



Chatham Islands

Resource Management Document (2020) and Resource Management Act (1991)

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Canterbury Regional Council

Our people, our Islands, our future

Compliance
Assessment
April 2021



chatham islands council

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1 EXECUTIVE SUMMARY

Environment Canterbury (ECan) is contracted by the Chatham Islands Council (CIC), through Ministry of Development funding, to monitor industrial and commercial activities on the island with regards to compliance with both the Resource Management Act (1991) (RMA) and the Chatham Islands Resource Management Document (2020) (CIRMD). Visits have occurred on a bi-annual basis since 2015. This report has been written to detail findings of the visits which occurred during 6th -13th April 2021. This report is a summary of the site visits undertaken, their compliance status and the potential environmental risk and impact of site activities. Recommendations have been made to address identified issues.

Prior to the visits mentioned, a notice was published on the Chatham Island Council Monthly website update for March 2021 and in the Chatham Community Focus Trust newsletter for the week of 1 April 2021. As well as visiting the sites identified within this report, meetings were also held with the Department of Conservation, the Hokotehi Moriori Trust, and Ngāti Mutanga o Wharekauri to identify any environmental concerns they had. A visit to the school at Kaingaroa was also made and ECan undertook an educational module with the children of the school around pollution prevention and the work being undertaken through these visits on the island.

Site inspections were undertaken of sites that had previously been visited under the contract in 2015 and 2019. This list was given to CIC who then updated and approved the list and provided ECan staff with the site owners contact details.

A summary has been provided for each site in this report highlighting the location, contact, relevant RMA (1991) section and CIRMD (2001) rules alongside site recommendations. A draft summary letter to each site visited with our on-site findings and recommendations is attached as Appendix A to this report.

It was clear from the time spent on the Island that there are a multitude of environmental challenges faced. Alongside reporting on an individual site basis this report aims to highlight key environmental challenges which would benefit from exploring solutions at an island wide level. From an environmental risk-based perspective the highest priorities for the island are:

- Conserving and protecting drinking water supplies (both ground and surface water).
- Managing legacy issues around 'closed' landfills and ensuring appropriate cultural, public health and environmental safeguards are in place for the future.
- Improved operational island waste management following the waste hierarchy, Reduce, Reuse, Repair, Recycle, with landfill being the least preferred and last option.
- Managing the impacts of increased tourism on the island with pressures on existing infrastructure and resource and its long-term sustainability. Ensuring greater compliance with hazardous substance storage and use through education and awareness
- Ensuring the volumes of waste oil produced long-term reduces and there is a better option than the current widespread practice of containment and burying.
- Ensuring compliance with legislation both in terms of permitted activities under the CI and the conditions prescribed in resource consents issued.

The geographical location itself makes the above challenging and at the same time imperative to a sustainable future for the community involved. The existing Chatham Island Investment Strategy forum would be well suited to ensure these recommendations are taken forward as many have already been thought about and readily align with elements of this strategy. Key to this will be ensuring key organisations in the Chatham Island Forum have access to ongoing trusted accurate specialist advice and support with the significant costs that addressing these challenges will likely incur.

2 INTRODUCTION

The Chatham Islands Resource Management Document provides a framework for the integrated management of natural and physical resources of the islands including the sea area out to the 12 nautical mile territorial limit. The first document was made operative on 24 January 2001 and the review of this document was undertaken in 2012/13. The CIRMD is created under the Chatham Islands Council Act 1995. Section 26 of the Act states that Council shall have such a single resource management document and that it shall contain all the information that the Resource Management Act 1991 requires to be contained in a regional policy statement, a regional coastal plan and a district plan.

The document was further revised in 2017, becoming partially operative on the 31 January 2018 and fully operative on the 22 December 2020.

ECan has been contracted to assist the CIC with monitoring industrial and commercial activities on the island under the RMA (1991) and CIRMD (2020). This report outlines findings from site visits (both permitted activity and consented) undertaken in 2021 and provides recommendations to reduce any associated environmental risks from business activities that were observed. Section 2 summarises the meetings had with the Hokotehi Moriori Trust, Ngāti Mutunga o Wharekauri and the Department of Conservation, whilst Section 3 provides a description for each site visit and assessment undertaken against the CIRMD (2020) and the RMA (1991) rules with recommended actions given for non-complying activities and / or activities that present an environmental risk.

To date, no enforcement action has been undertaken or abatement notices issued in relation to breaches of the permitted activity rules or the RMA as identified in previous reports from visits undertaken by ECan in 2015 and 2019. It has been evident from this year's visits that although some progress had been made at an individual level many challenges and recommendations made in previous reports had not moved forward or only changed closely prior to visits, therefore it may be worth considering whether the current framework for compliance is working. For this year's visits there was a clear steer to ECan for a more educational and awareness approach.

3 ENGAGEMENT

As part of the 2021 monitoring visit undertaken by ECan, meetings were held with the Department of Conservation, the Hokotehi Moriori Trust and Ngāti Mutunga o Wharekauri Iwi Trust to gaining a better understanding of environmental and resource concerns with the wider community on the island. A summary of the concerns raised during these meetings can be found in parts 2.1 to 2.4 of this report.

Parts 3.3 and 4.1 of the CIRMD (2020) makes provisions for CIC to consult with and take into consideration imi/iwi perspectives when making decisions regarding the management of resources.

3.1 DEPARTMENT OF CONSERVATION

The Department of Conservation (DoC) are responsible for looking after the rich biodiversity of the Chatham islands. The islands support 20% of New Zealand threatened bird species and 11% of its threatened plants. DoC manages 1 nature reserve, 7 scenic reserves, 1 national historic reserve, 2 historic reserves and 4 conservation areas which require protection and restoration of natural ecosystems, indigenous fauna and flora and cultural heritage features. They also work with private landowners around planting, stock exclusion, weed control and animal pest control. (<https://www.doc.govt.nz/nature/habitats/offshore-islands/chatham-islands/>)

Consultation was undertaken with DoC staff and several environmental concerns were raised including pest control, fencing and protection of water bodies and water quality.

The requirement for **fencing of water ways** under the National Environment Standards for Fresh Water is a challenge. Fencing on the island is not currently maintained, and the requirement for all waterways to be fenced off poses an issue due to the lack of resources. Due to this current lack of fencing, there is an issue with stock (feral and domesticated stock) entering waterways and grazing and degrading wetlands. An application to Funds for Nature has been made to help with this, but at the time of the visit, no result of the application had been received.

Water quality and quantity is also a major issue. There has been less rain over the last 5 years and lakes are drying up, particularly Lake Rangitai which is the main drinking water supply for Kaingaroa. The relationship between the levels of the lakes and the lagoons is not understood or the effect of private bores on water levels. There is no desalination plant on the island, so water quality is also an issue.

Pest management is an ongoing issue, particularly feral animals on land and excess swan numbers on the lagoon. There is a long-term plan in development to make the Chathams predator free by 2050 and there is ongoing pest management on the island to remove rats, cats and possums from the main island (retaining weka and pigs as they are a traditional food source) and removing cats and mice from Pitt island.

The **proposed runway extension** to the airport has concerns for DoC as there is a threatened plant species site in the extension area. They are hopeful an Assessment of Environmental Effects would be developed around this site prior to the extension being built.

Many of these issues were identified within the Chatham Island Investment Strategy (see section 2.4 below) with water health, predator free Chathams 2050, habitat restoration identified under the environmental focus area.

3.2 HOKOTEHI MORIORI TRUST

Hokotehi Moriori Trust (HMT) is the organisation that represents Moriori people - the descendants of Rongomaiwhenua and Rongomaitere on the islands of Rēkohu and Rangihau (Chatham Islands) in New Zealand and elsewhere. The Trust operates from Kōpinga Marae, and has operational support based on mainland NZ. Hokotehi is involved in several sectors of the islands economy including fishing, farming and tourism. The trust also provides cultural, social and educational services for members. The trust is the mandated imi body authority for Moriori people and its involvement in negotiations on behalf of Moriori with the Crown and other government and non-government agencies. It is tasked with developing a commercial, cultural, language and resource base for Moriori. (<https://www.moriori.co.nz/about-us/>)

Consultation was undertaken with HMT and several environmental concerns were raised, especially around waste, water and culturally significant sites.

The Trust have been, and continue to be, involved in many collaborative projects to improve known environmental and cultural issues on the island. One of these is **old landfills** (Te One, Owenga and Kaingaroa) that have been placed on culturally significant sites and reports undertaken by the Trust indicate that there is leaching of contaminants from these sites into the surrounding environment. Of particular concern is the Kaingaroa landfill - a closed landfill unlawfully established on Trust land. This has been partially capped, but more work is required to fully remediate the site. There are concerns around the effect of the leachates from the landfill on the surrounding environment, particularly lake Te Wapu and ongoing management requirements for the site. A report from Xtreme Zero Waste (a community enterprise that offers several services including consultancy on setting up recycling and waste minimisation ventures) dated November 2017 was forwarded to ECan to assist in the writing of this report. It outlines recommendations around the closure and rehabilitation of the Kaingaroa landfill see 4.5 for ECan's full recommendations for this site.

Water resources are becoming a critical issue on the island. The levels in lakes are reducing and solutions need to be investigated to improve water supply on the island. For example looking into a desalination plant, bigger potable water supply, etc. Improving water quality and water levels is one of the key focus areas identified in the Chatham Island Investment Strategy (see part 2.4). The trust has undertaken four years of surface water monitoring to gain a better understanding of the water quality trends and has also applied to the surface water improvement fund.

Concerns around the **lack of fencing** around waterways and the effect of wild stock on water quality and the grazing and degradation of the natural environment were also raised.

Other initiatives HMT would like to see investigated are:

- Investigation into the wastewater treatment site and sewage contamination of surrounding properties and surrounding drinking water supplies.
- a zero-waste policy (with research into nylon rope recycling, a polystyrene ban, a change in fishing practices to stop the use of strapping tape)
- improved oil spill contingency plans
- full consultation on culvert installation and upgrade as these are often in wāhi tapu/culturally significant sites.
- Consultation with HMT around their Freshwater Plan when environmental decisions are being made.

3.3 NGATI MUTUNGA O WHAREKAURI IWI TRUST

Ngāti Mutunga o Wharekauri Iwi are an iwi of Wharekauri (Chatham Islands). Consultation was undertaken with Ngāti Mutunga o Wharekauri iwi trust (NMOWIT) and several environmental concerns were raised including biosecurity, fencing and protection of water bodies and water quality.

NMOWIT stressed that **engagement and follow-up** is undertaken regularly with everyone involved with managing the island. There are several organisations (both private and public) with interests on the Chatham Islands and there is a real desire to find the best options to best suit the difficulties and issues identified on the islands. NMOWIT have been heavily involved in leading the development Chatham Island Investment Strategy which gives a clear direction and focus for the Islands development for the next 5 years (part 2.4 below). Communication in the past has not always been forthcoming, but this is changing and there is a real desire on the island to engage with and improve life and for all islanders.

Issues identified as being of concern to NMOWIT include:

- that action is undertaken on plans and promises e.g., Predator Free Chatham's 2050.
- Increased biosecurity is needed. There is too much work for 2 biosecurity officers and no biosecurity check is undertaken at the airport. With increased freight and tourism this poses a threat to the island for biosecurity breaches.
- There is no green waste dump on the island
- That CIE Trust investigate some renewable energy options for the island, thus reducing the islands reliance in diesel.

3.4 CHATHAM ISLAND INVESTMENT STRATEGY

In 2017, the Department of Internal Affairs held a workshop on the Chatham Islands to brainstorm a long list of important areas of investment for the community. As a result of this, and engagement with a wide range of government departments, Crown Entities, non-government Organisations as well as the Chatham Islands four key representative entities - Hokotehi Moriori Trust, Ngāti Mutunga O Wharekauri, Chatham Island Council and Chatham Island Enterprise Trust, the Chatham Islands Investment Strategy was developed and finalised in 2019. The strategy reflects the vision Chatham Islanders have for their community and has 5 outcomes areas: infrastructure, environment, economic, social and cultural. Each outcome area has a set of focus areas which are the priority investment areas for the next 4 years. (*Chatham Islands Investment Strategy 2020*)

Many of the community concerns identified as part of ECan's community engagement as part of the 2021 monitoring visit were identified within this strategy and the future for managing, restoring, and enhancing the environment on the Chatham's is looking very promising.

4 SITE ASSESSMENTS PERMITTED ACTIVITY

The purpose of these visits was to:

- Understand business activities and associated environmental risks.
- Provide an assessment (through a follow up letter) on the site's compliance with the Chatham Islands Resource Management status on the date of our visit.
- Give guidance on how to reduce any environmental risks observed on the site on the day of the visit through conversation on the day and a follow up letter.

The corresponding draft letters to businesses can be found in 7.3 Appendices, awaiting CIC's approval prior to sending.

For the sites visited the most common environmental hazards were:

- Hazardous substance storage
 - Bulk storage of diesel
 - Waste oil generation and storage

For all sites with hazardous substances ¹the assessment on hazardous substance compliance is indicative only, based on knowledge of basic associated requirements of current HS legislation. Environment Canterbury staff work under the jurisdiction of the Resource Management Act 1991 and therefore are not warranted to monitor compliance of Hazardous Substance Use and storage which is regulated by WorkSafe under the legislation highlighted in the General Information section below.

Generic challenges for all sites observed were:

- Level of knowledge and understanding of the legislative requirements of the Resource Management Act and the Chatham Islands Resource Management regulations involved and translation of this into on site practice and compliance.
- The logistics and costs of ensuring compliance due to the remote island location, whether this was access to goods or specialist support.
- The logistics and costs associated with appropriate transport and disposal of hazardous waste and waste products from business activities.
- Legal waste disposal options on the island were limited to sending to Te One Waste Transfer Station (where waste oil is currently stored indefinitely).
- As these are generic challenges that many sites visited are grappling with it is recommended that CIC takes a whole island approach. Many of the above challenges link in with resolution of high environmental priorities as identified in the Executive Summary and can be linked to the Chatham Islands Investment Strategy.

For example, Outcome 1: Resilient infrastructure, focus area renewable energy, reduced reliance on diesel power.

Pursuing this outcome will in turn reduce the volumes of waste oil generated and associated challenges of disposal. When making recommendations for sites specific to individual areas observed, it has been highlighted whether this needs to be undertaken to meet Chatham Island Resource Document permitted activity rules (Meeting Minimum Standards) or whether this is Good Management Practice (GMP) beyond minimum standards.

4.1 ELECTRICITY GENERATION

4.1.1 Electricity Generation Plant

Contact: Ian Sanson

Company: Chatham Island Enterprise Trust (CIET)

Land ownership: Chatham Island Enterprise Trust

Activity: Diesel generation

Management Zone: Rural

GPS coordinates: W176.490254 S43.972911

Drainage: To ground

Compliance

RMA (1991) Section	CIRMD (2018) Rules	Permitted 5.3.4 Rural	PA Compliance	Notes	Photo Reference
N/A	5.3.4.2 Industrial and commercial activity	<i>(i) Industrial and commercial activities are permitted if: (a) They do not exceed 200 square metres in site area; and (b) They are separated by a minimum of 100m from the nearest dwelling not on the site</i>	(i)(a) No (b) Yes	Compliance as per previous reports 2015 and 2019	N/A
S15 Discharge of contaminants into the environment	5.3.4.8 Hazardous Substances	<i>i) The use, storage, disposal and transportation of hazardous substances is permitted if: (a) there is compliance with all legislation and regulation requirements including the regulations under the Hazardous Substances and New Organisms Act and regulations 104 and 105 of the Resource Management (National Environmental Forestry) Regulations 2017; and (b) no hazardous substance is discharged or dumped into any waterbody or water course or stormwater system; and (c) any hazardous substance that is to be dumped on land is</i>	No ¹	Three 12,000 litre tanks. Bunding cracked. Vegetation growing in bunding – evident in 2019 report, no change this visit. New Tank 30,000 litres, double skinned, awaiting staffing resource to install. Placement will be next to old tanks. Oil drums outside / inside old DG shed. Spill absorbent in old DG shed.	Fig. 1 Fig. 2 Fig. 3

		<i>sealed or contained in a manner that does not allow any discharge or escape.</i>			
S15 (1)(c) contaminant from any industrial or trade premises into air	5.4.3.18 Discharge of contaminants into air	<i>(i) Discharges of contaminants including odour particulates into air are permitted provided they do not give rise to a nuisance that would not reasonably be expected in a normal working rural environment. Live burns conducted and controlled by the New Zealand Fire Service for training purposes are exempt from this rule.</i>	Yes	Odour from generators minimal and not detectable beyond boundary of property.	
S15 (1)(d) contaminant from any industrial or trade premises onto or into land	5.4.3.24 Discharge of contaminants onto land	<i>(i) Discharge of contaminants into or onto land is permitted if: (a) they are not from an industrial or trade premises, (except for fish factory wastes and septic tank sludge effluent which are permitted); and (b) they are not dumped within 30 metres of a waterbody or water supply or MHWS; and (c) they are not dumped within 50 metres of a dwelling.</i>	(i)(a) No (b) Unable to assess (c) Yes	Hydrocarbons had been discharged (potentially for some time) to land on drop behind wall.	Fig. 4

Recommendations

Item	Recommendation	Meeting Minimum Compliance or Good Management Practice
Hazardous Substances	<p>As a priority install the new diesel tank as planned. Ensure you are compliant with all Hazardous Substance Use and Storage legislation including Codes of practice and Safe Work Instruments. WorkSafe has some very helpful guidance on its website, including a Hazardous Substances Toolbox which can assist understanding the business controls for the use and storage of amounts and volumes of Hazardous Substances present on site.</p> <p>Whilst awaiting the above, as a priority clear out vegetation and ensure areas where the integrity of secondary containment systems such as bunds has failed are fixed.</p>	<p>MMC</p> <p>MMC</p>
Hazardous Waste	<p>Soil contaminated with hydrocarbons was evident beyond the concrete pad with fuel line (see Fig. 4) beyond the drop from retaining wall. Ensure that all contaminated soil is dug out and replaced with clean soil. Ideally, successful removal would be validated by soil testing of the remaining soil. Testing could confirm that contamination was removed, prior to backfilling with clean soil. If validation testing is not possible,</p>	MMC

	photographic documentation of the removal of visible contamination (staining) is recommended. Ensure contaminated soil is disposed of appropriately at the Te One Waste Transfer station. Notify staff there prior to disposal in order they can arrange a suitable location to store it.	
Spill Management	<p>Best practice is to have spill kits clearly labelled, and easily accessible to the areas which spills are most likely to occur. It is also important that staff are familiar with their contents and how to use them to ensure a timely response in the event of an emergency.</p> <p>As volumes of fuel stored on site are large and have the potential for significant environmental impact if infrastructure fails, review / develop an emergency spill management plan and associated training for all staff on site. In this consider the risk to groundwater / surface water and how to protect it in the event of an emergency. This may be a requirement alongside other controls based on volumes stored (see Hazardous Substances recommendations).</p>	<p>MMC</p> <p>GMP / MMC</p>
Discharge of contaminants	Clear up and appropriately dispose of any spills immediately when noticed. Fix any leaking infrastructure.	MMC
Redundant materials	Continue to use concrete pad to store these, whilst ensuring any empty containers have lids on and old batteries are kept dry and stored under cover to prevent leaching of contaminants.	MMC



Fig.1 On site Diesel Storage



Fig.2 Bunding filled with vegetation



Fig. 3 New double skinned fuel containment awaiting installation



Fig. 4 Leakage of fuel evident beyond concrete pad and wall



Fig. 5 Redundant material stored on concrete pad

4.1.2 Windfarm

Contact: Toni Gregory Hunt

Company: Chatham Island Enterprise Trust (CIET)

Land ownership: Chatham Island Enterprise Trust

Activity: Wind farm electricity generation

Management Zone: Rural

GPS coordinates: W176.383627 S44.036271

This site is not operational but has a resource consent. See Section 4.2 of this report.

4.2 SEAFOOD PROCESSING PLANTS

Five seafood processing plants are currently operational on the island. It was off season at the time of visits therefore at some sites the business activities had paused or were reduced.

All processing plants were found to be undertaking the practice of discharging by-product waste from their processes to the environment, whether nearby surface water, land, or the coastal marine environment. All sites had some level of screening to remove the larger pieces of fish waste, which would be sent to the Fish Dump (**see 3.5.3**). Due to the nature of activities these discharges contain smaller particles of fish waste and a known source of nutrients. Due to the food standards placed on the processing plants it is known that chemical detergents would also be present in any discharges.

For the discharge points observed, the environmental impacts were assessed to be localised and minor. This was confirmed as likely by ECan's Senior Surface Water Scientist who is experienced in Coastal Marine water quality.

In these instances, the RMA 1991 makes no provision for historical discharges of contaminants and grandparenting rights. When strictly measured against this and CIRMD these discharges are non-compliant and would require consent. This has been highlighted in both previous compliance reports. However, due to the current environmental impact being assessed as minor and localised the more pragmatic approach for CIC would be to look for progress through the following approach:

- Consult with Treaty partners Ngāti Mutunga o Wharekauri and the Moriori Trust on consideration of the below approach and advise CIC whether it would be acceptable from a cultural perspective.
- To work with the industry as a whole and require improvement of current screening of liquid waste prior to discharge, for some sites this could be easily achieved by adding an additional settling tank, prior to discharge exposure to UV light it would add an additional level of treatment.
- To ensure all food processing sites have a shut off valve prior to the point of discharge from site to allow wastewater to be contained. Therefore, in the event of a spill of chemical / overdosing there is an opportunity to contain. Circumstances when valves are open or closed would be written into emergency spill procedures and communicated with staff.
- To look at slow-release trickle systems which could reduce loading of discharges at any one point in time.
- If any businesses increase production volumes significantly whether through development or other means improved compliant systems are applied for through the existing resource consenting process.
- That this approach is clearly communicated with industry so that expectations are set with a clear timeline for progress. This also removes the uncertainty and business impacts of being assessed as non-compliant.
- To investigate whether alternative non-chemical based detergents are available for use which would meet food grade standards.

4.2.1 Moana Pacific - Waitangi

Contact: Catherine Hannagan

Company: Moana Pacific

Land ownership: Moana Pacific

Activity: Fish processing plant

Management Zone: Industrial

GPS coordinates: W176.561662 S43.9504

Drainage: To coastal environment

Compliance

RMA (1991) Section	CIRMD (2018) Rules	Permitted Activity 5.5.3 Industrial	PA Compliance	Notes	Photo Reference
S15 Discharge of contaminants into the environment	5.5.3.8 Hazardous Substances	<i>The use, storage and transportation of hazardous substances is permitted if:</i> <i>(a) there is compliance with all legislation and regulations and Codes of Practice, including the regulations under the Hazardous Substances and New Organisms Act; and</i> <i>(b) no hazardous substance may be dumped or discharged to any waterbody or water course or stormwater system and may not be dumped on land.</i>	No ¹	Chlorine stored separately. Dangerous Goods shed signage details storage of incompatible substances together – although this may not be the practice the signage could cause confusion to staff, increasing risk. Diesel tank out back is double skinned on concrete pad. Holds up to 20,000 litres. Rusting noticeable.	Fig. 6 Fig. 7 Fig. 8
S15(1)(a) Contaminant or water into water; S15(1)(b) contaminant onto or into land in circumstance which may result in that contaminant (or any other contaminant emanating as	5.5.3.14 Discharge of contaminants or water into water or the discharge of contaminants into or onto land which may result in that	<i>(i) Discharge of a contaminant or water into water or into or onto land which may result in that contaminant entering water is permitted if the discharge is for stormwater, water supply or freshwater purposes provided:</i> <i>(a) the discharge after reasonable mixing shall not give rise to any of the following effects:</i> <i>(i) the production of any conspicuous scums or foams on</i>	(i) No	Detergents used are washed down and discharged directly into the coastal marine environment. Although diluted this may still be classified as Hazardous Waste (same requirements as HS)	Fig. 9

a result of natural processes from that contaminant) entering water	contaminant entering water	<i>floatable or suspended materials;</i> <i>(ii) any conspicuous change in colour or visual clarity;</i> <i>(iii) any emission of objectionable odour;</i> <i>(iv) the rendering of freshwater unsuitable for consumption by farm animals; or</i> <i>(v) any significant adverse effects on aquatic life.</i>		Inventory and SDS present Spill kit present in workshop. More on order.	
S15 (1)(d) contaminant from any industrial or trade premises onto or into land	5.5.3.20 Discharge of contaminants onto land	<i>(i) Discharge of contaminants onto land is permitted if:</i> <i>(a) they are not from an industrial or trade premises; and</i> <i>(b) they are not dumped within 30 metres of a waterbody or water supply; and</i> <i>(c) they are not dumped within 50 metres of a dwelling.</i>	Yes	No evidence of contaminants discharged to land.	
S15 (1)(c) contaminant from any industrial or trade premises into air	5.5.3.21 Discharge of contaminants into air	<i>(i) Discharges of contaminants into air are permitted provided they:</i> <i>(a) do not give rise to a nuisance that would not reasonably be expected in an industrial environment; or</i> <i>(b) do not give rise to a nuisance in an adjoining zone. Live burns conducted and controlled by the New Zealand Fire Service for training purposes are exempt from this rule.</i>		No noticeable odour on site or beyond site boundaries.	
		Permitted Activity 5.6.4 Coastal			
S15(1)(a) contaminant or water into water; or	5.6.11.8 Discharge of contaminants - general	i) Discharges of contaminants to coastal water not authorised by Rules 5.6.11.11– 5.6.11.13 are discretionary activities.	No	See above	
S15(1)(a) contaminant or water into water;	5.6.11.9 Discharge of stormwater	<i>(i) The discharge of stormwater is permitted if:</i> <i>(a) the discharge, after reasonable mixing, does not cause:</i>	Unable to assess (dry weather)		

		<p><i>(i) the production of any conspicuous oil or grease, films, scums, or foam, or floatable or suspended material; and</i></p> <p><i>(ii) any conspicuous change in colour or visual clarity; and</i></p> <p><i>(iii) any emission of objectionable odour.</i></p>			
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Recommendations

Item	Recommendation	Meeting Minimum Compliance or Good Management Practice
Hazardous Substances	<p>Continue using the Hazardous Substance Calculator / Worksafe website to assist in ensuring compliance with regulations.</p> <p>Ensure signage does not state the storage of incompatible items together (this could confuse staff and lead to incompatible substances being stored together). In particular if required separation distances would not be able to be met in the containment area.</p> <p>Ensure staff training for all staff with access to and requirement to use Hazardous Substances.</p>	<p>MMC</p> <p>MMC</p> <p>MMC</p>
Spill Management	<p>Best practice is to have spill kits clearly labelled (dependent on types of HS and volumes stored this may be a requirement) and easily accessible to the areas which spills are most likely to occur. Consider whether current provision and locations can be improved.</p>	GMP / MMC
Drainage from site	<p>Consider installing shut off valves for stormwater containment and internal fish processing areas, in the event of a spill in either area it could be contained and disposed of appropriately.</p>	GMP
Discharge of contaminants	<p>Consider whether discharge from factory processing area could have greater level of treatment prior to discharge through a storage / settlement tank? Exposure to UV light could also assist in treatment.</p>	MMC

Photographs



Fig. 6 Separate locked storage



Fig 7. Label shows oxidisers and flammables stored in of Chlorine same container



Fig 8. Double skinned diesel fuel storage



Fig. 9 Discharge pipes to the coastal marine environment

4.2.2 Waitangi Sea Foods (Port Hut)

Contact: Pita Thomas

Company: Waitangi Seafoods

Land ownership: Moana Pacific (Wharf owned by CIET)

Activity: Fish processing (Cod frames for bait)

Management Zone: Industrial

GPS coordinates: W176.706983 S43.815966

Drainage: To ground / To coastal marine environment

RMA (1991) Section	CIRMD (2018) Rules	Permitted Activity 5.3.4 Industrial	PA Compliance	Notes	Photo Reference
S15 Discharge of contaminants into the environment	5.5.3.8 Hazardous Substances	<i>The use, storage and transportation of hazardous substances is permitted if:</i> <i>(a) there is compliance with all legislation and regulations and Codes of Practice, including the regulations under the Hazardous Substances and New Organisms Act; and</i> <i>(b) no hazardous substance may be dumped or discharged to any waterbody or water course or stormwater system and may not be dumped on land.</i>	No ¹	Diesel in IBC's, makeshift bunding being created, and containers are being stored under cover. Spill kit present near fuel source for generator. Detergents used are washed down and discharged directly into the coastal marine environment. Although diluted this may still be classified as Hazardous Waste (same requirements as HS) HS locked access. With inventory.	Fig. 10.0 Fig. 11
S15(1)(a) Contaminant or water into water; S15(1)(b) contaminant onto or into land in circumstance which may result in that	5.5.3.14 Discharge of contaminants or water into water or the discharge of contaminants into or	<i>(i) Discharge of a contaminant or water into water or into or onto land which may result in that contaminant entering water is permitted if the discharge is for stormwater, water supply or freshwater purposes provided:</i> <i>(a) the discharge after reasonable mixing shall not give rise to any of the following effects:</i>	(i) No	Not stormwater (trade waste) Localised evidence of fish waste and detergents.	Fig. 12 & 13

contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water	onto land which may result in that contaminant entering water	<p>(i) the production of any conspicuous scums or foams on floatable or suspended materials;</p> <p>(ii) any conspicuous change in colour or visual clarity;</p> <p>(iii) any emission of objectionable odour;</p> <p>(iv) the rendering of freshwater unsuitable for consumption by farm animals; or</p> <p>(v) any significant adverse effects on aquatic life.</p>		<p>Life found in nearest rock pool.</p> <p>Makeshift temporary storage underway</p>	<p>Fig. 14</p> <p>Fig. 15</p>
S15 (1)(d) contaminant from any industrial or trade premises onto or into land	5.5.3.20	<p>(i) Discharge of contaminants onto land is permitted if:</p> <p>(a) they are not from an industrial or trade premises; and</p> <p>(b) they are not dumped within 30 metres of a waterbody or water supply; and</p> <p>(c) they are not dumped within 50 metres of a dwelling.</p>	No	Evidence of diesel leaching to ground (through floor of diesel generator) – although majority of historic spill now cleaned up.	Fig. 16
S15 (1)(c) contaminant from any industrial or trade premises into air	5.5.3.21	<p>(i) Discharges of contaminants into air are permitted provided they:</p> <p>(a) do not give rise to a nuisance that would not reasonably be expected in an industrial environment; or</p> <p>(b) do not give rise to a nuisance in an adjoining zone. Live burns conducted and controlled by the New Zealand Fire Service for training purposes are exempt from this rule.</p>	Yes	No noticeable odour on site or beyond boundary. Generator was in operation at time of visit.	
		Permitted Activity 5.6.4 Coastal			
S15(1)(a) Contaminant or water into water;	5.6.11.8 Discharge of contaminants - general	<p>i) Discharges of contaminants to coastal water not authorised by Rules 5.6.11.11– 5.6.11.13 are discretionary activities.</p>	No		
S15(1)(a) Contaminant or water into water;	5.6.11.9 Discharge of stormwater	<p>(i) The discharge of stormwater is permitted if:</p>	Unable to assess (dry weather)	Stormwater runs straight off site to ground / coastal marine	Fig. 11

		<p><i>(a) the discharge, after reasonable mixing, does not cause:</i></p> <p><i>(i) the production of any conspicuous oil or grease, films, scums, or foam, or floatable or suspended material; and</i></p> <p><i>(ii) any conspicuous change in colour or visual clarity; and</i></p> <p><i>(iii) any emission of objectionable odour.</i></p>			
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Recommendations

Item	Recommendation	Meeting Minimum Compliance or Good Management Practice
Hazardous Substances	<p>It was evident that significant steps have been made in the last few weeks to improve Hazardous substance storage with what was available. The makeshift bunding which was in progress with metal available on site will in the short term reduce the risk to ground (see Fig. 9).</p> <p>It is worth noting that secondary containment requirements are triggered for diesel at above 1000l (although good management practice below this). Therefore, a requirement (110% of the cumulative volume of IBC's stored) so please ensure this is completed.</p> <p>For diesel amounts stored cumulatively on site above 5000l a 'compliance certificate' would be required from a 'compliance certifier' who is approved by Worksafe. Therefore, pragmatically ensuring volumes are kept below 5000l on site at any one time, will meet secondary containment requirements. It would be worth ensuring that the integrity of bunding is checked regularly (as it is visibly corroding) and / or painted to prevent further deterioration.</p> <p>Ensure you are compliant with all Hazardous Substance Use and Storage legislation. WorkSafe has some very helpful guidance on its website, including a Hazardous Substances Toolbox which can assist understanding the business controls for the use and storage of amounts and volumes of Hazardous Substances present on site.</p> <p>Ensure integrity of secondary containment is regularly checked. Consider better conditioned long-term containment. Keep amounts stored at any one time to a minimum (in line with business needs).</p> <p>Ensure secondary containment meets the requirements of ACOP Secondary containment systems (attached copy).</p>	<p>MMC</p> <p>MMC</p> <p>MMC</p> <p>MMC</p> <p>MMC</p> <p>MMC</p>
Spill Management	<p>It was great to see that the historic diesel spill, noted in the previous 2019 report, had been cleaned up prior to our visit. However, it is a requirement to remediate spills as soon as they occur. Fortunately, the bed rock in nearby ditch acted as natural containment of this spill and prevented further leakage to ground or the coastal environment.</p> <p>Secondary containment will capture leaks and give visibility to their occurrence. Dependent on volumes stored, spill kits may be a requirement and are best practice, ideally located close to the areas which are most at risk of spills.</p> <p>Additional to this it is best practice to:</p>	<p>MMC</p> <p>MMC / GMP</p>

	<ul style="list-style-type: none"> • Ensure that a log is kept for any spills, noting what was spilled, volume of spill, remediation e.g., how was it cleaned up, and any actions to prevent this occurring again. • Keep a log of when and where spill waste was appropriately disposed of. • Provide staff training. 	GMP
Discharge of contaminants	As above regarding historic spill.	MMC
Drainage from site	Consider whether discharge from factory processing area could have greater level of treatment prior to discharge through a storage / settlement tank? Exposure to UV light could also assist in treatment.	MMC
Redundant materials	Wherever possible segregate redundant materials to one storage area. Ensure if waste is hazardous that all legislative controls are met. For non-hazardous waste best practice would be to store on an impermeable base under cover.	MMC

Photographs



Fig. 10 Makeshift bunding for diesel storage



Fig. 11 Makeshift tank for chemical washdown discharge from factory



Fig. 12 Localised evidence of detergent discharge



Fig. 13 Localised evidence of small fish waste particles



Fig. 14 Life in nearby rock pools (Anemones, sea lice)



Fig. 15 Leaching of diesel to foundations of diesel generator shed



Fig. 16 Recent remediation of diesel spill

4.2.3 Waitangi Sea Foods (Te One)

Contact: Pita Thomas

Company: Waitangi Sea Foods

Land ownership: Waitangi Sea Foods

Activity: Fish processing plant

Management Zone: Rural

GPS coordinates: W176.53453 S43.944771

Drainage: To ground

Compliance

RMA (1991) Section	CIRMD (2018) Rules	Permitted 5.3.4 Rural	PA Compliance	Notes	Photo Reference
N/A	5.3.4.2 Industrial and commercial activity	<i>(i) Industrial and commercial activities are permitted if: (a) They do not exceed 200 square metres in site area; and (b) They are separated by a minimum of 100m from the nearest dwelling not on the site</i>	(i)(a) No (b) No	Compliance as per previous reports 2015 and 2019 Dwelling to the north was built after the factory was built and is within 100m of the factory buildings.	Fig. 17
S15 Discharge of contaminants into the environment	5.3.4.8 Hazardous Substances	<i>i) The use, storage, disposal and transportation of hazardous substances is permitted if: (a) there is compliance with all legislation and regulation requirements including the regulations under the Hazardous Substances and New Organisms Act and regulations 104 and 105 of the Resource Management (National Environmental for Plantation Forestry) Regulations 2017; and (b) no hazardous substance is discharged or dumped into any waterbody or water course or stormwater system; and (c) any hazardous substance that is to be dumped on land is sealed or contained in a manner that does not allow any discharge or escape.</i>	No ¹	Hazardous Substances stored in locked area. Mainly detergents stored. Inventory / SDS sheets not close to hand.	
S15(1)(a) Contaminant	5.5.3.14 Discharge of	<i>(i) Discharge of a contaminant or water into water or into or</i>	(i) No	Detergents used are washed down	Fig. 18

<p>or water into water; S15(1)(b) contaminant onto or into land in circumstance which may result in that contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water</p>	<p>contaminants or water into water or the discharge of contaminants into or onto land which may result in that contaminant entering water</p>	<p><i>onto land which may result in that contaminant entering water is permitted if the discharge is for stormwater, water supply or freshwater purposes provided:</i></p> <p><i>(a) the discharge after reasonable mixing shall not give rise to any of the following effects:</i></p> <p><i>(i) the production of any conspicuous scums or foams on floatable or suspended materials;</i></p> <p><i>(ii) any conspicuous change in colour or visual clarity;</i></p> <p><i>(iii) any emission of objectionable odour;</i></p> <p><i>(iv) the rendering of freshwater unsuitable for consumption by farm animals; or</i></p> <p><i>(v) any significant adverse effects on aquatic life.</i></p>		<p>and discharged to settling tank and underground pipe to an adjacent field.</p> <p>Shut off valve present allowing containment in the event of a spill in the processing area.</p>	<p>Fig. 19</p>
	<p>5.4.3.18 Discharge of contaminants into air</p>	<p><i>(i) Discharges of contaminants including odour particulates into air are permitted provided they do not give rise to a nuisance that would not reasonably be expected in a normal working rural environment. Live burns conducted and controlled by the New Zealand Fire Service for training purposes are exempt from this rule.</i></p>	<p>Yes</p>	<p>No odour was evident on site or past site boundary. As per previous reports 2015, 2019, the plant is on the Waitangi town electricity supply and therefore does not require a generator.</p>	
<p>S15 (1)(d) contaminant from any industrial or trade premises onto or into land</p>	<p>5.4.3.24 Discharge of contaminants onto land</p>	<p><i>(i) Discharge of contaminants into or onto land is permitted if:</i></p> <p><i>(a) they are not from an industrial or trade premises, (except for fish factory wastes and septic tank sludge effluent which are permitted); and</i></p> <p><i>(b) they are not dumped within 30 metres of a waterbody or water supply or MHWS; and</i></p> <p><i>(c) they are not dumped within 50 metres of a dwelling.</i></p>	<p>Yes</p>	<p>No evidence of any discharge of contaminants to land.</p>	

Recommendations

Item	Recommendation	Meeting Minimum Compliance or Good Management Practice
Hazardous Substances	Ensure you are compliant with all Hazardous Substance Use and Storage legislation. WorkSafe has some very helpful guidance on its website, including a Hazardous Substances Toolbox which can assist understanding the business controls for the use and storage of amounts and volumes of Hazardous Substances present on site.	MMC
Hazardous Waste	Ensure any redundant batteries are stored on an impermeable surface (e.g. concrete) and undercover to prevent leaching of heavy metals. Dispose of at an appropriate waste facility as soon as possible.	MMC
Spill Management	Ensure spill kits are held close to location of greatest risk of spills, with appropriate materials and amounts for volumes of substances used.	MMC / GMP
Discharge of contaminants	If there are any upgrades or increases in production of the site in the future, consider whether current system is still appropriate and or whether further treatment and /or resource consent will be required.	MMC
Redundant materials	Wherever possible segregate redundant materials to one storage area. Ensure if hazardous waste all legislative controls are met. For non-hazardous waste best practice would be to store on an impermeable base under cover.	MMC

Photographs



Fig.17 Neighbouring dwelling within 100m



Fig. 18 Factory waste filtering and screening system



Fig. 19 Site discharge into ground

4.2.4 Chatham Islands Food Co.

Contact: Jackie Cash, Delwyn Tuanui

Company: Chatham Islands Food Co.

Land ownership: Chatham Islands Food Co.

Activity: Fish food processing plant

Management Zone: Industrial

GPS coordinates: W176.368456 S44.024519

Drainage: To ground and to Coastal Marine environment

Compliance

RMA (1991) Section	CIRMD (2018) Rules	Permitted Activity 5.3.4 Industrial	PA Compliance	Notes	Photo Reference
S15 Discharge of contaminants into the environment	5.5.3.8 Hazardous Substances	<i>The use, storage and transportation of hazardous substances is permitted if:</i> <i>(a) there is compliance with all legislation and regulations and Codes of Practice, including the regulations under the Hazardous Substances and New Organisms Act; and</i> <i>(b) no hazardous substance may be dumped or discharged to any waterbody or water course or stormwater system and may not be dumped on land.</i>	No ¹	Detergents used are washed down and discharged directly into the coastal marine environment. Although diluted this may still be classified as Hazardous Waste (same requirements as HS) Hazardous Substance Storage. Signage old check compliant. The integrity of the shed is compromised as a section of the floor drains straight to ground.	Fig. 20
S15(1)(a) Contaminant or water into water; S15(1)(b) contaminant onto or into land in circumstance which may result in that contaminant	14. Discharge of contaminants or water into water or the discharge of contaminants into or onto land which may	<i>(i) Discharge of a contaminant or water into water or into or onto land which may result in that contaminant entering water is permitted if the discharge is for stormwater, water supply or freshwater purposes provided:</i> <i>(a) the discharge after reasonable mixing shall not give rise to any of the following effects:</i>	(i) No	Not stormwater - discharge from fish processing. Localised evidence detergents discharging to coastal marine environment.	Fig. 21 Fig. 22

(or any other contaminant emanating as a result of natural processes from that contaminant) entering water	result in that contaminant entering water	<p>(i) the production of any conspicuous scums or foams on floatable or suspended materials;</p> <p>(ii) any conspicuous change in colour or visual clarity;</p> <p>(iii) any emission of objectionable odour;</p> <p>(iv) the rendering of freshwater unsuitable for consumption by farm animals; or</p> <p>(v) any significant adverse effects on aquatic life.</p>			
S15 (1)(d) contaminant from any industrial or trade premises onto or into land	5.5.3.20 Discharge of contaminants onto land	<p>(i) Discharge of contaminants onto land is permitted if:</p> <p>(a) they are not from an industrial or trade premises; and</p> <p>(b) they are not dumped within 30 metres of a waterbody or water supply; and</p> <p>(c) they are not dumped within 50 metres of a dwelling.</p>	(i)(a) No	Discharge to ground from new building. Industrial / trade premises and will include chemicals / detergents.	Fig. 23
S15 (1)(c) contaminant from any industrial or trade premises into air	5.5.3.21 Discharge of contaminants to air	<p>(i) Discharges of contaminants into air are permitted provided they:</p> <p>(a) do not give rise to a nuisance that would not reasonably be expected in an industrial environment; or</p> <p>(b) do not give rise to a nuisance in an adjoining zone. Live burns conducted and controlled by the New Zealand Fire Service for training purposes are exempt from this rule.</p>	Yes	<p>No odour was evident on site or past site boundary.</p> <p>The plant is on the reticulated electricity supply and does not use a generator.</p>	
		Permitted Activity 5.6.4 Coastal			
S15 Discharge of contaminants into the environment	5.6.11.8 Discharge of contaminants - general	<p>i) Discharges of contaminants to coastal water not authorised by Rules 5.6.11.11– 5.6.11.13 are discretionary activities.</p>	No	Localised evidence detergents discharging to coastal marine environment.	Fig. 21 & 22
S15(1)(a) contaminant or water into water;	5.6.11.9 Discharge of stormwater	<p>(i) The discharge of stormwater is permitted if:</p> <p>(a) the discharge, after reasonable mixing, does not cause:</p>	Unable to assess (dry weather)	Stormwater runs straight off site to ground / coastal marine	Fig. 23

		<p>(i) the production of any conspicuous oil or grease, films, scums, or foam, or floatable or suspended material; and</p> <p>(ii) any conspicuous change in colour or visual clarity; and</p> <p>(iii) any emission of objectionable odour.</p>			
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Recommendations

Item	Recommendation	Meeting Minimum Compliance or Good Management Practice
Hazardous Substances	<p>Ensure you are compliant with all Hazardous Substance Use and Storage legislation. WorkSafe has some very helpful guidance on its website, including a Hazardous Substances Toolbox which can assist understanding the business controls for the use and storage of types, amounts and volumes of Hazardous Substances present on site.</p> <p>The current Hazardous Substance storage facility may not be compliant with relevant legislation and therefore not meet permitted activity rules. Ensure this area is locked and integrity brought up to the necessary standard.</p> <p>Irrespective of legal requirements best environmental practice would always be to store any liquids / chemicals undercover on an impermeable surface with some form of containment (reducing the risk to the environment if there were to be a spill).</p>	<p>MMC</p> <p>MMC / GMP</p> <p>MMC / GMP</p>
Spill Management	<p>It is also best practice to have appropriate spill materials and associated PPE close to any area which may have the greatest risk of spills due to business activities. For some substances / volumes this will be a requirement.</p> <p>It is important staff are aware and trained in what to do in the event of a spill. For example, what PPE do they need to keep themselves safe, what do they do to contain and clean up any spills, how to dispose of contaminated/used spill equipment. This may be a requirement dependent on types and volumes of Hazardous Substances stored.</p>	MMC / GMP
Discharge of contaminants	<p>The current discharge is likely having a minor localised impact however is non-compliant with permitted activity rules.</p> <p>Therefore, as a pragmatic approach please consider what steps can be taken to improve the quality of the</p>	<p>MMC</p> <p>MMC</p>

	<p>discharge from the factory processing area prior to discharge, potentially further storage / settlement and / or exposure to UV light could also assist in treatment.</p> <p>If there are any upgrades or increases in production of the site in the future, consider whether current system is still appropriate and or whether further treatment and /or resource consent will be required.</p>	MMC
Redundant materials	Wherever possible segregate redundant materials to one storage area. Ensure if waste is hazardous then all legislative controls are met. For non-hazardous waste best practice would be to store on an impermeable base under cover.	MMS

Photographs

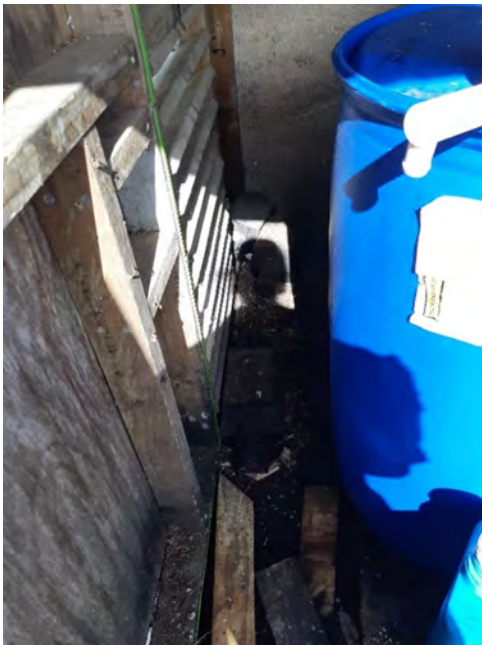


Fig. 20 Exposed earth left hand side of the Hazardous Substance storage shed.



Fig. 21 Factory discharge to coastal marine



Fig. 22 Factory discharge close up



Fig. 23 Discharge pipe for new shed directly to ground.

4.2.5 Port Nicholson (Owenga)

Contact: Shannon Peni and Peter Lanauze

Company: Port Nicholson

Land ownership: Port Nicholson

Activity: Crayfish processing factory

Management Zone: Industrial

GPS coordinates: W176.363945 S44.026506

Drainage: To ground and to nearby surface water (stream)

Compliance

RMA (1991) Section	CIRMD (2018) Rules	Permitted Activity 5.3.4 Industrial	PA Compliance	Notes	Photo Reference
S15 Discharge of contaminants into the environment	5.5.3.8 Hazardous Substances	<i>The use, storage and transportation of hazardous substances is permitted if:</i> <i>(a) there is compliance with all legislation and regulations and Codes of Practice, including the regulations under the Hazardous Substances and New Organisms Act; and</i> <i>(b) no hazardous substance may be dumped or discharged to any waterbody or water course or stormwater system and may not be dumped on land.</i>	No ¹	Site not operational – off season. Minimal amounts of Hazardous Substances on site. Evidence of spill on driveway. HS used to balance water for crayfish and detergents are washed down and discharged directly to nearby streambank. Although diluted this may still be classified as Hazardous Waste (same requirements as Hazardous Substances)	Fig. 24 Fig. 26 Fig. 27
S15(1)(b) contaminant onto or into land in circumstance which may result in that contaminant	14. Discharge of contaminants or water into water or the discharge of	<i>(i) Discharge of a contaminant or water into water or into or onto land which may result in that contaminant entering water is permitted if the discharge is for stormwater, water supply or freshwater purposes provided:</i>	(i) No	Not all stormwater Likely only minor (if at all) localised impact.	Fig. 26 & 27

(or any other contaminant emanating as a result of natural processes from that contaminant) entering water	contaminants into or onto land which may result in that contaminant entering water	<p><i>(a) the discharge after reasonable mixing shall not give rise to any of the following effects:</i></p> <p><i>(i) the production of any conspicuous scums or foams on floatable or suspended materials;</i></p> <p><i>(ii) any conspicuous change in colour or visual clarity;</i></p> <p><i>(iii) any emission of objectionable odour;</i></p> <p><i>(iv) the rendering of freshwater unsuitable for consumption by farm animals; or</i></p> <p><i>(v) any significant adverse effects on aquatic life.</i></p>			
S15 (1)(d) contaminant from any industrial or trade premises onto or into land	5.5.3.20 Discharge of contaminants onto land	<p><i>(i) Discharge of contaminants onto land is permitted if:</i></p> <p><i>(a) they are not from an industrial or trade premises; and</i></p> <p><i>(b) they are not dumped within 30 metres of a waterbody or water supply; and</i></p> <p><i>(c) they are not dumped within 50 metres of a dwelling.</i></p>	(i)(a) No	Discharge to land prior to reaching stream. From Industrial / trade premises and will include chemicals / detergents.	Fig. 26 & 27
S15 (1)(c) contaminant from any industrial or trade premises into air	5.5.3.21 Discharge of contaminants into air	<p><i>(i) Discharges of contaminants into air are permitted provided they:</i></p> <p><i>(a) do not give rise to a nuisance that would not reasonably be expected in an industrial environment; or</i></p> <p><i>(b) do not give rise to a nuisance in an adjoining zone. Live burns conducted and controlled by the New Zealand Fire Service for training purposes are exempt from this rule.</i></p>	Yes	Electricity from reticulated supply no generator.	

Recommendations

Item	Recommendation	Meeting Minimum Compliance or Good Management Practice
Hazardous Substances	<p>Current Hazardous Substance storage occurs in very small amounts.</p> <p>Ensure you are compliant with all Hazardous Substance Use and Storage legislation. WorkSafe has some very helpful guidance on its website, including a Hazardous Substances Toolbox which can assist understanding the business controls for the use and storage of types, amounts and volumes of Hazardous Substances present on site.</p>	MMC
Spill Management	<p>It is also best practice to have appropriate spill materials and associated PPE close to any area which may have the greatest risk of spills due to business activities. For some substances / volumes this will be a requirement.</p> <p>It is important staff are aware and trained in what to do in the event of a spill. For example, what PPE do they need to keep themselves safe, what do they do to contain and clean up any spills, how to dispose of contaminated/used spill equipment. This may be a requirement dependent on types and volumes of Hazardous Substances stored.</p>	MMC / GMP
Discharge of contaminants	<p>The current discharge is likely having a minor localised (if any) impact however is non-compliant with permitted activity rules.</p> <p>Therefore, as a pragmatic approach please consider what steps can be taken to improve the quality of the discharge from the factory processing area prior to discharge, potentially further storage / settlement and / or exposure to UV light could also assist in treatment.</p> <p>If there are any upgrades or increases in production of the site in the future, consider whether current system is still appropriate and or whether further treatment and /or resource consent will be required.</p>	<p>MMC</p> <p>MMC</p>
Redundant materials	Wherever possible segregate redundant materials to one storage area. Ensure if waste is hazardous then all legislative controls are met. For non-hazardous waste best practice would be to store on an impermeable base under cover.	MMC

Photographs



Fig. 24 Chemical storage shelf and record in office



Fig. 25 Vehicle oil leak in front of factory



Fig. 25 Factory and stormwater channel



Fig. 26 Stormwater discharge pipe into stream bank



Fig. 27 Downstream of discharge point

4.3 AIRPORT

The airport land and infrastructure is owned by CIET, however the fuel storage is managed by Air Chathams. Air Chathams is the sole airline for the island flying to Christchurch, Wellington, and Auckland. Air Chathams also undertakes flights from the main island to Pitt Island. Government funding has been granted to extend the runway by 400m to enable larger 737 airplanes to land thus increasing capacity for passengers and freight. The proposed work for the extension is currently going through the resource consenting process with a hearing before an independent commissioner due in August/September 2021.

Contact: Tony Gregory Hunt
 Company: Chatham Islands Enterprise Trust (CIET)
 Land ownership: CIET
 Activity: Airport / Bulk fuel Storage
 Management Zone: Industrial
 GPS coordinates: W176.47367 S43.816078

Drainage: To ground

Compliance

RMA (1991) Section	CIRMD (2018) Rules	Permitted Activity 5.3.4 Industrial	PA Compliance	Notes	Photo Reference
S15 Discharge of contaminants into the environment	5.5.3.8 Hazardous Substances	<i>The use, storage and transportation of hazardous substances is permitted if:</i> <i>(a) there is compliance with all legislation and regulations and Codes of Practice, including the regulations under the Hazardous Substances and New Organisms Act; and</i> <i>(b) no hazardous substance may be dumped or discharged to any waterbody or water course or stormwater system and may not be dumped on land.</i>	No ¹	Waste oil present on site and clearly discharging to land adjacent to building near bulk fuel storage. Bulk fuel storage ~ Static 5,000l tank for aviation fuel. Mobile fuel tank (double skinned) stored outside bunded area A mobile fuel tanker can contain up to 12,000 litres of jet fuel. Parked inside bunding leaking.	Fig. 28 Fig. 29 Fig. 30 Fig. 31 Fig. 32 Fig. 33

				Stormwater valves open.	
				Spill kits inside building.	
S15 (1)(d) contaminant from any industrial or trade premises onto or into land	5.5.3.20 Discharge of contaminants onto land	<i>(i) Discharge of contaminants onto land is permitted if:</i> <i>(a) they are not from an industrial or trade premises; and</i> <i>(b) they are not dumped within 30 metres of a waterbody or water supply; and</i> <i>(c) they are not dumped within 50 metres of a dwelling.</i>	(i)(a) Yes	Discharge to land from runway into channels. Long term may result in localised levels of Zinc and PCB's due to stormwater containing entrained particulates from wear of plane tyres.	Fig. 34 & 35
S15 (1)(c) contaminant from any industrial or trade premises into air	5.5.3.21 Discharge of contaminants into air	<i>(i) Discharges of contaminants into air are permitted provided they:</i> <i>(a) do not give rise to a nuisance that would not reasonably be expected in an industrial environment; or</i> <i>(b) do not give rise to a nuisance in an adjoining zone. Live burns conducted and controlled by the New Zealand Fire Service for training purposes are exempt from this rule.</i>	(i) Yes	No odour noticeable on site when no aircraft present. Odour present on plane arrival to be reasonably expected with an industrially zoned airport	

Recommendations

Item	Recommendation	Meeting Minimum Compliance or Good Management Practice
Hazardous Substances	Ensure you are compliant with all Hazardous Substance Use and Storage legislation. WorkSafe has some very helpful guidance on its website, including a Hazardous Substances Toolbox which can assist understanding the business controls for the use and storage of types, amounts and volumes of Hazardous Substances present on site.	MMC
	Secondary containment (bundling) when required must meet all associated codes of practice (see Worksafe). Valves are present to allow the drainage of stormwater only. Contaminated stormwater must be disposed of appropriately. Unless draining uncontaminated stormwater the valves should be closed at all times.	MMC

	<p>Fix the leak on the truck as a high priority. Clean up any spills in bunding and ensure contaminated spill absorbent is removed and disposed of appropriately.</p> <p>Irrespective of legal requirements best environmental practice would always be to store any liquids / chemicals undercover on an impermeable surface with some form of containment (reducing the risk to the environment if there were to be a spill).</p>	<p>MMS</p> <p>GMP</p>
Hazardous Waste	<p>In the last compliance visit in 2015 old oil drums were identified as an issue. Although the volumes compared to the prior visit have reduced the current drums are visibly corroded with clear evidence of holes and oil leaching to ground. This currently poses both an environmental and a human health hazard (as close to a working environment), it is also a fire risk.</p> <p>The drums need to be removed and taken to an appropriate waste facility, due to the poor integrity of these consideration will need to be given to how to decant into appropriate containment for transportation to Te One waste transfer facility.</p> <p>All contaminated soil will need to be dug up, replaced, and transported to Te One transfer station. Staff there will need to be made aware of the volumes they will be receiving prior to transportation; in order they can make sure that they can accommodate this on site.</p>	<p>MMS</p> <p>MMC</p> <p>MMC</p>
Spill Management	<p>Spills need to be contained and cleaned up if they occur.</p> <p>It is also best practice to have appropriate spill materials and associated PPE close to any area which may have the greatest risk of spills due to business activities. For some substances / volumes this will be a requirement.</p> <p>It is important staff are aware and trained in what to do in the event of a spill. For example, what PPE do they need to keep themselves safe, what do they do to contain and clean up any spills, how to dispose of contaminated/used spill equipment. This may be a requirement dependent on types and volumes of Hazardous Substances stored.</p>	<p>MMC</p> <p>MMC / GMP</p> <p>MMC / GMP</p>
Stormwater / Discharge of contaminants	<p>Runway stormwater runoff will likely contain particulates of Zinc / PCB's. It is suggested that in the long-term consideration is given to soil sampling of the stormwater ditches to ensure that concentrations do not exceed relevant guideline values.</p>	<p>GMP</p>
Redundant materials	<p>Wherever possible segregate redundant materials to one storage area. Ensure if waste is hazardous then all legislative controls are met. For non-hazardous waste best practice would be to store on an impermeable base under cover.</p>	<p>MMC</p>

Photographs



Fig 28. Old, leaking fuel storage barrels.



Fig. 29 Bulk fuel storage 5000 litres



Fig. 30 Mobile Fuel tank (double skinned) stored outside bunded area



Fig. 31 Fuel tanker leaking fuel.



Fig. 32 Stormwater valve on bunding open



Fig. 33 Spill kit present in adjacent building



Fig. 34 & 35 Open stormwater drainage channels off runway into ground and lagoon

4.4 AUTO MARINE MECHANICS

Contact: Graeme Hoare

Company: Chatham Automotive & Marine Limited

Land ownership: Chatham Automotive & Marine Limited

Activity: Vehicle Mechanics

Management Zone: Rural

GPS coordinates: W176.548556 S43.952825

Drainage: To ground

Compliance

RMA (1991) Section	CIRMD (2018) Rules	Permitted 5.3.4 Rural	PA Compliance	Notes	Photo Reference
S15(1)	5.3.4.2 Industrial and commercial activity	<i>(i) Industrial and commercial activities are permitted if: (a) They do not exceed 200 square metres in site area; and (b) They are separated by a minimum of 100m from the nearest dwelling not on the site</i>	(i)(a) No (b) Yes	As per 2015 report	
	5.3.4.3 Buildings	<i>(i) Buildings are permitted if: (a) they are set back a minimum of 10m from boundaries; and (b) they do not exceed 12m in height; and (c) they are located more than 100 metres from MHWS.</i>	(i)(a) Yes	As per 2015 report (b) not assessed (c) not assessed	
S15 Discharge of contaminants into the environment	5.3.4.8 Hazardous Substances	<i>i) The use, storage, disposal and transportation of hazardous substances is permitted if: (a) there is compliance with all legislation and regulation requirements including the regulations under the Hazardous Substances and New Organisms Act and regulations 104 and 105 of the Resource Management (National Environmental for Plantation Forestry) Regulations 2017; and (b) no hazardous substance is discharged or dumped into any waterbody or water course or stormwater system; and (c) any hazardous substance that is to be dumped on land is</i>	No ¹	Waste oil stored in 1000l drums outside front of workshop (on permeable ground). Caged, locked area with signage for gas bottles at the back of the site. Redundant materials around site. Empty gas bottles stored around site.	Fig. 37 Fig. 38 Fig. 39

		<i>sealed or contained in a manner that does not allow any discharge or escape.</i>		Spill kits present. Large kit hidden away.	
S15(1)(b) contaminant onto or into land in circumstance which may result in that contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water	5.5.3.14 Discharge of contaminants or water into water or the discharge of contaminants into or onto land which may result in that contaminant entering water	<i>(i) Discharge of a contaminant or water into water or into or onto land which may result in that contaminant entering water is permitted if the discharge is for stormwater, water supply or freshwater purposes provided: (a) the discharge after reasonable mixing shall not give rise to any of the following effects: (i) the production of any conspicuous scums or foams on floatable or suspended materials; (ii) any conspicuous change in colour or visual clarity; (iii) any emission of objectionable odour; (iv) the rendering of freshwater unsuitable for consumption by farm animals; or (v) any significant adverse effects on aquatic life.</i>	Yes	No evidence of discharges to water or land. Spill identified from 2015 report was remediated before 2019 visit.	Fig. 36
S15 (1)(d) contaminant from any industrial or trade premises onto or into land	5.4.3.24	<i>(i) Discharge of contaminants into or onto land is permitted if: (a) they are not from an industrial or trade premises, (except for fish factory wastes and septic tank sludge effluent which are permitted); and (b) they are not dumped within 30 metres of a waterbody or water supply or MHWS; and (c) they are not dumped within 50 metres of a dwelling.</i>	Yes	No evidence of any discharge of contaminants to land.	

Recommendations

Item	Recommendation	Meeting Minimum Compliance or Good Management Practice
Hazardous Substances	Ensure you are compliant with all Hazardous Substance Use and Storage legislation. WorkSafe has some very helpful guidance on its website, including a Hazardous Substances Toolbox which can assist understanding the business controls for the use and	MMC

	<p>storage of types, amounts and volumes of Hazardous Substances present on site.</p> <p>Irrespective of legal requirements best environmental practice would always be to store any liquids / chemicals undercover on an impermeable surface with some form of containment (reducing the risk to the environment if there were to be a spill).</p>	GMP
Hazardous Waste	<p>Waste oil was being stored close to the entrance to the site, in a drum on permeable ground. To reduce the risk of spills to ground, it is recommended that this is moved to an area on site which is impermeable (e.g., concrete) and if there were a spill could be quickly contained and cleaned up.</p> <p>As a business that regularly produces waste oil dependent on volumes produced and stored at any one time HSNOCOP 63 sets out how you must handle used or waste oil. You must ensure you comply with this in order to meet permitted activity rules.</p> <p>Empty gas bottles still have residual gas in them. Ensure all associated regulations are being complied with. Worksafe produce a Guide to gas cylinders which will assist in this.</p>	<p>MMC</p> <p>MMC</p> <p>MMC</p>
Spill Management	<p>Spills need to be contained and cleaned up if they occur. A small emergency kit was present and easily accessible however it would be worth ensuring the larger kit is also stored close to main points of Hazardous Substance / Waste storage.</p> <p>It is important staff are aware and trained in what to do in the event of a spill. For example, what PPE do they need to keep themselves safe, what do they do to contain and clean up any spills, how to dispose of contaminated/used spill equipment. This may be a requirement dependent on types and volumes of Hazardous Substances stored.</p>	<p>MMC / GMP</p> <p>MMC / GMP</p>
Redundant materials	<p>Wherever possible segregate redundant materials to one storage area. Ensure if hazardous waste all legislative controls are met (e.g., waste oil as above). For non-hazardous waste best practice would be to store on an impermeable base under cover.</p>	MMC

Photographs



Fig. 36 Remediated oil spill site



Fig. 37 Exposed old oil storage drums (empty)



Fig. 38 Empty gas cylinders



Fig. 39 Small emergency spill kit

4.5 WASTE MANAGEMENT / LANDFILLS / CLOSED LANDFILLS

Waste management is a big challenge for the island. There are high risks associated with the past and current practice of burial of waste with no modern geotechnical or environmental safeguards. Currently there are two operational waste transfer stations, Te One and Kaingaroa. No landfills are currently active so all waste on the island is being stored above ground at the Te One waste transfer site.

For historic landfills there is a real risk of contaminants leaching through the ground and finding a pathway to either surface or groundwater. It is highly likely that these landfills contain hazardous substances buried many years ago (which may no longer be approved for use) and could be extremely harmful to both humans and ecological life.

As a priority to mitigate this risk for all such sites it would be recommended that CIC along with other partner organisations of the CIC Investment Strategy:

- Secure funding options in order that specialist technical advice is sought for all 'closed' landfills on the island (including any known areas of historic / active dumping)
- Based on this advice consider long-term environmental monitoring programmes and any necessary remediation of these sites
- Any advice secured is qualified and experienced to make assessments.

The most recent consented landfill at Owenga is an example of the challenges that CIC have when modern infrastructure is in place, this facility was built over 6 years ago however is yet to become operative due to the waste bailing not being available and no operators available on the island. With a recent increase in the operational budget, a contract has now been awarded to Fulton Hogan to operate all waste management facilities on the island, including the landfill, commencing on the 1 August 2021. A resource consent for the site had been issued, but no copy of this consent had been received prior to visiting the site. Therefore, the site has only been monitored for compliance under the RMA (1991) and the CIRMD (2018), not for compliance with consent conditions.

Provisions have been made in the CIRMD to allow for dumping of fish and sanitary waste to land on rural areas, with no environmental mitigation provisions as a permitted activity in Rural zones. From an environmental perspective there is still a high risk of nearby streams and groundwater being contaminated due to high nutrient loading in a small area and cultural disharmonies with this practice need consideration. Again, the recommendation would be for CIC and other partner organisations to secure specialist technical and environmental advice on both the Fish Dump and Sanitary Waste dump in order that appropriate environmental mitigation for current and future impacts is considered and put in place if necessary.

Both waste streams will have a high nutrient content which potentially could be of benefit to land if managed appropriately. There is a real opportunity for the fish waste to be utilised for a source of compost, there may be grants available to CIC or island landowners who may want to consider this, in conjunction with green waste produced by households and business.

The sanitary waste stream could be considered in any upgrades of the waste-water treatment plant. The island would benefit from the implementation of a waste minimisation strategy.

4.5.1 Te One Waste Transfer Station (Active), Landfill (Closed)

Contact: Owen Pickles / Colleen Clearwater

Company: Chatham Island Council

Land ownership: Chatham Island Council

Activity: Waste Transfer / Storage (closed landfill)

Management Zone: Rural

GPS coordinates: W176.532321 S43.906668

Drainage: To ground (to contaminated land) and culturally significant site

Compliance

RMA (1991) Section	CIRMD (2018) Rules	Permitted 5.3.4 Rural	PA Compliance	Notes	Photo Reference
N/A	5.3.4.2 Industrial and commercial activity	<i>(i) Industrial and commercial activities are permitted if: (a) They do not exceed 200 square metres in site area; and (b) They are separated by a minimum of 100m from the nearest dwelling not on the site</i>	(i)(a) Not assessed (b) Yes	No nearby dwellings	
S15 Discharge of contaminants into the environment	5.3.4.8 Hazardous Substances	<i>i) The use, storage, disposal and transportation of hazardous substances is permitted if: (a) there is compliance with all legislation and regulation requirements including the regulations under the Hazardous Substances and New Organisms Act and regulations 104 and 105 of the Resource Management (National Environmental Forestry) Regulations 2017; and (b) no hazardous substance is discharged or dumped into any waterbody or water course or stormwater system; and (c) any hazardous substance that is to be dumped on land is sealed or contained in a manner that does not allow any discharge or escape.</i>	No ¹	Segregation of waste is evident. Hazardous Substances have a separate storage area. The majority looks to be waste oil. This appears to be dropped off in smaller containers and then decanted into larger barrels and stored inside the shipping container.	Fig. 40-44 Fig. 40

	5.4.3.18 Discharge of contaminants into air	<i>(i) Discharges of contaminants including odour particulates into air are permitted provided they do not give rise to a nuisance that would not reasonably be expected in a normal working rural environment. Live burns conducted and controlled by the New Zealand Fire Service for training purposes are exempt from this rule.</i>	Yes	No odour detectable beyond the site boundary No evidence of recent burning waste which was reported in both 2015 and 2019 reports.	
S15 (1)(d) contaminant from any industrial or trade premises onto or into land	5.4.3.24	<i>(i) Discharge of contaminants into or onto land is permitted if: (a) they are not from an industrial or trade premises, (except for fish factory wastes and septic tank sludge effluent which are permitted); and (b) they are not dumped within 30 metres of a waterbody or water supply or MHWS; and (c) they are not dumped within 50 metres of a dwelling.</i>	(i) (a) Unable to assess where hazardous waste arose from however likely some from tradewaste / industrial.		

Recommendations

Closed Landfill and current land used as waste transfer site.

CIC have advised that they are aware of the cultural sensitivities of this site and numerous cultural audits have been undertaken. CIC have agreed with Imi and Iwi to only operate on the upper level and some tree plantings have already been undertaken.

As stated in 4.5 above, specialist qualified advice be secured for determining what environmental monitoring, remediation and or mitigation will be required in the short, medium and long-term. ECan's contaminated land team would be able to further guide CIC on what 'specialised qualified' advice would be required to give assurances this is robust and to the standard required.

Recommendations

For Waste Transfer site (until above AIA has been undertaken)

Item	Recommendation	Meeting Minimum Compliance or Good Management Practice
Hazardous Substances	<p>Ensure you are compliant with all Hazardous Substance Use and Storage legislation (to meet Permitted Activity rules). WorkSafe has some very helpful guidance on its website, including a Hazardous Substances Toolbox which can assist understanding the business controls for the use and storage of types, amounts and volumes of Hazardous Substances present on site.</p> <p>Irrespective of legal requirements best environmental practice would always be to store any liquids / chemicals undercover on an impermeable surface with some form of containment (reducing the risk to the environment if there were to be a spill).</p>	<p>MMC</p> <p>GMP</p>
Hazardous Waste	<p>As a business that regularly produces / stores waste oil, HSNOCOP 63 sets out how you must handle used or waste oil. You must ensure you comply with this in to meet permitted activity rules.</p>	<p>MMC</p>
Spill Management	<p>Spills need to be contained and cleaned up if they occur. A small emergency kit was present and easily accessible however it would be worth ensuring the larger kit is also stored close to main points of Hazardous Substance / Waste storage.</p> <p>It is important staff are aware and trained in what to do in the event of a spill. For example, what PPE do they need to keep themselves safe, what do they do to contain and clean up any spills, how to dispose of contaminated/used spill equipment. This may be a requirement dependent on types and volumes of Hazardous Substances stored.</p>	<p>MMC / GMP</p> <p>MMC / GMP</p>
Redundant materials	<p>Wherever possible segregate redundant materials to one storage area. Ensure if waste is hazardous then all legislative controls are met (e.g. waste oil as above). For non-hazardous waste best practice would be to store on an impermeable base under cover.</p>	<p>MMC</p>

Photographs



Fig. 40 Waste Oil storage closed landfill



Fig. 41 Current waste stored on top of old Te One



Fig. 42 Baled recycling



Fig. 43 Bagged rubbish



Fig. 44 Sorted miscellaneous refuse.

4.5.2 Owenga Landfill (Closed)

Contact: Owen Pickles / Colleen Clearwater

Company: Chatham Island Council

Land ownership: CIC Lease from Alfred and Robyn Preece 99 years

Activity: Waste Transfer / Storage (closed landfill)

Management Zone: Rural

GPS coordinates: W176.413007 S44.003644

Recommendations as stated in 4.5 secure specialist qualified advice for what environmental monitoring, remediation and / or mitigation will be required in the short, medium and long-term.

Photographs



Fig. 44 Cap failure/erosion



Fig. 45 Recently closed landfill
(overview from top)



Fig. 46 Container of oil dumped at gate.

4.5.3 Owenga Fish Dump (Active)

Contact: Owen Pickles / Colleen Clearwater

Company: Chatham Island Council

Land ownership: CIC Lease from Alfred and Robyn Preece 99 years

Activity: Waste Disposal

Management Zone: Rural

GPS coordinates: W176.414593 S44.010262

Drainage: To ground

This site was described in 2015 as ‘temporary’. The 2019 report stated “the fish dump is still active today although significantly less waste is being disposed of due to the waste minimisation efforts of the fish factories”. At the time of the 2021 visit, the site was still active, although there was little waste at the time of the visit as it was the quiet season. Whilst there are provisions allowing dumping of fish waste to rural land which results in compliance with Permitted Activity rules this practice has significant environmental risks which need to be considered in the dumps short, medium and long-term management.

Compliance

RMA (1991) Section	CIRMD (2018) Rules	Permitted 5.3.4 Rural	PA Compliance	Notes	Photo Reference
S15 (1)(d) contaminant from any industrial or trade premises onto or into land	5.4.3.24	<i>(i) Discharge of contaminants into or onto land is permitted if:</i> <i>(a) they are not from an industrial or trade premises, (except for fish factory wastes and septic tank sludge effluent which are permitted); and</i> <i>(b) they are not dumped within 30 metres of a waterbody or water supply or MHWS; and</i> <i>(c) they are not dumped within 50 metres of a dwelling.</i>	(i)(a) Yes – fish factory waste (b) no evidence of surface waterbody in 30 metre radius of fish dump (c) no dwelling within 50m	Unable to assess distance to groundwater.	Fig. 47 & 48

Recommendations as stated in 4.5.

It should also be noted that the definition of waterbody in the CIRMD is:

“**Water body** means fresh water or geothermal water in a river, lake, stream, pond, wetland, or aquifer, or any part thereof, that is not located within the coastal marine area and for the purposes of this document includes Te Whanga.”

Therefore, undertaking recommendations as stated in 4.5. would need to include an assessment of any shallow aquifers. This information may already be available with work / monitoring bore holes associated with the nearby Owenga Landfill (see 4.5.5).

Photographs



Fig. 47 Fish carcass waste



Fig. 48 Fish dump with dirt waiting to bury waste

4.5.4 Kaingaroa Landfill (Closed)

Contact: Susan Thorpe

Company: Hokotehi Moriori Trust

Land ownership: Hokotehi Moriori Trust

Activity: Landfill (closed landfill)

Management Zone: Rural

GPS coordinates: W176.267149 S43.731927

Drainage: To ground

This 'closed' landfill situated in close to Lake te Wepu, therefore there is a very real risk of contaminants leaching into the waterway now and / or in the future. There was much exposed landfill through the cap. The CIC have advised that some capping work was undertaken by the Hokotehi Moriori Trust at the Council's expense. However, further work is required to remedy potential present and future contaminant leaching. Hokotehi Moriori Trust have previously commissioned a report on this Landfill which gave recommendations.

We would recommend that further specialist qualified advice be sought as stated in 4.5.

Photographs



Fig. 49 Exposed refuse through landfill cap



Fig. 50 Proximity of landfill to waterway and Lake te Wepu

4.5.5 Owenga Landfill (Inactive)

Contact: Owen Pickles / Colleen Clearwater

Company: Chatham Island Council

Land ownership: CIC Lease from Alfred and Robyn Preece 99 years

Activity: Landfill

Management Zone: Rural

GPS coordinates: W176.414593 S44.010262

Drainage: To settling pond, then wetland treatment system, then discharged through perforated pipe to ground.

A resource consent for the site had been issued, but no copy of this consent had been received prior to visiting the site. Therefore, compliance was unable to be assessed.

Photographs



Fig. 51 Sorted waste storage site



Fig. 52 Liquid waste settling pond



Fig. 53 Filtration tank



Fig. 54 Pipe from filtration tank to discharge field

4.5.6 Sanitary Landfill (Active)

Contact: Owen Pickles / Colleen Clearwater

Company: Chatham Island Council

Land ownership: CIC Lease from Alfred and Robyn Preece 99 years

Activity: Waste pump

Management Zone: Rural

GPS coordinates: W176.414593 S44.010262

Drainage: To ground

Compliance

RMA (1991) Section	CIRMD (2018) Rules	Permitted 5.3.4 Rural	PA Compliance	Notes	Photo Reference
S15 (1)(d) contaminant from any industrial or trade premises onto or into land	5.4.3.24	<i>(i) Discharge of contaminants into or onto land is permitted if: (a) they are not from an industrial or trade premises, (except for fish factory wastes and septic tank sludge effluent which are permitted); and (b) they are not dumped within 30 metres of a waterbody or water supply or MHWS; and (c) they are not dumped within 50 metres of a dwelling.</i>	(i)(a) Yes – septic tank sludge (b) Unable to assess wetland status (c) Yes - no dwelling within 50m	Unable to assess distance to groundwater	Fig. 55

Recommendations as stated in 4.5.

It should also be noted that the definition of waterbody in the CIRMD is:

“Water body means fresh water or geothermal water in a river, lake, stream, pond, wetland, or aquifer, or any part thereof, that is not located within the coastal marine area and for the purposes of this document includes Te Whanga.”

“Wetland is an area of shallow water and land water margins which contain predominantly indigenous vegetation and/or habitat for indigenous fauna. A wetland does not include areas of exotic pasture where water ponds after rain and does not include areas predominantly covered in bracken fern.

Therefore, undertaking recommendations as stated in 4.5. would need to include an assessment of any shallow aquifers. This information may already be available with work / monitoring bore holes associated with the nearby Owenga Landfill (see 4.5.5). It would also need to include an assessment from a specialist ecologist as to whether the current location would be classified as a wetland, DoC may be able to assist with this.

Photographs



Fig. 55 Septic waste dump

4.5.7 Kaingaroa Waste Transfer Station (Active)

Contact: Owen Pickles / Colleen Clearwater

Company: Chatham Island Council

Land ownership: Kaingaroa Sports and Social Club

Activity: Waste Transfer Station

Management Zone: Rural

GPS coordinates: W176.267149 S43.731927

Drainage: To ground

Compliance

RMA (1991) Section	CIRMD (2018) Rules	Permitted 5.3.4 Rural	PA Compliance	Notes	Photo Reference
S15 Discharge of contaminants into the environment	5.3.4.8 Hazardous Substances	<p><i>i) The use, storage, disposal and transportation of hazardous substances is permitted if:</i></p> <p><i>(a) there is compliance with all legislation and regulation requirements including the regulations under the Hazardous Substances and New Organisms Act and regulations 104 and 105 of the Resource Management (National Environmental for Plantation Forestry) Regulations 2017; and</i></p> <p><i>(b) no hazardous substance is discharged or dumped into any waterbody or water course or stormwater system; and</i></p> <p><i>(c) any hazardous substance that is to be dumped on land is sealed or contained in a manner that does not allow any discharge or escape.</i></p>	No ¹	<p>Hazardous Substances / Waste has a designated area on the site however if any leaked they would discharge straight to ground.</p> <p>Hazardous Substances / Waste has a designated area on the site however if any leaked they would discharge straight to ground.</p> <p>Containers of waste oil were present with no lids.</p> <p>Wild cats were observed pulling out domestic waste. From the trailer cage.</p>	<p>Fig. 57</p> <p>Fig. 57</p> <p>Fig. 58</p>
S15(1)(b) contaminant onto or into land in circumstance	5.5.3.14 Discharge of contaminants or water	<i>(i) Discharge of a contaminant or water into water or into or onto land which may result in that contaminant entering water is permitted if the discharge is</i>	(i) Yes	No evidence of discharges to land (although currently high risk from	

which may result in that contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water	into water or the discharge of contaminants into or onto land which may result in that contaminant entering water	<p><i>for stormwater, water supply or freshwater purposes provided:</i></p> <p><i>(a) the discharge after reasonable mixing shall not give rise to any of the following effects:</i></p> <p><i>(i) the production of any conspicuous scums or foams on floatable or suspended materials;</i></p> <p><i>(ii) any conspicuous change in colour or visual clarity;</i></p> <p><i>(iii) any emission of objectionable odour;</i></p> <p><i>(iv) the rendering of freshwater unsuitable for consumption by farm animals; or</i></p> <p><i>(v) any significant adverse effects on aquatic life.</i></p>		Hazardous Substance storage)	
S15 (1)(c) contaminant from any industrial or trade premises into air	5.4.3.18 Discharge of contaminants into air	<i>(i) Discharges of contaminants including odour particulates into air are permitted provided they do not give rise to a nuisance that would not reasonably be expected in a normal working rural environment. Live burns conducted and controlled by the New Zealand Fire Service for training purposes are exempt from this rule.</i>	Yes	No odour was evident on site or past site boundary.	
S15 (1)(d) contaminant from any industrial or trade premises onto or into land	5.4.3.24	<p><i>(i) Discharge of contaminants into or onto land is permitted if:</i></p> <p><i>(a) they are not from an industrial or trade premises, (except for fish factory wastes and septic tank sludge effluent which are permitted); and</i></p> <p><i>(b) they are not dumped within 30 metres of a waterbody or water supply or MHWS; and</i></p> <p><i>(c) they are not dumped within 50 metres of a dwelling.</i></p>	Yes	<p>No evidence of any discharge of contaminants to land. (Although high risk from Hazardous Substance Storage area)</p> <p>Unable to assess whether from domestic or industrial or trade premises (likely a mix).</p>	

Recommendations

Item	Recommendation	Meeting Minimum Compliance or Good Management Practice
Hazardous Substances	<p>Ensure you are compliant with all Hazardous Substance Use and Storage legislation (to meet Permitted Activity rules). WorkSafe has some very helpful guidance on its website, including a Hazardous Substances Toolbox which can assist understanding the business controls for the use and storage of types, amounts and volumes of Hazardous Substances present on site.</p> <p>Consider whether a small bunded concrete pad undercover for hazardous substance storage may reduce the risk of contamination to ground. Greater education on the risks of waste oil and hazardous substances to the environment should be considered.</p> <p>Irrespective of legal requirements best environmental practice would always be to store any liquids / chemicals undercover on an impermeable surface with some form of containment (reducing the risk to the environment if there were to be a spill).</p>	<p>MMC</p> <p>MMC / GMP</p> <p>GMP</p>
Hazardous Waste	<p>As a premises that regularly produces / stores waste oil, HSNOCOP 63 sets out how you must handle used or waste oil. You must ensure you comply with this in to meet permitted activity rules.</p>	<p>MMC</p>
Spill Management	<p>Spills need to be contained and cleaned up if they occur. A small emergency kit was present and easily accessible however it would be worth ensuring the larger kit is also stored close to main points of Hazardous Substance / Waste storage.</p> <p>It is important staff are aware and trained in what to do in the event of a spill. For example, what PPE do they need to keep themselves safe, what do they do to contain and clean up any spills, how to dispose of contaminated/used spill equipment. This may be a requirement dependent on types and volumes of Hazardous Substances stored.</p> <p>No spill kits on site. Consider getting and in the event of a spill how this would be managed on an unstaffed site.</p>	<p>MMC / GMP</p> <p>MMC / GMP</p>
General Waste Mgt	<p>Waste and litter was observed beyond the perimeter of the transfer site. Ensure that all waste remains within the boundary.</p> <p>Wild cats were observed accessing the cage for domestic refuse leaving bags open to the elements and being spread around the area. Consider alterations or an alternative form of storage which will prevent this from occurring.</p>	<p>GMP</p>

Photographs



Fig. 56 Kaingaroa Transfer Station



Fig. 57 Hazardous Substance segregation



Fig. 58 Open trailer for household refuse

4.5.8 Illegal Dumping Site – Port Hutt

See part 6.1 of this report.

4.6 QUARRIES

Contact: Philip Holt

Company: Fulton Hogan

Land ownership: Various

Activity: Quarrying

Management Zone: Rural

GPS coordinates: Various

Drainage: To ground / nearby surface water

There are 8 quarry sites on the island. Due to time restrictions one representative quarry site (Waitaha) was visited. This site was currently not operational and has enough metal to last approximately two more years prior to any more quarrying required.

This is used by Fulton Hogan for regular road maintenance.

Compliance

RMA (1991) Section	CIRMD (2018) Rules	Permitted 5.3.4 Rural,	PA Compliance	Notes	Photo Reference
S15	5.3.4.15	<p><i>(i) Quarry activities are permitted at the following sites:</i></p> <p><i>(a) Waitaha (SQ.1)</i></p> <p><i>(b) Matarakau (SQ.2)</i></p> <p><i>(c) C. Preeces (SQ.3)</i></p> <p><i>(d) Stony Creek (SQ.4)</i></p> <p><i>(e) Paritu (SQ.5)</i></p> <p><i>(f) Waihatu Bay (SQ.6)</i></p> <p><i>(g) Kaiwhata (SQ.7)</i></p> <p><i>(h) Rongamaiponga (Lime Pit) (SQ.8)</i></p> <p><i>(i) Existing farm quarries provided the material is for non-commercial purposes</i></p> <p><i>Provided: (a) the activity does not result in any change to the colour or visual clarity of water, including coastal water, other than of a temporary nature; and</i></p> <p><i>(b) fish passage is not impeded as a result of the quarry operations.</i></p> <p><i>Note: Rule 5.3.4.15 does not apply to forestry quarrying, which is regulated under regulations 50 to 61 of the Resource Management (National Environmental</i></p>	Yes	While only one quarry site was visited, and this was not operational, there was no sediment discharge observed into the neighbouring waterway and there was a good bund in place along the quarry edge	Fig. 59 and 60

Photographs



Fig. 59 Bunded quarry edge along waterway



Fig. 60 Quarry site

4.7 FULTON HOGAN DEPOT

Contact: Philip Holt

Company: Fulton Hogan

Land ownership: CIC

Activity: Depot (Supporting roading operations)

Management Zone: Industrial

GPS coordinates: W176.55644 S43.95334

Drainage: To Ground

Compliance

RMA (1991) Section	CIRMD (2018) Rules	Permitted Activity 5.3.4 Industrial	PA Compliance	Notes	Photo Reference
S15 Discharge of contaminants into the environment	5.5.3.8 Hazardous Substances	<i>The use, storage and transportation of hazardous substances is permitted if:</i> <i>(a) there is compliance with all legislation and regulations and Codes of Practice, including the regulations under the Hazardous Substances and New Organisms Act; and</i> <i>(b) no hazardous substance may be dumped or discharged to any waterbody or water course or stormwater system and may not be dumped on land.</i>	Yes ¹	Use of Hazardous Substances mainly herbicides for gorse control. Hazardous Substance storage locked area. SDS present. On spill pallets, would be contained if any spillage.	Fig. 61 & 62
S15 (1)(d) contaminant from any industrial or trade premises onto or into land	5.5.3.20 Discharge of contaminants onto land	<i>(i) Discharge of contaminants onto land is permitted if:</i> <i>(a) they are not from an industrial or trade premises; and</i> <i>(b) they are not dumped within 30 metres of a waterbody or water supply; and</i> <i>(c) they are not dumped within 50 metres of a dwelling.</i>	(i)(a) Yes	No evidence of any discharge of contaminants to land.	
S15 (1)(c) contaminant from any industrial or trade premises into air	5.5.3.21 Discharge of contaminants into air	<i>(i) Discharges of contaminants into air are permitted provided they:</i> <i>(a) do not give rise to a nuisance that would not reasonably be expected in an industrial environment; or</i> <i>(b) do not give rise to a nuisance in an adjoining zone. Live burns conducted and controlled by the New Zealand Fire Service for</i>	(i) Yes	Reticulated electricity supply no generator No odour noticeable on site when no aircraft present. Odour present on plane arrival to be reasonably expected with an	

		<i>training purposes are exempt from this rule.</i>		industrially zoned airport	
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Recommendations

Item	Recommendation	Meeting Minimum Compliance or Good Management Practice
Hazardous Substances	<p>Ensure you are compliant with all Hazardous Substance Use and Storage legislation (to meet Permitted Activity rules). WorkSafe has some very helpful guidance on its website, including a Hazardous Substances Toolbox which can assist understanding the business controls for the use and storage of types, amounts and volumes of Hazardous Substances present on site.</p> <p>Irrespective of legal requirements best environmental practice would always be to store any liquids / chemicals undercover on an impermeable surface with some form of containment (reducing the risk to the environment if there were to be a spill).</p>	<p>MMC</p> <p>GMP</p>
Hazardous Waste	As a business that regularly produces / stores waste oil, HSNOCOP 63 sets out how you must handle used or waste oil . You must ensure you comply with this in to meet permitted activity rules.	MMC
Spill Management	<p>Spills need to be contained and cleaned up if they occur. A small emergency kit was present and easily accessible however it would be worth ensuring the larger kit is also stored close to main points of Hazardous Substance / Waste storage.</p> <p>It is important staff are aware and trained in what to do in the event of a spill. For example, what PPE do they need to keep themselves safe, what do they do to contain and clean up any spills how to dispose of contaminated/used spill equipment. This may be a requirement dependent on types and volumes of Hazardous Substances stored.</p>	<p>MMC / GMP</p> <p>MMC / GMP</p>
Redundant materials	Wherever possible segregate redundant materials to one storage area. Ensure if hazardous waste all legislative controls are met (e.g. waste oil as above). For non-hazardous waste best practice would be to store on an impermeable base under cover.	MMC

Photographs



Figs. 61 and 62 hazardous substance storage

4.8 CHATHAM ISLAND ROADING NETWORK

The roading networks on Chatham Island and Pitt Island provide vital transport links. A network maintenance strategy operated by Council is designed to protect the roading asset, in which all roads are graded depending on their use. Adverse effects associated with the roading resource include the effects of activities carried out on roads and the effects of activities on the safe and efficient functioning of the network.

4.8.1 Roads

Contact: Philip Holt

Company: Fulton Hogan

Land ownership: Chatham Island Council

Activity: Road maintenance

Management Zone: Rural, Industrial and Settlement

GPS coordinates: Various

RMA (1991) Section	CIRMD (2018) Rules	Permitted 5.3.4 Rural, 5.4.3 Settlement and 5.5.3 Industrial	PA Compliance	Notes	Photo Reference
S15	5.3.4.11 Roads	<i>(i) Road construction, maintenance and modification, including stockpiling of roading materials, is a permitted activity if (a) it is within any existing road reserve; or (b) within 10 metres of the existing road formation.</i>	Yes	Road maintenance was occurring on several roads during our visit. No sediment discharge into waterways was observed. Good watertabling and road cutouts were observed for road run-off control on shingle roads. The sealed roads were observed to be in good condition and regular, ongoing maintenance plans have been developed for the whole roading network. No new road construction activities were being undertaken at the time of the site visit.	Fig. 63 and 64.
S15	5.4.3.16	<i>(i) Road construction, maintenance and modifications, including stockpiling of roading materials, is a permitted activity if: (a) it is within any existing road reserve or within 10 metres of the</i>	Yes	See above	

		<i>existing road formation; (b) no other rules are applicable to this activity</i>			
S15	5.5.3.13	<i>(i) Road construction, maintenance and modifications, including stockpiling of roading materials, is a permitted activity if: (a) it is within any existing road reserve or within 10 metres of the existing road formation</i>	Yes	See above	

Photographs



Fig. 63 Road cut-out



Fig. 64 Gravel road grading in progress.

4.8.2 Culverts

See 4.5 and 4.7 for compliance with the resource consents issued for culvert and bridge replacement activities.

4.9 BULK FUEL STORAGE

4.9.1 Kaingaroa Bulk Fuel Storage

Contact: Monique Croon

Company: Chatham Hardware

Land ownership: Owned by Hokotehi Moriori Trust and operated by Chatham Hardware (fuel management /)

Activity: Fuel service station

Management Zone: Industrial

GPS coordinates: W176.268599 S43.731587

Drainage: To ground, in proximity to the coastal marine environment

The Kaingaroa fuel site can hold up to 40,000 litres of diesel in two 20,000 litre underground tanks. The diesel pumps are used to fuel boats and vehicles. It is an unstaffed site.

Compliance

RMA (1991) Section	CIRMD (2018) Rules	Permitted Activity 5.3.4 Industrial	PA Compliance	Notes	Photo Reference
S15 Discharge of contaminants into the environment	5.5.3.8 Hazardous Substances	<i>The use, storage and transportation of hazardous substances is permitted if:</i> <i>(a) there is compliance with all legislation and regulations and Codes of Practice, including the regulations under the Hazardous Substances and New Organisms Act; and</i> <i>(b) no hazardous substance may be dumped or discharged to any waterbody or water course or stormwater system and may not be dumped on land.</i>	Unable to assess ¹	Unstaffed site. No spill kit present.	Fig. 65 & 66
S15 (1)(d) contaminant from any industrial or trade premises onto or into land	5.5.3.20 Discharge of contaminants onto land	<i>(i) Discharge of contaminants onto land is permitted if:</i> <i>(a) they are not from an industrial or trade premises; and</i> <i>(b) they are not dumped within 30 metres of a waterbody or water supply; and</i> <i>(c) they are not dumped within 50 metres of a dwelling.</i>	(i)(a) Yes	No evidence of any discharge of contaminants to land. However, integrity of underground tank unknown.	

Recommendations

Item	Recommendation	Meeting Minimum Compliance or Good Management Practice
Hazardous Substances	<p>Ensure you are compliant with all Hazardous Substance Use and Storage legislation (to meet Permitted Activity rules). WorkSafe has some very helpful guidance on its website, including a Hazardous Substances Toolbox which can assist understanding the business controls for the use and storage of types, amounts and volumes of Hazardous Substances present on site.</p> <p>Check integrity of underground tanks, consider options for fuel reconciliation if not already undertaken.</p> <p>Continue to progress future plans and ensure that storage and use meets all Hazardous Substance legislation.</p>	<p>MMC</p> <p>MMC</p> <p>MMC</p>
Spill Management	<p>Due to the isolated location of the diesel pump, bowser and underground tanks develop a spill management plan, including housing spill kit, for this to be effective it would need to be in collaboration with the local community who regularly utilize the pump / and or are in the area.</p>	MMC / GMP

Photographs



Fig. 65 and 66 Kaingaroa bulk fuel store

4.9.2 Waitangi Hardware Store

Contact: Monique Croon

Company: Chatham Hardware

Land ownership: Owned

Activity: Fuel service station

Management Zone: Settlement

GPS coordinates: W176.559598 S43.952106

Drainage: To ground and to swale / nearby stream

Compliance

RMA (1991) Section	CIRMD (2018) Rules	Permitted Activity 5.3.4 Settlement	PA Compliance	Notes	Photo Reference
N/A	5.4.3.2 – 5.4.3.9	See CIRMD	Yes	As per previous reports	
S15 Discharge of contaminants into the environment	5.4.3.10 Hazardous Substances	<p><i>(i) The use, storage and transportation of hazardous substances is permitted if:</i></p> <p><i>(a) the amount of diesel stored per site does not exceed 1200 litres, provided that existing farm units shall be permitted to store a maximum of 2,500 litres; and</i></p> <p><i>(b) there is compliance with all legislation and regulation requirements, including the regulations under the Hazardous Substances and New Organisms Act; and</i></p> <p><i>(c) no hazardous substance may be dumped or discharged into any waterbody or water course or stormwater system or dumped on land.</i></p>	No ¹	<p>Three tanks are operational, maximum volume of 17,000 litres each which is over >1200 litres permitted in a Settlement Zone. Infrastructure on concrete pad with interceptor, currently no scheduled maintenance regime.</p> <p>Unable to gain test location certificates for tanks. The metal bunding intact although visibly rusting. Likely hold 110% of tanks. Drainage valves observed open.</p> <p>Spill kits present, could improve access.</p>	<p>Fig. 67</p> <p>Fig. 67</p> <p>Fig. 69</p>

				<p>Diesel and petrol additionally stored outside bunds.</p> <p>Full gas bottles caged and locked with signage. Empty gas bottles located close to caged area open.</p>	
S15(1)(b) contaminant onto or into land in circumstance which may result in that contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water	<p>5.4.3.19 and 24</p> <p>Discharge of contaminants or Water into Water or the Discharge of Contaminants into land Which May Result in that Contaminant Entering Water</p>		No	Localised discharge of contaminants to land via interceptor system.	Fig. 70

Recommendations

Item	Recommendation	Meeting Minimum Compliance or Good Management Practice
Hazardous Substances	<p>Progress current plans to upgrade the infrastructure for fuel storage on site, ensure all plans meet Hazardous Substance legislation. Current timeline for completion July '21. If there is any change in these plans notify CIC.</p> <p>Apply for discretionary Resource Consent (for upgrade plans) OR reduce volumes below 1200 litres</p> <p>Ensure that stormwater is only drained from metal bunding after visual inspection confirms no contamination AND after draining valves are switched to closed.</p> <p>Small volumes (portable) of petrol and diesel are stored on impermeable surface undercover in closed petrol / diesel cannisters >100 litres. <i>Utilise as soon as practicable to avoid.</i></p> <p>Empty gas bottles still have residual gas in them. Ensure all associated regulations are</p>	<p>MMC</p> <p>MMC</p> <p>MMC</p> <p>MMC / GMP</p>

	being complied with. Worksafe produce a Guide to gas cylinders which will assist in this.	MMC
Spill Management	Ensure existing spill kits are located close to area spills may occur and access is free from obstruction. It is also important that staff are familiar with their contents and how to use them to ensure a timely response in the event of an emergency.	GMP
	Place drip trays under vehicles if leaks noticed / when stationary. Notify driver / company to fix.	GMP
Discharge of contaminants	Regularly clean out interceptor and check integrity. Add to scheduled maintenance regime. Check quality of discharge when raining.	MMC
	Dig out any historically contaminated soil around stormwater discharge from interceptor and replace, treat as hazardous waste and dispose of appropriately.	MMC
	Fix drainage pipe.	MMC

Photographs



Fig. 67 Bulk fuel storage tanks



Fig 68. Tanker fuel leak on bunded area



Fig. 69 Obstructed spill kits in shed.



Fig. 70 Stormwater discharge point to creek behind concrete pad.

4.9.3 Dough 'n go

Contact: Toni Gregory-Hunt

Company: Dough'n go

Land ownership: Chatham Island Enterprise Trust

Activity: Fuel service station

Management Zone: Rural

GPS coordinates: W176.554843E S43.953937

The Dough'n go store provides food and other general items in addition to diesel. The fuel is stored in two underground storage tanks with a combined capacity of 15,000 litres. The pumps and storage tanks are owned by CIET but leased and operated by Dough'n go.

Compliance

RMA (1991) Section	CIRMD (2018) Rules	Permitted 5.3.4 Rural	PA Compliance	Notes	Photo Reference
S15 Discharge of contaminants into the environment	5.3.4.8 Hazardous Substances	<i>i) The use, storage, disposal and transportation of hazardous substances is permitted if: (a) there is compliance with all legislation and regulation requirements including the regulations under the Hazardous Substances and New Organisms Act and regulations 104 and 105 of the Resource Management (National Environmental for Plantation Forestry) Regulations 2017; and (b) no hazardous substance is discharged or dumped into any waterbody or water course or stormwater system; and (c) any hazardous substance that is to be dumped on land is sealed or contained in a manner that does not allow any discharge or escape.</i>	No ¹	Two underground tanks total maximum 15,000l diesel	
S15 (1)(c) contaminant from any industrial or	5.4.3.18 Discharge of	<i>(i) Discharges of contaminants including odour particulates into air</i>	Yes	No odour was evident on site	

trade premises into air	contaminants into air	<i>are permitted provided they do not give rise to a nuisance that would not reasonably be expected in a normal working rural environment. Live burns conducted and controlled by the New Zealand Fire Service for training purposes are exempt from this rule.</i>		or past site boundary.	
S15 (1)(d) contaminant from any industrial or trade premises onto or into land	5.4.3.24	<i>(i) Discharge of contaminants into or onto land is permitted if: (a) they are not from an industrial or trade premises, (except for fish factory wastes and septic tank sludge effluent which are permitted); and (b) they are not dumped within 30 metres of a waterbody or water supply or MHWS; and (c) they are not dumped within 50 metres of a dwelling.</i>	No	Evidence of staining indicating discharge to land from frequent amounts of fuel leaking when people fill up vehicles.	Fig. 71

Recommendations

Item	Recommendation	Meeting Minimum Compliance or Good Management Practice
Hazardous Substances	<p>Ensure you are compliant with all Hazardous Substance Use and Storage legislation (to meet Permitted Activity rules). WorkSafe has some very helpful guidance on its website, including a Hazardous Substances Toolbox which can assist understanding the business controls for the use and storage of types, amounts and volumes of Hazardous Substances present on site.</p> <p>Check integrity of underground tanks, consider options for fuel reconciliation if not already undertaken.</p> <p>Long term, consider extending concrete pad whether an oil interceptor / concrete lip and bunding required.</p>	<p>MMC</p> <p>MMC MMC / GMP</p>
Spill Management	Clean up historic staining and replace as necessary with clean materials.	MMC / GMP

	Consider storing spill kit closer to location of the pumps. Currently housed inside storage shed. It is also important that staff are familiar with their contents and how to use them to ensure a timely response in the event of an emergency.	GMP
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Photographs



Fig. 71 Fuel spills evident on forecourt

4.10 WHARVES AND VESSEL SLIPWAYS

CIC confirmed that it has a contract in place to annually assess wharves. This is conducted by a specialist engineer. It must be highlighted that the assessments below are observational only and not conducted by specialist engineers. The wharves at Kaingaroa and Port Hutt require significant investment in either reinstating or removing the structures. The CIC is actively working towards the replacement of the wharf at Kaingaroa and an engineers report on options and costings is due shortly. The Owenga wharf, while relatively new, requires regular maintenance. Anecdotal evidence from conversations with locals suggests there are concerns around degradation and safety of some of the wharves, and work to maintain upgrade and maintain them is needed.

4.10.1 Waitangi Wharf

Contact: Craig Kerwin

Company: Chatham Islands Enterprise Trust

Land ownership: Department of Internal Affairs

Activity: Wharf

Management Zone: Industrial

GPS coordinates: W176.52964 S43.945784

Drainage: To coastal marine environment

There has been significant investment over recent years to upgrade this wharf which required consent. The visit focussed on the risks to the environment from activities on the wharf and not the engineering of the wharf itself.

Compliance

RMA (1991) Section	CIRMD (2018) Rules	Permitted Activity 5.3.4 Industrial	PA Compliance	Notes	Photo Reference
S15 Discharge of contaminants into the environment	5.5.3.8 Hazardous Substances	<i>The use, storage and transportation of hazardous substances is permitted if:</i> <i>(a) there is compliance with all legislation and regulations and Codes of Practice, including the regulations under the Hazardous Substances and New Organisms Act; and</i> <i>(b) no hazardous substance may be dumped or discharged to any waterbody or water course or stormwater system and may not be dumped on land.</i>	Yes ¹	<p>Craig's robust experience and knowledge of the Hazardous Substance Regulations and processes required to maintain compliance was evident through questions and conversation.</p> <p>10,000 litres (double skinned) diesel tank storage with test location certificate on wharf. New infrastructure to manage. Pump locked in shed. Spill absorbent pads available.</p> <p>New pipework certified with fail safe mechanism. Only one valve can be opened at a time, key is required to be in place.</p> <p>Challenge with fishermen using pads to clean boats.</p>	<p>Fig. 72</p> <p>Fig. 73</p>

				<p>Strip drains on wharf all drain to interceptor. Concrete drains in good condition. X4 Shut off valves present. When ships are unloading these are all shut.</p> <p>The interceptor 'Downstream Defender' Downstream Defender[®] is cleaned out every 6 months – more if required.</p> <p>Specific area on the wharf to store Hazardous Substances / Dangerous Goods. The wharf has a 3 day waste transfer license (e.g. HS / Hazardous Waste can be stored 3 days prior or 3 days after ship comes in to port).</p> <p>Challenges with sea salt water – therefore regular repainting.</p> <p>Regular visual inspections of all infrastructure.</p> <p>CIC Marine response plan in places in the event of big spill. Spill response equipment in old wharf shed.</p> <p>Biosecurity area on site cleaned out and disposed of by ECan Officers ~ once per year.</p> <p>Underground fuel line from wharf to bulk storage (400 000 litres diesel) area closer to shore has been pressure tested (~every 3 months). Has a counter system which checks what leaves wharf and what enters tank.</p> <p>Tanks and pipework regularly checked for rust and painted.</p> <p>Will be compliant until 2029 and then needs to be decommissioned. New more</p>	
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				<p>suitable area (outside Tsunami zone) will need to be located for replacement.</p> <p>Concrete catch pad is too small for larger trucks and presents risk of spill reaching land / coastal environment as would not be contained. Budget allocated and works to improve planned in July '21.</p>	
<p>S15(1)(a) Contaminant or water into water; S15(1)(b) contaminant onto or into land in circumstance which may result in that contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water</p>	<p>14. Discharge of contaminants or water into water or the discharge of contaminants into or onto land which may result in that contaminant entering water</p>	<p><i>(i) Discharge of a contaminant or water into water or into or onto land which may result in that contaminant entering water is permitted if the discharge is for stormwater, water supply or freshwater purposes provided:</i></p> <p><i>(a) the discharge after reasonable mixing shall not give rise to any of the following effects:</i></p> <p><i>(i) the production of any conspicuous scums or foams on floatable or suspended materials;</i></p> <p><i>(ii) any conspicuous change in colour or visual clarity;</i></p> <p><i>(iii) any emission of objectionable odour;</i></p> <p><i>(iv) the rendering of freshwater unsuitable for consumption by farm animals; or</i></p> <p><i>(v) any significant adverse effects on aquatic life.</i></p>	<p>(i) Yes</p>	<p>Infrastructure in place to avoid. See above.</p> <p>No evidence of discharge of contaminants observed.</p>	
<p>S15 (1)(d) contaminant from any industrial or trade premises onto or into land</p>	<p>5.5.3.20 Discharge of contaminants onto land</p>	<p><i>(i) Discharge of contaminants onto land is permitted if:</i></p> <p><i>(a) they are not from an industrial or trade premises; and</i></p>	<p>(i)(a) No</p>	<p>No evidence of discharge of contaminants observed.</p>	

		<p><i>(b) they are not dumped within 30 metres of a waterbody or water supply; and</i></p> <p><i>(c) they are not dumped within 50 metres of a dwelling.</i></p>			
S15 (1)(c) contaminant from any industrial or trade premises into air	5.5.3.21 Discharge of contaminants to air	<p><i>(i) Discharges of contaminants into air are permitted provided they:</i></p> <p><i>(a) do not give rise to a nuisance that would not reasonably be expected in an industrial environment; or</i></p> <p><i>(b) do not give rise to a nuisance in an adjoining zone. Live burns conducted and controlled by the New Zealand Fire Service for training purposes are exempt from this rule.</i></p>	Yes	<p>Electricity from reticulated supply.</p> <p>No odours observed on site or beyond boundary.</p>	
		Permitted Activity 5.6.4 Coastal			
S15 Discharge of contaminants into the environment	5.6.11.8 Discharge of contaminants - general	<p><i>i) Discharges of contaminants to coastal water not authorised by Rules 5.6.11.11–5.6.11.13 are discretionary activities.</i></p>	No	No evidence of discharges of contaminants	
S15(1)(a) contaminant or water into water;	5.6.11.9 Discharge of stormwater	<p><i>(i) The discharge of stormwater is permitted if:</i></p> <p><i>(a) the discharge, after reasonable mixing, does not cause:</i></p> <p><i>(i) the production of any conspicuous oil or grease, films, scums, or foam, or floatable or suspended material; and</i></p> <p><i>(ii) any conspicuous change in colour or visual clarity; and</i></p>	Unable to assess (dry weather) however 'Downstream Defender' in place.	Risks mitigated see above.	

		(iii) any emission of objectionable odour.			
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Recommendations

Item	Recommendation	Meeting Minimum Compliance or Good Management Practice
Hazardous Substances	Continue the good practices evident on site and review regularly. Ensure you are compliant with all Hazardous Substance Use and Storage legislation. WorkSafe has some very helpful guidance on its website, including a Hazardous Substances Toolbox which can assist understanding the business controls for the use and storage of types, amounts and volumes of Hazardous Substances present on site.	MMC
Spill Management	Continue the good practices evident on site. Continue to review these and spill kit materials available regularly. Undertake further education with fisherman around importance of leaving spill absorbent materials in case of a spill (not for cleaning boats).	MMC
Stormwater management	Ensure that materials are not stored over infrastructure access e.g., Downstream defender / shut off valve access and where possible strip drains.	GMP

Photographs



Fig. 72 10,000 litre double skinned diesel tank on wharf



Fig. 73 Pump locked in adjacent shed and spill kit present



Fig. 74 & 75 Shed (restricted access) storing diesel pipework, spill kit nearby

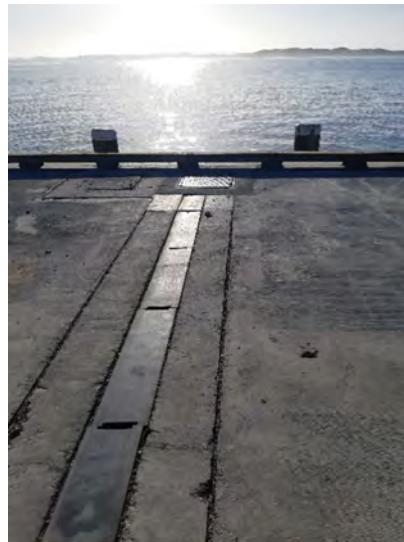


Fig. 76 & 77 Stormwater strip drains leading to shut off valve (then sea)



Fig. 78 Dedicated Hazardous Substance location for 3 day storage



Fig. 79 old diesel tank awaiting ship to be taken to the mainland



Fig. 80, 81 Bulk fuel storage 400,000 litres diesel in bunded area



Fig. 83 Bulk storage of diesel



Fig. 81 and 82 Overground fuel line to bulk storage



Fig. 83 Truck access to refuelling



Fig. 84 Concrete pad area for refuelling



Fig. 85 Bunded area near refuelling pad

4.10.2 Kaingaroa Wharf

Contact: Owen Pickles/Colleen Clearwater

Company: Chatham Island Council

Land ownership: Hokotehi Moriori Trust

Activity: Wharf

Management Zone: Industrial

GPS coordinates: W176.267149 S43.731927

Drainage: To stormwater network and then Coastal Marine Environment

Compliance

RMA (1991) Section	CIRMD (2020) Rules	Permitted 5.3.4 Rural	PA Compliance	Notes	Photo Reference
S15 (1)(a) Contaminant or water into water S15(1)(b) Contaminant onto or into land in circumstances which may result in that contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water	5.6.11.16. Coastal Marine Area within the Industrial Zone. (i) Any activity in the portion of the Industrial Zone within the Coastal Marine Area as it relates to existing jetty and wharf structures is permitted if: (a) the activity is specified in an Industrial Zone rule as a permitted activity; and (b) any conditions specified in the Industrial Zone rule are complied with.	<i>5.5.3.8 Hazardous substances The use, storage and transportation of hazardous substances is permitted if: (a) there is compliance with all legislation and regulations and Codes of Practice, including the regulations under the Hazardous Substances and New Organisms Act; and (b) no hazardous substance may be dumped or discharged to any waterbody or water course or stormwater system and may not be dumped on land</i>	No ¹	The wharf was not accessed due to concerns around the safety of the structure. However, anecdotal evidence from locals confirmed the wharf is still in use. A fuel tank was observed at the end of the wharf for refuelling boats. The wharf was in a very bad state of repair and requires a lot in investment to upgrade including the fuel storage facility to prevent further damage to the wharf and the surrounding environment in future storm events	Figs 72 and 73.
	5.5.3.14	<i>5.4.3.19 and 24 Discharge of contaminants or Water into Water or the Discharge of Contaminants</i>	No	As above.	

		<i>into land Which May Result in that Contaminant Entering Water</i>			
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Photographs



Fig. 86



Fig. 87

4.10.3 Port Hutt Wharf

Contact: Toni Gregory-Hunt

Company: Chatham Islands Enterprise Trust

Land ownership: ?

Activity: Wharf

Management Zone: Industrial

GPS coordinates: W176.706872 S43.815713

Compliance

RMA (1991) Section	CIRMD (2020) Rules	Permitted 5.3.4 Rural	PA Compliance	Notes	Pictures
<p>S15 (1)(a) Contaminant or water into water</p> <p>S15(1)(b) Contaminant onto or into land in circumstances which may result in that contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water</p>	<p>5.6.11.19. Coastal Marine Area within the Industrial Zone. (i) Any activity in the portion of the Industrial Zone within the Coastal Marine Area as it relates to existing jetty and wharf structures is permitted if: (a) the activity is specified in an Industrial Zone rule as a permitted activity; and (b) any conditions specified in the Industrial Zone rule are complied with.</p>		<p>Yes</p>	<p>This wharf is used as a jetty only. A large part of the jetty is further up the beach as a result of a large storm event in 2015. No repair to the structure has been undertaken since this time. There is no fuel storage on the structure.</p>	<p>Figs 74-76</p>

Photographs



Remaining part of Port Hutt wharf



Fig. 90 Section of wharf washed up further down the beach

Fig. 89



Fig. 91 Port Hutt vessel slipways

4.10.4 Owenga Wharf

Contact: Owen Pickles

Company: Chatham Island Council

Land ownership: Chatham Island Council

Activity: Wharf

Management Zone: Industrial

GPS coordinates: W176.367847 S44.024607

Compliance

RMA (1991) Section	CIRMD (2018) Rules	Permitted 5.3.4 Rural	PA Compliance	Notes	Photo Reference
<p>S15 (1)(a) Contaminant or water into water S15(1)(b) Contaminant onto or into land in circumstances which may result in that contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water</p>	<p>5.6.11.19. Coastal Marine Area within the Industrial Zone. (i) Any activity in the portion of the Industrial Zone within the Coastal Marine Area as it relates to existing jetty and wharf structures is permitted if: (a) the activity is specified in an Industrial Zone rule as a permitted activity; and (b) any conditions specified in the Industrial Zone rule are complied with.</p>		<p>Yes</p>	<p>This wharf is used as a jetty for landing fish only. There is no fuel storage on the structure. A consent was issued for the construction of the wharf but there are no ongoing monitoring conditions as part of the consent.</p> <p>There is evidence of erosion between the beginning of the wharf and the coast line and some potential illegal structures (ladders) have been attached to the structure to aid in getting on and off the wharf.</p>	<p>Fig.'s 77-79</p>

Photographs



Fig. 92 Erosion of land away from beginning of wharf



Fig. 93 Illegal ladder attached to wharf



Fig. 94 Erosion of infra-structure of wharf since construction

5 RESOURCE CONSENTS

Consents

In preparation for the ECan monitoring visit to the Chatham Islands, 10 resource consents were supplied providing some background information and to check for compliance with the consent conditions while the site visits were being undertaken.

A summary of the consents and monitoring that was undertaken is below:

5.1 CHATHAM ISLAND ORGANIC FOODS – CONSTRUCTION AND OPERATION OF MEAT SLAUGHTER PROCESSING PLANT

Monitored	Compliance	Comments
No	N/A	<ul style="list-style-type: none">• Issued on 11 April 2002• This consent is not operational. There is no meat processing facility on the island

5.2 CIET – INSTALLATION, OPERATION AND MAINTENANCE OF 2 WIND TURBINES

Monitored	Compliance	Comments
No	N/A	<ul style="list-style-type: none">• Granted on 6 November 2009• This consent is not operational. The turbines were installed but currently not operational.

5.3 ABALONE RESOURCES LTD – COASTAL PERMIT FOR AN AQUACULTURE OPERATION




Monitored	Compliance	Comments
No	N/A	<ul style="list-style-type: none">• Granted on 26 September 2013• This consent is not operational. No aquaculture operation has been installed to date.

5.4 CIET – PITT ISLAND WHARF UPGRADE

Monitored	Compliance	Comments
No	N/A	<ul style="list-style-type: none">• Granted November 2013• Not monitored as part of the Ecan monitoring visit of 2021

5.5 CIC – REPLACEMENT OF EXISTING WAIKATO BRIDGE WITH TWIN CULVERTS

Monitored	Compliance	Comments
Yes	Yes	<ul style="list-style-type: none">• Granted 23 November 2018• All works have been completed.• All remediation as per condition 15 has been undertaken• Consent expires in November 2021



Monitored Conditions	Complies	Comment
Condition 15. <i>The consent holder shall ensure that:</i> <i>a) the riparian margins for .. with locally sourced vegetation</i> <i>b. diversion channel backfilled, regraded and replanted</i> <i>c) temporary diversion reinstated to previous condition</i> <i>d. disturbed areas revegetated</i>	Yes	All remediation work as part of condition has been undertaken   Fig. 95 Fig. 96  Fig. 97

5.6 CIC – OWENGA WHARF UPGRADE



Monitored	Compliance	Comments
No	N/A	<ul style="list-style-type: none"> • Granted 28 June 2008 • All work completed. • There are no ongoing maintenance conditions as part of this consent.

5.7 CIC – NEW CULVERT TO CROSS TE ONE CREEK ON WAITANGI – OWENGA ROAD

Monitored	Compliance	Comments
Yes	No	<ul style="list-style-type: none"> • Issued 1 May 2014 • Work is now completed • Condition 12 (below) requires ongoing inspections

Monitored Conditions	Complies	Comment
<p>Condition 12</p> <p><i>a. The consent holder shall ensure that the culvert is regularly inspected and maintained by the consent holder so that:</i></p> <p><i>i. The culvert remains substantially clear of debris</i></p> <p><i>ii. Any erosion or scour of the creek bed or any instability of the banks that is attributable to the culvert or the works carried out as part of this consent is remediated by the consent holder; and</i></p> <p><i>iii. The structural integrity of the culvert remains sound at all times.</i></p>	No	<p>Evidence of scouring of the creek bed was observed due to the large rocks placed in the creek, downstream of the culvert. (see photos below). To avoid continued scouring, it is recommended these rocks be removed.</p>  <p>Fig. 98</p>  <p>Fig. 99</p>

5.8 CIC – RECYCLING SHED CONSTRUCTION

Monitored	Compliance	Comments
Yes	Yes	<ul style="list-style-type: none"> Application was made to build a recycling shed for the purposes of compacting and crushing glass on 18th October 2017. The proposal did not comply with the setback and m2 size rules of the CIC Resource Management Document. Consent was granted and the building has now been completed  <p>Fig. 100</p>  <p>Fig. 101</p>

5.9 CIC – SEWERAGE TREATMENT PLANT AND WASTEWATER DISPOSAL SYSTEM

The waste water treatment plant services the Waitangi township and includes some properties north and south of the township. Effluent is sampled on post UV treatment on a monthly basis when possible. Sampling may be delayed if there is a delayed, postponed or cancelled flight to New Zealand. Effluent is discharged to irrigation fields via a sprinkler system. Maintenance of the site is overseen by Fulton Hogan and there is a resource consent for the operation on site.

The site is in need of repair and upgrading. A hole in the wastewater settling tank was observed. Leakage from this hole had been temporarily remediated by the installation of a liner inside the tank.

Sampling results were received from Stantec for the last 3 years (from January 2018 to 2021). There are a number on non-compliances with the sampling data across a number of consent conditions. It is of concern that no records have been kept of the treated application depth to each area or which areas are receiving the treated discharge. There is also not a complete set of sampling data as required by the resource consent around soil and groundwater sampling. All areas of non-compliance are listed below and the raw data from Stantec is attached in appendix 6.3.

Photographs



Fig 102. Settling tank with temporarily Fixed hole



Fig 103. Waste water treatment plant



Fig 104. Upper irrigation field



Fig 105. Irrigation field sprinkler

Monitored	Compliance	Comments
Yes	No	<ul style="list-style-type: none"><li data-bbox="553 302 959 331">• Granted on 25 February 2005<li data-bbox="553 338 1198 428">• Stantec undertake the monitoring of the samples for the Wastewater Disposal system and supplied monitoring data for the last 3 years to Ecan.

Monitored Conditions	Complies	Comment
<p>Condition 5</p> <p><i>The consent holder shall ensure that the treated wastewater prior to discharge shall meet the following limits as annual medians:</i></p> <p><i>BOD 25mg/L</i> <i>Suspended Solids 25mg/L</i> <i>E, Coli 500cfu/100ml</i> <i>Total Nitrogen 30g/m3</i></p>	No	<ul style="list-style-type: none"> - COD at an informal adopted limit of 75mg/L is being measured not BOD at the consented limit of 25mg/L. - E.coli results are well above the consented limit of 500cfu/100ml– - Ammonical-N at an informal adopted limit of 25mg/L is being measured not Total N at the consented limit of 30mg/L. - Ammonical-N limits results are above the adopted limits
<p>Condition 7</p> <p><i>The depth of application of treated wastewater to each irrigation areas specified in plan number C102, over a 5 consecutive day period, shall not exceed 5mm and no single application shall exceed 8mm</i></p>	No	no records are kept of the depth of application of treated wastewater discharged to each irrigation area
<p>Condition 14</p> <p><i>The consent holder shall establish baseline groundwater quality and levels at the two boreholes prior to the commissioning of the irrigation field. Samples shall be treated for E.coli and nitrate nitrogen concentrations</i></p>	No	no samples have be taken at the bore holes as these are dry
<p>Condition 15</p> <p><i>The consent holder shall monitor the groundwater quality and levels at the two proposed monitoring bores on the same day twice annually...Samples shall be tested for E coli and nitrate nitrogen concentrations</i></p>	No	no samples have been taken at the bore holes as these are dry
<p>Condition 16</p> <p><i>The consent holder shall establish baseline soil conditions at one representative location of the irrigation areas. Samples shall be taken at 0-200, 200-400, and 400-800mm layers and analysed for total phosphorus, major exchangeable cations (K, Ca, Na, Mg), pH and conductivity</i></p>	No	no soil sampling has been undertaken as part of this consent
<p>Condition 17</p> <p><i>The consent holder shall monitor soil conditions at the locations and layers established condition 16 once every 2 years. Samples shall be tested for the parameters required by condition 16.</i></p>	No	no soil sampling has been undertaken as part of this consent

Stantec also noted that:

- they are aware of some complaints of adjacent land owners
- they are not aware of any leakage or burst pipe issues. However, there was a period of 6 months in 2019 (from the 4 April to 25 September) where no flow data was able to be undertaken due to the flow meter breaking. There were also 2 instances of exceedingly high flow meter readings. While the high reading on the 25th September 2019 of 2133m³/day is likely to be due to the new flow meter coming on-line and needing calibration, no investigation into the excessively high reading of 5 August 2018 of 3033m³/day appears to have been undertaken to determine whether it was due to an inaccurate reading, human recording error or pump failure.
- there is localised ponding and boggy areas along the WWTP site. This area is not well draining
- A fence was broken by grazing stock. The fence has been repaired and planting of newly propagated plants to mitigate the risk of ponding and run-off will occur in the near future.
- Irrigation lines and emitters were relocated in 2021 to increase the distance from the boundary and any faulty irrigators and pipework was restored to operating condition in 2020.
- A new land application area is planned to be constructed in 2021/2022 now funding has become available.
- Tables of the monitoring data are attached in Appendix 6.3

It is recommended:

- **That the consent conditions of the original consent granted in 2005 to be reviewed to better reflect the monitoring that is able to be undertaken. It is noted that there are sometimes issues with getting samples to mainland New Zealand within the required timeframe for testing.**
- **New bore holes sites need to be found to measure ground water quality**
- **Soil samples need to be taken to monitor soil conditions.**
- **Clauses around mitigation measures in the event of non-compliant sample results should also be included (eg taking a second sample if results are non-compliant).**
- **Accurate records of application time, depth and frequency of applications to irrigation areas must be kept to determine the nitrogen loading of the areas and ensure no areas incur significantly more nitrogen loading than others.**

5.10 OTHER RESOURCE CONSENTS

There are also resource consents issued for the Owenga New Land fill and the new Waitangi Wharf. These consents were not available at the time of the 2021 monitoring visit to the Chatham Islands.

6 OTHER SITES OF INTEREST FOR FUTURE MONITORING

6.1 PORT HUTT LANDFILL

This landfill was observed on the Waitangi West road past Port Hutt. It is visible from the road and is on the edge of a farmers paddock and borders a large wetland area. It is not fenced off and there is evidence of regular use. Although advised this is a private farmers dump, the size, scale and variety of items dumped indicate this is used on a regular basis by many people. Items dumped include wire, vehicle bodies, whiteware, fishing ropes and containers, household refuse, glass bottles, open containers of waste liquid, IBC containers of liquid. This landfill is in breach of the Resource Management Act 1991 section 15

Photographs



Fig. 106



Fig. 107



Fig. 108



Fig. 109



Fig. 110



Fig. 111



Fig. 112



Fig. 113

6.2 HOSPITAL

A diesel storage tank was observed at the hospital. It is recommended that this site be monitored in future visits for compliance with hazardous substance storage.

6.3 PRIVATE DIESEL STORAGE

A private diesel storage shed was observed at Port Hutt. This was, or has been, clearly leaking oil. An inventory of other private diesel storage facilities, including other small businesses (eg the hotel) to check for compliance with fuel and hazardous substance storage would be useful for future monitoring visits.



Fig. 110

6.4 PITT ISLAND

No monitoring visits have been made to Pitt island to date. It is recommended that, if possible, a visit be made to the island to monitor:

- The upgrade of the wharf at Pitt Island. A resource consent was issued for this in 2013.

- The roading network. Recent communications from the Chatham Island Council have confirmed the roading network on the island is to be upgraded by Futon Hogan this year.
- There is diesel generated electricity on the island. Fuel and other hazardous substance storage should be checked
- Waste management for the island should also be monitored including landfill and septic waste.

7 APPENDICES

7.1 NEWSLETTERS AND FACEBOOK COMMUNICATIONS AROUND ECAN VISITING THE ISLANDS



Visitors from Christchurch in April

Sarah Helleur and Jenny Watters are visiting the Island from 6-13 April. They'll be **meeting with our community and key organisations to share some simple ways to help protect our environment.**

Sarah and Jenny are very friendly and approachable, and they're excited to visit our beautiful Island. Sarah says, *"I am the Resource Management Officer for Forestry in Canterbury. I am very passionate about protecting our wonderful, unique environment, and working with people and organisations to help them with ways they can do this too."*

And Jenny says, *"I grew up in a small village of about 100 people in North Norfolk in the UK. I believe that my connection to the landscape was what drew me to working to protect the environment. I've been working as a Pollution Prevention Officer for the past six years and I really enjoy helping people reduce environmental risks associated with their business or household activities through education."*

If you have any questions about their visit or want to arrange a meeting with Sarah and Jenny, you can [contact Environment Canterbury on 0800 324 636](mailto:info@ecan.govt.nz) and ask for Sarah Helleur or Jenny Watters.

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Chatham Island Council Newsletter March 2021

Chatham Community Focus Trust
Newsletter 1 April 2021

7.2 WASTE WATER TREATMENT PLANT MONITORING DATA

The monitoring results received from Stantec for the period January 2018 to January 2021 for monitoring compliance with the waste water consent are listed below

a) pH

Date	pH Readings	Upper Target	Lower Target
30/01/2018	7.9	9	6
20/02/2018	7.9	9	6
20/03/2018	7.9	9	6
17/04/2018	7.9	9	6
15/05/2018	8	9	6
20/06/2018	7.9	9	6
17/07/2018	7.8	9	6
21/08/2018	8.1	9	6
18/09/2018	7.9	9	6
16/10/2018	7.9	9	6
20/11/2018	7.9	9	6
18/12/2018	7.8	9	6
15/01/2019	8.3	9	6
26/03/2019	8.1	9	6
16/04/2019	8	9	6
21/05/2019	7.9	9	6
16/07/2019	7.9	9	6
20/08/2019	7.9	9	6
17/09/2019	7.9	9	6
22/10/2019	7.8	9	6
19/11/2019	8	9	6
24/12/2019	7.9	9	6
21-Jan-20	7.8	9	6
17-Mar-20	7.8	9	6
21-Apr-20	8	9	6
19-May-20	7.9	9	6
16-Jun-20	8	9	6
21-Jul-20	8	9	6
18-Aug-20	7.9	9	6
15-Sep-20	8	9	6
20-Oct-20	8.1	9	6
17-Nov-20	8.1	9	6
15-Dec-20	7.9	9	6
26-Jan-21	8.1	9	6

b) Conductivity

Date	Conductivity	Conductivity Target
30/01/2018	166.8	200
20/02/2018	155.3	200
20/03/2018	156.1	200
17/04/2018	135.2	200
15/05/2018	140.4	200
20/06/2018	130.6	200
17/07/2018	132.9	200
21/08/2018	140.1	200
18/09/2018	136.9	200
16/10/2018	142.2	200
20/11/2018	164.4	200
18/12/2018	153	200
15/01/2019	152.1	200
26/03/2019	158.3	200
16/04/2019	139.8	200
21/05/2019	135.6	200
16/07/2019	146.5	200
20/08/2019	147.9	200
17/09/2019	151.4	200
22/10/2019	120.9	200
19/11/2019	150.6	200
24/12/2019	141	200
21-Jan-20	152.3	200
17-Mar-20	145.1	200
21-Apr-20	138.6	200
19-May-20	146.4	200
16-Jun-20	141.2	200
21/07/2020	142.3	200
18/08/2020	146.3	200
15/09/2020	151.4	200
20/10/2020	151.8	200
17/11/2020	161.7	200
15/12/2020	148	200
26/01/2021	142.2	200

c) Total Suspended Solids (TSS)

Date	TSS	TSS Rolling Annual Median	TSS Annual Median Limit
30/01/2018	13	13	25
20/02/2018	18	15.5	25
20/03/2018	20	18	25
17/04/2018	7	15.5	25
15/05/2018	12	13	25
20/06/2018	13	13	25
17/07/2018	19	13	25
21/08/2018	18	15.5	25
18/09/2018	15	15	25
16/10/2018	9	14	25
20/11/2018	30	15	25
18/12/2018	37	16.5	25
15/01/2019	38	18	25
26/03/2019	13	16.5	25
16/04/2019	14	14.5	25
21/05/2019	8	14.5	25
16/07/2019	12	14.5	25
20/08/2019	5	14.5	25
17/09/2019	20	14.5	25
22/10/2019	12	13.5	25
19/11/2019	13	13	25
24/12/2019	39	13.5	25
21-Jan-20	14	13.5	25
17-Mar-20	7	13	25
21-Apr-20	9	12.5	25
19-May-20	3	12	25
16-Jun-20	6	10.5	25
21/07/2020	6	10.5	25
18/08/2020	5	8	25
15/09/2020	11	10	25
20/10/2020	16	10	25
17/11/2020	26	10	25
15/12/2020	7	8	25
26/01/2021	3	7	25

d) Ammonia Nitrogen

Date	Year	Ammonia	Ammonia Rolling Annual Median	Total N Annual Limit	Ammonia Annual Median Limit
30/01/2018	2018	38	38	30	25
20/02/2018	2018	34	36	30	25
20/03/2018	2018	46	38	30	25
17/04/2018	2018	28	36	30	25
15/05/2018	2018	29	34	30	25
20/06/2018	2018	28	31.5	30	25
17/07/2018	2018	27	29	30	25
21/08/2018	2018	32	30.5	30	25
18/09/2018	2018	27	29	30	25
16/10/2018	2018	28	28.5	30	25
20/11/2018	2018	51	29	30	25
18/12/2018	2018	39	30.5	30	25
15/01/2019	2018	40	30.5	30	25
26/03/2019	2019	40	30.5	30	25
16/04/2019	2019	34	30.5	30	25
21/05/2019	2019	20	30.5	30	25
16/07/2019	2019	30	31	30	25
20/08/2019	2019	38	33	30	25
17/09/2019	2019	35	34.5	30	25
22/10/2019	2019	25	34.5	30	25
19/11/2019	2019	37	36	30	25
24/12/2019	2019	29	36	30	25
21-Jan-20	2020	36	35.5	30	25
17-Mar-20	2020	14.1	34.5	30	25
21-Apr-20	2020	23	32	30	25
19-May-20	2020	24	29.5	30	25
16-Jun-20	2020	25	27	30	25
21/07/2020	2020	28	28.5	30	25
18/08/2020	2020	26	27	30	25
15/09/2020	2020	29	27	30	25
20/10/2020	2020	32	27	30	25
17/11/2020	2020	50	28.5	30	25
15/12/2020	2020	32	28.5	30	25
26/01/2021	2021	21	27	30	25

e) COD

Date	COD	COD Rolling Annual Median	COD Annual Median Limit
30/01/2018	83	83	75
20/02/2018	80	81.5	75
20/03/2018	86	83	75
17/04/2018	52	81.5	75
15/05/2018	58	80	75
20/06/2018	69	74.5	75
17/07/2018	79	79	75
21/08/2018	93	79.5	75
18/09/2018	65	79	75
16/10/2018	52	74	75
20/11/2018	122	79	75
18/12/2018	128	79.5	75
15/01/2019	90	79.5	75
26/03/2019	62	74	75
16/04/2019	60	67	75
21/05/2019	46	67	75
16/07/2019	75	72	75
20/08/2019	76	75.5	75
17/09/2019	90	75.5	75
22/10/2019	71	73	75
19/11/2019	72	73.5	75
24/12/2019	81	75.5	75
21-Jan-20	79	75.5	75
17-Mar-20	48	73.5	75
21-Apr-20	43	71.5	75
19-May-20	42	71.5	75
16-Jun-20	52	71.5	75
21/07/2020	50	71.5	75
18/08/2020	63	67	75
15/09/2020	59	61	75
20/10/2020	65	61	75
17/11/2020	86	61	75
15/12/2020	46	55.5	75
26/01/2021	41	51	75

f) Total Coliforms

Date		Total Coliforms		Test Limit (max)
1/01/2008				2420
30/01/2018	2420	2420		2420
20/02/2018	2500	>2420		2420
20/03/2018	2500	>2420		2420
17/04/2018	435	435		2420
15/05/2018	2500	>2420		2420
20/06/2018	2500	>2420		2420
17/07/2018	2500	>2420		2420
21/08/2018	2500	>2420		2420
18/09/2018	2500	>2420		2420
16/10/2018	2500	>2420		2420
20/11/2018	2500	>2420		2420
18/12/2018	2500	>2420		2420
15/01/2019	2500	>2420		2420
26/03/2019	2500	488		2420
16/04/2019	2500	>2420		2420
21/05/2019	2500	>2420		2420
16/07/2019	2500	>2420		2420
20/08/2019	2500	>2420		2420
17/09/2019	2500	>2420		2420
22/10/2019	2500	>2420		2420
19/11/2019	2500	>2420		2420
24/12/2019	1553	1553		2420
21-Jan-20	2500	>2420		2420
17-Mar-20	2500	>2420		2420
21-Apr-20	2500	>2420		2420
19-May-20	2500	>2420		2420
16-Jun-20	2500	>2420		2420
21/07/2020	2500	>2420		2420
18/08/2020	2500	>2420		2420
15/09/2020	2500	>2420		2420
20/10/2020	2500	>2420		2420
17/11/2020	2500	>2420		2420
15/12/2020	2500	>2420		2420
26/01/2021	2500	1414		2420

g) E. Coli

Date	E.coli DL	E.coli	E.coli Rolling Annual Median	E. Coli Annual Median Limit
1/01/2008				500
30/01/2018	866	866	866	500
20/02/2018	770	770	818	500
20/03/2018	>2420	2420	866	500
17/04/2018	47	47	818	500
15/05/2018	2420	2420	866	500
20/06/2018	1300	1300	1083	500
17/07/2018	214	214.00	866	500
21/08/2018	1553	1553.00	1083	500
18/09/2018	328	328.00	866	500
16/10/2018	142	142.00	818	500
20/11/2018	>2420	2420.00	866	500
18/12/2018	>2420	2420.00	1083	500
15/01/2019	1300	1300.00	1300	500
26/03/2019	127	127.00	1300	500
16/04/2019	>2420	2420.00	1300	500
21/05/2019	>2420	2420.00	1426.5	500
16/07/2019	1414	1414	1357	500
20/08/2019	2420	2420	1483.5	500
17/09/2019	>2420	2420	1986.5	500
22/10/2019	1986	1986	2203	500
19/11/2019	1300	1300	2203	500
24/12/2019	1046	1046	2203.00	500
21-Jan-20	>2420	2420	2203	500
17-Mar-20	>2420	2420	2203	500
21-Apr-20	921	921	2203	500
19-May-20	579	579	2203	500
16-Jun-20	1553	1553	1769.5	500
21/07/2020	2420	2420	1769.5	500
18/08/2020	980	980	1769.5	500
15/09/2020	1046	1046	1426.5	500
20/10/2020	1986	1986	1426.5	500
17/11/2020	1733	1733	1426.5	500
15/12/2020	>2420	2420	1643	500
26/01/2021	210	210	1643	500

i) Daily Wastewater Discharge Flow data

