



chatham islands council

Chatham Islands Council

BOARD PACK

for

Council Meeting

Thursday, 13 February 2025

9:00 am (+1345)

Held at:

Chatham Islands Council

13 Tuku Road, Chatham Islands

INDEX

Cover Page

Index

Agenda

Attached Documents:

1.3 a	Interests Register.....	8
1.4 a	Action List.....	9
2.1 a	2.1 Minutes 19 December 2024.pdf.....	11
2.1 b	Public 19 Dec 2024 Minutes in Review Council Meeting.pdf.....	12
3.1 a	3.1 Financial Report.pdf.....	18
3.1 b	CIC Council report December 2024.pdf.....	19
3.2 a	3.2 Audit Management Report.pdf.....	22
3.2 b	CIC 24J RTG sent 16.12.24.pdf.....	23
4.1 a	4.1 Stantec Report1.pdf.....	57
4.1 b	Stantec Report Dec 2024.pdf.....	58
4.1 c	Stantec Report Jan 25.pdf.....	67
4.2 a	4.2 Fulton Hogan Road Maintenance Report .pdf.....	80
4.2 b	Dec 2024 SP1.pdf.....	81
4.3 a	4.3 Fulton Hogan Water & Wastewater Contract .pdf.....	94
4.3 b	Dec 2024 SP2.pdf.....	95
5.1 a	5.1 CIC Surf Boat Report 13feb25.pdf.....	100
5.1 b	Lottery content v2.pdf.....	129
6.1 a	6.1 Waitangi Wharf Monitoring Report.pdf.....	137
6.1 b	20241220_Waitangi_Wharf_Monitoring_Report.pdf.....	138
6.2 a	6.2 Water Services Bill Submission Agenda Item.pdf.....	242
6.3 a	6.3 b CIC_2023_008 Kaiara Limited Subdivision.pdf.....	243

6.3 b	6.3 CIC_2023_008 Final document .pdf.....	253
11.1 a	PE Cover Page 13 February 2025.pdf.....	318
11.2 a	PE.1 PE Minutes 19 December 2024.pdf.....	319
11.2 b	PE 19 Dec 2024 Minutes in Review Council Meeting.pdf.....	320
11.3 a	PE.2 ECan Work Programme.pdf.....	322
11.3 b	FINAL - 2024-2025 Work Programme ECan CIC DEC2024.pdf.....	323

AGENDA

COUNCIL MEETING



Name:	Chatham Islands Council
Date:	Thursday, 13 February 2025
Time:	9:00 am to 11:00 am (+1345)
Location:	Chatham Islands Council, 13 Tuku Road, Chatham Islands
Board Members:	Cr Amanda Seymour, Cr Celine Gregory-Hunt, Cr Graeme Hoare, Cr Greg Horler, Cr Judy Kamo, Cr Keri Day, Mayor Monique Croon, Cr Nigel Ryan, Cr Steve Joyce
Attendees:	Ms Colette Peni, Ms Jo Guise, Paul Eagle

1. Opening Meeting

1.1 Meeting Opening

1.2 Apologies

1.3 Interests Register

Review and update the interests register of board members and key executives.

Supporting Documents:

1.3.a	Interests Register	8
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1.4 Action List

Review the progress of action items from previous meetings and discuss any pending tasks.

Supporting Documents:

1.4.a	Action List	9
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2. Confirmation of Minutes

2.1 Ordinary Meeting Minutes19 December 2024

For Decision

Review and confirm the minutes of the previous meeting.

Supporting Documents:

2.1.a	2.1 Minutes 19 December 2024.pdf	11
2.1.b	Public 19 Dec 2024 Minutes in Review Council Meeting.pdf	12

3. Finance

3.1 Financial Report

For Information

Information to be received.

Supporting Documents:

3.1.a	3.1 Financial Report.pdf	18
3.1.b	CIC Council report December 2024.pdf	19

3.2 Audit Management Report

Supporting Documents:

3.2.a	3.2 Audit Management Report.pdf	22
3.2.b	CIC 24J RTG sent 16.12.24.pdf	23

4. Works & Services

4.1 Stantec Report

For Information

Information to be received.

Supporting Documents:

4.1.a	4.1 Stantec Report1.pdf	57
4.1.b	Stantec Report Dec 2024.pdf	58
4.1.c	Stantec Report Jan 25.pdf	67

4.2 Fulton Hogan Road Maintenance Report

For Information

Information to be received.

Supporting Documents:

4.2.a	4.2 Fulton Hogan Road Maintenance Report .pdf	80
4.2.b	Dec 2024 SP1.pdf	81

4.3 Fulton Hogan Water & Wastewater Report

For Information

Information to be received.

Supporting Documents:

4.3.a	4.3 Fulton Hogan Water & Wastewater Contract .pdf	94
4.3.b	Dec 2024 SP2.pdf	95

5. Community

5.1 Surf Boat

Supporting Documents:

5.1.a	5.1 CIC Surf Boat Report 13feb25.pdf	100
5.1.b	Lottery content v2.pdf	129

6. Regulatory

6.1 Waitangi Wharf Monitoring Report

For Information

Supporting Documents:

6.1.a	6.1 Waitangi Wharf Monitoring Report.pdf	137
6.1.b	20241220_Waitangi_Wharf_Monitoring_Report.pdf	138

6.2 Water Services Bill Submission

For Decision

Supporting Documents:

6.2.a	6.2 Water Services Bill Submission Agenda Item.pdf	242
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6.3 Resource Consent Application CIC/2023/008

For Decision

A resource consent application has been received by Kaiara Ltd to subdivide a site located at 546 Waitangi Tuku Road, Chatham Island, legally described as Part Otonga 1C2 Block contained in Record of Title (RT) WN123/95 into 12 proposed lots over two stages.

Supporting Documents:

6.3.a	6.3 b CIC_2023_008 Kaiara Limited Subdivision.pdf	243
6.3.b	6.3 CIC_2023_008 Final document .pdf	253

7. Emergency Management

8. Governmennt

9. Chatham Islands

10. Bylaws & Policies

11. Public Excluded

11.1 Move to Public Excluded

Supporting Documents:

11.1.a PE Cover Page 13 February 2025.pdf	318
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11.2 Public Excluded Minutes19 December 2024

For Decision

For Approval

Supporting Documents:

11.2.a PE.1 PE Minutes 19 December 2024.pdf	319
11.2.b PE 19 Dec 2024 Minutes in Review Council Meeting.pdf	320

11.3 ECan Work Programme 2025

For Information

Supporting Documents:

11.3.a PE.2 ECan Work Programme.pdf	322
11.3.b FINAL - 2024-2025 Work Programme ECan CIC DEC2024.pdf	323

11.4 Close the meeting

9:00 am

Next meeting: Council Meeting - 27 Mar 2025, 9:00 am

Summarize the key decisions made and officially close the board meeting.

Interests Register

Chatham Islands Council



As of: 13 Feb 2025

Person	Organisation	Active Interests	Notice Date
Cr Amanda Seymour	CIC	6.8 - Whanau member of applicant	27 Sept 2024
Cr Celine Gregory-Hunt	CIC	6.4 Applicant	27 Sept 2024
Cr Greg Horler	CIC	6.8 Whanau member of applicant	27 Sept 2024
Cr Keri Day	Chatham Islands Council	Interested party - Item 7.1 Water Tank Project Update	1 Feb 2024
Cr Steve Joyce	Chatham Islands Council	Director, Chatham islands Electricity Ltd - 6.1 Wind Turbines	14 Mar 2024
Mayor Monique Croon	Chatham Islands Council	Applicant in Item 6.2 - M Croon Subdivision	1 Feb 2024

Action List

Chatham Islands Council



As of: 4 Feb 2025

Waitangi Hall

In Progress

Meet with interested parties to explain unfavourable legal advice.

Due Date: 26 Sept 2024

Owner: Paul Eagle

Meeting: 15 Aug 2024 Council Meeting, 5.3 Waitangi Hall

Petrol Resolution

In Progress

Work with CIET on fuel resilience.

Due Date: 31 Oct 2024

Owner: Paul Eagle

Meeting: 27 Sept 2024 Council Meeting, 3.1 Financial Report

Communication to CDHB re raising the Hospital Gully traps

Done

Write to CDHB requesting that they raise their gully traps to ensure stormwater does not run in to wastewater pipes.

Due Date: 28 Nov 2024

Owner: Paul Eagle

Meeting: 31 Oct 2024 Council Meeting, 4.3 Fulton Hogan Water & Wastewater Report

CIHPT - Report to CiHPT on behalf of Council

In Progress

Chief Executive to report to the CIHPT on the feelings of elected members. It would include options including exiting the trust.

Consideration should also be given at the best role of council for housing on the island.

Due Date: 28 Nov 2024

Owner: Paul Eagle

Meeting: 31 Oct 2024 Council Meeting, 10.4 CIHPT Update

Latest Update:

Awaiting meeting to confirm funding was still available.

Ms Jo Guise | 19 Dec 2024

Water Leaks

Not Started

1. Write a letter to properties with ongoing leaks

2. Have a workshop re: water services, plan, operating and meters.

Due Date: 6 Feb 2025

Owner: Paul Eagle

Meeting: 19 Dec 2024 Council Meeting, 4.3 Fulton Hogan Water & Wastewater Report

Waste Management - Scrap Metal**In Progress**

1. Council to instruct FH to put a temporary stop on accepting scrap metal at Transfer Station.
2. Have a workshop within the first quarter of 2025 to work through waste management issues.
3. Plan a road trip to Owenga landfill in the new year for elected members

Due Date: 6 Feb 2025**Owner:** Paul Eagle**Meeting:** 19 Dec 2024 Council Meeting, 4.4 Fulton Hogan Waste Management Report



2. Democracy

2.1 Minutes of Ordinary Meeting 19 December 2024

Date of meeting	13 February 2025
Agenda item number	2.1
Author/s	Jo Guise, Executive Assistant

Purpose

For the Council to receive and confirm the minutes of the Ordinary Meeting held on 19 December 2024.

Recommendations

1. **THAT the minutes from the Ordinary meeting held on 19 December 2024 be a true and accurate record.**

MINUTES (in Review)

COUNCIL MEETING



Name:	Chatham Islands Council
Date:	Thursday, 19 December 2024
Time:	9:00 am to 11:00 am (+1345)
Location:	Chatham Islands Council, 13 Tuku Road, Chatham Islands
Board Members:	Cr Amanda Seymour, Cr Celine Gregory-Hunt, Cr Graeme Hoare, Cr Greg Horler, Cr Judy Kamo, Cr Keri Day, Mayor Monique Croon, Cr Nigel Ryan, Cr Steve Joyce
Attendees:	Ms Colette Peni, Ms Jo Guise, Paul Eagle, Ms Tanya Clifford, Mr Nigel Lister, Mr Jack Boyd
Guests/Notes:	Erin (Tomby) von Elders (Fulton Hogan)

1. Opening Meeting

1.1 Meeting Opening

Mayor Croon opened the meeting acknowledging the whanau pani of Pam Gregory-Hunt.

1.2 Apologies

1.3 Interests Register

1.4 Action List

Due Date	Action Title	Owner(s)
26 Sept 2024	Waitangi Hall Status: In Progress	Paul Eagle
31 Oct 2024	Petrol Resolution Status: In Progress	Paul Eagle
28 Nov 2024	Communication to CDHB re raising the Hospital Gully traps Status: Completed on 19 Dec 2024	Paul Eagle
28 Nov 2024	CIHPT - Report to CIHPT on behalf of Council Status: In Progress	Paul Eagle
19 Dec 2024	Conserve water notices Status: Completed on 12 Dec 2024	Ms Colette Peni

1.5 Correspondence



Correspondence

THAT the information be received.

Decision Date:	19 Dec 2024
Mover:	Cr Amanda Seymour
Seconder:	Cr Judy Kamo
Outcome:	Approved

Council had received correspondence from Minister Simeon Brown regarding the Water Services Bill noting the exclusion of Chatham Islands Council from the economic regulation regime given the existing Crown funding arrangements and the size of population currently receiving drinking water and wastewater services from the Council.

The Chief Executive explained that all Council had to deliver a Water Services Delivery Plan by 3 September 2025.

2. Confirmation of Minutes

2.1 Minutes 28 November 2024



Confirmation of Minutes

THAT the minutes from the Ordinary meeting on 28 November 2024 be a true and accurate record.

Decision Date: 19 Dec 2024
Mover: Cr Celine Gregory-Hunt
Second: Cr Amanda Seymour
Outcome: Approved

2.2 PARC Minutes 18 November 2024



PARC Minutes 18 November 2024

THAT the minutes from the PARC meeting held on 18 November be a true and accurate record.

Decision Date: 19 Dec 2024
Mover: Cr Steve Joyce
Second: Cr Keri Day
Outcome: Approved

3. Finance

3.1 Financial Report



Financial Report

THAT the financial report be received.

Decision Date: 19 Dec 2024
Mover: Cr Judy Kamo
Second: Cr Celine Gregory-Hunt
Outcome: Approved

Tanya Clifford gave an update to the report.

In reference to a query about the 'Emergency Management Investment Fund', the Chief Executive reminded Council that in July 2023, Apollo Projects had been engaged to progress a design and feasibility report for a new Emergency Services Depot. Up to \$100k had been approved for that project. As the Chief Executive was not confident they could deliver a business plan and design, \$20k had been paid to Apollo, and the remainder to Rau Paenga (Crown Infrastructure Delivery Agency). The design had just recently been received and would be presented to Council.

4. Works & Services

4.1 Stantec Report



Stantec Report

THAT the report be received.

Decision Date: 19 Dec 2024
Mover: Cr Celine Gregory-Hunt
Seconders: Cr Graeme Hoare
Outcome: Approved

Nigel Lister gave an update to the report. He advised the Owenga barge landing facility had been completed early and within budget.

Jack Boyd gave an update on water services. A 'conserve water' letter had been drafted in preparation for when the Waitangi bore level dropped. Jack also advised they would not be providing water services to the wharf.

4.2 Fulton Hogan Road Maintenance Report



Fulton Hogan Road Maintenance Report

THAT the report be received.

Decision Date: 19 Dec 2024
Mover: Cr Steve Joyce
Seconders: Cr Graeme Hoare
Outcome: Approved

Erin (Tomby) von Elders gave an update to the report. He advised Phil Holt would be on duty over the Christmas break.

4.3 Fulton Hogan Water & Wastewater Report



Fulton Hogan Water & Wastewater Report

THAT the report be received.

Decision Date: 19 Dec 2024
Mover: Cr Nigel Ryan
Seconders: Cr Judy Kamo
Outcome: Approved

Tomby von Elders advised there had been water leaks found outside the council boundary. Three homeowners had been alerted to leaks and were being constantly monitored.

There was discussion around charging for anything above the average metered rate which would be work-shopped in the new year.



Water Leaks

1. Write a letter to properties with ongoing leaks
2. Have a workshop re: water services, plan, operating and meters.

Due Date: 6 Feb 2025
Owner: Paul Eagle

4.4 Fulton Hogan Waste Management Report



Fulton Hogan Waste Management Report

THAT the report be received.

Decision Date: 19 Dec 2024
Mover: Cr Graeme Hoare
Seconders: Cr Celine Gregory-Hunt
Outcome: Approved



Waste Management - Scrap Metal

1. Council to instruct FH to put a temporary stop on accepting scrap metal at Transfer Station.
2. Have a workshop within the first quarter of 2025 to work through waste management issues.
3. Plan a road trip to Owenga landfill in the new year for elected members

Due Date: 6 Feb 2025
Owner: Paul Eagle

5. Community

6. Regulatory

6.1 Variations to Afforestation Decisions



Variations to Afforestation Decisions

THAT the information be received.

Decision Date: 19 Dec 2024
Mover: Cr Nigel Ryan
Seconders: Cr Greg Horler
Outcome: Approved

7. Emergency Management

8. Government

8.1 Elections 2025



Late item - Election Update

THAT the late item 'Election Update' be accepted.

Decision Date: 19 Dec 2024
Mover: Cr Judy Kamo
Seconders: Cr Celine Gregory-Hunt
Outcome: Approved



Election Update

THAT the Council:

1. Receives the report;
2. Appoints Joanne (Jo) Guise as its Electoral Officer.

3. Confirms the appointment of a Deputy Electoral Officer and and Electoral Official.
4. Adopts alphabetical as its preferred option for the order of candidates' names.
5. Notes the election timetable (attached).

Decision Date: 19 Dec 2024
Mover: Cr Judy Kamo
Seconders: Cr Steve Joyce
Outcome: Approved

9. Chatham Islands

9.1 CIC and CIET Review



Local Public Service Reform on Chatham islands - Consultation and Engagement Plan

THAT Chatham Islands Council -

1. Approve the consultation and engagement plan for the local public service reform on the Chatham Islands.

Decision Date: 19 Dec 2024
Mover: Cr Keri Day
Seconders: Cr Steve Joyce
Outcome: Approved

10. Bylaws & Policies

10.1 Policies for Adoption



Policies for Adoption

THAT the Chatham Islands Council adopt the following policies -

- CIC Conflict of Interest (including Gifts & Koha) Policy
- CIC Bullying, Harassment and Discrimination Policy
- CIC Bullying, Harassment and Discrimination Guidelines
- CIC Fraud, Corruption and Whistleblowing Policy

Decision Date: 19 Dec 2024
Mover: Cr Amanda Seymour
Seconders: Cr Steve Joyce
Outcome: Approved

11. Public Excluded

11.1 Move to Public Excluded



Move to Public Excluded

That the public be excluded from the following part of the proceedings of the meeting. The general subject of each matter to be considered while the public is excluded, the reason for passing this resolution in relation to each matter and the specific grounds under Section 48(1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution are as follows:

Item No.	Minutes / Report of:	General subject of each matter to be considered	General subject of each matter to be considered	Ground(s) under Section 48(1) for the passing of this resolution
1	Chief Executive Officer	Minutes of Public Excluded Meeting 28 November 2024	Good reason to withhold exists under Section 7	Section 48(1)(a)



This resolution is made in reliance on Section 48(1)(a) of the Local Government Official Information and Meetings Act 1987, and the particular interest or interests protected by Section 6 or Section 7 of that Act which would be prejudiced by holding the whole or relevant part of the proceedings of the meeting in public, are as follows:



Item No:	
1.	Would be likely to prejudice the commercial position of the person or persons who are the subject of the information. 7(2)(b)(ii) To maintain legal professional privilege. 7(2)(h) To enable the Council holding the information to carry out, without prejudice or disadvantage, commercial activities. 7(2)(i)

and that appropriate officers remain to provide advice to the Committee.

Decision Date: 19 Dec 2024
Mover: Mayor Monique Croon
Seconded: Cr Celine Gregory-Hunt
Outcome: Approved

Minutes : Council Meeting - 19 Dec 2024

11.3 Close the meeting

Next meeting: No date for the next meeting has been set.

Summarize the key decisions made and officially close the board meeting.

Signature: _____

Date: _____



3. Finance

3.1 Financial Report

Date of meeting	13 February 2025
Agenda item number	3.1
Author/s	Tanya Clifford, ECan

Purpose

To present to the Performance, Audit & Risk Committee the financial report as at 31 December 2024.

Recommendations

That the Chatham Islands Council receives the report.

Chatham Islands Council - Council cash financial report year-to-date transactions

Report to 31 December 2024

Year to date 'cash' transactions for twelve months	Revenue	Expenditure	Net surplus/ (loss)	Capital	Cash surplus/ (loss)
Leadership & community partnerships	-	135,388	(135,388)	-	(135,388)
Transportation, roading & coastal networks	2,644,885	1,067,578	1,577,307	1,994,504	(417,197)
Roading	2,622,392	1,036,680	1,585,713	1,994,504	(408,791)
Coasts	22,492	30,898	(8,406)	-	(8,406)
Three waters supply & treatment - potable water	499,999	128,342	371,657	-	371,657
Three waters supply & treatment - wastewater	105,312	108,960	(3,648)	-	(3,648)
Waste management & minimisation	103,043	420,478	(317,435)	-	(317,435)
Community development & emergency response	790,939	819,122	(28,183)	106,190	(134,373)
Community services	431,401	357,666	73,735	106,190	(32,455)
Petrol	359,538	301,830	57,708	-	57,708
Emergency services	-	159,626	(159,626)	-	(159,626)
Environmental protection, compliance & planning	109,574	186,807	(77,234)	-	(77,234)
Biosecurity and animal control	15,309	126,951	(111,643)	-	(111,643)
Resource management and regulatory	94,265	59,856	34,409	-	34,409
Corporate services and other overheads	4,783,534	1,099,465	3,684,070	24,087	3,659,983
Corporate services	580,534	1,099,465	(518,930)	24,087	(543,017)
Annual appropriation	4,203,000	-	4,203,000	-	4,203,000
Totals	9,037,285	3,966,139	5,071,146	2,124,780	2,946,366

All figures are 'cash' based and exclude year-to-date depreciation budgeted at \$2,100,000 for the year.

Notes:

Leadership & community partnerships	Includes Councillor honorarium. No issues of note.
Transportation, roading & coastal networks	Roading projects on track. NZTA subsidy rate remains at 88%.
Three waters supply & treatment - potable water	Three waters - better off funding grants have been received, and primarily spent in community services areas, retrospective payment related to 2024 expenditure.
Three waters supply & treatment - wastewater	Expenditure on three water works, appears slightly low compared with budget; reflective of Council's funding restrictions. Delayed expenditure will further impact on the levels of service Council is able to provide and may increase the risk of asset failure, due to lack of investment in critical asset maintenance.
Waste management & minimisation	Waste management expenditure tracking slightly above budget. Waste management expenditure in the prior financial year was significantly higher than budgeted levels, which could be a reflection of new activities being included and therefore difficult to estimate ongoing costs. However, Council could benefit from reviewing for additional cost efficiencies that could be achieved as part of the cost reduction plan.
Community development & emergency response	Primarily Council office rental expenditure, but also includes ongoing expenditure related to better off funding and Tourism Infrastructure funded projects. Emergency Management water tank project remains ongoing, these costs were not incorporated into the budget for 2024/25. Petrol transactions positive for the year.
Environmental protection, compliance & planning	No issues of note to report, works primarily performed by ECan. Expenditure in this activity appears low for two reasons. Firstly, the ECan contract reserve for work not performed in the 2024 year was returned and off-set against the biosecurity area of expenditure, meaning total ECan expenditure levels are lower than expected/invoiced. Secondly, the ECan invoice for works performed between September - December 2024 has not received as yet (with works being invoiced on an as agreed basis). Due to delays with finalising the ECan contract, some levels of service may be impacted or delayed.
Corporate services and other overheads	Annual budget is \$1.9 million, some overhead expenses have increased significantly, such as audit fees and insurance costs, these are likely to continue into the future.

Chatham Islands Council - Council cash financial report year-end forecast (continued)

Report to 31 December 2024

Remaining 'cash' difference to budget for nine months	Revenue	Expenditure	Net Surplus/ (loss)	Capital	Cash surplus/ (loss)
Leadership & community partnerships	-	145,641	(145,641)	-	(145,641)
Transportation, roading & coastal networks	2,420,178	805,014	1,615,165	1,753,496	(138,331)
Roading	2,383,595	742,154	1,641,440	1,753,496	(112,056)
Coasts	36,584	62,859	(26,275)	-	(26,275)
Three waters supply & treatment - potable water	-	215,152	(215,152)	-	(215,152)
Three waters supply & treatment - wastewater	3,368	88,516	(85,148)	-	(85,148)
Waste management & minimisation	1,506	333,176	(331,670)	-	(331,670)
Community development & emergency response	19,599	1,164,936	(1,145,337)	-	(1,145,337)
Community services	-	937,218	(937,218)	-	(937,218)
Petrol	-	-	-	-	-
Emergency services	19,599	227,718	(208,119)	-	(208,119)
Environmental protection, compliance & planning	106,242	1,158,504	(1,052,261)	-	(1,052,261)
Biosecurity and animal control	106,242	840,183	(733,940)	-	(733,940)
Resource management and regulatory	-	318,321	(318,321)	-	(318,321)
Corporate services and other overheads	733,327	890,194	(156,867)	-	(156,867)
Corporate services	-	890,194	(890,194)	-	(890,194)
Annual appropriation	733,327	-	733,327	-	733,327
Totals	3,284,221	4,801,132	(1,516,911)	1,753,496	(3,270,407)
Expected annual transactions	12,321,506	8,767,272	3,554,235	3,878,276	(324,042)
Annual Plan/Budget	10,755,756	7,392,776	3,362,980	3,748,000	(385,020)

Highlighted orange cells indicate instances where the actual transactions exceed budget, purple colours reforecast for timing adjustments - NKMR grant held in Trust, EM water tank insulation project and ECan Q2 invoice.

Chatham Islands Council - Council financial report benchmarks (continued)

Report to 31 December 2024

Ratio or measure of sustainability	Achieved?	Target	December	November	September
<i>Cash management:</i>					
Available cash (overdraft)	Yes	> -\$150k	1,538,808	2,181,774	2,792,886
Total cash (overdraft)	Yes	> \$200k	1,959,500	2,602,466	2,848,578
Working capital ratio (ability to pay our bills)	Yes	> 1	4	5	21
<i>Operating cash performance:</i>					
Net cash movement for period (2024/25)	Yes	> \$0	2,070,744	2,713,710	2,959,822
Operating performance (cash flow) ratio	Yes	> 5%	22%	35%	43%
Adjusted balanced budget (cash) ratio	Yes	> 100%	148%	194%	325%
<i>Asset replacement:</i>					
Asset sustainability ratio	Yes	> 85%	202%	104%	80%

Notes:

In the initial part of the year, the Council experiences high cash liquidity and positive reporting targets. This is a reflection of the Council receiving the full annual appropriation in July for the 2024/25 financial year. The trend of these sustainability targets shows a general decline in most targets, although currently all are above targeted levels. It is likely these targets will further deteriorate as the year progresses. Future 'committed' projects - such as the water tank project and some better off funded projects, are also likely to pull further on Council's resources, where cash has already been received to support the works, but work is not yet fully complete/paid for.

Both the budget (highlighted yellow) and the revised cash estimate (highlighted red) show expected cash outflows to exceed cash inflows by approximately \$350k for the year ended 30 June 2025. If no further adjustments are made, either by reducing expenditure or increasing revenues, Council will face serious cashflow pressures in the future. A cost savings plan has been requested of the Chief Executive to identify areas of potential expenditure reduction for consideration and implementation by Council, this is likely to have some impacts on the levels of service Council can offer to the community.

Historically, Council had excess funds invested in term deposits, including an 'Emergency Management' fund, these term deposits have all matured and have been absorbed into the Council's current operating account. Council may wish to investigate apportioning some of the \$2m in the current account into short term investments, which will provide some interest income to Council.

Council received significant financial support from three waters funding in 2024, which will no longer be available in 2025.

Formulas:

Working capital ratio (ability to pay our bills)	$=(SUM(cash\ and\ debtor\ assets,\ excluding\ JV))/(SUM(creditors,\ excluding\ loan\ balances))$
Net cash movement for period (2023/24)	$=(Total\ current\ bank\ balance)-(Total\ bank\ balance\ 2022/23)$
Operating performance (cash flow) ratio	$=(Total\ current\ bank\ balance)/(Total\ operating\ revenue\ for\ the\ period)$
Adjusted balanced budget (cash) ratio	$=(Total\ operating\ revenue\ for\ the\ period)/(Total\ operating\ expenditure\ \&\ capital\ for\ the\ period)$
Asset sustainability ratio	$=(Total\ capital\ expenditure\ for\ the\ period)/(Total\ depreciation\ for\ the\ period)$

Highlighting rules:

Ratio within benchmarked expectation	Yes	Ratio not within benchmarked expectation	No
Ratio within +/- 2% of benchmarked expectation	Acceptable		



3. Finance

3.2 Audit Management Report

Date of meeting	3 February 2025
Agenda item number	3.2
Author/s	Colette Peni, Operations Manager

Purpose

To present the Audit Management Report to the Council.

Recommendations

That the Chatham Islands Council receives the report.

Background

Attached to this report is the CIC Audit NZ Management Report for the year ended 30 June 2024.

This report sets out findings from the annual audit and draws attention to areas where the Chatham Islands Council is doing well and where Audit NZ has made recommendations for improvement.

Report to the Council on the audit of

Chatham Islands Council

For the year ended 30 June 2024

Contents

Key messages	3
1 Recommendations	5
2 Our audit report	7
3 Matters raised in the audit plan	10
4 Matters raised during interim audit – How the Council utilise Three Waters Better Off funding	15
5 Assessment of internal control	23
6 Public sector audit	25
7 Useful publications	26
Appendix 1: Status of previous recommendations	29
Appendix 2: Uncorrected misstatements	32
Appendix 3: Disclosures	33

Key messages

We have completed the audit for the year ended 30 June 2024. This report sets out our findings from the audit and draws attention to areas where the Chatham Islands Council (the Council) is doing well and where we have made recommendations for improvement.

Audit opinion

We have issued an unmodified audit opinion on the Council for the year ended 30 June 2024 with an emphasis of matter for the material uncertainty related to going concern on 28 November 2024.

Going concern and financial viability

We have assessed whether the Council is financially viable for the period of 12 months from the date of the date of its annual report adoption (28 November 2024) based on management's cashflow forecast model including:

- Key assumptions used in its cash flow forecasts, such as those relating to crown funding, savings targets, access to working capital facilities and any additional funding.
- Actions within the Council's control if actual cash flows end up being worse than forecast.

We considered the cashflow forecast model fairly supports the Council's going concern assumption in the preparation of the financial statements. We are also satisfied with disclosure in note 16 to appropriately support the going concern assumption. Without modifying our opinion, we draw attention to note 16, which outlines how insufficient funding to meet increased costs continues to weaken Chatham Island Council's cash position and management's plans to deal with the cash flow constraints. There is material uncertainty related to these conditions that may cast significant doubt on Chatham Island Council's ability to continue as a going concern.

However, we are concerned about the sustainability of the current operating model, and the ability to provide required level of services to the community.

- The Council is a knowingly non-compliant council with breaches of some legislations.
- There are significant upcoming uncertainties in relation to Department of Internal Affairs (DIA) funding agreement expiring on 30 June 2027, and service contract with Environment Canterbury (ECan) expiring on 30 June 2026. We would like to reiterate our recommendation in our Report to the Council for the 2024-2034 long-term plan audit for the Council to develop a robust plan to fund essential services and activities to meet the Council's legislative obligation.

We recommend the Council to review the impact of the non-compliance with certain legislation and the reduction in the planned level of service set out in the long-term plan (LTP). The Council should assess and seek legal advice whether an amendment to the LTP would be required. The amendment of the LTP is required to be audited. For further details, please refer to below section 3.2, *Going concern and financial viability*.

Local Water Done Well

We are satisfied with the disclosure made by the Council under note 17 for the Local Water Done Well programme. We remind the Council that the Local Water Done Well programme requires council to prepare a Water Services Delivery plan by 3 September 2025. The plan will set out the Council's intended future delivery arrangements. It is for the Council to determine its future delivery arrangement.

Effectiveness, efficiency, waste and probity

We have reviewed the utilisation of the Better Off Funding, procurement practice and tested sensitive expenditure. We have identified areas in improvements and made recommendations to the management. Key recommendations include the need to adhere to key contract provisions, delegation policy and to develop a comprehensive procurement policy that aligns with the public sector's good practice.

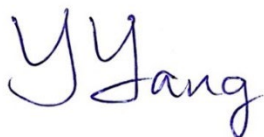
Other matters

Our audit plan for 2024 outlined the key matters identified for the audit. We have detailed the nature of these matters in section 3, *Risks and issues raised in the audit plan* of the report and the results from our procedures to address them.

Our other recommendations are summarised in section 1, *Recommendations* below.

Thank you

On behalf of our audit team, I would like to thank the Council, management and service providers at the Council, for their assistance and for making themselves available throughout the audit.



Yvonne Yang
Appointed Auditor
16 December 2024

1 Recommendations



Our recommendations for improvement and their priority are based on our assessment of how far short current practice is from a standard that is appropriate for the size, nature, and complexity of your business. We use the following priority ratings for our recommended improvements.

Explanation	Priority
Needs to be addressed <i>urgently</i> These recommendations relate to a significant deficiency that exposes the Council to significant risk or for any other reason need to be addressed without delay.	Urgent
Address at the earliest reasonable opportunity, <i>generally within six months</i> These recommendations relate to deficiencies that need to be addressed to meet expected standards of best practice. These include any control weakness that could undermine the system of internal control.	Necessary
Address, <i>generally within six to 12 months</i> These recommendations relate to areas where the Council is falling short of best practice. In our view it is beneficial for management to address these, provided the benefits outweigh the costs.	Beneficial

1.1 New recommendations

The following table summarises our recommendations and their priority.

Recommendation	Reference	Priority
Going concern and financial viability We recommend the Council to review the impact of the non-compliance with certain legislation, and the reduction in the planned level of service set out in the LTP. The Council need to reassess financial forecast model and significant policies in LTP, and to seek legal advice to determine whether amendments to LTP is required to reflect the current and future service capabilities and funding constraints.	3.2.2	Urgent
Relocation and accommodation expense of the Chief Executive Officer (CEO) We recommend one-up approval of sensitive expenditure incurred by KMP according to the Council's policy and to process the CEO's weekly rent according to the employment contract.	3.5.2	Necessary

Recommendation	Reference	Priority
Procurement practice and contract management We recommend the Council to strictly comply with provisions related to material changes in funding agreements, recognize funding restrictions in budgeting and project planning, and enhance record-keeping practices. The procurement policy should be updated to define supplier selection criteria, establish committees for significant contracts, and ensure contracts align with funding conditions. Lastly, the Council must adhere to the delegation policy for contract approvals to prevent splitting and review the policy to clarify procedures for contract progress payments.	4.1.3	Necessary
Approval of petrol expenditure We recommend the authorisation of expenditure to be compliant with delegation authority.	5.1	Necessary
Correct classification of infrastructure sub-classes We recommend the Council to review the fixed assets register and make sure that the nature of the asset align with its classification.	5.2	Beneficial

1.2 Status of previous recommendations

Set out below is a summary of the action taken against previous recommendations. Appendix 1 sets out the status of previous recommendations in detail.

Priority	Priority			
	Urgent	Necessary	Beneficial	Total
Open recommendations	0	2	1	3
Implemented or closed recommendations	2	5	1	8
Total	2	7	2	11

2 Our audit report

2.1 We issued an unmodified audit report



We issued an unmodified audit report containing an emphasis of matter paragraph related to the uncertainties over the going concern of the Council on 28 November 2024. This means we were satisfied that the financial statements and statement of service performance present fairly the Council's activity for the year and its financial position at the end of the year.

In forming our audit opinion, we considered the following matters. Refer to sections 2.2, *Corrected misstatements and disclosure deficiencies*, 2.3, *Uncorrected misstatements and disclosure deficiencies* and 2.4, *Quality and timeliness of information provided for audit* below.

2.2 Breach of section 98(3) of Local Government Act 2002

The Local Government Act 2002 section 98(3) requires local governments to adopt its Annual Report within four months after the end of the financial year to which it relates. The Council has not met this deadline. The relevant disclosure was made on the page 37 of the annual report.

2.3 Corrected misstatements and disclosure deficiencies

We are satisfied that all significant misstatements and disclosure deficiencies identified during the audit have been corrected. Therefore, we believe that the financial statements and statement of service performance are free from material misstatements, including omissions.

We would be pleased to provide the list of the corrected misstatements and disclosure deficiencies to the Council on request.

2.4 Uncorrected misstatements and disclosure deficiencies

The financial statements are free from material misstatements, including omissions. During the audit, we have discussed with management any misstatements that we found, other than those which were clearly trivial. The misstatements that have not been corrected are listed Appendix 2 along with management's reasons for not adjusting these misstatements. We are satisfied that these misstatements are individually and collectively immaterial.

The uncorrected misstatements had the net effect of decreasing net surplus by \$4,405 and decrease the associated net assets by the same amount compared to the draft financial statements.

2.5 Quality and timeliness of information provided for audit

The accounts and supporting working papers were provided and made available at the commencement of the audit. We appreciate the efforts the staff and service providers made to prepare the annual report for audit. However, we have encountered delays in obtaining:

- supporting information for our review over How the Council utilise Three Waters Better Off funding during our interim visit; and
- management's going concern assessment and the corresponding cashflow forecast model during our final visit.

2.5.1 Three Waters Better Off funding

We involved our procurement specialist to assist our review over how the Council utilise Three Water Betters Off funding during our interim visit. However, we initial experienced delays from management due to lack of understanding of our audit scope and procedures being involved.

We have incurred significant additional audit hours in relation to this, that we did not budget for. Refer our detailed work and findings to section 4, *Matters raised during interim audit*.

2.5.2 Going concern assessment

On many occasions, such as Council's 2024-34 LTP Report to the Council dated 8 August 2024, Council's 2024 interim audit management letter dated 10 September 2024 and a number of regular catchup meetings with management, we have emphasised the importance of an appropriate going concern assessment for the annual financial statements audit. Through those regular catchup meetings, we have further clarified the details of the cost savings, assumptions for forecast revenue in the cash flow forecast, the final status as a result of negotiation with Environment Canterbury for the service contract, as well as the appropriate disclosure to faithfully present the status of the Council and its financial challenges.

We only received the management's going concern assessment on 18 October 2024. Despite the extended timeframe was given, management could not provide us with sufficient evidence to support its own cost saving assumption. This resulted in an adverse opinion being proposed to OAG Opinion Review Committee (ORC) meeting on 29 October 2024. By knowing that a meeting was arranged between the Council and ECan to negotiate on cost savings from the service contract on 6 November 2024, ORC decided to make contact with DIA and wait for the result of the meeting.

On 12 November 2024, Council's management provided us with an updated work plan for negotiating with ECan. ECan has confirmed to us by email that their service contract fee for 25J will be capped on \$1 million (align with the Council's cash flow forecast). A follow up

ORC was held on 14 November 2024 based on this key additional evidence. This contributed to an unmodified audit opinion. We have incurred significant additional audit hours in relation to this, that we did not budget for.

Refer our detailed work and findings to section 3.2, *Going concern and financial viability*.

Management comment

Audit New Zealand's requests were significant and servicing these (that is, having all the information at the ready) were difficult in terms of meeting their expectations.

Chatham Islands Council (CIC) management have incurred significant hours of work (often after hours), involving at least five of the eight (full FTE) employees, several external contractors – all trying to respond as promptly as possible over a long period of time. It is worthy to note Audit New Zealand also had five staff involved.

In terms of external contractors being contacted, it appears some of their comments or feedback has been taken "as gospel" as it was not substantiated or verified with CIC.

Despite Audit New Zealand offering attendance at various in-house training opportunities to learn more, this was unhelpful given clarity of the process and expectations were needed quickly.

This being the new Chief Executive's first time, and inheriting several of the issues raised, at times, Audit New Zealand's expectations were unreasonable. Important to note that both the new Chief Executive and a contractor involved (from ECan) had significant bereavements during this period.

3 Matters raised in the audit plan



We informed the Council of the main risks and issues for the audits in our 2024 audit plans. The table below sets out the outcome of the audit procedures we had carried out to address those risks and issues raised in the audit plan.

3.1 The risk of management override of internal controls

There is an inherent risk in every organisation of fraud resulting from management override of internal controls. Management are in a unique position to perpetrate fraud because of their ability to manipulate accounting records and prepare fraudulent financial statements by overriding controls that otherwise appear to be operating effectively. Auditing standards require us to treat this as a risk on every audit.

To address the risk of management override we:

- tested the appropriateness of journal entries recorded in the general ledger and other adjustments made in the preparation of the financial statements;
- reviewed the appropriateness and application of accounting policies to particular transactions;
- reviewed accounting estimates, such as impairments, depreciation, provisions and contract assets, for bias and whether this represented a risk of material misstatement due to fraud; and
- reviewed and evaluated any unusual or one-off transactions, including those with related parties.

Based on our audit procedures, we did not identify any instance of management override during the year.

3.2 Going concern and financial viability

3.2.1 Background and financial status as at 30 June 2024

The DIA has agreed to offer \$4.2 million to the Council for the 2024/25 financial year. However, based on the Council's cash flow forecast model, the Council is likely to exhaust its bank overdraft facilities and also have to reduce level of services and defer its supplier payments before the next DIA appropriation (FY26) comes through on 1 July 2025.

The financial position of the Council has deteriorated compared to the forecasted position in the Council's 2024-2034 long term plan (LTP). As of 30 June 2024, the cash balance is already negative \$456,000 due to overdraft usage, indicating a worse financial position than the forecasted opening cash balance of \$31,000 for the 2024/25 financial year in the

LTP. This negative cash balance highlights the immediate financial challenges and the urgency of securing additional funding.

We have issued an adverse opinion on the LTP because we do not consider the assumptions regarding funding, cost savings, and the exclusion of investment in critical infrastructure assets to be reasonable. The uncertainties around whether DIA funding will be received with adjustment to inflation remain. Furthermore, the reliance on cost savings to achieve a breakeven position is expected to reduce essential services and in breaches of law and legislation. These would be discussed in more details in the following sections.

3.2.2 Assessment of going concern and audit opinion

Our initial assessment of the going concern was to issue an adverse opinion due to insufficient evidence supporting the Council's going concern assumption. This is due to lack of support for cost-saving assumptions, and ECan had paused certain services to the Council, affecting biosecurity, environmental monitoring, and resource consent activities. Without ECan or an equivalent contractor, the Council could not fulfil its duties, leading to a pervasive impact on the financial statement that warranted an adverse opinion.

Subsequently, a positive progress was made to support the ECan service contract saving assumption.

Although there has been progress, the Council still faces challenges with its reduced service levels and anticipated regulatory violations. such as Drinking Water Quality Assurance Rules, Resource Management Act, and Local Water Done Well programme. The Council is also expected to face funding challenges for roading projects and deferred payments to suppliers until the next DIA assistance package due in July 2025. Although the Council's going concern assumption was deemed appropriate, the ongoing impact of these financial conditions and the reduced services from the Chatham Island Council's main service provider along with the impact of the compliance costs of the Local Water Done Well Delivery plan, indicate that material uncertainty exists that casts significant doubt on our ability to continue as a going concern on a long-term basis under the current funding model.

We have concluded to issue unmodified audit opinion with an emphasis of matter to highlight the material uncertainty related to going concern. The audit report refer to the disclosures about the Council's financial position and management's plans to address financial difficulties.

We are concern that:

- The current operating model is not sustainable and financially viable to support the Council to provide required level of service to the community. This Council is a knowingly non-compliant council with breaches of some legislations.
- Further looking ahead, there are further significant uncertainty around DIA funding as the funding agreement will be expiring on 30 June 2027 also ECan service contract will expire on 30 June 2026.

- Although non-compliance with statutory obligations does not compel the Council to cease operations in the foreseeable future, as we recommend in our report for the 2024 LTP, we expect the Council to have a credible plan for funding all its essential services and activities to meet its responsibilities and minimum legislative requirements.

Recommendations

We recommend the Council to review the impact of the non-compliance with certain legislation, and the reduction in the planned level of service set out in the LTP. The Council also need to reassess the impact on the financial forecast model in light of new information regarding the costs savings and availability of funding and determine whether changes are required for the significant policies in the LTP such as the Revenue and Financing policy.

Additionally, we recommend the Council to seek legal advice to determine whether amendment to the LTP is required to reflect the current and future service capabilities and funding constraints as a result of the above assessment. Please refer relevant legislation requirement to sections 16, 97, and 103(4) of the Local Government Act 2002.

Management comments

Noted, CIC will address these with the review being undertaken by the Department of Internal Affairs but seek the support of the Regional Public Service Commission and Local Government New Zealand.

3.3 Fair value assessment of property, plant and equipment (PPE)

PBE IPSAS 17, *Property, Plant and Equipment* requires that valuations are carried out with sufficient regularity to ensure that the carrying amount does not differ materially from fair value.

The Council did not revalue its infrastructure assets as at 30 June 2024 given that it carried out revaluations of its infrastructure assets as at 30 June 2022. Instead, the Council performed a fair value movements assessment to determine whether there is a significant difference between the fair value and the carrying value.

We reviewed management's fair value assessments for the infrastructure assets and completed our own independent calculations. Overall, we are satisfied that the carrying value was not materially different to the fair value as at 30 June 2024.

3.4 Local Water Done Well

The Government has begun implementing its Local Water Done Well Delivery plan, which is expected to bring significant structural changes to the management, funding, and ownership of water supply, wastewater, and stormwater assets in the local government sector.

The Chatham Islands have a small resident community and are geographically isolated from mainland New Zealand, presenting unique challenges in providing services to the community. The Council cannot provide these services without external support from Central Government and can only afford to increase services if external funding is similarly increased. Consequently, without an increase in funding, the Council will have to evaluate whether to allocate funds to create a draft Water Service Delivery plan and associated consultation, meet ongoing compliance, or direct resources to maintaining existing Three Waters assets. The aging infrastructure requires critical maintenance, and the Council currently relies on reactive repairs. Maintaining the Three Waters assets is essential for local development, but with limited resources and a system at capacity, the Council's ability to support growth and meet community needs is increasingly compromised.

The Council currently does not comply with current water regulations (Part 4 or Part 5 of the Drinking-Water Standards (2018) – bacteria and protozoa compliance criteria) and is unlikely to achieve higher compliance with the new regulations without additional funding. To maintain its going concern assumption, the Council has reduced its level of service and planned to breach water-related regulations, including Local Water Done Well and the Resource Management Act. It is acknowledged that the Council is knowingly a non-compliant council. The Council is evaluating options, including advocating for more funding, merging with another council to form a council-controlled organisation, or continuing as a standalone entity without complying with new regulations.

We are satisfied that the above facts and consideration has been appropriately disclosed by the Council under note 17.

We remind the Council that the Local Water Done Well programme requires council to prepare a Water Services Delivery plan by 3 September 2025. The plan will set out the Council's intended future delivery arrangements. It is for the Council to determine its future delivery arrangement.

3.5 Effectiveness, efficiency, waste and probity

3.5.1 Utilisation of the Better Off Funding and procurement practice

Refer to below section 4, *Matters raised during interim audit* for details.

3.5.2 Review of sensitive expenditure

We have reviewed the sensitive expenditure incurred by Mayor, CEO, other KMP, and have communicated the following findings to the management:

One-up pre-approval of expenditure

According to the Council's policy, sensitive expenditures must be approved by a senior authority before being incurred, ensuring a justified business purpose. Our review identified that the pre-approval for CEO's temporary accommodation expenses was discussed but not documented at the time of the expenditure incurred.

CEO accommodation

During our review of key management personnel remuneration, we have found that the CEO did not make contribution to his temporary accommodation according to the contract. Lastly the process of rental payments were delayed due to staff changes in the Finance role.

Recommendation

We recommend one-up approval of sensitive expenditure incurred by KMP according to the Council's policy and to process the CEO's weekly rent according to the employment contract.

Management comment**Summary:**

Comments noted, Council consider these activities to be of a one-off nature, with further training to be provided to staff, to ensure all transactions and required reimbursements are covered.

CIC offered the new Chief Executive its house for rent as part of its remuneration package obligations. Whilst the refurbishment of the council house began well prior to the arrival of the new Chief Executive (starting Monday 30 October), the completion was significantly delayed with occupancy taking place on Thursday 8 August. Temporary accommodation was hastily provided, with no choice, and the quality and inconvenience to the new Chief Executive and arrival of family with a 10-month delay relied on significant goodwill and additional personal costs, notwithstanding the various roles required of the new Chief Executive to play (as stated in this report).

Regarding re-location costs, there was a lack of due diligence by those who drafted the Chief Executive's contract with regards to the true and accurate cost of shipping a container from mainland New Zealand (Wellington) to the Island. Only one removal company (from three) were prepared to do the move, and there was no control of the shipping costs. The difference was funded by the new Chief Executive despite this.

4 Matters raised during interim audit – How the Council utilise Three Waters Better Off funding

4.1.1 Background

The Better Off package of the Council is part of the Crown's Three Waters Reform financial support for local governments under the DIA to invest in the well-being of their communities in a manner that meets the priorities of both the central and local government. For the Council, the approved permitted funding activities or projects (as below) under the Better Off funding were eight activities or projects, totalling \$2.21 million.

- Waste management (\$122,191).
- Kaingaroa Wharf initiative (\$350,000).
- Owenga Wharf initiative (\$450,000).
- NKMRC initiative (\$300,000).
- Housing – Social (\$287,809).
- Housing – Staff (\$200,000).
- Housing – Visitor (\$200,000).
- New House initiative (\$300,000).

We assessed a selection of projects and certain aspects such as procurement, project management to understand how the Council utilise the funds from the DIA Three Waters Better Off funding programme.

4.1.2 Prior written approval for the reallocation of DIA funding to replacement projects

Part 4, section 2.2 of the Funding Agreement between DIA, the Council and Crown Infrastructure Partners Limited (CIP) as Monitor, stipulates that the Council may only use the funding for the purposes outlined in schedule 1. Any other use or changes in scope require prior written approval from DIA or the Monitor (CIP).

October 2023 additional funding for the Housing – Staff project

Although the Council passed a motion on 5 October 2023 to approve additional finance for the Housing – Staff project and the reallocation of the New House initiative (\$300,000) to fund this, it did not seek prior written approval as was required by the Funding Agreement. It did not seek agreement from CIP until 18 March 2024. This request was subsequently approved by CIP on 7 August 2024. This delay in seeking and obtaining approval is in breach of the Funding Agreement.

February 2024 redirection of funding from housing to other projects

In a Chief Executive Report for the Council meeting on 1 February 2024, the CEO requested a \$240,000 to be redirected from Tranche One of the “Three Waters Better Off funding Support Package”. This funding was a combination of “cost savings” from the Housing – Staff project (\$40,000) and the discontinuation of the Visitor House project (\$200,000). At this stage, the change of Housing – Staff project was not yet submitted for approval to DIA so this was a February 2024 variation to the October 2023 change to the Housing – Staff project before the initial change had been submitted or approved.

The Council approved the \$240,000 funding to be re-allocated to CCTV project (\$25,000), Chatham Islands Strategy 2023-28 work (\$100,000), Chatham Islands “Deal” (\$75,000) and Cultural Strategy project (\$40,000).

It is our understanding that approval was not sought from DIA until March 2024. This delay in seeking and obtaining approval is in breach of the Funding Agreement.

A need for greater clarity to support Council decision making

In our view, the documentation presented to the Council for October 2023 the approval of the additional upgrade to the Housing – Staff project lacked sufficient detail to ensure well informed decision-making. Additional information we might have expected could include a business case, quotes, or a project plan. Adequate documentation is essential for transparency, accountability, and good governance. In our view, the Council was not provided with enough information to make an informed decision regarding the additional funding requested.

The February 2024 report to Council should also have been clearer about the reallocation of funding, conditions attached to the funding, and the rationale for changes to projects. This would have enabled the Council to carry out its governance role fully informed.

Of particular concern is the statement, “Funding of \$300,000 is now available for other projects, due to savings and the approach taken with two projects in progress.” It is not clear from the report what savings and approach is being referenced and whether the projects would still be completed to deliver their full benefits without the \$300,000. Further, it is unclear to us from the reporting whether the CEO and Council recognised the requirement that this funding should be used in accordance with the projects agreed upon in the Funding Agreement unless prior written approval is given to fund replacement projects.

The timing of communication with DIA does not appear to match the progress of the projects

Although a request to reallocate funding was made in March 2024, by April 2024, DIA had not yet approved the reallocations. This is evident as DIA still considered the funds unallocated. Despite this, the Council has continued to advance projects as if the reallocations had been approved.

Without the approval from DIA, the Council had to pay all the cost incurred related to the Housing – Staff project (in additional to the \$200,000 originally approved), and the other proposed projects approved in Feb 2024 during its current financial constraints. The cash shortfall put further pressure to the Council’s financial viability. We do not believe the Council’s financial position is adequately managed.

4.1.3 Procurement practice and contract management

The Better Off funding agreement requires the Recipient to ensure that all agreements it enters with any contractor in connection with the Permitted Funding Activities are on an “arm’s length” basis, provide value-for-money and do not give rise to any conflict of interest.

The Council’s procurement policy

The Council’s Policy on requesting jobs and raising purchase orders states that all Council expenditure is subject to the standards of probity and financial prudence that are to be expected of a public entity. Expenditure is expected to be able to withstand public scrutiny.

The supplier is selected from the ‘preferred supplier list’ by the requestor. A job request form includes details, such as quotes, timeframe for completion services or delivery of goods. Once approved, purchase orders are raised. Purchase orders are required to be duly supported by approved job request including copies of the quotes.

We observed that the policy is silent as to the criteria the Council should use in the selection of the preferred supplier from the “the preferred supplier list” and the lack of alternative approach if there is no available supplier on the list for the job or purchase of goods and services requested. Neither was there any appropriate committee or tender panels created to decide on the preferred supplier for bigger contracts to ensure impartiality and value for money.

Delegated authority for procurement and contracting

The Council’s Delegations Register states that the CEO may award tenders for contracts up to \$300,000; or contracts up to \$500,000 procured using the qualified panel of suppliers established by the Council.

The first contract with the contractor, Peter Somerville Limited amounted to \$298,232 and the second contract amounted to \$96,508, or a total of \$394,740.32. This contractor is not on the Council’s preferred supplier listing. Given that the total amount of the contract already exceeded the CEO’s delegated authority – the approval of the additional contract should already be made by the Council.

In our view delegated authority should be considered at whole of contract or project cost level. Accordingly, the November 2023 budget increase to \$500,000 (\$200,000 initial cost plus \$300,000 additional funding allocated) likely meant that the contract should have been approved by Council rather than being delegated to the CEO.

It is not clear that the contracts were provided to the Council for approval.

Further, there is also no evidence showing the contracts were awarded through a competitive tender process or a process in place to ensure that the contracts are on an arm-length basis, provided value for money or do not give rise to any conflict of interest.

Delegated authority for contract payment

We noted that progress payments for the House - Staff project were approved by the Operations Manager and the CEO. Four purchase orders (PO) with an aggregate amount of \$271,729.75 were approved by the Operations Manager while one PO amounting to \$71,552 was approved by the CEO.

In accordance with Delegation Register, "1.9.3.3 Chief Executive approves progress payments for the supply of goods and services that have been approved by Council, appropriate Committee or the Tenders Panel". "2.5.2.2 Operations Manager approves contract progress payments for the supply of goods and services as have been approved by Council".

As noted above, it is not clear that the Council was provided adequate documentation such as the contract, a business case, quotes, or a project plan. In our view, it is not clear either the CEO or the Operation Manager have the authority to approve the progress payments.

Separation of duties - House – Staff project

The Council's Delegations Register states that the CEO may approve contract progress payments for the supply of goods and services that have been approved by Council, appropriate Committee, or the Tenders panel. However, this statement does not anticipate the CEO playing other roles on the same project.

With respect to this project, the CEO currently serves as the project manager, contract approver, and payment approver (in conjunction with the Operations Manager). We recognise that in a small Council, ensuring proper separation of duties can be challenging. However, this is a crucial internal control for sound financial management. The core principle of separation of duties is that one person should not be able to initiate, approve, and review the same action. We believe this situation should be avoided, and mitigation measures should be implemented to manage the risks. Getting specific delegated authority from Council to some other person would have avoided this issue, as would approvals reverting to Council.

Recommendations

We recommend the Council:

- a. To be alert and strictly comply provisions related to material change or variations of any grant or subsidy funding agreement, to ensure that the Council will not be in breach of funding agreement and exposed to any financial risks.
- b. To ensure budgeting, project planning and approval processes recognise any restriction or obligations tied to funding and enhance its record-keeping practices to ensure the retention of all key documents, decisions, communications, and

other necessary records to support procurement, contracting, and project management activities.

- c. To review and update its Procurement policy by clearly stating the manner of selection of preferred supplier, to include criteria to be used and by establishing appropriate committee or tender panels, for significant contracts, to ensure that expenditure decisions have justifiable business purpose, value for money and impartiality. It is also important to be clear on ensuring contracts entered are based funding condition or pre-approval from the funder.
- d. Strictly comply with its delegation policy on approval of contracts awarded to the same supplier to ensure appropriate level review and prevent splitting of contracts.
- e. To review the delegation policy to streamline unclear policies on contract progress payments in relation to contract approval.

Management comments

a. Summary:

- *At no stage was the funding at risk despite not receiving written approval.*
- *Government changed legislation which slowed down an already slow process for approving funds for reimbursement.*
- *Impact of waiting for written approval, an additional six months, would have cost CIC \$70k minimum in unrelated costs potentially rendering the project unviable.*
- *If the original projects had progressed as proposed, then the same financial pressure would have resulted for CIC in terms of Audit New Zealand's assertion that our financial position is inadequately managed in this regard.*

Neither of the two Council Officers who were involved in the Better Off Fund (BOF) projects had notified the new Chief Executive that the Funding Agreement required prior written approval from Crown Infrastructure Partners (CIP) for new projects post council approval to ensure reimbursement.

Whilst prior written approval was not sought from CIP, it is crucial to note that no indication was given, at any stage, that the work on the new projects (all approved by council) should not be pursued and/or cease, during several verbal and face to face meeting interactions with the Chief Executives, and officials, of both CIP and the Department of Internal Affairs (DIA). The Mayor attended these meetings with both agencies. The issue of ensuring that changes should have been made in writing and approved prior was never raised. Whilst changes in writing may have been stipulated originally, it did not impact the funding, and the funds were eventually approved in August and over \$430k has been reimbursed as expected. Therefore, it is the Chief Executive's view, that it does not constitute a breach as alleged. To reinforce this again, neither CIP or DIA have raised this as an issue.

It should also be noted that the entire process for managing reimbursement from DIA via CIP remains extremely slow. The political context for this funding changed when proposed new Government legislation for Three Waters resulted in the Minister for Local Government requesting all local authority Chief Executives “voluntarily consider” any funding be utilised for water by “mutual agreement”. The original intention of the processes first put in place for the funding were subsequently stalled and delayed the approvals for all those local authorities seeking changes.

Approvals from DIA were eventually received, as expected, on 7 August 2024. The consequences and impacts of not beginning work until this date would have been considerable in terms of CIC’s viability as a going concern – notwithstanding the employment obligations to the remuneration package for the new Chief Executive. This would have meant alternative accommodation costs alone would have escalated by an additional \$70,000.00 plus and impacted the wellbeing of the whānau for what would have resulted in a 15 month wait since arrival for a home.

In terms of financial risk, if the BOF projects had progressed as originally proposed, then the same financial pressure would have resulted for CIC in terms of the assertion that our financial position is inadequately managed in this regard.

b. Summary:

- *No procurement was undertaken prior to the new Chief Executive’s arrival.*
- *No Project Management Office or in-house specialist expertise.*
- *No processes in place for critical information handover.*

The hand-over and guidance provided from existing staff with the right knowledge of the contracts and projects was inadequate, despite requests from the new Chief Executive for more information. Too many people had ‘bits of information’ and this created compliance risks. With no Project Management Office or in-house specialist expertise, there were no processes in place for “critical information handover”, resulting in the right questions not being asked at the right time.

The issues raised in the report highlight and confirm the need for improvements to the siloed council culture and structure (including the contracted provision of corporate services). The Chief Executive has already identified this problem as a key contributing factor to the effective management of projects and related services.

There is a need for extreme caution when taking on additional funding for non-core activities, despite the need, without the project management expertise in-house and/or on-Island.

c. Summary:

- *No procurement plan put in place by previous Chief Executive.*
- *Absence of appropriate procurement policy.*
- *Two contracts put in place as a work around, project delivered under budget.*

Context not reflected in this report – project inherited by the new Chief Executive, and procurement already compromised by the contractor being engaged and the first invoice for work paid prior to starting.

The need to confirm the quote and provide a contract was immediately identified and progressed and signed off within the Chief Executive's delegation of \$300,000.00.

It should be noted that the additional work, and work undertaken by sub-contractors was approved and overseen by the contractor. The second quote and contract clearly reflect this.

Critical to the context is CIC has no project management expertise in-house, and a procurement plan should have been put in place right at the beginning. The costs related of producing and delivering a procurement plan, including the possibility of an external project management resource could have taken one third of the available budget, not to mention the extra time (which in itself is a cost) – potentially rendering the project unviable.

In terms of the need for separation of duties, it is important to note that much of the initial work and quote was undertaken prior to the new Chief Executive starting, by the former Chief Executive. There also appears to be a fundamental lack of understanding as to how CIC is required to operate in an isolated, island environment with approx. 600 people. Playing multiples roles is a given for the Chief Executive role, the key is to acknowledge the conflicts and ensuring there are processes in place for protecting this. The Chief Executive is an experienced project manager. The asset, which is owned by CIC, is one of a few public service homes that meet the Healthy Homes Standard. The Chief Executive is the tenant and it forms part of the employment remuneration.

Acknowledging the absence of policy, following the Government Procurement Rules would have been appropriate, whereby progressing the contract based on rule 14 (14.9.c) would have identified Peter Somerville as the only suitable contractor, noting both on-Island Licensed Building Practitioners were unavailable at the time. In addition to the lack of project management expertise, this reflects the lack of a competitive environment for building on-Island.

The Chief Executive has already sought legal assistance to remedy the gap in the CIC procurement policy. An extensive procurement manual and policy for all types of procurement will need to be commissioned and a meeting has been held with Council's legal advisors. This will align to the Chief Executive's delegations to "award tenders for contracts up to \$500,000 procured using the qualified panel of suppliers established in accordance with Chatham Islands Council". Acknowledging the unique circumstance, seeking approval from CIC as a default when unsure of the final amount is noted.

Important to note that the Chief Executive has progressed an alternative approach to project managing the emergency services hub proposal. Crown Infrastructure Delivery (formerly Rau Paenga), the Government's infrastructure project management agency, will now produce a business case and provide options to CIC prior to advancing to the next stage. This ensures a more robust process for managing projects on the Island.

d. Summary:

- *Contract structure issue.*

Noted, acknowledging the aggregated contract amounts breached delegations. The work was delivered as two contracts, versus one overall contract, as we were unable to fully specify the full scope of works upfront as such is the nature of remedial building work on a 50-year-old building, combined with the unpredictable circumstances of building on the Island.

e. Summary:

- *Noted.*

Summary of all five recommendations:

- *Learnings will be incorporated into future grant application processes, with additional guidance to be provided to staff on appropriate grant documentation processes –noting that such a significant funding package is unlikely to be received by Council in the foreseeable future.*

5 Assessment of internal control



The Council, with support from management, is responsible for the effective design, implementation and maintenance of internal controls. Our audit considers the internal control relevant to preparing the financial statements and the service performance information. We review internal controls relevant to the audit to design audit procedures that are appropriate in the circumstances. Our findings related to our normal audit work and may not include all weaknesses for internal controls relevant to the audit.

We have not identified any significant control deficiencies that would result in a modified audit opinion; however, there are some improvement opportunities requiring immediate attention, refer to section 1.1, *New recommendations* for a summary of the new recommendations and the corresponding sections.

We discussed with management the new findings raised and independently followed up on prior year recommendations during the audit. We report on our follow-up findings in Appendix 1, *Status of previous recommendations*.

5.1 Approval of petrol expenditure

Findings

During our testing of expenditure, we have found instances where the purchase of fuel have amounted to over \$20k. But was authorised by the operation manager, with maximum delegation authority of \$20k.

Recommendation

We recommend the authorisation of expenditure to be compliant with delegation authority.

Management comment

Comments noted, Council will revisit the staff approved delegations level, with particular focus on the Operations Manager, specifically given they are currently authorising all petrol expenditure transactions – where costs have increased due to a reduced availability of low capacity petrol containers, so higher volume container require purchasing.

5.2 Correct classification of infrastructure sub-classes

Findings

During our review of PPE, we have identified some misalignment of classification between the fixed asset register and the useful lives per accounting policies. We note that it is resulted from the assets being classified in the incorrect sub-classes, and we have confirmed the impact on depreciation expenditure is not material. However, the incorrect classification of infrastructure assets can lead to errors in the next valuation. For example, the streetlights have its own asset category and unit rate, but if it's classified under wharves and been assigned the unit rates of wharves, this would result in incorrect valuation result.

Recommendation

We recommend the Council to review the fixed assets register and make sure that the nature of the asset align with its classification.

Management comment

Comments noted, the Council's Fixed Asset Register has been recently reviewed, but additional refinement of asset classifications and depreciation rates will occur.

6 Public sector audit



The Council is accountable to Parliament, their local community and to the public for its use of public resources. Everyone who pays taxes or rates has a right to know that the money is being spent wisely and in the way the Council said it would be spent.

As such, public sector audits have a broader scope than private sector audits. As part of our audit, we have considered if the Council has fairly reflected the results of its activities in its financial statements and non-financial information.

In our audit, we also consider if there is any indication of issues relevant to the audit with:

- compliance with its statutory obligations that are relevant to the annual report;
- the Council carrying out its activities effectively and efficiently;
- the Council incurring waste being as a result of any act or failure to act by a public entity ;
- any sign or appearance of a lack of probity as a result of any act or omission, either by the Council or by one or more of its members, office holders, or employees; and
- any sign or appearance of a lack of financial prudence as a result of any act or omission by a public entity or by one or more of its members, office holders, or employees.

The key findings related to procurement practice and contract management have been discussed in the above section 4, *Matters raised during interim audit* for details.

As part of the audit, we reviewed the Council's compliance with significant legislation relevant to the annual report, instances of non-compliance were identified due to funding constraints, refer to above section 3.2, *Going concern and financial viability* for details.

We also performed a high-level review of expenditure relating to air travel, accommodation, and training/conferences. However, we have raised recommendation on the approval process of sensitive expenditure, as noted in section 3.5, *Effectiveness, efficiency, waste and probity*.

7 Useful publications



Based on our knowledge of the Council, we have included some publications that the Council and management may find useful.

Description	Where to find it
Performance reporting	
Public organisations are responsible for reporting their performance to Parliament and the public in a way that meaningfully reflects their organisation's aspirations and achievements. The Auditor-General published a discussion paper that explores five areas for improvement in performance reporting.	On the Office of the Auditor-General's website under publications. Link: The problems, progress, and potential of performance reporting
The Office of the Auditor-General, the Treasury and Audit New Zealand have jointly prepared good practice guidance on reporting about performance. The guidance provides good practice examples from public organisations in central government. Those working in other sectors may also find this useful.	On Audit New Zealand's website under good practice. Link: Good practice in reporting about performance — Office of the Auditor-General New Zealand (oag.parliament.nz)
Local government risk management practices	
The Covid-19 pandemic is a stark reminder for all organisations about the need for appropriate risk management practices. In our audit work, we often see instances where councils do not have effective risk management. This report discusses the current state of local government risk management practices and what councils should be doing to improve their risk management.	On the Office of the Auditor-General's website under publications. Link: Observations on local government risk management practices
Public accountability	
Public accountability is about public organisations demonstrating to Parliament and the public their competence, reliability, and honesty in their use of public money and other public resources. This discussion paper explores how well New Zealand's public accountability system is working in practice.	On the Office of the Auditor-General's website under publications. Link: Building a stronger public accountability system for New Zealanders

Description	Where to find it
Setting and administering fees and levies for cost recovery	
This good practice guide provides guidance on settings fees and levies to recover costs. It covers the principles that public organisations should consider when making any decisions on setting and administering fees and levies. It also sets out the matters public organisations should consider when calculating the costs of producing goods or providing services and setting charges to recover those costs.	On the Office of the Auditor-General's website under publications. Link: Setting and administering fees and levies for cost recovery: Good practice guide
The Office of the Auditor-General, the Treasury and Audit New Zealand have jointly prepared good practice guidance on reporting about performance. The guidance provides good practice examples from public organisations in central government. Those working in other sectors may also find this useful.	On Audit New Zealand's website under good practice. Link: Good practice in reporting about performance — Audit New Zealand (auditnz.parliament.nz)
Managing conflicts of interest involving council employees	
This article discusses findings across four councils on how conflicts of interest of council employees, including the CEO and staff, are managed.	On the Office of the Auditor-General's website under publications. Link: Getting it right: Managing conflicts of interest involving council employees
Model financial statements	
Our model financial statements reflect best practice we have seen. They are a resource to assist in improving financial reporting. This includes: • significant accounting policies are alongside the notes to which they relate; • simplifying accounting policy language; • enhancing estimates and judgement disclosures; and • including colour, contents pages and subheadings to assist the reader in navigating the financial statements.	Link: Model financial statements

Description	Where to find it
Sensitive expenditure	
The Auditor-General's good practice guide on sensitive expenditure provides practical guidance on specific types of sensitive expenditure, outlines the principles for making decisions about sensitive expenditure, and emphasises the importance of senior leaders "setting the tone from the top". It also describes how organisations can take a good-practice approach to policies and procedures for managing sensitive expenditure.	On the Office of the Auditor-General's website under good practice. Link: Sensitive expenditure
Good practice	
The Office of the Auditor-General's website contains a range of good practice guidance. This includes resources on: • audit committees; • conflicts of interest; • discouraging fraud; • good governance; • service performance reporting; • procurement; • sensitive expenditure; and • severance payments.	On the Office of the Auditor-General's website under good practice. Link: Good practice
Procurement	
The Office of the Auditor-General are continuing their multi-year work programme on procurement. They have published an article encouraging reflection on a series of questions about procurement practices and how processes and procedures can be strengthened, with a focus on local government.	On the Office of the Auditor-General's website under publications. Links: Strategic suppliers: Understanding and managing the risks of service disruption Getting the best from panels of suppliers Local government procurement

Appendix 1: Status of previous recommendations

Open or in progress recommendations

No.	Recommendation	First raised	Status
Necessary			
1	Valuation of infrastructure assets Consider and implement the improvement recommendations from Stantec.	2021/22	No progress Implementation of recommendations made by the valuer will be confirmed as part of the next full revaluation.
2	Bribery and corruption Recommended updates and process improvements include: • Update the fraud policy to specifically cover bribery and corruption. • Improve controls or processes to address the risks of bribery and corruption. • Improve processes for notifying and dealing with breaches of the code of conduct and ethical guidelines and incidents of bribery and corruption. • Provide training on updated policies.	2018/19	In progress We note that the policy is under review and has not yet been adopted by the Council.
Beneficial			
3	Depreciation Ensure that depreciation rates in the policy for infrastructure assets to reflect their actual useful lives after the completed full revaluation. Update the depreciation rates in the fixed asset register (FAR) to ensure the correct recognition of depreciation expense.	2022/23	No progress Depreciation policy and useful lives per FAR remained unchanged from prior year.

Implemented or closed recommendations

No.	Recommendation	First raised	Status
Urgent			
1	Local Government Members 2023 Determination Ensure that the remuneration and allowances of the members of the Council is within the limits set out in the elected members' determination as required by law.	2022/23	Closed During our review for 2023/24 we have not identified similar issue.
2	Review and update the rates assessment notice Revise and update the presentation of the rate assessment to comply with the required disclosures under section 45(1) of the Local Government (Rating) Act 2002. Obtain legal advice to assess whether the Council is exposed to any financial or legal compliance risk.	2018/19	Closed We had verified and accepted management explanation that required information has been either included in rate assessment notice.
Necessary			
3	Fair value assessment of property, plant and equipment (PPE) Perform a full revaluation for its transportation assets considering that the fair value movement this year is material although lower than our performance materiality but close enough, to warrant full revaluation in the next financial year.	2022/23	Closed We have reviewed and are satisfied with the fair value assessment for the roading assets performed by the Council that there's no material fair value movements on the roading assets this year.
4	Updated fixed asset register (FAR) Ensure that all the property, plant and equipment movements are processed into the fixed asset register in a timely manner to ensure that FAR and GL are reconciled ,and depreciation charges are accurately calculated.	2022/23	Closed During the year, the Council had made some reclassification between assets classes to ensure FAR reconcile to GL. We have reviewed the PPE movement table and are comfortable with the changes made.

No.	Recommendation	First raised	Status
5	Grants revenue recognition process Implement a centralised process to review the grant revenue and monitor if they comply with the condition of the grant. Be able to provide their review, including any workings, to support the grants review recognised in the financial statements.	2022/23	Closed In the current year, the only material grant with use or return condition that is still ongoing is the Better Off Funding which we have reviewed in detailed as discussed under section 4. This recommendation is superseded by new recommendation raised for the Better Off funding.
6	Suspensory loans Reclassify suspensory loan to non-current deferred revenue under non-exchange transactions as this better reflects the substance of the arrangement.	2022/23	Closed We have confirmed that the suspensory loan has been reclassified to non-current.
7	General IT controls Perform and document formally a regular review of User access. Update the configuration settings on password security settings to be aligned to NZISM recommendations to strengthen its design and controls.	2022/23	Closed We have confirmed that alternative approach were in place on ad hoc basis for any changes in staffs, and the password security issue has been addressed. This is in line with our expectation considering the size of the Council.
8	Delegation authority Update the delegation policy to clearly cover approval of expenditures from grants, which are normally excluded from LTP, hence unbudgeted, if the intention of the Council is to delegate the approval of related expenses to management.	2022/23	Closed We accepted that the PPE addition testing that the delegation policy has been followed appropriately. The source funding of the PPE addition were mainly from grant, and the allocation of the grants have been discussed and approved evidenced from the Council minutes.

Appendix 2: Uncorrected misstatements

Note	Account Name	Statement of comprehensive income		Statement of financial position	
		Dr	Cr	Dr	Cr
1	Other receivable	–	–	5,066	–
	Accommodation expense	–	4,405	–	–
	GST	–	–	–	661

Explanation of uncorrected misstatement

- 1 To recognise receivable for CEO's weekly rent for the accommodation as per the employment contract.

Uncorrected disclosure deficiencies

Detail the uncorrected misstatement
Funding Impact Statements: The total amount of fees and charges are not separately disclosed in the Funding Impact Statements for whole of council as well as all the group of activities. This is not compliant with the standard format specified in the Local Government (Financial Reporting and Prudence) Regulations 2014.
Note 2 Grant Revenue: To disclose the nature of the Better Off Funding received from DIA, in addition to the Crown's annual contribution.
Note 17 Events after the end of the reporting period: To disclose the service contract agreed with ECan, including the agreed contract value and its uncertainties.

Explanation for uncorrected misstatement

Consider not material to the report reader given the net position remains unchanged and the gross impact on the disclosure is not material.

Appendix 3: Disclosures

Area	Key messages
Our responsibilities in conducting the audit	We carried out this audit on behalf of the Controller and Auditor-General. We are responsible for expressing an independent opinion on the financial statements and performance information and reporting that opinion to you. This responsibility arises from section 15 of the Public Audit Act 2001. The audit of the financial statements does not relieve management or the Council of their responsibilities. Our audit engagement letter contains a detailed explanation of the respective responsibilities of the auditor and the Council.
Auditing standards	We carried out our audit in accordance with the Auditor-General's Auditing Standards. The audit cannot and should not be relied upon to detect all instances of misstatement, fraud, irregularity or inefficiency that are immaterial to your financial statements. The Council and management are responsible for implementing and maintaining your systems of controls for detecting these matters.
Auditor independence	We are independent of the Council in accordance with the independence requirements of the Auditor-General's Auditing Standards, which incorporate the independence requirements of Professional and Ethical Standard 1: <i>International Code of Ethics for Assurance Practitioners</i>, issued by New Zealand Auditing and Assurance Standards Board. Other than the audit, we have no relationship with, or interests in, the Council.
Fees	The net audit fee for the year is \$99,606 plus Office of the Auditor-General overhead and GST, as detailed in our audit proposal letter. No other fees have been charged in this period.
Other relationships	We are not aware of any situations where a spouse or close relative of a staff member involved in the audit occupies a position with the that is significant to the audit. We are not aware of any situations where a staff member of Audit New Zealand has accepted a position of employment with the Council during or since the end of the financial year.

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4. Works & Services

4.1 Stantec Report – December 2024 / January 2025

Date of meeting	13 February 2025
Agenda item number	4.1
Author/s	Stantec New Zealand

Purpose

To update and inform Council about its Engineering Services contract.

Recommendations

THAT the reports be received.

Background

Members from the Stantec team will teleconference in to the meeting to give a verbal report on monthly activities.

Attachments

1. Stantec Monthly Report December 2024 & January 2025

CIC Engineering Services Contract: Monthly Report

Financial update – December 2024

Financial Position: Roothing

The total roading budget allocated for the 2024/25 financial year is \$5.8M. The approved budget for the subsidised Continuous Maintenance Programme is \$4.7M.

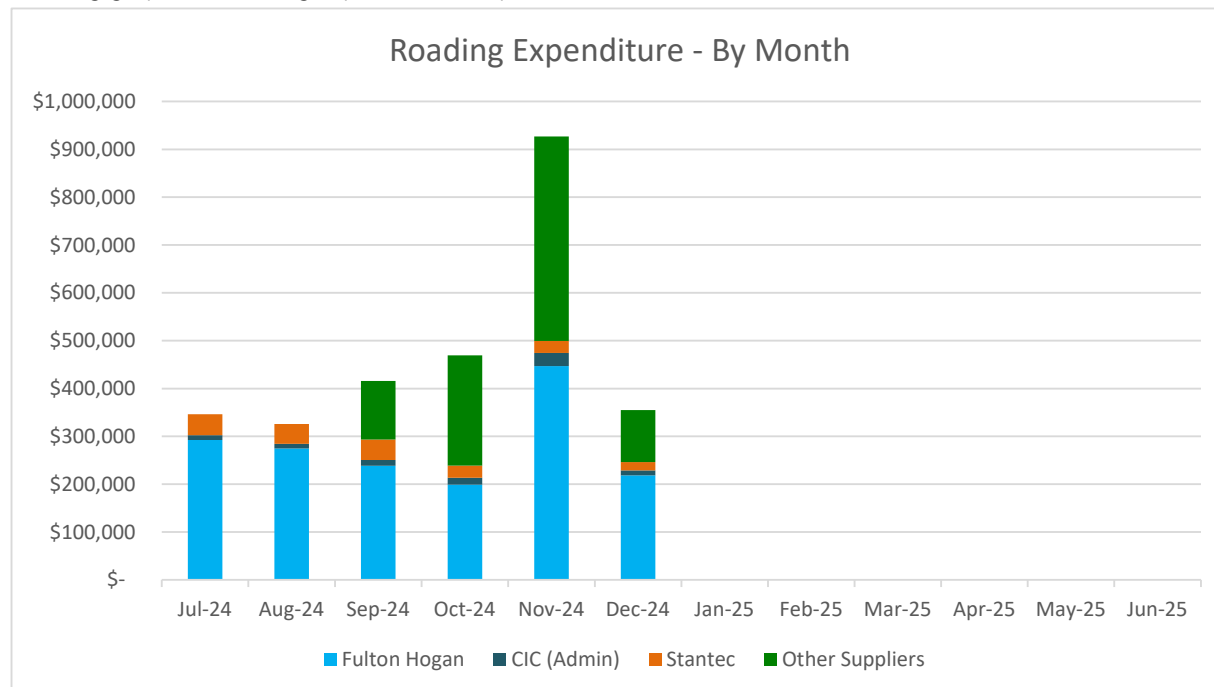
The December claim totalled \$355k.

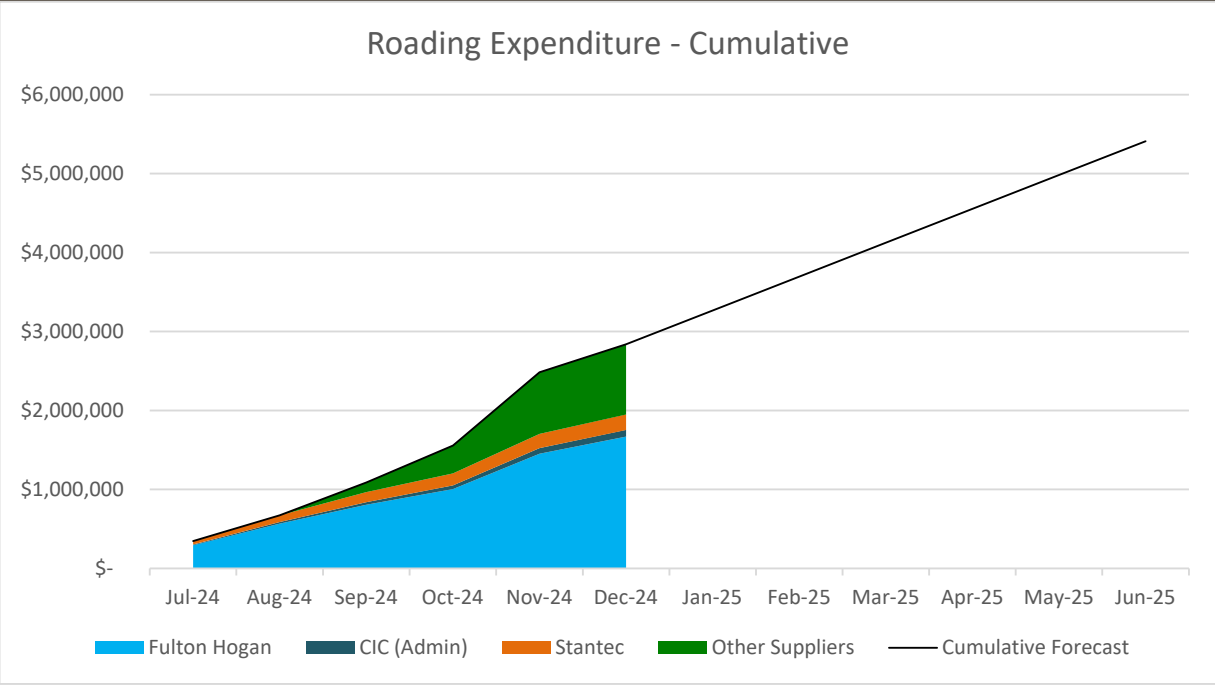
Expenditure of the Continuous Programme has used 44% of the funding allocated for 24/25 and we are 50% of the way through the 2024/25 financial year.

The largest construction cost in December was for the works at Owenga for the Barge Landing. The largest engineering cost was for meeting the reporting requirements under the new Ministerial Expectations for Pothole Prevention and TTM.

Expenditure Tracking of Waka Kotahi Funding

Tracking graphs for roading expenditure are presented below.





The claims from "Other Suppliers" include:

- Hunter Civil for the Owenga Barge Landing
- CIET for the electricity for the street lighting, and
- GoldSeal for the replacement of the Lower Nairn Bridge protective coating.

Financial Position: Water and Wastewater

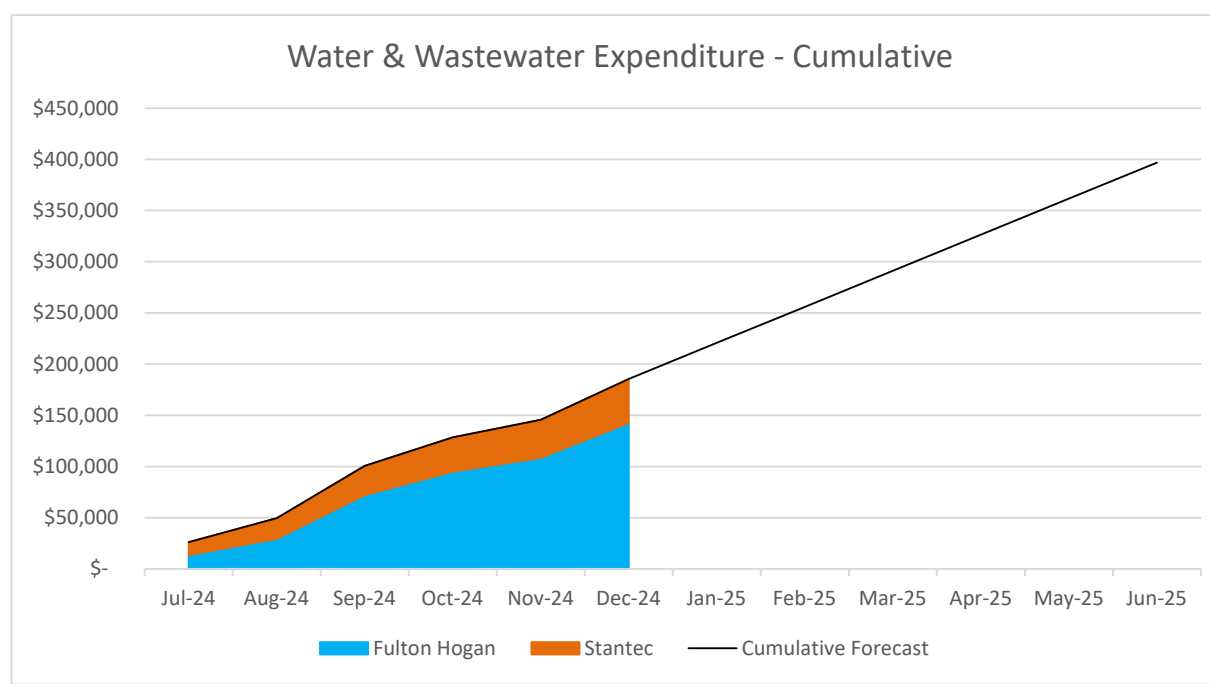
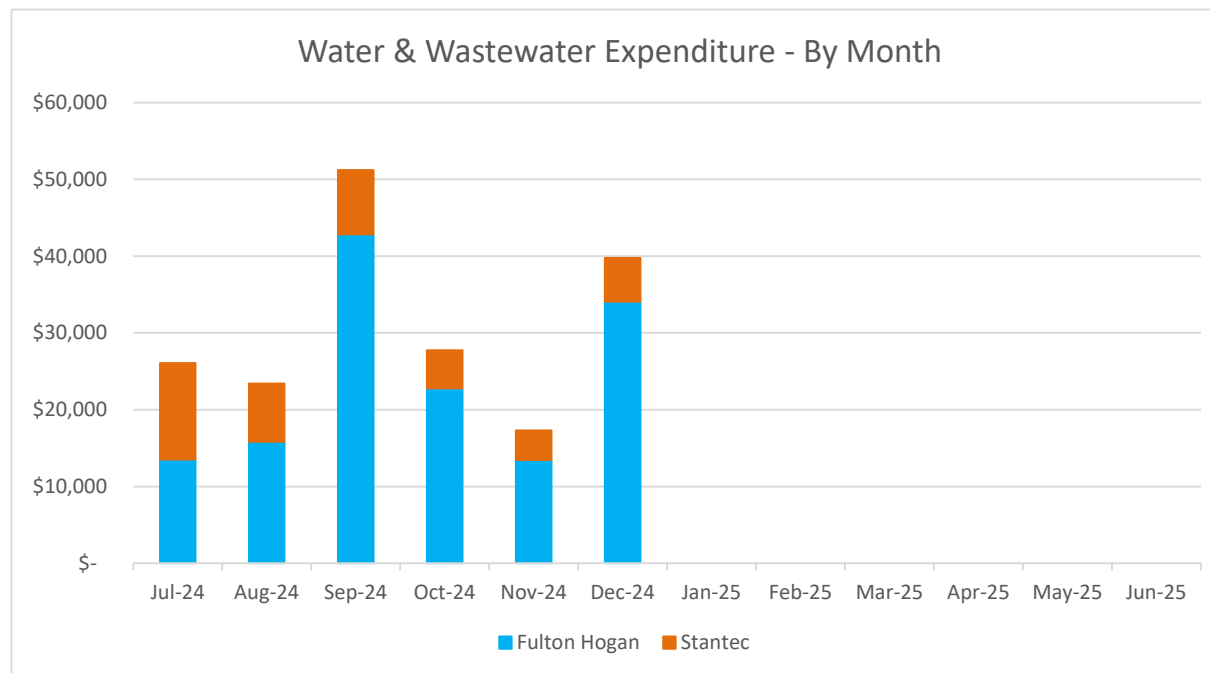
The operational expenditure for W+WW allocated in the 2024-34 LTP for 2024/25 is \$391,000.

The December claim totalled \$39.7k

The main construction cost was for repairing the numerous water leaks around Waitangi and Kaingaroa.

Expenditure Tracking of Water & Wastewater Funding

Tracking graphs for the W+WW expenditure are presented below.



Roading Update – December 2024

Short- & Medium-Term Roothing Forward Work Programme	
Pavement Maintenance	Continue unsealed Strengthening works on North and Waitangi Wharf – Owenga roads
Owenga Loading Facility (LCLR)	- Hunter Civil are waiting for some invoices before the final payment claim is submitted and the project will be completed - Practical Completion inspection to occur during week ending 24 Jan
Network & Asset management	- Respond to the NZTA audit report, - Submit first quarterly report for the new Ministerial Expectations for NLTP funding incl. Potholes and Temporary Traffic Management - Continue prioritising and costing future roading projects identified in the 30-year plan
Long Term Roothing Forward Work Programme	
Pavement Maintenance	Confirm pavement designs and rehabilitation locations for the Sealed Pavement maintenance programme in summer 2025/26
Bridges & Structures	Replacement of the deck and beams on the Maipito Bridge in 2025/26
Owenga / Kaingaroa MakeSafe Works	Ongoing monitoring of wharf condition

Pavement Maintenance	
Previous Status: - The unseasonably wet weather has given over to unseasonably dry weather and maintenance interventions will change to match - Some types of work require certain amounts of moisture in the pavement and may not be able to be successfully completed during dry spells	Updates: Additional pavement materials have been placed on North Road & Kaingaroa Road to repair areas damaged from hauling to the previous rehab sites.

Drainage Maintenance	
Previous Status: - Swale formation and renewal has remained a priority to ensure that surface water doesn't pool on the roads - Ongoing drainage maintenance and inspection	Updates: None

Bridge & Structures Maintenance	
Previous Status: - The GoldSeal contractor and his equipment should be arriving on Island in December after some delays by the shipping company have pushed back the planned start date - Fulton Hogan are producing a works plan for the Maipito Bridge deck and beam replacement	Updates: - The GoldSeal contractor has completed the new application on the Lower Nairn Bridge - Nigel & Rebecca will undertake an inspection of the application during the next site visit, but the site photos from the contractor look good

Owenga Barge Landing

Previous Status:

- The results of the clegg hammer, anchor creep, and grout cylinder quality tests for the landing have all passed the quality assurance requirements
- At least 2 of the concrete slabs are in place at the time of writing
- The landing is on track for practical completion in the first week of December

Updates:

- Construction on the landing is complete and it is ready for use
- Once the final invoices have been presented to Hunter a Final Payment Claim will be submitted and the project will be complete.
- Nigel & Rebecca will undertake an inspection of the Landing during the next site visit, and issue a Practical Completion Cert

Network & Asset Management

Previous Status:

- An initial 30-year plan has been populated for the roading activity
- Due to the NZTA funding levels recently being adequately high, there are few capital improvements required to the Chatham Islands Roads
- There are some areas that may benefit from upgrading unsealed roads to sealed roads, and the component and structural replacements for every remaining timber & steel bridge has been included
- We would like to add any ideas to the list to help discuss NZTA funding limitations and benefits to community, and to assist Paul to secure alternative funding sources in future.

Updates:

- Ongoing minor Asset Management works and forward planning

Kaingaroa & Owenga Wharf Repairs

Previous Status:

- Hunter Civil have submitted the payment claim for the Kaingaroa Southern Fender and decking repairs.
- Some work to install tread grating on the stairs of Owenga Wharf is still to be undertaken, and will be completed in conjunction with the loading ramp construction

Updates:

- Some grating has been added to the stairs down to the platform at the end of the Owenga wharf to reduce the slipperiness

Stantec Site Visits

Previous Status:

- The roading visit at the end of October was for the NZTA combined Audit
- The NZTA audit team attended a briefing after the Council Meeting on the 31st of October

Updates:

- The next site visit will be in January 2025.

CIC catch-ups in Christchurch

Previous Status:

- Nigel, Rebecca, Bryan, and Hanna attended a dinner in Christchurch with Monique and Paul, and Owen and Lynette Pickles on the 23rd of October.

Updates:

- No updates

NZTA Waka Kotahi Updates
Previous Status:

- The Minister through the NZTA has asked CIC to report on Pothole response and TTM expenditure for Q2 in January next year.
- The guidance for the pothole response reporting has not been released, but we understand no RCA has been informed of how to report the pothole requirements.
- The TTM reporting guidance has been sent, and we are working with FH to capture an estimate of these costs. It's likely to be sufficiently low that there will not be any concern over it.

Updates:

- The reporting requirements for TTM and potholes also include a number of qualitative commentary requirements which we are working through to address. Some of them are vague, but many will not apply to the Chathams.
- The draft Audit report from the Transport Agency's joint procurement and technical audit in October has been received
- Stantec is producing some comments in response, which will be returned to the agency for review
- Largely the results of the audit are satisfactory. There is some commentary which lacks pragmatism around delivery of the works programme on the Chathams but it is generally around minor issues.

CIC Water and Wastewater O & M – December 2024

Three Waters Funding		
Item	Current Status:	Action
General	Nigel will issue formal response to the variation request. No objections to what has been proposed.	JB
	An operational expenditure of \$391,000 was allocated in the 2024-34 Long Term Plan for 2024/25. Stantec have drafted a Technical Memo for Council highlighting the anticipated budget shortfall.	
	The ship continues to operate as usual. The shipping company has addressed compliance issues and has been granted permission to run through to March 2025. There is a risk to ongoing supply beyond March 2025. Monitor shipping situation going forward and procure critical spares and stocks are required.	
	- Napier has been added to the shipping route - FH are setting up a planned maintenance schedule on water outlook. FH will draft plans for upload to water outlook. PH explained that they have found old manuals for both WTPs and the WWTP. PH to send these to PG. - PH has sent the list of active water meters to JB. JB to talk to Jose about checking these against what is in Water Outlook. Water Outlook Contact is Mark?	PH JB
Water Supply		
Project:	Current Status:	
Kaingaroa Water Supply Scheme	New Issues: - The do not drink notice has been lifted. Ongoing chlorate monitoring required as part of default sampling. JB to issue NTC (via Nigel) to FH. - The next lot of samples will be taken on Tuesday 17 December. - RP explained the WTP is currently not operating as a fitting near the softeners failed on Saturday. A spare part is on the plane overnight and should be installed tomorrow morning. No network outage as there is enough storage in the tanks.	JB
	Work in Progress: - FAC probe has stopped working. Filtec Rep (Leighton Greaves) didn't have an easy fix but will have a look at possible fixes when on island for the annual service early in the new year. - PH explained that the annual service involves calibrations, general service of plant. Leighton normally sends a report to Stantec. JB to find the report from last year and send to PG for maintenance schedules. PH estimated the WTP service cost around 8-10k. - Lake Rangitai intake extension (not invoiced). This will be installed when lake levels allow. PH estimated that the supply and install would cost around 10-12k. This would involve installing about 100m of pipe with concrete mooring blocks, new strainer and float. FH has the materials in their yard. JB to email Paul Eagle for approval. - Ongoing operations and maintenance	JB JB
	Completed:	

	○ Ongoing operations and maintenance	
	• Critical Works Updates ○ None	
Waitangi Water Supply Scheme	• New Issues: ○ Fixed leak near River Onion ○ Leaky private water assets (pipes, fittings, valves, header tanks) are increasing water demand. CIC have issued a letter. Demand is high, Bruce may do another meter readings shortly. PH explained that people have been carting water from FH yard. This may be because the pump at the Trust is broken. ○ The Port will not be connected as the new 'emergency only' connection was going to be used for other purposes. Firefighting supply can be taken from the sea. JB to ask whether Klicky needs any further comms from FH or Stantec. ○ SD queried whether there is a planned response for drought periods. PH previously addressed by issuing letters to the community to conserve water. explained that CIC have issued. FH proactively monitor and notify CIC/ Stantec if there are concerns. JB to issue water conservation notice to Council ○ FH have turned off the water supply at Nairn house to reduce water loss ○ Awaiting plumber to fix leaks at the MAF office. Leaks at both Nairn house and MAF office have been using around 4 m³/day.	JB JB
	• Work in Progress: ○ Ongoing operations and maintenance	
	• Completed: ○ All actions from the FH audit have been completed.	
	• Critical Works Updates ○ None	
Compliance Monitoring October 2024	November 2024 Monthly Water Quality Compliance: • <i>Waitangi</i> ○ No E. coli or Total Coliforms detected in raw, treated, or network samples. ○ Treated water turbidity (0.05 NTU) was below the operational target (0.3 NTU). ○ The UVT for treated water was satisfactory at 97.9%. ▪ Protozoa compliance is being met. • <i>Kaingaroa</i> ○ The do not drink notice is lifted. Chlorate measured at 0.63 mg/L, below the 0.8 mg/L MAV. Ongoing chlorate monitoring required as part of default sampling. JB to issue NTC (via Nigel) to FH. Dosing is the same, dilution still the same (1/2). ○ No E. coli or Total Coliforms detected in the treated and network samples. ○ Low levels of both E.coli and Total Coliforms were detected in the raw sample, but as expected with a lake water source. ○ Treated water turbidity (0.12 NTU) was below the operational target (0.3 NTU).	JB

	○ The UVT for treated water was not satisfactory on the day of sampling at 66.1%. ▪ Protozoa compliance may not have been provided for this period. • Recycling Center Supply ○ No E. coli or Total Coliforms detected in treated sample. • Council Office Supply (<i>not a CIC supply</i>) ○ No E. coli or Total Coliforms detected in treated sample. ○ The UVT was good at 97.7%.	
Wastewater		
Project:	Current Status:	
Waitangi Wastewater Scheme	• New Issues: ○ One of the WW pumps at the bridge was blocked/ not sitting on the cradle properly. FH investigating tomorrow (Pump 1). Continuously pumping but not conveying flow. ○ Council have issued a letter requesting residents disconnect stormwater connections to the wastewater system. ○ Circuit cut out and breaks need to be replaced. Still to do, PH estimated this will cost between 3-4k. RP to check whether this work has been completed. Critical to allow duty standby switch over.	PH RP
	• Work in Progress: ○ General service of plan has been completed. New sleeves and UV tubes installed, service on pump seals, oil levels, bearings, lines, all mechanical parts. ○ Discharge consent review on-going (Stantec progressing). ○ Ongoing operations and maintenance	
	• Completed: ○ Ongoing operations and maintenance	
	• Critical Works Update ○ Nothing added	
Compliance Monitoring October 2024	November 2024 Monthly Compliance Monitoring • All parameters were below the annual median except for E. coli which was 0.1- log higher. The land application system will further reduce nitrogen and micro-organisms prior to reaching groundwater. RP explained that FH have been adding pool chlorine tablets to the irrigation fed tank – about two tablets per week. This may have improved the E. coli and Total Coliform results. RP explained that FH have turned off the agitator pump in balance tank. This has resulted in a noticeable drop in suspended solids. RP to write short summary email explaining any issues with suspended solids, why the agitators have been turned off/ how this is improving operation of the WWTP and send to PG and JB.	RP

CIC Engineering Services Contract: Monthly Report

Financial update – January 2025

Financial Position: Roothing

The total roading budget allocated for the 2024/25 financial year is \$5.8M. The approved budget for the subsidised Continuous Maintenance Programme is \$4.7M.

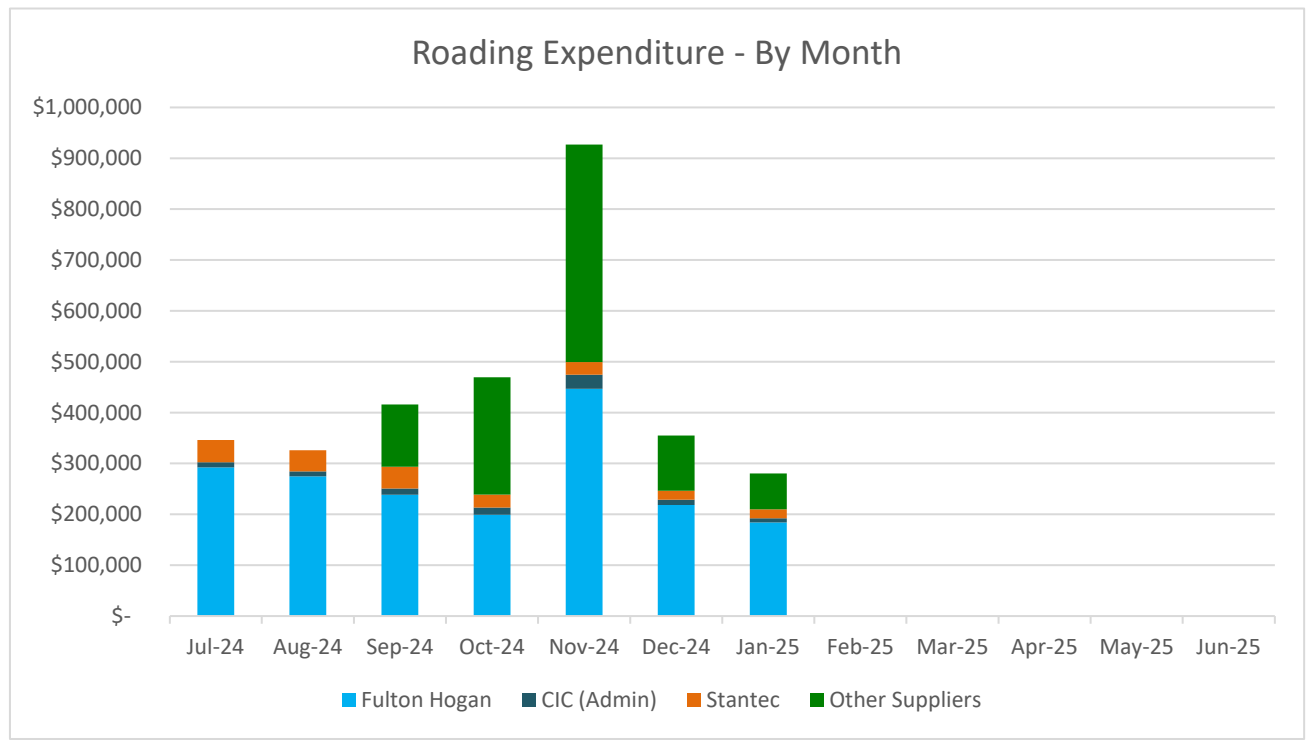
The January claim totalled \$280k.

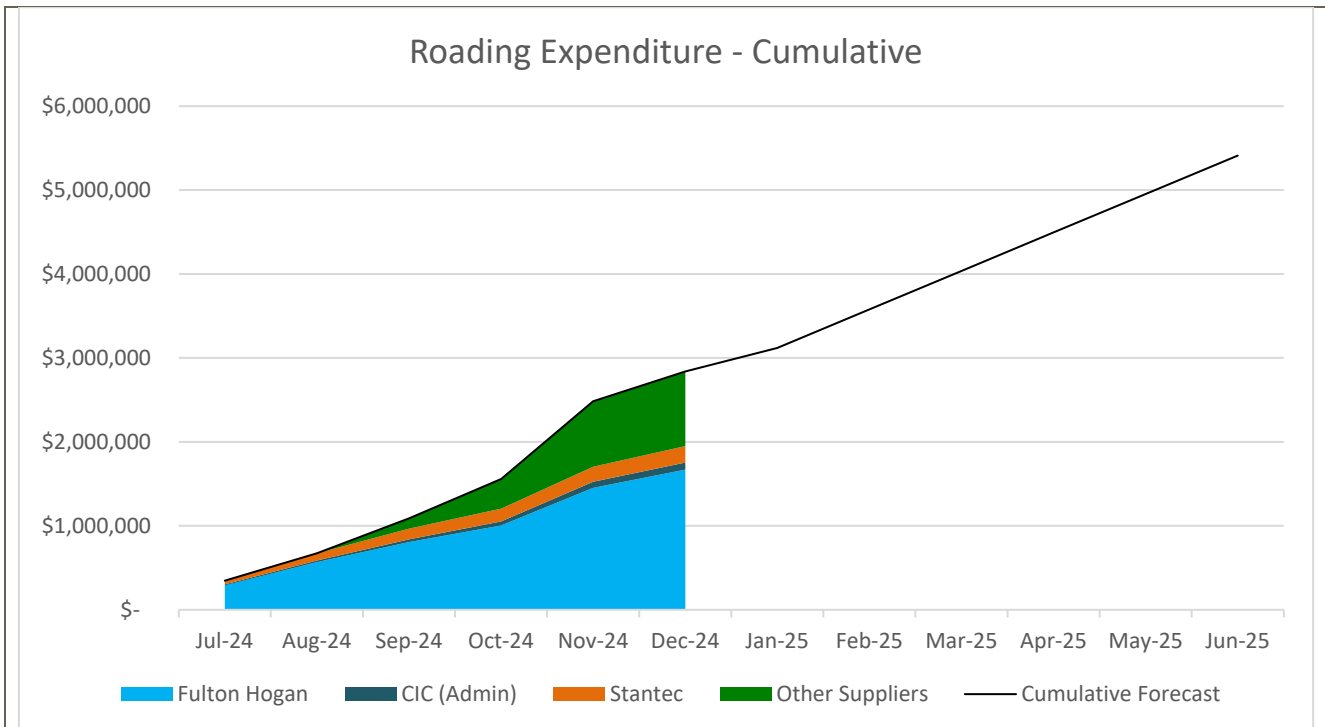
Expenditure of the Continuous Programme has used 50% of the funding allocated for 24/25 and we are 58% of the way through the 2024/25 financial year.

The largest construction cost in January was the payment for the replacement GoldSeal coating on the Nairn Bridge undertaken in December. The largest engineering cost was for the responses to the NZTA draft audit report, and the Ministerial Expectations reporting requirements.

Expenditure Tracking of Waka Kotahi Funding

Tracking graphs for roading expenditure are presented below.





The claims from "Other Suppliers" include:

- Hunter Civil for the Owenga Barge Landing
- CIET for the electricity for the street lighting, and
- GoldSeal for the replacement of the Lower Nairn Bridge protective coating.

Financial Position: Water and Wastewater

The operational expenditure for W+WW allocated in the 2024-34 LTP for 2024/25 is \$391,000.

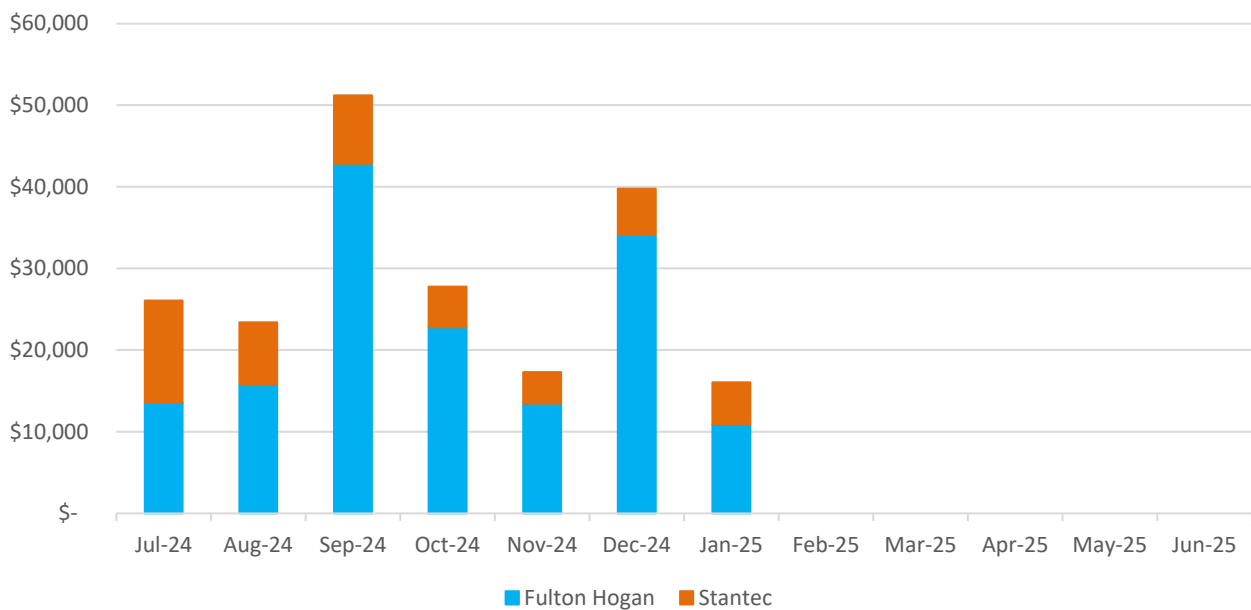
The January claim totalled \$16k

The main construction cost was for replacement parts for the UV unit at the water treatment plant. The main engineering cost is for the Kaingaroa Water Safety Plan.

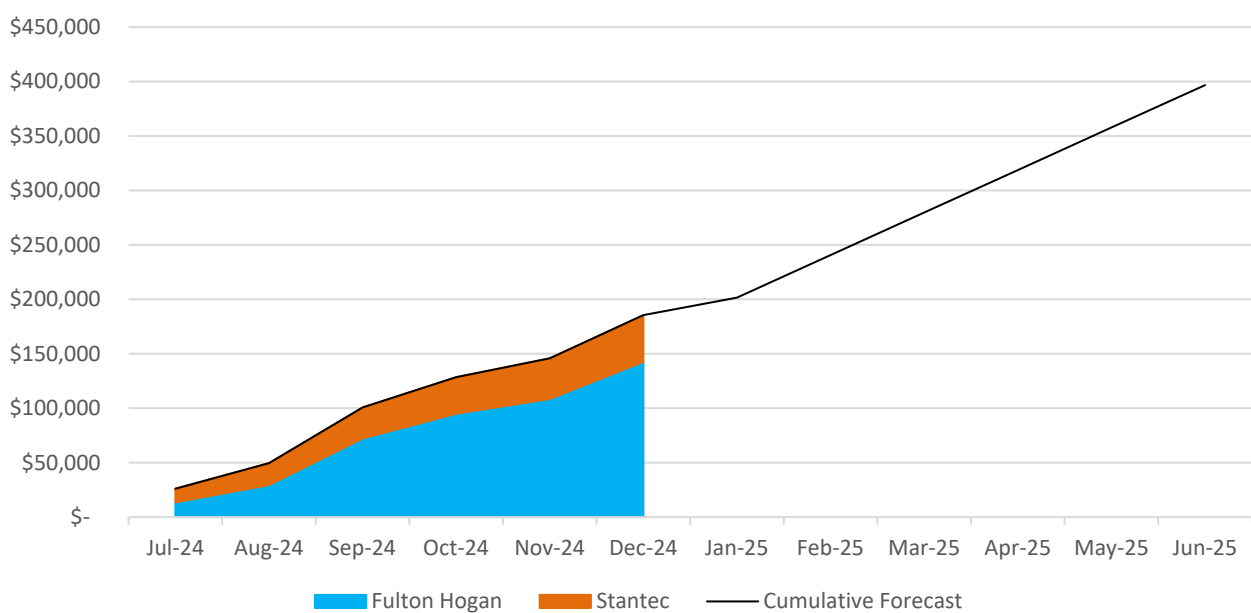
Expenditure Tracking of Water & Wastewater Funding

Tracking graphs for the W+WW expenditure are presented below.

Water & Wastewater Expenditure - By Month



Water & Wastewater Expenditure - Cumulative



Roading Update – January 2025

Short- & Medium-Term Rading Forward Work Programme	
Pavement Maintenance	Pitt Island Pavement Maintenance works to be undertaken in February subject to accommodation availability on Pitt
Long Term Rading Forward Work Programme	
Pavement Maintenance	Confirm pavement designs and rehabilitation locations for the Sealed Pavement maintenance programme in summer 2025/26
Bridges & Structures	Replacement of the deck and beams on the Maipito Bridge in 2025/26
Owenga / Kaingaroa Wharves	- Ongoing monitoring of wharf condition - Reinstatement of lighting on Owenga Wharf

Pavement Maintenance	
Previous Status: Additional pavement materials have been placed on North Road & Kaingaroa Road to repair areas damaged from hauling to the previous rehab sites.	Updates: - Fulton Hogan are planning to head to Pitt Island in February to undertake the scheduled pavement and drainage maintenance - Ongoing general maintenance across the island

Drainage Maintenance	
Previous Status: - Swale formation and renewal has remained a priority to ensure that surface water doesn't pool on the roads - Ongoing drainage maintenance and inspection	Updates: - Roadside drainage on Pitt Island will be renewed while FH are over there. Culverts will be inspected for condition and cleared or replaced as necessary - Clearing of roadside drains completed North of Waitaha Quarries

Bridge & Structures Maintenance	
Previous Status: - The GoldSeal contractor has completed the new application on the Lower Nairn Bridge - Nigel & Rebecca will undertake an inspection of the application during the next site visit, but the site photos from the contractor look good	Updates: - Nigel & Rebecca are satisfied with the replacement GoldSeal application. Given the site constraints the new contractor has done well. - It could be worth discouraging people from etching into the coating too much, as the coating works as a "barrier" treatment to exclude salt laden air from settling on the steel components - Some minor bridge maintenance items will be undertaken on Pitt Island when FH are there

Owenga Barge Landing	
Previous Status: - Construction on the landing is complete and it is ready for use - Once the final invoices have been presented to Hunter a Final Payment Claim will be submitted and the project will be complete. - Nigel & Rebecca will undertake an inspection of the Landing during the next site visit, and issue a Practical Completion Cert	Updates: - The final inspection was completed during January with the Practical Completion certificate being issued. - The landing facility is open for use now.
Network & Asset Management	
Previous Status: - An initial 30-year plan has been populated for the roading activity - Due to the NZTA funding levels recently being adequately high, there are few capital improvements required to the Chatham Islands Roads - There are some areas that may benefit from upgrading unsealed roads to sealed roads, and the component and structural replacements for every remaining timber & steel bridge has been included - We would like to add any ideas to the list to help discuss NZTA funding limitations and benefits to community, and to assist Paul to secure alternative funding sources in future.	Updates: Ongoing minor Asset Management works and forward planning
Kaingaroa & Owenga Wharf Repairs	
Previous Status: - Hunter Civil have submitted the payment claim for the Kaingaroa Southern Fender and decking repairs. - Some grating has been added to the stairs down to the platform at the end of the Owenga wharf to reduce the slipperiness	Updates: - The makesafe contract has now concluded, with the Final Completion Certificates for this work being issued - Design sketches have been issued for the reinstatement of lighting to the Owenga Wharf
Stantec Site Visits	
Previous Status: Nigel & Rebecca Visited once again in January 2025.	Updates: The next site visit will be in May 2025.
CIC catch-ups in Christchurch	
Previous Status: Nigel, Rebecca, Bryan, and Hanna attended a dinner in Christchurch with Monique and Paul, and Owen and Lynette Pickles on the 23rd of October.	Updates: No updates

NZTA Waka Kotahi Updates

Previous Status:

- The reporting requirements for TTM and potholes also include a number of qualitative commentary requirements which we are working through to address. Some of them are vague, but many will not apply to the Chathams.
- The draft Audit report from the Transport Agency's joint procurement and technical audit in October has been received
- Stantec is producing some comments in response, which will be returned to the agency for review
- Largely the results of the audit are satisfactory. There is some commentary which lacks pragmatism around delivery of the works programme on the Chathams but it is generally around minor issues.

Updates:

- Stantec will shortly return comments to the NZTA on the Draft Audit report.
- The first quarter reporting submission was made. No feedback has been received so far.



CIC Water and Wastewater O & M –January 2025

Three Waters Funding																								
Item	Current Status:	Action																						
General	- Water testing and requirements variation issued to Fulton hogan - An operational expenditure of \$391,000 was allocated in the 2024-34 Long Term Plan for 2024/25. Stantec have drafted a Technical Memo for Council highlighting the anticipated budget shortfall. - The ship continues to operate as usual. The shipping company has addressed compliance issues and has been granted permission to run through to March 2025. There is a risk to ongoing supply beyond March 2025. Monitor shipping situation going forward and procure critical spares and stocks are required. - Napier has been added to the shipping route - FH are setting up a planned maintenance schedule on water outlook. FH will draft plans for upload to water outlook. PH explained that they have found old manuals for both WTPs and the WWTP. PH to send these to PG. - PH has sent the list of active water meters to JB. JB to talk to Jose about checking these against what is in Water Outlook. Water Outlook Contact is Mark?	PH JB																						
	Budget tracking update:																							
	<table><tr><td colspan="2">FH & Stantec Combined Budget</td><td>\$</td><td>391,000.00</td></tr></table>		FH & Stantec Combined Budget		\$	391,000.00																		
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Water Supply																								

Project:	Current Status:	
Kaingaroa Water Supply Scheme	New Issues: - The do not drink notice has been lifted. Ongoing chlorate monitoring required as part of default sampling. JB to issue NTC (via Nigel) to FH. - The next lot of samples will be taken on Tuesday 17 December. - RP explained the WTP is currently not operating as a fitting near the softeners failed on Saturday. A spare part is on the plane overnight and should be installed tomorrow morning. No network outage as there is enough storage in the tanks.	JB
	Work in Progress: - FAC probe has stopped working. Filtec Rep (Leighton Greaves) didn't have an easy fix but will have a look at possible fixes when on island for the annual service early in the new year. - PH explained that the annual service involves calibrations, general service of plant. Leighton normally sends a report to Stantec. JB to find the report from last year and send to PH for maintenance schedules. PH estimated the WTP service cost around 8-10k. - Lake Rangitai intake extension (not invoiced). This will be installed when lake levels allow. PH estimated that the supply and install would cost around 10-12k. This would involve installing about 100m of pipe with concrete mooring blocks, new strainer and float. FH has the materials in their yard. JB to email Paul Eagle for approval. - Ongoing operations and maintenance	JB JB
	Completed: - Ongoing operations and maintenance	
	Critical Works Updates - None	
Waitangi Water Supply Scheme	New Issues: - Fixed leak near River Onion - Leaky private water assets (pipes, fittings, valves, header tanks) are increasing water demand. CIC have issued a letter. Demand is high, Bruce may do another meter readings shortly. PH explained that people have been carting water from FH yard. This may be because the pump at the Trust is broken. - The Port will not be connected as the new 'emergency only' connection was going to be used for other purposes. Firefighting supply can be taken from the sea. JB to ask whether Klicky needs any further comms from FH or Stantec. - SD queried whether there is a planned response for drought periods. PH previously addressed by issuing letters to the community to conserve water. Explained that CIC have issued. FH proactively monitor and notify CIC/ Stantec if there are concerns. JB to issue water conservation notice to Council - FH have turned off the water supply at Nairn house to reduce water loss	JB JB

	○ Awaiting plumber to fix leaks at the MAF office. Leaks at both Nairn house and MAF office have been using around 4 m³/day.	
	• Work in Progress: ○ Ongoing operations and maintenance	
	• Completed: ○ All actions from the FH audit have been completed.	
	• Critical Works Updates ○ None	
Compliance Monitoring	December 2024 Monthly Water Quality Compliance: • <i>Waitangi</i> ○ No E. coli or Total Coliforms detected in raw, treated, or network samples. ○ Treated water turbidity (0.07 NTU) was below the operational target (0.3 NTU). ○ The UVT for treated water was satisfactory at 96.9%. ▪ Protozoa compliance is being met. • <i>Kaingaroa</i> ○ Chlorate measured at 0.066 mg/L, below the 0.8 mg/L MAV. ○ No E. coli or Total Coliforms detected in the treated and network samples. ○ No E. coli detected in the raw water sample. ○ Low level of Total Coliforms was detected in the raw sample, but as expected with a lake water source. ○ Treated water turbidity (0.14 NTU) was below the operational target (0.3 NTU). ○ The UVT for treated water was not satisfactory on the day of sampling at 62.7%. ▪ Protozoa compliance may not have been provided for this period. • <i>Recycling Center Supply</i> ○ No E. coli or Total Coliforms detected in treated sample. • <i>Council Office Supply (not a CIC supply)</i> ○ No E. coli or Total Coliforms detected in treated sample. ○ The UVT was good at 95.4%. January 2025 Monthly Water Quality Compliance: • <i>Waitangi</i> ○ No E. coli or Total Coliforms detected in raw, treated, or network samples. ○ Treated water turbidity (0.06 NTU) was below the operational target (0.3 NTU). ○ The UVT for treated water was satisfactory at 98%. ▪ Protozoa compliance is being met. • <i>Kaingaroa</i> ○ Chlorate measured at 0.97 mg/L, above the 0.8 mg/L MAV.	

	○ No E. coli or Total Coliforms detected in the treated and network samples. ○ No E. coli detected in the raw water sample. ○ Low level of Total Coliforms was detected in the raw sample, but as expected with a lake water source. ○ Treated water turbidity (0.14 NTU) was below the operational target (0.3 NTU). ○ The UVT for treated water was not satisfactory on the day of sampling at 72.4%. ▪ Protozoa compliance is being met. • <i>Recycling Center Supply</i> ○ No E. coli or Total Coliforms detected in treated sample. • <i>Council Office Supply (not a CIC supply)</i> ○ No E. coli or Total Coliforms detected in treated sample. ○ The UVT was good at 96.8%.	
Wastewater		
Project:	Current Status:	
Waitangi Wastewater Scheme	• New Issues: ○ One of the WW pumps at the bridge was blocked/ not sitting on the cradle properly. FH investigating tomorrow (Pump 1). Continuously pumping but not conveying flow. ○ Council have issued a letter requesting residents disconnect stormwater connections to the wastewater system. ○ Circuit cut out and breaks need to be replaced. Still to do, PH estimated this will cost between 3-4k. RP to check whether this work has been completed. Critical to allow duty standby switch over.	PH RP
	• Work in Progress: ○ General service of plan has been completed. New sleeves and UV tubes installed, service on pump seals, oil levels, bearings, lines, all mechanical parts. ○ Discharge consent review on-going (Stantec progressing). ○ Ongoing operations and maintenance	
	• Completed: ○ Ongoing operations and maintenance	
	• Critical Works Update ○ Nothing added	
Compliance Monitoring	December 2024 Monthly Compliance Monitoring • All parameters were below the annual median except for total nitrogen (15 mg/L higher), ammonia N (3 mg/L higher), E. coli (0.81- log higher). The land application system will further reduce nitrogen and micro-organisms prior to reaching groundwater. January 2025 Monthly Compliance Monitoring • All parameters were below the annual median except for total nitrogen (27 mg/L higher), ammonia N (9 mg/L higher), E. coli (0.1- log higher). The land application system will further reduce nitrogen and micro-organisms prior to reaching groundwater. • RP explained that FH have been adding chlorine tablets to the irrigation fed tank – about two tablets per week. This may have improved the E. coli and Total Coliform results.	



	• RP explained that FH have turned off the agitator pump in balance tank. This has resulted in a noticeable drop in suspended solids. RP to write short summary email explaining any issues with suspended solids, why the agitators have been turned off/ how this is improving operation of the WWTP and send to PH and JB.	RP
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Solid Waste Update – December 2024/January 2025

Landfill Operation	
Current Status. - Council has approved for Stantec to prepare the Annual Report under current budgets. A start has been made on this. - Stantec has completed a memo on the capacity of Owenga Landfill. It assesses the impact that the current low compaction rate and the possibility of having to dispose of waste scrap metal at the landfill, will have on the life of the landfill. - Stantec has provided a follow-up email to the memo which sets out "next steps" to address the matters raised in the memo. - An issue to be addressed at the landfill is containing windblown litter. Fulton Hogan staff to consider practical options for dealing with this issue. - Fulton Hogan to provide a price for a compactor with front blade and steel-cleated wheels, with smaller excavator. It was noted that the sludge pond capacity is limited. Fulton Hogan staff estimate it will need to be replaced this year.	Actions – Stantec - Stantec to complete Annual Report for year July 2023 to June 2024. Actions - Council - CIC to consider the memo on the capacity of Owenga Landfill and the follow-up email outlining "next steps", and give approval, or otherwise for further actions to be taken. - CIC to confirm that it is satisfied that the current sludge disposal arrangements are appropriate under the circumstances. Actions – Fulton Hogan - To provide options for compacting refuse. - To get price for footbridge remediation.
Te One Operations	
Current Status. - Baling of wastes and recyclables is going well. - Dealing with scrap metal is a pressing issue at Te One. It would be useful to get hold of some open top shipping containers so that metals could be sorted on-site and loaded into the bins, with the future prospect of sending them to the mainland. - Fulton Hogan staff have made an estimate of the amount of waste scrap metal still to be disposed of from Te One. Estimates are that it will cost about \$150,000 to transport to Owenga and process it there, plus the costs of the waste levy payments, which would add a further \$86,000. This issue is pressing and has been highlighted in Stantec's memo, which is being considered by Council staff. - It is estimated that a collection of waste oil may be needed in a year or so. FH to source additional IBCs.	Actions - Stantec - Work with Council and Fulton Hogan staff to identify a solution for the waste scrap metal. Actions - Council - CIC to discuss with Chatham Islands Shipping about the possibility of obtaining some open top shipping containers. Actions – Fulton Hogan - To provide photos of the tyres being stored on-site. - Provide a quotation for transporting and handling recyclables to Timaru. - Contact Chemwaste about availability of IBCs for waste oil storage.
Other Waste Management Matters	
Current Status. - Monthly solid waste matters meetings have been re-scheduled for 1st Wednesday of each month. - Stantec has prepared an issues and options memo on the situation at Kaingaroa RTS, with FH input. The memo is to be issued to Councillors by CIC staff. - CIC is still to consider solid waste charges, which are most important for bulk users. Stantec has provided some brief advice on the process for formally implementing the charges. - Shipping of recyclables is still likely to be a low priority whilst the shipping company catches up on handling of livestock.	Actions - Stantec - Stantec to prepare agendas for directing monthly Solid Waste meetings. Actions - Council - Council to consider issues and options memo for addressing matters at Kaingaroa RTS. - Council to determine further action regarding Solid Waste Charging. Actions – Fulton Hogan - To work through Memo on MfE reporting requirements and identify how recording waste and diverted materials can be



	done, and if there are issues to be dealt with. • To continue to identify waste sources in OWLS returns.
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4. Works & Services

4.2 Fulton Hogan Road Maintenance Report

Date of meeting	13 February 2025
Agenda item number	4.2
Author/s	Fulton Hogan Contract Manager

Purpose

To inform and update the Council on the Chatham Islands Road Maintenance programme.

Attached is the December 2024 monthly reports from Fulton Hogan.

Recommendation

THAT the report be received.



Waitaha Basalt Quarry

CHATHAM ISLANDS ROAD MAINTENANCE CONTRACT MONTHLY REPORT DECEMBER 2024

Work Summary

Outline of work carried out during month

Routine Maintenance and Operations

Pavement Renewals

Sealed Road Resurfacing

Drainage Renewals

Bridge and Structure Renewals

Traffic Services

Minor Improvements

Vegetation Control

Dayworks

Programmed Work for following month

Schedule of Work by Road Name

1. Maintenance Grading
2. Unsealed Maintenance Metaling

Next Month's Target

Crash Damage Report Summary

Monthly Safety Report and Statistics

1. Safety Engagements

Metal Stockpiles

CIC Owned Materials

Signs

Culvert Pipes

Environmental Compliance & Feedback

Environmental Compliance

Stakeholder Complaints Register

Public Relations & Community Involvement

Innovation

When conditions allow we will continue with the blended maintenance material and continue to monitor areas already done to gauge how they perform in the wet/dry conditions.

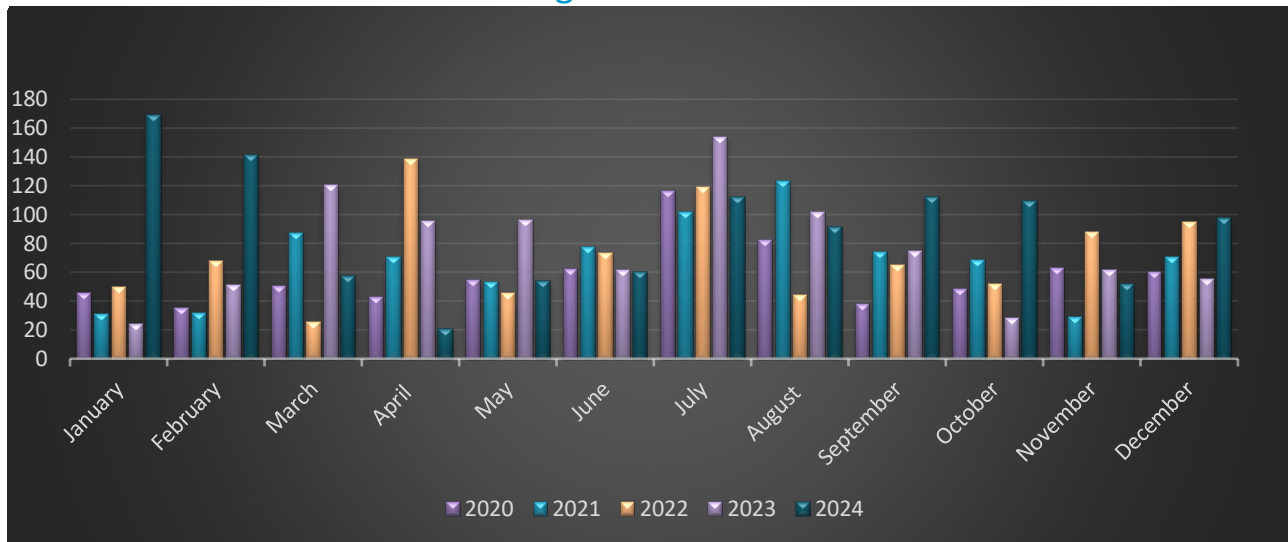
Summary of Monthly Progress Claim by Work Category

1. Miscellaneous
2. Traffic Counting
3. Pitt Island
4. Wind Damage

Photos

Work Summary

Outline of work carried out during the month.



97.5mm rainfall recorded for 1st – 31st December in the Waitangi yard.

Routine Maintenance and Operations:

Another month of record rainfall since FH has been collecting data anyway, which has resulted in a record amount for the year being 1076.5mm. This has been well above the average for the past 9 years of 838.8mm. Who knows what next year will bring?

With the relatively dry end to November stretching into the start of December we were able to complete the North Road overlay and repair the damage to the pavement caused by the metal cartage operation.

Graded and put maintenance metal where required to have the roads ready for the holiday period.

Mowing verges where required as warmer weather has accelerated the grass growth.

Pavement Renewals:

Finished the current strengthening site and will look at doing others in the new year.

Sealed Road Resurfacing:

Drainage Renewals:

Bridge and Structure Renewals:

Traffic Services:

Minor Improvements:

Vegetation Control:

Roadside verge mowing where and as required.

Spraying of gorse on roadside verges and along the edges of the sealed network as weather allows.

Dayworks:

Programmed Work for following month:

Carry on with strengthening and drainage works on sections of North Road, if dry enough and weather permits.

Finish spraying the gorse on roadside verges, weather permitting.

Schedule of Work by Road Name

1. Maintenance Grading

- Carried out as required during the month on the following roads:

Road ID	Dispatch	Road ID	Start RP	End RP	Quantity M
NORTH ROAD	5656	21	4590	48508	23270
WW-O ROAD	5664	11	4440	20395	13645
AIR BASE ROAD	5670	71	0	5926	5926
TUKU ROAD	5677	111	700	14057	3250
				Total	46091m
					46.091km

2. Unsealed Maintenance Metaling

Road	Dispatch	Road ID	Start RP	End RP	Quantity m3
WW-O ROAD	5662	11	4440	20395	160
NORTH ROAD	5665	21	4590	48508	80
TUKU ROAD	5671	111	700	14057	88
PORT HUTT ROAD	5672	51	0	16000	64
TIKI TIKI ROAD	5675	96	30	300	16
		Totals		This Month	408
					m3

				Revised Target	55000	m3
				Contract TD	54158	m3

Next Month's Target

842m3 behind at this stage.

Crash Damage Report Summary

Date	Event	Action	Repaired Y/N
28/07/23	A vehicle went through both sets of railings on Nairn bridge and landed on the beach.	Damage not found till the next morning and made safe.	Y New post & railings installed.
12/08/23	Vehicle v's beast on North Road just past Murphy's causing extensive damage to the front end of the vehicle. Beast got up and ran away!	Vehicle moved off to the side to be recovered later.	N
17/09/24	Vehicle left at the shop with no hand brake applied = ran across the road and into the rail fence around the playground.	Vehicle removed and rails repaired.	Y
26/10/24	Vehicle hit concrete plinth during the night at D&G and shot across the road and through the fence into the trees.	Vehicle was removed and fence repaired.	Fence repaired by others. No damage to the pavement.
29/10/24	Vehicle ran off the road sometime during the night and through the fence by Wassa's pump shed on North Road.	Vehicle removed and fence to be repaired by others.	N

Network Inspections

Month	Inspection Type	Faults Identified	Inspected By
March 2024	Day	Drive around the network to access and work out a 3-month program of works required.	Phil
April 2024	Day	Drive around the network. Some damage occurring due to the works on North Road.	Tomby
May 2024	Day	Drive around the network, including roadroid survey. Normal wet condition damage which will be addressed with grading and maintenance metal.	Tomby.
July 2024	Day	Drive around and check the network condition to program any maintenance works required.	Phil
August 2024	Day	Network checked during the Roadroid survey. No urgent faults found.	Tomby
October 2024	Day	Full network check during the Roadroid survey. No urgent faults found.	Tomby

December 2024	Day	Full network check to make sure all was good for the holiday period.	FH Crew
---------------	-----	--	---------

Monthly Safety Report and Statistics

Nothing to report.

1. Safety Engagements

Date	Near Miss	Incident	Lost Time Injury	Plant Damage	Depot/Worksite Inspections
22/08/22	N	N	N	N	HSQES site audit carried out while crew clearing culvert ends = all ok.
12/09/22	N	N	N	N	Target Hill counterfort drains = making sure correct installation procedure being followed = all ok.
7/12/22	N	N	N	N	Reseal site inspection = all TM in place and sufficient.
29/3/23	N	N	N	N	Tiki Tiki water plant check with Kirsten.
12/05/23	N	N	N	N	Te Awainanga Bridge cleat replacements.
17/05/23	N	N	N	N	Whangamoe Bridge Replacement
16/08/23	N	N	N	N	Audit done on the workshop by Andy Allen.
19/10/23	N	N	N	N	New workshop washdown area checked while slab being poured to make sure everyone observing FH SOP's
20/12/23	N	N	N	N	Workshop inspected to see the changes made by the new mechanic = all good so far.

Metal Stockpiles

31/12/2024							
Site	AP40 Schist	AP65	AP32 Basalt	AP100 Schist	AP20	G3 Chip	G5 Chip
Waitaha Schist	2,429	0	0	700	0		
Waitaha Basalt	0	2,204	0	0	128	315	271
Paritu	1,805	0	0	753	0		
Stoney Crossing	0	1,976	8,282	0	2,536	311	111
Yard	0	0	0	0	0		
Ohinemama	0	0	0	0	0		
Muirsons Schist	3,168	0	0	848	0		
MPA Yard	0	0	0	0	0	51	230
	7,402	4,180	8,282	2,301	2,664	677	612

CIC Owned Materials

Signs

Item Description	Unit	Purchased	Used November 2024	End Measure	Comments
<i>Signs</i>					
CS85 North Rd	ea.			1	
CS85 Port Hutt Rd	ea.			1	
RG1	ea.			0	
RG2	ea.			0	
RM6 White	ea.			6	
RM6 Yellow	ea.			5	
RM7	ea.			16	
P66X242	ea.			7	
PW11	ea.			1	
PW11.1L	ea.			1	
PW11.1R	ea.			1	
PW12L	ea.			1	900
PW12R	ea.			1	
PW24	ea.			2	
PW25 65KM	ea.			1	
PW28	ea.			1	
PW34.1	ea.			1	900 Y
PW34.2	ea.			2	
PW37	ea.			1	900
PW49 FIRE ENGINE	ea.			2	
PWSX1	ea.			2	
RH-4	ea.			2	
PW54	ea.			2	
<i>Marker pegs</i>					
EMP	ea.			622	
CULVERT MARKERS	ea.			45	
WHITE RAPID MARKERS	ea.			60	

Item Description	Unit	Purchased	Used November 2024	End Measure	Comments
Misc. Items					
ACROW PROPS	ea.			6	
ROAD COUNTER	ea.			1	
ROUGHOMETER	ea.			1	

Culvert Pipes

ALUFLOW

Item Description	Unit	Used	Purchased	End Measure
375mm	m			5
450mm	m			0
600mm	m			0
750mm	m			6

Civilboss

225mm	m			24
300mm	m			54
375mm	m			30
450mm	m			23.2
525mm	m			15
600mm	m			30
700mm	m			30
800mm	m			23.2
1000mm	m			12

Builders Mix

CEMENT	T			0
GEOGRID Triax 160 3.8 x 75	Rolls			13
BIDIM CLOTH 3.9m x 100m	Rolls			13
BIDIM CLOTH 3.9m x 50m	Rolls			0

Environmental Compliance

Date	Site Inspected	Compliant Y/N	Abatement Order Issued	Corrective Action Required	Completed By
14/03/22	WW-O Rd Culvert Installation	Y	N	N	Phil
27/06/22	Stoney Crossing Quarry	Y	N	N	Phil

26/08/22	North Road Strengthening works	Y	N	N	Phil
13/10/22	Target Hill Rehab Site	Y	N	N	Phil
1/12/22	Kaingaroa Rehab Site	Y	N	N	Tomby
21/02/23	Whangamoe Bridge Replacement	Y	N	N	Tomby
18/05/23	Whangamoe Bridge Replacement	Y	N	N	Tomby
27/06/23	FH Workshop Wash Down Pad	Y	N	N	Phil

Stakeholder Complaints Register

Month	Council/ Public Complaint	Complaint	Repair Undertaken	Response Time
May 24	Public	Parent from Pitt Island complained to council about state of Flowerpot-Glory Road.	Inspection and Roadroid completed. Repairs to be completed in November.	2 weeks.
July 24	Public	Road soft where strengthening work is being carried out.	Strengthening material got too wet while being placed. Site needs to dry out before work continues.	When weather allows.
July 24	Public	Numerous potholes throughout the unsealed network.	Very wet conditions graders doing the best they can.	Ongoing.
July 24	Public	Grader making roads rough causing punctures in tyre.	Roads inspected and nothing out of the ordinary found.	3 days.

Public Relations & Community Involvement

Innovation

Summary of Monthly Progress Claim by Work Category

	December 24	Separable Portion One - Roading			
Item	Work Category	Value for Month	Value YTD	Annual Budget	% of Annual Budget
1	P&G Other	\$131,350.95	\$868,386.85	\$1,500,000.00	57.89%
2	Routine Maintenance and Ops	\$62,478.03	\$355,893.38	\$810,000.00	43.94%
3	Pavement Renewals	\$18,480.79	\$301,322.13	\$662,000.00	45.52%

4	Sealed Road Resurfacing	\$0	\$0	\$9,000.00	0%
5	Drainage Renewals	\$0	\$42,996.13	\$405,000.00	10.62%
6	Bridge Renewals	\$0	\$1,129.08	\$50,000.00	2.26%
7	Traffic Services	\$563.96	\$28,337.95	\$86,000.00	32.95%
8	Minor Improvements	\$0	\$16,320.57	\$50,000.00	32.64%
9	Vegetation Control	\$5,408.41	\$40,546.31	\$55,000.00	73.72%
11	Dayworks	\$0	\$3,303.80	\$150,000.00	2.2%
	Total	\$218,282.14	\$1,658,234.20	\$3,770,000.00	43.98%

1. Miscellaneous

2. Traffic Counting

Traffic counts on various roads is ongoing.

3. Pitt Island

Starting to program and source plant for the work required on Pitt now that the loading ramp has been constructed at Owenga. Have scheduled work to be done in February 25 at this stage.

4. Wind Damage

No reported or visible signs of damage this month.





Metal Stockpiles In Waitaha Basalt Quarry



4. Works & Services

4.3 Fulton Hogan Water and Wastewater Operation Contract Report

Date of meeting	13 February 2025
Agenda item number	4.3
Author/s	Fulton Hogan Contracts Manager

Purpose

To inform and update the Council on the Chatham Islands Water and Wastewater Operation programme.

Recommendations

THAT the reports be received.

Background

Attached is the December 2024 Water & Wastewater report from Fulton Hogan.

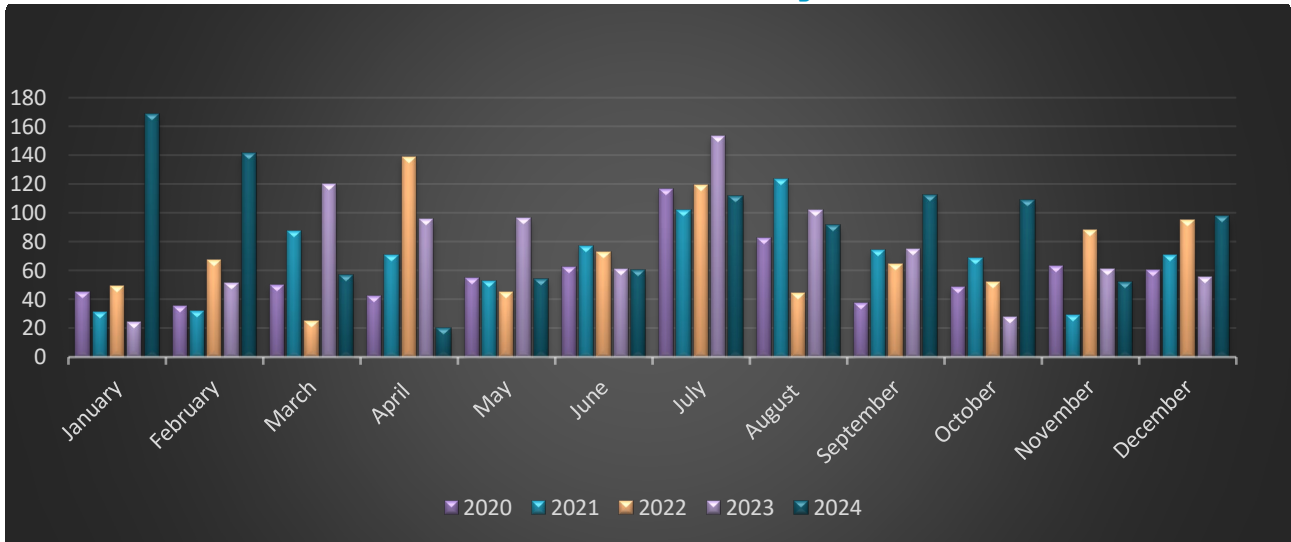


Kaingaroa Lake Rangitai

CHATHAM ISLANDS WATER AND WASTEWATER OPERATION CONTRACT MONTHLY REPORT DECEMBER 2024

Work Summary

Outline of work carried out during the month:



97.5mm rainfall recorded for 1st – 31st December in the Waitangi yard.

Water Supply Operation & Maintenance:

Had a leak in the network outside River Onion, this was the second leak there in the same bit of pipe. We cut the section out and replaced with a new piece. While repairing this we found a large dent in the 100mm main and put a compression bandage over this as a precaution.

Also had a scare just before xmas as the plant was running 24hrs a day for 3 days but town was losing water rapidly. Crew went around the network and found a few properties that were using an excessive amount, one of these had gone through 108m³ which is 108,000lts. Property owners spoken too and those that were not home we shut the water off at the meter.

Town tanks full again and plant running normally by the 27th.

Water Treatment:

Tiki Tiki plant = good start to the month but had to work extra hard at xmas to keep up. This resulted in the bore level dropping and it started sucking air which causes high raw water turbidity. Kaingaroa plant = Leak found in the network but once this was found and repaired plant settled down to running normally.

Wastewater Treatment Plant at Waitangi:

Plant had no issues during the month, with the balance and irrigation tanks maintaining steady levels.

Dayworks – Water:

Chatham Islands Monthly Report

Dayworks - Wastewater:

Water and Wastewater Reticulation Network:

Apart from a few properties with historical leaks and the one major one everything ok.

Water and Wastewater Treatment Plant: Monitoring:

No issues this past month. Chlorite levels at Kaingaroa are within spec.

Kaingaroa Lake Monitoring Post = lake level is still very high preventing us from installing the new intake filter. Looking at options to install new intake while level is high.

Summary of Monthly Progress Claim by Work Category:

	December 24	Separable Portion Two - Water and Wastewater			
Item	Work Category	Value for Month	Value YTD	Annual Budget	% of Annual Budget
13	Preliminary and General	\$22,567.16	\$54,773.36	0	0%
14	Water Supply Ops and Maint	\$922.32	\$5,533.92	0	0%
15	Water Treatment	\$4,608.08	\$21,192.19	0	0%
16	WWTP Waitangi	\$922.32	\$5,533.92	0	0%
17	Dayworks - Water	\$3,235.18	\$15,344.23	0	0%
18	Dayworks - Wastewater	\$0	\$31,967.74	0	0%
19	Water and Wastewater Reticulation	\$461.16	\$461.16		
20	Treatment Plant Monitoring	\$1,188.52	\$7,125.12	0	0%
	Total	\$33,904.74	\$141,937.64	\$140,000.00	101.38%

Provisional Budget

Programmed Work for Following Month:

Keep the plants and network operating as best we can.

Water Meter Report:

Readings done early December with the usual high users present.

Chatham Islands Monthly Report

Irrigation Dosing:

Evaporation has been good with very little if any runoff evident.

Quality Assurance:**Site Safety Report:**

Date	Near Miss	Incident	Lost Time Injury	Plant Damage	Depot/Worksite Inspections
23/08/23	N	N	N	N	WWWT Plant check once service had been completed.
19/03/24	N	N	N	N	Water & WWWT plant checks after services.

Environmental Non-Compliance:**Monthly Stocktake of Supplies:****General Supplies Stockpile - Month Ending December 2024**

	Stock Purchased	Stock End of Previous Month	Stock Used	Stock Remaining End of Month
Salt		143 Bags	10	133bags
Chlorine		60lts	0L	60lts

PHOTOS



Waste Water Filters Prior To UV Treatment And Onto Irrigation Fields



5. Community

5.1 Surf Boat Report

Date of meeting	13 February 2025
Agenda item number	5.1
Author/s	Paul Eagle, Chief Executive

Purpose

To present the findings of the *Condition Assessment and Repair Recommendations for Conservation of the Chatham Islands Surfboat* prepared by Mike Gillies of Southern Preservation to the Council. This Conservation Report is appended to this paper.

To seek endorsement to proceed with the preservation work and next steps as proposed in report and outlined in Recommendations below.

Recommendations

THAT the Chatham Islands Council:

1. Endorse the findings of the *Condition Assessment and Repair Recommendations for Conservation of the Chatham Islands Surfboat* prepared by Mike Gillies of Southern Preservation and the undertaking of the work proposed in the report.
2. Support the relocation of the surfboat to John and Judy Kamo's shed temporarily for drying and the preservation work to be undertaken undercover.
3. Support Judy Kamo and those assisting with the project to seek funding through grants, sponsorship, donations and any other sources, for the cost of the project.
4. Support an application to LEH for the remaining funding if required.
5. Support the surf boat be relocated back to the sand dunes unless some other location becomes the preferred option.

Background

A successful Lottery Environment and Heritage Grant (LEH) was lodged by the Chatham Islands Council for a Conservation Report for the restoration of the surf boat in the Waitangi dunes last year.

The work was undertaken by Mike Gillies of Southern Preservation and the report has been completed. The accountability report has also been prepared for LEH.

Report Findings and Next Steps

The Conservation Report is recommending removing of the surf boat to a shed to be cleaned up and to dry out properly and acclimatise for several months. Judy and John Kamo have offered their shed at no cost and Fulton Hogan have offered to assist with the equipment for the relocation at no cost. Some materials are required for the relocation and Judy is confident these can be loaned and donated. This being the case, the project going forward includes:

The drying period, expected to be at least two months.

The application of suitable chemicals, removal of rust and replacement of damaged components of the boat would then be undertaken. The process will require:

1. Removal any non-contributory fabrics, e.g., treated wood or rubber tyres. Applying wood cleaner to remove salts to the entire boat to kill all biological organisms,
2. Application of Framesaver over timber surfaces
3. Application of Everdure to any decayed timber and allowing it to cure completely.
4. Undertaking repairs, remove rust from the steel surfaces, including the Lister engine and treat the surfaces.
5. Clearing the area and construction of a shelter to protect the surfboat.
6. Relocating the surf boat potentially back to the current location.
7. Preparing and installing interpretation panels
8. Construction of a ladder to enable viewing inside the boat.

Following the drying process, Conservation specialist Mike Gillies is prepared to return to the island and assist with the preservation work outlined above on a voluntary basis with just his flights, accommodation and any direct costs covered.

Location Options Once Preserved

Consideration of the site where the surfboat is to be returned to appears to be the current site, however further consideration of alternatives can be undertaken. The current locations considered are:

1. The existing site – that is in an inundation zone. It is felt that it belongs here and if ever washed away, there would be much more serious destruction than the surf boat.
2. Up at the playground – where it is felt children might play in it.
3. As a feature outside the Council – the area in front of the building may not big enough and this could be considered in conjunction with the review of the hall and former Council building.
4. The Norman Kirk Memorial Reserve – where it is felt it would get played on.

Further considerations are welcomed and can be considered through the restoration process.

Project Costs and Funding

The project is expected to cost in the vicinity of \$30,000 - \$40,000, the main costs being the materials, construction of the shelter and interpretation panels. If 1/3 of this amount can be raised an application could be lodged with LEH for up to 2/3 of the project costs. The next funding round closes on the 26 February.

Council Support Sought for Next Steps

It is proposed that the Council endorse the following motions:

1. That the Council endorse the findings of the *Condition Assessment and Repair Recommendations for Conservation of the Chatham Islands Surfboat* prepared by Mike Gillies of Southern Preservation and the undertaking of the work proposed in the report.
2. That the surfboat be moved to the Kamo's shed temporarily for drying and the preservation work to be undertaken undercover.
3. That Judy Kamo, and those assisting with the project, seek funding through grants, sponsorship, donations and any other sources, for the cost of the project.
4. That, if required, the Council support an application to LEH for the remaining funding
5. That, on completion of the project the surf boat be relocated back to the sand dunes unless some other location becomes the preferred option.

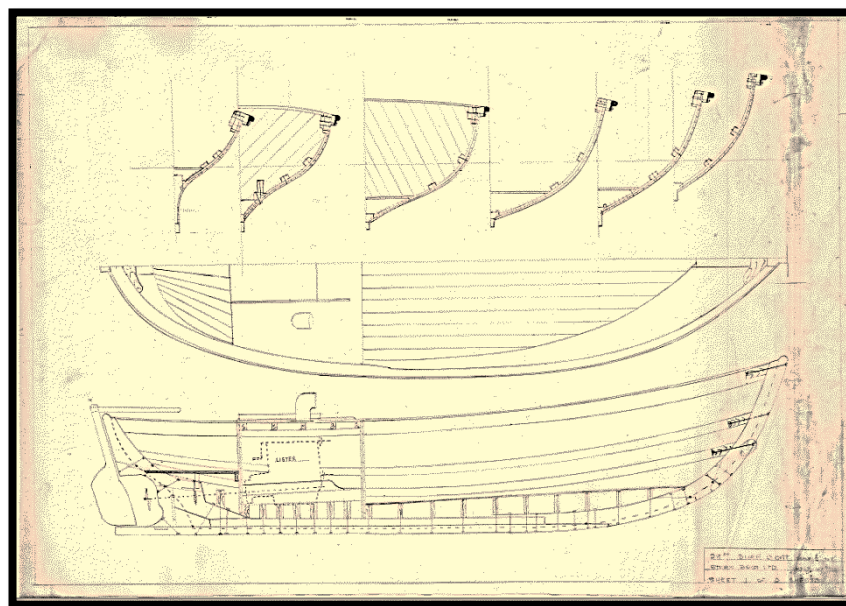
It is noted that should the funding not be raised, the surf boat be returned to the dunes.

We are really keen to save this piece of our history.

Thank you.

Judy Kamo
Surf Boat Preservation Project Leader

Condition Assessment and Repair Recommendations for Conservation of the Chatham Islands Surfboat



Condition Assessment and Repair Recommendations for Conservation of the Chatham Islands Surfboat

Compiled by Mike Gillies, Southern Preservation, West Coast

This plan was completed in October 2024

All images are the author's unless otherwise stated.



1.0	INFORMATION	4
1.1	Commission	4
1.2	Brief	4
1.3	Acknowledgements	4
1.4	Location	5
1.5	General Description	5
1.6	Executive Summary	6
2.0	UNDERSTANDING	6
2.1	History of the Surfboat	6
3.0	OBSERVATION	10
3.1	Description of Materials	10
4.0	ANALYSIS	12
4.1	Identification of Defects	12
4.2	Nature of Deterioration	15
4.3	Summary of Condition	16
5.0	PROPOSALS	16
5.1	Conservation Concept – maintenance, repairs and more significant intervention	16
6.0	APPENDICES	19
6.1	Stark Bros Drawings of Surfboat	19

1.0 Information

1.1 Commission

Mike Gillies [Southern Preservation] was commissioned in July 2024 by Jackie Gurden to undertake a Chatham Islands Surf Boat conservation report.

1.2 Brief

The brief for this commission was to create a road map that provides a clear plan and options for conserving the Chatham Islands Surfboat. This includes historical research, documenting and assessing the condition of the boat, options for conservation, and specifications, including indicative costs for preservation.

All recommendations for conserving the surfboat were consistent with the ICOMOS New Zealand Charter (2010).

1.3 Acknowledgments

I wish to thank the following individuals (in no order):

- Jackie Gurden, Project Manager, for commissioning this report, providing incredible assistance on and off the island with this project, and being a fantastic tour guide
- Phil Buck, Skipper, for his assistance, support, knowledge and humour during the week-long site visit to the surfboat in August 2024
- Judy Kamo, Project Manager, for assistance with logistics on the island and for collating and assisting with the historical section of this report
- Tony Croon, Chatham Islands Hotel Owner, for assisting with all my random requests during my weeklong stay
- Chatham Island residents, thank you for your friendliness and hospitality during my visit.
- Jocelyn Powell, for research and assistance with the history section
- Robert Holmes, for research assistance

1.4 Location

The surf boat is on council reserve between the Fulton Hogan yard and the Waitangi Wharf Owenga Road.

The boat was moved here in the 2000s. The surf boat rests directly on the ground and is exposed to the weather.



Figure 1 Location of surfboat in Waitangi



Figure 2 Location of surfboat

1.5 General Description

The Chatham Island Surfboat is a 28ft carvel-built wooden boat commissioned for construction in 1969 by the Chatham Islands County Council. This carvel-constructed boat was built of Kauri planks, which are butt-joined and shaped on the edges to receive caulking cotton and create a watertight fit with some swelling.¹ The boat was powered by a small diesel Lister engine.

¹ Andrew Stark. Pers. Comms. 2/10/2024. Stark Bros Chief Executive. Lyttleton.

1.6 Executive Summary

The Chatham Island's Surfboat was built in 1969 by the Stark Bros of Lyttleton. The 28ft boat was used to ferry goods to and from ships visiting the Pitt and Chatham Islands for over thirty years.

Retired from service two decades ago, the boat was left to rest in its current location between Waitangi Wharf Owenga Road and the Fulton Hogan yard in Waitangi.

During the week of 12-16 August, Mike Gillies and Phil Buck cleared, cleaned and surveyed the surfboat to assess its condition and potential for conservation.

Although the boat has been exposed to the elements for over 20 years, it is still in reasonable condition. After much consideration, it is recommended that the boat undergoes conservation and stabilisation treatment and is then displayed as a historic relic for locals and visitors to the Chatham Islands.

2.0 Understanding

2.1 History of the Surf boat

Due to the remote location of the Chatham Islands Surf Boat, it wasn't easy to obtain primary sources for the boat's history. However, two interviews of persons associated with the ship, Ruka Lanauze (interviewed by Jocelyn Powell on 5 August 2024) and Robert Holmes (interviewed by Jocelyn Powell on 30 April 2023 and Mike Gillies on 7 December 2024) and Judy Kamo's research have filled in much of the historical narrative. These are referenced as personal communications. As interest and appreciation of the Chatham Islands Surf Boat increases, further information and research can be appended to this history section.



Figure 3 Flowerpot Bay, Pitt Island, Date unknown. Retrieved on 08/12/2024 from [www.ehihttps://ehive.com/collections/5362/objects/1129160/flower-pott-pitt-island-chatham-islands](https://ehive.com/collections/5362/objects/1129160/flower-pott-pitt-island-chatham-islands)

Timeline associated with Chatham Islands Surf Boat

DATE	EVENT
24 April 1967	Chatham Island County Council [CICC] reports in council minutes that inquiries from boat builders to build a suitable boat to operate between the wharf and Holmdale are unsuccessful and that further efforts should be made to obtain a clinker-style boat ²
1968	Holmdale, owned by Holm and Company Ltd, begins the “Chatham Island’s run” ten times yearly and twice to Pitt Island ³ . The Holmdale replaces the Holmburn, also owned by Holm and Co. ⁴
December 1968	CICC Chair [F.Q. Lanauze] appoints an agent [Stephen Gregory-Hunt] for the tender and purchase of the “Pitt Island” Surf Boat ⁵
22 March 1969	Reported in The Press that the CICC has “...ordered a 29ft kauri-hulled surfboat for use in ferrying cargo from ships visiting Pitt Island. The surfboat, which will be diesel-powered with a smooth hull, is now under construction at Stark Brothers’ Shipyard, Lyttelton, and will be shipped to the Chathams in six weeks.” ⁶
May 1969	F.Q.Lanauze requests a report on the progress of the Chatham Island Surfboat from Stephen Gregory-Hunt ⁷
7 May 1969	As reported in the Press, “...A 29ft-long, kauri-hulled surfboat built by Stark Brothers, of Lyttelton, for ferrying cargo to and from ships visiting Pitt Island, in the Chathams, will be launched at Lyttelton this morning. The diesel-powered surfboat, which was ordered by the Chatham Islands County Council, will be shipped to the Chathams aboard the Holmdale” ⁸ .
7 December 1982	It was reported in the Press’ Shipping News that two Kauri surfboats were still used two to three times a year for ferrying supplies from the Holmdale [911ton trader based in Lyttelton] to Pitt Island, returning with wool bales ⁹
31 March 1990	Ending of the Holmdale service from Lyttelton to Chatham Islands ¹⁰
1990	Expiry of the government charter agreement with the Department of Internal Affairs to operate the Holmdale.

Although known as the Chatham Island Surf Boat, the boat's true narrative belongs with Pitt Island and its twenty-year association with the 911ton trader – the M.V Holmdale. The Holmdale began undertaking the ‘Chatham’s run’ between Lyttelton and Waitangi ten times a year in 1968. This also included two trips to the Pitt Islands¹¹.

There is uncertainty about when the surf boat was commissioned and by whom (R. Holmes, pers. comm¹²; J. Kamo, pers. comm¹³). However, what is clear is that the CICC had ordered a 29ft Kauri-hulled surfboat to be constructed by the Stark Brother’s shipyard in Lyttelton by

² Judy Kamo in email 16 May 2023 taken from Chatham County Council minutes

³ Press, 6 August 1988, pg 21

⁴ Press, Volume CIV, Issue 30708, 25 March 1965, pg 1

⁵ ibid

⁶ Press, Volume CIX, Issue 31944, 22 March 1969, Pg 42

⁷ ibid

⁸ Press, Volume CIX, Issue 31981, 7 May 1969, Pg 32

⁹ Press, 7 December 1982, Pg 29

¹⁰ Press, 4 November 1989, pg 4

¹¹ Press, 6 August 1988, pg 21

¹² Robert Holmes phone interview with Mike Gillies 7 December 2024

¹³ Judith Kamo email 16 May 2023

1969¹⁴. According to the CICC meeting minutes, F.Q. Lanauze, County Chair from September 1968 until October 1974, appointed S. Gregory-Hunt as Pitt Island County Agent in 1968 to tender, purchase and report on the delivery of a surfboat¹⁶. The new surfboat was completed in May 1969 – its first launch was reported at the time by the Christchurch Press newspaper:

“...A 29ft-long, kauri-hulled surfboat built by Stark Brothers, of Lyttelton, for ferrying cargo to and from ships visiting Pitt Island, in the Chathams, will be launched at Lyttelton this morning. The diesel-powered surfboat which was ordered by the Chatham Islands County Council, will be shipped to the Chathams aboard the Holmdale”¹⁷.

According to Andrew Stark, current Chief Executive of Stark Bros. in Lyttelton, this was the only 28ft [reported in the Press as 29ft¹⁸] Kauri hulled surfboat built for the Chatham Islands according to the plans and specifications included in the appendices of this report¹⁹.

The surfboat was required to ferry cargo from the Holmdale ship to Pitt Island. The Holmdale would moor in Flowerpot Bay 300m from shore, then lower the surfboat into the sea from the ship. The surfboat would then be loaded with goods to be ferried onto Pitt Island, typically crewed by three Pitt Islanders.²⁰ Goods would be lifted from the boat onto the wharf at Flowerpot Bay.²¹

The twice-yearly visit by the Holmdale was considered a significant yearly event for Pitt Island's 60 residents. All work on the island was reported to stop when the ship arrived to assist with unloading and ferrying six months' worth of cargo from the surf boat onto the wharf. This also included loading the returning surfboat with the wool bales filled with the island's wool clip, which, although very heavy, were expertly rolled from the wharf onto the surfboat.²²²³

The demise of the surfboat's use and association with Pitt Island occurred when the government decided not to renew the Department of Internal Affairs Chatham Island's shipping charter, which expired in 1990. Pitt Islanders were reportedly facing uncertainty in 1987 when it was made clear that the shipping system would change²⁴. The government opted to transfer the responsibility of its assets and services, including shipping services, to the new Chatham Island Community Development Corporation in 1990²⁵. At the same time, the Holmdale's expensive 30-year survey was due, and instead of repairing it, suggestions of replacing it with a towed barge were reported in 1988.²⁶ According to a resident of Pitt Island and former [and final] skipper of the surf boat, Ruka Lanauze, the surf boat was replaced with a barge purchased from Michael Faye, Mercury Island, and shipped for use on Pitt Island²⁷.

The history of the surfboat becomes uncertain once it was retired from its ferry duties associated with the Holmdale and Pitt Island in 1990. According to Ruka Lanauze, Pitt Islanders

¹⁴ Press, Volume CIX, Issue 31944, 22 March 1969, pg 42

¹⁵ Andrew Stark phone call with Mike Gillies 1 October 2024

¹⁶ Jocelyn Powell email 16 May 2023

¹⁷ Press, Volume CIX Issue 31981, 7 May 1969, pg 32

¹⁸ ibid

¹⁹ Andrew Stark email 2 October 2024

²⁰ Press, 7 December 1982, pg 29

²¹ Ruka Lanauze interviewed by Jocelyn Powell 5 August 2023

²² ibid

²³ Press, 8 December 1987, pg 15

²⁴ ibid

²⁵ Press, 7 October, pg 5

²⁶ Press, 6 August 199, pg 21

²⁷ Ruka Lanauze interviewed by Jocelyn Powell 5 August 2023

had assumed it was shipped back to mainland New Zealand.²⁸ However, Robert Holmes - Chatham Islander and son of former long-term CICC Chairman [1953-1968], David L Holmes, recalls that the surf boat continued to be used around Chatham Island for ferrying building materials to isolated locations such as Kaingaora and Hapupu²⁹. Robert recalls the boat stored at the wharf in Waitangi; then, it was moved to a shed at the present Fulton Hogan yard in Waitangi. At some point, the boat was moved outside to its current location, where it has stayed ever since³⁰.



Figure 4 The Holmdale, Lyttelton, 1964. Retrieved on 08/12/2024 from <https://ehive.com/collections/5362/objects/1134368/the-holmdale-in-lyttelton-port-april-1964>

²⁸ *ibid*

²⁹ Robert Holmes phone interview with Mike Gillies 7 December 2024

³⁰ *ibid*

3.0 Observation

3.1 Description of Materials

While undertaking this report's field visit and condition survey, the author and Phil Buck spent several hours clearing the vegetation and removing detritus, weeds and soil/sand inside the boat. Finally, the ship was carefully lifted with bottle jacks to inspect the hull and to insert timber dunnage between the ground to reduce capillary from ground contact.

Timber: based on the site visit and the material specifications for the surfboat from Stark Brothers, the boat is primarily built from hardwood and Kauri. The hardwood is assumed to be an Australian native *Eucalyptus sp* hardwood, such as Jarrah, Ironbark, etc. Beech was used for the ribs. This is considered a native New Zealand *Nothofagus species*, such as red or silver beech. A few pieces of treated radiata pine are non-contributory to the boat and can be removed.

Bolts and nails: based on the specifications – copper

Engine: Lister diesel engine

Stem capping: mild steel

① 1/3/349

Specifications for 28' Surf Boat. - for Chatham Islands County Council.

Keel	5" x 4" Hardwood.	$\frac{1}{2}$ " Copper bolts.
Hog	8" x 4" Hardwood.	$\frac{1}{2}$ " " "
Stem	8" x 8" Kauri.	$\frac{1}{2}$ " " "
Deadwoods	8" Kauri.	$\frac{1}{2}$ " " "
Stern Post	8" Kauri.	$\frac{1}{2}$ " " "
Planking	$\frac{7}{8}$ " Kauri.	10G Copper nails roved.
Ribs	2 x 1 $\frac{5}{16}$ " Beech @ 5" centres.	
Stringers	4" x 2" Hardwood.	5G Copper nails.
Gunnal	6" x 2" Hardwood.	5G " "
Aft Rim	8" x 3" Laminated Kauri.	$\frac{3}{8}$ " " bolts.
Floors	8" x 3" @ 8" centres under engine.	$\frac{1}{2}$ " " "
Floors	8" x 2" @ 15" centres.	$\frac{3}{4}$ " " "
Engine Beds	8" x 4" Hardwood.	
Bulkheads	Double diagonal $\frac{3}{4}$ " T & G on 3" x 4 $\frac{1}{2}$ " Kauri grounds.	
Deck Beams	3" x 2 $\frac{1}{2}$ " @ 14" centres.	$\frac{1}{2}$ " Copper bolts.
Deck	$\frac{3}{4}$ " Ply.	
Capping	$\frac{3}{4}$ " Hardwood.	
Belting	5" x 2" Hardwood with hard rubber and steel strip.	$\frac{1}{2}$ " Copper bolts.
Stem Capping	Full steel U shape. Full length of ship.	
Inside Floor	6" x 1" Hardwood.	

Figure 5 Specifications for materials. Stark Bros. Lyttleton.

Treated pine timber elements have been added to the boat, as seen in the red and yellow highlighted photos below. Rubber vehicle tyres were also added to protect the vessel.



4.0 ANALYSIS

4.1 Identification of Defects

Although the boat has been exposed to the elements outside, it is still in sound enough condition to be conserved. Because the boat was lying directly on the ground during the condition survey, it was decided that the hull would be lifted with bottle jacks to inspect the buried planking and keel.



Figure 6 Surfboat getting lifted for inspection during survey.



Figure 7 Cracked gunnel



Figure 8 Starboard side planking. Note cracking



Figure 9 Portside planking.



Figure 10 Bent stem capping

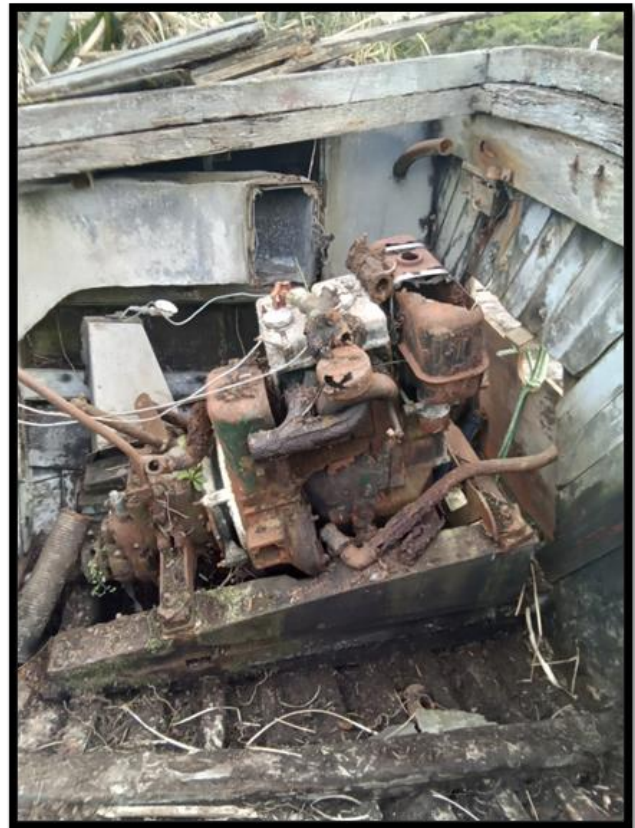


Figure 11 Lister motor in poor condition



Figure 12 Inside the boat looking towards the stern.



Figure 13 Inside the boat looking towards the bow.

4.2 Nature of Deterioration

The surfboat has suffered decay due to environmental exposure, ground contact, vegetation, and biological organisms due to wind-blown detritus.

Because no barrier was laid between the boat and the ground when it was moved, the hull has been in a continuous state of dampness due to capillary action and the inability to drain after rain.

The build-up of organic matter and subsequent growth of weeds inside the boat has significantly decayed the lower-lying timber elements.

Of note, there is no indication of borer presence or impact. This can be attributed to the exposed site, which doesn't allow borer to prevail, despite borer seen in other timber structures during the site visit.



Figure 14 Inside the boat before detritus clearing

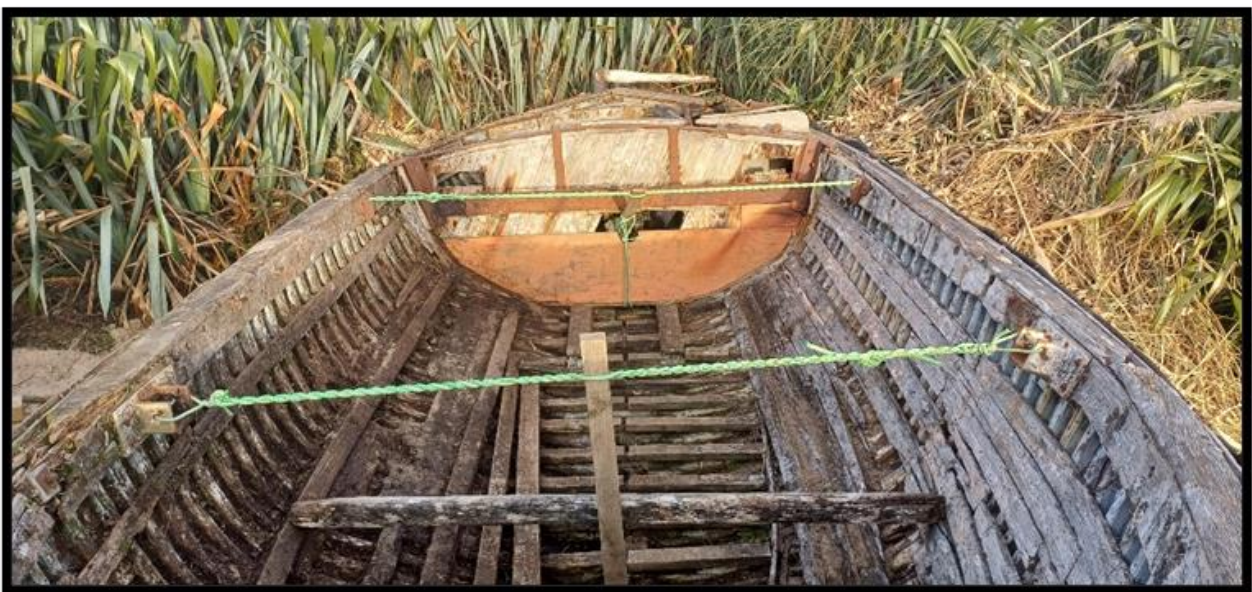


Figure 15 Inside the boat after clearing

4.3 Summary of Condition

Although well past being considered sea-worthy, and despite the exposed site, the non-permanent materials, and neglect, the surfboat is still in reasonable condition.

Besides the few defects highlighted above and the decay of some of the lower-lying timber fabric, the structure is sound and warrants conservation treatment.

5.0 PROPOSALS

5.1 Conservation Concept – Maintenance, Repairs and Intervention

Several proposals regarding the level of intervention on the boat were discussed during the site visit. These ranged from the bare minimum – doing nothing, to the complete restoration so the boat was once again seaworthy. The proposal below fits somewhere in the middle: stabilising the boat and treating it as an artefact. The justification for the decision is as follows:

- Rebuilding the boat to seaworthiness would require significant resources and skills, which are not readily available on the island.
- Rebuilding the boat would lead to the loss of a significant percentage of original materials and fabric, therefore reducing the authenticity of the boat and creating “Granddad’s axe”.
- Because the original Stark Bros plans and specifications are available, building a replica would be comparatively cheaper and require fewer resources.
- Stabilizing the boat means the authenticity of the materials and workmanship is retained and protected
- Conserving the boat would mean the sixty-year-old patina is retained.
- Significantly less resources are required for stabilisation.
- A boat-builder is not required. Instead, the repairs and stabilisation work can be undertaken by a carpenter with some training in conservation work.
- It is more likely that a stabilisation and repairs level of intervention will be successful and finished to completion than a technically more difficult rebuild project.

The ICOMOS NZ Charter allows for four degrees of intervention. This surf boat will be treated as a **preservation** and **stabilisation** project instead of a restoration job. This will ensure that any intervention is kept to a bare minimum and that as much original material and fabric is retained as possible.³¹

The proposed conservation, stabilisation, and repair work have been divided into four stages. These are:

- Stage one: moving the surf boat
- Stage two: conservation repairs and stabilisation work
- Stage three: build a permanent shelter for displaying the surf boat
- Stage four: moving the surf boat to the permanent shelter

³¹ ICOMOS New Zealand Charter for the Conservation of Places of Cultural Heritage Value. 2010.

Stage one: Moving the surf boat

Brace, support, and strop the surf boat for safe moving by Hiab (Fulton Hogan) from the current location to a temporary shed for conservation works.

This will require the following actions:

- Temporarily screwing plywood over the cracked planking on the starboard side of the hull.
- Fasten truck strops around the hull to ensure the boat is compressed.
- Temporarily brace the hull with timber to keep the boat in tension.
- Investigate whether to use lifting straps fastened around the hull or a lifting cradle to reduce the compression when loading the boat for moving.
- Move the boat to its temporary location for conservation work. Ensure that when the boat is lowered into its new location, it sits with enough ground clearance to allow for repair work on the keel.

Stage Two: Conservation repairs work [in the following order]

- Keep the truck strops and timber bracing fixed and fastened around the boat.
- Give the boat a few months to dry out and acclimatise.
- Remove any non-contributory fabrics, e.g., treated wood or rubber tyres.
- Remove all detritus, sand, dirt, and other organic/biological material using an air compressor. Ensure that the boat is completely clean and free of the above.
- Apply wood cleaner to remove salts to the entire boat to kill all biological organisms [allow to dry completely].
- Apply two coats of Framesaver over timber surfaces on the boat, inside and outside [allow to dry completely].
- Apply multiple coats of Everdure to any decayed timber. Ensure application methodology is followed. Do not apply Everdure to any wood in good condition [Allow to cure completely].
- Repair any structural breakages. This includes the severe starboard planking cracks and breaks on the gunnels. Use 75mm x 6mm brass plates, fixed with either brass slot head screws or brass bolts. Date stamp these before fixing.
- Remove rust from steel surfaces using a wire brush. Use a wire wheel attached to an angle grinder to remove all scale if necessary.
- Clean steel surfaces with an air blower and rags to remove loose particles. This includes the Lister engine [check and replace engine mount if required].
- Apply POR15 Metal Prep to treat all metal surfaces and fixings [allow to completely dry].
- Apply POR15 Rust Preventative to all treated metal surfaces [allow to completely dry].
- *Do not treat any non-ferrous metal fixings or surfaces. Only lightly clean.
- Repair hardwood cross arm. Refit into repaired steel brackets.
- Drill and fix two/three pairs of stainless steel (s/s) eyebolts under the gunnels.
- String s/s wire rope between eyebolts in a criss-cross pattern.
- Tension wire rope with stainless steel turnbuckles – fixed with wire rope grips.
- *Be careful not to over-tension.

Stage Three: Build a permanent shelter

- Prepare the site for permanent shelter
- Shelter should be designed to cover and protect the entire boat from weather.
- A gable roof design will provide the greatest protection

- The example below is a newly constructed DOC picnic shelter at Castle Hill, with added cultural motifs.
- Construct a cradle support structure for the boat to rest in permanently.
- NB: check whether the boat must be moved to the shelter before constructing the roof structure.
- The shelter and the boat support structure must be built to accommodate both visitors and the ongoing maintenance/conservation of the surf boat.
- A small viewing platform/ladder may be required to allow visitors to view inside the boat. The need for this may be mitigated by excavating below ground level to allow the boat to sit low enough that the inside is visible. Either way, visitors must be prevented from entering the boat.

Stage Four: Moving the surfboat to the shelter for permanent display

- Ensure that all conservation work is completed before moving the boat.
- Check that the wire rope is tensioned, and the cross arm is bolted and in tension.
- Fasten truck stops around the hull to ensure the boat is kept in compression
- Temporarily brace the hull with timber to keep the boat in tension.
- If unsure whether brass straps will support the cracked planking during moving, screw plywood onto the hull to provide additional protection.
- Lift the boat using a Hiab, using the same method previously used to move it.
- Move boat
- Lower gently into the new permanent support structure.
- Fix the boat to the permanent support structure
- Install interpretation



Figure 16 An example of a DOC-built gable shelter with a wooden boat photoshopped

Stage One: Materials Required

Materials	Supplier	Cost
Truck strops	Buy off island	\$200
Plywood	Buy off Island	\$200
Fulton Hogan Hiab	Fulton Hogan	Donation (Phil Holt FH)
Lifting strops	Fulton Hogan	Donation (Phil Holt FH)
Screws and fixings	Buy off island	\$100
6x2 timber	Buy off island	\$200
Subtotal		\$700

Stage Two: Materials Required

Materials	Supplier	Cost
Air compressor with hoses and air gun	Borrow from locals or bring to the island	FOC
Timber Clean cleaning chemical	www.naturaloils.co.nz	3Kg = \$90
Protrim Framesaver timber treatment	Bunnings	40l = \$800
Everdure wood stabiliser	Burnsco	16l = \$1000
Brass plate	www.littlemetals.co.nz	\$1000
Brass bolts and nuts	Blacks Fasteners	\$1000
POR15 Metal Prep	www.por.co.nz	\$200
POR15 Rust Preventative	www.por.co.nz	\$800
Brushes, rags, etc	Bring to the island	FOC
M12 Stainless steel eyebolts	Anzor	8x \$171.96
M8 Stainless steel turnbuckles	Anzor	8x \$245.82
8mm Stainless steel wire rope grips	Anzor	24x \$223.08
8mm Stainless steel wire rope	Anzor	50m \$640
8mm Stainless steel thimbles	Anzor	48x 171.96
Subtotal		\$6,342.82

Stage Three: Materials Required

Materials/Design	Supplier	Cost
Plans for a simple gable shelter designed to shelter surf boats permanently	Once a design is settled upon, ask a local builder to quote on materials and labour.	TBA
Plans for a simple structure to permanently support and house the boat	Once a design is settled upon, ask a local builder to quote on materials and labour	TBA

Small looking platform (if required)	Once a design is settled upon, ask a local builder to quote on materials and labour.	TBA
--------------------------------------	--	-----

Stage Four: Materials Required

Materials	Supplier	Cost
Fulton Hogan Hiab	Fulton Hogan	Donation (Phil Holt FH)
Lifting strops	Fulton Hogan	Donation (Phil Holt FH)
Subtotal		\$0

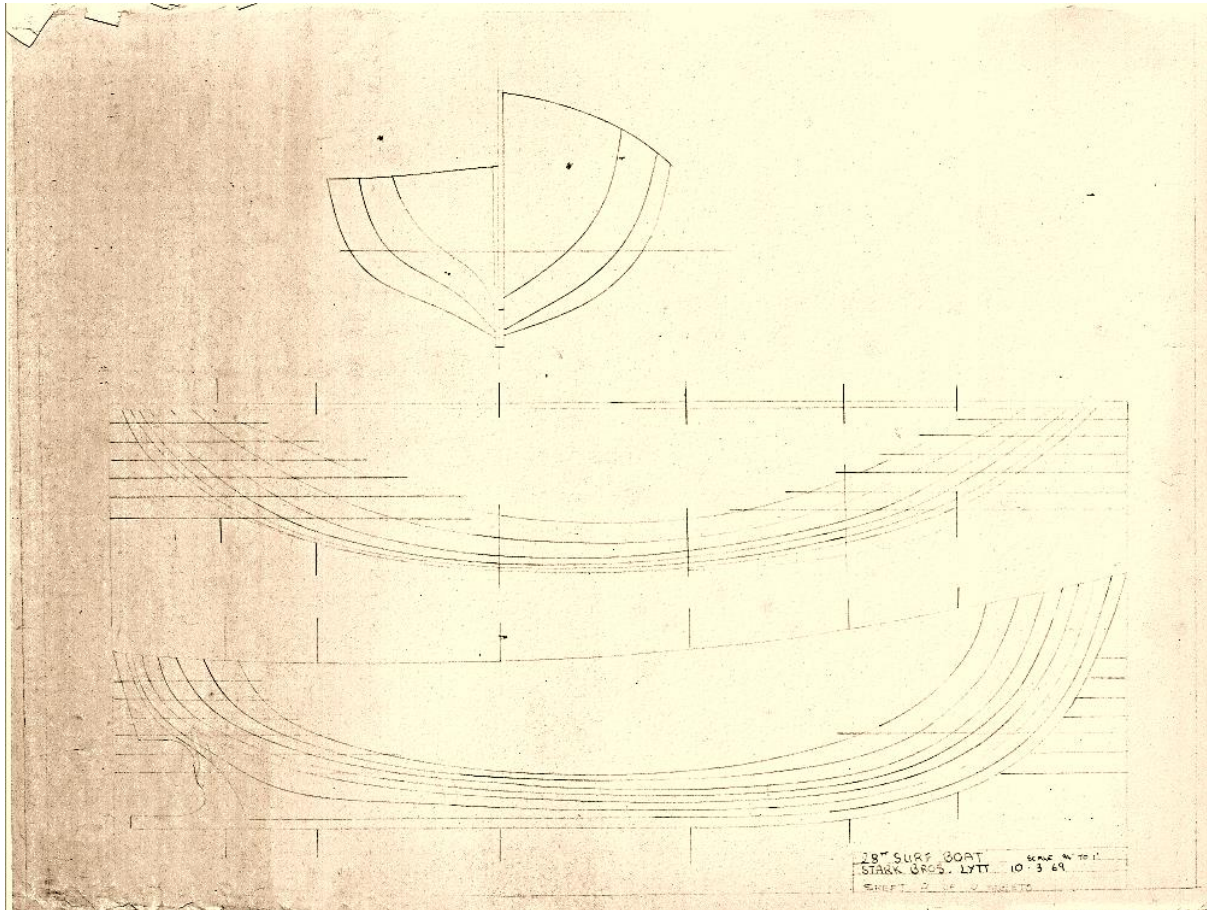
Total Costs

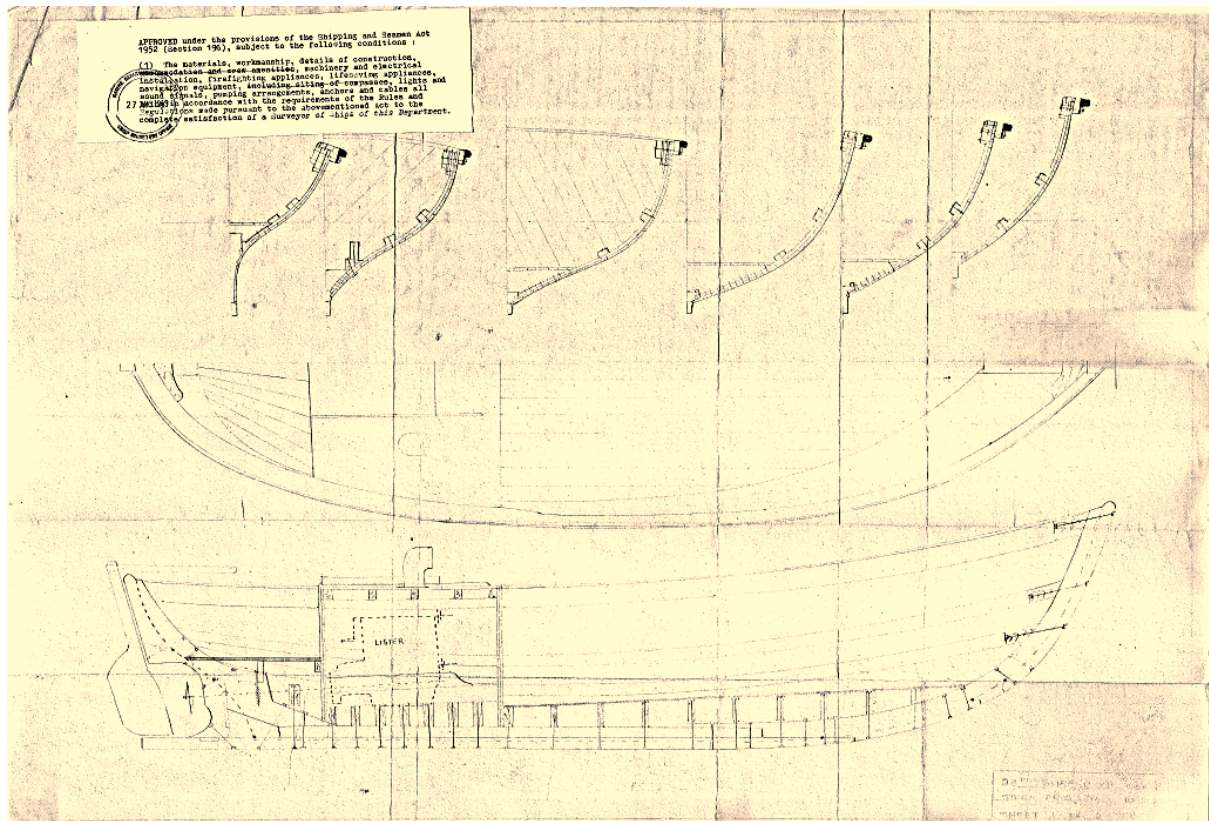
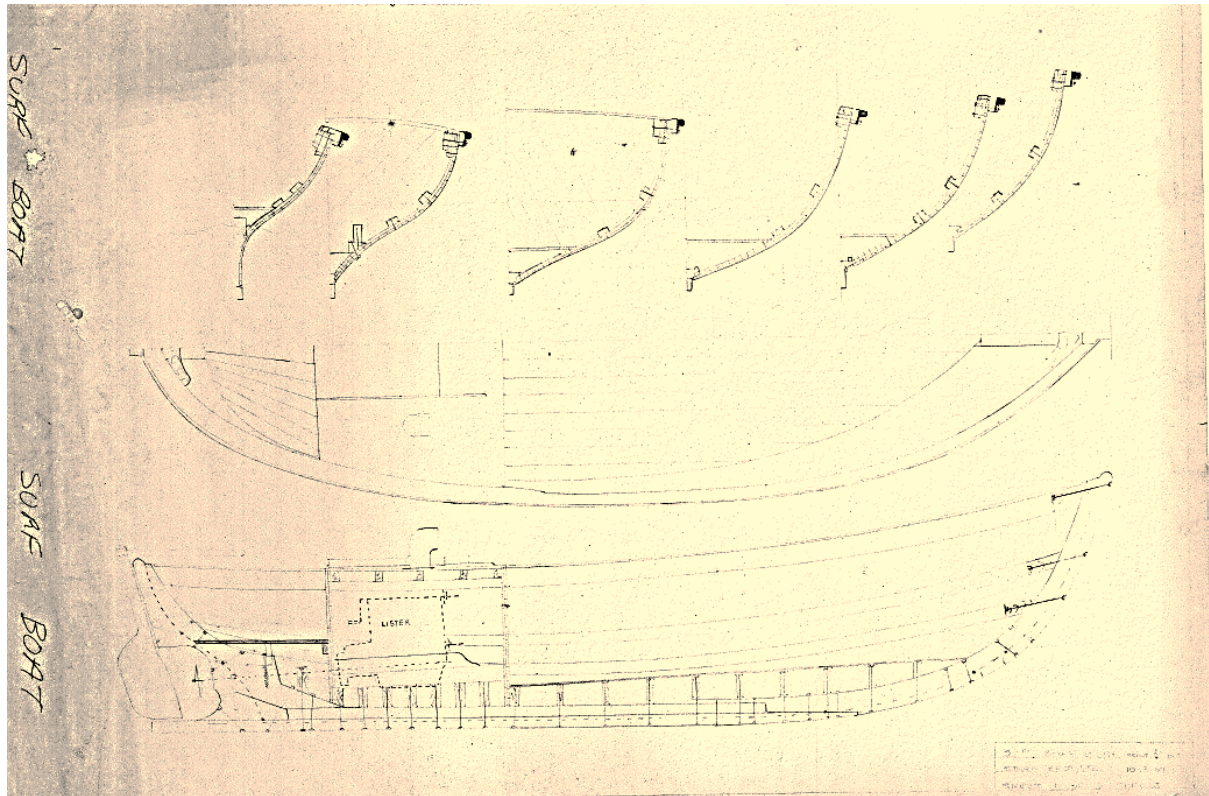
Stage One Subtotal	\$700
Stage Two Subtotal	\$6342.82
Stage Three Subtotal	TBD
Stage Four Subtotal	\$0
20% Contingency	
Total	

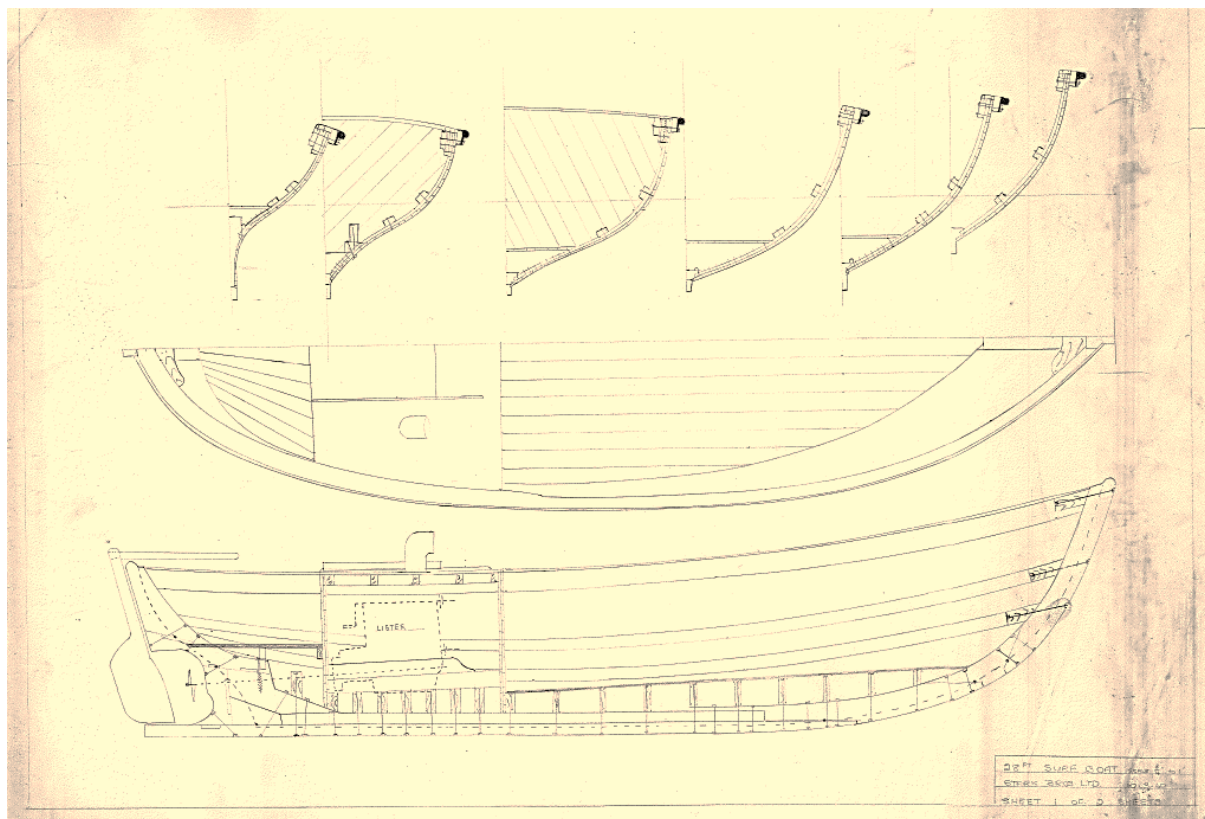
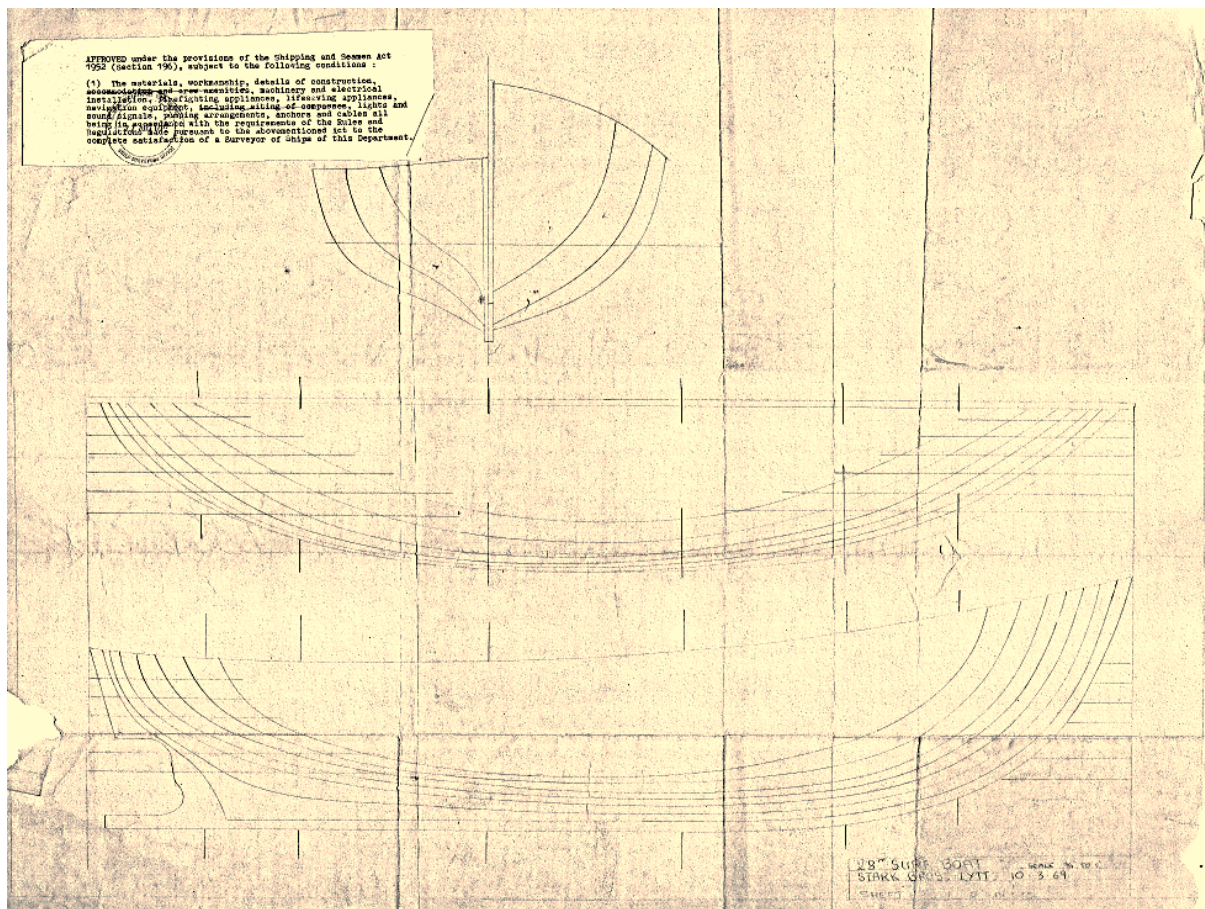
6.0 Appendices

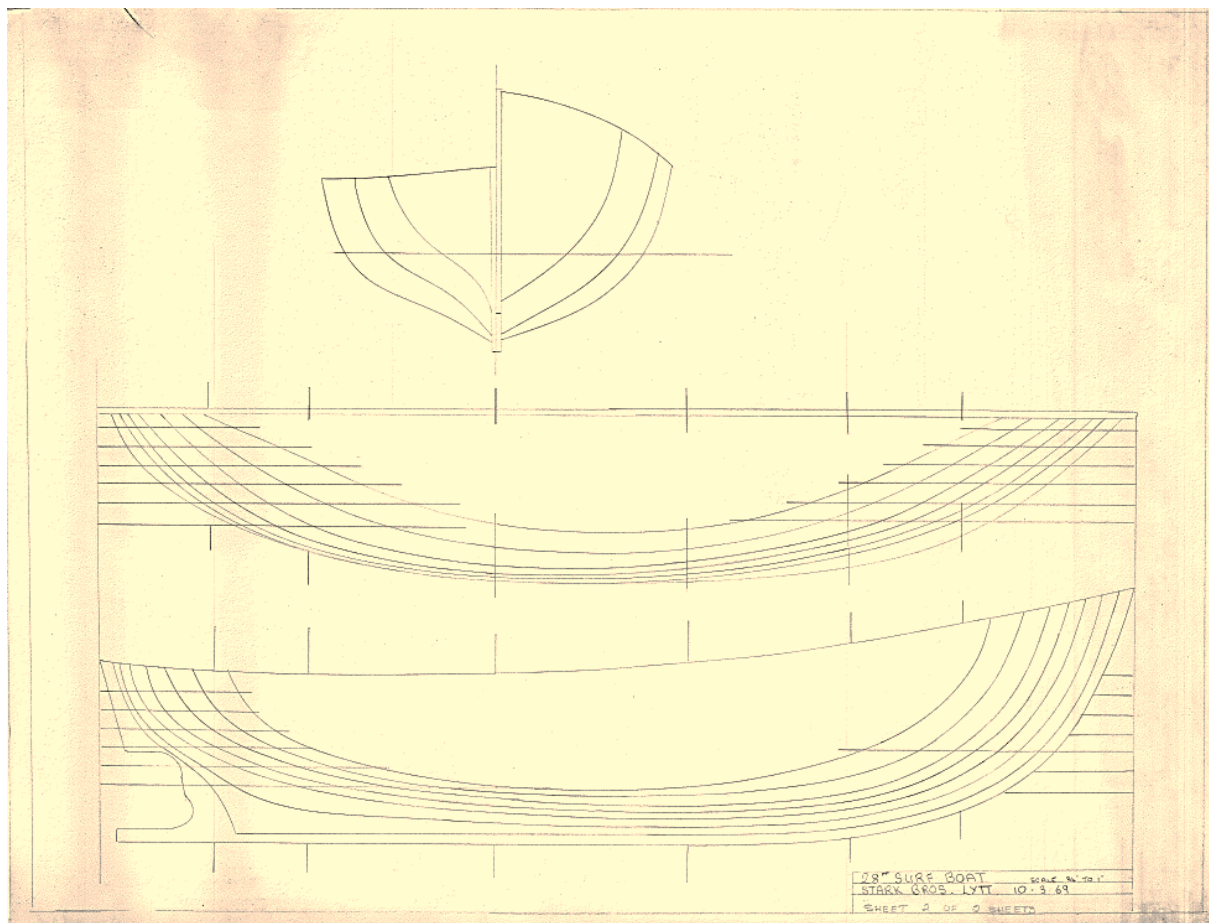
6.1 Stark Bros. Drawings and Specifications

These plans have been coloured, corrected, and sharpened to increase the legibility of the drawings.









① 21/3/249

Specifications for 28' Surf Boat. - for Chatham Islands County Council.

Keel	5" x 4" Hardwood.	$\frac{1}{2}$ " Copper bolts.
Hog	8" x 4" Hardwood.	$\frac{1}{2}$ " " "
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Stern Post	8" Kauri.	$\frac{1}{2}$ " " "
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Stringers	4" x 2" Hardwood.	5G Copper nails.
Gunnal	6" x 2" Hardwood.	5G " "
Aft Rim	8" x 3" Laminated Kauri.	$\frac{3}{8}$ " " bolts.
Floors	8" x 3" @ 8" centres under engine.	$\frac{1}{2}$ " " "
Floors	8" x 2" @ 15" centres.	$\frac{1}{2}$ " " "
Engine Beds	8" x 4" Hardwood.	$\frac{3}{4}$ " " "
Bulkheads	Double diagonal $\frac{3}{4}$ " T & G on 3" x 4 $\frac{1}{2}$ " Kauri grounds.	
Deck Beams	3" x 2 $\frac{1}{2}$ " @ 14" centres.	$\frac{1}{2}$ " Copper bolts.
Deck	$\frac{3}{4}$ " Ply.	
Capping	$\frac{3}{4}$ " Hardwood.	
Belting	5" x 2" Hardwood with hard rubber and steel strip.	$\frac{1}{2}$ " Copper bolts.
Stem Capping	Full steel U shape. Full length of ship.	
Inside Floor	6" x 1" Hardwood.	

APPROVED under the provisions of the Shipping and Seamen Act 1952 (Section 196), subject to the following conditions :

(1) The materials, workmanship, details of construction, accommodation and crew amenities, machinery and electrical installation, firefighting appliances, lifesaving appliances, navigation equipment, including siting of compasses, lights and sound signals, pumping arrangements, anchors and cables all being in accordance with the requirements of the Rules and Regulations made pursuant to the above mentioned Act to the complete satisfaction of a Surveyor of Ships of this Department.





Mike Gillies
Southern Preservation
West Coast, New Zealand.
2024

Chatham Islands Surf Boat Project Draft Lottery Application 2023

- What do you want funding for?

There is an historic surf boat owned by the Chatham Islands Council that is resting in the sand dunes in the main township of Waitangi. A community project has been launched, in conjunction with the Council, to have it restored. This funding application is for a Conservation Report to be prepared by professional conservator Brent Withers of dpa architects of Auckland. This report will inform the decisions over the options for the restoration work.

The surf boat was originally purchased by the Chatham Islands Council and built in 1959 by Stark Bros of Lyttleton. It was used to transport supplies from the main supply ship the *Holmdale*, to the communities of the Chatham Islands. It was relocated from the Council yard to the current location in the sand dunes several years ago. It has rested there, largely untouched since that time. Over time it has become filled with sand and plants had started to grow in it. Luckily their roots have not gone through the bottom of the boat. It's restoration was identified as an important project by Tourism Chatham Islands and included in the Destination Plan for achievement in the next five years. Discussions were held with members of the community to determine the history and interest in the project. Recently an historic reed boat builder, Phil Buck, visited the Island and was introduced to the project. He is very keen to help lead the restoration work. Having someone with the restoration skills and knowledge required has provided the ability to move the project forward. Stark Bros have been contacted. They still have the original plans and are willing to contribute materials, including kauri and other original materials to the project.

The majority of Chatham Islanders are either of Moriori or Ngati Mutunga descent.

- What community need do you propose to meet?

This project will meet the need of restoring, and hence retaining, a heritage item that the community does not want to have lost. One of the outcomes already from this project, is that the importance of this special boat has been recognised with the coming together of many older members of the community that value it and want to see it retained.

There is also a strong desire to have the many stories from individuals that had associations with this boat, recorded. The museum has indicated it would like to include the recording of stories amongst their oral history recording project work. This will be a catalyst for the capturing of much of the personal lives of many of the small communities on Chatham and Pitt Island that were served by the *Holmdale*.

- How will you address the need?

This first stage of the project is to obtain a report from a professional who has the expertise to identify what the historical significance of the surf boat is, what the various options are for the restoration, how these could be achieved correctly, what they will cost. Also what other measures are required for the long term care of the boat and should it remain in its current location or are there other options that could be considered.

The required funding and support will then be sought to implement the project.

PROJECT DETAILS

- Project name\title:
- What is the project start date?
- What is the project end date?
- What are the expected benefits/outcomes?

The benefits of this project will be:

A professional report that will guide the restoration of this asset.

Documentation of the restoration options and costs for each that will guide decision making on what can be achieved.

Decisions on the permanent location of the boat.

Documentation of what is required to care for the boat going forward.

The documenting of the history of the surf boat and importantly the stories of the people and communities it served.

A number of local people will be involved in, and gain an understanding of the process of restoration of heritage assets in this way. While Tourism Chatham Islands has managed restoration work on two category 1 listed buildings, this is understood to be the first community restoration project of its type on the Island.

- Mahinga/activities: briefly describe your project or planned activities

Brent Withers, who has already visited the Island and viewed the surf boat, will be contracted by the Chatham Island Council to prepare the report.

Those on Island will provide the additional information he requires.

Stark Bros in Lyttleton, who build the boat and still have all the plans, will provide the information on the materials and construction.

Brent will research the history of the boat, examine its makeup and compile the required report.

- How do you know this is needed?

Observing the condition of the boat - it is clearly in a state of disrepair. It has been assessed by both Brent Withers in an earlier trip and by a visiting historic wooden boat builder who came to the island to view an historic reed boat in the Chatham Island museum. A working bee with Phil Buck and members of the community has already been undertaken to remove the sand and plant growth that had accumulated in the boat. The flax and growth around it was also cleared to allow air flow.

A number of people on island have expressed a desire to have the boat restored.

No one on island has been identified with the skills to provide the information that this report will produce.

- How will you achieve it?

If the funding is successful, Brent Withers will be commissioned by the Chatham Island Council to undertake the work and his report will be received to guide the project.

Moving forward following this current stage of the project, once the report is received, the project team will then look to bring together the voluntary and in-kind resources available and raise any funds needed to undertake the project. This is likely to include a further application to the next stage of Lottery Environment and Heritage.

- How will you show you have achieved it?

A physical report will exist. Planning decisions will be made by the Council and those leading the project on how the project will progress.

- How do you know the community supports your project? (e.g. What community consultation has taken place and is the project supported by local hapu and iwi?)

The Chatham Island Council has formally moved to support the project. Members of the community have already shown their support by meeting, holding a small working bee to clean out the boat and lead this project. Support letters are attached.

Letters of support have been provided by the Hokotehi Moriori Trust and Ngati Mutunga o Wharekauri Iwi Trust.

The Museum Trust and Tourism Chatham Islands and CHART have indicated their support for the project formally in the attached support letter.

- What community participation/collaboration will be involved?

The project is being led by members of the community. A public notice has been put out calling for anyone that would like to be involved to come forward. The working bee has already been held. Local engineering firms and builders have offered tools, storage, machine and support with things like vegetation clearing.

- How does your request align with the purpose or priorities of this fund?

This project can be considered both physical and cultural heritage. It aligns with the priorities as follows:

This project involves restoring and protecting a built object that is considered culturally significant to the Chatham Islands people. Very little work has been undertaken in formally identifying items of significance on the island, hence it is not listed. This process may yet come as a result of this project.

The priority of public access through the recording of the stories and having them presented on interpretation panels will also be met.

FUNDING BENEFIT AREA

Where will your activities or project provide the most benefit?

- Primary location

Will an additional area benefit from your activities or project?

- Additional location

FUNDING BENEFIT ETHNICITY

Which ethnic group or community will benefit most from your activities or project?

- Primary ethnic

group/community

Will an additional ethnic group or community benefit from your activities or project?

- Additional ethnic

group/community

AMOUNT REQUESTED

If you are GST registered, the amounts should be exclusive of GST.

If you are not GST registered, the amounts should be inclusive of GST.

- What is the total amount you are requesting?

FINANCIAL INFORMATION

- What is the total cost of the project?

- Is your request for a plan or report?

SECURED PARTNERSHIP FUNDING

For project requests that require partnership funding, please provide details of all partnership funding secured for this project, including the amount, the date and the source.

Secured partnership funding should be at least one third of the total cost of the project.

Secured partnership funding and the amount requested should not exceed the total cost of the project.

Click on the 'Add a Secured Partnership Funding' plus sign icon to add partnership funding

Click on the 'Edit' to update the partnership funding

Click on the 'Delete' icon to remove the partnership funding

Secured Partnership Funding

- Comments on partnership funding and/or planned fund raising you are doing

The Chatham Islands Council is baseline funded by the government so is unable to put any funding into the project as it is only able to be spend of the purposes for which it is given.

The project has received voluntary professional support from a professional to guide the process. This would equate to over \$5000 monetary value. Additionally, the project has received planning support from an expert historic wooden boat builder whose contributions would have also matched this amount. Further a museum Trustee and community member have both also put considerable expert help into the early stages of planning.



PROJECT RELATIONSHIPS

Please provide contact details for the organisations, agencies or bodies who are involved in collaborating with your organisation on this project?

Museum Trust, 15 Waitangi-Tuku Road, Chatham Islands 8942

TCI

Click on the 'Add a Project Collaborator' plus sign icon to add project collaborators

Click on the 'Edit' to update the project collaborator

Click on the 'Delete' icon to remove the project collaborator

Project Collaborators

- Give details of any projects or services being provided which are similar to your project

There are no projects or services that are similar to this on the Island.

PROJECT RESOURCES & REQUIREMENTS

- Have you secured resource consent for the project?

1. ☐ Yes
 2. ☐ No
 3. ☐ In Progress
 4. ☐ Not Applicable
- Have you secured building consent for the project?
 1. ☐ Yes
 2. ☐ No
 3. ☐ In Progress
 4. ☐ Not Applicable
 - Does your organisation own the land the project will be on?
 1. ☐ Yes
 2. ☐ No
 3. ☐ Not Applicable
 - Will your organisation own the facility/site once the project has been completed?
 1. ☐ Yes
 2. ☐ No
 3. ☐ Not Applicable
 - Tell us about how your organisation will manage the facility, outlining how to fund the ongoing

maintenance and running costs for the project

PROJECT LEAD

Who is, or will be, responsible for managing this project?

Judi Kamo – Chatham Islands community leader and Maori Warden, Chatham Islands Councillor, Museum Curation Assistant

Jackie Gurden – Chatham Islands Tourism Manager

Phil Buck – Historic wooden boat builder and restorer

Jocelyn Powell – Chatham Islands Museum Trustee, historian and botanist.

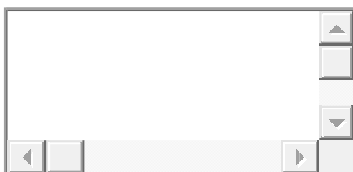
Malcolm Lock

Please include the Project Manager's name and contact details, along with a short description of their experience/skills in managing projects of a similar size.

- Project Lead Name
- Project Lead Email
- Project Lead Phone
- Project Lead Qualifications

The project lead is or will be responsible for this project. Please provide a short description of their experience/skills in managing projects of similar size

Judi Kamo will lead this project. Judi is a respected Chatham Island resident, a Maori Warden, Chatham Island Councillor and works as a museum curator assistant at the Museum. While not having a background in restoration projects, Judi is learning from this project. She is supported by Jackie Gurden. Jackie has led many heritage projects including some involving restoration work. She has a background in project management and is passing on her knowledge and skills to Judi. Judi is also supported by Phil Buck who has restored a number of wooden boats.



SUPPORTING DOCUMENTATION

Refer to [Community Matters - Lottery Environment and Heritage](#)

Required Documents:

- Project Plan and timeline
 - Project budget
 - Quotes, contracts and/or quantity surveyor reports
 - Partnership funding: evidence of one third funds secured or raised - not required for feasibility study, conservation plan or specialist report requests
 - 2 Letters of support for your project
- Required for some projects depending on the nature of your project*
 - Detailed job descriptions for any project related salaries identified in the budget
 - Professional independent endorsement of the project, appropriate to the sector (for capital works projects in museums and art galleries and major restoration projects)
 - Resource consent approval - where required for capital works projects
 - Landownership: evidence of project support from legal owner and proof of ongoing access for general public for capital works projects
 - Concept drawings or floor plans - for capital works projects
- Required for large projects (total project cost over \$250,000)*
 - A completed feasibility study
 - Any specialist or conservation reports, restoration plans or collection policies - check website for requirements
- Required for feasibility study, conservation plan or specialist report requests:*
 - A detailed requirements brief
- Required for historical projects*
 - Chapter outline
 - Main sources
- Required for book publication projects*
 - Synopsis of proposed book
 - One chapter of draft text or manuscript
 - Confirmation of the proposed selling price of the book

Additional Supporting Documentation

- Any additional supporting documents you believe provide critical information to support your request

Refer to Community Matters for more information

[Community Matters - Budgets](#)

[Community Matters - Lottery Environment and Heritage](#)

Organisation Documentation:

Refer [Community Matters - financial requirements for organisations](#)

Refer [Community Matters - financial statements](#)

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Supporting Documentation

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Top

6. Regulatory

6.1 Waitangi Wharf Monitoring Report

Date of meeting	13 February 2025
Agenda item number	6.1
Author/s	Paul Eagle, Chief Executive

Purpose

Information for Council.

Recommendations

THAT the Chatham Islands Council:

- 1. Receives the report.**

Background

The Waitangi Wharf upgrade granted resource consent requires ongoing beach monitoring in accordance with a Coastal Monitoring Plan. Following completion of the wharf, Tonkin +Taylor took over the monitoring regime required.

The attached report outlines the results from the 2024 round of coastal monitoring and includes:

- A summary of the photographic monitoring undertaken key observations and changes in the beach.
- A summary of beach profile monitoring survey results.
- Comment on the monitoring results in comparison with the Summary and Conclusion section of the Waitangi Wharf Upgrade Coastal Processes Report.
- If necessary, suggestions on adaptive management such as additional sand transfer, coastal protection works or relocation of assets.



Waitangi Wharf Coastal Process Monitoring Report

Prepared for

Chatham Islands Port Limited

Prepared by

Tonkin & Taylor Ltd

Date

December 2024

Job Number

1008326.0400 v1



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sustain a better world**

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Document control

Title: Waitangi Wharf Coastal Process Monitoring Report					
Date	Version	Description	Prepared by:	Reviewed by:	Authorised by:
20/12/24	1	For Issue	V. Taylor	M. Paine	E. Breese

Distribution:

Chatham Islands Port Limited

1 copy

Tonkin & Taylor Ltd (FILE)

1 copy

Table of contents

1	Introduction	1
2	Beach monitoring description	2
2.1	Monitoring programme	2
2.2	Locations	3
3	Monitoring results	4
3.1	Purpose	4
3.2	Photo-point monitoring	5
3.2.1	Town Beach west (P1 and P2)	5
3.2.2	Town Beach east (P3 and P4)	6
3.2.3	North of Nairn River (P5 to P8)	7
3.3	Beach profile survey	8
3.3.1	Town Beach west (T1 and T2)	8
3.3.2	Town Beach east (T3A and T3B)	11
3.3.3	North of Nairn River (T4 to T6)	12
3.4	Wave data analysis	13
3.5	Shoreline analysis	14
4	Summary and conclusion	16
5	Applicability	17
Appendix A	Photo-point monitoring data	
Appendix B	Beach profile survey data	
Appendix C	Beach profile analysis	
Appendix D	Waitangi Wharf Upgrade Coastal Processes Monitoring Plan	
Appendix E	Coastal Process Report	

1 Introduction

The Chatham Islands Port Limited (CIPL) obtained resource consents (CIC/2015/02) for the construction of an upgrade of Waitangi Wharf and related activities in 2015. The project was funded by the Department of Internal Affairs (on behalf of the New Zealand Government) and was designed and constructed by the Memorial Park Alliance (MPA) which consisted of the New Zealand Transport Agency (NZTA), Downer Construction, HEB, AECOM and Tonkin & Taylor Ltd (T+T).

The project included reclamation and dredging activities which resulted in changes to the pre-construction coastal processes. The assessment of coastal processes (Appendix E) prepared as part of the resource consent application concludes that the wharf construction will not result in significant changes or adverse effects on coastal processes. To confirm this assessment and determine if mitigation measures are required, a Coastal Processes Monitoring Plan (CMP) was prepared (Appendix D).

The main areas of interest for coastal processes monitoring are the beach area in front of the Waitangi Hotel and Aotea Fisheries Factory ('Town Beach') and the area around the mouth of the Nairn River and north of the river.

The CMP set out procedures for the collection of relevant information and the analysis and reporting of results. The monitoring programme set out in the CMP includes:

- Photo-point monitoring.
- Beach profile surveying.
- Wave data analysis
- Shoreline analysis (using satellite and aerial imagery).

The granted resource consent requires ongoing beach monitoring in accordance with the above CMP. Following completion of the wharf, T+T took over the monitoring regime required from MPA.

This report outlines the results from the 2024 round of coastal monitoring and includes:

- A summary of the photographic monitoring undertaken key observations and changes in the beach.
- A summary of beach profile monitoring survey results.
- Comment on the monitoring results in comparison with the Summary and Conclusion section of the Waitangi Wharf Upgrade Coastal Processes Report.
- If necessary, suggestions on adaptive management such as additional sand transfer, coastal protection works or relocation of assets.

2 Beach monitoring description

2.1 Monitoring programme

The following programme has been undertaken to monitor potential changes in shoreline characteristics:

Table 2.1: Beach monitoring programme

Name	Description	Monitoring Requirement	Frequency		
			Baseline	During Capital	Following Capital
Photo-point Monitoring	Photographs taken from fixed locations and aspects.	Visually assess beach level change or fine sediment deposition.	June 2016	2 weekly	Annually for 2 years (until 2021) then bi-annually for remainder of consent
Beach Profile Survey	Beach profile survey from established benchmark ² .	Quantifies changes in profile geometry and/or location	June 2016	6 monthly	Annually for 2 years (until 2021) then bi-annually for remainder of consent
Wave Data Analysis	Wave climate data from NOAA Wavewatch III global numerical wave model at an output location 75 km offshore of Waitangi Bay.	Provide indication of ocean conditions occurring between surveys (i.e. magnitude and frequency of storms).	June 2016	Annually	Annually until 2021 then 5 yearly for the remainder of the consent ³
Shoreline Analysis	Digitise and compare shoreline positions from aerial photographs/satellite imagery	Determines any changes in shoreline position.	June 2015	Annually (or as aerial photographs/satellite imagery become available if longer than this) to 2021 then 5 yearly for the remainder of the consent ³ .	

¹Monitoring frequency is broken into three stages,

- **Baseline** before works began; **During** capital works project; **Following** capital works project

²Surveys should be referenced to the benchmark and consist of horizontal and vertical offsets across the profile from the benchmark to the water edge at low tide. Acceptable survey methods include RTK GPS, theodolite, level and staff. Staff and tape and visual estimate are not acceptable.

³Shorter period if agreed by Council

2.2 Locations

Monitoring has been undertaken at the locations shown in Figure 2.1 for the types of monitoring shown in Table 2.2 below.

Table 2.2: Beach monitoring locations

Location		Photo-point monitoring	Beach profile survey
1.	Western end of Town Beach	✓ (P1)	
2.	Toe of boat ramp to south of Aotea Fisheries Factory	✓ (P2)	✓ (T2)
3.	In front of Waitangi Hotel accommodation block	✓ (P3)	
4.	75m east of Waitangi Hotel public bar	✓ (P4)	✓ (T3B)
5.	Eastern abutment Nairn River bridge	✓ (P5)	
6.	125m east of the eastern abutment Nairn River bridge	✓ (P6)	✓ (T4)
7.	710m east of the eastern abutment Nairn River bridge	✓ (P7)	✓ (T5)
8.	1500m east of the eastern abutment Nairn River bridge	✓ (P8)	✓ (T6)
9.	Northern end of diesel storage compound		✓ (T1)
10.	Boundary between Aotea Fisheries factory and the Waitangi Hotel		✓ (T3A)



Figure 2.1: Monitoring locations along Town Beach (top) and north of Nairn River (bottom)

3 Monitoring results

3.1 Purpose

The purpose of the monitoring is to confirm that the conclusions stated in the Coastal Processes Report (refer Appendix E) undertaken by MPA during the design phase stating that the capital works undertaken will not result in significant changes or adverse effects on coastal processes is correct. This report stated that the construction of the wharf and breakwater may result in some alterations to the beach processes within Waitangi Bay due to an altered wave climate from a north-west swell direction namely:

- The swell wave climate was expected to be reduced by 20-80% at the western end of the bay (Town Beach) resulting in less sediment transport in front of Waitangi Town.
- The swell wave climate was likely to slightly increase up to 5% at the more northern end of Waitangi Beach (1-2 km north-east of Nairn River) resulting in slightly increased erosion rates from those historically experienced (0.1-0.3 m/year since 1969).

These actual effects were not expected to be noticeable given the background erosion rate in the area.

To combat the potential changes in sediment transport in the system and to increase the stability of the perched beach west of the Nairn River (Town Beach), dredged sand material was placed in this area to nourish the beach. It was anticipated before works began that approximately 3000 m³ material be placed along 120 m of the shoreline started from the western end of the bay (refer Figure 3.1). This material was anticipated to be gradually transported eastward along the bay. It is noted that during construction, dredged material was also placed further eastward of this location, extending along the Town Beach in front of the fish factory. Approximately 3300 m³ dredged sand was placed on the Town Beach during construction of the Wharf.

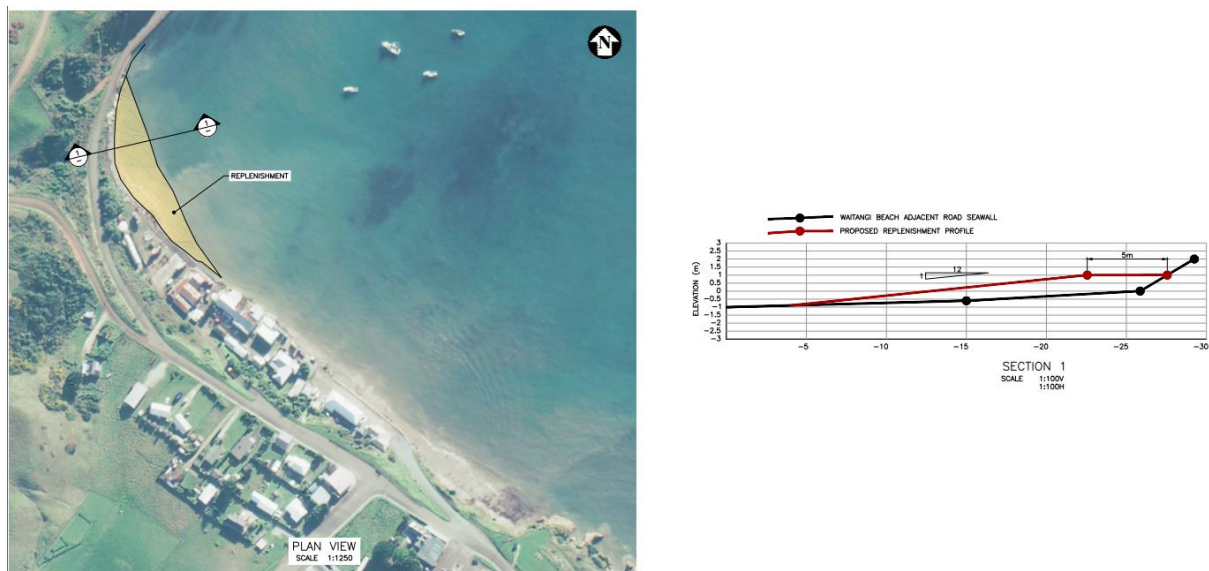


Figure 3.1: Initial beach sand nourishment design extent and profile concept (note sand was also placed further east along Town Beach during construction)

The monitoring requirements and their purpose are outlined in Table 2.1.

3.2 Photo-point monitoring

The photo-point and visual monitoring was undertaken through the construction process and annually following completion of construction. The 2024 photo-point monitoring round was undertaken on 12 November 2024 – 15 November 2024. Photos were taken at low tide with overcast sky and negligible swell. In general, these photos show only minor changes to the majority of the beach profile since beginning of works. Refer Appendix B for photos taken.

3.2.1 Town Beach west (P1 and P2)

The beach levels at the far western end of Towns Beach, west of the concrete pile groyne, appear generally lower compared to the concrete piles and the sand line along the revetment observed in the December 2022 monitoring round (Figure 3.2). There is erosion along the access road edge which will likely continue unless protected. The higher beach levels at this location (compared to pre-nourishment) will be somewhat aiding in mitigating the rate of erosion. Sand build-up on the western side of the groyne and reduction of the sand levels on the eastern side has been noted since the 2018 monitoring round. This difference in beach levels was also evident during the 2022 monitoring round (refer Figure 3.2). The 2022 report identified displacement of the rock armour protecting the access ramp, and this issue has continued since 2022, with larger additional rock displacement of revetment noted, particularly near the concrete pile groyne (see Figure 3.3) with evidence of rock displaced onto the beach in front.



Figure 3.2: Beach photo-point monitoring at point Nov 2022 (left) and Nov 2024 (right)



Figure 3.3: UAV images (2022 left and 2024 right) at point 1 showing increased displacement of access ramp rock armour

The beach levels at the upper beach location at the western end of Town Beach (adjacent to the boat haul out area) are currently similar to the levels observed in 2022. The gravel/sand interface at the top of the beach has maintained a similar placement as what was observed in 2022 (Figure 3.4). The gravel sand/interface was initially exposed in 2019. This did not recover in 2022 and has again maintained similar level at present.



Figure 3.4: UAV images at photo-point monitoring at point Nov 2022 (left) and Nov 2024 (right). Red line shows gravel/sand interface.

Lowering of sand levels at this location was also noted in the December 2018 monitoring reports. This trend is ongoing and is likely the result of ongoing easterly transport of the dredged material placed here during construction with recent trends indicating that this transport rate has reduced, or even stabilised, following sand placement during construction.

3.2.2 Town Beach east (P3 and P4)

This trend of beach lowering is also noted to the east of this location in front of the Fish Factory with increased exposure of gravel and Tuff rock seaward of the fish factory seawall noted in previous monitoring rounds. Unmanned Aerial Vehicle (UAV) photography has been taken along Town Beach and part of the beach north of the Nairn River from 2016 to 2024 and has been visually assessed for notable changes in shoreline and beach profile.

Comparing December 2024 and December 2022 aerial photography of Town Beach it reflects the trend of lowering sand level with increased exposure of Tuff rock, gravel and geotextile sandbags (refer Figure 3.5). This has been an ongoing trend that was first identified in the 2019 monitoring round.

The most notable trend along Town Beach to date has been to the sand levels at monitoring point 3 along central and eastern end of the beach. Here the underlying tuff rock was seen to be exposed during the latter half of 2016, then being covered by sand throughout 2018-2022 (refer Figure 3.6). This difference is likely to be a direct result of the dredged sand placed west of this location in front of the fish factory in the latter half of 2016 being transported along the length of beach in front of the Hotel.



Figure 3.5: UAV photo analysis showing differences in Town Beach sand levels in front of the fish factory between Nov 2019 (top left), Dec 2020 (top right), Dec 2022 (bottom left), and Dec 2024 (bottom right). Arrow shows general easterly movement of sand

The volume of beach sand placed on the Town Beach averaged over the area of the western half of the beach (including the area in front of the fish factory) equates to an approximate average depth of 0.5m. This is approximately equal to the maximum depth of sand surveyed following the sand placement indicating a large volume of the placed material was relatively rapidly incorporated into the beach system and dispersed along the beach eastward.

It is still not clear what the natural beach fluctuation will be along this length of beach based on the monitoring to date. However, the Tuff rock in front of the hotel is partially visible during the 2024 monitoring round (refer Figure 3.6) which indicates some of the sand has remained in place over five years' climatic cycles and the rest is likely continuing to migrate towards the east, a trend which is likely to continue, though at a slower rate, as beach levels approach pre nourishment levels.



Figure 3.6: Beach photo-point monitoring at point 3 June 2016 (left), Nov 2022 (centre), and Nov 2024 (right)

3.2.3 North of Nairn River (P5 to P8)

There are no obvious locations of beach level change visible in the monitoring photos along the length of beach 1-2km to the north of the Nairn River, a stretch which has experienced background erosion since 1969. In 2022, dune erosion surrounding P7 and P8 was noted, with the dune toe showing signs of erosion as well as a retreat in the toe vegetation. This trend has not continued into the present

monitoring round, with the dune toe showing signs of accretion with vegetation establishing both landward and seaward of the dune toe at photo points P7 and P8 (Figure 3.7 and Figure 3.8).



Figure 3.7: Increase in dune vegetation at the dune toe at photo point location P7 between the 2022 monitoring round (left) and the 2024 monitoring round (right)



Figure 3.8: Increase in dune vegetation at photo point P8 between the 2022 monitoring round (left) and the 2024 monitoring round (right)

3.3 Beach profile survey

The beach profile survey data undertaken since June 2016 is included in Appendix B with transect trend analysis undertaken on this data presented in Appendix C. This transect analysis was undertaken at the contour considered to best represent the shoreline (dune toe or equivalent) at each monitoring location.

3.3.1 Town Beach west (T1 and T2)

Throughout construction, accretion occurred along the Town Beach due to the import and easterly migration of dredged sand placed on the beach during the works. However, since this placement stopped, the beach levels along the western half of Towns Beach at the location of monitoring profiles T1 and T2 have lowered.

Location T1

At monitoring location T1, the beach levels are up to 300 mm lower than preconstruction levels, up to 100 mm lower than the 2022 monitoring. A trend which was also noted in the 2018-2022 monitoring reports.

At the toe of the access ramp there is a 40 mm decrease in beach levels when compared to 2022 and at the furthest seaward position there is a maximum lowering of 80 mm recorded 20 m offshore from the toe of the access ramp (refer Figure 3.9).

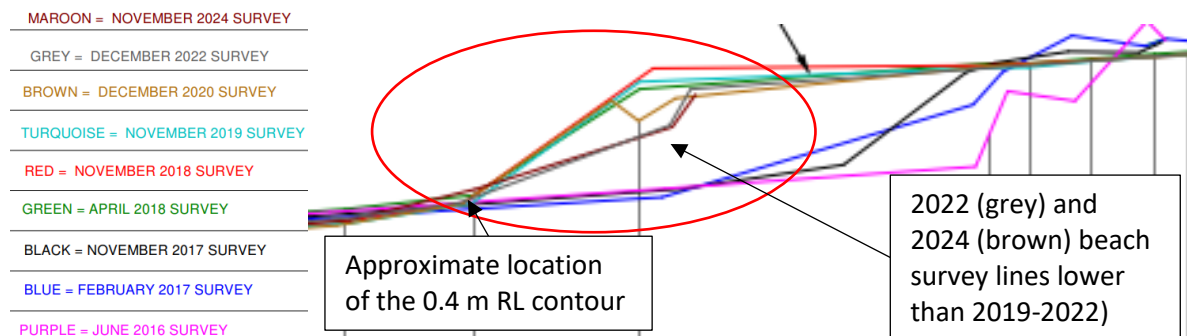


Figure 3.9: Beach levels at the western end of Town Beach (monitoring location T1)

Beach profile analysis has been conducted using all survey data for monitoring location T1 (see Figure 3.10 and Appendix C1) to assess trends over time noting that sand placement occurred in 2018.

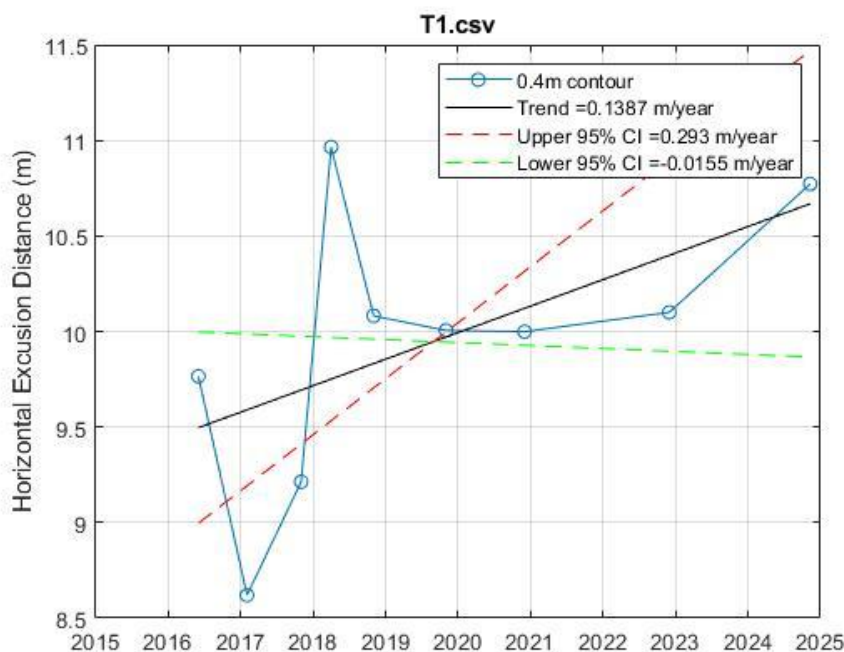


Figure 3.10: Beach profile analysis at monitoring location T1 showing accretionary trend.

Analysing the horizontal excursion of the 0.4 m RL contour (approximate location of rock armour toe), shows that the 2024 monitoring has experienced an increase in accretion rates bringing the overall accretion rate up to 0.14 m/year which is an increase from 0.12 m/year noted in the November 2022 assessment. The 2022 profile showed similar accretional trends however prior to this this location was experiencing erosion post placement of material. However it is noted that the beach seaward of this contour is lowering and therefore it appears the trend at this contour is the result of rock revetment erosion and material displacement to the toe of the slope at this location, this has worsened since the 2022 monitoring report rather than accretion of the beach itself.

Location T2

Beach levels recorded at profile T2 (Figure 3.11) are up to 10 mm lower than the 2020 and 2022 monitoring rounds and up to 350mm lower than the levels recorded in June 2016. There is a maximum decrease in the 2024 beach levels of 10 mm from the 2022 beach profile. Similarly, to the 2020 and 2022 surveys, there is still a substantial decrease in beach profile below high tide level, when compared to surveys prior to 2019. It is worth noting this monitoring location is seaward of the improved boat haul out area constructed towards the end of the wharf works in 2017.

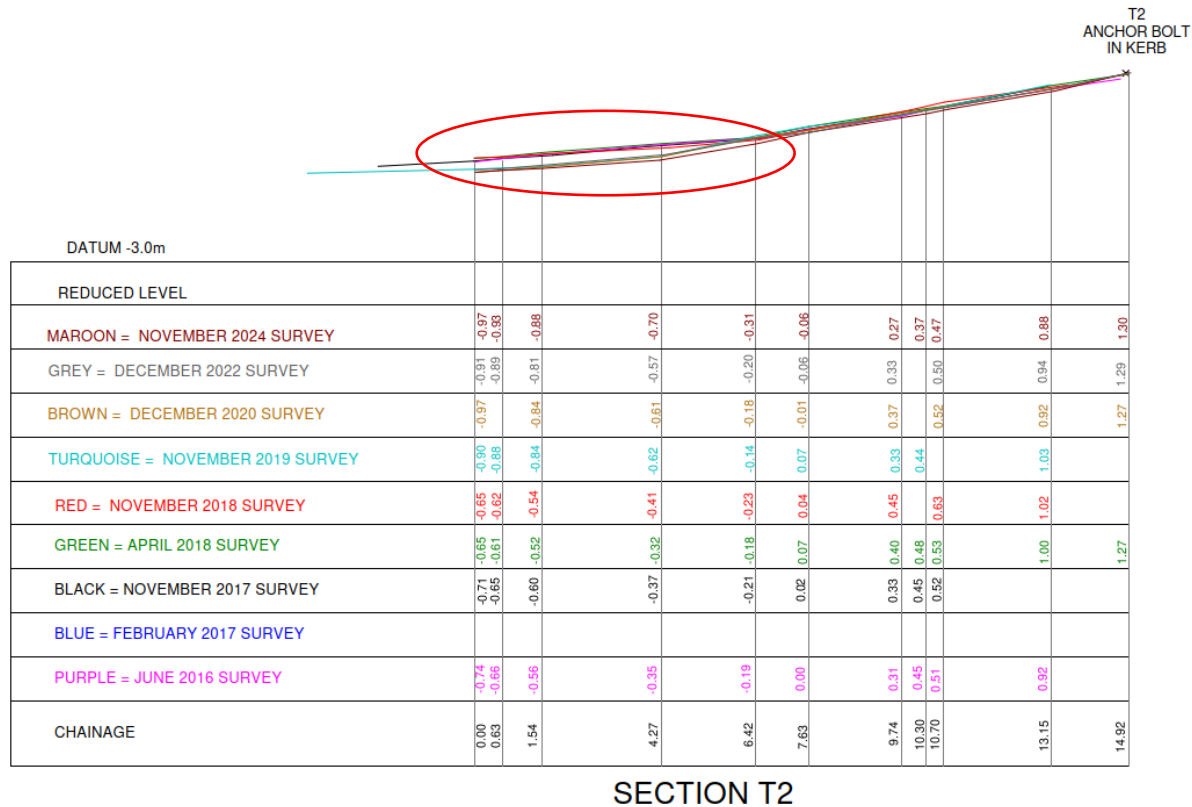


Figure 3.11: Lowering of low tide beach levels seaward of the boat haul out area (monitoring location T2).

Beach profile analysis has been conducted using all survey data for monitoring location T2 (see Appendix C2). Analysing the horizontal excursion of the 1 m RL contour, shows that after the substantial accretion from 2019 to 2020, and minimal accretion between 2020 and 2022, there has been erosion to just below the 2020 value. This is in align with lower beach levels observed in the survey profile and photo monitoring points.

As outlined in the 2020 and 2022 report, this adjusted profile is likely the result of ongoing easterly sediment migration exacerbated by one or more of the following factors:

- The low tide beach profile may be adjusting due to a slight alteration in wave climate. However, at this location the wave climate was expected to reduce as a result of wharf construction, also reducing sediment transport rate and erosion risk.
- Increased use of the boat haul out may have resulted in a beach profile change along the alignment of boat launch and retrieval.
- Increased storminess during 2019, 2021 and 2022 (leading to more erosive conditions that year than noted in previous years monitored).
- Human intervention at this location to improve usability of haul out area.

3.3.2 Town Beach east (T3A and T3B)

Location T3A

Beach levels recorded at profile T3A are very similar to the 2018 to 2022 monitoring rounds. The low tide beach levels are still higher than the June 2016 pre-nourishment levels by 170 mm compared to the 2022 monitoring round there is a maximum decrease in beach levels of 110 mm and a maximum increase of 60 mm fluctuating along the profile.

Beach profile analysis has been conducted using all survey data for monitoring location T3A (see Figure 3.12 and Appendix C3). Analysing the horizontal excursion of the 0.8 m RL contour (Figure 3.12), shows that the profile has been generally consistent with some minor fluctuation between erosion and accretion since sand placement in 2018. The 2024 monitoring round shows an increased erosional trend on previous monitoring rounds.

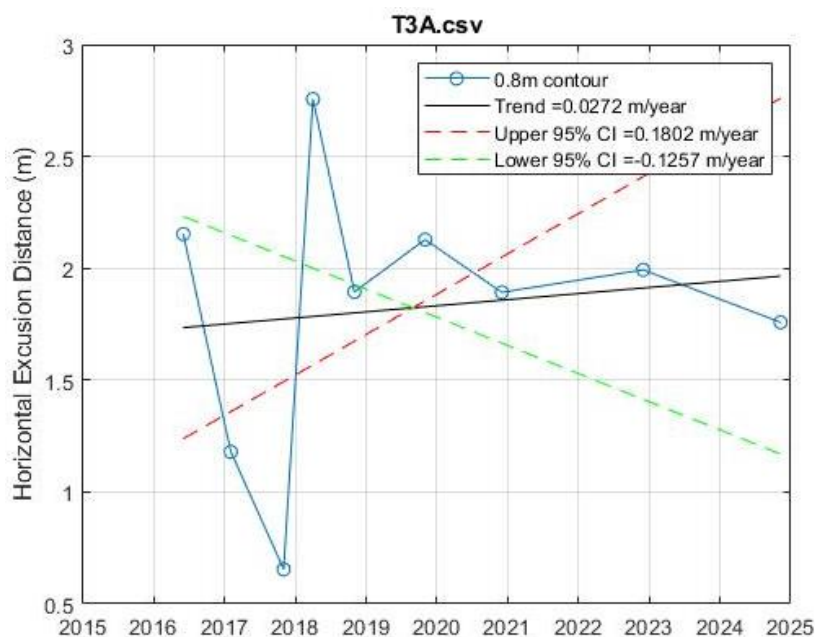


Figure 3.12: Average accretional trend at 0.8m RL contour.

Considering the beach profile analysis has been fluctuating between erosion and accretion since 2018 and that the overall profile is largely unchanged since 2019, it is likely that this profile could be close to pre-nourishment equilibrium, however the slight increase in erosion trend this round should be monitored in future assessments.

Location T3B

Beach levels at the eastern end of Town Beach (profile T3B Figure 3.13) have decreased by a maximum of 280 mm since November 2022. Low tide beach levels are similar to the pre-nourishment June 2016 beach level. However, above high tide, the beach levels are greater than the pre-nourishment levels and are above all previously recorded levels (at maximum, beach levels are 40 mm above pre-nourishment levels).

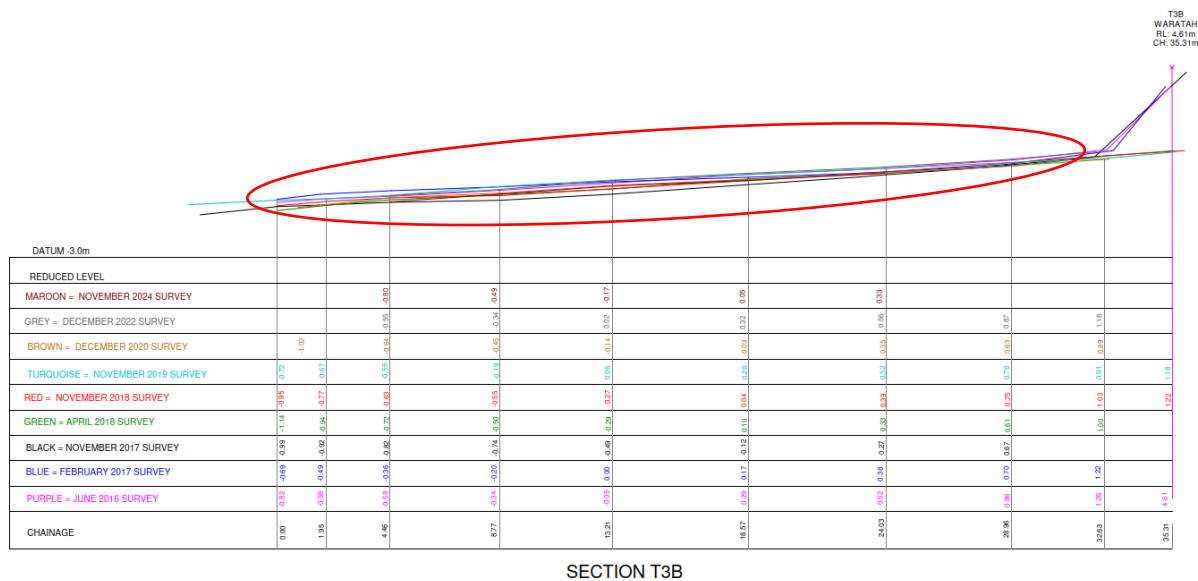


Figure 3.13: Increase in beach levels at the eastern end of Town Beach (monitoring location T3B).

Beach profile analysis has for monitoring location T3B has historically been at the 1 m RL contour the beach survey did not reach the 1 m RL contour this year therefore the 2022 results are shown for monitoring location T3B in Appendix C4.

The beach profile analysis indicates that there has been easterly movement of the nourished sediment that was present in front of the hotel since 2022, resulting in a decrease in beach levels in front of the hotel and an increase at the eastern end of Town Beach (profile T3B).

It is worth noting that this area has experienced background erosion since 1969 (refer Figure 3.16) and it is likely that this trend would be shown to continue this round (as evidenced by general lowering of the beach levels further down the profile).

3.3.3 North of Nairn River (T4 to T6)

Locations T4 to T6

In general, the beach levels are similar to those recorded in the December 2022 monitoring round. The wider, sandier beach at these locations is subject to greater natural beach fluctuations than Town Beach and as per the 2022 report, the changes in level noted are generally within that expected due to natural beach fluctuation.

However, there are some general trends that can be established from the post construction monitoring:

- At beach profile T4, there has been a general accretional trend since monitoring began. This accretion has continued since 2022 (Appendix C5), with rate increasing from 0.8 m/year in 2022 to 1.36 m/year in this monitoring round.
- At beach profile T5, there has been a general accretional trend dune toe position and overall beach profile between 2022 and 2024 (refer to Appendix C6) with the dune toe at its highest position since monitoring began (refer to Figure 3.15). There has been a general accretional trend since 2017, with the dune toe moving at an average rate of 0.6 m/year since the 2016 pre-construction survey.
- Analysis of beach profile T6 found an accretional trend of the dune toe. This is a difference in the erosional trend recorded from 2019 to 2022 and has brought but the 2 m contour level to

2019 values. This has decreased the overall average rate of erosion from 0.7 m/year recorded in 2022 to 0.4 m/year in this monitoring round (Appendix C7). This aligns with the increase in dune vegetation noted in the assessment of imagery in the broader T6 beach profile area. (Section 3.2.3).



Figure 3.14: Monitoring location P5 showing T4 survey point location. Left: 2022, right: 2024.

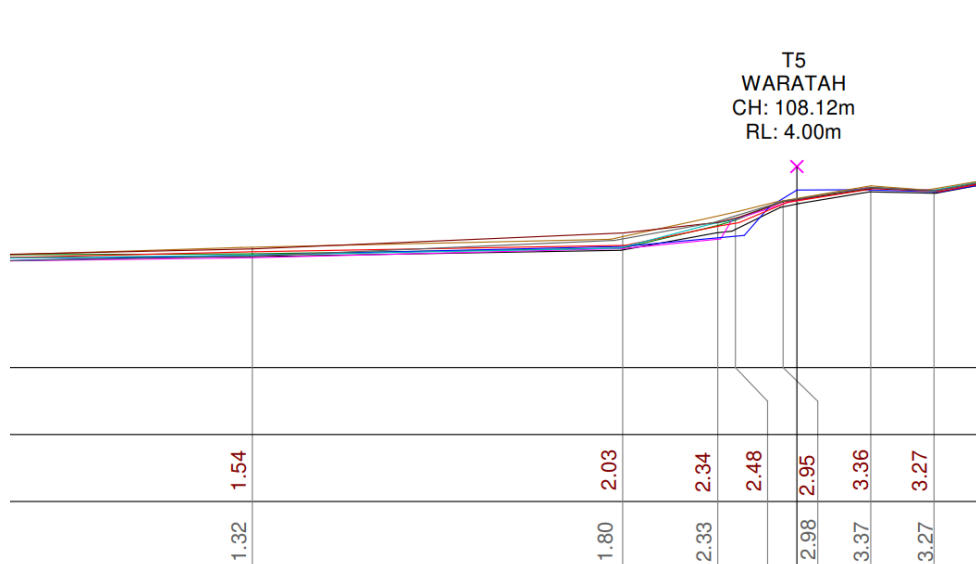


Figure 3.15: Zoomed in snip of beach survey profile at monitoring location T5 Appendix B, it can be seen that the 2024 monitoring round profile (maroon) is the highest dune toe position recorded in this monitoring.

There has been a general accretional trend of dune toe since monitoring began at T4 and T5. T6 has a continuing general erosion trend but unlikely a result of wharf given its location and is likely to be attributed to a continued historical trend.

3.4 Wave data analysis

Wave data analysis was conducted annually as part of the monitoring report until 2021, after which it shifted to a five-year cycle for the remainder of the consent period. Since the analysis was completed in 2022, it has not been included in this monitoring round and will be carried out during the next round of monitoring.

The 2022 wave data analysis indicated that storminess in 2021 and 2022 was on par with 2019, which was previously reported as being still the stormiest year since before wharf construction began resulting in the most notable erosion. This likely contributed to the identified areas of erosion during

the 2022 monitoring round (e.g., outside the fish factory and dune toe north of the Nairn River), though this erosion was less significant than that noted in 2019.

3.5 Shoreline analysis

The currently available satellite imagery has been used to digitise the shoreline in relation to historic aerial photographs (refer Figure 3.16). The shoreline for this purpose is defined by the vegetation line or edge of sand (where it intersects a structure or cliff) and compared to previously available shoreline locations.

Satellite imagery was updated in September 2023. The updated shoreline was analysed for any significant erosion or accretional changes over the last 3 years. There have been no significant changes in the shoreline profile since the 2019 shoreline assessment. Imagery will continue to be monitored and will be updated in future monitoring rounds if and when imagery becomes available.

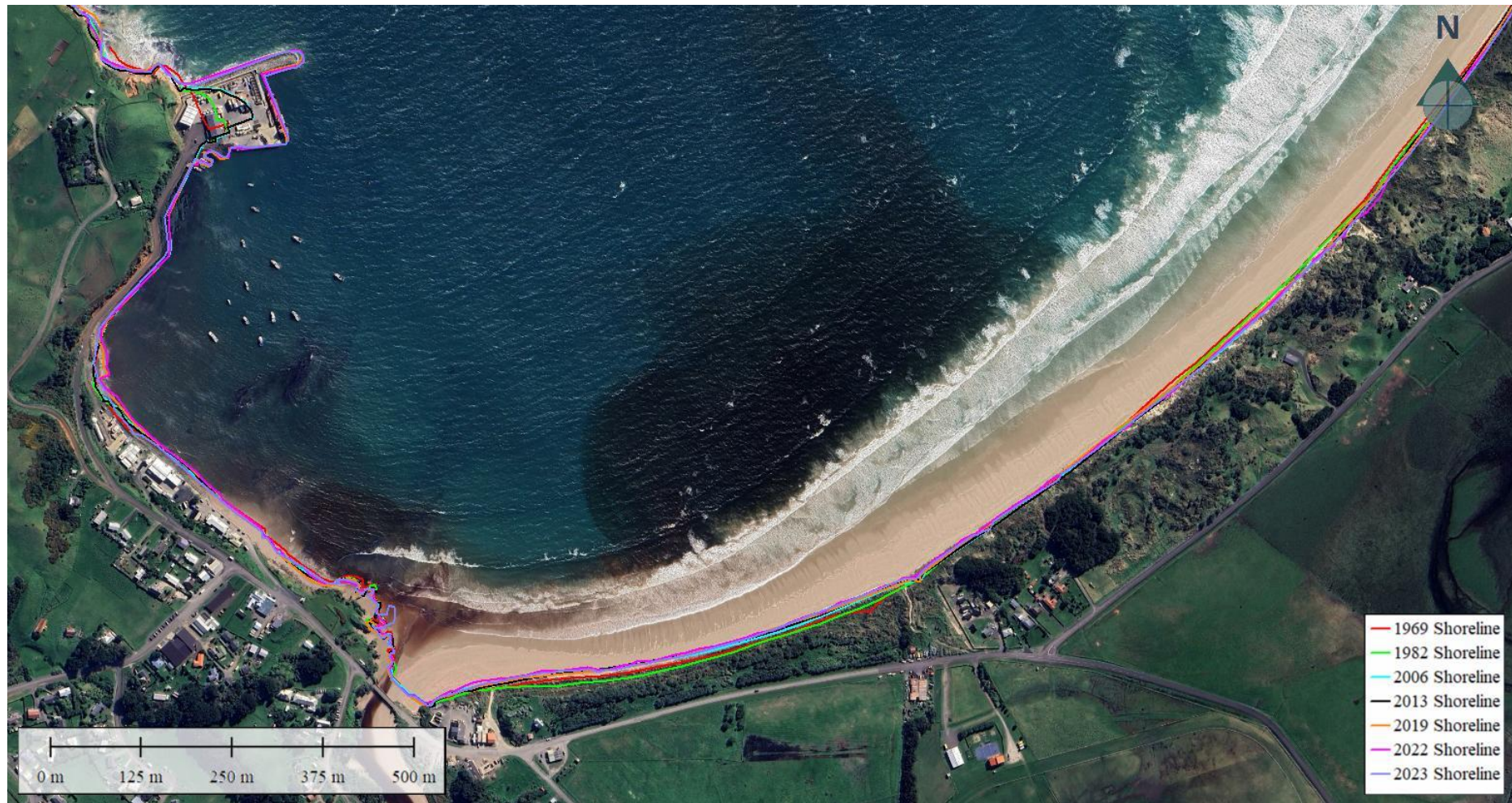


Figure 3.16: Shorelines from 1969, 1989, 1996, 2019, 2022 and 2023 images superimposed on 2022 satellite image (source CNES/Astrium)

4 Summary and conclusion

Beach monitoring has been undertaken at various locations around Waitangi Bay during the construction of the new Waitangi Wharf and continued following construction completion. The wharf modifies the wave climate refracting around the headland at the north-west end of the Bay. Beach monitoring is a resource consent requirement with the purpose of determining if there are any effects on sediment transportation and hence beach profile in the bay as a result of this modification.

To date the monitoring data is not sufficient to establish any global trends directly associated to wave climate modification as it appears that the sand nourishment is still within the Town Beach system. However, it is useful in showing any localised trends since construction began and for building a baseline dataset to build towards establishing longer term trends.

Trends noted to date include:

- Accretion along the majority of the Town Beach throughout the construction process. The accretion on Town Beach is a direct result of beach nourishment that has been undertaken during the construction works.
- Potential stabilisation in the sand levels at the western end of Town Beach (near the access ramp and boat haul out) after the initial decrease in sand levels in the years immediately following nourishment. With the western beach showing similar sand levels and trends over the last 3-4 years. This could be an indication that the effects of construction activity on Towns Beach (specifically sand nourishment) are diminishing with a new equilibrium being established.
- Ongoing reduction in beach levels directly seaward of the fish factory. Increasing Tuff rock, gravel and sandbag exposure has been noted in the last 4 years of monitoring and appears to be an ongoing trend.
- An area of historic beach erosion at the eastern end of the Town Beach has previously first been noted in the May 2018 monitoring report. This area however showed beach accretion in the December 2018 and 2019 reports which was evidence of eastward migration of the placed sand. In the 2020 report, erosion was noted at this beach location. As the beach profile analysis has been fluctuating between erosion and accretion since 2018 and that the overall profile is largely unchanged since 2019, it is possible that this profile could be reaching equilibrium.
- Dune toe accretion along with dune vegetation growth along the ~1km length of Waitangi Beach to the northeast of Nairn River is evident during the 2024 assessment. In the 2022 assessment this area had experienced toe erosion is likely attributed to the above average storminess experienced over the 2021 and 2022 period. These beach level variations are likely within the bounds of natural beach fluctuation.
- T4 and T5 have shown a general trend of dune toe accretion. In contrast, T6 continues to experience erosion, though this likely part of an ongoing historical pattern (refer Figure 3.16).

C IPL have requested consideration or relaxing of beach monitoring from bi-annually to five yearly and discussed this with the Chatham Islands Council (CIC) who indicated they will consider the findings of this years report before agreeing to the reduction.

In general, the monitoring undertaken to date does not provide any evidence to counter the conclusions presented in the 2015 Coastal Processes Report. As such, no adaptive management suggestions are made for the Waitangi Bay beach at this time. The conclusions outlined above are likely to continue into the future and as such, if the implications of these are acceptable to CIC, we believe that there is no reason not to relax monitoring to five yearly.

5 Applicability

This report has been prepared for the exclusive use of our client Waka Kotahi New Zealand Transport Agency, with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose, or by any person other than our client, without our prior written agreement.

Tonkin & Taylor Ltd
Environmental and Engineering Consultants

Report prepared by:

Authorised for Tonkin & Taylor Ltd by:



Verity Taylor
Coastal Engineer



Ed Breese
Project Director

Technically Reviewed for Tonkin + Taylor by: Michael Paine – Senior Coastal Engineer

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Projects\1008326\1008326.0400\IssuedDocuments\20241218_Waitangi_Wharf_Monitoring_Report.docx

Appendix A Photo-point monitoring data

Monitoring location P1

Direction: East



Direction: West



Monitoring location P2

Direction: East



Direction: West



Monitoring location P3

Direction: East



Direction: West



Monitoring location P4

Direction: East



Direction: West



Monitoring location P5

Direction: East



Monitoring location P6

Direction: East



Direction: West



Monitoring location P7

Direction: East



Direction: West



Monitoring location P8

Direction: North

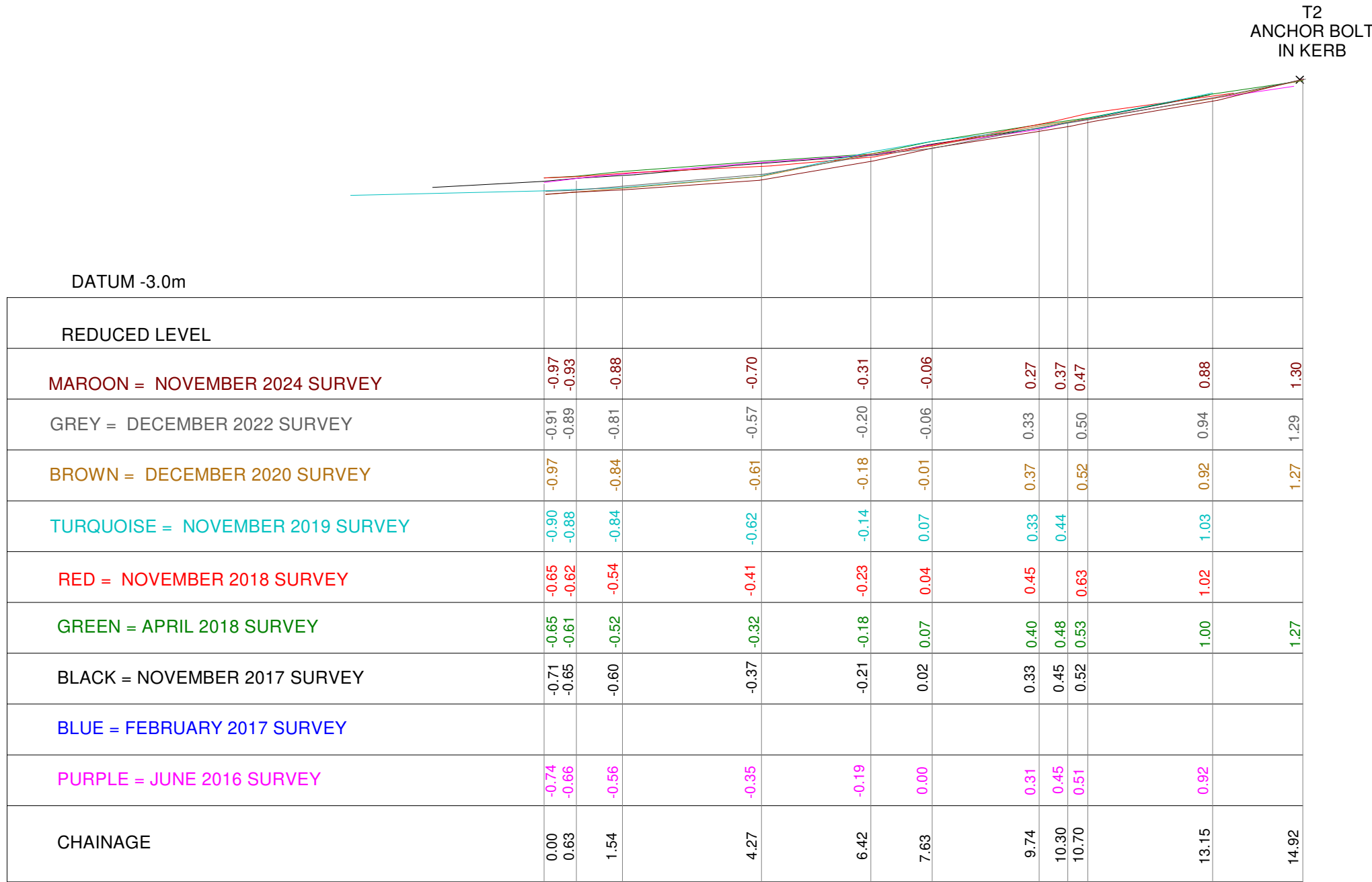


Direction: South

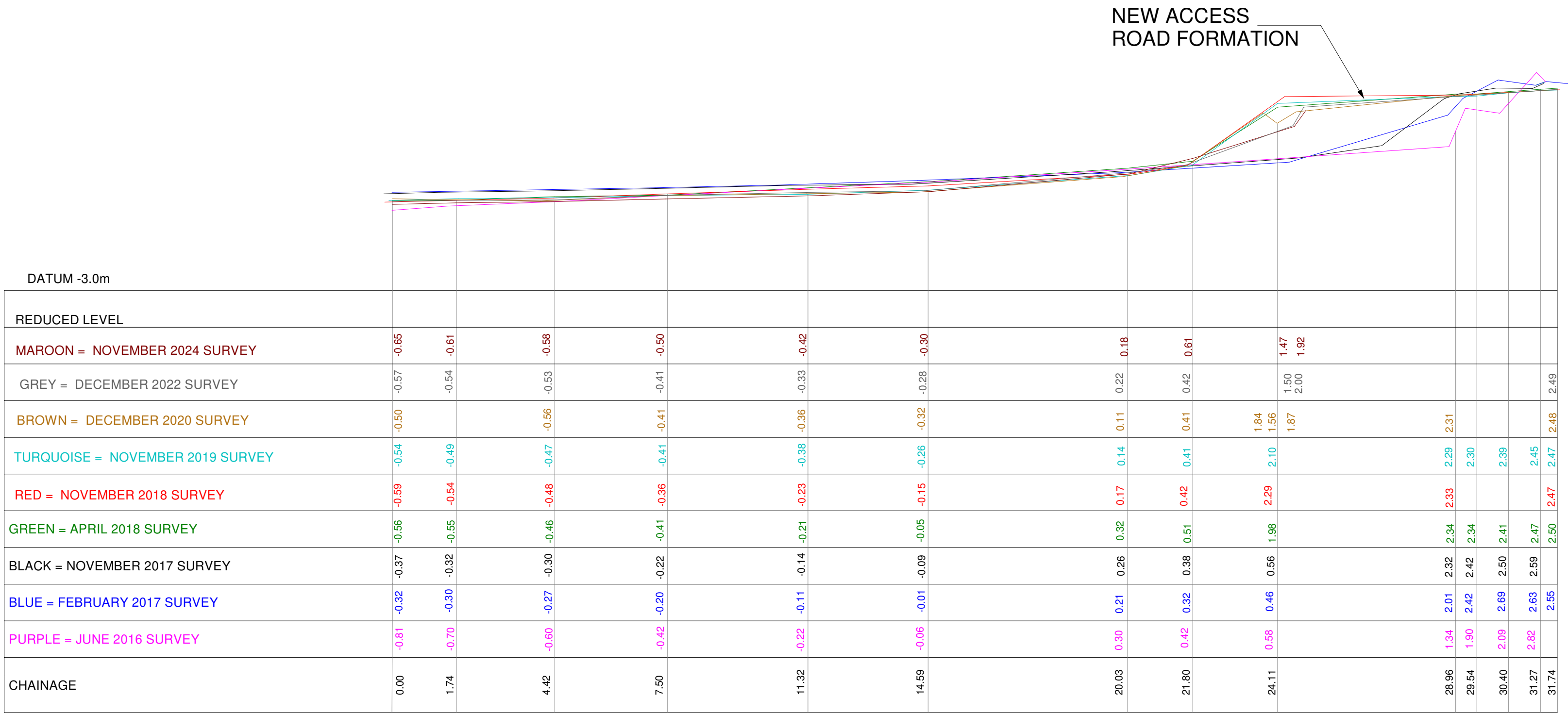


Appendix B Beach profile survey data

NO	REVISION	BY	DATE
A	FIRST ISSUE		
B	NOVEMBER 2018	RMT	29/11/2018
C	NOVEMBER 2019	RMT	28/11/2019
D	DECEMBER 2020	RMT	13/12/2020
E	DECEMBER 2022	RMT	06/12/2022
F	NOVEMBER 2024	RMT	20/11/2024



SECTION T2



SECTION T1

COORDINATE DATUM - CHATHAM ISLANDS TM 2000

HEIGHTS ARE IN TERMS OF
- MEAN SEA LEVEL

ORIGIN OF LEVELS
- MARK NAME EHN1
- REDUCED LEVEL 2.35m
- SOURCE LINZ

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CLIENT

PROJECT

MEMORIAL PARK
ALLIANCE

WAITANGI WHARF
UPGRADE

DRAWING TITLE
COASTAL MONITORING
CROSS SECTIONS
T1 & T2

DESIGN CONSULTANT

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☐ S140871 Nov 24 CM Xsec - S14-0871-M13

☐ DRAWN RMT

☐ CHECKED HLM

☐ FB

☐ DATE

24/04/2018

SCALE

1 : 100

DRAWING NUMBER

S14-0871-M13

AT

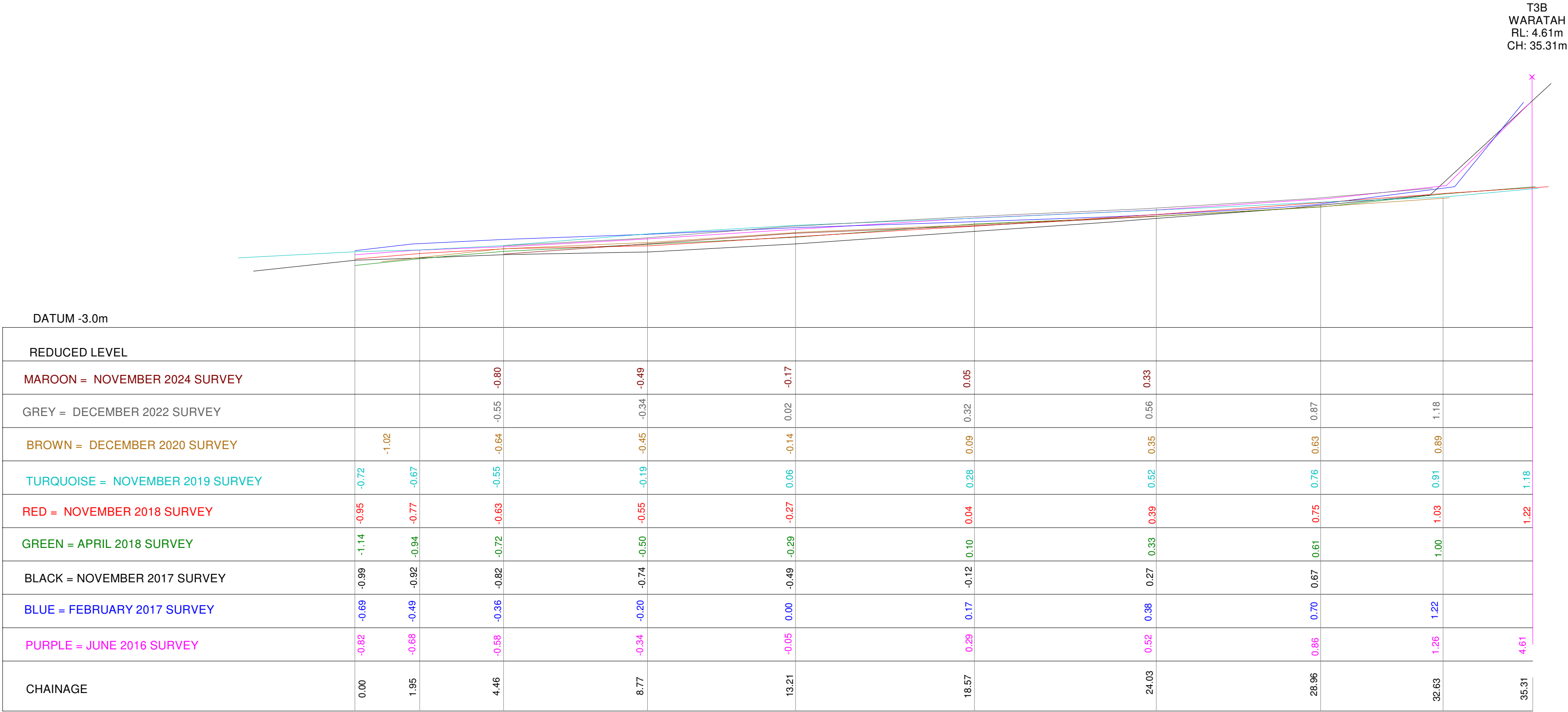
REV

A1

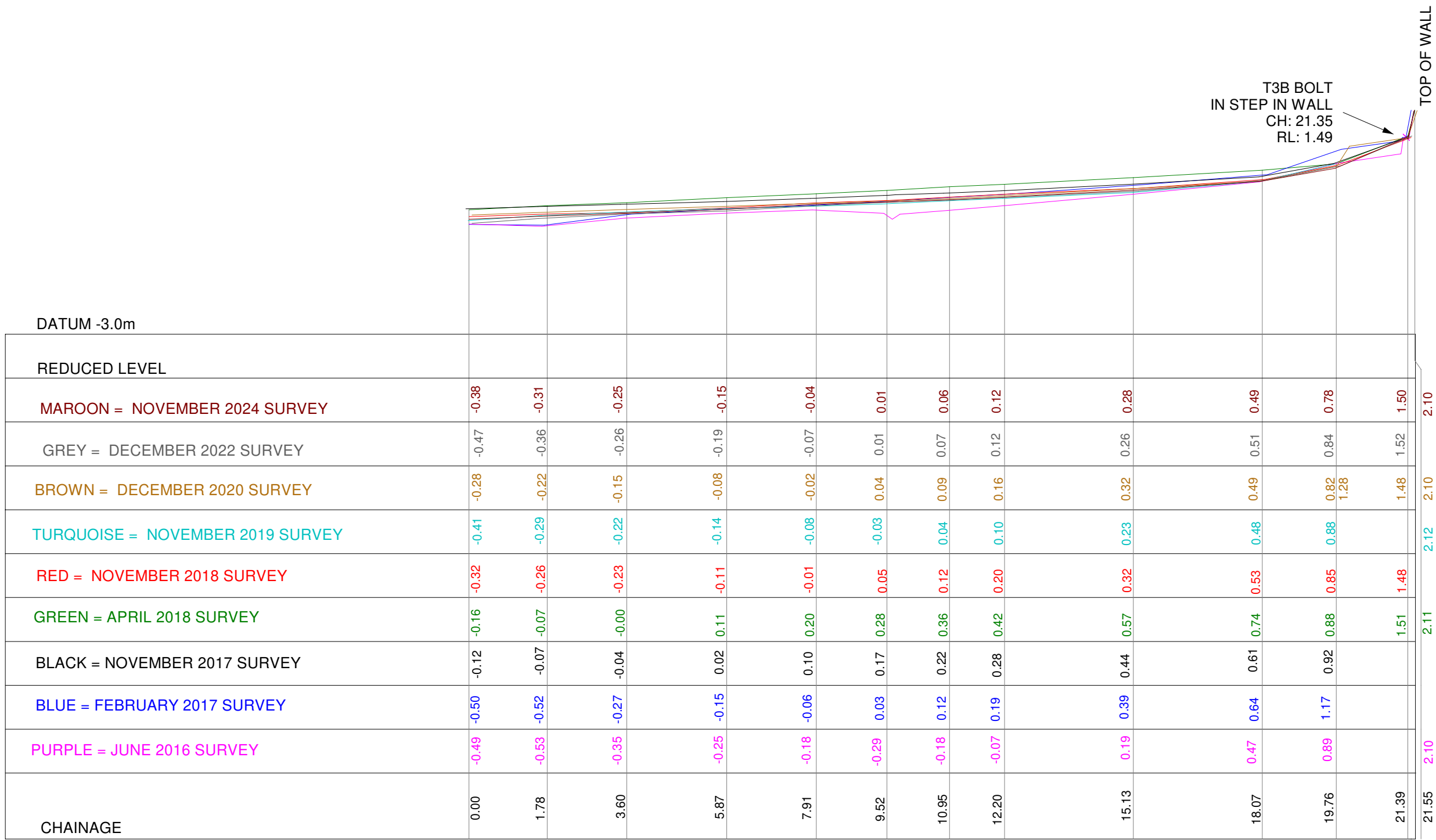
F

168

NO	REVISION	BY	DATE
A	FIRST ISSUE		
B	NOVEMBER 2018	RMT	29/11/2018
C	NOVEMBER 2019	RMT	28/11/2019
D	DECEMBER 2020	RMT	13/12/2020
E	DECEMBER 2022	RMT	06/12/2022
F	NOVEMBER 2024	RMT	20/11/2024



SECTION T3B



SECTION T3A

COORDINATE DATUM - CHATHAM ISLANDS TM 2000

HEIGHTS ARE IN TERMS OF
- MEAN SEA LEVEL

ORIGIN OF LEVELS
- MARK NAME EHN1
- REDUCED LEVEL 2.35m
- SOURCE LINZ

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CLIENT
MEMORIAL PARK
ALLIANCE

PROJECT
WAITANGI WHARF
UPGRADE

DRAWING TITLE
COASTAL MONITORING
CROSS SECTIONS:
T3A & T3B

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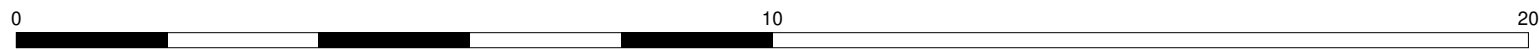
☐ S140871 Nov 24 CM Xsec - S14-0871-M14
☐ DRAWN RMT ☐ FB
☐ CHECKED HLM ☐ DATE 24/04/2018

SCALE
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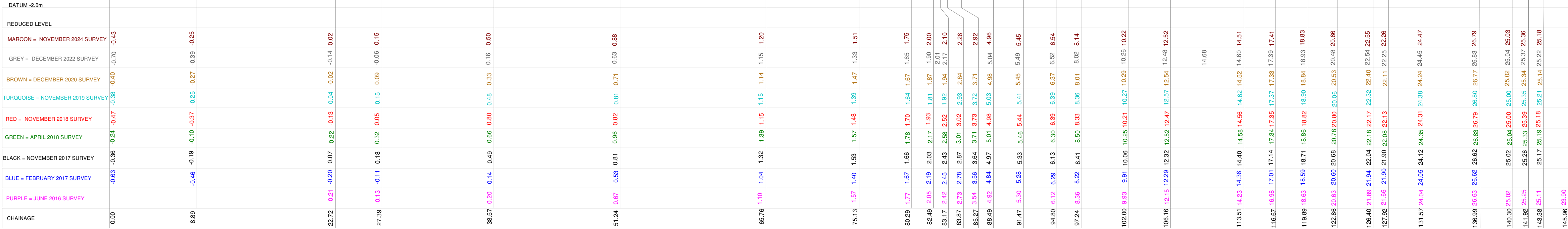
DRAWING NUMBER
S14-0871-M14

AT
A1

REV
F



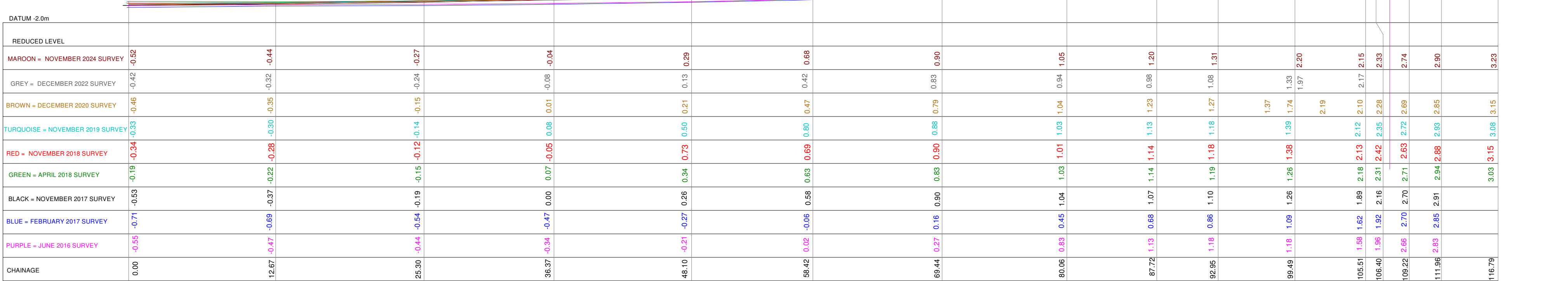
NO	REVISION	BY	DATE
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D	DECEMBER 2020	RMT	13/12/2020
E	DECEMBER 2022	RMT	06/12/2022
F	NOVEMBER 2024	RMT	19/11/2024



SECTION T6



SECTION T5



SECTION T4

T5
WARATAH
CH: 108.12m
RL: 4.00m

T4
WARATAH
CH: 107.56
RL: 3.36m

EDGE OF BEACH
ACCESS TRACK

COORDINATE DATUM - CHATHAM ISLANDS TM 2000

HEIGHTS ARE IN TERMS OF
- MEAN SEA LEVEL

ORIGIN OF LEVELS
- MARK NAME EHN1
- REDUCED LEVEL 2.35m
- SOURCE LINZ

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CLIENT
**MEMORIAL PARK
ALLIANCE**

PROJECT
**WAITANGI WHARF
UPGRADE**

DRAWING TITLE
**COASTAL MONITORING
CROSS SECTIONS
T4, T5, & T6**

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□ S140871 Nov 24 CM Xsec - S14-0871-M15
□ DRAWN RMT
□ CHECKED HLM
□ DATE 24/04/2018

SCALE
1 : 250

DRAWING NUMBER
S14-0871-M15

AT
A1

REV
F

Appendix C Beach profile analysis

C1 Profile T1

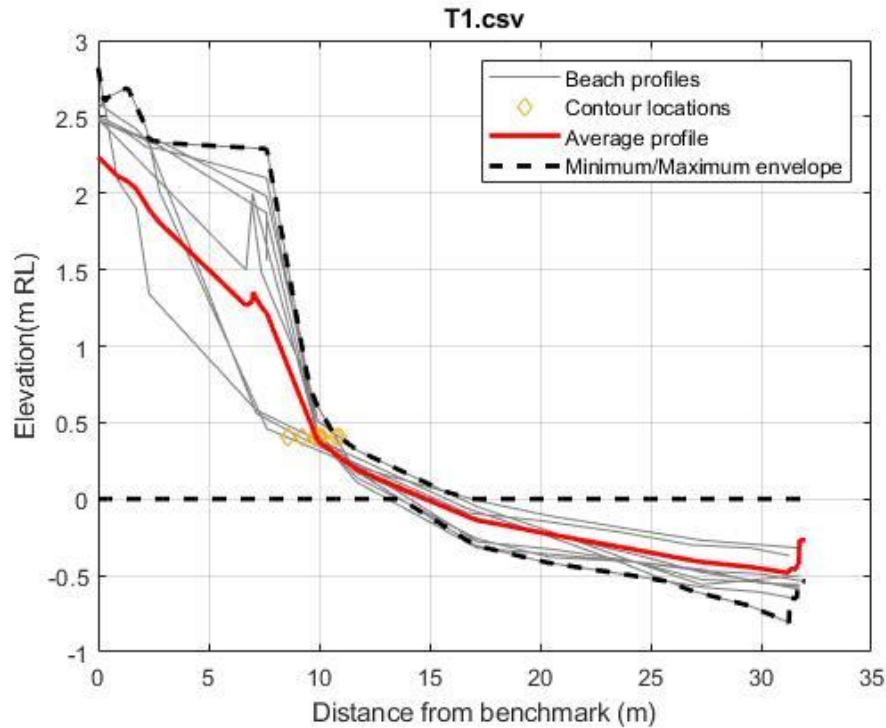


Figure Appendix C.1: Profile variation over monitoring period

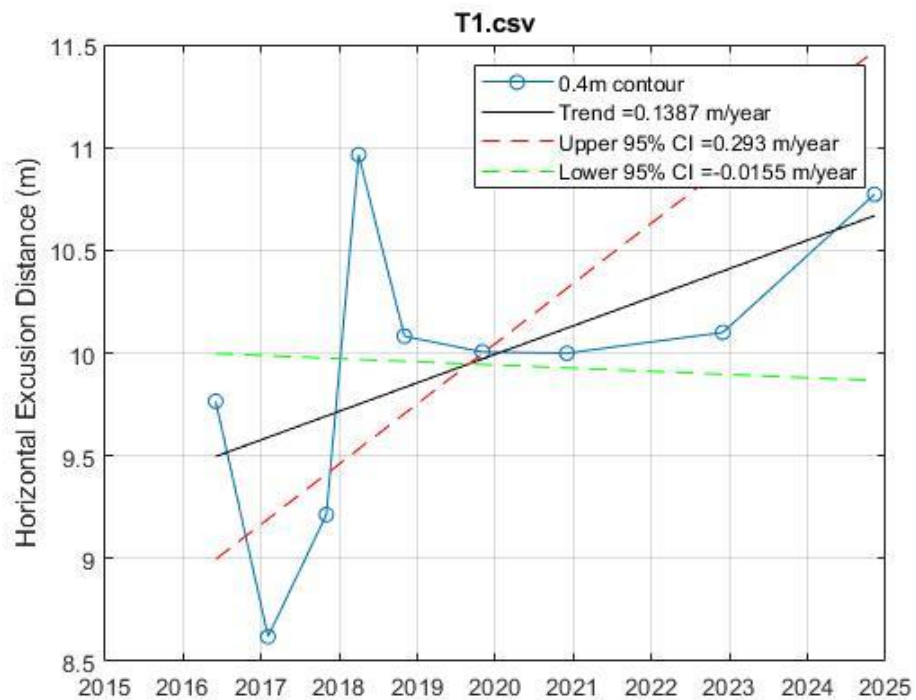


Figure Appendix C.2: Average accretional trend at ramp toe (estimated as 0.4m RL contour).

C2 Profile T2

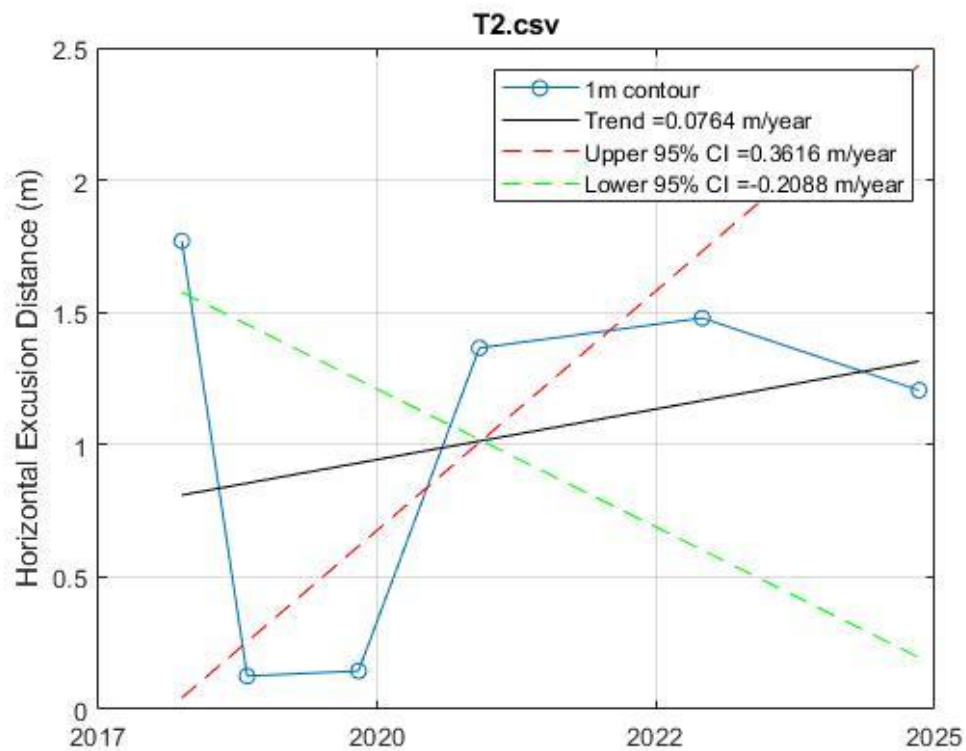


Figure Appendix C.3: Profile variation over monitoring period

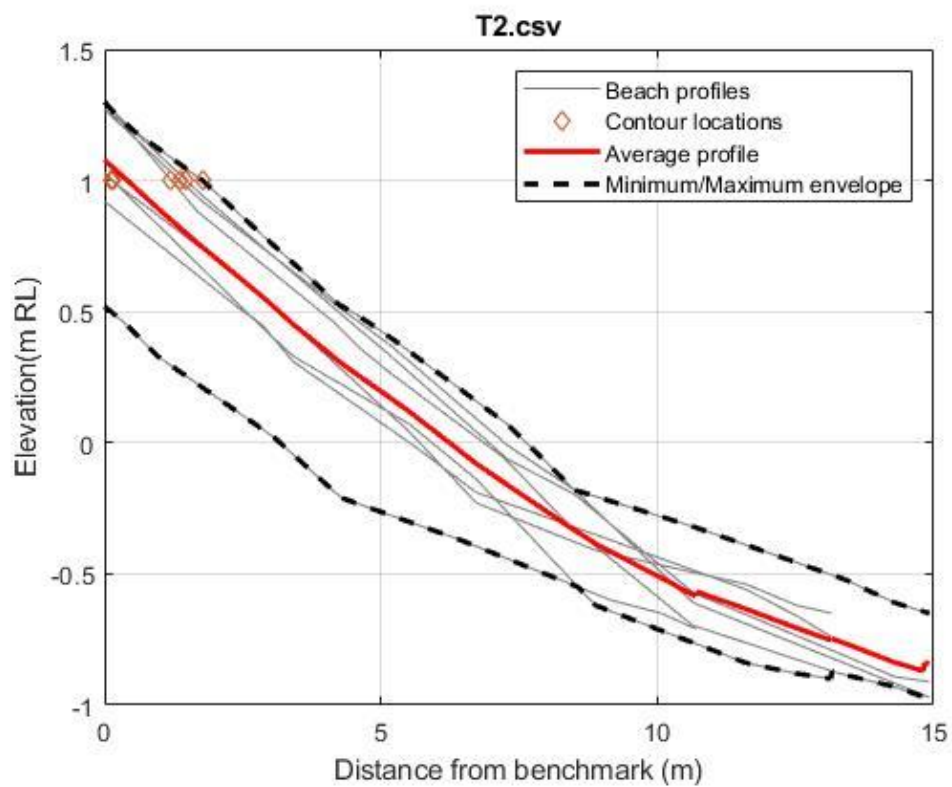


Figure Appendix C.4: Average accretional trend at 1m RL contour

C3 Profile T3A

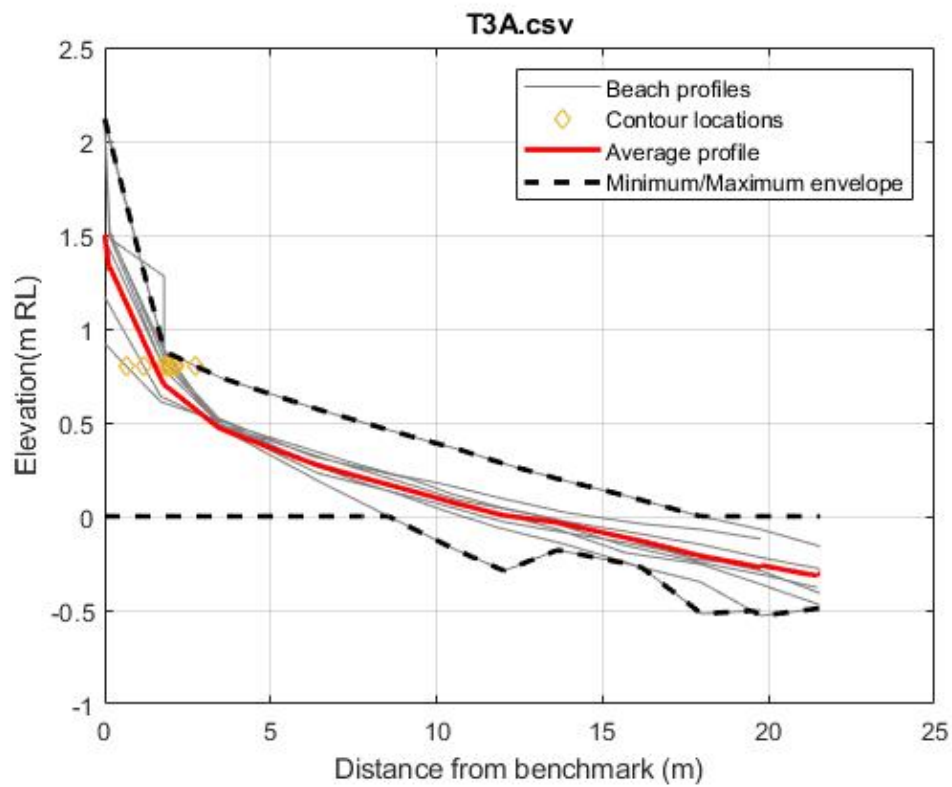


Figure Appendix C.5: Profile variation over monitoring period

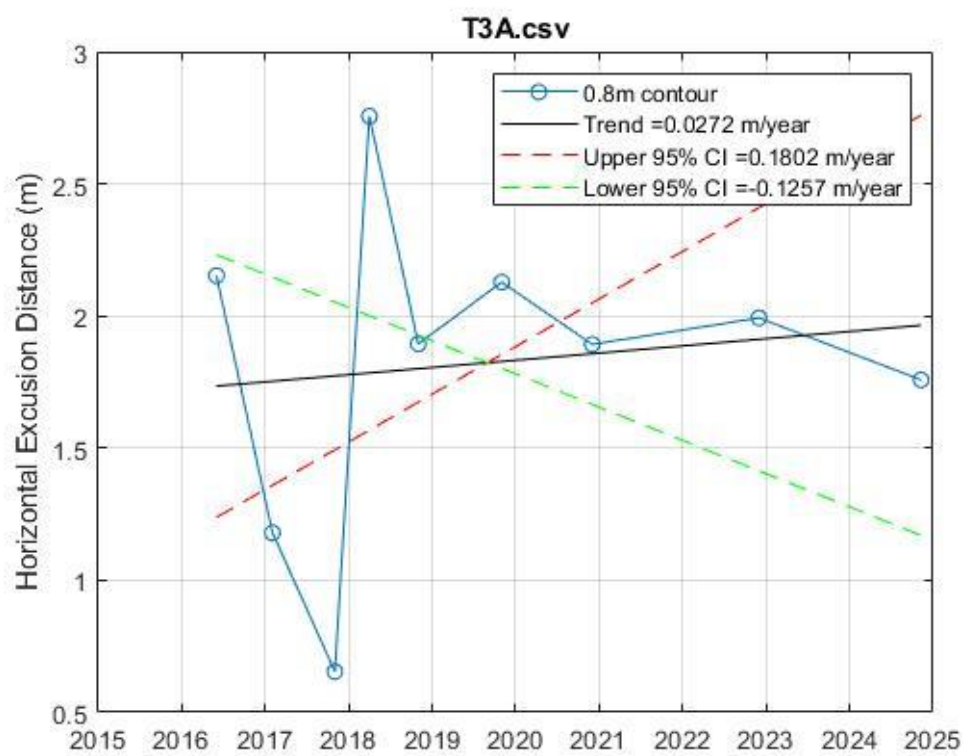


Figure Appendix C.6: Average accretional trend at 0.8m RL contour

C4 Profile T3B

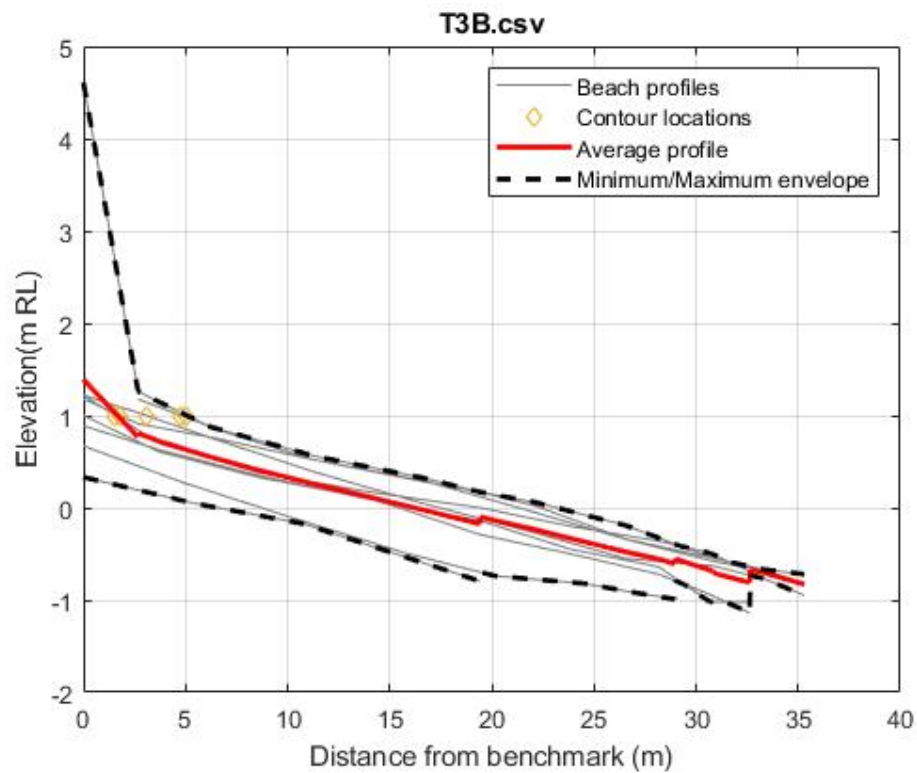


Figure Appendix C.7: Profile variation over monitoring period

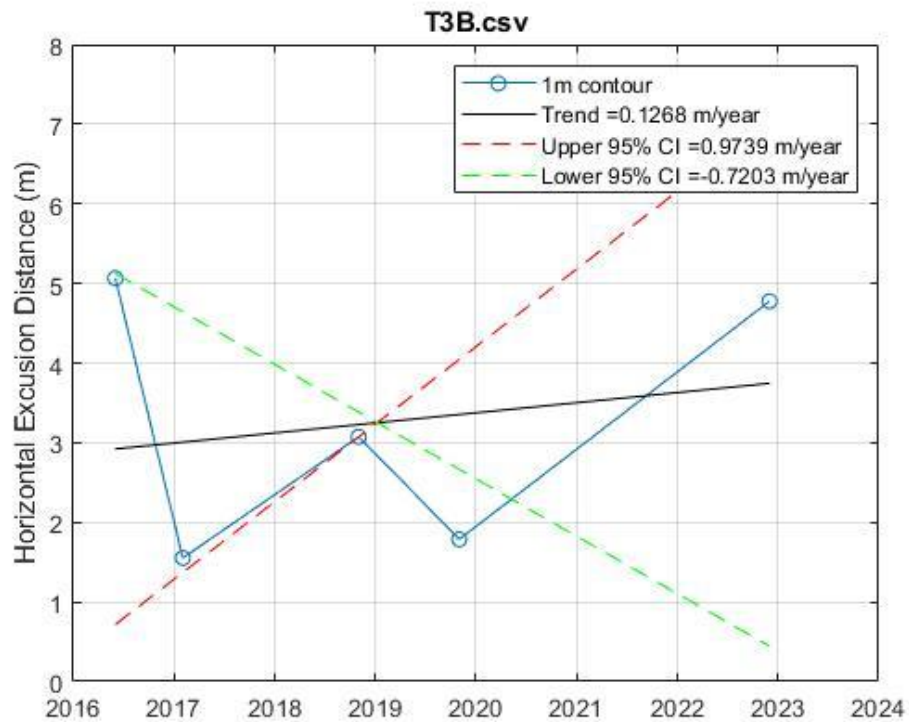


Figure Appendix C.8: Average accretional trend at 1m RL contour

C5 Profile T4

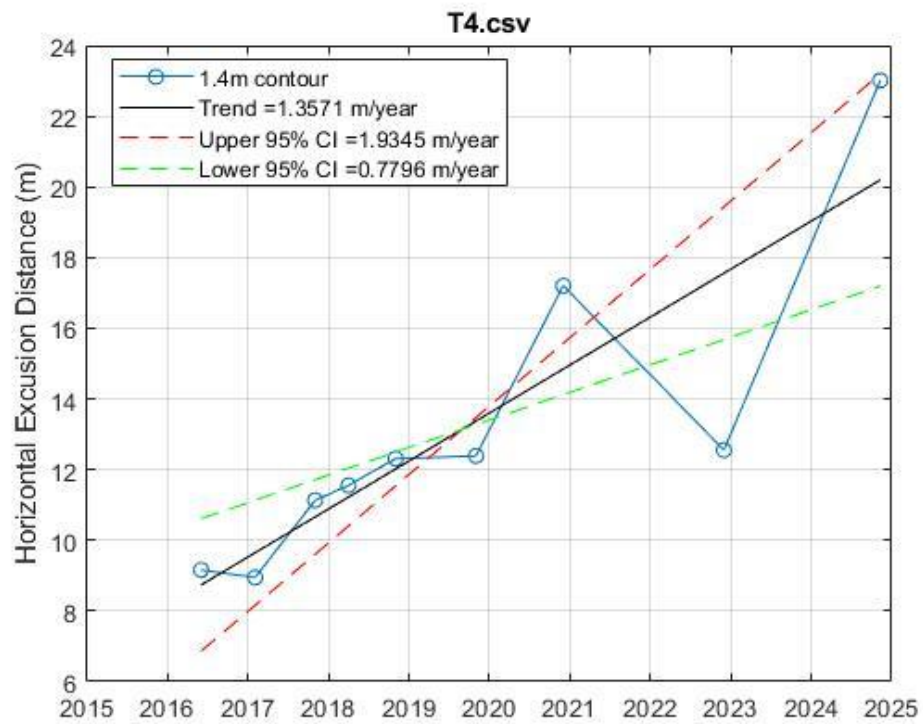


Figure Appendix C.9: Profile variation over monitoring period

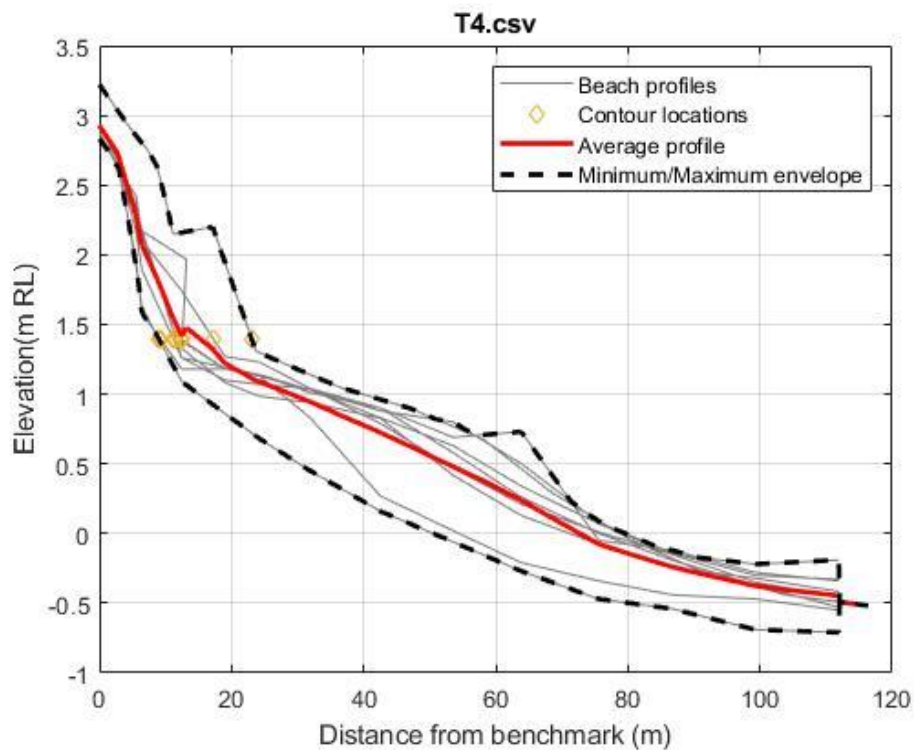


Figure Appendix C.10: Average accretional trend at 1.4m RL contour (estimated dune toe)

C6 Profile T5

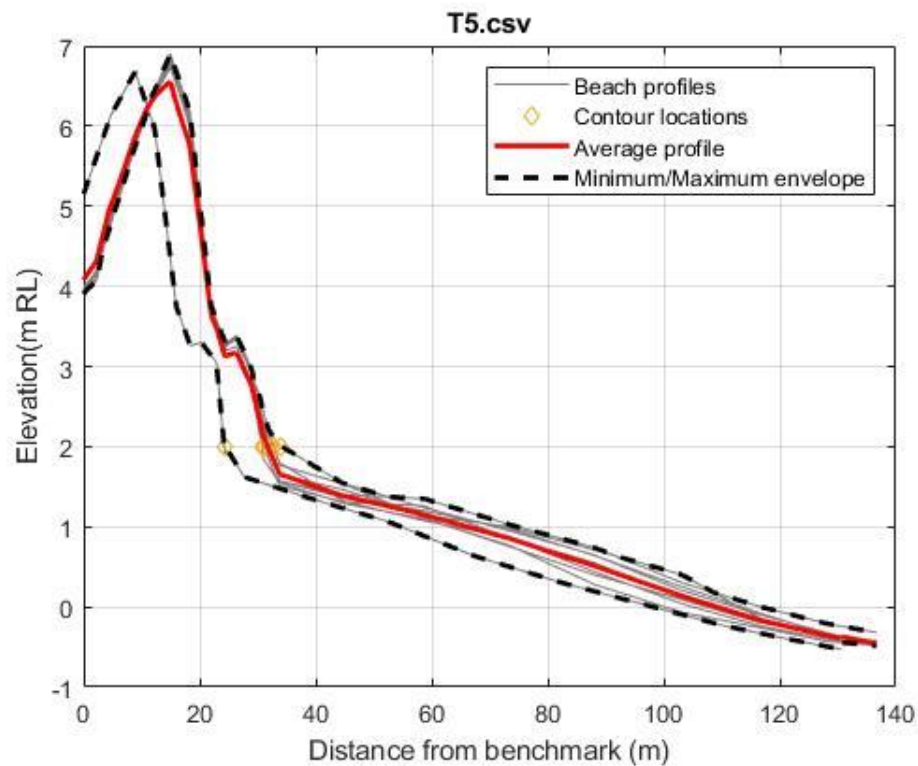


Figure Appendix C.11: Profile variation over monitoring period

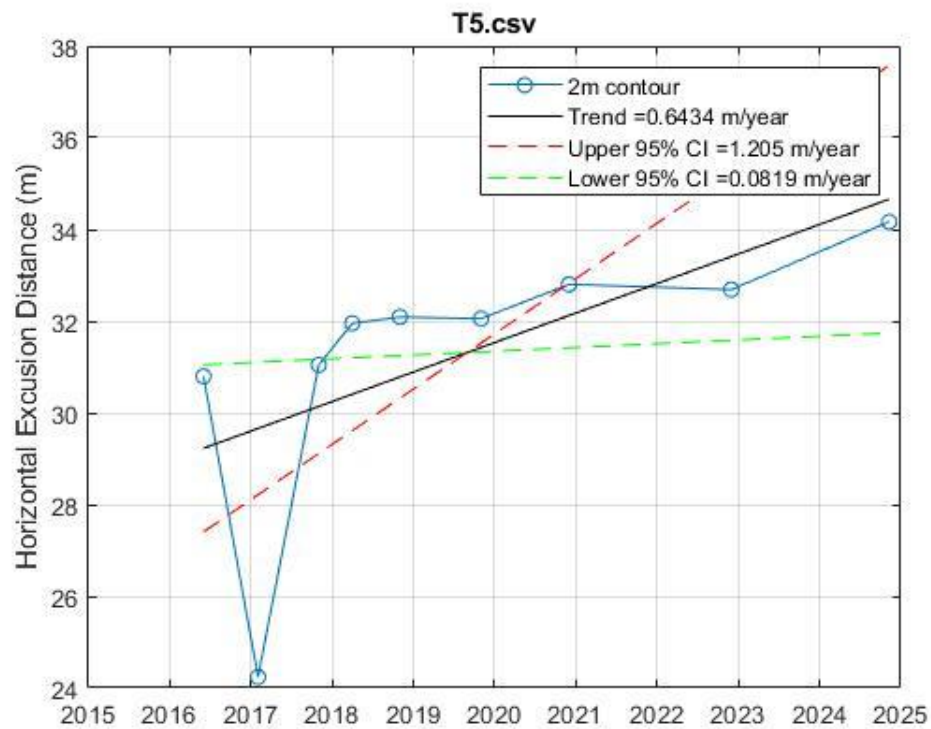


Figure Appendix C.12: Average accretional trend at 2m RL contour (estimated dune toe)

C7 Profile T6

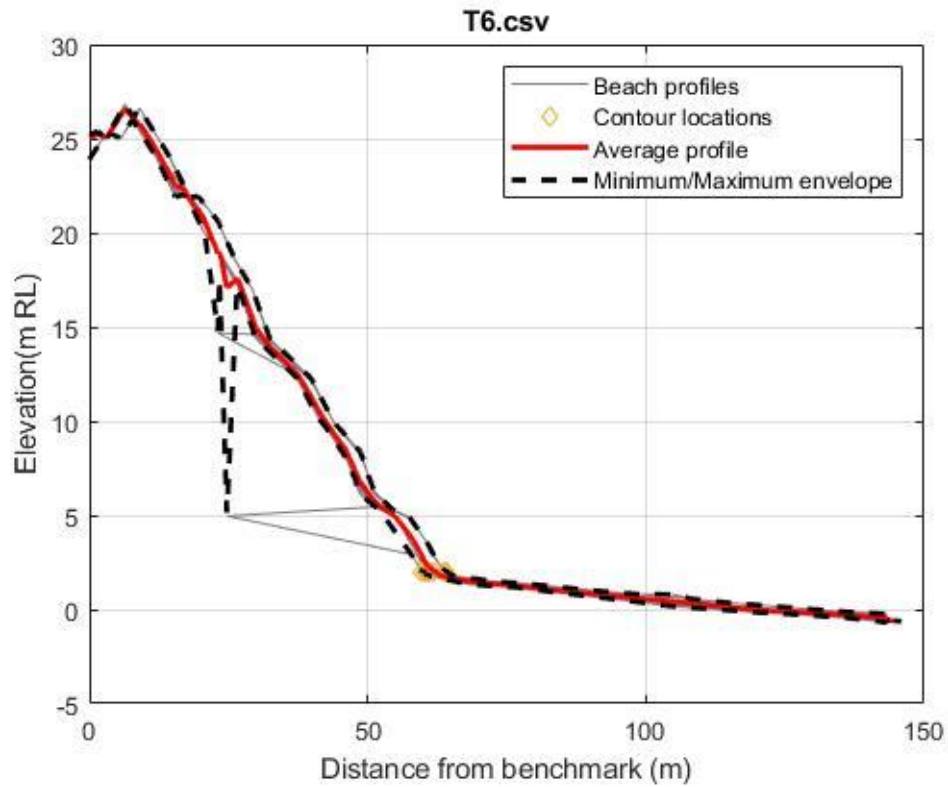


Figure Appendix C.13: Profile variation over monitoring period

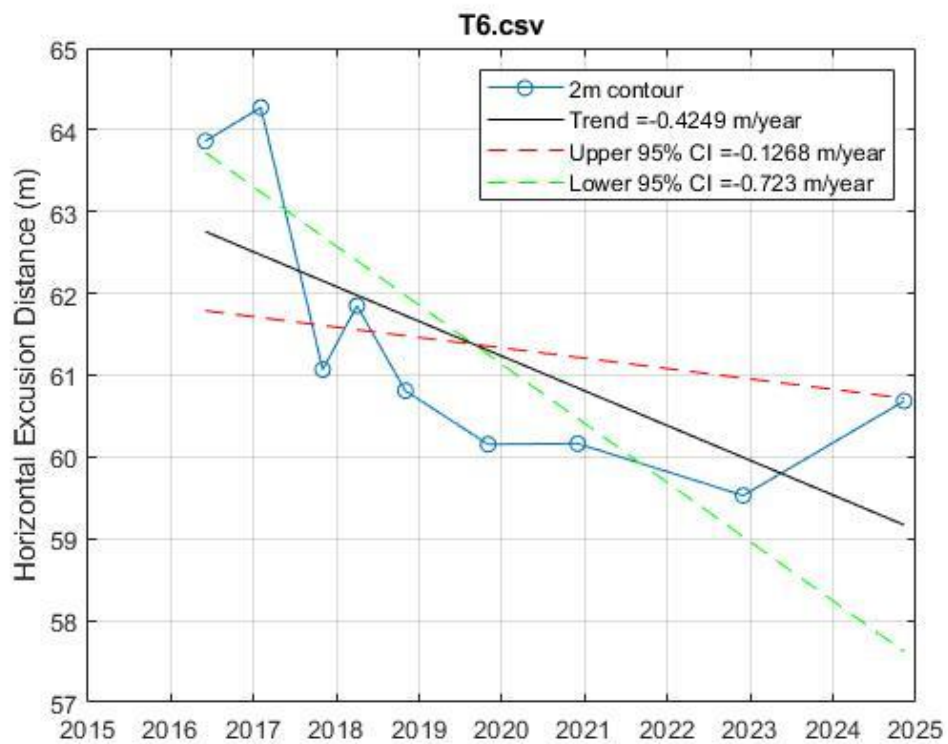


Figure Appendix C.14: Average accretional trend at 2m 1m RL contour (estimated dune toe)

Appendix D Waitangi Wharf Upgrade Coastal Processes Monitoring Plan



28 June 2016

COASTAL PROCESSES MONITORING PLAN

Waitangi Wharf Upgrade Project

Rev.	Status	Prepared by	Checked by	Date
1	Draft	Ed Breese	Tom Shand	17 May 2016
2	Final	Ed Breese	Tom Shand	28 June 2016

Name	Position	Date	Signature
Ed Breese	Environmental Manager	30/6/16	
Steve Croft	Alliance Manager	30/6/16	

Waitangi Wharf Coastal Processes Monitoring Plan

1.	INTRODUCTION	3
1.1	Statutory Requirements	3
2.	THE CMP	4
2.1	Roles & Responsibilities	4
2.2	Training	4
3.	MONITORING PROCEDURES	4
3.1	Photopoint monitoring	4
3.2	Surveying	8
4.	PROGRAMME	9
5.	WAVE DATA COLLECTION	9
6.	SATELLITE IMAGERY	10
7.	REPORTING	10
	APPENDIX 1 – Waitangi Wharf Upgrade Coastal Processes Report	11

Waitangi Wharf Coastal Processes Monitoring Plan

1. INTRODUCTION

The Chatham Islands Port Limited (CIPL) has obtained resource consents (CIC/2015/02) for the construction of an upgrade of Waitangi Wharf and related activities. The project is funded by the Department of Internal Affairs (on behalf of the Government,) and is being designed and constructed by the Memorial Park Alliance (MPA) which consists of the New Zealand Transport Agency, Downer Construction, HEB, AECOM and Tonkin and Taylor.

The project will include the reclamation and dredging activities which will result in changes to coastal process. The assessment of coastal processes (Appendix 1) prepared as part of the resource consent application has concluded that these activities will not result in significant changes or adverse effects on coastal processes. To confirm this assessment and determine if mitigation measures are required, this Coastal Processes Monitoring Plan (CMP) has been prepared.

The main areas of interest for coastal processes monitoring is the beach area in front of the Waitangi Hotel and Aotea Fisheries Factory and the area around the mouth of the Nairn River and north of the river.

The CPMP sets out procedures for the collection of relevant information and the analysis and reporting of results.

1.1 Statutory Requirements

Resource consent CIC/2015/02 sets out the following conditions in respect of coastal processes monitoring.

- 2 *The Consent Holder shall prepare a Coastal Processes Monitoring Plan (CMP), The CMP shall be submitted to Chatham Islands Council 20 working days prior to works in the CMA commencing for certification. The purpose of the CMP is to identify any impacts on coastal processes that are attributable to the construction works or the coastal structures once they are in place and the requirement for adaptive management to mitigate adverse effects. The CMP will include:*
 - a) *use of a numerical wave model to record the wave climate within Waitangi Bay during the construction phase;*
 - b) *fortnightly photo point monitoring of Waitangi Town Beach for the purpose of identifying measurable changes and causes of such changes for the period of construction;*
 - c) *coastal profile surveys including at least six profiles at locations on Waitangi Town Beach, the Nairn River mouth and north of the Nairn River mouth,*
 - d) *A description of survey intervals and duration;*
 - e) *review of relevant satellite imagery as it becomes available; and*
 - f) *an annual review of wave climate, beach profile and photo point monitoring data.*
- 3 *The Consent Holder shall report the monitoring results to the Community Liaison Group and the Chatham Islands Council together with any recommended adaptive management on an annual basis by 31 December each year.*

Waitangi Wharf Coastal Processes Monitoring Plan

2. THE CMP

2.1 Roles & Responsibilities

The responsibilities in regard to the implementation of the CMP are shown in Table 1.

Table 1: Responsibilities for implementation of the CPMP.

Title	Name	Responsibilities
Alliance Manager	Steve Croft	Overall responsibility for the project
Stakeholder, Environmental and Compliance Manager	Ed Breese	Ensuring resource consent reporting requirements are met and engaging with Community Liaison Group
On Island Project Manager	Hugh Miliken	Ensure surveys and photo point monitoring is undertaken
Independent Surveyors	Spencer Holmes	Setting out survey control points and confirming baseline survey
Coastal Processes Expert	Dr Tom Shand	Data analysis, reporting and identification of mitigation measures if required.

2.2 Training

All people involved in monitoring activities will need to go through a training process. The objectives of the training will be to ensure the following:

- Health and safety procedures are clearly understood
- The procedures for photopoint monitoring are clearly understood and consistently applied
- The procedures for beach surveying are clearly understood and consistently applied

A record of this training will be kept.

3. MONITORING PROCEDURES

The coastal processes monitoring will involve maintaining a photographic record of the beach on a regular basis and a less regular surveying of the beach profile.

3.1 Photopoint monitoring

During the construction of the breakwater and wharf, two weekly photographic monitoring and visual observations will be undertaken. The photos and observations will be taken at the high water mark at the locations shown in Table 2. The position of these locations is also shown in Figures 1 and 2. The photos will be taken as close to time of low tide as practical.

At each photo location, a permanent off set marker will be established so the photo position can be easily replicated. Table 2 will be updated to provide the offset information. The permanent off set marker will be either a metal rod or timber pole buried at least 500mm into the ground or marked onto a fixed structure. The marker will also include a label such a metal tag to identify the location number.

Waitangi Wharf Coastal Processes Monitoring Plan

Table 2: Photographic and visual monitoring locations

Monitoring point	Location	Off set marker description
P 1	Western end of Town Beach	
P 2	At toe of boat ramp to south of Aotea Fisheries factory	
P 3	In front of Waitangi Hotel accommodation block	
P 4	75m east of Waitangi Hotel public bar	
P 5	Eastern abutment Nairn River bridge	
P 6	125m east of the eastern abutment Nairn River bridge	
P 7	710 m east of the eastern abutment Nairn River bridge	
P 8	1500 m east of the eastern abutment Nairn River bridge	

A summary sheet for all photos will be prepared that covers the following information:

- Date
- Low tide time nearest to time of photo
- Weather conditions and sea state over the previous two weeks

For each photo the following information will be recorded;

- Time
- Location
- Photo direction
- Site observations particularly any differences from previous photos such as noticeable erosion or aggradation.

Following the first round of photos and visual observations the coastal processes expert will review the information collected and make recommendations if necessary on changes in the monitoring procedures.

Waitangi Wharf Coastal Processes Monitoring Plan



Waitangi Wharf Coastal Processes Monitoring Plan



Waitangi Wharf Coastal Processes Monitoring Plan

3.2 Surveying

Prior to construction commencing a set of baseline beach profiles will be recorded. The transect locations are identified in Table 3. The position of these transects is also shown in Figures 1 and 2.

Surveys at the nominated transects will be undertaken on a 6 monthly basis during construction and then annually for 2 years after the breakwater and wharf construction is completed. Then bi-annually for the duration of the consent or a shorter term if approved by Council.

At each transect a permanent marker will be established so the survey can be easily replicated. Table 3 will be updated to provide information on the marker location, vertical elevation and transect bearing. All levels are reduced to local MSL (2.35 m below LINZ EHN1 survey mark), and all locations are referenced to Chatham Islands Transverse Mercator (CITM). The transect marker will be either a metal rod or pole buried at least 500mm into the ground. The marker will also include a label (such as a metal tag) to identify the transect number.

Table 3: Survey line locations

Transect	Location	Marker GPS position and transect bearing
T 1	At northern end of diesel storage compound	
T 2	At toe of boat ramp to south of Aotea Fisheries factory	
T 3	At boundary between Aotea Fisheries factory and the Waitangi Hotel	
T 3	75m east of Waitangi Hotel public bar	
T 4	125m east of the eastern abutment Nairn River bridge	
T 5	710 m east of the eastern abutment Nairn River bridge	
T 6	1500 m east of the eastern abutment Nairn River bridge	

The permanent marker will be located at least 5m (horizontally) landward of the beach or dune crest (or as agreed with the Coastal Processes Expert). The permanent marker will be moved inland and resurveyed if threatened by erosion.

Surveys should be referenced to the benchmark and consist of horizontal and vertical offsets across the profile from the benchmark to the water edge at low tide. The survey should pick up changes in grade, vegetation line, debris line (denoting high tide) and any other features of note. Acceptable survey methods include RTK GPS, theodolite, level and staff. Staff and tape and visual estimate are not acceptable.

Following the first round of surveying the coastal processes expert will review the information collected and make recommendations if necessary on changes to the monitoring procedures. If changes are required these will be undertaken before construction commences and another series of transects completed.

In the first year at least one set of transects will be surveyed by an independent surveyor.

Waitangi Wharf Coastal Processes Monitoring Plan

4. PROGRAMME

The programme for the monitoring activities is shown below.

Activity	2016	2017	2018	2019	2020	2021 – End Consent*
2 weekly photo monitoring						
Beach profile baseline						
6 monthly beach profiling						
Annual beach profiling and photo monitoring						
Annual reporting						
Biannual beach profiling and photo monitoring						
5 yearly reporting						

* Shorter period if agreed by Council

5. WAVE DATA COLLECTION

Information will be collected on the wave climate reaching Waitangi Bay. This information will be obtained from NOAA Wavewatch III global numerical wave model at an output location 75 km offshore of Waitangi Bay (Figure 3). This output will provide indication of ocean conditions occurring between surveys (i.e. magnitude and frequency of storms).



Figure 3 Proposed location of numerical wave output point offshore of Waitangi Bay

Waitangi Wharf Coastal Processes Monitoring Plan

6. SATELLITE IMAGERY

A review will also be undertaken to see if any new satellite imagery has become available. If so, the new image will be georeferenced with respect to historic aerial photographs (refer Waitangi Wharf Upgrade Coastal Processes Report) and the new shoreline digitised as defined by the vegetation line or edge of sand (where it intersects a structure or cliff) and compared to previous shoreline locations.

7. REPORTING

An annual report will be prepared upto 2021 and on a 5 yearly basis until the consent expires or Council agree reporting no longer required. The report will include the following;

- Summary of the wave regime over the previous 12 months and commentary in respect the “normal” wave regime
- A summary of the photographic monitoring undertaking covering frequency of monitoring and key observations and changes in the beach
- A summary of beach profile monitoring
- Update on shoreline position if any new relevant satellite imagery has become available
- Comment if the information changes the Summary and Conclusion section of the Waitangi Wharf Upgrade Coastal Processes Report.
- If necessary suggestions on adaptive management such as additional sand transfer, coastal protection works or relocation of assets.

The report shall be provided to the Community Liaison Group and the Chatham Islands Council on an annual basis by 31 December each year. If significant change is observed during from the photopoint monitoring the Community Liaison Group and Chatham Island Council will be advised as soon as practical.

Appendix E Coastal Process Report

- **No appendices – refer Consent Documentation if required**



24 June 2015

Waitangi Wharf Upgrade – Coastal Processes Report



Waitangi Township (Source: Susan Thorpe, date unknown)

Rev.	Status	Prepared by	Checked by	Date
5		Dr Tom Shand	Richard Reinen-Hamill	24.06.15

Name	Position	Date	Signature
Dr Tom Shand	Senior Coastal Engineer	24.06.15	
Richard Reinen-Hamill	Principal Coastal Engineer	24.06.15	

Waitangi Wharf Coastal Processes Report

Contents

1	Introduction.....	4
1.1	Site location	4
2	Physical environment	6
2.1	Geological setting	6
2.2	Topography and bathymetry	7
2.3	Existing structures	8
2.4	Historical shoreline changes	10
2.5	Sediments	13
2.6	Wind	15
2.7	Water levels	16
2.7.1	Mean sea level	17
2.7.2	Astronomical tide	17
2.7.3	Storm surge	18
2.7.4	Tsunami	19
2.8	Waves	19
2.8.1	Wave hindcast	19
2.8.2	Extreme wave climate	22
2.8.3	Nearshore processes	22
2.9	Nearshore currents and sediment transport	25
2.10	Nairn River	27
2.11	Coastal stability	28
2.11.1	Equilibrium planform	28
2.11.2	Climate change effects	29
2.11.3	Effect of seawalls	30
2.12	Coastal process summary	31
3	Proposed works	32
3.1	Design philosophy	32
3.2	Design Conditions	32
3.2.1	Environmental conditions	32
3.2.2	Design vessel	33
3.3	Reclamation	33
3.4	Breakwater	34
3.4.1	Planform	34
3.4.2	Material	34
3.4.3	Geometry	35
3.5	Dredging	36
3.5.1	Land-based	36
3.5.2	Marine-based	36
3.6	Beach replenishment	37
4	Assessment of effects on coastal processes	39
4.1	Shoreline location	39
4.2	Waves processes	39
4.3	Nearshore currents	40
4.4	Sea levels	41
4.5	Sediment processes	41
4.5.1	Scour	41
4.5.2	Longshore processes	42
4.5.3	Cross-shore processes	43
4.5.4	Suspended sediments	45
4.6	Coastal stability	45
4.7	Coastal water quality	46
4.7.1	Construction effects	46
4.7.2	Long-term	47
4.8	River discharge	47
4.9	Effect on existing structures	48
5	Summary and conclusions	48
6	References	50

Waitangi Wharf Coastal Processes Report

Appendix A :	Site Photographs 7 - 11 March 2015	51
Appendix B :	Historic shoreline analysis	52
Appendix C :	Metoccean wave modelling reports	57
Appendix D :	Consent-level design drawings	64

Waitangi Wharf Coastal Processes Report

1 INTRODUCTION

The Chatham Islands Ports Limited (CIPL), in conjunction with its funder, the Crown, administered by the Department of Internal Affairs (DIA) is seeking resource consent applications to undertake the Waitangi Wharf Upgrade Project (WWUP) located in Waitangi Bay, in the Chatham Islands. The project seeks to improve the reliability and usability of the wharf, and enhance the port operations for the island. The key elements of the project include: —

- Creating a temporary landing area to enable the unloading and loading of construction equipment between New Zealand and the Chatham Islands;
- Constructing a breakwater up to 185 m long for protection of the wharves;
- Constructing new land for enhanced port operations including new buildings for cargo handling. The facings of this reclamation will create a new commercial wharf and a new fishing wharf;
- Dredging to enable the construction of the reclamation and wharves, and to improve vessel berthing;
- Beach replenishment of Waitangi beach using sand from the proposed dredging if it cannot be used within the reclamation; and
- Minor improvements to the existing livestock holding area and track.

This Coastal Report sets out the dominant coastal processes operating in the area surrounding Waitangi, describes the proposed works and evaluates their potential effect on coastal processes.

1.1 Site location

The Waitangi Bay coastline is situated at the southern end of Petre Bay and in the lee of a rocky headland, Tikitiki Hill (Figure 1-1; Figure 1-2). The dominant driver of the coastal processes are swell waves generated by the predominant westerly airstreams south of 40° latitude. These waves are refracted around the Tikitiki Hill headland before arriving in Waitangi Bay from a north westerly direction at a reduced height. The construction of the proposed physical works have potential to modify these wave processes and the resultant sediment transport dynamics within the bay. In regards to site datum's, all levels are reduced to local MSL (2.35 m below LINZ EHN1 survey mark), and all locations are referenced to Chatham Islands Transverse Mercator (CITM)

Waitangi Wharf Coastal Processes Report

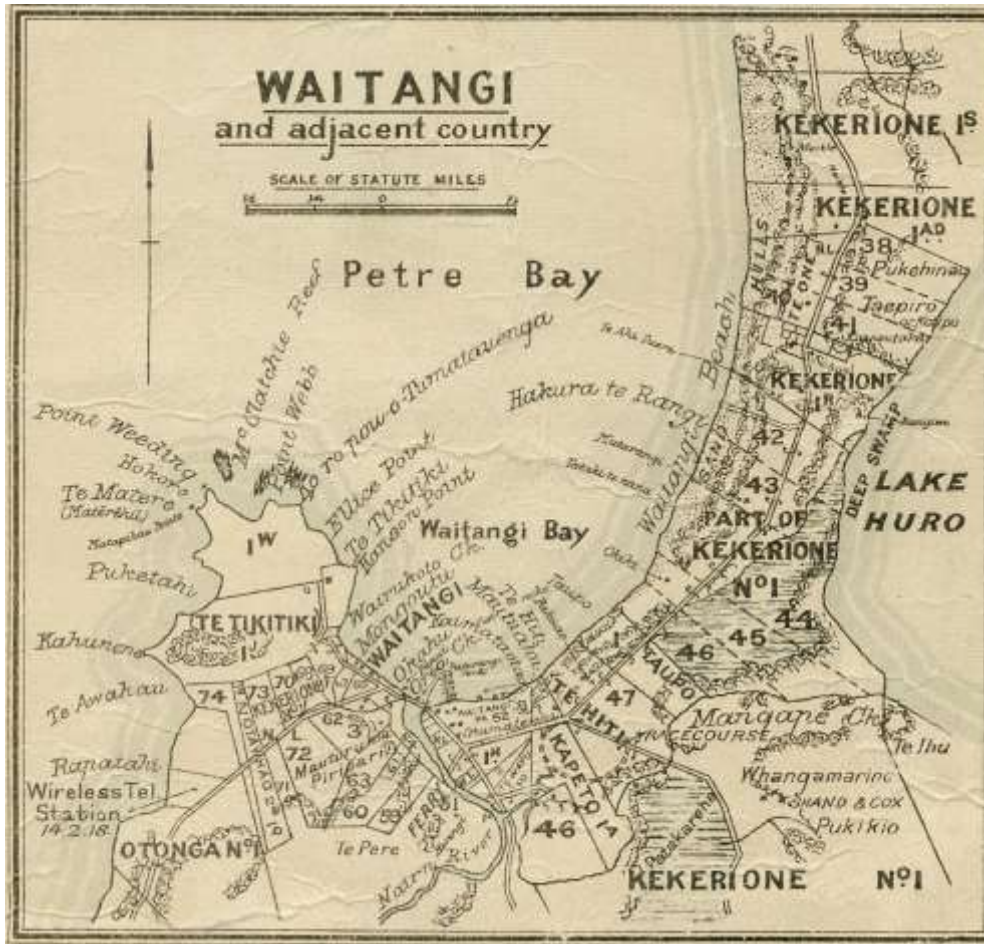


Figure 1-1 Waitangi Bay and surrounding land location figure



Figure 1-2 Waitangi Bay (left) with the existing wharf (right)

Waitangi Wharf Coastal Processes Report

2 PHYSICAL ENVIRONMENT

2.1 Geological setting

The Chatham Rise is part of New Zealand's continental crust, extending east from the South Island. The Chatham Islands are the only emergent part of the rise and are located some 900 km east of Christchurch. The islands emerged within the last four million years and are comprised of Schist basement overlain by localised volcanic material (Figure 2-1).

The largest Island, Chatham Island (Rekohu or Wharekauri), is comprised of a basement schist, emergent in the north, overlain by volcanic basalt, tuff and limestone accumulations. The Islands have been relatively unaffected by tectonic movement compared to the rest of New Zealand (Williams, 1995) with changes in sea level being the main drivers in the development of extensive marine cut surfaces and accumulation of marine sands. Following the most recent stabilisation of sea level (over the past 10,000 years) marine sediments have accumulated in the lee of the southern Chatham volcanic outcrops, joining northern and southern portions of the Chatham Islands and resulting in the formation of Te Whanga Lagoon system and new, low barrier beach systems on the eastern and western sides.

Waitangi Bay is located at the south-eastern corner of Petre Bay, and is defined on its western side by the rocky headland of Tikitiki Hill, and on its eastern side by Waitangi Beach which extends north to Red Bluff (refer Figure 2-1). Both Tikitiki Hill and Red Bluff are comprised of Eocene Volcanic Red Bluff Tuff. This material is highly to moderately weathered, weak rock that has varying degrees of calcite cementation. When weathered it typically breaks down into a fine to coarse sand with some silt.

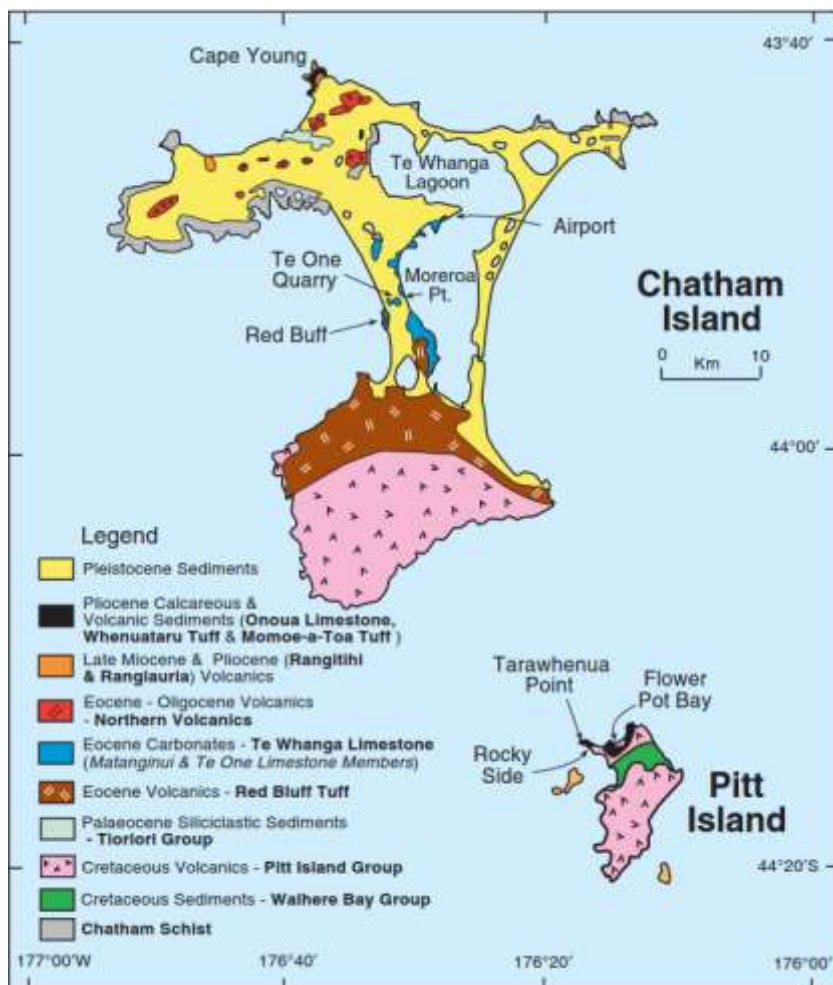


Figure 2-1 Chatham Islands Geology (James et al., 2011)

Waitangi Wharf Coastal Processes Report

2.2 Topography and bathymetry

The headland adjacent the existing wharf comprises steep cliffs 20 – 30 m high overlain by rolling hills. To the northwest of the existing wharf the cliffs slope up from an intertidal rock platform at slopes of 2(V):1(H) flattening to 1(V):1(H) nearer the top of the cliff (Appendix A, Photograph 3). These cliffs appear over-steepened with recent slips evident. To the south of the wharf the cliff toe is retained by a seawall and roadway (Appendix A, Photograph 6) and the above cliff slopes up at around 1(V):1(H). While vegetation is becoming established on this cliff, minor slips remain evident. Buildings including the Moana Pacific fish processing factory and Hotel Chathams are located on a low terrace 1 to 1.5 m above the high water level backed by a 10 m high tuff embankment (Appendix A, Photograph 9). To the east of the hotel, the beach is backed directly by the tuff embankment (Appendix A, Photograph 9, 17).

Survey data from a number of sources were combined into a composite Digital Terrain Model (DTM) (Figure 2-2). These sources include:

- LINZ Fairsheet Data (1977) covering South Petre Bay;
- LINZ Multibeam survey (2006) covering South Petre Bay with detail in Waitangi Bay;
- Spencer Holmes topographic survey (December 2014) of the wharf structure, road and eastern Tikitiki Hill; and
- Diver-collected seabed depths (December 2014) including depth of sand to basement rock.

The combined DTM shows that Waitangi Bay is a relatively shallow bay with depths of 10 m occurring 350 m offshore of the existing wharf and some 900 to 1000m from the shoreline. Between the 5 m and 10 m depth contour (nearshore shelf) the seabed slopes at $s=0.007$ before steepening to $s=0.01$ to 0.014 between the 5 and 0 m depth contour (within the surf zone). The beach fronting Waitangi Town slopes at between $s=0.04$ at the western end to $s=0.08$ at its eastern end. The longer Waitangi Beach that extends north to Red Bluff is at a flatter slope of $s=0.037$.

Several rocky outcrops comprised of Calcareous Tuff occur within Waitangi Bay. The most prominent being a 40 to 60 m wide intertidal reef platform at the toe of the cliff and road seawall. There is a 130 x 100 m reef in 4 to 5 m water depth approximately 50 m south of the existing wharf, and the 'hotel reef', a 200 x 150 m reef between 4 m and 0.5 m depth contours (approximately low tide), is in front of the Hotel Chathams in the centre of Waitangi Bay. A further reef extends 150 m offshore from the rocky headland between Waitangi Town Beach and the Nairn River.

A multi-beam survey outside the surf zone shows evidence of bed forms with wave length 5 to 10 m and amplitude up to 0.1 m. Higher frequency variations (length ~ 30 cm and amplitude up to 0.1 m) are also evident, although it is uncertain whether these are also bed forms or survey noise. It is inferred that fluctuations of ± 0.2 m from the average seabed level are possible.

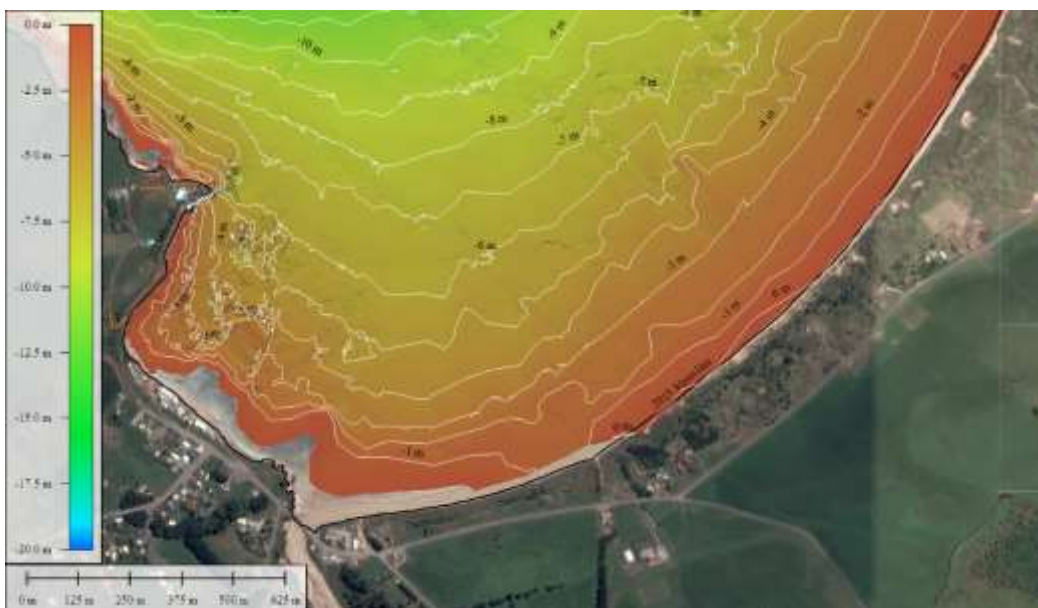


Figure 2-2 Combined digital terrain model of harbour bathymetry

Waitangi Wharf Coastal Processes Report

2.3 Existing structures

The wharf was moved from its original location in the western corner of the bay to the present location at Hanson Point in the early 1930s. Previously surf boats would load cargo at a short jetty and then row out to the trading vessels offshore (Figure 2-3). A 385 ft (117 m) long timber wharf with a 202 ft by 26ft (60 x 8 m) 'Tee' section was constructed (Figure 2-4) to enable larger trading vessels to berth directly (King and Morrison, 1990). Depths off the berth at the time of construction were reportedly 15 to 17 ft (4.6 – 5.2 m). The wharf was upgraded to a reinforced concrete structure in 1979/1980 (Appendix A, Photograph 1) and a small previous reclamation at the base of the wharf was extended to approximately 65 m in length (2,800 m² total area) to allow construction of port facilities. This reclamation is protected on its seaward side by rock rip-rap comprised of both basalt and tuff material (Appendix A, Photograph 2-4). The tuff riprap was placed during the formation of the reclamation. The basalt has been added as replenishment and repair. The basalt rock is relatively resistant to weathering and the tuff material reportedly rapidly deteriorates and is frequently replaced.

A road was excavated out of the cliff face to reach the new wharf with a stepped, vertical concrete seawall eventually constructed to protect the road. This road and seawall remain in use today (Appendix A, Photograph 6-8) and appear in reasonable condition.

Early imagery of Waitangi Town Beach (Figure 2-5 and Figure 2-6) show buildings constructed on the low terrace at the base of the tuff embankment. Timber and brush seawalls fronting the land are also evident and were reported as being intended to prevent erosion (King and Morrison, 1990). This indicates that although a wider beach is evident than exists there today, periodic erosion was an issue then.

The present day foreshore at Waitangi Town Beach is backed almost continuously by seawalls. At the western end (Appendix A, Photograph 7, 10) rock and rubble has been dumped to prevent erosion at the end of the road seawall. This rubble wall continues towards the east fronting fuel tanks located on the backshore behind the beach (Appendix A, Photograph 11). The rubble does not appear to overlie an impermeable core (such as a geotextile filter layer) and so fine material is lost by hydraulic wave action. The boat pull-up area is fronted by a low, gravel and fill revetment (Appendix A, Photograph 12). Further east a range of vertical concrete walls front of the Moana Pacific fish processing factory (Appendix A, Photograph 13, 14, 15). These walls are in generally poor condition and have been undermined in some places with fill lost from behind the walls and collapse of concrete pavements. A sloped vertical seawall fronts the Waitangi Hotel (Appendix A, Photograph 16) and appears in reasonable condition, although the toe footing is becoming exposed in places indicating that the beach levels may have lowered since initial construction. Some loose rock has been placed at the eastern end of this hotel wall, though the adjacent cliff is located some 5 m landward indicating a trend of ongoing background erosion.



Figure 2-3 Waitangi Wharf 1907 (Source: Waitangi Museum)

Waitangi Wharf Coastal Processes Report



Figure 2-4 The wharf at Waitangi Bay before upgrades of the late 1970s. The M.V. Holmdale is berthed (Source: F. Holmes; Chatham Islands 1791 - 1984)



Figure 2-5 Waitangi circa 1870s (Source: Canterbury Museum in. King, M. and Morrison, R., 1990. A Land Apart)

Waitangi Wharf Coastal Processes Report



Figure 2-6 Beach fronting the Mangoutu Hotel circa 1910 (precursor to the Waitangi Hotel constructed in 1956)
(Source: Guest Collection, Alexander Turnbull Library in. King, M. and Morrison, R., 1990. *A Land Apart*)

2.4 Historical shoreline changes

The position of the coastal shoreline, as defined by the intersection of the high tide level, may change over time through both erosional and accretionary processes, although cliff coastlines are generally subject to erosion only. Long-term rates of shoreline change are determined by comparison of the historic shoreline position. This is achieved by georeferencing historic aerial photographs to a consistent scale and datum and digitising the shoreline position. This corresponds to the cliff toe for cliff coastlines and vegetation line for beaches.

A list of historic aerial photographs and satellite imagery used in the analysis are provided in Table 2-1. The accuracy of the georeferencing is estimated compared to the 2012 satellite image by comparing the location of ground control point such as buildings. Accuracy in the locating of the cliff to position is estimated based on the image resolution and contrast with low light and shadow over the cliff toe all potentially decreasing accuracy. The resultant potential error of these independent factors is derived using the sum of independent errors approach whereby $E_{sum} = \sqrt{E_1^2 + E_2^2 + \dots + E_n^2}$.

An example of historic shoreline positions shown on the 2013 Satellite image is presented in Figure 2-7 with all historical shoreline data presented in Appendix B. Software developed by Tonkin & Taylor has then be used to measure the distance to each shoreline from an assumed baseline at 50 m increments. A linear regression analysis is then undertaken on each set of shoreline measurements to estimate long-term retreat rates. Results are shown in Figure 2-8 and, while some fluctuation in rates is apparent, general trends for the differing coastal compartments are evident.

Waitangi Wharf Coastal Processes Report

Table 2-1 List of historic aerials and maps used in analysis

Year	Item	Scale or Ground Sample Distance	Source	Estimated georeference accuracy ¹ (m)	Estimated shoreline accuracy ² (m)	Resultant estimated error ³ (m)
9 Nov 1969	Aerial Photo SN2196 G/2	1:24,000	Opus	±5	±5	±7
24 Mar 1982	Aerial Photo SN8066 G/3	1:25,00	Opus	±5	±5	±7
7 Apr 2006	Satellite Image	0.4	Digitalglobe	±2	±2	±2.8
29 Nov 2013	Satellite Image	0.4 m	CNES/Astrium	-	±2	±2

¹Relative to 2013 Image

²Shoreline accuracy estimated based on image resolution and ambient lighting causing contrast of cliff and beach

³Resultant estimated error derived using the sum of squares for summing independent parameters

To the northwest of the wharf (Figure 2-7) the cliff coastline has been eroding at rates of up to -0.25m/year, although average rates are -0.08 m/year. Erosion of such cliff coastlines is often episodic, with no erosion over a long period followed by large amounts during a landslide. The artificial shoreline between the wharf and Waitangi Town Beach has been omitted as changes have been the result of human reclamation. Similarly at the western end of the Waitangi Town Beach the presence of seawalls has concealed any natural trends, although anecdotally beach levels (which are not picked up by aerial photo analysis) have dropped over this time. This is partially evident comparing Figure 2-5 and Figure 2-6 from the late 19th and early 20th centuries to today (Appendix A, Photograph 9, 16). Along the western end of the Waitangi Town Beach the base of the tuff embankment has eroded by up to 9 m since 1969 (up to -0.2m/year) and the low tuff headland to the east has retreated by up to a similar amount. East of the Nairn River (to around 700 m), the shoreline eroded up to 10 m between 1969 and 1982. Since 1982 the shoreline has accreted by up to 17 m. This is evident in Appendix A, Photograph 22, where a low accretionary foredune is evident some 15 m in front of an older hind-dune. These changes result in long-term accretion rates of 0.3 to 0.6 m/year but realistically the trends are cyclical rather than constant with little movement having occurred since 2006.

It is therefore reasonable to assume that fluctuations of ± 10 to 15m are likely to occur along this beach. Such fluctuations are natural processes related to sequences of storms and calm periods and longer-term climatic cycles influencing sediment supply and average wave direction.

Further north, between 700 m and 1800 m from the Nairn, trends are erosive at rates of up to -0.3 m/year (average -0.1 m/year). This is evidenced by the high, over-steepened dunes in this area undergoing active toe erosion (Appendix A, Photograph 23). This trend appears more stable over the long-term and could be expected to continue. Further north trends become cyclical or negligible.

Waitangi Wharf Coastal Processes Report



Figure 2-7 Example of historic shoreline positions superimposed on the 2013 Satellite Image

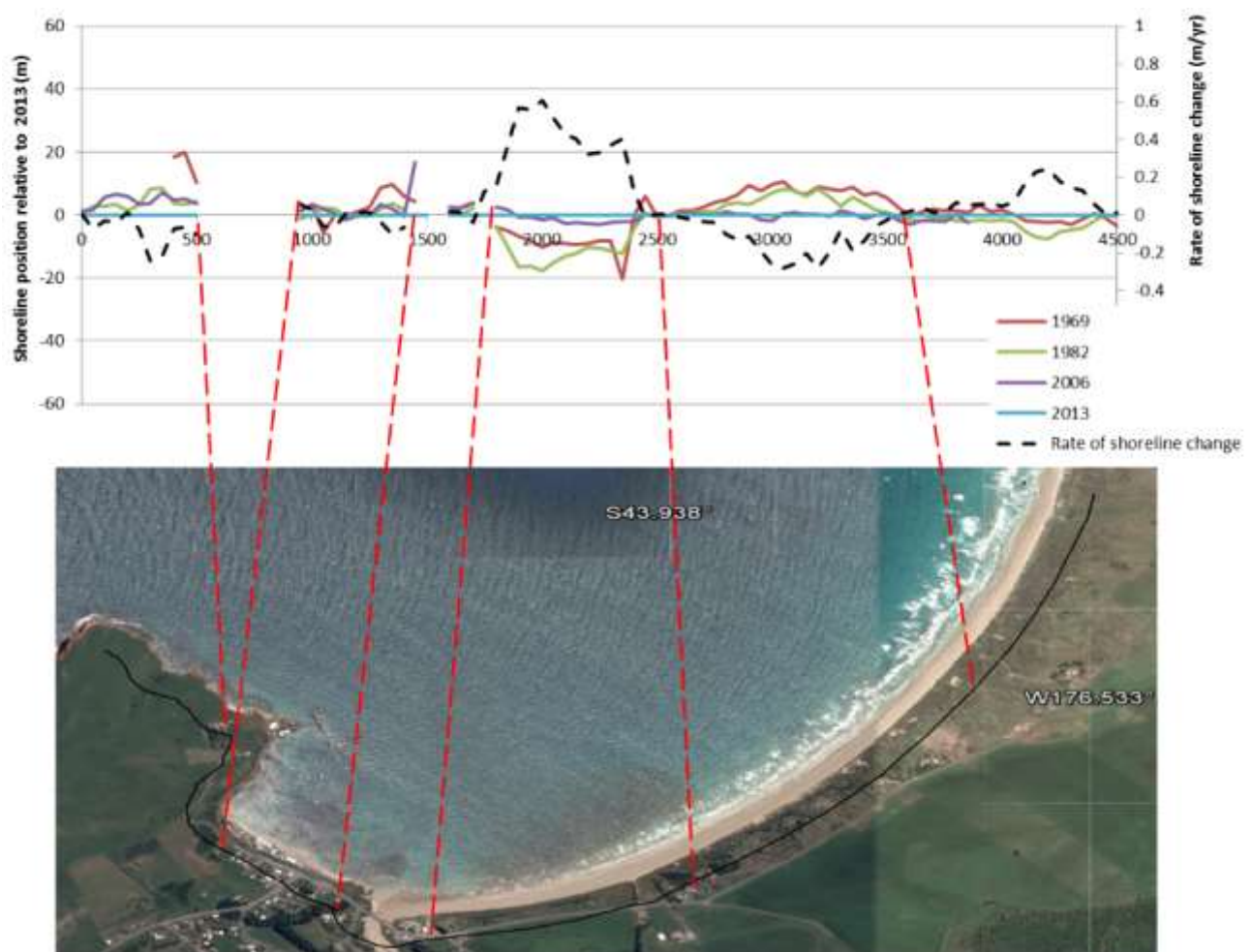


Figure 2-8: Historical shoreline position and rates of change

Waitangi Wharf Coastal Processes Report

2.5 Sediments

Sediments on the Chatham Islands beaches are primarily of marine origin (Williams, 1995) and have accumulated in the lee of the southern Chatham volcanic outcrops as sea levels stabilised to their present stage.

During investigations, 20 samples were collected from the beaches, nearshore and offshore between 500m northwest of Waitangi Wharf to 1.5 km northeast of Waitangi with their locations shown in Figure 2-9. Tests indicate material to be fine-medium white-grey sands with some shell. Size ranges from $D_{50} = 0.15$ to 0.3 mm with a medium grading offshore and adjacent the wharf to $D_{50} = 0.125$ mm with a more uniform grading on beach (Figure 2-10). Solid density of the sediment ranges from $2.72 - 2.79$ t/m³.

Around the cliffs and wharf these marine sands are combined with small volumes (estimated at less than 5-10% near the wharf, reducing to 1-5% near the beach) derived from erosion of the adjacent Tuff cliffs. Based on 20 m high cliffs eroding at an average rate of -0.08 m/year, up to 1120 m³ of sediment could potentially be delivered into the nearshore system from the 700 m of cliff coastline northwest of the wharf.



Figure 2-9 Sediment sample numbered locations and median size (D_{50}) in mm.

Waitangi Wharf Coastal Processes Report

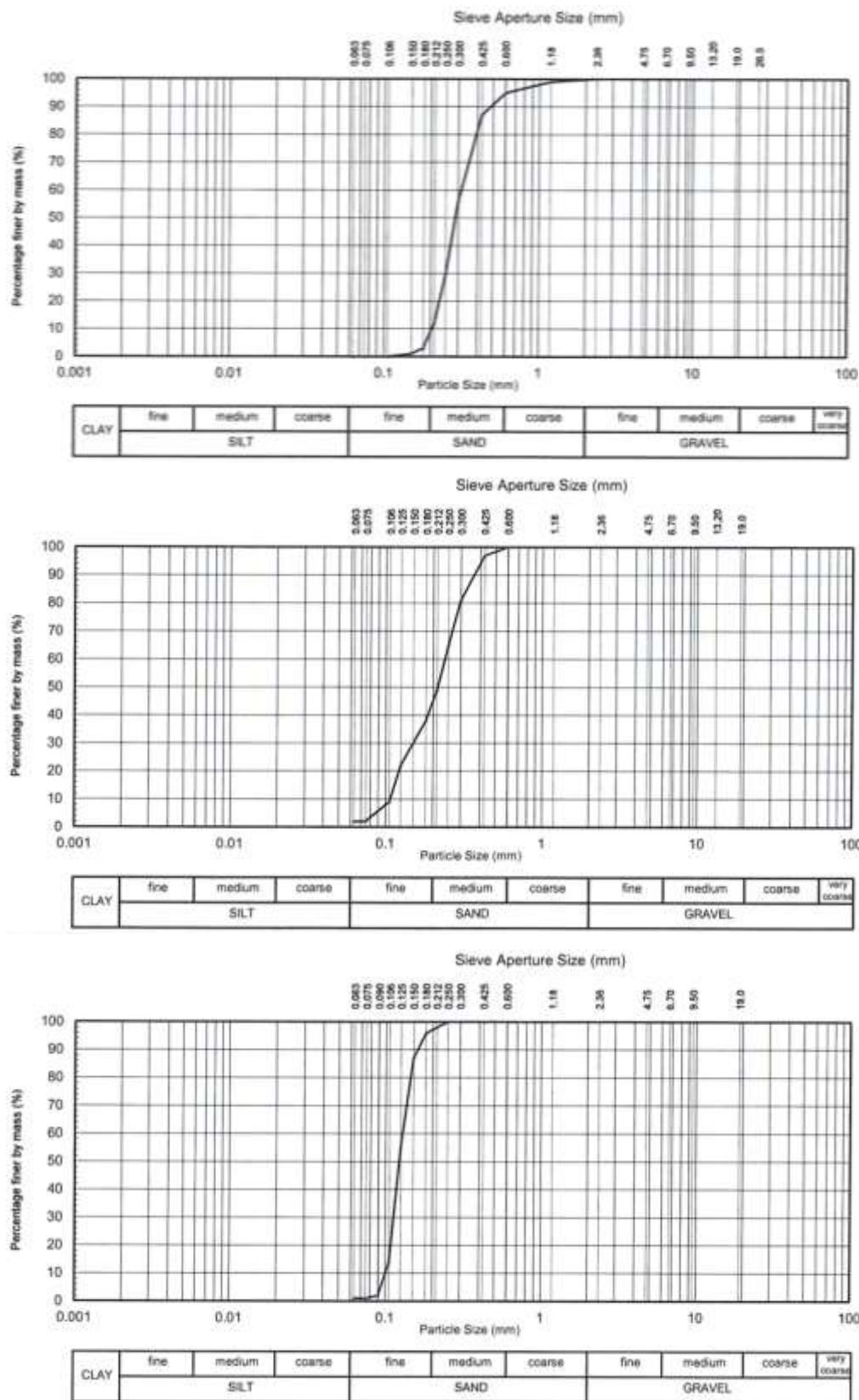


Figure 2-10 Example of sediment gradings from the base of the sea cliffs northwest of the breakwater (top; Sample 5, $D_{50} = 0.28\text{mm}$), at the end of the wharf (centre; Sample 15, $D_{50} = 0.21\text{ mm}$) and 500m along Waitangi Beach (bottom; Sample 25, $D_{50} = 0.125\text{m}$)

Waitangi Wharf Coastal Processes Report

2.6 Wind

Observed wind data from Waitangi Bay is scarce with NZ MetService (Thompson, 1983) compiling daily (9 am) records between 1972 and 1981 (Figure 2-11). Records show wind direction is well distributed, although occurs most frequently from the northwest to southwest. A numerical analysis of a 35 year (1979 – 2013) wind field comprised of hourly data offshore of Port Webb was undertaken by Metocean (2015a). This data has been validated against coastal and open-ocean wind stations around the world with good agreement with 10 minute mean wind speed at 10 m elevation above sea level.

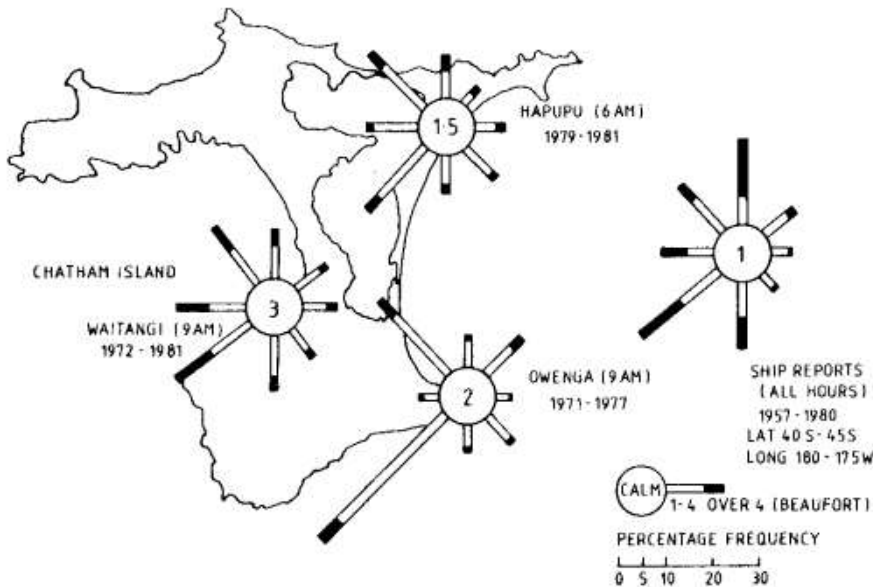
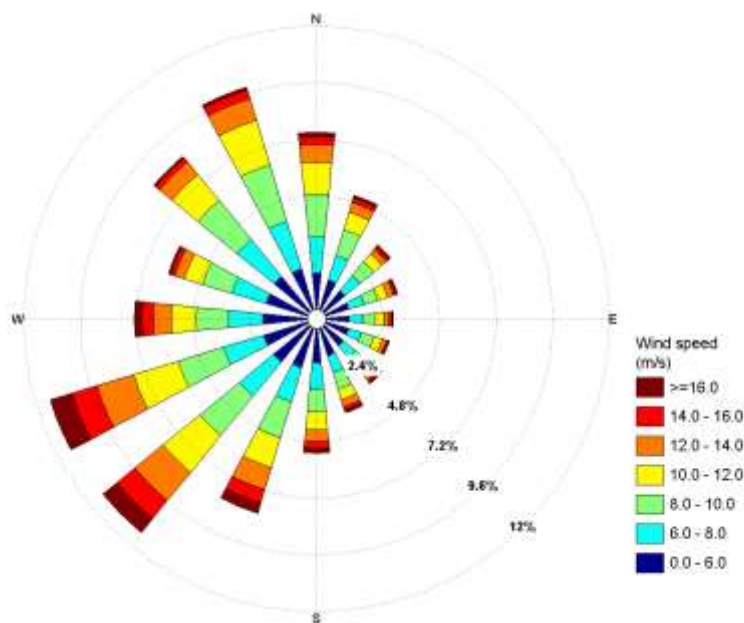


Figure 2-11: Wind frequency record (source: Thompson, 1983)



Results (

Figure 2-12 and Table 2-2) show similarly well distributed wind direction, although wind from the southwest quarter is more dominant. Peak wind speeds of 22-24 m/s occur from the south to west, although can also occur from the north, potentially as the tail end of ex-tropical cyclones descend on the islands.

Waitangi Wharf Coastal Processes Report

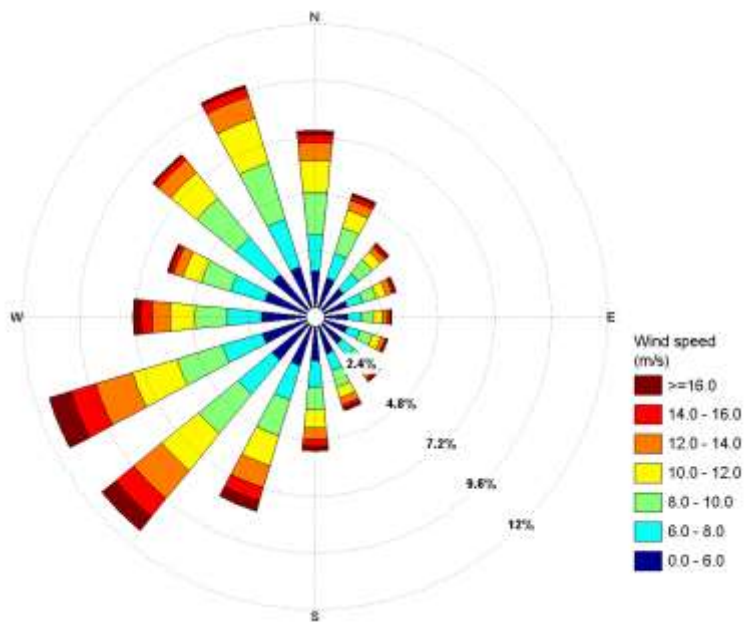


Figure 2-12: Wind rose offshore of Point Webb (source: Metocean, 2015a)

Table 2-2: Annual joint distribution (parts per thousand) of wind speed and wind direction offshore of Point Webb (source: Metocean, 2015a)

U (m/s)	Wind direction (degT)								
	337.5 - 22.5	22.5 - 67.5	67.5 - 112.5	112.5 - 157.5	157.5 - 202.5	202.5 - 247.5	247.5 - 292.5	292.5 - 337.5	Total
> 0 <= 2	3.0	2.3	2.5	2.7	2.8	3.0	3.1	2.9	22.3
> 2 <= 4	9.1	7.7	6.5	7.3	9.2	11.8	11.9	10.8	74.3
> 4 <= 6	19.1	12.8	10.7	11.3	17.3	23.7	22.7	24.1	141.7
> 6 <= 8	31.8	16.9	12.1	13.4	22.2	36.1	30.1	39.3	201.9
> 8 <= 10	36.3	15.9	10.9	12.1	21.1	40.5	29.0	40.9	206.7
> 10 <= 12	27.9	10.0	7.6	8.2	16.1	38.0	23.6	28.2	159.6
> 12 <= 14	14.8	5.7	4.1	4.9	10.5	29.7	17.4	13.8	100.9
> 14 <= 16	6.3	2.7	2.0	2.1	6.0	19.3	10.7	5.0	54.1
> 16 <= 18	2.2	1.3	0.8	1.1	3.0	9.3	5.3	1.4	24.4
> 18 <= 20	0.8	0.5	0.3	0.4	1.1	4.3	2.3	0.4	10.1
> 20 <= 22	0.2	0.2	0.1	0.2	0.3	1.3	0.6	0.1	3.0
> 22 <= 24	0.1	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.5
Total	151.6	76.0	57.6	63.7	109.7	217.2	156.8	166.9	1000.0

2.7 Water levels

The water level at any location varies across a range of timescales. Key components that determine water level are:

- Astronomical tides
- Barometric and wind effects, generally referred to as storm surge

Waitangi Wharf Coastal Processes Report

- Medium term fluctuations, including El Nino Southern Ocean (ENSO) and Interdecadal Pacific Oscillation (IPO) effects
- Long-term changes in sea level
- Wave breaking can also contribute to water level through wave setup and runup. This is discussed in the following section.

A 14 year record (2001 - 2014) of hourly measured water level has been collected at Waitangi Port by the University of Hawaii Sea Level Centre (UHSLC). Metocean (2015a) analysed this data to provide astronomical tide and storm surge values.

2.7.1 Mean sea level

The mean level of the sea from year to year varies depending on cyclical changes such as; the 2-4 year El Nino-Southern Oscillation (ENSO) cycle, the 20-30 year Inter-decadal Pacific Oscillation (IPO) and long-term sea level changes.

LINZ (2012) give the present mean sea level (MSL) at 2.35 m below LINZ mark EHN1 (Waitangi BM1) and Chart Datum at 0.48 m below MSL.

2.7.2 Astronomical tide

Astronomical tide is the periodic rising and falling of the level of the sea surface caused by the gravitational interaction of the sun and moon on the earth's waters and harmonics of such interactions. A tidal table is derived for Port Waitangi based on Metocean (2015a) sea level analysis and information provided by LINZ (pers. comm. Jan 2015).

Waitangi Wharf Coastal Processes Report

Table 2-3 Astronomical tidal levels for Port Waitangi (source: Metocean, 2015a)

Level Description	Tidal level (m)	
	m CD ¹	MSL
Highest Astronomical Tide (HAT)	1.05	0.57
Mean High Water Spring (MHWS)	0.96	0.48 ¹
Mean High Water Neap (MHWN)	0.79	0.31
Mean Sea Level (MSL)	0.48	0
Mean Low Water Neap (MLWN)	0.17	-0.31
Mean Low Water Spring (MLWS)	0.13	-0.35
Lowest Astronomical Tide (LAT)	0	-0.48 ¹

¹Values provided by LINZ per. comm. (Jan, 2015)

2.7.3 Storm surge

Storm surge results from the combination of barometric setup from low atmospheric pressure and wind stress from winds blowing along or onshore which elevates the water level above the predicted tide (Figure 2-13). The combined elevation of the predicted tide and storm surge is known as the storm tide. Storm-surge applies to the general elevation of the sea above the predicted tide across a region but excludes nearshore effects of storm waves such as wave setup and wave runup at the shoreline.

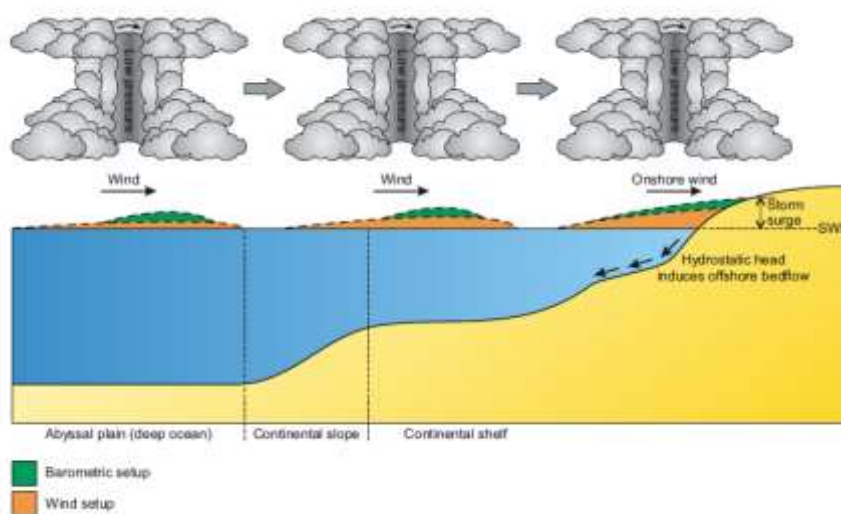


Figure 2-13 Processes causing storm surge

Metocean (2015a) analysed the 14 year sea level record separating storm surge from astronomical tide. Extreme value analysis showed that the 100 year average recurrence interval (ARI) storm surge at Waitangi was 0.6 m which is in general agreement with other New Zealand ports. The combination of astronomical tide and storm surge is known as storm tide and, as the components are independent, values are typically less than simply adding the storm surge to a given high tide value. Extreme value analysis shows a 100 year ARI storm tide of 0.86 m above MSL, approximately 0.4 m above the MHWS.

Waitangi Wharf Coastal Processes Report

Table 2-4 Extreme value analysis of storm surge and total still water level (source: Metocean, 2015a)

Water level (m)	ARI (years)							
	5	10	20	50	100	200	500	1000
Storm surge (positive)	0.47	0.50	0.53	0.57	0.60	0.63	0.67	0.69
Storm surge (negative)	-0.37	-0.40	-0.43	-0.47	-0.50	-0.52	-0.56	-0.59
Total still water level (positive)	0.73	0.76	0.78	0.82	0.84	0.86	0.90	0.92
Total still water level (negative)	-0.64	-0.66	-0.68	-0.70	-0.72	-0.73	-0.76	-0.77

2.7.4 Tsunami

Tsunami are a series of waves generated when a large volume of water is rapidly displaced by such events as earthquakes (normally >M5) and their associated fault ruptures (especially dip-slip faulting of the seabed), volcanic eruptions, coastal landslides and submarine slides and meteor impact (GNS, 2005). The Chatham Islands may be vulnerable to Tsunami generated regionally (i.e. from the Hikurangi Margin) and from distance sources such as Tonga and South America.

The Chatham Islands has experienced Tsunami throughout its recorded history with a severe tsunami generated in Peru in 1868 devastating Tupurangi Village, a tsunami occurred in 1931 during the initial wharf construction with materials lost from the wharf surface, runup of 2.5 to 4 m was observed during the 1960 South Chile event and the Chatham Islands experienced the highest tsunami in New Zealand during the 2009 Tonga event of 0.89 m at Kaingaroa.

While Waitangi is more protected from these far field events, it remains vulnerable to regional events originating from New Zealand. Power (2014) estimates 100, 500 and 2500 year return period tsunami on the Chatham Islands west coast as 5 m, 9 m, 12 m+. Sea level rise

Sea levels have historically been rising around New Zealand (Hannah and Bell, 2012) at average rates of 1.3 mm/year (Dunedin) to 2.2 mm/year (Wellington) and with a NZ-wide average rate of 1.7 mm/year. While analysis has not been undertaken on the Waitangi sea level data, the landmass is tectonically stable (Williams, 1995) and so rates of sea level rise are expected to be comparable.

Ongoing changes in the global climate are predicted to result in acceleration of this sea level rise in coming decades. The Ministry of Environment (2008) guidelines recommends a base value sea level rise of 0.31 m at 2065 with consideration of the consequences of a rise of 0.45 m (relative to the 1980-1999 average). Likewise, a base sea level rise of 0.5 m by 2100 is recommended with consideration of the consequences of sea level rise of at least 0.8 m with an additional sea level rise of 10 mm per year beyond 2100 (refer Table 2-5).

Table 2-5: Baseline sea level rise recommendations for different future timeframes (MfE, 2008)

Timeframe	Base sea-level rise allowance (m relative to 1980–1999 average)	Also consider the consequences of sea- level rise of at least: (m relative to 1980–1999 average)
2030–2039	0.15	0.20
2040–2049	0.20	0.27
2050–2059	0.25	0.36
2060–2069	0.31	0.45
2070–2079	0.37	0.55
2080–2089	0.44	0.66
2090–2099	0.50	0.80
Beyond 2100	10 mm/year	

2.8 Waves

2.8.1 Wave hindcast

Waves occurring within Waitangi Bay are expected to be predominantly swell waves generated by the dominant westerly airstreams south of 40° latitude. Irregular west to north-west waves result from

Waitangi Wharf Coastal Processes Report

ex-tropical weather systems descending from the north and wind-waves are generated within South Petre Bay by north to northeast winds.

No instrumented wave data is available for the Chatham Islands. Metocean Ltd. have therefore produced a numerical wave hindcast using the numerical wind field described previously for a 35 year period between 1979 and 2013. The numerical model SWAN is a 3rd generation ocean wave propagation model which allows for wave growth, refraction and decay of wave fields. The resulting wave climate has been verified using satellite altimeter data recorded between 2010 – 2012.

Three levels of model downscaling are used to transform the wave fields from a global model domain (11 x 11 km resolution), to a domain including only the Chatham Islands (1 x 1 km resolution) and finally to a model domain including the south part of Petre Bay (50 x 50 m resolution). An example of the model bathymetry and an example wave field are shown in Figure 2-16. Output points are provided in 20 m water depth 800m north of Point Webb, in 10 m water depth 300 m north of the existing wharf and in 6 m water depth 90 m north of the existing wharf.

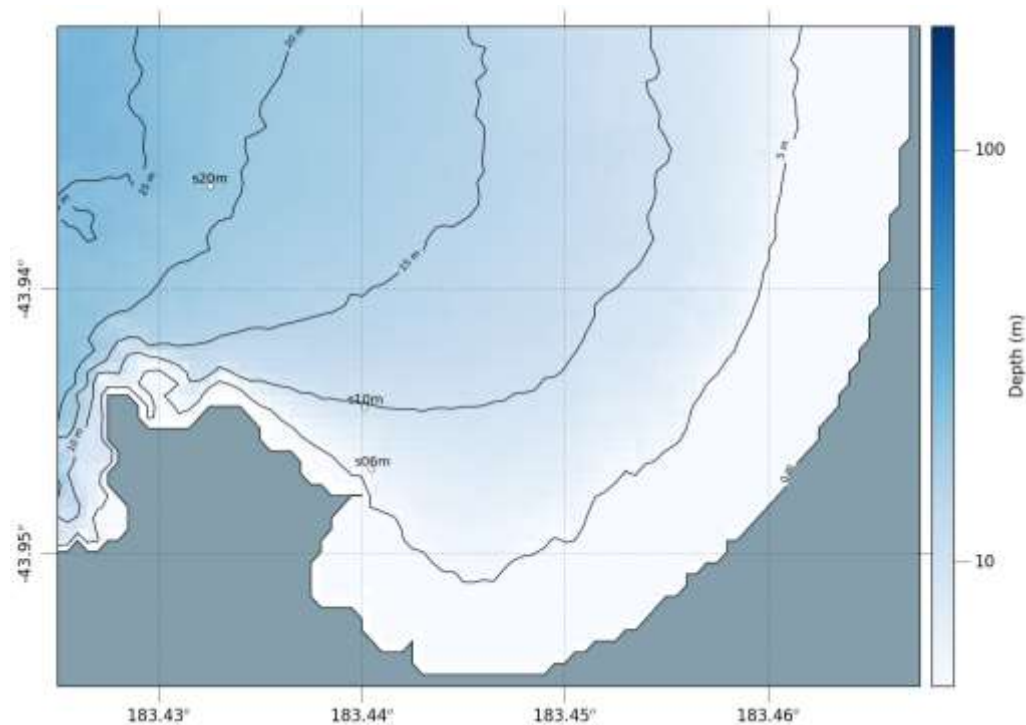


Figure 2-14: Swan model nearshore bathymetry (source: Metocean, 2015a)

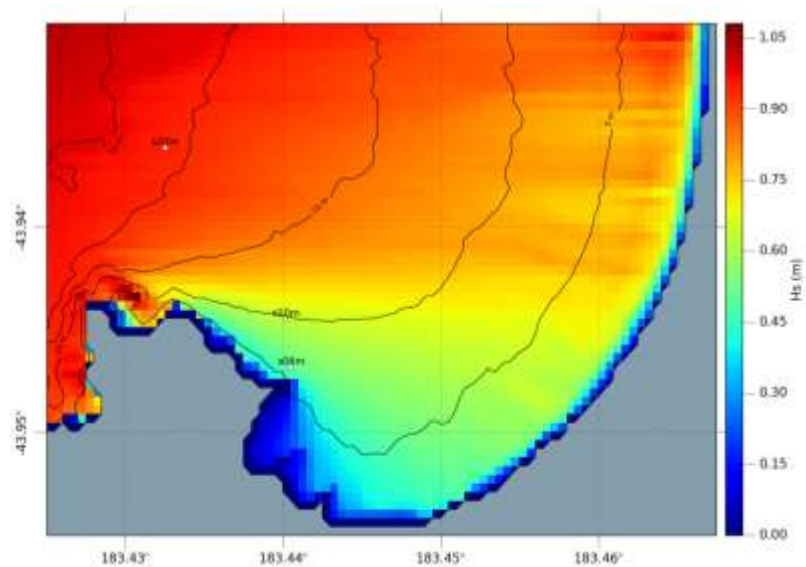


Figure 2-15: Example of modelled significant wave height in the nested Petre Bay domain (source: Metocean, 2015a)

Waitangi Wharf Coastal Processes Report

Time series wave data are available for each of these locations as well as summary statistics which are provided in full within Appendix C. Results show that waves are transformed from a dominant westerly direction in 20 m depth to northwest by 10 m depth and north-northwest by 6 m depth near the existing wharf head. In 6 m depth the majority (90%) of waves occur from 332 to 335 degrees with periods from 11 to 15 s. A subset of wind waves generated locally within Petre Bay occur from 350 to 90° and reach heights of up to 1.6 m with periods up to 5 s.

Overall, over 50% of significant wave heights are less than 0.5 m with a further 30% between $H_s = 0.5 - 0.75$ m. Around 6% of waves exceed 1 m with a maximum significant wave height of 2.19 m occurring in August 1988. A greater proportion of larger waves occur during winter rather than summer, although waves exceeding 1.75 m can occur at any time of year.

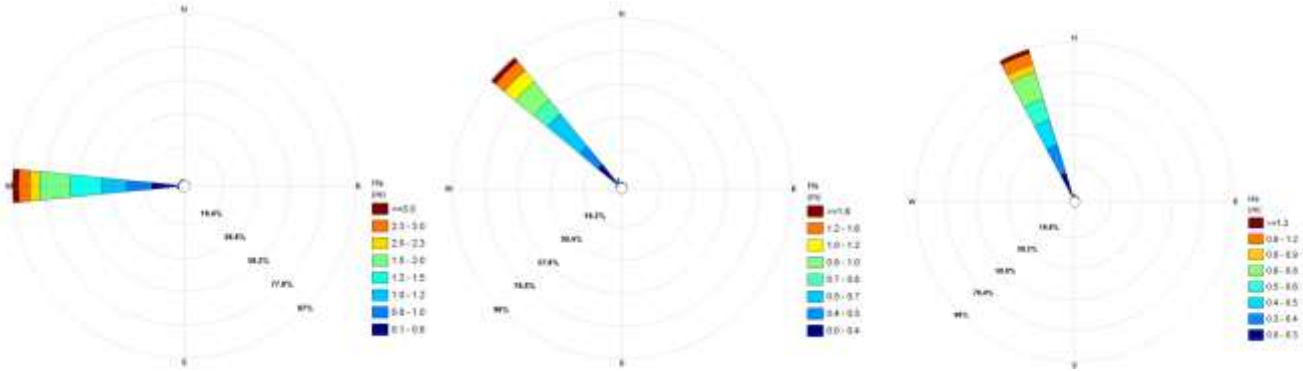


Figure 2-16: The transformation in the wave direction rose from 20 m depth (left) to 10 m (centre) to 6 m depth (right) (source: Metocean, 2015a)

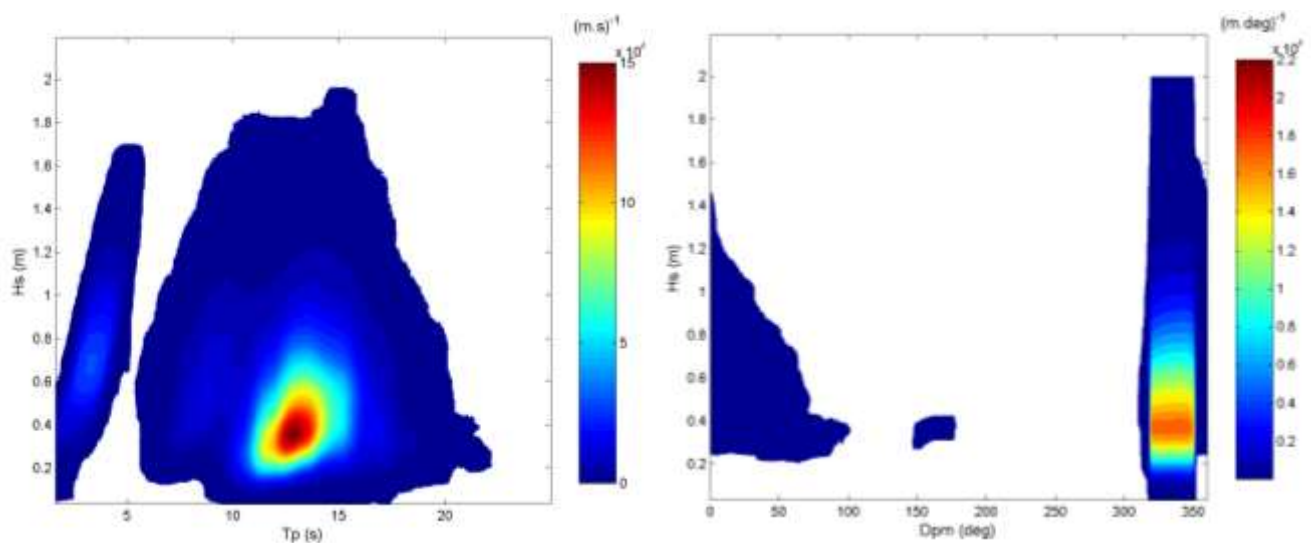


Figure 2-17: Density plot of total significant wave height vs peak wave period (left) and significant wave height vs peak wave direction (right) at outpoint point S06 (source: Metocean, 2015a)

Table 2-6: Annual significant wave height exceedance probabilities at S06

H_s (m)	Exceedance (%)	Average number of days per year exceeding
0 - 0.25	8.3	30
0.25 - 0.5	43.4	158
0.5 - 0.75	29	106
0.75 - 1.0	12.7	46
1.0 - 1.25	4.5	16.5
1.25 - 1.5	1.51	5.5
1.5 - 1.75	0.5	0.4 (10 hours)
1.75 - 2.0	0.01	0.04 (1 hour)

Waitangi Wharf Coastal Processes Report

2.8.2 Extreme wave climate

An extreme wave climate including both swell and local wind waves has been produced for output point S06 in 6 m water depth approximately 80 m north of the existing wharf (refer Figure 2-15). The results show a 100 year ARI swell-dominated extreme wave height of $H_s = 2.22$ m with an associated period of 13.8 s. A 100 year ARI wind-sea height of $H_s = 2.01$ m has an associated peak period of 5.5 s. Wave heights at the wharf structure are expected to be slightly smaller due to the increased sheltering nearer the shore. Note that waves of up to twice the significant height could occur during extreme conditions, i.e. over 4 m for the 100 year ARI swell event.

Table 2-7: Extreme wave climate at output point S06 (source: Metocean, 2015a)

Parameter	Unit s	ARI (years)							
		5	10	20	50	100	200	500	1000
Wind speed (10 min mean)	m/s	27.3	28.7	30.0	31.7	33.0	34.3	36.0	37.2
Significant wave height, H_s (swell dominated)	m	2.05	2.10	2.14	2.18	2.20	2.22	2.23	2.24
Peak wave period, T_p (swell dominated)	s	13.3	13.4	13.6	13.7	13.7	13.8	13.8	13.9
Significant wave height, H_s (wind-sea dominated)	m	1.71	1.79	1.86	1.95	2.01	2.06	2.12	2.15
Peak wave period, T_p (wind-sea dominated)	s	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.7
Maximum individual wave height, H_{max}	m	4.43	4.59	4.74	4.93	5.06	5.20	5.37	5.49
Maximum individual crest height, C_{max}	m	2.38	2.47	2.55	2.66	2.73	2.80	2.90	2.97

2.8.3 Nearshore processes

As waves move into the nearshore they interact with the seabed and begin to turn towards the seabed contours (known as refraction) and as they pass a headland, wave energy is transferred along the wave crest into the shadow region (known as diffraction). The spectral SWAN wave model does not resolve wave diffraction well and phase resolving (wave by wave) models are preferred.

The numerical refraction-diffraction model CGwave has been used to model wave propagation from 20 m water depth into south Waitangi Bay using a high resolution nearshore digital terrain model described previously (Metocean, 2015b). CGWAVE simulates the combined effects of wave refraction-diffraction within the mild-slope equation, and includes the effects of reflection, wave dissipation by friction, breaking, nonlinear amplitude dispersion, and harbour entrance losses (Panchang, and Xu, 1995) which means that it is ideal for resolving complex localised bathymetry and harbour walls in a numerically-efficient manner. This numerical model is an industry-standard tool for use in harbours and coastal regions with complex bathymetry.

Waves have been modelled for a range of incident directions at the boundary between 250 and 280° with periods between 10 and 16 s giving a total of 16 separate monochromatic simulations. Wave height is arbitrary with an adopted height used to find relative height elsewhere within the modelled domain. Initial modelling was undertaken using the existing bathymetry, reclamation and piled wharf structure. An example wave crest and wave height output is shown in Figure 2-18 for 14 s waves occurring from 270° at the S20 offshore boundary (i.e. the average direction). Results show that waves refract in towards Waitangi Bay reaching the wharf from an almost north direction and wave energy moving into this shadow zone through diffraction. While the majority of wave energy reaches the beach north of the Nairn River, energy is focussed onto the reef offshore of the low headland adjacent the Nairn River and on the reef offshore of the hotel. Very little wave energy reaches the shadow zone west of the hotel reef.

Waitangi Wharf Coastal Processes Report

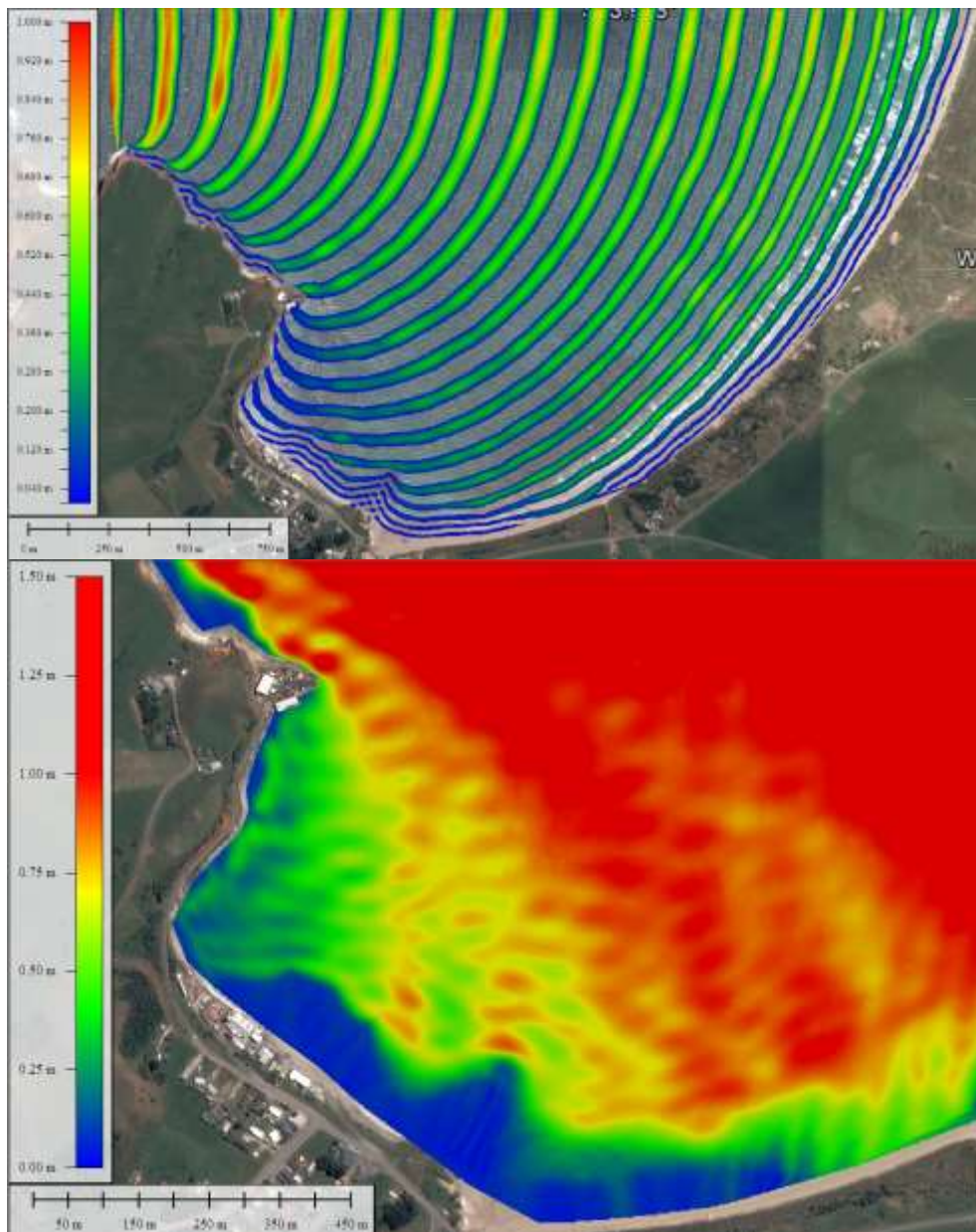


Figure 2-18 Example CGwave wave crest output (top) and wave height (bottom) for a 14 s wave occurring from 270° at the S20 offshore boundary

2.8.3.1 Wave reflection

Reflection off the seawall can be observed during high water levels. This reflection deflects waves that have refracted around the existing reclamation and are approaching from a northeast direction towards the beach from a northwest direction. While this has only been observed in relatively benign conditions, similar reflection reportedly occurs during high energy conditions.

Waitangi Wharf Coastal Processes Report



Figure 2-19 Road seawall reflecting oblique incoming waves towards the beach

2.8.3.2 Wave run-up-and setup

Wave set-up is a super-elevation of the mean water surface over normal ‘still’ water level due to wave action alone. Following wave breaking, on-shore directed momentum flux or radiation stress is induced due to dissipation of wave energy. To balance this momentum flux, a pressure gradient is created by elevation of the water level. Water level is highest at the beach face, and drops towards the break point, creating an offshore gradient (Figure 2-20). An associated process is wave run-up, which varies with breaking wave characteristics and beach and backshore slope and material. Wave run-up causes periodic wave swash above the inundation level and may contribute to flooding or cause damage to land and infrastructure within the impact zone.

Based on the extreme wave values derived above and the nearshore wave climate within Waitangi Bay, wave height during a 1% AEP event is assessed (Figure 2-21) and wave setup and runup evaluated according to methods presented within the Coastal Engineering Manual (USACE, 2006). Results show wave setup to range from 0.1 to 0.4 m above still water level between the road seawall and open Waitangi Beach and wave run up to range between 0.6 and 1.3m.

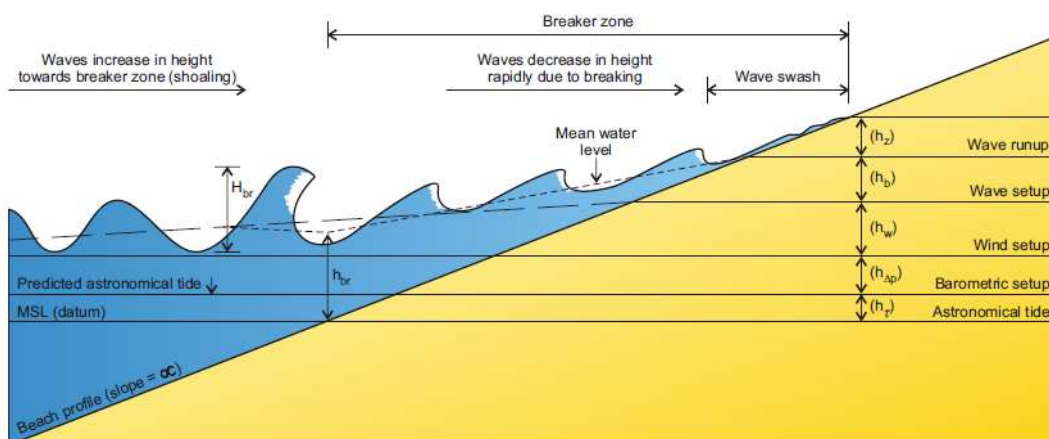


Figure 2-20 Schematic diagram showing components of wave runup level. (Frisby and Goldberg, 1981)

Waitangi Wharf Coastal Processes Report

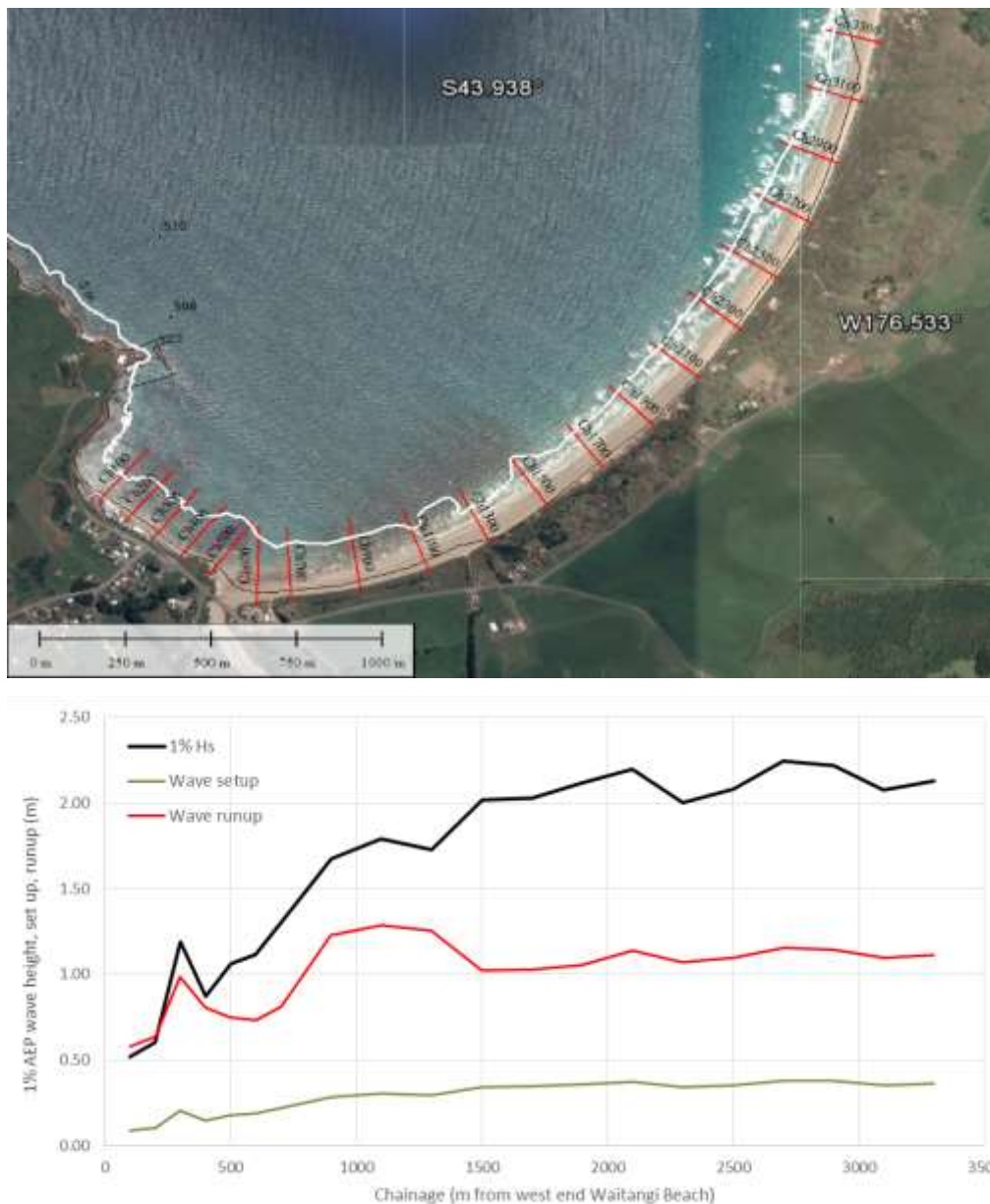


Figure 2-21 Output points around Waitangi Bay at chainage distances from the western end of the beach (top) and the resultant 1% AEP wave height at the 2m depth contour and derived wave runup and setup (lower)

2.9 Nearshore currents and sediment transport

Due to both the low tidal range and open coastal nature, nearshore currents are likely driven by waves and wind shear. These are likely to be orientated in a west to east direction (south to north along Waitangi Beach) due to the prevalent south-westerly quarter wind and wave climate. A small return current (east to west) may occur in the southerly corner of Waitangi Bay due to the water level gradient induced by differential wave setup levels and water flowing from a high to low elevation. It is unlikely that such return current would transport significant sediment volumes.

Sediment transport may occur in both the cross-shore and longshore directions with asymmetry of wave orbital velocities at the seabed driving cross shore transport and breaking wave orientation compared to shore normal driving longshore transport. Cross shore transport is likely to be offshore during storm events, returning onshore during calm periods. While large wave events may occur at any time of the year, they are more prevalent in winter. Erosion events are therefore likely to be concentrated during the winter months and rebuilding occurring over summer months. Beach profile data is not available to quantify the likely magnitude of storm-induced erosion events but based on similar low dissipative profiles along the west coast of New Zealand (i.e. Shand, 2008) the maximum potential horizontal retreat is likely to be in the order of 10-15 m on the open Waitangi Beach and less than 5 m in the sheltered Town Beach (in areas not protected by seawall). Littoral drift is usually

Waitangi Wharf Coastal Processes Report

expressed in m³/year of sand. For comparative purposes, the littoral transport rate under mean wave condition has been calculated for the existing situation using the Kamphuis/Queens sediment transport formula (Kamphuis, 2002, Eqn. 2-1). A summary of the parameters used for littoral transport modelling is presented in Table 2-8. These formulae calculate the sediment transport rate for the entire surf zone based on several physical parameters such as wave height, period and angle, sand grain size, surf zone slope, etc. The Kamphuis Model has been found in good agreement with physical and field studies without such parameter adjustment (Smith *et al.* 2003). Input wave height and direction parameters are obtained from CGwave modelling at intervals around Waitangi Bay (as shown in Figure 2-21) using a mean wave height (1.4 m at location S20) and direction (270 degrees at S20). While this is an oversimplification of the actual processes where waves occur from a range of directions resulting in sediment transport in both directions, bulk transport formulae based on mean conditions have been found to provide good indication of general trends (Kamphuis, 2010) and for the comparative purposes used here are deemed sufficient.

$$Q_s = \frac{7.3}{3600} H_b^2 T_p^{1.5} m_b^{0.75} D_{50}^{-0.25} \sin^{0.6}(2\alpha_b) \quad (2-1)$$

Table 2-8 Sediment transport parameters

Parameter	Physical Description	Value
Q_s	Littoral transport rate	[m ³ /s]
ρ_w	Density of sea water	1025 [kg/m ³]
ρ_s	Density of sand	2650 [kg/m ³]
γ	Breaker index	0.65 [-]
n	Porosity	0.40 [-]
H_b	Significant wave height at break point	Varies [m]
α_b	Wave angle at break point	Varies [°]
T_p	Peak wave period	12.5 [s]
m_b	Bed slope at break point	0.014 to 0.002 [-]
D_{50}	median grain size	0.125 [mm]

Results (Figure 2-22) show the mean significant wave height and peak period for swell, compared to shoreline orientation and the potential longshore sediment transport capacity under these swell conditions. Results show a general south to north transport, driven by the dominant south-west wave direction and increasing as the coastline becomes more exposed. However, the lack of supply from the western end of the bay and observed lack of sediment at the base of cliffs or on the beach indicates that the system contains a dearth of sediment. Therefore, while the potential sediment transport capacity can be calculated, the actual transport is likely to be significantly lower owing to this deficit. A reduction in transport rate is observed between chainage 500 and 700 m in front of the Nairn River Entrance. This reduction is likely due to the effect of the submerged reef fronting the low tuff headland which rotates the incoming waves to near shore parallel. While a large sediment accumulation is not evident at this location, the Nairn River is a sediment sink (refer following section) and accumulation has recently occurred over several hundred metres to the north.

Waitangi Wharf Coastal Processes Report

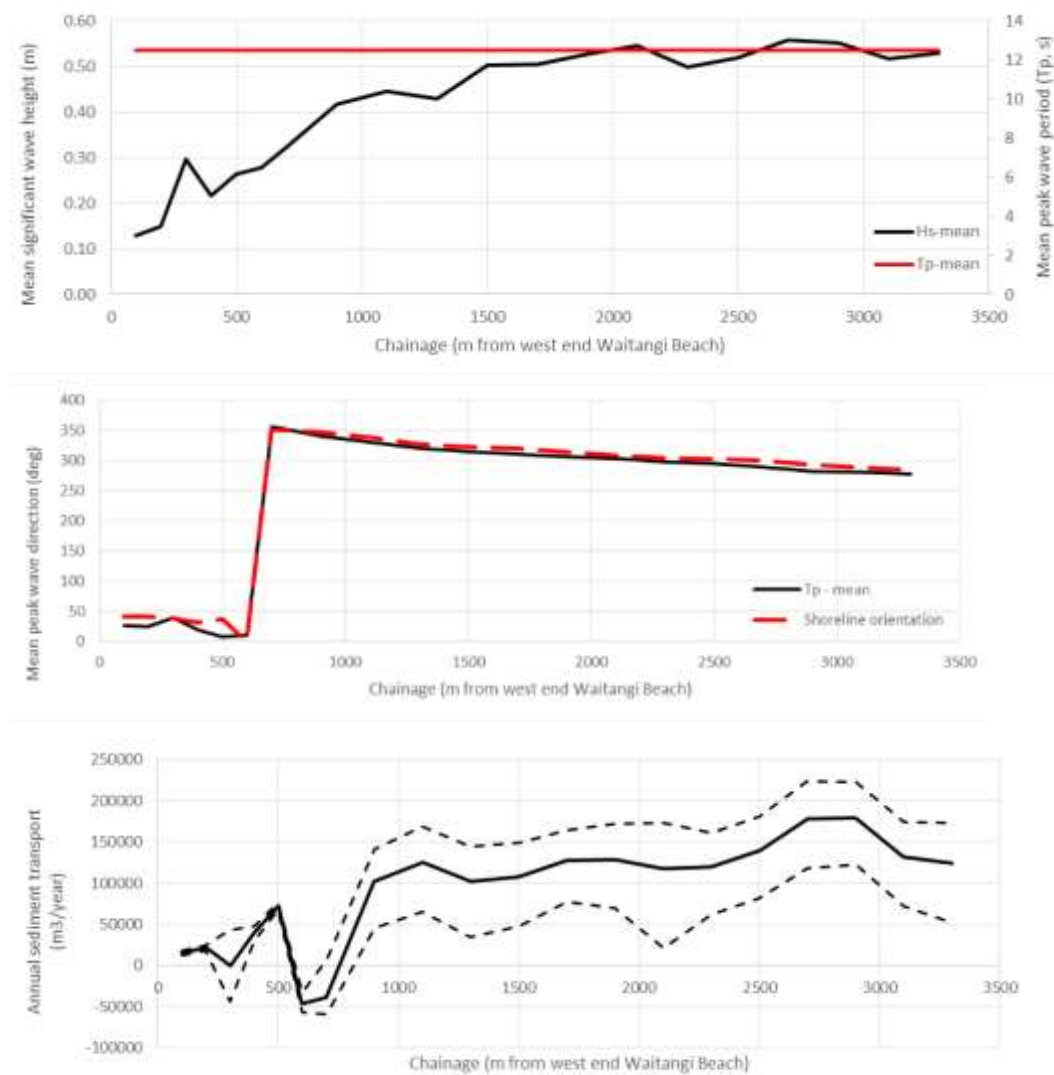


Figure 2-22 Annual mean wave height and period (top), direction and coastline orientation (middle) and potential longshore sediment transport capacity (lower) including the effect of $\pm 5^\circ$ wave directional error

2.10 Nairn River

The Nairn River discharges into Waitangi Bay adjacent a Tuff Headland (Appendix A, Photograph 21). Williams (1995) reports that the Nairn River has a total catchment area of 6500 ha with a mean annual flow in the upper river of $0.56 \text{ m}^3/\text{s}$. Due to the relatively low flows and the moderate wave energy and potential sediment movement at the mouth, the lower Nairn River is a sediment sink and contains large volumes of marine sediment (beach sands) that has been moved into the river mouth by wave processes and partially blocked the entrance. Such sediment transport dynamics are typical of high energy coastlines with entrances often becoming completely blocked until large rainfall events cause the waterway to break out with sediment redistributed back onto the beach. Once the flood water has drained waves begin pushing sediment back into the entrance and the refilling process begins again. These river systems are known as Intermittently Closed and Open Lagoons (ICOLL). Where flooding behind such entrances is problematic (particularly immediately before a breakout) it is often managed by manual excavation of sand from the river mouth.

The bridge over the lower Nairn River was initially constructed in 1947 and has reduced the width at the entrance from an estimated 70 m initially to 35 m today. Early imagery of the lower Nairn River (Figure 2-23) showed similar coastal sediment accumulation indicating that this has been a long-term process. Sediment accumulates over a $15,000 \text{ m}^3$ area up to 300 m up-stream of the Waitangi Rd Bridge with historical imagery in Figure 2-24 showing the extents and volume of sediment vary over time. While geotechnical investigation and long-term monitoring is required to make accurate estimates of sedimentation volumes and rates, it is likely that the lower river contains between 5,000 and $30,000 \text{ m}^3$ of marine sediment at any time.

Waitangi Wharf Coastal Processes Report

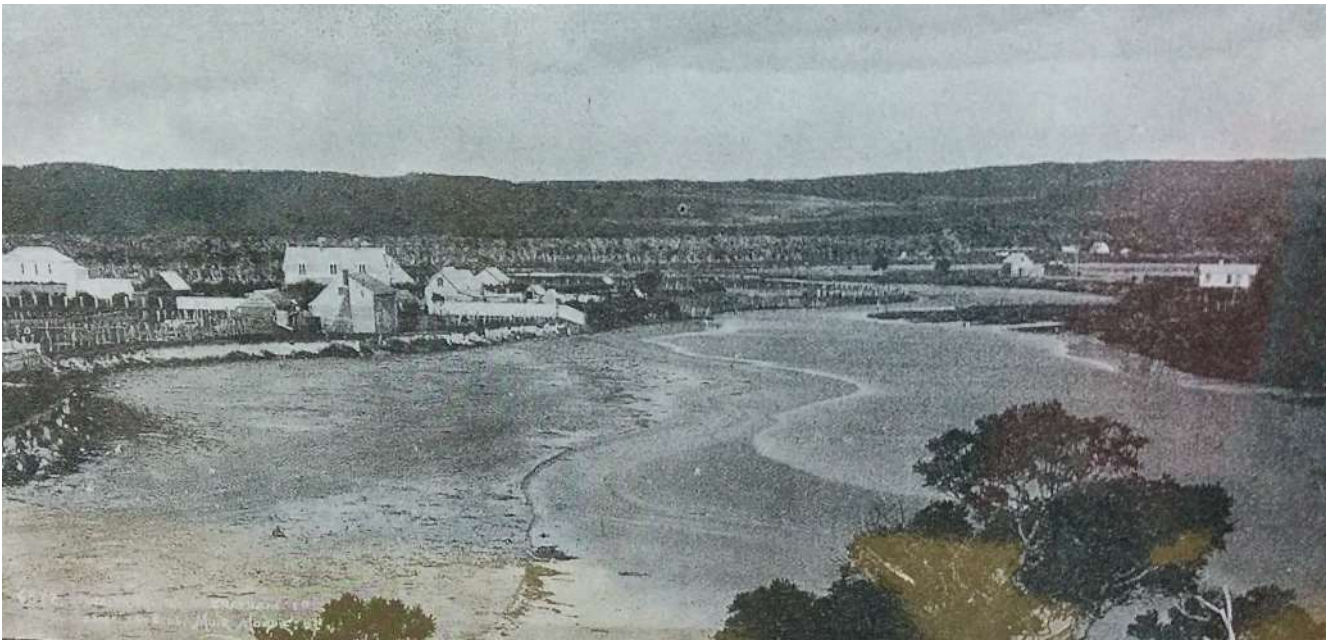


Figure 2-23 View of the Nairn River circa 1910. Source: Waitangi Museum



Figure 2-24 Example of sediment accumulated in the lower Nairn River in 1969 (left), 1982 (centre) and 2013 (right)

2.11 Coastal stability

2.11.1 Equilibrium planform

The equilibrium coast angle within southern Waitangi Bay was modelled using the software Mepbay (Klein et al., 2003) which is based on the parabolic bay model of Hsu and Evans (1989). The current port reclamation is assumed as the headland control point with incoming wave angle aligned to the dominant offshore direction. Results (Figure 2-25) show that the beach geometry of southern Waitangi Beach closely approximates a parabolic bay shape which is typical of headland controlled beaches and indicates that the southern part of the bay is close to dynamic equilibrium.

The beach fronting Waitangi Township (termed the Waitangi *town beach*) is out of alignment from the equilibrium coast angle within the wider bay. This beach differs from that to the east in that it is a perched beach, with a layer of sand overlying a rock platform at the toe of a tuff bank. It is likely that this area is being maintained in its present position/ alignment by the offshore reefs and the small rock outcrop at the eastern end of the beach. Analysis of historical aerial photographs (Section 2.4) show that this outcrop, comprised of a weak tuff material, has eroded up to 9m since 1969. As this headland retreats, the control on the beach is lost and sand can migrate to the east.

Waitangi Wharf Coastal Processes Report

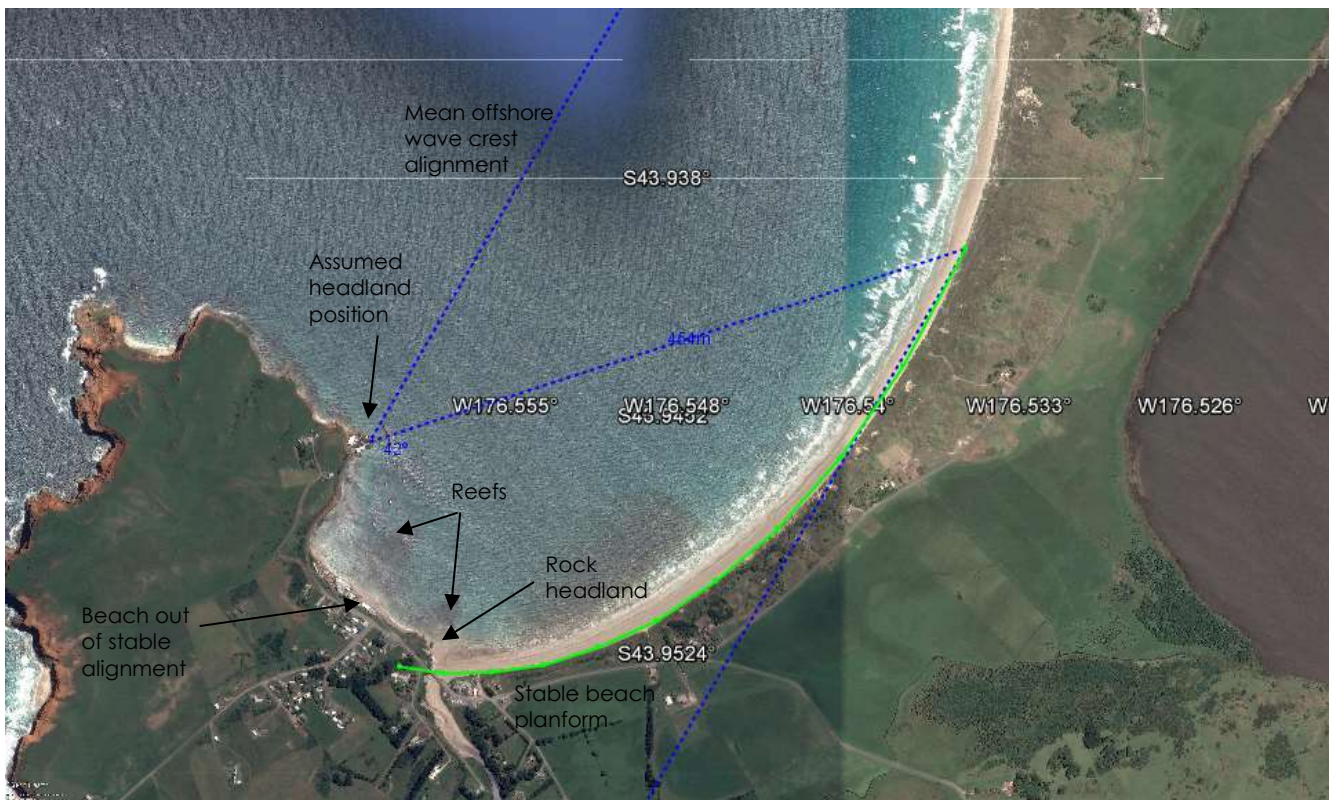


Figure 2-25 Analysis of an equilibrium planform for southern Waitangi Bay

2.11.2 Climate change effects

As discussed previously, sea levels have been rising around New Zealand over the past century and are expected to continue to rise in the future. As sea level rises the morphology of the beach profile is expected to respond. The most widely known model for this beach response is that of Bruun (1962). The Bruun model assumes that as sea level is raised, the 'equilibrium profile' is moved upward and landward conserving mass and original shape (Figure 2-26). This profile translation effectively results in a recession of the coastline, although the actual coastal response will depend on longshore transport and the wider sediment budget. The model may be defined by the following equation:

$$R = \frac{L_*}{B + h_*} S \quad (4-2)$$

Where SL is the landward retreat, d_* defines the maximum depth of sediment exchange, L_* is the horizontal distance from the shoreline to the offshore position of d_* , B is the height of the berm/dune crest within the eroded backshore and S is the sea level rise.

For a given historic sea level rise of 85 mm over the past 50 years, the Bruun model predicts shoreline recession of 4 m at the Waitangi Town Beach, increasing to 7 m to the north along Waitangi Beach. Given the coastline here is close to a stable equilibrium angle (Figure 2-25), historic sea level rise could explain the background erosion observed here.

Waitangi Wharf Coastal Processes Report

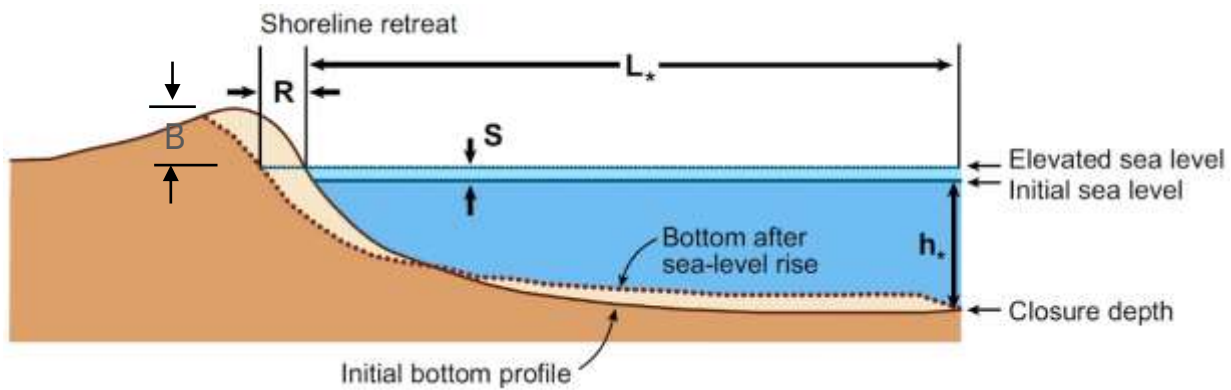


Figure 2-26 Bruun model of shoreline response to sea level rise

2.11.3 Effect of seawalls

Seawalls are constructed where the natural landward migration of the shoreline impacts on human assets. The seawall is intended to protect the land behind the structure only. They do not protect the fronting beach and, if the coast is in a state of long-term recession, the beach will gradually be lost in front of a wall (i.e. as shown in Figure 2-27). Similarly, seawalls will not protect adjacent land from ongoing erosion and the erosion will continue adjacent to any constructed wall, potentially at an increased rate due to turbulence, reflected waves and the deficit caused by sediment trapped behind the wall.

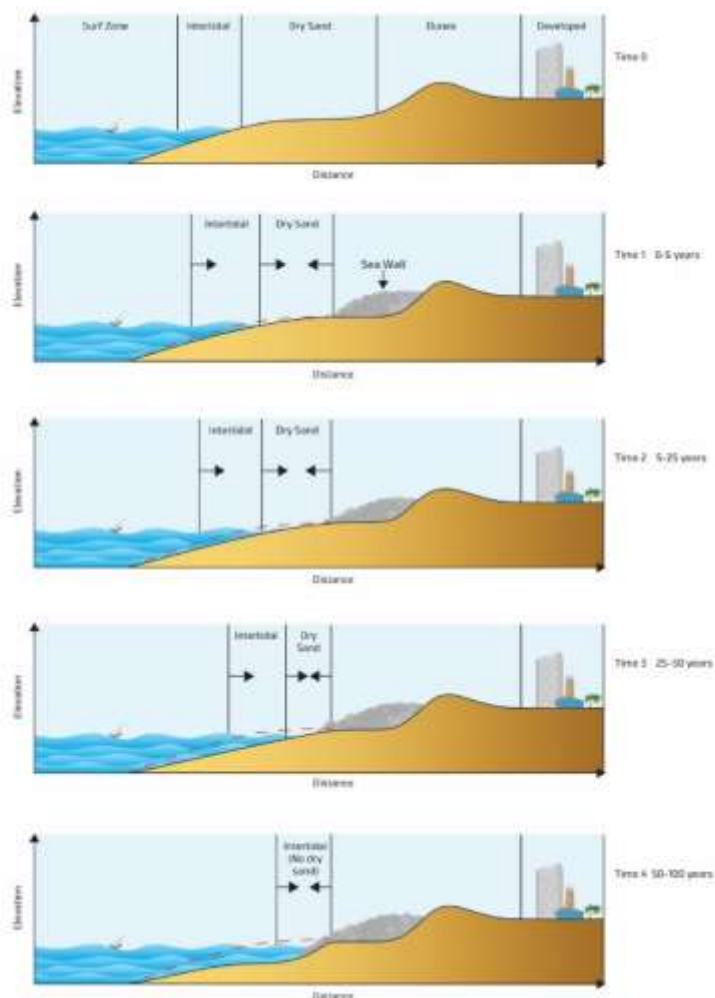


Figure 2-27 Example of the long-term shoreline response to a seawall on an eroding beach

Waitangi Wharf Coastal Processes Report

2.12 Coastal process summary

Waitangi Bay is located at the south-eastern corner of Petre Bay, and is defined on its western side by the rocky headland of Tikitiki Hill, and on its eastern side by Waitangi Beach which extends north to Red Bluff. Waitangi Beach is an accretional feature formed by accumulation of Pleistocene aged marine sediment in the lee of the southern Chatham volcanic outcrops as sea levels stabilised to their present level and has resulted in the formation of the Te Whanga Lagoon system.

Sediment on the beaches are generally of marine origin (Williams, 1995) with small volumes derived from erosion of adjacent Tuff cliffs. Sediment movement along the coastline is expected to be typically south to north, driven by the dominant south-west wave direction. The beach geometry along southern Waitangi Beach to the Nairn River entrance fits a parabolic bay shape that is typical of headland controlled beaches indicating that the southern part of the bay is close to dynamic equilibrium. Analysis of historical aerial photographs (1969 and 1982) and recent satellite imagery shows that the beach adjacent the Nairn River has fluctuated up to 20 m over this time while the beach further north has been in a state of long-term erosion. Such fluctuations are natural processes related to sequences of storms and calm periods and longer-term climatic cycles influencing sediment supply and average wave direction.

The lower Nairn River is a sediment sink and contains large volumes of marine sediment (beach sands) that have been moved into the river mouth by wave processes and have partially blocked the entrance. Such sediment transport dynamics are typical of high energy coastlines with entrances often becoming completely blocked until large rainfall events cause the waterway to break out with sediment redistributed back onto the beach.

The beach fronting Waitangi township differs from that north of the Nairn River. It is a perched beach, with a layer of sand overlying a rock platform at the toe of a tuff bank. While the beach has been present as far back as settlement (refer Figure 2-5), its low volume makes it more susceptible to erosion during storms or to changes in the sediment budget (i.e. the balance of sediment additions and losses) than the open coast beaches. The beach here is out of alignment with the wider bay and we believe is being maintained in its present position/alignment by the offshore reefs and the small rock outcrop at the eastern end. Analysis of historical aerial photographs show that this outcrop, comprised of a weak tuff material, has eroded up to 9 m since 1969. As this headland retreats, the control on the beach is lost and sand can migrate to the east. Early images show a wider beach than presently exists, but also show punga breastwork constructed to combat coastal erosion. This indicates that cycles of erosion and accretion have long influenced this beach, although are likely to have become exacerbated recently by erosion of the adjacent headland to the west, ongoing sea level rise and potentially by wave reflection off the nearby Waitangi Wharf Rd seawall.

The wharf was moved from its original location in the western corner of the bay to the present location at Hanson Point in the early 1930s. Previously surf boats would load cargo at a short jetty and row out to the trading vessels offshore. A 385 ft (117 m) long timber wharf with a 202 ft by 26 ft (60 x 8 m) 'Tee' section was constructed to enable larger trading vessels to berth directly. Depths off the berth at the time of construction were 15 to 17 ft (4.6 – 5.2 m). A road was excavated out of the cliff face to reach the new wharf with a concrete seawall eventually constructed to protect the road. The wharf was upgraded to a reinforced concrete structure in 1979/1980 and a small reclamation at the base of the wharf was extended to approximately 65 m in length (2,800 m²) to allow construction of port facilities.

Analysis of the historic aerial photographs and satellite images shows that the Tuff cliffs to the northwest of the wharf have been eroding at average rates of 0.1 to 0.25 m/year. While this represents up to 1100 m³ of sediment input annually, the fine material is likely to be quickly lost offshore. The lack of sediment accumulation on the seaward side of the reclamation or in the sheltered lee adjacent to the fishing wharfs indicates a lack of sediment in the littoral system. Actual longshore sediment transport rates (i.e. northwest to southeast movement) are therefore likely to be substantially lower than the empirically-derived potential rates.

Waitangi Wharf Coastal Processes Report

3 PROPOSED WORKS

Waitangi Wharf is nearing the end of its serviceable life and requires significant repairs to maintain freight services to the Chatham Islands. The wharf also requires an upgrade to improve the port operations facilities and berthing and usability at the wharf.

3.1 Design philosophy

The project is intended to

- Improve level of service

The existing concrete T-wharf used by commercial vessels currently protrudes into Waitangi Bay and is significantly exposed to weather and sea conditions. As a consequence, berthing vessels in all weather is not possible. From discussions with the commercial vessel operators, it is estimated that the vessels servicing the island each lose on average 40 days per year due to undesirable weather. As a consequence of exposed sea conditions the vessels often:

- Cannot manoeuvre into the wharf berth; and/or
- Cannot unload/load cargo (including any livestock which may be consolidated already in holding pens waiting to be loaded); and/or
- Cannot hold the boat on the berth due to unfavourable conditions; and/or
- Can suffer damage to vessels (and the wharf) when attempting to berth.

This project aims to decrease the number of days lost to undesirable weather by reducing the wave climate at the berth.

- Achieve compliance with current legislation

The project provides an opportunity to upgrade the existing wharf operations to meet the relevant legislative requirements and standards of similar facilities across New Zealand.

- Improve health and safety

The project has been designed to improve the health and safety for port and shipping company employees and the general public. The Health and Safety in Employment Act governs the operations proposed at the wharf.

- To minimise maintenance during the project design life

Due to the remote nature of the site and the difficulty and expense of mobilising plant for upgrade and repair, the design should seek to minimise maintenance requirements over the design life of the project where this is cost-effective.

3.2 Design Conditions

3.2.1 Environmental conditions

The likelihood of a design event impacting a structure is a function of both the probability of event occurrence defined by the annual exceedance probability (AEP) or its inverse an average recurrence interval (ARI) and the timeframe being considered. Given a 50 year design life, there is a 40% likelihood of a 1% AEP event (100 year ARI) occurring or a 5% likelihood of a 0.1% AEP event (1000 year ARI). Given the critical nature of the facility and the difficulty in undertaking repairs, a 0.1% AEP event is deemed appropriate.

Design criteria based on this are presented below:

Waitangi Wharf Coastal Processes Report

Table 3-1 Design criteria for coastal protection works

Design criteria	Commentary	Value
Design life	Time period over which structure is expected to remain functional	50 years
Design event annual exceedance probability (AEP)	Probability of event being exceeded during any year	0.1%
Sea level rise to 2065	IPCC emission scenario A1F1 upper limit	0.5 m
Design water levels	MHWS Annual event at 2065 0.1% AEP at 2065	RL 0.5 m RL 1.30 m RL 1.55 m
Design wave heights	$P_{50\%}$ wave height Annual event inc 20% factor of safety Swell Wind-waves Design 0.1% AEP inc. 20% factor of safety Swell Wind-waves	$H_s = 0.488\text{m}, T_p = 13.0\text{s}$ $H_s = 2.3\text{m}, T_p = 13.0\text{s}$ $H_s = 1.9\text{m}, T_p = 5.0\text{s}$ $H_s = 2.7\text{m}, T_p = 13.8\text{s}$ $H_s = 2.6\text{m}, T_p = 6\text{s}$
Acceptable overtopping discharge	Typical (working) conditions at wharf ($H_s < 0.5\text{m}$) Design 0.1% AEP event	Not hazardous for pedestrians/vehicles ($q < 0.02\text{ l/s/m}$) No damage to pavement $q < 20\text{ l/s/m}$

3.2.2 Design vessel

The proposed works including wharf length and height, breakwater length and requirements for dredging of approaches and berthing have been sized to accommodate a design vessel (refer Pacific Marine Management Ltd. 2015 for details). This design vessel has been sized to accommodate future growth in cargo volumes and has the following characteristics:

- An overall vessel length of 68m;
- A beam width of 11.4m;
- Maximum displacement of 2,631 tons; and
- A maximum operating draft of 4.3m.

3.3 Reclamation

A key physical element of the proposed works is the creation of a new landform extending from the existing reclamation seaward to the extent (approximately) of the existing concrete T-wharf to provide improved port handling and access. This will involve creating 11,780m² of new land (encompassing the existing reclamation) protected by a concrete armour unit revetment to the north, a vertical concrete wall on the east and south-east and a sloping rock revetment to the southwest (Appendix D). The topography of the new reclamation will vary across the site, to accommodate overtopping and provide additional protection from storm surges. The height differences are summarised as follows:

- Port operations and commercial wharf height on the new reclamation: 3.0 m; and
- Fishing wharf height and area: 2.0 m, set lower than the remainder of the port area similar to the existing situation.

Waitangi Wharf Coastal Processes Report

3.4 Breakwater

3.4.1 Planform

A breakwater is a structure designed to absorb wave energy on its seaward face providing a region of reduced wave climate in its lee. Wave energy may reach this sheltered region by being transmitted through a semi-permeable breakwater (rock or concrete armour structure) such as proposed for Waitangi (typically less than 5% wave height) or by refraction and diffraction around the end of the breakwater as shown in Figure 3-1. The breakwater length should be sufficient to achieve the desired reduction in wave height behind the structure.

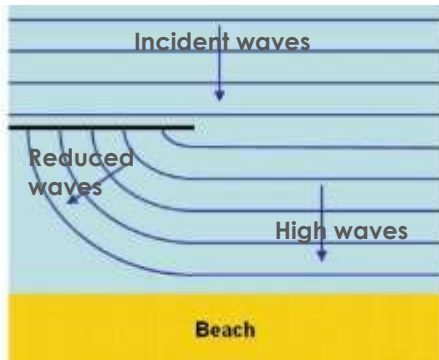


Figure 3-1 Diffraction around a breakwater head

The effect of breakwater lengths ranging from 40 to 90 m from the seaward end of the reclamation (measured to the RL0m contour) were tested. Final breakwater length remains to be finalised following more detailed mooring analysis but the effect of a 90 m long breakwater have been assessed as a maximum potential.

3.4.2 Material

A conventional breakwater contains a granular rock core, overlain by a filter layer to limit the loss of the smaller core material and covered by secondary and primary rock armour to protect the core material from wave attack. The armour layer needs to be large enough to withstand design wave heights without being displaced. Based on the assessed wave climate, a significant wave height of 2.7m with individual waves up to 5m has been design for. Rock sized using standard engineering methods would need to be 7-15 Ton. Suitable rock is only available up to 300kg on island. This larger rock would need be imported from New Zealand and even these are difficult to source.

An alternative to rock are concrete armour units which can be manufactured in a range of designs from simple 'cubes' that replicate rock to more complex shapes that interlock. These interlocking units can be smaller than equivalent rock as they provide support to each other rather than acting as singular units. The disadvantage of these units is if they are damaged others can fail quickly. It is therefore important to oversize units to prevent failure.

After considering a range of potential armour units as described within PIANC (2005), Xbloc® units have been selected as most cost-effective and well-proven unit. Characteristics of Xbloc are:

- Single layer protection therefore required lower material volume;
- Highly interlocking therefore lower unit weight;
- Unreinforced;
- Used widely internationally since 1994 (20+ projects with 230,000 units placed);
- Sizing includes appropriate factors of safety for deep water and breakwater head.

Waitangi Wharf Coastal Processes Report



Figure 3-2 Example of breakwater constructed using Xbloc armour units (source: DMC, 2013)

3.4.3 Geometry

Cross-section of the proposed reclamation and breakwater are shown in Appendix D and have the following characteristics:

On northern side of reclamation and both sides of the breakwater (Appendix D: WAI-15-928, 929)

- Single layer Xbloc armour unit size = 0.75m^3
- Side slope = 4(H):3(V)
- XBase unit at toe
- Toe either clad in 300kg armour rock and rafted on sand or excavated into the underlying rock
- A crest height of RL 4.6 m has been adopted to minimise overtopping to tolerable rates
- Along the reclamation, the crest is three Xbloc units wide backed by a concrete crown wall
- Along the breakwater, the crest is 6 m wide to allow width for construction plant
- Underlain by a 0.8m thick secondary armour layer of 60-300kg local rock
- Underlain by filter layer up to 0.8m thick separating the core from the armour rock
- A Geotextile layer is used to separate the core from the armour layers above mean sea level

On southern side of reclamation (Appendix D: WAI-15-928)

- Two layer rock armour 60-300 kg
- Side slope = 2(H):1(V)
- Toe clad in armour rock and rafted on sand
- Underlain by filter layer up to 0.8 m thick separating the core from the armour
- A Geotextile layer is used to separate the core from the armour layers above mean sea level
- Crest at RL2.4 m with concrete edge used to separate reclamation from revetment armour

Waitangi Wharf Coastal Processes Report

3.5 Dredging

Dredging of seabed material is required to:

1. Excavate material for the breakwater toe
2. Remove potentially liquefiable material (sand) from the base of the vertical H-pile walls
3. Dredge an approach channel and berthing area to accommodate the design vessel. Details on required channel size and depths provided in Pacific Marine Management Ltd. (2015) and shown in Appendix D.

Dredging will be a combination of land-based (1, 2 and part of 3) and marine-based dredging (part of 3).

3.5.1 Land-based

Dredging

It is expected that dredging from land will be undertaken using a long-arm excavator operated from above the high water level. Anticipated volumes are as follows:

- Sand:
 - o 5,000 - 10,000 m³ from under breakwater toe
 - o 750 m³ in berthing pocket
 - o 6500 m³ from under H-pile wall
- Rock:
 - o <200 m³ where breakwater need to be toed into rock

Disposal

Disposal options for the dredged material are proposed as follows:

- Sand:
 - o 3,000m³ to the beach for replenishment,
 - o Up to 14,500 m³ into the reclamation if material is suitable,
 - o Much of the material at the breakwater toe can likely be moved and replaced over the toe rather than removed from the system.
- Rock:
 - o To be placed into reclamation.

3.5.2 Marine-based

Dredging

It is expected that marine-based dredging would be undertaken using a barge-mounted excavator or backhoe. The proposed dredge area is shown in Appendix D and covers a 4,750 m² area of sand and reef to the southeast of the reclamation. The current seabed in this area is of irregular height between RL -4 and -6 and will be lowered to a uniform RL -6m. Anticipated volumes are as follows:

- o Sand: 750 m³ (though likely mixed with some rock)
- o Rock: 2,250 m³

Waitangi Wharf Coastal Processes Report

Disposal

It is expected that marine-based dredging material will be disposed offshore or within the reclamation.

- Sand:
 - o Clean sand may be deposited in the nearshore (in less than 4m depth) to the east of the dredge area and so will remain within the active beach system
- Rock: Options for disposal of rock material include:
 - o Disposal ~400 m offshore in approximately 10 m depth. Using a 100x100 m disposal area, rock would average 0.25 m high or could be concentrated in more defined 'reef'
 - o Disposal; in 30-50 m depth 2.5 km to 7.5 km away
 - o Land based. Could be potentially used in reclamation.

3.6 Beach replenishment

The beach fronting Waitangi township currently has very little dry beach in front of near continuous seawalls. While this beach has likely been continually subject to periods of erosion and accretion (as the existence of historical seawalls suggests), comparisons with historic photographs indicates that the beach has lost significant sediment volume over the past 140 years. This has likely been caused by a combination of ongoing sea level rise and erosion of the controlling headland to the east combined with the presence of backing seawalls behind and adjacent the beach causing wave reflection along the beach.

One solution to ongoing erosion is beach replenishment whereby sediment is placed either along the beach or at the updrift end where it will eventually migrate along the beach. Such replenishment results in a wider beach and can absorb the effects of storm erosion demand without further erosion occurring at the backshore.

It is proposed to replenish the beach at Waitangi with sediment dredged from around the wharf structure as part of construction of the reclamation and breakwater. This dredged sediment has a similar mean diameter ($D_{50} = 0.125\text{mm}$) to the existing beach sand (Figure 3-3) meaning that the beach profile grades are likely to be similar. The grading of the existing beach sand is more uniform than the dredged replenishment material indicating that the replenishment material is better sorted and that some of the placement material is likely to be more mobile and lost from the beach system. An overfill ratio of 1.7 has been initially assessed meaning that approximately 60% of the material placed on the beach will be retained with the remainder migrating alongshore or offshore over time.

In general, the replenished beach profile will have a 5 m wide berm at RL 1 m (approximately 0.5 m above high tide), sloping down at 1(V):12(H) to the existing foreshore (Figure 3-4). This elevation should minimise wave overtopping during most tide/wind combinations. While a 1(V):12(H) slope is steeper than the existing profiles (ranging from 1:12 to 1:20), the replenished profile is expected to flatten over time as the imported material achieves a stable angle that will result in a lowering of the replenished beach crest. Longshore transport will also continue to act on this area reducing total volumes over time.

It is expected that 3,000m³ will be available to be placed on the beach. At an average rate of 25 m³/linear m the material will extend approximately 120 m along the shoreline. A larger volume will be placed at the western (updrift) end, tapering towards the east and it is expected that the material will gradually migrate towards the east. To retain the sand on Waitangi beach would require a coastal control structure such as a groyne at the eastern end of the beach. This is beyond the scope of the present works but could be considered by the community at a later date, potentially during the management of the Nairn River entrance.

The material is expected to be back tipped from the western end of the beach or from the seawalls below Waitangi Wharf-Owenga Road, before being spread along the beach by hydraulic excavator or similar plant.

Waitangi Wharf Coastal Processes Report



Figure 3-3 Comparison of proposed replenishment sediment (left) with existing beach material (right)

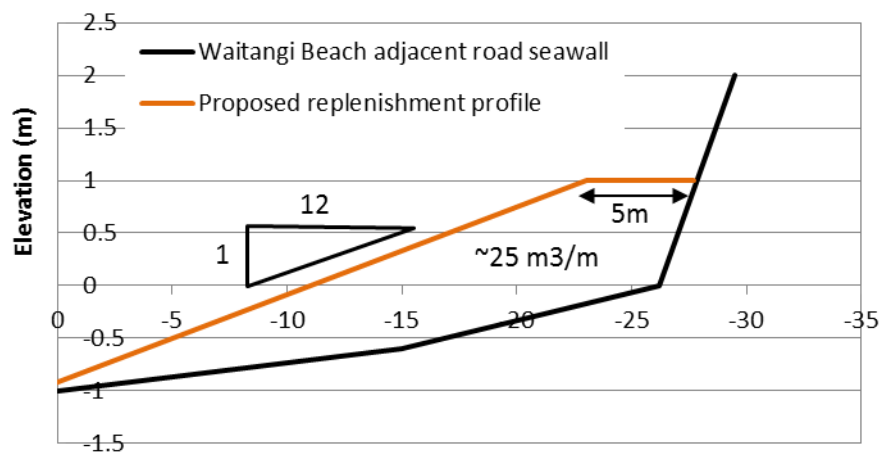


Figure 3-4 Proposed typical replenishment profile

Waitangi Wharf Coastal Processes Report

4 ASSESSMENT OF EFFECTS ON COASTAL PROCESSES

4.1 Shoreline location

Construction of a reclamation and breakwater over 9,000m² will shift the existing shoreline position, as defined by MHWS, offshore.

Placement of dredged sand material on the beach will temporarily move current MHWS location offshore by average of 10 m.

4.2 Waves processes

The construction of a breakwater would shift the headland control point further offshore, modifying incoming swell waves. Wave modelling has been undertaken using the refraction-diffraction model CGwave for both the existing situation and with the addition of the reclamation and various breakwater lengths to assess the change in typical and extreme wave climate in the breakwater lee.

Results are presented within Appendix C and summarised for a particular typical wave case for the existing situation and with the inclusion of a reclamation and 60 m long breakwater in Figure 4-1 and Figure 4-2. Results show that wave climate in the lee of the structures and reaching the Waitangi Town Beach is substantially reduced.

Figure 4-3 shows the change in mean wave climate and direction at the 2 m depth contour. Results show that a 90 m breakwater would reduce the wave climate along Waitangi Town Beach by between 20 and 80% while a 40 m breakwater would reduce the climate between 10 and 70%. A slight increase (up to 5%) in wave height is noted outside the shadow region which is typical along refraction edges. This increase would occur between Chainage 700m (for 40 m breakwater) and 1700 m (for 90 m breakwater) which is along the southern end of Waitangi Beach.

While these changes are very small and may not result in noticeable effects, the change in wave climate may modify longshore and cross shore sediment transport processes as the reduced wave climate transports less sand to the east and causes less movement across the surf zone. These are discussed below.

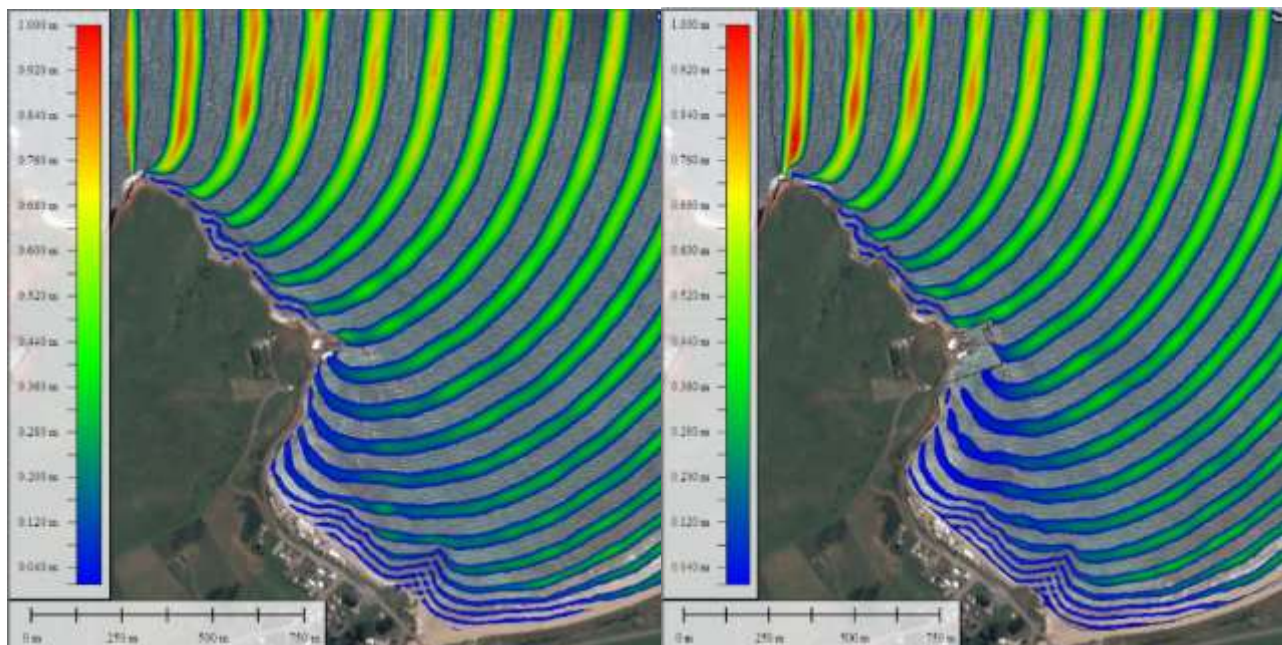


Figure 4-1 Change in wave crest patterns construction of the enlarged reclamation area and breakwater

Waitangi Wharf Coastal Processes Report

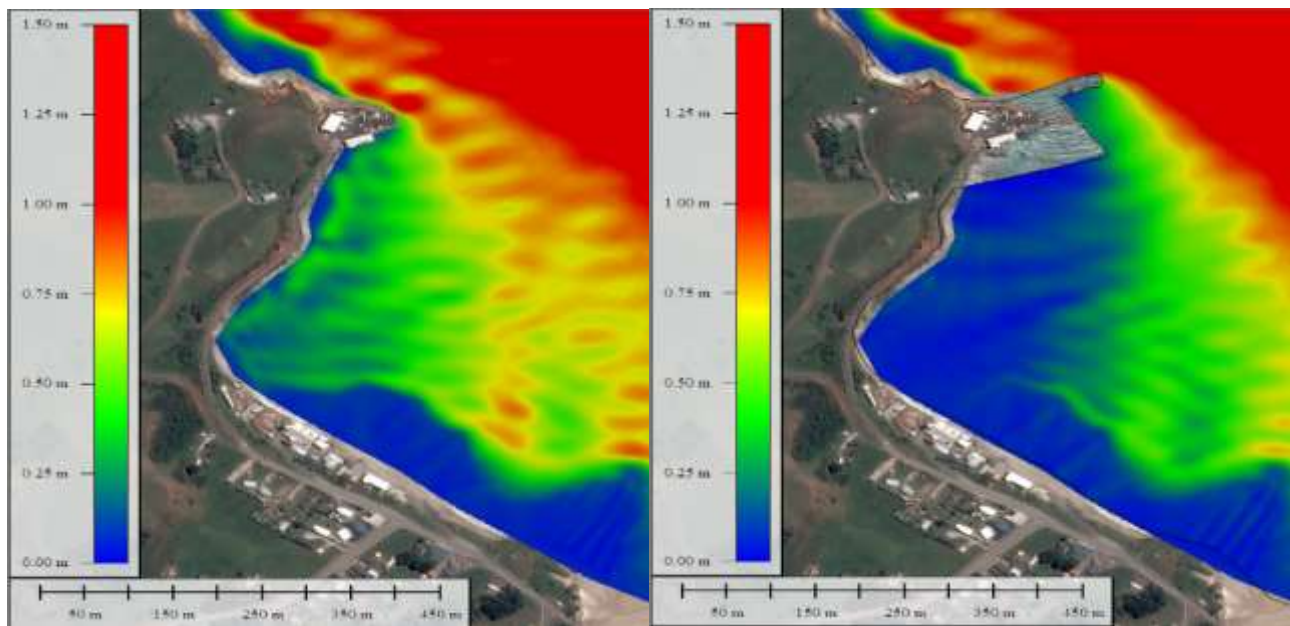


Figure 4-2 Expected effects of the construction on wave processes

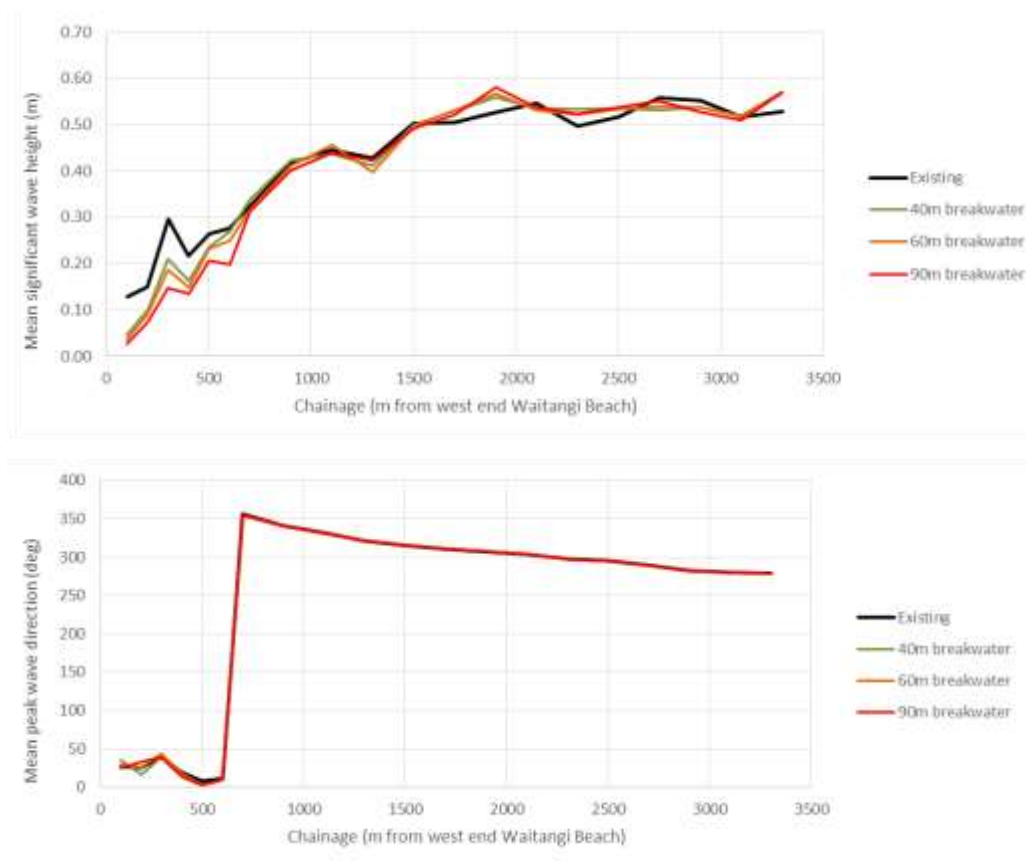


Figure 4-3 Change in annual mean wave height (top), wave direction at the coastline (lower) for a range of potential breakwater lengths.

4.3 Nearshore currents

The effect of the proposed works on nearshore currents are expected to be minimal as tidal currents are not expected to be present within Waitangi Bay due to the low tidal range and open coast nature of the site. The differential reduction in wave climate across Waitangi Town Beach could induce a slight east to west current but is not expected to be sufficient to transport sediment.

Waitangi Wharf Coastal Processes Report

4.4 Sea levels

Proposed works are not expected to have an effect on sea levels. Future sea level rise (SLR) has been accounted for in design of the physical works.

Physical works will assist in offsetting future SLR effects on the western corner of Waitangi Beach by manually placing additional sand on the upper beach to help offset expected SLR-induced erosion.

4.5 Sediment processes

4.5.1 Scour

Scour may occur in front of breakwaters due to increased sediment suspension and transport due to wave turbulence. Van Rijn (2006) presents a number of methods to evaluate scour at the toe of a rubble mound structure. Based on the four standard empirical methods, toe scour in sand under 100 year ARI swell ($H_s = 2.2$ m, $T_p = 13.7$ s) and wind-wave conditions ($H_s = 2.0$ m, $T_p = 5.5$ s) was assessed. Results incorporating a safety factor of 1.3 are shown in Figure 4-4 and show that under design swell conditions, average predicted scour depths range from 1 to 2.2m with a maximum prediction of 3.2m. Under wind-wave conditions, average predicted scour depths range from 1 to 1.7m. It is not known how long these scour depths take to develop and it is likely that these maximum depths could not be achieved during the storm peak (i.e. before wave height begins to reduce).

These scour depths may reach the underlying rock depending on sand depths at the time and have been allowed for in design with larger volumes of rock used along the breakwater toe. This 'toe protection' rock is sized to limit the potential for toe scour damage to the structure.

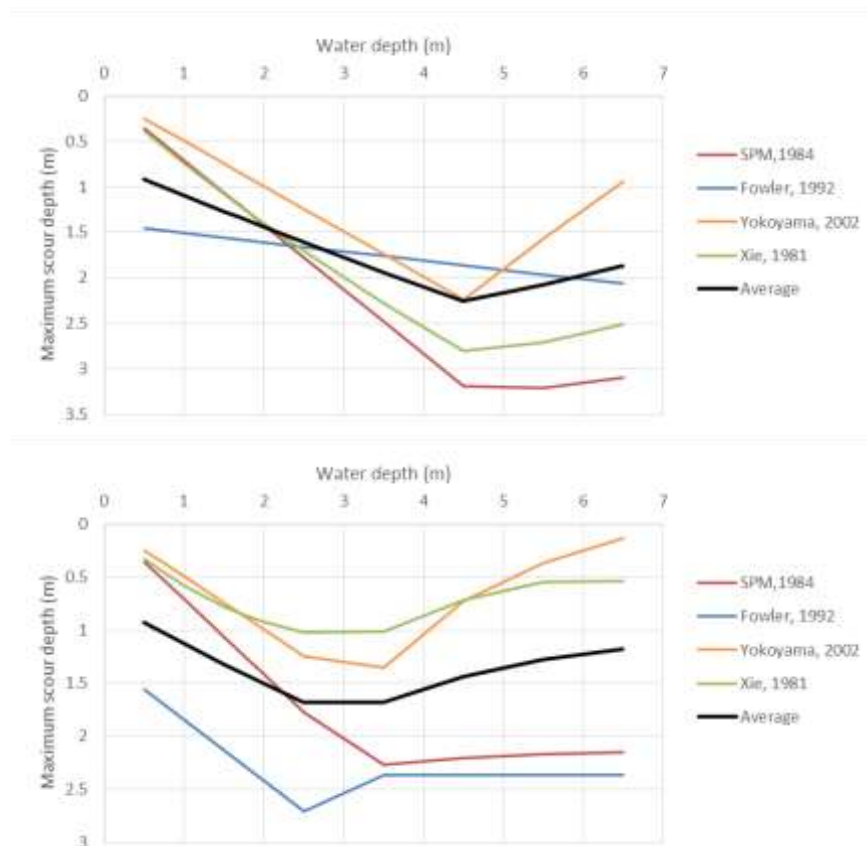


Figure 4-4 Maximum theoretical scour depth for the 100 year ARI swell (top) and wind-wave (bottom) conditions

Waitangi Wharf Coastal Processes Report

4.5.2 Longshore processes

Under wave conditions, sediment is transported along the sea bed and in suspension. Sediment transport along the seabed is highest within the inner surf zone where wave velocities at the seabed are highest and reduces with distance offshore. The longshore transport model Unibest CL+ (Version 7.1, Deltares 2011) was used to compute the annual sediment transport *potential* at the proposed breakwater location. The model (example in Figure 4-5) shows that sediment transport is highest in 0 – 2 m water depth, decreasing to zero transport offshore of 4 m. This model computes the sediment transport *potential* with actual transport dependent on the availability of sediment in the system. Given the rocky nature of the nearshore to the northwest of the breakwater, actual transport is likely to be significantly lower. The key finding, however, is that the potential for longshore transport seaward of the 4m depth contour is effectively zero indicating that sediment is unlikely to be transported around the end of the breakwater that could accumulate in the breakwater lee.

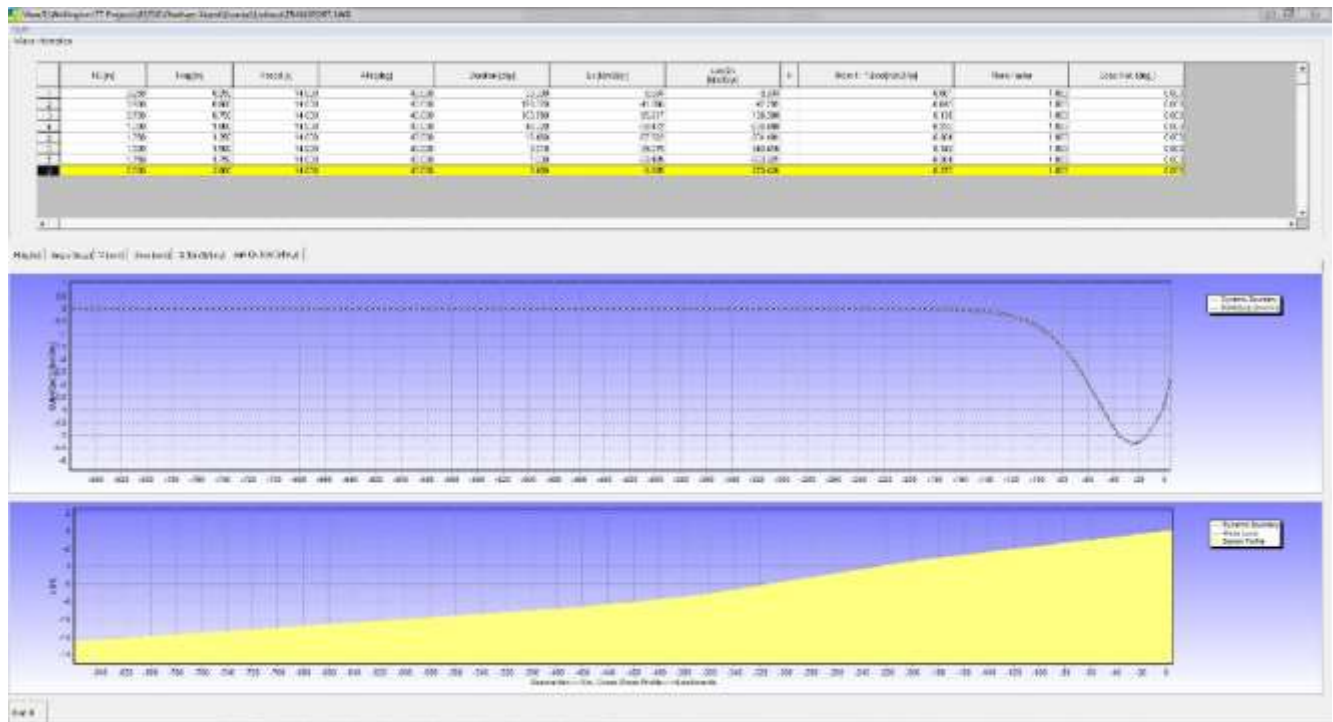


Figure 4-5 Example of longshore sediment transport (cross-shore rate shown in centre panel) northwest of the proposed breakwater calculated using the numerical model Unibest CL+.

The potential for changes in wave processes to affect longshore sediment transport along Waitangi Beach has been assessed using the Kamphuis/Queens sediment transport formula (Kamphuis 2002; Refer Section 2.9). Changes in wave direction and height along the beach for differing breakwater lengths have been assessed based on results of the CGwave modelling assessment (Metocean, 2015). Results (Figure 4-6) show the original south to north longshore transport trend remains increasing to the north as the coastline becomes more exposed.

Results show, similar to wave climate, a slight reduction in sediment transport capacity west of Chainage 1500m (west of approximately 900m east of the Nairn River mouth) with longer breakwater lengths resulting in more reduction in sediment transport. This trend reverses further east with greater transport potential. These results indicate that less longshore transport may occur in front of Waitangi town, potentially increasing beach stability or maintaining the replenishment material for longer. Sediment potential in front of the Nairn River is similarly reduced. This may or may not result in decreased sediment accumulation at the mouth but any changes will likely be negligible. Model results show sediment transport rates could increase slightly (10-20%) between 1 to 2 km northeast of the Nairn River, although these small changes are likely well within the model's margin of error (refer Figure 2-22). Given this area has experienced a background erosion rate of 0.1 to 0.3m/year since 1969, this increased transport could potentially increase erosion pressure here. As described previously, while the potential sediment transport capacity can be calculated, the actual transport is likely to be significantly lower owing to the lack of sediment apparent in the system (Section 2.9).

Waitangi Wharf Coastal Processes Report

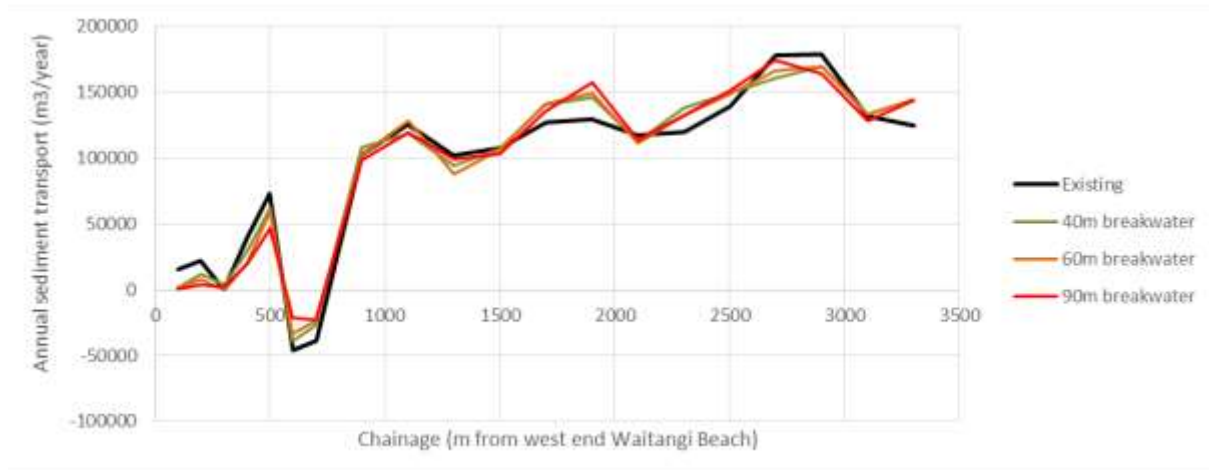


Figure 4-6 Change in potential longshore sediment transport for a range of potential breakwater lengths

4.5.3 Cross-shore processes

To minimise initial and potential ongoing dredging requirements, the wharf has been rotated anti-clockwise to remove the requirement for an approach channel within the bay. Some initial dredging is still required for vessel manoeuvring immediately landward of the wharf. This initial dredging includes removing the upper part (up to 1 m thick) of an irregular reef (estimated at 2,200 m³ rock) and some sandy material (estimated at 750m³).

The rocky nature of the existing reef indicates a lack of sediment in this area. As the dredging is effectively levelling the reef to the elevation of the adjacent seabed, we do not anticipate additional sedimentation on the reef top requiring ongoing dredging.

Sedimentation of the sandy dredge area could occur by cross shore transport from inshore. This later sediment transport mechanism may have additional adverse effects by removing sediment from the upper part of the cross-shore profile, potentially inducing beach erosion. The cross shore sediment transport model, SBeach, has been used to assess the potential for cross shore sediment transport during storm events to move sediment across the profile and cause infilling of the dredged areas. A cross-shore profile extending from Waitangi town beach offshore through the dredge area has been tested. Figure 4-7 shows the location and the proposed dredge profile including the required dredge areas. As is evident, the required dredging is an incision into the profile rather than a deep dredge channel.

The June 1988 storm event was initially tested being the largest on record. Results showed sediment to be removed from the upper beach and deposited on the lower profile, extending to RL -4 m to -5 m but no accumulation in the dredge area. A 100 year return period event based on Metocean analysis was similarly run through the model with results again showing less than 0.1 m sediment deposited in the dredge area (Figure 4-8). We therefore recommend over-dredging by 0.2m to allow for potential offshore sediment transport due to storm events but based on our analysis we do not expect significant levels of ongoing dredging to be required as a result of cross-shore processes.

Waitangi Wharf Coastal Processes Report

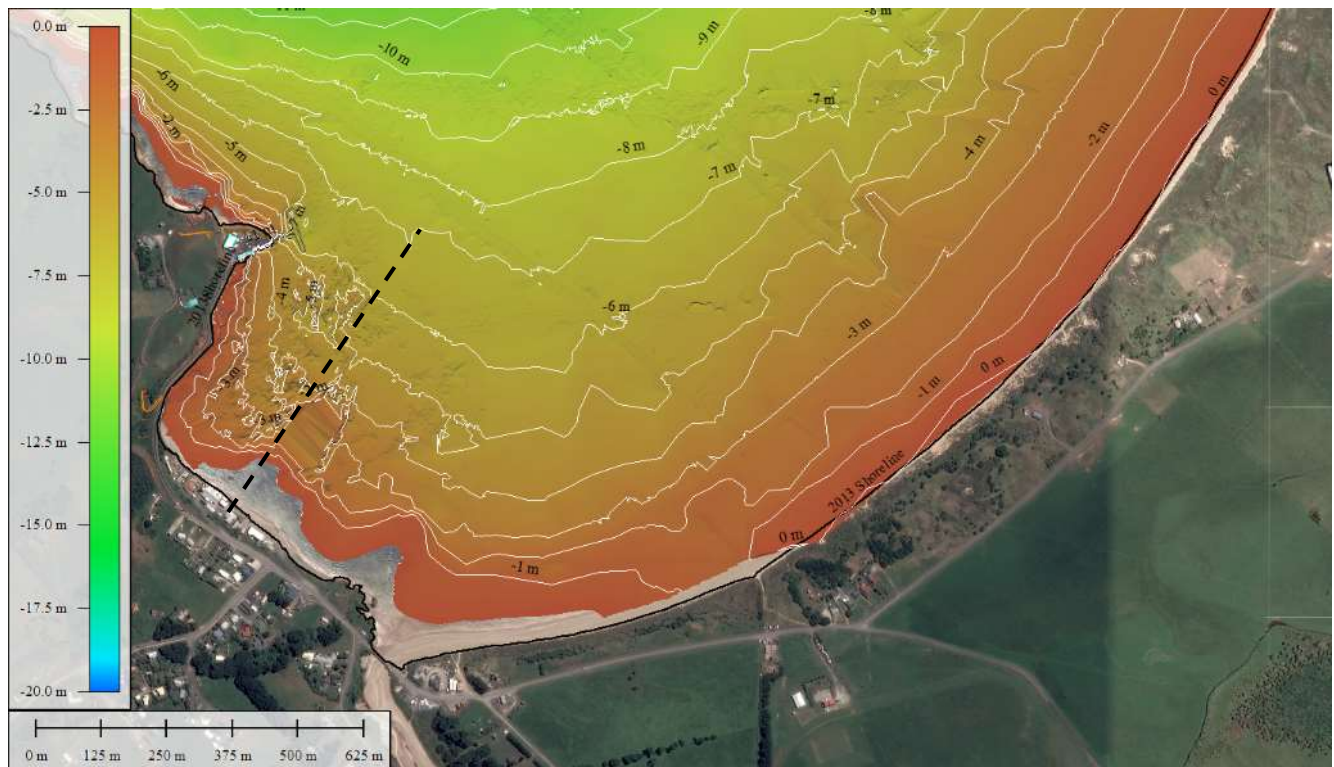


Figure 4-7 Location and tested profile used to test potential cross-shore transport

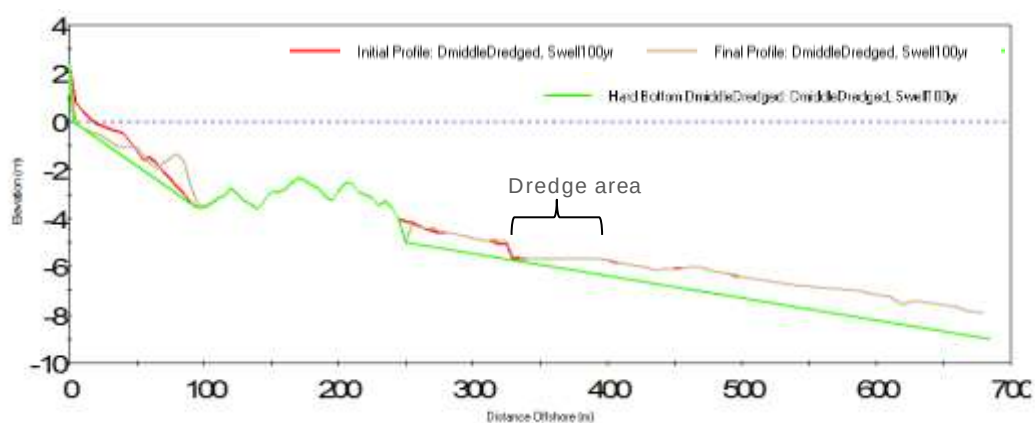


Figure 4-8 Initial and final profiles after a 100 year Return Period storm event. Material is eroded off the upper shoreface and deposited offshore. Minimal accumulation in the dredge areas is evident.

Waitangi Wharf Coastal Processes Report

4.5.4 Suspended sediments

In deeper water sediment may still be transported as the orbital velocities beneath non-breaking waves suspend and move sediment. Once the wave climate is reduced, suspended sediment may settle. The computational software TRANSPOR (Van Rijn, 2004) has been used to assess the *potential* suspended sediment transport offshore at the breakwater and within the shadow zone behind the breakwater. Sediment characteristics used in the model (D_{10} , D_{50} and D_{90}) have been obtained from sediment grading curves and wave characteristics from the numerical SWAN and CGwave modelling. Assessment shows that suspended sediment transport under wave processes may range from 0 to 0.143 kg/s.m depending on wave height. Based on the annual wave climate at the breakwater head, the total sediment transported in suspension in this area may range from 4 to 24 m³/year.m². Given a 130 m long potential shadow zone (i.e. the length of the wharf) where this material may drop from suspension, approximately 500 to 3,000 m³/year may potentially accumulate in the breakwater lee.

However, the existing 65m long reclamation effectively acts as a breakwater inducing a shadow zone in its lee and therefore provides some indication of the *actual* existing sedimentation rates. Anecdotaly, since construction of this reclamation in 1979/1980 no dredging has been required adjacent the Fishing Wharf in the lee of the reclamation. This indicates that *actual* suspended sediment loads are low and it may be inferred that sedimentation behind the proposed breakwater is also likely to be low. We recommend that an allowance is made for 500-1,000 m³ of sediment accumulating annually in the breakwater lee. This would likely equate to at between 0.05-0.1 m/year at the outer edge of the breakwater increasing to 0.1-0.3 m/year adjacent the wharf.

4.6 Coastal stability

The effect of moving the refraction control point seaward on the equilibrium planform of Waitangi Bay has been assessed using the software Mepbay (refer Section 2.11 for details on initial calibration). Assuming a breakwater length of 60 m, the control point is shifted offshore by 150 m. Results show that the equilibrium planform is extended seaward of the current coastal edge (Figure 4-9).

While Waitangi town beach is not likely affected by this change in equilibrium planform as it is maintained by different controls (i.e. the small eastern headland and offshore reefs), the result indicates that increased erosion pressure on the town beach as a result of the development is unlikely. Some additional accumulation of sediment may, however, occur at the southern end of Waitangi Beach in front of the Nairn Rivermouth (refer section 4.8 for discussion).



Figure 4-9 Analysis of an equilibrium planform for southern Waitangi Bay with reclamation and 60 m breakwater

Waitangi Wharf Coastal Processes Report

4.7 Coastal water quality

4.7.1 Construction effects

Based on sediment samples, dredged material is expected to be clean sand or rock with small amount of fine material. Based on the model Transpor (Van Rijn, 2006) for typical sand material with $D_{50}=0.138\text{mm}$, $D_{90} = 0.28\text{mm}$, $D_{10} = 0.1\text{mm}$ and 3% fines ($<0.063\text{mm}$), average fall velocity for the suspended components is 0.01m/s

The fall duration for this material can be calculated for a range of depths (Figure 4-10). This material may be transported by waves due to the asymmetry in the wave orbital velocities caused by Stokes drift. This has been calculated using Transpor (Van Rijn, 2006) and the distance travelled by suspended sediment particles in falling 4m (typical depth at landward edge of dredge area) is shown for a range of wave heights in Figure 4-10. This figure shows that distances travelled are generally less than 20m for wave heights below 1m. It can be assumed that dredging will only occur in wave heights of less than 1m and therefore any sediment suspended during the dredging process is likely to have reached the seabed within 20m. Wind- and any tidal induced currents are not considered here but, as described previously, tidal currents are expected to be low and prevalent wind directions are from the SW, directing any suspended sediments towards the NE, away from Waitangi Bay. Any turbidity plume is expected to be confined to a 50 m area around the dredge area.

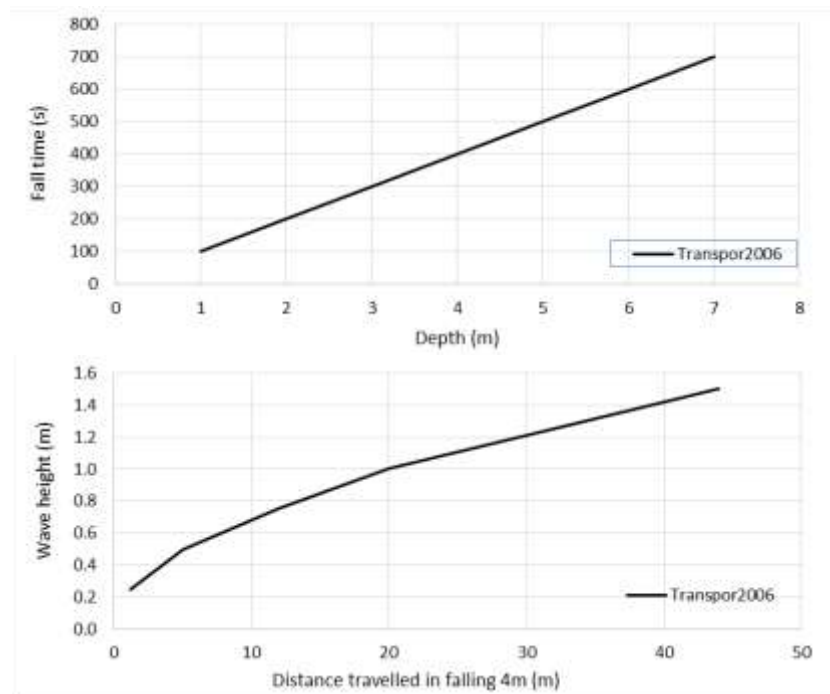


Figure 4-10 Sediment fall duration (s) for range of depths and distance travelled while falling 4m for a range of wave heights

Waitangi Wharf Coastal Processes Report

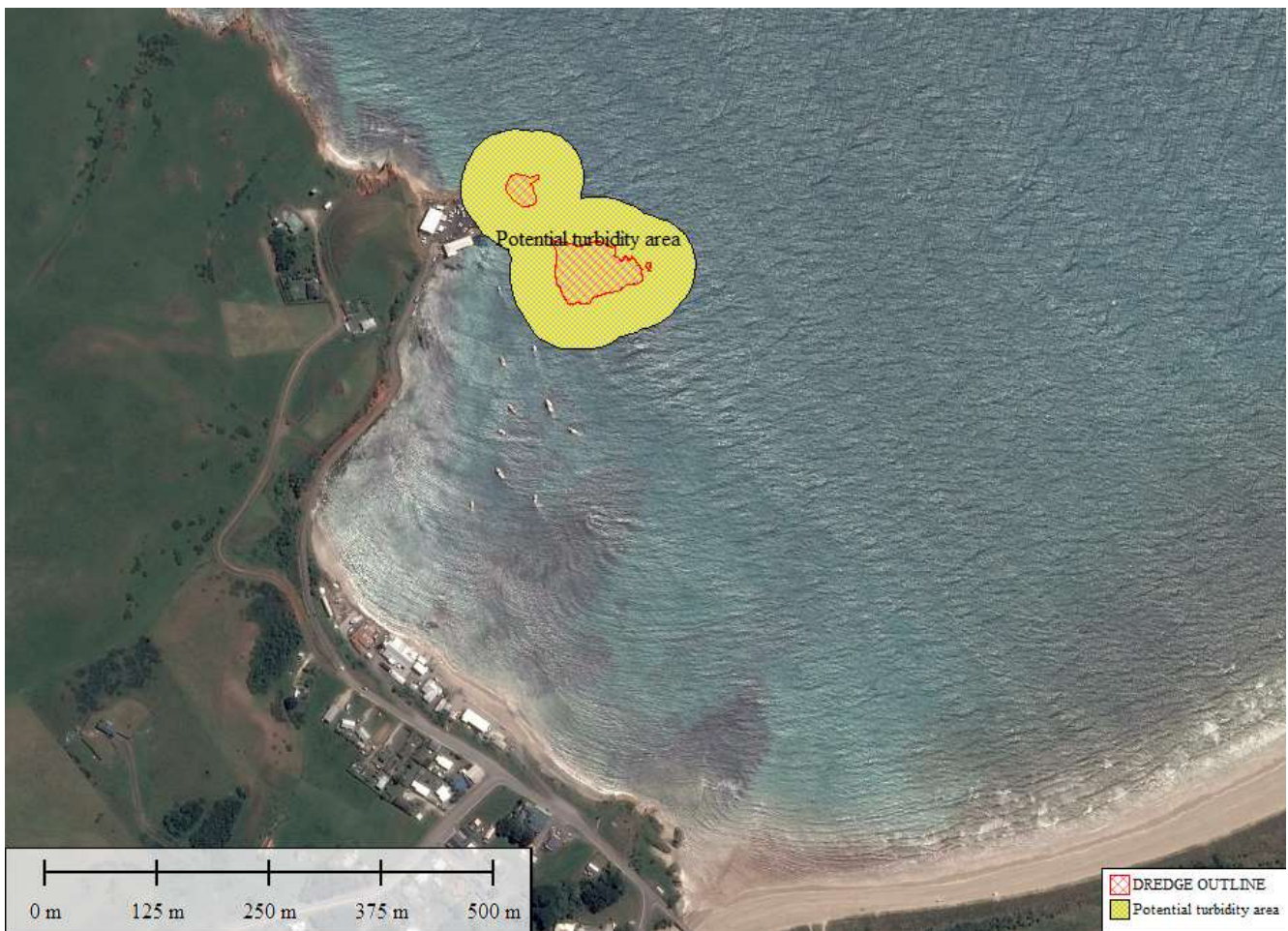


Figure 4-11 Area anticipated to be affected by turbidity during dredging

4.7.2 Long-term

The breakwater extension is likely to result in slightly more enclosure of the beach and nearshore at Waitangi. However, the bay is still largely 'open' with an exposure of 100° from mid beach following construction (c.f. 109° at present). Given the majority of wind is from a westerly quarter which will drive surface water towards the NE and bring in water from the deeper parts of the bay, construction of the proposed works are not expected to affect water exchange or seawater residence time within the Bay.

The water intake for Moana Seafood factory is likewise not expected to be adversely affected.

4.8 River discharge

Wave modelling shows that the wave climate near river mouth may be reduced by up to 25% (Figure 4-3) depending on the breakwater length adopted. Sediment transport potential in front of the Nairn River is likely to be similarly reduced (Figure 4-6). However, as discussed in Section 4.5.2, this may or may not result in increased sediment accumulation at the river mouth. Trends show that sediment transport occurs towards the river from both directions so a reduction in the transport potential may slow accumulation and infilling of the river mouth. Any changes are expected to be minor compared to natural fluctuations.

The periodic, partial blockage of the river mouth is a natural process as described previously and will continue to occur. It is recommended that a river management plan is developed to monitor and periodically open the entrance to minimise the incidences of upstream flooding that currently occur. Dredged material could be placed on Waitangi Town Beach to migrate back or could be placed further north to migrate up Waitangi Beach.

Waitangi Wharf Coastal Processes Report

4.9 Effect on existing structures

The foreshore today at Waitangi Town Beach is backed almost continuously by seawalls. At the western end (Appendix A, Photograph 7, 10) rock and rubble has been dumped to prevent erosion at the end of the road seawall. This rubble wall continues towards the east fronting the fuel tanks (Appendix A, Photograph 11). The rubble does not appear to overlies filter layer of rock (or geotextile filter layer) and so fine material from the slope behind is easily lost by hydraulic wave action. The boat pull-up area is fronted by a low, gravel and fill revetment (Appendix A, Photograph 12). Further east a range of vertical concrete walls in front of the Moana Pacific fish processing factory (Appendix A, Photograph 13, 14, 15). These walls are generally in poor condition and have been undermined in some places with fill lost from behind the walls and collapse of concrete pavements. A sloped vertical seawall fronts the Waitangi Hotel (Appendix A, Photograph 16) and appears in reasonable condition, although the toe footing is becoming exposed in places indicating that the beach levels have lowered since initial construction.

A range of existing structures exist within Waitangi Bay including the stepped, vertical concrete seawall below the wharf road, a rubble revetment at the west end of the beach, a concrete boat pull up area fronted by rock and rubble and a range of vertical concrete seawall in poor to average condition.

While the breakwater is likely to provide additional wave sheltering from swell waves, wind-waves from the north to north-east are likely unchanged. There is therefore unlikely to be significant reduction in damage to coastal structures during north to northeasterly storm conditions. However, the sand placed on the beach will provide some protection to the toe of the structures, decreasing the likelihood of the structures being undermined and/or losing material from behind the wall.

Water discharging from the Moana Pacific fish processing factory is likely to cause additional scour to any beach replenishment material placed or that has migrated in front of the factory. The replenishment material is not expected to have an adverse effect on the discharging of water, although the low level pipes may become blocked if flow is not continuous.

5 SUMMARY AND CONCLUSIONS

The Chatham Islands Port Limited, in conjunction with the Department of Internal Affairs are seeking resource consent applications to undertake the upgrade of Waitangi Wharf in the Chatham Islands. The project seeks to improve the reliability and usability of the existing wharf operations and its facilities, and enhance the resilience of the port infrastructure for the island.

Waitangi Bay is located at the south-eastern corner of Petre Bay, and is defined on its western side by the rocky headland of Tikitiki Hill, and on its eastern side by Waitangi Beach which extends north to Red Bluff. Waitangi Beach is an accretional feature formed by accumulation of Pleistocene aged marine sediment in the lee of the southern Chatham volcanic outcrops as sea levels stabilised to their present level and has resulted in the formation of the Te Whanga Lagoon system.

Sediment movement along the coastline is expected to be typically south to north, driven by the dominant south-west wave direction. The beach geometry along southern Waitangi Beach to the Nairn River entrance fits a parabolic bay shape that is typical of headland controlled beaches indicating that the southern part of the bay is close to dynamic equilibrium, although it may fluctuate by up to 20 m. The lower Nairn River is a sediment sink and contains large volumes of marine sediment (beach sands) that have been moved into the river mouth by wave processes and have partially blocked the entrance. Such sediment transport dynamics are typical of high energy coastlines with entrances often becoming completely blocked until large rainfall events cause the waterway to break out with sediment redistributed back onto the beach.

The beach fronting Waitangi township differs from that north of the Nairn River. It is a perched beach, with a layer of sand overlying a rock platform at the toe of a tuff bank. While the beach has been present as far back as settlement, its low volume makes it more susceptible to erosion during storms or to changes in the sediment budget (i.e. the balance of sediment additions and losses) than the open coast beaches. The beach here is out of alignment with the wider bay and we believe is being maintained in its present position/alignment by the offshore reefs and the small rock outcrop at the eastern end. Analysis of historical aerial photographs show that this outcrop, comprised of a weak tuff material, has eroded up to 9 m since 1969. As this headland retreats, the control on the beach is lost and sand can migrate to the east. Early images show a wider beach than presently exists, but also show a punga breastwork constructed to combat coastal erosion. This indicates that cycles of

Waitangi Wharf Coastal Processes Report

erosion and accretion have long influenced this beach, although it is likely to have become exacerbated recently by erosion of the adjacent headland to the west, ongoing sea level rise and potentially by wave reflection off the nearby Waitangi Wharf Rd seawall.

Analysis of the historic aerial photographs and satellite images show that the Tuff cliffs to the northwest of the wharf have been eroding at average rates of 0.1 to 0.25 m/year. While this represents up to 1100 m³ of sediment input annually, the fine material is likely to be quickly lost offshore. The lack of sediment accumulation on the seaward side of the reclamation or in the sheltered lee adjacent to the fishing wharf indicates a lack of sediment in the littoral system. Actual longshore sediment transport rates (i.e. northwest to southeast movement) are therefore likely to be substantially lower than the empirically-derived potential rates.

Works are proposed to improve the reliability and usability of the existing wharf operations and its facilities, and enhance the resilience of the port infrastructure for the island. These works are expected to include reclamation of land for enhanced port operations, construction of rock and armour revetments to protect the land, construction of a breakwater to protect the wharf berth area, dredging of an approach and berthing area and replenishment of the town beach using dredged material.

These physical works will affect the natural environment in the following ways:

- The shoreline as defined by MHWS will be moved seaward
- The construction of a breakwater would shift the headland control point further offshore, modifying incoming swell waves. This is likely to reduce the swell wave climate along the Waitangi Town Beach by between 20 and 80% and slightly increasing the swell wave climate further north along Waitangi Beach (up to 5%). Local wind-waves are unlikely to be affected.
- The effect of the proposed works on nearshore currents are expected to be minimal as currents are not expected to be present within Waitangi Bay due to the low tidal range and open coast nature of the site.
- The changes in wave climate may modify the longshore transport rates along Waitangi Beach resulting in less sediment transport in front of Waitangi Town and around the Nairn River and slightly increased transport rates further north along Waitangi Beach (1-2 km north of the River). Given this area has experienced a background erosion rate of 0.1 to 0.3m/year since 1969, this increased transport could potentially increase erosion pressure here, however, given the small rates of change, actual effects may not be noticeable.
- Modelling of cross-shore sediment transport indicates that negligible sediment is exchanged between the beach and area where dredging is proposed meaning that any dredging is not likely to have adverse effects on the beach
- Sediment transport rates in front of the Nairn River mouth are likely to be reduced. While this may or may not result in increased sediment accumulation at the river mouth, changes are likely to be minor compared with natural fluctuations. The natural periodic blockage of the mouth is likely to continue and could be managed through periodic manual opening.
- Beach replenishment is proposed for Waitangi Town Beach using sand excavated from the seabed during the construction process. This replenishment will provide additional amenity for beach users, will provide increased protection to the backshore and existing structures from wave processes and will offset ongoing erosion due to sediment deficits and ongoing sea level rise.
- Some sediment, suspended by wave action, may settle in the sheltered lee of the breakwater. While this could theoretically amount to 500 to 3,000m³ annually, the lack of sediment accumulation adjacent to the Fishing Wharf since the construction of the existing 65m long reclamation in 1979/1980 indicates that the actual suspended sediment loads are low and it may be inferred that future sedimentation behind the proposed breakwater is also likely to be low.
- Dredge material is expected to be primarily clean sand and rock and will fall out of suspension quickly (within 10 minutes in typical 4-6m water depth). Turbidity plumes driven by wave processes are therefore likely to be limited to within 50 m of the dredge area. Tidal currents are expected to be low and prevalent wind directions are from the SW, directing any suspended sediments towards the NE, away from Waitangi Bay.

Waitangi Wharf Coastal Processes Report

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REFER CONSENT DOCUMENTATION FOR APPENDICIES

6. Regulatory

6.2 Water Services Bill Submission

Date of meeting	13 February 2025
Agenda item number	6.2
Author/s	Kate Williman, Environment Canterbury

Purpose

For the Council to identify key points to include in the Chatham Islands Council submission on the Local Government (Water Services) Bill.

Recommendations

THAT the Chatham Islands Council:

1. **Agrees** to lodge a submission to central Government on the Water Services Bill, based on key points identified during discussion on 13 February 2025.

Background

1. The Local Government (Water Services) Bill follows on from the Local Government (Preliminary Arrangements) Act 2024. Together, these replace New Zealand's existing water service delivery system, including the previous Local Government (Water Services Entities) Act 2022, which was often known as "Three Waters".
2. The Water Services Bill requires territorial authorities to complete a substantial process to set up new governance arrangements for three waters service delivery. Councils should have been working through this as part of the legislation mentioned above.
3. The Bill is comprehensive and detailed. It has significant implications for territorial authorities because it changes the governance, obligations, and powers for delivering drinking water, wastewater and stormwater services. It also significantly reduces direction for tangata whenua involvement, compared with the current system.
4. The Bill also has significant implications for Councils' functions under the Resource Management Act – including regional Councils' discharge consenting functions. For example, water services will be required to comply with national standards for infrastructure and environmental performance. These standards override RMA direction.
5. Submissions must be lodged by 23 February 2025.

6. Regulatory

6.3 Kaiara Subdivision CIC_2023_008

Date of meeting	13 February 2025
Agenda item number	6.3
Author/s	Paul Whyte (Beca)

Purpose

For the Council to consider the subdivision application.

Recommendations

THAT the Chatham Islands Council:

Subdivision Consent (CIC/2023/008)

1. That pursuant to sections 104, 104B and 108 of the RMA Council grants consent:
To subdivide Part Otonga 1C2 Block contained in Record of Title (RT) WN123/95 into proposed Lots 1 -11, 100 and 101 in two stages, Stage 1 comprising Lots 1-3 and 100 and Stage 2 comprising Lots 4-11 and 101, subject to the following conditions:

Stage 1

General

1. The proposed activity must be undertaken in general accordance with the information and plans provided with the resource consent application and further information received by the Council.

Easements

2. All easements shown on the subdivision plan shall be duly granted and reserved.

Access

3. The design and construction of the shared accessway to Lots 1, 2 and 3 shall be in general accordance with Council's standard drawing 005 (attached) or an otherwise applicable standard at the time of application. The access shall be a single shared accessway, located at the shared boundary of Lots 2 and 3 and in general accordance with the approved Scheme Plan (N230005.04 – V200 – Revision B).
4. Any culvert crossings and inlet / outlet structure to be constructed for each lot must adhere to Council's standard drawings for rural accessways, with culvert pipe size and length to be agreed with the Council Engineer prior to construction. Culvert construction shall be in general accordance with Council's standard drawings 004 and 005 (attached). If a culvert is not required, approval from the Council Engineer shall be required prior to construction.

Electricity Connection

4. The consent holder shall ensure that confirmation be supplied from an electrical supply network operator that an electricity supply network has been provided to or at the boundary of Lots 1-10 or confirmation that an electricity supply from other means is available and able to be provided in respect of Lots 1-3.

Consent Notices

6. Pursuant to Section 221 of the Resource Management Act 1991 a consent notice shall be registered on the Record of Title of Lots 1, 2, and 3 advising that:

Building Development Geotechnical Requirements

(i) All future building development, including earthworks, on Lots 1-3 shall be consistent with a geotechnical report prepared by a suitably qualified geotechnical engineer that is to be provided at the time of the development on the site. This report shall address as a minimum, building siting and design, storm water runoff, and the location of wastewater disposal systems.

Residential Units/Buildings

(ii) A maximum of one residential unit per allotment is permitted.

(iii) Any residential unit shall in general and as far as practicable be located within the Restrictive Land Covenants Building Platforms identified on approved Scheme Plan (N230005.04 – V200 – Revision B), or as otherwise approved by the Chatham Islands Council at the time of application for Building Consent.

(iv) The maximum height of any residential unit or accessory building shall be 8m.

Water Supply

(v) At the time a building consent application is submitted for the residential units on Lots 1-3, it must be demonstrated that:

(a) Sufficient water volume, pressure & flow will be provided in accordance with NZFS Fire Fighting Water Supplies Code of Practice (CoP) SNZ 4509:2008 (or an otherwise applicable standard at the time of application) and that this water supply is accessible for firefighting purposes. Should the water supply be provided by way of tank storage, this storage must be located a safe distance away from any habitable dwelling in accordance with the relevant standard. If an alternative fire-fighting water supply is to be provided the written approval of that system from Fire and Emergency New Zealand (or the equivalent body at the time of application) must be provided with the building consent application and:

(b) Sufficient water storage will be provided onsite for uses other than firefighting supply having regard to such relevant matters as number of people living in the dwelling, roof area and Chatham Islands rainfall.

Wastewater

(vi) The discharge from residential lots shall only be treated domestic wastewater originating from each individual lot.

(vii) The volume of treated wastewater discharged at each residential lot shall not exceed 1.45m³ per day or shall be within the limits specified in relevant regulatory standards as applicable. Anything exceeding these limits shall require resource consent.

(viii) The level of wastewater treatment and method of disposal to land (including land area) at each residential lot shall be consistent with the requirements set out in AS/NZS 1547:2012 (or an otherwise applicable standard of the time) and confirmed during design of each individual wastewater system by a suitably qualified engineer.

(ix) Subject to confirmation during design by a suitably qualified engineer, the treated wastewater at each residential lot shall be discharged to land as shown on the ENGCO Wastewater Plan, dated 5 July 2024 attached to and forming part of approved consent CIC/2023/008. Alternative discharge locations may be suitable subject to design by a suitably qualified engineer.

(x) As far as practical, the treated wastewater at each individual lot shall be evenly dosed over the land application area, at a rate that is consistent with the confirmed infiltration capacity of the soils.

(xi) As a general guide, the vertical separation distance between the base of a secondary treated wastewater dripline system and the highest groundwater level, shall be at least 0.3m for each individual lot. If a primary level wastewater quality is shown to be sustainable for individual lots, through design by a suitably qualified engineer, a minimum vertical separation distance between the base of the disposal system and the highest groundwater level shall be at least 0.6m.

(xii) There shall be no ponding or overland flow of wastewater on the land surface at any residential lot.

(xiii) The minimum separation distances from the wastewater disposal field, at each lot shall be:

- 20m from any surface water body including wetland.
- 50m from any authorised or existing water supply bore or well.
- 1.5m from all boundaries.
- 3m from house foundations

(xiv) Within three months of the installation of the wastewater treatment and disposal system, at each lot, the landowner shall provide to the Chatham Islands Council, Attention Chief Executive Officer, with;

- A signed copy of a compliance certificate attesting that the installation of the wastewater treatment system, land disposal system and any ancillary devices and pipework, has been installed by a suitably qualified person in accordance with the final design and the conditions of approved consent CIC/2023/008.
- A maintenance and monitoring programme of the treatment system recommended by a suitably qualified person. The programme shall be approved by the Chatham Islands Council and be the responsibility of the owner.

- A copy of an “as built plan” which has been signed by the Design Engineer which clearly shows the location of the installed wastewater treatment and disposal system and the minimum separation distances required in accordance with Condition (xiii).

Stormwater

(xv) Stormwater from the roof of the residential units shall primarily be directed to storage tanks on each site. Other stormwater shall be directed to ground and that, as far as practical, site stormwater flows shall be conveyed;

- at least 10m away from the building foundations (or as otherwise determined by a suitably qualified engineer) and
- away from wastewater disposal fields.

Stormwater disposal to ground shall be contained within each lot.

Stage 2

General

7. The proposed activity must be undertaken in general accordance with the information and plans provided with the resource consent application and further information received by the Council.

Easements

8. All easements shown on the subdivision plan shall be duly granted and reserved.

Access

9. Access to Lots 4-10 shall be by a Private Lane, constructed as an unsealed pavement with a minimum width of 4m. Specific pavement layer details to shall be provided to the Council Engineer for approval prior to construction.
10. Access to Lots 4-10 from Waitangi Tuku Road, shall be at right angle to the centre of the curve of the road, to reinforce the priority of Waitangi Tuku Road over the Private Lane. A General Arrangement Plan shall be provided to the Council Engineer for approval prior to construction.

11. Maintenance of the Private Lane shall remain the responsibility of the landowners of Lots 4-10.
12. The design and construction of the crossing point between the Private Lane and Waitangi Tuku Road shall be in general accordance with Council's standard drawing 005 (attached) or an otherwise applicable standard at the time of application.
13. Any culvert crossings and inlet / outlet structure to be constructed at the crossing point must adhere to Council's standard drawings for rural accessways, with culvert pipe size and length to be agreed with the Council Engineer prior to construction. Culvert construction shall be in general accordance with Council's standard drawings 004 and 005 (attached) or an otherwise applicable standard at the time of application. If a culvert is not required, approval from the Council Engineer shall be required prior to construction.

Electricity Connection

14. The consent holder shall ensure that confirmation be supplied from an electrical supply network operator that an electricity supply network has been provided to or at the boundary of Lots 4-10 or confirmation that an electricity supply from other means is available and able to be provided in respect of Lots 4-10.

Vesting

15. Lot 101 shall vest in Chatham Islands Council as Road.

Planting

16. Prior to the application for certification under Section 224(c) of the Resource Management Act 1991, Lot 11 shall be planted in general accordance with the attached Plan CIC/2023/008 Planting.

Consent Notices

17. Pursuant to Section 221 of the Resource Management Act 1991 a consent notice shall be registered on the Record of Title of Lots 4, 5, 6, 7, 8, 9 and 10 advising that:

Building Development Geotechnical Requirements

(i) All future building development, including earthworks, on Lots 14-10 shall be consistent with a geotechnical report prepared by a suitably qualified geotechnical engineer that is to be provided at the time of the development on the site. This report shall address as a minimum, building siting and design, storm water runoff, and the location of wastewater disposal systems.

Residential Units/Buildings

(ii) A maximum of one residential unit per allotment is permitted.

(iii) Any residential unit shall in general and as far as practicable be located within the Restrictive Land Covenants Building Platforms identified on approved Scheme Plan (N230005.04 – V200 – Revision B), or as otherwise approved by the Chatham Islands Council at the time of application for Building Consent.

(iv) The maximum height of any residential unit or accessory building shall be 8m.

(v) A residential unit or residential accommodation is not permitted on Lot 11.

Water Supply

(vi) At the time a building consent application is submitted for the residential units on Lots 4-10, it must be demonstrated that:

(c) Sufficient water volume, pressure & flow will be provided in accordance with NZFS Fire Fighting Water Supplies Code of Practice (CoP) SNZ 509:2008 (or an otherwise applicable standard at the time of application) and that this water supply is accessible for firefighting purposes. Should the water supply be provided by way of tank storage, this storage must be located a safe distance away from any habitable dwelling in accordance with the relevant standard. If an alternative fire-fighting water supply is to be provided the written approval of that system from Fire and Emergency New Zealand (or the equivalent body at the time of application) must be provided with the building consent application and:

(d) Sufficient water storage will be provided onsite for uses other than firefighting

supply having regard to such relevant matters as number of people living in the dwelling, roof area and Chatham Islands rainfall.

Wastewater

(vii) The discharge from residential lots shall only be treated domestic wastewater originating from each individual lot.

(viii) The volume of treated wastewater discharged at each residential lot shall not exceed 1.45m³ per day or shall be within the limits specified in relevant regulatory standards as applicable. Anything exceeding these limits shall require resource consent.

(ix) The level of wastewater treatment and method of disposal to land (including land area) at each residential lot shall be consistent with the requirements set out in AS/NZS 1547:2012 (or an otherwise applicable standard of the time) and confirmed during design of each individual wastewater system by a suitably qualified engineer.

(x) Subject to confirmation during design by a suitably qualified engineer, the treated wastewater at each residential lot shall be discharged to land as shown on the ENGCO Wastewater Plan, dated 10 January 2024 attached to and forming part of approved consent CIC/2023/008. Alternative discharge locations shall be suitable subject to design by a suitably qualified engineer.

(xi) As far as practical, the treated wastewater at each individual lot shall be evenly dosed over the land application area, at a rate that is consistent with the confirmed infiltration capacity of the soils.

(xii) As a general guide, the vertical separation distance between the base of a secondary treated wastewater dripline system and the highest groundwater level, shall be at least 0.3m for each individual lot. If a primary level wastewater quality is shown to be sustainable for individual lots, through design by a suitably qualified engineer, a minimum vertical separation distance between the base of the disposal system and the highest groundwater level shall be at least 0.6m.

(xiii) There shall be no ponding or overland flow of wastewater on the land surface at any residential lot.

(xiv) The minimum separation distances from the wastewater disposal field, at each lot shall be:

- 20m from any surface water body including wetland.
- 50m from any authorised or existing water supply bore or well.
- 1.5m from all boundaries.
- 3m from house foundations

(xv) Within three months of the installation of the wastewater treatment and disposal system, at each lot, the landowner shall provide to the Chatham Islands Council, Attention Chief Executive Officer, with;

- A signed copy of a compliance certificate attesting that the installation of the wastewater treatment system, land disposal system and any ancillary devices and pipework, has been installed by a suitably qualified person in accordance with the final design and the conditions of approved consent CIC/2023/008.
- A maintenance and monitoring programme of the treatment system recommended by a suitably qualified person. The programme shall be approved by the Chatham Islands Council and be the responsibility of the owner.
- A copy of an “as built plan” which has been signed by the Design Engineer which clearly shows the location of the installed wastewater treatment and disposal system and the minimum separation distances required in accordance with Condition (xv).

Accesses

(xvi) Maintenance of the Private Lane serving Lots 4-10 shall remain the responsibility of the landowners of Lots 4-10 (refer to Condition 11 of CIC/2023/008).

Stormwater

(xvii) Stormwater from the roof of the residential units shall primarily be directed to storage tanks on each site. Other stormwater shall be directed to ground and that, as far as practical, site stormwater flows shall be conveyed;

- at least 10m away from the building foundations (or as otherwise determined by a suitably qualified engineer) and
- away from wastewater disposal fields.

Stormwater disposal to ground shall be contained within each lot.

Background

Kaiara Ltd is making application for a consent to subdivide a site located at 546 Waitangi Tuku Road, Chatham Island. The proposal is to subdivide the land in two stages. Stage 1 involves the creation of three lots for residential dwellings in the northwest corner of the site. Stage 2 involves the creation of 7 lots for residential dwellings and one lot to be planted in native vegetation. The proposed residential lots, which range in size from 0.59ha to 1.54ha, will be serviced by individual onsite wastewater systems. Five- bedroom dwellings with standard water fixtures have been assumed. The dwellings will have roof top water collection.

Resource Management Report for Chatham Islands Council CIC/2023/008

Applicant:	Kaiara Limited
Application:	To subdivide a site located at 546 Waitangi Tuku Road, Chatham Island, legally described as Part Otonga 1C2 Block contained in Record of Title (RT) WN123/95 into 12 proposed lots over two stages.
Site Description:	546 Waitangi Tuku Road, Chatham Islands
Zoning:	Rural Zone of the Chatham Islands Resource Management Document (CIRMD).
Type of Activity:	Subdivision Consent– Restricted Discretionary Activity

1. Introduction

This report is prepared by Paul Whyte, Senior Planning Associate of Beca Ltd for the Chatham Islands Council (the Council). The report reviews the application for resource consent and addresses the relevant information and issues raised. It should be emphasised that any conclusions reached, or recommendations made in this report are not binding on the Council.

2. The Application

2.1 General

The proposal is to subdivide a 13ha site located at 546 Waitangi Tuku Road into ultimately twelve allotments in which Lots 1-10 will each contain a building platform for a residence; Lot 11 will be planted in vegetation; and Lot 101 will be vested in Council as Road.

The application site is located approximately 5km southwest of Waitangi and is legally described as Part Otonga 1C2 Block and is shown in Figure 1. The proposed site occupies 13ha of undulating hill country generally in pasture.

The site is currently fenced with two small stock ponds located on the site within proposed Lots 8 and 11. A dwelling is located on an adjoining property to the south. The site and surrounding area are zoned Rural in the CIRMD.

The application is attached as **Appendix A**.

The subdivision is proposed to be undertaken in two stages. Stage One will subdivide the property into four lots. (Lots 1-3 and balance Lot 100) and Stage Two will subdivide Lot 100 into nine allotments. Seven allotments (Lots 4-10) will be for future residential dwellings, one lot to be replanted in vegetation (Lot 11), and one lot to be vested in Council as road (Lot 101).

The plans for the two-staged subdivision are shown in Figure 2 and Figure 3 below and a summary of the allotments is in Table 1.



Figure 1 – Site location



Figure 2 – Stage 1 of the proposed subdivision



Figure 3 – Stage 2 of the proposed subdivision

Accordingly, once the two-staged subdivision is completed, the site will consist of 10 residential lots (Lots 1-10), a vegetation lot (Lot 11) and a lot vested in Council as road (Lot 101). The area and intended use of the lots is summarised below:

Table 1. Area and intended use of allotments.

Allotment	Area (ha)	Proposed Activity
Lot 1	1.0780	Future residential dwelling
Lot 2	1.0776	Future residential dwelling
Lot 3	0.7100	Future residential dwelling
Lot 4	0.5942	Future residential dwelling
Lot 5	0.8920	Future residential dwelling
Lot 6	1.3521	Future residential dwelling
Lot 7	0.8393	Future residential dwelling
Lot 8	0.9257	Future residential dwelling
Lot 9	0.8973	Future residential dwelling
Lot 10	1.5367	Future residential dwelling
Lot 11	3.1884	Replanted in vegetation
Lot 100	10.4278	Balance allotment Stage 1
Lot 101	0.0222	Road to vest in Council

2.2 Building Platforms

The scheme plan shows building platforms on the lifestyle lots (Lots 1-10) which are 25m x 25m, and will be the general area future dwellings (defined as “residential units” in the CIRMD) are restricted to. The applicant advises that the building platforms were chosen after a topographical survey of the site which considered northerly aspects/views, natural amenity spaces, access, sight lines and effluent field space. Furthermore, the applicant has agreed to one residential unit per lot with a maximum height of 8 metres. These restrictions will be enforced by consent notices under section 221 of the RMA to ensure on going compliance. It is also understood the applicant may apply further restrictive covenants on prospective purchasers.

2.3 Geotechnical Considerations

A report undertaken for the applicant *Geotechnical and Wastewater Treatment Report* (Engco 5/07/2024) and included in **Appendix A** to this report notes the following:

- The site can be described as “gently rolling hills” with the majority of sites less than 10 degrees, except for a steeper portion in the western corner. There were no signs of ground cracking. The Chatham Islands is generally in a low seismic event area.
- Eight Dynamic Cone penetration tests (DCP) and six test pits (TP) were conducted on the site.
- Groundwater was not recorded to a depth of 2.0m of the investigation pits.
- “Good ground” was achieved in terms of ultimate bearing capacity (UBC)
- In terms of potential liquefaction induced settlements the site is equivalent to Technical Category 1 (TC 1) which suggest future land damage from liquefaction is unlikely and ground settlements are likely to be within normally accepted tolerances.
- The report recommends implementation of standard compliant systems for building foundations and that specific UBC is carried out at building consent stage and that geotechnical inspections by a professional engineer is engaged for future bulk earthworks or foundation excavations.

2.4 Access

Access to proposed Lots 1-3 will be provided via a new crossing to be established off Waitangi Tuku Road adjacent to the southern boundary of Lot 2, with a right of way proposed to Lots 1 and 3.

At the completion of stage two, access to proposed Lots 4-10 will be provided along a legal road which adjoins the site on the eastern boundary. The applicant will be responsible for constructing the access and maintaining it. Lot 101, which currently protrudes into the legal road will become part of the legal road as a “tidying up” process and improve sight lines.

This matter has been discussed with Nigel Lister, Councils Roading Engineer who in an email dated 1 February 2024 advised he was comfortable with the proposal noting:

- For the Stage One access to Lots 1, 2, and 3 the siting of the proposed combined access is adequate subject to Council Standards in respect of formation and construction.
- For the Stage Two access to Lots 4-10 shall by a Private Lane, constructed as an unsealed pavement a minimum of 4m wide and subject to Council Standards in respect of formation and construction.

Any access to Lot 11 will be via an existing gate in proximity to Lot 1.

2.5 Services

Potable water supply will be provided to the site via water tanks. The water tanks are intended to comply with the potable water supply and firefighting water supply standards. Rainwater yield and storage will be dependent on the future dwelling size and will be confirmed at building consent stage. The applicant suggests a consent notice is used to confirm this.

The applicant advised that there is sufficient area within each lot to accommodate a wastewater system and as part of the request for further information (see 4. below) the applicant supplied a specialist report for the wastewater treatment aspects of the proposal - *Geotechnical and Wastewater Treatment Report* (Engco 5/07/2024) and included in **Appendix A** to this report.

In summary, the report notes that the assessment is a conservative one and that the wastewater design for lots 1-10 shall have regard to the following:

- The soils generally have low permeability and at this stage will require the lots to provide secondary treatment (in addition to the primary treatment of a septic tank and disposal field). Secondary treatment systems typically involve aeration and settling chambers and require pumping.
- Disposal fields should have a minimum area of 750m² and a groundwater clearance of .3m which according to the report can be achieved.
- The wastewater fields should generally be in the locations identified in Appendix E to the report which are generally setback from boundaries, water features and house foundations.

The applicant therefore notes that site-specific testing, analysis and recommendations will be required at Building Consent stage and requests a consent notice to be placed on Lots 1-10 requiring a specific design for the wastewater system to be undertaken by a professionally qualified wastewater engineer. It is understood that these site investigations may negate the need for a secondary treatment system.

The Engco report has been reviewed by Mr Graeme Jenner, wastewater expert of Beca and whose memorandum is attached as **Appendix B**.

In respect of stormwater the applicant has advised that stormwater for the future dwelling of building on the proposed lots will be provided via a combination of roof collection to rain tanks and ground soakage. The Engco report notes the stormwater should be collected and conveyed at least 10m from any structural footprint.

The applicant has indicated that the sites will be supplied with power and internet. This is likely to be provided via solar panels and Starlink respectively, although it is understood power can be supplied from Chatham Islands electricity network which runs along the adjoining road.

2.6 Earthworks

The applicant notes that minor earthworks that meet the permitted standard conditions of Rule 5.3.4.10 will be required for the new vehicle crossing. Ultimately further earthworks will be required to create the private lane and the building platforms.

2.7 Planting

Lot 11, which appears to contain a gully and is more low lying, will not be built upon and is intended to be planted in what I understand to be predominantly indigenous vegetation. It is intended the lot will be a "conservation lot" and is intended to have a positive ecological effect by promoting biodiversity and native flora/fauna. An indicative vegetation plan was supplied as part of the request.

for further information (see 3. below) and included in **Appendix A** to this report.

The applicant also proposes to plant parallel to the northern, southern and western boundaries if fast-growing large tree species offset 5m from these boundaries and more low-lying vegetation along the eastern boundary. The new internal lot boundaries will also be planted.

2.8 Rights of Way

Rights of way (ROW) are proposed for the access for Lots 1- 3 and a right to convey electricity for an existing electricity infrastructure consisting of an 11,000-volt fuse box on Lot 3.

2.9 Contaminated Soils

I agree with the applicant that the presence of potentially contaminated soils on the site in terms of the National Environmental Standards -Contaminated Soils (NES CS) is unlikely.

3. Section 92 RMA Letter

A Section 92 RMA letter was sent on 22 February 2024 to request further information regarding building platforms, wastewater disposal and other services, restrictive covenants and affected parties.

A response to the letter was received 16 September 2024 in which the following is addressed:

- Confirmation of the building platforms and the restrictions that apply to them.
- Proposed method of effluent disposal including effects on any water bores.
- Proposed water supply.
- Affected parties.
- The proposed planting plan for Lot 11.
- Effects in respect of the stock ponds on site.

The section 92 letter and response are attached in **Appendix A**.

4. Resource Consents Required

The site is located in the Rural Zone of the Chatham Islands Resource Management Document (CIRMD). The site is not identified in the CIRMD as being of any particular significance in terms of natural values, heritage, landscape etc.

The CIRMD provisions relating to this application are operative.

The proposal requires a following subdivision consent as a restricted discretionary activity under Rule 5.3.4.12 (i).

Matters over which the Council has restricted its discretion:

- (a) the imposition of development contributions as provided for in Section 4.13
- (b) The design and layout of subdivisions
- (c) Protection of features such as rural amenity, outstanding landscapes, heritage items, significant indigenous vegetation and habitats and imi/iwi values
- (d) Creation of esplanade reserves/strips
- (e) Transfer or amalgamation of parcels of land, whether they are adjoining or not in accordance with Section 220(2) of the Act.

- (f) The siting of buildings
- (g) The filling and compaction of the land and earthworks
- (h) The provision of services including access, water supply, power supply, telephone, stormwater and sewage disposal, The New Zealand Fire Service Firefighting water supplies Code of Practice SNZ PAS 4509:2008 must be used as a guide regarding firefighting water supply and access
- (i) The provision to be made for the protection of land or any part thereof or of any land not forming part of the subdivision against erosion, subsidence, slippage or inundation from any source.
- (j) The vesting of beds of lakes and rivers (Section 237A of the Act).

In considering the application sections 104 and 104C of the RMA are particularly relevant.

Section 104(1) of RMA states when considering an application for a resource consent and any submissions received, the consent authority must, subject to Part 2, have regard to among other matters–

- (a) any actual and potential effects on the environment of allowing the activity; and
- (b) any relevant provisions of a number of documents including the following:
 - a national policy statement:
 - a regional policy statement or proposed regional policy statement:
 - a plan or proposed plan; and
 - any other matter the consent authority considers relevant and reasonably necessary to determine the application.

These matters are discussed below in Section 6 of the report.

In addition, section 104(2) states that when forming an opinion for the purposes of subsection (1)(a), a consent authority may disregard an adverse effect of the activity on the environment if the plan permits an activity with that effect (the “permitted baseline test”).

Section 104C states that when considering an application for a resource consent for a restricted discretionary activity, a consent authority must consider only those matters it has restricted the exercise of its discretion in its plan or proposed plan.

Section 106 also states a consent authority may refuse to grant a subdivision consent, or may grant a subdivision consent subject to conditions, if it considers that there is a significant risk from natural hazards.

5. Notification

In terms of sections 95 and 95 – 95G of the RMA Council determined the application should be limited notified to adjoining owners of the site because the scale of the subdivision and its density may result in potential adverse effects that are at least minor in respect of matters such as visual amenity and rural amenity, including openness and rural character.

In this respect, the applicant submitted written approval from the Robin Seymour and Amanda Horler. The other adjoining owners, Donna Rae Tuanui and Jack and Hariora Daymond did not submit

written approval and as a consequence Council limited notified these persons under section 95B.

No submissions were received at the close of submissions on 6th December 2024 and as a consequence there are no submissions to consider.

The applicant also supplied written approvals from Hokotehi Moriori Trust and the Department of Conservation. The applicant also advised that Ngati Mutanga o Wharekauri Trust (NMOWT) had been contacted for comment, but no response has been received.

6. Actual and Potential Effects

6.1 Positive Effects

The proposal will have positive effects by creating the potential for additional housing stock on the islands given that I understand that the provision of housing on the islands can be difficult due to a lack of availability of land and housing stock.

Subdivision of the type and scale proposed has generally not been implemented on the Chathams although the CHIPT development (CIC/2020/002) on the Waitangi Wharf-Owenga Road provided for 7 building sites at relatively high density.

The setting aside of Lot 11 for vegetative purposes will also generally have a positive impact in terms of biodiversity.

6.2 Adverse Effects

The actual and potential adverse effects of the subdivision addressed below. The rules of the Rural Zone list a number of assessment criteria that are useful in assessing the actual and adverse effects of the application and these are referred to where relevant below.

The assessment criteria in Rule 5.3.4.12 are set out below and provide a useful basis for assessment.

(a) Whether the size and shape of the allotments are adequate for the proposed use.

The proposed allotments appear to be of a regular shape and size to accommodate the proposed development, in terms of its rural residential nature and also the ability to dispose of effluent. Future dwellings can be accommodated in respect of the bulk and location requirements.

(b) Whether the size of the proposed allotments will maintain the amenity of the Rural Zone

The proposal will increase the density of future dwellings in the Rural Zone and potentially affect the anticipated amenities of the zone which are identified in the Rural policies as including openness, effluent disposal, noise, traffic generation, air emissions, odour, shading and visual impact.

It is noted that there is no minimum area in the Rural Zone and it appears that the areas of the sites which range in area from approximately 6,000m² to approximately 1.5ha, are of a density that allows the retention of rural amenity, in that open space will tend to dominate over built form. The density is further offset by the proposed non-residential nature of Lot 11 which will be planted out (as well as other plantings), while the identification of building platforms and restrictions on the height and number of future dwellings will further assist in maintaining amenity.

The applicant also identifies that the site is generally elevated above the Waitangi Tuku Road, and which has a number of turns, rises and falls such that future development would not be visible from many aspects of the road corridor. Proposed Lots 5 – 10 do not have frontage with the road and development therefore will have a large setback from public view.

It is also of significance that no opposing submissions have been received to the proposal which indicates the neighbouring properties are satisfied with the layout.

There is a “permitted baseline argument” given that Rule 5.3.3.4 allows four dwellings per site. However, this provision is generally intended for farm management purposes on large rural properties and is unlikely to be directly applicable to this application given the nature and size of land holdings in the vicinity.

Generally, the other amenity matters referred to such as effluent disposal and traffic generation can be addressed by conditions and it is not anticipated the subdivision will give rise to odour, noise, air emission effects etc given the rural land use is unlikely to change and the at least part residential nature of the development.

Overall, the proposed development is considered to be compatible with the surrounding area and will not compromise the amenity values of the surrounding properties.

(c) Whether the size, shape and soil permeability is sufficiently adequate to dispose of sewage.

The report from Engeo indicates that effluent can be satisfactorily disposed of at each site given the areas of the sites, availability of disposal fields, and the depth to groundwater although secondary treatment in the form of a proprietary system is recommended at this stage, given the initially assessed low permeability of soils and an assumed five bedroom house. The report recommends that at the time of building consent a more detailed investigation is undertaken by a professional wastewater engineer and which I understand may establish that a primary system is satisfactory.

As indicated above the Engeo report was reviewed by Mr Graeme Jenner, who in his memo (attached as **Appendix B**) generally concurs with the approach of Engco. Acknowledging that Engco have taken a conservative approach at this stage Mr Jenner notes his preference for a simpler system of primary treatment (eg septic tank and disposal field) given that the operation of a secondary treatment system will require more expertise and regular maintenance. He concurs with the Engeo that this opportunity will be available when more detailed design is undertaken at building consent stage.

Mr Jenner proposes a number of conditions, which are generally consistent with CIC/2020/002. The conditions acknowledge that the detailed design occurring at the time of building consent will determine the final system. These conditions have generally been adopted and based on these I am satisfied effluent disposal will be able to be disposed of satisfactorily.

The applicant, in its RFI response (see **Appendix A**), also confirmed that any adjoining bores will not be affected by effluent disposal and in particular Lot 1 DP50244 given that the supply for this property is located to the south a substantial distance from the effluent fields and is not “downslope”. It is also noted there was no opposing submission from this property.

Generally, I am satisfied that with the imposition of appropriate conditions the effects of the wastewater discharge are less than minor.

(d) Whether access can be safely achieved.

Access to Lots 1-3 is proposed off the Waitangi-Tuku Road in proximity to the southern boundary of Lot 2. Access to Lots 1-10 is proposed along the existing legal road on the eastern boundary of the site.

As indicated Council’s roading engineer, Mr Lister, is generally in agreement with this proposal, including the location of accesses in terms of sight distances and visibility. He notes that the applicant must comply with Council standards in terms of formation and that subsequent owners are responsible for the formation and maintenance of the accesses.

(d) The effect on the natural character of the coastline.

The site is not located in proximity to the coastline hence its natural character will not be affected.

(e) To what extent the effects of a natural hazard can be avoided remedied or mitigated.

As indicated above, a geotechnical investigation of the site was undertaken by Engeo Limited. The site is deemed suitable for subdivision but noted the need for further testing at the time of building consent stage to confirm UBC within the building platforms. The applicant notes that any overland flow from the stock ponds is towards Lot 11.

Accordingly, the provisions of section 106 of the RMA are not compromised.

(f) The effect on adjoining sites in terms of effluent disposal, stormwater disposal and runoff.

As discussed above, effluent disposal is anticipated to be contained within each site. Roof stormwater will be captured in a tank and any excess and other runoff will discharge to ground and appears to be able to be contained within the respective sites.

(g) The effect on features including outstanding landscapes, significant indigenous vegetation and habitats and imi/iwi values.

The subdivision site is not identified as containing any of these features and imi/iwi have not raised any issues.

(h) The matter set out in Table 4.12.1 in respect of creation of an esplanade/strip.

The site does not adjoin the Coastal Marine Area (CMA) or a river hence this is not applicable. Council also has a policy of generally not taking reserve contributions for subdivisions.

(i) The effects on the demands for services.

It appears that the provision of services will be largely “self-contained” and not result in any uneconomic demand for services.

It is noted that matters such as effluent disposal and water supply will be finalised at the time of building consent. Effluent disposal has been discussed above while appropriate water storage will be dependent on number of people, roof area etc taking into account Chatham Islands rainfall. It is noted that in CIC/2020/002 a storage tank of 15,000 litres was suggested for each lot (excluding firefighting supply).

Overall, I am satisfied that with the imposition of appropriate conditions the effects of the subdivision are minor or less.

7. National Policy Statements (NPS)

Regard must be had to any National Policy Statements under section 104(1) of the RMA.

The National Policy Statement for Highly Productive Land (NPS-HPL) came into effect in October 2022 and seeks to protect highly productive land for use in land-based primary production, both now and for future. The NPS-HPL requires that territorial authorities avoid the subdivision of highly productive land unless circumstances under 3.8(1) apply. However, the islands have not been mapped for LUC 1, 2 and 3 soils, which is critical for the definition of Highly Productive land under the NPS, and as such, the NPS is not relevant to this proposal.

The National Policy Statement for Indigenous Biodiversity (NPSIB) came into effect in August 2023 and seeks to maintain indigenous biodiversity across Aotearoa New Zealand so that there is at least

no overall loss in indigenous biodiversity. As noted by the applicant, the subject site is not a habitat for native plants or animals, but that the planting of Lot 11 (and other plantings) will result in a net gain in indigenous biodiversity and give effect to the NPS in terms of enhancement. The support of DOC is also noted in this respect.

The National Policy Statement Freshwater Management (NPSFM) appears to be of limited relevance. It is noted that features such wetlands have not been identified on the property.

8. Objectives and Policies of CIRMD

The applicant has undertaken an assessment of the relevant objectives and policies of the CIRMD (which contains RPS and district and regional plan provisions) which I largely concur with. In particular:

- Subdivision and Development- Objective 4.12.1. and Policy 4.12.1.1 Subsequent Uses and Objective 4.12.2 and Policy 4.12.1.1 Provision of Services

The subdivision appears appropriate for its subsequent uses given the sites are able to accommodate the dwellings with retention of amenities and effluent able to be disposed of. Services, subject to conditions, are able to be provided in terms of the three waters, vehicular access and electricity.

- Management of Resources (in the Rural Zone) Objective 5.3.2 and Policy 5.3.2.1 and Amenities (in the Rural zone) Objective 5.3.3 and Policy 5.3.3.1.

Generally, the lots are of sufficient size to retain some rural use and unlikely to affect rural production. In a critical manner. As discussed in Section 6 of the report the amenities of the locality are unlikely to be affected in a significant way, and the planting of lot 11 will enhance the amenity of the area.

In addition, I consider the proposal is consistent with the CIRMD objectives and policies.

- The Imi/Iwi Objective 4.1.1 and Policy 4.1.2.

The Imi/Iwi have not raised any issues in respect of consultation with these parties.

9. Part 2 of RMA

I consider the CIRMD gives effect to Part 2 of RMA but in any event consider that the proposal is in accordance with Part 2 given that it will provide for social and economic well-being for the community without compromising the environment in a detrimental manner.

10. Conclusion

Overall, any effects of the proposal on the environment are minor or less and the proposal is consistent with the objectives and policies of the CIRMD and in accordance with Part 2 of the RMA. Accordingly, the resource consent can be granted subject to conditions. I note the proposed conditions have been pre-circulated to the applicant who has agreed to them.

11. Recommendation

Subdivision Consent (CIC/2023/008)

That pursuant to sections 104, 104B and 108 of the RMA Council grants consent:

To subdivide Part Otonga 1C2 Block contained in Record of Title (RT) WN123/95 into proposed Lots 1 -11, 100 and 101 in two stages, Stage 1 comprising Lots 1-3 and 100 and Stage 2 comprising Lots 4-11 and 101, subject to the following conditions:

Stage 1**General**

1. The proposed activity must be undertaken in general accordance with the information and plans provided with the resource consent application and further information received by the Council.

Easements

2. All easements shown on the subdivision plan shall be duly granted and reserved.

Access

3. The design and construction of the shared accessway to Lots 1, 2 and 3 shall be in general accordance with Council's standard drawing 005 (attached) or an otherwise applicable standard at the time of application. The access shall be a single shared accessway, located at the shared boundary of Lots 2 and 3 and in general accordance with the approved Scheme Plan (N230005.04 – V200 – Revision B).
4. Any culvert crossings and inlet / outlet structure to be constructed for each lot must adhere to Council's standard drawings for rural accessways, with culvert pipe size and length to be agreed with the Council Engineer prior to construction. Culvert construction shall be in general accordance with Council's standard drawings 004 and 005 (attached). If a culvert is not required, approval from the Council Engineer shall be required prior to construction.

Electricity Connection

5. The consent holder shall ensure that confirmation be supplied from an electrical supply network operator that an electricity supply network has been provided to or at the boundary of Lots 1-10 or confirmation that an electricity supply from other means is available and able to be provided in respect of Lots 1-3.

Consent Notices

6. Pursuant to Section 221 of the Resource Management Act 1991 a consent notice shall be registered on the Record of Title of Lots 1, 2, and 3 advising that:

Building Development Geotechnical Requirements

- (i) All future building development, including earthworks, on Lots 1-3 shall be consistent with a geotechnical report prepared by a suitably qualified geotechnical engineer that is to be provided at the time of the development on the site. This report shall address as a minimum, building siting and design, storm water runoff, and the location of wastewater disposal systems.

Residential Units/Buildings

- (ii) A maximum of one residential unit per allotment is permitted.
- (iii) Any residential unit shall in general and as far as practicable be located within the Restrictive Land Covenants Building Platforms identified on approved Scheme Plan (N230005.04 – V200 – Revision B), or as otherwise approved by the Chatham Islands Council at the time of application for Building Consent.
- (iv) The maximum height of any residential unit or accessory building shall be 8m.

Water Supply

- (v) At the time a building consent application is submitted for the residential units on Lots 1-3, it must be demonstrated that:
- (a) Sufficient water volume, pressure & flow will be provided in accordance with NZFS Fire Fighting Water Supplies Code of Practice (CoP) SNZ 4509:2008 (or an otherwise applicable standard at the time of application) and that this water supply is accessible for firefighting purposes. Should the water supply be provided by way of tank storage, this storage must be located a safe distance away from any habitable dwelling in accordance with the relevant standard. If an alternative fire-fighting water supply is to be provided the written approval of that system from Fire and Emergency New Zealand (or the equivalent body at the time of application) must be provided with the building consent application and:
 - (b) Sufficient water storage will be provided onsite for uses other than firefighting supply having regard to such relevant matters as number of people living in the dwelling, roof area and Chatham Islands rainfall.

Wastewater

- (vi) The discharge from residential lots shall only be treated domestic wastewater originating from each individual lot.
- (vii) The volume of treated wastewater discharged at each residential lot shall not exceed 1.45m³ per day or shall be within the limits specified in relevant regulatory standards as applicable. Anything exceeding these limits shall require resource consent.
- (viii) The level of wastewater treatment and method of disposal to land (including land area) at each residential lot shall be consistent with the requirements set out in AS/NZS 1547:2012 (or an otherwise applicable standard of the time) and confirmed during design of each individual wastewater system by a suitably qualified engineer.
- (ix) Subject to confirmation during design by a suitably qualified engineer, the treated wastewater at each residential lot shall be discharged to land as shown on the ENGCO Wastewater Plan, dated 5 July 2024 attached to and forming part of approved consent CIC/2023/008. Alternative discharge locations may be suitable subject to design by a suitably qualified engineer.
- (x) As far as practical, the treated wastewater at each individual lot shall be evenly dosed over the land application area, at a rate that is consistent with the confirmed infiltration capacity of the soils.
- (xi) As a general guide, the vertical separation distance between the base of a secondary treated wastewater dripline system and the highest groundwater level, shall be at least 0.3m for each individual lot. If a primary level wastewater quality is shown to be sustainable for individual lots, through design by a suitably qualified engineer, a minimum vertical separation distance between the base of the disposal system and the highest groundwater level shall be at least 0.6m.
- (xii) There shall be no ponding or overland flow of wastewater on the land surface at any residential lot.
- (xiii) The minimum separation distances from the wastewater disposal field, at each lot shall be:
 - 20m from any surface water body including wetland.
 - 50m from any authorised or existing water supply bore or well.

- 1.5m from all boundaries.
 - 3m from house foundations
- (xiv) Within three months of the installation of the wastewater treatment and disposal system, at each lot, the landowner shall provide to the Chatham Islands Council, Attention Chief Executive Officer, with;
- A signed copy of a compliance certificate attesting that the installation of the wastewater treatment system, land disposal system and any ancillary devices and pipework, has been installed by a suitably qualified person in accordance with the final design and the conditions of approved consent CIC/2023/008.
 - A maintenance and monitoring programme of the treatment system recommended by a suitably qualified person. The programme shall be approved by the Chatham Islands Council and be the responsibility of the owner.
 - A copy of an “as built plan” which has been signed by the Design Engineer which clearly shows the location of the installed wastewater treatment and disposal system and the minimum separation distances required in accordance with Condition (xiii).

Stormwater

- (xv) Stormwater from the roof of the residential units shall primarily be directed to storage tanks on each site. Other stormwater shall be directed to ground and that, as far as practical, site stormwater flows shall be conveyed;
- at least 10m away from the building foundations (or as otherwise determined by a suitably qualified engineer) and
 - away from wastewater disposal fields.

Stormwater disposal to ground shall be contained within each lot.

Stage 2

General

7. The proposed activity must be undertaken in general accordance with the information and plans provided with the resource consent application and further information received by the Council.

Easements

8. All easements shown on the subdivision plan shall be duly granted and reserved.

Access

9. Access to Lots 4-10 shall be by a Private Lane, constructed as an unsealed pavement with a minimum width of 4m. Specific pavement layer details to be provided to the Council Engineer for approval prior to construction.
10. Access to Lots 4-10 from Waitangi Tuku Road, shall be at right angle to the centre of the curve of the road, to reinforce the priority of Waitangi Tuku Road over the Private Lane. A General Arrangement Plan shall be provided to the Council Engineer for approval prior to construction.
11. Maintenance of the Private Lane shall remain the responsibility of the landowners of Lots 4-10.
12. The design and construction of the crossing point between the Private Lane and Waitangi Tuku Road shall be in general accordance with Council's standard drawing 005 (attached)

or an otherwise applicable standard at the time of application.

13. Any culvert crossings and inlet / outlet structure to be constructed at the crossing point must adhere to Council's standard drawings for rural accessways, with culvert pipe size and length to be agreed with the Council Engineer prior to construction. Culvert construction shall be in general accordance with Council's standard drawings 004 and 005 (attached) or an otherwise applicable standard at the time of application. If a culvert is not required, approval from the Council Engineer shall be required prior to construction.

Electricity Connection

14. The consent holder shall ensure that confirmation be supplied from an electrical supply network operator that an electricity supply network has been provided to or at the boundary of Lots 4-10 or confirmation that an electricity supply from other means is available and able to be provided in respect of Lots 4-10.

Vesting

15. Lot 101 shall vest in Chatham Islands Council as Road.

Planting

16. Prior to the application for certification under Section 224(c) of the Resource Management Act 1991, Lot 11 shall be planted in general accordance with the attached Plan CIC/2023/008 Planting.

Consent Notices

17. Pursuant to Section 221 of the Resource Management Act 1991 a consent notice shall be registered on the Record of Title of Lots 4, 5, 6, 7, 8, 9 and 10 advising that:

Building Development Geotechnical Requirements

- (i) All future building development, including earthworks, on Lots ~~14~~-10 shall be consistent with a geotechnical report prepared by a suitably qualified geotechnical engineer that is to be provided at the time of the development on the site. This report shall address as a minimum, building siting and design, storm water runoff, and the location of wastewater disposal systems.

Residential Units/Buildings

- (ii) A maximum of one residential unit per allotment is permitted.
- (iii) Any residential unit shall in general and as far as practicable be located within the Restrictive Land Covenants Building Platforms identified on approved Scheme Plan (N230005.04 – V200 – Revision B), or as otherwise approved by the Chatham Islands Council at the time of application for Building Consent.
- (iv) The maximum height of any residential unit or accessory building shall be 8m.
- (v) A residential unit or residential accommodation is not permitted on Lot 11.

Water Supply

- (vi) At the time a building consent application is submitted for the residential units on Lots 4-10, it must be demonstrated that:
 - (c) Sufficient water volume, pressure & flow will be provided in accordance with NZFS Fire Fighting Water Supplies Code of Practice (CoP) SNZ 4509:2008

(or an otherwise applicable standard at the time of application) and that this water supply is accessible for firefighting purposes. Should the water supply be provided by way of tank storage, this storage must be located a safe distance away from any habitable dwelling in accordance with the relevant standard. If an alternative fire-fighting water supply is to be provided the written approval of that system from Fire and Emergency New Zealand (or the equivalent body at the time of application) must be provided with the building consent application and:

- (d) Sufficient water storage will be provided onsite for uses other than firefighting supply having regard to such relevant matters as number of people living in the dwelling, roof area and Chatham Islands rainfall.

Wastewater

- (vii) The discharge from residential lots shall only be treated domestic wastewater originating from each individual lot.
- (viii) The volume of treated wastewater discharged at each residential lot shall not exceed 1.45m³ per day or shall be within the limits specified in relevant regulatory standards as applicable. Anything exceeding these limits shall require resource consent.
- (ix) The level of wastewater treatment and method of disposal to land (including land area) at each residential lot shall be consistent with the requirements set out in AS/NZS 1547:2012 (or an otherwise applicable standard of the time) and confirmed during design of each individual wastewater system by a suitably qualified engineer.
- (x) Subject to confirmation during design by a suitably qualified engineer, the treated wastewater at each residential lot shall be discharged to land as shown on the ENGCO Wastewater Plan, dated 10 January 2024 attached to and forming part of approved consent CIC/2023/008. Alternative discharge locations shall be suitable subject to design by a suitably qualified engineer.
- (xi) As far as practical, the treated wastewater at each individual lot shall be evenly dosed over the land application area, at a rate that is consistent with the confirmed infiltration capacity of the soils.
- (xii) As a general guide, the vertical separation distance between the base of a secondary treated wastewater dripline system and the highest groundwater level, shall be at least 0.3m for each individual lot. If a primary level wastewater quality is shown to be sustainable for individual lots, through design by a suitably qualified engineer, a minimum vertical separation distance between the base of the disposal system and the highest groundwater level shall be at least 0.6m.
- (xiii) There shall be no ponding or overland flow of wastewater on the land surface at any residential lot.
- (xiv) The minimum separation distances from the wastewater disposal field, at each lot shall be:
 - 20m from any surface water body including wetland.
 - 50m from any authorised or existing water supply bore or well.
 - 1.5m from all boundaries.
 - 3m from house foundations
- (xv) Within three months of the installation of the wastewater treatment and disposal system, at each lot, the landowner shall provide to the Chatham Islands Council, Attention Chief Executive Officer, with;

- A signed copy of a compliance certificate attesting that the installation of the wastewater treatment system, land disposal system and any ancillary devices and pipework, has been installed by a suitably qualified person in accordance with the final design and the conditions of approved consent CIC/2023/008.
- A maintenance and monitoring programme of the treatment system recommended by a suitably qualified person. The programme shall be approved by the Chatham Islands Council and be the responsibility of the owner.
- A copy of an “as built plan” which has been signed by the Design Engineer which clearly shows the location of the installed wastewater treatment and disposal system and the minimum separation distances required in accordance with Condition (xv).

Accesses

- (xvi) Maintenance of the Private Lane serving Lots 4-10 shall remain the responsibility of the landowners of Lots 4-10 (refer to Condition 11 of CIC/2023/008).

Stormwater

- (xvii) Stormwater from the roof of the residential units shall primarily be directed to storage tanks on each site. Other stormwater shall be directed to ground and that, as far as practical, site stormwater flows shall be conveyed;
- at least 10m away from the building foundations (or as otherwise determined by a suitably qualified engineer) and
 - away from wastewater disposal fields.

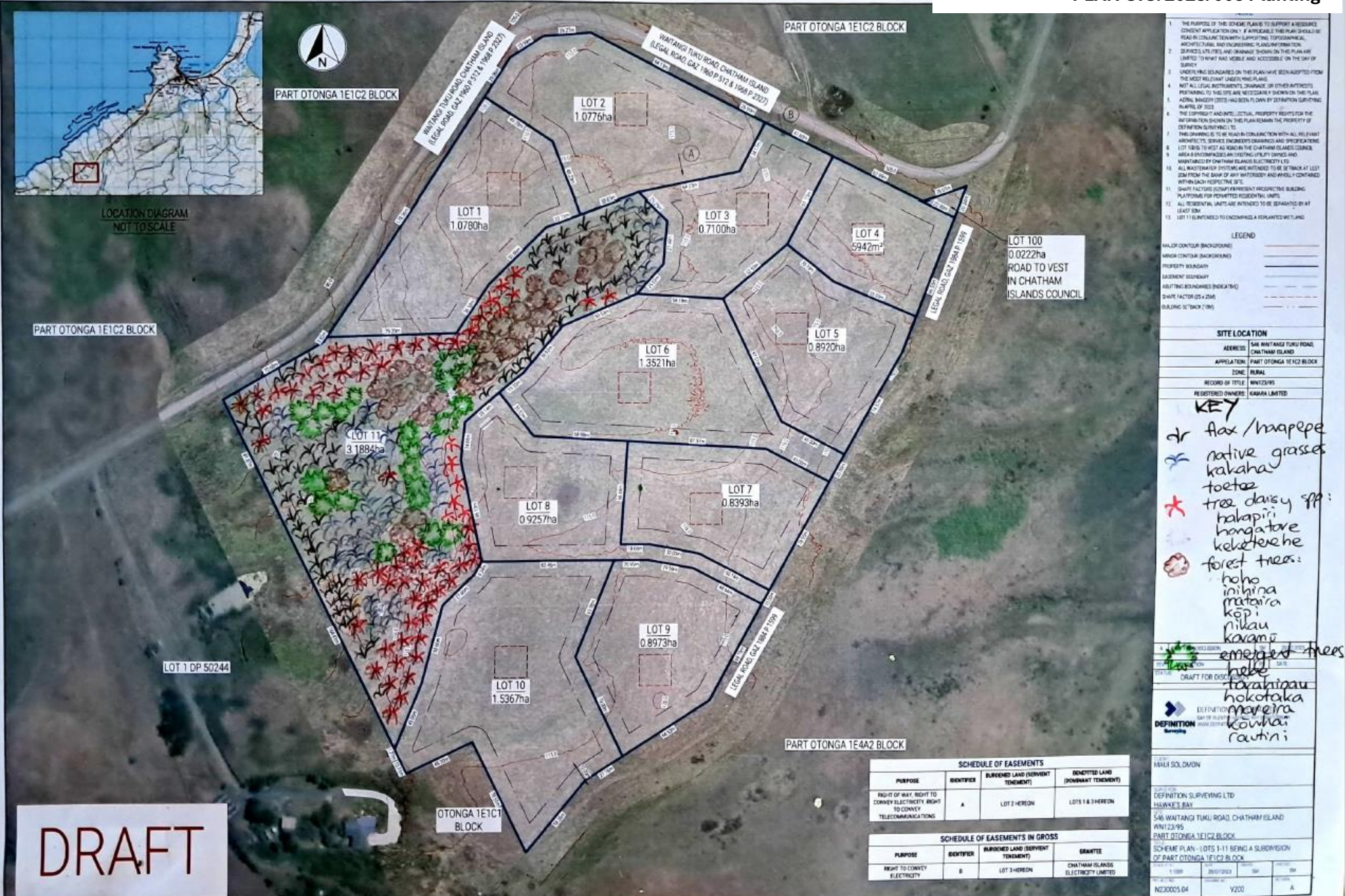
Stormwater disposal to ground shall be contained within each lot.

Paul Whyte

30th January 2025

Consultant Planner

PLAN CIC/2023/008 Planting





Appendix A

**APPLICATION FOR RESOURCE MANAGEMENT CONSENT
SECTION 88 OF THE RESOURCE MANAGEMENT ACT 1991**

1.1 Full Name of Applicant:

Kaiara Limited

1.2 Postal Address of Applicant:

P.O. Box 104, Waitangi, Chatham Islands, 8942

1.3 Applicant is the (e.g. Owner, Lessee etc) of the property:

Owner

1.4 Name and Address of Owner:

Maui Solomon and Susan Thorpe

1.5 Name and Address of Occupier:

1.6 Location to which this Application relates is (Address and Legal Description) :

546 Waitangi Tuku Road, Chatham Island
Part Otonga 1E1C2 Block

2.0 Please circle one of the following activities in which this consent relates to:

☐

Controlled Activity

☐

Discretionary Activity

☐

Non-Complying Activity

☒

Subdivision Consent

2.1 Are any additional resource consents required in relation to this proposal?

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.....

.....

No

2.2 A description of the activity to which this application relates is:

.....

.....

12-lot restricted discretionary subdivision in the Rural Zone

2.3 The alternatives considered and the reasons for choosing this site are:

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.....

.....

The site is vacant of development and vegetation and free of natural hazard risk. It

2.4 Name and address of persons affected by this application:

.....

.....

.....

Refer s95 assessment in application

3.1 Provide an assessment of any effects that the proposed activity may have on the environment, in particular:

(a) Any effect on those in the neighbourhood and, where relevant, the wider community including any socio-economic and cultural effects:

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.....

An AEE is provided in the attached consent application

(b) Any physical effect on the locality, including any landscape and visual effects:

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- (c) Any effects on ecosystems, including effects on plants or animals and disturbance of habitats in the vicinity:

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- (d) Any effect on natural and physical resources having aesthetic, recreational, scientific, historical, spiritual, or cultural, or other special value for present or future generations:

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.....

- (e) Any discharge of contaminants into the environment, including any unreasonable emission of noise and options for the treatment and disposal of contaminants:

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- (f) Any risk to the neighbourhood, the wider community, or the environment through natural hazards or the use of hazardous substances or hazardous installations:

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3.2 Outline any other relevant information:

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.....

.....

4.1 Where the application is for a subdivision consent, the following additional information is required:

- (a) the position of all new boundaries;
- (b) the areas of all new allotments;

- (c) the location and areas of new reserves to be created including any es to be set aside on a survey plan under Section 189;
- (d) the location and areas of land below mean high water springs of the sea or of any point of the bed of a river or lake which is to be vested in the Crown under Section 191 of the Act;
- (e) the location and areas of land to be set aside as new road;
- (f) the provisions of access and all easements. The latter shall be clearly designed and accompanied by a schedule stating the allotments subject and appurtenant to the easements shown on the plan;
- (g) physical features, including buildings on any proposed new allotment as well as buildings on the balance of the land being subdivided;
- (h) contours and spot heights in sufficient detail to determine the approximate grades of roads, the general siting of the buildings and the general level of the land being subdivided; and
- (i) on each lot a site suitable for building and disposal of effluent must be determined and located on the plan. Where necessary provide information relating to the bearing capacity of proposed building site.

4.2 Generally, the information to accompany this application shall include:

- (a) Site Plan showing (as appropriate):
 - i. Location to all existing and proposed buildings and distances to boundaries (indicate those to which this application relates);
 - ii. Elected ground heights and/or land contours;
 - iii. Location of trees, streams, drains, and other topographical features;
 - iv. Existing and proposed access points and internal roading;
 - v. Existing and proposed car-parking areas;
 - vi. Location of archaeological sites on the property;
 - vii. Location of existing septic tanks and effluent drainage lines, or a proposed water and sewerage connection and stormwater disposal;
 - viii. Details of proposed landscaping;
 - ix. Location of existing and proposed signs;
 - x. Areas and dimensions of property;
 - xi. Roads on to which the property has frontage;
 - xii. Present use of adjoining properties.
- (b) Floor plan of all buildings relating to the application.
- (c) Elevations of all new buildings to show external appearance.
- (d) Size and design of advertising signs.

Note: All plans are to be to scale.

Dated at Napier this 12 day of December 2023

.....
Signature of applicant or person
authorised to sign on behalf of applicant.

Address for Service of Applicant

.....
.....
.....
.....

546 Tuku Road, Waitangi, Chatham Islands

Phone No.....

Application for Resource Consent

Section 88, Resource Management Act 1991

To *(name of local authority or regional council in the case of a coastal permit)*.

I, *(full name)*, apply for the following type(s) of resource consent:

(For any activity in the coastal marine area, state coastal permit. Otherwise state 1 or more of the following: land use consent, subdivision consent, water permit, or discharge permit.

Describe the activity to which the application relates.)

*The names and addresses of the owner and occupier (other than the applicant) of land to which the application relates are as follows:

(Give names and addresses)

*Delete if not applicable

The location of the proposed activity is as follows:

(Describe the location as it is commonly known and in a way that will enable it to be easily identified e.g. the street address, the legal description, the name of any relevant stream, river, or other water body to which the application relates, proximity to any well-known landmark, the grid reference if known).

No additional resource consents are needed for the proposed activity (or the following additional resource consents are needed for the proposed activity and have (or have not) been applied for: *(Give details)*).

I attach, in accordance with the Fourth Schedule of the Resource Management Act 1991, an assessment of environmental effects in the detail that corresponds with the scale and significance of the effects that the proposed activity may have on the environment.

I attach any information required to be included in this application by the District Plan, the Regional Plan, the Resource Management Act 1991, or any regulations made under that Act.

(List all documents that you are attaching).

*As this is an application for a subdivision consent, I attach information that is sufficient to adequately define:-

- (a) the position of all new boundaries; and
- (b)** the areas of all new allotments; and
- (c) the locations and areas of new reserves to be created, including any esplanade reserves and esplanade strips; and
- (d) the locations and areas of any esplanade reserves, esplanade strips and access strips; and

(e) the locations and areas of land below mean high water springs of the sea, or of any part of the bed of a river or lake, to be vested in the Crown or local authority under Section 237a of the Resource Management Act 1991; and

(f) the locations and areas of land to be set aside as new roads.

**(Delete if this is not an application for a subdivision consent).*

*** (Delete if the subdivision involves a cross-lease, company lease, or unit plan).*

*As this is an application for a resource consent for reclamation, I attach information to show the area proposed to be reclaimed, including its location, the position of all new boundaries, and the portion of that area (if any) to be set apart as an esplanade reserve or esplanade strip.

**Delete if this is not an application for a resource consent for reclamation*

.....

Signature of applicant (or person authorised to sign on behalf of applicant)

.....

Date

Address for service of applicant:

Telephone:

Fax/Email:

Contact person: *(name and designation, if applicable)*

Note to applicant

You may apply for 2 or more resource consents that are needed for the same activity on the same form.

You must pay the charge payable to the consent authority for the resource consent application under the Resource Management Act 1991 (if any). If the application is for a coastal permit for a restricted coastal activity, you must also pay the application fee stated in Schedule 2 of the Resource Management (Forms, Fees, and Procedure) Regulations 2003.



Subdivision Consent Application and Assessment of Environmental Effects

Kaiara Limited

Prepared By: Amber Lebioda

12 December 2023



December 2023
Project No. 201223

CONTENTS

1. APPLICANT AND LOCATION DETAILS	3
2. SITE DESCRIPTION AND SURROUNDS	4
3. THE PROPOSAL	4
4. RESOURCE MANAGEMENT DOCUMENT REQUIREMENTS.....	7
5. ASSESSMENT	9
6. RELEVANT OBJECTIVES AND POLICIES	13
9. NATIONAL ENVIRONMENTAL STANDARD FOR ASSESSING AND MANAGING CONTAMINANTS IN SOIL TO PROTECT HUMAN HEALTH 2011 (NESCO).....	16
10. NATIONAL POLICY STATEMENT FOR INDIGENOUS BIODIVERSITY 2023 (NPSIB).....	17
11. PART II ASSESSMENT.....	17
12. SECTION 95A AND 95B ASSESSMENT.....	18
13. CONCLUSION.....	20
14. LIMITATIONS	20

Appendices

Appendix One: Record of Title

Appendix Two: Scheme Plans



1. APPLICANT AND LOCATION DETAILS

Applicant:	Kaiara Limited
Application:	Subdivision of one lot into twelve
Location:	546 Waitangi Tuku Road, Chatham Island
Legal Description:	Part Otonga 1E1C2 Block
Zoning:	Rural
Overlays:	Nil
LUC:	Not mapped
Activity Status:	Restricted Discretionary Activity
Site Location:	



Figure 1: Part Otonga 1E1C2 Block (Chatham Islands Planning Maps)

2. SITE DESCRIPTION AND SURROUNDS

The subject site is 80.5324ha in area and held in RT WN123/95. It is legally described as Part Otonga 1E1C2 Block.

It is a large rural allotment that is bisected by Waitangi Tuku Road. The approximate 67ha north of the road is accommodated with a single dwelling and accessory farm buildings toward the northwest of the property. Access is via a vehicle crossing off the road which connects to a formed drive of approximately 800m in length.

This proposal relates to the land of approximately 13ha located south of the road only, as shown in Figure 1.

The topography of this land is medium hill country, is in pasture and vacant of development. It is not in an identified hazard area.

It has frontage with Waitangi Tuku Road along the northern and western boundaries. An unformed legal road adjoins the eastern boundary.

The site is fenced along existing boundaries and there is no discernible vegetation present. Two small dams are located toward the centre of the subject site, located within proposed lots 8 and 11. An existing electrical utility that is owned and maintained by Chatham Islands Electricity Ltd is located toward the northern boundary of proposed Lot 3.

Surrounding properties are typically large rural allotments with some smaller lifestyle and rural lots located off Waitangi Tuku Road.

The subject site is approximately 5.5 kilometres south west of the town centre of Chatham Island.

Waitangi Tuku Road is gravelled, and the posted speed limit is 80km/hr. However, a curve warning sign of 25km/hr is located at this point in the road.

3. THE PROPOSAL

The proposal is for the two-staged subdivision of the land south of Waitangi Tuku Road into 12 allotments. The purpose for which is to facilitate high-quality residential development in an area of housing shortage. As a staged subdivision it is requested that conditions imposed by Council are staged.

Stage one will involve subdivision of the property into four lots. Lot 1 will be 1.0780ha, Lot 2 will be 1.0776ha, Lot 3 will be 0.7100ha and Lot 100 will be the balance lot at 10.2478ha.

Stage two will involve subdivision of the balance lot into 9 allotments. Seven lots will be lifestyle lots ranging from 0.5942ha to 1.3521ha. Lot 11 will be 3.1884ha. This is to remain undeveloped and is intended to be planted in a mix of exotic and indigenous vegetation. Proposed Lot 101 at 0.0222ha shall be vested in Council as road.



Further detail is shown within the scheme plans, attached as Appendix 2. All lots are subject to survey.

Within stage one, access to proposed Lots 1 – 3 will be via a new crossing off Waitangi Tuku Road toward the centre of the properties existing northern boundary. Legal access will be secured by a right of way easement in favour of Lots 1 and 3.

Within stage two, access to the additional lifestyle lots 4 – 10 will be from the legal road adjoining the properties existing eastern boundary. This is intended to be a private lane that will be upgraded to a standard sufficient to enable practical access. Maintenance will be the responsibility of the landowners that use the laneway for access.

The intersection of Waitangi Tuku Road and the proposed private laneway is within road reserve. This is currently unformed and shall be constructed to Council standards.

Potential building platforms on all lifestyle lots are shown on the scheme plans. The platforms are only for the purposes of demonstrating that permitted activity development can be sited on all lots. It is not intended that development will be located in these exact locations, instead restrictive covenants for building location will be placed on the relevant titles when the site has been surveyed.

Minor earthworks that meet 5.3.4.10 will be required for the new vehicle crossing and to create the private lane. Earthworks will not be required for building platforms as part of this subdivision. Notwithstanding, at the time of building development, as the site is greater than 100m from MHWS, earthworks would be a permitted activity and appropriate erosion and sediment control measures can be put in place.

Water supply to each lifestyle lot will be via water tanks. It is requested that a condition of consent is imposed that requires the lots to meet Council requirements for potable supply and fire-fighting water supply.

Stormwater for any future dwelling or building could be accommodated via a combination of roof collection to rain tanks and ground soakage.

There is sufficient area within each lot to accommodate a wastewater system which would be applied for at the time of building consent.

In addition to building location, the applicant will place restrictive covenants on the lifestyle titles that restricts the number of primary dwellings to one with a maximum height no greater than two-storey. Restrictive covenants are considered the more appropriate method of managing development so that the enforcement of limitations is a private matter and not for Council to administer.

The applicant proposes to plant parallel to the northern, southern and western boundaries in fast-growing large tree species. They will be offset 5m from these boundaries. The new, internal lot boundaries will be planted and not fenced.



3.1 EASEMENTS

Proposed easements, as shown on the scheme plan, are as follows. It is requested that these are placed on the relevant titles at the time of 224 certification.

Schedule of Easements

Purpose	Shown	Burdened Land	Benefitted Land
Right of way, right to convey electricity, right to convey telecommunications	A	Lot 2 hereon	Lots 1 & 3 hereon

Schedule of Easements in Gross

Purpose	Shown	Burdened Land	Grantee
Right to convey electricity	B	Lot 3 hereon	Chatham Islands Electricity Limited

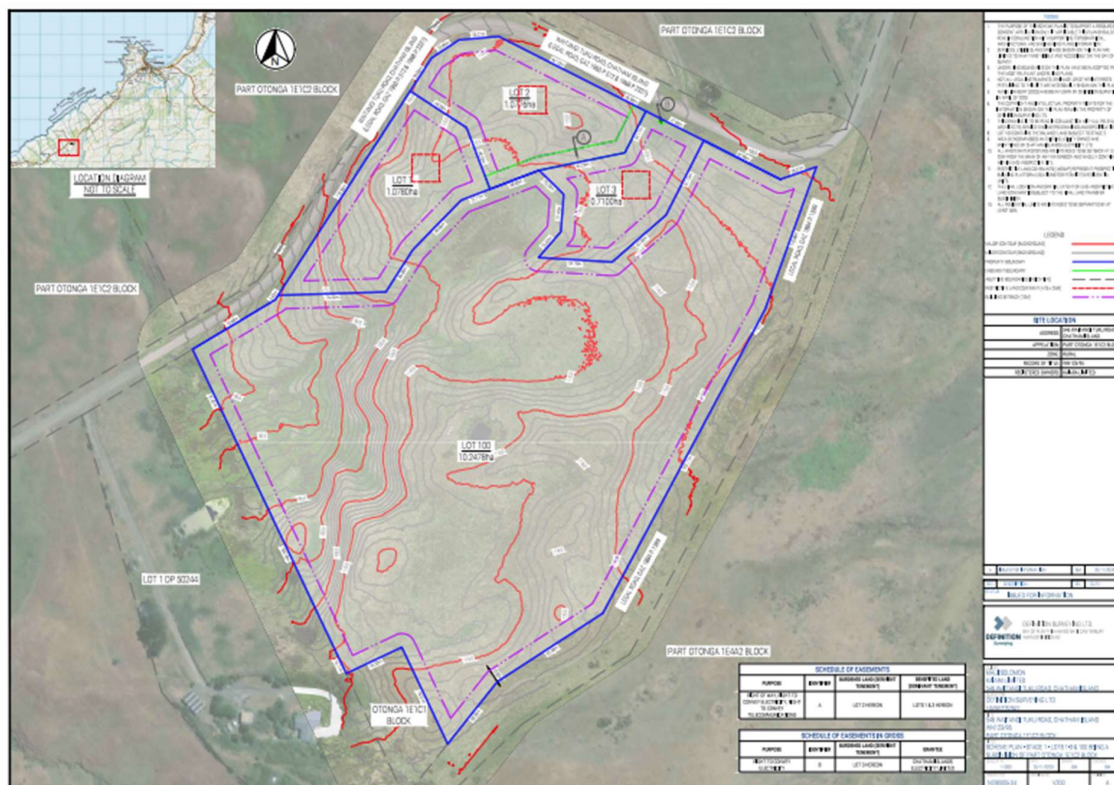


Figure 2: Scheme plan of proposed subdivision – Stage 1



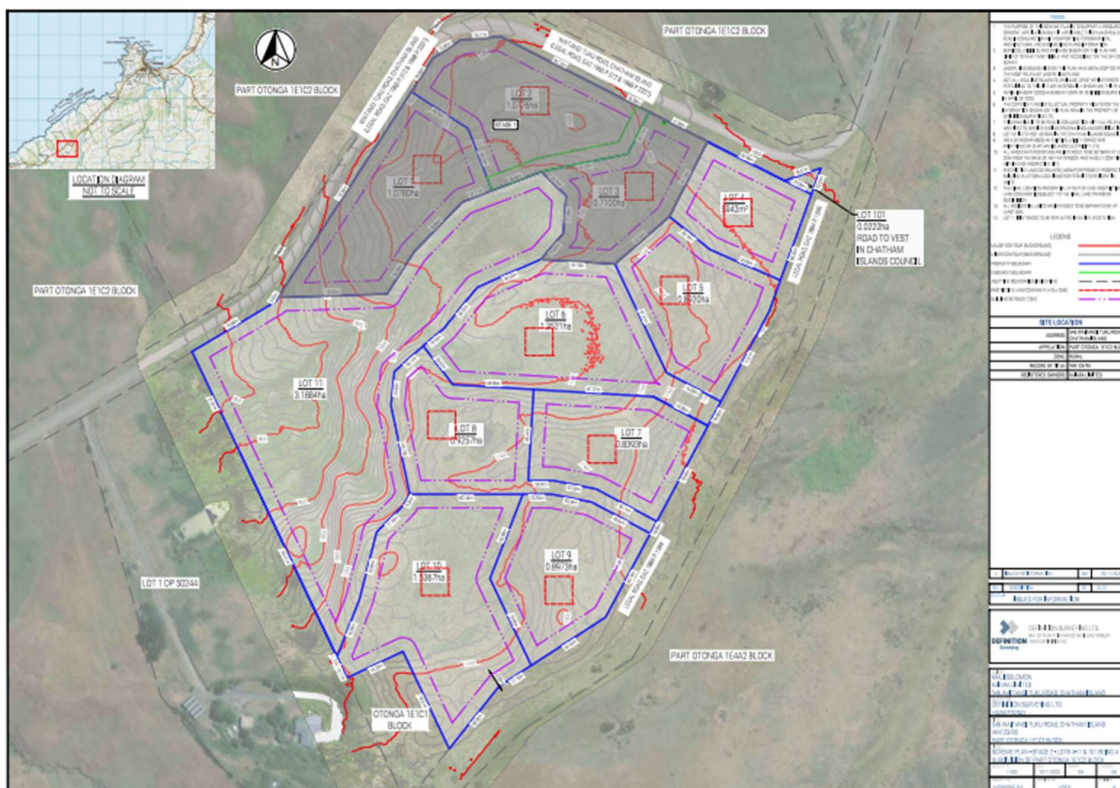


Figure 2: Scheme plan of proposed subdivision – Stage 2

4. RESOURCE MANAGEMENT DOCUMENT REQUIREMENTS

Chatham Islands Resource Management Document (CIRMD)

5.3.4 Rural Zone

PERFORMANCE STANDARDS	STATUS	REASON
5.3.4.1 General		The proposal will allow for permitted activity development.
5.3.4.2 Industrial and Commercial Activities	Permitted	Can comply.
5.3.4.3 Buildings	Permitted	The site is vacant of built form and can accommodate permitted activity development.
5.3.4.4 Residential Units	Permitted	There are no existing residential units. The applicant intends to limit the number of residential units to one per lifestyle lot as title covenants.
5.3.4.5 Noise		N/A
5.3.4.6 Heritage Sites and Buildings	Permitted	There are no heritage sites or buildings on the property.
5.3.4.7 Parking and Loading	Permitted	There is sufficient area for on-site parking at the time of development.



5.3.4.8 Hazardous Substances	Permitted	Hazardous substances are not stored or used on the property.
5.3.4.9 Signs	Permitted	Signs are not proposed.
5.3.4.10 Earthworks	Permitted	The site is located greater than 100m of MHWS. Building platforms are not proposed as part of this subdivision and minor earthworks may be required to facilitate the construction of a vehicle crossing and to create the private laneway. There are no limits to earthworks volumes in this regard.
5.3.4.11 Roads	Permitted	The intersection of Waitangi Tuku Road and the proposed private laneway is within road reserve and shall be constructed to Council standards.
5.3.4.12 Subdivision	Restricted Discretionary	The scheme plan demonstrates complying building sites within each lifestyle lot. There is sufficient area within each lot for on-site effluent disposal. The subject site is greater than 100m from MHWS.
5.3.4.13 Forestry and Shelterbelts Separation	Permitted	Forestry is not proposed. Trees will be planted with an offset of 5m parallel to the northern, southern and western boundary of the subject site.
5.3.4.14 Network Utilities		N/A
5.3.4.15 Quarries – Schedule Activity (SQ)		N/A
5.3.4.16 Activities In or Near Waterbodies	Permitted	Two dams are located on the subject site. Development will not occur within 5m of each waterbody. There are no wetlands on or adjoining the subject site.
5.3.4.17 Discharge of Effluent	Permitted	There is sufficient area within each lot to cater for on-site effluent disposal. This would be applied for at the time of building consent. There are no bores within proximity of the subject site and a system can be greater than 20m from a waterbody.
5.3.4.18 Discharge of Contaminants into Air		N/A
5.3.4.19 Discharge of Contaminants into Water...	Permitted	This proposal will not result in the discharge of contaminants. There is nothing to suggest there are contaminants in the land. However, earthworks for building platforms can be appropriately managed through an erosion and sediment control plan as part of the building consent process.
5.3.4.20 Taking of Water		N/A
5.3.4.21 Damming and Diversion of Water		N/A
5.3.4.22 Structures – Beds of Lakes and Rivers		N/A
5.3.4.23 Disturbance of Beds of Lakes and Rivers		N/A
5.3.4.24 Discharge of contaminants onto land.	Permitted	This proposal will not result in the discharge of contaminants.



5.3.4.25 Areas of Significant Natural Value	Permitted	The subject site is not identified as being in an Area of Significant Natural Value.
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4.2 SUMMARY

It is our assessment that the proposal to subdivide one lot into twelve is a **Restricted Discretionary** activity pursuant to Rule 5.3.4.12(i).

5. ASSESSMENT

5.1 STATUTORY REQUIREMENTS

Section 88(2)(b) of the Resource Management Act 1991 (the 'Act') stipulates that an application shall include an assessment of environmental effects prepared in accordance with the Fourth Schedule and be in such detail as corresponds with the scale and significance of the effects that the activity may have on the environment.

Matters to be considered by the Council when assessing an application for resource consent under section 104(1) of the Act include (subject to Part II), any actual and potential effects on the environment and any relevant objectives, policies, rules or other provisions of a Plan or Proposed Plan.

Overall, the Council is required to assess this application for resource consent against the purpose and principles of sustainable management set out in Part II of the Act, which is addressed below in section 10 of this report.

Section 104C

The proposal is deemed to be a Restricted Discretionary activity under the provisions of the CIRMD. Accordingly, Council must consider only those matters over which discretion is restricted in national environmental standards, other relevant regulations and the CIRMD. Council may grant or refuse the application and if it grants the application may impose conditions under section 108 for those matters over which discretion is restricted.

5.2 ACTUAL AND POTENTIAL EFFECTS

The actual and potential effects of the proposal on the environment have been evaluated as required by section 88 of the Resource Management Act 1991.

The following matters have been identified as being relevant to the proposal:

- Visual, Character and Amenity
- Transport and Safety
- Services
- Cultural
- Natural Hazards



Visual, Character and Amenity

There is no minimum lot size in the rural zone. However, the proposed lots are considered to be generously proportioned lifestyle allotments.

The lot sizes and rules of the Rural Zone can allow for permitted activity development of up to 4 residential units per site at a maximum height of 12m. In this location this would be considered to be an over-development that would adversely affect the amenity of the surrounding environment.

As such, the applicant will place restrictive covenants on the title that limit the number of primary dwellings per site to one with a maximum height no greater than two-storey.

The subject site is elevated above the road. In addition, Waitangi Tuku Road has a number of turns, rises and falls such that future development would not be visible from many aspects of the road corridor. Proposed Lots 5 – 10 do not have frontage with the road and development therefore will have a large setback from public view.

Notwithstanding, the applicant intends to plant along the northern, southern and western boundaries. The eastern boundary will not be planted for ease of access and maintenance. The planting will be offset 5m from the boundary to ensure there are no effects on traffic, safety, shading or visibility. The trees will enhance on and off-site amenity, provide privacy to residents and screening between adjoining sites. Planting, in place of fencing, will also be established along internal lot boundaries. This will enhance on-site amenity and privacy between the new lots.

It is noted that there is residential development on only one adjoining property, being Lot 1 DP 50244, to the west. The nearest lot to this property is proposed Lot 10. The distance between the properties in addition to the proposed planting would ensure no adverse amenity effects to this neighbour.

The applicant intends to place further restrictive covenants on the titles that limits building location and colour.

Securing building locations will safeguard viewscales and rural amenity to future residents. Setbacks between buildings will be maximised where possible to minimise overlooking and provide privacy.

The applicant intends for future development to integrate into the environment and be complementary to the rural setting. Building colours will be restricted to recessive colours that blend in with the environment and don't draw attention.

As mentioned, earthworks will not be required for building platforms as part of the subdivision. Notwithstanding this will be necessary at the time of development. The site is



not in an outstanding landscape area and the restricted density of development will ensure that the existing landform is not significantly altered.

Proposed Lot 11 is the largest lot as part of this subdivision. Where it could have been created into another four lifestyle lots the applicant proposes to plant this land in a mix of native and exotic vegetation. This will enhance the amenity of the subject site, increase indigenous biodiversity and enhance ecological values. It will also have the practical benefit of creating a wind break to neighbouring properties and may be used as a seedbank for wider regenerative efforts on Chatham Island.

The lifestyle lots will be able to facilitate permitted activity land use in future. Site restrictions will result in low-density development with a low site coverage percentage. This will enhance amenity to future residents and protect the scenic and open character of the land. Proposed plantings will provide screening and create privacy for on and off-site amenity.

Overall, the scale of the proposal is considered appropriate. Any visual effects will be less than minor, and the character and amenity of the Rural Zone will be maintained and enhanced.

Transport and Safety

The speed limit of Waitangi Tuku Road is 80km/hr. However, given the road is in gravel and there is a curve warning sign of 25km/hr at this point in the road, the operational speed would be significantly less.

Access to the lifestyle lots will be near the curve warning sign. Lots 1-3 will obtain access via a new vehicle crossing and lots 4-10 via a private laneway off Waitangi Tuku Road.

The intersection of Waitangi Tuku Road and the private lane will be upgraded to Council standards to ensure the safe and efficient movements of vehicles.

At the point of the vehicle crossing the road is straight and there is good visibility of approximately 100m in both directions.

Lots sizes are large and there is sufficient area for on-site manoeuvring at the time of development to allow vehicles to exit onto the road in a forward motion.

Overall, it is considered that there are no increased traffic and safety effects as a result of this proposal.



Services

The proposed lifestyle lots have sufficient area to cater for on-site wastewater disposal. This would likely be via a septic system and effluent field; however, site specifics would be considered at the time of building consent.

The proposal will restrict development to one primary dwelling per lot. As such this will not be a highly concentrated or developed area and the cumulative effect of onsite effluent disposal is considered to be minimal with low risk to groundwater contamination. Regular maintenance of the disposal system would be the responsibility of landowners.

Potable water and water for firefighting supply will be to rainwater tanks. As mentioned, the applicant will adhere to Council imposed conditions on tank capacity to ensure continued supply over the summer months. Rain tanks are an efficient and cost-effective means of water supply and tank water is generally safer than bore water in un-sewered areas.

Stormwater will be managed by collection to tanks and disposal to ground with lot boundaries. Each lifestyle lot can be provided with a supply of power and telecommunications services. This is likely to be by way of solar panels and a provider such as Starlink.

It is considered that the proposed subdivision can support adequate on-site services for future development.

Cultural

The subject site was ancestral land and a living space for Moriori in the pre-contact period. In this respect archaeological sites may be uncovered during construction. As such, it is requested that Council place the wording below as a condition or advice note on the consent as deemed appropriate.

It is possible that archaeological sites may be affected by development anywhere on Rēkohu/Chatham Islands. Evidence of archaeological sites may include surface evidence of occupation, such as Moriori food preparation areas (ovens and shell middens), rock art, miheke/taonga tuturu finds and burials.

The applicant is advised to contact Heritage New Zealand Pouhere Taonga if the presence of an archaeological site is suspected. Work affecting archaeological sites is subject to an Authority process under the Heritage New Zealand Act 2014.

Natural Hazards

The Chatham Islands Resource Management Planning Maps have been reviewed in respect of the subject site with no hazards identified.

Prior to development site specific geotechnical assessments will be commissioned to ensure ground stability of building locations and to provide recommendations for foundations.



This will be adequately addressed at the time of building consent and development shall comply with The Building Act 2004.

Overall, it is considered that the proposal will not exacerbate the risk of natural hazards.

CONCLUSION

It is concluded that the proposal is a suitable and appropriate use for the site and will be consistent with the principle of sustainable resource management. Any adverse effects identified are considered to be less than minor.

6. RELEVANT OBJECTIVES AND POLICIES

6.1 CHATHAM ISLANDS COUNCIL RESOURCE MANAGEMENT DOCUMENT:

The following objectives and policies are considered relevant to the proposal:

Chapter 4 Subdivision and Development

4.12.1 Objective – Subsequent Uses

To ensure that sites which are created by subdivision do not subsequently result in adverse effects on the environment that cannot be avoided, remedied or mitigated.

4.12.1.1 Policies

(i) To ensure that sites created are capable of being put to reasonable use having regard to the objectives and policies for the management area in which it is located.

(ii) Any subdivision should avoid the possible adverse effects of development on significant indigenous vegetation and habitats, outstanding landscape features, historic heritage, and the natural character of water bodies and the coastal environment.

(iii) Any subdivision should avoid or be able to mitigate any site identified with a natural hazard, or be able to mitigate that natural hazard.

4.12.2 Objective - Provision of Services

(i) The adequate provision of services, infrastructure and access for sites created by subdivision and development in a manner that avoids, remedies or mitigates adverse effects.

4.12.2.1 Policies

(i) Subdivision and development should provide for:

Disposal of sewage in a manner which maintains public health and avoids, remedies or mitigates effects on the environment,



Adequate water supplies for drinking and fire fighting,

Disposal of stormwater in a manner which does not affect water quality and avoids inundation,

Supply of electricity, street lighting and telecommunications using a method that is appropriate to the circumstances of the subdivision/development and to the amenity values of the area,

Safe and efficient vehicular and pedestrian access

(ii) The costs of additional new or upgraded services and infrastructure shall be paid for by the developer/subdivider (refer Section 4.13).

Comment

There is no minimum lot size in the Rural Zone. However, all lots are considered to be generously proportioned lifestyle lots. As such, sites can accommodate permitted activity development and be put to reasonable use.

Restrictive covenants that will be placed on these titles will ensure that future effects of development on amenity are less than minor.

The site is not in an area of outstanding landscapes or historic heritage. There is no discernible vegetation present. To enhance indigenous biodiversity and amenity values the applicant proposes to plant along boundaries and create a lot for conservation purposes.

Natural hazards are not identified on the property and a geotechnical assessment will be provided prior to development to ensure site specific ground suitability.

Each lifestyle lot can be adequately serviced within property boundaries. It is requested that Council place a condition of consent for the installation of water tanks that can meet the needs for potable and firefighting water supply. The cost to create a new vehicle crossing and private lane will be borne by the applicant.

Overall, the characteristics of the environment will be maintained as a result of the proposal.

Chapter 5.3 Rural Zone

5.3.2 Objective – Management of Resources

(i) The management of resources in the rural zone in a manner that enables people and communities to carry out a variety of activities while ensuring that the resource base is sustainable for future generations.

5.3.2.1 Policies



(i) Activities should not significantly reduce the long-term potential or availability of the natural and physical resources.

(ii) A wide range of activities should be permitted provided adverse effects are avoided, remedied or mitigated.

5.3.3 Objective – Amenities

(i) To retain and enhance the existing amenity values of the rural area.

5.3.3.1 Policies

(i) The patterns of subdivision and housing should ensure that the openness of the Rural Zone is retained and the adverse effects on natural features are avoided, remedied or mitigated.

(ii) The bulk and location of structures should not affect the character of the Rural Zone or affect the amenity values of adjoining properties.

(iii) Activities should not adversely affect the amenity values of the Rural Zone or adjoining properties in terms of such matters as effluent disposal, noise, traffic generation, air emissions, odour, shading and visual impact.

Comment

The proposed subdivision will create large lifestyle lots that can facilitate development as of right. Covenants on the titles will ensure the scale of development is restricted to one primary dwelling which will thereby ensure that the open and spacious nature of the zone is retained.

Bulk and location will be managed by development density. Lot sizes can enable large setbacks of development from adjoining properties such that any amenity effects are less than minor.

The proposal will not cause nuisance effects and future development will be managed by covenants to ensure there are no adverse visual effects.

6.2 SUMMARY

For the reasons outlined above it is considered that the proposal is consistent with the relevant objectives and policies of The Chatham Islands Resource Management Document.

7. SECTION 106

Section 106 of the Act sets out certain circumstances where a consent authority may refuse subdivision consent, being:

1. *A consent authority may refuse to grant a subdivision consent, or may grant a subdivision consent subject to conditions, if it considers that –*
 - a. there is a significant risk from natural hazards; or



- b. *Repealed; or*
- c. *sufficient provision has not been made for legal and physical access to each allotment to be created by the subdivision.*

The subdivision will result in twelve lots, ten of which are intended for residential development. There are no identified natural hazards within the property on Council's Planning Maps and a geotechnical assessment for ground suitability and foundation recommendations can be provided prior to development.

There is suitable access into all lots from Waitangi Tuku Road.

Consequently, it is considered that consent can be granted to this application in accordance with Section 106 of the RMA.

8. NATIONAL POLICY STATEMENT FOR HIGHLY PRODUCTIVE LAND (NPS-HPL)

The NPS-HPL came into effect in October 2022 and seeks to protect highly productive land for use in land-based primary production, both now and for future.

The NPS-HPL requires that territorial authorities avoid the subdivision of highly productive land unless circumstances under 3.8(1) apply.

Following correspondence with Council's Chief Executive and Planning Consultant (Beca) it is deemed that the NPS-HPL does not currently apply to Chatham Islands. The island has not been mapped for LUC 1, 2 and 3 soils which is critical for the definition of Highly Productive land under the NPS.

Without mapping the subject site cannot meet the definition of Highly Productive land under the NPS. As such, it is considered that the provisions of the NPS are not relevant to this proposal.

9. NATIONAL ENVIRONMENTAL STANDARD FOR ASSESSING AND MANAGING CONTAMINANTS IN SOIL TO PROTECT HUMAN HEALTH 2011 (NESCS).

The NESCS came into effect in January 2012 and seeks to manage actual and potential adverse effects of contamination in soil on human health from particular activities that have occurred on a site. The NESCS includes a Hazardous Activities and Industries List (HAIL) that sets out which activities may have potentially contaminated the soil. The NES applies when a person wants to undertake an activity described in subclauses (2) to (6) on a piece of land described in subclause (7) or (8).



There subject site is in pasture and undeveloped. There is no evidence on site to suggest that any HAIL activities have been undertaken on the site. Accordingly, the assessment and reporting provisions of the NECS are not applicable to this application.

Overall, it is considered that the NESCS does not apply to this proposal.

10. NATIONAL POLICY STATEMENT FOR INDIGENOUS BIODIVERSITY 2023 (NPSIB)

The National Policy Statement for Indigenous Biodiversity (NPSIB) came into effect in August 2023 and seeks to maintain indigenous biodiversity across Aotearoa New Zealand so that there is at least no overall loss in indigenous biodiversity.

The subject site is not a habitat for native plants or animals. It is not in a significant natural area and no vegetation will be cleared as part of this subdivision.

Notwithstanding, the applicant proposes to establish Lot 11 as a conservation lot. At 3.1884ha it is the largest lot to be created and will be planted in both indigenous and exotic vegetation. As such, the proposal will result in a net gain in indigenous biodiversity.

While the provisions of the NPSIB are not applicable to the subdivision per se, the creation and planting of this lot will result in its protection under the NPSIB in future.

11. PART II ASSESSMENT

The Council is required to consider the application in relation to the purposes and principles of the Act, which are contained in Sections 5 to 8 of the Act, inclusive.

It is considered that the proposal will be consistent with the purpose and principles of the Act as detailed below.

Section 5 - Purpose

This proposal meets Section 5 as the proposal provides for the site to be used for residential use in an area where there is a shortage in housing supply and does not adversely affect the environment.

Section 6 - Matters of National Importance

The proposal does not present significant risk from natural hazards occurring on the site, the subdivision is considered appropriate, and no outstanding features are located on the property. There are no other matters of national importance. Therefore, Section 6 is considered to be met.



Section 7 - Other Matters

The following matters are considered relevant for this proposal, to achieve the purposes of the Act:

- (a) *"Kaitiakitanga"*
- (b) *"The efficient use and development of natural and physical resources".*
- (c) *"The maintenance and enhancement of amenity values".*

The subject site has a history of previous Moriori use. It is requested that the consent is appropriately conditioned relating to any archaeological findings. The application has assessed that the proposal is an appropriate use of the land that will maintain the amenity values of the surrounding environment.

Section 8 - Purpose

All persons exercising functions and powers under the RMA shall take into account the principles of the Treaty of Waitangi. This proposal recognises and respects the Treaty of Waitangi.

12. SECTION 95A AND 95B ASSESSMENT

12.1 SECTION 95A PUBLIC NOTIFICATION ASSESSMENT

Section 95A(1) of the Act states:

'A consent authority must follow the steps set out in this section, in the order given, to determine whether to publicly notify an application for a resource consent'

Step 1: *mandatory public notification in certain circumstances*

- We do not request public notification;
- With regards to s95C we have not yet been requested to provide further information, and should we fail to do so, the Council can use its discretion to notify under this clause;
- The application is not made jointly with an application to exchange recreation reserve land under section 15AA of the Reserve Act 1977.

Step 2: *public notification precluded in certain circumstances*

- No national environmental standard or rule in a plan precludes public notification;
- This is not a boundary activity.

Step 3: *public notification required in certain circumstances*

- The application is not subject to an environmental standard or rule that requires public notification;



- In accordance with s95D, the effects on the environment are summarised in section 5 and are considered to be less than minor.

Step 4: public notification in special circumstances

- There are no special circumstances that warrant public notification as the proposal is for a twelve-lot subdivision that satisfies s106 and meets the permitted activity rules of the Rural Zone. This proposal is not unique, nor unusual and public notification would not contribute to the assessment of this application.

For the above mentioned reasons the proposal does **not** require public notification.

12.2 SECTION 95B LIMITED NOTIFICATION ASSESSMENT

Section 95B(1) of the Act states:

'A consent authority must follow the steps set out in this section, in the order given, to determine whether to give limited notification of an application for a resource consent...'

Step 1: certain affected groups and affected persons must be notified

- There are no affected protected customary rights groups or customary marine title groups.
- The site is not within a statutory acknowledgement area that will be affected by this proposal.

Step 2: limited notification precluded in certain circumstances

- No national environmental standard or rule in a plan precludes limited notification;
- This is not a controlled activity.

Step 3: certain other affected persons must be notified

- In accordance with s95E, no persons are considered adversely affected by the proposal because,
 - The proposed subdivision will result in lifestyle lots that can facilitate the construction of development as of right.
 - Restrictive covenants will be placed on the lifestyle titles that limit development to a scale and aesthetic appropriate to the environment.
 - Each lot can be adequately serviced.
 - Access into all lots can be provided safely from the existing road network.
 - There are no natural hazards that will be exacerbated by this proposal, and it will not cause any adverse effects on neighbouring properties.
 - Lot 11 will remain undeveloped and is for the purpose of planting to recreate indigenous biodiversity and enhance visual amenity.



- The character and amenity of the surrounding environment will not be compromised.

Step 4: further notification in special circumstances

- There are no special circumstances that warrant notification of any person not already eligible for limited notification.

For the above-mentioned reasons, the proposal does **not** require limited notification.

12.3 NOTIFICATION CONCLUSION

Overall, it is considered that this proposal does not create any adverse environmental effects or effects on amenity and character experienced by the surrounding properties. There is nothing unusual or unique about this proposal and therefore this application should be processed on a non-notified basis.

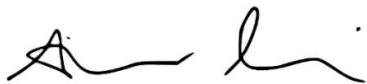
13. CONCLUSION

The proposal for a twelve lot subdivision is considered to be a suitable proposal.

This AEE has demonstrated that the effects of this proposal are less than minor and will not result in any loss of value to the amenity and character of the surrounding area and the lots can be appropriately serviced. Further, the proposal meets the relevant objectives and policies and assessment matters of the CIRMD and is in line with the NESCS and NPS-IB.

It is therefore considered that resource consent for this proposal be **granted** subject to conditions.

Report prepared by: Amber Lebioda



14. LIMITATIONS

This report is for the use by Kaiara Limited only and should not be used or relied upon by any other person or entity or for any other project.

This report has been prepared for the particular project described to us and its extent is limited to the scope of work agreed between the client and Fringe Planning. No responsibility is accepted by Fringe Planning or its directors, agents, staff or employees for the accuracy of



information provided by third parties and/or the use of any part of this report in any other context or for any other purposes.





RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD
Search Copy




 R.W. Muir
 Registrar-General
 of Land

Identifier **WN123/95**

Land Registration District **Wellington**

Date Issued 20 January 1903

Part-Cancelled

Prior References
 WN113/128

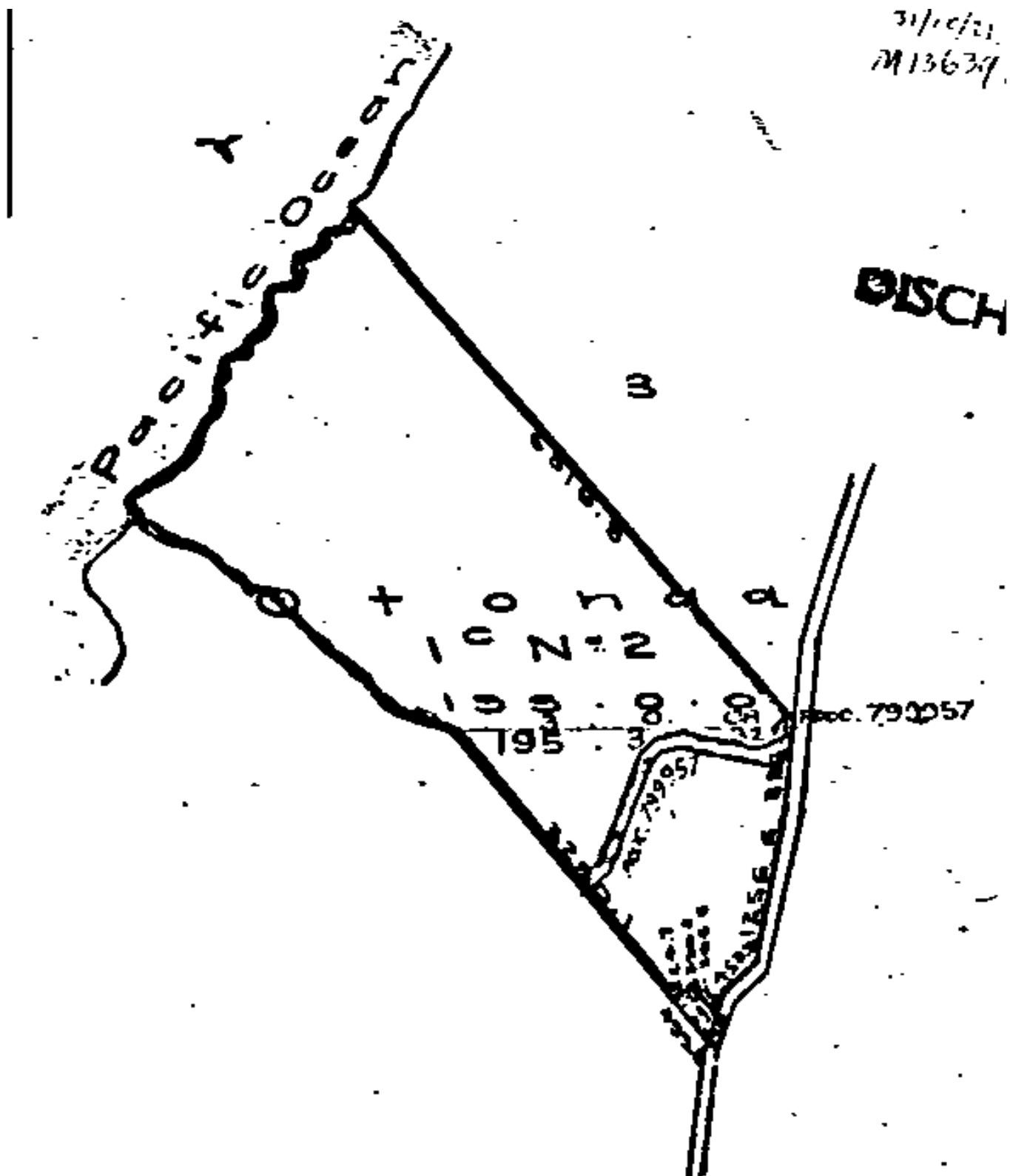
Estate	Fee Simple
Area	80.5324 hectares more or less
Legal Description	Otonga 1C2 Block
Registered Owners	
	Kaiara Limited

Interests

799957 Proclamation proclaiming part (3 acres 8 perches) for road on and after 15.9.1969 - 25.9.1969 at 9.00 am

Identifier

WN123/95





ANZ Centre, 267 High Street,
PO Box 13960, Christchurch,
8141, New Zealand
T: +64 3 366 3521 // F: +64 3 366 3188
E: info@beca.com // www.beca.com

Kaiara Limited
C/- Amber Lebioda
Fringe Resource Consent Planning
Hawkes Bay

22 February 2024

Attention: Amber Lebioda
E-mail: amber@fringeplanning.co.nz

Dear Amber,

s92 - Request for Further Information – Kaiara Limited – CIC/2023/008

Further to our recent correspondence and on behalf of Chatham Islands Council, this letter is a request under s92(1) of the Resource Management Act 1991 (RMA) for further information to assist Council in processing your application and understanding of the actual or potential adverse effects of your proposal.

Please see the below which sets out why the request is being made, and process should you refuse to provide information or not respond to this request.

Requested Information

The following additional information about your application is requested for the reasons set out below:

1. Dwellings/Building Platforms

- (i) The plan of subdivision shows “Restrictive Land Covenant (25m x 25m)” or potential building platforms on each lot although it is understood they are not fixed on site. Could you please provide an indicative location of the potential buildings platforms so as to better assess visual impact.

Can you also confirm the building platforms will be restricted to “25m x 25m”?

- (ii) Please confirm if the applicant is agreeable to consent notices relating to the maximum number of residential units per allotment (1); building platforms; a maximum height above ground level of say 8m – noting this is a typical two storey residential dwelling height; and potentially “recessive colours”.

2. Wastewater

While the proposed lots are reasonably large it is difficult to assess effects (including cumulative effects) without fully understanding the likely design, sizing and performance of the proposed discharge systems having regard to types of soils etc.

Accordingly, please provide further details of the proposed wastewater system, including:

- (i) Site soils and suitability for onsite disposal as classified under AS/NZS 1547:2012 Onsite Domestic Wastewater Management which may soil test pits / soil logs to determine soil type/texture.
- (ii) Do the soils vary across the subdivision or are they areas which are unsuitable for onsite disposal?
- (iii) What is the expected method of disposal (e.g subsurface) ?
- (iv) What is the assessed minimum area for the proposed discharge volume (based on expected residents/bedroom numbers and application rate generally 5mm per day for worst case permeability)?
- (v) What is the expected separation to groundwater?
- (vi) Can you please provide a site water balance based on available weather data (rainfall records), soil permeability and the proposed application rate.

- (vii) A summary of the proposed design parameters for onsite wastewater within the subdivision based on the above information.
- (viii) Confirmation that any adjoining bores will not be affected.eg does the dwelling on Lot 1 DP50244 use a bore.

3. **Water Supply**

To provide some level of certainty please the demonstrate technical feasibility of sustainable on-site water supply by rainwater e.g., provide estimate of rainwater yield expected (eg each month over a year) and hence size of individual rain water tanks based on dwelling size (roof area, no. bedrooms/people, water usage per person) and fire-fighting storage. It is noted that Rule 5.3.4.12 refers to the FENZ Code of Practice SNZ PAS 4509:2008.

4. **Affected Parties**

A discussed at this stage the adjoining landowners have been identified as affected parties (see email of 15 February 2023).
In addition, as indicated in the same email, please provide any written comment from Hokotehi Moriori Trust, Ngāti Mutanga o Wharekauri Iwi Trust and Department of Conservation.

5. **Planting**

Please provide a landscape plan that shows the extent of the proposed planting, including location, width, dimensions etc and typical species that are to be planted and the proposed timing of the planting.

6. **Other Matters**

The aerial image of the site below shows a likely overland flow path near / from the existing “dams” on the site. Both dams are in area to be subdivided as part of Stage 2 – one is on a proposed lifestyle lot (Lot 8) and other is on lot to remain undeveloped/planted (Lot 11). The majority of overland flow path appears to be in Lot 11 but there’s also a portion within Lot 8 and 10 (which will need to be considered when siting building platform and on-site wastewater disposal systems). Please provide any relevant comment on this matter.



Responding to this request

This letter represents the formal request under Section 92(1) and sets out the reasons for the Council requesting the information in accordance with section 92(3)(a) of the RMA. You are required to respond to this request in writing within 15 working days from the date of this letter, to advise the consent authority that you either agree or refuse to provide the information requested, or to seek an alternative timeframe to provide the information in accordance with RMA section 92A(2)(a).

If you are seeking an alternative timeframe to provide the information, this new timeframe must be agreed in writing with Council. When I have received the information and completed my assessment of your application I will be able to confirm notification pathways and/or whether anyone else is affected by the proposal.

If the further information you provide raises any new matters that need to be clarified, your application will stay on hold until there is enough information to continue processing.

Yours sincerely,



Note: My normal office hours are Monday to Thursday

Paul Whyte
Senior Associate (Planning)
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paul.whyte@beca.com
www.beca.com

Kaiara Subdivision Project – Section 92 Request

Requested Information

The following additional information about your application is requested for the reasons set out below:

1. Dwellings/Building Platforms

i (i) The plan of subdivision shows “Restrictive Land Covenant (25m x 25m)” or potential building platforms on each lot although it is understood they are not fixed on site. Could you please provide an indicative location of the potential buildings platforms so as to better assess visual impact.

The indicative locations of potential building platforms shall be located inside the Restrictive Land Covenants. A prospective purchaser will be able to build anywhere inside this covenant area subject to site-specific considerations during the building consent process. Please note we cannot pre-empt exactly where a consented dwelling will sit inside these covenant areas. The positions of the covenants have been established based on a topographical survey of the site considering northerly aspects/views capes, natural amenity spaces, access, sight lines and effluent field space. The visual impact of the proposal is being further controlled by the proposed covenants in the AEE. The final positions of the covenants will be in general accordance with the Scheme Plan. We do not anticipate their locations to change unless site-specific constraints are identified during the subdivision process, i.e. wastewater disposal.

Can you also confirm the building platforms will be restricted to “25m x 25m”?

Yes, we can confirm that the Restrictive Land Covenants will be 25m x 25m. This in turn restricts prospective building platforms to the same area.

(ii) Please confirm if the applicant is agreeable to consent notices relating to the maximum number of residential units per allotment (1); building platforms; a maximum height above ground level of say 8m – noting this is a typical two storey residential dwelling height; and potentially “recessive colours”.

Yes, the applicant is agreeable to consent notices proposed above. We wish to review the draft Consent Notices and associated conditions prior to the issue of Council's decision.

2. Wastewater

While the proposed lots are reasonably large it is difficult to assess effects (including cumulative effects) without fully understanding the likely design, sizing and performance of the proposed discharge systems having regard to types of soils etc.

The Geotechnical Wastewater Treatment Report prepared by ENGCO Consulting Engineers (refer to link provided below) details site-specific testing and subsequent recommendations suitable to support all future development. Please refer to this report for all information requested below.

<https://www.dropbox.com/scl/fo/0t71ubeyz60nxnb5sladn/AFZA84P4NDL-SdWQIQaTGmk?rlkey=3bdw3vio22geqzmr04ot92ugs&st=sowfziuv&dl=0>

Accordingly, please provide further details of the proposed wastewater system, including:

- i (i) Site soils and suitability for onsite disposal as classified under AS/NZS 1547:2012 Onsite Domestic Wastewater Management which may soil test pits / soil logs to determine soil type/texture.

The report has assessed the design criteria for onsite wastewater disposal. However, site-specific testing, analysis and recommendations will be required at Building Consent stage. We request the following consent notice (or similar) to be placed on the future Record of Title (RT) of Lots 1-10:

“This site has been created by subdivision. All building development on the site shall only be undertaken in accordance with a development and site-specific report and the recommendations of a registered and professionally qualified geotechnical engineer experienced in soils engineering. This report should cover as a minimum, building siting and design, storm water runoff, and the location of wastewater disposal systems. Specific design shall be required for the wastewater system by a professionally qualified wastewater engineer.”

- ii (ii) Do the soils vary across the subdivision or are they areas which are unsuitable for onsite disposal?

Please refer to the report for further information.

- iii (iii) What is the expected method of disposal (e.g subsurface) ?

Please refer to the report for further information.

iv (iv) What is the assessed minimum area for the proposed discharge volume (based on expected residents/bedroom numbers and application rate generally 5mm per day for worst case permeability))?

Please refer to the report for further information.

(v) What is the expected separation to groundwater?

Please refer to the report for further information.

(vi) Can you please provide a site water balance based on available weather data (rainfall records), soil permeability and the proposed application rate.

Please refer to the report for further information.

(vii) A summary of the proposed design parameters for onsite wastewater within the subdivision based on the above information.

Please refer to the report for further information.

(viii) Confirmation that any adjoining bores will not be affected.eg does the dwelling on Lot 1 DP50244 use a bore.

The owner of Lot 1 DP 50244 (RT WN22A/641 - Donna Rae Tuanui) has confirmed that her property is supplied by water from Lot 2 DP 511489 (RT 785388 – Amanda Rosemarie Horler, Robin Paul Seymour) via an existing easement, namely Area A DP 511489, located to the south-west of her property. This water source is far from the subject development and any potential or perceived effects of wastewater seepage. Please note that the dwelling on Donna Tuanui's property is at a similar or higher elevation to the subject development, i.e. not downslope. Please refer to the screenshot below indicating the location of the water source.



3. Water Supply

To provide some level of certainty please the demonstrate technical feasibility of sustainable on-site water supply by rainwater e.g., provide estimate of rainwater yield expected (eg each month over a year) and hence size of individual rain water tanks based on dwelling size (roof area, no. bedrooms/people, water usage per person) and fire-fighting storage. It is noted that Rule 5.3.4.12 refers to the FENZ Code of Practice SNZ PAS 4509:2008.

The average annual rainfall on Chatham Island varies by locality, as detailed in NIWA's 'The Climate and Weather of the Chatham Islands' report by P.R Pearce (https://niwa.co.nz/sites/default/files/Chathams_Climate.pdf). We estimate this average annual rainfall to be in the order of ~1000-1200mm (see Figure 18 of this report). Therefore, we estimate the average monthly rainfall to be ~83-100mm.

Rainwater yield and storage sizing per lot is dependent on the dwelling size and roof area of a dwelling proposed at Building Consent stage. Therefore, we cannot accurately estimate the size, roof area, occupancy or water usage for Lots 1-10 in advance of consent.

We propose that water storage requirements for Lots 1-10 be confirmed at the time of Building Consent and secured by a consent notice on the respective RTs.

Auckland Council's calculator (refer to the link provided below) provides an estimate for rainwater tank size dependent water usage requirements.

<https://www.aucklandcouncil.govt.nz/environment/looking-after-aucklands-water/rainwater-tanks/Pages/rainwater-tank-size-calculator.aspx>

4. Affected Parties

As discussed at this stage the adjoining landowners have been identified as affected parties (see email of 15 February 2023).

In addition, as indicated in the same email, please provide any written comment from Hokotehi Moriori Trust, Ngāti Mutunga o Wharekauri Iwi Trust and Department of Conservation.

The following affected parties have provided written approval for the subject proposal:

- Department of Conservation – 18/04/2024
- Hokotehi Moriori Trust – 7 August 2024
- Robin Seymour & Amanda Horler (RT 785388 – Lot 1, 2 and 4 DP 511849, and RT WN395/157 – Part Otonga 1E4A2 Block) – 8 August 2024

Copies of these approvals accompany this Section 92 response.

Another affected party, Donna Rae Tuanui (RT WN22A/641 – Lot 1 DP 50244) was consulted in person in June 2024 and provided with all the relevant documentation. After consulting with her family she has advised that she will not sign the written approval form, but nor will she oppose the application.

Ngati Mutunga o Wharekauri Iwi Trust (NMOWIT) were contacted on three separate occasions, being 9 March 2024, 18 June 2024 and 8 August 2024, with no response

received. Copies of attempted communications with NMOWIT accompany this Section 92 response.

Jack Daymond and Hariroa Daymond (RT WN428/46 – Otonga 1E3A Block), were also contacted on two separate occasions, being 23 February 2024 and 4 September 2024, with no response received. Copies of attempted communications accompany this Section 92 response.

The remaining land identified by Council as an affected landowner, being RT WN26B/596 - Otonga 1E1C1 Block) is an alienated block owned by Heni Apitea, who died in 1917 without succession.

5. Planting

Please provide a landscape plan that shows the extent of the proposed planting, including location, width, dimensions etc and typical species that are to be planted and *the proposed timing of the planting.*

Please find attached to this Section 92 response a Landscape Plan for Lot 11.

Please note that Lot 11 is not categorised as a ‘natural inland wetland’ under Section 3.21 of the NPS Freshwater Management 2020 (and therefore under the NPS Indigenous Biodiversity) – being in an area used for pastoral grazing and containing vegetation cover exceeding 50% exotic pasture. Furthermore, Lot 11 is not categorised as a wetland under the Resource Management Act 1991 (RMA1991). Lot 11 shall hereon be referred to as a conservation lot.

Lot 11 is to be set aside and replanted to promote biodiversity and native flora/fauna. This intends to have a positive ecological effect on the land and the wider ecosystem. The replanting of Lot 11 also enhances the aesthetic value of the subdivision while providing a seedbank for wider regenerative efforts on the Island. Six of the ten lots (being Lots 1-3, 6, 8 and 10) abut Lot 11.

6. Other Matters

The aerial image of the site below shows a likely overland flow path near / from the existing “dams” on the site. Both dams are in area to be subdivided as part of Stage 2 – one is on a proposed lifestyle lot (Lot 8) and other is on lot to remain undeveloped/planted (Lot 11). The majority of overland flow path appears to be in Lot 11 but there’s also a portion within Lot 8 and 10 (which will need to be considered when siting building platform and on-site wastewater disposal systems). Please provide any relevant comment on this matter.

Please note the 'dams' referenced above are in fact stock ponds which fill up after heavy rainfall. The pond contained within Lot 8 is associated with a spring.

The overland flow paths for Lots 8 & 10 extend north-west towards Lot 11 (refer to the topographical survey information detailed on the Scheme Plan).

Any on-site wastewater disposal systems will be established in accordance with the Geotechnical Wastewater Treatment Report prepared by ENGCO Consulting Engineers (refer to link provided above) and/or future site-specific geotechnical input during the Building Consent stage.



LOCATION DIAGRAM
NOT TO SCALE



PART OTONGA 1E1C2 BLOCK

PART OTONGA 1E1C2 BLOCK

LOT 1 DP 50244

WAITANGI TUKU ROAD, CHATHAM ISLAND
(LEGAL ROAD, GAZ 1960 P.512 & 1968 P.2327)

LOT 2
1.0776ha

LOT 1
1.0780ha

LOT 3
0.7100ha

LOT 100
10.2478ha

LEGAL ROAD, GAZ 1884 P.1599
(~20.12m)

PART OTONGA 1E1C2 BLOCK

PART OTONGA 1E4A2 BLOCK

OTONGA 1E1C1
BLOCK

SCHEDULE OF EASEMENTS			
PURPOSE	IDENTIFIER	BURDENED LAND (SERVIENT TENEMENT)	BENEFITED LAND (DOMINANT TENEMENT)
RIGHT OF WAY, RIGHT TO CONVEY ELECTRICITY, RIGHT TO CONVEY TELECOMMUNICATIONS	A	LOT 2 HEREON	LOTS 1 & 3 HEREON

SCHEDULE OF EASEMENTS IN GROSS			
PURPOSE	IDENTIFIER	BURDENED LAND (SERVIENT TENEMENT)	GRANTEE
RIGHT TO CONVEY ELECTRICITY	B	LOT 3 HEREON	CHATHAM ISLANDS ELECTRICITY LIMITED

Notes:

- THE PURPOSE OF THIS SCHEME PLAN IS TO SUPPORT A RESOURCE CONSENT APPLICATION ONLY. IF APPLICABLE THIS PLAN SHOULD BE READ IN CONJUNCTION WITH SUPPORTING TOPOGRAPHICAL, ARCHITECTURAL AND ENGINEERING PLANS/INFORMATION.
- SERVICES, UTILITIES, AND DRAINAGE SHOWN ON THIS PLAN ARE LIMITED TO WHAT WAS VISIBLE AND ACCESSIBLE ON THE DAY OF SURVEY.
- UNDERLYING BOUNDARIES ON THIS PLAN HAVE BEEN ADOPTED FROM THE MOST RELEVANT UNDERLYING PLANS.
- NOT ALL LEGAL INSTRUMENTS, DRAINAGE, OR OTHER INTERESTS PERTAINING TO THIS SITE ARE NECESSARILY SHOWN ON THIS PLAN.
- AERIAL IMAGERY (2023) HAS BEEN FLOWN BY DEFINITION SURVEYING IN APRIL OF 2023.
- THE COPYRIGHT AND INTELLECTUAL PROPERTY RIGHTS FOR THE INFORMATION SHOWN ON THIS PLAN REMAIN THE PROPERTY OF DEFINITION SURVEYING LTD.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS' SERVICE ENGINEERS DRAWINGS AND SPECIFICATIONS.
- LOT 100 CONTAINS THE BALANCE LAND SUBJECT TO STAGE 2.
- AREA B ENCOMPASSES AN EXISTING UTILITY OWNED AND MAINTAINED BY CHATHAM ISLANDS ELECTRICITY LTD.
- ALL WASTEWATER SYSTEMS ARE INTENDED TO BE SETBACK AT LEAST 20M FROM THE BANK OF ANY WATERBODY AND WHOLLY CONTAINED WITHIN EACH RESPECTIVE SITE.
- RESTRICTIVE LAND COVENANTS (~625M²) REPRESENT PROSPECTIVE BUILDING PLATFORM LOCATIONS FOR PERMITTED RESIDENTIAL UNITS.
- THE FINAL LOCATION AND SPATIAL EXTENT OF EACH RESTRICTIVE LAND COVENANT IS SUBJECT TO THE FINAL LAND TRANSFER SUBDIVISION.
- ALL RESIDENTIAL UNITS ARE INTENDED TO BE SEPARATED BY AT LEAST 50M.
- ALL ACCESS LOCATIONS ARE INDICATIVE ONLY AND ARE SUBJECT TO THE FINAL LAND TRANSFER SUBDIVISION.

LEGEND

MAJOR CONTOUR (BACKGROUND)	
MINOR CONTOUR (BACKGROUND)	
PROPERTY BOUNDARY	
EASEMENT BOUNDARY	
ABUTTING BOUNDARIES (INDICATIVE)	
RESTRICTIVE LAND COVENANT (~25 x 25M)	
BUILDING SETBACK (10M)	
INDICATIVE ACCESS LOCATION	

SITE LOCATION

ADDRESS:	546 WAITANGI TUKU ROAD, CHATHAM ISLAND
APPELLATION:	PART OTONGA 1E1C2 BLOCK
ZONE:	RURAL
RECORD OF TITLE:	WN123/95
REGISTERED OWNERS:	KAIARA LIMITED

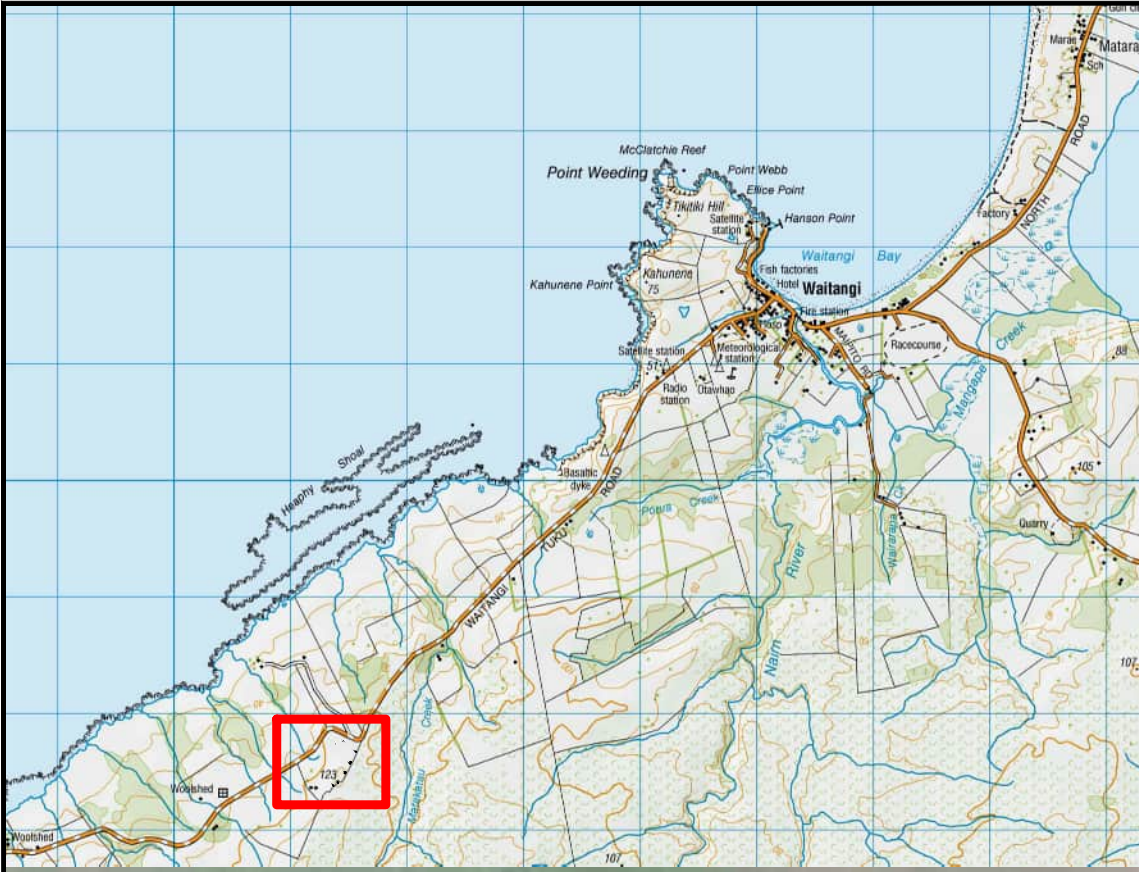
B	ACCESS CLARIFICATION	SM	10/01/2024
A	ISSUED FOR INFORMATION	SM	20/11/2023

REV.	DESCRIPTION:	BY:	DATE:
STATUS: ISSUED FOR INFORMATION			



CLIENT:
MAUI SOLOMON
KAIARA LIMITED
546 WAITANGI TUKU ROAD, CHATHAM ISLAND
SURVEYOR:
DEFINITION SURVEYING LTD
HAWKES BAY
SITE:
546 WAITANGI TUKU ROAD, CHATHAM ISLAND
WN123/95
PART OTONGA 1E1C2 BLOCK
TITLE:
SCHEME PLAN - STAGE 1 - LOTS 1-3 & 100 BEING A SUBDIVISION OF PART OTONGA 1E1C2 BLOCK

SCALE AT 1: 1:1000	DATE: 10/01/2024	DRAWN: SM	CHECKED: SM
PROJECT NO: N230005.04	DRAWING NO: V200	REVISION: R 311	



LOCATION DIAGRAM
NOT TO SCALE



Notes:

1. THE PURPOSE OF THIS SCHEME PLAN IS TO SUPPORT A RESOURCE CONSENT APPLICATION ONLY. IF APPLICABLE THIS PLAN SHOULD BE READ IN CONJUNCTION WITH SUPPORTING TOPOGRAPHICAL, ARCHITECTURAL AND ENGINEERING PLANS/INFORMATION.
2. SERVICES, UTILITIES, AND DRAINAGE SHOWN ON THIS PLAN ARE LIMITED TO WHAT WAS VISIBLE AND ACCESSIBLE ON THE DAY OF SURVEY.
3. UNDERLYING BOUNDARIES ON THIS PLAN HAVE BEEN ADOPTED FROM THE MOST RELEVANT UNDERLYING PLANS.
4. NOT ALL LEGAL INSTRUMENTS, DRAINAGE, OR OTHER INTERESTS PERTAINING TO THIS SITE ARE NECESSARILY SHOWN ON THIS PLAN.
5. AERIAL IMAGERY (2023) HAS BEEN FLOWN BY DEFINITION SURVEYING IN APRIL OF 2023.
6. THE COPYRIGHT AND INTELLECTUAL PROPERTY RIGHTS FOR THE INFORMATION SHOWN ON THIS PLAN REMAIN THE PROPERTY OF DEFINITION SURVEYING LTD.
7. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS' SERVICE ENGINEERS' DRAWINGS AND SPECIFICATIONS.
8. LOT 101 IS TO VEST AS ROAD IN THE CHATHAM ISLANDS COUNCIL AREA B ENCOMPASSES AN EXISTING UTILITY OWNED AND MAINTAINED BY CHATHAM ISLANDS ELECTRICITY LTD.
9. ALL WASTEWATER SYSTEMS ARE INTENDED TO BE SETBACK AT LEAST 20M FROM THE BANK OF ANY WATERBODY AND WHOLLY CONTAINED WITHIN EACH RESPECTIVE SITE.
10. RESTRICTIVE LAND COVENANTS (~625M²) REPRESENT PROSPECTIVE BUILDING PLATFORM LOCATIONS FOR PERMITTED RESIDENTIAL UNITS.
11. THE FINAL LOCATION AND SPATIAL EXTENT OF EACH RESTRICTIVE LAND COVENANT IS SUBJECT TO THE FINAL LAND TRANSFER SUBDIVISION.
12. ALL RESIDENTIAL UNITS ARE INTENDED TO BE SEPARATED BY AT LEAST 50M.
13. LOT 11 IS INTENDED TO BE REPLANTED IN NATIVE VEGETATION.
14. ALL ACCESS LOCATIONS ARE INDICATIVE ONLY AND ARE SUBJECT TO THE FINAL LAND TRANSFER SUBDIVISION.

LEGEND

MAJOR CONTOUR (BACKGROUND)	
MINOR CONTOUR (BACKGROUND)	
PROPERTY BOUNDARY	
EASEMENT BOUNDARY	
ABUTTING BOUNDARIES (INDICATIVE)	
RESTRICTIVE LAND COVENANT (~25 x 25M)	
BUILDING SETBACK (10M)	
INDICATIVE ACCESS LOCATION	

SITE LOCATION

ADDRESS:	546 WAITANGI TUKU ROAD, CHATHAM ISLAND
APPELATION:	PART OTONGA 1E1C2 BLOCK
ZONE:	RURAL
RECORD OF TITLE:	WN123/95
REGISTERED OWNERS:	KAIARA LIMITED

B	ACCESS CLARIFICATION	SM	10/01/2024
A	ISSUED FOR INFORMATION	SM	20/11/2023
REV.	DESCRIPTION:	BY:	DATE:
STATUS: ISSUED FOR INFORMATION			



CLIENT:	MAUI SOLOMON KAIARA LIMITED 546 WAITANGI TUKU ROAD, CHATHAM ISLAND
SURVEYOR:	DEFINITION SURVEYING LTD HAWKES BAY
SITE:	546 WAITANGI TUKU ROAD, CHATHAM ISLAND WN123/95 PART OTONGA 1E1C2 BLOCK
TITLE:	SCHEME PLAN - STAGE 2 - LOTS 4-11 & 101 BEING A SUBDIVISION OF PART OTONGA 1E1C2 BLOCK

SCALE AT 1:	DATE:	DRAWN:	CHECKED:
1:1000	10/01/2024	SM	SM
PROJECT NO:	DRAWING NO:	REVISION:	
N230005.04	V201		R 312



B

Appendix B

To: Paul Whyte
From: Graeme Jenner
Copy:
Subject: Kaiara Subdivision (CIC/2023/008) - onsite wastewater

Date: 15 January 2025
Our Ref: 4395328-1128409485-256

Introduction

Kaiara Ltd is making application for a consent to subdivide a site located at 546 Waitangi Tuku Road, Chatham Island. The proposal is to subdivide the land in two stages. Stage 1 involves the creation of three lots for residential dwellings in the northwest corner of the site. Stage 2 involves the creation of 7 lots for residential dwellings and one lot to be planted in native vegetation.

The proposed residential lots, which range in size from 0.59ha to 1.54ha, will be serviced by individual onsite wastewater systems. Five- bedroom dwellings with standard water fixtures have been assumed. The dwellings will have roof top water collection.

Site Details

The information provided on behalf of the applicant, by Consulting Engineers ENGCO¹, based on a site assessment on 12 June 2024, indicates that:

- The majority of the land is less than 10 degrees, except for steeper parts of the western corner that fall towards a wet swampy area,
- Surface water ponding in the northeast corner of proposed Lot 11 and the centre of proposed Lot 8,
- Soils are sandy topsoil (to 0.30m) over sandy clay to clayey silt (0.3 to 2m). For the purposes of onsite wastewater disposal, the soils are classified as having low permeability (i.e Category 6 - based on Table M1 of AS/NZS 1547:2012).
- Groundwater was not recorded in test pits to a depth of 2m below existing ground level.

Proposed Wastewater Treatment and Disposal

Based on the above site assessment, ENGCO has taken a conservative approach and proposed the following:

- A daily wastewater discharge per residential lot of 1.45m³,
- A proprietary secondary-type wastewater treatment system capable of meeting a 20g/m³ (BOD₅) and 30g/m³ (TSS) discharge quality, or better is also recommended at this stage due to the Category 6 soils identified at this stage (noting that the treatment system can be confirmed during design). At this stage primary treatment system which typically consists of a septic tank and disposal field is not favoured.
- Dripline irrigation (to be confirmed during design) with a minimum vertical clearance to groundwater of 0.3m,

¹ ENGCO (2024) *Geotechnical and Wastewater Treatment Report*

- A minimum disposal field area of 750m² based on the assessed soil infiltration capacity and flows from a 5-bedroom dwelling. Designated disposal areas on each lot have been provided (to be confirmed during design),
- Disposal areas will be required to meet the following horizontal set-back distances (exceptions would required specific Council approval):
 - Minimum of 20m from any surface water feature
 - Minimum 1.5m from all boundaries
 - Minimum 3m from all house foundations.

Comments on Proposal

From the above information, it is noted that:

- provision for 5-bedroom dwellings on the site is highly conservative in the local context and the assumed daily wastewater flow of 1.45m³ and therefore, the required land area for disposal, is also likely to be overstated. It is unclear what the basis is for the stated assumption by ENGCO that 1.45m³/d is “*within the regional council permitted activity standards for secondary treated wastewater*” as the CIRMD does not contain such a provision but 1.45m³ is considered reasonable for a 5 bedroomed house.
- The requirement to achieve a discharge quality of 20g/m³ (BOD₅) and 30g/m³ (TSS) using a proprietary secondary treatment process should be confirmed (as stated by the applicant) during design. Secondary treatment systems involve biological processes that typically require power to operate (eg for pumps and aeration). A possible configuration would include a septic tank followed by an aeration chamber and then a settling chamber. However, these systems require regular attention/maintenance by a skilled technician, which may be problematic in the local context. The option of using eg a simpler two chamber septic tank with replaceable outlet filter (3mm) to obtain a well-treated primary wastewater, should be considered during design. These systems require less regular maintenance and can achieve reasonable levels of wastewater solids removal, which may be appropriate for sustainable over the land areas identified for each lot.
- The applicant’s assessment of site soil conditions should be reviewed for each lot (as stated by the applicant) during design of the wastewater system. There may be opportunities, (depending on the final daily flow estimate bedroom numbers and confirmed soil conditions) to apply a lower loading application rate over the available disposal area and use alternative means of disposal eg mounds, trenches or beds, instead of drippers.
- The applicant has proposed a vertical clearance to groundwater of 0.3m which may be appropriate for a secondary treated wastewater and dripline system. Greater separation (eg >0.6m) may be required if alternative treatment and disposal systems are considered more appropriate for the lot.
- The expected impacts of the discharge on adjacent property, surface and groundwater should be appropriately mitigated based on the applicant’s proposal (noting that there may be opportunities as discussed to re-configure the treatment and disposal system (based on site assessment and design considerations) without compromising the environmental effects.

- Any collected site stormwater from sealed surfaces should be directed away from disposal areas.

Conclusions

The information and proposed design parameters for the proposed subdivision onsite wastewater system are based on a conservative assessment of likely daily flows and soil infiltration characteristics. However, as noted by the applicant, there may be opportunities to modify, both treatment and disposal processes during individual site wastewater design.

Overall, the proposal is generally consistent with the good practice requirements set out in AS/NZS 1547:2012 *Onsite Domestic Wastewater Management*.

Taking into account the information provided by the applicant, I consider that the effects on adjacent surface and groundwater will be less than minor.

Proposed Wastewater Management Conditions

The following conditions are recommended to be included in the consent to be granted to subdivide the property at 546 Waitangi Tuku Road, in regard to onsite wastewater management:

1. *The discharge from residential lots shall only be treated domestic wastewater originating from each individual lot.*
2. *The volume of treated wastewater discharged at each residential lot shall not exceed 1.45m³ per day.*
3. *The discharge shall only be from a single dwelling on each residential lot with a maximum of 5 bedrooms.*
4. *The level of wastewater treatment and method of disposal to land (including land area) at each residential lot shall be consistent with the requirements set out in AS/NZS 1547:2012 and confirmed during design of each individual wastewater system by a suitably qualified and experienced engineer.*
5. *Subject to confirmation during design by a suitably qualified and experienced engineer, the treated wastewater at each residential lot shall be discharged to land as shown on the ENGCO Wastewater Plan, dated 10 January 2024 attached to and forming part of this consent.*
6. *As far as practical, the treated wastewater at each individual lot shall be evenly dosed over the land application area, at a rate that is consistent with the confirmed infiltration capacity of the soils.*
7. *As a general guide, the vertical separation distance between the base of a secondary treated wastewater dripline system and the highest groundwater level, shall be at least 0.3m for each individual lot. If a primary level wastewater quality is shown to be sustainable for individual lots, through design by a suitably qualified and experienced engineer, a minimum vertical separation distance between the base of the disposal system and the highest groundwater level shall be at least 0.6m.*
8. *There shall be no ponding or overland flow of wastewater on the land surface at any residential lot.*
9. *The minimum separation distances from the wastewater disposal field, at each lot shall be:*

- 20m from any surface water body including wetland
 - 50m from any authorised or existing water supply bore or well
 - 1.5m from all boundaries
 - 3m from house foundations
10. *Within one month of the installation of the wastewater treatment and disposal system, at each lot, the owner shall provide to the Chatham Islands Council, Attention Chief Executive Officer, with*
- *a signed copy of a compliance certificate attesting that the installation of the wastewater treatment system, land disposal system and any ancillary devices and pipework, has been installed by a suitably qualified and experienced person in accordance with the final design and the conditions of this consent; and*
 - *a maintenance and monitoring programme of the treatment system recommended by a suitably qualified and experienced person and which such programme shall be the responsibility of the owner. Such a programme shall be approved by the Chatham Islands Council.*
 - *A copy of a “as built plan” which has been signed by the Design Engineer which clearly shows the location of the installed wastewater treatment and disposal system and the minimum separation distances required in accordance with Condition 9.*

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Public Excluded Agenda

13 February 2025

Mayor to Move

I move that the public be excluded from the following part of the proceedings of the meeting.

The general subject of each matter to be considered while the public is excluded, the reason for passing this resolution in relation to each matter and the specific grounds under Section 48(1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution are as follows:

Item No.	Minutes / Report of:	General subject of each matter to be considered	Reason for passing this resolution in relation to each matter	Ground(s) under Section 48(1) for the passing of this resolution
1.	Chief Executive	Public Excluded Minutes 19 December 2024	Good reason to withhold exists under Section 7	Section 48(1)(a)
2.	Chief Executive	ECan Work Programme 2025	Good reason to withhold exists under Section 7	Section 48(1)(a)

This resolution is made in reliance on Section 48(1)(a) of the Local Government Official Information and Meetings Act 1987, and the particular interest or interests protected by Section 6 or Section 7 of that Act which would be prejudiced by holding the whole or relevant part of the proceedings of the meeting in public, are as follows:

Item Nos	
1.	Would be likely to prejudice the commercial position of the person or persons who are the subject of the information. 7(2)(b)(ii) To maintain legal professional privilege. 7(2)(h) To enable the Council holding the information to carry out, without prejudice or disadvantage, commercial activities. 7(2)(i)
2	Would be likely to prejudice the commercial position of the person or persons who are the subject of the information. 7(2)(b)(ii) To maintain legal professional privilege. 7(2)(h) To enable the Council holding the information to carry out, without prejudice or disadvantage, commercial activities. 7(2)(i)

and that appropriate officers remain to provide advice to the Committee.