



# AGENDA

Ordinary meeting of the

**Nelson Regional Sewerage Business Unit**

**Friday 13 March 2015  
Commencing at 1.00pm  
Ruma Marama  
Civic House  
110 Trafalgar Street, Nelson**

Membership:

Councillor R Copeland and Mr D Shaw (Nelson City Council)  
Councillors B Dowler and M Higgins (Tasman District Council)

Representatives:

M Hippolite (Iwi Representative)  
P Wilson (Industry Customers Representative)

## Apologies

### 1. Confirmation of Order of Business

### 2. Interests

2.1 Updates to the Interests Register

2.2 Identify any conflicts of interest in the agenda

### 3. Confirmation of Minutes – 28 November 2014 4-9

Document number A1281366

Recommendation

***THAT the minutes of the meeting of the Nelson Regional Sewerage Business Unit, held on 28 November 2014, be confirmed as a true and correct record.***

### 4. Status Report 10

Document number A452094

Recommendation

***THAT the Status Report dated 13 March 2015 (A452094) be received.***

### 5. General Manager's Report 11-60

Document number A1313458

Recommendation

***THAT the report General Manager's Report (A1313458) and its attachments (A1319962, A1320206 and A1324144) be received.***

**6. Financial Report**

**61-62**

Document number A1263549

Recommendation

***THAT the Nelson Regional Sewerage Business Unit Financial Report for the period ended 31 January 2015 (A1263549) be received.***

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**Minutes of a meeting of the Nelson Regional Sewerage Business Unit**

**Held in Ruma Marama, Civic House, Trafalgar Street, Nelson**

**On Friday 28 November 2014, commencing at 9.04am**

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Present: Councillors M Higgins (Chairperson) and B Dowler (Tasman District Council), and D Shaw (Nelson City Council)

In Attendance: M Hippolite (Iwi Representative), P Wilson (Industry Customers' Representative), Nelson Regional Sewerage Business Unit General Manager (R Kirby), Senior Asset Engineer – Solid Waste (J Thiart), Management Accountant (A Bishop), and Administration Adviser (S McLean)

Apologies: Councillor R Copeland

**1. Apologies**

Resolved

***THAT apologies be received and accepted from Councillor Copeland.***

Dowler/Shaw

Carried

**2. Confirmation of Order of Business**

There was no change to the order of business.

**3. Interests**

There were no updates to the Interests Register, and no conflicts of interest with agenda items were declared.

**4. Confirmation of Minutes – 29 August 2014**

Document number A1244806, agenda pages 4-9 refer.

Resolved

***THAT the minutes of the meeting of the Nelson Regional Business Sewerage Unit, held on 29***

**August 2014, be confirmed as a true and correct record.**

Shaw/Dowler

Carried

## **5. Status Report**

Document number A452094, agenda page 10 refers.

The Nelson Regional Sewerage Business Unit (NRSBU) Manager, Richard Kirby, advised that there had been no progress to date on the review of charging mechanisms.

There was discussion on moving the completion of charging mechanisms review to December 2015. It was proposed to have this ready by February 2015. It was pointed out that clarity would be needed on this for the upcoming budget review.

Resolved

***THAT the Status Report – 28 November 2014 (A452094) be received.***

Higgins/Shaw

Carried

## **6. General Manager's Report**

Document number A1269375, agenda pages 11-15 refer.

Richard Kirby summarised the report and tabled pages 6-8 that had not been included with the agenda.

In response to a question, Senior Asset Engineer – Solid Waste, Johan Thiart, clarified that no resource consent was required for accidental discharge through the Tasman District Council Resource Management Plan because it is a prohibited activity. He said that through the Nelson City Council Resource Management Plan, accidental discharge was a discretionary activity so it required a resource consent.

Mr Thiart provided further clarification on using aerators efficiently to save electricity. He said it was a matter of adjusting the volume in the activated sludge area to keep removing sludge. Mr Thiart advised that Nelmac was working on a strategy to reduce power consumption, and that once the aerators could be turned off for longer, energy use would decrease.

There was discussion on koiwi areas of Rabbit Island. Mr Thiart confirmed that the koiwi boundary areas were being increased to protect these areas, and that bio-solid spraying was not conducted near these areas.

Under Item 5.3 in the Table under Section 7 "Review of Action Plan Implementation" in the report, Mr Kirby confirmed that the draft modelling report was still being developed with MWH and Nelmac.

Mr Thiart confirmed that the large one-off decrease in power usage on the Treatment Plant graph (Figure 10.1) was due to taking the operation basin out of use.

Mr Thiart added that the standby pump was now available, resulting in shorter delays for servicing duty pumps in the future.

There was discussion on current power charges, solar power, and power usage during higher rate times. Mr Thiart spoke about dropping the temperature in the first phase of sludge treatment tanks by decreasing aeration in the first tank for 20 minutes of every hour to save power. He said this initiative would likely commence in March 2015 once the C-Train tanks had been refurbished.

Mr Thiart spoke about the review of the interruptible power supply contract, and added that the price had dropped significantly. He advised that the supplier could no longer sustain a fixed price model, but would instead arrange a profit sharing agreement. Mr Kirby said he would be revising this contract.

## **7. The effects of biosolids application at Rabbit Island on the Waimea estuary since biosolids application started in 1996**

Paul Gillespie, of Cawthron Institute, joined the meeting and gave a presentation (A1283443) on biosolids application at Rabbit Island.

Mr Gillespie spoke about management decisions based on categories of good versus bad enrichment. There was discussion about the sewerage outfall onto the Waimea Estuary and the range of enrichment levels in estuaries in general.

Mr Gillespie advised there had been very little sediment build up in the last 20 years, and emphasised that it could not be concluded that this was related to catchment erosion.

In response to a question, Mr Gillespie advised that there were high nickel and chromium readings in the area, and that these metals were bound up and non-toxic. He added that the more concerning metal was arsenic, and that the sources were unknown.

Attendance: The meeting adjourned for morning tea from 10.24am to 10.34am

Mr Thiart advised that the Cawthron Institute were working on a proposal for storm chasing which could be beneficial for the consent renewal. He confirmed that the discharge of biosolids consent expires in approximately three years time.

Mr Thiart spoke about the interpretation of stormwater runoff results by Tasman District Council (TDC), adding that TDC used outlier results. He advised that composite sampling would better show trends and averages. Mr Kirby agreed to look at the Cawthron Institute proposal on evaluating the heavy rain event impacts on the transects, and to report back to the Board with further context at the next meeting.

In response to a question, Mr Thiart advised that faecal coliform testing was not carried out on the bores.

## **8. General Manager's Report cont'd**

With regards to Item 10 of the report, Research Request, it was agreed that this was a low priority for funding. Councillors Dowler and Higgins agreed to advise TDC that the request was not supported by the NRSBU.

Resolved

***THAT the report "General Manager's Report" (A1269375) be received.***

Shaw/Dowler

Carried

## **9. NRSBU Amendment to: Wastewater Asset Management Plan 2014**

Document number A1272788, agenda pages 16-20 refer.

Mr Kirby summarised the report, highlighting that TDC staff had reconsidered wastewater demand predictions and the regional pipeline could now be delayed. He said that the pipeline would remain in the 30 year infrastructure strategy for each council, but would not be reflected in either council's Long Term Plan (LTP).

Mr Kirby clarified that some of the upgrades listed in the LTP table were noted as consent dependant, and replaced the phosphorous and nitrogen removal descriptions that were specifically itemised previously. Management Accountant, Andrew Bishop, added that the potential upgrades would not affect development contributions as they would be related to service levels not growth.

Resolved

***THAT the report NRSBU Amendment to: Wastewater Asset Management Plan 2014 (A1272788) and its attachment (A1270479) be received;***

***AND THAT the amendment of the NRSBU Wastewater Asset Management Plan to reflect***

***the demand projections received from Tasman District Council be approved.***

Dowler/Shaw

Carried

**10. Nelson Regional Sewerage Business Unit Business Plan 2015/16**

Document number A1268612, agenda pages 21-40 refer.

Mr Kirby spoke about the 2015/16 Business Plan, adding that it was required under the Memorandum of Understanding.

It was noted that several dates needed updating on pages 5 and 6 of the Plan. It was agreed that the review of customer contracts would be amended to December 2015.

It was noted that the Three Year Capital Expenditure Forecast table on page 8 of the Plan showed incorrect totals.

Mr Thiart, tabled an updated page 11 (A1283450) with corrected figures.

Mr Thiart spoke about moving sludge from one pond to another to be able to dredge a pond quickly. Mr Kirby added that an optimised solution needed to be found, instead of simply spending money.

In response to a question, Mr Thiart advised that dewatered sludge would either go to landfill, or an alternative use would be found. He added that if the sludge was applied to land, there was a stand down period of two years.

There was discussion on the phrase 'projected loads to 2025 without further significant capital investment' at the bottom of page 4 of the Plan. It was agreed that no change needed to be made as the relevant figures were in a separate report and only covered the next few years.

Resolved

***THAT the Nelson Regional Sewerage Business Unit Business Plan 2015/16 (A1268612) be adopted with minor edits, subject to approval by Nelson City and Tasman District Councils.***

Recommendation to Nelson City and Tasman District Councils

***THAT the Nelson Regional Sewerage Business Unit Business Plan 2015/16 (A1268612) be approved.***

Higgins/Dowler

Carried



**11. Financial Report**

Document number A1263549, agenda pages 41-42 refer.

Management Accountant, Andrew Bishop, summarised the report. He highlighted that the operating expenditure was significantly over budget, due to a lump sum one-off payment under the biosolids renewal contract, the overhaul of duty pumps, and being ahead of schedule on maintenance. Mr Bishop added that the contribution from Nelson City Council (NCC) was understated by \$47k, which changed the year to date contributions variable figure.

It was noted that TDC and the Industrial customers had reduced their contributing load, and it was suggested that the trade waste agreements were resulting in appropriate responses from contributors.

Resolved

***THAT the Nelson Regional Sewerage Business Unit Financial Statement for the period ended 31 October 2014 (A1263549) be received.***

Shaw/Dowler

Carried

Councillor Higgins said that it was encouraging to see a good working relationship between NCC and Nelmac, noting that positive outcomes such as lower costs had resulted.

There was discussion on the review of the Memorandum of Understanding in 2015.

There being no further business the meeting ended at 11.16am.

Confirmed as a correct record of proceedings:

\_\_\_\_\_ Chairperson \_\_\_\_\_ Date

**NRSBU STATUS REPORT - 13 March 2015**

No	Meeting Date	Document Number	Report Date	Report Title / Item Title	Officer	Resolution or Action	Status
A	14/03/14	A1163334 and A1552561	14/03/14	Minutes	Johan Thiart	A short report be developed quantifying the benefits to both councils of the biosolids application at Rabbit Island.  That a press release will follow the circulation of the report to the two councils.	
B	14/03/14	A1163334 A1145728	14/03/14	Minutes and officer report	Johan Thiart	Biosolids and effluent discharge reports.	TDC has indicated that they continue to consider the reports submitted last year. Also item included in GM report.
C	5/07/13	1552561		Minutes of meeting	J Thiart	TDC Parks and Reserves Review/Rabbit Island Management Plan. Rough Island to be considered as potential Biosolids spraying area.	
D	5/07/13	1540469		Customer Survey 2012/13		Meetings with contributors between quarterly meetings	
E	5/07/13	1476829		Staff Report	R Kirby	Risk assessment if contributor exits the contributor agreement	Presented by GM in November 2014.
F	22/06/12		22/06/12	Minutes	J Thiart	Energy audit at pump stations	Programmed for 2015
G	14/12/12			Bell Island power supply	J Thiart	Improvement of power supply by Network Tasman	Network Tasman activity. Reported on in this agenda.
1	31/01/14	A681693	31/01/14	Staff Report	J Thiart	<u>THAT</u> a further benchmark report be submitted to the Board in December 2014.	Report will be prepared for the meeting in March 2015.
2	23/08/13	1582359	23/08/13	Nelson Regional Sewerage Business Unit Resopurce Consent Monitoring: Discharge Permit	J Thiart	<u>AND THAT</u> the increase in suspended solids and biological oxygen demand be investigated as part of the operation and maintenance contract and a further report be submitted to the Board regarding this matter in March 2014.	Reported in March 2014. Waiting for further assessment by consent authority.
3	22/06/12	1307226	22/06/12	Bell Island Energy Audit	J Thiart	<u>AND THAT</u> the removal of the time of use meter at the dewatering building will be considered once the deferment of the thickening upgrade is confirmed;  <u>AND THAT</u> the optimisation of O <sub>2</sub> levels in the aeration basin will be considered as part of the waste water treatment capacity review; <u>AND THAT</u> the cost of changing the point of supply for the ponds and irrigation pump station will be investigated in order to establish the return on capital investment.	Deferred until review of secondary sludge separation completed.
4	9/03/12	1042662	9/03/12	Staff report	J Thiart	<u>AND THAT</u> the NRSBU continue supporting the tree trials and that the monitoring continues until the trees are harvested.	Ongoing. Reported on in this agenda.
5	16/09/11	11497595	16/09/11	NRSBU BIWWTP Capacity and commissioning report	J Thiart	<u>AND THAT</u> an independent review be undertaken of the charging mechanism and user contracts once the capacity review in 2012/13 is complete;	General Manager: Meeting scheduled for 16 March 2015
6	15/02/11	1042982	3/02/11	Bell Island Spit Restoration	J Thiart	<u>AND THAT</u> the project committee submit a progress report to the NRSBU on a Quarterly basis	Report included in this agenda.

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## General Manager's Report

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### 1. Purpose of Report

To outline NRSBU operational activities over the last few months.

### 2. Recommendation

***THAT the report General Manager's Report (A1313458) and its attachments (A1319962, A1320206 and A1324144) be received.***

### 3. Correspondence received

#### Coastal Occupation Charges: Draft Plan Change

A letter was received from Tasman District Council (TDC) regarding a proposed plan change. TDC is providing the NRSBU opportunity to comment on the draft plan change by 27 March 2015. (Letter and supporting documents are attached)

The proposed plan change proposes the introduction of a statement that TDC will not introduce coastal occupation charges at present into the Tasman Resource Management Plan.

It is considered that the proposed plan change will have no effect on the business activities of the NRSBU and that no comment will therefore be made.

### 4. Recent Actions

#### Accidental Discharge Consent Application

The NRSBU needs to obtain a resource consent for accidental sewage discharges. Accidental discharge is a permitted activity in Nelson City and a prohibited activity in Tasman District. NRSBU has engaged Landmark Lyle to manage the process to obtain a resource consent for this activity.

Landmark Lyle has prepared the application and we are working with them on some of the detail before lodging it with Council. The application will be released to the identified stakeholders on 2 March 2015 for pre-consultation. It is likely that the application will be lodged before the end of March 2015.

## **ATAD Tank Linings**

An inspection of the A-Train sludge tanks has revealed that the lining applied in 2013 has failed. This lining was applied under the NRSBU Contract with Downer. NCC is currently investigating the causes of this failure against warranties/guarantees and options to remedy. The product used was selected by Downer and approved by its wastewater specialist at the time of application.

One of the B-Train tanks was cleaned and inspected on 25 February 2015. The lining failed in a similar mode and confirms the suspicion that the material used is not appropriate. This observation confirms that this failure is considered a latent defect. The matter was reported to the insurers.

The rehabilitation work on C-Train has been put on hold until the causes for the failure is known.

## **Power Supply – Network Tasman Contingency Plans**

Network Tasman is planning to install a back up power supply on an alternative route to Bell Island. The proposed route for this overhead power line is along the current access road to Bell Island. This access road is on private land covered by an easement that does not permit other services. The landowner directly affected has expressed concerns at Network Tasman's proposals and as it transgresses his property and has therefore denied approval. He has insisted that the second power cable be installed parallel to the existing cable across the estuary. Network Tasman disagrees with this as the two cables would be too close together, thereby mitigating to reason for a back up supply. Network Tasman is liaising with the landowner to find a solution.

## **Biosolids Trial**

The increase of the boundaries around ko-iwi areas has resulted in a reduction in the area used in the biosolids trial. We have asked SCION to report on whether the biosolids trial has been compromised by this reduced area. We have indicated to SCION that the NRSBU may not provide further financial support until such time as it understands the implications of the reduced area for the biosolids trial.

## **Load Agreement – Electrical Energy**

The General Manager has signed the agreement with ENERNOC extending the Interruptible Load agreement with the NRSBU. ENERNOC is predicting lower revenue resulting from hydrodam levels, so this could reduce the potential income to the NRSBU under this agreement.

## **Spit Restoration Project**

There is an attachment to this report outlining the activities in this project. Essentially the Bell Island Spit Restoration Project members intend focusing on consolidating the areas planted to date. They include a small planting along the area where the causeway enters Bell Island with the ultimate

intention of extending these plantings along the spit service road to join up with the spit area.

## 5. Contract 3458 – Operations and Maintenance

The reticulation and treatment operations have continued as normal over the last few months.

## 6. Key Performance Indicators

The outcomes of key performance indicators for the last 3 months to 31 January 2015 are outlined as follows:

<b>Environmental: Treatment and Disposal</b>			
RMA consent - wastewater Discharge to Coastal Marine Area	RMA Consent - Discharge of Contaminants to Air (Odour complaints)	RMA Consent - Discharge of Contaminants to Land	Equipment failure of critical components within treatment and disposal system
100% compliance	100% compliance	100% compliance	100% compliance
<b>Environmental: Pump Stations</b>			
Odour complaints from pump stations	Pump station wet weather overflows	Pump station overflows resulting from power failure	Pump station overflows resulting from mechanical failure
100% compliance	100% compliance	100% compliance	Non compliance <sup>1</sup>
<b>Environmental: Pipeline</b>			
Reticulation breaks	Air valve malfunction		
100% compliance	100% compliance		
<b>Capacity: Overloading system capacity</b>			
Treatment & Disposal	Pump Stations		
100% compliance	100% compliance		
<b>Reliability: Equipment failure of critical components</b>			
Treatment & Disposal	Pump Stations	Pipelines	
100% compliance	100% compliance	100% compliance	
<b>Responsiveness: Speed of response for emergency and urgent maintenance works</b>			
Treatment & Disposal	Pump Stations	Pipelines	
100% compliance	100% compliance	100% compliance	
<b>Responsiveness: Speed of response for routine and programmable maintenance works</b>			
Treatment & Disposal	Pump Stations	Pipelines	
100% compliance	Non compliance <sup>1</sup>	100% compliance	
<b>Key customer relationships: Overall satisfaction</b>			
Treatment & Disposal	Pump Stations	Pipelines	
100% compliance	100% compliance	100% compliance	

Note <sup>1</sup>: Operator did not reinstate compressor and back up compressor to operational mode following wet well cleaning. This resulted in a failure of the actuated valve to open and programmed and inhibited the pumps from starting. The high level alarm was incorrectly interpreted by the duty

operator and delayed response to incident resulting in a 5m<sup>3</sup> raw sewage overflow at Saxton pump station.

The compliance outcomes for the 12 months to 31 January 2015 are as follows:

<b>i)</b>	<b>Resource Consent Compliance (rolling 12 month record)</b>	
	➤ Discharge to Estuary Permit	Not achieved. A discharge 5m <sup>3</sup> raw sewage occurred at Saxton pump station on 19 December 2014 when pumps failed to start following an operator error.
	➤ Discharge to Air Permit	100% Compliance
	➤ Biosolids Disposal	100% Compliance
	➤ Discharge treated waste water to land	100% Compliance
<b>ii)</b>	<b>Odour Notifications</b>	
	➤ Past three months	Nil.
	➤ Last 12 months	Nil.
<b>iii)</b>	<b>Overflows</b>	
	➤ Past three months	Nil
	➤ Last 12 months	Nil.
<b>iv)</b>	<b>Speed of response for maintenance works</b>	
	In past three months:	
	➤ One treatment plant power outage call out	
	➤ Three call outs related to Songer Street pump station	
	➤ Response within 30 minutes. Achieved.	

## 7. Review of Action Plan Implementation – 2013 Asset Management Plan

The following table indicates the draft time lines for the individual action items:

AP	Action	Target Date	Completion Date	Comments
<b>Levels of Service</b>				
1.1	Annual customer survey.	March 2015		
<b>Demand Management</b>				
2.1	Extending/renewing the Memorandum of Understanding that expires in 2010.	2014/15		Await outcomes of review by shareholders (Nelson City Council and Tasman District Council)
2.2	Review Improvement Plan, consider and if appropriate prioritise and move to		Ongoing	Continuing.

AP	Action	Target Date	Completion Date	Comments
	action.			
2.3	Flow and load analyses.	July 2015		
<b>Risk Management</b>				
3.2	Annual calibration. (Flow meters)	June 2015		
<b>Financial</b>				
4.1	Valuation.	August 2015		
4.3	Internal review of customer charging model.	June 2014		Limited progress to date.
<b>Asset Management</b>				
5.3	Treatment Plant Capacity Review.	August 2014	30 June 2015	The draft modelling report was reviewed and returned to the contactor for further development.
<b>General</b>				
6.1	Board Workshop.	April 2015		

## 8. Health and Safety

There have been 12 Health and Safety inductions and 181 visitors to the Bell Island site over the past three months.

No further Health and Safety incidents are outstanding.

## 9. Financial

The operation and maintenance costs to date indicate a large percentage of discretionary expenditure was committed earlier in the financial year than usual. The mechanical equipment has been overhauled to the extent that there is now sufficient standby pumps and aerators available as replacements.

Most of the programmed work was completed early in the financial year to minimise the risk of equipment failure. This is different to our traditional practice, however it was considered necessary to complete.



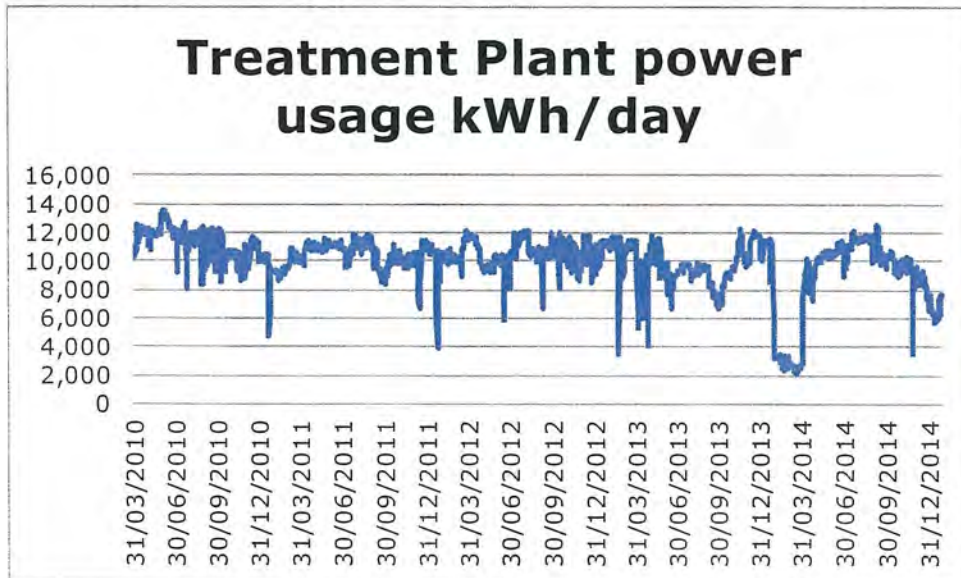


Figure 10.1 Treatment plant power use

It is proposed to lower the power use for the remainder of the summer season by diverting loads to the ponds rather than utilise aeration.

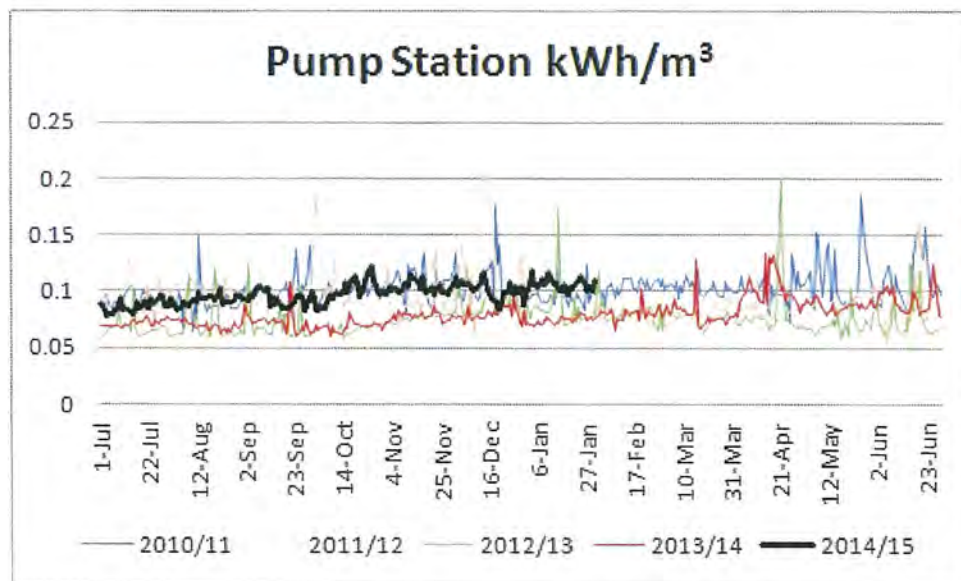


Figure 10.2 Pump stations power use

There is a trend indicating that the efficiency in the pump operation for the within all the pumpstations is dropping. Investigations are continuing into the causes of this.



## 10. Conclusion

The NRSBU facilities are continuing to function well.

Apart from the one discharge transgression arising from human error, the key performance indicators show 100% compliance to date.

R J Kirby  
**General Manager NRSBU**

### Attachments

Attachment 1: Bells Island Spit Restoration Project – February 2015 [A1319962](#)

Attachment 2: Coastal Effects of the Bell Island Regional Sewerage Discharge:  
February 2015 Mussel Monitoring Survey [A1320206](#)

Attachment 3: Coastal Occupation Charges: A Draft Plan Change. [A1324144](#)

## Bells Island Spit Restoration Project February 2015

### Project Overview

This report outlines progress on Year Four of the restoration on Bell Island Spit and provides our plans and budget for planting, maintenance and trapping on the Spit in Year Five (2015).

At the start of the project the Bell Island Spit had recently been logged and was littered with pine slash and bare of vegetation other than emerging weeds. We are pleased to report that we have planted more than 12,000 plants and the Spit now has a growing native vegetation cover.

Planting now covers the whole of the Spit area up to and around the "car park". Some of the area around the car park was originally planted by PF Olsen and the success rate of this planting was low due to the terrain, the types of plants put in and the style of planting. This area is now extensively planted and despite the ravaging by rabbits, is getting well established. There have been some losses here though and further planting is planned for this year.

Unfortunately some gorse clearance by our contractor in Nov 2014 resulted in the death of approx. 175 four-year old manuka, ake ake and ngaio. We are in negotiation for reparation but have revised our plans for 2015 to enable us to replace the plantings. We have requested further clearance of gorse and broom for reparation but without the use of herbicide.

The Bell Island Spit project has been recognised as a significant restoration by DOC and other environmental organisations. The Tasman Environmental Trust provided us with 50 rare native broom plants as part of its efforts to protect endangered plant species. We hope to be able to continue to protect and increase the biodiversity of plant species on the Spit.

### Plans for 2015

The number of new plantings planned for this year (1300) is fewer than in previous years. We are conscious of the need to maintain our previous plantings and to plan new plantings that are within our capacity to manage successfully. The only new area to be planted in 2015 is on the Bell Island Spit side of the Causeway where a small grove of manuka and ngaio is planned for.

The Bell Island project plans for 2015 are to:

- Maintain existing plantings
- Replace plants lost in 2014 event
- Control weeds – gorse, broom, marram, iceplant, pampas grass
- Plant some bigger tree species in the established areas
- Plant a small grove of natives at the Spit end of the causeway.

The budget for 2015 for approval by the Board is outlined below:

Taller tree species for the established planting	200 x \$2.50	\$500
Plants to replace those lost in 2014 event	200 x \$2	\$400
Additional plants for existing planted area and the estuary margin (replacing the marram grass)	800 x \$2	\$1,600
Plants for alongside the causeway	100 x \$2	\$200
Mowing of the access path along the Spit	2 x \$250	\$500
Spraying or weed control by contractor		\$2500
Spray for use by project team		\$200
Plant protectors	0	
Fertiliser tabs for new plantings	1,000	\$70
<b>Total</b>		<b>\$5970</b>

### **Maintenance**

Maintenance is now crucial to the continuing success of this restoration project with spraying, weeding, fertiliser application and timely removal of plant guards all important tasks to ensure the health of the plants. We have successfully reduced the cover of exotic iceplant with contractor spraying in 2013 and 2014 which has enabled us to replace the iceplant with suitable native species. Marram grass is spreading along the Northern side of the Spit and we plan to spray this out and replace with native estuary margin plantings .

The control of marram grass, iceplant, gorse, broom and pampas grass will be an ongoing issue until the native species are large enough to suppress the growth of the weed understory. Assistance with the weed control by a contractor is included in the budget.

### **Pest Management**

We are continuing trapping with 10 DoC200 Mustelid traps on the Spit. We commenced trapping in October 2012 and have caught rats, hedgehogs, stoats and weasels.

### **Summary**

Our intentions for Year 5 are to:

- Maintain existing plantings
- Replace plants lost in 2014 event
- Control weeds – gorse, broom, pampas, exotic iceplant and marram grass
- Plant some bigger tree species in the established areas
- Plant a small grove of natives at the Spit end of the causeway.
- Plant rare plants in suitable locations.

We appreciate the continued support of the Board for this important Project. We work on the Spit on Thursday most weeks, in the morning or afternoon depending on the tide and would welcome a visit at any time.

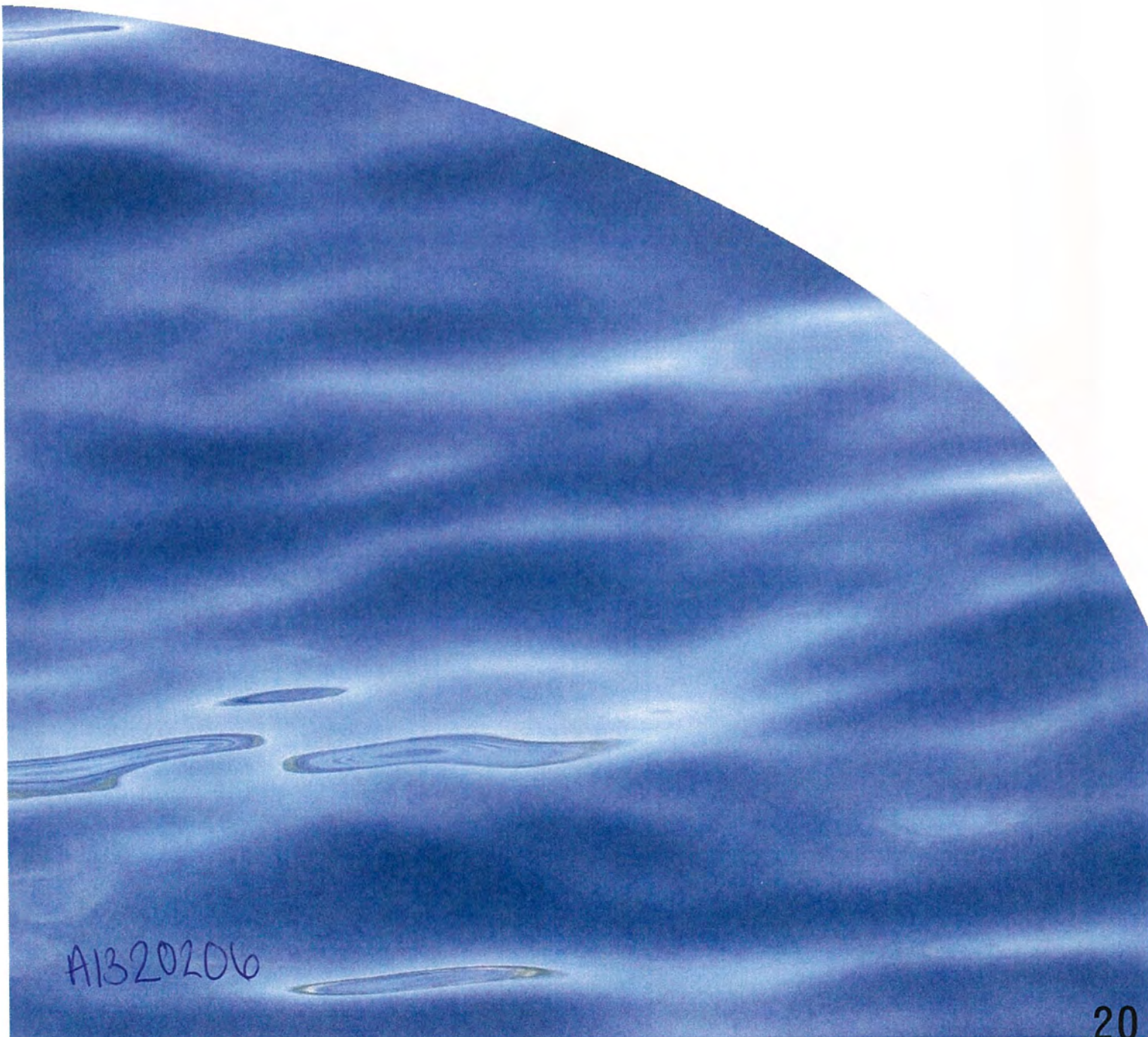
*Gillian Bishop, Verdun King, Kevin McClintock, David Sissons*





REPORT NO. 2653

**COASTAL EFFECTS OF THE BELL ISLAND  
REGIONAL SEWERAGE DISCHARGE: FEBRUARY  
2015 MUSSEL MONITORING SURVEY**



A1320206

# COASTAL EFFECTS OF THE BELL ISLAND REGIONAL SEWERAGE DISCHARGE: FEBRUARY 2015 MUSSEL MONITORING SURVEY

DONALD MORRISEY

Prepared for Nelson Regional Sewerage Business Unit

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Natasha Berkett



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## 1. BACKGROUND

Cawthron Institute (Cawthron) has been commissioned by the Nelson Regional Sewerage Business Unit (NRSBU) to undertake twice-yearly (summer and winter) shellfish monitoring surveys. These are to identify any potential bacteriological water quality issues at inner Tasman Bay sites in the vicinity of the Bell Island regional sewerage outfall. The surveys, first implemented in April 2008, are carried out in accordance with conditions of consent for Coastal Permit NN925584 (Annex 2, Part B, revised July 2007). The present report describes the results of the February 2015 (summer) survey.

## 2. METHODS

### 2.1. Mussel deployment and analyses

Farmed green-lipped mussels (*Perna canaliculus*) were sourced from Guytons seafood shop, Wakefield Quay, Nelson on 9 February 2015. Twelve mussels were retained for analysis of faecal indicator bacteria (FIB) concentrations in the mussel flesh. The remaining mussels were distributed into plastic, open-mesh baskets (12 mussels per basket) for experimental deployment at approximately 11:30 on the same day. All mussels were measured (to the nearest cm) and kept chilled until deployment (within 3 hours of purchase). The mussels retained for analysis were handled in the same way as the deployed mussels and were returned to the laboratory within 5 h of purchase.

The baskets were suspended from a surface float at approximately mid-water depths above an anchor point at Sites 18, 19, 21 and 22 (Figure 1). The mussels were retrieved on 13 February 2015 and kept chilled until returned to the laboratory for analysis (within 2 hours of collection). No significant rainfall occurred in the Waimea River catchment during the three days prior to retrieval (10–13 February: 2 mm were recorded in the catchment overnight on 9–10 February).

Site locations and water depths at the time of deployment and retrieval are shown in Table 1. Water depths were approximately 1.3–1.7 m shallower at retrieval due to the different tidal state<sup>1</sup>.

---

<sup>1</sup> Predicted tidal heights and times may be viewed through the following web site:  
<http://www.linz.govt.nz/docs/hydro/tidal-info/tide-tables/maj-ports/pdf/Nelson%202015.pdf>

Table 1. Locations (New Zealand Map Grid), water depths and times of deployment and recovery at each of the monitoring sites. Times are NZDS.

	Easting	Northing	Deployment (high tide 13:56)		Retrieval (high tide 17:08)	
			Water depth (m)	Time	Water depth (m)	Time
Site 18	2527875	5994283	4.8	11:48	3.2	11:42
Site 19	2527841	5993263	8.0	11:57	6.3	11:33
Site 21	2520686	5996674	7.1	11:26	5.6	11:15
Site 22	2521371	5997460	8.3	11:11	6.9	11:06

Mussel samples collected during deployment and retrieval were put into plastic bags, chilled and returned to the laboratory for analyses of faecal indicator bacteria (FIB: *Escherichia coli* and enterococci) concentrations. Analyses were carried out within 24 hours of collection according to procedures defined in Appendix 1.

## 2.2. Seawater sampling and analyses

Surface seawater samples (100 ml) were hand-collected at each site and stored in sterile containers during the deployment and retrieval of mussels. Samples were stored on ice, refrigerated and analysed for FIB (faecal coliforms and enterococci) concentrations within 24 hours of collection.

At the time of retrieval, two additional seawater samples (one preserved with Lugol's iodine and one unpreserved) were collected at each site to determine the type and abundance of phytoplankton species.

Vertical water-column profiles of salinity, temperature, light (photosynthetically active radiation; PAR), turbidity, chlorophyll-a and dissolved oxygen (DO) concentrations were measured *in situ* at each site on both sampling occasions using a Seabird Electronics (Seacat SBE-19 Plus) profiler.

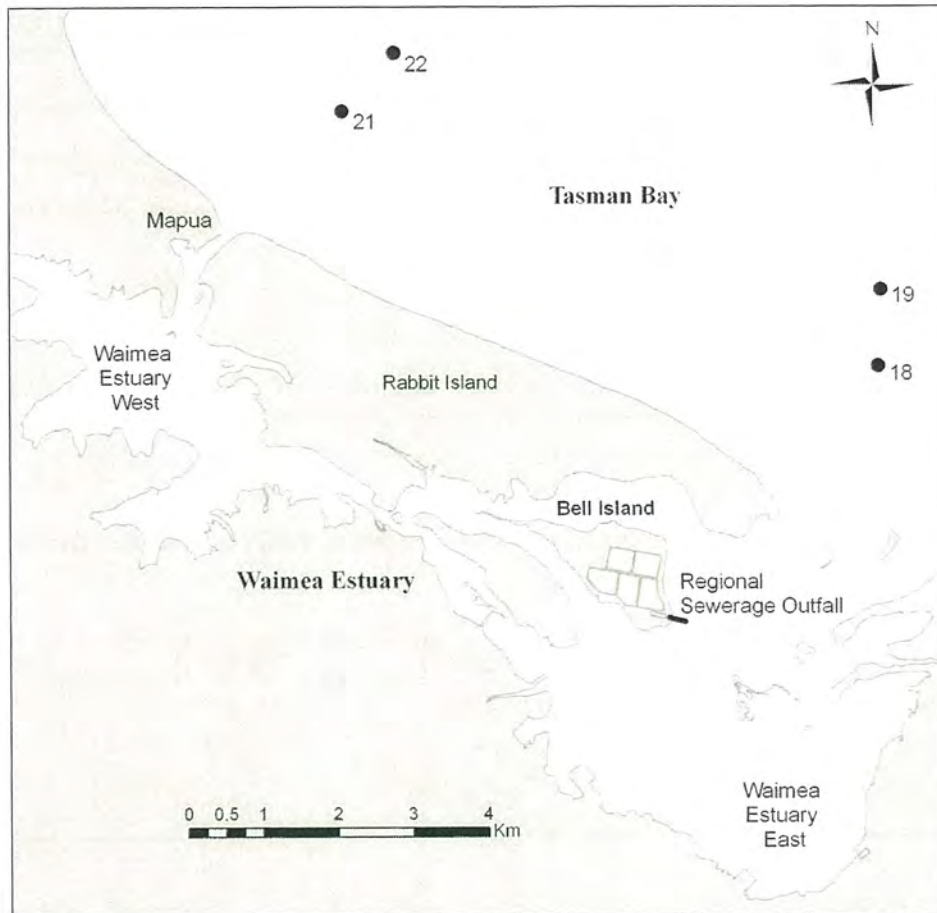


Figure 1. Mussel monitoring sites in inner Tasman Bay.

### 3. RESULTS

#### 3.1. Faecal indicator bacteria

Concentrations of FIB in mussel flesh and water samples at the times of deployment and retrieval are shown in Tables 2–4 (and see Appendix 2).



Table 2. Faecal indicator bacteria concentrations (MPN / 100 g) in mussel flesh during deployment (9 February 2015) and retrieval (13 February 2014) of mussels. The sizes of mussels (mean  $\pm$ SE) are also shown.

	Deployment	Retrieval			
		Site 18	Site 19	Site 21	Site 22
Faecal coliforms	< 20	20	< 20	< 20	< 20
<i>E. coli</i>	< 20	20	< 20	< 20	< 20
Enterococci	20	20	< 20	< 20	< 20
Mussel size (cm)	9.8 (0.17)	10.0 (0.17)	9.9 (0.15)	9.6 (0.19)	10.0 (0.21)

Table 3. Faecal indicator bacteria concentrations in seawater (MPN / 100 ml) during deployment of mussels (9 February 2015).

Test	Site 18	Site 19	Site 21	Site 22
Faecal coliforms	< 2	< 2	< 2	< 2
<i>E. coli</i>	< 2	< 2	< 2	< 2
Enterococci	< 10	< 10	< 10	< 10

Table 4. Faecal indicator bacteria concentrations in seawater (MPN / 100 ml) during retrieval of mussels (13 February 2015).

Test	Site 18	Site 19	Site 21	Site 22
Faecal coliforms	< 2	< 2	< 2	< 2
<i>E. coli</i>	< 2	< 2	< 2	< 2
Enterococci	< 10	< 10	< 10	< 10

### 3.2. Phytoplankton

Results of phytoplankton analyses for seawater samples collected during mussel retrieval (13 February 2015) are provided in Appendix 2.

### 3.3. Water column characteristics

Vertical distributions of salinity, temperature, chlorophyll-a, PAR, turbidity and DO at each station are shown in Figures 2 and 3.

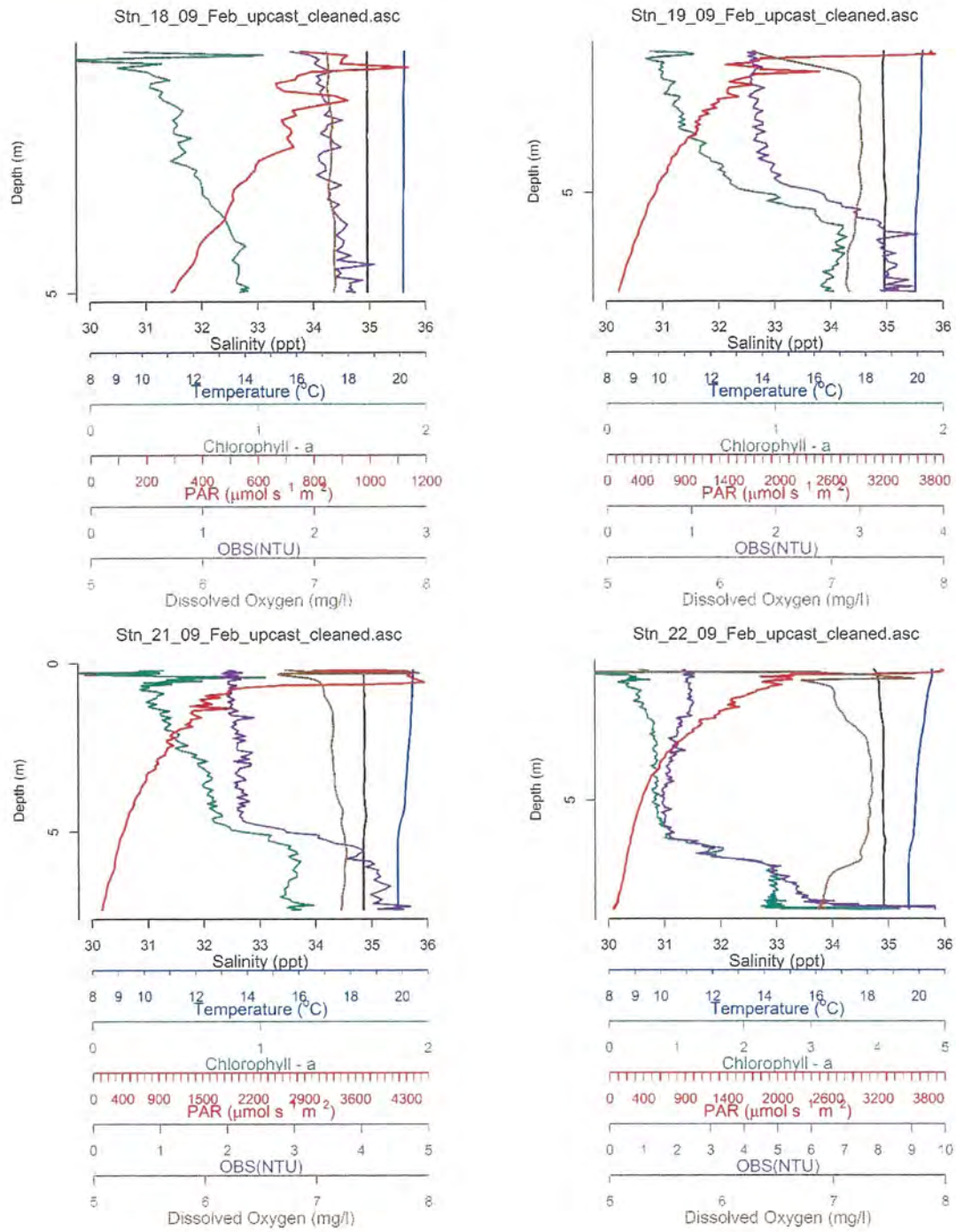


Figure 2. Water column characteristics at the time of mussel deployment (9 February 2015).

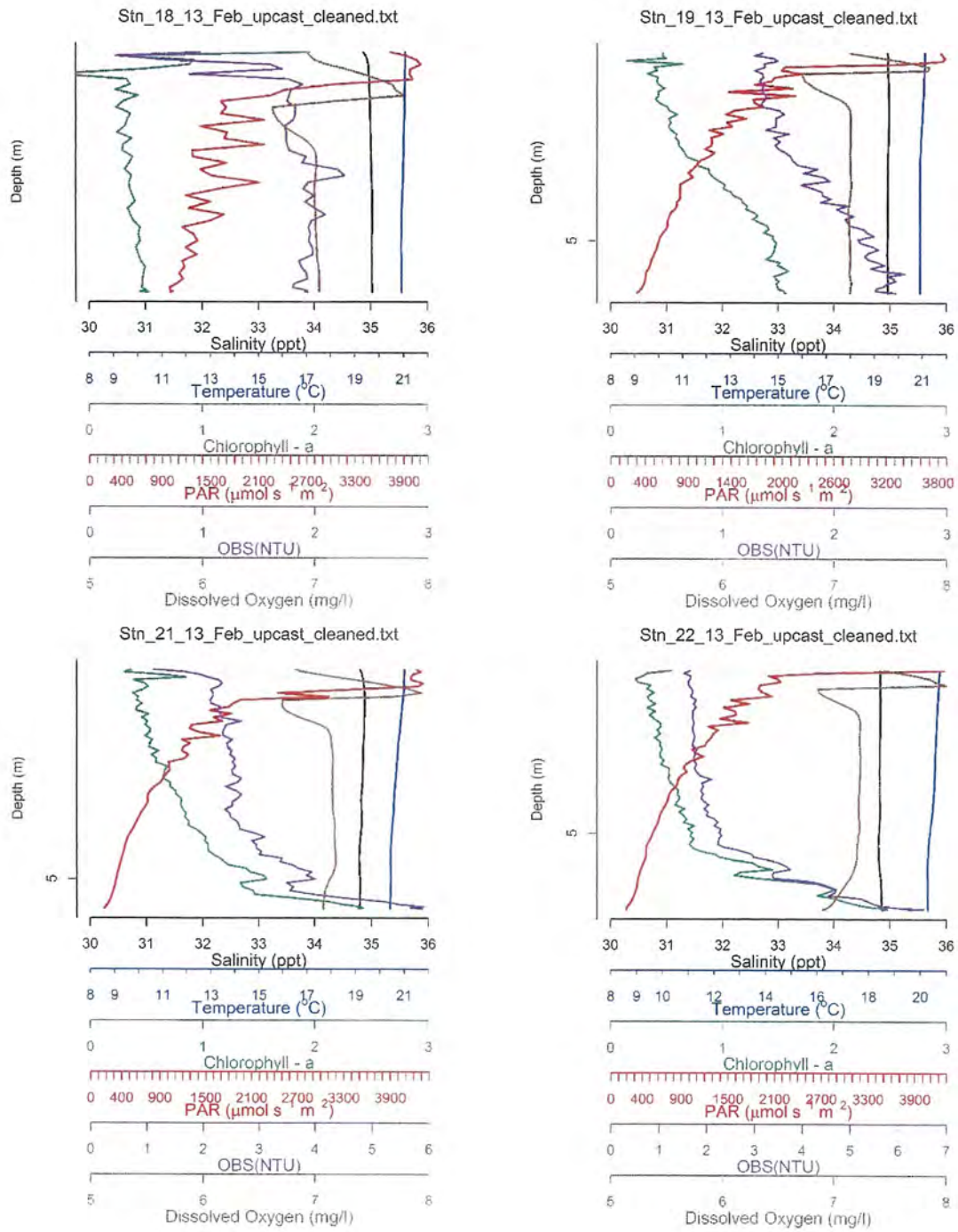


Figure 3. Water column characteristics at the time of mussel retrieval (13 February 2015).



## 4. BRIEF COMMENT

Faecal indicator bacteria concentrations in the composite sample of mussel flesh at the time of deployment and retrieval were at or below analytical detection limits (20 MPN/100 g: Table 2).

Concentrations of faecal indicator bacteria in seawater samples collected during deployment (Table 3) and retrieval of mussels (Table 4) were also at or below analytical detection limits (*i.e.* < 2 MPN/100 ml) at all sites. These results suggest that, during the deployment period, discharge of FIB into the near shore coastal environment from drainage catchments was minimal and that there was no detectable contribution from the Bell Island wastewater outfall. Summer seawater temperatures would be expected to increase the FIB die-off rate (*i.e.* decrease the length of time they remain viable in the coastal environment).

Phytoplankton analyses of seawater samples collected during retrieval of mussels (Appendix 2) revealed diverse communities (18–29 taxa per site) containing relatively low numbers of a variety of species. This is likely due to the February survey coinciding with a late summer low rainfall period with consequent nutrient limitation throughout Tasman Bay.

Low numbers of a few potentially toxic species were observed at all sites, but these were substantially below trigger levels considered to potentially result in toxic events. These results (*i.e.* low phytoplankton biomass) do not indicate wastewater outfall enrichment effects at the time of the survey.

The water column was well mixed at all stations and at both times of sampling, as indicated by the uniform temperature and salinity profiles (Figure 2 and Figure 3). Increasing turbidity with depth suggests that resuspension of sediments is occurring at Stations 19–22. This is also reflected in slightly elevated concentrations of chlorophyll-*a* above the seabed, probably representing resuspended benthic algae. Chlorophyll-*a* concentrations were low (< 2 mg/m<sup>3</sup>) in the over-lying water. Dissolved oxygen concentrations declined slightly near the seabed at Stations 21 and 22 but were within the range of values typical of inner Tasman Bay in summer.

## 5. ACKNOWLEDGEMENTS

Thanks to Emma Newcombe, Marc Jary and Paul Meredith for help with field work, Paul Barter and Weimin Jiang for advice on processing of CTD data, and Paul Gillespie for reviewing an earlier draft of this report.

## 6. APPENDICES

Appendix 1. Laboratory microbiological and phytoplankton analytical procedures.

Sample type	Analysis	Method
Mussels	Faecal coliforms	Compendium 4 <sup>th</sup> edition 2001
	<i>E. coli</i>	Compendium 4 <sup>th</sup> edition 2001
	Enterococci	Compendium 4 <sup>th</sup> edition 2001
Sea water	Faecal coliforms	APHA (online) 9221E
	<i>E. coli</i>	APHA (online) 9221F
	Enterococci	APHA (online) 9230D
	Phytoplankton abundance and composition	In-house, based on UNESCO 1978 and IOC Manual and Guides 55 2010

Appendix 2. Laboratory reports.

**Certificate of Analysis: Final**

Cawthron Contract Number: 10210

**Project Number: T47366**

 Cawthron Institute  
 Private Bag 2  
 NELSON

**Attention:** Emma Newcombe

**Customer Ref:** BST 15639  
**Email Recipients:** Emma Newcombe  
**Date Project Started:** 09/02/2015 14:56

## Sample Details

<b>Laboratory ID:</b> T47366-1	<b>Sample Type:</b> Wholeshell Mussels	<b>Date Sampled:</b> 09/02/2015
<b>Description:</b> Bells Island		<b>Date Received:</b> 09/02/2015 13:00
<b>Customer ID:</b> Control		

Analysis	Result	Units	Method
Presumptive coliforms	<20	MPN/100g	Compendium 4th Edn 2001
Faecal coliforms	<20	MPN/100g	Compendium 4th Edn 2001
<i>E.coli</i>	<20	MPN/100g	Compendium 4th Edn 2001
Presumptive <i>Enterococci</i>	20	MPN/100g	Compendium 4th Edn 2001

## Sample Details

<b>Laboratory ID:</b> T47366-2	<b>Sample Type:</b> Water	<b>Date Sampled:</b> 09/02/2015
<b>Description:</b> Bells Island		<b>Date Received:</b> 09/02/2015 13:00
<b>Customer ID:</b> Station 21		

Analysis	Result	Units	Method
Presumptive coliforms	<2	MPN/100mL	APHA (online) 9221B
Faecal coliforms	<2	MPN/100mL	APHA (online) 9221E
<i>E.coli</i>	<2	MPN/100mL	APHA (online) 9221F
<i>Enterococci</i>	<10	MPN/100mL	APHA (online) 9230D

## Sample Details

<b>Laboratory ID:</b> T47366-3	<b>Sample Type:</b> Water	<b>Date Sampled:</b> 09/02/2015
<b>Description:</b> Bells Island		<b>Date Received:</b> 09/02/2015 13:00
<b>Customer ID:</b> Station 18		

Analysis	Result	Units	Method
Presumptive coliforms	<2	MPN/100mL	APHA (online) 9221B
Faecal coliforms	<2	MPN/100mL	APHA (online) 9221E
<i>E.coli</i>	<2	MPN/100mL	APHA (online) 9221F
<i>Enterococci</i>	<10	MPN/100mL	APHA (online) 9230D


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**Project Number:** T47366  
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---

**Sample Details**

**Laboratory ID:** T47366-4  
**Description:** Bells Island  
**Customer ID:** Station 19

**Sample Type:** Water

**Date Sampled:** 09/02/2015  
**Date Received:** 09/02/2015 13:00

**Analysis**

	<b>Result</b>	<b>Units</b>	<b>Method</b>
Presumptive coliforms	<2	MPN/100mL	APHA (online) 9221B
Faecal coliforms	<2	MPN/100mL	APHA (online) 9221E
<i>E.coli</i>	<2	MPN/100mL	APHA (online) 9221F
<i>Enterococci</i>	<10	MPN/100mL	APHA (online) 9230D

---

**Sample Details**

**Laboratory ID:** T47366-5  
**Description:** Bells Island  
**Customer ID:** Station 22

**Sample Type:** Water

**Date Sampled:** 09/02/2015  
**Date Received:** 09/02/2015 13:00

**Analysis**

	<b>Result</b>	<b>Units</b>	<b>Method</b>
Presumptive coliforms	<2	MPN/100mL	APHA (online) 9221B
Faecal coliforms	<2	MPN/100mL	APHA (online) 9221E
<i>E.coli</i>	<2	MPN/100mL	APHA (online) 9221F
<i>Enterococci</i>	<10	MPN/100mL	APHA (online) 9230D


---

Results apply to samples as received

Our routine detection limits for chemical testing relate to samples with a clean matrix.  
Reported detection limits may be higher for individual samples if there is insufficient sample or the matrix is complex.

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**Date Generated:** 13/2/15

**Authorised by:** Mark Englefield  
**Position:** Senior Technician, Microbiology Laboratory  
**Signature:** 



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**Certificate of Analysis: Final**

Cawthron Contract Number: 10210

**Project Number: T47675**

 Cawthron Institute  
 Private Bag 2  
 NELSON

Attention: Emma Newcombe

 Customer Order No: BST #15639  
 Customer Ref: Bells Island  
 Email Recipients: Emma Newcombe  
 Date Project Started: 13/02/2015 13:45

## Sample Details

 Laboratory ID: T47675-1      Sample Type: Water      Date Sampled: 13/02/2015  
 Description: Site 18      Date Received: 13/02/2015 13:00

Analysis	Result	Units	Method
Faecal coliforms	<2	MPN/100mL	APHA (online) 9221E
<i>E.coli</i>	<2	MPN/100mL	APHA (online) 9221F
<i>Enterococci</i>	<10	MPN/100mL	APHA (online) 9230D

## Sample Details

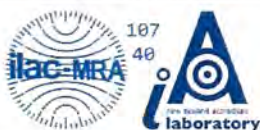
 Laboratory ID: T47675-2      Sample Type: Water      Date Sampled: 13/02/2015  
 Description: Site 19      Date Received: 13/02/2015 13:00

Analysis	Result	Units	Method
Faecal coliforms	<2	MPN/100mL	APHA (online) 9221E
<i>E.coli</i>	<2	MPN/100mL	APHA (online) 9221F
<i>Enterococci</i>	<10	MPN/100mL	APHA (online) 9230D

## Sample Details

 Laboratory ID: T47675-3      Sample Type: Water      Date Sampled: 13/02/2015  
 Description: Site 21      Date Received: 13/02/2015 13:00

Analysis	Result	Units	Method
Faecal coliforms	<2	MPN/100mL	APHA (online) 9221E
<i>E.coli</i>	<2	MPN/100mL	APHA (online) 9221F
<i>Enterococci</i>	<10	MPN/100mL	APHA (online) 9230D


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 Project Number: T47675  
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<b>Sample Details</b>			
<b>Laboratory ID:</b>	T47675-4	<b>Sample Type:</b> Water	<b>Date Sampled:</b> 13/02/2015
<b>Description:</b>	Site 22		<b>Date Received:</b> 13/02/2015 13:00
<b>Analysis</b>	<b>Result</b>	<b>Units</b>	<b>Method</b>
Faecal coliforms	<2	MPN/100mL	APHA (online) 9221E
<i>E. coli</i>	<2	MPN/100mL	APHA (online) 9221F
<i>Enterococci</i>	<10	MPN/100mL	APHA (online) 9230D

<b>Sample Details</b>			
<b>Laboratory ID:</b>	T47675-5	<b>Sample Type:</b> Wholeshell Mussels	<b>Date Sampled:</b> 13/02/2015
<b>Description:</b>	Site 18		<b>Date Received:</b> 13/02/2015 13:00
<b>Analysis</b>	<b>Result</b>	<b>Units</b>	<b>Method</b>
Faecal coliforms	20	MPN/100g	Compendium 4th Edn 2001
<i>E. coli</i>	20	MPN/100g	Compendium 4th Edn 2001
Presumptive <i>Enterococci</i>	20	MPN/100g	Compendium 4th Edn 2001

<b>Sample Details</b>			
<b>Laboratory ID:</b>	T47675-6	<b>Sample Type:</b> Wholeshell Mussels	<b>Date Sampled:</b> 13/02/2015
<b>Description:</b>	Site 19		<b>Date Received:</b> 13/02/2015 13:00
<b>Analysis</b>	<b>Result</b>	<b>Units</b>	<b>Method</b>
Faecal coliforms	<20	MPN/100g	Compendium 4th Edn 2001
<i>E. coli</i>	<20	MPN/100g	Compendium 4th Edn 2001
Presumptive <i>Enterococci</i>	<20	MPN/100g	Compendium 4th Edn 2001

<b>Sample Details</b>			
<b>Laboratory ID:</b>	T47675-7	<b>Sample Type:</b> Wholeshell Mussels	<b>Date Sampled:</b> 13/02/2015
<b>Description:</b>	Site 21		<b>Date Received:</b> 13/02/2015 13:00
<b>Analysis</b>	<b>Result</b>	<b>Units</b>	<b>Method</b>
Faecal coliforms	<20	MPN/100g	Compendium 4th Edn 2001
<i>E. coli</i>	<20	MPN/100g	Compendium 4th Edn 2001
Presumptive <i>Enterococci</i>	<20	MPN/100g	Compendium 4th Edn 2001

<b>Sample Details</b>			
<b>Laboratory ID:</b>	T47675-8	<b>Sample Type:</b> Wholeshell Mussels	<b>Date Sampled:</b> 13/02/2015
<b>Description:</b>	Site 22		<b>Date Received:</b> 13/02/2015 13:00
<b>Analysis</b>	<b>Result</b>	<b>Units</b>	<b>Method</b>
Faecal coliforms	<20	MPN/100g	Compendium 4th Edn 2001
<i>E. coli</i>	<20	MPN/100g	Compendium 4th Edn 2001
Presumptive <i>Enterococci</i>	<20	MPN/100g	Compendium 4th Edn 2001

Results apply to samples as received

Our routine detection limits for chemical testing relate to samples with a clean matrix. Reported detection limits may be higher for individual samples if there is insufficient sample or the matrix is complex.

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**Project Number:** T47675  
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**Authorised by:** Mark Englefield

**Position:** Senior Technician, Microbiology Laboratory

**Signature:** 



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**Project Number:** T47675  
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**Certificate of Analysis: Final**

Cawthron Contract Number: 10210

**Project Number: T47676**

 Cawthron Institute  
 Private Bag 2  
 NELSON

**Customer Order No:** BST# 15639  
**Customer Ref:** Bell Island  
**Email Recipients:** Emma Newcombe

## Sample Details

**Laboratory ID:** T47676-1      **Sample Type:** Grab      **Date Sampled:** 13/02/2015  
**Description:** Site 18      **Date Received:** 13/02/2015 13:00  
**Site Description:** PU01 - Phyto Site Unspecified

Species	Description	Count (cells/L)	Trigger (cells/L)	Risk	Action
Biomass : Low					
cf. <i>Azadinium</i> spp.	Toxic in Shellfish	200	30000	Low	
<i>Pseudo-nitzschia</i> spp.	Toxic in Shellfish	2000	100000	Low	
<i>Rhizosolenia</i> spp.	Potential Problem Species	600			
<i>Chaetoceros</i> spp.	Other Dominant Species	2400			
Ciliate (unidentified)	Other Dominant Species	2400			
Cryptomonads	Other Dominant Species	1400			
Dinobryon spp.	Other Dominant Species	2800			
<i>Gonyaulax</i> spp.	Other Dominant Species	200			
<i>Guinardia</i> spp.	Other Dominant Species	2400			
<i>Gymnodinium</i> spp.	Other Dominant Species	2000			
<i>Katodinium</i> spp.	Other Dominant Species	400			
<i>Leptocylindrus</i> spp.	Other Dominant Species	3400			
<i>Nitzschia</i> spp.	Other Dominant Species	1400			
<i>Oxytoxum</i> spp.	Other Dominant Species	200			
<i>Peridinium</i> spp.	Other Dominant Species	600			
<i>Prorocentrum</i> spp.	Other Dominant Species	600			
<i>Protoperidinium</i> spp.	Other dominant species	200			
<i>Scrippsiella</i> spp.	Other Dominant Species	200			
<i>Skeletonema</i> spp.	Other Dominant Species	13000			
Small Flagellates	Other Dominant Species	1600			

Method: In-house, based on UNESCO 1978 and IOC Manual and Guides 55 2010


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**Report Number:** 567347  
**Project Number:** T47676  
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 SL:P

Sample Details

Laboratory ID: T47676-2      Sample Type: Grab      Date Sampled: 13/02/2015  
 Description: Site 19      Date Received: 13/02/2015 13:00  
 Site Description: PU01 - Phyto Site Unspecified

Species	Description	Count (cells/L)	Trigger (cells/L)	Risk	Action
Biomass : Low					
<b>Pseudo-nitzschia spp.</b>	Toxic in Shellfish	<b>4000</b>	100000	Low	
<b>Heterosigma akashiwo</b>	Ichthyotoxic Species	<b>200</b>		Low	
Rhizosolenia spp.	Potential Problem Species	800			
Bacteriastrium spp.	Other Dominant Species	800			
Ceratium spp.	Other Dominant Species	200			
Chaetoceros spp.	Other Dominant Species	600			
Ciliate (unidentified)	Other Dominant Species	4600			
Cryptomonads	Other Dominant Species	3400			
Cylindrotheca spp.	Other Dominant Species	200			
Dinobryon spp.	Other Dominant Species	2400			
Euglenoid spp.	Other Dominant Species	400			
Gonyaulax spp.	Other Dominant Species	600			
Guinardia spp.	Other Dominant Species	800			
Gymnodinium spp.	Other Dominant Species	4600			
Gyrodinium spp.	Other Dominant Species	600			
Hemiaulus spp.	Other Dominant Species	1000			
Heterocapsa spp.	Other Dominant Species	200			
Katodinium spp.	Other Dominant Species	200			
Leptocylindrus spp.	Other Dominant Species	1800			
Nematodinium spp.	Other Dominant Species	200			
Nitzschia spp.	Other Dominant Species	4200			
Oxytoxum spp.	Other Dominant Species	200			
Peridinium spp.	Other Dominant Species	1200			
Prorocentrum spp.	Other Dominant Species	1600			
Protoperdinium spp.	Other dominant species	400			
Scrippsiella spp.	Other Dominant Species	1000			
Skeletonema spp.	Other Dominant Species	5000			
Small Flagellates	Other Dominant Species	5400			
Thalassionema spp.	Other Dominant Species	400			

Method: In-house, based on UNESCO 1978 and IOC Manual and Guides 55 2010



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Report Number: 567347  
 Project Number: T47676  
 V17.50  
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Sample Details

Laboratory ID: T47676-3      Sample Type: Grab      Date Sampled: 13/02/2015  
 Description: Site 21      Date Received: 13/02/2015 13:00  
 Site Description: PU01 - Phyto Site Unspecified

Species	Description	Count (cells/L)	Trigger (cells/L)	Risk	Action
Biomass : Low					
cf. <i>Azadinium</i> spp.	Toxic in Shellfish	400	30000	Low	
<i>Achnanthes</i> spp.	Other Dominant Species	200			
<i>Chaetoceros</i> spp.	Other Dominant Species	200			
Ciliate (unidentified)	Other Dominant Species	2800			
Cryptomonads	Other Dominant Species	200			
<i>Cylindrotheca</i> spp.	Other Dominant Species	400			
Euglenoid spp.	Other Dominant Species	600			
<i>Gonyaulax</i> spp.	Other Dominant Species	200			
<i>Gymnodinium</i> spp.	Other Dominant Species	1000			
<i>Heterocapsa</i> spp.	Other Dominant Species	200			
<i>Lithomelissa</i> sp.	Other Dominant Species	200			
<i>Nitzschia</i> spp.	Other Dominant Species	3000			
<i>Peridinium</i> spp.	Other Dominant Species	600			
<i>Prorocentrum</i> spp.	Other Dominant Species	600			
<i>Protoperidinium</i> spp.	Other dominant species	400			
<i>Scrippsiella</i> spp.	Other Dominant Species	400			
Small Flagellates	Other Dominant Species	1400			
<i>Alexandrium margalefi</i>	Non-toxic <i>Alexandrium</i> Species	200			

Method: In-house, based on UNESCO 1978 and IOC Manual and Guides 55 2010



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 Project Number: T47676  
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Sample Details

Laboratory ID: T47676-4      Sample Type: Grab      Date Sampled: 13/02/2015  
 Description: Site 22      Date Received: 13/02/2015 13:00  
 Site Description: PU01 - Phyto Site Unspecified

Species	Description	Count (cells/L)	Trigger (cells/L)	Risk	Action
Biomass : Low					
Karenia cf. mikimotoi	Toxic in Shellfish	400	250000	Low	
Pseudo-nitzschia spp.	Toxic in Shellfish	3600	100000	Low	
Rhizosolenia spp.	Potential Problem Species	1800			
Achnanthes spp.	Other Dominant Species	200			
Bacteriastrium spp.	Other Dominant Species	1800			
Chaetoceros spp.	Other Dominant Species	2200			
Ciliate (unidentified)	Other Dominant Species	2000			
Cryptomonads	Other Dominant Species	1000			
Entomoneis spp.	Other Dominant Species	200			
Euglenoid spp.	Other Dominant Species	400			
Gonyaulax spp.	Other Dominant Species	200			
Guinardia spp.	Other Dominant Species	600			
Gymnodinium spp.	Other Dominant Species	2400			
Hemiaulus spp.	Other Dominant Species	400			
Navicula spp.	Other Dominant Species	200			
Nitzschia spp.	Other Dominant Species	2800			
Oxytoxum spp.	Other Dominant Species	200			
Peridinium spp.	Other Dominant Species	800			
Prorocentrum spp.	Other Dominant Species	400			
Scrippsiella spp.	Other Dominant Species	200			
Skeletonema spp.	Other Dominant Species	3200			
Small Flagellates	Other Dominant Species	1200			

Method: In-house, based on UNESCO 1978 and IOC Manual and Guides 55 2010

Results apply to samples as received

Our routine detection limits for chemical testing relate to samples with a clean matrix. Reported detection limits may be higher for individual samples if there is insufficient sample or the matrix is complex.

< means less than, > means greater than

Date Generated: 18/2/15

Authorised by: Mandy Edgar

Position: Senior Technician, Natural Toxins Section

Signature:




This laboratory is accredited by IANZ. Unless specified all tests reported herein have been performed in accordance with the laboratory's scope of registration.



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Report Number: 567347  
 Project Number: T47676  
 V17.50  
 SL:P

27 February 2015

Nelson Regional Sewerage Authority  
PO Box 645  
Nelson 7040

RECEIVED  
02 FEB 2015  
NELSON CITY COUNCIL

Dear Sir/Madam

### Coastal Occupation Charges: A Draft Plan Change

The Resource Management Act 1991 requires the Tasman District Council (Council) to look at charging for use of the coastal area. The charges are similar to a rental for use of public space and the money collected is required to be used for the sustainable management of the coastal area. The uses affected include activities like moorings, jetties, wharves, and marine farms, but not short-term activities like swimming, boating and fishing. The law also requires Council, once it has looked at introducing charges, to include the decision in the regional coastal plan through a plan change.

Council has decided **not** to introduce charges at this point in time, but Council is still required to undertake a plan change and this letter has been sent to you as a person who may be affected or interested and forms part of Council's consultation before changing the plan.

#### Background

Originally people using the coastal area were charged a lease or licence fee under the Harbours Act (1950). These were replaced by crown rentals and royalties in 1991 and the charges were collected by councils and passed on to the Government. This Council chose not to collect these charges as to do so came at a cost to ratepayers. In 1997 coastal occupation charges replaced crown rental and royalties and Council is now required to decide whether or not to introduce the charges.

The charges are based on the idea that a person's use of the coast is a privilege and where a person benefits from that use they should pay some form of compensation to the public, particularly where the public lose use of the area. Most coastal uses have a mix of benefits and losses to the public and charges can be set at different levels. For example, a public boat ramp might not be charged because overall the public benefits but a mooring or marine farm may be charged because the public no longer have full use of the area.

Council believes that the charges are a good idea for most coastal uses. However, because the law and the method of charging is not clear and not all coastal users would be caught by the charges, Council has decided **not** to charge for coastal use at this point in time.

Despite the decision not to change things, Council needs to make the decision clear in the regional coastal plan. To do this, Council is required to make a change to the regional

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coastal plan (Tasman Resource Management Plan) and this consultation forms part of that plan change process. Following on from this consultation Council will formally prepare the plan change and call for submissions. A hearing may be held, decisions released, with potential for appeals.

Please look at the attached a copy of the draft plan change and section 32 report and if you have any comments or questions regarding Council's decision, please provide these to me by **27 March 2015**.

Yours faithfully

A handwritten signature in black ink, appearing to read 'Tania Bray', written in a cursive style.

Tania Bray  
Policy Planner

G:\EP Merge\TB\C421-1 COC\C56-COC Draft Consultation-Consents&Interest Grps-C421.1-let-27.02.2015.docx



A large rectangular area with a double border and horizontal ruling lines, resembling a writing template or a page for notes. The lines are evenly spaced and cover the majority of the page's width and height.

**Report on Assessment of Alternatives under Section 32  
of the Resource Management Act**

**Draft Plan Change 56**  
**Coastal Occupation Charges**

**February 2015**

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# 1. Introduction and Planning Context

## 1.1 Purpose of the Report

The Resource Management Act 1991 (RMA) enables regional councils to introduce a charging regime for the occupation of space within the coastal marine area. Until recently councils were given the option of whether or not they wished to consider coastal occupation charges, however this has recently changed. From the 1 October 2014 all regional councils are required to amend their regional coastal plans and either introduce a charging regime or to state in their plans that no charging regime would be imposed. Until this change is made regional councils are prevented from undertaking further changes to their regional coastal plans.

Tasman District Council (TDC) has made a significant contribution to the development of coastal occupation charging regimes at the national level and through that work, along with other regional councils, has identified significant barriers to the implementation of a charging regime. Regional councils have worked with the government over the years to try and reduce the barriers to implementation, but have been largely unsuccessful to date and the barriers to implementation remain. Despite this, the requirement to address the issue remains and TDC has made the decision to proceed with a plan change to address the matter. This decision will enable TDC to continue with its statutory responsibilities to sustainably manage the coastal environment, including amending the regional coastal plan (Plan) when required.

The purpose of this plan change is solely to meet the requirements of sections 64A and 401A of the RMA which require TDC to address coastal occupation charges.

In considering whether or not to introduce a charging regime section 64A of the RMA requires TDC to have regard to:

- (a) The extent to which public benefits from the coastal marine area are lost or gained; and
- (b) The extent to which private benefit is obtained from the occupation of the coastal marine area.

If TDC decides to introduce a charging regime it must include the following:

- The circumstances when a coastal occupation charge will be imposed; and
- The circumstances when the regional council will consider waiving (in whole or in part) a coastal occupation charge; and
- The level of charges to be paid or the manner in which the charge will be determined; and
- The way the money received will be used (in terms of promoting the sustainable management of the coastal marine area).

TDC has considered the extent to which public benefit is gained and lost from coastal occupation and has decided in principle that where private gain is greater than public gain then the public should be compensated. However, due to the identified barriers to implementation TDC has decided **not** to introduce a charging regime at present. TDC is still required to undertake a plan change to state this decision.

Whenever a plan change is undertaken the RMA requires an evaluation report (prepared under section 32) which explains the reason for the proposed plan change and the methods used by TDC in reaching the decision to undertake the plan change.

This report is the section 32 evaluation report and it also includes TDC's considerations under section 64A.

## 1.2 Coastal Occupation Charges

### 1.2.1 Background

Coastal occupation charges are a charge that can be made against any person who occupies public space within the coastal marine area. Charges replace a system of coastal rentals that had, in turn replaced the Harbour Act lease and licence fees that applied prior to 1991. These charges can apply to, but are not limited to, wharves, jetties, moorings, marinas, boat ramps, cables, pipes and marine farms; and those activities which are long term occupations of the coastal marine area. Temporary and transient uses of the coastal marine area like fishing, swimming and anchoring vessels are not considered to be coastal occupations.

In 1991 when the Act was first enacted it contained a system of coastal rentals which were to be administered by regional councils and the revenue was to be passed on to central government. The amounts to be paid were set by the Resource Management Transitional, Fees, Rents and Royalties) Regulations 1991. Regional councils, with the exception of Southland, refused to implement the rentals and urged the government to amend the legislation to allow the revenue to remain in the regions. In 1997 the Act was amended and coastal rentals were replaced with coastal occupation charges. The change enabled councils to charge for coastal occupation, with the proviso that any charges collected had to be spent on the sustainable management of the coastal environment within the region.

### 1.2.2 Principles Underlying Coastal Occupation Charges

The principles underlying coastal occupation charging are that:

- public access to and within the coastal marine area is protected and private occupation of the coastal marine area is a privilege and not a right; and
- where private occupation has an adverse effect on public access to and use of the coastal marine area, then some form of compensation for the loss is appropriate.

Public access, use and enjoyment of the coastal marine area can be restricted, prevented or enhanced by structures and activities occupying space, particular those that involve a permanent or ongoing occupation of the coastal marine area. Coastal occupation charges are one way in which the public can be 'recompensed' for the loss of the ability to use and access public space.

There are clear analogies with land based activities. If somebody wished to rent/lease private property or to occupy and use public park land for commercial use, they would expect to pay for that space e.g. Department of Conservation concessions for commercial operators in Abel Tasman National Park. Where an activity is occupying space in the coastal marine area and private benefit is gained consideration is required if a charge or rent should be paid for that benefit.

It is on this basis that the coastal occupation charges are founded – namely councils must have regard to the extent to which the public benefits from the coastal marine area are lost or gained; and the extent to which public benefit is obtained from the occupation of the coastal marine area. This is discussed in more detail in Section 2: Public and Private Benefit Assessment.

### 1.3 Statutory and Legislative Framework

Before completing an evaluation under section 32 of the RMA TDC is required to examine the extent to which the objective of this plan change; to address the requirements of the section 64A, are the most appropriate way to achieve the purpose of the RMA. To do this TDC is required to look at the provisions in the RMA, other documents and strategies that arise from the RMA and other related legislation. The purpose of this is to ensure decision making across relevant statutory and planning frameworks is integrated.

The statutory and policy considerations for any coastal occupation charging regime is outlined below.

#### Resource Management Act 1991

##### **Section 401A: Transitional Coastal Occupation Charges**

- ...
- (4) Where no provision for coastal occupation charges has been made in a regional coastal plan or proposed regional coastal plan by the expiry date [1 October 2014], the regional council must, in the first proposed regional coastal plan or change to a regional coastal plan notified on or after the expiry date, include a statement or regime on coastal occupation charges in accordance with section 64A.
- (5) In this section, expiry date means the date that is 3 years after the commencement of section 59 of the Resource Management Amendment Act (No 2) 2011.

This section requires TDC to include a statement or charging regime in the regional coastal plan, when it next notifies a change to the regional coastal plan.

##### **Section 64A: Imposition of coastal occupation charges**

- (1) Unless a regional coastal plan or proposed regional coastal plan already addresses coastal occupation charges, in preparing or changing a regional coastal plan or proposed regional coastal plan, a regional council must consider, after having regard to—
- (a) The extent to which public benefits from the coastal marine area are lost or gained; and
- (b) The extent to which private benefit is obtained from the occupation of the coastal marine area,—
- whether or not a coastal occupation charging regime applying to persons who occupy any part of the common marine and coastal area should be included.
- (2) Where the regional council considers that a coastal occupation charging regime should not be included, a statement to that effect must be included in the regional coastal plan.
- (3) Where the regional council considers that a coastal occupation charging regime should be included, the council must, after having regard to the matters set out in paragraphs (a) and (b) of subsection (1), specify in the regional coastal plan—
- (a) The circumstances when a coastal occupation charge will be imposed; and
- (b) The circumstances when the regional council will consider waiving (in whole or in part) a coastal occupation charge; and



(c) The level of charges to be paid or the manner in which the charge will be determined; and

(d) In accordance with subsection (5), the way the money received will be used.

(4) No coastal occupation charge may be imposed on any person occupying the coastal marine area unless the charge is provided for in the regional coastal plan.

(4A) A coastal occupation charge must not be imposed on a protected customary rights group or customary marine title group exercising a right under Part 3 of the Marine and Coastal Area (Takutai Moana) Act 2011.

(5) Any money received by the regional council from a coastal occupation charge must be used only for the purpose of promoting the sustainable management of the coastal marine area.

This section defines what TDC must consider before making a decision to impose a coastal occupation charging regime and what must be included in a charging regime. This section also requires the inclusion of a statement in the regional coastal plan should the decision be to not impose a charging regime.

## **Part II**

Part II of the RMA, section 5 states that the purpose of the Act is to promote sustainable management of natural and physical resources. Section 6(d) states that it is a matter of national importance to maintain and enhance public access to and along the coastal marine areas and section 7(b) refers to the efficient use of resources.

Coastal occupation charges are not mentioned in Part II, however, as money received from coastal occupation charges is required to be spent on the sustainable management of the coastal environment the charges are considered to be consistent with the purpose of the RMA in section 5. A charging regime may also promote more efficient use of resources (section 7(b)) by acting as a disincentive to the occupation of areas larger than required.

## **New Zealand Coastal Policy Statement 2010**

The purpose of the New Zealand Coastal Policy Statement 2010 (NZCPS) is to state policies in order to achieve the purpose of the RMA in relation to the coastal environment. There are provisions in the NZCPS regarding the allocation and use of public space but no specific provisions regarding coastal occupation charges. To the extent that money received from a charging regime is to be spent on the sustainable management of the coastal environment is considered consistent with the principles of the NZCPS.

## **Tasman Regional Policy Statement**

The Tasman Regional Policy Statement (TRPS) provides an overview of the resource management issues for Tasman and includes policies and methods to achieve integrated management of the natural and physical resources for region.

The TRPS does not include any specific provisions relevant to coastal occupation charges.

## **Tasman Resource Management Plan (which includes the Regional Coastal Plan)**

The purpose of the Tasman Resource Management Plan, in part, is to assist TDC, in conjunction with the Minister of Conservation, to achieve the purpose of the RMA in relation to the coastal marine area in Tasman.

There are specific objectives and policies regarding the occupation of space in the coastal marine area, however, these policies seek to address environmental effects arising from the occupation, which is different from the purpose of coastal occupation charges. The Plan does not include any specific objectives, policies or methods relating to coastal occupation charges.

## **Marine and Coastal Area (Takutai Moana) Act 2011**

The Marine and Coastal Area (Takutai Moana) Act divests the common marine and coastal area from ownership and sets out a number of core rights for public use regarding access, fishing and navigation. The Act specifically provides for the public to pass, re-pass, enter, stay in or on, and leave the common marine and coastal area without charge (section 26), subject to provisions under other Acts and customary interests.

Coastal occupation charges only apply to longer-term and permanent occupations of the common marine and coastal area and do not affect transient and temporary uses like fishing, swimming and anchoring which are protected by this Act.

## **Summary of Statutory and Policy Framework**

Sections 401A and 64A of the RMA require TDC to either implement a coastal charging regime or include a statement in the plan to the effect that TDC has made the decision not to implement a charging regime, at the next change to the regional coastal plan. Section 64A sets out what must be considered before TDC makes a decision and section 64A(3) states what must be addressed in the charging regime. Beyond these sections, the RMA neither provides support nor opposes the introduction of coastal occupation charges, or provides details of what form a charging regime should take.

Coastal occupation charges are not discussed in either the Tasman Regional Policy Statement or the Tasman Resource Management Plan.

To the extent that the RMA, policy documents and management plans seek sustainable management of the coastal environment, then the imposition of a coastal occupation charging regime is considered consistent.

## 2. Public and Private Benefits Assessment (Section 64A)

Section 64A of the RMA requires councils to have regard to both public benefits (lost and gained) and private benefits (gained) in determining whether or not to introduce a charging regime.

It is considered that private benefit occurs where occupations/use by one excludes the use of that space by another. A public benefit occurs where no one is excluded from use or enjoyment and the benefits are available to everyone in the community for that space. The majority of occupations fall between these two extremes with few occupations having total private or public benefit. For example a private marina might exclude the general public, however in most cases they provide public facilities in the form of boat ramps, refuelling and ablution/ toilet facilities. At the other end of the spectrum a public boat ramp may prevent other uses; however the occupation is fully for the benefit of the public.

The following authorised coastal occupations occur in Tasman District

**Table 1: Number and Type of Coastal Occupations**

Type of Structure	Authorisation	Number
Wharves and Breakwaters	Permitted by TRMP	12
Boat Ramps	Permitted by TRMP	15
Swing Moorings	Permitted by TRMP	23
	Coastal Permit	152
Jetties and berths	Permitted by TRMP	34
	Coastal Permit	243
Bridges in CMA	Coastal Permit	2
Utilities (pipes and power cables)	Coastal permit	12
Swim platform	Coastal Permit	2
Marine farm	Coastal permit	30 (Total= 142ha)
Marine farm (Spat catching)	Coastal permit	5 (Total =1670ha)
Marine farm (low density off shore)	Coastal permit	10 (Total =1075ha)

The allocation of benefits and costs to the differing types of occupation is a subjective exercise which varies according to the judgement of the person(s) carrying out the exercise and particular circumstances of each occupation.

The following benefits and costs are considered to arise from coastal occupation in Tasman District.

**Table 2: Benefits and Costs of Occupation in the CMA**

Occupation Type		Private Benefit Gained	Public Benefit	
			Gained	Lost
Mooring (swing, pile)		Boat security Accessibility Convenience	Safety (low risk to other boats or property)	Opportunity to occupy the same space for other uses and activities.  May impede access along the foreshore.
Marina		Security/ Safety  Accessibility (to land, associated facilities e.g. disposal points).  Storage  Profit	Safety (low risk to other boats or property)  Often additional facilities provided e.g. boat ramps and ablution blocks	Opportunity to occupy/ access the same space  May impede access along the adjoining foreshore.
Jetty/Wharf/ boat ramp	Public	Access and use  Berthing/ storage  Passive use and recreation (e.g. fishing, walking)  Accessibility  Convenience	Access and use  Berthing/ storage  Passive use and recreation (e.g. fishing, walking)  Accessibility  Convenience	Opportunity to occupy the same space, although other use of space may be possible depending on structure size, height above water surface etc.  May impede access along adjoining foreshore
	Private	Access and use  Berthing/ storage  Passive use and recreation (e.g. fishing, walking)  Accessibility  Convenience	Potentially(subject to conditions of consent)–Access and use  Berthing/storage  Passive use and recreation (e.g. fishing, walking)  Accessibility  Convenience	Opportunity to occupy the same space, although other use of space may be possible depending on structure size, height above water surface etc.  May impede access along adjoining foreshore
Boat shed/ Factories (other private buildings)		Security/safety  Weather protection  Accessibility  Convenience  No cost of storage on land	Safety/ lighting	Opportunity to occupy the same space, although other use of space may be possible depending on structure size, height above water surface, exclusivity of use etc.  May impede access



Occupation Type	Private Benefit Gained	Public Benefit	
		Gained	Lost
			along adjoining foreshore.
Marine Farm	Access Use Productivity Profit	Navigational aid/ safety  Possible fish attraction  Wider socio-economic benefits (e.g. enhanced (local) employment opportunities and export earnings)	Opportunity to occupy the same space (note: may not occupy entire permit area or for the whole year)  Limited public accessibility (e.g. large vessels, crossing over lines)  Loss of opportunity to navigation, recreational fishers etc particularly where large areas are involved.
Utility Service (public utilities e.g. power)	Health/ safety of individuals  Provision of services  Profit (private companies)	Health/safety of wider public/community  Provision of services	Opportunity to occupy the same space, although generally unobtrusive as below surface.  No opportunity for other use of occupied space, may be less restrictive if below surface of on seafloor.  May be other necessary exclusions (e.g. anchoring, mooring or dredging).
Domestic pipelines (private)	Convenience Access Use Provision of services	Health/safety	Opportunity to occupy the same space, although generally unobtrusive as below surface.  No opportunity for other use of occupied space, may be less restrictive if below surface of on seafloor.  May be other necessary exclusions (e.g. anchoring, mooring or dredging).
Bridges (public)	Safety Convenience Access	Safety Convenience Access	Opportunity to occupy the same space, although other use of space may be possible

Occupation Type	Private Benefit Gained	Public Benefit	
		Gained	Lost
		Wider socio-economic benefits (e.g. enhanced (local) employment opportunities.	depending on structure size, height above water surface etc
Swim Platform (public) -seasonal	Convenience Access Health/safety	Convenience Access Health/safety	Opportunity to occupy the same space, although the structures are short term and the space can be used when the space is not in use.

The Marlborough District Council undertook an exercise in 1999<sup>1</sup> to quantitatively assess the relative benefits associated with different types of occupation. This assessment is well documented, based on a sound rationale, and is considered to be a fair representation of the benefits. The findings from this analysis are detailed in the following table.

**Table 3: Net Private Benefit**

Occupation (type)	Private Benefit (a)	Public Benefit Gained (b)	Public Benefit Lost (b)	Net Private Benefit a+(c-b)
Mooring	5	2	3	6
Marina	5	4	4	5
Jetty/wharf (private)	4	4	3	3
Jetty /Wharf (public)	1	5	2	-2
Boat Ramp(private)	5	1	3	7
Boat Ramp(public)	1	5	2	-2
Mussel Farm [traditional mussel]	4	3	4	5
Utility (e.g. power)	1	1	2	2
Domestic Services e.g. storm water	5	1	2	6

TDC in accordance with the underlying principles of coastal occupation charges considers, in principle, that where private benefit is greater than public benefit the public should be compensated. Based on the above analysis all coastal occupations (except public jetty/wharfs and public boat ramps) could be considered to have greater private benefit than net public benefit and consent holders should compensate the public for loss of use.

<sup>1</sup> Boffa Miskell Limited. (1999) Coastal Occupation Charges  
[http://www.marlborough.govt.nz/sitecore/shell/Controls/Rich%20Text%20Editor/~/\\_media/Files/MDC/Home/Your%20Council/RM/RPS/Review/CoastalOccupancyChargespreparedbyBoffaMiskellLimited.pdf](http://www.marlborough.govt.nz/sitecore/shell/Controls/Rich%20Text%20Editor/~/_media/Files/MDC/Home/Your%20Council/RM/RPS/Review/CoastalOccupancyChargespreparedbyBoffaMiskellLimited.pdf)

### 3. Evaluation of Coastal Occupation Charges Options

In addition to the assessment of the appropriateness of this plan change under the statutory and planning frameworks (section 1.3) and the assessment of net public benefits and losses (section 2), TDC is required to assess the appropriateness of the proposed changes in achieving the purpose of the plan change. This requires an examination of the options, assessing the efficiency and effectiveness (including costs and benefits and risks of acting and not acting) and a summary of the reasons why TDC has made its decision.

#### 3.1 What are the options?

The RMA provides TDC with two options for meeting the requirements of sections 64A and 401A:

1. Amend the Plan to include a statement which gives effect to a decision **not** to establish a coastal occupation charging regime (section 64A(2)); or.
2. Amend the Plan to introduce a coastal occupation charging regime (section 64A(3)). The charging regime is required to cover the following;

*(a) The circumstances when a coastal occupation charge will be imposed; and*

*(b) The circumstances when the regional council will consider waiving (in whole or in part) a coastal occupation charge; and*

*(c) The level of charges to be paid or the manner in which the charge will be determined; and*

*(d) In accordance with subsection (5), the way the money received will be used.*

#### 3.2 Effectiveness and Efficiency

The RMA requires TDC to assess how effective the two options will be in achieving the purpose of the plan change or how successful the options will be in solving the problem.

TDC is also required to look at the efficiency of the two options, whether the proposed change is likely to achieve the purpose of the plan change at the lowest total cost to all members of society, or achieve the highest net benefit to all of society.

##### 3.2.1 How effective and efficient are the options?

Both options 1 and 2 fulfil the requirements of section 64A and 401A and are effective in addressing the issue of coastal occupation charges as required by the RMA. However, TDC along with other regional councils and government agencies have been working for a number of years to develop a methodology for a coastal occupation charging regime. Through this collaborative work considerable uncertainty regarding coastal occupation charges has been identified. Regional councils have been working with Government to achieve greater certainty, but have been unsuccessful to date. The following barriers to implantation have been identified.

##### Definition

The lack of guidance in the RMA has created a significant barrier to understanding what an occupation charging regime is, how to develop one and how it should be implemented.

Coastal occupation charges are commonly described as akin to a rental, however others, believe it more like a fee, rate or a contribution.

### **Methods for Calculating Charges**

The lack of clarity about what the charge actually is has made it difficult to determine what the level of charge should be or a methodology for calculating one. A variety of methods for calculating similar types of charges and rentals are used worldwide, including using neighbouring terrestrial land values, charging percentages of income of commercial operations and commercial market rates. However, in the absence of an established system councils have to start from scratch in setting up a charging regime to meet the purpose of the RMA and have little historic precedence to rely on. There has been a large amount of academic debate regarding the various charging regimes which have been proposed so far, and all have been challenged regarding methodology.

### **No Presumption that Charges should apply**

There is no presumption in legislation in favour of charging and any decision must be subject to the plan change process. While significant and well reasoned work has been undertaken by regional councils to define the principles and form of coastal occupation charges it is anticipated that without statutory guidance any charging regime is likely to be debated in the courts with no predictable outcome.

### **Issues of Equity and Consistency**

For councils to charge for coastal occupancy the occupation must be authorised (either through the Plan or by a coastal permit) and the council needs to know who occupier is. Currently there are a significant number of structures in Tasman District that are unauthorised and/or the owner is unknown. TDC has a statutory obligation to identify the owners of coastal structures and where the owner is not found then the Minister of Conservation may at her discretion order the removal of the structure. Until all structures are authorised with known owners, or removed, then the imposition of charges would only affect those people with authorised structures, which may perversely encourage the establishment of more illegal structures.

### **Financial Return**

It is unclear whether the administrative costs from the charging regime can be recovered from the charges. If the costs cannot be recovered then the administrative costs would need to be met through general rates. If the costs can be recovered then after the exemptions have been applied, there may only be a modest financial return.

Until the above matters of uncertainty are addressed TDC considers it would be costly, litigious and difficult to introduce a coastal occupation charging regime under Option 2. Option 1 is considered to be a relatively simple matter as this option represents the status quo. The costs and benefits and risks from each other are further assessed below.

### **3.2.3 How do the costs and benefits of the options compare?**

A decision whether or not to establish a charging regime has limited impact on environmental or social costs and benefits. The effects of the occupation – loss of public access and natural character are addressed through other provisions in the Plan. The introduction of a charging regime does however have a direct financial implication both for the community and for TDC. Unfortunately, the actual financial benefits and costs arising from a charging regime cannot be quantified until a regime is developed and the charges set. Some use has been made of the Environment Southland and Marlborough District Council's work regarding coastal



occupation charges and figures from their table of charges have been included in this evaluation to give some indication of costs, but should not be taken as a reflection of any proposal by this Council.

The following is a general assessment of the benefits and costs for the two options.

Option	Benefit	Costs
<p><b>Plan change that includes Coastal Occupation Charges</b></p>	<ul style="list-style-type: none"> <li>• Provides a target funding source for sustainable management of the CMA.<sup>2</sup></li> <li>• May be used to reduce the cost of coastal management on the general ratepayer.</li> <li>• Community receives compensation for private occupation of the CMA.</li> <li>• Possible disincentive for the occupation of public space in the CMA for private benefit.</li> <li>• Council complies with legislative requirements in s64A and s401A of the Act.</li> </ul>	<ul style="list-style-type: none"> <li>• Financial cost incurred in development of a plan change, particularly where there are uncertainties.</li> <li>• Plan change will be time consuming, potentially litigious, with no certain outcome.</li> <li>• No financial return until appeals resolved.</li> <li>• Administrative costs of a charging regime. Administrative costs passed onto the community if unable to claim from the charging regime.</li> <li>• Economic impact on commercial operators e.g. Marine farming under in accordance with the ES and MDC charges would return \$28-55,000 per annum)<sup>3, 4</sup></li> <li>• Socio-economic impact/ costs on coastal permit holders (without developing a charging regime these costs cannot be quantified). Swing moorings under ES and MDC charges \$10-20,000 per annum<sup>5</sup>.</li> <li>• An increase in the establishment of unauthorised structures by individuals unwilling or unable to meet the cost of the charges.</li> </ul>

<sup>2</sup> Approximately \$80,000 in accordance with the Marlborough District Council's coastal occupancy charges consultation fees schedule. Note: this figure does not include administrative costs or waivers.

<sup>3</sup> Approximately \$28,000 calculated using Environment Southland's Coastal Occupation Charges fees schedule for (30 September 2014)

<sup>4</sup> Approximately \$55,000 calculated using Marlborough District Council's Coastal Occupation Charges consultation fees schedule.

<sup>5</sup> Estimated using the Marlborough District Council's Coastal Occupation Charges consultation fees schedule and the Environment Southland's Coastal Occupation Charges fees schedule for (30 September 2014). ES ( moorings = approx \$21,000) MDC (moorings= \$9625).

Option	Benefit	Costs
<p><b>Plan change stating that no Coastal Occupation Charges will be applied</b></p>	<ul style="list-style-type: none"> <li>• No financial and other costs imposed on occupiers of public space in CMA.</li> <li>• Unlikely to be contested in the Courts as the status quo is maintained.</li> <li>• Council complies with legislative requirements in s64A and s401A of the Act.</li> <li>• Enables the Council to progress other plan changes.</li> <li>• Does not prevent the Council from establishing a</li> <li>• Coastal occupancy regime in the future.</li> </ul>	<ul style="list-style-type: none"> <li>• Charging regime would be inequitable until all coastal occupations are authorised and owners identified.</li> <li>• Future legislation changes that remove the current uncertainty may require redevelopment of any existing charging system.</li> <li>• Financial costs incurred in development of a plan change.</li> <li>• Will not provide a disincentive for the occupation of space in the CMA for private gain.</li> <li>• No extra funding for sustainable management of the coast (potentially \$80,000<sup>6</sup> per annum less admin costs and waivers)</li> </ul>

### 3.2.4 Risks of acting or not acting

A decision on whether or not to establish a coastal occupation charging regime is a mandatory requirement under the RMA. TDC cannot make any further changes to the Plan until the matter has been addressed. Ignoring the requirement creates a risk for TDC in that it can no longer sustainably manage the coastal marine area where that management requires a change to the Plan.

A decision to implement a coastal occupation charging regime is considered to have the following risks associated with it.

<sup>6</sup> Estimated using the Marlborough District Council's Coastal Occupation Charges consultation fees schedule.

- Very likely to be subject to extended and expensive litigation with an uncertain outcome.
- Appeals in opposition may be upheld given lack of clarity or direction in legislation.
- Charges are likely to be inequitable in the short term and may encourage further establishment of unauthorised structures.
- Regime likely to be inconsistent with regimes developed by other Councils, leading to limited guidance from court cases.
- May create a perception that occupation charges entail private ownership.
- The return from the charging regime after administration costs and waivers have been applied may not be cost effective.
- Legislation changes requested by regional councils regarding coastal occupation charges may require the further review of the provisions.

A decision not to introduce a coastal occupation charging regime is considered to have low risks associated with it as it maintains the status quo. The decision is reversible and if conditions and constraints change, TDC has the ability to introduce a charging regime at a later date.

#### **4. Conclusion and Recommendations**

Based on the assessment under section 64A of the RMA of the private benefits and public benefits gained and lost from coastal occupation, TDC considers it appropriate to charge for the private occupation of the coastal marine area where the private benefit outweighs the public net benefit.

However, the section 32 evaluation has determined that the risk of implementing a coastal occupation charging regime, at this point in time, is too high due to lack of clarity in the legislation and a number of barriers to implementation. Issues regarding the equitable implementation of a charging regime in the District have also been identified.

The requirements outlined in section 401A of the RMA mean that there is a risk in not undertaking a plan change, as this would effectively "freeze" the Plan and prevent TDC undertaking the statutory requirements with regard to sustainable management of the coastal environment. It is considered that the most appropriate course of action is to introduce a statement into the Plan resolving not to introduce coastal occupation charges regime, at the present. The draft plan change wording is provided in Appendix 1 of this report.

TASMAN DISTRICT COUNCIL  
Tasman Resource Management Plan

**DRAFT PLAN CHANGE NO. 56**  
**Coastal Occupation Charges**

**Schedule of Amendments**

The Tasman Resource Management Plan is amended in accordance with the following schedule:

NOTE:

*Italics* denotes TRMP text whether existing or proposed.

Underlining denotes proposed new text inserted or text amended (unless otherwise indicated).

~~Strikethrough~~ denotes text deleted (unless otherwise indicated).

**1. Part III: Coastal Marine Area**

**1.1 Add a new section at the end of Part III Introduction.**

**1.1.1 *Coastal Occupation Charges***

*In accordance with section 64A of the Act, Council is required to consider whether or not a coastal occupation charging regime applying to persons who occupy any part of the common marine and coastal area should be included in the Regional Coastal Plan.*

*Council agrees with the principle of coastal occupation charges and considers that an appropriate regime would assist in the sustainable management of the common marine and coastal area. However, given the legal and policy uncertainties around such a charging regime, Council has decided not to impose a charging regime at present.*



**Nelson Regional Sewerage Business Unit  
Financial Report**

Income Account for the period to 31st January 2015

	Actual Month	Budget Month	Actual YTD	% YTD	% Year	2014/15 Budget		YTD Variation
						YTD	Annual	
<b>Income</b>								
Contributions Fixed	371,243	386,900	2,598,702	96	56	2,708,400	4,643,000	109,698
Contributions Variable	179,618	234,100	1,381,513	84	49	1,638,600	2,809,000	257,087
Other Recoveries	11,634	14,800	93,978	91	53	103,800	178,000	9,822
Interest	10	80	196	33	20	600	1,000	404
Forestry Income	-	830	-			5,800	10,000	
Revaluation Derivative Instruments	-		-					
<b>Total Income</b>	<b>562,505</b>	<b>636,710</b>	<b>4,074,388</b>	<b>91</b>	<b>53</b>	<b>4,457,200</b>	<b>7,641,000</b>	<b>377,012</b>
<b>Less Expenses</b>								
Management	11,883	19,700	112,220	82	48	137,100	235,000	24,880
Electricity	46,984	63,450	428,450	96	56	444,900	762,700	16,450
Contract Maintenance	56,157	65,400	420,993	92	54	457,500	784,200	36,507
Reactive and Proactive Maintenance	- 93,221	32,150	318,983	142	83	224,900	385,500	(94,083)
Monitoring	3,610	10,000	44,895	65	38	69,200	118,600	24,305
Consultancy	315	4,200	22,767	78	46	29,200	50,000	6,433
Insurance	5,023	4,900	35,158	102	60	34,400	59,000	(758)
Sundry	- 2,116	6,150	32,503	68	40	47,800	82,000	15,297
Biosolids Disposal	45,680	43,250	418,734	138	81	303,300	520,000	(115,434)
<b>Operating &amp; Maintenance Expenses</b>	<b>74,316</b>	<b>249,200</b>	<b>1,834,703</b>	<b>105</b>	<b>61</b>	<b>1,748,300</b>	<b>2,997,000</b>	<b>(86,403)</b>
Financial	90,717	68,650	543,293	113	66	480,700	824,000	(62,593)
Depreciation	145,349	164,500	1,017,442	88	52	1,151,500	1,974,000	134,058
<b>Total Expenses</b>	<b>310,382</b>	<b>482,350</b>	<b>3,395,439</b>	<b>100</b>	<b>59</b>	<b>3,380,500</b>	<b>5,795,000</b>	<b>- 14,939</b>
<b>Net Income before Rebate</b>	<b>252,123</b>	<b>154,360</b>	<b>678,950</b>	<b>63</b>	<b>37</b>	<b>1,076,700</b>	<b>1,846,000</b>	<b>391,950</b>
Owners rebate	0		0					
<b>Net Income after rebate</b>	<b>252,123</b>	<b>154,360</b>	<b>678,950</b>			<b>1,076,700</b>	<b>1,846,000</b>	<b>391,950</b>
<b>Capital Expenditure</b>								
Renewals	99,251	59,900	204,967			419,420	719,000	
New Capital Expenditure	2,500	-	41,654			-	-	
<b>Total Capital Expenditure</b>	<b>101,751</b>	<b>59,900</b>	<b>246,621</b>			<b>419,420</b>	<b>719,000</b>	

## Nelson Regional Sewerage Business Unit

### Balance Sheet as at 31st January 2015

	Current	Last Month	June 2013
<b>Equity</b>			
Opening Equity (July)	37,137,636	37,137,636	36,229,451
Plus Net Income YTD	678,950	426,827	(323,397)
Plus Revaluation	0	0	1,231,581
<b>Closing Equity</b>	<u>37,816,585</u>	<u>37,564,463</u>	<u>37,137,636</u>
Contingency Reserve	100,000	100,000	100,000
	<u><b>37,916,585</b></u>	<u><b>37,664,463</b></u>	<u><b>37,237,636</b></u>
Which was Invested as follows -			
<b>Current Assets</b>			
Bank	20,592	92,818	44,983
Debtors	22,930	24,380	178,100
NCC Current account	372,220	577,766	317,468
<b>Total Current Assets</b>	<u>415,742</u>	<u>694,964</u>	<u>540,551</u>
<b>Fixed Assets</b>	<b>54,557,187</b>	<b>54,600,786</b>	<b>55,328,008</b>
<b>Current Liabilities</b>			
Creditors	(306,344)	(231,287)	(199,467)
NCC Loan	(750,000)	(1,400,000)	0
TDC Current Account	0	0	(800,691)
NCC Current account	0	0	(1,430,765)
<b>Total Current Liabilities</b>	<u>(1,056,344)</u>	<u>(1,631,287)</u>	<u>(2,430,923)</u>
<b>Term Liabilities</b>	<b>(16,000,000)</b>	<b>(16,000,000)</b>	<b>(16,200,000)</b>
Derivative Financial Instruments	0	0	0
	<u><b>37,916,585</b></u>	<u><b>37,664,463</b></u>	<u><b>37,237,636</b></u>