Regional Council

NOTICE IS GIVEN

that the next meeting of the **Regional Council** will be held in **Mauao Rooms, Bay of Plenty Regional Council Building, 87 First Avenue, Tauranga** on:

Thursday, 9 March 2017 commencing at 9.30 am.

Mary-Anne Macleod
Chief Executive

2 March 2017

BAY OF PLENTY REGIONAL COUNCIL TOI MOANA

Regional Council
Terms of Reference

Purpose

- Enable democratic local decision-making and action by, and on behalf of, Bay of Plenty communities.
- Meet the current and future needs of communities for good-quality local infrastructure, local public services, and performance of regulatory functions in a way that is most cost-effective for households and businesses.
- Set the overarching strategic direction for Bay of Plenty Regional Council as an organisation.
- Hold ultimate responsibility for allocating financial resources across the Council.

Membership

All councillors are members of the Regional Council.

Quorum

In accordance with Council standing order 10.1(a), the quorum at a meeting of the Regional Council is seven members, consisting of half the number of members.

Meeting frequency

Six-weekly.

Role of Council

- Address Local Electoral Act matters and Local Government Rating Act matters.
- Oversee all matters relating to identifying and contributing to community outcomes.
- Consider and agree on matters relating to significant new activities or areas of involvement such as infrastructure which are not the responsibility of a specific committee.
- Provide regional leadership on key issues that require a collaborative approach between a number of parties.
- Develop, adopt and review Council's Policy on Significance and decision-making policy and processes.
- Develop, adopt and implement the Triennial Agreement and the Code of Conduct.
- Consider and agree on matters relating to elected members' remuneration matters.
- Appoint the Chief Executive Officer, and review their contract, performance and remuneration at least annually.
- Approve all delegations to the Chief Executive, including the authority for further delegation to staff.
- Establish committees, subcommittees, and working parties and appoint members.
- Receive and consider recommendations and matters referred to it by its committees, joint committees, subcommittees and working parties.

- Approve membership to external bodies and organisations, including Council Controlled Organisations.
- Develop, adopt and review policies for, and monitor the performance of, Council Controlled Organisations.
- Review and approve strategic matters relating to the sale, acquisition and development of property for the purposes of meeting Council's organisational requirements and implement approved Regional Council policy.
- Address strategic corporate matters including property and accommodation.
- Institute any proceedings in the High Court that are not injunctive proceedings.
- Exercise the powers and duties conferred or imposed on Council by the Public Works Act 1981.
- Consider and agree on the process to develop the Long Term Plan, Annual Plan and Annual Report.
- Adopt Council policies as required by statute (for example Regional Policy Statement and Regional Land Transport Strategy) to be decided by Council or outside of Committee delegations (for example infrastructure policy).
- Delegate to commissioners to exercise the powers, functions and duties of the Council as a consent authority under the Resource Management Act 1991 including to hear and decide a consent application.
- Monitor Council's financial and non-financial performance in-year.
- Develop, review and approve Council's Financial Strategy and funding and financial policies and frameworks.

Delegations from Council to Committees

- Full Council has a role to monitor the functioning of all committees.
- Full Council will consider matters not within the delegation of any one Council committee.
- Full Council may at any time, revoke or modify a delegation to a Council committee, either permanently, for a specified time or to address a specific matter, if it considers there is good reason to do so.
- The delegations provided to committees may be further delegated to subcommittees unless the power of further delegation is restricted by Council or by statute.

It is accepted in making these delegations that:

- The committees, in performing their delegated functions, powers or duties, may, without confirmation by the Council, exercise or perform them in a like manner and with the same effect as the Council itself could have exercised or performed them.
- The delegated powers given shall at all times be subject to their current policies and principles or directions, as given by the Council from time to time.
- The chairperson of each committee shall have the authority to exercise their discretion, as to whether or not the delegated authority of the committee be used where, in the opinion of the chairperson, circumstances warrant it.

Powers that cannot be delegated

Under Clause 32 Schedule 7 of the Local Government Act 2002, Full Council must make the following decisions:

- Make a rate.
- Make a bylaw.
- Borrow money or purchase or dispose of assets, other than in accordance with the long-term plan.
- Adopt the long-term plan, annual plan, or annual report.
- Appoint a chief executive.
- Adopt policies required to be adopted and consulted on under the Local Government Act 2002 in association with the long-term plan or developed for the purpose of the local governance statement.
- Adopt a remuneration and employment policy.

Public Forum

1. A period of up to 15 minutes may be set aside near the beginning of the meeting to enable members of the public to make statements about any matter on the agenda of that meeting which is open to the public, but excluding any matter on which comment could prejudice any specified statutory process the council is required to follow.

2. The time allowed for each speaker will normally be up to 5 minutes but will be up to the discretion of the chair. A maximum of 3 public participants will be allowed per meeting.

3. No statements by public participants to the Council shall be allowed unless a written, electronic or oral application has been received by the Chief Executive (Governance Team) by 12.00 noon of the working day prior to the meeting and the Chair's approval has subsequently been obtained. The application shall include the following:

    - name of participant;
    - organisation represented (if any);
    - meeting at which they wish to participate; and matter on the agenda to be addressed.

4. Members of the meeting may put questions to any public participants, relevant to the matter being raised through the chair. Any questions must be asked and answered within the time period given to a public participant. The chair shall determine the number of questions.

Membership

Chairman:	D Leeder
Deputy Chairman:	J Nees
Councillors:	N Bruning, W Clark, J Cronin, S Crosby, D Love, T Marr, A Tahana, P Thompson, L Thurston, A von Dadelszen, K Winters
Committee Advisor:	S Kameta

Recommendations in reports are not to be construed as Council policy until adopted by Council.

Agenda

E te Atua nui tonu, ko mātau ēnei e inoi atu nei ki a koe, kia tau mai te māramatanga ki a mātau whakarite mō tēnei rā, arahina hoki mātau, e eke ai te ōranga tonu ki ngā āhuatanga katoa a ngā tangata ki tō mātau rohe whānui tonu. Āmine.

"Almighty God we ask that you give us wisdom in the decisions we make here today and give us guidance in working with our regional communities to promote their social, economic, environmental and cultural well-being. Amen".

1 Apologies

2 General Business and Tabled Items

Items not on the agenda for the meeting require a resolution under section 46A of the Local Government Official Information and Meetings Act 1987 stating the reasons why the item was not on the agenda and why it cannot be delayed until a subsequent meeting.

3 Public Forum

4 Declarations of Conflicts of Interests

5 Previous Minutes

6 Chairman's Report

7 Chief Executive's Reports

Resolution to exclude the public

THAT the public be excluded from the following parts of the proceedings of this meeting.

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

General Subject of Matter to be Considered	*Reason for passing this resolution in relation to this matter*	*Grounds under Section 48(1) LGOIMA 1987 for passing this resolution*
8.1 Public Excluded Regional Council Minutes - 14 February 2017	**Please refer to the relevant clause in the meeting minutes.**	**That the public conduct of the whole or the relevant part of the proceedings of the meeting would be likely to result in the disclosure of**

		information for which good reason for withholding would exist.
8.2 New Aquaculture Opportunities - Eastern BOP	**To carry out, without prejudice or disadvantage, commercial activities.**	**That the public conduct of the whole or the relevant part of the proceedings of the meeting would be likely to result in the disclosure of information for which good reason for withholding would exist.**
8.3 Regional Integrated Ticketing System Interim Solution	**To carry on, without prejudice or disadvantage, negotiations (including commercial and industrial negotiations).**	**That the public conduct of the whole or the relevant part of the proceedings of the meeting would be likely to result in the disclosure of information for which good reason for withholding would exist.**
8.4 Whakatāne and Tauranga Building Upgrades	**To prevent the disclosure or use of official information for improper gain or improper advantage.**	**That the public conduct of the whole or the relevant part of the proceedings of the meeting would be likely to result in the disclosure of information for which good reason for withholding would exist.**
9.1 Presentation: Chief Executive's 6-monthly Performance Review	**To protect the privacy of natural persons, including that of deceased natural persons.**	**That the public conduct of the whole or the relevant part of the proceedings of the meeting would be likely to result in the disclosure of information for which good reason for withholding would exist.**

8.4 Whakatane and Tauranga Building Upgrades – report to follow under separate cover

Please note: *The meeting will adjourn for a workshop on this item.*

8.1 Presentation: Chief Executive's 6-monthly Performance Review

Please note: *Consultant Russell Ness will be in attendance for this item.*

9 Confidential business to be transferred into the open

10 Readmit the public

11 Consideration of General Business

12 Closing karakia

Previous Minutes

Minutes of the Regional Council Meeting held in Mauao Rooms, Bay of Plenty Regional Council Building, 87 First Avenue, Tauranga on Tuesday, 14 February 2017 commencing at 9.30 a.m.

Present:

Chairman: D Leeder

Deputy Chairman: J Nees

Councillors: J Cronin, T Marr, L Thurston, P Thompson, D Love, N Bruning, W Clark, S Crosby, K Winters, A von Dadelszen, A Tahana

In Attendance: M Macleod (Chief Executive), F McTavish (General Manager Strategy & Science), M Taylor (General Manager Corporate Performance), E Grogan (General Manager Regulatory Services), J Graham (General Manager Corporate Solutions), C Ingle (General Manager Integrated Catchments), M Le Comte (Organisational Planning Manager), S Craig (Communications Manager), Y Tatton (Interim Governance Manager), S Hey (Manager Chief Executive's Office), P Sisam (Communications Partner), S Kameta (Committee Advisor)

Attendance in part: G Maloney (Transport Policy Manager), D Llewell (Legal Specialist), P Buell (BOP Harbourmaster/Manager), A Dixon (Strategic Accountant), M Norris (Planning Coordination Officer), A Chappell (Property Manager); Member of the public: M Lewis; E White (Director, Bancorp Treasury Services Limited)

Apologies: For lateness: A Tahana (10:00am), D Leeder (10:30am)

1 Opening remarks

In the Chairman's absence, Deputy Chair Nees assumed the chair and asked Councillor Marr to open the meeting with a karakia.

2 Apologies

Resolved

That the Regional Council:

1 Accepts the apologies for lateness from Chairman Leeder and Councillor Tahana tendered at the meeting.

Winters/Cronin
CARRIED

3 Chairperson's announcements

The Deputy Chair made the following announcements:

- Agenda items 5.4 and 5.5, Council Workshop Reports of 3 February 2017 had been circulated to members under separate cover. Members also received material provided by Mr Max Lewis for his public forum address.

- Agenda item 9.2 'Nomination to Tauranga City Council's Transport Committee' had been withdrawn, following advice received from TCC's Transport Committee Chair.

- A change to the order of business was advised as follows:

    1) Agenda item 8.1 'Chairman's Report' would be deferred to accommodate the arrival of the Chairman.

    2) Public excluded agenda item 10.4 'Regional Property Update' would be taken first under the public excluded part of the agenda, to accommodate the arrival of presenters.

Resolved

That the Regional Council:

1 Notes agenda item 9.2, Nomination to Tauranga City Council's Transport Committee, is withdrawn from the agenda.

2 Agrees to a change in the order of business to accommodate the arrival of the Chairman and guest presenters.

Nees/Thompson
CARRIED

4 General Business and Tabled Items

4.1 Late item

Council received the following late item for consideration.

1) Late Agenda Item 10.5, Appointment of an Independent Member for Regional Council Audit and Risk Committee

The item was not available at the time of the agenda distribution and could not be delayed as a decision was required prior to the Audit and Risk Committee on 2 March 2017.

Resolved

That the Regional Council:

1 Pursuant to section 46A of the Local Government Official Information and Meetings Act 1987, considers the late agenda item 10.5 'Appointment of an Independent Member for Regional Council Audit and Risk Committee' at the meeting.

Nees/Thompson
CARRIED

4.2 General business item

A member raised concern about technical issues being experienced with electronic meeting appointments and asked for the issue to be investigated. The matter was dealt with immediately at the meeting.

5 Public Forum

Refer Tabled Document Number 1 – Mr Max Lewis submissions 1, 2 and 3.

Mr Max Lewis addressed Council on public transport matters that were outlined in his submission papers and pre-circulated to members in advance of the meeting. Mr Lewis expressed his disappointment at the low patronage of Tauranga's public transport and outlined solutions for increasing patronage, reducing single car use, transforming transport within the city business district and through the East Coast Main Trunk rail corridor.

Regarding Driverless Transportation Vehicles (DTVs), Mr Lewis advised he would be making submissions to the Tauranga City Council to move towards DTVs, noting there were private operators willing to fund and operate DTVs at no cost to councils. He advised he would be willing to work with the respective councils regarding his suggestions.

The Deputy Chair thanked Mr Lewis for his presentation, noting that the Public Transport Committee would be meeting on Friday if he wished to attend.

Resolved

That the Regional Council:

1 Receives the submissions from Mr Max Lewis.

Nees/Thurston
CARRIED

6 Declaration of conflicts of interest

No conflicts of interest were declared.

7 Previous minutes and workshop reports

A query was raised regarding workshop reports attached to Council agendas, as workshops were not considered formal meetings of Council or committees. The Chief Executive acknowledged the query and undertook to provide a response following the meeting.

7.1 Regional Council Strategic Issues Workshop Report - 13 December 2016

Resolved

That the Regional Council under its delegated authority:

1 Receives the Council Strategic Issues Workshop Report - 13 December 2016.

Nees/Thurston
CARRIED

7.2 Regional Council Annual Plan 2017/18 Workshop Report - 13 December 2016

Resolved

That the Regional Council under its delegated authority:

1 Receives the Regional Council Annual Plan 2017/18 Workshop Report - 13 December 2016.

Nees/Bruning
CARRIED

7.3 Regional Council Minutes - 15 December 2016

Matter arising

Further to minute item 8.1 'Further appointments to Regional Council Committees' (agenda page 29), Councillor Winters advised of his appointment as Council's representative to TB Free New Zealand.

Resolved

That the Regional Council under its delegated authority:

1 Confirms the minutes of the Regional Council meeting held 15 December 2016, as a true and correct record.

Nees/Crosby
CARRIED

7.4 Regional Council Treaty of Waitangi Settlements: Strategic Issues Workshop Report – 3 February 2017

Resolved

That the Regional Council under its delegated authority:

1 Receives the Regional Council Treaty of Waitangi Settlements: Strategic Issues Workshop Report – 3 February 2017.

Marr/Love
CARRIED

7.5 Regional Council Annual Plan 2017/18 Workshop Report – 3 February 2017

Resolved

That the Regional Council under its delegated authority:

1 Receives the Regional Council Annual Plan 2017/18 Workshop Report – 3 February 2017.

Thurston/Winters
CARRIED

8 Statutory committee minutes

8.1 Regional Transport Committee Minutes - 16 December 2016

Resolved

That the Regional Council under its delegated authority:

1 Receives the Draft minutes of the Regional Transport Committee meeting held 16 December 2016.

Crosby/Nees
CARRIED

8.2 Rotorua Te Arawa Lakes Strategy Group Minutes - 20 December 2016

Resolved

That the Regional Council under its delegated authority:

1 Receives the Draft minutes of the Rotorua Te Arawa Lakes Strategy Group meeting held 20 December 2016.

Winters/Bruning
CARRIED

9 Joint committee minutes

9.1 Draft SmartGrowth Implementation Committee Minutes - 14 December 2016

Matters arising

Item SG16/12.7 page 53 of agenda - Clarification was sought and provided on the potential change in name of the SmartGrowth Implementation Committee (SGIC), to align with its strategic leadership role. Members were informed of further considerations regarding the widening of the scope and focus of the SGIC, both of

which would be considered at the Committee's meeting the following day. The Committee's jurisdiction and its financial status and sustainability were questioned.

Resolved

That the Regional Council under its delegated authority:

1 Receives the Draft Minutes of the SmartGrowth Implementation Committee Meeting held 14 December 2016.

Thompson/Crosby
CARRIED

9.2 Draft Eastern Bay of Plenty Joint Committee Minutes - 14 December 2016

Resolved

That the Regional Council under its delegated authority:

1 Receives the Draft Minutes of the Eastern Bay of Plenty Joint Committee Meeting held 14 December 2016.

Bruning/Clark
CARRIED

10 Chief Executive's reports

10.1 Bay of Plenty Regional Navigation Safety Bylaw 2017 adoption

Refer Supporting Document: Draft Bay of Plenty Navigation Safety Bylaw 2017; PowerPoint Presentation Objective ID A2545996.

The report sought decisions from Council to make the Bay of Plenty Regional Navigation Safety Bylaw 2017 operative and to commence associated revision of regulations to enable the enforcement of the Bylaw through the Ministry of Transport.

Organisational Planning Manager Mark Le Comte, Legal Specialist Donna Llewell and Independent Commissioner and Hearing Chair Les Porter were in attendance. Background was provided on the Bylaw review, hearing process, key issues and recommendations from the Commissioner's review, options available to Council, including implications for rejecting or referring recommendations back to the Commissioners for consideration.

Mr Le Comte advised of a correction required to recommendation 4, to include reference to section 33M of the Maritime Transport Act (1994).

Attendance
Councillor Tahana entered at 10:20 am.

Councillors received advice regarding the recommended changes and letter of response from the Ministry of Maritime New Zealand (MNZ). It was noted that some minor amendments had been made to the Bylaw in response to MNZ's letter, with no further inconsistencies with the Maritime Transport Act 1994 advised. It was confirmed

that Maritime staff would be actively providing education to the public and enforcing provisions under rule 3.1 (Minimum Age for Operating Powered Vessels), rule 3.2.8 relating to wakes and rules 5.4 and 5.5 that were associated with registration and naming of vessels.

While support was noted for the Independent Commissioner's Report and recommendations, opposition was expressed to rule 2.1.4, which enables a skipper of vessels under 6m to decide when lifejackets are not required to be worn. The Deputy Chair sought that the recommendations be decided and taken in part, which were resolved as follows:

Resolved

That the Regional Council:

1 Receives the report, Bay of Plenty Regional Navigation Safety Bylaw 2017 adoption.

2 Receives the Independent Commissioners Report on Hearings on the Bay of Plenty Region Navigation Safety Bylaw.

Thompson/Tahana
CARRIED

Moved: Councillor Nees **Seconded:** Councillor Bruning

3 Adopts the recommendations contained within the attached Independent Commissioners Report, November 2016: Revocation of the Bay of Plenty Regional Navigation Safety Bylaw 2010, and the making of the Bay of Plenty Regional Navigation Safety Bylaw 2017.

A **SHOW OF HANDS** was requested and a **DIVISION** was called and recorded as follows:

FOR (8)	**AGAINST (4)**
Cronin	Thurston
Love	Winters
Bruning	Marr
Thompson	Tahana
von Dadelszen	
Clark	
Crosby	
Nees	

The MOTION was **CARRIED**

4 Adopts the attached Bay of Plenty Regional Navigation Safety Bylaw 2017 pursuant to section 33M of the Maritime Transport Act (1994), and in accordance with processes set by section 86 and 156 of the Local Government Act (2002)

5 Makes the Bay of Plenty Regional Navigation Safety Bylaw operative on 01 July 2017.

6 Adopts the attached Schedule of infringement fees for offences and apply to review the Local Government (Infringement Fees for Offences: Bay of plenty Regional Navigation Safety Bylaw 2010) Regulations 2010.

7 Revokes the Bay of Plenty Regional Navigation Bylaw 2010 on 01 July 2017.

8 Revokes New Zealand Gazette Notice 2014-au3530 (Page 1693 Issue 61) – Notification of Speed Uplifting under Part 91 of the Maritime Rules.

9 Notes the recommendations made by the Independent commissioners on matters that are outside of the scope of the Navigation Safety Bylaw.

Thompson/von Dadelszen
CARRIED

Adjournment

The meeting adjourned for morning tea at 11:00 am and reconvened at 11:21 am.

Attendance

Chairman Leeder arrived at 11:00 am and assumed the Chair upon the meeting reconvening.

Order of business

With the leave of Council, the Chairman advised that public excluded agenda items 10.1 through to 10.4 would be received next on the agenda, followed by the remaining open items.

11 Public Excluded Section

Resolution to exclude the public

THAT the public be excluded from the following parts of the proceedings of this meeting.

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

General Subject of Matter to be Considered	*Reason for Passing this Resolution in Relation to this Matter*	*Grounds Under Section 48(1) LGOIMA 1987 for Passing this Resolution*
10.1 Public Excluded Regional Council minutes - 15 December 2016	**Please refer to the relevant clause in the meeting minutes.**	**That the public conduct of the whole or the relevant part of the proceedings of the meeting would be likely to result in the disclosure of information for which good reason for withholding would exist.**
10.2 Public Excluded Regional Transport Committee minutes – 16 December 2016		
10.3 Public Excluded Rotorua Te Arawa Lakes Strategy Group minutes - 20 December 2016		
10.4 Regional Property Update	**To protect information where the making available of the information would be**	**That the public conduct of the whole or the relevant part of the proceedings of the meeting would be**

	likely unreasonably to prejudice the commercial position of the person who supplied or who is the subject of the information.	**likely to result in the disclosure of information for which good reason for withholding would exist.**

Leeder/Thompson
CARRIED

12 Chairman's Report

The Chairman spoke to his report that updated Council on his activities and matters of interest. The Chairman provided a verbal update on matters discussed at recent meetings in Wellington, particularly around water.

A report was requested on relevant matters at the national level to be provided at the next meeting of the Regional Direction and Delivery Committee.

Information regarding regional sector priorities, following the Regional Sector SIG convener's plenary session, was also requested for circulation to councillors.

On behalf of Council, the Chairman congratulated Councillor Stuart Crosby on his appointment, in the New Year's Honours List 2017, as an Officer of the New Zealand Order of Merit (ONZM) for his services to local government.

Resolved

That the Regional Council:

1 Receives the report, Chairman's Report;

2 Notes that Council have supported the nomination of Councillor Jane Nees to be considered for a position on the Local Government New Zealand National Council Policy Advisory Group.

Leeder/Nees
CARRIED

13 Chief Executive's reports continued

13.1 June 2016 Flood Damage Costs

The report was presented by Rivers and Drainage Programme Leader Roger Waugh and General Manager Integrated Catchments Chris Ingle and sought approval for additional expenditure to complete the flood damage repair programme of work from the June 2016 flood. Clarification was provided on the scheme flood damage reserves. It was noted that the additional expenditure being sought was seeking to use funds from works' reserves, but that reserves for major flood repair would be left untouched.

Mr Ingle sought a change to the recommendations better clarity, to remove recommendation two and to include at the end of recommendation three additional wording to read, 'to be funded from the relevant schemes' reserves as required'.

Resolved

That the Regional Council:

1 Receives the report, June 2016 Flood Damage Costs;

2 Approves additional expenditure in the 2016/2017 financial year of $1,023,900 to complete the flood damage repair programme of work; to be funded from the relevant schemes' reserves as required.

3 Notes that progress on flood damage repairs will be discussed at each scheme liaison group meeting during March 2017.

Bruning/von Dadelszen
CARRIED

Adjournment

The meeting adjourned at 12:43 pm and reconvened at 1:17 pm.

13.2 Council Performance Monitoring Report 2016/17 July - December, Months 1 to 6

The report provided Council with information to review financial and non-financial performance for all Council activities for the first six months of 2016/17 and sought approval for an increase in operating budget relating to Plan Change 10 (Lake Rotorua Nutrient Management) to the Regional Water and Land Plan and non-cash expenditure to provide for accelerated depreciation of Regional House.

Clarification and advice was provided on several matters, including the revised budget requests. Comment was raised on the need to review the KPI for public transport farebox recovery and the budget shortfall for Hearing Commissioners in the next Long Term Plan.

Resolved

That the Regional Council:

1 Receives the report, Council Performance Monitoring Report 2016/17 July - December, Months 1 to 6.

2 Notes the reported financial and non-financial performance for all Regional Council Activities.

3 Notes the reported variations to estimates and targets for the period, and forecast for 2016/17.

4 Approves an increase in operating budget of $214,800 relating to expenditure to provide the level of resources required for the hearing process for Plan Change 10, as set by the Independent Hearing Panel. This is to be funded from reserves at the end of the year should there be no compensatory operating underspend.

5 Approves an increase in the operating budget of $3 million relating to non-cash expenditure to provide for accelerated depreciation of Regional House. This is a non-cash transaction and does not require funding.

6 Notes that a separate paper titled 'June 2016 Flood Damage Costs' will be presented at the Council meeting on 14 February seeking approval for an increase in expenditure for 2016/17 to meet flood damage costs.

Cronin/Thurston
CARRIED

14 Public Excluded Section

Resolution to exclude the public

THAT the public be excluded from the following parts of the proceedings of this meeting.

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

General Subject of Matter to be Considered	*Reason for Passing this Resolution in Relation to this Matter*	*Grounds Under Section 48(1) LGOIMA 1987 for Passing this Resolution*
10.5 Appointment of an Independent Member for Regional Council Audit and Risk Committee	**To protect the privacy of natural persons.**	**That the public conduct of the whole or the relevant part of the proceedings of the meeting would be likely to result in the disclosure of information for which good reason for withholding would exist**
10.6 Confidential Appendix 1 - Investment Performance Report 2016/17 Months 1 to 6	**To carry on, without prejudice or disadvantage, negotiations (including commercial and industrial negotiations).**	**That the public conduct of the whole or the relevant part of the proceedings of the meeting would be likely to result in the disclosure of information for which good reason for withholding would exist**
10.7 Confidential Appendix 2 - Investment Fund Valuation and Report for December 2016		

Leeder/Thurston
CARRIED

The meeting closed at 2:17 pm.

Confirmed

_____
Chairman Bay of Plenty Regional Council

_____
Date

Chairman's Report

Receives Only – No Decisions

Report To: Regional Council

Meeting Date: 09 March 2017

Report From: Douglas Leeder, Council Chairman

Chairman's Report

Executive Summary

Since the preparation of the previous Chairman's Report (for the 14 February 2017 Council meeting) I have attended and participated in a number of meetings and engagements as Chairman on behalf of the Bay of Plenty Regional Council.

This report sets out those meetings and engagements and highlights key matters of interest that I wish to bring to Councillors' attention.

Recommendations

That the Regional Council:

1 Receives the report, Chairman's Report.

1 Purpose

The purpose of this report is to update Council on meetings and engagements I have attended and participated in as Chairman and to highlight key matters that will be of interest to Councillors.

The following section summarises these meetings and engagements. I will provide further detail at the meeting in response to any questions you may have.

2 Meetings and Engagements

Date	Meeting/Engagement	Comment
6 February	Waitangi Day Dawn Service –*Mount Maunganui*	Attended and gave a short speech about whanaungatanga (relationships).

Date	Meeting/Engagement	Comment
7 February	Smart Talk Future Thinking event - Beyond 2020: How we can deliver on the Potential of our Businesses, Communities and our Region – *Tauranga*	A conversation about the future of the western Bay of Plenty including a presentation by Professor Paul Spoonley, Massey University's Pro Vice Chancellor (College of Humanities and Social Sciences).
10 February	National Council meeting – *Wellington*	Attended.
13 February	Land and Water Forum Small Group meeting – *Wellington*	Attended.
15 February	SmartGrowth Leadership Group Meeting – *Tauranga*	Attended.
16 February	Regional Sector Dinner – *Wellington*	Hon Dr Nick Smith joined the Regional Sector dinner.
17 February	Regional Sector meeting – *Wellington*	This is covered in more detail in the following section.
22 February	Breakfast meeting with Western Bay of Plenty District Council and Tauranga City Council Mayors – *Tauranga*	Attended.
23 February	Bay of Plenty Mayors and Chair Dinner – *Rotorua*	Attended.
24 February	Bay of Plenty Triennial meeting - *Rotorua*	This is covered in more detail in the following section.
	Civil Defence Emergency Management Group Meeting – *Rotorua*	Attended.
	2017 Ballance Farm Environment Awards: Bay of Plenty – *Tauranga*	An event to recognise and celebrate good farm practices which promote sustainable land management. Council support the awards as a regional partner. Short speech given on our support for sustainable development, and presented the two Council Environment awards.
1 March	Meeting with CEO and Mayor of Western Bay of Plenty District Council - *Tauranga*	Attended.
	Eastern Bay of Plenty covenantors event – *Manawahe*	Attended this event which was hosted by QEII National Trust.

3 Matters of Potential Interest

3.1 Regional Sector Group Meeting (RSG)

At the RSG meeting on 17 February 2017, for regional/unitary council Chairs/Mayors and Chief Executives, a variety of topics were discussed with a focus on the following:

- Environmental Monitoring and Reporting – an outline of the proposed work programme for the next 3 years and request for future support of the project.

- Local Government Excellence Programme – Toby Stevenson, Independent Assessment Board Chair of the Local Government Excellence Programme provided an update on the programme to date and spoke about the assessments of the pilot councils.

- Presentations by:

    - OSPRI – Michelle Edge, Chief Executive at OSPRI spoke about their priorities and work programme and Predator Free 2050.

    - Office of the Auditor-General – Andrea Reeves, Assistant Auditor-General, Local Government spoke about Water theme being a priority for their office in 2017; and

    - Environmental Defence Society (EDS) – Dr Marie Brown from the EDS provided the findings of their report '*Last Line of Defence – Compliance, Monitoring and Enforcement of New Zealand's Environmental Law*'. The report raises concerns over the capacity and capability of the Ministry for the Environment to provide effective oversight of the operational role that is compliance, monitoring and enforcement. Recommendations are made for both the Ministry and local government.

      The report was released on 28 February 2017 in Wellington.

3.2 Triennial Meeting

The triennial meeting was held in Rotorua on 24 February 2017. The following were the main topics covered:

- Bay of Connections update on Bay of Plenty Regional Study (RGS) – central government and Ministers remain committed to the Bay of Plenty region and will continue to assist the RGS Action Plan implementation.

  The first RGS Action Leads meeting in 2017 reinforced the strong relationship this region has with central government, the growing links across the various action areas, and the progress they expect to make during 2017.

- Triennial Agreement for the 2016-2019 triennium - one pending approval resolution, it was agreed that the Agreement will be signed once the resolution has been received.

- Treaty of Waitangi Symposium – to be hosted by Bay of Plenty Regional Council on Friday 21 April 2017 at ASB Bay Park Stadium.

The symposium will provide a forum for councillors and senior staff members from local authorities in the Bay of Plenty region to build awareness and understanding of the contemporary Treaty landscape, both for the Bay of Plenty region and from a broader national perspective.

- Local Government Futures – a verbal update on the project and next steps discussed.

The draft minutes for the triennial meeting will be circulated as soon as they are available.

4 Committee Membership Update

4.1 Bay of Plenty TBfree Committee

At the end of last year I nominated Councillor Kevin Winters to represent Council on the Bay of Plenty TBfree Committee.

The committee is a local group of representatives who assist and advise OSPRI, who is responsible nationally for the implementation of the TBfree program. The TBfree program manages the implementation of the National Pest Management Plan for Bovine tuberculosis, with the aim of eradicating the disease from New Zealand.

Doug Leeder
Chairperson

for Council Chairman

1 March 2017

Chief Executive's Reports

Report To: Regional Council

Meeting Date: 09 March 2017

Report From: Eddie Grogan, General Manager, Regulatory Services

Statement of Proposal to amend the Bay of Plenty Regional Council Resource Management Act and Building Act Charges Policy

Executive Summary

This paper recommends that the Council adopts the Proposed Bay of Plenty Regional Council Resource Management Act and Building Act Charges Policy 2017/2018 (the Charges Policy). The Charges Policy sets out the charges that can be made for services and functions that the Regional Council is responsible for providing under the Resource Management Act 1991 and the Building Act 2004.

Charges set under the Resource Management Act are required to be consulted on using the special consultative procedure under section 83 of the Local Government Act 2002. To meet this requirement, a summary of the proposed changes will be sent to affected consent holders, where significant changes are greater than the Council's cost of inflation, as well as placing the draft 2017/2018 Charges Policy on the Council website.

Recommendations

That the Regional Council:

1 Receives the report, Statement of Proposal to amend the Bay of Plenty Regional Council Resource Management Act and Building Act Charges Policy.

2 Agrees to the proposed changes to the Charges Policy as outlined in Section 2.2 of the report, as set out below:

a. Increase the $500 fixed charge component of the general application fee for resource consents (Section 2.2.1 of the Charges Policy) by $50 to $550 (GST exclusive), to reflect the increased administration required in the Accela database system. Based on an estimated receipt of 500 applications in the next financial year, this will result in additional revenue of $25,000;

b. Replace the fixed fee for processing short term consents for On-Site Effluent Treatment (OSET) systems 'in future reticulation zones' and where 'properties require a community solution' (Table 1 of the Charges Policy) with the general application fee and recovery of actual and reasonable costs for consent applications;

c. Maintain the fixed fee for transfer of consent applications that are complete (Table 1 of the Charges Policy), but introduce recovery of actual and reasonable costs for incomplete transfer applications;

d. A $10 (plus BERL) increase to the base charge (Section 3.1 of the Charges Policy) for all fixed fee consent activities (from $99 to $111, GST exclusive). This would apply to approximately 2,950 consents and provide an increased revenue of around $30,000/pa;

e. An increase of 2% (BERL) for Building Act Charges (Section 5. Table 2 of the Charges Policy);

f. Remove the 'credit factor' allowance (Section 3.2.1 of the Charges Policy) applied to the fixed supervision/compliance charge for self-monitoring. Resource consents covered by this category are now charged on an actual and reasonable basis thereby removing the need to apply a credit factor to a fixed charge;

g. A change to the hourly rates structure in Schedule A, Table 1 of the report.

3 Adopts the Statement of Proposal on Resource Management Act and Building Act Charges Policy 2017/2018 for public consultation through the special consultative procedure under the Local Government Act (appended to this report).

4 Confirms that Council will continue to waive charges for consented Low Risk Onsite Effluent Treatment Systems for the 2017/2018 financial year.

5 Confirms that Council agrees the three exceptions to the base charge, as outlined in section 2.4 of the report, set out below:

(a) Long term consents for structures, reclamations or diversions in the Coastal Marine Area, rivers and lakes unless an inspection has been carried out (in which case, the consent holder is charged as per Schedule 1A or 2A).

(b) "Consequential" consents such as the discharge permit in an activity that involves a diversion and discharge, or the discharge permit in an activity that involves taking and discharging water (e.g. to heat a pool). To qualify, the "consequential" consent must occur as a natural consequence of the primary activity and have no significant environmental effect compared to the primary consent.

(c) In addition to the base charge, a special administrative charge is payable where multiple holders of one consent request separate invoicing and correspondence to each consent holder. An additional fee of $115 (GST inclusive) will be charged to each additional consent holder requiring this service.

1 Introduction

The Bay of Plenty Regional Council (BOPRC) is responsible for controlling the use of a wide range of resources, which requires staff to process resource consents, monitor and manage consented and other authorised activities, and investigate the state of the region's resources.

The framework for setting charges to do this work sits under Section 36 of the Resource Management Act 1991 (RMA). Each year the Regional Council develops a charging policy that sets out what costs we intend to recover for the services and functions that we undertake when carrying out our regulatory functions under the RMA and the Building Act 2004.

This paper recommends that the Council adopts the 'Proposed Bay of Plenty Regional Council Resource Management Act and Building Act Charges Policy 2017/2018' (the Charges Policy).

The Charges Policy requires a full special consultative process. As a general indication of the expected response; 38 submissions were received in response to the 2016/2017 Charges Policy consultation.

The draft 2017/2018 Charges Policy is appended to this report.

2 Resource Management Act charges

Section 36 of the Resource Management Act 1991 enables BOPRC to recover reasonable costs from consent holders and applicants for undertaking the following functions:

- Receiving, processing and granting resource consents and certificates of compliance;
- Monitoring and supervising resource consents (including administration);
- Regional impact (or environmental) monitoring;
- Reviewing resource consent conditions;
- Providing information regarding plans and resource consents;
- Supplying documents;
- Collecting charges authorised by regulations.

The fees and charges must either be set down in a bylaw or put in place using the special consultative procedure set out in s83 of the Local Government Act 2002.

2.1 Changes adopted in the 2016/2017 Charges Policy

The following changes were introduced for the 2016/2017 Policy and adopted through the 2016/2017 Annual Plan consultation process:

- The base fee was increased by inflation of 1.9% (BERL);
- Schedule A and 1A charges were increased by 9%;
- Schedule 1B-12B (regional impact/monitoring) charges were increased by inflation of 1.9% (BERL).

2.2 Proposed changes for the 2017/2018 Charges Policy

The draft 2017/2018 Charges Policy includes a number of proposed changes:

- Increase the $500 fixed charge component of the general application fee for resource consents (Section 2.2.1 of the Charges Policy) by $50 to $550 (GST exclusive), to reflect the increased administration required in the Accela

database system. Based on an estimated receipt of 500 applications in the next financial year, this will result in additional revenue of $25,000;

- Replace the fixed fee for processing short term consents for On-Site Effluent Treatment (OSET) systems 'in future reticulation zones' and where 'properties require a community solution' (Table 1 of the Charges Policy) with the general application fee and recovery of actual and reasonable costs for consent applications. It was initially anticipated that processing of these consents would be relatively straightforward; however, experience has found they are often as complex as any other OSET consent and require more time than the fixed fee covered;
- Maintain the fixed fee for transfer of consent applications that are complete (Table 1 of the Charges Policy), but introduce recovery of actual and reasonable costs for incomplete transfer applications;
- A $10 (plus BERL) increase to the base charge (Section 3.1 of the Charges Policy) for all fixed fee consent activities (from $99 to $111, GST exclusive). This would apply to approximately 2,950 consents and provide an increased revenue of around $30,000/pa;
- An increase of 2% (BERL) for Building Act Charges (Section 5. Table 2 of the Charges Policy);
- Remove the 'credit factor' allowance (Section 3.2.1 of the Charges Policy) applied to the fixed supervision/compliance charge for self-monitoring. Resource consents covered by this category are now charged on an actual and reasonable basis thereby removing the need to apply a credit factor to a fixed charge;
- A change to the hourly rates structure in Schedule A in Table 1:

Table 1: Proposed changes to hourly charge-out rates structure

Group	**16/17 charges** (GST exclusive)	**Proposed 17/18 charges** (GST exclusive)
Administration	$85	$90 + BERL
Officers/Planners	$106	$125 (inclusive of BERL)
Senior Officers/Planners	$122	
Engineers/Scientist/Regulatory Project Officer (RPO)	$126	
External contracted compliance monitoring officer	NEW addition	
Maritime Officer	NEW addition	
Team Leaders/Senior RPO/Works Engineer/Senior Maritime Officer	$134	$140 (inclusive of BERL)
Senior Engineer/Senior Scientist/Harbourmaster	$140	
Managers/Regional Harbour Master	$180	$180 + BERL
Consultants/Contractors	NO CHANGE	As charged by consultant/contractor
Regional Council staff mileage	65c/km	Current IRD rate

These changes reduce the number of categories, making charging more streamlined within Accela. Furthermore, this provides for cross team working and billing with minimal impact on the consent holder and removes invoice disparity which has previously arisen when different officers perform the same task;

- Increase Schedules A, 1A and 1B-12B (regional impact/monitoring) charges by inflation of 2% (BERL) and round to the nearest $5;
- Remove 'step 4' from Schedule 11B Coastal management and adjust the remaining categories to cover marine farms above and below 10 hectares. This provides a charging structure that better reflects the extent of aquaculture in the region (at present there are only two operational marine farms, Ōhiwa Oyster Farm and Eastern Sea Farms).

In addition to the changes to our charging structure, we also propose the following administrative changes:

- Rename 'Certificates of Compliance – Onsite Effluent Treatment Regional Plan' (Table 1 of the Charges Policy) to 'OSET Approval Inspection Fee' to reflect the wording in the new Onsite Effluent Treatment Regional Plan;

- Amend the annual invoice payment due date (Section 3 of the Charges Policy) to the 20th of the month following the month the invoice was issued i.e. invoices issued in September will be due on 20th October. This will prevent the need to change TechOne and Accela software to cater for non-standard payment due dates;
- Quote all charges in the policy as GST inclusive for consistency and ease of use for the consent holder.

2.3 Exemption for Low Risk Onsite Effluent Treatment System annual charges

Consented On-Site Effluent Treatment (OSET) Systems which are classified as Low Risk are subject to an annual fixed fee (base charge plus compliance charge plus regional/impact monitoring charge, Section 3 of the Charges Policy); these include systems which are less than $2m^3$/day, have a good compliance history and are not within close proximity to the Rotorua Lakes.

Council has previously chosen to waive the annual fees relating to these consents, at an estimated loss of revenue of $13,000 (GST exclusive).

Council is required to confirm whether it will continue to waive annual charges for these consents for the 2017/2018 financial year.

2.4 Other exceptions to the annual base charge

There are currently three other exceptions to the annual base charge (Section 3.1 of the Charges Policy), as follows:

(d) Long term consents for structures, reclamations or diversions in the Coastal Marine Area, rivers and lakes unless an inspection has been carried out (in which case, the consent holder is charged as per Schedule 1A or 2A).

(e) "Consequential" consents such as the discharge permit in an activity that involves a diversion and discharge, or the discharge permit in an activity that involves taking and discharging water (e.g. to heat a pool). To qualify, the "consequential" consent must occur as a natural consequence of the primary activity and have no significant environmental effect compared to the primary consent.

(f) In addition to the base charge, a special administrative charge is payable where multiple holders of one consent request separate invoicing and correspondence to each consent holder. An additional fee of $115 (GST inclusive) will be charged to each additional consent holder requiring this service.

Council is required to confirm the exceptions, identified above as a, b and c, for the 2017/2018 financial year.

2.5 Significance of proposals

The changes proposed have been assessed against the criteria and thresholds in the Council's Significance and Engagement Policy and are not considered to be significant.

3 Detailed review of the Charges Policy

The Charges Policy provides a framework to recover actual and reasonable costs of consenting and compliance monitoring. However, a number of factors have impacted on our ability to fully implement the consents and compliance programmes in recent years:

- The implementation of the Accela project (BOPRC's internal database system) in November 2015;
- The ongoing increase in complaints received through the pollution hotline (complaint response is currently not cost recoverable);
- Increases in the number and complexity of resource consents; and
- Increased demand for pro-active and non-cost recoverable work within both the community and BOPRC.

These factors have necessitated a number of changes to the way we work, which has ultimately resulted in the recent restructure of the Regulatory Compliance team. They have also highlighted the need to undertake a more rigorous and realistic assessment of the costs of compliance and how we structure our compliance programme through future Charges Policies.

In time, the ongoing implementation of Accela will provide staff with a more robust set of data to track the time and cost associated with consenting and compliance monitoring. As such, staff propose to defer a significant review of the consent and compliance charging regimes for the 2018/2019 policy, to be worked on in the 2017/2018 financial year.

4 Council's Accountability Framework

4.1 Community Outcomes

This proposal directly contributes to the Water Quality & Quantity, Environmental Protection and Resilience & Safety Community Outcomes in the Council's Long Term Plan 2015-2025.

4.2 Long Term Plan Alignment

This work is planned under the Resource Regulation and Monitoring Group of Activities in the Long Term Plan 2015-2025.

Current Budget Implications

This work is being undertaken within the current budget for the Resource Regulation and Monitoring Group of Activities Activity in the Annual Plan 2017/18.

Future Budget Implications

Future work by the Resource Regulation and Monitoring Group of Activities is provided for in the Council's Long Term Plan 2015-2025.

Alex Miller
Regulatory Compliance Team Leader

Jane Palmer
Policy Analyst (Finance)

for General Manager, Regulatory Services

2 March 2017

APPENDIX 1

2017-2018 Consultation Draft Policies and Proposals consultation pack (PDF)

Proposed Changes to Bay of Plenty Regional Council's Resource Management Act and Building Act Charges Policy 2017/2018

Welcome to the Proposed Resource Management Act and Building Act Charges Policy 2017/2018 consultation

We are consulting on the proposed changes to the Resource Management Act and Building Act Charges Policy 2017/2018 (Council Charges Policy). We would like to hear your thoughts.

The Council Charges Policy in this pack is in draft form and is **appended to this document**. This means that it may change depending on your submissions. For more information about how to make a submission please see the "How to Make a Submission" page in this pack.

Submissions close at 4:00 pm, 10 April 2017.

How to make a submission

Making a submission is easy...

As previously mentioned, the proposals contained in this consultation pack are in draft form. This means that they are not yet finalised and may change depending on your submissions. Before making a submission we recommend that you read through the relevant sections of this document to ensure that you have all the information available.

WHEN MAKING A SUBMISSION PLEASE ENSURE YOU REFERENCE "COUNCIL CHARGES POLICY" IN YOUR SUBJECT LINE

How to make a submission

Electronically

This is the quickest and easiest way to make your submission. You can email your submission, along with any documents and additional information to support your submission, to feesandcharges@boprc.govt.nz.

In writing

You can post it to:

Bay of Plenty Regional Council
PO Box 364
Whakatāne 3158

Or fax: 0800 884 882

Or drop it into one of our Council offices in Whakatāne, Tauranga or Rotorua.

In person

If you would like to present your submission to the Council in person, you will still need to make a written submission – either electronically or in writing. You should outline the key points of your submission and make sure you indicate that you would like to be heard at the Council's hearing. Council staff will then contact you to arrange a time to speak to your submission.

If you have any questions about the submission process, please contact Mary Norris on 0800 884 881 extension 8523.

Submissions must be received by 4:00 pm, 10 April 2017.

What happens next?

Submission Period	Public Hearing	Deliberations	Adoption
10 March – 10 April 2017	8 or 9 May 2017	24-25 May 2017	By 29 June 2017
Submissions on the proposed Council Charges Policy must be received by **4:00 pm, 10 April 2017.**	Depending on the number of submissions received, these days have been set aside for those who wish to present their submission to the Council.	The Council will make their decisions on the Policies and Proposals based on your submissions and any other relevant information.	The Council will adopt the final policies and proposals. These will include any changes agreed on through the deliberations process.

Proposed changes to Council Charges Policy

Introduction

The Bay of Plenty Regional Council is responsible for controlling the use of a wide range of resources, which requires us to process resource consents, monitor and manage consented and other authorised activities and investigate the state of the region's resources.

The framework for setting charges to do this work sits under Section 36 of the Resource Management Act 1991 (RMA). Under Section 36 we can recover reasonable costs from consent holders and applicants for the following functions:

- Receiving, processing and granting of resource consents (including certificates of compliance);
- Administration, monitoring and supervision of resource consents (including certificates of compliance) and resource management functions under Section 35 of the RMA (environmental monitoring);
- Reviewing resource consent conditions under Section 128(1)(a) and (c) of the RMA and reviews carried out at the request of the consent holder;
- Providing information in respect of plans and resource consents;
- Supplying documents;
- Charges authorised by regulations; and
- Extra charges where a fixed charge is not enough to recover our costs, for example, where the cost of processing a consent application is greater than the deposit fee paid by the applicant.

Each year we develop a charging policy that sets out what costs we intend to recover from carrying out our regulatory functions.

Council's cost of inflation has been set at 2.0% for the 2017/2018 financial year.

Proposed Resource Management Act charges

The RMA charges are reviewed annually. The key changes proposed are summarised as follows:

- Increasing the $500 fixed charge component of the general application fee for resource consents by $50 to $633 (GST inclusive) to reflect the increased administration required in the Council's new database system;
- Replacing the fixed fee for processing short term consents for On-Site Effluent Treatment systems with the general application fee and recovery of actual and reasonable costs for consent applications;
- Maintaining the fixed fee for transfer of consent applications that are complete, but introduce recovery of actual and reasonable costs for incomplete transfer applications;
- Simplifying the categories for staff charge-out rates in Schedule A, as described in Table 1 (below);
- Increasing the base charge by $10 (plus 2% inflation) for all fixed fee consent activities;
- Removing the 'credit factor' allowance applied to the fixed supervision/compliance charge for self-monitoring;
- Amending Schedule 11B (Coastal management) to provide a charging structure that better reflects the extent of aquaculture in the region;
- Increasing Schedules A (staff charge-out rates), 1A (annual fixed fee) and 1B-12B (regional impact/monitoring) charges by inflation of 2% and round to the nearest $5.

In addition to the changes to our charging structure, the following administrative changes are also proposed:

- Renaming 'Certificates of Compliance – Onsite Effluent Treatment Regional Plan' (Table 1 of the Council Charges Policy) to 'OSET Approval Inspection Fee' to reflect the wording in the new Onsite Effluent Treatment Regional Plan;
- Amending the annual invoice payment due date (Section 3 of the Council Charges Policy) to the 20th of the month following the month the invoice was issued i.e. invoices issued in September will be due on 20th October;
- Quoting all charges in the policy as GST inclusive for consistency and ease of use.

CHARGES FOR RESOURCE CONSENT APPLICATIONS

Application fees (Section 2.2.1 of the Council Charges Policy)

It is proposed to increase the fixed fee component of the application fee to reflect the increased administration required in the Council's new database system.

The deposit component of the application fee has been reduced in order to maintain the initial application fee at the same level of $774 (including GST). Actual and reasonable costs incurred above the deposit are recovered from applicants.

It is proposed to continue with the policy that allows applications to reduce the annual volume/rate of water allocated under a water take consent to be processed free of charge. This policy has been in place for several years, and Council officers encourage consent holders to make such applications where the volume or rate of water actually taken is much less than that allocated. The administration of these applications is simple and the policy encourages efficient use of water.

Other application fees (fixed charges) (Table 1 of the Council Charges Policy)

The $390 fixed fee for processing short term consents for On-Site Effluent Treatment (OSET) systems 'in future reticulation zones' and where 'properties require a community solution' is not sufficient for Council to cover the actual and reasonable costs associated with processing consent applications. It was initially anticipated that processing of these consents would be relatively straightforward; however, experience has found they are often as complex as any other OSET consent and require more time than the fixed fee covered. It is proposed to bring these applications in line with the majority of other resource consent applications i.e. charge the general application fee of $774 (GST inclusive) plus any additional fees incurred on an actual and reasonable basis.

The $90 fixed fee for transfer of consent applications will be retained for those applications that are submitted complete. However, where an incomplete application results in more than one hour of staff time being required to process the transfer, actual and reasonable costs will be charged to the transferee for the additional time required to process the incomplete application.

No other changes are recommended.

GENERAL CHARGES

Staff charges (Schedule A of the Council Charges Policy)

Charges for staff time can be incurred by consent and plan change applicants, consent holders and people requesting information from Council. The charging structure has been simplified to align with the Council's new database and team structure and will have minimal impact on the consent holder.

Table 1: Proposed changes to the staff charge-out rates structure

Group	2016/17 Charges (excluding GST)	Proposed 2017/18 Charges (including GST)
Administration	$85	$105
Officers/Planners	$106	$145
Senior Officers/Planners	$122	
Engineers/Scientist/Regulatory Project Officer (RPO)	$126	
External contracted compliance monitoring officer	NEW Addition	
Maritime Officer	NEW Addition	
Team Leaders/Senior RPO/Works Engineer/Senior Maritime Officer	$134	$160
Senior Engineer/Senior Scientist/Harbourmaster	$140	
Managers/Regional Harbour Master	$180	$210
Consultants/Contractors	NO CHANGE	As charged by consultant/contractor
Regional Council staff mileage	65c/km	Current IRD rate

The proposed charges for 2017/18 include a 2% increase to allow for inflation.

ANNUAL CONSENT HOLDER CHARGES

The annual charge is made up of three components – the base charge, the compliance monitoring charge and the regional/impact monitoring charge.

Base charge (Section 3.1 of the Council Charges Policy)

The base charge is paid by the majority of consent holders. It contributes to administration services costs, such as compiling and monitoring accounts, dealing with general enquiries and maintaining consents and compliance databases.

It is proposed to increase the base charge by $10 for all fixed fee consent activities in additional to the 2.0% increase to allow for inflation. This means that the base charge will increase from $99 (excluding GST) to $130 (including GST).

Compliance/supervision charges for resource consents (Section 3.2 of the Council Charges Policy)

The compliance/supervision schedule of charges sets out fees that people pay based on our requirement to monitor consents issued. The programme reflects the level of risk associated with an activity, i.e. to ensure that high risk activities are visited more frequently than low risk activities. Any instances of non-compliance are followed up by additional compliance inspections until the activity is in compliance – consent holders are charged an extra fee for these additional inspections, based on actual and reasonable costs.

The frequency at which we intend to monitor consented activities is set out in Schedules 1A and 2A of the Council Charges Policy.

We are proposing to increase charges by 2.0% to allow for inflation and rounding charges to the nearest $5 for simplicity.

Credit factor (Section 3.2.1 of the Council Charges Policy)

A credit factor is provided for by the RMA to reduce charges where self-monitoring by the consent holder reduces Council's monitoring costs where a fixed supervision or compliance fee is charged. With previous changes to the Council's charging structure, all consents that previously qualified for a credit factor under the fixed fee regime are now charged on an actual and reasonable basis. Therefore any reduction to the Council's monitoring costs will be captured under this charging basis.

It is proposed that the credit factor allowance is removed from the Council Charges Policy.

Regional/impact monitoring charge (Section 3.3 of the Council Charges Policy)

The regional/impact monitoring schedule of charges relates to broader state of the environment monitoring and management of resources. Council recovers approximately 25% of the cost of providing this service from resource users (consent holders).

The main change proposed is to remove 'step 4' from Schedule 11B (Coastal management) and adjust the remaining categories to cover marine farms above and below 10 hectares. This will provide a charging structure that better reflects the extent of aquaculture in the region; at present there are only two operational marine farms: Ōhiwa Oyster Farm and Eastern Sea Farms.

We are also proposing to increase charges by 2.0% to allow for inflation and rounding charges to the nearest $5 for simplicity.

Notifying current consent holders of the proposed changes

A letter will be sent out to all consent holders who are affected by the changes to the proposed Charges Policy, except where the changes are only incorporating Council's cost of inflation, which has been set at 2.0% for the 2017/2018 financial year.

Building Act charges

There are no changes to the Building Act charges from the 2016/2017 policy.

SUBMISSIONS

We are keen to hear your thoughts on this proposal. Please refer to the Appendix at the end of this document for details on the proposed changes. Submissions must be received **by 4:00 pm, 10 April 2017**. For more information on how to make a submission please refer to the "How to make a Submission" page in this consultation pack.

APPENDIX 2

Proposed 2017-2018 Resource Management Act and Building Act Charges Policy (PDF-Tracked Changes)

Proposed Resource Management Act and Building Act Charges Policy 2017/2018~~2016/2017~~

Table of Contents

1 Introduction

This policy sets out the Resource Management Act and Building Act charges that are proposed to apply from 1 July 20176. Under section 36(7) of the RMA and section 243(2) of the Building Act, the Regional Council may decline to perform the action to which the charge relates until the charge has been paid in full.

1.1 Resource Management Act Charges

Under the Resource Management Act (RMA) the Bay of Plenty Regional Council is responsible for managing the use of a wide range of natural resources including air quality, geothermal energy, groundwater and surface water. In order to carry out this function we are required to undertake a significant level of activity including:

- Processing and administration (e.g. in regard to regional plans and resource consents).
- Monitoring and supervision of resource consents.
- Monitoring of natural resources.

The RMA gives Council the power to recover the 'reasonable' costs associated with these functions using charges made under Section 36.

In order to achieve a fair and equitable sharing of costs the Bay of Plenty Regional Council has evaluated these functions and decided what proportion of each work programme and consent related activity should be recovered directly from individuals (either holders of resource consents, consent applicants or people using environmental resources), and what should be funded by the regional community through general funds.

Section 36(4) specifies the criteria for reaching decisions about the apportionment of costs and these are reproduced below.

(a) The sole purpose of a charge is to recover the reasonable costs incurred by the local authority in respect of the activity to which the charge relates:

(b) A particular person or persons should only be required to pay a charge —

(i) To the extent that the benefit of the local authority's actions to which the charge relates is obtained by those persons as distinct from the community of the local authority as a whole; or

(ii) Where the need for the local authority's actions to which the charge relates is occasioned by the actions of those persons; or

(iii) In a case where the charge is in respect of the local authority's monitoring functions under section 35(2)(a) (which relates to monitoring the state of the whole or part of the environment), to the extent that the monitoring relates to the likely effects on the environment of those persons' activities, or to the extent that the likely benefit to those persons of the monitoring exceeds the likely benefit of the monitoring to the community of the local authority as a whole, —

and the local authority may fix different charges for different costs it incurs in the performance of its various functions, powers, and duties under this Act —

(c) In relation to different areas or different classes of applicant, consent holder, requiring authority, or heritage protection authority; or

(d) Where any activity undertaken by the persons liable to pay any charge reduces the cost to the local authority of carrying out any of its functions, powers, and duties.

1.2 Building Act Charges

The Bay of Plenty Regional Council is responsible for the following Building Act functions that relate to dams:

- maintaining a Register of Large Dams (s.151)
- administering and monitoring the Dam Safety Scheme (s.13)
- adopting and implementing a policy on dangerous, flood-prone and earthquake-prone dams (s.13)
- taking action if necessary, if a dam poses an immediate danger (s.157)
- Issuing Project Information Memorandum for new dams (s.34 and s.14)
- Issuing Certificates of Acceptance where work has been done without a Building Consent (s.96 and s.14)
- Enforcing the provisions of the building code and the Building Act 2004 and regulations that relate to dams (s.13).

Bay of Plenty Regional Council has determined that the costs incurred in processing Building Act related applications should be recovered based on the principle of 'user pays'. The Council is not expecting any revenues to be generated from these fees and charges.

Section 243 of the Building Act 2004 enables us to recover costs through imposing fees or charges.

The charges are set out in this policy as follows:

Section 2: **Application charges:**

- Preparation/change to a policy statement or plan
- Resource consents/certificates of compliance/transfers

Section 3: **Resource consent charges:**

- Base charges
- Compliance/supervision charges
- Regional monitoring charges

Section 4: **Miscellaneous administrative charges:**

- Information requests
- Photocopying and documents
- Royalty collection
- Enforcement
- Forestry Operators Accreditation System (FOAS)

Section 5: **Building Act charges**

- Register of dams
- Reviewing Impact Classifications and Dam Safety Assurance Programmes
- Compliance charges
- Building Act consent application/certificate of acceptance charges

2 Resource Management Act Application charges

Sections 36(1) (a) and (b) of the RMA allow Council to fix:

(a) Charges payable by applicants for the preparation or change of a policy statement or plan, for the carrying out by the local authority of its functions in relation to such applications.

(b) Charges payable by applicants for resource consents, for the carrying out by the local authority of its functions in relation to the receiving, processing, and granting of resource consents (including certificates of compliance and existing use certificates).

2.1 Application for preparation/change to a policy statement or plan

Applicants shall pay a deposit of $5,000 (including GST) in advance for any requests for a change to an existing regional plan or policy statement, or for the preparation of any new plan or policy statement.

The full actual and reasonable costs of assessing and completing the change or preparation process set out in Schedule 1 of the RMA that exceed the deposit, will be charged as an additional charge in accordance with section 36(3) of the RMA. The charge will be assessed using the fixed charge out rates set out in Schedule A of this policy. Interim invoicing will be carried out to recover costs that exceed the deposit in the same financial year that they are incurred.

Actual and reasonable costs include but are not limited to council staff time, peer review, meeting and hearing costs and commissioner charges.

Despite the above charges, the General Manager Strategy is authorised to set an appropriate deposit fee for complex plan or policy statement changes (or new plan requests) up to a maximum of $50,000 (including GST).

Note that the provisions pertaining to private plan changes under the RMA apply, and the charging or provision of payment does not infer approval or acceptance of any plan change request.

2.2 Application for resource consents, certificates of compliance and transfers

Council's charges under sections 36(1)(b) and 36(3) are given in Table 1 and are described further below.

2.2.1. General application fee

The General Application Fee is $774 (including GST). This is made up of a fixed charge (under section 36(1)(b)) of $~~500~~ 633 (GST ~~exclusive~~inclusive) and a deposit (section 36(3)) towards processing of $~~173~~ 141 (GST ~~exclusive~~inclusive). Any additional costs will be invoiced by way of additional charges in accordance with section 36(3) (refer notes in Table 1). The fixed charge covers:

- All administrative activity for non-notified applications including, but not limited to, receiving applications, data entry, and file preparation. Notified applications will incur additional administrative costs associated with notification, submissions and hearing processes.
- Internal peer review of the reporting officer's report and recommendations including proposed conditions.
- Vehicle running costs.
- Decision making (for decisions made by staff acting under delegated authority).

2.2.2. Other application fees

These are fixed charges (section 36(1)(b)) with no additional costs payable.

2.3 Resource management discount regulations for late applications

In August 2010 the RMA Discount Regulations were introduced. The Regulations require the Regional Council to provide a discount of 1 per cent per day, up to a maximum of 50 working days for resource consent applications not processed within RMA timeframes.

Table 1: Consent application fees

General Application Fee (GST inclusive) – *Note: this is a deposit and other fees incurred will be recovered on an actual and reasonable basis*	
• Resource Consent applications (except those specified below as fixed charges). • Certificates of Compliance ~~(excluding Onsite Effluent Treatment)~~. • Changes or cancellation of conditions of consents. • Review of consent conditions. • Transfer of consent to another site or another person at another site. • Lapsing period extensions.	$774
• Publicly Notified Applications.	$10,000
Other application fees (GST inclusive) *Note: these are fixed charges with no additional costs payable.*	
~~Certificates of compliance -~~ OSET Approval Inspection Fee~~Onsite Effluent Treatment Regional Plan~~	$50
Land use consent to construct a single geotechnical, freshwater bore or domestic geothermal bore.	$390
Applications for activities listed in regional plans that have zero fee[1].	$0
Transfer of consent to another person at the same site where a complete application is submitted.	$90
~~Short term consent for five years or less for onsite effluent treatment systems in future reticulation zones.~~	~~$390~~
~~Onsite effluent treatment consents in communities where properties require a community solution.~~	~~$390~~
Application to reduce the allocated rate of a surface water take consent or allocated annual volume of groundwater take consent.	$0

Notes:

A. Where fees are deposits only the applicants will be charged all actual and reasonable costs above the deposit fee. Such costs may include, but not be limited to staff time (see Schedule A), advertising, hearing costs (including costs of Committee members, Commissioners, Technical Appointees and the Minister of Conservation's representative), disbursements and costs of consultants.

B. Where an application is withdrawn the fixed fee of $500 will be retained and any actual and reasonable costs incurred will also be charged.

C. Where costs are incurred that exceed $2,000 above the deposit, or at the end of every quarter, the applicant may be requested to pay an additional amount by way of an interim payment against the final total costs.

D. In accordance with section 36(7), the processing of any application may be suspended until any relevant charge is paid in full.

E. Where the deposit fee exceeds the processing costs by $25 or more, the difference will be refunded to the applicant.

F. Despite the above fee structure, the Consents Manager may require an appropriate application deposit fee for complex, multi-consent projects or limited notified applications up to a maximum of $10,000 (GST inclusive).

G. Costs for Hearing Committee members and Commissioners will be recovered from applicants at their set charge-out rate. Disbursements will be charged at actual and reasonable cost.

H. The deposit fee for a Review of Consent Conditions is payable by the 20th of the month following service of notice by Council.

I. All charges apply from 1 July 2017~~6~~.

J. An application to reduce the allocated volume/rate in a water take consent for zero cost must reduce the environmental effect of that take.

~~J.~~K. Where an incomplete application for a 'transfer of consent to another person at the same site' ~~is submitted~~results in more than one hour of staff time being required to process the transfer, actual and reasonable costs will be charged

[1] At the time of writing this includes some bore permits under the Rotorua Geothermal Regional Plan (rule 19.6.3(d)) and some wetland works under the Regional Water and Land Plan (rule 80 and method 261).

to the transferee for the additional time required to process the incomplete application.

3 Resource consent charges

The following charges, made under sections 36(1) and 36(3) of the RMA, are payable by holders of resource consents to cover Council's costs associated with the administration, monitoring and supervision of those consents. The charges also cover a portion of Council's costs of carrying out regional and impact monitoring and specific investigations into the state of the environment.

Resource consent charges will be invoiced on the 20th of the month following the month the invoice was issued e.g. invoices issued in September will be due on 20th October. ~~are invoiced annually in August/September~~[2]. The annual charge is calculated as below:

Annual Charge = Base Charge + (Compliance/Supervision Charge x Credit Factor) + Regional/Impact Monitoring Charge

3.1 Base charge

The base charge is $13099 (GST inclusive~~exclusive, rounded up from $98.64~~) per consent that is subject to annual charges. This charge covers the costs associated with:

- Maintaining and improving the consent database and associated records.
- Compiling and monitoring accounts, dealing with general enquiries from consent holders (including surrenders) and general administrative actions.
- Section 36 policy development and maintenance.

The base charge is not applicable in the following cases~~.~~ in accordance with decisions adopted by Council at its meeting on 9 March 2017~~in accordance with previous Council policy decisions~~:

(a) Long term consents for structures, reclamations or diversions in the Coastal Marine Area, rivers and lakes unless an inspection has been carried out (in which case ~~and~~ the consent holder is charged as per Schedule 1A or 2A).

(b) "Consequential" consents such as the discharge permit in ~~a consent~~ an activity that involves a diversion~~to divert~~ and discharge, or the discharge permit in ~~a consent to~~an activity that involves taking~~e~~ and discharging~~e~~ water (e.g. to heat a pool). To qualify, the "consequential" consent must occur as a natural consequence of the primary activity and have no significant environmental effect compared to the primary consent.

(c) Onsite wastewater (OSET - low risk) consents required under the Onsite Effluent Treatment Regional Plan for 20~~16~~/17/18.

(d) In addition to the base charge, a special administrative charge is payable where multiple holders of one consent request separate invoicing and correspondence to each consent holder. An additional fee of $~~100~~ 115 (GST ~~exclusive~~inclusive) will be charged to each additional consent holder requiring this service.

3.2 Compliance/supervision charge (Schedule 1A and 2A)

This section of the policy is based on both Council's requirement to monitor consents issued (section 36(1)(c) RMA) and where applicable, Council's specific compliance monitoring programme. It is

[2] Note that some resource consents are only invoiced if they have been the subject of a compliance inspection. These can be identified as consents that have a zero charge in both the compliance/supervision schedule (1) and the regional/impact monitoring schedules (1B to 12B).

Council policy that the majority of costs of compliance/supervision of consents should be recovered from consent holders.

Compliance/supervision activity involves the checking of consent conditions (validation) including such aspects as:

- Undertaking site inspections to ensure the activity complies with the consent requirements.
- Ensuring compliance with plans (including site plans, management plans and contingency plans) and quality criteria.
- Quality checking and filing of monitoring returns.
- The preparation of reports for file or Council.
- Day to day contact with individual consent holders such as enquiries, minor complaints and non-compliance issues via telephone calls and correspondence.
- Administrative tasks including entering and distributing field sheets and returns.

The compliance/supervision charge has been set as specified in the Compliance Monitoring Programme 2017/182016/17, shown in Schedule 1A and 2A. Where the level of monitoring is undetermined the consent holder will be charged actual and reasonable costs including staff time (see the charge out rates in Schedule A).

This policy also provides that Council can recover from consent holders covered by Schedule 1A and 2A the actual and reasonable costs associated with:

- Second and subsequent inspections and follow-up work as necessitated by previous non-compliance. This includes time spent, and costs associated with, investigating confirmed non-compliances with a consent. These are subject to separate invoice following the inspection/follow-up/investigation.
- Auditing information required by consent conditions (for example management plans, engineering plans, landscape designs, approvals, etc.) or participation in peer review panels (as detailed in consent conditions). This includes the costs associated with managing these processes and any specialist technical advice required.

A fixed fee of $23000 (GST exclusiveinclusive) for the late submission of records and monitoring reports as required by consent or Resource Management Act Regulations.

Holders of consents to take and/or discharge geothermal water and or contaminants will be invoiced separately for actual and reasonable costs of monitoring of temperature and flow, where such monitoring is required to be carried out by the consent holder, but the monitoring is not carried out by the consent holder. Actual and reasonable costs are based on staff or consultants actual time spent (including travel time) charged at the relevant rate for the staff/consultant involved as set out in Schedule A, actual and reasonable vehicle running costs and any additional costs incurred.

Note: The compliance/supervision fee in Schedule 1A will not be invoiced for Low Risk Onsite wastewater consents (OSET - low risk) for the 2016/172017/18 year, in accordance with decisions adopted by Council at its meeting on 9 March 2017. However, as detailed above, actual and reasonable costs associated with follow-up work, as necessitated by previous non-compliance, will be charged.

3.2.1. Credit factor

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Section 36(4)(d) of the RMA provides for charges to be reduced where consent holder self-monitoring reduces Council's monitoring costs. Under this policy the compliance/supervision charge may be reduced by up to a maximum of 10%. The actual credit will be determined on a case by case basis

~~depending on the level of monitoring by the consent holder and the extent to which this reduces the Council's monitoring needs.~~

3.3 Regional/impact monitoring charge (Schedules 1B to 12B)

Section 36(1)(c) of the RMA allows Council to fix:

(c) Charges payable by holders of resource consents, for the carrying out by the local authority of its functions in relation to the administration, monitoring, and supervision of resource consents (including certificates of compliance), and for the carrying out of its resource management functions under section 35.

The resource management functions detailed under section 35 of the RMA include monitoring:

(a) the state of the whole or any part of the environment of its region or district to the extent that is appropriate to enable the local authority to effectively carry out its functions under this Act; and

(b) the efficiency and effectiveness of policies, rules, or other methods in its policy statement or its plan; and]

(c) the exercise of any functions, powers, or duties delegated or transferred by it; and

(d) the exercise of the resource consents that have effect in its region or district, as the case may be,—

and take appropriate action (having regard to the methods available to it under this Act) where this is shown to be necessary.

Section 35 requires that local authorities gather information and undertake or commission such research, as is necessary to effectively carry out its functions under the RMA.

The Bay of Plenty Regional Council carries out a range of environmental monitoring under its Natural Environmental Regional Monitoring Network (NERMN). The NERMN includes monitoring of land resources, terrestrial ecology, water quality, freshwater and marine ecology, groundwater, river and stream flows, geothermal energy and air quality. Specific additional investigations are also carried out on a project basis where resources are under pressure (e.g. the regional groundwater study, harbour sedimentation studies). Finally, impact monitoring is carried out to assess activities with higher risk potential (e.g. large sewage and industrial effluent discharges).

The regional/impact monitoring charges are given in Schedules 1B to 12B.

Note: The regional/impact monitoring charge in Schedule 2B will not be invoiced for Low Risk Onsite wastewater consents (OSET - low risk) for the 2017~~6~~/18~~7~~ year, in accordance with decisions adopted by Council at its meeting on 9 March 2017.

4 Miscellaneous administrative charges

Under sections 36(1)(e), 36(1)(f) and 36(1)(g) of the RMA and section 13 of the Local Government Official Information and Meetings Act (1987), Council is able to charge for the provision of information in respect of plans and resource consents, the supply of documents and any kind of charge authorised by regulations. The various charges fixed by Council under these sections are set out below.

4.1 Information requests

Any information requests, including those under the Local Government Official Information and Meetings Act (1987), will be charged actual and reasonable costs with the first hour being free.

4.2 Photocopying and documents

The following charges include GST:

Photocopying	6c per A4 page (Black and White) 10c per A3 page (Black and White) 50c per A4 page (Colour) 75c per A3 page (Colour)
Copies of BOPRC reports and publications	$10 per document up to 25 pages $12 per 25-50 page document $15 per 50-100 page document

Copies of the following New Zealand Standards:

AS/NZS 1546.1:2008 On-site domestic wastewater treatment units – Septic tanks	$~~117.30~~115
AS/NZS 1546.3:2008 On-site domestic wastewater treatment units – Aerated wastewater treatment systems	$~~108.64~~110
AS/NZS 1547:2012 On site domestic wastewater management	$~~216.21~~215

4.3 Royalty collection

The Administration Fee for collection of Government Royalties is $~~105~~ 120 (GST ~~exclusive~~inclusive).

4.4 Enforcement

Issuing an abatement notice is $~~192~~ 220 (GST ~~exclusive~~inclusive) which will be charged to the holder of the consent, even if the notice itself is issued to a representative of the consent holder (e.g. farm manager, contractor, etc.). Note that this is for the issuing of the notice and does not include any additional costs associated with non-compliance as outlined in 6(h).

4.5 Forestry Operators Accreditation System (FOAS)

As per Schedule 12, clause 4.6(b) and (c) of the Bay of Plenty Regional Water and Land Plan, the following fees apply for the processing of a FOAS application and the Auditing of an Approved Operator:

- Forestry Operators Accreditation application fee: $~~102~~ 115 (GST ~~exclusive~~inclusive);
- Application processing costs: The cost of the Accreditation Panel's associated with the processing of any application through to a recommendation, and the council staff time involved in assessing and processing the recommendation (this includes processing recommendation to decline) will be charged to the applicant on an actual and reasonable costs basis;
- Auditing fee: All actual and reasonable costs associated with the Auditing of any activity carried out under FOAS, including time and mileage. Actual and reasonable costs will also be invoiced to the Operator where the Audit is the result of a substantiated complaint.

5 Building Act Charges

Charges are set for technical processing and other functions under the Building Act 2004. These charges have been set using the principle that the full cost is to be recovered, including the base charge and any actual and reasonable additional costs.

Table 2: Building Act Charges

Activity **Administration cost for Register of Dams**	The base charge (including GST)	Additional cost
Lodge dam potential impact category	$~~234~~240	On an actual and reasonable costs basis
Lodge dam safety assurance programme	$~~234~~240	On an actual and reasonable costs basis
Lodge annual dam compliance certificate	$~~234~~240	On an actual and reasonable costs basis
Review		
Review of potential impact classifications submitted by dam owners	Actual and reasonable costs	
Review of dam safety assurance programme	Actual and reasonable costs	
Compliance		
Standard labour cost and extra cost of expert advice, on an actual and reasonable costs basis.		
Building Consent for Dams		**Additional cost**
Apply for Project Information Memorandum (PIM)	$~~153~~155	On an actual and reasonable costs basis.
The Bay of Plenty Regional Council has transferred its building consent authority functions to the Waikato Regional Council for efficiency and cost reduction reasons. Please contact Waikato Regional Council or see its website www.waikatoregion.govt.nz/damsafety for relevant up-to-date fees and charges for building consents, which may include: • Processing of building consents • Inspection process • Issuing dam code compliance certificate • Issuing compliance schedule.		
Certificate of Acceptance		**Additional cost**
The charges vary due to the complexity and scale. The base charge (~~excluding~~ including GST~~, but excluding~~ BRANZ levy and DBH levy) for a dam: Valued over $100,000 is $4,690~~4,000~~. Valued between $20,000 and $100,000 is $2,345~~2,000~~. Valued up to $20,000 is $585~~500~~.		On an actual and reasonable costs basis, including tax and levies.
Other functions		
Charges for other functions, such as Compliance Schedule or amending of Compliance Schedule, are based on labour cost and extra cost of expert advice, on an actual and reasonable costs basis. Note other costs that may be charged back to the applicant include the actual cost of photocopying and printing, vehicle use and fuel, travel and accommodation, administration, including data digitising and data storage, site notices, advertisements, testing charges, commissioners, consultants (including engineers, specialists and scientists), staff time, and other disbursements.		

6 General matters

(a) The charges will cover the financial period from 1 July 2017~~6~~ – 30 June 2018~~7~~, but will continue for following financial years unless replaced through a new special consultative procedure.

(b) If an activity is consented during the year which is not accommodated on the existing steps and schedules of the policy, an interim charge will be set based on the actual and reasonable costs to Council of carrying out the compliance monitoring/supervision and the regional/impact monitoring of the consent.

(c) When a consent to which this policy applies expires or is surrendered or lawfully terminated during the year and the activity ceases, then in any case the minimum base charge of $~~99~~ 130 (GST inclusive) will apply and the remainder of the fee will be on a pro-rata basis having regard to what monitoring had been undertaken.

(d) Where a consent to which this policy applies expires or is surrendered or lawfully terminated during the course of a year but the activity continues and is subject to a renewal process, then the full charge shall apply.

(e) Where a consent is varied during a financial year to which this policy applies, any change in charge will apply on a pro-rata basis from when the variation is approved.

(f) When a consent is issued part way through the financial year the charge will be on a pro-rata basis, but in all cases the minimum base charge of $~~99~~ 130 (GST inclusive) will first be payable.

(g) Council may remit any charge made, in part or in full, in cases of inequity to be determined by resolution of Council. In doing so Council will credit the appropriate account.

(h) The charges and scales of charges are set to recover a proportion of Council's costs identified in the Ten Year Plan, under sections 36(1) and 36(3) of the Resource Management Act 1991, assuming responsible use and compliance with consents and associated conditions.

Where non-compliance requires additional visits to those defined in the Compliance Monitoring Programme (Schedule 1A and 2A), the costs of any further visits and investigation will be charged at:

(i) Officers actual time spent charged at the relevant rate for the staff/consultant involved (Schedule A), including travel and vehicle running costs.

(ii) Incidental costs (e.g. laboratory analyses, specialist advice) at actual and reasonable costs incurred. If this was to apply the consent holder will be advised that additional costs are to be recovered.

Council will also recover the costs of investigating and reporting substantiated complaints relating to consented activities.

(i) For accounts greater than $5,000 payment can be made in three instalments on the following due dates:

- 30 November 2017~~6~~ 50%
- 28 February 2018~~7~~ 25%
- 31 May 2018~~7~~ 25%

All fixed fee accounts less than $5,000 should be paid by 30 November 2017~~6~~. Actual and Reasonable fee accounts will normally be billed on a monthly basis.

(j) Council may impose an additional administrative charge to cover the cost of debt recovery from individual consent holders.

7 Worked examples

The following are examples of annual charges (GST ~~exclusive~~inclusive) for a range of consented activities. Note that actual charges will be determined on a case by case basis.

Small cooling water discharge to a river (Compliance Category = ID Min)

	Base Charge	Schedule 1A	Schedule 1B, 3	Total
Charges	$130~~99~~	$185~~158~~	$140~~118~~	$455~~375~~

Small sewage discharge, land treatment, annual inspection (Compliance Category = STP Min)

	Base Charge	Schedule 1A	Schedule 2B, 3	Total
Charges	$130~~99~~	$435~~371~~	$140~~118~~	$705~~588~~

Farm dairy discharge – Low risk, good infrastructure, land treatment. Three yearly monitoring. (Compliance Category = DairyLR)

	Base Charge	Schedule 1A	Schedule 3B, 2	Total
Charges	$130~~99~~	$55~~46~~	$70~~60~~	$255~~205~~

Small to medium stormwater discharges, flood pumping schemes without contaminants to surface water. (Compliance Category = SW)

	Base Charge	Schedule 2A	Schedule 4B, 2	Total
Charges	$130~~99~~	Actual and reasonable costs for inspections	$115~~97~~	$245~~196~~ plus A+R

Geothermal take/discharge in the Rotorua field, 3 yearly compliance inspection (Compliance Category = GeoR)

	Base Charge	Schedule 1A *	Schedule 5B, 3a	Total
Charges	$130~~99~~	$155~~132~~	$0	$285~~231~~ plus A+R

* Takes in the Rotorua geothermal field may incur actual and reasonable costs for flow and temperature monitoring by Council

Water take for irrigation, >5L/s, 5-yearly compliance inspection (Compliance Category = Irri large)

	Base Charge	Schedule 1A	Schedule 6B, 4	Total
Charges	$130~~99~~	$175~~148~~	$875~~746~~	$1,180~~993~~

Water take for irrigation, <5L/s, 3-yearly compliance inspection (Compliance Category = Irri small)

	Base Charge	Schedule 1A	Schedule 7B, 3	Total
Charges	$130~~99~~	$115~~97~~	$515~~440~~	$760~~636~~

Large industrial geothermal take (Compliance Category = GeoI)

	Base Charge	Schedule 2A	Schedule 8B, 8	Total
Charges	$130~~99~~	Actual and reasonable costs for inspections	$16,915~~14,419~~	$17,045~~14,518~~ plus A+R

Hydro-dam, full compliance check every year (Compliance Category = Hydro)

	Base Charge	Schedule 2A	Schedule 9B, 6	Total
Charges	$130~~99~~	Actual and reasonable costs for inspections	$3,170~~2,703~~	$3,300~~2,802~~ plus A+R

Sand blaster, discharge to air (Compliance Category = Air min)				
	Base Charge	**Schedule 1A**	**Schedule 10B, 2**	**Total**
Charges	$13099	$125106	$210180	$465385

~~*Sea wall requiring 10-yearly monitoring (Compliance Category = Struct)*~~					
	~~**Base Charge**~~	~~**Schedule 1A**~~	~~**Schedule 11B, 1**~~	~~**Total**~~	
~~Charges~~	~~$99~~	~~$43~~	~~$0~~	~~$142~~	

Earthworks (0.9 ha) for subdivision (Compliance Category = EW)				
	Base Charge	**Schedule 2A**	**Schedule 12B, 1**	**Total**
Charges	$13099	Actual and reasonable costs for inspections	$7060	$200159 plus A+R

Low Risk Onsite Effluent Treatment (OSET) discharge, 8 yearly inspection (Compliance Category = OSET LR)				
	Base Charge	**Schedule 1A**	**Schedule 2B, 1**	**Total**
Charges	$13099	$8573	$4537	$0

Comment [JP1]: Deleted since this is now AnR

8 Schedules

Note: all charges in the following schedules are GST ~~exclusive~~inclusive.

- Schedule A: Fixed Charges - Staff and Consultants.
- Schedules 1A and 2A: Compliance/Supervision monitoring charges.
- Schedules 1B to 12B: Regional/Impact monitoring charges.

Schedule A - Fixed charges for staff, consultants/contractors (GST ~~exclusive~~inclusive)

~~Grouping~~	~~Positions~~	~~Hourly Charge~~
~~Administration~~	~~Planning Administration Officer~~ ~~Regulatory Administration Officer~~ ~~Environmental Data Assistant~~ ~~Committee Administration Officer~~	~~$85~~
~~Officers/Planners~~	~~Planner~~ ~~Pollution Prevention Officer~~ ~~Consents Officer~~ ~~Maritime Officer~~	~~$106~~
~~Senior Officers/Senior Planners~~	~~Senior Consents Officer~~ ~~Senior Pollution Prevention Officer~~ ~~Senior Planner~~	~~$122~~
~~Engineer/Scientist/Project Officers~~	~~Environmental Engineer~~ ~~Environmental Scientist~~ ~~Project Implementation Officer~~	~~$126~~
~~Team Leader/Senior Project Officers/Works Engineer~~	~~Consents Team Leader~~ ~~Pollution Prevention Team Leader~~ ~~Laboratory Services Team Leader~~ ~~Works Engineer~~ ~~Senior Project Implementation Officer~~	~~$134~~
~~Senior Engineer/Senior Scientist/Harbourmaster~~	~~Harbourmaster~~ ~~Senior Environmental Scientist~~ ~~Principal Technical Engineer~~	~~$140~~
~~Managers/Regional Harbourmaster~~	~~Regional Harbourmaster~~ ~~Consents Manager~~ ~~Data Services Manager~~ ~~Regional Integrated Planning Manager~~ ~~Natural Resources Policy Manager~~ ~~Science Manager~~ ~~Pollution Prevention Manager~~ ~~Engineering Manager~~	~~$180~~
~~Consultants/Contractors~~	~~External Consent Processing or Specialist Technical Consultant, or External Compliance Monitoring~~	~~As charged by consultant/contractor~~
~~Grouping~~		~~Mileage Charge~~
~~Consultants/Contractors~~		~~As charged by consultant/contractor~~
~~Regional Council staff~~		~~65c/km~~

Group	Hourly rate (including GST)
Administration	$105
Officers/Planners	$145
Senior Officers/Planners	
Engineers/Scientist/Regulatory Project Officer (RPO)	
External contracted compliance monitoring officer	
Maritime Officer	
Team Leaders/Senior RPO/Works Engineer/Senior Maritime Officer	$160
Senior Engineer/Senior Scientist/Harbourmaster	
Managers/Regional Harbour Master	$210
Consultants/Contractors	As charged by consultant/contractor
Regional Council staff mileage	Current IRD rate

Note: Some positions may not be listed. In such cases the charge will be calculated from actual time (including travel time) charged at rates determined from annual salary plus on-cost.

Schedule 1A – Consents subject to Annual Fixed Fee (GST inclusive)

Compliance Category	Code	Inspection Frequency	Comments	Annual Charge
Air Discharge - small industry	Air min	3 yearly	Sandblasters, spray painters, etc. Some are also audited by other agencies	$125~~106~~
Air Discharge - medium industry	Air med	1 yearly	Generally visited at the same time as rest of industrial visit. Some of these do require monthly checking of returns, as described above for Industrial discharges.	$495~~423~~
Dairy Sheds - low risk	DairyLR	3 yearly	PI systems: Adequate pond storage (lined in Rotorua lakes), appropriate irrigator technology for soil types and slopes, good compliance history	$55~~46~~
Dairy Sheds - moderate risk	DairyMR	2 yearly	All disposal systems that don't meet DairyLR or DairyHR criteria, but have good compliance history and systems that can be managed in a way that ensures compliance	$155~~132~~
Dairy Sheds - high risk	DairyHR	1 yearly	Any consent authorising a discharge to surface waters, or other High Risk dairy systems that don't meet DairyLR or DairyMR criteria	$310~~264~~
Industrial Discharges - small	ID Min	3 yearly	Small sites with small discharges and a low risk when managed well	$185~~158~~
Industrial Discharges - medium	ID Med	1 yearly	Medium sites with potential to result in moderate effects if not managed well	$870~~740~~
Landfills - closed	Landfill min	5 yearly	Closed landfills and managed cleanfill sites	$175~~148~~
OSET - low risk	OSET LR	8 yearly	All septic tanks and AWTS that are not within the OSET HR category. Inspected at time of installation and then on an 8 yearly basis	$85~~73~~
Piggeries	Pig	2 yearly	Low risk when managed correctly	$135~~117~~
Smaller Plants - small	STP Min	1 yearly	Not an OSET HR or OSET LR system, and up to 50m^3/day	$435~~371~~
Transfer Stations	Transfer	1 yearly	Operational Transfer Stations	$310~~264~~
Timber Treatment Plant	TTP	1 yearly	Sites generally have tight environmental controls with a significant amount of reporting. Risk is high if uncontrolled discharges occur	$555~~475~~
Minor Dams	Dams	10 yearly	Mostly farm dams. Does not include Hydro-electric dams	$40~~32~~
Geothermal Abstraction - excluding Rotorua field	GeoO	3 yearly	All geothermal abstractors who are not large commercial operators, and are located outside of the Rotorua Geothermal field	$175~~149~~
Geothermal Abstraction - Rotorua field only	GeoR	3 yearly	All geothermal abstractors who are not large commercial operators, and are located inside of the Rotorua Geothermal field. Cost of undertaking temp and flow charged at A+R if not done by Consent holder	$155~~132~~
Industrial Abstraction - minor	Ind Min	5 yearly	As most of these water takes will fall under the NER, inspections can be reduced as records will be good indicator of compliance. Generally inspect the industrial takes at the same time as the industrial discharge consents are inspected	$160~~137~~
Hort/Agr Abstraction - >5L/s	Irri large	5 yearly	Larger takes covered by NER so require meter and verification. LTP target aims for reduced non-compliance	$175~~148~~

Hort/Agr Abstraction - <5L/s	Irri small	3 yearly	Small takes that do not generally require metering and verification, so require more frequent inspection.	$11597
Municipal Abstraction - minor	MA Min	5 yearly	These water takes will generally fall under the NER, and as such records will be good indicator of compliance	$170143
Geothermal Abstractors (Warm Water Bores Tga)	Warm	3 yearly	All warm water abstractors in the Western Bay area who are not Industrial or Municipal abstractors	$175149

Schedule 2A – Consents subject to Actual and Reasonable charges

Compliance Category	Code	Inspection Frequency	Comments
Air Discharge - large industry	Air Maj	3 monthly	In addition to regular visits, these require very frequent review of compliance returns, technical reports, etc. throughout year.
Aquaculture	Aqua	1 yearly	Aquaculture monitoring
Bore Installations	Bore Ins	As required	Administration only. Generally no site visit undertaken
Comprehensive Catchment Stormwater	CCSW	1 yearly	Regular review of returns and reports
Dewater	Dewater	As required	Short term consents usually associated with earthworks, so inspected during earthworks site visit
Other Disturbance	Disturb	1 yearly	Inspected during works
Diversions	Div	As required	Inspected as per earthworks during construction, then not at all
Dredging	Dredge	1 yearly	Inspected during works
Earthworks	EW	As required	An estimated annual monitoring time has been allocated for this category, as only a portion of all consents are "active" at any one time. Inspections are usually once every month, but can increase or decrease depending on site risk
Forestry	Forest	As required	An estimated annual monitoring time has been allocated for this category, as only a portion of all consents are "active" at any one time. Inspections are once every 2 months, but can increase or decrease depending on site risk
Geothermal Abstractors (Large scale industrial)	GeoI	6 monthly	Complex sites, Peer Review Panels, Community Liaison Groups, etc.
Hydro Dams	Hydro	1 yearly	Large hydro schemes are generally well managed however impact of non-compliance can be very significant
Industrial Discharges Major	ID Maj	3 monthly	These require very frequent review of compliance returns, technical reports, etc. throughout year
Industrial Abstraction - major	Ind Maj	As required or 5 yearly	As most of these water takes will fall under the NER, inspections can be reduced as records will be good indicator of compliance. Generally inspect the industrial takes at the same time as the industrial discharge consents are inspected
Landfills - Open	Landfill Maj	6 monthly	Open landfills and managed cleanfill sites
Mangroves	Mangrove	1 yearly	Inspected as and when required when removal is taking place
Municipal Abstraction - major	MA Maj	As required or 5 yearly	These water takes will fall under the NER, and as such records will be good indicator of compliance
OSET - high risk	OSET HR	1 yearly	All septic tanks and AWTS within 200m of Rotorua Lakes, or within Maintenance Zones as shown in OSET Plan, or where the system receives more than $2m^3$/day, or where there has been a poor history of compliance
Quarries - large commercial	Quarry Lge	6 monthly	Large commercial quarries
Quarries (small)	Quarry Sml	3 yearly	Example: Forestry, farm quarry

Reclamations	Rec	As required	Inspected as per earthworks during construction, then not at all
Disturb, excavate foreshore or seabed	Sand	5 yearly	Inspected during works
Sewage Plants - large	STP Maj	6 monthly	Not an OSET HR or OSET LR system, and greater than 50m^3/day
Shingle extraction	Shingle	1 yearly	Inspected during extraction - irregular basis
Spray - herbicides, etc.	Spray	As required	Inspected on an infrequent basis depending on whether the activity is taking place
Stormwater	SW	As required	Variety of low risk consents. Generally only monitored at installation, unless issues arise

Schedule 1B - Water management (GST inclusive)

Scale of regional/impact monitoring charges for consents to discharge industrial or process related water and/or contaminants

Step	Annual charge	Examples
1	$4537	Negligible individual impact but cumulative impacts require monitoring. Monitoring of receiving water classification standards where relevant. Small volume, often intermittent.
2	$7060	Minor individual impact but cumulative impacts require monitoring. Monitoring of receiving water classification standards where relevant. Small volume, low concentration waste. May not be continuous.
3	$140118	Individual and cumulative impacts require monitoring. Monitoring of receiving water classification standards where relevant. Regular discharge. Contains contaminants. Volume <20 m^3/day.
4	$355302	Individual and cumulative impacts require monitoring. Monitoring of receiving water classification standards where relevant. Range of contaminants. Volume <50 m^3/day, regular Discharge to surface water. No impact on other users. For land discharge volume up to 150 m^3/day increase in contaminant concentration.
5	$1,4101,201	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Monitoring of receiving water classification standards where relevant. Noticeable effect on resource, other users. Regular discharge volume <100 m^3/day. Noticeable effect on resource, other users. Regular discharge volume <100 m^3/day. Range of contaminants. For land discharge volume up to 250 m^3/day and increase in contaminant concentration.
6	$28,2002,4040	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Monitoring of receiving water classification standards where relevant. Significant potential effect on resource, but does not exclude other users. Volume <1,000 m^3/day. Range of contaminants. For land discharge volume up to 2,000 m^3/day and increase in contaminant concentration.
7	$7,0456,008	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Major receiving water impact monitoring investigation annually. Report prepared. Monitoring of receiving water classification standards where relevant. Significant potential effect on resource, but does not exclude other users. Volume <10,000 m^3/day. Range of contaminants. For land discharge, volume up to 20,000 m^3/day and increase in contaminant concentrations.
8	$14,09512,016	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Major receiving water impact monitoring investigation annually. Report prepared. Monitoring of receiving water classification standards where relevant. Significant potential effect on resource, but does not exclude other users. Volume <20,000 m^3/day. Contaminants discharge to receiving waters, utilises significant portion of assimilative capacity of receiving water. Likely to exclude other significant users.
9	$21,14018,024	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Major receiving water impact monitoring investigation annually. Report prepared. Monitoring of receiving water classification standards where relevant. Significant effect on resource, other users. Volume exceeds 20,000m^3/day. Contaminants discharge to receiving waters, utilises substantial proportion of assimilative capacity of receiving water. Likely to exclude other significant users.
10	$28,19024,031	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Major receiving water impact monitoring investigation annually. Report prepared. Monitoring of receiving water classification standards where relevant. Very High Impact; as a result of individual discharge or combined effect with other discharges. Substantial effect on resource or other users. Substantial range of contaminants. Can exclude other significant users.
11	$56,37548,061	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Major receiving water impact monitoring investigation annually. Report prepared. Monitoring of receiving water classification standards where relevant. Severe impact. The individual discharge has a substantial effect on resources and other users. Substantial range of contaminants. Excludes other significant users. May alter habitat and impact ecosystem.

Schedule 2B - Water management (GST inclusive)

Scale of regional/impact monitoring charges for consents to discharge sewage related water and/or contaminants

Step	Annual charge	Examples
1	$45~~37~~	Negligible individual impact but cumulative impacts require monitoring. Monitoring of receiving water classification standards where relevant. No offsite Impacts. Small scale on site disposal. Individual household, up to 2 m^3/day.
2	$70~~60~~	Minor individual impact but cumulative impacts require monitoring. Monitoring of receiving water classification standards where relevant. No offsite Impacts. Small scale on site disposal. Up to 30 m^3/day.
3	$140~~118~~	Individual and cumulative impacts require monitoring. Monitoring of receiving water classification standards where relevant. Limited offsite Impacts. Small scale communal system. Land based system 30-50 m^3/day.
4	$420~~360~~	Individual and cumulative impacts require monitoring. Monitoring of receiving water classification standards where relevant. Potential offsite impacts. Small communal system. 50-100 m^3/day. For land based 50-200 m^3/day.
5	$1,410~~1,201~~	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Monitoring of receiving water classification standards where relevant. Potential and occasional offsite impacts. Significant community. Up to 2,000 m^3/day. For land discharge up to 4,000 m^3/day. No trade wastes.
6	$3,525~~3,004~~	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Major receiving water impact monitoring investigation annually. Report prepared. Monitoring of receiving water classification standards where relevant. Moderate impact. Small town treatment system. Potential effect on resource, but does not exclude other users. Limited trade wastes.
7	$7,045~~6,008~~	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Major receiving water impact monitoring investigation annually. Report prepared. Monitoring of receiving water classification standards where relevant. Moderate Impact. Medium scale treatment system. Identifiable effects on resource, but does not exclude other users. Trade wastes.
8	$14,095~~12,016~~	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Major receiving water impact monitoring investigation annually. Report prepared. Monitoring of receiving water classification standards where relevant. Moderate to high impact. Identifiable effects on resource, can exclude other users. Significant trade wastes.

Schedule 3B - Water management (GST inclusive)

Scale of regional/impact monitoring charges for consents to discharge agricultural related water and/or contaminants

Step	Annual charge	Examples
1	$4537	Negligible individual impact but cumulative impacts require monitoring. Monitoring of receiving water classification standards where relevant. No offsite impacts. Land discharge <20 m^3/day.
2	$7060	Individual and cumulative impacts require monitoring. Monitoring of receiving water classification standards where relevant. Discharge to surface water and land discharge >20 m^3/day. Potential effect on resource, but does not exclude other users.
3	$28024 0	Individual and cumulative impacts require monitoring. Monitoring of receiving water classification standards where relevant. Small to moderate Impact. Some impact on resource, minimal impact on other users.
4	$845720	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Monitoring of receiving water classification standards where relevant. Moderate impact. Utilises significant amount of receiving water capacity. May impact on other users. <50 m^3/day.
5	$1,410 1,201	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Major receiving water impact monitoring investigation annually. Report prepared. Monitoring of receiving water classification standards where relevant. Moderate to high impact. Utilises substantial amount of receiving water capacity. Excludes other users.

Schedule 4B - Water management (GST inclusive)

Scale of regional/impact monitoring charges for consents to discharge stormwater, quarrying, dredging, leachate and miscellaneous related water and/or contaminants

Step	Annual charge	Examples
1	$5548	Negligible individual impact but cumulative impacts require monitoring. Monitoring of receiving water classification standards where relevant. No offsite effects. Land based disposal only.
2	$11597	Minor individual impact but cumulative impacts require monitoring. Monitoring of receiving water classification standards where relevant. Low concentration of limited contaminants. Intermittent discharge. Insignificant impact on resource.
3	$170145	Individual and cumulative impacts require monitoring. Monitoring of receiving water classification standards where relevant. Small Impact. Low concentration of limited contaminants. Intermittent to regular discharge.
4	$420360	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Monitoring of receiving water classification standards where relevant. Moderate impact. Minor effect on resource. Does not exclude other users. Low to medium concentration of limited contaminants. Intermittent to regular discharge.
5	$1,4101,201	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Monitoring of receiving water classification standards where relevant. Moderate to Significant impact. Has impact on resource and may affect other users. Increase in concentration and number of contaminants discharged.
6	$4,2253,604	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Monitoring of receiving water classification standards where relevant. Significant impact. Has impact on resource, can exclude other users. Can have impact on biota and alters habitat. May contain toxic substances.
7	$8,4557,209	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Major receiving water impact monitoring investigation annually. Report prepared. Monitoring of receiving water classification standards where relevant. Major impact. Has impact on resource, can exclude other users. Has impact on biota and alters habitat.

Schedule 5B - Water management (GST inclusive)

Scale of regional/impact monitoring charges for consents to discharge warm water/geothermal fluid into the ground

Step	Annual charge	Examples
1	$3025	Negligible individual impact but cumulative impacts require monitoring. No foreign contamination.
2a	$0	Reinjection (Rotorua Geothermal Field), small volume <25 m^3/day. Regular discharge.
2b	$5548	Soakage (Rotorua Geothermal Field), small volume <25 m^3/day. Regular discharge. Minor individual impact but cumulative impacts may require monitoring. Minor impact. No foreign contamination.
3a	$0	Reinjection (Rotorua Geothermal Field), volume <250 m^3/day. Regular discharge.
3b	$140118	Soakage (Rotorua Geothermal Field). Regular discharge. Volume <250 m^3/day. Individual and cumulative impacts require monitoring. Small impact. No foreign contamination.
4a	$0	Reinjection (Rotorua Geothermal Field), volume <500 m^3/day. Regular discharge.
4b	$565482	Soakage (Rotorua Geothermal Field). Regular discharge. Volume <500 m^3/day. Individual and cumulative impacts require monitoring. Small to moderate impact. No foreign contamination.
5a	$0	Reinjection (Rotorua Geothermal Field), volume <2,000 m^3/day. Regular discharge.
5b	$1,4101,201	Soakage (Rotorua Geothermal Field). Regular discharge. Volume <2,000 m^3/day. Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Moderate impact. No foreign contamination. Has potential to affect resource or other users.
6	$2,8202,404	Discharge to reinjection. Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Moderate impact. No foreign contamination. May affect resource and other users. Regular discharge. Volume <5,000 m^3/day.
7	$7,0456,008	Discharge to reinjection. Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. High impact. No foreign contamination. Resource affected. Can exclude other users. Volume >5,000 m^3/day.

Schedule 6B - Water management (GST inclusive)

Scale of regional/impact monitoring charges for consents to take surface water

(Note: these charges vary depending on the volume of water permitted to be taken under the consent as per the examples below and apply regardless of whether the allocation is being used).

Step	Annual charge	Examples
1	$6051	Negligible individual impact but cumulative impacts require monitoring. Includes environmental protection or enhancement activities. Plentiful resource 0-250 m^3/day. Frost protection - up to 1,000 m^3/day.
2	$120102	Minor individual impact but cumulative impacts require monitoring. Includes environmental protection or enhancement activities. No significant impact on other users. Plentiful resource 250-500 m^3/day. Frost protection - up to 2,000 m^3/day.
3	$220186	Individual and cumulative impacts require monitoring. Small Impact. Some impact on flow particularly in combination with other users. Not detrimental to in-stream values. 500-1,000 m^3/day. Frost protection - up to 3,000 m^3/day.
4	$875746	Individual and cumulative impacts require monitoring. Small to moderate impact. Impact on flow may exclude other users. 1,000-2,000 m^3/day (municipal and industrial takes). Up to 5,000 m^3/day (irrigators). Frost protection - >3,000 m^3/day.
5	$2,2651,929	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Moderate Impact. Impact on flow may exclude other users. May be detrimental to in-stream values. Up to 10,000 m^3/day.
6	$6,7905,788	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Moderate to Large Impact. Significant abstraction. Can have impacts on the resource and other users. Up to 30,000 m^3/day.
7	$11,3159,647	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Major resource impact monitoring investigation annually. Report prepared. High impact. Significant water abstraction. Has significant impact on resource. Up to 50,000 m^3/day.
8	$22,63019,292	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity require specific monitoring techniques. Major resource impact monitoring investigation annually. Report prepared. High impact. Significant water abstraction. Has significant impact on resource. Up to 100,000 m^3/day.
9	$45,26038,583	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity require specific monitoring techniques. Major resource impact monitoring investigation annually. Report prepared. Substantial Impact. Has significant impact on water availability and capacity to receive discharges. Utilises large proportion of stream flow >10% of Q5. Potential to exclude other users. Up to 200,000 m^3/day.

Schedule 7B - Water management (GST inclusive)

Scale of regional/impact monitoring charges for consents to take groundwater excluding geothermal

(Note: these charges vary depending on the volume of water permitted to be taken under the consent as per the examples below and apply regardless of whether the allocation is being used).

Step	Annual charge	Examples
1	$140~~118~~	Negligible individual impact but cumulative impacts require monitoring. Plentiful resource. Up to 250 m^3/day. Frost protection - up to 1,000 m^3/day.
2	$280~~239~~	Minor individual impact but cumulative impacts require monitoring. No significant impact on other users. Plentiful resource. Up to 500 m^3/day. Frost protection - up to 2,000 m^3/day.
3	$515~~440~~	Individual and cumulative impacts require monitoring. Small impact. Resource may be limited. Can impact other users. Up to 1,000 m^3/day. Frost protection - up to 3,000 m^3/day.
4	$2,060~~1,756~~	Individual and cumulative impacts require monitoring. Moderate impact. Resource may be limited. Can impact resource and other users. Up to 2,000 m^3/day (municipal and industrial takes). Up to 5,000 m^3/day (irrigators). Frost protection - >3,000 m^3/day.
5	$2,895~~2,466~~	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Moderate Impact. Other users potentially affected. Resource may be impacted. Up to 5,000 m^3/day (municipal and industrial takes). Up to 7,500 m^3/day (irrigators).
6	$5,325~~4,539~~	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Moderate to Large Impact. Other users affected or excluded. Resource impacted. Up to 10,000 m^3/day.
7	$15,975~~13,617~~	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Major resource impact monitoring investigation annually. Report prepared. Large Impact. Other users affected or excluded. Resource impacted. Up to 30,000 m^3/day.
8	$26,620~~22,696~~	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity require specific monitoring techniques. Major resource impact monitoring investigation annually. Report prepared. Major Impact. Localised effect on complex resource. Can limit or exclude other users. Up to 50,000 m^3/day.

Schedule 8B - Water management (GST inclusive)

Scale of regional/impact monitoring charges for consents to take geothermal fluid and geothermal heat/energy

Step	Annual charge	Examples
1	$3025	Negligible individual impact but cumulative impacts require monitoring. Geothermal fluid <5 m^3/day. Warm water bores (Tauranga Field) <25 m^3/day.
2	$5548	Minor individual impact but cumulative impacts require monitoring. No significant impact on other users. Geothermal fluid <25 m^3/day. Down-hole heat exchangers <5 kw. Warm water bores (Tauranga Field) <100 m^3/day.
3	$8070	Individual and cumulative impacts require monitoring. Small impact. Resource may be limited. Can impact other users. Geothermal fluid < 50 m^3/day. Down-hole heat exchangers >50 kw. Warm water bores (Tauranga Field) >100 m^3/day.
4	$475404	Individual and cumulative impacts require monitoring. Moderate impact. Resource may be limited. Can impact resource and other users. Geothermal fluid <150 m^3/day.
5	$1,4101,201	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Moderate impact. Other users potentially affected. Resource may be impacted. Geothermal fluid <350 m^3/day.
6	$3,5253,004	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Moderate to large impact. Other users affected or excluded. Resource impacted. Geothermal fluid <2,000 m^3/day.
7	$7,0456,008	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Major resource impact monitoring investigation annually. Report prepared. Large impact. Other users affected or excluded. Resource impacted. Geothermal fluid up to 20,000 m^3/day.
8	$16,9151 4,419	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity require specific monitoring techniques. Major resource impact monitoring investigation annually. Report prepared. Major impact. Localised effect on complex resource. Can limit or exclude other users. Geothermal fluid >20,000 m^3/day.

Schedule 9B - Water management (GST inclusive)

Scale of regional/impact monitoring charges for consents to dam and/or divert

Step	Annual charge	Examples
1	$4537	Negligible individual impact but cumulative impacts require monitoring. Intermittent flood control, permanent stream diversions and realignments. Environmental protection or enhancement activities. Dams:- less than 1.5 m. Diversions: - mean stream flow less than 0.5 m^3/sec.
2	$7060	Minor individual impact but cumulative impacts require monitoring. No significant impact on resource. No impact on in-stream values. Permanent stream diversions and realignments. Environmental protection or enhancement activities. Dams:- less than 3 m. Diversions:- mean stream flow less than 1 m^3/sec.
3	$140118	Individual and cumulative impacts require monitoring. Small impact. Potential effect on resource. Some impact on in-stream values on a more sensitive stream/river. Permanent stream diversions and realignments. Dams:- less than 3 m. Diversions:- mean stream flow less than 2 m^3/sec.
4	$420360	Individual and cumulative impacts require monitoring. Small impact. Effect on resource. Some impact on in-stream values. Permanent stream diversions and realignments. Dams:- less than 5 m. Diversions:- mean stream flow less than 10 m^3/sec. Diversion of water (power schemes) less than 10% of mean flow of river system.
5	$1,125961	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Small to moderate impact. Significant effect on resource. Impact in-stream values. Ecosystem impacts. Minimal compensation flow. Dams:- less than 10 m. Diversions:- (a) Permanent stream diversions and realignments - mean stream flow less than 20 m^3/sec. (b) Diversion of water (power scheme) less than 20% of mean flow of river system.
6	$3,1702,703	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Moderate impact. Impacts flow regime of part of catchment. Significant impact on stream ecosystem and in-stream values. Limits and may exclude other users. Diversion of water (power schemes) less than 30% of mean flow of river system.
7	$5,6404,807	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity may require specific monitoring techniques. Major resource impact monitoring investigation annually. Report prepared. Large impact. Other users affected or excluded. Resource impacted. Geothermal fluid up to 20,000 m^3/day.
8	$9,8658,411	Individual and cumulative impacts require monitoring. Impacts of consent holder's activity require specific monitoring techniques. Major resource impact monitoring investigation annually. Report prepared. Large Impact. Impacts flow regime of part of catchment. Substantial impact on stream ecosystem and in-stream values. Likely to exclude other users. Diversion of water (power schemes) greater than 50% of mean flow of river system.

Schedule 10B - Air management (GST inclusive)

Regional/impact monitoring charges for consents to discharge contaminants into air

Step	Annual charge	Examples
1	$45~~37~~	Small landfills.
2	$210~~180~~	Sand blasters, small incinerators. Predominantly former Class "B" processes. Medium/large sewage plant air discharges.
2a	$45~~37~~	Spray painters. Small/medium sewage plant air discharges.
3	$210~~180~~	Hot dip galvanising. Asphalt manufacture.
4	$565~~482~~	Rendering plants.
5	$1,410~~1,201~~	A range of chemical processes. Larger boiler plant.
6	$4,230~~3,605~~	A range of chemical processes with higher risk of offsite effects.
7	$8,455~~7,209~~	Fertiliser Manufacturing Plant.
8	$16,915~~14,419~~	Major pulp and paper mill.

Schedule 11B - Coastal management (GST inclusive)

Regional/impact monitoring charges for coastal consents (other than takes and discharges)

Step	Annual charge	Examples
1	$0	No charge as there is no specific regional/impact monitoring programme associated with this category of consents.
2	$115~~104~~	Aquaculture – ~~offshore~~ marine farms <10 hectare ~~occupied~~ consented area.
3	$1,175~~1,038~~	Aquaculture – ~~offshore~~ marine farms ≥10~~-10~~ hectare~~s occupied~~ consented area.
~~4~~	~~$10,384~~	~~Aquaculture – offshore marine farms >10 hectares occupied area.~~
Note: The Regional/impact monitoring charges for ~~offshore~~ marine farms apply from the time the consent is exercised (i.e. once marine farm equipment is installed in the water) and are based on the area ~~actually occupied~~consented.		

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Schedule 12B - Land use management (GST inclusive)

Regional/impact monitoring charges for land use consents

Step	Annual charge	Examples
0	$0	Minor earthworks not covered by Steps 1-5 (e.g. installation of structures such as culverts and jetties).
1	$7060	Earthworks and forestry operations <1 hectare (total land area covered under the consent). *
2	$210180	Earthworks and forestry operations 1-10 hectares (total land area covered under the consent). *
3	$420360	Earthworks and forestry operations >10 hectares (total land area covered under the consent). *
4	$7060	Quarries <2 hectare (total land area allowed to be worked under the consent).
5	$140118	Quarries >2 hectare (total land area allowed to be worked under the consent).
* Note: earthworks include those associated with land development, tracks, roads, forestry, vegetation clearance and rehabilitation works. It does not include consents for installation of structures (e.g. culverts and jetties).		

Report To: Regional Council

Meeting Date: 09 March 2017

Report From: Mat Taylor, General Manager, Corporate Performance

Draft Annual Plan 2017/18 - Approval of Information Document and Supporting Information

Executive Summary

The purpose of this paper is to seek Council's adoption of the Annual Plan 2017/18 Information Document *'Thriving Together – The journey continues'* and supporting draft financial information for the purpose of informing the community about changes to year three of Long Term Plan 2015-2025.

The development of the draft budget for 2017/18 has been guided by Council workshops. Once approved, the Annual Plan 2017/18 Information Document will be released for public information and will be circulated to the same range of stakeholders that received the Annual Plan 2016/17 Information Document, including City and District Councils. The Annual Plan 2017/18 Information Document will follow under separate cover.

The draft budget for 2017/18 contains a number of variances from year three of the Long Term Plan 2015-2025. Pursuant to section 95 2A of the Local Government Act (2002), these variances are not considered to be significant or material enough to require a full special consultative procedure including formal submissions and hearings.

Overall, the draft budget 2017/18 includes:

- A total real rates revenue increase of 6.6%, which is less than the forecast 8.5% increase in year three of the Long Term Plan 2015-2025.
- Total operating revenue, excluding rates, of $60.5 million, which is $2.7 million less that the forecast for year three of Long Term Plan 2015-2025
- Total operating expenditure of $124.4 million, which is $1.1 million more than the forecast for year three of Long Term Plan 2015-2025.
- Total capital expenditure of $46.5 million, which is $21.7 million more than the forecast for year three of Long Term Plan 2015-2025.

The draft budget for 2017/18 is unbalanced, which means that operating expenditure is higher than operating revenue. The main reason for the unbalanced budget is that Council is contributing funding to third-party infrastructure projects. As part of adopting the Long Term Plan 2015-2025, Council resolved that it was financially prudent to set an unbalanced budget as the infrastructure grants are better funded from reserves instead of rates

increases.

Recommendations

That the Regional Council:

1 Receives the report, Draft Annual Plan 2017/18 - Approval of Information Document and Supporting Information;

2 Approves the draft Budget for 2017/18 and financial statements in appendices 1-5 for the purpose of public information.

3 Notes that the draft Budget 2017/18 is unbalanced, mainly due to payment of operating grants for infrastructure projects.

4 Approves the draft total real rates revenue increase of 6.6%, which is less than the forecast 8.5% increase of for year three of the Long Term Plan 2015-2025, for the purpose of public information.

5 Agrees that, pursuant to section 95 2A of the Local Government Act (2002), the variances from Long Term Plan year 3 are not significant or material enough to require a full special consultative procedure including formal submissions and hearings.

6 Approves the Annual Plan 2017/18 Information Document '*Thriving Together – The journey continues*'.

7 Delegates to the Chief Executive to make any minor editorial changes to the Annual Plan 2017/18 Information Document.

8 Approves the release of the Annual Plan 2017/18 Information Document and draft budget 2017/18 for public information and feedback.

9 Confirms that the decision has a low level of significance.

1 Development of the Draft Annual Plan for 2017/18

The draft Annual Plan for 2017/18 has been shaped through direction received at Council workshops on 13 December 2016 and 3 February 2017. Figure 1 on the next page shows the high level process.

The draft budget for 2017/18 contains increased resources in specific areas, and general inflationary adjustments. The draft Council Summary and Groups of Activities financial statements are included in appendices 1 and 2.

The main changes for the draft Budget 2017/18 compared to year three of the LTP are outlined below.

Revenue

The Perpetual Preference Shares issued by Quayside Holdings Limited (QHL) will have its dividend rate reset in March 2017. This is anticipated to deliver an increase in Council's dividend income from QHL which is included in the draft Budget for 2017/18.

The forecast dividend payment is still to be agreed through the Statement of Intent process.

There is the potential to receive additional grant funding from the Ministry for the Environment (MfE) for the Kopeopeo Canal Remediation, and new funding support for the Kaituna River Re-diversion project. These potential grants have not been included in the draft Budget for 2017/18 as they have not been approved by the MfE. It is expected funding decisions will be made by the MfE prior to the final Annual Plan 2017/18 being adopted.

Other revenue changes are related to timing of grants received for capital projects including the Kopeopeo Canal Remediation, updates to internal interest (which is offset by less internal interest expense) and updates to likely fees and charges revenue.

Figure 1: Annual Plan 2017/18 Process

Operating expenditure

There is a net operating expenditure increase from the LTP year 3 budget of $1.1 million. This net increase is set out in table 1 on the next page.

Table 1: Summary of Operating Expenditure changes

Project	Timing Change $000	Budget Change $000
Brown Bullhead Catfish		200
Consents and Pollution Prevention Resourcing[1]		400
Water Policy		212
Maritime additional patrols		92
Rangitāiki Tuna Plan		40
Marine Spatial Planning		100
Natural Hazards		200
Rotorua Nutrient Data Management System		25
Stock Truck Effluent		80
Matata Sewerage[2]	1,882	
Internal Interest[3]		(1,328)
Depreciation[3]		(774)
Minor changes		
Subtotal	**1,882**	**-753**
Total Change		**1,138**

Notes:
1. Increased expenditure is offset by increased fees and charges revenue.
2. Timing change for Matata Sewerage was decided through the Annual Plan 2016/17 process.
3. Reductions in internal interest and depreciation are the result of delayed capital expenditure in previous years.

Capital expenditure

There is a net capital expenditure increase from the LTP year 3 budget of $21.678 million. This net increase is comprised of $15.409 million of timing changes and $6.250 million of budget increases for major projects. Table 2 on the next page shows the main Capital expenditure changes.

Table 2: Summary of Capital Expenditure changes

Project	Timing Change $000	Budget Change $000	Total Change $000
Kopeopeo Canal Remediation	1,900	5,300	7,200
Kaituna River Re-diversion	2,900		2,900
Nutrient Data Management System		950	950
Minor changes			19
Regional Building Upgrades [1]	8,357		8,357
Electronic Ticketing system [1]	2,252		2,252
TOTAL	**15,409**	**6,250**	**21,678**

Note 1: Timing change for Regional Building Upgrades and Electronic Ticketing system were decided through the Annual Plan 2016/17 process.

Unbalanced Budget

The draft budget for 2017/18 is unbalanced, which means that operating expenditure is higher than operating revenue. The main reason for the unbalanced budget is that Council is contributing funding to third-party infrastructure projects.

As part of adopting the Long Term Plan 2015-2025 Council resolved that, pursuant to section 100 of the Local Government Act (2002), it was financially prudent to set an unbalanced budget as the infrastructure grants are better funded from reserves instead of rates increases. To adopt the final Annual Plan 2017/18, Council will be requested to make a similar resolution that it is financially prudent to set an unbalanced budget.

Forecasting assumptions

Forecasting assumptions were set as part of LTP 2015-2025, and are reviewed annually. Changes to the forecasting assumptions are required for the inflation rate and investment income return. These changes are shown in appendix 3, which will be used as supporting information for community engagement.

Rates

The draft Budget for 2017/18 includes a total real rates revenue increase of 6.6%, which compares favourably to a forecast increase of 8.5% for year three of the LTP 2015-2025. The reduction in the draft total real rate revenue increase is the result of increases in funding being greater than the increases in expenditure.

The average annual median property rate values have been adjusted for the approved changes and QVNZ's Land Value revaluations for the Western Bay, Whakatāne and Ōpōtiki Districts. The revaluations adjust the share of the total rates requirement that each property (and district) pays.

The Annual Plan 2017/18 Information Document includes a breakdown of median rates increases for each district based on the draft Budget for 2017/18. Individual ratepayers will have differed increases depending on their property revaluations and the targeted rates that apply to their property.

Other financial statements

Two other financial statements are included as supporting information for the draft Budget for 2017/18. These are the Statement of Comprehensive Revenue and Expenditure and the Council Funding Impact Statement and are included in appendices 4 and 5.

2 Community Engagement

Following approval, the Annual Plan 2017/18 Information Document *'Thriving Together – The journey continues'* will be released for public information and feedback. This is in line with the direction provided by Council at the 3 February 2017 Annual Plan workshop. The Annual Plan 2017/18 Information Document will be sent to Councillors separately.

The Annual Plan 2017/18 Information Document will be sent to the same range of stakeholders as the Annual Plan 2016/17 Information Document. Additionally, it will be available online, at Council offices, local territorial authority offices, and from appropriate community organisations with 'shop front' offices. The release of the 2017/18 Information Document *'Thriving Together – The journey continues'* will be accompanied with a media release and advertising.

In addition to the above circulation, staff will be available to support Councillors to present the Annual Plan 2017/18 Information Document and key aspects of the planned 2017/18 programme to the City and District Councils.

Any public or stakeholder feedback will be presented to Council at an Annual Plan Workshop in May 2017. In addition, members of the community and other organisations can make requests of Council at any time through normal channels.

3 Next Steps

A separate Special Consultative Procedure is required for the "Proposed Changes to the Bay of Plenty Regional Council's Resource Management and Building Act Charges Policy 2017/18". Hearings for that consultation process hearings may be held on the same day as the Annual Plan 2017/18 Workshop in May 2017.

The purpose of the May 2017 Annual Plan 2017/18 workshop is for Councillors to provide direction on any further budget changes, including any requests from the public or stakeholders. Part of the staff preparation for this workshop is a detailed deliverability review to ensure that the timing of large capital projects and operating grants are realistic. This financial direction will be used to prepare the Annual Plan 2017/18 for adoption.

Council will be requested to adopt the Annual Plan 2017/18 at the 29 June 2017 Council Meeting.

4 Council's Accountability Framework

4.1 Community Outcomes

This Annual Plan Information Document '*Thriving Together – The journey continues'* directly contributes to the Regional Leadership and Collaboration Community Outcomes in Council's Long Term Plan 2015-2025.

The Information Document informs the community of the future direction of Council by providing an outline of what we plan to deliver in that year, and the main differences to Year three of the LTP 2015-2025.

4.2 Long Term Plan Alignment

This work is planned under the Corporate Services Group of Activities in the Long Term Plan 2015-2025.

The adoption of an Annual Plan is a legislative requirement for Council.

Current Budget Implications

The preparation of an Annual Plan, and any associated community engagement is part of Council's core legislative obligations.

This work is being undertaken within the current budget for year two of the LTP 2015-2025.

Future Budget Implications

The future financial implications of the draft budget 2017/18 has been discussed by Councillors during its development. The Annual Plan 2017/18 will supersede year three of the LTP when it is adopted in June 2017. The draft budget includes key financial parameters of $60.5 million operating revenue (excluding rates), $124.4 million operating expenditure, $46.5 million capital expenditure, and a 6.6% total real rates revenue increase.

Mark Le Comte
Organisational Planning Manager

for General Manager, Corporate Performance

1 March 2017

APPENDIX 1

2017-18 Draft Annual Plan - Council Summary

Council Summary

2016/17 Annual Plan $000		2017/18 Year 3 Long Term Plan $000	2017/18 Draft Annual Plan $000	Change $000
	Activity operating revenue			
15,866	Targeted rates	19,034	16,365	2,669
20,900	Dividends	21,850	23,850	(2,000)
9,664	External interest income	7,576	7,236	340
2,778	Internal interest income	4,399	3,072	1,327
15,664	Operating grants and subsidies	13,566	14,875	(1,309)
2,188	Other revenue	5,679	1,913	3,766
8,948	Fees and charges	10,162	9,563	599
76,008	**Total activity operating revenue**	**82,267**	**76,876**	**5,390**
	Operating expenditure by group of activities			
27,455	Integrated Catchment Management	31,569	29,642	(1,927)
10,859	Flood Protection and Control	11,918	11,239	(680)
14,029	Resource Regulation & Monitoring	15,207	15,994	786
20,871	Transportation	22,499	22,128	(371)
9,608	Regional Development	15,688	17,702	2,014
16,100	Regional Planning and Engagement	15,476	17,081	1,605
2,934	Emergency Management	3,080	3,110	30
6,077	Technical Services	7,443	7,326	(117)
833	Corporate Services	438	234	(204)
108,766	**Total operating expenditure**	**123,318**	**124,455**	**1,138**
32,759	**Net (surplus) deficit to fund**	**41,051**	**47,580**	**6,528**
	Funding required			
20,467	General rates	21,987	23,376	1,389
0	Investment income allocated	0	0	0
12,292	(Increase) decrease in reserves	19,064	24,204	5,140
32,759	**Total funding required**	**41,051**	**47,580**	**6,528**
	Capital expenditure by group activities			
3,668	Integrated Catchment Management	3,248	6,309	3,061
8,954	Flood Protection and Control	8,071	15,138	7,067
255	Resource Regulation & Monitoring	105	104	(1)
0	Transportation	0	2,252	2,252
160	Regional Development	0	0	0
11	Emergency Management	38	36	(2)
956	Technical Services	883	845	(38)
9,557	Corporate Services	12,443	21,781	9,338
23,559	**Total capital expenditure**	**24,788**	**46,466**	**21,678**
	Other capital funding applied			
597	Internal loan repayments	1,095	597	(498)
2,010	Clean Heat programme	2,010	2010	0
(23,676)	Increase (decrease) in reserves	(25,311)	(46,323)	(21,012)
2,491	**Total capital funding applied**	**2,583**	**2,750**	**168**

	Sources of capital funding			
75	Subsidies and grants for capital expenditure	250	342	92
2,010	Internal loans advanced	2,010	2,010	0
406	Gross proceeds from sale of assets	322	398	76
2,491	**Total sources of capital funding**	**2,582**	**2,750**	**168**

APPENDIX 2

2017-18 Draft Annual Plan - Groups of Activities

Integrated Catchment Management

2016/17 Annual Plan		2017/18 Year 3 Long Term Plan	2017/18 Draft Annual Plan	2017/18 Change
$000		$000	$000	$000
	Activity operating revenue			
2,974	Targeted rates	4,014	3,049	965
3,863	Operating grants and subsidies	4,655	4,864	(209)
85	Other revenue	2,826	87	2,739
20	Fees and charges	288	20	268
6,942	**Total activity operating revenue**	**11,785**	**8,020**	**3,763**
	Operating expenditure by activity			
4,610	Tauranga Harbour	5,891	4,272	(1,619)
14,235	Rotorua Lakes	15,929	15,923	(6)
2,530	Kaituna	2,770	2,823	53
1,042	Rangitaiki	1,282	1,157	(125)
2,314	Other Catchments	2,973	2,520	(453)
2,724	Land and Water Framework	2,723	2,947	224
27,455	**Total operating expenditure**	**31,569**	**29,642**	**(1,926)**
20,513	**Net (surplus) deficit to fund**	**19,784**	**21,622**	**1,838**
	Funding required			
5,372	General rates	6,079	5,883	(196)
9,063	Investment income allocated	9,340	8,436	(904)
6,078	(Increase) decrease in reserves	4,365	7,304	2,939
20,513	**Total funding required**	**19,784**	**21,622**	**1,838**
	Capital expenditure by activity			
244	Rotorua Lakes	500	684	184
3,424	Kaituna	2,748	5,625	2,877
3,668	**Total capital expenditure**	**3,248**	**6,309**	**3,061**
	Other capital funding applied			
(3,593)	Increase (decrease) in reserves	(2,998)	(5,967)	(2,969)
75	**Total capital funding applied**	**250**	**342**	**92**
	Sources of capital funding			
75	Subsidies and grants for capital expenditure	250	342	92
75	**Total sources of capital funding**	**250**	**342**	**92**

Flood Protection & Control

2016/17 Annual Plan		2017/18 Year 3 Long Term Plan	2017/18 Draft Annual Plan	Change
$000		$000	$000	$000
	Activity operating revenue			
8,652	Targeted rates	9,543	8,710	833
308	External interest income	352	308	43
2,637	Operating grants and subsidies	60	530	(470)
162	Other revenue	280	165	115
11	Fees and charges	11	11	0
11,771	**Total activity operating revenue**	**10,247**	**9,725**	**522**
	Operating expenditure by activity			
9,378	Rivers & Drainage Schemes	10,475	9,671	(804)
1,481	Regional Flood Risk Coordination	1,443	1,568	124
10,859	**Total operating expenditure**	**11,918**	**11,239**	**(680)**
(911)	**Net (surplus) deficit to fund**	**1,672**	**1,513**	**(158)**
	Funding required			
1,381	General rates	1,504	1,397	(107)
2,304	Investment income allocated	2,311	2,076	(236)
(4,596)	(Increase) decrease in reserves	(2,144)	(1,960)	184
(911)	**Total funding required**	**1,672**	**1,513**	**(158)**
	Capital expenditure by activity			
8,954	Rivers & Drainage Schemes	8,071	15,138	7,067
8,954	**Total capital expenditure**	**8,071**	**15,138**	**7,067**
	Other capital funding applied			
(8,954)	Increase (decrease) in reserves	(8,071)	(15,138)	(7,067)
0	**Total capital funding applied**	**0**	**0**	**0**

Resource Regulation & Monitoring

2016/17 Annual Plan		2017/18 Year 3 Long Term Plan	2017/18 Draft Annual Plan	Change
$000		$000	$000	$000
	Activity operating revenue			
924	Targeted rates	1,903	1,286	617
0	Operating grants and subsidies	0	60	(60)
169	Other revenue	193	255	(62)
3,585	Fees and charges	3,705	4,106	(401)
4,678	**Total activity operating revenue**	**5,801**	**5,707**	**94**
	Operating expenditure by activity			
2,995	Biosecurity	3,103	3,497	394
1,112	Rotorua Air Quality	1,703	1,291	(412)
3,221	Resource Consents	3,090	3,757	667
4,126	Pollution Prevention	4,600	4,504	(96)
2,575	Maritime Operations	2,711	2,944	233
14,029	**Total operating expenditure**	**15,207**	**15,994**	**786**
9,351	**Net (surplus) deficit to fund**	**9,406**	**10,286**	**880**
	Funding required			
3,422	General rates	3,789	4,293	505
5,709	Investment income allocated	5,821	5,898	76
219	(Increase) decrease in reserves	(204)	95	299
9,351	**Total funding required**	**9,406**	**10,286**	**880**
	Capital expenditure by activity			
255	Maritime Operations	105	104	(1)
255	**Total capital expenditure**	**105**	**104**	**(1)**
	Other capital funding applied			
597	Internal loan repayments	1,095	597	(498)
2,010	Clean Heat programme	2,010	2,010	0
(852)	Increase (decrease) in reserves	(1,200)	(701)	499
2,010	**Total capital funding applied**	**2,010**	**2,010**	**0**
	Sources of capital funding			
2,010	Internal loans advanced	2,010	2,010	0
2,010	**Total sources of capital funding**	**2,010**	**2,010**	**0**

Transportation

2016/17 Annual Plan		2017/18 Year 3 Long Term Plan	2017/18 Draft Annual Plan	Change
$000		$000	$000	$000
	Activity operating revenue			
3,407	Targeted rates	3,672	3,531	141
7,470	Operating grants and subsidies	7,190	8,001	(811)
687	Other revenue	705	701	5
4,312	Fees and charges	5,270	4,394	876
15,877	**Total activity operating revenue**	**16,837**	**16,627**	**210**
	Operating expenditure by activity			
20,306	Passenger Transport	21,802	21,494	(308)
566	Transport Planning	697	634	(63)
20,871	**Total operating expenditure**	**22,499**	**22,128**	**(371)**
4,995	**Net (surplus) deficit to fund**	**5,661**	**5,501**	**(160)**
	Funding required			
1,865	General rates	1,849	1,987	138
2,775	Investment income allocated	2,840	2,757	(84)
354	(Increase) decrease in reserves	972	758	(214)
4,995	**Total funding required**	**5,661**	**5,501**	**(160)**
	Capital expenditure by activity			
0	Passenger Transport	0	2,252	2,252
0	**Total capital expenditure**	**0**	**2,252**	**2,252**
	Other capital funding applied			
0	Increase (decrease) in reserves	0	(2,252)	(2,252)
0	**Total capital funding applied**	**0**	**0**	**0**

Regional Development

2016/17 Annual Plan		2017/18 Year 3 Long Term Plan	2017/18 Draft Annual Plan	Change
$000		$000	$000	$000
	Activity operating revenue			
50	Other revenue	14	0	14
1	Fees and charges	69	1	68
51	**Total activity operating revenue**	**83**	**1**	**82**
	Operating expenditure by activity			
7,940	Regional Infrastructure	14,126	16,014	1,888
874	Regional Economic Development	761	856	95
794	Regional Parks	801	831	31
9,608	**Total operating expenditure**	**15,688**	**17,702**	**2,014**
9,557	**Net (surplus) deficit to fund**	**15,605**	**17,701**	**2,096**
	Funding required			
499	General rates	538	655	116
1,150	Investment income allocated	1,096	1,213	117
7,908	(Increase) decrease in reserves	13,971	15,833	1,862
9,557	**Total funding required**	**15,605**	**17,701**	**2,096**
	Capital expenditure by activity			
160	Regional Parks	0	0	0
160	**Total capital expenditure**	**0**	**0**	**0**
	Other capital funding applied			
(160)	Increase (decrease) in reserves	0	0	0
0	**Total capital funding applied**	**0**	**0**	**0**

Regional Planning & Engagement

2016/17 Annual Plan		2017/18 Year 3 Long Term Plan	2017/18 Draft Annual Plan	Change
$000		$000	$000	$000
	Activity operating revenue			
338	Operating grants and subsidies	150	38	112
338	**Total activity operating revenue**	**150**	**38**	**112**
	Operating expenditure by activity			
5,766	Regional Planning	5,480	6,547	1,067
1,362	Maori Policy	1,240	1,355	115
485	Geothermal	398	516	118
1,583	Kotahitanga/Strategic Engagement (incl. EEF)	1,836	1,633	(203)
6,903	Governance Services	6,522	7,031	508
16,100	**Total operating expenditure**	**15,476**	**17,081**	**1,605**
15,763	**Net (surplus) deficit to fund**	**15,326**	**17,042**	**1,717**
	Funding required			
5,158	General rates	5,470	6,339	869
8,605	Investment income allocated	8,404	9,167	763
2,000	(Increase) decrease in reserves	1,451	1,536	85
15,763	**Total funding required**	**15,326**	**17,042**	**1,717**

Emergency Management

2016/17 Annual Plan			2017/18 Year 3 Long Term Plan	2017/18 Draft Annual Plan	Change
$000			$000	$000	$000
	Activity operating revenue				
1,356	Operating grants and subsidies		1,511	1,382	130
39	Other revenue		45	40	5
1,395	**Total activity operating revenue**		**1,557**	**1,422**	**135**
	Operating expenditure by sub activity				
2,934	Emergency Management		3,080	3,110	30
2,934	**Total operating expenditure**		**3,080**	**3,110**	**30**
1,539	**Net (surplus) deficit to fund**		**1,523**	**1,688**	**165**
	Funding required				
467	General rates		534	625	91
780	Investment income allocated		820	870	50
292	(Increase) decrease in reserves		169	193	24
1,539	**Total funding required**		**1,523**	**1,688**	**165**
	Capital expenditure by activity				
11	Emergency Management	Capital - New	38	36	(2)
11	**Total capital expenditure**		**38**	**36**	**(2)**
	Other capital funding applied				
(11)	Increase (decrease) in reserves		(38)	(36)	2
0	**Total capital funding applied**		**0**	**0**	**0**

Technical Services

2016/17 Annual Plan		2017/18 Year 3 Long Term Plan	2017/18 Draft Annual Plan	Change
$000		$000	$000	$000
	Activity operating revenue			
244	Other revenue	207	240	(33)
904	Fees and charges	932	921	11
1,148	**Total activity operating revenue**	**1,139**	**1,160**	**(21)**
	Operating expenditure by activity			
0	Geospatial	0	0	0
2,123	Engineering	2,629	2,464	(165)
170	Data Services	175	208	33
3,784	Science	4,639	4,654	15
6,077	**Total operating expenditure**	**7,443**	**7,326**	**(117)**
4,929	**Net (surplus) deficit to fund**	**6,305**	**6,166**	**(138)**
	Funding required			
2,081	General rates	2,295	2,405	111
3,476	Investment income allocated	3,526	3,317	(209)
(628)	(Increase) decrease in reserves	484	444	(40)
4,929	**Total funding required**	**6,304**	**6,166**	**(138)**
	Capital expenditure by activity			
389	Geospatial	305	301	(3)
291	Data Services	296	264	(31)
275	Science	283	280	(3)
955	**Total capital expenditure**	**883**	**845**	**(38)**
	Other capital funding applied			
(955)	Increase (decrease) in reserves	(883)	(845)	38
0	**Total capital funding applied**	**0**	**0**	**0**

Corporate Services

2016/17 Annual Plan		2017/18 Year 3 Long Term Plan	2017/18 Draft Annual Plan	2017/18 Change
$000		$000	$000	$000
	Activity operating revenue			
(91)	Targeted rates	(99)	(211)	112
20,900	Dividends	21,850	23,850	(2,000)
9,355	External interest income	7,224	6,928	296
2,778	Internal interest income	4,399	3,072	1,328
751	Other revenue	1,174	426	748
115	Fees and charges	118	110	9
33,808	**Total activity operating revenue**	**34,667**	**34,174**	**493**
	Operating expenditure by activity			
40	Communications	41	41	0
0	Organisational Planning & Reporting	0	0	0
82	People and Performance	85	84	(1)
0	Support Services	(0)	(0)	0
501	Corporate Property	165	171	6
243	Information & Communication Technology	250	240	(10)
(33)	Finance	(103)	(301)	(198)
833	**Total operating expenditure**	**438**	**234**	**(203)**
(32,975)	**Net (surplus) deficit to fund**	**34,230**	**(33,940)**	**290**
	Funding required			
220	General rates	(71)	(208)	(137)
(33,859)	Investment income allocated	(34,159)	(33,732)	427
664	(Increase) decrease in reserves	0	0	0
(32,975)	**Total funding required**	**(34,230)**	**(33,940)**	**290**
	Capital expenditure by activity			
11	Communications	11	11	(0)
6,547	Corporate Property	10,891	19,245	8,353
2,999	Information, Communication & Technology	1,539	2,525	986
9,557	**Total capital expenditure**	**12,442**	**21,781**	**9,340**
	Other capital funding applied			
(9,151)	Increase (decrease) in reserves	(12,120)	(21,383)	(9,263)
406	**Total capital funding applied**	**323**	**398**	**77**
	Sources of capital funding			
406	Gross proceeds from sale of assets	323	398	75
406	**Total sources of capital funding**	**323**	**398**	**75**

APPENDIX 3

2017-18 Changes to Forecasting assumptions

Changes to Forecasting Assumptions

Appendix 3

The following are changes to the Forecasting Assumptions since the Long Term Plan 2015-2025

Assumption	2017/18 Draft Annual Plan	2017/18 Long Term Plan
1. Inflation factors	1.9%	2.5%
2. Investment income	5.0%	5.6%

Changes to Accounting Policies

Nil

APPENDIX 4

2017-18 Draft Annual Plan - Comprehensive Revenue and Expenditure

Prospective Statement of Comprehensive Revenue and Expense

2016/17		2017/18		
Annual Plan		**Year 3 Long Term Plan**	**Draft Annual Plan**	**Change**
$000		$000	$000	$000
	Operating revenue			
20,467	General rates	21,987	23,376	(1,389)
15,866	Targeted rates	19,034	16,365	2,669
8,935	Finance income	7,576	7,236	340
20,900	Dividends	21,850	23,850	(2,000)
15,739	Subsidies and grants	13,816	15,217	(1,401)
11,865	Trading and other revenue	15,840	11,477	4,363
93,772	**Total operating revenue**	**100,104**	**97,521**	**2,583**
	Operating expenditure			
34,772	Employee benefit expenses	33,664	36,213	2,549
5,816	Depreciation and amortisation	7,451	6,677	(774)
65,400	Trading and other expenses	77,804	78,496	692
105,988	**Total operating expenditure**	**118,918**	**121,386**	**2,467**
(12,216)	**Net surplus (deficit)**	**(18,814)**	**(23,865)**	**5,050**
	Other comprehensive revenue and expense			
667	Gain on property revaluations	961	961	0
6,749	Gain on infrastructure asset revaluations	6,480	6,480	0
(403)	Financial assets at fair value through comprehensive revenue and expense	(662)	(662)	0
7,012	**Total other comprehensive revenue and expense**	**6,779**	**6,778**	**0**
(5,204)	**Total comprehensive revenue and expense**	**(12,036)**	**(17,087)**	**5,050**

APPENDIX 5

2017-18 Draft Annual Plan - Council Funding Impact Statement

Council Funding Impact Statement

2016/17 Annual Plan $000		2017/18 Year 3 Long Term Plan $000	2017/18 Draft Annual Plan $000	Change $000
	Sources of operating funding			
20,467	General rates, uniform annual general charges, rates penalties	21,987	23,376	(1,389)
15,866	Targeted rates	19,034	16,365	2,669
15,664	Subsidies and grants for operating purposes	13,566	14,875	(1,309)
8,948	Fees and charges	10,162	9,563	599
29,835	Interest and dividends from investments	29,426	31,087	(1,661)
2,917	Local authorities fuel tax, fines, infringement fees and other receipts	5,679	1,913	3,766
93,696	**Total operating funding**	**99,854**	**97,180**	**2,675**
	Applications of operating funding			
100,047	Payments to staff and suppliers	110,822	114,475	(3,653)
0	Finance costs	0	0	0
125	Other operating funding applications	645	231	414
100,172	**Total applications of operating funding**	**111,467**	**114,707**	**(3,239)**
(6,476)	**Surplus (deficit) of operating funding**	**(11,613)**	**(17,527)**	**5,914**
	Sources of capital funding			
75	Subsidies and grants for capital expenditure	250	342	(92)
0	Development and financial contributions	0	0	0
0	Increase (decrease) in debt	0	0	0
406	Gross proceeds from sale of assets	323	398	(75)
0	Lump sum contributions	0	0	0
0	Other dedicated capital funding	0	0	0
481	**Total sources of capital funding**	**573**	**740**	**(167)**
	Application of capital funding			
	Capital expenditure			
0	- to meet additional demand	0	0	0
18,457	- to improve the level of service	16,745	32,647	(15,902)
5,103	- to replace existing assets	8,043	13,819	(5,776)
(30,152)	Increase (decrease) in reserves	(36,924)	(63,849)	26,926
597	Increase (decrease) of investments	1,095	597	498
(5,995)	**Total applications of capital funding**	**(11,041)**	**(16,786)**	**5,746**
6,476	**Surplus (deficit) of capital funding**	**11,613**	**17,527**	**(5,914)**
0	**Funding balance**	**0**	**0**	**0**
	Note: This financial statement excludes:			
5,816	Depreciation and amortisation	7,451	6,677	(774)

SUPPORTING DOCUMENT - Annual Plan 2017/18
Information Document

Receives Only – No Decisions

Report To: Regional Council

Meeting Date: 09 March 2017

Report From: Chris Ingle, General Manager, Integrated Catchments

Update on Lake Rotorua Incentives Committee Activities

Executive Summary

Negotiations with land owners wishing to sell nitrogen to the Lake Rotorua Incentives Committee are progressing well with the Committee recently signing off on the sale of 0.356 tonnes bringing the confirmed total of nitrogen purchased to date to 6.1 tonnes.

There are a further six deals in the pipeline with the potential to realise a further 7.2 tonnes by the end of the financial year. The Committee has completed the preparation of its Strategic Plan and has commenced work on a communications and engagement plan.

A tendering process has been approved by the Committee for small land blocks who have less than 1 tonne in-lake nitrogen available for sale. A call for expressions of interest will be made by the end of March with final decisions for sale and purchase being made by the end of this financial year. This is expected to yield a further 10 tonnes of nitrogen making the calendar year target of 20 tonnes in-lake nitrogen achievable.

The first of the low nitrogen fund projects involving the development of a forestry value assessment tool has been presented to the Committee and will be piloted on a number of Maori owned land blocks. It will enable an evaluation of land best suited for forestry to be made including the potential value of aggregating small land blocks. It is a tool that can be readily transferred to pastoral farmers enabling optimal land use value to be assessed.

Recommendations

That the Regional Council:

1 Receives the report, Update on Lake Rotorua Incentives Committee Activities;

1 Background

The objective of the Incentives programme is to permanently reduce the level of nitrogen entering Lake Rotorua by 100 tonnes, within a budget of $40 million, by purchasing rights to discharge nitrogen below the level established by the assigned

nitrogen discharge allowance (NDA) set by the Bay of Plenty Regional Council. The target deadline for this purchase process is December 2022.

First deals for the sale and purchase of nitrogen (including a deal securing the decommissioning of a dairy farm) have been secured, and increasing interest is being shown by small block owners in particular. Despite the uncertainty of proceeding before the Rules are finalised and some reluctance by larger land block owners to participate at this time, momentum is being maintained to get deals across the line. It is anticipated that interest will grow as the hearings on the Rules proceed, levels of uncertainty are reduced and awareness builds that deals are being secured.

2 Activities

Landowner engagement and completion of nitrogen deals in the pipeline has continued to be the key focus for Incentives staff, while the Committee members have been busy preparing and finalising a strategic plan and have more recently commenced work on a communications and engagement plan alongside the regional council communications professionals.

In terms of the closed deals, there are two deals already settled (6.1 tonnes), and a 6 further deals in the pipeline including three new 2017 customers. The total potential Nitrogen purchases currently in the pipeline equate to 7.2 tonnes. The customers are seeking a variety of changes to their land use.

It is anticipated that at least 4 tonnes of the above will be achieved by the end of this financial year leaving a further 10 tonnes to reach an expected in-lake total target of 20 tonnes by the end of this calendar year.

Strong interest has been shown by smaller land blocks as evidenced by the current pipeline opportunities. In order to provide a more rational and cost effective approach to small landowner interests (defined as having less than 1 tonne of nitrogen available for sale), a tender process has been designed whereby calls for expressions of interest will be made by the end of March and decisions confirmed by 1 July 2017. It is expected that this could pull a further 10 tonnes of nitrogen into the mix.

Additionally, the first of the low nitrogen fund projects involving the development of a forestry value assessment tool has been completed and is ready to be launched publically. This is an online tool that will enable land owners to get a feel for the relative value of forestry options (pine trees and manuka) on those parts of their land best suited for trees. It will be piloted among a number of Maori owned blocks and will be useful to assess the value potential of aggregating a number of smaller blocks to create scale and thereby open up development potential of a number of under-utilised land blocks.

This could be a useful tool to look at optimal opportunities on pastoral blocks where selected planting of trees could be assessed. This could potentially create more value for the land owner at the same time presenting opportunities for participation in the Incentives programme particularly for some of the larger pastoral land blocks.

3 Issues

The uncertainty of proceeding prior to the Rules being confirmed remains an on-going issue. Hopefully the advent of the Plan hearings due to begin in March will ultimately deliver greater certainty and associated opportunities for the Incentives programme.

At this stage I would anticipate that around 20% of the 100 tonnes required will come from the small land owner blocks, 30% from the dry stock farmers and 50% from Dairy farmers with 10% of the latter already achieved through the first deal signed off by the Incentives Committee.

4 Conclusions

Although the deals in the pipeline are mostly smaller deals, positive momentum and interest in the Incentives programme is being maintained.

Based on current progress, there is confidence that a total of 10 tonnes of in-lake nitrogen will be secured by the end of this financial year and that a target of 20 tonnes is achievable by the end of the 2017 calendar year (cumulative total).

Optimism is further fuelled by the launch of a forestry value assessment tool and the planned roll out of a tender process designed to create a more cost effective and consistent approach for engaging with small land owner blocks.

Finally, hearings on the Rules will commence soon, which will improve certainty for land owners over the course of the year, which is likely to boost interest in the Incentives programme.

5 Council's Accountability Framework

5.1 Community Outcomes

The Lake Rotorua Incentives Scheme directly contributes to the Community Outcomes of Water Quality and Quantity and Environmental Protection in Council's Long Term Plan 2015-2025.

The Lake Rotorua Incentives Committee has the primary objective to contribute to the sustainable improvement of water quality in Lake Rotorua by achieving a 100 tonne reduction of nitrogen entering Lake Rotorua and ensuring this investment of Council is protected in perpetuity.

5.2 Long Term Plan Alignment

This Incentives Scheme is planned and funded under the Rotorua Catchments Activity of the Bay of Plenty Regional Council's Long Term Plan 2015-2025 and the Rotorua Te Arawa Lakes Programme. Implementation of the Incentives Scheme in accordance with planned targets directly contributes to KPI 4 of the Long Term Plan which relates to nitrogen reduction in Lake Rotorua, towards the total 320 tonne nitrogen reduction target of the Integrated Framework plus engineering solutions.

5.3 Current Budget Implications

The Lake Rotorua Incentives Scheme is within the current budget for the Rotorua Catchments Activity in the Annual Plan 2016-2017 or Year 2 of the Long Term Plan 2015-2025.

5.4 Future Budget Implications

The adoption of the strategic plan is not inconsistent with the current budgets for the Incentives Programme. There are no implications for future expenditure other than that already expected and provided for.

Te Taru White
Incentives Programme Director

for General Manager, Integrated Catchments

2 March 2017

Receives Only – No Decisions

Report To: Regional Council

Meeting Date: 09 March 2017

Report From: Fiona McTavish, General Manager, Strategy & Science

Update from the University of Waikato

Executive Summary

The purpose of this report is to update the Regional Council on the activities of the University of Waikato which are of relevance to the Bay of Plenty Region. This includes information on;

- The Tauranga Campus and the proposed Marine Centre;
- Establishment of Te Waiora Freshwater Management Institute;
- A proposed Regional Centre for Design, Innovation and Technology in Horticulture (CDITH); and
- The Entrepreneurial Universities Fund.

The Annual Reports from the University of Waikato Chairs are also provided along with a Project Brief for an independent review of the Chairs.

At the conclusion of this item Professor David Hamilton will deliver a farewell presentation.

Recommendations

That the Regional Council:

1 Receives the report, Update from the University of Waikato.

2 Notes that staff intend to initiate an independent review of the University Chairs with findings to be delivered before the end of this financial year.

1 Purpose

The purpose of this report is to;

1. Update the Regional Council on the activities of the University of Waikato which are of relevance to the Bay of Plenty Region;
2. Advise Council of the intention to initiate an independent review of the University of Waikato Chairs.

2 University of Waikato Update

Professor Bruce Clarkson, Deputy Vice Chancellor Research, will provide a verbal update (see key topics below). This will be followed by a presentation from Professor David Hamilton who has recently accepted a new academic position in Australia.

Also attached for information are the Annual Reports from the University Chairs.

2.1 Tauranga Campus and the proposed Marine Centre

Professor Clarkson will outline the latest progress with the Tauranga Campus and the proposed Marine Centre at Sulphur Point.

2.2 Establishment of Te Waiora: the Freshwater Management Institute

The University of Waikato and NIWA intend to jointly establish Te Waiora Institute for Freshwater Management. This will be located on the University's Hamilton campus and involve national and international partners, and iwi.

As a result of existing MOU's and agreements (e.g. the Chairs), the proposed partners and advisory board members for the set up phase are Bay of Plenty Regional Council, Waikato Regional Council and the Waikato-Tainui College for Research and Development, with other partners to be added later. A director will be appointed (funded by UoW and NIWA) to manage the Institute and undertake the partner engagement required in the set-up phase.

The Institute will be a world-leading centre for interdisciplinary freshwater research and teaching that builds capability and capacity across the sciences, engineering, management, law, economics, policy, Mātauranga Māori, and education. It will deliver greater economic, social, cultural and environmental benefits from and for freshwater and represents a paradigm shift for New Zealand in freshwater management.

The Institute will be complemented by the newly created Waikato Regional Council River Science Chair.

2.3 The Regional Research Institute

The Regional Research Institute proposal was submitted on 27 January 2017 and has the working title of "Centre for Design, Innovation and Technology in Horticulture" (CDITH). This would be a new organisation established with the purpose of accelerating innovation performance for the region and New Zealand. It would do this by:

1. Developing a distinctive programme of research and innovation, where regional strengths in horticulture (particularly kiwifruit) are leveraged to support a cluster of knowledge intensive companies;
2. A structured approach to integrating CDITH's capability into the region, increasing regional innovation capability though services available to the broader regional business and research sectors, including project work and consultancy, capability development and networking, and an innovation space and facilities.

The University of Waikato was a key driver of this Institute proposal supported by Priority One and a range of very enthusiastic businesses (Bluelab, Eurofins NZ, Plus Group, Trimax, Waka Digital, Zespri).

2.4 Entrepreneurial Universities

The Tertiary Education, Skills and Employment Minister, Steven Joyce, has announced a $35 million investment over four years for "Entrepreneurial Universities". More specifically, the Minister noted that he especially wanted to recruit "people with an established record in innovation and entrepreneurship in the top 'maker' disciplines, to help grow the pipeline of excellent innovative start-up companies in New Zealand, and train the next generation of scientific entrepreneurs".

The government's investment will be up to $35 million over the first four years and $10 million per year in out-years. Each proposal can request up to $1.5 million of government funds, matched at least 50:50 by university funds, so a maximum of about seven proposals will be funded in the first investment period. An individual proposal will be funded for three to four years.

The Entrepreneurial Universities Fund provides the University of Waikato with a significant opportunity to modernise research and teaching offerings to increase our relevance, especially to our regional industry stakeholders and partners, and to enhance our contribution to the regional and national economy. The new Tauranga Campus and the vibrant innovation ecosystem emerging in the Bay of Plenty seem ideally suited for a distinctive contribution to research and teaching. Every effort is being made to submit a competitive proposal for submission to the Tertiary Education Commission on 17 March 2017.

3 Review of the University Chairs

The agreement for the Chair in Lake Management and Restoration ends on 30 June 2017. The Coastal Chair agreement does not end until 30 June 2019. Although the coastal agreement still has some time to run staff consider that it is appropriate to undertake a review of both at the same time. This review would consider changes to the relationship and delivery outputs but also assess if there is any merit in combining or extending either or both of the agreements to cover a wider aspect of the environment. For example, there may be merit in extending the Lakes Chair to fresh water to help support the science needs of the Freshwater Futures Programme.

A copy of the Project Brief for the review is attached for information.

4 Council's Accountability Framework

4.1 Community Outcomes

The relationship with the University of Waikato contributes to a number of Community Outcomes in the Council's Long Term Plan 2015-2025, in particular Water Quality and Quantity and Environmental Protection.

4.2 Long Term Plan Alignment

As above.

Current Budget Implications

None

Future Budget Implications

Future work on this programme is provided for in Council's Long Term Plan 2015-2025.

Rob Donald
Science Manager

for General Manager, Strategy & Science

1 March 2017

APPENDIX 1

Review of Lakes and Coastal Chair 2016

Project Brief

Project title: Review of the Rotorua Lakes and the Bay of Plenty Coastal Chair's 2016	**Date:** 11 November 2016
Project sponsor: Chris Ingle / Fiona McTavish	**Group:** Integrated Catchments / Strategy & Science
Business owner: Rob Donald	**Prepared by:** Andy Bruere
Project Manager: To be confirmed	**Objective No:** A2470770

1 Introduction

The Bay of Plenty Regional Council funds two chairs in lake and coastal research with the University of Waikato. The work expected of these positons and funding commitment is outlined in two agreements between the UoW and BoPRC.

The agreement for the Chair in Lake Management and Restoration ends on 30 June 2017. The Coastal Chair agreement does not end until 30 June 2019. Although the coastal agreement still has some time to run it would seem appropriate to undertake a review of both at the same time. This review would consider changes to the relationship and delivery outputs but also assess if there is any merit in combining or extending either or both of the agreements to cover a wider aspect of the environment. For example, there may be merit in extending the Lakes Chair to fresh water to help support the science needs of the Freshwater Futures Programme.

1.1 Key objectives

Objective
1. Undertake an independent review of the outputs delivered under the Lake and Coastal Chair agreements, specifically those identified under the Objectives and Terms of Reference.
2. Assess whether there are ways of improving delivery against BOPRC expectations.
3. Assess the level of support provided to each of the Chairs by the UoW and make recommendations on changes that could improve output for BOPRC,
4. Assess the current research needs for the Lakes and Coastal Chairs and make recommendations on the value, need and logistics of changing their focus to a "Mountains to the Sea" approach or some other configuration.

2 Current situation

Currently the Lakes Chair and the Coastal Chair are two independent agreements for the delivery of research to the Rotorua Lakes Programme, and to meet BoPRCs coastal research needs. For the Lakes Chair staff meet regularly with Professor Hamilton to review research progress and agree on the research direction, which is generally outlined in the Lakes Programme Science Plan. There is no specific reference in the agreement as to how these priorities will be set and how often they will be adjusted, but the programme with the University is flexible and priorities can be changed through discussion. A similar situation exists for the Coastal Chair.

It is recognised that these are academic research chairs, albeit with a significant focus on applied research. Although ideally BoPRC would like a large proportion of the research output to be directly applicable to lake and coastal management and restoration, these are not normal “contract” roles where we as the client specifies 100% of the outputs required. It is expected that to retain academic staff there is a need for UoW to be involved with national and international experts and undertake collaboration that keeps them at the forefront of freshwater and coastal research. The benefit of this is that the Chairs are able to provide expert knowledge and advice on current and future issues that may be faced in the Bay of Plenty.

3 Project description

This would be an independent review of the current Lake and Coastal Chair agreements, including the outputs delivered to the Regional Council over the past 3 years. The review would identify ways to improve the outputs where applicable, assess the level of support by the University to match funding or other resources provided by BoPRC, and assess the current research focus of the two chairs. We would also be interested in an assessment of the value, need and logistics of changing the focus to a “Mountains to the Sea” approach or some other configuration.

3.1 Scope of project

The review would involve interviews with key BoPRC and UoW staff, and potentially councillors. A selection of documents would be provided to the reviewer as required including annual reports on the Chairs, research reports and scientific papers, minutes and correspondence.

The reviewer would produce a written report with recommendations and present this to the Senior Leadership Team. This would be followed by a recommendation to Council on the future of the Chairs.

In scope

Specifically review the following:

1. What output is BoPRC getting from each of the University Chairs?
2. Do the university outputs meet the agreement requirements (are the requirements clear)?
3. Should future agreements be more specific about the outputs and how these are agreed between the University and BoPRC?
4. What support should BoPRC expect the University to provide each of the Chairs?
5. Are there conflicts with the work undertaken by the University that need to be addressed, for example on consenting matters?
6. Is there a better structure for the agreements that could be implemented, for example combining the contracts into one agreement and addressing waterways not currently covered by the contracts?

Out of scope

The review will not investigate or report on any employment issues between the UoW and its staff.

3.2 Dependencies

The review is dependent on access to documents held by BoPRC and UoW and access to appropriate staff of both organisations.

3.3 Timescales

Initiation	*Execution*	*Close out*
TBA		

3.4 Benefits/outcomes

Qualitative benefits	*Indicator of success*	*Owner*
Final report on the review of the Lakes and Coastal Chairs	Completed report	Rob Donald
Presentation of the findings as appropriate	Presentation to SLT Recommendation to Council	Andy Bruere/Rob Donald

3.5 Financial analysis (budget required)

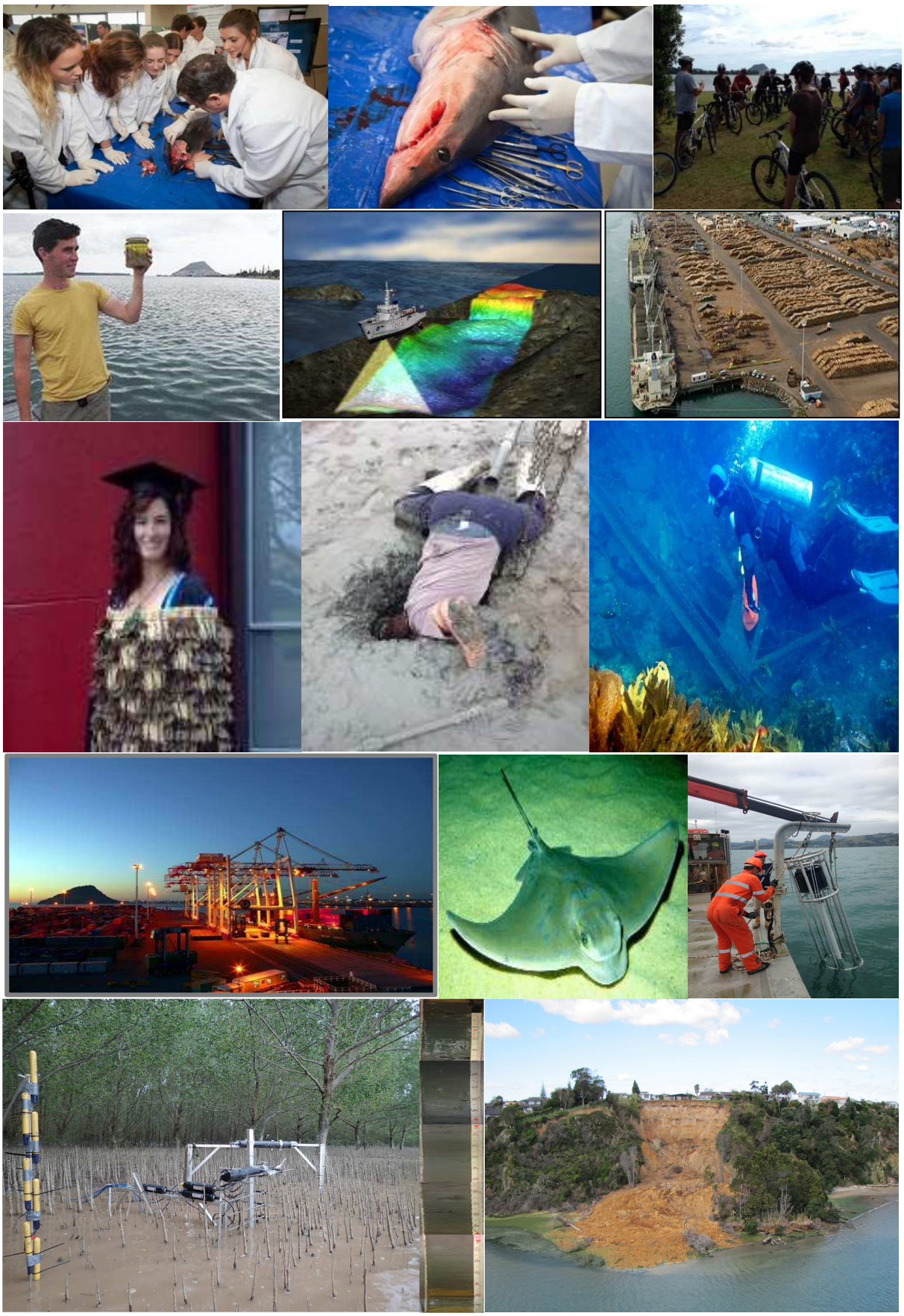
Year	*Description*	*Amount*
2016/17	Complete project during 2016/17 year.	$10,000 - $20,000
	Total Costs	

APPENDIX 2

BOPRC Chair in Coastal Science Annual Report 2015-2016

Bay of Plenty Regional Council Chair in Coastal Science

Annual Report for the period 1st June 2015 to the 30th June 2016



Coastal Science Chair Research Summary 2015-2016:

The following report summarises the activities of the Bay of Plenty Regional Council Chair in Coastal Science at the University of Waikato (UoW).

Highlights

- Publication of the MV Rena environmental effects and recovery science program in a special edition of the NZ Journal of Marine and Freshwater Research (Vol 50, 2016).
- Launch of House of Science to the central city location.
- Confirmation of planning for a fit for purpose Marine Research Facility in Tauranga.
- Initiation of Oranga Taio Oranga Tangata MBIE Targeted Research Program, the only current estuarine research program for MBIE in New Zealand.
- Support of the Kai Moana restoration project with Manaaki te Awanui in translocation of pipi from dredged locations on Centre Bank to sites selected by Kaumatua within the harbour.
- Review with MNZ of response to oil spills (Rena and Mobil events).
- Completion of the Sea Change Review for marine spatial planning in the Hauraki Gulf. Insights of relevance to the Bay of Plenty.
- Drafting of the BApp Sci degree too be taught fully in Tauranga; content drawn from recent marine research and environmental response experience in the Bay of Plenty. Currently in review.
- INTERCOAST MBIE funding successfully contested and completed.
- Hosted the 7th INTERCOAST conference in Tauranga with a workshop and field program in Opotiki and Raukokere.
- Smart Ideas Endeavour Fund awarded. Ocean Acidification and sediment nutrient flux
- Battershill awarded 2015 Science Communication Medal, New Zealand Association of Science (in recognition of science communication throughout the MV Rena incident).
- Well over $1.5m of external funding (additional to BoPRC) successfully garnered by the Chair and senior UoW academics for research in the BoPRC region

Funding for the Chair supports a number of people directly and indirectly, including:

- Professor Chris Battershill (Chair)

Others who have undertaken projects related to the Coastal Chair and fully domiciled in the Bay of Plenty at the Field Station (funded externally through contracts include):

- Dr Phil Ross (Research Fellow)
- Mr David Culliford (Technical Officer)
- Mr Rex Fairweather (Technical Officer)
- Ms Te Puea Dempsey (Administrative Officer)

Other Academic staff supported by the enterprise (Field Station and ancillary field support) created around the Coastal Chairs position in Tauranga include:

- Professor Chad Hewitt
- Professor Marnie Campbell
- Mr Shane Stuart
- Professor Conrad Pildich
- Associate Professor Karin Bryan
- Dr Willem de Lange
- Dr Vicky Moon
- Dr Julia Mullarney
- Professor Nick Ling

Regular visitors supported by the Chair's activities include:

- Professor David Schiel
- Professor Ian Hawes (now fully domiciled at the Field Station 2017+)
- Professor Ralf Shothauser (now fully domiciled at the Field Station 2017+)

Also supported at the Coastal Marine Field Station is Manaaki te Awanui and associated collaborative research:

- Mr Caine Taiapa
- Ms Waiaria Rameka
- Ms Vanessa Taikato

House of Science has been supported since its inception at the Coastal Field Station and in this cycle has now relocated to a central city location.

- Ms Chris Duggan

The following current students have involvement in research directly associated with the Chair's position in Tauranga/Bay of Plenty.

- Julien Huteaux (PhD submitted Jan 2016)
- Helen Cadwallader (PhD confirmed Jun 2016)
- Sam McCormack (PhD initiated June 2016)
- Merle Bollen IC (PhD in progress)
- Manuela Biondo IC (PhD in progress)
- Anja Singer IC (PhD in progress)
- David Culliford (MSc awarded April 2016)
- Nathania Brooke (MSc awarded April 2016)
- Nicole Sturgess (MSc awarded April 2016)
- Te Puea Dempsey (MSc awarded April 2016)
- Caleb McSweeney (MSc awarded April 2016)
- Nikki Webb (MSc awarded April 2016)
- Sam McCormack (MSc awarded April 2016)
- Kiri Reihana (MSc awarded April 2016)
- Vanessa Taikato (MSc awarded April 2016)
- Ashleigh Browne (MSc completed June 2016, now awarded)
- Amy Platt (BSc Hons awarded April 2016)
- Daniel Burnstein (MSc awarded April 2016)
- Stine Sorensen (MSc in progress, now converted to PhD)
- Graeme Hull (MSc in progress)
- Melissa Kellett (MSc in progress)
- Fenna Beetes (MSc in progress)
- Carlos Moraes (MSc initiated March 2016)
- Ryan Koverman (MSc initiated March 2016)
- Jane Cope (MSc initiated March 2016)

The following students are associated with the Chairs activities as supported in the INTERCOAST program. Supervisors are indicated (please see attached INTERCOAST report to MBIE, Appendix I).

- Ben Stuart (PhD ongoing, Karin Bryan et al)
- Bradley Monahan (PhD ongoing, Karin Bryan et al)
- Mariana Cussioli (PhD ongoing, Karin Bryan et al)
- Peter de Ruiter (PhD ongoing, Karin Bryan et al)
- Pham Thi Lien (PhD ongoing, Lars Brabyn et al)
- Philipa Mills (PhD ongoing, Vicky Moon et al)

Overview

Projects relating to the Chair are listed below, as well as a number of other activities that are important in the context of the University of Waikato's commitment to research on the coastline and its estuaries.

The University of Waikato provides formal cross disciplinary technical advice in a number of capacities. Professor Chris Battershill and the growing academic team specialise in benthic marine ecology with complementary skills. The team are specialists in experimental and monitoring design with skills bridging biosystematics, geomorphology, ecohydrology, genetics, microbiology and macro ecology. The Chair promotes cross disciplinary research and supports work not only in the sciences, but links to cultural science, law and social science. Manaaki te Awanui co-located at the Coastal Field Station continues to provide synergy across most research projects of relevance to the Tauranga Moana and Moana a Toi.

Staff and students maintain involvement at a number of levels with a large postgraduate program now at full capacity for the size of the Field Station (relevant summaries are provided in latter sections of this report). Professor Battershill also transmits relevant information at national level to council staff and councillors of the Regional Council through the full range of scientific outlets as well as disseminating information through public presentations, seminars and media. Of significance in this cycle are invitations to speak at FoMA and other Māori for a in the region at conferences focusing on Climate Change and Water. This and related activity has been recognised in late 2015 with award of the NZ Association of Scientists Science Communication Medal. The Chair has also been asked to provide advice to a number of independent peer review processes including a final review of the Hauraki Gulf Spatial Plan (Sea Change), and Maritime New

Zealand's review of Oil spill engagement practice (this in association with Tauranga Moana iwi). Battershill was an invited reviewer of the Nagoya Protocol (Convention for Biodiversity Conservation) in Tokyo late 2015, to provide input on New Zealand's legal position regarding Access and Benefit Sharing policy for use of marine genetic resources. Of note is the Chairs involvement as a contributing scientist in the National Science Challenges: Sustainable Seas and as Project Leader for the Innovation component of the Valuable Seas Theme.

The Chair maintains a strong international profile, advancing the international linkage with James Cook University for algal bioremediation and aquaculture research (now linked to a new Degree to be taught in Tauranga) and has expanded links with the Yantai Institute of Coastal Zone Research again in areas of environmental bioremediation and algal innovation (sea lettuce uses and remediation of water quality). This collaboration is generating innovations in the algal bioremediation space of direct applicability to Tauranga Harbour, Maketu and Little Waihi Estuaries. Research collaborations have been established with the University of California Regents group and UC San Diego, UC Santa Barbara in particular, in areas of rocky reef ecology, climate change and marine biotechnologies. The INTERCOAST collaboration continues to strengthen with new initiatives in the eastern Bay of Plenty examining land-sea connectivity and effects of sedimentation from forested (pine) hinterland.

Coastal Science Chair Mission and a 5 Year Synthesis

Academic

Coastal Science as supported by the Bay of Plenty Regional Council at the University of Waikato builds on the University philosophy of offering excellence in relevant, multi-disciplinary education and research opportunity of international standing. It builds on the Tertiary Partnership with the Bay of Plenty Polytechnic, Te Whare Wānanga o Awanuiārangi and the Waiariki Institute of Technology (now Toi Oho Mai), in providing stepping stones to the full range of careers that are now on offer in New Zealand and overseas in sectors spanning coastal environmental science, environmental management, environmental law, aquaculture, and 'blue' biotechnology. The vision is to train the best equipped students for a wide variety of careers; adding to the knowledge economy of the region; while developing innovative enterprise associated with the Bay of Plenty marine estate that will generate new jobs. Research training is always applied to relevant environmental issues within the Bay of Plenty region. The task now is to grow the teaching base at Undergraduate level in Tauranga with development of a new Degree (BAppSci with Majors in

Sustainability and Aquaculture). This builds on regional research initiatives to provide relevant new educational opportunity based on coastal sustainability and resource use. Over the past 5 years, the chair has been primary supervisor to 10 completed MSc students, 4 almost complete MSc's, 1 complete PhD and 2 new PhDs and co-supervisor to 4 PhD's and 3 MSc's. In addition the chair overseas internal NZ interests of 20 PhDs current in INTERCOAST (on top of 15 now complete from the first phase) as the NZ leader of the INTERCOAST collaboration.

Facility Base and Research Platform

The Tauranga Coastal Field Station (CMFS) has grown quickly since an office was leased at Sulphur Point in late 2011. From an initial compliment of 2 persons (Battershill and PhD student Huteau), there are now over 30 researchers based at the CMFS. This growth has been supported by a range of stakeholders notably BoPRC, TCC and the Port Company with support from the University of Waikato. It has demonstrated longevity in revenue generation (self-funding model, see below). In addition, the Chair has championed support of the successful House of Science (generating a membership of over 25,000 students and 900 secondary school teachers in a little over 1.5 years). The HoS is now 'fledged' carrying with it a legacy of University of Waikato support and sponsorship. The Coastal Field station now supports 5 staff, two Post Doctoral Fellows, two long term Professorial adjuncts, a Research Associate, 2 Royal Society funded teacher sabbaticals, and 12 full time resident students. The Field station supports an additional 5 (on average) PhD students from Hamilton/INTERCOAST at any one time (for short visits). The Chair has either directly or indirectly facilitated generation of over $3.5million in external research funding since 2011.

The CMFS is now at capacity and the condition of the current lease is deteriorating. It currently cannot support research that requires clean rooms and temperature controls dry and wet lab conditions. There is now agreement that a new fit for purpose facility is required with some urgency. Both the BoPRC and UoW welcome discussion on co-investment/co-habitation of science staff in a new entity. This will be a high priority for 2017.

Coastal Chair summary 2011-2016 reporting against BoPRC prescribed duties

a. To foster a multi-disciplinary approach to coastal marine research and ecological management of the coastal environment.

The Coastal Chair works seamlessly with cultural specialists, ecologists, coastal morphologists, modellers, water quality specialists, chemists, microbiologists, lawyers and social scientists. The

multi-disciplinary approach that has been developed over the last five and a half years has now been effectively tested at a number of levels. INTERCOAST was the flagship, now nationally recognised (see below). Of growing importance is the relationship established with Te Mauri Moana, a multidisciplinary partnership forged to respond to the Rena event. The research partnership provides a unique approach to environmental issues, data from which is underpinning future action (Otaiti environment). Matauranga Maori is central to all work, now embodied in co-investment of the Coastal Field station by Manaaki te Awanui and embedded in initiatives championed in the National Science Challenge, Sustainable Seas. The science/Matauranga interconnection was again harnessed in response to the Mobil spill. The research collective is now nationally recognised and has led to invitations to provide environmental advice throughout the region and internationally.

b. To encourage research into the understanding of coastal processes that permits considered decisions for the effective management of the environment and its resources.

Over 20 PhD and MSc students are now domiciled at the Coastal Field Station or use it in support of field work associated with coastal environmental issues of high relevance to the Bay of Plenty Regional Council. This is in addition to other students from Waikato University and elsewhere (including INTERCOAST) who base their research in the Bay of Plenty. Building on the multidisciplinary/cross disciplinary approach together with strong elements of cultural engagement, the health and functioning of the regions coasts and estuaries are being examined from molecular levels to whole of ecosystem levels now including worfk on fish populations and apex predators and their habitat use. The Rena environmental investment has substantially added to the store of information at broad spatial scales and indeed has added to New Zealands preparedness for maritime incidents in an environmental context. New work includes examination of marine biosecurity ecology, sharks and rays, while biogeochemistry studies of pollutant uptake in kai moana at the other end of the spectrum informs ecosystem resilience. Focus continues on estuarine health with new work on mangroves, sea lettuce and seagrass as well as examinations of port discharges. A new initiative with the Tauranga City Council will examine methods by which waste water can be scrubbed utilising marine and freshwater algae, including sea lettuce. This work builds on collaboration with James Cook University and Yantai Institute of Coastal Zone Research. The Chairs research group is now poised to integrate research results into coastal spatial planning models and link with lakes and river research (Lakes and River Chair). Invitation to review SeaChange (Auckland Council) is evidence of the regard of the approach to date and in turn informs strategy for the Bay of Plenty.

c. To encourage continuing active partnership between the University and both territorial and

regional government, other research organisations, the community and iwi on coastal issues.

Relationships between the Coastal Chair, Tauranga Moana and Moana a Toi iwi, industry, the Regional Council and a number of the District Councils continue to flourish as demonstrated by coinvestment in facility and equipment (Manaaki te Awanui, Ngati Makino, Opotiki District Council, DML Ltd, Tauranga Port, Priority One and others). Other research organisations that continue to collaborate and invest in Coastal Chair activity include the University of Bremen, Bay of Plenty Polytechnic and Te Whare Wananga o Awanuiarangi, University of Canterbury, NIWA, Cawthron Institute. Internationally, INTERCOAST grows and an articulation in research and teaching is being developed with James Cook University (Australia) and Yantai and Ocean Universities in China, also the Yantai Institute of Coastal Zone Research. The Chair has presented on invitation to a range of public seminars and forums including; Rotary, Lions, University of the Third Age, Probis, NZ Marine Sciences Society Conference, Bay of Plenty Regional Council, Maketū Environmental Society, Western Bay of Plenty and Tauranga City Councils, Auckland Council, (see attachments).

d. To increase the capability and capacity of coastal scientists and managers by offering teaching and supervision of students in Tauranga.

The Coastal Field station hosts over 25 post graduate students who use the facility as their main base. This year alone, 8 MSc students have successfully completed their theses/degree. Many of these students started amongst the 18 summer school scholarship holders that were generated from the Rena Environmental contract (MfE). In addition a new 300 level course in aquaculture has been launched and a review of Coastal and Marine courses and research just completed will lead to a range of new courses being taught in Tauranga. These will include marine ecology, biosecurity, systematics, ecohydrology, aquaculture, conservation and possibly cross disciplinary courses in environmental management (marine), and marine related law and social science. The articulation with James Cook and Chinese Universities will add to the vibrancy of high level education provision in the region.

e. To undertake integral participation and contribution to the research projects within the INTERCOAST programme.

The Coastal Chair is an integral part of INTERCOAST which is a research partnership between the University of Waikato and the University of Bremen, Germany. Additional research effort has been leveraged from this partnership bringing new activity into the Bay of Plenty. The German Government have awarded an additional €3.5m for the second phase of the INTERCOAST program following a review by an International panel of the first phase achievements and a proposal for new work to 2018. In addition MBIE how now recognised the value of

INTERCOAST to the Bay of Plenty Region and New Zealand, now funding New Zealand scientists and students to spend their research time in Germany. Capacity generated by INTERCOAST and initiatives from INTERCOAST research direction is now integrated into the National Science Challenge Sustainable Seas. INTERCOAST is a strengthening model being adopted by other Universities in New Zealand and will be used as a template for building relationships with the Yantai Institute of Coastal Zone Research in environmental bioremediation and algal biotechnologies. Planning is underway to extend the INTERCOAST model into new EU funding regimes (ITN/ETN) to examine urbanised coastal sustainability.

Research Summary

1. ***INTERCOAST and Estuarine Research*** **(see also Appendix I)**
   Chris Battershill NZ INTERCOAST Program Leader

   During the 2015-2016 period two international INTERCOAST workshops (2-3 weeks each) have been held. The 6th INTERCOAST workshop was held in Bremen, Germany spanning 1-26th of September (15 New Zealand staff and students attended) and the 7th workshop was held throughout February 2016 in Tauranga and East Cape (for the field components), with 26 German staff and students attending the full event. A report of Bay of Plenty estuarine based research activity is provided in Appendix I.

2. ***Oranga Taiao, Oranga Tangāta – Knowledge and Toolsets to Support Co-Management of Estuaries – Subcontract with Massey University – In-Kind Co funding from BoPRC***
   Chris Battershill, Caine Taiapa, Phil Ross, Dave Culliford

   We have contributed to the four-year MBIE programme, Oranga Taiao, Oranga Tangāta which started 1st October 2015. The central objective of the research programme is to empower iwi/hapu to be stronger partners in the co-management of estuaries, by providing improved knowledge/tools/processes. We are have contributed to Research Aim Three: *Ecological Understanding, Modelling and Analysis* in particular undertaking the following critical steps:

   3.1 – Survey the sub-tidal water column in the Tauranga Harbour
   3.2 – Survey the sub-tidal benthic zone in the Tauranga Harbour
   3.3 – Survey of the sub-tidal water column for fish and other species
   3.4 – Survey and map Tauranga Harbour for the distribution of sea lettuce and seagrass.

A synthetic review of all data layers (biological and physical) is currently being assembled by the Chair for input into the modelling package by the other members of the OTOT team (Cawthron

Institute and Massey University). This will be published. The aim is to integrate across known and new information linking the biophysical regime of sediments and water quality both intertidal and subtidal with new information on biogenic community structure in the deeper channel beds and fish abundance. A full report on progress is available in Appendix II.

***3. Rena Scientific Sampling* - P & I Services Ltd**

Phil Ross, Rex Fairweather, Dave Culliford

We have continued to undertake a sampling programme on the Astrolabe Reef (Otaiti). During the 2015-2016 year we have undertaken the collection of samples, processing of samples at sea and bringing the samples to shore for analysis. We have undertaken bi-annual sampling and reporting as well as habitat mapping. The effects of the Rena wreck *in situ* are mostly limited to the region of the debris field apart from TBT legacies which appear to be more widely distributed.

***4. Marine Biosecurity Maintenance* - Bay of Plenty Regional Council**

Phil Ross, Rex Fairweather, Dave Culliford, Chris Battershill, Marnie Campbell, Chad Hewitt

An extension was made to continue the Marine Pest Surveillance in the Tauranga Harbour: Monitoring and Assistance. Funding was provided to continue surveying and monitoring for the presence, absence and spread of *Sabella spallanzanii* (Mediterranean Fanworm), *Styela cava* (the Clubbed Tunicate), *Musculista senhousia* (Asian Date Mussel) and *Eudistoma elongatum* (Australian Tunicate) within the Bay of Plenty Region.

Funding from this project has also been provided to fund a Masters student in the area of Marine Biosecurity. Incursions of small fan worm are being regularly discovered and removed. A research group has now been assembled to focus on marine invasion science within the Bay of Plenty Region led by Professors Hewitt and Campbell with the appointment of a new PostDoc (Dr Kaeden Leonard) in late 2016. A package of MBIE projects is being prepared for submission in the 2016/17 funding round to examine how marine adventives gain a foothold in new areas, and how their establishment may be mitigated.

5. Rena Legacy Funding – Tauranga City Council

Chris Battershill

Funding was provided as part of the Rena Legacy Funds to continue environmental recovery research linked to examining the restoration of the Mauri of the Moana a Toi post Rena. This has provided on-going student support as well as a contribution towards attendance at the recent Society for the Environmental Toxicology and Chemistry Conference for Chair of the Ngati te Awanui Board, Mr Carlton Bidois. Mr Bidois has been highly instrumental in facilitating cross iwi liaison and communication and has taken the opportunity to present our collective results on the MV Rena experience, especially the Matauranga Maori components. The funding supports new projects that will broaden research in the Bay of Plenty region providing focus on areas that are considered to be under represented in current programs. These include focal work on the regions biodiversity and examination of possible biogeographic shifts due to climate change, and examination of apex predators to compliment work in the MBIE funded OTOT estuarine program (see below for detail).

6. **The Fate and Effects of Contaminants in Estuarine Environments**

Julien Huteau, Chris Battershill, Conrad Pilditch, Brendon Hicks. BoPRC PhD funded.

Estuaries are sensitive environments in terms of their response to anthropogenic events. The accumulation of toxic trace elements, such as Cd and Pb, has detrimental consequences on benthic community composition and function that can lead to human health issues when seafood is consumed. Eutrophic water can generate blooms of macroalgae and can induce negative changes in the structure of an entire food web. The approach taken in this research project, is focused on the measurement of trace elements in sediment, water and biota, and the application of stable isotopes in the detection of sources of contaminants. A novel set of data on New Zealand estuarine species, not usually screened for pollutants, has been assembled in the context of a number of estuarine systems that have been influenced by a range of anthropogenically generated contamination events. The combined use of diffuse gradient ‘in thin films’ (DGT) and the analysis of δ_{15}N-NO_3 and δ_{18}O-NO_3 in water are new for New Zealand estuarine systems; the information from which will constitute the first baseline dataset for future environmental studies. This research additionally led to the development of a world premiere environmental indicator, “Ecohardness”, reflecting the estuarine chemical budget by the analysis of the material strength of cockle shell. From this research, lead, cadmium and zinc were found to be the most concerning polluting elements, with levels above sedimentary ANZECC safety guidelines. Phosphorus was found in high concentration in urban and rural estuaries heavily impacted by agricultural practises. Isotopic analysis confirmed sources of pollution with higher values of δ_{13}C and δ_{15}N near treated wastewater ponds. The accumulation

of contaminants was also associated with river and stormwater inputs and the intensive use of fertilisers. The accumulation of trace elements was specifically associated with metal pathways rather than sedimentary composition. However, metal speciation is of fundamental importance in ecotoxicology and is regarded as more significant than bulk concentrations in water and sediment in the understanding of biological response of organisms to trace elements. Accumulation of trace elements in biota was found to be strongly associated to those that were captured in DGT devices deployed in the water ('DGT-labile' elements). DGT-labile elements can be defined as "bioavailable" fraction as this technique uses a hydrogel layer to control the diffuse transport of trace elements in solution to a binding resin. All labile elements were found in higher concentration in the stream/estuarine environment than the ocean, demonstrating the characteristic of estuaries as a sink for trace elements. Further insight into the speciation of the various elements was permitted by calculating the rate of accumulation in different hydrogel thicknesses. Each element could be classified according to their behaviour ranking from putatively free simple inorganic cations with no resupply from complex ligands (e.g. Cd at Bureta), to fully sustained conditions with a constant degree of resupply of free ions and labile complexes (e.g. Ni, Fe and Cu at Bureta). The research project also permitted the development of a novel environmental parameter "EcoHardness" that has application to estuarine bivalves. While microhardness has been measured previously in bivalves (cockle shell) and correlated to microstructure, this is the first time that microhardness for the same species was analysed in different estuaries that have different anthropogenic pollution attributes. The method demonstrated an increase of microhardness related to a decrease of Ca content that appeared to be inversely correlated to an increase of trace elements that were associated with the general chemical state of estuaries. Hence harder shells were associated with more polluted estuarine areas. This parameter could be a valuable tool in the assessment of environmental changes linked to the increase of trace metal pollutants as observed around the world in the last few decades. This work has extended research into the environmental health of estuaries by combining a number of known analytical methodologies in a novel manner and through the development of a new technology. In addition, the work has examined a relevant trophic cascade of species further providing an insight into ecosystem functioning against a backdrop of human presence.

7. Biodiversity in the Bay of Plenty

Sam McCormack, Chris Battershill, Ian Hogg, Michelle Kelly-Borges (Rena Legacy PhD Funding)

This research will examine the systematics and biogeography of sponges (Demospongiae) within the Bay of Plenty region representing coastal systems that are expected to be influenced by changing current systems and for which there is a current paucity of information on benthic encrusting biodiversity, especially the Porifera. The study will address several fundamental questions relating to sponge systematics. Research will examine three levels of biodiversity research with increasing steps of focus; (1) a broad taxonomic review of all sponge taxa from the eastern and western seaboards over a 200 km coastal range spanning approximately 2^{o} of latitude, (2) a nested study of adventive species along a transect from near shore to offshore sites, (3) a nested inner harbour study comparing composition of species across habitat types (urban to rural influence), (4) a focused systematic revision of the poorly defined Callyspongiidae family using molecular and morphological techniques. The study draws on findings from recently completed MSc research that identified an extraordinarily high biodiversity of sponges from within Tauranga Harbour, with almost 30% undescribed, signalling a strong influence from cosmopolitan species.

8. **The Ecology of Apex Predators in an Urbanised Estuary: Habitat use, Seasonality and Effects of Pollutant Exposure in Tauranga Harbour.**

Helen Cadwallader, Chris Battershill, Malcolm Francis, Clinton Duffy Commonwealth PhD funded

Coastal areas worldwide are becoming increasingly impacted by rapid urbanisation and industrialisation, putting increasing pressure on the associated ecosystems. Predators such as the elasmobranchs (sharks and rays) that inhabit these areas may be particularly at risk from anthropogenic stressors such as pollutants, due to their slow growth and long lifespans. Knowledge of the use of impacted areas by these animals, such as their seasonal movement cycles and site fidelity, is required in order to effectively measure this risk. The proposed study will utilise a number of methods including quantification of feeding activity, acoustic telemetry and conventional identification tagging in order to identify: 1) seasonal patterns and 2) site fidelity of the coastal stingray *Dasyatis brevicaudata* in the Tauranga Harbour. In addition, toxicological measurements will be taken from *D. brevicaudata* individuals within the heavily urbanised southern Tauranga Harbour and compared with those from the less impacted northern Tauranga Harbour and Ohiwa estuary in order to identify any impacts. Movement behaviour and toxicological contamination information will be combined in order to provide a framework for risk assessment of the potential impact of human pressures on elasmobranch species in urban estuarine environments in New Zealand and internationally.

9. Bay of Plenty Sea Grass Research

Marnie Campbell 2015-2016 Research projects either including the Bay of Plenty region or relevant to the region:

- Researchers: Marnie Campbell, Chad Hewitt, Oliver Floeral (Cawthron), Grant Hopkins, Graeme Inglis, Tarek Soliman. Project title: "What's at stake? – Enabling decision-making through better measurement, forecasting and evaluation of the impacts of non-native organisms in NZ's changing ocean." Funding source: MBIE Environment Targeted Research (2015).
- Researchers: Marnie Campbell, Chad Hewitt, Oliver Floeral (Cawthron), Grant Hopkins, Graeme Inglis. Project title: Quadrilateral Scientific Collaboration in Marine Biosecurity Funding source: MBIE – Catalyst (Global Strategic Partnerships)
- Researchers: Marnie Campbell. Project title: Marine debris on the Coromandel shoreline. Funding source: Waikato Regional Council
- Researchers: Marnie Campbell Project title: Development of a Cumulative Impacts Framework for Coastal Marine Areas. Funding source: Waikato Regional Council

Students and their research projects that are relevant to the Bay of Plenty:

- <u>Summer scholarship student projects (2015/2016)</u>
  - Project supervisors: Marnie Campbell and Chad Hewitt. Project Title: "Rafting of species on marine debris: do non-indigenous species have a greater propensity to foul human generated debris?" Student: Staci King (Tauranga based Masters student). Project description: Investigated the rafting of introduced marine species (*Sabella spallanzanii*) on aquaculture debris that arrived on beaches in the Coromandel region. A stocktake of debris amounts and types was undertaken at 26 beaches. Funding source: Priority One.
  - Project supervisors: Marnie Campbell and Lars Brabyn. Project Title: "Efficacy of using a drone with a multispectral camera to quantify beach litter." Student: Eilish Robinson (undergraduate student). Project description: Trialled whether a drone with a multispectral camera could be used to detect litter loads on beaches. Funding sources: TBC.

- <u>Masters students projects (Tauranga based students)</u>

- Student: Stine Sorenson. Project title: “Seagrass vulnerability and resilience: The threat of sedimentation.” Supervisors: Marnie Campbell, Merilyn Manley-Harris, Chris Battershill. Project description: Examined the influence of sediment on seagrasses in the Tauranga Harbour. Funding sources: Port of Tauranga, Waikato Regional Council
- Student: Staci King. Project title: “Post-harvest treatment methods for an invasive polychaete *Sabella spallanzanii* in marine aquaculture.” Supervisors: Marnie Campbell, Chris Battershill, Phil Ross. Project description: Establishing how *Sabella spallanzanii* reacts to potential treatment options. Behavioural study occurred to note how this species reacts to different stimuli. Funding sources: Waikato Regional Council, Ministry of Primary Industries
- Student: Octavia Cade. Project title: “The resilience of vegetative fragments of *Zostera muelleri*.” Supervisors: Marnie Campbell, Fleur Matheson (NIWA). Project description: To investigate the duration of time that vegetative fragments of seagrass remain viable and can subsequently take root. Funding sources: Nil
- Student: Shannon Weaver (began in later 2015). Project title: “Assessing the economic impact of the invasive Asian paddle crab Charybdis japonica on New Zealand’s native crab (*Ovalipes catharus*) fishery.” Supervisors: Marnie Campbell, Chad Hewitt, Fiona McCormack. Project description: Using social surveys to investigate the perceptions of fishers around whether their fishing methods have altered to accommodate changes in native crabs numbers after the invasion of Charybdis. Funding sources: Ministry of Primary Industries

• Phd Students

- Student: Ross Martin. Project title: “Remote sensing of estuarine seagrass health.” Supervisors: Marnie Campbell, Lars Brabyn, Chris Battershill. Project description: Investigation about the suitability to use drones to monitoring seagrass health. Various locations will be investigated including the Bay of Plenty and Coromandel. Funding sources: Waikato Regional Council, New Zealand Coastal Society.

10. **Estuarine research Projects (Supervised primarily by Conrad Pilditch).**

Waikato Student Research (only those for which Pilditch is Chief Supervisor)

Completions

Please note: Research relevant to and/or undertaken in BoPRC region is indicated by † and that directly supported by BoPRC by ‡

- ‡Ryan Hughes (MSc): Effects of elevated porewater nutrient concentrations on seagrass meadows and their associated macrofaunal assemblages in relations to sediment characteristics
- †Rachel Harris (PhD): The effects of benthic organisms on intertidal sediment stability

<u>In progress</u>

- †Rebecca Gladstone-Gallagher (PhD): Detrital subsides and soft sediment ecosystem function
- Rebecca has recently submitted her PhD for examination and is currently preparing papers for submission to journals. She has published one paper this year (Gladstone-Gallagher et al 2016) and has another one under revision. She is also assisting me write a paper resulting from Ryan Hughes MSc research (see below) conducted in Tauranga Harbour.
- ‡Clarisse Niemand (INTERCOAST PhD): Effects of Ulva mats on benthic communities
- Clarisse has suspended her enrolment for nine months as she is working part-time to support herself. Clarisse has been making steady progress, a completed chapter is ready for submission to a journal and I have provided feedback on the two remaining research chapters. She has also contributed to a published paper (Karlson et al 2016 see below) which was conducted in Tauranga Harbour: Her plan is to re-enrol early in the New Year and submit her thesis.
- †Emily Douglas: Macrofaunal biodiversity and denitrification in estuarine sediments
- Emily is currently on maternity leave until Feb 2016 when she will return to finish up the last chapters of her thesis. She has her first chapter (Douglas et al 2016) published earlier this year and a second is currently undergoing revision. Her studies have helped underpin recent funding acquired through the National Science Challenge Sustainable Seas.
- †Bradley Monahan (INTERCOAST PhD): Bivalve larval dispersal in Tauranga Harbour

- Bradley has developed a larval tracking model for Tauranga Harbour and has completed all the model simulation runs needed for his first paper. This paper will combine predicted dispersal pathways with those measured in a field study. Future chapters will address connectivity between shellfish populations in the harbour and how morphological changes and loss of shellfish beds have altered this. Bradley has recently returned from Germany as part of his INTERCOAST commitments.
- †Tarn Drylie (PhD): Ecological functioning of estuarine soft sediment: projecting into the future
- Tarn has been working on emerged intertidal systems examining rates of primary production to determine whether systems under turbidity stress can offset production losses at low tide. She is planning experiments in Tauranga Harbour in the new year to examine whether eutrophication induced acidification can be mitigated by calcium carbonate in the sediment. Tarn's research will compliment a new MBIE Endeavour grant to Cary/Pilditch/Battershill/Vopel looking at the effects of ocean acidification on nutrient processing in soft sediments.

German INTERCOAST students (Conrad Pilditch is a Waikato supervisor)

Completions

- †Dorothea Kohlmeier (PhD - Kai Bischof Chief Supervisor): Sedimentation impacts on photosynthetic performance of seagrass: A study on Zostera spp. In New Zealand and Germany
- †Ruth Gutperlet (PhD – Ingrid Kroncke Chief Supervisor): Habitat dynamics in response to constructional impacts: a biological approach

In progress

- †Merle Bollen (PhD- Kai Bischof Chief Supervisor): Range expansion mechanisms in invasive seaweeds)
- Merle has been making good progress, a paper based on work conducted in Tauranga was published this year (Bollen et al 2016) and second is with supervisors.
- †Anja Singer (PhD -Ingrid Kroncke Chief Supervisor): Distribution modelling of macrofauna species in response to environmental change.
- Anja is in the writing stage of her thesis and a chapter is based on Tauranga Harbour which I am yet to see a draft.

- †Lydia Kolmorgen (PhD -Ingrid Kroncke Chief Supervisor): The ecology of natural vs artificial hard substrate in marine coastal environments: Substrate characteristics as a facilitator of settlement and community stability.
- Lydia started her studies this year and is planning to be Tauranga this summer to begin her research.

External funding secured to work in region

1. †National Science Challenge Sustainable Seas

Pilditch has secured $650 000 over 3.5 years for projects related to estuarine tipping points and quantifying soft sediment ecosystem services. As part of this funding two PhD students have been appointed and it is anticipated at Tauranga Harbour will be a focal area for research. Bryan is also involved in the tipping points project.

2. †MBIE Endeavour Fund

Cary/Pilditch/ Battershill have secured $1 million to examine effects of ocean acidification on nutrient processing in marine sediments. Some of the field component (led by Pilditch) will be conducted in Tauranga Harbour as will outreach to iwi (led by Battershill)

3. †MfE Manging Upstream – Estuaries State and Values Project

Pilditch is subcontracted to this NIWA/Cawthron led project. The nature of his involvement is still under negotiation.

Outreach

1. †Wednesday 22 June RNZ National interview with Kathryn Ryan "Muddying the waters"

http://www.radionz.co.nz/national/programmes/ninetonoon/audio/201805447/muddying-the-waters

2. †Sunday 21 August 2016: Presentation to the AGM of the Long Bay Okura Great Park Society. Contact Chris Bettany (chris.bettany@xtra.co.nz), 60 people in attendance

3. †Monday 29 August 2016: Presentation to Café Scientifique participants in Tauranga. Contact Julia Banks (julia.banks@saffronconsulting.co.nz), 150 people in attendance

11. **Other Research projects of relevance to the Coastal Chair (Supervised, co-supervised or supported by the CMFS)**

Coastal Chair Research Chief Supervisor Students Based at Tauranga (*Complete 2015):

Hellena Ileue (PhD, TCC Scholarship Persistent Pharmaceuticals in Effluents).
Sarah Lockwood (PhD, Fullbright, Rena Coastal Pollution Volunteer Social Science).
Sam McCormack (MSc Sponge Biosystematics Molecular Taxonomy Tauranga Moana) – *Complete.
Nicole Sturgess (MSc Te Puki Ariki Scholarship – Multibeam habitat maps) - *Complete.
Te Puea Dempsey (MSc Rena Scholarship, Otaiti Rena Mauri – plankton) - *Complete.
Caleb McSweeney (MSc Rena Scholarship, Otiati Rena Mauri –paua) - *Complete.
Vanessa Taikato (MSc TCC Scholarship, Te Maunga Treatment Plant Ecology) - *Complete.
Nathania Brooke (MSc Larval Fishes of Tauranga Harbour) - *Complete.
Kiri Reihana (MSc Rena Scholarship, Mauri – cyanobacteria; biofilms).-*Complete
Staci King (MSc Bioinvasions Tauranga Moana underway). Submission Feb 2017.
Fenna Beets (MSc ERI Scholarship, Benthic – Pelagic Carbon flux). Submission July 2017
Stine Sorensen (MSc ERI Scholarship – Sea grass ecology Tauranga Moana). Now PhD
Melissa Kellet (MSc, Shark ecology Tauranga Harbour). Submission Feb 2018
Graeme Hull (MA GIS – estuarine resource mapping). Submission June 2017

INTERCOAST PhD Direct Supervision (See also INTERCOAST report for full student profile)

Merle Bollen (INTERCOAST PhD, DFG Marine invasive algae) with Pilditch/Battershill.
Anya Singer (INTERCOAST PhD, DFG Habitat proxies). With Battershill
Manuela Biondo (INTERCOAST PhD, DFG Seismic Habitat Mapping) with Pilditch/Battershill.
Tobias Klugemeyer (INTERCOAST PhD, DFG Bay of Plenty Biogenic Communities) Battershill

Conrad Pilditch Bay of Plenty Region Students

PhD Students

Clarisse Niemand (2011-2016) INTERCOAST BoPRC Scholarship Ulva mat function and structure. Submission early 2017.
Rachel Harris (2011-2016) INTERCOAST UoW Scholarship Intertidal sediment stability/biotics.
Rebecca Gladstone-Gallagher (2013-2016) UoW Estuarine cross-boundary detrital subsides.

Emily Douglas (2013-2016) UoW Nutrient enrichment on soft sediment ecosystem function.

Bradley Monahan (2014-2018) UoW Larval dispersal and connectivity in large estuaries.

Tarn Drylie (2015-2018) NIWA Coast & Oceans OBI Ocean acidification on ecosystem function.

Gutperlet, Ruth (complete). Habitat dynamics: a biological approach.

MSc Students

Cooper, Jordan (in progress). Juvenile snapper habitat preference.

Hinds Laura (2015). Enrichment effects: Macrofauna diversity and porewater nutrients.

Cooper, J. (2015). Juvenile snapper behaviour and seagrass.

Karin Bryan Students

PhD

Alex Port INTERCOAST PhD BoPRC Scholarship. Sea lettuce bloom modelling Complete

Ben Stewart INTERCOAST PhD BoPRC Scholarship Mangrove Ecology freshwater influence.

Funded by Port of Tauranga Ltd

Andi Ramli (PhD) - Stability of Matakana Banks.

Holly Watson (MSc) - Impact of proposed wharf extensions on Stella Passage.

De Lange Mullarney and Moon Students

Christophers, A.J., 2015. Paleogeomorphic reconstruction of the Omokoroa Domain, Bay of Plenty, New Zealand. MSc thesis. Drs de Lange & Moon

MacPherson, D., 2016. An integrated stratigraphy of Tauranga Harbour. MSc thesis. Drs Fox & de Lange

Watson, H., 2016. Potential impacts of wharf extensions on the hydrodynamics of Stella Passage and upstream regions of Tauranga Harbour, New Zealand. MSc thesis. Drs de Lange and Mullarney

Mills, P.R., 2016. Failure mechanisms in weathered pyroclastic soil materials in the Bay of Plenty. MSc thesis. Drs Moon & de Lange

Ramli, A.Y., 2016. The impact of littoral drift and dredging on the stability of the Matakana Banks ebb tidal delta. PhD thesis. Dr de Lange, Assoc Prof Bryan & Dr Mullarney

Upiap, J., 2016. The fate of contaminated sediments in the Ohinemuri and Lower Waihou Rivers, New Zealand. MSc dissertation. Drs de Lange & Balks

Podromac, A., in prep. Stratigraphy of the upper western Channel, Tauranga Harbour. MSc thesis. Drs de Lange & Moon. Completion 2016

Manderson, T., in prep. Factors contributing to the instability of coastal cliffs around Tauranga Harbour. MSc thesis. Drs de Lange & Moon Completion 2016

Saillour, T. Impacts of capital dredging on the hydrodynamics and sedimentation patterns of Tauranga Harbour. PhD thesis. Dr de Lange, Assoc Prof Bryan & Dr Mullarney Underway.

Breakdown of Bay of Plenty funding allocation over the 12 month period 1st July 2015 to 30th June 2016

Summary of Contract - Bay of Plenty Regional Council Funding

1st July 2015 to the 30th June 2016

(All figures exclude GST)

	Budget	Actual	Difference	Notes
Income from Environment Bay of Plenty	162,900	162,900	-	
Prof Salary 100%	162,900	164,335	- 1,435	1
Total Costs	162,900	164,335		
Balance	-	(1,435)		

Notes:

1. Funding for Professor Chris Battershill is not fully covered by the Chair agreement

Summary of Contract - University of Waikato Funding

1st July 2015 to the 30th June 2016

(All figures exclude GST)

	Actual Costs	Notes
Full overheads costs on the 100% Prof Salary BoPRC Contribution	108,769	
Total Costs	108,769	

APPENDIX I

Final MBIE Report 2016

Contract UOWX1410

Summary

This document contains the final travel report for each of the PhD candidates supported by funding from MBIE contract UOWX1410. It includes an outline of their activities and outcomes of their stay in Germany to date, under the INTERCOAST International Research Training Group programme.

Project 1 (IC38_NZ): *Understanding dissolved inorganic nitrogen fluxes within Tauranga Harbour. PhD Candidate: Ben Stewart; Supervisor: Karin Bryan/Christian Winter.*

Last year between July – September 2015 Ben Stewart undertook a research visit at the ICBM Oldenburg/Wilhelmshaven and at MARUM, Bremen University. It has almost been one year since

then and Ben is still benefiting from the experiences and exchanges made during that time. It has created a solid framework for future collaborations with researchers in Germany. In particular, Ben is now in regular contact with a Submarine groundwater discharge group at the ZMT in Bremen, Germany. Nils Moosdorf and Till Oehler connected with Ben in Bremen and since then he has collected samples in New Zealand which are being analysed at the ZMT and ICBM, Oldenburg. Due to the similar nature of their research interests future collaborations are being discussed. This experience has connected Ben's research to a broader global community which may strengthen future projects and funding opportunities. This is an indirect result of the INTERCOAST program and how having the opportunity to study in Germany can open up other avenues that can mutually benefit and strengthen the program.

The research visit at MARUM, Bremen University also positively impacted Ben's current work. During his stay with Christian Winter (German INTERCOAST supervisor) he was able to become familiar with the Delft 3d modelling program and work with other students who are highly experienced. He was able to practice running and setting up a model and to run through the basic functions. This is directly related to the work Ben will be doing in the coming months using the water quality module to run nutrient simulations in Tauranga Harbour. Ben is also seeking to further develop these skills with continued contact with Christian Winter and other students using the program at MARUM. He will be conducting further experiments in Tauranga Harbour over the summer months and aims to discuss and work through the results with his German counterparts. For example, Ben will run a salinity model for the harbour. This will help delineate what the fresh groundwater component input to the harbour is likely to be. Radium and nutrient pathways and movement around the harbour will also be investigated with both modelling scenarios and physical time series observations. The skills learned last year have formed a base for these further applications.

Top: Ben Stewart at work; Bottom: Marum field centre

Project 2 (IC35_NZ): *Shellfish dispersal and population connectivity in large mesotidal estuaries: a comparison of two systems. PhD Candidate: Bradley Monahan; Supervisors: Karin Bryan and Conrad Pilditch/Ingrid Kroencke and Alexander Bartholomae.*

Bradley Monahan had the opportunity to travel to Germany for a three month INTERCOAST research stay from 2nd May to 31st July 2016 at the Schenkenburg Research Institute in Wilhelmshaven. Many of the experiences from this stay have positively impacted on his personal and professional development. During this stay Bradley had the opportunity to present his findings at the Senckenberg young scientists retreat, allowing for comments from outside of the research group. While in Germany, Bradley was able to meet with his German research panel (Prof Ingrid Kroencke and Prof Alexander Bartholomae) to discuss ideas about his Jade Bay research. During the stay he was also able to collect species specific data from past benthic marine invertebrate surveys, and a hydrodynamic model for the Jade Bay area which will be used in his final research chapter. The research from this chapter will provide a comparison of the population connectivity between a New Zealand (Tauranga Harbour) and a German (Jade Bay) system and how increased time and harbour degradation influences connectivity. He also had the opportunity to spend time on the Senckenberg research vessel to take sediment and biological samples in the North Sea, which provided experience in how offshore research is conducted. Bradley was also able to attend the INTERCOAST 'Lunch and Learn' workshops and to meet with the German cohort members from multiple disciplines to experience how research is conducted in disciplines outside of science. This research stay also provided the experience of working in an International research institute, during which time he worked towards a draft of his methods and results for his first research paper.

Project 3 (IC41_NZ): *Turbidity variations in and around estuaries that are impacted by humans. PhD Candidate: Mariana Cussioli; Supervisors: Karin Bryan, Conrad Pilditch and Willem de Lange/Kai Bischof.*

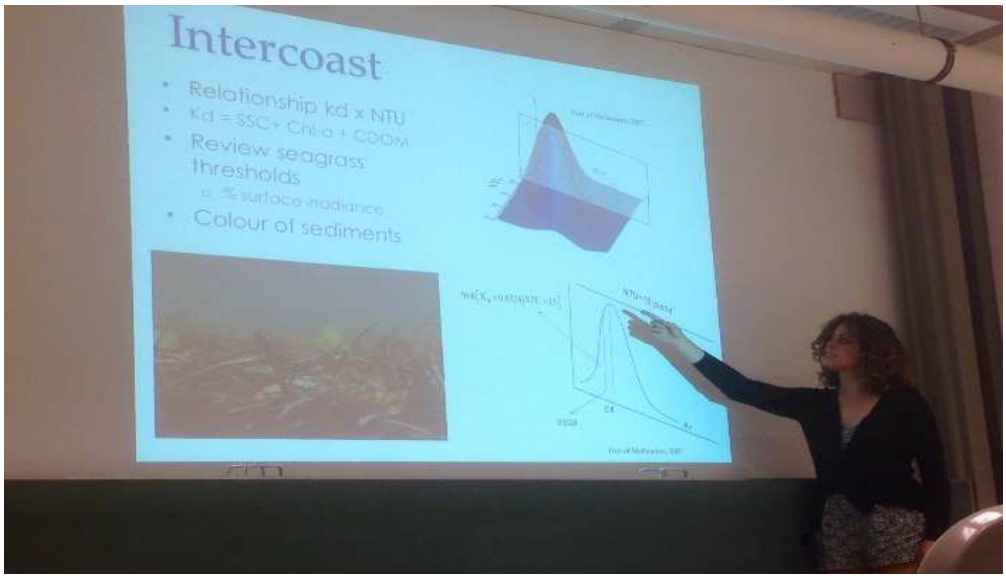
Mariana arrived in Bremen, Germany in July 2016 and is currently undertaking her research visit working with Bremen Marine Ecology Group (BreMarE) at the University of Bremen, under the supervision of Prof Kai Bischof until October 2016. One of her research chapters is regarding underwater light attenuation and how turbidity variations could affect the light availability for photosynthesis. During August, Mariana has been working on that chapter using a unique dataset of light measurements and turbidity and discussing her results during weekly meetings with Prof Kai Bischof whose experience with marine botany will provide inputs on the biological component of the paper.

BreMarE is a very dynamic group, with weekly meetings and updates on the projects. In August, Mariana gave a talk about the research project and had the opportunity to discuss her results with

colleagues. Networking with INTERCOAST colleagues also occurs once a week with exchange of information regarding projects and opportunities.

The next step of Mariana's research stay is to conduct a laboratory experiment on the spectral absorption properties of suspended sediment samples of different colours and discuss how this would affect light available for photosynthesis. Layers of sediment of different composition can be re-suspended during dredging activities generating plumes that can decrease the amount of light and also change the quality of light, filtering wavelengths which are preferred for photosynthesis. This experiment will be carried out using a spectrophotometer fitted with an integrating sphere.

The paper that is in preparation will provide guidance for thresholds regarding light availability due to turbidity variations; this research is relevant for the development and sustainability of coastal areas such as Tauranga Harbour, in New Zealand and the Jade Bay in the Wadden Sea,Germany. .



Top: BreMarE weekly meetings; Bottom: Presenting the background and objectives of the research project

Project 4 (IC39_NZ): *The Hydrodynamic controls on sedimentation within Tauranga Harbour. PhD Candidate: Peter de Ruiter; Supervisors: Karin Bryan, Conrad Pilditch and Julia Mullarney/Christian Winter.*

As part of his PhD research 'Sediment connectivity in Tauranga Harbour', Peter is currently staying for 2 months at MARUM, Bremen University to collaborate with his German supervisor, PD Dr. Christian Winter. His research stay commenced in August 2016 and will conclude in October 2016.

During his stay in Germany, the main priority is to work on resolving sediment exchange between a number of regions and subestuaries in the Tauranga Harbour estuarine lagoon. This work involves setting up a hydrodynamic model of Tauranga Harbour, using the Delft3D software package. The first stage of the model setup, which includes the creation of a model grid and bathymetry, has been completed. Seaward boundary conditions for the model, consisting of a number of tidal constituent amplitudes and phases, have been created and implemented. Basic runs of the model have been carried out in order to verify that the boundary conditions as currently set are correct.

By early September, the model will be enhanced by including parameters and processes related to sediment characteristics, sediment erosion and deposition and associated morphological changes, riverine discharges and wind events. Peter will work together with Christian Winter and other members of his working group in order to implement these additions to the model correctly. He will also be working on the determination of hypsometric characteristics of a number of subestuaries.

Calibration of the hydrodynamic model will aid in the determination of whether the model is performing satisfactorily. Once the model is functioning well, the plan is to determine (net) circulation patterns and sediment fluxes within the estuary by firstly only applying tidal forcing. Subsequently, additional forcing can be added to the model (such as wind speed and direction) to determine the influence of these forcing on circulations and sediment fluxes and pathways.

Once a clear picture is established regarding general circulation patterns and exchanges between different harbour regions, a method of systematic closing and opening of subestuaries in the model can be used to evaluate how sediment exchange is moderated by the connectivity between the different subestuaries.

During his research stay, Peter has also been attending group meetings and seminars and interacting with postdoctoral research fellows in the group. These meetings have provided an excellent mechanism for Peter to develop his scientific networks and gain experience of different research cultures.

Project 5 (IC36_NZ): *Integration of remote sensing and GIS for mapping coastal vegetation. PhD Candidate: Pham Thi Lien; Supervisor: Lars Brabyn.*

As reported in the interim report (August to October 2015):
On her trip Bremen, Pham Thi Lien first attended INTERCOAST workshop and presented the following paper: Lien, P. Mapping native tree species in Coromandel, New Zealand. INTERCOAST workshop 2015, University of Bremen, Germany. This provided an opportunity to network with both PhD students and with international coastal scientists.
Lien then visited the International Training Centre (ITC) in Enschede and discussed research with researchers and students. The ITC publish a remote Sensing journal (International Journal of Applied Earth Observation and Geoinformation) that is highly regarded internationally (citation index 3.5). After discussing her work and submitting a paper for this journal, the ITC have accepted the following article for publication:
Pham, L., Brabyn, L. and Ashraf, S. Combining QuickBird, LiDAR, and GIS topography indices to identify a single native tree species in a complex landscape using an object-based classification approach. Paper submitted to International Journal of Applied Earth Observation and Geoinformation (Accepted for publication March 2016).

Project 6 (IC40_NZ): *In situ geographical property evaluation of low strength on-shore and near-shore sediments in use assigned areas. PhD Candidate: Philippa Mills, Supervisor: Vicki Moon/Tobias Moerz*
Pip Mills completed and submitted her thesis entitled "Failure mechanisms in sensitive volcanic soils in the Tauranga Region, New Zealand" in July 2016. The thesis is currently under examination. She has a paper accepted for presentation and publication at the Australia - New Zealand Young Geotechnical Professionals Conference in Queenstown in October 2016.
Dr Moon presented an opening keynote address at the International Workshop on Volcanic Rocks and Soils, in September, 2015 based on INTERCOAST research that provided a springboard for Ms Philippa Mills research. Pip Mills completed her MBIE funded research stay in Bremen through August - September last year (2015) when she worked with Professors Tobias Moerz, Stefan Kreiter and Max Kluger on cyclic triaxial testing of sensitive soils from a coastal landslide in Tauranga. Based on this work, she has had an abstract accepted (full paper to follow) for the Australia - New Zealand Young Geotechnical Professionals Conference in Queenstown in October 2016.

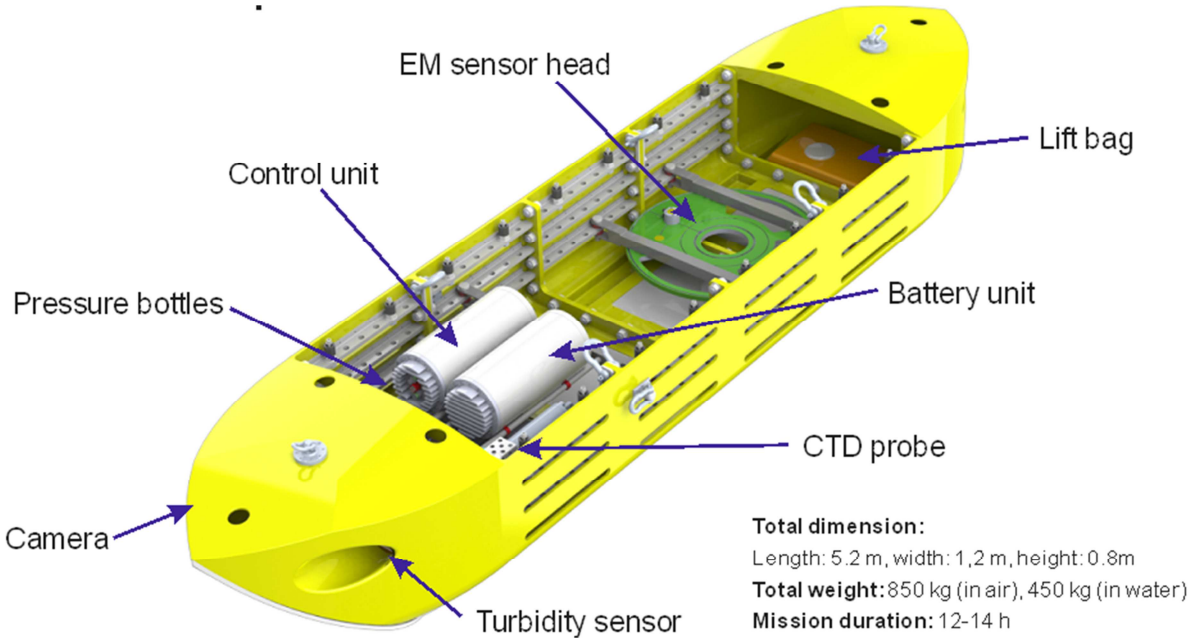
Project 7 (IC42): *The law and policy of scientific models in coastal zone management. Supervisor: Barry Barton/Gerold Winter.*

Environmental Law student, Sarah Bartholme, is currently based in Germany and her research with this project the basis of her research. The student has very recently commenced her work and an update on her progress will be provided.

Related MBIE Activities: INTERCOAST and the MV Rena Legacy

The availability of INTERCOAST generated information on the biophysical environment of the Bay of Plenty region and specifically Tauranga Harbour, proved invaluable in combination with Regional Council information permitting assessment of the degree of impact that the MV Rena had on the environment and the trajectory for recovery. The INTERCOAST research collaboration significantly aided the fast development of oil spill trajectory models for predicting likely heavy oil spill impact locations on the coast (the models again used in the more recent Mobil Oil spill in Tauranga Harbour) (Jones et al 2016). In a world first the presence of the INTERCOAST geotechnical team in Tauranga shortly after the ship wreck and period of major container debris pollution across the Bay, allowed a unique and comprehensive profiling of the inner Bay of Plenty coast using the benthic magnetic profiling submersible the Neridis III (Kulgemeyer et al 2016; von Dobenek and Battershill 2013). The Neridis III is the worlds first benthic sensor platform designed to measure calibrated magnetic susceptibility of the shallow seafloor (~ 0-50 sediment depth cm) in a conductive saltwater environment at high speed by performing a joint conductivity measurements (Marum, University of Bremen). The Neridis was carrying out a planned INTERCOAST progam examining coastal geomorphology, but serendipity permitted its deployment to examine the seabed for metal debris from the Rena from Waihi to Maketu and as far out to sea as Motiti Island. The following was achieved:

- Map magnetic mineral and grain-size distribution of entire inner Bay of Plenty (5-30m depth) in detail → bottom-towed EM (susceptibility, conductivity)
- Map sediment facies, bedforms + biological habitats, seek marine anthropogenic debris (MAD) from RENA → bottom-towed optical imaging (macro photography)
- Study hydrology and suspended sediment transport → bottom-towed CTD and turbidity sensor
- Map seafloor bathymetry and micro-relief → shipboard WASSP multi-beam/sidescan sonar
- Take representative sample set for EM calibration, ground truthing and laboratory analytics → grab sampling campaign in March 2013 or later
- Photograph the mapped seabed permitting visualization of any other debris possibly from Rena



The result is published in Kulgemeyer et al 2016. In addition to creating the first benthic map of the western Bay of Plenty coastal zone a strobing camera mounted on the benthic sled took over 1 million images (6TB data) to produce a biogenic map of the seafloor. The result of this effort was identification of a small amount of Rena debris, but importantly the map has resolved a number of important environmental and geological issues for the region. The source of sea lettuce blooms has been identified (hitherto unknown coastal reefs) and a number of fresh water submarine upwelling zones have been found. Also a relatively rich source of magnetite and other minerals has been identified.

The benefit of the INTERCOAST program as applied to the MV Rena event continues to be realised with ongoing research examining the influence of terrestrial sources of freshwater upwelling on coastal zone productivity, the role of biogenic reefs on coastal and harbour dynamics (MBIE funded Oranga Taio Oranga Tangata program 2015-2019) and research on coastal morphology. A component of this relates to the effects of deeper Tauranga Harbour channel dredging to permit larger container vessel access (8,200 TEU). Again a unique geotechnical tool (the GOST, a submersible drilling rig for deploying a deep subseabed probe) also designed and built by Marum, University of Bremen was available to profile the Tauranga Harbour channel floor to examine any likelihood of channel subsidence post dredging. Hydrodynamic models of the harbour current systems (post Rena) were also used to examine dredge plume extent.

Peer Reviewed Rena Publications *(relevant literature that has benefitted directly and indirectly from INTERCOAST).*

Tobias Kulgemeyer, Tilo von Dobeneck; Hendrik Müller; Karin R Bryan; Willem P de Lange; Christopher N Battershill 2016. Lithofacies distribution and sediment dynamics on a storm-dominated shelf from combined photographic, acoustic and sedimentological profiling methods (Bay of Plenty, New Zealand). Marine Geology 376: 158–174.

Battershill CN, Pilditch C, Ross PM and Schiel DR Guest eds MV Rena Environmental Effects. 2016 Special Edition. NZJMFWR 50 (1)

Battershill CN, PR Ross & DR Schiel 2016. The MV Rena shipwreck: time-critical scientific response and environmental legacies. NZJMFWR 50 (1): 173-182 | DOI: 10.1080/00288330.2015.1134593

Schiel DR, PM Ross & CN Battershill 2016. Environmental effects of the MV Rena shipwreck: cross-disciplinary investigations of oil and debris impacts on a coastal ecosystem. NZJMFWR 50 (1):1-9 | DOI: 10.1080/00288330.2015.1133665

Ross PM, RM Fairweather, DP Culliford, S Park, CA Pilditch & CN Battershill 2016. In situ sampling reveals rapid uptake and depuration of polycyclic aromatic hydrocarbons by surf clams (Paphies subtriangulata) affected by the Rena oil spill. NZMFWR 50 (1): 56-69 | DOI: 10.1080/00288330.2015.1084934

Ross PM, CN Battershill & C Loomb 2016. The wreck of the MV Rena: spatio-temporal analysis of ship-derived contaminants in the sediments and fauna of Astrolabe Reef. NZJMFWR 50 (1): 87-114 | DOI: 10.1080/00288330.2015.1077873

Dempsey T, PM Ross, A Hartland, C McSweeney & CN Battershill 2016. Measurement of shipwreck-derived waterborne trace metals using DGT samplers. NZJMFWR 50 (1): 115-130 | DOI: 10.1080/00288330.2015.1127829

Jones HFE, MTS Poot, JC Mullarney, WP de Lange & KR Bryan 2016. Oil dispersal modelling: reanalysis of the Rena oil spill using open-source modelling tools. Pages: 10-27 | DOI: 10.1080/00288330.2015.1112819

Lockwood Sara, C Kay Weaver, Debashish Munshi & Mary Simpson 2016. The self-organising of youth volunteers during the Rena oil spill in New Zealand. Pages: 28-41 | DOI: 10.1080/00288330.2015.1063515

de Lange WP, NPHM de Groot & VG Moon 2016. Burial and degradation of Rena oil within coastal sediments of the Bay of Plenty. Pages: 159-172 | DOI: 10.1080/00288330.2015.1062401

Appendix II

Oranga Taiao, Oranga Tangata – Annual Report from 1 July 2015 to 30 June 2016

Organisation: University of Waikato, Chris Battershill

Progress Summary to date (with focus on last 12 months)

The first seasons subtidal estuarine survey of infauna, biogenic community structure has been completed. Further detailed work now progresses on quantifying extant biogenic community structure and stability. New work is underway on examining fish community dynamics in subtidal regions of Tauranga Moana. Extension using the philosophy of the OTOT approach has successfully been promoted to the eastern Bay of Plenty embellishing a regional Maori economic plan there, the first in NZ.

Top 5 Achievements

Of relevance to Research Aim 3: Completion of year 1 subtidal infaunal sampling throughout Tauranga Moana and completion of aligned project work with the international collaboration INTERCOAST of 3D multibeam mapping and biogenic community analysis of key harbour channel systems. Completion of aligned PhD projects on Sea lettuce ecology in Tauranga Moana and completion of field components of seagrass ecology projects within the moana. Access to datasets for water quality/water column information for harbour system characterisation has been initiated with synthesis for OTOT uptake underway from August 2016. Tauranga harbour fish ecology and apex predator projects underway with preliminary field work completed. Advanced understanding of marine invasive species dynamics, and distribution/incursions.

Key End User Outcomes

Biogenic and benthic geological maps now available for the major subtidal channel systems of Tauranga Harbour; first quantitative information of fish community structure linked to benthos initiated. Sea grass and sea lettuce ecological dynamics now linked, with additional correlation to surrounding harbour biophysical character. These synthetic datasets are of high value to Regional Councils, City Councils, Fisheries and Recreational Sectors. Biosecurity related research is of high relevance to this Research Aim, and is of particular relevance to Bay of Plenty, Waikato and Auckland Regional Councils and MPI.

Key Research Science and Technology Outcomes

- Integrated subtidal research program spanning microbial and macro infauna ecology linked to biophysical elements of sediments and water quality now expanded to include fish and apex predator ecology.
- Completion of major ecotoxicological studies of ecological and cultural health indexing value to Tauranga Moana
- Enhanced focus on marine biosecurity in Tauranga Moana linked to the health of the environment
- Validation of remote sensing technologies to permit fast, inexpensive and large scale mapping of seabed communities in estuarine environments using 3D multi-beam systems.

Key Vision Matauranga Achievements

The experience that the OTOT program brings, building on the successful completion of the MTM MBIE funded research program has been extended to support initiatives in the far eastern region of the Bay of Plenty with Hapu of Te Whanau Apanui. An international program (NTERCOAST) has successfully collaborated with hapu in the region to examine the connectedness of land and sea (from an overview of 6 major catchments linking areas ranging from slight to serious degradation –forestry, to coastal water quality. The work will be ongoing building on OTOT dynamics in examining cultural value and health of nearshore and estuarine ecosystems. This program is intimately linked to other elements of regional development from Opotiki east and is designed to grow a sustainable model for future economic development of hapu/iwi aligned with coastal restoration. The OTOT/MTM experiences have been translated into this regional program at a very early stage and will form a cornerstone of future collaborative work. An early outcome is the successful establishment of the Kaupapa Kohimarama Project with the Nga Uri o te Ngahere Trust.

Issues/Risks

The University of Waikato project is well under way. It relies heavily on aligned research programs, but these are well in hand. The major task remaining is to synthesise information across a broad array of environmental and ecological projects within the Taranga Moana. These in turn link to previous MTM research which has established a substantial Launchpad of background biophysical information of the Harbours ecological dynamics.

KNOWLEDGE TRANSFER / networking / meetings / hui

Full description	List with Details: date/who with	Contact name(s) – if possible
Workshops and Hui	• Manaaki te Awanui 9/7/ 2015, Matuaranga workshop, OTOT planning. • Te Maunga Waster Water plant review on site with Tauranga Moana hapu and Tauranga City Council. Cultural health planning and persistent pharmaceuticals research 24/7/2015. • Mobil spill environmental assessment and cultural health issues review 28/7/2015 • Ministers Bennett and Muller site visit, review of Matauranga led science • Hui Raukokere and Lottin Point to establish the Kaupapa Kohimarama Project with the Nga Uri o te Ngahere Trust. 10-11/8/2015 • Port of Tauranga log terminal runoff workshop 13/8/2015 • Matuarnga workshop with MtA • BoPRC Council presentation Moana a Toi integrated environmental science • Motuopuhi Island Mobil Oil Spill review Tuaranga Harbour • INTERCOAST workshop Bremen, review integrated research Tauranga Moana 7-14/9/2015 • Kingitanga Day presentations Western Science and Matauranga 17/9/2015 • Kaimai Catchment Association presentation Taiapa and Battershill 17/9/2015 • MNZ Tier 3 workshop for Mobil Oil spill and integrated iwi response 20/10/2015 • MTM Hui 27/28/10/2015 for planning future estuarine research and cultural health indexing • Raukokere collaboration planning with INTERCOAST • Hawaiki Rising collaboration discussions 16/17/11/2015 • NZAS Science communications Award highlighting Matauranga led science 19/11/2015 • Invited workshop on use of marine genetic resources and Wai262/Treaty of Waitangi in Tokyo 23-27/11/2015. • Seaweek Mauao cultural and ecological public walk. 5/3/2016 • Te Arawa FoMA, Climate Change and Water conference presentation on marine CC and OS issues of relevance to Maori. 9-10/3/2016 • Ngati Makino, NIWA and UoW hui for MfE managing upstream estuaries project. • NZ Marine Sciences Association conference 4-7/7/2016 Presented 10 papers on Tauranga Moana related research. Matuaranga workshop with Caine Taiapa. • Moari Water conference Te Mauri o te Wai, Rotorua. Invited keynote on Matauranga and Western Science fusion	Caine Taiapa Toby Barach, Carlton Bidois, Reon Tuanau et al. Mobile and Port authorities, Carlton Bidois, Reon Tuanu, BoPRC UoW, MtA and ministerial staff with Hons Bennett and Muller. John Butler and Raukokere hapu Rowan Marsh Port Engineer Waiaria Rameka and Te Puea Dempsey BoPRC Councillors Adrian Heyes BoPRC, Reon Tuanu, Carlton Bidois Katrin Huhn INTERCOAST leader Germany. Caine Taiapa and Battershill presentation to University of Waikato Presentation to catchment association (P Ropata chair). Keith Manch MNZ CEO chair, with Tauranga Moana iwi and Battershill. Murray Patterson, Caine Taiapa, Crhis Cornelisen Katrin Huhn, John Butlet, Caine Taiapa. Pat Mohi, Caine Taiapa. NZAS president. Hajimu Moriaka, ASB Taskforce Japan. Caine Taiapa and Battershill Te Arawa Federation of Maori Associations chair. Raewyn Bennett, Caine Taiapa Helen Neil NZMSS president. FoMA and BoPRC Matauranga leaders

SCIENCE QUALITY:

Full description / citation
Non-Peer Reviewed Published Articles (eg published in newspaper/websites etc): Battershill C, Beverley P, Bowen R, Ehler C, Hikuroa D, 2014/15/16. SeaChange Review (Hauraki Gulf Spatial Plan). International Review Panel, Phase I, II & III. Battershill C. 2015 Environmental effects of the MV Rena Incident. Evidence: Environmental Hearing S15A and 15B of the RMA Hajimu Morioka, Chris Battershill, Masanori Nakae, Nan Xiao, Atsushi Tsuda, Thomas Vanagt, Taro Saishu, Ikuo Hirono. 2016 Access to Marine Genetic Resources and Benefit-sharing from Their Academic Use REPORT OF MGR WORKSHOP IN JAPAN Tokyo, November 26, 2015 ABS Task Force Team for Academia in Japan National Institute of Genetics
Peer Reviewed Journal Articles Accepted for Publication or Published (these publications have relevance to Tautranga Moana and Moana a Toi coastal environmental health. They have invoked Matauanga Maori throughout): Tobias Kulgemeyer , Tilo von Dobeneck, Hendrik Müller, Karin R. Bryan, Willem P. de Lange, Christopher N. Battershill 2016. Lithofacies distribution and sediment dynamics on a storm-dominated shelf from combined photographic, acoustic and sedimentological profiling methods (Bay of Plenty, New Zealand). Marine Geology 376 (2016) 158–174. Battershill CN, Pilditch C, Ross PM and Schiel DR Guest eds MV Rena Environmental Effects. 2016 Special Edition. 50 (1) Battershill CN, PR Ross & DR Schiel 2016. The MV Rena shipwreck: time-critical scientific response and environmental legacies. 50 (1): 173-182 | DOI: 10.1080/00288330.2015.1134593 Ross, P. M., Battershill, C., & Loomb, C. (2016). The wreck of the MV Rena: spatio-temporal analysis of ship-derived contaminants in the sediments and fauna of Astrolabe Reef.. New Zealand Journal of Marine and Freshwater Research. 50 (1): 87-114 | DOI: 10.1080/00288330.2015.1077873 Schiel, D. R., Ross, P. M., & Battershill, C. N. (2016). Environmental effects of the MV Rena ship wreck: cross-disciplinary investigations of oil and debris impacts on a coastal ecosystem. New Zealand Journal of Marine and Freshwater Research. 50 (1):1-9 | DOI: 10.1080/00288330.2015.1133665 Ross, P. M., Fairweather, R., Culliford, D., Park, S., Pilditch, C. A., & Battershill, C. N. (2016). In situ sampling reveals rapid uptake and depuration of hydrocarbons by surf clams affected by the Rena oil spill. New Zealand Journal of Marine and Freshwater Research. 50 (1): 56-69 | DOI: 10.1080/00288330.2015.1084934 Dempsey, T., Ross, P. M., Hartland, A., McSweeney, C., & Battershill, C. N. (2016). Measurement of shipwreck-derived waterborne trace metals using DGT samplers. New Zealand Journal of Marine and Freshwater Research. 50 (1): 115-130 | DOI: 10.1080/00288330.2015.1127829 Bollen, Merle; Pilditch, Conrad A.; Battershill, Christopher N., Bischof K. 2015. Salinity and temperature tolerance of the invasive Undaria pinnatifida and native New Zealand Kelps. EUROPEAN JOURNAL OF PHYCOLOGY Volume: 50 Supplement: 1 Pages: 212-
Book Chapters or Books: New Zealand Coastal Invertebrates. V II Ascidians Battershill, Stocker and Page. In SDC Cook Ed. Canturbury University Press. In Production.
Published Conference Proceedings: NZMSS abstracts Tokyo Workshop on Use of Genetic Resources and the Nagoya Protocol
New Processes: Validated remote sensing 3D side scan sonar for use in mapping submarine shallow water biogenic communities in estuaries.
Awards for Science Achievement: Battershill New Zealand Association of Scientists 2015/2016 Science Communications Award.
KeyNote Presentations: Battershill: • INTERCOAST workshop Bremen, keynote introductory presentation review integrated research Tauranga Moana 7-14/9/2015 • Kingitanga Day presentations Western Science and Matauranga 17/9/2015 • Kaimai Catchment Association presentation Taiapa and Battershill 17/9/2015 • NZAS Science communications Award highlighting Matauranga led science 19/11/2015 • Invited workshop on use of marine genetic resources and Wai262/Treaty of Waitangi in Tokyo 23-27/11/2015. • Te Arawa FoMA, Climate Change and Water conference presentation on marine CC and OS issues of relevance to Maori. 9/3/2016 • NZ Marine Sciences Association conference 7/7/2016 Use of genetic resources. • Moari Water conference Te Mauri o te Wai, Rotorua. Invited keynote on Matauranga and Western Science fusion
Postgraduate Study Completions: See below.

Co-funding:

Organisation:	INTERCOAST Tauranga Harbour Research	Direct / related:	Direct	Cash / in kind:	In Kind	Amount: (+ GST)	@30,000.00

Comment(s):	PhD research funded by the DFG Germany. Anja Singer and Manuela Biondo examining the use of multibeam 3D surveying to characterise benthic (channel floor) habitats. Also a PhD by Merle Bolen on marine invasive ecology. • Merle Bollen: Range expansion mechanisms in invasive seaweeds“ • Manuela Biondo: Trends of habitat patchiness in acoustic seafloor classification data • Anja Singer: Hindcasting and Forecasting macrofauna distribution for Tauranga Harbour and the Jade Bay (North Sea, Germany)						
Organisation:	INTERCOAST Workshop Feb 2016	**Direct / related:**	**Direct**	**Cash / in kind:**	**In Kind**	**Amount:** *(+ GST)*	@10,000.00
Comment(s):	Regional workshop to East Cape (Raukokere) to examine land sea connectivity and Matauranga informed appraisal and restoration options. 25 German colleagues and 10 OTOT/University of Waikato participants.						

Students obtaining Masterate / Doctorate / Post Doctorate qualifications

Name	FTE	University	Supervisor from your Organisation	Qualification	Thesis Topic
Vanessa Taikato	0.5	University of Waikato	Chris Battershill/ Caine Taiapa	MSc Biological Sciences	Estuarine Condition and Macro-benthic Communities in Te Tahuna o Rangataua
Kiri Reihana	In kind	University of Waikato	Chris Battershill/ Craig Cary	MSc Biological Sciences	Contrasting Microbial Communities Across Anthropogenic Pollution Gradients: MV Reba Shipwreck versus Urban Pressures
David Culliford	In kind	University of Waikato	Chris Battershill	MSc Biological Sciences	Characterisation potential toxicity and fate of storm water run-off from log storage areas of the Port of Tauranga
Nathania Brooke	In kind	University of Waikato	Chris Battershill/Phil Ross	MSc Biological Sciences	Larval fish of Tauranga Harbour
Amy Platt	In kind	University of Waikato	Chris Battershill/Phil Ross	MSc Biological Sciences	Effects of copper toxicity on recruitment of Undaria pinnatifida
Sam McCormack	In kind	University of Waikato	Chris Battershill	MSc Biological Sciences	The Taxonomy of Demospongiae (Porifera) from the Bay of Plenty, New Zealand – Connecting Linnaean and Phylogenetic Classification
Julien Huteau	In kind	University of Waikato	Chris Battershill/Conrad Pildich	PhD Biological Sciences	Fate an effects of contaminants in estuarine environments

Appendix III Publications 2015-2016

2016 Publications that may have relevance to the Bay of Plenty region:
Chairs Publications

Bollen, M., Pilditch, C.A., Battershill, C.N., Bischof K. 2016. Salinity and temperature tolerance of the invasive alga *Undaria pinnatifida* and native New Zealand kelps: Implications for competition Mar Biol (2016) 163: 194. doi:10.1007/s00227-016-2954-3

Battershill CN, Pilditch C, Ross PM and Schiel DR Guest eds MV Rena Environmental Effects. 2016 Special Edition. NZJMFWR 50 (1)

Battershill CN, PR Ross & DR Schiel 2016. The MV Rena shipwreck: time-critical scientific response and environmental legacies. NZJMFWR 50 (1): 173-182 | DOI: 10.1080/00288330.2015.1134593

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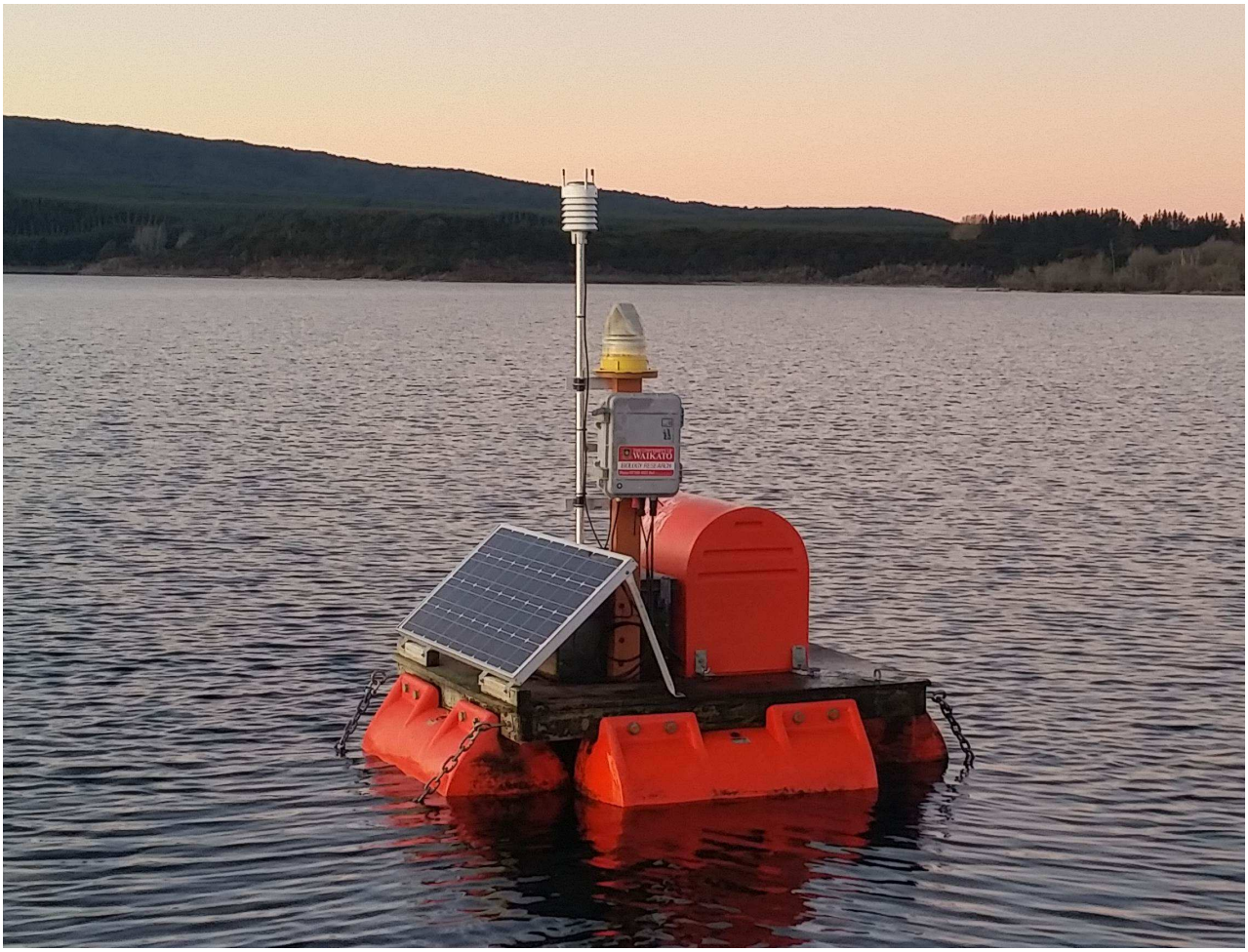
APPENDIX 3

University of Waikato - Bay of Plenty Regional Council Chair in Lake Management and Restoration - Report for the period 1 July 2015 to 30 June 2016

Bay of Plenty Regional Council Chair in Lake Management and Restoration

Annual Report for the period 1 June 2015 to 30 June 2016



Prepared for Bay of Plenty Regional Council

June 2016

Environmental Research Institute
Te Pūtahi Rangahau Taiao
THE UNIVERSITY OF WAIKATO

THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato

Lakes Chair Research Summary 2014-2015:

The following report summarises the activities of the Bay of Plenty Regional Council Chair in Lake Restoration at the University of Waikato (UoW). Funding for the Chair supports a number of staff and students directly and indirectly, including:

- Professor David Hamilton (Chair)
- Dr Aroon Parshotam (Research Fellow) – Employment ended December 2015
- Dr Eunju Cho (Research Fellow) – Replacement position started May 2016
- Dr Moritz Lehmann (Research Fellow)
- Chris McBride (Research Officer)
- Joseph Butterworth (Technical Officer)
- Theodore Kpodonu (PhD student-submitted May 2016)
- Katie Noakes (MSc student)
- Ronald Ram (FIA technician) funded by the University of Waikato as per the Lakes Chair agreement

Other staff who undertake projects related to the Rotorua lakes include:

- Dr Grant Tempero (Research Officer)
- Dr Christopher Dada (Research Officer)
- Dr Adam Hartland
- Associate Professor Brendan Hicks
- Associate Professor Nick Ling
- Lena Schallenberg
- Richard Lamont

In addition the following people have had involvement as students in the programme of work:

- Dr Ian Kusabs (PhD confirmed October 2015)
- Hannah Mueller (PhD submitted May 2016)
- Monica Peters (PhD defended June 2016)
- Ari Santoso (PhD submitted April 2016)
- Wang Me (PhD in progress)

Overview

The Bay of Plenty Regional Council Chair in Lake Restoration at the University of Waikato (hereafter referred to as the "Lakes Chair"), has been in existence continuously since 2002. Funding is allocated from Bay of Plenty Regional Council to the Lakes Chair based on a five-year agreement between the University of Waikato and the Bay of Plenty Regional Council. Since 2002 the funding, scope and volume of work undertaken by the Lakes Chair has expanded. The current 'annual' report covers the period 1 June 2015 to 30 June 2016 (now aligning with fiscal year reporting).

The current annual report combines projects funded directly by the Bay of Plenty Regional and those funded from other sources. Funding also occurs from a number of other sources to support research on the Rotorua lakes. This includes for example, other funding support from the University of Waikato (e.g., student scholarships and post-doctoral support), MBIE, Lake Tarawera Ratepayers' Association and Beca, as follows:

- University of Waikato MSc scholarship to Caroline Hodges
- Lake Biodiversity Restoration Outcome Based Investment (OBI) funded by MBIE, which ended in September 2015. A new project funded by MBIE has arisen to replace the OBI, commencing in October 2015. The new project is of duration four years and is entitled "Enhancing the health and resilience of New Zealand lakes.
- An annual donation is received by the Lakes Chair from Lake Tarawera Ratepayers' Association to support analyses associated with stream monitoring and to recognise ongoing provision of advice to LTRA and for maintaining the monitoring buoy on the lake.
- A subcontract to Beca as part of the assessment of environmental effects of diversion of the Ohau Channel diversion wall, which relates to an upcoming resource consent to ensure the wall remains in place.

A number of other activities are associated with the Lakes Chair:

- David Hamilton Chris McBride and Warwick Silvester are members of the Lakes Water Quality Technical Advisory Group (WQTAG) for the Rotorua lakes
- Hamilton and McBride have participated as members in the Rotoma / Rotoiti Sewage Technical Advisory Group and the Rotorua Sewage Technical Advisory Group.
- Associate Professor Brendan Hicks is a member of the Fisheries Technical Advisory Group.

- Staff and students have presented in presentations to the public on the Rotorua lakes, including Hamilton, McBride, Hicks, Moritz Lehmann, Hannah Mueller, Grant Tempero, and Ian Kusabs.
- A number of formal and informal presentations to community groups, organisations and others have been given by Hamilton.

Hamilton maintains involvement with two National Science Challenges: *Our Land and Water* and *New Zealand's Biological Heritage.* This involvement is important to make sure that Rotorua lakes are included as study sites in upcoming research funding from the Challenges. Hamilton is also involved with the National Objectives Framework of the National Policy Statement for Freshwater Management, as a member of panels for Science Review, Lakes and Cyanobacteria, and is therefore well able to inform the Bay of Plenty Regional Council on the evolving water policy framework arising from the Ministry for the Environment and the Ministry of Primary Industries. Other projects included in the Lakes Chair are described below.

1. ***Lake monitoring buoys***

   Chris McBride, Joseph Butterworth

   The Rotorua lakes' monitoring buoy network was expanded in July 2015 with the addition of a 'profiling' buoy in Lake Rerewhakaaitu. The profiler buoy, developed at the University of Waikato, uses an automated winch to raise and lower a sensor package to measure throughout the water column every two hours, allowing collection of multiple variables of interest at all depths without the need for costly sensor replication. A total of six Rotorua lakes are now monitored using high-frequency buoy systems, and further profiling systems are presently being considered for Lakes Rotokakahi (under construction), Okareka and Rotoiti (a second site). A program of regular maintenance of the existing buoys has continued over the past year, with several upgrades performed to improve reliability and automate the cleaning of key sensors. As the sensor network expands these processes become critical and due recognition must be given to the maintenance and support requirements to maintain the largest regional lake sensor network in the world.

2. ***Review of ecological effects of alum dosing***

   Grant Tempero

A toxicological review of alum dosing to the Rotorua lakes was undertaken in 2015 examining the potential for acute and chronic toxicological effects on a range of aquatic organisms. It was concluded that although the low buffering capacity of the Rotorua lakes is a risk factor, the current level of alum dosing is duly conservative and unlikely to result in toxicological effects. However, the long-term effects of alum dosing are unknown and indefinite alum dosing of the Rotorua lakes is not recommended. The detailed findings of this study are presented in ERI Report No. 52 (Tempero et al. 2015a) and a summary presentation of the results was given at a community science evening.

3. ***Sediment survey of Lakes Rotorua and Rotoehu***

In February 2016, 15 sediment cores were taken from Lake Rotorua and seven cores from Lake Rotoehu. The cores were sectioned and were analysed for both total aluminium and non-crystalline aluminium. In addition, nutrient concentrations above the sediment surface and sediment pore water dissolved phosphorus concentrations were determined. This information will allow determination of the relative rate of surface sediment aluminium accumulation due to alum dosing, and the amount of aluminium available for phosphorus sequestration. This study is complementary to a concurrent study by Max Gibbs from NIWA, examining rats of dissolved phosphorus efflux from lake sediment and the ability of flocculated alum to bind released phosphorus.

4. ***Effects of alum dosing on fauna for inflows to Lakes Rotorua and Rotoehu***

Nick Ling, Brendan Hicks et al.

Nick Ling has a contract with BOPRC to evaluate the effects of the alum dosing on the Utuhina Stream and Sulphur Bay, Lake Rotorua, and the Waitangi Soda Springs, Lake Rotoehu. Brendan Hicks is assisting with the management of this project. Utuhina Stream monitoring in 2015 suggests there have been no obvious effects of alum dosing on stream fish or macroinvertebrate communities. Some evidence of aluminium bioaccumulation was seen in tissues of common bully (gills and liver) resulting from continuous alum dosing of the Utuhina Stream but there was no evidence of bioaccumulation of aluminium in the tissues of koura. Alum exposure in these species does not appear to affect their health or abundance in the stream (Ling 2016a). No significant effects of alum dosing of Puarenga Stream could be distinguished by annual monitoring, and bioavailable aluminium in the vicinity of Sulphur Bay appears to be primarily influenced by the major geothermal activity of this region. Continuous alum dosing of the Puarenga Stream since 2010 has not caused aluminium bioaccumulation of

any species compared with samples obtained prior to the commencement of alum dosing (Ling 2016b).

5. ***Boat electrofishing survey for catfish in Lake Rotorua and Lake Rotoiti***

Brendan Hicks, Grant Tempero

Annual boat electrofishing was undertaken in the Ohau Channel in 2015 for the ninth consecutive year by Brendan Hicks and his fishing crew. Catches of common bullies, common smelt, rainbow trout, longfin eel and koura continue to be quite variable with no obvious trends. Brown trout, shortfin eel, and gambusia have been found occasionally. Goldfish are the one species that appears to have consistently increased in abundance since fishing began. An unfortunate addition to the boat electrofishing schedule this year was an emergency survey of the shoreline Lake Rotorua, the Ohau channel and Okere Arm and Te Weta Bay of Lake Rotoiti for brown bullhead catfish. Weed harvesting by BOPRC caught one catfish and subsequent fyke netting by the BOPRC Biosecurity team caught a further approximately 330 catfish, mostly in Te Weta Bay. The University of Waikato boat electrofishing crew fished 29.5 km of lake and channel shoreline, and the single catfish caught by boat electrofishing was in Te Weta Bay, so it appears that catfish are largely confined to this bay. Heavy weed cover in Lake Rotoiti reduced electrofishing capture efficiency, and continued use of fyke nets is recommended.

6. ***Ecological monitoring of artificial destratification in Lake Rotoehu***

Grant Tempero, Chris McBride, David Hamilton et al.

A four-year monitoring programme monitoring the ecological effects of two artificial destratification devices installed in Lake Rotoehu was completed in 2015. The devices were intended to prevent the formation of lake stratification by forcing compressed air through a diffuser near the lake bottom, the rising bubbles draw water from the bottom of the lake through vertical cylinders and cause mixing of thermally distinct layers. Monitoring results indicated that the mixing devices produced a limited, localised mixing effect, but had little or no effect on the ecology of the lake as a whole. It was concluded that Lake Rotoehu is too large and shallow for the current number of mixing devices, and that stratification will form outside of an immediate area (< 400 m) of influence of the destratification device.

7. ***Anthropogenic phosphorus loads to Lake Rotorua***

Grant Tempero, Chris McBride et al.

An estimation of anthropogenic and natural (baseline) sources of phosphorus to Lake Rotorua was prepared for the Bay of Plenty Regional Council to assist it with setting of realistic targets for reducing phosphorus loads. Natural concentrations (indicative of baseline or reference levels) of dissolved reactive phosphorus (DRP) and total phosphorus (TP) were modelled from observed concentrations in undisturbed catchments. These values were then used to estimate anthropogenic phosphorus in the Lake Rotorua catchment as the difference between natural and observed concentrations. Anthropogenic phosphorus loads to Lake Rotorua were estimated to be 22% of the total DRP load and 48% of the TP load. The report concludes that to achieve the Lake Rotorua TLI target of 4.2, anthropogenic TP loading would need to be reduced from c. 23 t y^{-1} to 8–13 t y^{-1}. This work was published as ERI Report No. 66 (Tempero et al. 2016).

8. Comment paper on management of nutrient loads to Lake Rotorua

Jonathan Abell, David Hamilton, Chris McBride

This work was important from the point of view that it was important to 'set the record straight' in relation to limiting nutrients in Lake Rotorua. It addressed a key conclusion in a paper by Morgenstern et al. (2015) "Using groundwater age and hydrochemistry to understand sources and dynamics of nutrient contamination through the catchment into Lake Rotorua, New Zealand". These authors had concluded that "the only effective way to limit algae blooms and improve lake water quality in such environments is by limiting the nitrate load". This finding was not considered to be consistent with dual nutrient control and the improvements in water quality that had occurred with alum dosing which had targeted phosphorus. Our comments pertain only to the issue of nutrient limitation in the lake and not to the primary focus of the study by Morgenstern et al. (2015), which otherwise makes a highly valuable contribution to understanding groundwater dynamics and nutrient delivery from the catchment.

9. Reducing phosphorus and nitrogen loads to Lake Rotorua for effective eutrophication control

David Hamilton, Chris McBride and Jonathan Abell

This paper was led by the late Val Smith (University of Kansas, USA) and was completed after his death. Two water quality datasets (>10 yr) were analysed from Lake Rotorua. Highly significant declines in total phosphorus (TP), total nitrogen (TN) and chlorophyll *a* (Chl-*a*) in surface waters of Lake Rotorua occurred between 2001 and 2015. Alum dosing substantially reduced TP and Chl-*a* Correlations of Chl-*a* on TP and TN were highly significant, indicating

a need to control both nutrients to reduce algal productivity. This conclusion has been reinforced by past bioassay studies (by Jonathan Abell, David Burger and Hannah Mead individual studies) which show co-limitation by N and P. Collectively, the data provide strong support for the current strategy of limiting both N and P loads to Lake Rotorua for effective eutrophication control.

10. Lake Rotorua wastewater discharge effects study

Jonathan Abell, David Hamilton, Chris McBride

In 2019, irrigation operations at the Land Treatment System (LTS) in the Whakarewarewa Forest are scheduled to cease. Six main options for upgrades of the treatment plant were tested for their performance in removing nutrients and impacts on the Trophic Level Index in Lake Rotorua. Seven potential discharge sites to water were also identified in three areas: in the lower reach of the Puarenga Stream; on the lake shoreline near Sulphur Bay, and offshore on the lake bed, 2 km to the north of the Puarenga Stream mouth. The assessment also considered potential effects related to nitrogen toxicity, dissolved oxygen and the growth of algae attached to the bed of the Puarenga Stream in the stream discharge option. Computer modelling results showed that effects associated on lake eutrophication for each of the options would either be neutral or minor (negative). In the lower Puarenga Stream, discharging treated wastewater was predicted to cause minor negative effects in relation to nitrogen toxicity.

11. ROTAN

Richard Lamont

Work has continued on the redevelopment of the ROTAN catchment model. This model has previously been applied to Lake Rotorua to assess the magnitude and time-varying changes in nitrogen loads to the lake. A re-development of the model was required because the existing model was no longer compatible with upgraded ARCGIS software. The graphical/user interface side is complete, with the final work based on improving the output of the model to bring it in line with the output from the original model. At the time of writing this report the output is very similar to the original ROTAN, with the re-development phase close to an end point. Once this has been completed, continuing work will need to be done with NIWA to calibrate the model to ensure it is fit for purpose.

12. Lake Tikitapu water quality model

Chris McBride et al.

The establishment of a water quality model for Lake Tikitapu was finalised and a report created (McBride et al. 2016). This model will provide a framework upon which future scenarios (e.g. changes within the catchment) for Lake Tikitapu can be evaluated using a model.

13. Reconsenting of Ohau Channel diversion wall

David Hamilton, Brendan Hicks, Moritz Lehmann

The current Ohau Channel diversion wall consents expire in 2017 and the Bay of Plenty Regional Council (BOPRC) wishes to renew the consent for the existing structure for a further period. As part of this process, it is necessary to determine the effect the wall has had on the water quality and fisheries of Lake Rotoiti. BOPRC has engaged Beca Ltd to manage the re-consenting of this wall, and David Hamilton, Brendan Hicks, and Moritz Lehman have been engaged as sub-contractors to Beca to provide scientific evidence in respect of the reconsenting.

14. Analysis of trends in water quality of Lakes Rotorua and Rotoiti

Moritz Lehmann, Jake Vander Zanden and David Hamilton

Data from Bay of Plenty's monthly lake water quality monitoring program is currently being analysed for trends related to geoengineering activities such as alum dosing and inflow diversion. Overall improvements in water quality in both lakes since 2004 can be detected on seasonal and annual averages of TLI and related variables such as chlorophyll. Preliminary analysis suggests that since 2008, Rotoiti annual chlorophyll concentration is 0.5 $\mu g\ L^{-1}$ lower that what would be predicted from the chlorophyll concentration in Lake Rotorua, however, it cannot be conclusively stated that this is the effect of the diversion wall, because of the interaction of effects from the source-water (i.e, Rotorua) improvements and natural variability. It is recommended to carry out further analysis on the dissolved oxygen data, to expand 3-D modelling efforts of the system and to carry out detailed analysis of satellite imagery. Results from this analysis were presented at the NZ Freshwater Sciences Society Conference in Wellington on 26 November 2015.

15. Modelling of **E. coli** *in Lake Rotorua*

Christopher Dada

Research using multivariate analysis to assess drivers of variations of *E. coli* abundance in Lake Rotorua has been undertaken. Findings on the development of predictive models for the determination of *E. coli* concentrations at Lake Rotorua bathing sites were presented at the NZ Freshwater Sciences Society Conference in Wellington on 26 November 2015. This information has been collated into a report which is currently under peer-review.

16. Lake Tarawera Sewage reticulation study

Christopher Dada, Chris McBride, David Hamilton

In order to guide efforts being considered for the management of catchment sources of nutrient pollution into Lake Tarawera, a study was commissioned by the Lake Tarawera Ratepayers Association to assess the potential impact of sewage reticulation on lake water quality. Led by Christopher Dada, the study specifically applied mass balance models to estimate the response of in-lake concentrations to changes in external load (namely, with and without sewage reticulation). Historical measurements of *E.coli* concentrations (1991-2015) from tap water samples collected from a number of sites around the lake were also analysed. Modelling of reticulation of wastewater nutrient loads revealed that the impact on lake water nutrient concentrations is likely minor, because wastewater represents a small component of overall N and P loads to Tarawera. Analysis of *E. coli* concentrations however, indicated that microbiological non-compliance of drinking water samples was prevalent at the study site, suggesting some sort of faecal contamination of source waters. The study concluded that wastewater reticulation may be a desirable management initiative as it could realise in relatively short order a contribution to improving manageable sources of nutrients from the lake catchment, and may additionally mitigate any public health risk that might occur due to poorly performing on-site treatment systems. A draft report has since been submitted to Lake Tarawera Ratepayers Association.

17. Aptamer biosensor-based real-time monitoring and reporting of E.coli concentrations at BoPRC recreational hotspots

Christopher Dada

Dr Christopher Dada will be working in collaboration with Dr Justin Hodgkiss (Victoria University of Wellington) and leading Chinese researchers to develop an efficient aptamer-based biosensor that offers high-resolution estimation of faecal pollutants in recreational water samples at 15-minute to 1-hour sample processing time. Achieving continuous data collection at this time scale is not otherwise economically viable or technically feasible with conventional

methods for monitoring faecal indicator bacteria. The aptamer-based biosensor will improve timely issuance of swimming advisories and other freshwater quality management efforts as it will generate high-frequency bacteriological data at significantly reduced costs and unrivalled efficiencies. An MBIE funding proposal for the project has already been developed and submitted. If approved, the developed biosensor technology would be calibrated for real-time measurements and reporting of faecal pollution at BoPRC recreational freshwaters.

18. Modelling water quality of Lake Rerewhakaaitu

Eunju Cho

This project has been a long time in its infancy but good progress is currently being made by post-doctoral fellow Eunju Cho. Input data to the model are currently being checked, updated and buoy data are being added for the purpose of validation of the model. The updated input data are being informed by modelling undertaken for the greater Lake Tarawera catchment by GNS (a report to Bay of Plenty Regional Council by Paul White). This work will be useful to inform on the extent to which catchment management actions influence water quality of the lake as the lake is perched and groundwater therefore flows out of it, with only two small surface water inflows entering the lake, as well as rainfall.

Summary of Postgraduate Studies undertaken under the Lake Chair agreement:

Student Scholarship Funding

1. Alfred Theodore Kpodonu was awarded a three year PhD study award from BoPRC for the period 1st March 2013 - 28th February 2016. PhD Title: *An integrated ecosystem assessment for water quality management of Lake Okataina*. – Report attached.

2. Katie Noakes was awarded a MSc study award from BoPRC for the period 1st September 2015 – 31st August 2016. MSc Title: *The biogeochemical effects of groundwater discharges into selected Rotorua lakes* – Report attached.

3. Lena Schallenberg received a Summer Research Scholarship from the University of Waikato for setting up a 3-D hydrodynamic model of Lake Rotoiti during summer 2015/2016. The resulting poster was entitled, *Three dimensional modelling of water transport and mixing as a result of the Ohau Diversion Wall in Lake Rotoiti.*

4. Caroline Hodges received a University of Waikato Masters Scholarship to support research on calibration of calibration of phycocyanin sensors to measure cyanobacteria biomass. The thesis is currently under examination.

5. Ari Santoso submitted his PhD thesis in April 2016, funded under a NZ Aid PhD scholarship with Indonesia. He is currently awaiting oral examination. The title of this thesis is: Carbon dioxide and methane emissions from the Te Arawa lakes of Rotorua, New Zealand.

6. Hannah Mueller submitted her PhD thesis in May 2016, funded under an Outcome Based Investment in Lake Biodiversity funded by MBIE. She is currently awaiting oral examination. The title of her thesis is: Restoring freshwater quality: an integrated environmental, economic, and policy assessment of reducing nutrient loads to Lake Rotorua.

7. Monica Peters successfully defended her PhD thesis in June 2016 and is currently making revisions to it before final submission and confirmation. She was funded under an

Outcome Based Investment in Lake Biodiversity funded by MBIE. The title of her thesis is: The ecology of community environmental groups: Integrating restoration, partnerships and citizen science.

8. Kohji Muraoka continues with his PhD thesis on high-frequency variations in phytoplankton communities. This work has a component of work on Lake Rotoehu, examine effects of disturbance from destratification on phytoplankton communities in the lake. He is expecting to submit his thesis at the end of this year (2016).

9. Wang Me continues with her PhD thesis on modelling discharge, sediment and nutrient dynamics in the Puarenga catchment of Lake Rotorua. She is expecting to submit her thesis in July 2016.

Progress Report – An integrated ecosystem assessment for water quality management of Lake Okataina (PhD research by Theodore Kpodonu)

This Ph.D. research is designed to understand long- and short-term changes in water quality of Lake Okataina and the underlying causes, particularly in relation to exotic wildlife. The work is to help to better inform the natural (reference) state of the Rotorua Lakes, which is relevant to setting realistic goals for restoration. Specifically, the project is designed to help better understand the relevance of the Trophic Level Index for management of the lake, lake reference conditions and to assist in development of a comprehensive management plan. The thesis has been submitted and th candidate is currently awaiting oral examination. The following are the major outcomes of the study:

- The quality of the lake has been impacted by volcanic eruptions, climate variability, and invasive mammals
- The effects of the volcanic eruption on the lake were found to be transmitted mostly through catchment disturbance.
- The eruption delivered mostly refractory organic matter from the catchment to the lake, and also increased fluxes of minerals from the catchment.
- Volcanic eruptions and the presence of invasive mammals were also found to have accounted for changes in the phosphorus pool in the lake sediment. This change appeared to be associated with alterations to the composition of phytoplankton groups in the lake.
- The combined effect of eruptions and invasive mammals in the catchment was shown in the study to have contributed to increased erosion into the lake. Related to the increased erosion rates are contemporary reductions in dissolved oxygen in bottom waters and increased internal loading of phosphorus. The marked increase in primary productivity in Lake Okataina about 1960 followed the reduction in hypolimnetic oxygen and the onset of reduced capacity of bottom sediments to retain phosphorus.
- The effects on lake productivity of climate and invasive mammals have been shown to be pervasive in this study. These mammals are the “new normal” in many New Zealand catchments. Their role as conduits for transfer of soil and nutrients from catchments to lakes has been demonstrated.

The following are some management implications of the findings:

- To manage lakes effectively in New Zealand under the NPS-FM, will require that stressors are identified and removed or managed.

- Identifying, enumerating and managing invasive mammals in the catchment of lakes could reduce the rate of transfer of sediment and nutrients to lakes, thereby maintaining the integrity of these ecosystems.
- The direct impact of climate on lakes cannot be managed but its indirect effects on catchment erosion and landslides that accompany rainstorms may at least by partly mitigated through careful management and planting of riparian areas, slope stabilization and wise choices about the suitability of different land uses.
- In the light of the above, management goals should not be static but dynamic to reflect the impact of the natural variability of the lakes.

Progress Report - The biogeochemical effects of groundwater discharges into selected Rotorua lakes. (MSc Research by Katie Noakes)

Purpose

The water quality of Lake Rotokakahi has declined over recent years. Recent modelling reports have stated that there is a significant lack of inflow data for the lake. There is only one permanent inflow to the lake so it is presumed that hydrologically, this is a groundwater dominated system. Little research has been done on field measurements of groundwater within the area, particularly in regard to assessing the quality of the groundwater, where groundwater discharges are occurring within the lake, or the impacts that these discharges have on the ecological status of the lake.

Progress

To date 8 piezometers have been installed around the perimeter of the lake. These piezometers were installed with the intention of gaining information on the shallow groundwater system that directly impacts the lake. There are 2 piezometers in the forested area of the catchment and the remaining 6 are on the farm land (Fig. 1). On the farmland paired sites were set up; two are situated in a dry stream bed – the main drainage path from the farm, another two were placed in a

Figure 1: Map of Lake Rotokakahi showing piezometer locations and associated land uses

swampy area and the final two were located between the farm and forested areas. These piezometers were removed just prior to the time of writing this report. Monthly water sampling has been undertaken and includes monitoring of the lake, the spring, the piezometers and a groundwater bore. These samples have been processed by the Bay of Plenty Regional Council lab in Whakatane. A small scale weather station has been set up in the farm land to the south of the lake to assist with field measurements.

Additional work

Storm event sampling is planned and includes sampling of the sub-surface 'quick flow' that occurs within the shallow sandy soil layers in periods of high rain, to determine nutrient loads. Also, storm event sampling of the spring will be compared over periods of varying (or no) rainfall to determine the response time of deeper groundwater to storm events. The DYRESM-CAEDYM (one-dimensional) and ELCOM-CAEDYM (three-dimensional) models are being set up at the time of writing this report. These models will be coupled with the groundwater model outputs (MODFLOW) which are part of a GNS report to Bay of Plenty Regional Council.

Expected results

Shallow groundwater flows are expected to contribute higher nutrient loads than previously estimated, particularly in storm conditions when they enter the lake via rapid sub-surface flow. It is expected that the farm monitoring sites will have higher nutrients than the exotic and native forest sites. It is also expected that groundwater flow boundaries will be different than those previously assumed. These boundaries will be determined by locating areas of groundwater seepage within the lake. If expectations of changes to groundwater boundaries are true, the implications will provide focus for investigations to identify and source groundwater flows, not only in Rotokakahi but for lakes across the region.

Summary of recently completed, current and upcoming work

Note: Plain font denotes projects that are generally supported by Bay of Plenty Regional Council and involve University of Waikato. Dark grey font denotes projects that are directly supported through University of Waikato. Light grey font denotes projects that are led independently of University of Waikato but may involve the university in some way.

Recently completed	Current work	Upcoming work
1. Anthropogenic phosphorus report identifying catchment sources of phosphorus that may be managed (Tempero et al. 2016b)	22. Review Tarawera groundwater report by GNS (Hamilton)	52. Tarawera nutrient budget and lake model following from Tarawera groundwater work and farm nutrient budgets (Hamilton)
2. Modelling of the impact of Rotorua sewage scenarios related to discharge to the lake for RLC (Abell et al. 2016)	23. Complete Lake Ōkāreka catchment and lake modelling (Kpodonu, Me and Hamilton)	53. Kaituna River monitoring project and alignment with matauranga Māori monitoring in the local area, leveraged with new MBIE investment in Lake Resilience (Hamilton, Lehmann)
3.Research presentations to the Rotorua community (two evening presentation evenings within the current reporting time)	34. Modelling of the Rotorua sewage disposal land area, to help with impact of decommissioning the site (Me and Hamilton)	54. Research into aluminium in Rerewhakaaitu soils, lake sediment responses to anoxia, and summary of results of the lake buoy (Cho, Gibbs (NIWA) and Hamilton)
4. Completed review of the eco-toxicological effects of alum dosing to support rules development and initiation of the community discussion on alum use in our lakes (Tempero et al. 2016a)	35. Complete report on nano-bubble treatment at lab scale with commentary for scale up to part lake application (Hamilton and Tempero)	55. Support for the nitrogen target and phosphorus target for Lake Rotorua as a result of Plan Change 10 including possible Environment Court appearances (Hamilton)
5. Installation of monitoring buoy in Lake Rerewhakaaitu and buoy prepared for installation in Lake Rotokakahi.	36. Support Ohau wall resource consent application, water quality analysis through sub-contract from Beca (Hamilton, Hicks and Lehmann)	56. Modelling of Lake Rotoiti to consider long term scenarios using DYRESM-CAEDYM and removing the diversion wall, treating lake sediments, etc. (Cho)
6. Review Ohau annual monitoring reporting (peer review by Hamilton).	37. Completion of Rerewhakaaitu lake model (Cho and Hamilton)	57. Review report on the effect of acacias in action plan for Tarawera (Hamilton)
7. Completed two reports on Lake Rotoehu aeration Tempero et al. 2016b, McBride et al. 2015)	38. Sediment monitoring of lakes Rotorua and Rotoehu to support management decisions on the alum programme	58. Ongoing fisheries assessments and research including responses to alum dosing, catfish incursion,

		effect of Ohau Channel diversion, fisheries Technical Advisory Group (Hicks, Ling)
8. Completed Lake Tarawera nutrient budget and reported to Lakes Water Quality Society (Dada et al. 2016)	39. Lead main agenda items and review minutes for quarterly WQTAG meetings	59. Impact of invasive weeds on water quality and native flora and fauna habitat
9. Completed Lake Rotorua modelling report addressing the impact of alum dosing on water quality and potential improvements in TLI as a result of meeting nitrogen targets (Hamilton et al. 2015)	40. Complete re-coding of the ROTAN program to support NIWA and BoPRC in quantitative assessment of effects of land use change	60. Māori involvement in programme monitoring and application of matuaranga Māori in science monitoring to identify effects on Māori values
10. Completed bathymetry surveys for 5 lakes in the past 18 months. Bathymetric data necessary to re-develop predictive lake models, e.g , Lake Rotokakahi (data file received, adapted into model, awaiting final report on bathymetry)	41. Completing lake nutrient load calculations for each of the 12 Rotorua Lakes to update knowledge with most recent data and feed into various nutrient budgeting and modelling works (McBride, Verburg and Hamilton)	61. Enhancement of koura habitat in Lake Rotorua and initiation of “citizen science” projects to enhance data collection (Kusabs)
11. Completed lake model for Tikitapu (McBride et al. 2016)	42. Update of modelling of Lake Rotokakahi using additional groundwater data from GNS and as part of MSc thesis (Noakes, MSc thesis)	
12. Support to identify monitoring needs in the Kaituna and Pongakawa catchments (preliminary meeting at Te Puke)	43. Advise on monitoring plan for Lake Rotokakahi to enhance model predictions and re-calibrate model with new data collected. To be carried out following MSc thesis submission (Hamilton, Butterworth and McBride)	
13. Ōkataina PhD impact of introductions on lake water quality (PhD submitted by Theodore Kpodonu)	44. Lake buoy maintenance programme (Butterworth,McBride)	
14. Boat electro-fishing survey for catfish in Lake Rotorua and Lake Rotoiti completed	45. Complete Lake Ōkāro catchment and lake modelling to help understand the long term prognosis for the lake under	

survey following incursion	different catchment management regimes (Kpodonu, Me and Hamilton)	
15. Modelling of *E. coli* in Lake Rotorua and Aptamer biosensor-based real-time monitoring and reporting of E.coli concentrations at BoPRC recreational hotspots undertaken by Chris Dada	46. Lake Rotorua nutrient budget based on updated OVERSEER figures (McBride)	
16. Effects of alum dosing on fauna for inflows to Lakes Rotorua and Rotoehu (Ling and Hicks 2015)	47. Put in place cultural health monitoring programme (Kusabs)	
17. Ecosystem services assessment of Lake Rotorua. PhD submitted by Hannah Mueller	48. Advice on water quality and treatment to the RLC sewage TAG(Hamilton, McBride)	
18. Greenhouse gas emissions assessment for Rotorua lakes. PhD submitted by Ari Santoso	49. Maintain stream monitoring programme for Lake Tarawera (Hamilton, Beckett)	
19. Summer student scholarship award to Lena Schallenberg to adapt 3-D modelling to assessment of Ohau Channel Diversion wall effects.	50. Updates for Te Arawa Lakes Trust and Ngati Rangiwewehi on Te Arawa lakes' projects being undertaken by University of Waikato	
20. MSc student thesis, Caroline Hodges, to examine calibration of phycocyanin sensors. Thesis submitted.	51. Strategic Farming Fund for supporting research on detention bunds in the Rotorua catcment (PhD student to be put in place)	
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Breakdown of Bay of Plenty funding allocation over the 12-month period 1st July 2015 to 30th June 2016

Summary of Contract - Bay of Plenty Regional Council Funding

1st July 2015 to the 30th June 2016

(All figures exclude GST)

	Budget	Actual	Difference	Notes
Income from Environment Bay of Plenty	312,000	327,750	(15,750)	**1**
Prof Salary 80%	122,500	122,500	-	
Technician 50%	35,000	34,001	999	
J Butterworth Support	28,500	35,270	(6,770)	**2**
Post-Doctoral Modeler	78,000	61,653	16,347	**3**
Modelling Support		12,861	(12,861)	**3**
Student Study Awards	48,000	39,907	8,093	**4**
Total Costs	312,000	306,192		

Notes:

1. One of the student study awards payments was missed in the 2014-2015 Financial Year. This catch up payment of $15,750 was paid out in the following year.
2. J Butterworth salary is slightly higher than that provided by the Lakes Chair contract and in conjunction with annual leave accrual has meant an overspend in the 2015-2016 Financial Year.
3. The timing difference in finding a replacement position for Aroon Parshotam has meant the full Post-Doctoral Funding for the 2015-2016 Financial Year was not paid out. The balance has been used to fund additional modelling work by Lena Schallenberg to the value of $12,861.11
4. This is a timing difference as the funding is received in advance of the stipend payments for MSc Katie Noakes.

Breakdown of University of Waikato funding allocation over the 12-month period 1st July 2015 to 30th June 2016

Summary of Contract - University of Waikato Funding

1st July 2015 to the 30th June 2016

(All figures exclude GST)

		Actual Costs	Notes
Full overheads costs on the 80% Prof Salary BoPRC Contribution		149,600	
Shortfall of actual costs of Prof David Hamilton's Salary		14,000	1
Technician 100% Salary Costs		56,250	2
Full overhead costs on 100% of the Technician Role UoW and 50% Technician BoP		99,276	
Full overhead cost on Joseph Butterworth's position		38,797	
Full overhead cost on the Post Doctoral Modelling position		67,818	
	Total Costs	425,741	

Notes:

1. The funding received from the Bay of Plenty Regional Council was not sufficient to cover the actual cost of 80% of Professor David Hamilton's salary in his role as Lakes Chair. The subsequent shortfall was met by the University of Waikato.

2. The UoW-funded Technician Role has increased to a full time position with the employment of Ronald Ram which is over and above the 0.50FTE outlined by the Lakes Chair agreement.

The FTE allocation for Research Fellow Dr Christopher Dada (not shown in the table above) has been covered through an agreement with the University of Waikato.

Receives Only – No Decisions

Report To: Regional Council

Meeting Date: 09 March 2017

Report From: Shelley Hey, Manager Chief Executive's Office

Update on local government reorganisation in other regions

Executive Summary

This report provides an update on local government reorganisation initiatives in other regions. The report includes key information from the previous update to Council on 25 August 2016, to ensure sufficient background is provided within this first update of the new Triennium.

The Local Government Commission (LGC) is currently involved in local government reorganisation processes in the West Coast and Auckland.

On 1 February 2017 the Commission called for alternative applications and other proposals for changes to local government arrangements on the West Coast, with applications closing on 15 March 2017. The Commission is also working with the four West Coast councils' joint Mayors and Chair forum to support its *Commitment to Regional Efficiency*. Two LGC-funded reports were jointly released by the councils and the Commission on 13 February 2017. The reports focused on resource management services (including planning, consenting and compliance monitoring) and on transportation services (covering roading arrangements for local roads and state highways). No specific recommendations were provided by the reports. Next steps are for the councils and the Commission to consider whether further work should be done on a potential option or options for change in one or both of these functional areas.

The last update from the LGC regarding the Auckland reorganisation process was on 7 November 2016. The update advised that the current phase of community engagement had been completed and the next step of identifying the reasonably practicable options and refining those to a preferred option would begin in early 2017. Unrelated to the reorganisation process, in November 2016 Auckland Council released its independently authored 'Governance Framework Review'. The review proposes three alternatives to existing local board arrangements and some local board leaders were reportedly unhappy with the proposals.

The LGC is also continuing to work with key stakeholders in Wellington (including Wairarapa) and Northland, two of the three regions involved in earlier reorganisation processes. No recent updates have been reported from Wellington or Northland.

There has been some reported discussion of potential interest regarding the Otago region and also regarding proposed 'special demarcation zones' proposed by the Rotorua, Gisborne and Far North District Council Mayors.

Recommendations

That the Regional Council:

1 Receives the report, Update on local government reorganisation in other regions.

1 Introduction

This report provides an update on local government reorganisation initiatives in other regions since the last report, which was provided to Council on 25 August 2016. Key information from the previous update has been included in this report to ensure sufficient background is provided within this first update report of the new Triennium.

2 The West Coast

2.1 Councils and LGC joint regional efficiency work

In April 2015 the four West Coast Councils (Buller, Grey and Westland District Councils and West Coast Regional Council) and the LGC signed a memorandum of understanding seeking to introduce positive change supporting the West Coast Mayors and Chair forum's *Commitment to Regional Efficiency*.

On 13 February 2017 the West Coast Mayors and Chair forum and the LGC issued a joint media statement regarding the two regional efficiency reports tabled at the Mayors and Chair forum that week. The LGC-funded reports are a report on resource management services by Boffa Miskell (the RMA report) and a draft indicative business case for transport by Rationale (the transport report). Both reports are publicly available on the LGC website. [1]

The purpose of each report was to achieve a shared understanding of the function (transport or resource management services) in the region to enable development of a potential case for change. These workstreams are intended to be key enablers to facilitate future economic development and wellbeing of the West Coast. Both reports suggest a set of evaluation criteria that could be used to assist the Commission and the councils to identify and assess options. Other than this, and reflecting the requirements in the terms of reference, the reports do not provide any specific recommendations concerning the way forward.

The **transport report** [2] follows similar methodology to the Bay of Plenty joint councils' Local Government Futures project (LGF) transportation assessment. The options arrived at appear to be quite similar to the LGF indicative business case.

The **RMA report** [3] is the first of these types of reports to cover resource management services, encompassing planning, consenting and compliance monitoring. Key opportunities identified include:

- The process of establishing better communication and working relationships between councils at political, management and staff levels; and

[1] Joint media statement LGC and West Coast Councils, 13 February 2017: Regional efficiency reports an important milestone

[2] LGC website: West Coast Regional Transport Efficiency draft IBC, Rationale, February 2017

[3] LGC website: West Coast Regional Efficiency Report on Resource Management Services, Boffa Miskell, 7 February 2017

- The prospective National Planning Template, which may make the process of creating new planning documents for part, or all, of the West Coast a more straight forward task.

Next steps are for the councils and the LGC to consider whether further work should be done on a potential option or options for change in one or both of these functional areas.

The joint media statement says that the reports are "an excellent basis on which to consider further work by the Commission and the Councils on a potential option, or options, should be done".

2.2 LGC reorganisation process

Separately but in parallel with the joint councils and LGC work on regional efficiency, the LGC is also undertaking a local government reorganisation process in the West Coast region. The reorganisation process was initiated in August 2015 by two West Coast residents' lodgement of an application for a unitary authority for the West Coast, supported by a petition.

The LGC conducted a community engagement programme in June to July 2016 and, after receiving over 700 submissions, determined there was 'demonstrable community support' for some change.

An LGC media release on 1 February 2017 advised that the Commission is now calling for alternative reorganisation applications regarding West Coast local government arrangements. Applications close 15 March 2017.[4]

To assist those preparing alternative applications, the Commission has prepared supporting information which is now publicly available.[5]

3 Auckland

The LGC is also undertaking a local government reorganisation process in the Auckland region. This process was initiated by lodgement of two separate reorganisation applications. The first was from the Northern Action Group (NAG), seeking separation of North Rodney from the Auckland Council, and the second was from Our Waiheke, seeking formation of a unitary Waiheke Island Council. The NAG application was accepted in August 2015 and alternative applications were called for in April 2016. The LGC determined in May 2016 that the application from Our Waiheke was to be considered an alternative application in the process.

The last LGC update on the Auckland process was on 7 November 2016. The update advised that the Commission had completed the current phase of its Auckland community engagement programme, and the next step of identifying the reasonably practicable options and refining those to a preferred option would likely begin in early 2017. [6]

[4] LGC media release, 1 February 2017: Commission calls for alternative reorganisation applications for West Coast local government arrangements
[5] LGC website, 1 February 2017: West Coast - Invitation for alternative reorganisation applications
[6] LGC media release, 7 November 2016: Meetings helpful - last call for online survey

Unrelated to the LGC reorganisation process in Auckland, on 8 February it was reported that Auckland Council local board leaders are unhappy with the Council's proposal to reduce the number of local boards.[7]

This follows Auckland Council's release of its "Governance Framework Review" report on 18 November 2016. The 160 page review by independent consultant Gareth Stiven, PWC, scrutinises Auckland's governance and how well the council structure and local boards (excluding CCOs) have performed since amalgamation in 2010.

Instead of the existing 21 local boards, the review proposes three alternatives:

1. Reduce the number of local boards by merging some

2. Reduce the number of local boards and replace some smaller-populated areas with smaller 'community boards'

3. Keep the same number of local boards but introduce a 'cluster based' support model with staff decentralised across the region.

Auckland Council has appointed a working party (of seven local board and seven governing body members) to review the findings and make recommendations to Council's governing body in July 2017.

4 Update on regions involved in earlier reorganisation processes

4.1 Wellington region, including Wairarapa

In July 2016 the LGC released a progress update report on 'Strengthening the Wellington Region', which is underpinned by a number of LGC and consultants' reports.[8]

The progress update noted that more than 40% of submitters to the LGC's 2014 reorganisation proposal proposed some change for the region. On consideration of the outcomes from a community consultation process, the Commission withdrew its proposal but continued the reorganisation process with the aim of identifying a new preferred option that would be more likely to achieve widespread community support.

The progress update also noted that the LGC had worked collaboratively with the region's nine councils over the past year. The following five priority areas were identified as key to the region's prosperity and updates were provided for each, summarised as:

- *Governance in the Wairarapa* – on the basis of engagement undertaken in the Wairarapa, the Commission considered the communities' preference to be for a single combined Wairarapa District Council but to remain part of the Wellington region.
- *Transport (covering roading and public transport across the region)* – no formal decision had been made, with work being undertaken by Castalia Strategic Advisers still at an early stage. The LGC was to work with councils to finalise the indicative business case by October 2016. The Commission

[7] Stuff, North Shore Times, 8 February 2017: Auckland Council review proposes reducing number of local boards

[8] LGC media release, 29 July 2016: Strengthening the Wellington Region - a progress update

would then set out a process and timeframe for identifying a preferred option, including public consultation.

- *Water services* – the Commission broadly agreed with the Mott MacDonald report findings, including that Wellington Water should be given more time and support to develop and mature using the current delivery model. The Commission is to monitor councils' responses to the report findings and will remain open to considering changes to water services in a draft proposal in 2017.
- *Spatial planning* – the Commission recognised the divergent views of councils and considered that at that stage the case for a comprehensive spatial plan had not been conclusively made. Conscious that work to date by Boffa Miskell had focused mainly on the perspectives of councils, the Commission had decided to obtain a focused stocktake, or gap analysis, to look for evidence of any meaningful gaps, overlaps and inefficiencies with respect to the 23 growth plans and strategies currently in place in metropolitan Wellington.
- *Economic development* – on balance the Commission supported Martin Jenkins' key recommendation that now was not the time to make further changes to the region's economic development arrangements. The Commission suggested that councils consider undertaking a review by late 2017 if the issues raised in the report have not been resolved by then.

At the time of writing this report, no further updates had been reported.

4.2 Northland

In its June / July newsletter the LGC advised it is working with the Northland councils on their shared services work programme, and that the councils had agreed for the Commission to deliver two reports on the state of water assets and the ICT architecture in the region.[9]

At the time of writing this report, no further updates had been reported.

5 Other areas of potential interest

5.1 Otago

It was reported on 25 January 2017 that Dunedin City Council has ordered a report into a possible merger between it and the Otago Regional Council, to create a unitary council for the Dunedin district.[10] The report is expected at the end of March 2017.

Subsequently, Michael Laws, Regional Councillor, put a motion to the Otago Regional Council on 8 February proposing a review of local government structures across the region, including the merits of a unitary council for the region. The motion was defeated by the Council.[11]

[9] LGC website: LGC Newsletter June/July 2016
[10] Otago Daily Times, 25 January 2017: City and ORC merger sought
[11] Radio NZ news, 8 February 2017: 'No public support' for Otago amalgamation review

5.2 Proposed special 'demarcation zones'

On 3 February 2017 it was reported that Mayors of Far North, Gisborne and Rotorua districts, working with the public policy think tank, the McGuinness Institute, are lobbying the Government to 'shake up' the social welfare system.[12]

The idea is the result of the Tackling Poverty NZ project, a series of one-day workshops held across the country in mid-2016.

The proposed demarcation zones would 'isolate and separate' the three districts from central governance. Welfare, health, education, employment and policing would be refocused and overseen by local communities to deal with the social problems in the three areas.

The 15 page December 2016 report, *'Proposed Demarcation Zones for Public Policy Innovation'*, by the McGuinness Institute, is publicly available.[13]

6 Conclusion

As per previous Council direction, local government reorganisation updates are provided to Council when there is new information to report, or on request.

7 Council's Accountability Framework

7.1 Community Outcomes

Council's interest in the matters in this report contributes to the Regional Collaboration and Leadership Community Outcome in the Council's Long Term Plan 2015-2025.

7.2 Long Term Plan Alignment

This work is provided for in the Governance Services activity in the Long Term Plan 2015-2025.

Budget Implications

There are no budget implications arising from this report.

Anne Payne
Principal Advisor

for Manager Chief Executive's Office

1 March 2017

[12] Stuff, national, 3 February 2017: Mayors rally PM to create social welfare shake-up
[13] www.mcguinnessinstitute.org, December 2016 : Proposed Demarcation Zones for Public Policy Innovation