

BANKS PENINSULA WATER MANAGEMENT ZONE COMMITTEE AGENDA

TUESDAY 16 OCTOBER 2012

AT 5.30PM

IN GOVERNORS BAY HOTEL, MAIN ROAD, GOVERNORS BAY

Committee: Richard Simpson, Community Representative (Chairperson)
Donald Couch, Commissioner Environment Canterbury
Claudia Reid, Christchurch City Council
Yvette Couch-Lewis, Community Representative
Steve Lowndes, Community Representative
Pam Richardson, Community Representative
Kevin Simcock, Community Representative
Iaeen Cranwell, Te Rūnanga o Wairewa
June Swindells, Te Hapu o Ngāti Wheke/Rapaki
Wade Wereta-Osborn, Te Rūnanga o Koukourarata
Pere Tainui, Te Rūnanga o Ōnuku

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1. **APOLOGIES**

2. **CONFIRMATION OF MINUTES – 18 SEPTEMBER 2012**

The minutes of the committee's meeting held on 18 September 2012 are **attached**.

The Committee is asked to approve these minutes as a true and accurate record of the meeting.

ATTACHMENT TO CLAUSE 2

**BANKS PENINSULA WATER MANAGEMENT ZONE COMMITTEE
18 SEPTEMBER 2012**

A meeting of the Banks Peninsula Water Management Zone Committee was held in Rapaki Marae on Tuesday 18 September 2012 at 4.05pm

PRESENT: Richard Simpson, Community Representative (Chairperson)
Yvette Couch-Lewis, Community Representative
Iaeen Cranwell, Te Rūnanga o Wairewa
Steve Lowndes, Community Representative
Pam Richardson, Community Representative
Pere Tainui, Te Rūnanga o Ōnuku
Kevin Simcock, Community Representative
June Swindells, Te Hapu O Ngati Wheke
Wade Wereta-Osborn, Te Rūnanga o Koukourarata

APOLOGIES: An apology for absence was received and accepted from Councillor Claudia Reid and Commissioner Donald Couch.

1. CONFIRMATION OF MINUTES – 21 AUGUST 2012

It was **decided** that the minutes of 21 August 2012 be approved as a true and accurate record of the meeting.

2. DEPUTATIONS BY APPOINTMENT

2.1 The Committee received a deputation from Paula Smith, resident of Diamond Harbour, regarding Whakaraupo (Lyttelton Harbour) Catchment and the draft Zone Implementation Programme (refer **attached**).

3. IDENTIFICATION OF URGENT ITEMS

3.1 Fiona Nicol advised the Committee that posters advertising the public meetings were available to distribute in the community. Fiona will follow up on articles for the community newspapers.

3.2 Pam Richardson volunteered to write about the recent severe storm and its aftermath in Banks Peninsula as a record of the event.

4. MATTERS ARISING

4.1 COMMITTEE WORKSHOPS

The Committee gave feedback on the work in progress on the draft Zone Implementation Programme developed through committee workshops. The Committee acknowledges that all chapters are still in development.

4.1 STAKEHOLDER MEETING

The Committee **decided** not to hold a stakeholder meeting. An email will be sent to stakeholders informing them of the four public meetings and inviting them to attend.

5. REGIONAL COMMITTEE UPDATE

The Committee received a verbal briefing from laean Cranwell on the Regional Committee infrastructure meeting held on 23 August as well as the Regional Committee meeting held on 11 September.

6. PRONUNCIATION PRACTICE

The Committee participated in a short lesson in pronunciation of Te Reo led by laean Cranwell.

7. COASTAL PLAN

Linda Kirk, Programme Manager – Environment Canterbury, provided an overview to the Committee on the New Zealand Coastal Policy Statement. Environment Canterbury has indicated it will commence reviewing the Coastal Plan in late 2013. The role of the Zone Committee will be through the submission process under the Resource Management Act (refer **attached**).

8. YOUTH ENGAGEMENT AND ENVIROSCHOOLS CANTERBURY

Sian Carvell and Toni Watts from Environment Canterbury provided a brief overview of youth engagement programmes to the Committee with a specific focus on water and biodiversity, coordinated by Environment Canterbury in the Banks Peninsula Zone (refer **attached**).

9. IDENTIFICATION OF ANY GENERAL PUBLIC CONTRIBUTIONS

Rachel Barker, Banks Peninsula Conservation Trust, emphasised the need for collaboration with the community on water issues, particularly with schools and the local Rūnanga.

Claire Findlay, Lyttelton Harbour / Whakaraupo Issues Group, spoke in support of Paula Smith's deputation and the need for more emphasis on Lyttelton Harbour in the Zone Implementation Programme. She also emphasised the need for advertising so that the public are aware of the upcoming public meetings.

Helen Chambers commented that the best way to teach people about the environment is on a personal basis.

The meeting concluded at 6.10pm.

CONFIRMED THIS 16TH DAY OF OCTOBER 2012

**RICHARD SIMPSON
CHAIRPERSON**

3. DEPUTATIONS BY APPOINTMENT

4. IDENTIFICATION OF URGENT ITEMS

5. REFLECTIVE QUESTIONS REGARDING ZONE IMPLEMENTATION PROGRAMME

6. FINALISING OF DRAFT ZONE IMPLEMENTATION PROGRAMME

The Draft Zone Implementation Programme will be circulated separately.

7. PUBLIC MEETING ARRANGEMENTS

8. IDENTIFICATION OF ANY GENERAL PUBLIC CONTRIBUTIONS

The Banks Peninsula Zone Committee

The Banks Peninsula Zone Committee is one of ten under the Canterbury Water Management Strategy (CWMS)

Banks Peninsula Zone Committee Members:

Richard Simpson, Chair (community member)

Yvette Couch-Lewis, Deputy Chair (community member)

Iaeen Cranwell (Te Rūnanga o Wairewa)

Steve Lowndes (community member)

Pam Richardson (community member)

June Swindells (Te Hapu ō Ngāti Wheke/Rapaki)

Kevin Simcock (community member)

Claudia Reid (Christchurch City Councillor)

Wade Wereta-Osborn (Te Rūnanga o Koukourarata)

Pere Tainui (Te Rūnanga o Ōnuku)

Donald Couch (Environment Canterbury Commissioner)

(see <http://ecan.govt.nz/get-involved/canterburywater/committees/bankspeninsula/Pages/membership.aspx> for background information on committee members)

With support from

Peter Kingsbury – Christchurch City Council

Fiona Grace Nicol – Environment Canterbury

Tracey Hobson – Christchurch City Council

For more information contact fiona.nicol@ecan.govt.nz

Nā te Pō, Ko te Ao

Tana ko te Ao Mārama

Tana ko te Ao Tūroa,

Tana ko te Kore te Whiwhia

Tana ko te Kore te Rawea

Tana ko te Kore te Tāmaua

Tana ko te Kore Mātua

Tana ko Mākū

Te Punawai o Te Ao

Ko te pū, Ko te more, Te Weu Aka

Ko te rea, Ko te wao, Kukune whe

Ko te kore ko te pō ko Rakinui, Papatūānuku Ūkaipō

Ka tau te parawhenua, Hua parawhenua!

Ka tau anō kā mauka, Ko Te Poho o Tamatea, Te Pōhue

Ōteauheke, Te Ūpoko o Tahumatā

Ka titiro ki kā puna, kā awa, kā whaka, te roto o Wairewa, ki Te Pātaka

Te toka tapu ko Te Ahu Pātiki, Ō tū kai taua Tūmataueka

Ko Waitaha

Ko Māmoe

Ko Tahu

Tihei Mauri Ora!

Chairman's Comment

CHAIRMAN'S COMMENT

Volcanic activity millions of years ago has meant that the Banks Peninsula Zone has a long coastline, two harbours, a lake and moderate to steep hill country that is predominantly extensively farmed. The representatives on the zone committee reflect this diverse area by contributing their extensive knowledge of the Banks Peninsula water issues as well as their wide areas of interest and expertise.

The representatives and employees of Environment Canterbury, the Christchurch City Council, local Runanga and the community have worked conscientiously and collaboratively with extensive community input to produce this Draft Zone Implementation Programme. It has been a pleasure to Chair such a diverse, dedicated and capable group of people.

Richard Simpson [Chair]

Mā te mahi ngātahi i te ao kōwhai, ka eke tātou

The work will be successful through unity

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UNIQUE BANKS PENINSULA

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INVITATION FOR FEEDBACK (Attachment)

DRAFT

INTRODUCTION

Canterbury Water Management Strategy

This **Zone Implementation Plan** (ZIP) is the output from the Banks Peninsula Zone Committee (BPZC), as part of the wider Canterbury Water Management Strategy (CWMS).

The CWMS was initiated in 2005 by the Canterbury Mayoral Forum to manage water in the region in a collaborative manner.

The desired outcome of the CWMS is:

“To enable present and future generations to gain the greatest social, economic, recreational and cultural benefits from our water resources within an environmentally sustainable framework.”

Banks Peninsula is one of ten zones in the Canterbury region under the CWMS.

The Committee is tasked to make recommendations to the following targets in the CWMS:

- **Primary principles** - sustainable management, regional approach and tangata whenua
- **Supporting principles** - natural character, indigenous biodiversity, access, quality drinking water, recreational opportunities, and community and commercial use
- **First order priorities** - environment, customary use, community supplies and stock water
- **Second order priorities** - irrigation, renewable electricity generation, recreation and amenity

A further set of ten targets provides the strategy with a sense of direction and balance, and ensure that all aspects of the solution are advanced in parallel. The targets are:

- Ecosystem health and biodiversity
- Natural character, processes and ecological health of braided rivers
- Kaitiakitanga
- Drinking water
- Recreational and amenity opportunities
- Water use efficiency
- Irrigated land area
- Energy security and efficiency
- Indicators of regional and national economies
- Environmental limits

Draft ZIP

The recommendation from the Committee make up this DRAFT ZIP which is then is circulated for Public Feedback. The FINIAL ZIP will contain recommendations principally for actions in the next

three years, but with a long-term horizon also in view. The FINIAL ZIP is a living document and the Zone committee will review progress against it and update it as required.

The FINIAL ZIP is not a statutory plan under the Resource Management Act and the Zone Committee does not have the power to commit any Council to any path or expenditure. However the ZIP carries the weight of the wide commitment to the CWMS, of Councils, Rūnanga, and the community and a wide range of agencies and interest- and industry-groups.

Due to the collaborative process of forming the recommendations, The ZIPs recommendations are intended to be integrated into the planning process in relevant agencies and councils and lead weight to future projects and spending in the zones.

Immediate Steps Funding

Immediate Steps funding is money set aside through CWMS to implement recommendations in the ZIP, mainly around Biodiversity projects. The Zone Committee is tasked with setting priorities for how this money is to be spent in the Zone.

**Further information on the CWMS targets are found in the references.*

A detailed cross reference of Banks Peninsula recommendations and the CWMS targets will be found as an Appendix in the Final Banks Peninsula ZIP.

The Banks Peninsula Zone Committee

The Banks Peninsula Zone Committee is an experienced, committed, talented and collaborative group of people including Rununga, farming, small block holders and council members representing the broad mix of the peninsula population.

Specifically the Zone Committee is formed with Canterbury Regional Council, Christchurch City Council, Te Rūnanga o Wairewa, Te Hapu ō Ngāti Wheke/Rapaki, Te Rūnanga o Ōnuku, Te Rūnanga o Koukourarata and key environmental and industry stakeholders and community members.

The Banks Peninsula Zone Committee was launched in September 2011 and since then has met at least once a month to work through various chapters of its ZIP. Formal meetings, site visits, presentations and stakeholder feedback meetings were followed by more informal workshop sessions to pull together a consensus of recommendations.

The Committee acknowledges it has been supported by staff from Christchurch City Council, Environment Canterbury and many of the smaller groups on the peninsula who have given presentations and engaged in discussion with the Zone Committee to come up with the recommendations in this ZIP.

Many public have come along to the open meetings and presented their specific cases, educating and influencing the Zone Committee in their recommendations for Water Management in the Zone.

The Zone Committee has set priorities for how Immediate Steps funding is to be spent

The Zone Committee looks forward to continuing work in the Zone, building on existing established relationships and the ones formed through the process to implement the recommendations in this ZIP.

The Banks Peninsula ZIP enables the CWMS targets through its chapters as follows:

<i>CWMS Target</i>	<i>Chapter in Banks Peninsula ZIP</i>
<i>Ecosystem health and Biodiversity</i>	Biodiversity
<i>Natural character of Braided Rivers</i>	No braided rivers in Zone
<i>Kaitiakitanga</i>	Kaitiakitanga
<i>Drinking Water</i>	Water Quality
<i>Recreational & Amenity Opportunities</i>	Biodiversity and Te Roto O Wairewa
<i>Water Use efficiency</i>	Water Quantity
<i>Irrigated Land Area</i>	Little Irrigated Land on Peninsula

<i>Energy security and efficiency</i>	Water Quantity
<i>Regional and National Economics</i>	Water Quantity
<i>Environmental Limits</i>	Water Quality and Water Quantity

A more detailed analysis of the Banks Peninsula recommendations against the CWMS targets will be included in the FINAL ZIP

UNIQUE BANKS PENINSULA

Map & Scope



Features

Banks Peninsula/Horomaka is a unique part of Canterbury. The peninsula is approximately 1000 sq km in area and its highest point is Mt Herbert at 920 m above sea level. Almost surrounded by the Pacific Ocean, the peninsula has a geologically and ecologically distinctive volcanic and coastal landscape. The extinct volcanic cones have created a steep landscape with many deep valleys. With so many bays, harbours and valleys, the peninsula contains over 100 streams. Due to the nature of the landscape, the catchments are all short (less than 10 km long), and very steep, with lowland stream reaches generally measuring only a few kilometres long. In pre-European times (pre 1840s), upper headwaters would have issued from densely clad totara and New Zealand cedar montane forests.

Lowland streams would have run through tall totara, matai, rimu and kahikatea podocarp (native pine) forests. The once vast areas of podocarp forest have mostly all gone now. Over the last 100yrs the peninsula has experienced a complete ecological transformation from dense forest to farmland. The peninsula's steep sided valleys and limited flat land means it is difficult for wetlands to form. The small amounts of flat land have generally been drained and turned into farmland.

The largest wetland areas on the peninsula are around the edges of Lake Ellesmere/Te Waihora.

The soils on Banks Peninsula comprise two different types, volcanic tephra and loess soil (including clays). The volcanic soils are high in iron and other minerals, giving them a strong reddish-brown colour. In the past, before vegetation became well established, loess was blown by strong nor'west winds from the plains and settled on top of the volcanic soil. Strong winds, rain and the removal of native forest from Banks Peninsula have caused erosion of both soil types. Loess is particularly prone to erosion when native forest cover is removed. Movement of sediment is typical in many Banks Peninsula streams due to highly erodible soils and steep catchments. Mud and soil transported downstream is most often referred to as suspended sediment. Even streams such as Narbey Stream, which has thick streamside vegetation for almost its entire length, often has a milky appearance due to small amounts of sediment being held in suspension. This must be due in part to the contribution of Canterbury soil, transported by wind onto the peninsula for thousands of years, still having an effect on streams. Many native freshwater fish species are adapted to, and will tolerate a certain level of suspended sediment for short periods, such as during storms. However, few species will withstand prolonged high sediment loadings. Banded kokopu, for example, actively avoid streams with high sediment loadings and may in time disappear from such streams.

Over the years there has developed strong community support for conservation projects to retain natural and historic features and to restore habitats once lost. Increasingly land is being purchased for conservation by private individuals and at the same time long established farming families are protecting areas of high conservation value on their land.

Tourism has become one of the peninsula's primary earners, with holidaymakers flooding into Akaroa and other peninsula settlements over weekends and holidays.

Tourism, just like more traditional peninsula industries, can put pressure on freshwater resources both in terms of consumer needs and effluent disposal.

The Committee has broken up the Zone into five sub-areas for ease through the ZIP process. The five areas are:

- Lyttelton catchment
- Outer bays catchment
- Akaroa catchment
- Wairewa catchment

- Southern Bays catchment

Christchurch City Council

The whole Banks Peninsula Zone falls under the Christchurch City Council Area. Since amalgamation with the Banks Peninsula District Council in 2006 there has been more money and resources for the peninsula to upgrade water related activities such as water and wastewater treatment plants.

The Christchurch City Council has been a large part of creating this ZIP and the work they are doing is recognised and supported by the Zone Committee

Cross over boundaries Zone Boundaries

The Banks Peninsula Zone crosses over with the Selwyn/Waihora Zone

The Selwyn/Waihora Zone main water body is Lake Waihora with Banks Peninsula being Te Roto O Wairewa. The Zone Committee acknowledges the cross over and the need to work together on into zone issues. This is detailed further in the recommendations.

History

The history of the Waitaha people in New Zealand goes back many generations to about 850 AD, when Rākaihautū (a Waitaha ancestor) came to Te Wai Pounamu (the South Island) from

Hawaiki as the captain of the Uruao waka. The waka was beached at Whakatū/Nelson. While his son Rākihōia took some of the party to explore the East Coast, Rākaihautū led the remainder on an inland route over the Southern Alps or Kā Tiritiri o te Moana. With his famous kō (digging stick) Tūwhakaroria, Rākaihautū dug the southern lakes (Kā puna karikari o Rākaihautū). Te Rākihōia then proceeded south down the Canterbury Coast in the Uruao waka and met up with his father in the vicinity of Waihao.

The final two lakes that Rākaihautū carved out were Te Waihora (Lake Ellesmere) and Te Roto o Wairewa (Lake Forsyth), these are guarded by a taniwha kaitiaki (guardian monster), named Tūterakihuanoa. Te Waihora was originally named Te Kete Ika o Rākaihautū - the fish basket of Rākaihautū, acknowledging the abundant resources in the lake.

Waitaha then settled in Akaroa Harbour. Overwhelmed by the magnificence of his artistic endeavours Rākaihautū decided to stay driving his kō, Tūwhakaroria deep into the ground above Wainui where it became Tuhiraki (Mt Bossu). As a testament to his work and in recognition of the abundance and variety of food and other resources found on the Peninsula up until quite recently, the people named the area Te Pātaka o Rākaihautū or the great food storage house of Rākaihautū.

Generations later, the Kāti Māmoe people arrived from the North Island (Te Ika a Maui) and settled among the Waitaha people. A prominent man of this tribe was Tūtekawa, who in establishing his home at Waikākahi, declared Te Waihora as his own and the lake became known as Te Kete Ika a Tūtekawa. Until the late seventeenth century, Kāti

Māmoe was the main tribe in the South Island. When Tūtekawa killed two senior Ngāi Tahu women, Ngāi Tahu warriors came from the north in pursuit of Tūtekawa and his people. They ransacked the major Kāti Māmoe pā Parakākāriki (at Ōtanerito) and Waikākahi, and from there Ngāi Tahu chiefs took control of key locations on the peninsula.

By 1750, prior to European settlement, Ngāi Tahu occupied most of the South Island. Ngāi Tahu had settlements in every bay on the peninsula and on many of the headlands. They settled these areas in either hapū (sub-tribe) or whānau (family) groups. Ngāi Tahu settlement differed from the earlier more nomadic tribes in that permanent gardens were established. The gardening expertise of peninsula Ngāi Tahu must have been well honed; kūmara were grown successfully on Te Pātaka o Rākaihautū despite it being 1,000 kilometres further south than kūmara grown in their native Chile. In the early 1800s, there are records of trading between Ngāi Tahu and European sealers. However, as well as muskets, clothing, tobacco and alcohol, the Europeans brought with them a number of diseases. These diseases, combined with a ferocious civil war and raids led by Te Rauparaha from Kapiti, all took a huge toll on Peninsula Ngāi Tahu. A census conducted in 1848-49 estimated a population of only 300 Ngāi Tahu on the peninsula, whereas before the war and spread of disease there had been thousands.

Papatipu Rūnanga

Papatipu Rūnanga are the modern day administrative councils and representatives of Ngāi Tahu hapū and whānau traditional marae-based communities. Each Rūnanga has its own takiwā (area) determined by natural boundaries such as mountain ranges and rivers.

The four Rūnanga on the Peninsula are:

- Te Hapū o Ngāti Wheke,
- Te Rūnanga o Koukourārata,
- Ōnuku Rūnanga
- Wairewa Rūnanga.

And each are represented on the Zone Committee

Full description Appendix 9

CHAPTERS AND RECOMMENDATIONS

In order to begin work on the ZIP, in March 2012 the Committee had a workshop to set **Initial Priority Outcomes** for the Zone. The output from this workshop is outlined as follows:

Key Principles

- A Ki Uta Ki Tai (hill top to the coastal zone) approach is taken to waterway management in the Zone
- Collaboration and Community Partnerships are used to achieve outcomes
- Innovation and Integration are used in implementation
- Success is demonstrated and shared
- Kaitiakitanga and the principle of Guardianship underpin water management in the Zone

Priority Outcomes

Priority outcomes to be achieved under the CWMS have been identified by the Committee. These are considered to be all outcomes of equal importance and they are not listed in any priority order.

- Thriving communities and industries, including tourism and agriculture
- Communities have a reliable water supply, in particular Akaroa meeting the needs of the community and visitors
- Safe drinking water is available for private supplies
- High quality drinking water is available for community supplies
- Adequate water is available for stock water and fire fighting
- Improved efficiency in the use of water in the Zone
- Waste water management is improved in Little River, Lyttleton and Akaroa harbours
- The coastal margins in harbours and bays are healthy ecosystems
- Selected streams are protected and enhanced in each sub-zone using a Ki Uta Ki Tai approach
- Remaining areas of salt marsh and raupo in Whakaraupo / Lyttleton Harbour are protected and enhanced
- The Okains Bay estuary is suitable for contact recreation
- Lake Wairewa is suitable for contact recreation, and has improved mahinga kai, and fish passage
- Improved community understanding of water quality and quantity through effective monitoring and education

Healthy Water, Healthy Land, Healthy People

From the **Initial Priority Outcomes**, the following chapters were formed. Each chapter was focused around a Zone Committee meeting where presentations and feedback were sought from council experts, community and smaller conservation groups.

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APPENDIXES

- 1. Drinking Water Grading Information**
Christchurch City Council
- 2. Planned upgrades to water and wastewater plants**
Christchurch City Council
- 3. Mean low flows for streams on the peninsula**
Environment Canterbury
- 4. Flow Sensitive Catchments**
- Environment Canterbury
- 5. Explanation of surface and groundwater interactions**
Environment Canterbury
- 6. Soil Erosion Maps**
- Environment Canterbury
- 7. Te Roto O Wairewa TLI explanation**
Environment Canterbury
- 8. Te Roto O Wairewa full background**
Wairewa Rununga
- 9. Stakeholder List**

10. **Cross References: Banks Peninsula ZIP and CWMS
Targets** (will be appended in Final ZIP)

REFERENCES

1. **Canterbury Water Management Strategy 2009**
Canterbury Mayoral Forum
2. **Targets**
Canterbury Water publication
3. **'Proposed Land and Water Regional Plan' August 2012**
Environment Canterbury publication
4. **'Waitaha wai' Booklet for Banks Peninsula**
Environment Canterbury publication
5. **Erosion and Sediment Control Guidelines 2007**
Environment Canterbury publication
6. **Water Supply Strategy 2009-2039**
Christchurch City Council
7. **Surface Water Strategy 2009-2039**
Christchurch City Council
8. **Wastewater Supply Strategy 2009-2039**
Christchurch City Council
9. **New Zealand Coastal Policy Statement 2010**
New Zealand Government 2010
10. {Ngā (6)} Rūnanga, 2012, **Mahaanui Iwi Management Plan 2012** (Draft). 464pp.
Tau, Te Maire, Anake Goodall et al. 1990. Te Whakataau Kaupapa. Ngai Tahu

Resource Management Strategy for Canterbury Region.

11. Te Rūnanga o Ngāi Tahu 1999. **Fresh Water Policy Statement.**
12. Te Taumutu Rūnanga, 2003. **Natural Resource Management Plan.** (180pp).
13. **Canterbury Regional Pest Management Strategy 2005-2015**
Environment Canterbury

GLOSSARY

Adaptive management	A structured process of decision making using system monitoring in order to respond to change or uncertainty.
Allocation	The volume of water that may be taken from a fresh water resource by resource consent holders.
Audited self-management	ASM is a process where collective groups manage their resource use and activities to verify their adherence to good practice to achieve set outcomes
Earthworks	<p>means the excavation of, and/or filling with topsoil, subsoil, sediments, rock and/or other underlying materials on</p> <p>Which the soil is formed. Earthworks include, but are not limited to, the construction of roads, tracks, firebreaks and</p> <p>landings, and ground shaping (recontouring), root raking and blading. Earthworks excludes cultivation of the soil for</p> <p>the establishment of crops or pasture.</p>
Ecosystem	Plants, animals, their physical environment and the dynamic processes that link them.
Groundwater	Water located underground in rock crevices and pores /layers of geological material, groundwater supplies wells and springs.
Hazardous Site	<p>The Resource Management Act (RMA) defines contaminated land as land of one of the following kinds:</p> <p>(a) If there is an applicable national environmental standard on contaminants in soil, the land is more contaminated than the standard allows; or</p> <p>(b) If there is no applicable national environmental standard on contaminants in soil, the land has a hazardous substance in or on it that –</p> <p>(i) has significant adverse effects on the environment; or</p> <p>(ii) is reasonably likely to have significant adverse effects on the environment</p>

Intensity of land use	The concentration of the use of the land through activity or productivity.
Kaitiaki	Guardians, custodians
kaitiakitanga	The exercise of guardianship by the Tangata Whenua of an area in accordance with tikanga Māori in relation to natural and physical resources; and includes the ethic of stewardship
ki uta ki tai	From the mountains to the sea
Limit	To define the capacity for use of a resource, e.g. maximum water take, minimum discharge quality or receiving water quality standards.
mahinga kai	Food and places for obtaining natural foods and resources. The work (mahi), methods and cultural activities involved in obtaining foods and resources.
mauri	Life supporting capacity; spiritual essence; life, health and vitality; Mauri is the traditional measure of physical, spiritual and/or emotional wellbeing of people and places.
mātauranga Māori	Māori traditional knowledge and systems. Mātauranga takes many forms, including language (te reo), traditional environmental knowledge (tāonga tuku iho, mātauranga o te taiao), traditional knowledge of cultural practice, such as healing and medicines (rongoā), fishing (kai moana) and cultivation (mahinga kai).
Natural character	The natural flow regimes, dynamic processes and biodiversity of rivers are still in place, and the interdependence of waterways, land and coastal systems are intact.
Ngāi Tahu	Iwi with Tangata Whenua status in Canterbury and the South Island, excluding the northern part of the island.
Riparian planting	Planting usually of indigenous plants on the banks of rivers or streams to reduce erosion, stock access and pollution run off into a waterway.
Papatipu Rūnanga	The modern day administrative councils and representatives of Ngāi Tahu hapū and whanau. Each Rūnanga has its own area (rohe /takiwā) determined by natural boundaries such as mountain ranges and rivers.
Rangatiratanga	Chieftainship.

Tangata Whenua	Those with traditional status, rights and responsibilities in an area, based on their traditional takiwā.
Taonga	Treasured possessions, both tangible and intangible.
Taonga raranga	Plants which produce material highly prized for use in weaving.
Tikanga	Rights, customs, accepted protocol, rule, Māori traditions, lore or law, the correct Māori way.
Wāhi taonga	Places and resources of historical and traditional significance often linked to significant mahinga kai values.
Wāhi tapu	A place sacred to Māori in a traditional, spiritual, religious, ritual or mythological sense (<i>section 2, Historic Places Act 1993</i>).
Wetlands	Wetlands are areas that are intermittently or permanently wet, shallow water and land water margins that support plants and animals that are adapted to the wet conditions.

INVITATION FOR FEEDBACK

1. WATER QUALITY

Introduction

Maintaining and enhancing surface and groundwater water quality in the Banks Peninsula Zone is important as water is used for drinking, enhancing biodiversity and helping to sustain economic viability. The Zone Committee believes that high quality drinking water is important for both the health of the community, ecosystems and to sustain our tourist industry. Much of the Peninsula's drinking water is supplied via council-run community water supplies which are currently being upgraded. There are also many private small group supplies which are operated independently. The council mandate for upgrading systems not already council owned comes from national policy and public health risks. The Zone Committee feels it is important that private small group supplies are prioritised for support and the local communities are fully briefed on the options for upgrading such systems in their areas. A water quality monitoring programme is in place which regularly tests many of the streams on the peninsula, but there is a need to review the programme and update as necessary. Contaminants entering waterways are an important issue for the Zone Committee and are dealt with in specific recommendations.

Appendix 1 - CCC Community water supply schemes and an explanation of grading's associated with these. Appendix 2 show planned upgrades the Christchurch City Council water and wastewater systems.

Priority Outcomes

People in the Banks Peninsula Zone have access to safe Drinking Water, as defined by the New Zealand Drinking Water Standards (NZDWS). Water quality in Banks Peninsula waterways is regularly monitored. Policies and rules are developed to maintain water quality and improve it where appropriate.

Recommendations

- | | | |
|------|---|---|
| 1.1 | CCC WATER SUPPLIES to be upgraded to at least Bb by 2015 in the following areas: Akaroa, Duvauchelle, Little River, Pigeon Bay, Takamatua. | Christchurch City Council in 5yrs |
| 1.2 | Small group private water supplies to be prioritised for outside support | Zone Committee in 1 year |
| 1.3 | Small group private water supplies are fully briefed on the options for increasing water quality in their catchments | Zone Committee and Christchurch City Council in 5yrs |
| 1.4 | Water Supply Catchments are prioritised for Biodiversity enhancements and protection upstream of the takes | Christchurch City Council and Community |
| 1.5 | All Stormwater is controlled off hazardous sites with oil interceptors or similar technology | Environment Canterbury in 5yrs |
| 1.6 | Stormwater catchment upgrades are prioritised based on effects of water quality and quantity on the environment | Christchurch City Council |
| 1.7 | Planning rules around Stock Exclusion are enforced | Environment Canterbury on-going |
| 1.8 | Fertiliser usage is managed to minimise discharge of nutrients to waterways. The Overseer programme (or an equivalent method) and GPS are used for fertiliser management on farms. | All farmers |
| 1.9 | Passive discharge from contaminated land is investigated to determine its affect on the environment. Rules to require sufficient distance from waterways are enforced | Environment Canterbury in 5yrs |
| 1.10 | Identify birds that in large numbers have significant adverse effects on water quality in the Zone. Where required improve the effective management of birds in these locations. | Environment Canterbury On-going |
| 1.11 | Water trough and yard placement are away from streams and runoff is managed | Community education |
| 1.12 | Regulations are established and enforced for runoff water from such activities as boat and car washing, excavations, roadways and car parks and similar to improve the quality of water being discharged to the ocean | Environment Canterbury 5yrs |
| 1.13 | On-going water quality testing of waterways in continued and a plan for expansion developed | Environment Canterbury and Christchurch City Council On-going |

2. WATER QUANTITY

Introduction

Water availability for out-of-stream use, particularly for domestic and stock water requirements, is one of the key issues in the Zone. Most of the water sources are the numerous small streams, with only a small proportion of water being sourced from groundwater. In the summer months, in some communities, there is not enough water to service all household and gardening needs. If the Peninsula is to grow, this issue will need to be addressed. It is recommended that all the existing minimum flows set for streams and rivers in the zone (Appendix 3) are reviewed, including in flow-sensitive catchments already listed in Environment Canterbury plans (see Appendix 4). An action also identified is to explore water efficiency and re-use options. Adoption of measures to improve water use efficiency, including re-use is recommended before sourcing additional water supplies.

Appendices 3 and 4 show low flows and flow sensitive catchments for the Zone. Appendix 4 explains the interaction between surface water and groundwater

Priority Outcomes

There is enough water available in the Banks Peninsula Zone to meet the needs of daily living, stock water and fire fighting storage. Allocation of water above that required to meet these needs is subject to flow and allocation limits

Recommendations

2.1	A research project into how much Permitted Activity water takes influence the flows in the Peninsula stream flows is undertaken.	Environment Canterbury in 1yr
2.2	Low flows set for streams (including flow sensitive catchments) are reviewed and, if needed, new low flows set. Recognise the significance of the low flow tentative catchments when assessing the future land usage for those areas.	Zone Committee and Christchurch City Council in 2 yrs
2.3	The interaction between groundwater and surface water is taken into account when setting low flows for streams	Environment Canterbury in 2yrs
2.4	Banks Peninsula focuses on the efficient use and re-use of water rather than an increase in supply	Christchurch City Council in 20yrs
2.5	Water use efficiencies on Banks Peninsula are investigated, and once decided, recommended as changes to the Christchurch City Council Bylaw	Zone Committee and Christchurch City Council in 2 yrs
2.6	CCC carry out a cost-benefit study to investigate a system where water rates are reduced for people who adopt the water use efficiencies in the Christchurch City Council Bylaw	Christchurch City Council in 10yrs
2.7	At the next District Plan Review, regulation be included requiring rain-water recovery systems for all new homes and major building alterations	Christchurch City Council in 2yrs
2.9	Water use is measured and recorded and water metering is promoted. Where this measurement identifies high water use, strategies are developed and implemented to reduce use.	Christchurch City Council and Community in 5yrs
2.10	CCC work through programmed works to fix leaky pipes in infrastructure as per Water Supply Strategy 2009-2039 and feed back to Zone Committee on 6 monthly basis	Christchurch City Council in 10yrs
2.11	Storage Options are identified, discussed and implemented for fire fighting water. All property owners are encouraged to develop a fire-fighting plan	Zone Committee 1 yr
2.12	The effects of high seasonal numbers of tourists are taken into account when planning for water usage in Banks Peninsula	Christchurch City Council on-going
2.13	Establish water supply strategies for Small group private water supplies, encouraging the usage of reclaimed water, roof supply water and similar systems	Christchurch City Council on-going

3. BIODIVERSITY

Introduction

The Banks Peninsula Zone Committee considers the protection and restoration of biodiversity to be a priority within the zone. This is reflected in the large number of recommendations within this chapter. The whole of Banks Peninsula is a regionally outstanding landscape (Daley 2004) and the topography, geology and climate that results from such a uniquely formed landscape is also reflected in the unique biodiversity values found in the zone. The often short and steep stream catchments of Banks Peninsula have high native fish and invertebrate diversity and provide rare 'source to sea' habitats for the flora and fauna that live in them. This is especially important for our migratory native fish which spend at least part of their lifecycle at sea but return to the freshwater streams to spawn. The wetlands and salt marshes found within the Banks Peninsula zone together with the estuaries and oxidation ponds found north of the Port Hills within the Christchurch zone, support nationally and internationally significant concentrations of a variety of bird species. The main lake present within the zone, Lake Forsyth (Te Roto o Wairewa), is extremely important in both a national and regional context.

Priority Outcomes

Banks Peninsula is recognised in the region for showcasing flourishing biodiversity. Protection and enhancement of biodiversity is promoted, supported and celebrated. 'Flagship Projects' are showcased as examples of excellent Biodiversity achievement.

Recommendations

3.1	Agencies take a co-ordinated approach to Biodiversity across the Zone	All Agencies general philosophy
3.2	<u>Key biodiversity indicators</u> are selected and agreed on. These indicators are used to measure Biodiversity improvement in (i) Water Quality (ii) Flora and fauna regeneration and (iii) Water Quantity (iv) Mauri	Christchurch City Council, Environment Canterbury, DOC, BPCT QEII Trust, All Rununga in 1yr
3.3	All agencies use the <u>key biodiversity indicators</u> to measure and communicate biodiversity on the Peninsula	Christchurch City Council, Environment Canterbury, DOC, BPCT QEII Trust, All Rununga in 1yr
3.4	One agency agrees to take the responsibility for co-ordinating all of the monitoring information from agencies and community groups, and creating a computerised system of documentation including mapping	Christchurch City Council, Environment Canterbury, DOC, BPCT QEII Trust decide in 1yr
3.5	2-3 Flag Ship projects are selected including one in the farming sector	Zone Committee in 6 months
3.6	Two wetlands are chosen to protect and regenerate	Zone Committee in 6 months
3.7	The Banks Peninsula Ecological Study and implementation programme is supported.	Christchurch City Council Syrs
3.8	The Banks Peninsula Conservation Forum is supported. At least 1 Zone Committee member is nominated to attend the forum and report back to the Zone Committee	Banks Peninsula Conservation Forum and Zone Committee 6 months
3.9	The Banks Peninsula Conservation Trust is supported	Zone Committee, Community and Councils
3.10	Improved co-ordination to rationalise equitable access to available funding for smaller groups	Christchurch City Council, Environment Canterbury, DOC On-going
3.11	Barriers to native fish passage are investigated. A programme is worked towards to remove these barriers to promote native fish passage.	Christchurch City Council and Environment Canterbury in 5yrs
3.12	Biodiversity is highly valued and promoted and highly valued in all infrastructure upgrades	Christchurch City Council On-going
3.13	Environment Canterbury and CCC plans are reviewed to ensure rules specifically support Biodiversity	Zone Committee in 1 yr
3.14	Compliance with the Regional Pest Management Strategy is supported. Identify pests that are significant risks to Biodiversity that are not covered by RPMS and develop strategies to address these	Environment Canterbury in 5 yrs
3.15	Alternative ways to prevent stock entering waterways other than fencing are investigated	Zone Committee and Community
3.16	The remaining Immediate Steps Funding, for enhancing biodiversity and maximising ecological health is spread out over the four regions of the peninsula The following project criteria be a priority for funding: Projects which protect areas which were vulnerable to threats (development, weeds, animal pests etc); Projects have good links back into the community; Projects which have good connectivity and create habitat corridors throughout the peninsula; Projects which protect and achieve Ki Uta Ki Tai – mountains to the sea protection and restoration of waterways; Projects which have the ability to provide educational opportunities and visibility for the general public to become engaged with biodiversity (a 'working laboratory'); and Projects which support landowners who go above and beyond the current requirements under the stock exclusion rule in the NRRP. Projects where funding provides leverage to further funding from other organisations. Projects where "buy in" and enthusiasm of land owner is high.	Environment Canterbury
3.17	Scientific experts in salt marsh and estuary research are engaged to provide expert advice and information regarding regeneration	Environment Canterbury in 1 yr
3.18	Protection of whitebait spawning habitats is a priority in biodiversity projects	Environment Canterbury and Christchurch City Council
3.20	Priority areas for willow tree removal are set taking into account the crested grebe habitat	Environment Canterbury and Christchurch City Council in 5yrs

4. KAITIAKITANGA

Introduction

Kaitiakitanga is one of the three fundamental principles of the Canterbury Water Management Strategy (CWMS) which also notes (Annex G no.3) that “.. Exercise of Kaitiakitanga requires both a role in decision making and the achievement of environmental outcomes..” The Resource Management Act (RMA) (Part 1 section 2(1)) states that “.. ‘Kaitiakitanga’ means the exercise of guardianship by the tangata whenua of an area in accordance with tikanga Māori in relation to natural and physical resources: and includes the ethic of stewardship..”

The Zone Committee notes that the issue of indigenous rights to fresh water lies beyond the purview of the CWMS and is not a matter that the Committee can resolve. Indeed, indigenous rights to fresh water in Canterbury can only be resolved by Ngāi Tahu and Crown representatives as it relates to agreements reached by their predecessors under the Treaty of Waitangi (1840) and the Sale & Purchase Agreement for Port Cooper & Port Levy Blocks (1849) and the Akaroa Block (1856). That said, the Committee recognises the following: a) That the relationship between tangata whenua and freshwater is longstanding; b) That relationship of mana whenua with water is fundamental to their culture; c) That water per se is valued as a taonga of paramount importance; and d) That the obligations to protect and enhance the mauri of water are inter-generational and must apply to all those who benefit from the use of water.

It is worth noting that, notwithstanding the unresolved nature of their rights to freshwater, Ngāi Tahu have made it very clear that economic development is vital for the region and for the nation, and that in their role as kaitiaki, they need to be involved in all aspects of water management, including economic development. Tangata Whenua have been very clear that sustainable economic development is fundamentally dependent on sustaining healthy waterways. Poor water, poor economy! No water, no economy! Tangata Whenua consider that water quality is the paramount determinant governing all land and water use and development, ensuring that land and water users share relative responsibility to protect, maintain or enhance environmental values as a matter of first order priority so that the water can continue to uphold economic, social and cultural endeavour for generations to come.

Ultimately, Ngāi Tahu seek outcomes from water that: a) Sustain the physical and metaphysical health and wellbeing of waterways as a matter of first principle ;b) Ensure the continuation of customary in-stream values and uses; and c) Satisfy development aspirations.

Mahinga Kai Water plays a unique role in the traditional economy and culture of Ngāi Tahu. The most direct physical relationship that Ngāi Tahu have with water involves the protection, harvesting, and management of mahinga kai. The term 'mahinga kai' refers to natural resources and the area in which they are found, Ki Uta Ki Tai (from the mountains to the sea). Mahinga kai has always been, and continues to be, at the heart of Ngāi Tahu culture and identity. It encompasses social and educational elements as well as the process of food gathering. This includes the way resources are gathered, the places they are gathered from, and the resources themselves. In the past, mahinga kai would have included seals, tītī (mutton birds), kererū, kaimoana (shellfish), tuna (eels) inaka (whitebait), trees for carving and waka, materials such as harakeke, and paru (mud), which are used for dyes. These resources are considered taonga (particular treasures for food and cultural identity) because they sustained life and an industry for the area and those who resided there. Thus cultural use, traditionally and today, continues within a sustainable use framework. For Ngāi Tahu today, participation in mahinga kai activities is an important expression of cultural identity.

Toitū te marae o Tangaroa
Toitū te marae o Tāne
Toitū te iwi

Healthy Water, Healthy Land, Healthy People

Priority Outcomes

All streams, freshwater wetlands, Te Roto o Wairewa, salt marsh/estuaries, springs and harbours in the Banks Peninsula Zone have Kaitiakitanga as an overarching value and reflect Ki Uta Ki Tai, Mauri, Mahinga Kai to tangata whenua, Wahi Tapu and Wahi Taonga.

Recommendations

4.1	Restoration and maintenance of Mauri in all waterways be of the highest priority.	All agencies and councils and community
4.2	Ki Uta Ki Tai (catchment based planning from the mountains to the sea) is integrated into all planning documents on the Peninsula	All agencies and councils and community
4.3	The coast, oceans and harbours are not separated from the waterways leading to them.	All agencies and councils and community
4.4	All Papatipū Rūnanga are consulted and involved in the freshwater projects in their Takiwā.	All agencies and councils and community
4.5	Tuia projects are spread between the four Papatipū Rūnanga within the zone.	Environment Canterbury
4.6	Investigate ways to measure Kaitiakitanga values and include one measure in <u>key biodiversity indicators</u> for improvement	Zone Committee and Rununga 6 months
4.7	Three main projects are chosen which focus on Mahinga Kai as the priority	Zone Committee in 1 year
4.8	Access to key mahinga kai sites is to be discussed by tangata whenua and land owners and where possible provided for.	Rununga and Community 4 yrs
4.9	Wahitapu and Wahitaonga sites are identified for protection through the Ngai Tahu cultural mapping project. Rununga are consulted and are involved in the environmental projects on the sites in their area	Community On-going

5. EROSION AND SEDIMENT CONTROL

Introduction

Sediment contamination into streams and harbours from unrestricted earthworks and other land use practices is identified as another major issue for the zone. Sediment building up in the streams and harbours negatively effects water quality, Mahinga Kai and Kai Moana. Of all sources of contaminants, sediment coming from roading is considered to have the highest impact and so most in need of priority attention. Areas of high risk for erosion and sediment runoff on Banks Peninsula have been identified in the regional plan, and these are included in Appendix 5. The community has previously undertaken a lot of work on this issue and wants to see this work continued and improved. As a starting point, it is recommended that sediment budgets are developed as a means to quantifying the issue, beginning in Whakaraupō. A sediment budget will provide an estimate of how much sediment enters the harbour and how much sediment is washed out, thus indicating whether sediment is accumulating in the harbour at this time, and if so, at what rate.

Appendix 6 are maps of land erosion risk on the Peninsula

Priority Outcomes

Sediment discharge into waterways is minimised. Sediment build-up in the harbours is managed sustainably to prevent damage to Mahinga Kai and Kai Moana from erosion and sedimentation

Recommendations

5.1	Collate all existing research material on sediment in the harbour and devise a harbour sediment budget, starting with Whakaraupō, to monitor changing sediment levels in the harbour	Christchurch City Council and Environment Canterbury in 2yrs
5.2	Roading planners and contractors are educated and enforced to engineer new roading cuts to eliminate sediment discharge during, and after, construction in rain events.	Christchurch City Council in 2yrs
5.3	Enforcement is prioritised for erosion and sediment control from roads on the peninsula	Environment Canterbury for 5yrs
5.4	Subdivisions and new housing earthworks are managed in accordance with strict erosion and sediment control guidelines to eliminate sediment discharge during, and after, rain events	Environment Canterbury and Christchurch City Council On-going
5.5	Christchurch City Council prioritises Whakaraupō for an integrated stormwater management plan	Christchurch City Council in 2yrs
5.6	Quarries are targeted for management of sediment and erosion control	Environment Canterbury and Christchurch City Council On-going
5.7	Stabilising vegetation is established as a priority after any earthworks	Environment Canterbury and Christchurch City Council and community
5.8	Resource Consents are required for all forestry clearance to protect waterways from sediment	Environment Canterbury
5.9	Previously identified area of erosion risk are clearly advised to the community to encourage wise land use, development and roading	Environment Canterbury
5.10	The effects of potential extreme events as a result of climate change are included in the evaluation of erosion and sediment control guidelines	Environment Canterbury

6. TE ROTO O WAIREWA

Introduction

Te Roto o Wairewa is a shallow coastal lake and is a tribal taonga. The lake is also one of only two customary lakes in Aotearoa (the other being Horowhenua). Te Roto o Wairewa supports a customary fishery; tuna (eel), pātiki (flounder), aua (yellow eyed mullet), kanakana (lamprey) and inaka (whitebait) are the primary species caught. Extensive forests in the catchment provided timber, fibre for building and weaving, as well as food and traditional medicines. Te Roto o Wairewa is Statutory Acknowledgement site, recognizing the mana of Ngāi Tahu with regard to the lake and guaranteeing tribal involvement in management. Schedule 71 of the NTCSA 1998 is a statement of Ngāi Tahu cultural, spiritual, historic, and traditional association to the lake. Thousands of years ago Te Roto o Wairewa was a hāpua or estuary and in the late 1800's, alluvial drift caused the lake to close by the growth of a large shingle bar, known as Kaitōrete Spit. Over the last 160 years, the catchment has been dramatically modified and mahinga kai values severely degraded. The majority of native forest cover was removed between 1860 and 1890 to open up the land for agricultural and pastoral land use, resulting in massive reductions in native bird and plant species. See

*Appendix 7 explains the meaning of TLI (Priority Outcome)
Appendix 8 shows the full Te Roto O Wairewa background*

Priority Outcomes

(i) Te Roto O Wairewa is a nationally and regionally significant 'Flagship Project' showcasing outstanding environmental restoration. The Lake has a TLI of 4 within 20 yrs and supporting Mahinga Kai and contact recreation within 15 years.

(ii) All streams that flow into Te Roto O Wairewa are flourishing ecosystems reflecting Mauri, Kaitiakitanga and Mahinga Kai values

Recommendations

6.1	Wairewa Rununga is recognised as the leader in the restoration and management of Te Roto O Wairewa, resolving issues in partnership with agencies and community.	Wairewa Rununga
6.2	A nutrient, flow and allocation regime is investigated and modelled for the Wairewa catchment	Environment Canterbury and Community through sub-regional process in 2yrs
6.3	A permanent opening for the lake is investigated and modelled	Wairewa Rununga, Christchurch City Council, Environment Canterbury and Research Organisations in 2yrs
6.4	The existing mechanical opening regime is supported by technology and information to provide for more effective lake level control. Openings take into account weather patterns, waves, fish recruitment and predicative flood control	Wairewa Rununga and Christchurch City Council
6.5	Different methods of sediment removal from the lake are investigated	Wairewa Rununga, Christchurch City Council, Environment Canterbury and Research Organisations in 2yrs
6.6	A monitoring programme is set up that gives the community confidence in the increasing health of the lake	Wairewa Rununga, Christchurch City Council, Environment Canterbury and Research Organisations in 2yrs
6.7	The lake and surrounding streams are managed in such a way that flooding is minimised to a 1 in 100year flood to Little River and SH1	Christchurch City Council
6.8	Coventing and fencing is prioritised in the catchment	Environment Canterbury, BPCT and QEII Trust
6.9	Prioritisation is given to Geese and swan population management	Environment Canterbury
6.10	Banks Peninsula and Selwyn/Waihora ZC meet annually to discuss to inter-zone issues	Environment Canterbury and ZCs On-going
6.11	Community Briefings to give updates on the progress of lake Wairewa are held annually	Wairewa Rununga
6.12	Sea level rise due to climate change is included in all modelling of the Lake	Environment Canterbury
6.13	All steps are taken to reduce the incidence of cyano bacteria in the Lake	Environment Canterbury

7. WASTEWATER

Introduction

Wastewater disposal in the Banks Peninsula Zone is generally via either Christchurch City Council reticulated systems or individual septic tanks systems. Since the amalgamation of the Christchurch City Council with Banks Peninsula District Council many more upgrades have been possible for the council reticulated systems, and more are planned. For the council reticulated systems, the Zone Committee has a preference for no discharge of treated wastewater to harbours in the long term, in order to further improve the water quality of the harbours. The new Land and Water Regional Plan is requiring a resource consent be obtained for the installation of new septic tanks on Banks Peninsula due to the soil types and properties of these in the Zone. The Zone Committee has concerns with this proposed change, and hence some recommendations are included around investigating alternative types of Septic tanks that may work more efficiently on Banks Peninsula soils. Due to the relative scarcity of water on the peninsula at times of low rainfall, there is a significant focus being promoted to innovatively re-use reclaimed wastewater.

Appendix 2 show planned upgrades the Christchurch City Council water and wastewater systems.

Priority Outcomes

Wastewater is not discharged to the harbours but reclaimed to land. Wastewater is treated to a high quality and promoted as an innovative water and irrigation source for the Peninsula.

Recommendations

7.1	The CCC wastewater programme (Appendix 2) is supported and completed	Christchurch City Council LTP process On-going
7.2	Land based application and irrigation trials for Akaroa wastewater are vigorously supported	Christchurch City Council LTP process in 3yrs
7.3	The new Wainui land based reticulated system is used as a trial for irrigation to land in other areas	Christchurch City Council LTP process in 3yrs
7.4	Un-reticulated areas are to be prioritised for reticulation as follows: (i) Charteris Bay (ii) Wainui (iii) Little River (iv) Birdlings Flat (v) Takamatua (vi) Robinsons Bay (vii) Purau (viii) Okains Bay	Christchurch City Council and Public Health to feedback to ZC in 1yr
7.5	Alternative processes for reclaiming wastewater are investigated. Reclamation and re-use of wastewater is encouraged	Christchurch City Council
7.6	Wastewater capacity is a priority for the future CCC Small Settlement Studies	Christchurch City Council
7.7	Septic Tanks are managed up to current standards and plan rules	Community On-going
7.8	Investigations are undertaken into new technologies for Septic tanks specifically suited to Peninsula soils	Christchurch City Council and Environment Canterbury in 5 years
7.9	Freedom camping and visitor impacts are managed so they do not pose unacceptable risk to community drinking water or to waterways.	Christchurch City Council On-going
7.10	Maintain the Lyttelton wastewater plant in a near ready to operate state to provide backup if the tunnel pipeline should fail	Christchurch City Council 10yrs

8. CLIMATE CHANGE AND FLOODING

Introduction

The Zone Committee's thinking on climate change has been primarily influenced by NIWA's publication "Coastal Adaptation to Climate Change - Pathways to Change" (Nov 2011) and Christchurch City Council's "Climate Smart Strategy" 2010 - 2025. The "Pathways to Change" laid out in NIWA's publication involve four steps to guide planners toward the creation of communities which are resilient to climate change. The first step is awareness and acceptance and the committee is firmly of the mind that climate change will have a significant impact on coastal communities on the peninsula while higher temperatures and less rainfall will impact on fresh water. Step two is assessment and that is what we have set out to address in this document. The final steps are planning a way forward and implementation, monitoring and review which will evolve as the risks and threats are better understood. The following recommendations are the Committees outline for this process.

Priority Outcomes

Climate Change effects are taken into account in all infrastructure upgrades and planning on Banks Peninsula. As the climate changes ensure there is adequate water available and that flooding is minimised.

Recommendations

8.1	Planning processes take into account the prediction of less rain, warmer temperatures and stronger winds from the West increasing fire risk	Christchurch City Council and Environment Canterbury
8.2	Planning processes take into account the prediction of 10% higher intense rainfall events resulting in flooding of low lying areas and increased risk of landslides and road closures	Christchurch City Council and Environment Canterbury
8.3	Planning processes take into account the prediction of sea level rise leading to possible 50-80cm rise by 2090	Christchurch City Council and Environment Canterbury
8.4	Planning processes take into account that low lying areas will be affected by erosion and inundation at times of high tides and storm surges	Christchurch City Council and Environment Canterbury
8.5	Climate change effects are taken into account when culverts are investigated, maintained or changed	Environment Canterbury and Christchurch City Council and Community
8.6	A database is set up for recording Floods. Community members can add to the database easily.	Environment Canterbury and Christchurch City Council and Community
8.7	Vegetation clearance is planned and undertaken with climate change in mind	Environment Canterbury and Christchurch City Council
8.8	The pest types and populations will alter as the climate changes. Strategies for the zone need to consider the potential effects of these new pests and diseases	Environment Canterbury and Christchurch City Council

9 EDUCATION AND COMMUNICATION		
<p align="center">Introduction</p> <p>Education and Communication was of high importance to the Zone Committee. It was agreed that an empowered community is one that is going to be engaged in positive environmental management. Many of the population of the peninsula is motivated in conservation and biodiversity but not be fully informed on all the water issues.</p> <p>The main recommendation centres around priority funding. At the moment, most of the council funding is focused on youth (which is recommended and supported to continue) but general funding would be spread across the Priority areas listed in 9.4</p> <p align="center">Priority Outcomes</p> <p>The Banks Peninsula community are empowered by education in environmental management. Environmental successes in the Zone are widely celebrated and shared</p>		
<p align="center">Recommendations</p>		
9.1	Education is supported in parallel with enforcement	Christchurch City Council and Environment Canterbury
9.2	Enviroschools are adequately funded so youth are empowered	Christchurch City Council and Environment Canterbury
9.3	A Youth Hui is worked toward in 2013	Environment Canterbury
9.4	Education is prioritised in the following areas(in order of importance) Water quality and quantity limits Erosion and Sediment Control Water quality and quantity results/nutrient levels in waterways Biodiversity knowledge and monitoring Christchurch City Council Sites of Significance (SES) Planning Rules - consents etc Research and Development Promotion of 'Flagship' Projects Flood management Community involvement in monitoring Septic Tank Maintenance Salt Marsh Protection Regional Pest Strategy	Relevant Agencies and Councils
9.5	The existing peninsula groups and organisations including Rununga, Banks Peninsula Conservation Trust and Farm Discussion Group are used and funded to educate about particular issues	All Agencies
9.6	There is a focus on research and development in the Zone	All Agencies

10. COASTAL		
<p align="center">Introduction</p> <p>The Coastal chapter in the Banks Peninsula ZIP is slightly more difficult to include as the CWMS has a focus on fresh water. The planning framework for coastal issues is covered under a separate regional plan which is due to be reviewed in 2013. The Zone Committee considers it important to include a coastal chapter in the ZIP to provide a holistic, integrated approach to water management in the Zone as there are many Ngāi Tahu philosophies of connectedness between mountains, rivers and the sea. This chapter mainly focuses on work beginning in 2013 when the regional coastal plan will be reviewed.</p> <p align="center">Priority Outcomes</p> <p>The harbours are a natural extension of the rivers and streams. The marine biodiversity of the harbours is protected and restored</p>		
<p align="center">Recommendations</p>		
10.1	Environment Canterbury collaborate with the community through the Coastal Plan process beginning 2013	Environment Canterbury in 2013
10.2	A list of interested parties that are involved in Coastal Management is set up. Ways of working with these groups to enhance land to coastal management is developed	Environment Canterbury in 2013
10.3	Investigate and monitor the water quality for its impact on sustaining coastal harbours	Environment Canterbury in 2013