

**Whakaraupō/Lyttelton Harbour Catchment Management Plan**

**Feedback on community consultation workshops**

**20<sup>th</sup> - 23<sup>rd</sup> September 2016**

Please note, a separate consultation process will be undertaken with mana whenua. As such, this report does not represent the views of the harbour communities as a whole.

Rather, it reflects the responses received during the workshops only.

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## **Introduction to the project**

Many people and groups associated with Whakaraupō/Lyttelton Harbour have concerns about the current state of the harbour environment, the impacts that past and future human activities may have, and the lack of co-ordination between the agencies responsible for managing the harbour. To assist in the redevelopment of Lyttelton Port following the Canterbury earthquakes, the Lyttelton Port Recovery Plan was developed and gazetted on 19 November 2015.

During development of the Lyttelton Port Recovery Plan, Canterbury Regional Council, Lyttelton Port Company Limited, Te Hapū o Ngāti Wheke, Christchurch City Council and Te Rūnanga o Ngāi Tahu agreed to work together and with the community to prepare and implement a catchment management plan for Whakaraupō/Lyttelton Harbour. This commitment is recorded in the Plan, although it is not a statutory requirement.

Such an integrated approach to managing Whakaraupō/Lyttelton Harbour has been discussed between the partner agencies and the community for many years. At the project launch event in August 2016, the partner agencies signed a Memorandum of Understanding that sets out the governance structure and terms of reference for the partnership and the project. This is available on the partnership website ([www.healthyharbour.org.nz](http://www.healthyharbour.org.nz)).

So what exactly is the Catchment Management Plan?

The Catchment Management Plan will be based on the concept of Ki Uta Ki Tai, or from the mountains to the sea. This recognises the influence of land based practices on freshwater and coastal environments and that they are all inter-linked. An integrated approach to managing land based sources of contaminants, their pathways and the receiving environment is therefore required. The project will identify actions to improve the ecological health of the harbour, such as methods to reduce sediment input, and also address socio-cultural issues such as enhancing mahinga kai sites.

The first phase of the project runs until June 2017 and focuses on developing the catchment management plan and programme of actions. This includes:

- Completing a stocktake of existing traditional and scientific knowledge – (check out the storymaps on the project website)
- Establishing a Governance structure for the project
- Developing a website and community engagement programme
- Holding a series of community workshops and establishing ways for the community to provide input
- Establishing a Science Advisory Group who will
  - Help identify the key issues impacting on the health of the harbour
  - Identify key knowledge gaps and priority actions
  - Review existing monitoring programmes and make recommendations on future monitoring requirements
- Preparing a draft catchment management plan for community input by April 2017
- Completing the final catchment management plan by June 2017
- Developing a programme of work for 2017/18 and beyond

The second phase of the project runs from 2017 onwards and includes:

- Completing identified “quick win” projects
- Defining mid-long term projects along with organisation(s) responsible for delivery
- Preparing proposals for external funding for larger priority projects

- Monitoring of coordinated partnership & collaborative working
- Making any identified changes to existing monitoring programmes

## **Introduction to workshops**

This report presents a summary of the feedback received from participants at three workshops held in Lyttelton, Governors Bay and Diamond Harbour in September 2016. The workshops were attended by 37 members of the community.

### **Objectives of engagement**

1. Community is aware of and understands the objectives of the project
2. Community has a sense of connection to and desire to participate in the project
3. Enable community to participate in meaningful dialogue and to feel heard
4. To ensure the partners and project team are fully informed and aware of public and stakeholder opinion.

### **Objectives of workshop**

1. To introduce the partnership / project, its objectives, timeline etc.
2. To identify community based initiatives that are ongoing / planned
3. To identify community desires for their harbour through:
  - i. What does a healthy harbour mean to you?
  - ii. What are the main areas of the harbour and its catchment that are important to you and why?
  - iii. What are the key issues facing the harbour?
  - iv. How can we make a difference?
4. To garner anecdotal evidence of change in the harbour over time
5. To communicate how the programme of engagement will roll out over the project
  - a. Workshop report
  - b. Website submission
  - c. Feedback sessions
  - d. Dialogue with residents associations
  - e. Community Board and Zone Committee representation at the project working group level

### **Structure**

1. Welcome refreshments and sign in sheet
2. Short presentation on the partnership / CMP project – issues, vision, project phase 1 & 2
3. Question 1 – Facilitator led, open floor
4. Question 2 to groups – scribing on a map of the catchment
5. Question 3 – scribing on a map of the catchment
6. Question 4 to groups - group discussion and completion of the cost/time framework
7. Wrap up of session

### **Question 1 - What does a healthy harbour mean to you?**

This question was asked to participants in order to identify the hopes and aspirations that the community hold for their harbour.

This information will feed into the development of a long term vision for the project and partnership, and help shape project objectives that guide focal areas for projects.

#### Methodology

1. The statements that were captured under this section of the workshops were transferred onto post it notes in order to present it in graphic form for this report.
2. The statements were then grouped according to similarity into six categories.
3. The statements were then synthesised into one representative objective for each category.

What does a healthy harbour mean to you? Governors Bay

Wetland  
recovery @  
Head of harbour

Continually  
Improving  
Ecology

Whole of harbour  
approach - Recognising  
local issues.

Spawning  
habitat  
reinvigorated

Land use -  
Management + land  
cover Important with  
Climate change

Raupō  
Regeneration

Land stabilisation  
Sustainable over  
time

Supports our  
native  
species

Reduced sediment  
& other contaminants  
after rainfall

Meets food  
gathering / Sustainable  
harvesting

Whole of  
catchment  
management

Swimmable

What does a healthy harbour mean to you? Lyttelton

In a healthy catchment there are no sediment plumes during storm events.

Look ahead to get ready for future threats. Prevention is better than cure.

Biodiversity enriched.

A healthy harbour is where cockles & pipis can live & thrive and their numbers increase.

It can't be a healthy harbour without a healthy catchment.

Lots of dolphins live in a healthy harbour. They love it here.

A working landscape that has a shared vision.

A healthy harbour might have raupō restored and live up to its name.

The harbour is deteriorating. In a healthy harbour, these trends are reversed.

A healthy harbour is safe - safe to swim and safe to eat from.

Whole ecosystem

Kaimoana

Regulating discharge  
from ships

Natural flow of  
water unrestricted  
(breakwater)

Control of  
marine pests

Swimmable  
Water

Protected  
visual landscape  
values

Cooperation  
among NZ Ports  
rather than  
competition

Sensitive - light  
development - noise  
Industry

Facilities/  
amenities for  
visitors

Reversing - roads)  
Sediment - oil  
Inflow/runoff - break  
Industrial  
agriculture

Controlled  
residential  
development

## **Question 1 – Summary**

The question ‘what does a healthy harbour mean to you’ was put to the floor and responses scribed on a flip chart.

The responses were quite varied and largely reflected the issues that were raised under question 2. When grouped, the responses fell into six categories:

- Water quality
- Biodiversity
- Land use
- Erosion and sediment control
- Contaminants
- Collaboration

These translate into the following potential objectives for improving the health of the harbour:

1. Water quality is of a standard that is suitable for food gathering and contact recreation throughout the harbour;
2. Biodiversity within the harbour and its catchment is enhanced, predominantly with native species, and pest species are managed;
3. Commercial and residential development is controlled in a manner that is suitable for the carrying capacity of the local environment;
4. Erosion prone land is stabilised and sediment discharges reduced to a level commensurate with the natural flushing ability of the harbour;
5. Contaminants entering the harbour are reduced to levels such that objective 1 is not compromised;
6. The Whakaraupō catchment is managed collaboratively and as a whole across the land sea interface.

## **Question 2 - What are the main areas of the catchment that are important to you and why?**

In order to understand community values around the harbour, we need to identify what is important to community members.

Participants were asked to spatially identify points or areas on a map of the catchment that are important to them stating why, e.g. swimming, food gathering, walking.

### Methodology

1. The information on the maps was transcribed onto a word document (Appendix 1) as either single words or phrases.
2. This information was then processed using Wordle Cloud. Wordle Cloud is a computer programme that takes the frequency of a word and represents how often it was said through the word's font size. For example, at the Diamond Harbour workshop, 'swimming' was highlighted on the maps as an important value seven times, while 'surfing' was mentioned once. Therefore, the wordle cloud makes the font size for 'swimming' seven times larger than 'surfing'. This gives us a visual representation of how important a particular value is to the community.
3. Where particular points or areas were indicated on the workshop maps, these were captured on a map with all workshops combined.
4. The combined information was then categorised into seven categories (Appendix 2), places, community, recreation, biodiversity, port, conservation, and heritage. The weight of these categories were then represented in a pie chart.



The graphic is a word cloud centered around the words "Quail Island", "Planting", and "Beaches". The words are in large, bold, dark teal font. Surrounding these central words are numerous smaller, semi-transparent words in various colors (green, blue, red, yellow) representing different aspects of the area. The words include: Naval Point yacht club, Orton Bradley Visual landscape, Port activities, Rocky coastline, Wetlands, Ropapa Island, Swimming, Penguins, Recreation, Beaches, Dolphins, Sailing, Port, History, Birdlife, Saltmarsh, Moorings, Shipping movements, and Head to Head walkway.

Naval Point yacht club  
Orton Bradley Visual landscape

Quail Island

Port activities

Rocky coastline

Wetlands

Ropapa Island

Swimming

Penguins

Recreation

Planting

Beaches

Dolphins

Sailing

Port

History

Birdlife

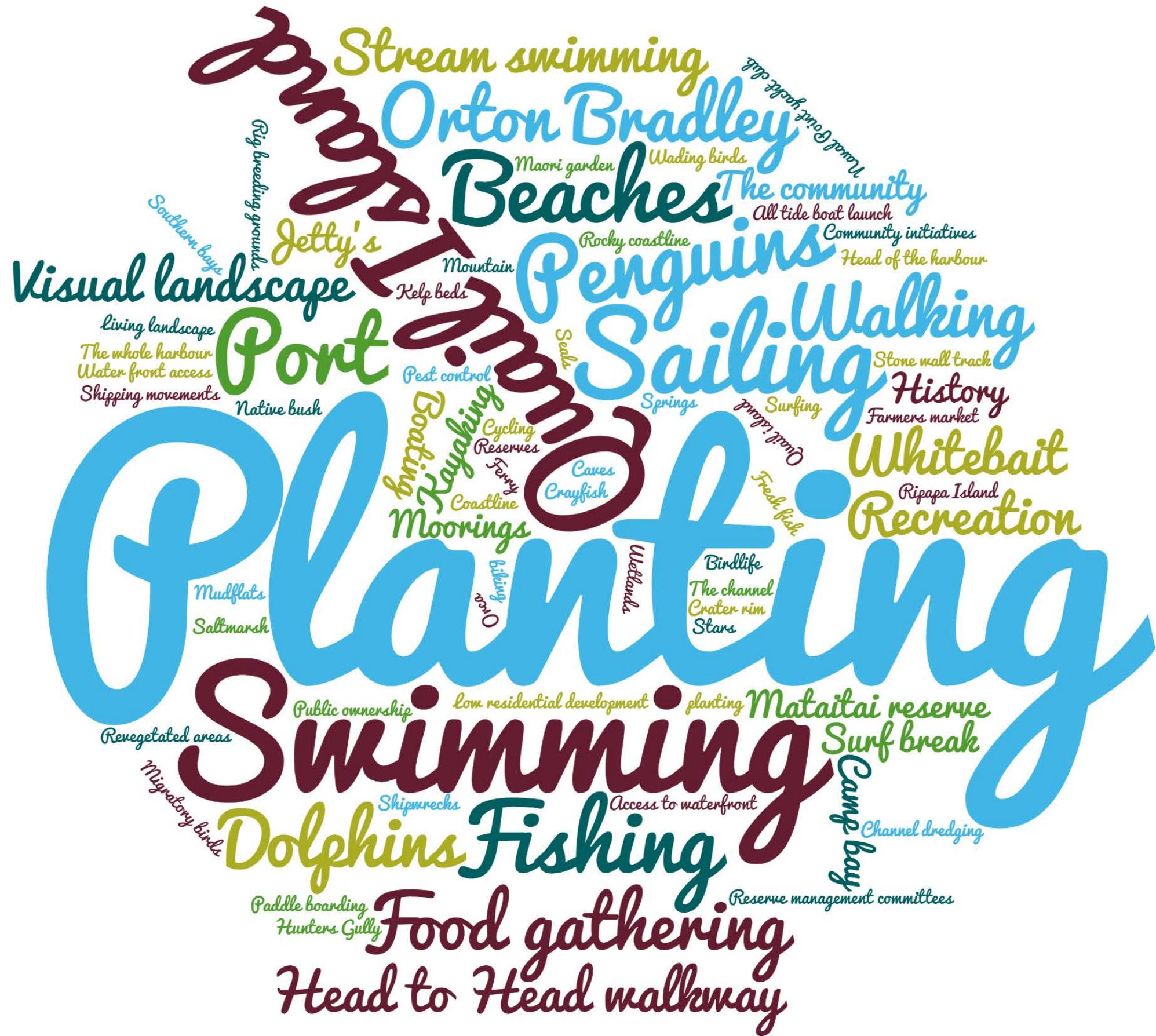
Saltmarsh

Moorings

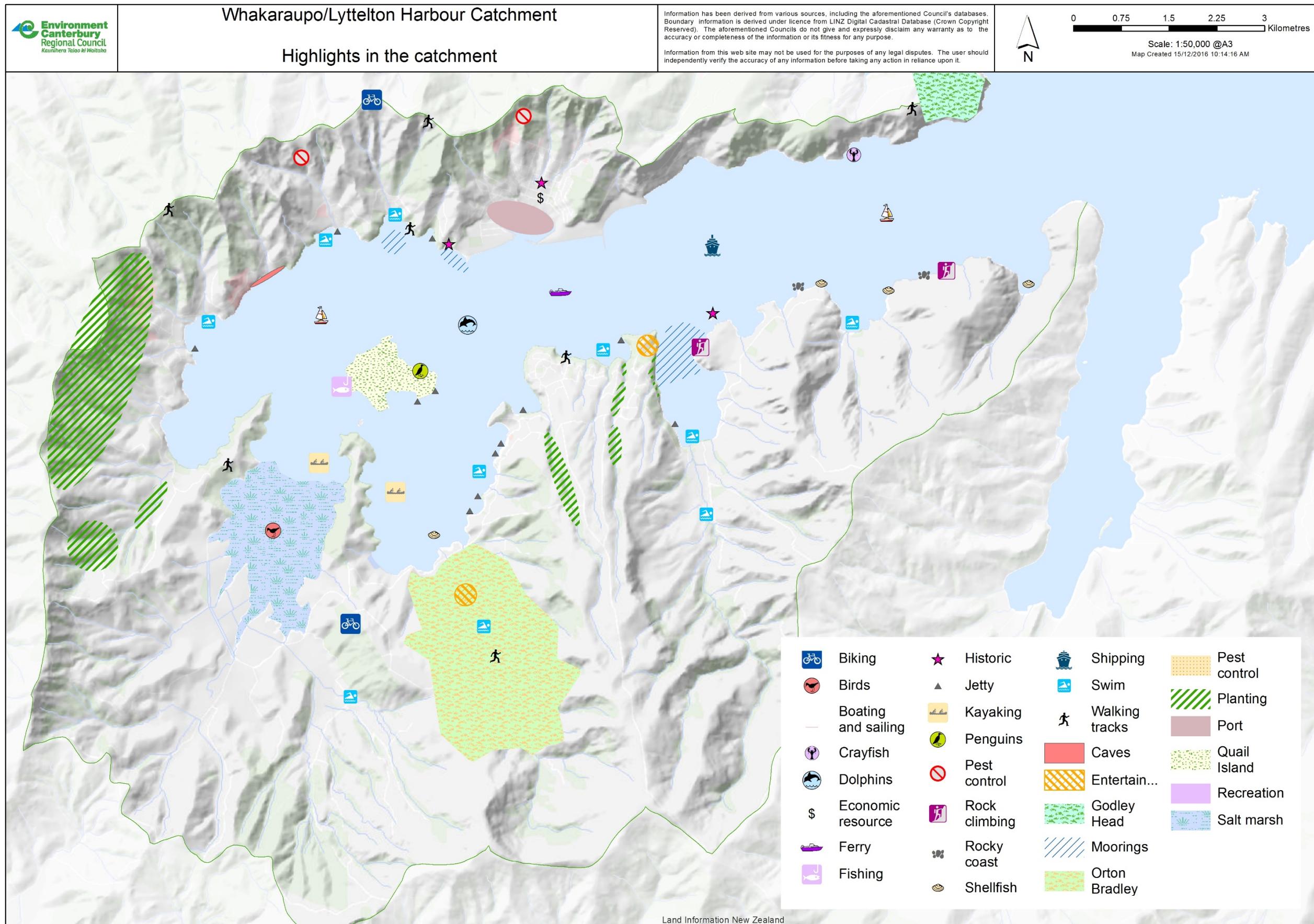
Shipping movements

Head to Head walkway





## Map of key values in the harbour catchment



## Question 2 – Summary

Participants answered this first question with a very diverse list of responses. A total of 74 different values were expressed across the three workshops. Based on the frequency of responses:

- The Governors Bay community placed greatest value on native planting initiatives in the catchment, particularly of native species, followed by the Rāpaki Mātaitai reserve.
- The Lyttelton community also placed greatest value on planting initiatives, followed by Quail Island, penguins, beaches and dolphins.
- The Diamond Harbour community placed greatest value on swimming, followed by fishing, sailing, planting and food gathering.

Overall, the highest frequency value across the three workshops was found to be planting initiatives. This emphasises the value placed on returning the harbour to its former health through enhancing biodiversity, controlling erosion and sediment input to the catchment's waterways and coast, and the personal investment the harbour community has in making this happen.

The total list of values were grouped by similarity to provide a more concise understanding of the data, and categorised by a theme that best represented the group. This provided seven themes; places, community, recreation, biodiversity, the port, conservation and heritage. The components of each category can be seen in Appendix 2.

A weighting for each category was then assigned to reflect the number of values within each, and presented via a pie chart.

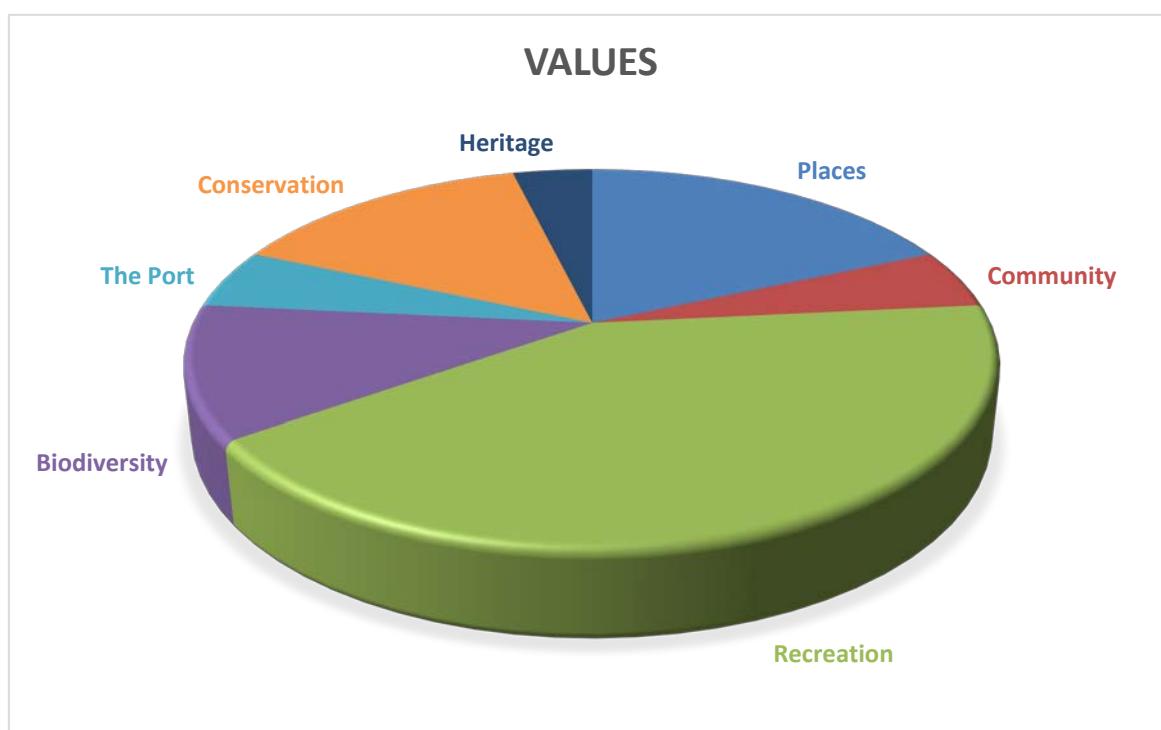


Figure 1: Values categorised by theme across the workshops

The key messages emerging from the workshops around values indicate:

- That planting initiatives are by far the most valued aspect about the harbour and its catchment. This was followed by swimming, Quail Island, sailing, fishing, beaches, penguins, Orton Bradley Park, Lyttelton Port, dolphins, food gathering and walking.
- The greatest thematic value across the catchment is placed on recreational opportunities, with places, conservation, and biodiversity forming the second highest valued categories and the port, heritage and community representing the third most valued group of categories.

### **Question 3 – What are the key issues facing the harbour?**

The harbour community and regular visitors are well placed to see changes in the harbour environment over time. The eyes and ears of the community can identify issues as they happen or become apparent.

Participants were asked to spatially identify points or areas on a map of Whakaraupō where they think there are issues, e.g. sedimentation, loss of shellfish, pollution.

#### Methodology

5. The information on the maps was transcribed onto a word document (Appendix 1) as either single words or phrases.
6. This information was then processed using Wordle Cloud. Wordle Cloud is a computer programme that takes the frequency of a word and represents how often it was said through the word's font size. For example, at the Govenors Bay workshop, 'commercial forestry' was highlighted on the maps as an important issue four times, while 'marine pests' was mentioned once. Therefore, the wordle cloud makes the font size for 'commercial forestry' four times larger than 'marine pests'. This gives us a visual representation of how important a particular issue is to the community.
7. Where particular points or areas were indicated on the workshop maps, these were captured on a map with all workshops combined.
8. The combined information was then categorised into 10 categories (Appendix 3); access, port operations, biodiversity loss, limited amenities, sedimentation, stormwater, contaminants, land use, climate change and jet skis. The weight of these categories were then represented in a bar chart.

Stormwater  
Commercial forestry  
Sedimentation  
Sewage

loss of wetland  
lack of visitor facilities  
Road cuttings  
Dredging  
The breakwater Dredge spoil  
Marine pests  
Boat contaminants  
Industrial stormwater  
Access to Port area

**Sedimentation**

**Commercial forestry**

**Stormwater**

**Sewage**

**Weeds**

Road cuttings  
Farm management  
Turbidity from shipping  
Climate change  
Boating facilities  
Septic tanks  
Road contaminants  
Loss of wetland  
Industrial stormwater  
Access to Port area  
Litter  
Pests  
Jet ski's  
Erosion  
Boat noise  
Weed management  
Lack of parking  
Use of herbicides  
Lack of visitor facilities

Cumulative effects of development  
Access for mountain bikes  
Urban development  
Farm management  
Commercial forestry  
Access to Port area  
Road cuttings  
Sea lice  
Jet ski's  
Toxic shellfish  
Loss of fish and shellfish  
Water quality  
Debris from reclamation  
Access to fetties  
Access to Sumner  
Access for horses  
Urban development  
Cumulative effects of development  
Access for mountain bikes  
Industrial stormwater  
Erosion  
Turbidity  
Loss of wildlife  
Boat noise  
Access to ferry  
Marine pests  
Litter  
Septic tanks  
House pollution  
Channel dredging  
Climate change  
Access to Moepuku  
Flooding  
Lack of visitor facilities  
Access to parking

# Stormwater

# Sedimentation

Access to Port areas

Industrial stormwater

Jet ski's

brown's

Road cuttings

Climate change

Loss of wetland

Urban development

Stormwater

Flooding

Debris

Access to ferry

Biosecurity

Boat contaminants

Loss of wildlife

Farm management

Road contaminants

Use of herbicides

Cumulative effects

Access to jetties

Recreational facilities

Erosion

Noise pollution

Water quality

Access to Sumner

loss of fish and shellfish

Commercial forestry

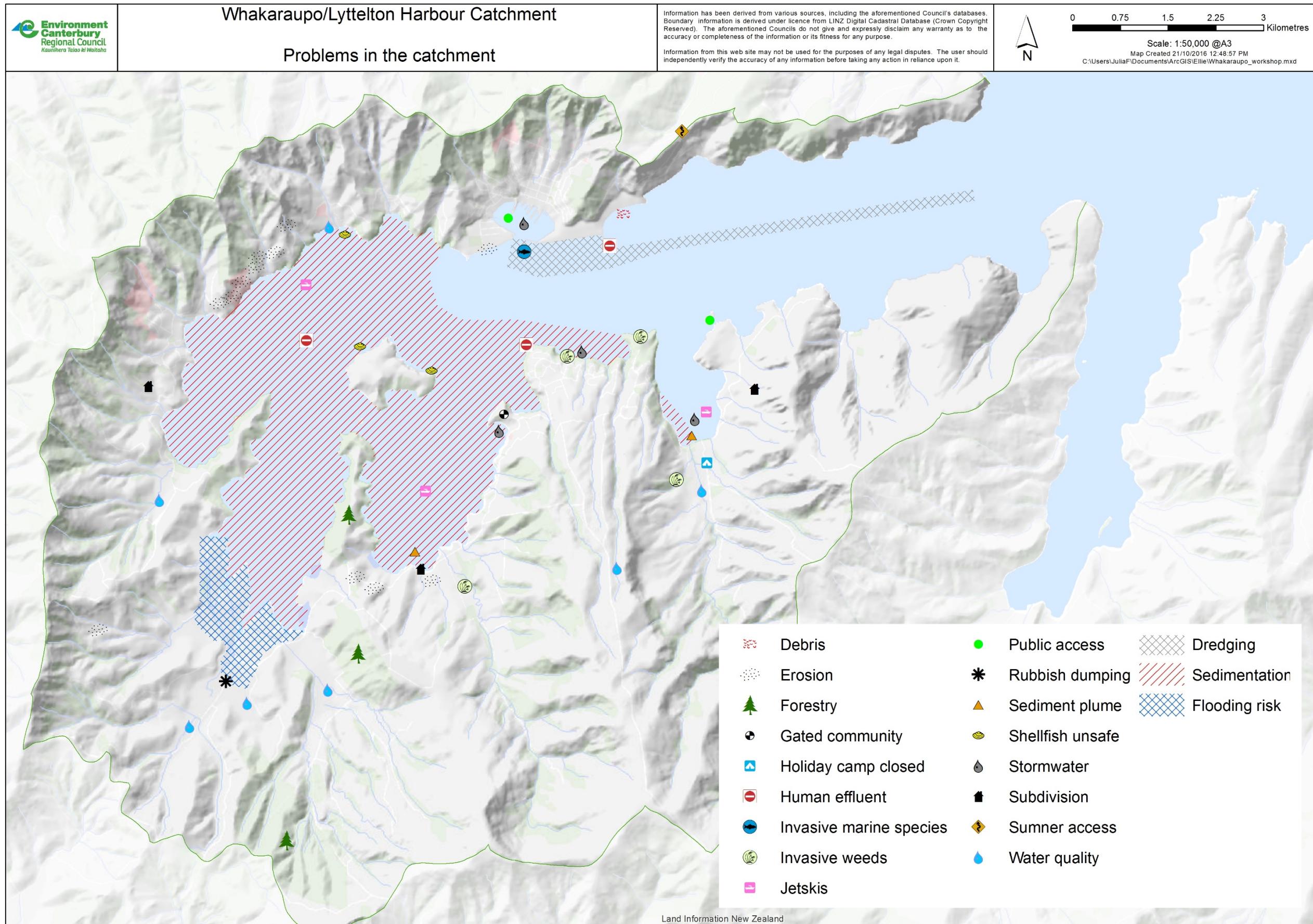
# Sedimentation

## Lack of recreational facilities

## Water quality

## Biosecurity

## Map of key issues facing the harbour catchment



### Question 3 – Summary

The Governors Bay community identified 16 different issues within the catchment with sedimentation and sewage as the two issues raised most frequently by the participants.

The Lyttelton community identified 25 different issues within the catchment with sedimentation, followed by stormwater and sewage, as the three issues raised most frequently by the participants.

The Diamond Harbour community identified 41 different issues within the catchment with sedimentation, followed by stormwater, as the two issues raised most frequently by the participants.

When responses to Question 2 were combined across the workshops, the issues raised most in order of frequency were sedimentation, stormwater, sewage and lack of recreational facilities.

The total list of issues were grouped by similarity to provide a more concise understanding of the responses, and categorised by a theme that best represented the group. This provided ten themes; access, port operations, biodiversity loss, limited amenities, sedimentation, stormwater, contaminants, land use, climate change and jet skis. The components of each category can be seen in Appendix 3.

The number of issues within each category is presented via a bar chart.

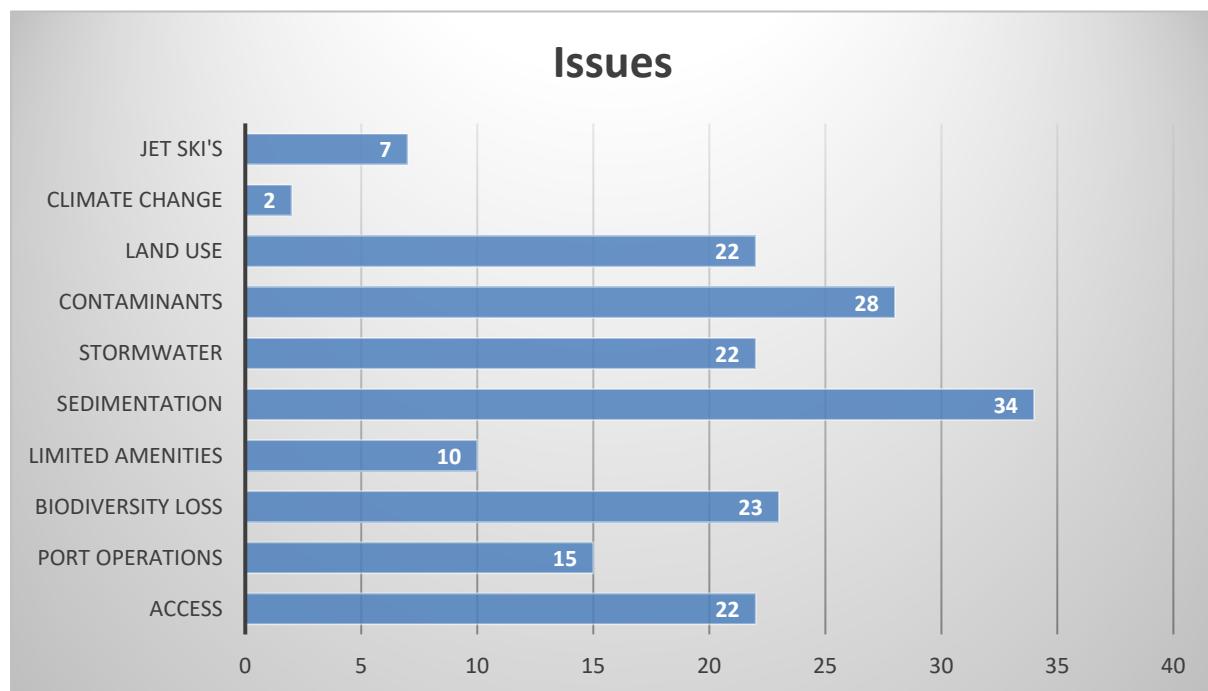


Figure 2: Issues categorised by theme across the workshops

The key messages emerging from the workshops around issues indicate:

- Community responses throughout the workshops indicate that sedimentation is considered to be the greatest issue within the Whakaraupō catchment. This is followed by stormwater, sewage and lack of recreational facilities.
- The largest thematic issue across the catchment is also considered to be sedimentation. This was followed by contaminants, biodiversity loss, land use, stormwater and access.

#### **Question 4 – How can we make a difference?**

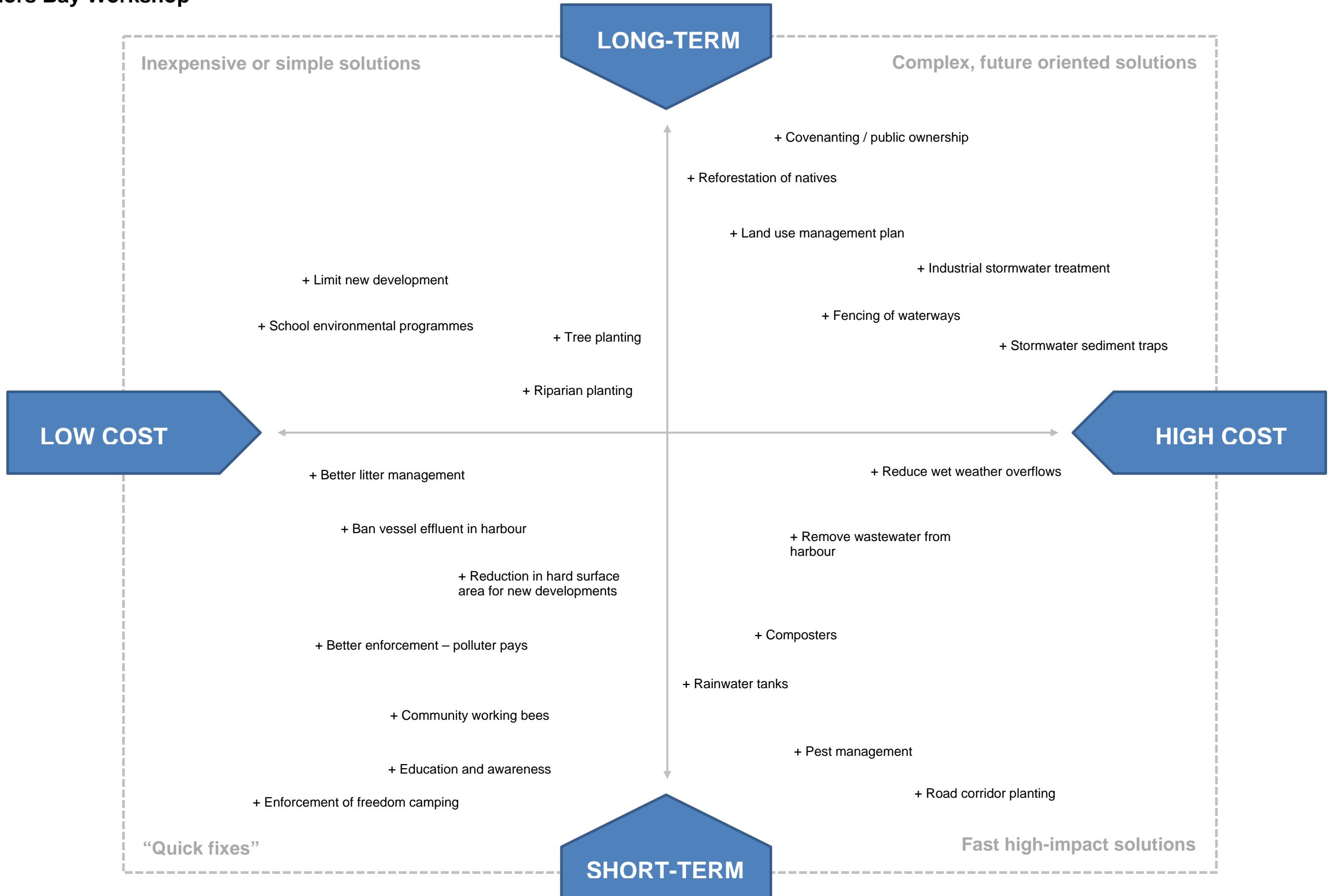
There is a wealth of community projects already taking place in the catchment, often using the efforts of local volunteers. The harbour community have their own aspirations and ideas on how we can improve the health of the harbour.

##### Methodology

1. Participants were provided with a template and asked to think about what sort of activities we could carry out to improve the health of the harbour.
2. The template was structured in a way that encouraged participants to consider both financial cost and time when suggesting projects, positioning them within the framework accordingly.
3. The information is presented by workshop and then by category.
4. The information has been presented as it was captured with no alteration to either estimated cost or time. This section therefore does NOT represent actual projected cost or effort, rather community perceptions of how long and how expensive an activity or project may be.

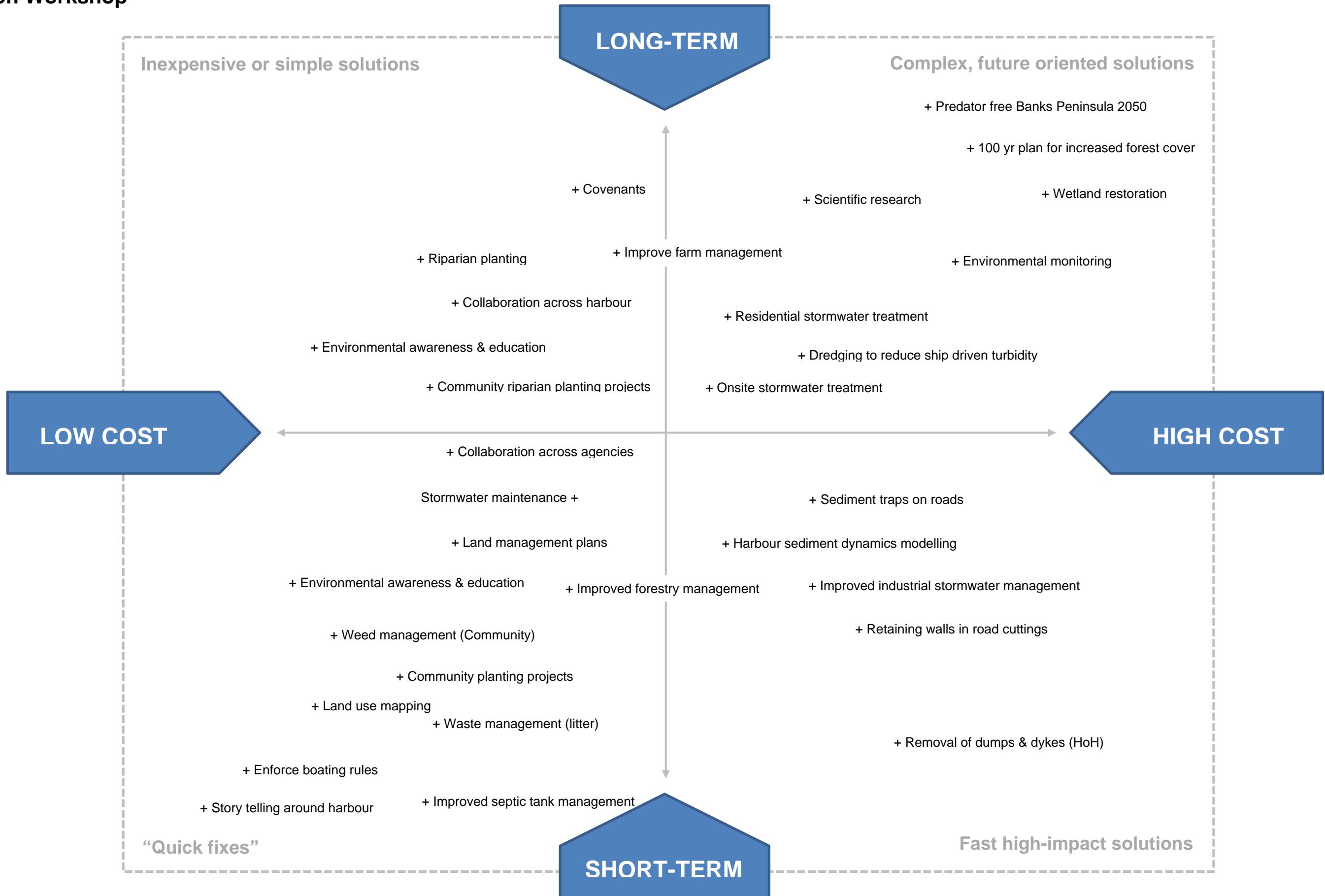
## HOW CAN WE MAKE A DIFFERENCE – SOLUTIONS

### Governors Bay Workshop



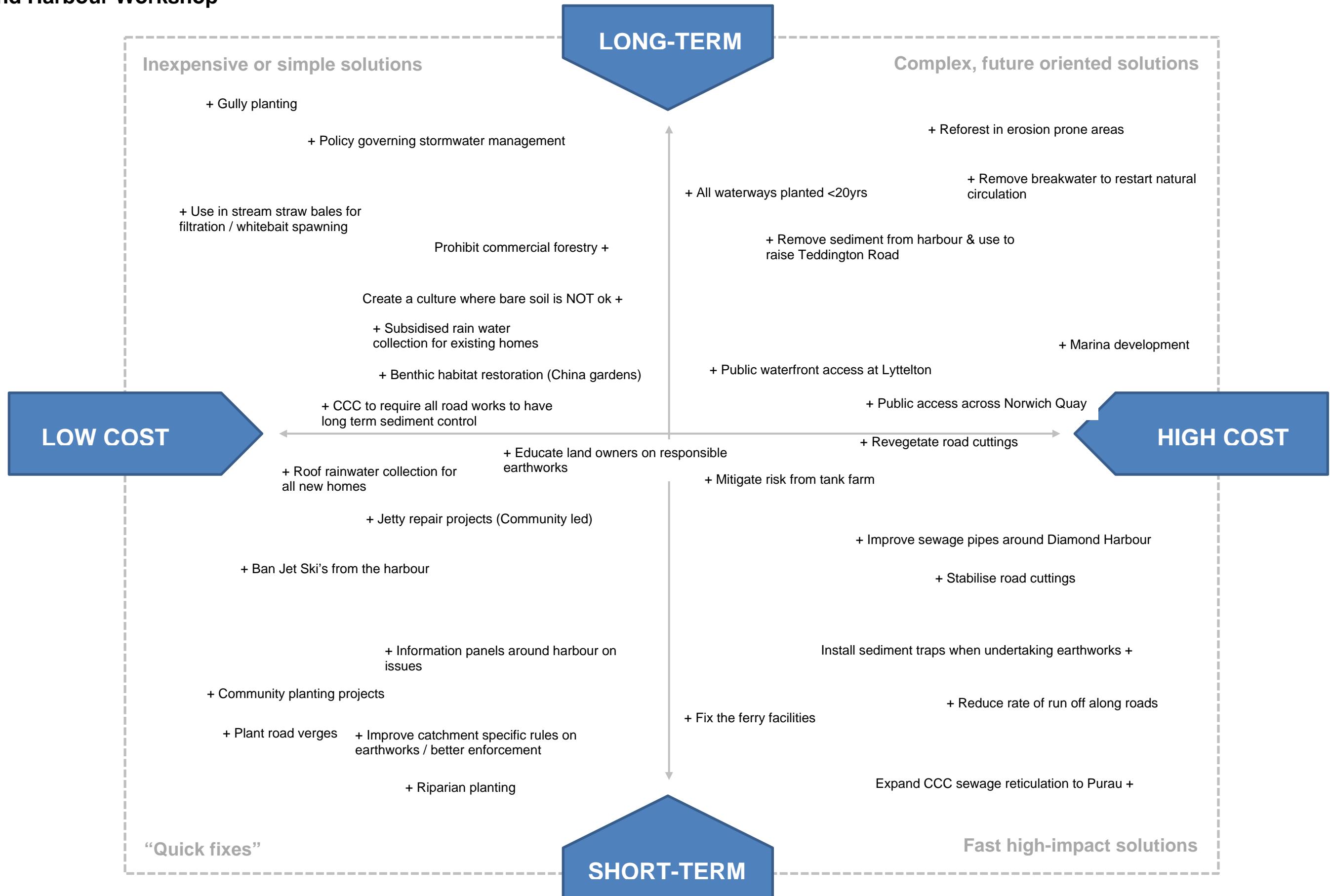
## HOW CAN WE MAKE A DIFFERENCE – SOLUTIONS

### Lyttelton Workshop



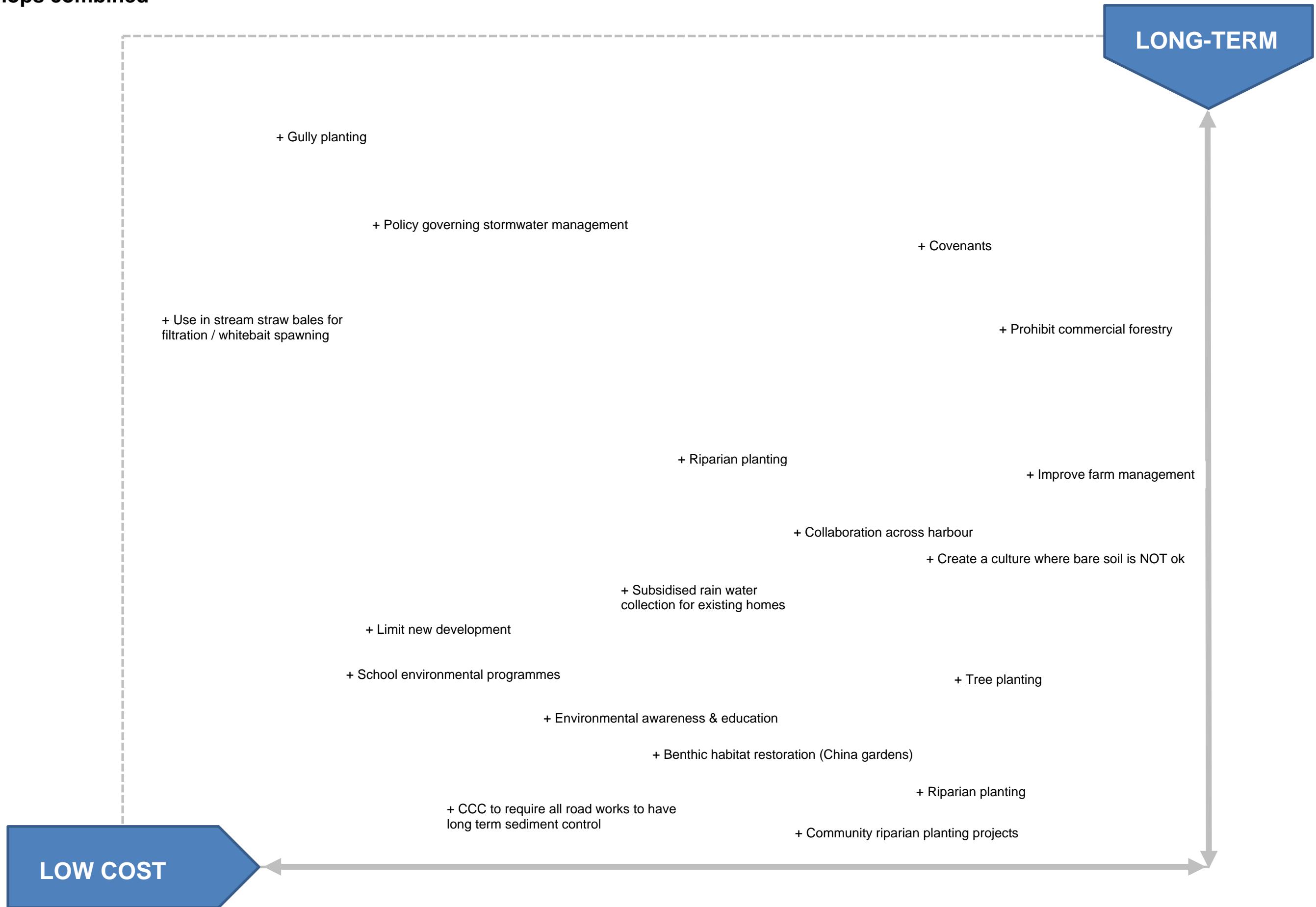
## HOW CAN WE MAKE A DIFFERENCE – SOLUTIONS

### Diamond Harbour Workshop

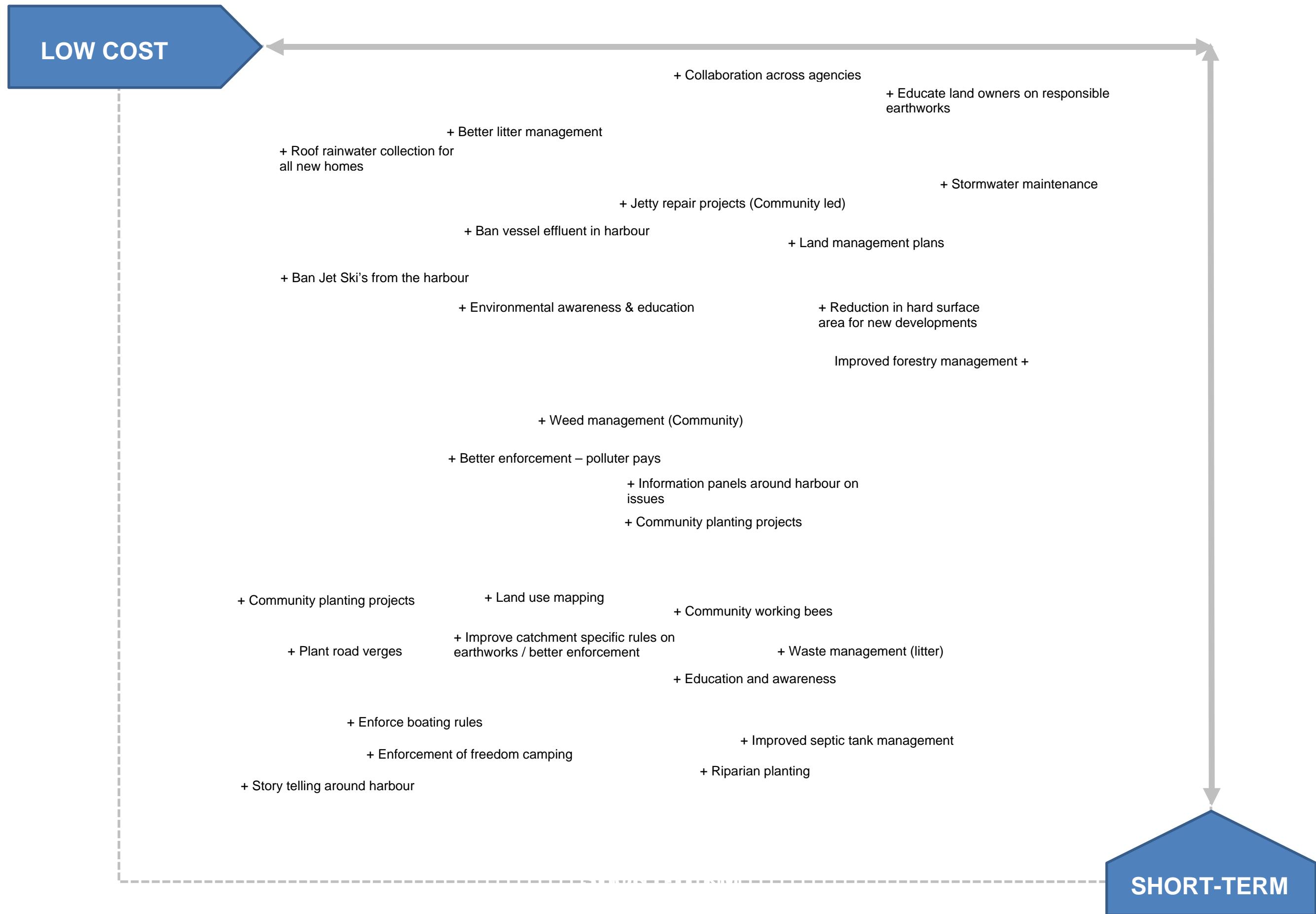


## INEXPENSIVE OR SIMPLE SOLUTIONS

### Workshops combined

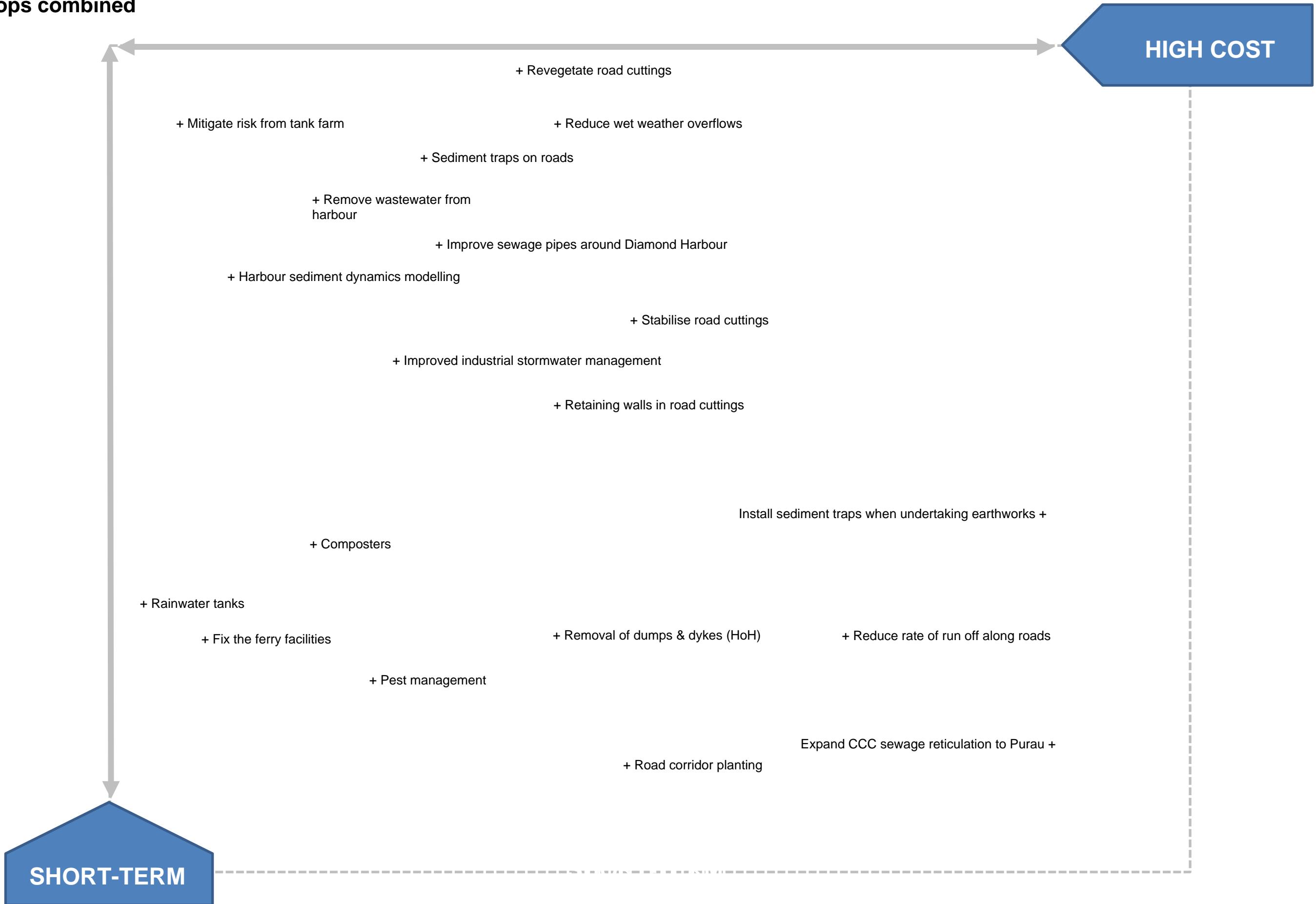


## QUICK FIXES – Workshops combined

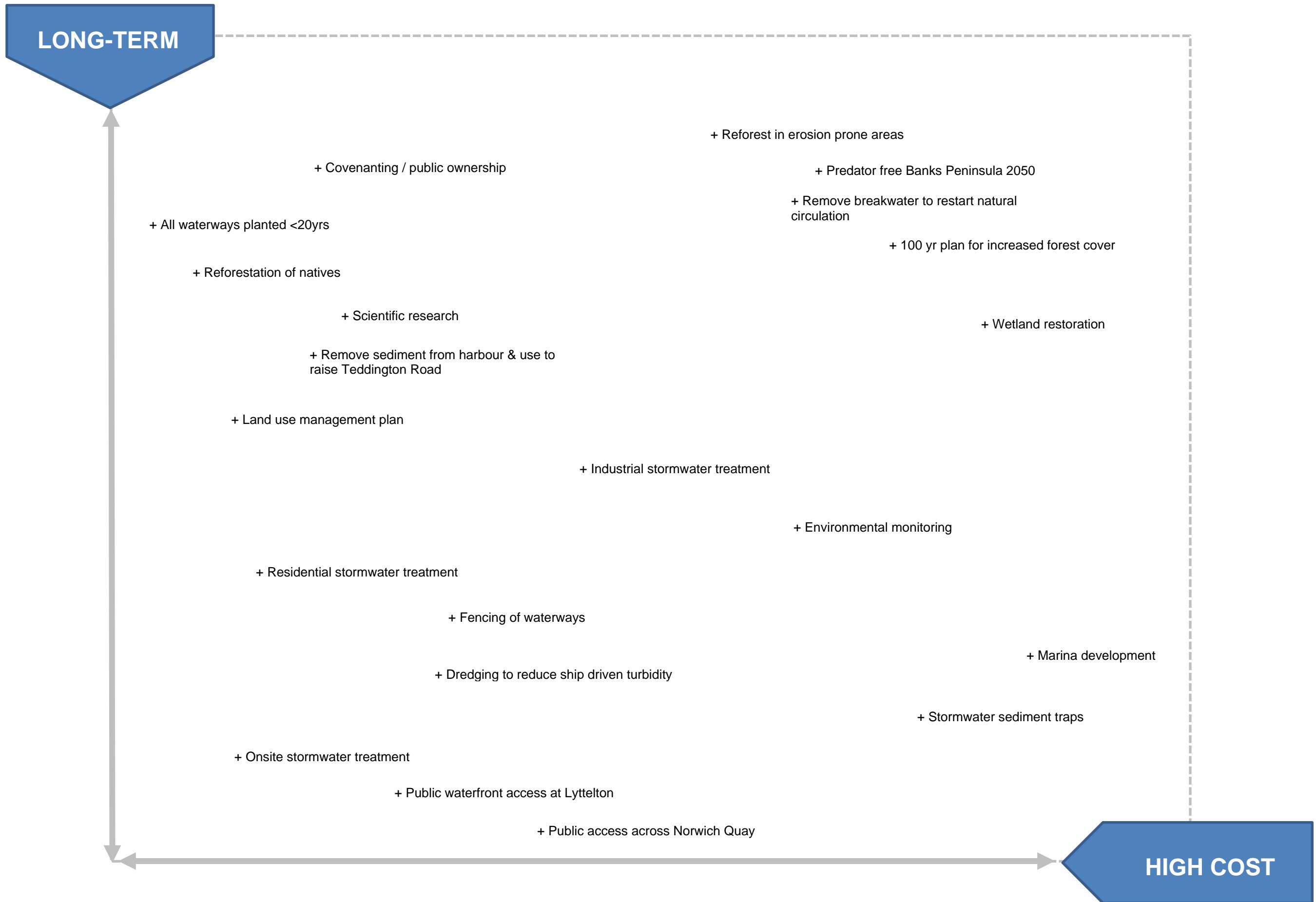


## FAST, HIGH IMPACT SOLUTIONS

### Workshops combined



## COMPLEX, FUTURE ORIENTED SOLUTIONS – Workshops combined



#### **Question 4 – Summary**

Workshop participants suggested 116 projects across the four categories of ‘inexpensive or simple solutions’, ‘complex future oriented solutions’, ‘quick fixes’ and ‘fast high impact solutions’. The projects ranged from small scale activities such as the installation of educational interpretation panels, to large scale, long term projects such as reforestation of the catchment.

The location of the projects within the cost/time framework has been presented as captured at the workshops to reflect the expectations and aspirations of the community.

Within the inexpensive or simple solutions category, projects focused on education and community based restoration activities such as planting.

Within the complex future oriented solutions category, projects focused on stormwater management and longer term restoration activities such as reforestation of the catchment and removal of sediment from the harbour.

Within the quick fixes category, the scope of projects was quite broad with community planting, better enforcement, education, better waste management and better stormwater management being most prominent.

Within the fast high impact solutions category, improved sediment and stormwater management, stabilisation of road cuttings and the total removal of sewage from the harbour featured most frequently.

## **Next steps**

We would like to extend our gratitude to the participants who attended the workshops during what turned out to be a very rainy week. Your input will be invaluable to the project as it progresses.

The key messages that came out of each section of the workshops will feed in to the work of the science advisory group and the development of the final strategy and action plan.

### What next

1. The workshop report will be finalised and made available on the project website
2. Project updates will be provided by email as they happen. If you have not yet received communication by email and would like to be added to the list, please let us know at [info@healthyharbour.org.nz](mailto:info@healthyharbour.org.nz)
3. A second round of workshops will be held in March/April to present the draft outputs of the project and assist with submitting comments on the draft Catchment Management Plan.
4. In the meantime, you are encouraged to submit any further thoughts and ideas through the project website 'Have your say', at [www.healthyharbour.org.nz](http://www.healthyharbour.org.nz).
5. Also, if you notice a pollution event or a situation that may lead to one occurring, please let us know by calling the Environment Canterbury pollution hotline on 03 3664663, or the Christchurch City Council on 03 9718999.

## **APPENDICES**

Appendix 1: Workshop notes

Appendix 2: Key values in the harbour catchment – categories

Appendix 3: Key issues facing the harbour catchment – categories

**Whakaraupō community consultation workshops**  
**September 2016**

**Governors Bay**

**1. Expectations for CMP**

- a. Love the harbour
- b. Want to see waterways better managed
- c. Want to stop contaminants going into the harbour
- d. Management should be coordinated and strategic rather than piecemeal
- e. Want the CMP process to be community led
- f. Want to know how much say Jerry B has in the process
- g. Focus should be on the whole of the harbour basin, improving water quality
- h. Water quality and mahinga kai – want the water quality standard to be food gathering

**2. Feedback during presentation from Bianca**

- a. It's important to be realistic. We don't want to have a repeat of the Akaroa sewage treatment process which came to nothing. Short deadlines will make this unachievable.
- b. While we may 'know' what needs to be done, we still need to go through the process
- c. Community would like transparency around any ongoing commitments from agencies, as money tends to become a problem down the track and these plans die.
- d. Andrew – the commitment to the project is recorded through the Ministers direction and long term plans and annual plans. Where the Council has signed an MOU that resulted from a Plan signed off by the Minister will carry weight.

**3. Q1 – What does a healthy harbour mean to you?**

- a. Swimmable
- b. Supports our native species
- c. Meets food gathering / sustainable harvesting
- d. Continually improving ecology
- e. Whole of harbour approach and recognising local issues (i.e. rubbish at head of harbour)
- f. Reduction in sedimentation and other contaminants from first flush after rainfall
- g. Whole of catchment management
- h. Land use – management and land cover important with climate change
- i. Land stabilisation sustainable of time
- j. Spawning habitat reinvigorated
- k. Wetland recovery at head of harbour
- l. Raupō regeneration
- m. Recognise Whakaraupō as a working landscape with a shared vision

**4. Q2 – Important places**

- a. All the water in the harbour
- b. The coastline
- c. The crater rim
- d. Native bush
- e. Rāpaki mātaitai
- f. The channel through the harbour = lifeblood of the harbour
- g. Head of the harbour

- h. Mudflats at the head of the harbour
- i. Wading birds
- j. The community – projects, events
- k. Revegetated areas
- l. Collaboration on pest control – flora and fauna
- m. Planting x 4
- n. Orton Bradley
- o. Reserve management committees
- p. Recreation
- q. Access
- r. Public ownership
- s. Mātaitai reserve
- t. Ferry
- u. Channel dredging - helps flush the harbour
- v. Beaches
- w. Southern bays
- x. Crayfish
- y. Surf break
- z. Swimming (Camp Bay)
- aa. The whole harbour
- bb. Natives planting x 4
- cc. Quail Island (ecology)

5. Q3 – Key issues

- a. Erosion
- b. Runoff
- c. Sedimentation x5
- d. Sewage x 6
- e. Dredging
- f. Degrading wetlands
- g. Forestry blocks x3
- h. Road cuttings
- i. Heavy metals
- j. Urban stormwater
- k. Port environment is hostile
- l. The breakwater
- m. The port – industrial stormwater
- n. Visitors don't have adequate facilities around the harbour
- o. Sediment extending mudflats, especially at head of harbour
- p. Clearing of forestry blocks – Mokuku Point is being worked soon
- q. Tunnel gully erosion with sediment going straight into the harbour
- r. Stormwater entering the port area and washing into harbour
- s. Dredge spoil
- t. Boat contaminants
- u. Biosecurity - Marine invasive species

6. Q4 - Potential solutions

- a. Leave the action plan to the SAG
- b. Need to sort out issues on land prior to harbour
- c. Need sustainable marine management
- d. Limit new development (sub-divisions)
- e. Better enforcement of existing rules required
- f. Capture traditional knowledge – historical & cultural
- g. Provide incentives to developers for best practice

- h. Change current land use – management plan for agriculture, forestry, marginal land
- i. Industrial stormwater treatment
- j. Covenanting
- k. Ensure industry uses stormwater treatment
- l. Remove wastewater outfalls
- m. Pest management
- n. Education with children and environmental projects with schools
- o. Planting
- p. Litter management
- q. Reforestation with natives
- r. Planting
- s. Enhancing biodiversity around the catchment
- t. Planting of road corridors
- u. Fencing of waterways to manage stock access
- v. Reduce sediment run off
- w. Reduce stormwater egress into wastewater treatment systems
- x. Make rainwater tanks mandatory
- y. Education and awareness programmes, especially for children
- z. Reduce any new development
- aa. Reduce hard surface areas in design of new development
- bb. Manage vessel waste discharge – discharge outside of harbour
- cc. Community working bees, networks etc.
- dd. Annual surveys for pests
- ee. Improve visitor facilities such as toilets
- ff. Use composters
- gg. The scientists should tell US what would make the biggest difference
- hh. No point in address sediment in the harbour until addressed at the source
- ii. Everyone needs to take responsibility

7. Other comments

- a. Can this plan change the way the Port works?
- b. What contaminants are vessels bringing in with them?
- c. Send the draft workshop report to workshop peeps for review and comment
- d. The workshops were not well advertised
- e. Keep the community connected with project developments

**Whakaraupō community consultation workshops**  
**September 2016**

**Lyttelton**

**1. Expectations for CMP**

- a. Want to reverse the trends of sediment going into the harbour
- b. Catchment stormwater contaminants need to be contained
- c. Capital dredging and spoil and how may this feed sediment back into the system
- d. Need community involvement as all have a part to play
- e. Herbicide use by the Council to kill weeds gets into streams and kills everything
- f. Access to the harbour for recreation – fishing
- g. Safe access for boats on and off the water (10,000 trailer boats in Canterbury – has been surveying use of harbour by boats for 1 year)
- h. Biota – restoration of seagrass, returning marine life to pre-European times.

**2. Questions**

- a. Who will be leading on the actions / projects?
- b. What form will the partnership take once the CMP has been written?
- c. What is the difference between an integrated CMP and an action plan?
- d. Is it possible to attach a photo to 'have your say'?
- e. Map areas important to biodiversity – i.e. Whitebait streams
- f. Map reserves / protected areas (DOC?)

**3. Q1 – What does a healthy harbour mean to you?**

- a. In a healthy catchment there are no sediment plumes during storm events
- b. Lots of dolphins live in a healthy harbour, they love it here
- c. The harbour shows signs of deterioration – the trends are bad. In a healthy harbour these trends are slowed, stopped and begin to reverse
- d. It can't be a healthy harbour without a healthy catchment
- e. A healthy harbour is safe – safe to swim and safe to eat from
- f. A healthy harbour is where cockles and pipi's can live and thrive and their numbers increase
- g. Look ahead to get ready for future threats. Need preventative action not action after the event
- h. A healthy harbour might have raupō restored and live up to its name
- i. A working landscape that has a shared vision
- j. Biodiversity enriched.

**4. Q2 – Best things about the harbour**

- a. Birdlife
- b. The views and visual landscapes
- c. Planting projects x3
- d. Living Springs planting x2
- e. Head to Head walkway
- f. Caves
- g. Sailing
- h. Moorings
- i. Quail Island
- j. Boating
- k. History
- l. Interesting port activities
- m. Dolphins x2
- n. Rocky coastline

- o. Beaches x2
- p. Planting
- q. Penguins x3
- r. Saltmarsh
- s. Quail Island – pest free
- t. Walking trails
- u. Access to beaches
- v. Orton Bradley
- w. Working port
- x. History of Lyttelton
- y. Ripapa Island – history
- z. Shipping movements
- aa. Swimming
- bb. Recreation
- cc. Quail Island
- dd. Port
- ee. Naval Point yacht club (only all tide slipway in Canterbury)
- ff. Wetlands

## 5. Q3 – Issues

- a. Amenities – need better slipways and moorings for boats x2
- b. Runoff
- c. Sediment x5
- d. Water quality
- e. Sewage x3
- f. Litter
- g. Access to the port area
- h. Facilities for visitors and public x2
- i. Climate change – Head of the harbour
- j. Use of herbicides contaminating fresh water
- k. Stormwater run off
- l. Road contaminants – heavy metals, oil
- m. Lack of wetlands to buffer sea level rise
- n. Septic tanks in Pūrau bay
- o. Cows in streams / farm management
- p. Industrial stormwater x2
- q. Forestry
- r. Sewage
- s. Turbidity caused by ships
- t. Residential stormwater x2
- u. Weeds x2
- v. Pests
- w. Slumping road cuttings
- x. Loss of wetlands
- y. Forest clearance x2
- z. High turbidity x2
- aa. Erosion
- bb. Boat noise
- cc. Jet ski's
- dd. Sediment plumes x2
- ee. Lack of parking

## 6. Q4 - Solutions

- a. Riparian planting in water courses
- b. Change farming practices (education), lower stocking density, fencing
- c. Predator free Banks Peninsula
- d. 100 year plan for increased forest cover
- e. Collaboration between agencies / volunteer groups / Corporates
- f. Waste management (litter) – secure yellow recycling bins
- g. Weed management by volunteers
- h. Increase awareness of ecological values of Lyttelton Harbour basin
- i. Enforce boating speeds
- j. Retaining walls in road cuttings, sediment traps, filter socks
- k. Sea walls to prevent erosion
- l. Stormwater runoff – contain, manage, treat
- m. After a rainfall event, send a drone up and see where main plumes are
- n. Removal of dykes, chemical dumps in the head of the bay
- o. Behaviour change
- p. Community planting projects
- q. Covenants
- r. Land management plans
- s. Environmental awareness, education, stewardship
- t. Dredging to reduce ship driven turbidity
- u. Stormwater improvements – residential
- v. Long term monitoring of the environment to increase understanding
- w. Wetland restoration
- x. Increase research
- y. Identify sediment sources
- z. Investigate appropriate forestry techniques for the harbour
  - aa. Land use mapping
  - bb. Story telling around the harbour
  - cc. Education around septic tank use
  - dd. Sediment dynamics in the harbour – where does sediment go?
  - ee. Industrial stormwater improvements
  - ff. Keystone / demonstration projects that set examples
  - gg. Better onsite stormwater treatment

**Whakaraupō community consultation workshops**  
**September 2016**

**Diamond Harbour**

2. Expectations for CMP
  - a. Deal with over grazing
  - b. Sedimentation
  - c. There has been a call to act since the Urban Development Strategy 12-15 years ago. Action was never taken following that process.
  - d. Identifying source of sediment in order to reverse trend and improve the harbour
  - e. Improving mahinga kai – important for mana, to feed visitors and future generations. The health of the harbour is part of Ngāti Wheke identity
  - f. Ki uta ki tai
  - g. Restoring the harbour
  - h. Removing sediment
  - i. Restoring the governors bay jetty
  - j. Improving water quality – unable to swim after rain due to faecal contamination and plumes of sediment
  - k. Connect Pūrau Bay septic tanks to reticulated system
  - l. Having science underpin actions, not just emotion
  - m. Identifying and managing stormwater in the catchment
  - n. Heavy metals in harbour sediments
  - o. Improve fisheries – kowhai no longer, most fish in harbour are bottom feeders
  - p. Kaipara harbour – tree planting over 10 years. Indicator of success was how long it took to catch a snapper
3. Questions
  - a. While the CMP is not statutory, will it have regard to the National Coastal Policy Statement and National F/W Policy Statements?
  - b. Would the harbour recover if we stopped the sediment going in? What would be the timeline for recovery?
  - c. Will it follow the Kaikōura model?
4. Q1 - What does a healthy harbour mean to you?
  - a. Swimmable water
  - b. Kaimoana
  - c. Whole ecosystem
  - d. Control of marine pests
  - e. Free flow of marine water, unrestricted by development (e.g. breakwater)
  - f. Sensitive development with regard to light, noise, industry
  - g. Reversing sediment inflow / runoff, e.g. roads, oil, brake linings, industrial waste, agriculture
  - h. Controlled residential development
  - i. Importance of visual landscape values - protect
  - j. Facilities / amenities for visitors
  - k. Regulating discharge from ships
  - l. Cooperation amongst NZ Ports rather than competition
5. Q2 – Best things about the harbour
  - a. Swimming (x7)
  - b. Different sources of kai
  - c. Surf break off Ripapa Island
  - d. Quail island – everything about it

- e. Dolphins x2
- f. The communities around the harbour
- g. Walking tracks
- h. Quail island x 3
- i. LPC land – big block of grass, should be forest
- j. Camp bay – fishing and swimming
- k. The dump – spoil dredging's – good???
- l. Food gathering x3
- m. Fishing x5
- n. Boating
- o. Cycling
- p. Plantings / revegetation x4
- q. Jetty's x 2
- r. Mountain biking
- s. Sailing / moorings x5
- t. Water front access
- u. Orton Bradley Park x2
- v. The view/landscape x2
- w. Reserves
- x. Stars
- y. Walking in hills
- z. Stream swimming x3
- aa. Community initiatives
- bb. Living landscape – mix of residential, agriculture, industrial, & native
- cc. Coastal walking tracks
- dd. Penguins x2
- ee. Access to fresh fish
- ff. Port – economic resource
- gg. Farmers market
- hh. Port
- ii. Recreational opportunities
- jj. Paddle boarding
- kk. Head to Head walkway x2
- ll. Stone wall track
- mm. Migratory birds
- nn. Whitebait x3
- oo. Maori garden
- pp. Ship wrecks
- qq. Shore *Plagianthus* sp.
- rr. Kayaking x2
- ss. Beaches/bays
- tt. Springs
- uu. Rig breeding grounds
- vv. Hunters Gully
- ww. Low residential development on hillside
- xx. Orcas, seals
- yy. Surfing
- zz. Camp bay
- aaa. Kelp beds

## 6. Q3 - Issues

- a. Sediment at head of harbour
- b. Loss of wildlife
- c. Stormwater runoff from built up areas
- d. Intensification of development leading to increased runoff

- e. Weeds (terrestrial)
- f. Industrial stormwater from the Port
- g. Jet ski's
- h. Sewage x3
- i. Flooding on Teddington flats – use dewatered sediment to raise the road?
- j. Need car parking near the jetty's
- k. Need more recreational facilities
- l. Hostility of port – need increased access for public
- m. Toxic shellfish
- n. Disrepair of jetty's
- o. Kai
- p. Jet ski's
- q. Noise pollution
- r. Loss of cliffs around the port from reclamation
- s. No off road trails for horses, mountain biking
- t. Large projects are being considered individually with no regard to cumulative effects – how to address this?
- u. Sub-divisions / development
- v. Sludge / mud
- w. Road cuttings
- x. Weeds
- y. Parking on Stoddart Point
- z. Water quality – swimming
- aa. Stormwater x2
- bb. Erosion around streams
- cc. Dean animals in streams – E.coli
- dd. Jet ski's
- ee. Sediment x5
- ff. Stock in streams
- gg. No planning for sea level rise
- hh. Wetland loss
- ii. Cockle beds lost
- jj. High turbidity in water
- kk. Commercial forestry
- ll. Access to Moepuku point
- mm. Loss of wildlife – penguins, shellfish, sea horses
- nn. Lack of fish and shellfish
- oo. Access to Port area
- pp. Cumulative effects of large scale projects (15+ years)
- qq. Channel dredging
- rr. Reclamation
- ss. Sumner road still out of action
- tt. Road cuttings
- uu. Stormwater runoff x4
- vv. Ferry access
- ww. Marine invasive species
- xx. Sewage pipes easily bust
- yy. Loss of mussels, pāua and oysters
- zz. Accessibility of jetty
- aaa. Debris from reclamation found on beaches x3
- bbb. Access to Sumner gone
- ccc. Sewage from Pūrau septic tanks
- ddd. Stormwater runoff onto beaches
- eee. Inappropriate sub-division
- fff. Closing of holiday camp in Pūrau bay

ggg. Pūrau stream pollution  
hhh. Stormwater runoff  
iii. Rubbish dumping  
jjj. Fire danger with climate change and vegetation cover  
kkk. Lack of whitebait  
III. Silt / sedimentation  
mmm. No sandy beaches at head of harbour  
nnn. Roadside cuttings  
ooo. Jet ski's x 3  
ppp. No tracks for horses or mountain bikes x 2  
qqq. Water quality  
rrr. Bad shellfish  
sss. Slumping along road cuttings  
ttt. Muddy seafloor  
uuu. Sediment plumes following rain  
vvv. Mud/silt x 2  
www. Sea lice x 2  
xxx. Confrontational port company  
yyy. Height of houses on the hill  
zzz. Boat noise  
aaaa. Loss of cliffs on Sumner road  
bbbb. Not enough car parking  
cccc. Flood risk (Teddington)  
dddd. Sediment  
eeee. Need more bike tracks  
ffff. Toxic shellfish  
gggg. Port access (marine, ferry)  
hhhh. Broken jetties  
iii. Tank farm – needs moving  
jjjj. Alienation from land/water – LPC  
kkkk. Cruise ship issues  
IIII. Need green open spaces  
mmmm. Stormwater  
nnnn. Integrity of network – e.g. sewage overflows

## 7. Q4 - Solutions

- a. Ban jet ski's
- b. No bare soil
- c. Stabilise road cuttings
- d. Improve regulations/consent conditions on earthworks
- e. Educate land owners on responsible earthworks
- f. No bare earth
- g. Riparian planting at the top of the ridge first
- h. Policy on stormwater management in catchment
- i. Remove Cashin Quay – restore the natural circulation
- j. Extend reticulated sewage system to Pūrau
- k. Control sediment from road cuttings
- l. Rain water collection in tanks
- m. Tree planting
- n. Jetty rebuild
- o. Planting gullies and roadside to capture sediment
- p. Fix ferry facilities
- q. Install sediment traps – where?
- r. Remove sediment from the head of harbour – use for retaining road
- s. Marina development

- t. Improve port access and risk from tank farm
- u. All waterways to be planted by 20 years to reduce erosion and decrease stormwater flows
- v. Shade over streams & plant riparian zones
- w. Provide public access across Norwich Quay – improve links for DH to Lyttelton
- x. Improve sewage pipes around DH
- y. Slow flow rates of runoff along roads, especially main road. Intercept and filter through planting. Do not concrete road verges.
- z. Remove sediment – use to make a reclamation or raise the Teddington road
  - aa. Quality public waterfront access at Lyttelton
  - bb. Marina development
  - cc. Sort out any risk from tank farm – move it?
  - dd. Community led jetty repair projects
  - ee. Community planting projects to reduce sediment and runoff – gullies, roadsides
  - ff. Fix the ferry facilities – need to be accessible and fit for purpose
  - gg. Install sediment traps when doing earthworks
  - hh. Plantings of gullies
  - ii. Use straw bales as filtration in small streams and for whitebait breeding
  - jj. Create a culture across the community where bare soil is NOT ok for all landowners and managers
  - kk. Local guardianship of marine areas of harbour (China gardens)
  - ll. Ban jet ski's from whole harbour (marine mammal sanctuary)
  - mm. Use interpretation panels to raise awareness of issues
  - nn. Stabilise road cuttings to reduce sediment
  - oo. Ban commercial forestry
  - pp. Subside rainwater collection for existing houses, grey water separation
  - qq. CCC to require all roadworks to include long term sediment control
  - rr. Roof rainwater collection and grey water separation mandatory for all new houses
  - ss. Revegetate road cuttings
  - tt. Plant trees in erosion prone areas
  - uu. Remove Cashin Quay to re-start natural circulation pattern of the harbour
  - vv. Expand the CCC sewage plan to Pūrau

## 8. Other info

- a. Governors Bay jetty – trust set up to repair then sell back to the council for \$1
- b. China guardians – mini ecosystem planted/seeded (~ 1 acre) with volunteers maintaining. Acts as a mini protected area with spill over effect for surrounding habitat
- c. LHIG has considerable info on sediment in the harbour

**Appendix 2: Key values in the harbour catchment – categories**

| <b>Places</b>       | <b>Community</b>              | <b>Recreation</b>      | <b>Biodiversity</b> | <b>The Port</b>      | <b>Conservation</b> | <b>Heritage</b>          |
|---------------------|-------------------------------|------------------------|---------------------|----------------------|---------------------|--------------------------|
| Camp~bay            | Farmers~market                | Access to waterfront   | Surf~break          | Birdlife             | Channel~dredging    | Planting                 |
| Camp~bay            | Fresh~fish                    | Beaches                | Surf~break          | Kelp~beds            | Port                | Planting                 |
| Caves               | Ferry                         | Beaches                | Surfing             | Migratory~birds      | Port                | Planting                 |
| Coastline           | Low~residential~development   | Beaches                | Recreation          | Dolphins             | Port                | Planting                 |
| Crater~rim          | Public~ownership              | Beaches                | Recreation          | Dolphins             | Port                | Planting                 |
| Head~of~the~harbour | Reserve~management~committees | Beaches                | Recreation          | Dolphins             | Port                | Planting                 |
| Living~landscape    | The~community                 | Boating                | Food~gathering      | Dolphins             | Shipping~movements  | Planting                 |
| Maori~garden        | The~community                 | Boating                | Food~gathering      | Penguins             | The~channel         | Planting                 |
| Mudflats            |                               | 8 Cycling              | Food~gathering      | Penguins             |                     | Planting                 |
| Orton~Bradley       |                               | Head~to~Head~walkway   | Food~gathering      | Penguins             |                     | Planting                 |
| Orton~Bradley       |                               | Head~to~Head~walkway   | Mataitai~reserve    | Penguins             |                     | Planting                 |
| Orton~Bradley       |                               | Head~to~Head~walkway   | Mataitai~reserve    | Penguins             |                     | Planting                 |
| Orton~Bradley       |                               | Paddle~boarding        | Crayfish            | Orca's               |                     | Planting                 |
| Quail~island        |                               | Moorings               | Whitebait           | Saltmarsh            |                     | Planting                 |
| Quail~island        |                               | Moorings               | Whitebait           | Seals                |                     | Planting                 |
| Quail~island        |                               | Kayaking               | Whitebait           | Wading~birds         |                     | Planting                 |
| Quail~Island        |                               | Kayaking               | Fishing             | Native~bush          |                     | Planting                 |
| Quail~Island        |                               | Naval~Point~yacht~club | Fishing             | Rig~breeding~grounds |                     | Planting                 |
| Quail~island        |                               | Sailing                | Fishing             |                      | 18                  | Pest~control             |
| Quail~Island        |                               | Sailing                | Fishing             |                      |                     | Community~initiatives    |
| Quail~Island        |                               | Sailing                | Fishing             |                      |                     | Reserves                 |
| Rocky~coastline     |                               | Sailing                |                     |                      |                     | Revegetated~areas        |
| Southern~bays       |                               | Sailing                |                     |                      |                     | Hunters~Gully (planting) |
| Springs             |                               | Sailing                |                     |                      |                     |                          |
| Stars               |                               | Swimming               |                     |                      |                     |                          |
| The~whole~harbour   |                               | Swimming               |                     |                      |                     |                          |
| Visual~landscape    |                               | Swimming               |                     |                      |                     |                          |
| Visual~landscape    |                               | Swimming               |                     |                      |                     |                          |
| Visual~landscape    |                               | Swimming               |                     |                      |                     |                          |
|                     |                               | Swimming               |                     |                      |                     |                          |
|                     |                               | Swimming               |                     |                      |                     |                          |
|                     |                               | Swimming               |                     |                      |                     |                          |
|                     |                               | Swimming               |                     |                      |                     |                          |
|                     |                               | Walking                |                     |                      |                     |                          |
|                     |                               | Walking                |                     |                      |                     |                          |
|                     |                               | Walking                |                     |                      |                     |                          |
|                     |                               | Walking                |                     |                      |                     |                          |
|                     |                               | Water~front~access     |                     |                      |                     |                          |
|                     |                               | Wetlands               |                     |                      |                     |                          |
|                     |                               | All~tide~boat~launch   |                     |                      |                     |                          |
|                     |                               | Mountain~biking        |                     |                      |                     |                          |
|                     |                               | Stone~wall~track       |                     |                      |                     |                          |
|                     |                               | Stream~swimming        |                     |                      |                     |                          |
|                     |                               | Stream~swimming        |                     |                      |                     |                          |

## **Appendix 3: Key issues facing the harbour catchment - categories**

| Access                    | Port operations         | Biodiversity loss          | Limited amenities             | Sedimentation | Stormwater  | Contaminants      | Land use            | Climate change | Jet ski's   |
|---------------------------|-------------------------|----------------------------|-------------------------------|---------------|---|-------------------|---------------------|----------------|-------------|
| Access for horses         | Boat noise              | Loss of fish and shellfish | Lack of car parking           | Erosion       | Stormwater  | Septic tanks      | Cummulative effects | Climate change | Jet ski's   |
| Access for horses         | Channel dredging        | Loss of fish and shellfish | Lack of car parking           | Sedimentation | Stormwater  | Sewage            | Cummulative effects | Climate change | Jet ski's   |
| Access for mountain bikes | Reclamation             | Loss of fish and shellfish | Lack of car parking           | Sedimentation | Industrial stormwater   | Sewage            | Urban development   |                | 2 Jet ski's |
| Access for mountain bikes | Reclamation             | Loss of fish and shellfish | Lack of visitor facilities    | Sedimentation | Stormwater  | Sewage            | Urban development   |                | Jet ski's   |
| Access for mountain bikes | Noise pollution         | Loss of fish and shellfish | Lack of visitor facilities    | Sedimentation | Stormwater  | Sewage            | Urban development   |                | Jet ski's   |
| Access to ferry           | Debris from reclamation | Loss of wetland            | Lack of boating facilities    | Sedimentation | Stormwater  | Sewage            | Fire danger         |                | Jet ski's   |
| Access to jetties         | Debris from reclamation | Loss of wildlife           | Lack of visitor facilities    | Sedimentation | Stormwater  | Sewage            | Commercial forestry |                | Jet ski's   |
| Access to jetties         | Debris from reclamation | Loss of wildlife           | Lack of car parking           | Sedimentation | Stormwater  | Sewage            | Commercial forestry |                |             |
| Access to jetties         | The breakwater          | Marine pests               | Lack of visitor facilities    | Sedimentation | Stormwater  | Sewage            | Commercial forestry |                |             |
| Access to Moepuku point   | Dredging                | Sea lice                   | 10 Lack of visitor facilities | Sedimentation | Stormwater  | Sewage            | Commercial forestry |                |             |
| Access to Port area       | Dredge spoil            | Sea lice                   |                               | Sedimentation | Stormwater  | Sewage            | Commercial forestry |                |             |
| Access to Port area       | Turbidity from shipping | Toxic shellfish            |                               | Sedimentation | Stormwater  | Sewage            | Commercial forestry |                |             |
| Access to Port area       | Boat noise              | Toxic shellfish            |                               | Sedimentation | Stormwater  | Water quality     | Commercial forestry |                |             |
| Access to Port area       | Shipping                | Toxic shellfish            |                               | Sedimentation | Stormwater  | Water quality     | Commercial forestry |                |             |
| Access to Port area       | Tank farm               | Loss of wetland            |                               | Sedimentation | Industrial stormwater   | Water quality     | Farm management     |                |             |
| Access to Sumner          |                         | Weeds                      |                               | Sedimentation | Stormwater  | Water quality     | Farm management     |                |             |
| Access to Sumner          |                         | Weeds                      |                               | Sedimentation | Stormwater  | Road contaminants | Road cuttings       |                |             |
| Access to Sumner          |                         | Marine pests               |                               | Sedimentation | Stormwater  | Boat contaminants | Road cuttings       |                |             |
| Access to Port area       |                         | Weeds                      |                               | Sedimentation | Stormwater  | Water quality     | Road cuttings       |                |             |
| Access to Port area       |                         | Weeds                      |                               | Sedimentation | Stormwater  | Sewage            | Road cuttings       |                |             |
| Flooding                  |                         | Pests                      | 23 Loss of wetland            | Erosion       | Industrial stormwater   | Sewage            | Road cuttings       |                |             |
| Flooding                  |                         | Loss of wetland            |                               | Turbidity     | Industrial stormwater   | Sewage            | Road cuttings       |                |             |
|                           |                         | Loss of wetland            |                               | Sedimentation | 22 Sewage<br>Road contaminants<br>Septic tanks<br>Use of herbicides<br>Litter<br>Litter | 22                | 22                  |                |             |
|                           |                         |                            |                               | Sedimentation |   |                   |                     |                |             |
|                           |                         |                            |                               | Sedimentation |   |                   |                     |                |             |
|                           |                         |                            |                               | Sedimentation |   |                   |                     |                |             |
|                           |                         |                            |                               | Sedimentation |   |                   |                     |                |             |
|                           |                         |                            |                               | Erosion       |   |                   |                     |                |             |
|                           |                         |                            |                               | Erosion       |   |                   |                     |                |             |
|                           |                         |                            |                               | Sedimentation |   |                   |                     |                |             |
|                           |                         |                            |                               | Sedimentation |   |                   |                     |                |             |
|                           |                         |                            |                               | Turbidity     |   |                   |                     |                |             |
|                           |                         |                            |                               | Turbidity     |   |                   |                     |                |             |