

3

CULTURAL IMPACT ASSESSMENT

Cultural Impact assessment:

Assessment of effects on manawhenua rights, values and interests - Lyttelton Port Company Capital Dredging Project

Update to a Cultural Impact Assessment Report prepared in April 2014



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For Lyttelton Port of Christchurch Ltd.

September 2016

This report is an update to a CIA report prepared in May 2014: *Cultural Impact assessment for a proposed Capital Dredging Project in Whakaraupō/Lyttelton Harbour*. Prepared for Lyttelton Port Company (LPC), by Dyanna Jolly, on behalf of Te Hapū o Ngāti Wheke (Rāpaki) and Te Rūnanga o Koukourārata.

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Cover photo: View of Rāpaki and Whakaraupō from Te Poho o Tamatea (photo credit: Donald Couch).

Disclaimer: This report is prepared for LPC as a technical assessment of the potential impacts of the proposed Capital Dredging Project on manawhenua values and interests. The CIA does not affect ability of the Papatipu Rūnanga, individuals within the Rūnanga, Mahaanui Kurataiao Ltd, or Te Rūnanga o Ngāi Tahu to submit on resource consent applications.

Executive Summary

Lyttelton Port Company (LPC) is proposing to widen, deepen and lengthen the existing navigation channel in Whakaraupō/Lyttelton Harbour to accommodate the next generation of container vessels. The Capital Dredging Project involves dredging of the channel, deposition of the dredged material to an offshore disposal site, and ongoing maintenance dredging and disposal.

The assessment of potential effects on manawhenua¹ values, rights and interests is an important part of this project. A Cultural Impact Assessment (CIA) report for the project was completed in May 2014.

Since 2014, the scale and design of the proposed project have changed, and as a consequence so have the effects, expectations and opportunities relating to the protection of manawhenua values. In June 2016, Te Hapū o Ngāti Wheke, Te Rūnanga o Koukourārata and Te Rūnanga o Ngāi Tahu identified the need to update the CIA.

Since 2014, there is stronger focus on the effects of the dredging activity in Whakaraupō, and increased concern around the potential of dredge spoil from the offshore site reaching Koukourārata. There is also an opportunity to remove the majority of future maintenance dredge discharges from Whakaraupō to a new offshore site.

Summary of findings:

- The key values that manawhenua seek to protect are water quality and mahinga kai. Mahinga kai includes natural kaimoana stocks and the customary rights associated with these, and also marine farm interests. These values are integral to the relationship between manawhenua and the coastal environment.
- Manawhenua understand LPC's desire to widen, deepen and extend the existing navigation channel in Whakaraupō to enable larger vessels. However, there are concerns about the localised and cumulative sediment-induced effects on mahinga kai. Te Hapū o Ngāti Wheke and Te Rūnanga o Koukourārata are actively working to protect and restore their harbours as mahinga kai. Assessing how and where specific activities occur is critical to achieving this goal.
- Capital dredging and the disposal of dredge spoil have the potential to increase turbidity² and sediment movement in the water and across the seabed, and this can result in adverse effects on water quality and the health, abundance, or diversity of mahinga kai species, and the ability to access and gather these.
- Manawhenua want to be satisfied, with a high degree of confidence, that their values, rights and interests associated with the coastal environment will be protected. For many, shifting the capital dredging disposal activity further offshore from Koukourārata into deeper water is the best way to achieve this.
- Manawhenua will continue to work with LPC to develop an Environmental Monitoring and Management Plan (EMMP) to monitor and adaptively manage the dredging activity. However, the ability to move the offshore disposal grounds further away from the coastline must remain on the table.

¹ 'Manawhenua' means the hapū who hold mana whenua and mana moana (customary authority) in the area.

² Turbidity is a measure of water quality, and in this case the amount of suspended sediment in the water and therefore how clear or transparent the water is.

- Manawhenua are looking for LPC to adopt a precautionary approach to managing the dredging activity, favouring environmental protection and mahinga kai. Effective turbidity trigger levels, and knowing that specific actions will be taken by LPC if these are exceeded, are critical to this.
- Lodging a resource consent application without turbidity trigger levels remains a concern. Manawhenua are still uncertain around how the trigger levels will be set, and the ability of manawhenua to influence these.
- Manawhenua are seeking a reduced duration of consent, and support proposed consent conditions requiring a formal review of the EMMP following Stage 1 of the project, and of baseline monitoring if Stage 2 occurs more than 5 years after Stage 1.
- The proposed removal of the majority of maintenance dredge spoil disposal from Whakaraupō to a new offshore site is an opportunity for positive effects on the harbour environment and mahinga kai. However, manawhenua want to see capital and maintenance dredge spoil consolidated at the proposed capital dredging disposal grounds, rather than creating another disposal site in the coastal environment. There is also a strong expectation that LPC will discontinue use of the existing Awaroa/Godley Head disposal grounds.

LPC's desire to accommodate larger ships and remain competitive, and the desire of manawhenua to protect and restore harbour waters, are not mutually exclusive goals. As stated in the Mahaanui Iwi Management Plan, Whakaraupō can be both a mahinga kai and a port if there are good relationships and clear strategies to manage the effects of port activities on the harbour environment.

LPC, Te Hapū o Ngāti Wheke, Te Rūnanga o Koukourārata and Te Rūnanga o Ngāi Tahu have invested significant time and resources to engage on this project, and will continue to do so. While there are varying levels of confidence around effects and how these can be managed, the willingness to work together to get to a place of agreement is a shared goal. The focus of the engagement and cultural impact assessment process is on how the project occurs rather than if it occurs. Ultimately, the response of manawhenua to the project will depend on the outcomes of this process.

Table of contents

SECTION 1 INTRODUCTION AND PURPOSE OF THIS UPDATE.....	1
1.1 Introduction.....	1
1.2 Purpose of this report	2
1.3 Status of the Cultural Impact Assessment.....	Error! Bookmark not defined.
1.4 Manawhenua and Manamoana	2
1.5 Terminology.....	4
SECTION 2 RECORD OF ENGAGEMENT	5
2.1 Engagement approach	5
2.2 Engagement from 2014 to 2016.....	5
2.3 Methods informing this update	6
SECTION 3 PLANNING FRAMEWORK.....	8
3.1 Mahaanui Iwi Management Plan 2013	8
3.2 Statutory planning framework.....	8
SECTION 4 KEY MESSAGES FROM THE 2014 CIA.....	10
4.1 Key messages	10
4.2 Agreements following the 2014 CIA	10
SECTION 5 PROGRESS MADE TO ADDRESS 2014 CIA ISSUES	12
SECTION 6 WHERE ARE WE AT IN JULY 2016?	13
6.1 Relevant values, rights and interests	13
6.2 Effects on values, rights and interests.....	15
6.2.1 Effects related to the capital dredging activity in Whakaraupō.....	15
6.2.2 Effects related to the offshore capital dredging disposal site	16
6.2.3 Ongoing maintenance dredging disposal.....	18
SECTION 7 ADDRESSING EFFECTS – ADAPTIVE MANAGEMENT	20
SECTION 8 RECOMMENDATIONS GOING FORWARD	24
8.1 Recommendations	25
SECTION 9 WHERE TO FROM HERE?	32
REFERENCES.....	33
APPENDICES	34

SECTION 1 INTRODUCTION AND PURPOSE OF THIS UPDATE

1.1 Introduction

Lyttelton Port Company (LPC) is proposing to widen, deepen and lengthen the existing navigation channel in Whakaraupō/Lyttelton Harbour to enable the port to respond to growth and accommodate the next generation of container vessels. The Capital Dredging Project involves dredging of the channel, deposition of the dredged material to an offshore disposal site, and ongoing maintenance dredging and disposal (Figure 1).

The assessment of potential effects on manawhenua values is an important part of this process. The proposed dredging and deposition activities are located in the coastal marine areas of the respective takiwā (traditional territories) of Te Hapū o Ngāti Wheke and Te Rūnanga o Koukourārata. The coastal marine area is identified in the Ngāi Tahu Claims Settlement Act 1998 as the Te Tai o Mahaanui Statutory Acknowledgement, reflecting the particular cultural, spiritual, historical and traditional associations to this area.

A Cultural Impact Assessment report for the project was completed in May 2014 (2014 CIA). The CIA resulted in agreements between LPC, Te Hapū o Ngāti Wheke, and Te Rūnanga o Koukourārata and Te Rūnanga o Ngāi Tahu on how to address potential effects of the project on cultural values (see Section 4.2).

In June 2016 Te Hapū o Ngāti Wheke and Te Rūnanga o Koukourārata identified the need to update the CIA before consent lodgement, given that in the two years since the CIA was prepared:

- The scale of the project increased, resulting in a wider and deeper channel and an increased volume of dredged spoil from 12 million m³ to 18 million m³, and the disposal site has been rotated clockwise;
- LPC undertook additional technical work in response to issues raised in the CIA and changes to the project;
- The disposal site for ongoing maintenance dredging is proposed to shift from the existing in-harbour Spoil Dumping Grounds to a new offshore site;
- LPC and manawhenua have made progress giving effect to the agreements and actions coming out of the 2014 CIA;
- The Lyttelton Port Recovery Plan added a new chapter to the Regional Coastal Environment Plan with provisions that apply to capital dredging; and
- There is improved understanding of the project and how it fits with the long-term plans for port recovery and development.

1.2 Purpose of this report

The purpose of this report is to update the 2014 CIA by:

- (a) Providing a record of engagement;
- (b) Confirming the core values that manawhenua seek to protect, and the potential effects on these as a result of the proposed project;
- (c) Assessing progress on addressing key issues, with specific attention to the adaptive Management Plan;
- (d) Assessing the effects associated with the disposal of ongoing maintenance dredging spoil at a new offshore site;
- (e) Providing recommendations to inform ongoing work with LPC.

In doing so, the report provides:

- (a) An assessment of effects on manawhenua values to inform the Assessment of Environmental Effects (AEE);
- (b) Information to enable appropriate consideration of the relevant Resource Management Act (RMA) 1991 Part 2 matters;
- (c) Information to address requirements of relevant planning documents, particularly the *New Zealand Coastal Policy Statement*, with regard to the protection of the relationship of tangata whenua with the coastal environment; and
- (d) An assessment of the proposal that reflects the relevant considerations of Mahaanui Iwi Management Plan (IMP) 2013.

The report is prepared recognising the commitment of Te Hapū o Ngāti Wheke, Te Rūnanga o Koukourārata and Te Rūnanga o Ngāi Tahu to work together, and with LPC, to achieve outcomes desired by manawhenua for both harbours.

The 2014 CIA is included as Appendix 1. This is important from a manawhenua perspective as it provides a record of 'where we started' as the context for 'where we are now and all the work in between'.

1.3 Manawhenua and Manamoana

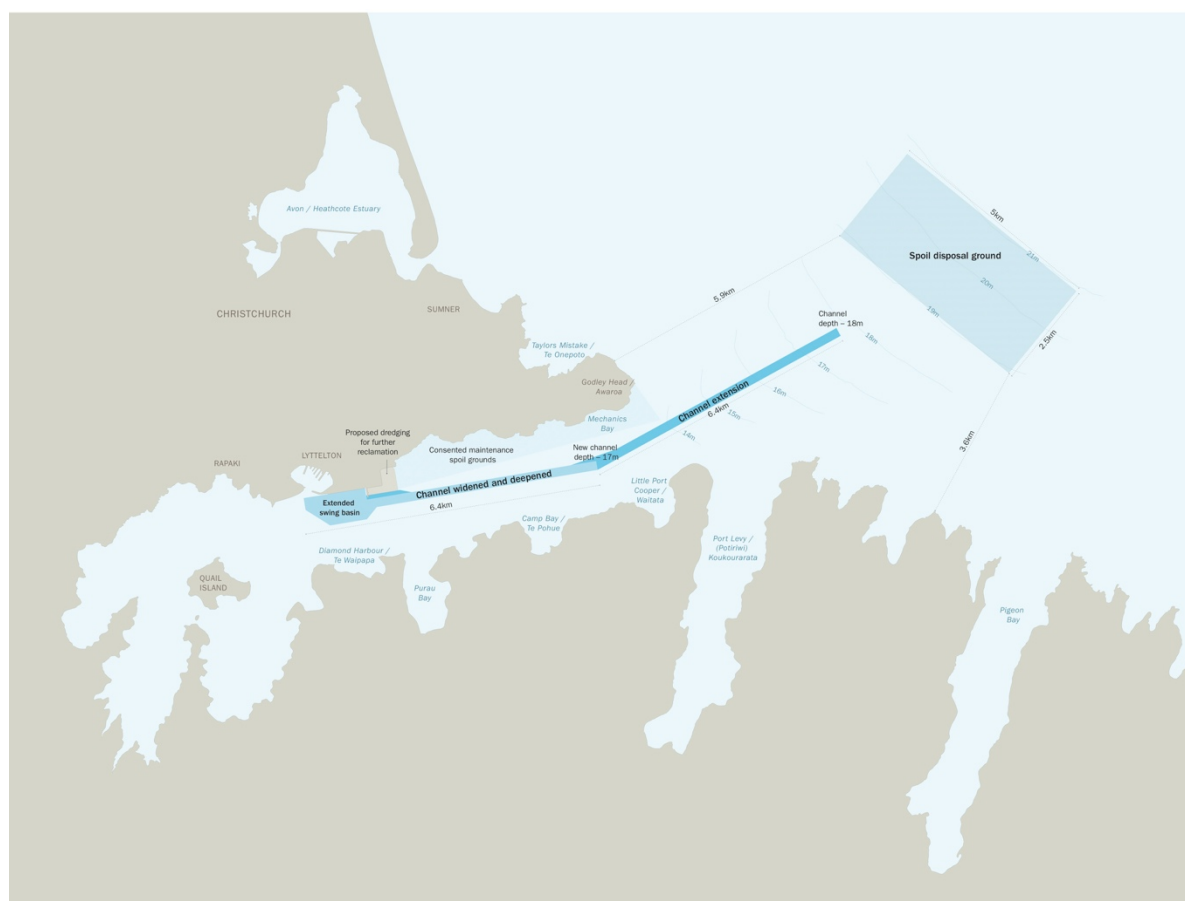
Te Hapū o Ngāti Wheke is the Ngāi Tahu Papatipu Rūnanga representing the hapū Ngāti Wheke, who hold mana whenua and mana moana (customary authority) over Whakaraupō. As manawhenua, Te Hapū o Ngāti Wheke have a formal relationship with LPC with regard to issues affecting the health of Whakaraupō.

Te Rūnanga o Koukourārata is the Papatipu Rūnanga representing the hapū Ngāti Huikai, who hold mana whenua and mana moana over Koukourārata and the northern bays of Te Pātaka o Rākaihautū (Banks Peninsula). Te Rūnanga o Koukourārata has a relationship with LPC with regard to the potential effects of port activities on this area.

The coastal marine area offshore from Whakaraupō and Koukourārata is an area of shared interest for the two Rūnanga.

Te Rūnanga o Ngāi Tahu is the legal representative of Ngāi Tahu Whānui within the Ngāi Tahu takiwā, as per section 15 of the Te Rūnanga o Ngāi Tahu (TRoNT) Act 1996. The TRoNT Act and the Ngāi Tahu Claims Settlement Act (NTCSA) 1998 give recognition to the status of Papatipu Rūnanga as kaitiaki, manawhenua and rangatira of the natural resources within their takiwā boundaries. Notwithstanding the relevant provisions of the TRoNT Act, it is established practice for resource management matters that the kaitiaki status of the Papatipu Rūnanga is supported and enabled by Te Rūnanga o Ngāi Tahu.

Figure 1: The Channel Deepening Project proposes to lengthen the existing navigation channel by approximately 6.5 km, widen it by 20 m (from 180m to 200m) and increase the depth by up to 5-6 m. The proposed disposal site is 2.5 km long by 5 km wide and is located approximately 6 km off shore from Awaroa/Godley Head. The project includes swing basin extensions, spoil disposal from berth pocket deepening and construction dredging for reclamation. A new offshore site 2.25 km off Awaroa/Godley Head is proposed for the majority of annual maintenance dredging discharges.



1.4 Terminology

In this report the following terminology is used:

“Manawhenua” means the hapū who hold mana whenua and mana moana (customary authority) in their traditional takiwā, and therefore have the right and responsibility to make decisions about the resources of a particular area. In this report, “manawhenua” is used to refer to both Te Hapū o Ngāti Wheke and Te Rūnanga o Koukourārata, while recognising that each Rūnanga is manawhenua in the area defined as their takiwā.

“Mahinga kai” refers to iwi/hapū interests in food and other natural resources, and the sites, habitats and practices associated with those resources. In this report, mahinga kai also includes Rūnanga interests in marine farms.

“Whakaraupō” refers to Whakaraupō/Lyttelton Harbour, the area over which Te Hapū o Ngāti Wheke holds manawhenua manamoana.

“Koukourārata” refers to Koukourārata/Port Levy; also known as Te Ara Whānui a Makawhiua.

“Manawhenua Advisory Group (MAG)” is the group established by LPC and Te Hapū o Ngāti Wheke to enable the effective delivery of information and provision of advice as to how LPC can recognise and provide for manawhenua values across all projects, and provide a forum for discussions about the joint interest the parties have in the health of Whakaraupō.

“Technical Advisory Group (TAG)” is the group established by LPC to provide advice on ecological monitoring and the development of an Adaptive Management Plan for the proposed project. The TAG includes members nominated by Te Hapū o Ngāti Wheke, Te Rūnanga o Koukourārata Te Rūnanga o Ngāi Tahu, and Ngāi Tahu Seafood.

SECTION 2 RECORD OF ENGAGEMENT

2.1 Engagement approach

The 2014 CIA and this update recognise the importance that manawhenua and LPC place on constructive and meaningful relationships.

Te Hapū o Ngāti Wheke and LPC have a formal relationship, via a Manawhenua Advisory Group (MAG), to work together on harbour issues. The group was established in April 2014. The approach of the parties is recorded in a Joint Statement:³

Lyttelton Port Company (LPC) and Te Hapū o Ngāti Wheke share a long term interest in the future of Whakaraupō. We place a high level of importance on working together to fulfill our common responsibility as custodians and kaitiaki of the harbour. We are committed to strengthening the partnership that already exists between us, and to enable future generations to realise the benefits of this partnership through the protection of Whakaraupō and its ability to provide for cultural, social and economic well-being.

LPC is entering a critical phase of Port recovery and development. The Port Lyttelton Plan sets out the long term plans for the rebuild and expansion of the Port. Our ability to work together to promote and protect the unique value of Whakaraupō as both a mahinga kai and a working port is critical to the success of these endeavors.

Te Rūnanga o Koukourārata and LPC maintain a good working relationship with regard to addressing the potential effects of port activities on the waters of the Ngāti Huikai takiwā.

2.2 Engagement from 2014 to 2016

Manawhenua, Te Rūnanga o Ngāi Tahu and LPC have invested significant time and resources to engage on the Capital Dredging project in order to identify, assess and address cultural impacts. The first Hui on the project was held in 2007 (see Section 1.3 of the 2014 CIA for a description of early engagement).

Following the preparation of the 2014 CIA, LPC, manawhenua, and Te Rūnanga o Ngāi Tahu met kanohi ki te kanohi (face to face) to discuss the CIA recommendations. This resulted in agreements and actions for how to address the issues and recommendations in the CIA, and shaped engagement between the parties going forward.⁴

From July 2014 to September 2015 the focus of engagement shifted to the development of the Lyttelton Port Recovery Plan (LPRP). The LPRP was gazetted in November 2015, and contains provisions for capital dredging of the main navigation channel. A subsequent outcome of the process was a revised scope and design of the Capital Dredging project, including a wider and deeper channel.

In October 2015, LPC renewed discussions with manawhenua on the Capital Dredging Project, with the focus of engagement being the changes to the project since 2014, and ways to give effect to the agreements reached following the 2014 CIA around the development of an ecological monitoring programme and adaptive management plan.

³ Appendix 1 of the Lyttelton Port Recovery Plan CIA (November 2016).

⁴ Jolly, D. Outcomes Report. June 2014.

Engagement on the Capital Dredging Project is influenced by engagement processes across other projects linked to the LPRP. This includes a Whole of Harbour plan, Te Ana Design Guide, a Kaimoana Management Plan for the Te Awaparahi reclamation, and the Oil Berth Rebuild Project. Whether recovery, reclamation, dredging or rebuilding infrastructure, manawhenua are looking for port activities to be managed in a way that avoids effects on water quality and mahinga kai, and further sedimentation of the upper harbour.

2.3 Methods informing this CIA update

The following methods inform this CIA update:

- Review of the 2014 CIA report for the Capital Dredging Project for relevance and gaps;
- Review of the Lyttelton Port Recovery Plan CIA (November 2014), and the Te Hapū o Ngāti Wheke, Te Rūnanga o Koukourārata and Te Rūnanga o Ngāi Tahu submission on the Draft Lyttelton Port Recovery Plan, for issues relevant to this project;
- Further site visit and multiple Hui with LPC, Manawhenua and Te Rūnanga o Ngāi Tahu to discuss the project;
- Participation in Technical Advisory Group (TAG) meetings, from October 2015 to August 2016, and a review of minutes from these;
- Participation in monthly Manawhenua Advisory Group (MAG) meetings from April 2014 to August 2016, and a review of minutes from these for issues relevant to this project;
- Three Hui with Manawhenua and Te Rūnanga to work on the CIA update.

Opportunities were provided to enable all whānau with an interest in the project to participate in the update. In addition to Hui, whānau participated via phone calls, email and small group discussions. A core team of 15 manawhenua and Te Rūnanga o Ngāi Tahu representatives actively worked on the CIA update.

Table 1 provides a timeline of engagement relevant to the Capital Dredging Project and key features of the CIA process.

Table 1: Engagement on the Capital Dredging Project from 2014 to 2016

May 2014	Capital Dredging Project CIA
June 2014	LPC, manawhenua and Te Rūnanga meet to discuss CIA and agree on way forward.
November 2014	Lyttelton Port Recovery Plan CIA. Includes issues related to capital dredging.
December 2014	Stakeholder workshops and NIWA report identifying monitoring options.
September 2015	LPC forms Technical Advisory Group (TAG) to provide advice on ecological monitoring programme and Adaptive Management Plan.
October 2015	LPC communicates changes to the Capital Dredging project to manawhenua.
October 2015	Whakaraupō trip by vessel to view and discuss maintenance dredging operations.
March 2016	LPC/Manwawhenua/Te Rūnanga Hui - project scope, plume modelling results and approach monitoring and adaptive management.
May 2016	LPC/Manwawhenua/Te Rūnanga Hui - assessment of progress on key issues and discuss proposed changes to maintenance dredging disposal.
June 2016	LPC/Manwawhenua/Te Rūnanga Maintenance Dredging Hui - discussion of site options for offshore disposal and identify manawhenua preferences.
July 2016	CIA update Hui
August 2016	CIA update Hui
August 2016	Manawhenua/Te Rūnanga review and endorsement of CIA update report.
August 2016	LPC/Manwawhenua/Te Rūnanga Maintenance Dredging Hui - discussion of site options for offshore disposal
September 2016	LPC/ Manwawhenua/Te Rūnanga 'wrap-up' Capital Dredging Hui
September 2016	CIA update Hui

SECTION 3 PLANNING FRAMEWORK

3.1 Mahaanui Iwi Management Plan 2013

The *Mahaanui Iwi Management Plan 2013* is a manawhenua planning document that provides the planning framework for CIA by identifying key issues and providing a values-based policy baseline against which to assess proposed activities.

Relevant provisions from the Iwi Management Plan are covered in the 2014 CIA (Section 5). However, the key messages that influence the CIA are repeated here:

- Water quality, sedimentation and the discharge of contaminants are key issues of significance for both Te Hapū o Ngāti Wheke and Te Rūnanga o Koukourārata, with regard to effects on their relationship with the harbours and the ability to exercise kaitiakitanga;
- Whakaraupō and Koukourārata harbours are highly valued for mahinga kai, and must be managed for mahinga kai (and Mātaitai) first and foremost. Central to this approach is ensuring that all proposed activities for the lands and waters of these harbours are consistent with the objective of management for mahinga kai (**Policy WH1.2**; **Policy KP2.3**).
- Whakaraupō as a working Port does not have to be inconsistent with managing the harbour for mahinga kai values. Manawhenua and LPC need to continue to work together to develop strategies to manage the effects of port activities on the cultural health of the harbour (**Policy WH1.3**; **Policies WH2.1 to WH2.6**).

3.2 Statutory planning framework

The Resource Management Act 1991, New Zealand Coastal Policy Statement 2010, Canterbury Regional Policy Statement 2013 and Regional Coastal Environment Plan 2005 set out the obligations for engagement with regard to the relationship of tangata whenua with the coastal environment and the potential for adverse effects as a result of a large infrastructure project.

The **Ngāi Tahu Deed of Settlement and Ngāi Tahu Claims Settlement Act (NTCSA) 1998** record the Te Tai o Mahaanui Statutory Acknowledgement, acknowledging the special relationship of Ngāi Tahu with the coastal environment. They also recognise the importance of mahinga kai to Ngāi Tahu culture and traditions, and the associations with particular species, including Taonga Species.

The **Resource Management Act (RMA) 1991** recognises the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu and other taonga as a matter of national importance; identifies kaitiakitanga as a matter that particular regard must be given to in relation to managing the use, development and protection of natural and physical resources; and establishes that all persons exercising functions and powers under the Act shall take into account the principles of the Treaty of Waitangi (Part 2).

The **New Zealand Coastal Policy Statement 2010 (NZCPS)** recognises the special relationship of tangata whenua with the coastal environment, including recognising the kaitiaki role of tangata whenua by promoting meaningful relationships and interactions. The NZCPS contains provisions to safeguard the integrity, form, functioning and resilience of the coastal environment and sustain its ecosystems, including marine and intertidal areas (**Objective 1**), and provides for the protection of characteristics of the coastal environment of special value to tangata whenua (**Objective 3**).

The NZCPS also contains a requirement to adopt a precautionary approach towards proposed activities whose effects on the coastal environment are uncertain, unknown, or little understood, but potentially significantly adverse (**Policy 3**).

The **Canterbury Regional Policy Statement 2013** recognises the strong ancestral connections, and immense spiritual, historical, cultural and traditional importance of the coastal environment to Ngāi Tahu, including those areas particularly important for mahinga kai, and contains policies to manage the effects of activities on these.

The **Regional Coastal Environment Plan 2005** (RCEP) recognises the relationship of tangata whenua with the coastal environment and the effect of discharges of contaminants on this. The **Lyttelton Port Recovery Plan (2015)** inserted a new chapter into the RCEP (*Chapter 10—Lyttelton Port of Christchurch*), and this recognises dredging to deepen and widen the Main Navigational Channel, ship turning basins and berth pockets, as an element of port recovery (**Policy 10.1.1; Policy 10.1.8**). Under the chapter 10 provisions:

- The dredging activity associated with deepening and extending the main navigation channel is **a restricted discretionary activity** (Rule 10.12), with effects on cultural values, particularly mahinga kai as matters of discretion.
- The discharge and deposition of dredge spoil at the proposed offshore grounds for capital and maintenance dredging is a discretionary activity (Rules 7.2, 8.13 and 10.33).
- The ongoing Maintenance Dredging of the main navigation channel and the operational area of the port is a permitted activity (Rule 10.9).
- Disposal of maintenance dredge spoil in the existing spoil dumping grounds - restricted discretionary activity (Rule 10.18).

The new Chapter 10 recognises that port recovery will result in some adverse effects on the environment that cannot in all circumstances be avoided or mitigated, but requires that LPC recognise the relationship between the port and the values of Whakaraupō/Lyttelton Harbour; minimise the adverse effects on ecological, recreational, heritage, amenity and cultural values; use best practice methods during construction; and *make an effort to achieve a net gain in mahinga kai* (**Policy 10.1.4**).

Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 gives statutory recognition to ongoing customary commercial and non-commercial fishing rights. The Act enables the ability to establish mātaihai reserves under the Fisheries Act 1996 to protect customary non-commercial fishing rights and recognise the use and management practices of tangata whenua and the special relationship between tangata whenua and places of customary food gathering importance.

SECTION 4 KEY MESSAGES FROM THE 2014 CIA

The 2014 CIA was strongly focused on the effects of poor water quality and sedimentation on mahinga kai sites, species and habitat. The CIA provided 12 recommendations to address potential effects on mahinga kai.

4.1 Key findings

The key findings from the 2014 CIA are:

- Mahinga kai is the driver for assessing the effects of the proposed Capital Dredging Project. Whakaraupō and Koukourārata are highly valued as mahinga kai. The existing and proposed Mātaitai reserves reflect this significance. The discharge of contaminants and increased sedimentation in the harbour affect the mahinga kai habitat, sites and use.
- Mahinga kai includes Te Rūnanga o Koukourārata (and iwi) interests in marine farms.
- Manawhenua understand LPC's desire to widen, deepen and extend the existing navigation channel in Whakaraupō to enable larger vessels. However, there are concerns about the localised and cumulative sediment-induced effects on mahinga kai.
- The disposal site for dredged seabed material should be located further offshore and in deeper water, to provide certainty that suspended sediment will not reach the coastline, or enter Koukourārata or the northern bays of Te Pātaka o Rākaihautū/Banks Peninsula.
- An adaptive management framework is best suited to monitor and manage the potential effects of the activity on mahinga kai (and other) values, and monitoring must include effects on mahinga kai, identifiable thresholds for sedimentation and water quality, and specific actions that will be taken if thresholds are reached, including a 'stop and re-assess' provision.
- There is an opportunity for positive effects on mahinga kai habitat if maintenance dredge spoil were moved from the existing in-harbour dumping grounds to the proposed capital dredging offshore site.
- There is a need to collaboratively develop a strategy to promote and progress a Whole Harbour Plan to address all the issues in the Whakaraupō, including port activities, in a collective and effective manner.

4.2 Agreements following the 2014 CIA

As per good practice,⁵ post-CIA engagement between LPC, manawhenua and Te Rūnanga o Ngāi Tahu generated agreements on how to address issues and recommendations in the CIA (Table 2). A key outcome was an agreement that the activity should be managed within an ecological monitoring and Adaptive Management Plan framework developed with advice from a technical advisory group.

⁵ RMA Quality Planning Resource, 2013.

Table 2: Post CIA agreements

Agreements between LPC and manawhenua following the 2014 CIA (Jolly, D. June 2014)	
1.	Planning, design and management of the proposed Capital Dredging Project must prioritise the protection of mahinga kai values (CIA Recommendation 1).
2.	Using the dredged material in the proposed reclamation is more consistent with Ngāi Tahu environmental policies than dumping it off shore (CIA Recommendation 3). There is an interest in exploring this, recognising the challenges associated with using the material for reclamation, and that manawhenua have concerns about further reclamation in the Whakaraupō.
3.	The proposed offshore disposal site is acceptable subject to the activity being managed within an adaptive environmental management plan that is agreed to by both LPC and Manawhenua (CIA Recommendations 2, 4, 5, 8 & 9) and that includes: (a) a robust monitoring programme that includes: <ul style="list-style-type: none">• baseline monitoring• a range of methods• Thresholds and limits for sediment dispersal and water quality that reflect the need to provide certainty for the protection of Ngāi Tahu values and interests• Agreed monitoring locations;• Specific provisions for mahinga kai (e.g. turbidity levels and the relationship to macro algae growth and the health of customary fisheries); and• Appropriate response to the detection of adverse effects, i.e. if agreed thresholds are reached then use of the proposed disposal site to cease until an alternative solution/or further research into the effect is undertaken, including the option to move the disposal site further offshore. (b) The formation of a Technical Advisory Group.
4.	LPC and Te Hapū o Ngāti Wheke will continue to work together, via the Manawhenua Advisory Group, to address key issues of concern and improve understandings of the effects of LPC operations and activities on mahinga kai values in Whakaraupō (CIA Recommendation 6).
5.	LPC notes the interest of Te Hapū o Ngāti Wheke in discussing the potential to have one capital and maintenance dredging disposal site, rather than using both the offshore site and the existing consented sites within the harbour. (CIA Recommendation 7).
6.	LPC will engage with Sanford Ltd, as the joint venture partner with Te Rūnanga o Kōkōurārata in marine farming, and Ngāi Tahu Seafoods as interested party (CIA Recommendation 10).
7.	The investigation and monitoring of the presence and abundance of juvenile school sharks in Whakaraupō is more of a whole harbour management issue rather than a capital dredging issue (CIA Recommendation 11).
8.	The CIA will be provided to Environment Canterbury, and LPC will request that resource consents are publicly notified (CIA recommendation 12).

SECTION 5 PROGRESS MADE TO ADDRESS 2014 CIA ISSUES

LPC, manawhenua and Te Rūnanga have made steady progress towards addressing key issues raised in the 2014 CIA. This includes:

- The Manawhenua Advisory Group (MAG) has met on a monthly basis since April 2014 to enable Te Hapū o Ngāti Wheke and LPC to work together on issues affecting harbour health and port recovery, including capital dredging.
- The proposed offshore disposal ground was rotated anticlockwise, moving the southern corner further away from the shoreline and resulting in the entire disposal ground located beyond the 19m contour and making the disposed sediment less susceptible to wave induced movement.
- A Technical Advisory Group (TAG) was established in September 2015 to provide LPC with advice on ecological monitoring and development of an Adaptive Management Plan for the Capital Dredging Project. The group has met 15 times between October 2015 and August 2016.
- The Lyttelton Port Recovery Plan provided for a Whole of Harbour/Catchment Management Plan.

In 2015, LPC refined the scope and design of the project, in response to further analysis of ship requirements for in channel navigation and further technical investigations on effects. The most significant change was an increase to the width of the channel from 180m to 200m and therefore an overall dredge spoil volume increase from 12 million m³ to 18 million m³. These changes affected how manawhenua assessed the potential effects of the project, and the focus and intensity of the engagement process.

In mid 2016, LPC decided to move the majority of maintenance dredge spoil discharges from the existing Awaroa/Godley Head site to a new offshore site. This was in response to further technical investigations on hydrodynamics (in part in response to ongoing concerns from Te Hapū o Ngāti Wheke) demonstrating that the Awaroa/Godley Head site is unsuitable for disposal of maintenance dredging, as spoil is moving back into the navigation channel.

For manawhenua, these changes equate to an increased risk to some values (as a result of more dredging in Whakaraupō and a higher volume of spoil disposed offshore) and an opportunity for positive effects on others (as a result of removing the majority of maintenance dredging out of the harbour). These effects are discussed further in Section 6.

SECTION 6 WHERE ARE WE AT IN SEPTEMBER 2016?

In June 2016, Te Hapū o Ngāti Wheke and Te Rūnanga o Koukourārata, supported by Te Rūnanga o Ngāi Tahu and Mahaanui Kurataiao Ltd, identified the need to bring the CIA up-to-date before consent lodgement.

The purpose of the update was defined as enabling manawhenua to confirm the values that they seek to protect, the potential effects on these given the changes to the project and the further technical information available upon which to assess effects, and to assess progress made over the last two years to address key issues.

Sections 6.1 and 6.2 below confirm the relevant values, rights and interests; and the potential effects of the dredging and disposal activities on these. These are presented in table form for ease of reference. **Section 7** addresses adaptive management as a key method for addressing effects, and **Section 8** provides recommendations consistent with enabling the project to deliver key outcomes desired by manawhenua.

6.1 Relevant values, rights and interests

Whakaraupō and Koukourārata are cultural landscapes with strong traditions of mahinga kai. Cultural well-being and use of these harbours is directly related to a healthy harbour that is able to support mahinga kai. Traditions such as manaakitanga (the ability to provide for manuhiri, or guests) rely on high quality and abundant local mahinga kai.

As described in the Mahaanui IMP, manawhenua seek to manage harbour waters first and foremost as mahinga kai, reflecting the connection between mahinga kai and cultural well-being. Restoration of cultural health and mahinga kai restores the mauri of the harbour and the mana of the people.

Section 7 of the 2014 CIA describes the cultural values relevant to impact assessment. For the purpose of this update, there is a change of terminology from *values* to *values, rights and interests*. This change ensures that the mahinga kai value is recognised as including food gathering sites, species and practices; customary rights to access these; and also hapū/iwi interests in marine farms.

The take home message with regard to manawhenua values, rights and interests is the protection of the cultural and ecological health of Whakaraupō and Koukourārata for future generations. This includes the fundamental importance of water quality to sustaining mahinga kai which is abundant, diverse, and safe to access and eat.

6.1 What values, rights and interests are manawhenua seeking to protect?

- Mauri, and the life supporting capacity and cultural and ecological health of the harbours. This requires improving water quality and avoiding further sedimentation.
- The cultural, historical, and spiritual relationship with the harbours, including the ability for current and future generations to engage with the harbour waters as their ancestors did.
- Water quality to a standard that sustains mahinga kai that is abundant, diverse, and safe to eat.

- Mahinga kai species, habitat and sites, and access to these for customary use. A total of thirty-eight different species of marine organism in Whakaraupō were identified as locally-important in the Mahinga Kai technical assessment work completed for the Port Recovery Plan, including 14 types of shellfish and 21 species of finfish.⁶ This number will be similar for Koukourārata.
- Existing and proposed Mātaimai Reserves in both harbours (Figure 2, and Section 7.2 of 2014 CIA). Mātaimai Reserves recognise traditional fishing grounds of tangata whenua that are important for customary food gathering and are intended to protect, enhance and sustain the fishery for future generations to access and use.⁷
- Te Rūnanga o Koukourārata interests in mussel farms along the northern coastline, and aspirations for future farms.
- Marine mammals, particularly Upokohue (Hector's dolphin/ *Cephalorhynchus hectori*) and seabirds, including those that have mahinga kai associations, or are identified as taonga species.
- Ngāi Tahu commercial interests in wild fisheries (iwi held fishing quota).
- Wāhi tapu or wāhi taonga on or under the seabed, associated with historical occupation and use of the coastal environment. For example, a significant battle was fought on and around Rīpapa Island in the 1820's, under the Ngāi Tahu rangatira (chief) Taununu,⁸ and manawhenua consider it likely that evidence from this and other historical activity is present in the harbour.

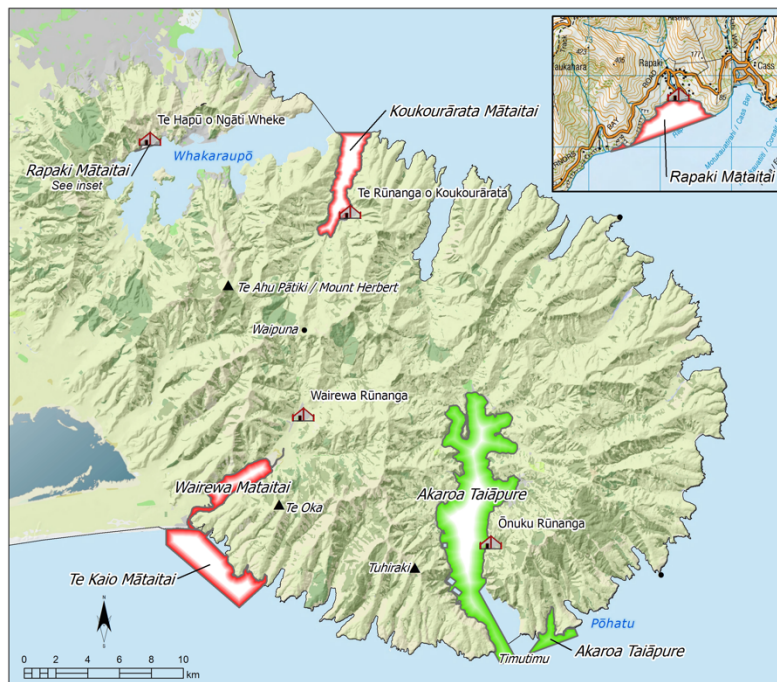


Figure 2: Rāpaki and Koukourārata (and other) Mātaimai Reserves. Te Hapū o Ngāti Wheke have lodged an application to extend the Rāpaki Mātaimai to include most of Whakaraupō.

⁶ Ogilvie, S. 2014. The species were identified by the Te Hapū o Ngāti Wheke application for a mātaimai reserve (Te Hapū o Ngāti Wheke, 2014), and by Te Hapū o Ngāti Wheke Tangata Tiaki.

⁷ The Environment Court decision for Port of Tauranga Capital Dredging Project noted that Mātaimai are directly relevant to RMA Part 2 analyses, as mātaimai are established to recognise and provide for the special relationship of tangata whenua with an area (s6(e)).

⁸ Ngai Tahu Claims Settlement Act 1998. Schedule 88. Tōpuni for Ripapa Island, Lyttelton Harbour.

6.2 Effects on values, rights and interests

Dredging projects have the potential for significant effects on manawhenua values, rights and interests. The dredging activity results in the physical modification of the seabed, and creates sediment plumes which increase turbidity and can have adverse effects on water quality and mahinga kai habitat beyond the footprint of the activity. The disposal of dredge spoil to sea results in the loss of benthic habitat, and can impact on water quality and mahinga kai and other values as a result of increased levels of sediment in the water column and on the seabed, and the movement of this sediment beyond the disposal site.

The 2014 CIA identifies sediment induced effects on harbour health and mahinga kai as the key concern for manawhenua. Since then, given changes to the project, there is:

- A stronger focus on the potential effects of the dredging activity on mahinga kai values (because of disturbance of the physical environment, turbidity and sediment) in Whakaraupō;
- Increased concern that sediment will reach Koukourāta and the coastline, and adversely affect natural kaimoana stocks and marine farms, now that the volume of spoil to be disposed at the capital dredging site has increased;
- An opportunity to achieve a net gain for Whakaraupō by removing maintenance dredging disposal out of the harbour (if the dredging activity is managed well);
- Increased concern about cumulative effects of capital and maintenance dredging and disposal activities on water quality and mahinga kai values.
- Increased emphasis on clear and effective processes for ongoing engagement.

The take home message with regard to effects is that manawhenua and Te Rūnanga have a significant degree of uncertainty around the nature and extent of effects. This is because of the scale of the project, the complexity of the environment, and variable levels of confidence in modelling methods and results and therefore in the ability to predict effects.

The potential effects related to the capital dredging activity in Whakaraupō, the discharge and deposition of capital dredging spoil at the offshore site, and ongoing maintenance dredging are described below. Issues and opportunities for addressing effects within an Adaptive Management Plan framework are addressed in Section 7.

6.2.1 Effects related to the capital dredging activity in Whakaraupō

Whakaraupō is considered an environment sensitive to sedimentation. The effects of sedimentation on water quality and mahinga kai habitat is an ongoing concern for Te Hāpu o Ngāti Wheke. Since the 2014 CIA there is a stronger focus on how the dredging of the navigation channel could affect these values.

Te Hāpu o Ngāti Wheke is looking for no further adverse effects on water quality, harbour health and mahinga kai in Whakaraupō. Activities should strive to deliver a net gain.⁹ Good progress is being made to eliminate discharges of contaminants and restore harbour health in an integrated and collective way. It is important that development activities in the harbour align with this work.

⁹ Policy 10.1.4 of the Lyttelton Port Recovery Plan recognises the net gain approach.

The potential effects of the dredging activity in Whakaraupō are:

6.2.1 Potential effects on values as a result of the capital dredging activity in Whakaraupō

- The potential effects on water quality and harbour health, at a time when gains are being made to improve water quality, as a result of increased turbidity during the dredging activity.
- The potential for further sediment deposition in the upper harbour and along harbour edges, affecting mahinga kai species and habitat that are vulnerable to sediment, and therefore impacting on the ability to gather food.
- Increased suspended sediment in the water impedes the penetration of light through the water and therefore can affect the growth of seaweeds that provide food and habitat, and phytoplankton, which provide food, for mahinga kai species.
- Increased turbidity/sediment loads in the harbour can degrade customary fisheries habitat, including pātiki (flounder) and rig/shark.
- Potential effects on customary use as a result of the duration and intensity of the dredging activity and the potential for changes to fish distribution or abundance or disruptions to access.
- Potential effects of a deeper channel on tidal currents, wave action and sediment dynamics, and therefore the potential contribution to existing sedimentation issues in the upper harbour, and impacts on kaimoana habitat quality.
- Potential effects on Upokohue (Hector's dolphin/ *Cephalorhynchus hectori*) through noise, vessel strike, or disturbance due to the duration and intensity of the dredging activity.
- Cumulative effects over time of capital and maintenance dredging on harbour health and the relationship of Ngāti Wheke to Whakaraupō.
- The potential for disturbance of wāhi taonga or wāhi tapu on or under the seabed during dredging, including kō iwi tangata (human bones) or artefacts.

In addition to the effects listed above, the findings of this CIA indicate that some activities can have a cultural effect without a detectable physical adverse impact. For example, even if there are no detectable effects on water quality beyond the footprint of the dredging activity in Whakaraupō, there may be an effect on how manawhenua experience and engage with the harbour as a result of continuous dredging over a 9 to 12-month period.

6.2.2 Effects related to the disposal of capital dredging spoil at the proposed offshore disposal site

The increase in spoil volume from 12 million m³ to 18 million m³ has increased concern that sediment will move from the disposal site into Koukourārata and along the northern coastline of Te Pātaka o Rākaihautū (Banks Peninsula), as a plume or across the seabed.

The potential effects on values as a result of the disposal of dredge spoil at the proposed offshore location are as follows:

6.2.2 Potential effects on values as a result of the disposal of capital dredge spoil

- Dredge spoil moving, via suspended sediment plume, from the offshore site to the coastline and into Koukourārata, and having adverse effects on natural kaimoana stocks in the Koukourārata Māitaitai and on marine farms (Figure 3).
- The potential for the disposal activity to accelerate or exacerbate the natural accumulation of sediment at the mouth of Koukourārata, during and post dredging.
- Loss of benthic species and habitat at the disposal site, and the potential wider ecological effects of this (e.g. forage opportunities for birds).
- Effects on wild fisheries (e.g. pāua and lobster) in and around the disposal site, as a result of increased sediment loads and habitat disturbance, including a loss of food/prey species.
- Potential effects on Upokohue (Hector's dolphin/ *Cephalorhynchus hectori*) as a result of noise, vessel strike, or habitat disturbance.
- Potential effects on seabirds, including white-flipped penguin, spotted shags, Hutton's shearwater and gulls and terns, due to disturbance of forage habitat or range at the offshore disposal site.¹⁰
- The potential for effects on future marine farm opportunities for Te Rūnanga o Koukourārata as a result of increased suspended sediment loads.
- Dredge spoil moving from the offshore site to Ngāi Tahu Seafood (NTS) marine farm monitoring (control) sites and resulting in a breach of consent conditions and requirement to address an effect that is not the result of the marine farm activity. NTS is required to monitor bathymetry, depth of anoxic layer, and organic matter content of the sediment.
- Cumulative effects of capital and maintenance dredging over time with regard to turbidity and sediment dispersal and deposition.

Plume modelling results for the offshore disposal grounds presented by LPC in March 2016 demonstrated that it is 'very likely' (95% probability) that sediment will settle out before it is transported to within 1.6km of the shoreline, and that it is 'exceptionally unlikely' (1% probability) that sediment will be transported beyond 600m of the shoreline.¹¹ Bathymetry modelling to examine the movement of sediment from the disposal ground along the seabed shows that, post-dredging, some sediment could accumulate at the mouth of Koukourārata.

Ultimately, the acceptability of the offshore site location is dependent on the level of confidence with modelling methods and results, and the ability of an adaptive management approach to provide certainty that any unexpected events will be detected and managed in a manner that avoids sediment reaching the coast. The default position is to seek that the site moved to deeper water farther out from the coastline.

"The issue is uncertainty, and the potential for significant effects and potentially irreversible effects if the things don't happen the way they are predicted to." – Hui participant, March 23rd, 2016.

¹⁰ Taylor, G. (Department of Conservation), described in NIWA (December 2014, revised May 2015), considered that the proposed dredging programme could potentially affect four seabird species.

¹¹ Model results as per MetOcean (2016), with likelihood and probability descriptions in accordance to IPCC 2010.

A strong message from the CIA Hui is that any effects on mahinga kai and water quality as a result of dredge spoil from the offshore site reaching the coastline and harbours as a plume in the water column or across the seafloor are unacceptable.

Figure 3: Marine farms on northern Banks Peninsula. Te Rūnanga o Koukourārata has joint ownership of the farm on the west side of Koukourārata (in red), and a cultural take from the farm on the eastern side. Te Rūnanga o Koukourārata and Ngāi Tahu Seafood own two thirds of the Squally Bay marine farm (in red). Map produced by Te Rūnanga o Ngāi Tahu, using information from Tonkin & Taylor (2016).



6.2.3 Effects of ongoing maintenance dredge spoil disposal

Ongoing maintenance dredging is required in the larger navigation channel. In 2014, LPC planned to dispose ongoing maintenance dredge spoil (post capital dredging) in the existing consented spoil dumping grounds in Whakaraupō (at Awaroa/Godley Head) with a new consent to account for the additional volume and potential effects.

The 2014 CIA identifies concerns around this, given the increased volume of maintenance dredge spoil that would result from a wider and deeper channel. There is ongoing concern that the existing activity is impacting on mahinga kai habitat, and may be contributing to sedimentation in the harbour. The CIA recommended using the capital dredging project as an opportunity to consolidate capital and maintenance dredge spoil at one offshore site.

LPC has acknowledged Te Hapū o Ngāti Wheke concerns around maintenance dredging and agreed to revisit the maintenance dredging monitoring programme. This work is included as an option in the TAG terms of reference. On the advice of the MAG, LPC also agreed to a 50 metre exclusion zone along the coastline of the dumping grounds to protect habitat.

In 2016, further technical investigations on hydrodynamics (in part in response to ongoing concerns from Te Hapū o Ngāti Wheke) showed the Awaroa/Godley Head site as unsuitable for the disposal of maintenance dredge spoil, as spoil is moving back into the navigation channel. In May 2016, LPC initiated discussions with manawhenua to determine an alternative disposal site.¹²

For Te Hapū o Ngāti Wheke, this change is an opportunity for positive effects on water quality, mahinga kai habitat and the health of Whakaraupō, and is consistent with the longstanding aspiration to eliminate maintenance dredge discharges in the harbour.¹³

What is happening in this space?

Manawhenua provided a list of preliminary criteria to LPC to inform site selection, and a Hui was held in June 2016 to discuss site options and identify options for further investigations.

LPC identified 7 offshore site options for consideration. In discussing these, manawhenua chose the proposed capital dredging disposal grounds as the preferred option (for Te Rūnanga o Kōkourārata this is the only option). This was based on a strong desire to consolidate discharges into one site, concerns that other site options were too close to the shoreline, and questions about the ability of LPC to fully investigate the effects of any other site prior to the proposed consent lodgement date.

Manawhenua agreed that two site options north of Awaroa/Godley Head would also be investigated. These were described as “way down the list” compared to the capital dredging disposal ground option, but thought to provide useful comparisons.

In August LPC, manawhenua and Te Rūnanga o Ngāi Tahu met to discuss the results of these investigations. LPC had yet to receive modelling results for the capital dredge disposal grounds option, but provided the results for a site part way between that site and Awaroa/Godley Head.

Given the significant increase in travel time from dredge location to disposal site and the increase in duration of each campaign, along with the annual additional costs, LPC indicated their preference to shift the disposal of maintenance dredge spoil to a site part way between the proposed capital dredging disposal grounds and Awaroa/Godley Head, and to retain the existing Awaroa/Godley Head site as a backup.

For manawhenua, identifying an appropriate offshore site is critical given that maintenance dredging is part of ongoing port operations beyond the duration of the capital dredging project. The disposal of maintenance dredge spoil has the potential for the following effects:

6.2.3 Potential effects on values as a result of maintenance dredge disposal

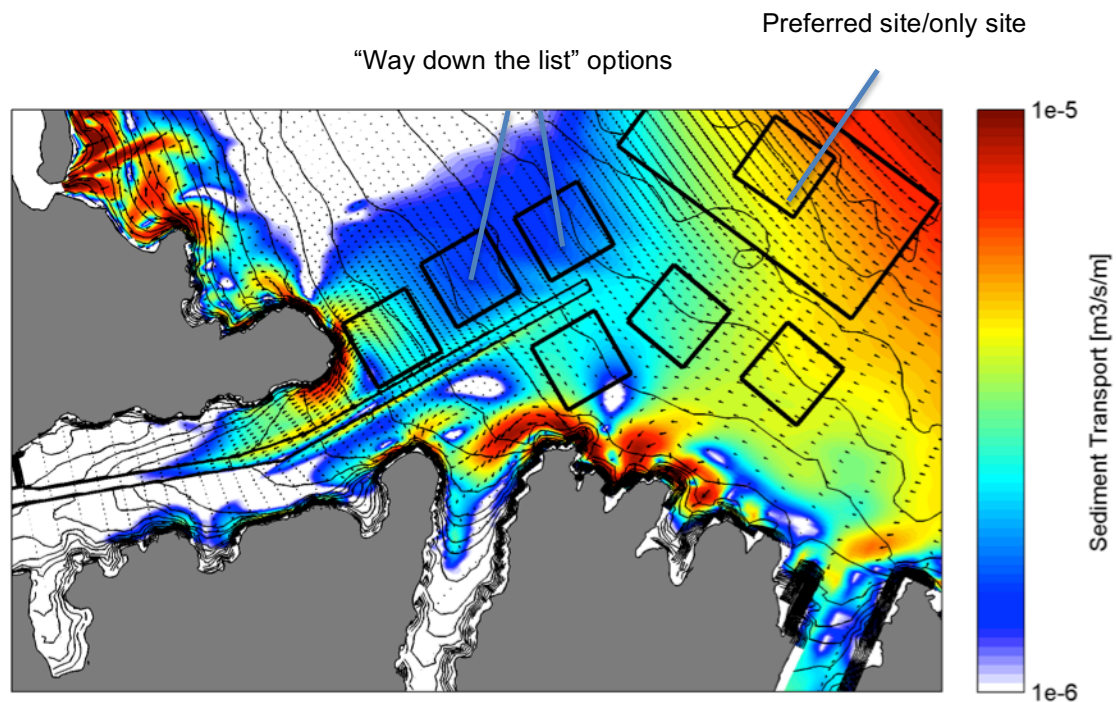
- Positive effects on water quality, mauri and mahinga kai in Whakaraupō as a result of the change in activity from in harbour to offshore disposal (noting that the existing spoil dumping grounds will be retained for Inner Harbour dredging spoil, and LPC has proposed to retain the Awaroa/Godley Head as back up).
- Under-estimations or lack of certainty of future maintenance dredge spoil volumes which may result in inadequate assessment of effects.

¹² It is noted that the existing spoil dumping grounds will still be used for spoil from the inner harbour.

¹³ The removal of maintenance dredge discharges from Whakaraupō achieves Policy WH2.5 (b) in the Mahaanui IMP.

- Potential for dredging spoil from a new offshore maintenance dredge site to be transported to the coastline and/or into harbours, or Pegasus Bay, and have effects on mahinga kai (including proper holes), marine farms or other values.
- Cumulative effects of multiple discharge sites – Gollans Bay, Godley Head, proposed new maintenance dredge disposal site, and proposed capital dredging site.

Figure 4: Manawhenua maintenance dredging site preferences



SECTION 7 ADDRESSING EFFECTS – ADAPTIVE MANAGEMENT

An Environmental Monitoring and Management Plan (EMMP) will provide the overarching environmental management framework for the dredging operations, and for adaptive management. The purpose of the plan is to manage the dredging suspended sediment plumes, as the primary mechanism for potential effects, and ensure the effects of the project are within those predicted by suspended sediment modelling and the assessment of environmental effects.¹⁴

The plan is intended to provide a framework for adaptive management of the dredging and disposal activities based on results of real-time turbidity monitoring in order to reduce the risk of unanticipated effects occurring. A key objective is to ensure dredging and disposal activities are managed to protect water quality, mahinga kai, marine farm interests and other values, and therefore recognise and provide for the relationship of manawhenua with the coastal environment.

The plan will include:

- Trigger levels and thresholds for suspended sediment and water quality, supported by at least a year of baseline data.
- An environmental monitoring programme that enables detection of potential effects before any effect on a sensitive site, during and after the activity. The intent is to have a 'protective net' of real-time monitoring instruments in the water around the navigation channel and offshore disposal site.
- Established monitoring sites around the offshore disposal ground, along the coast and inside the harbours at which a range of methods will be used to identify change over time and provide assurance that the activity has not caused significant adverse effects on mahinga kai and other values.
- Management responses that specify the actions to be taken if thresholds are reached.
- Management groups, to ensure all relevant technical experts and stakeholders are appropriately involved in the dredge management process

This approach gives effect to recommendations in the 2014 CIA, recognising that the scale of the activity and the uncertainty of effects are best managed within an adaptive management approach.

Adaptive management, with appropriate trigger levels and thresholds, can provide a greater degree of certainty that key values such as mahinga kai will be protected over time through good monitoring and that particular actions will be taken by LPC to change/adapt the activity if any adverse effects are observed (learning by doing). The approach is recognised as an effective way to address uncertainty relating to the effects of large scale projects on the environment.

Adaptive management for marine activities is recognised as an “approach that allows an activity to be undertaken so that its effects can be assessed and the activity discontinued, or continued with or without amendment, on the basis of those effects”.¹⁵

¹⁴ Tonkin and Taylor, 2016. Channel Deepening Project. Draft Environmental Monitoring and Management Plan.

¹⁵ Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012, Section 64 (recognising that this Act is not applicable to this activity).

The environmental monitoring programme for the Capital Dredging Project is expected to be the most extensive ever undertaken for a dredge project in New Zealand.¹⁶

The intent is to lodge the consent application with an EMMP framework agreed to by LPC, Te Hapū o Ngāti Wheke, Te Rūnanga o Kōkourārata and Te Rūnanga o Ngāi Tahu. This process provides an opportunity for Te Hapū o Ngāti Wheke and Te Rūnanga o Kōkourārata, as manawhenua for the respective takiwā, to exercise kaitiakitanga. It recognises that the provision of advice does not imply agreement, and is consistent with the engagement approach adopted by Te Hapū o Ngāti Wheke and LPC based on the understanding that at times the parties may need to agree to disagree.

What is happening in this space?

At the time of writing, the TAG has reviewed a draft EMMP, and LPC, the TAG and planners from Mahaanui Kurataiao, Te Rūnanga o Ngāi Tahu and Environment Canterbury have met to discuss the consent conditions around the plan.

Key issues raised by manawhenua representatives on the TAG with regard to the draft EMMP, are as follows:

- There is concern over the availability and quality of information that will inform the plan (e.g. modelling assumptions and methods, and limits to what is known about species).
- The strength of the EMMP relies on strong turbidity triggers, and these will not be established until at least a year of baseline monitoring is complete. This means the consent application will not include trigger levels. There is concern about what this means in terms of the ability of the plan to protect manawhenua values and interests. There is an absence of certainty around how and when triggers will be set, and the role of the TAG in this process.
- There are questions as to whether a year of baseline data is sufficient to capture the range of values for a 'natural' baseline, and whether there will be sufficient time to work and become confident with the baseline data in order to set trigger levels.
- There is still work to be done to identify and assess candidate methodologies and determine which one will be used to establish trigger levels.
- The existing baseline or 'background' in Whakaraupō is considered degraded; that is, water quality needs to be improved, sedimentation is an ongoing issue, and there are species that were once plentiful that have declined, such as kārengo. There is concern around how this may affect the trigger level setting process, as manawhenua are currently working to improve the baseline against which effects will be measured.

*"We used to have seaweed that was thick and plentiful, and I remember my father making us bull kelp shoes as we walked around the rocks. Seaweed provides habitat for paua, kina and pupu (periwinkles), and shelter for finfish. Today there is little seaweed left."*¹⁷

¹⁶ LPC 2016, Proposed Channel Deepening Project Factsheet.

¹⁷ Couch, H. 2015. Evidence to the Preliminary Draft Lyttelton Port Recovery Plan.

There are also a number of issues that manawhenua identify as unresolved at the time of preparing this CIA. These are:

- The EMMP does not describe the relationship between surface turbidity and benthic plumes, or how this relationship will be established. There are concerns around the ability to detect unexpected sediment plumes from the dredging activity in Whakaraupō and therefore to manage these adaptively, due to these unresolved issues on the profile of plume movement.
- The need for a monitoring site at Te Piaka (Adderley Head), to address the potential for the dredging activity to move sediment from Whakaraupō around Te Piaka and into Koukourārata.
- The value of monitoring light attenuation (a measure of the reduction in light intensity with depth). Light is critical to the survival of key mahinga kai species by supporting the growth of seaweeds, which provide food and habitat, and phytoplankton, which provide food. Light measurements ensure that turbidity triggers 'make sense ecologically'.
- How to manage the potential effects of increased turbidity on the environment when trigger levels are exceeded and the cause is determined by LPC to be a natural event (e.g. landslide) and therefore the dredging activity is allowed to continue. This is considered at odds with a precautionary approach.
- The need to consider non-tidal influences on sediment transport in the inshore (Whakaraupō) plume dispersion modelling, including sediment re-suspension and extreme weather events.
- The need to understand the potential ecological effects on finfish, marine mammals and seabirds, as mahinga kai values.
- The role of the TAG in the period between consent lodgement and a decision on the consent.¹⁸

While adaptive management within an EMMP is an appropriate method for addressing uncertainty about the effects of an activity, the CIA process highlights that there are varying levels of confidence around how this can work, and this is an ongoing challenge. The acceptability of the Capital Dredging Project will depend on the ability of the EMMP to provide confidence that values will be protected. Good relationships and clear and effective processes supported by robust consent conditions are critical.

Uncertainty is a key theme in the 2014 CIA and in this update. Uncertainty is due to:

- The scale of the project.
- Limits to understandings of the existing state of the harbour and its ecology and about coastal processes and the effects of dredging activities on these.
- Confidence in modelling methods and a lack of understanding about some assumptions.
- The potential difficulty linking the dredging and disposal activities to effects on mahinga kai, and therefore the ability to avoid adverse effects on these.
- Concern that there may not be sufficient time or suitable baseline data to set quality trigger levels.
- Reliance on consent conditions to determine the process for setting trigger levels, when the strength of adaptive management relies on these levels.
- The experience of Ngāi Tahu with dredging projects at other ports, including non-compliance with consent conditions.

¹⁸ LPC is currently drafting a new terms of reference and work plan for the TAG that will define the role of the group during this period.

Section 8 Recommendations going forward

“What does a healthy harbour look like for Ngāi Tahu? It is a harbour with an abundance and diversity of mahinga kai resources for Ngāi Tahu and the community, and where port activities and catchment land use are managed to ensure coastal water quality and the harbour environment are consistent with this objective. It is a harbour that supports safe and healthy mahinga kai that enables manawhenua to provide for their own use, and exercise the cultural tradition of manaakitanga, providing local kai (food) for manuhiri (guests).” - Port Recovery Plan CIA.

“We need to collectively find solutions that will last generations.” – June Swindells, Chair -Te Hapū o Ngāti Wheke.

The findings of the CIA process from 2014 onwards highlight that the key issue for manawhenua is the potential that sediment induced effects on water quality and mahinga kai values as a result of the Capital Dredging Project will adversely affect the relationship of manawhenua to their harbours and ongoing efforts to improve water quality, address sedimentation and enhance mahinga kai sites, species, habitats and traditions.

LPC's desire to accommodate larger ships and remain competitive, and the desire of manawhenua to protect and restore harbour waters, do not have to be mutually exclusive goals. As stated in the Mahaanui IMP, Whakaraupō can be both a mahinga kai and a port if there are good relationships and clear strategies to manage the effects of port activities on the harbour environment.¹⁹

Te Hapū o Ngāti Wheke, Te Rūnanga o Koukourārata and Te Rūnanga o Ngāi Tahu are seeking confidence and certainty that values, rights and interests associated with the coastal environment will be protected. This comes from agreeing on how dredging and disposal activities can be monitored and managed to reduce risk, and knowing that specific actions will be taken by LPC to adapt the activity if adverse effects are observed. Integral to this is an adaptive and precautionary approach to managing potential effects that favours the protection of water quality and mahinga kai habitat, sites and species, and reflects the limits of what we know, and the significance of potential impact if things go wrong.

“...all decisions must relate back to mahinga kai: How will the proposed activity affect mahinga kai resources, and the ability of tāngata whenua to access and use these resources?”. [Mahaanui IMP, Issue KP2 Explanation, p. 267]

“Why do we do this? For the next generation. Our unborn. Just as our ancestors looked after us, we need to look after future generations. Ngāi Tahu understand economics. But we also understand the need to find balance.” – Manaia Cunningham, Te Rūnanga o Koukourārata.

LPC, Te Hapū o Ngāti Wheke, Te Rūnanga o Koukourārata and Te Rūnanga o Ngāi Tahu have invested significant time and resources to engage on this project, and will continue to do so. While there are varying levels of confidence around the effects of the activity and how these can be managed, the willingness to work together to reach an agreement is a shared goal. The focus of the engagement and cultural impact assessment process to date is on *how* the project occurs rather than if it occurs. Ultimately, the response of manawhenua to the project will depend on the outcomes of this process.

The recommendations below provide direction to ensure that the proposed Capital Dredging Project is consistent with achieving the following outcomes:

¹⁹ Explanation for Issue WH2, p. 254

Outcomes sought by Te Hapū o Ngāti Wheke, Te Rūnanga o Koukourārata and Te Rūnanga o Ngāi Tahu:

1. Increased confidence and certainty around the nature and extent of potential effects, and the ability of the EMMP to manage these.
2. Ongoing relationship with LPC, as a port company with long term interest in Whakaraupō and responsibilities to protect the harbour environment.
3. Continued ability to safely access and gather food in the coastal environment.
4. Continued ability to exercise kaitiakitanga over the coastal environment of their respective takiwā.
5. Continual improvement to the health of the Whakaraupō and Koukourārata, including the enhancement of mahinga kai sites, species and habitats, consistent with the 'net gain' approach.
6. The protection of future aspirations of manawhenua, including proposed Mātaitai (Whakaraupō) and intentions to establish further marine farms (Koukourārata).

8.1 Recommendations

"The role of kaitiaki requires that the resources of Whakaraupō and Koukourārata are left in a better state for future generations than they are today." – Ngāi Tahu submission LPRP 3.3.5

CAPITAL DREDGING

Providing for the relationship of manawhenua with the coastal environment

1. The assessment of effects and decision-making process for the project must:

- (a) Recognise the traditional and continuing cultural relationship of Te Hapū o Ngāti Wheke with Whakaraupō as a place where Ngāti Wheke have lived and fished for generations, as statutorily recognised in the NTCSA 1998 and required by the NZCPS;
- (b) Recognise the traditional and continuing cultural relationship of Te Rūnanga o Koukourārata with Koukourārata as a place where the Ngāti Huikai have lived and fished for generations, as statutorily recognised in the NTCSA 1998 and required by the NZCPS;
- (c) Recognise Mātaitai Reserves in Whakaraupō and Koukourārata as statutory recognition of the special relationship between tangata whenua and these waters, and reflecting the interests of the Crown and Māori to provide for customary food gathering;²⁰
- (d) Give appropriate weight to these relationships with ancestral waters and mahinga kai as a matter of national importance, as per RMA Part 2;
- (e) Recognise the right of manawhenua to fulfill their kaitiaki obligations to protect and care for taonga in the environment, including the coastal environment, as guaranteed by the Treaty of Waitangi/Te Tiriti o Waitangi;
- (f) Recognise that mahinga kai is defined as sites, species, habitat and use, and includes both customary non-commercial, and commercial activities (e.g. marine farms);

²⁰ The significance of Mātaitai Reserves is described in the Environment Court decision *Te Rūnanga o Ngāi Te Rangi Iwi v Bay of Plenty Regional Council* [2011] NZEnvC 402 – Port of Tauranga case, sections 232 and 233.

- (g) Recognise that Te Hapū o Ngāti Wheke consider the existing Whakaraupō environment (the baseline) as degraded.

2. The proposed capital dredging project, and ongoing maintenance dredging should occur within the wider space of:

- (a) The agreement between Te Hapū o Ngāti Wheke and LPC that Whakaraupō can be both a port and mahinga kai, and that there are shared obligations to improve harbour health;
- (b) The development of a whole of harbour plan for Whakaraupō as a pathway to integrate efforts to improve harbour health;
- (c) Other projects that are positive steps forward to improve harbour health, including plans to remove wastewater from the harbour;
- (d) Manawhenua aspirations for a shellfish/mahinga kai gathering standard for water quality in Whakaraupō and Koukourārata, with the exception of the inner harbour industrial area in Whakaraupō;
- (e) Te Rūnanga o Koukourārata work to restore “kai sovereignty”²¹ and mahinga kai practices, including existing and future interests in marine farms; and
- (f) The ongoing efforts of Ngāi Tahu as an iwi to protect traditional fishing grounds and species, practices and knowledge associated with these.

Precautionary approach

- 3. LPC should adopt a precautionary approach to managing the effects of dredging and disposal, favouring the protection of water quality and mahinga kai habitat, sites and species, and reflecting the limits to what we know and the significance of potential impact if things go wrong. This means that environmental protection must be preferred over other matters.**
- 4. LPC should lodge an environmental bond to cover any unforeseen adverse effects on the environment.**

Lyttelton Port Company as an environmental port

- 5. Manawhenua encourage LPC to seek to be a world leader in sustainable port operations, demonstrating how a port can contribute to a healthy harbour, as per Recommendation 18 of the Lyttelton Port Recovery Plan CIA.²²**

Capital dredging activity in Whakaraupō

Capital dredging is proposed to occur in two stages of intensive dredging activity in Whakaraupō, each for a period of 9 to 12 months. The following recommendations apply to the dredging activity.

- 6. LPC should provide certainty that dredging will not commence until at least a full year of baseline data is collected, and the EMMP is complete.**

²¹ http://ngaitahu.iwi.nz/our_stories/restoring-kai-sovereignty/

²² Jolly, D, with Te Hapū o Ngāti Wheke, Te Rūnanga o Koukourārata and Te Rūnanga o Ngāi Tahu (2015).

7. **To minimise effects on mahinga kai, dredging methods must be based on the need to have the least suspension of fine sediments and to minimise the transport of sediment outside the footprint of the dredging operations. This includes minimising overflow discharges.**
8. **A marine-based accidental discovery protocol or similar mechanism is required to address the potential disturbance of taonga or wāhi tapu as a result of dredging activity. Te Hapū o Ngāti Wheke and LPC will continue to work on developing this.**
9. **Further investigation is required to understand the potential effects of the dredging activity in Whakaraupō on:**
 - (a) Finfish, including health, abundance, habitat and migration activity; and
 - (b) Customary fishing activities and access to resources, given the intensity and duration of the dredging.

Capital dredging offshore disposal site

The acceptability of the offshore disposal site location is dependent on the level of confidence with modelling methods and results, and the ability of the EMMP to provide certainty the activity will be managed to avoid sediment reaching the coast. For many, the best option is to shift the disposal site further offshore into deeper water. This would alleviate concerns that the project will accelerate or exacerbate the natural accumulation of sediment at the mouth of Koukourārata, and also provide a potentially less complex marine environment for the disposal activity to occur within.

The following recommendations apply to the disposal of dredge spoil at the proposed offshore disposal site:

10. **The disposal of dredge spoil must be managed to avoid sediment transport into Whakaraupō, Koukourārata and/or the coastline and bays along the northern side of Banks Peninsula, particularly given the potential challenges with linking the disposal activity with effects on mahinga kai.** If this cannot be done at the existing disposal site, then the disposal ground should be moved further offshore into deeper water.
11. **Dredge spoil should be spread across the disposal site as a management method to minimise risk of sediment transport beyond the site boundaries; this practice should not be limited to a management response option.**
12. **Te Rūnanga o Koukourārata, Te Hapū o Ngāti Wheke and Te Rūnanga o Ngāi Tahu retain the ability to advocate for moving the proposed offshore disposal grounds further out into deeper water,**
 - (a) until such time as turbidity trigger levels are set, within a process agreed to by manawhenua; and
 - (b) after Stage 1 of the project is completed and following a formal review of the performance of the EMMP.
13. **Te Rūnanga o Koukourārata and Ngāi Tahu iwi interests in marine farms are given due weight, taking into account the social and economic benefits of aquaculture to the hapū/iwi, by ensuring dredge spoil disposal does not result in:**
 - (a) sediment-induced effects on water quality that make it unfit for aquaculture activities, including effects on the quality and quantity of the marine farm species; and

- (b) sediment-induced effects on water quality that result in the breaching of water quality or turbidity consent conditions on existing consents held by Te Rūnanga o Koukourārata and Ngāi Tahu Seafood.

Environmental Monitoring and Management Plan (EMMP)

The following recommendations pertain to the expectations of manawhenua and Te Rūnanga for how the EMMP will monitor and manage potential effects:

14. The expectation of manawhenua and Te Rūnanga is that there will be agreement on the EMMP framework before the consent application is lodged.

15. The EMMP must provide a high degree of certainty around the avoidance of sediment-induced effects on water quality and mahinga kai as a result of the dredging and disposal activities. This means a plan that:

- (a) Reflects a precautionary approach to managing effects on water quality and mahinga kai habitat, sites and species, as per Recommendation 3 above;
- (b) Clearly identifies a purpose of the plan as being to protect water quality, mahinga kai and values of importance to manawhenua, and contains a sufficient level of detail to achieve this;
- (c) Contains a robust baseline monitoring program that is agreed to by manawhenua, Te Rūnanga o Ngāi Tahu and LPC before it is implemented;
- (d) Establishes a relationship between surface and benthic plumes, in order to enable adaptive management;
- (e) Clearly sets out the role and purpose of the Consent Holder Group, Technical Advisory Group and Peer Review Panel;
- (f) Is supported by agreed consent conditions setting out the nature and extent of Te Hapū o Ngāti Wheke, Te Rūnanga o Koukourārata and Te Rūnanga o Ngāi Tahu involvement;
- (g) Ensures management responses to adverse effects are enforceable via consent conditions;
- (h) Includes a *stop and re-asses* management response that is consistent with a precautionary approach, and retains the ability to move the offshore site into deeper water further offshore (as per the 2014 CIA);
- (i) Integrates both Assurance and Adaptive monitoring;²³ and
- (j) Provides for the ability of manawhenua, on the advice of the TAG, to request additional monitoring sites and methods to the monitoring programme following baseline monitoring.

16. Te Hapū o Ngāti Wheke, Te Rūnanga o Koukourārata and Te Rūnanga o Ngāi Tahu should be able to nominate suitably qualified candidates for the Peer Review Panel.

17. The EMMP should be peer-reviewed by an independent party agreed to by Te Hapū o Ngāti Wheke, Te Rūnanga o Koukourārata, Te Rūnanga o Ngāi Tahu and LPC.

²³ Adaptive Monitoring is based upon the proposed real-time monitoring sites and trigger levels. Assurance Monitoring consists of bathymetric, ecological, physical beach shore surveys and water and sediment quality sampling.

18. A formal review of the EMMP/AMP should follow the completion of Stage 1 of the Capital Dredging Project, to assess plan performance and ensure it remains relevant and effective. The review should involve Te Hapū o Ngāti Wheke, Te Rūnanga o Koukourārata, and Te Rūnanga o Ngāi Tahu.
19. LPC should provide the rationale behind any decisions not to adopt advice provided by the TAG. As per the TAG Terms of Reference, this will be discussed with the TAG as well as distributed in writing for each member to take to their respective organisations.

Baseline monitoring and turbidity trigger levels

20. The EMMP and supporting consent conditions should provide for the opportunity to extend baseline monitoring beyond one year if required, recognising:
 - (a) The scale of the project and the complexity of the harbour and offshore environments;
 - (b) The potential for problems with data collection that may result in less than one year of data; and
 - (c) The need to have sufficient, usable data to enable the TAG to feel confident in their advice to the Rūnanga, and upon which to establish trigger levels.
21. There should be at least one light monitoring site in Whakaraupō, given the importance of light to mahinga kai species and therefore the value of light measurements to ensure that turbidity triggers make sense ecologically. Options for this may include the existing monitoring site at Rāpaki (UH3) and/or a site near Ōtamahua/Quail Island.
22. Te Hapū o Ngāti Wheke, Te Rūnanga o Koukourārata, and Te Rūnanga o Ngāi Tahu expect that turbidity trigger levels will be determined with appropriately qualified and independent expertise, and that the TAG will be involved in developing trigger levels, and that these will be agreed to by all parties.
23. LPC and Te Hapū o Ngāti Wheke, via the TAG, should work together to address Te Hapū o Ngāti Wheke concerns about setting trigger levels using baseline monitoring information from Whakaraupō that is not representative of the desired state of the environment.
24. Baseline monitoring results should be peer-reviewed by an independent party agreed to by Te Hapū o Ngāti Wheke, Te Rūnanga o Koukourārata, Te Rūnanga o Ngāi Tahu and LPC.
25. Consistent with a precautionary approach that favours environmental protection, dredging activity should cease when turbidity trigger levels are exceeded and this is determined to be the result of a natural physical process (e.g. landslide). Shifting the activity to a new location when a trigger level is exceeded due to a natural event will not change the trigger exceedance; but staying at the location and continuing to dredge may increase the exceedance and pose a risk to the environment.

Validation of models

26. All models used to inform the assessment of effects should be validated. Manawhenua recognise that the validation of some models can be completed before the activity (i.e. hydrodynamics) while others can only be validated after dredging has occurred (e.g. morphological model).

Consent duration

27. Te Hapū o Ngāti Wheke, Te Rūnanga o Koukourārata, and Te Rūnanga o Ngāi Tahu recommend a 15 year consent duration for the capital dredging project, because:

- (a) Manawhenua want increased certainty as to when the project will be complete;
- (b) Decisions should not limit the opportunities or experiences of future generations; and
- (c) Port of Tauranga was granted a 14 year consent duration for a similar project.

MAINTENANCE DREDGING

New site for maintenance dredging disposal

Ongoing maintenance dredging is required in the larger navigation channel. LPC is proposing to shift the disposal of maintenance dredge spoil from the existing Spoil Dumping Grounds in Whakaraupō to a new offshore site part way between the proposed capital dredging disposal grounds and Awaroa/Godley Head, and retain the existing Awaroa/Godley Head site as a back up .

28. Based on available information,²⁴ the preferred/only option for maintenance dredge disposal, from the options provided by LPC, is the proposed capital dredging disposal grounds. This is because:

- (a) This will consolidate all dredge spoil discharges into 2 sites (Gollans Bay²⁵ and the offshore capital dredge grounds) rather than the proposed 4 sites (Gollans Bay, Godley Head, new maintenance dredge offshore site and proposed capital dredging offshore disposal grounds); and
- (b) Sites closer to shore are considered a greater risk to values; and
- (c) There is concern around the ability to fully investigate the effects associated with any other site in the proposed timeframes.

29. The continued use of Awaroa/Godley Head for maintenance dredge spoil dumping should be prohibited.

30. The maintenance dredging disposal site should be located, managed and monitored to:

- (a) Avoid spoil coming back into Whakaraupō, or entering Koukourārata;
- (b) Avoid spoil reaching/settling along the coastline from the northern bays of Banks Peninsula to Pegasus Bay;
- (c) Avoid known mahinga kai / fishery sites (e.g. groper holes) or impacts on these sites that affect their use;
- (d) Ensure spoil mounds will not affect currents or waves, and therefore sediment transport along the coast and into the harbours;
- (e) Avoid effects of ongoing disposal activities on marine mammals, particularly Hector's dolphin;

²⁴ At the time of writing, LPC has not provided the plume modeling results for disposing maintenance dredge spoil into the capital dredging disposal site.

²⁵ Gollans Bay will continue to be used for maintenance dredge disposal under consent CRC135318, but only for spoil from the Inner Harbour.

- (f) Avoid effects on kōura (crayfish) migration pathways; and
- (g) Avoid effects on Ngāi Tahu interests in marine farms.

31. LPC and manawhenua, via the TAG, should develop a monitoring and management plan for future maintenance dredging disposal, reflecting:

- (a) An adaptive and precautionary approach to effects, given the new site and lack of certainty around maintenance dredge volumes;
- (b) The need to understand how the new site will behave over time, with regard to sediment movement; and
- (c) The need to be able to change the location if adverse effects are detected.

32. LPC needs to clarify the volumes of maintenance dredging spoil, post capital dredging. This needs to be done prior to consent lodgement, and the size of the disposal site must reflect these volumes.

33. LPC, Te Hapū o Ngāti Wheke, Te Rūnanga o Koukourārata and Te Rūnanga o Ngāi Tahu need to have a conversation about maximum dredge spoil volume limits for any single maintenance dredge campaign.

34. The existing maintenance dredging consent (CRC135318) that will continue to apply to Inner Harbour dredge spoil disposal should be revised to:

- (a) Restrict the disposal to Gollans Bay, and uncontaminated spoil from inner harbour dredging;
- (b) Include a 50 m exclusion zone along the immediate coastline of the spoil dumping ground (whereby the dredging vessel avoids this area); and
- (c) Contain volume limits.

Consent duration and review

35. Te Hapū o Ngāti Wheke, Te Rūnanga o Koukourārata, Te Rūnanga o Ngāi Tahu recommend a 25-year consent duration for the Maintenance Dredging activity, with a consent condition requiring a review of the activity every 5 years,

- (a) against agreed objectives in a management plan for the activity, and
- (b) with the ability to move the location of the disposal grounds based on monitoring results.

Cumulative effects

36. The cumulative effects of port recovery and development projects on the Whakaraupō harbour environment over time need to be considered as part of effects assessments for this and other projects.

Notification

37. Te Hapū o Ngāti Wheke, Te Rūnanga o Koukourārata and Te Rūnanga o Ngāi Tahu support LPC's intentions to request public notification of consent application, as agreed following the 2014 CIA.

Other

38. **As per Recommendation 20 of the Lyttelton Port Recovery Plan CIA, Te Hapu o NgātiWheke is interested to discuss in discussing the potential for some focused dredging in the upper harbour, for the purpose of mahinga kai habitat restoration.** This would be subject to a full investigation of key issues such as location, extent, depth, effects on mahinga kai, and disposal of dredged material.

SECTION 9 WHERE TO FROM HERE?

“The role of kaitiaki requires that the resources of Whakaraupō and Koukourārata are left in a better state for future generations than they are today.”²⁶

Te Hapū o Ngāti Wheke and Te Rūnanga o Koukourārata are actively working to protect and restore their harbours as mahinga kai. This requires eliminating discharges, improving water quality and reducing sedimentation. Assessing how and where specific activities occur is critical to achieving this goal.

The CIA update report confirms key values, rights and interests, and the potential impacts on these, as a result of the Capital Dredging Project. It identifies progress made on addressing key issues, and provides recommendations for going forward. Together with the 2014 CIA, it provides the basis to continue working together in a collective and constructive way, to align the development aspirations for Lyttelton Port with the long term vision of manawhenua to protect and restore the coastal environment, *mō tātou, ā, mō kā uri ā muri ake nei*.

²⁶ Te Hapū o Ngāti Wheke, Te Runanga o Koukourarata and Te Runanga o Ngai Tahu submission on the Lyttelton Port Recovery Plan, Section 3.3.5.

REFERENCES

- Environment Court Decision No. [2011] NZEnvC 402. In the matter of appeals under Section 120 of the RMA 1991, between Te Rūnanga o Ngāi Te Rangi Iwi Trust, S. Tuahakaraina on behalf of Te Taumata o Nga Te Potiki and Ngāti Ruahine & L. Waaka, and the Bay of Plenty Regional Council (Respondent) and Port of Tauranga Limited (Applicant).
- Canterbury Earthquake Recovery Authority. 2015. Lyttelton Port Recovery Plan – Te Mahere Whakaraupō i te Pūaha o Ōhinehou.
- Couch, H. (2015). Evidence to the Preliminary Draft Lyttelton Port Recovery Plan. In: Te Hapū o Ngāti Wheke, Te Rūnanga o Koukourārata and Te Rūnanga o Ngāi Tahu (May 2015). Submission on the Preliminary Draft Lyttelton Port Recovery Plan.
- Jolly, D. with Te Hapū o Ngāti Wheke, Te Rūnanga o Koukourārata and Te Rūnanga o Ngāi Tahu. (2014). Cultural Impact Assessment: An assessment of potential effects of the Port Lyttelton Plan and Lyttelton Port Recovery Plan on Ngāi Tahu values and interests.
- Jolly, D. on behalf of Te Hapū o Ngāti Wheke and Te Rūnanga o Koukourārata (May 2014). Cultural Impact assessment for a proposed Capital Dredging Project in Whakaraupō/Lyttelton Harbour.
- Jolly, D. (2014). Outcomes Report. Ngāi Tahu – Lyttelton Port Company Hui to discuss the recommendations in the Capital Dredging Project Cultural Impact Assessment.
- Lyttelton Port Company (2016). Proposed Channel Deepening Project - Project description (draft AEE).
- National Institute of Water & Atmospheric Research (May 2011). *Technical review of proposed Lyttelton Port Company Ltd developments with specific reference to identified cultural values and concerns*. Prepared for Mahaanui Kurataiao Ltd.
- National Institute of Water & Atmospheric Research (2015). NIWA Capital Dredging monitoring options and technical specifications report.
- Ngāi Tūāhuriri Rūnanga, Te Hapū o Ngāti Wheke (Rāpaki), Te Rūnanga o Koukourārata, Ōnuku Rūnanga, Wairewa Rūnanga and Te Taumutu Rūnanga (2013). *Mahaanui Iwi Management Plan*.
- Tonkin & Taylor Ltd (2014). Lyttelton Harbour/Whakaraupō Mahinga kai and Working Port. Effects on Mahinga Kai. Report prepared for Lyttelton Port Company (Appendix 17 of the Recovery Plan information package).
- Mastrandrea, M.D., C.B. Field, T.F. Stocker, O. Edenhofer, K.L. Ebi, D.J. Frame, H. Held, E. Kriegler, K.J. Mach, P.R. Matschoss, G.-K. Plattner, G.W. Yohe, and F.W. Zwiers (2010). *Guidance Note for Lead Authors of the IPCC Fifth Assessment Report on Consistent Treatment of Uncertainties*. Intergovernmental Panel on Climate Change (IPCC). Available at <http://www.ipcc.ch>.
- MetOcean (2016). Lyttelton Harbour/Whakaraupō Channel Deepening Project - Simulations of suspended sediment plumes generated from the deposition of spoil at the offshore disposal site. Prepared for Lyttelton Port Company Limited.
- Ministry for the Environment (2013). Consent Support – FAQ's about Cultural Impact Assessment. The RMA Quality Planning Resource www.qualityplanning.org.nz
- Te Hapū o Ngāti Wheke, Te Rūnanga o Koukourārata and Te Rūnanga o Ngāi Tahu (May 2015). Submission on the Preliminary Draft Lyttelton Port Recovery Plan.
- Tonkin & Taylor Ltd (2016). Capital Dredge Programme Assessment of Environmental Effects - Marine Farms. Draft Report Prepared for Lyttelton Port of Christchurch.

APPENDIX 1

Cultural Impact assessment for a proposed Capital Dredging Project in Whakaraupō/Lyttelton Harbour. 2014. Prepared for Lyttelton Port Company (LPC), by Dyanna Jolly, on behalf of Te Hapū o Ngāti Wheke (Rāpaki) and Te Rūnanga o Koukourārata.

Cultural Impact assessment

For a proposed Capital Dredging Project in Whakaraupō / Lyttelton Harbour



Prepared for: Lyttelton Port Company

Prepared by: Dyanna Jolly (Wītaskēwin), on behalf of Te Hapū o Ngāti Wheke (Rāpaki) and Te Rūnanga o Koukourārata

May 2014

Cover image: View of Whakaraupō, from the offshore disposal site.

Report prepared by:

Dyanna Jolly (Wītaskēwin). PO Box 69211 Lincoln 7640



Report approved by Te Hapū o Ngāti Wheke on 29 April, 2014.

Report approved by Te Rūnanga o Koukourārata on May 11, 2014.

Disclaimer:

This Cultural Impact Assessment is prepared for LPC as a technical assessment of the potential impacts of the proposed Capital Dredging Project on Ngāi Tahu values and interests. The CIA provides a basis for further discussions between LPC and Ngāi Tahu to address key issues. The CIA does not affect ability of Ngāi Tahu to submit on consent applications.

Summary of Findings

Lyttelton Port Company (LPC) is proposing to lengthen and deepen the navigation channel at Lyttelton to enable the port to respond to growth and accommodate the next generation of container vessels. The Capital Dredging Project involves dredging of the channel, deposition of the dredged material to an offshore disposal site, and the ongoing maintenance dredging and disposal of the material.

The identification of potential effects on Ngāi Tahu values, interests and associations is an important part of this process. The proposed dredging and deposition activities are located in the coastal marine area of the takiwā (traditional territory) of Te Hapū o Ngāti Wheke and Te Rūnanga o Koukourārata. The coastal marine area is known as Te Tai o Mahaanui, and is identified in the Ngāi Tahu Claims Settlement Act (NTCSA) 1998 as a Statutory Acknowledgement site, reflecting the particular cultural, spiritual, historical and traditional associations of Ngāi Tahu to this area.

LPC has commissioned this Cultural Impact Assessment (CIA) to confirm key cultural issues associated with the proposed Capital Dredging project and understand how any outstanding actual or potential impacts can be avoided or mitigated.

The findings of this CIA highlight that the primary interest for Ngāi Tahu in assessing the actual or potential effects of the proposed Capital Dredging Project is mahinga kai. There are Mātaitai Reserves in both Harbours, recognising the value of these areas for customary food gathering. The importance of mahinga kai is reflected Ngāi Tahu policy: that all activities in Whakaraupō and Koukourārata are consistent with the objective of managing the harbours for mahinga kai.

Te Hapū o Ngāti Wheke and Te Rūnanga o Koukourārata support the desire to deepen and extend the existing navigation channel in Whakaraupō to enable larger vessels. However there are concerns about the localised and cumulative effects on Ngāi Tahu values and interests. Two key issues for Ngāi Tahu remain with regard to the Capital Dredging Project are:

- (a) The site of the proposed offshore disposal site, and the risk that sediment/spoil from the offshore deposition site will be transported to Koukourārata and other areas of high mahinga kai value, and have adverse effects on the Mātaitai values and kutai/mussel farms.
- (b) The cumulative effects of proposed and existing LPC activities on mahinga kai values in Whakaraupō, and the limited information and understanding about these. Local knowledge indicates that existing structures and operations are having effects on kaimoana. A consent by consent approach to assessing effects has not enabled investigation and understanding of cumulative effects, or development of strategies to address these.

Section 9 of this CIA provides 12 recommendations to address the potential for adverse effects on Ngāi Tahu values and interests associated with Whakaraupō and Koukourārata. The key messages from these recommendations are that:

- Given the significance of mahinga kai values associated with Whakaraupō and Koukourārata (and surrounds), it is critical that planning, design and management of the proposed capital dredging project prioritises the protection of these values.
- The disposal site for dredged seabed material should be located further offshore from Koukourārata, to provide increased certainty that suspended sediment will not enter Koukourārata or the northern bays of Te Pātaka o Rakaihautū/Banks Peninsula.
- There is a pressing need to understand the effects of existing LPC structures and operations on mahinga kai values in Whakaraupō, in order to assess and understand the potential effects of capital dredging.
- Monitoring must include provisions to monitor effects on mahinga kai, identifiable thresholds for sedimentation and water quality, and specific actions that will be taken if thresholds are reached.
- An adaptive management plan is the most appropriate framework to manage monitoring the effects of the activity on mahinga kai (and other) values, and identifying a management strategy and mitigation responses to adverse effects.

Te Hapū o Ngāti Wheke and Te Rūnanga o Koukourārata are actively working to protect and restore Whakaraupō and Koukourārata as mahinga kai. Strategic relationships with key organisations, industry and councils in the takiwā, and contributing to planning processes that determine how and where specific activities can occur, are critical to achieving this goal.

A key message in the *Mahaanui Iwi Management Plan 2013* is that Whakaraupō as a working port does not have to be inconsistent with managing the harbour for mahinga kai values. The key to developing a shared vision is to work together to manage the effects of port activities and develop a long term, whole harbour, restoration plan.

Table of Contents

1	Introduction.....	1
1.1	<i>Background.....</i>	1
1.2	<i>Manawhenua.....</i>	1
1.3	<i>Previous engagement.....</i>	2
1.4	<i>Terminology.....</i>	2
2	Purpose of this CIA.....	3
3	Methods	3
4	Structure of the CIA	5
5	Description of Activity.....	5
6	Iwi planning framework – Mahaanui IMP 2013	7
7	Ngāi Tahu values and associations with Whakaraupō and Koukourārata.....	11
7.1	<i>Historical and traditional mahinga kai associations.....</i>	11
7.2	<i>Customary fisheries and the establishment of Mātaitai.....</i>	12
7.3	<i>Marine farms.....</i>	12
7.4	<i>Future aspirations for mahinga kai.....</i>	13
8	Assessment of effects on Ngāi Tahu values	14
8.1	<i>Key cultural issues.....</i>	14
8.2	<i>Ngāi Tahu Assessment of Effects</i>	17
9	Recommendations	21
10	Where to from here?.....	25
	Source material	26

1 Introduction

1.1 Background

Lyttelton Port Company (LPC) is proposing to lengthen and deepen the navigation channel at Lyttelton to enable the port to respond to growth and accommodate the next generation of container vessels. The proposed Capital Dredging Project will increase the depth and extent of the existing navigation channel. Approximately 12.5 million cubic metres of material will need to be dredged, and it is proposed to deposit this dredged material at an offshore disposal site which, at its nearest point, is 3.3 km offshore in water depths of 20 m (see Section 2 for a description of the activity and concept plan).

Resource consents (coastal permits) are required for the capital dredging, deposition of the dredged material and the ongoing maintenance dredging and disposal of the material from the extended channel. As per the Fourth Schedule of the Resource Management Act (RMA) 1991, the consent application include an assessment of actual or potential effects on the environment.

The identification of potential effects on Ngāi Tahu values, interests and associations is an important part of this process. The proposed dredging and deposition activities are located in the coastal marine area of the takiwā (traditional territory) of Te Hapū o Ngāti Wheke (Rāpaki) and Te Rūnanga o Koukourārata. The coastal marine area is known as Te Tai o Mahaanui, and is identified in the Ngāi Tahu Claims Settlement Act (NTCSA) 1998 as a Statutory Acknowledgement site, reflecting the particular cultural, spiritual, historical and traditional associations of Ngāi Tahu to this area.¹

LPC places a high level of importance on constructive relationships with tāngata whenua. All three parties have agreed that a Cultural Impact Assessment (CIA) report is the appropriate mechanism to facilitate the assessment of potential or actual effects on Ngāi Tahu values. The CIA will form part of the suite of resource consent applications for this project.

1.2 Manawhenua and Manamoana

Te Hapū o Ngāti Wheke and Te Rūnanga o Koukourārata are the Papatipu Rūnanga representing the tangata whenua who hold mana whenua and mana moana in their traditional takiwā.

The takiwā of Te Hapū o Ngāti Wheke is defined in the Te Rūnanga o Ngāi Tahu (Declaration of Membership Order) 2001 and the Port Cooper Deed as centering on Rāpaki and including the catchment of Whakaraupō and Te Kaituna.

The takiwā of Te Rūnanga o Koukourārata is defined in the Te Rūnanga o Ngāi Tahu (Declaration of Membership Order) 2001 as centering on Koukourārata and extending from Pōhatu pā to the shores of Te Waihora, including Te Kaituna.

¹ NTCSA 1998, Schedule 101.

Te Rūnanga o Ngāi Tahu is the legal representative of Ngāi Tahu Whānui within the Ngāi Tahu takiwā, as per section 15 of the Te Rūnanga o Ngāi Tahu Act (TRoNT) Act 1996. The TRoNT Act and the Ngāi Tahu Claims Settlement Act (NTCSA) 1998 give recognition to the status of Papatipu Rūnanga as kaitiaki, manawhenua and rangatira of the natural resources within their takiwā boundaries. Notwithstanding the relevant provisions of the Te Rūnanga o Ngāi Tahu Act 1996, it is established practice for resource management matters that the kaitiaki status of the Papatipu Rūnanga is supported and enabled by Te Rūnanga o Ngāi Tahu.

1.3 Previous engagement

The CIA builds on previous LPC engagement with Te Hapū o Ngāti Wheke and Te Rūnanga o Koukourārata on this proposal, and existing information provided to address key cultural issues. Multiple hui were held between 2007 and 2012 to discuss the proposal and identify cultural issues. In 2011, Mahaanui Kurataiao Ltd. (MKT)² and LPC commissioned the National Institute for Water and Atmospheric Research (NIWA) to provide a specialist technical evaluation of the likely impacts of the proposal on issues of importance to Ngāi Tahu, as identified in the consultation hui.³

Given the level of previous engagement, both Papatipu Rūnanga have a good understanding of the proposed activity and the potential effects on Ngāi Tahu values. This enables a somewhat truncated CIA, bringing everything together and providing conclusions on Ngāi Tahu positions on these issues. The CIA identifies the level of confidence the Rūnanga have as to how key cultural issues have been addressed and provides recommendations for how any outstanding actual or potential impacts can be avoided or mitigated.

1.4 Terminology

In this CIA report the following terminology is used:

- “Ngāi Tahu” and “tāngata whenua” refer to Te Hapū o Ngāti Wheke and Te Rūnanga o Koukourārata.
- “Whakaraupō” is the Ngāi Tahu name for Lyttelton Harbour.
- “Koukourārata” is used to refer to the Koukourārata/Port Levy Harbour. The Ngāi Tahu name for this harbour is Te Ara Whānui o Makawhiua.

² Consultancy owned by six Canterbury Papatipu Runanga, including Te Hapū o Ngāti Wheke (Rāpaki) and Te Rūnanga o Koukourārata

³ Technical review of proposed Lyttelton Port Company Ltd developments with specific reference to identified cultural values and concerns. Prepared for Mahaanui Kurataiao Ltd (May 2011).

2 Purpose of this CIA

The purpose of this CIA is to:

- (a) Identify relevant Ngāi Tahu values, interests, and associations with Whakaraupō and Koukourārata.
- (b) Confirm key cultural issues associated with the proposed Capital Dredging Project, building on previous engagement and information.
- (c) Assess the level of confidence of Te Hapū o Ngāti Wheke and Te Rūnanga o Koukourārata with the information provided to date to address cultural issues.
- (d) Provide recommendations for how any outstanding actual or potential impacts can be avoided or mitigated.

In meeting these objectives, the report will:

- Provide the LPC and the consent authority with a clear understanding of how the Capital Dredging Project may impact Ngāi Tahu values, interests and associations, and what can be done to address adverse effects.
- Recognise and provide for the Mahaanui Iwi Management Plan 2013.
- Provide information to enable appropriate consideration of the relevant Resource Management Act (RMA) 1991 Part 2 matters.
- Provide information to inform the Assessment of Environmental Effects (AEE) in accordance with RMA s88 (2)(b) and the Fourth Schedule.
- Provide information to address requirements under the New Zealand Coastal Policy Statement 2010, the Canterbury Regional Policy Statement 2013 and the Regional Coastal Environment Plan 2005, with regard to the protection of characteristics of the coastal environment of special value to tangata whenua when managing activities in the coastal marine area.
- Provide a basis for further engagement between LPC, Te Hapū o Ngāti Wheke and Te Rūnanga o Koukourārata.

3 Methods

The following methods were used to prepare this CIA report:

- a) Review of draft AEE and other relevant material, including information on previous engagement with Ngāi Tahu.
- b) Review of the *Mahaanui Iwi Management Plan 2013* to identify relevant issues and key policy messages.
- c) Hīkoi (site visit) with LPC, Te Hapū o Ngāti Wheke and Te Rūnanga o Koukourārata representatives by vessel along the existing channel to the location of the extended channel and offshore disposal site (see photos below).
- d) Engagement with Te Hapū o Ngāti Wheke and Te Rūnanga o Koukourārata to discuss cultural issues, how existing information in the draft AEE addresses these issues, and how any outstanding concerns may be addressed.
- e) Engagement with Te Rūnanga o Ngāi Tahu, specifically with regard to customary fisheries and mātaihai issues.
- f) Preparation of draft CIA report, and provision of the report to Te Hapū o Ngāti Wheke, Te Rūnanga o Koukourārata, Te Rūnanga o Ngāi Tahu and MKT.
- g) Review of draft CIA by Te Hapū o Ngāti Wheke, Te Rūnanga o Koukourārata, Te Rūnanga o Ngāi Tahu.



Photos: Hīkoi to offshore disposal grounds, Whakaraupō.

4 Structure of the CIA

Section 5 provides a description of the activity.

Section 6 provides the policy framework that informs the cultural impact assessment process, from the *Mahaanui IMP 2013*.

Section 7 outlines the relevant cultural values, interests and associations for consideration in the assessment of cultural effects.

Section 8 assesses the potential and actual effects of the activity on Ngāi Tahu values. This section provides a conclusive statement on the nature and significance of cultural effects, reflecting the careful consideration and assessment of existing information.

Section 9 provides recommendations to avoid or mitigate cultural impacts.

5 Description of Activity

LPC is proposing to deepen the navigation channel to the port so that anticipated international vessels of up to approximately 14.5m draught can access the port during all tides. The existing navigation channel, including the Cashin Quay turning basin and berth areas, will need to be both deepened and extended approximately 4km beyond the harbour heads. The existing channel ends about 1km inside the harbour heads.⁴

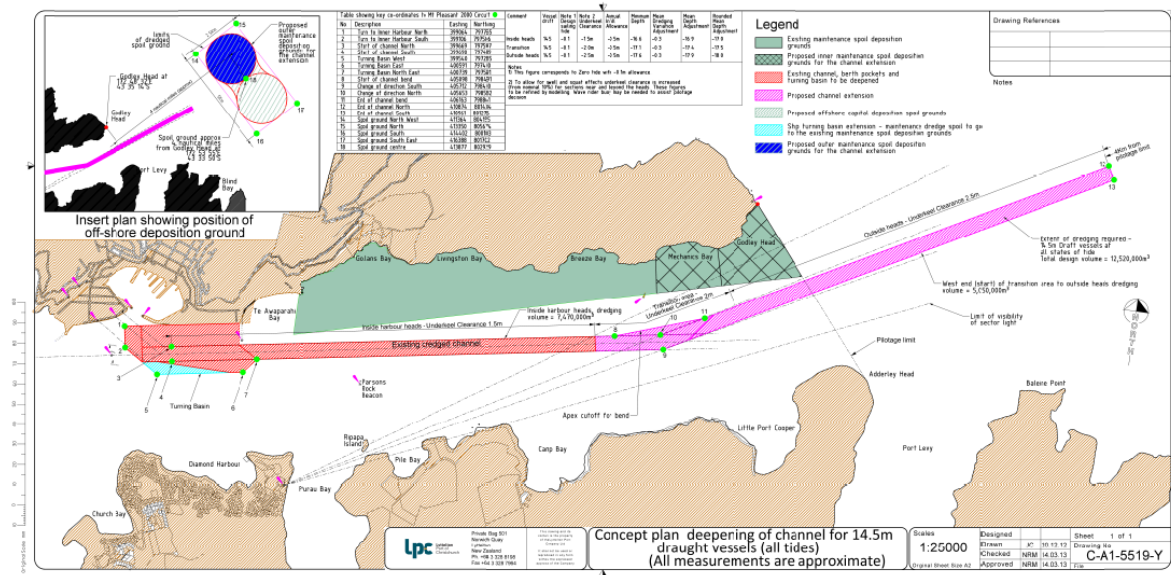
Key features of the proposed activity are summarised below:

- Existing navigation channel deepened up to approximately 4m, although the extent of deepening further out would progressively reduce.
- Dredged seabed material proposed to be deposited at an approximately 1,200 hectare offshore spoil ground. At the nearest points this site is located some 6.2 km from Godley Head and 3.3 km from Baleine Point.
- The depth of the navigation channel will need to be maintained by dredging. The maintenance dredging spoil from the existing channel will continue to be directed to the existing authorised spoil grounds. Maintenance dredging spoil from the extended channel is proposed to be deposited to the existing spoil grounds area at Godley Head or Mechanics Bay or at the offshore spoil grounds.

⁴ The information in this section is taken from the Project Description in the Draft AEE.

- The capital dredging operation would be tendered internationally and dredging companies are expected to propose different dredging methodologies. Nevertheless, the most likely option is for a large dredge to be deployed from overseas. Such a dredge is likely to take between nine and fourteen months to carry out the dredging operation.
- Disposal on land and disposal in a reclamation were considered as alternative methods, but marine disposal is identified as the preferred method.
- The location of the proposed offshore spoil deposition ground was initially selected on the basis that it would be a) deep enough to avoid shoaling, b) far enough from the coast to avoid spoil reaching the bays, and c) close enough to the dredging work in terms of managing travelling time and cost.
- Following the initial site selection, the proposed disposal ground was then comprehensively investigated and assessed to determine effects on currents and waves, the nature and extent of sediment transport, whether benthic communities at the site were rare or had conservation value, the degree to which existing habitat would recover, whether the location was significant for marine mammals or a fishery resource, and whether there would be any recreational issues.
- A list of technical reports commissioned for the investigations is provided in Appendix 1.⁵

Figure 1. Concept Plan (source: Appendix 1 of the AEE)



⁵ This CIA is one of the technical reports commissioned to inform the AEE.

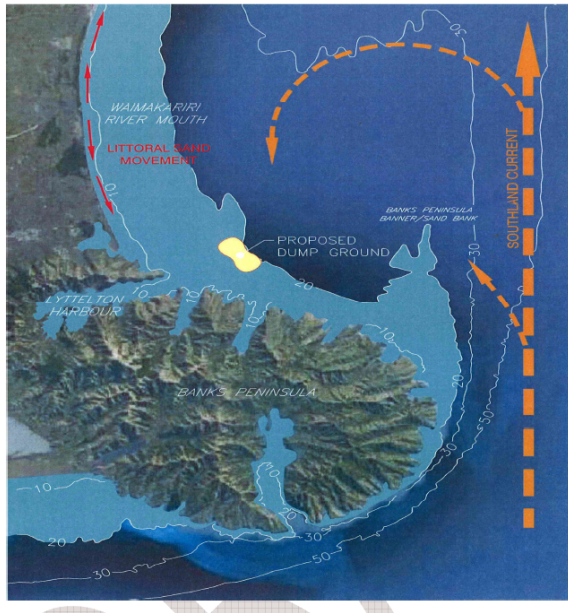
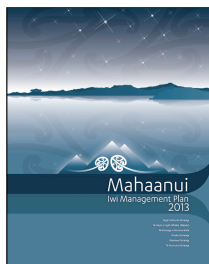


Figure 2: Extension of the 20 m contour depth at the north-eastern end of Banks Peninsula illustrating the banner bank as well as the antic-clockwise eddy of the Southland Current. Proposed offshore deposition ground shown in yellow. Source: Chapter 4 AEE, (OCEL Consultants NZ Ltd.)

6 Iwi planning framework – Mahaanui IMP 2013



The *Mahaanui Iwi Management Plan 2013* is a collaborative manawhenua planning document prepared by Te Hapū o Ngāti Wheke (Rāpaki) and Te Rūnanga o Koukourārata, with 3 other Rūnanga, covering the region from the Hurunui to the Hakatere. The plan is a written expression of kaitiakitanga and rangatiratanga.

The IMP provides the policy framework for Cultural Impact Assessments. It identifies natural resource management issues of significance for Manawhenua and provides a values-based policy framework to resolve those issues.

Sections 6.6 (Whakaraupō) and **6.7 (Koukourārata ki Pōhatu)** are most relevant to this CIA report. These sections identify issues of local significance in Whakaraupō (Lyttelton Harbour) and Koukourārata (Port Levy) and provide policies to address those issues. **Section 5.6 (Tangaroa)** is also relevant to this CIA, with general issues and policies for the coastal marine environment.

Key policy messages from these sections of the Mahaanui IMP are summarised below. Section 6.6 contains a specific Issue Statement and set of policies directed at LPC (these are provided in full in Box 1).

At a high level, the key policy messages from Sections 6.6 and 6.7 of the Mahaanui IMP are:

- Whakaraupō and Koukourārata are highly valued for mahinga kai and water quality must be consistent with protecting mahinga kai habitat and enabling customary use.

- Whakaraupō and Koukourārata must be managed for mahinga kai (and Mātaitai) first and foremost (**Policy WH1.2; Policy KP2.3**) Central to this approach is ensuring that all proposed activities for the lands and waters of these harbours are consistent with the objective of management for mahinga kai.

Specific policy messages for Whakaraupō and Koukourārata are as follows:

Whakaraupō – Key relevant policy messages

- The cultural impact of sedimentation and pollution on the Whakaraupō and its mahinga kai resources is significant. Ngāti Wheke seeks to restore the cultural health of the Whakaraupō by eliminating wastewater discharges, reducing sedimentation and achieving a water quality standard consistent with the harbour as mahinga kai.
- Ngāti Wheke intend to extend the Mātaitai over the whole of Whakaraupō, consistent with aspirations to manage the harbour as mahinga kai (Policy WH5.3).⁶
- Whakaraupō as a working Port does not have to be inconsistent with managing the harbour for mahinga kai values. Ngāi Tahu and LPC need to continue to work together to develop strategies to manage the effects of port activities on the cultural health of the harbour (**Policy WH1.3; Policies WH2.1 to WH2.6**).
- Te Hapū o Ngāti Wheke is committed to maintaining a good working relationship with LPC to address cultural issues and achieve positive cultural, environmental and economic outcomes (**Policies WH2.1**).
- LPC should recognise and provide for the relationship of Ngāi Tahu to Whakaraupō, and aspirations to manage the harbour as mahinga kai, by ensuring that port activities avoid contributing to pollution in the harbour (**Policy WH2.4**).
- Restoring the cultural health of Whakaraupō requires a holistic, whole-harbour approach, recognising the cumulative effects of all activities and requiring collaboration and integration of efforts between local authorities, Ngāi Tahu, the community and other agencies (**Policy WH1.4**).
- Sedimentation is a key contributor to the poor cultural health of the harbour (**Issue WH1.8**). The impact of sedimentation and infilling on mahinga kai habitat in the upper harbour is of particular concern. A regional management strategy is required to address sedimentation in the Harbour, including the identification and control of activities that contribute to sedimentation (**Policy WH1.7**). While catchment erosion is identified as a significant external source of sediment to the harbour, dredging and reclamation activities are also identified as contributors, as are coastal structures such as breakwaters that change tidal and wave patterns.

⁶ An application to the Ministry of Primary Industries was lodged in 2011.

- LPC and Ngāi Tahu should work together on a number of specific cultural issues, including a research programme to investigate and address how sedimentation associated with dredging, reclamation and structures in the harbour are affecting mahinga kai, particularly accumulation of sediment on kaimoana beds at Rāpaki. The disposal of maintenance spoil along the northern edge of the harbour is a key issue (i.e. need for an alternative location), as is the need to investigate options to dredge the intertidal mudflat areas at the Head of the Harbour (**Policy WH2.5**).

"Our goal for the waters of Whakaraupō is to restore the harbour to the state it was before deforestation, sewage discharges and other activities degraded it. The long term goal is to restore the harbour to a state where the kaimoana return and we can once again harvest mahinga kai without cultural, environmental and health concerns." [Mahaanui IMP, Issue WH1 Explanation; p.252].

Koukourārata – Key relevant policy messages

- The relationship between tāngata whenua and Te Ara Whānui a Makawhiua to be recognised as a matter of national importance in regional coastal environment planning, including the importance of the Harbour as mahinga kai (**Policy KP2.3**).
- Water quality in the harbour must be to a standard that enables the safe harvest of mahinga kai (**Policy KP2.4**).
- Silt from dredging in Whakaraupō must not enter Te Ara Whānui o Makawhiua, and the activity must be monitored for adverse effects on the harbour (**Policy KP2.5 (f)**).
- Te Rūnanga o Koukourārata have intent to further develop aquaculture in the takiwā, to provide cultural and commercial opportunities (**Policy KP9.2**).

General policy messages for the coastal marine environment

Harbour specific policies are complemented by general policies on coastal water quality.

- **Policy TAN2.1** To require that coastal water quality is consistent with protecting and enhancing customary fisheries, and with enabling tāngata whenua to exercise customary rights to safely harvest kaimoana.
- Economic costs cannot take precedence over the cultural, environmental and intergenerational costs of discharge activities to the coastal marine area (**Policy TAN2.4**).
- A catchment-based approach to coastal water quality issues is required, recognising and providing for the impacts of catchment land and water use on coastal water quality (**Policy TAN2.8**).

Box 1: Issue WH2 from the Mahaanui IMP 2013.

LYTTELTON PORT COMPANY (LPC) ACTIVITIES

Issue WH2: The need to work closely with LPC to manage effects of port activities on the cultural health of the harbour and the relationship of tāngata whenua to it, in particular:

- (a) Inner harbour activities, and expansion of these activities;
- (b) Changes to tidal flows, ebbs and flushes as a result of structures and/or landfill in the harbour (e.g. breakwaters);
- (c) Disposal of dredge spoil; and
- (d) Biosecurity risks.

Ngā Kaupapa / Policy

Relationships

WH2.1 To continue to maintain a good working relationship between tāngata whenua and the LPC to address cultural issues and achieve positive cultural, environmental and economic outcomes.

WH2.2 To require that the relationship between tāngata whenua and the LPC reflects the spirit of a Treaty relationship.

WH2.3 To investigate the feasibility of having a Papatipu Rūnanga representative appointed to the LPC Planning Board.

Cultural effects

WH2.4 To require that LPC recognise and provide for the relationship of Ngāi Tahu to Whakaraupō, and aspirations to manage the harbour as mahinga kai, by:

- (a) Ensuring that port activities avoid contributing to pollution in the outer harbour;
- (b) Ensuring that port activities at all times seek to avoid or minimise pollution in the inner harbour; and
- (c) Providing appropriate mitigation and/or compensation where cultural and environmental effects cannot be avoided, including but not limited to:
 - (i) Funds for restoration projects.

WH2.5 To work with LPC on the following issues of cultural concern and significance:

- (a) The need for a research program to investigate and address how dredging, reclamation,

sedimentation and structures in the harbour are affecting mahinga kai, including the potential effects of breakwaters on the ability of tidal flows to flush the harbour of sediment, and the resultant accumulation of sediment on kaimoana beds at Rāpaki;

- (b) The need for an alternative location for the disposal of dredging soil. Disposal of spoil along the northern edge of the harbour is contrary to cultural interests and objectives for improving the Whakaraupō marine environment, and may be adversely affecting Te Ara Whānui o Makawhūa (Koukourārata); and
- (c) The feasibility of dredging the mudflat areas at the Head of the Harbour, where sediment build up and infilling is having significant cultural and environment impact.

WH2.6 To require effective marine rules to protect Whakaraupō from the effects of discharges associated with ballast, bilge and sewage from ships and boats, including biosecurity risks.

He Kupu Whakamāhukihuki / Explanation

Tāngata whenua accept that Lyttelton is an important working port for the South Island, providing significant economic benefits for the community and region. However, it is important to manage the effects of LPC activities on the cultural health of the Whakaraupō, and on Ngāi Tahu and community values. Whakaraupō as a working port and harbour does not have to be inconsistent with managing the harbour for mahinga kai (see Issue WH1).

Tāngata whenua have worked with LPC on a number of proposals for various activities in the inner harbour. These include deepening the main channel, extending the reclaimed area, changing the function of the inner harbour, removal of toxic materials from the harbour floor and recovery from the earthquake damage. In each case, LPC and tāngata whenua have worked together to identify and address cultural issues.

“We believe that reclamation is having an affect on kaimoana beds. The harbour isn’t able to ‘flush’ itself. There used to be a good flow coming up the harbour to flush the kaimoana beds, but this doesn’t happen anymore.” Rāpaki IMP hui participant.

“One of the questions we need to ask is: Is there more sedimentation coming into the harbour, or is there less sediment leaving the harbour, or both?” Rewi Couch, Ngāti Wheke.

7 Ngāi Tahu values and associations with Whakaraupō and Koukourārata

A Cultural Impact Assessment identifies the sites, areas and values of significance that contribute to the relationship of tangata whenua to a given area, and the potential and actual impacts on these.

What values and associations are relevant to this CIA?⁷

The primary emphasis for Ngāi Tahu with regard to the relationship with Whakaraupō and Koukourārata is mahinga kai, particularly kaimoana (seafood). Mahinga kai is integral to Ngāi Tahu culture and identity. The protection and restoration of mahinga kai is a focal point for tangata whenua in both Harbours. In assessing effects, manawhenua ask the question: *'How will this activity affect mahinga kai?'*

Mahinga kai associations with Whakaraupō and Koukourārata include:

- Historical and traditional associations, including key mahinga kai resources, sites and practices;
- Ongoing associations such as customary use, the protection of customary fisheries and the establishment of Mātaitai;
- Contemporary expressions of mahinga kai, including marine farms; and
- Future use of the harbours for mahinga kai.

7.1 Historical and traditional mahinga kai associations

Both Whakaraupō and Te Ara Whānui o Makawhiua (Koukourārata) have a long and rich history of Ngāi Tahu land use and occupancy. The bays, coast and lands of this region are part of the history and identity of Ngāi Tahu and reflect the relationship between the tāngata whenua and the environment. The numerous pā sites, kāinga, mahinga kai areas, wāhi taonga and wāhi tapu sites hold the stories of Ngāi Tahu migration, settlement and resource use.

The NTCSA 1998 recognises the importance of the coastal marine area to Ngāi Tahu via the identification of the Te Tai o Mahaanui Statutory Acknowledgement (SA) area. A statutory acknowledgement is an acknowledgement by the Crown of the special relationship of Ngāi Tahu with identifiable areas; namely, the particular cultural, spiritual, historical and traditional association of Ngāi Tahu with those areas. The full text of the recorded statement is included in Appendix 2.

⁷ Much of this explanation for these values is taken directly from the Mahaanui IMP 2013.

The abundance of mahinga kai resources was a primary driver for Ngāi Tahu settlement of Rāpaki and Koukourārata. Rāpaki and Koukourārata became major mahinga kai areas because of the availability of natural resources within the harbours. Whakaraupō was specially valued for shellfish and species such as pioke (rig). Koukourārata was known for kutai (mussels).

“...The whole of the coastal area offered a bounty of mahinga kai, including a range of kaimoana (sea food); sea fishing; eeling and harvest of other freshwater fish in lagoons and rivers; marine mammals providing whale meat and seal pups; waterfowl, sea bird egg gathering and forest birds; and a variety of plant resources, including harakeke (flax), fern and tī root.” (NTCSA 1998, Schedule 101).

During the month of February the whakarua (north-easterly) blew the pioke up the harbour and tangata whenua would gather at Govenors Bay and take the pioke from the shallows (Te Whakatau Kaupapa, p. 5- 27).

7.2 Customary fisheries and the establishment of Mātaitai

The ancestral relationship of Ngāi Tahu to these harbours is reflected in the continued value placed on the harbours as mahinga kai. Today, the protection and restoration of mahinga kai for customary use⁸ is the primary driver for Ngāi Tahu policies on harbour management, and assessments of effects related to proposed activities. The mudflats in the upper harbour and the kaimoana beds around Rāpaki are two areas of high cultural value for mahinga kai habitat.

There are Mātaitai reserves in both harbours, provided for under the Fisheries Act 1996 (see Figure 3). The Rāpaki Mātaitai Reserve was established in 1998 as the first Mātaitai in New Zealand. The Koukourārata Mātaitai Reserve, extending across the whole of the harbour, was established in December 2000. The purpose of these reserves is to conserve, protect and restore the customary fisheries resource. They provide for the protection of the marine environment through tikanga-based management of fisheries.⁹

7.3 Marine farms

Aquaculture is not new for Ngāi Tahu. Rimurapa was traditionally used to transport live shellfish from one location to another, to seed new beds with new varieties or to assist in the build up of existing depleted stocks. Shellfish seeding is a traditional form of aquaculture still practiced today, including in Whakaraupō, where Ngāti Wheke has recently re-seeded cockles to Whakaraupō with cockles brought in from Ōtakou.

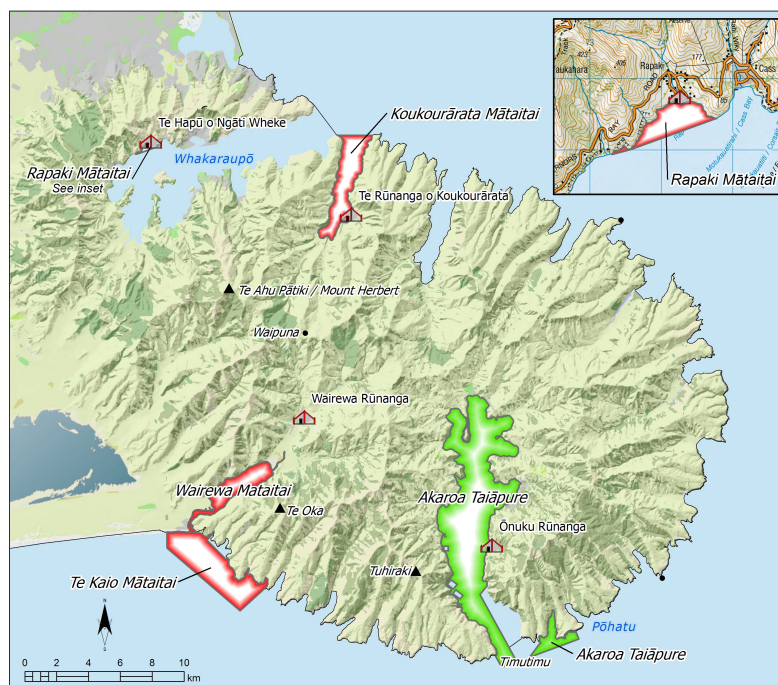
⁸ Customary use can include customary commercial fisheries, such as the pāua and lobster fisheries along the northern bays of Banks Peninsula.

⁹ Mahaanui IMP Issue TAN4 Explanation.

A second form of aquaculture involved the storage of kaimoana in taiki, or coastal storage pits. Pits were usually hollows in the rocks that would be covered by water at high tide, and were used to store shellfish such as paua and mussels. Historically, tāngata whenua living at Koukourārata would travel to a neighbouring bay in the autumn, make up small beds of kaimoana and store them under piles of rocks for the winter.¹⁰

Marine farms are a contemporary expression of mahinga kai. Te Rūnanga o Koukourārata is a joint venture partner in commercial mussel farms in the outer stretches of the bay. A primary driver for the establishment of marine farms in Koukourārata is to “bring whānau home” by providing employment opportunities.¹¹

Figure 3. Mātaitai and Taiāpure reserves on Banks Peninsula.



7.4 Future aspirations for mahinga kai

Ngāi Tahu mahinga kai interests extend beyond existing use to include aspirations for future use. These aspirations are about restoring kaimoana to levels that can sustain customary use and ensure safe consumption. The restoration of mahinga kai resources, and the whānau and hapū traditions associated with these resources is a key kaupapa for both Rūnanga.

¹⁰ Tau, TM et al. 1990, in Mahaanui IMP 2013 Issue KP9 Explanation.

¹¹ Peter Ramsden (Te Runanga o Koukourārata), personal communication April 31, 2014.

Te Hapū o Ngāti Wheke has signalled intent to work towards establishing a Mātaitai over a larger area of the harbour, consistent with aspirations to maintain and improve the kaimoana and fishery resources (Policy WH5.3 of the Mahaanui IMP). An application for the Whakaraupō Mātaitai, covering the inner two thirds of the Harbour is currently lodged with the Ministry for Primary Industries.

Te Rūnanga o Koukourārata have signalled intent to further develop aquaculture opportunities, to provide both cultural and commercial opportunities ([Policy KP9.2 of the Mahaanui IMP](#)).

8 Assessment of effects on Ngāi Tahu values

The proposed dredging and deposition activities have the potential to affect the coastal marine area of Whakaraupō and Koukourārata and the mahinga kai values associated with these harbours.

Given the level of previous engagement and existing information (see **Section 1.2 - Previous Engagement**), the focus of the cultural impact assessment process for this report is to:

- Confirm what the key cultural issues are;
- Review how existing information in the draft AEE addresses these issues, including the NIWA report;
- Provide conclusions as to a Ngāi Tahu response to this proposed activity.

8.1 Key cultural issues

As described in Section 7, the primary interest for Ngāi Tahu in assessing cultural effects of the proposed Capital Dredging Project is mahinga kai. The policy framework in the Mahaanui IMP 2013 reflects tāngata whenua intentions to ensure that all activities in Whakaraupō and Koukourārata are consistent with the objective of managing the harbours for mahinga kai. This means that all decisions relate back to mahinga kai: *How will the proposed activity affect mahinga kai values?* This includes the health, abundance and diversity of the resource, and the quality of habitat.

The key issues raised during the cultural impact assessment process are consistent with those documented during previous engagement:

- The risk that spoil (suspended sediment and potentially contaminants) may be transported to Koukourārata and have effects on mahinga kai values, including Mātaitai and marine farms.

- The potential effects of capital dredging on tidal currents, wave action and sediment dynamics in Whakaraupō, and therefore the potential contribution to existing sedimentation issues in the upper harbour, and impacts on kaimoana habitat quality.
- Impacts on customary fisheries associated with Whakaraupō, through disturbance or habitat degradation.
- The cumulative effects of proposed and existing LPC activities on the cultural health and mahinga kai values of Whakaraupō.

These issues were subsequently addressed in a Ngāi Tahu-commissioned specialist technical review prepared by NIWA of the likely impacts of a number of proposed LPC developments on matters of particular interest to Ngāi Tahu.¹²

Several additional issues were raised during the hīkoi and subsequent discussions associated with this CIA:

- The potential for disturbance of taonga from the seabed during dredging, including kō iwi tangata (human bones) or artefacts. The harbour was a major travel route between settlements and mahinga kai areas.
- The risk to marine mammals, particularly Upokohue (Hector's dolphin/ *Cephalorhynchus hectori*). The area around both harbours is the Banks Peninsula Marine Mammal Sanctuary, intended to protect the endangered Upokohue.¹³
- The potential for suspended sediment (and contaminants) from the dredging and disposal site to have adverse effects on pāua and lobster fisheries in the outer (Whakaraupō) harbour.
- The potential for suspended sediment and contaminants from the offshore disposal site to adversely affect marine farms and wild fisheries along northern Banks Peninsula.

The draft Assessment of Environmental Effects (AEE) provided by LPC for the purposes of this CIA report contains information on how Capital Dredging may affect some of the values and interests identified above. Table 1 provides a summary of key points made in the existing draft AEE with regard to cultural issues.

¹² National Institute of Water & Atmospheric Research (NIWA). May 2011. Technical review of proposed Lyttelton Port Company Ltd developments with specific reference to identified cultural values and concerns. Prepared for Mahaanui Kurataiao Ltd.

¹³ <http://www.doc.govt.nz/conservation/marine-and-coastal/other-marine-protection/banks-peninsula/>

Table 1: Key cultural issues raised by Ngāi Tahu 2007 – 2014, during previous engagement and this CIA process, and how these issues are addressed in the draft AEE for the Capital Dredging Project.

Issue	How the Assessment of Environmental Effects (AEE) addresses this issue
Suspended sediment entering Koukourārata and impacting on mahinga kai and marine farms.	<ul style="list-style-type: none"> • Deposition trails and modeling work undertaken to understand how far suspended sediment would be transported from drop zone, and how the sediment settles after the drop. • Plume is expected to spread out laterally near the seabed bottom rather than at surface. • Material released at the proposed offshore deposition ground will be transported slowly in a southeast direction parallel the northern peninsula coastline and eventually disappear in to the abyss beyond the continental shelf. Any sediment caught in weak eddies forming would eventually catch the same parallel currents. • Boat and bottom mounted ADCPs, and drogue release, show that there is little opportunity for suspended sediment to be transported into Koukourārata.
Further sedimentation in the mid and upper Whakaraupō	<ul style="list-style-type: none"> • No evidence of any significant quantities of sediment from the outer harbour reaching and causing swallowing in the middle part of the harbour, or accumulating in the upper harbour. Rāpaki is a control site for monitoring maintenance dredging, and monitoring shows no evidence of excessive sedimentation. • Particle tracking and Sediment Trend Analysis (STA) indicate that the sediment neither travels up into Whakaraupō nor propagates out of the harbour and into Port Levy. The majority of suspended sediment discharged from the dredge would be swept away on the incoming or outgoing tide and eventually accumulate in the deeper, more quiescent, navigation channel.
Impacts on fisheries at dump site	<ul style="list-style-type: none"> • Sand flounder is trawled for within the proposed spoil ground, and yellow-bellied flounder is trawled seaward of the harbour to about the 2 nautical mile limit. • It is expected that there will be very little impact on the fish population as flatfish and other inshore fisheries are highly mobile and would move out of the area stressed by deposition. It is also expected that the habitat will recover, and bottom feeding fish species will return. The short-term effects to the flatfish resources are expected to be less than minor. • It is likely to be more difficult to trawl for flatfish until the seabed flattens out and the sediment consolidates over time.
Effects of dredging on marine mammals	<ul style="list-style-type: none"> • The disposal of sediment is not expected to have any detrimental or long-term effects on dolphins or whales. Extremely low risk of strike. Any risk of adverse effects associated with the impact of underwater noise on marine mammals assesses as less than minor. Once a marine mammal is beyond 250 m of a dredge background noise would mask most dredge noise.
Ecological effects within spoil grounds	<ul style="list-style-type: none"> • The spoil is of marine origin with a high degree of similarity to the benthic sediments in the surrounding area. • Benthic community under the drop zone will be adversely affected. Initial rate of recovery assessed as relatively rapid (using surveys from maintenance dredging grounds).

8.2 Ngāi Tahu Assessment of Effects

Based on previous engagement, a review of the draft AEE, information gained during the hīkoi, and Ngāi Tahu discussions during the preparation of this CIA, the outcomes the assessment of effects of the proposed Capital Dredging Project on Ngāi Tahu values and interests are as follows:

1. LPC has made a significant effort to engage with tangata whenua with regard to this activity. This recognition of kaitiakitanga and rangatiratanga assists Ngāi Tahu to ensure the active protection of land, water and mahinga kai resources in Whakaraupō and Koukourārata, mō tātoa, ā, mō kā uri ā muri ake nei.¹⁴
2. Te Hapū o Ngāti Wheke (Rāpaki) and Te Rūnanga o Koukourārata recognise the need to provide for larger international vessels via the deepening and extension of the existing navigation channel in Whakaraupō. However, there are concerns about the localised effects of the activities on Ngāi Tahu mahinga kai values and interests, and about the cumulative effects of LPC activities on mahinga kai values in Whakaraupō.
3. If Capital Dredging proceeds, Te Hapū o Ngāti Wheke and Te Rūnanga o Koukourārata generally support the deposition of dredged seabed material to a suitable offshore spoil site. Ngāi Tahu policy would suggest a preference for the re-use of the dredged material in the recovery and expansion of port infrastructure rather than disposal to sea. However, Ngāi Tahu have significant concerns with further reclamation in Whakaraupō until there is an improved understanding of how existing reclamation and structures are contributing to sedimentation in the harbour and degradation of mahinga kai habitat.
4. A key issue for Ngāi Tahu is sediment dispersal from the offshore disposal site, and the potential for sediment, and contaminants such as heavy metals, to enter Koukourārata and have adverse effects on the Koukourārata/Port Levy Mātaitai values and kutai (mussel) farms. The whole of Koukourārata is a Mātaitai (see Section 7), and Te Rūnanga o Koukourārata is a Joint Venture Partner in marine farms on the west side of the harbour and one near the entrance (known as Beacon Rock).
5. This concern extends to the wild fisheries and marine farms in other bays along the northern coastline of Banks Peninsula.
6. Ngāi Tahu is not confident that the proposed disposal site is far enough offshore to prevent sediment/spoil from being transported to Koukourārata, and other areas valued for customary fisheries and marine farms. The success of the mussel farms at the Koukourārata harbour entrance is attributed to the inflow of nutrient-rich waters to the harbour from currents running along the coastline (see Photos 1 and 2). The outstanding question for the Te Rūnanga o Koukourārata is consequently: *if the nutrients make it there, why won't the sediment?*

¹⁴ "For us and our children after us".

7. Suspended sediment, and any potential contaminants that may be present in the spoil, have the potential to adversely effect mahinga kai values. The quality of the mahinga kai resource may be impacted, and habitat degraded. Given the significance of Koukourārata, Whakaraupō and their surrounds for mahinga kai, it is critical that the dredging and deposition activities associated with the Capital Dredging Project are planned and managed to prioritise the protection of these values.
8. To address this issue, an alternative site further offshore from Koukourārata, in deeper waters, should be investigated. This, in conjunction with a robust monitoring programme and an adaptive management plan, will provide confidence that Ngāi Tahu values and interests will be protected. The identification of an appropriate offshore disposal site must reflect the need for absolute certainty that spoil will not reach Whakaraupō, Koukourārata, or the bays along the northern Peninsula.
9. Ngāi Tahu policy is that economic costs cannot take precedence over the cultural, environmental and intergenerational costs of discharge activities to the coastal marine area (Mahaanui IMP Policy TAN2.4).
10. In making this recommendation, it is acknowledged that a suitable location further offshore will still require careful investigation with regards to potential effects on fisheries, marine mammals and benthic communities. The site would also need to be selected to ensure that the new location did not create a risk of sediment dispersing northwards into Pegasus Bay and the takiwā of Ngāi Tūāhuriri.



Photo 1: This photo is held by Te Rūnanga o Koukourārata, and was provided for the purposes of this CIA to illustrate the movement of nutrients into the Harbour (Koukourārata). The inflow of nutrients into the harbour is recognised as the driver behind the success of the kutai (mussel farms), enabling a harvest earlier than initially forecast. The photo taken by a whānau member on a flight to the Chatham Islands; and provided by Peter Ramsden.



Photo 2: Marine farms of interest to Te Rūnanga o Koukourārata. The Rūnanga is a Joint Venture partner in the kutai (mussel) farms on the east side of the Harbour (right of photo; looking into the harbour) and the Beacon Rock marine farm (bottom left).

11. Ngāi Tahu support the intention to monitor sediment movement into Koukourārata for a full year prior to the start of capital dredging.¹⁵ The Rūnanga welcomes the opportunity to provide input into this monitoring programme, specifically the location of the monitoring sites, the inclusion of thresholds, and the response to any adverse results.
12. The second key issue for Ngāi Tahu is the cumulative effects of proposed and existing LPC activities on the cultural health and mahinga kai values of Whakaraupō. A consent-by-consent approach to assessing effects is not adequately recognising or providing for cumulative effects. Local knowledge indicates that existing structures and operations (e.g. breakwater and reclamation) may be having an impact on mahinga kai values, through changes to the ability of the harbour to flush sediment out to sea.¹⁶ It is difficult to assess the potential effects of the proposed Capital Dredging project in the absence of a solid understanding of how existing structures and operations are contributing to sedimentation problems.

¹⁵ Information provided by LPC technical on the hīkoi to the proposed offshore disposal site.

¹⁶ Some Te Hapū o Ngāti Wheke representatives noted that older structures and reclamation were established without an appropriate assessment of effects on mahinga kai.

13. A related issue is that the Capital Dredging Project is one component of a longer term LPC plan for Port recovery and expansion. Ngāi Tahu have significant concerns with further reclamation in the harbour, particularly given the lack of information about how existing reclamation and structures are affecting mahinga kai. LPC and Te Hapū o Ngāti Wheke need to have the discussion about how expansion occurs, and how this aligns with Rūnanga aspirations to manage the harbour as mahinga kai and a Mātaitai.
14. While the primary emphasis is cumulative effects, Ngāi Tahu note that the NIWA independent specialist report commissioned by MKT identified shortcomings in relation to the potential impacts of dredging on fishes in Whakaraupō, particularly small sharks.¹⁷ Ngāti Wheke have a long tradition of shark fishing in Whakaraupō; the harbour was traditionally known for pioke (rig).¹⁸ The report identifies the need for surveys to determine the distribution and abundance of selected fishes and other mahinga kai in the vicinity, before and after the proposed works. This potential localised effect on mahinga kai values will need to be assessed as part of the consent application.
15. Te Hapū o Ngāti Wheke also raise the issue of whether overall harbour health would benefit from disposing of all maintenance dredging sediment offshore, rather than in two locations, as proposed in this application.
16. Te Hapū o Ngāti Wheke policy is that Whakaraupō as a working port does not have to be inconsistent with managing the Harbour for mahinga kai values. As the two major interests in Whakaraupō, Ngāi Tahu and LPC need to work together to investigate key issues of cultural concern, including sedimentation of mahinga kai habitat and how dredging, reclamation and coastal structures may be contributing to this, and develop strategies to address these issues, including specific restoration actions such as dredging and wetland restoration in the upper harbour.
17. Ngāti Wheke seeks to restore the cultural health of the Whakaraupō via a whole harbour approach to eliminate wastewater discharges, reduce sedimentation, achieve a water quality standard consistent with the harbour as mahinga kai (i.e. shellfish gathering standard), protect and restore fish stocks through mātaimai bylaws, and the active restoration of shellfish populations. As a primary user of the harbour, LPC is in the position alongside Ngāi Tahu to champion a whole harbour restoration plan with all parties working collaboratively to identify key issues and ways to address those. This approach could be similar to the marine strategy produced by Te Korowai o Te Tai o Marokura, the Kaikoura Coastal Marine Guardians.¹⁹
18. With regard to the potential disturbance and resultant loss of taonga or kō iwi tangata as a result of dredging the seabed, Ngāi Tahu has determined that this is unlikely given the depth of the existing channel. It would also be difficult to determine the presence of taonga, and to separate these from dredging material, given the dredging methods used.

¹⁷ National Institute of Water & Atmospheric Research (NIWA). May 2011. This specialist technical review addressed the likely impacts of a number of proposed LPC developments on matters of particular interest to Ngāi Tahu.

¹⁸ Te Hapū o Ngāti Wheke, 2011. Whakaraupō Mātaitai application.

¹⁹ <http://www.teamkorowai.org.nz/>

19. With regard to effects on marine mammals and the relationship of Ngāi Tahu to these, the re-location of the disposal site further offshore in deeper waters should reduce any risk to species such as Upokohue (Hector Dolphin/ *Cephalorhynchus hectori*). The proposed dredging and deposition activities are situated within the Banks Peninsula Marine Mammal Sanctuary.²⁰ While a Cawthron Institute Report prepared for LPC concludes that there are unlikely to be long term or detrimental effects on marine mammals,²¹ shifting the dump site further offshore would further recognise the need to protect marine mammal habitat.

9 Recommendations

“Tāngata whenua accept that Lyttelton is an important working port for the South Island, providing significant economic benefits for the community and region. However, it is important to manage the effects of LPC activities on the cultural health of the Whakaraupō, and on Ngāi Tahu and community values. Whakaraupō as a working port and harbour does not have to be inconsistent with managing the harbour for mahinga kai.” [Mahaanui IMP, Issue WH2) Explanation, p. 254].

“...all decisions must relate back to mahinga kai: How will the proposed activity affect mahinga kai resources, and the ability of tāngata whenua to access and use these resources?”. [Mahaanui IMP, Issue KP2 Explanation, p. 267]

The results of this cultural impact assessment indicate that Ngāi Tahu is supportive of the need to provide for next generation of international vessels in Whakaraupō. However, there are concerns with localised impacts on mahinga kai values and the need to examine the cumulative of proposed and existing LPC activities on Whakaraupō over the long term, within the context of a collaborative and integrated whole harbour restoration effort.

Whakaraupō and Koukourārata, and their surrounds, are highly valued for mahinga kai. Mahinga kai values and interests are an integral part of ancestral relationship of Ngāi Tahu and their culture and traditions to these places. Given the significance of these values, it is critical that planning, design and management of the proposed capital dredging project prioritises the protection of these values.

A key message in the *Mahaanui Iwi Management Plan 2013* is that Whakaraupō as a working port does not have to be inconsistent with managing the harbour for mahinga kai values. The key to recognising multiple values and interests is to work together to manage the effects of port activities and develop strategies for long term, whole harbour restoration.

The following recommendations identify the key actions sought by Ngāi Tahu to address the potential for adverse effects on Ngāi Tahu values, interests and associations. **Note: it is important that these recommendations are read in conjunction with Section 8.**

²⁰ The area was created in 1988 under the Marine Mammals Protection Act 1978 to protect upokohue/Hector's dolphins from being caught in set nets. The Sanctuary was extended in 2008 and seismic surveying work is also restricted.

²¹ Appendix 10 of the AEE for this Consent Application: Cawthron Institute, December 2009. Assessment of Potential Effects on Marine Mammals of Proposed Capital Dredging of Approach Channel to Lyttelton Port of Christchurch and Offshore Disposal of Spoil.

Relationship of Ngāi Tahu to Whakaraupō and Koukourārata

1. Planning, design and management of the proposed capital dredging project must prioritise the protection of the mahinga kai values that Whakaraupō and Koukourārata are recognised and highly valued for, particularly Mātaitai.²²

Alternative disposal site

2. Identify an alternative disposal site further away from Koukourārata. The proposed site is too close to the harbour entrance to provide certainty that sediment will not be transported into the Harbour (or along the northern bays) and pose a risk to Mātaitai values and Ngāi Tahu interests in marine farms.

Use of dredged seabed material in Port recovery

3. The re-use of the dredged seabed material in the recovery of port infrastructure is more consistent with Ngāi Tahu policy than disposal to sea. However, Te Hapū o Ngāti Wheke have significant concerns with further reclamation in the harbour (see Section 8) and these would need to be addressed in the first instance. Further, any re-use of dredged material would require an assessment of effects on the environment, and conditions to ensure that the material did not contribute to sedimentation issues in the harbour.

Monitoring

4. The monitoring programme established for the Capital Dredging Project must include:
 - (a) Specific provisions for mahinga kai (e.g. turbidity levels and the relationship to macro algae growth and the health of customary fisheries).
 - (b) Specific thresholds and limits for sediment dispersal and water quality.
 - (c) Specific actions that will be taken if thresholds are reached (e.g. Te Rūnanga o Koukourārata representatives identify the need for a specific “stop and re-assess” provision.).
 - (d) Provisions for peer review of monitoring methods and results.
5. The proposed programme to monitor sediment movement at the entrance of Koukourārata should be expanded to include monitoring sites on both sides of the entrance to Koukourārata, to monitor sediment transport before, during and following the dredging and deposition.

²² The Environment Court decision for Port of Tauranga Ltd. dredging applications noted that Mātaitai are directly relevant to RMA 1991 Part 2 analyses, as mātaitai are established to recognise and provide for the special relationship of tangata whenua with an area (s6(e)). The decision also noted that adverse effects on a Mātaitai reserve are effects on the ability of tangata whenua to exercise kaitiakitanga (s7(a)) and rangatiratanga (s8).

Cumulative effects and Whakaraupō harbour restoration

6. LPC to work with the Te Hapū o Ngāti Wheke Manawhenua Advisory Group²³ to address key issues within the spirit of a Treaty relationship, and consistent with protecting the harbour as mahinga kai and a working port. This includes:
- (a) Understanding the cumulative effects of LPC activities on the Whakaraupō, particularly how existing structures in the harbour may be contributing to sedimentation and degradation of mahinga kai habitat (e.g. changes to hydrodynamics and a reduction in the ability of the harbour to flush sediment out, and therefore the accumulation of sediment on kaimoana beds).
 - (b) A review of the existing monitoring programme (methods and results) for the harbour, particularly monitoring of sedimentation near the Rāpaki Mātaitai and in the upper harbour and effects on mahinga kai.
 - (c) The identification of further investigation or monitoring requirements for the harbour.
 - (d) Discussions on how the use of Ngāi Tahu monitoring and assessment tools, including State of the Takiwā and the Marine Cultural Health Index (MCHI) can contribute to investigations and monitoring.
 - (e) Ngāi Tahu engagement on the Port Lyttelton Plan (long term plan for the recovery and reinstatement of port infrastructure) and how the Plan can best recognise and provide for Ngāi Tahu values, issues and aspirations for the harbour.
 - (f) The identification of a strategy to promote and progress a 'whole harbour restoration plan', involving all key interests working collaboratively to identify key issues and ways to resolve these.
 - (g) The establishment of a strategy for the restoration of the Head of the Bay as a flagship project, restoring this area to reflect the name: Whakaraupō – the harbour of raupō, or place of reeds. This may include further dredging into the upper harbour.
7. Te Hapū o Ngāti Wheke seek to have a discussion with LLPC about the feasibility, risks and benefits of establishing one maintenance dredging disposal site (i.e. offshore) rather than the current proposal to use both the existing, consented maintenance dredging sites and the offshore site.

²³ The Manawhenua Advisory Group was established by Te Hapū o Ngāti Wheke and LPC in April 2014 to enable facilitated, structured and regular interactions between LPC and Ngāti Wheke.

Adaptive environment management plan

8. If the capital dredging project proceeds, the activity and its potential effects should be managed within an adaptive environmental management plan framework, incorporating the monitoring provisions in Recommendation 4. The plan would set out:
 - a) Dredging and disposal methodology.
 - b) Monitoring programme, including specific thresholds.
 - c) Provisions that enable the activity to be responsive to specific conditions such as storm events (e.g. storm events may increase the rate or extent of sediment dispersal or may re-suspend sediment at the drop zone).
 - d) Actions/mitigation responses if thresholds are reached.
 - e) Communication plan for keeping Ngāi Tahu informed of monitoring results.
9. Ngāi Tahu should have the opportunity to contribute to and review this plan.

Affected parties

10. Recognise Sanford Ltd (Sustainable Seafood) and Ngāi Tahu Seafood Ltd. as affected parties to this application, and consider opportunities to work with Sanford Ltd. to share monitoring data.

Further investigations

11. Further investigation is required to understand and assess the potential impacts of the proposed Capital Dredging Project on customary fisheries. This should include the potential effects on small sharks, as identified in the NIWA technical review commissioned by MKT. NIWA recommended monitoring the presence and abundance of juvenile school sharks and rig in the upper harbour by conducting a long line survey, with monitoring repeated at later dates to determine whether any major changes occur in the abundance of small sharks.

Provision of CIA to consent authority

12. This Cultural Impact Assessment report, and the outcomes of discussions to address key issues, should be provided in full to the consent authority.

10 Where to from here?

Te Hapū o Ngāti Wheke and Te Rūnanga o Koukourārata are actively working to protect and restore Whakaraupō and Koukourārata as mahinga kai. Strategic relationships with key organisations, industry and councils in the takiwā, and contributing to planning processes that determine how and where specific activities can occur, are critical to achieving this goal.

This CIA report provides information to assist LPC to understand Ngāi Tahu views on the proposed Capital Dredging Project. The information in the report will provide the basis for further discussions between LPC and Ngāi Tahu, and ensure that resource consent applications recognise and provide for Ngāi Tahu values. While some of the issues raised in the CIA may fall outside of the scope of the specific activity, these are included in the interest of continuing to progress the relationship between Ngāi Tahu and LPC.

Source material

Environment Court Decision No. [2011] NZEnvC 402. In the matter of appeals under Section 120 of the RMA 1991, between Te Rūnanga o Ngāi Te Rangi Iwi Trust, S Tuahakaraina on behalf of Te Taumata o Nga Te Potiki and Ngāti Ruahine & L Waaka, AND the Bay of Plenty Regional Council (Respondent) and Port of Tauranga Limited (Applicant).

Lyttelton Port Company. 2014. *Draft Assessment of Environmental Effects (including all technical reports)*.

Ngāi Tūāhuriri Rūnanga, Te Hapū o Ngāti Wheke (Rāpaki), Te Rūnanga o Koukourārata, Ōnuku Rūnanga, Wairewa Rūnanga and Te Taumutu Rūnanga. 2013. *Mahaanui Iwi Management Plan*.

National Institute of Water & Atmospheric Research (NIWA). May 2011. *Technical review of proposed Lyttelton Port Company Ltd developments with specific reference to identified cultural values and concerns*. Prepared for Mahaanui Kurataiao Ltd.

Otago Regional Council. 2011. Decision of Commissioners Appointed by Otago Regional Council and Minister of Conservation, in the matter of an application by Port Otago Limited for resource consents for Project Next Generation.

Te Hapū o Ngāti Wheke. 2011. Application for Whakaraupō Mātaitai (Ministry for Primary Industries).

Appendix 1: Technical reports commissioned by LPC for investigation and assessment of potential effects of the proposed Capital Dredging Project.

- Currents outside Lyttleton Harbour – Analysis of ADP Data (Mulgor Consulting Ltd 2009)
- Currents, waves and sediment transport (Hydrodynamics) – Mulgor Consulting Ltd 2013.
- Sediment transport (SedTrend Analysis Ltd. 2012).
- Capital and Maintenance Dredging impact on the physical environment (currents, waves and sediment transport) – OCEL Consultants NZ Ltd. 2013.
- Assessment of impacts to benthic ecology and marine ecological resources – Cawthron Report (2009).
- Assessment of effects from maintenance dredging spoil disposal in Lyttelton Harbour, supplementary surveys and reviews – Cawthron Report (2013).
- Environmental monitoring of impacts of maintenance dredging spoil disposal in Lyttelton Harbour – Cawthron Report (2010).
- Assessment of potential effects on marine mammals – Cawthron Report (2009).
- Effects of noise on marine mammals – Hegley Acoustic Consultants (2009).
- Economic effects – Brown, Copeland and Co. Ltd 2014.
- Effects on recreation – Rob Greenway & Associates (2014).

Appendix 2: Schedule 101 from the Ngāi Tahu Claims Settlement Act 1998

Schedule 101

Statutory acknowledgement for Te Tai o Mahaanui (Selwyn – Banks Peninsula Coastal Marine Area)

Statutory area

The statutory area to which this statutory acknowledgement applies is Te Tai o Mahaanui (Selwyn – Banks Peninsula Coastal Marine Area), the Coastal Marine Area of the Selwyn – Banks Peninsula constituency of the Canterbury region, as shown on SO Plan 19407, Canterbury Land District as shown on Allocation Plan NT 505 (SO 19901).

Preamble

Under section 313, the Crown acknowledges Te Rūnanga o Ngāi Tahu's statement of Ngāi Tahu's cultural, spiritual, historic, and traditional association to Te Tai o Mahaanui as set out below.

Ngāi Tahu association with Te Tai o Mahaanui

The formation of the coastline of Te Wai Pounamu relates to the tradition of Te Waka o Aoraki, which foundered on a submerged reef, leaving its occupants, Aoraki and his brothers, to turn to stone. They are manifested now in the highest peaks in the Kā Tiritiri o Te Moana (the Southern Alps). The bays, inlets, estuaries and fiords which stud the coast are all the creations of Tū Te Rakiwhānoa, who took on the job of making the island suitable for human habitation.

The naming of various features along the coastline reflects the succession of explorers and iwi (tribes) who travelled around the coastline at various times. The first of these was Māui, who fished up the North Island, and is said to have circumnavigated Te Wai Pounamu. In some accounts the island is called Te Waka a Māui in recognition of his discovery of the new lands, with Rakiura (Stewart Island) being Te Puka a Māui (Māui's anchor stone). A number of coastal place names are attributed to Māui, particularly on the southern coast.

There are a number of traditions relating to Te Tai o Mahaanui. One of the most famous bays on the Peninsula is Akaroa, the name being a southern variation of the word “Whangaroa”. The name refers to the size of the harbour. As with all other places in the South Island, Akaroa placenames recall the histories and traditions of the three tribes which now make up Ngāi Tahu Whānui: Waitaha, Ngāti Mamoe and Ngāi Tahu.

Waitaha traditions tell that after Rakaihautu had dug the southern lakes with his kō (a tool similar to a spade)—Tūwhakarōria—he and his son, Rokohouia, returned to Canterbury with their people. On the return, Rakaihautu buried his kō (a tool similar to a spade) on a hill overlooking the Akaroa harbour. That hill was called Tuhiraki (Bossu). Rakaihautu remained in this region for the rest of his life.

For Ngāi Tahu, traditions such as these represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

Because of its attractiveness as a place to establish permanent settlements, including pā (fortified settlements), the coastal area was visited and occupied by Waitaha, Ngāti Mamoe and Ngāi Tahu in succession, who through conflict and alliance, have merged in the whakapapa (geneology) of Ngāi Tahu Whānui. Battle sites, urupā and landscape features bearing the names of tūpuna (ancestors) record this history. Prominent headlands, in particular, were favoured for their defensive qualities and became the headquarters for a succession of rangatira and their followers.

Ngāi Tahu connections to Akaroa came after the settling of Kaiapoi Pa in North Canterbury. Akaroa harbour was soon allocated to a number of chiefs by Tūrākautahi of Kaiapoi. One chief, Te Ruahikihiki, settled at Whakamoa near the Akaroa Heads at the south east end of the harbour. Te Ruahikihiki fell in love with the elder sister of his wife, Hikaiti. As it was customary at that time for chiefs to have several wives, Te Ruahikihiki took the elder sister, Te Ao Taurewa, as his wife.

Hikaiti fell into a deep depression and resolved to kill herself. She arose early in the morning, combed her hair and wrapped her cloak tightly around herself. She went to the edge of the cliff where she wept and greeted the land and the people of her tribe. With her acknowledgements made, she cast herself over the cliff where she was killed on the rocks. The body remained inside the cloak she had wrapped around herself. This place became known as Te Tarere a Hikaiti (the place where Hikaiti leapt). After a long period of lamentation, Te Ruahikihiki and his people moved to the south end of Banks Peninsula to Te Waihora (Lake Ellesmere).

Another one of the senior chiefs within the Akaroa harbour was Te Ake whose hapū was Ngāi Tuhaitara. Ōtokotoko was claimed by Te Ake when he staked his tokotoko (staff) at that end of the bay. Te Ake's daughter, Hine Ao, is now represented as a taniwha that dwells with another taniwha, Te Rangiorahina, in a rua (hole) off Opukutahi Reserve in the Akaroa Harbour. Hine Ao now carries the name Te Wahine Marukore. These taniwha act as (kaitiaki) guardians for local fisherman.

The results of the struggles, alliances and marriages arising out of these migrations were the eventual emergence of a stable, organised and united series of hapū located at permanent or semi-permanent settlements along the coast, with a intricate network of mahinga kai (food gathering) rights and networks that relied to a large extent on coastal resources.

The whole of the coastal area offered a bounty of mahinga kai, including a range of kaimoana (sea food); sea fishing; eeling and harvest of other freshwater fish in lagoons and rivers; marine mammals providing whale meat and seal pups; waterfowl, sea bird egg gathering and forest birds; and a variety of plant resources, including harakeke (flax), fern and tī root.

The coast was also a major highway and trade route, particularly in areas where travel by land was difficult. Travel by sea between settlements and hapū was common, with a variety of different forms of waka, including the southern waka hunua (double-hulled canoe) and, post-contact, whale boats plying the waters continuously. Hence tauranga waka occur up and down the coast in their hundreds and wherever a tauranga waka is located there is also likely to be a nohoanga (settlement), fishing ground, kaimoana resource, rimurapa (bull kelp) with the sea trail linked to a land trail or mahinga kai resource. The tūpuna had a huge knowledge of the coastal environment and weather patterns, passed from generation to generation. This knowledge continues to be held by whānau and hapū and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the coast.

Numerous urupā are being exposed or eroded at various times along much of the coast. Water burial sites on the coast, known as waiwhakaheketūpāpaku, are also spiritually important and linked with important sites on the land. Places where kaitāngata (the eating of those defeated in battle) occurred are also wāhi tapu. Urupā are the resting places of Ngāi Tahu tūpuna and, as such, are the focus for whānau traditions. These are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected in secret locations.

The mauri of the coastal area represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the coastal area.