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Time: 10.00 am
Venue: Council Chamber, Dunedin Public Art Gallery, The Octagon,
Dunedin

Council
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ITEM	TABLE OF CONTENTS	PAGE
9	Te Awa Ōtākou- Issues and Opportunities Report	
	A Te Awa Ōtākou- Issues and Opportunities Report	2
10	Supporting Documentation for the 9 year plan Consultation Document	
	A Financial Information for the 9 year plan	177
	B Significant Forecasting Assumptions	225
	C Financial Strategy	238
	D Infrastructure Strategy	257



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kaunihera
a-rohe o
Ōtepoti

COUNCIL

26 March 2025

Prepared for Otago Regional Council

Te Awa Ōtākou Issues & Opportunities

Prepared for
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studiopacificarchitecture



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Whakaihu Waka
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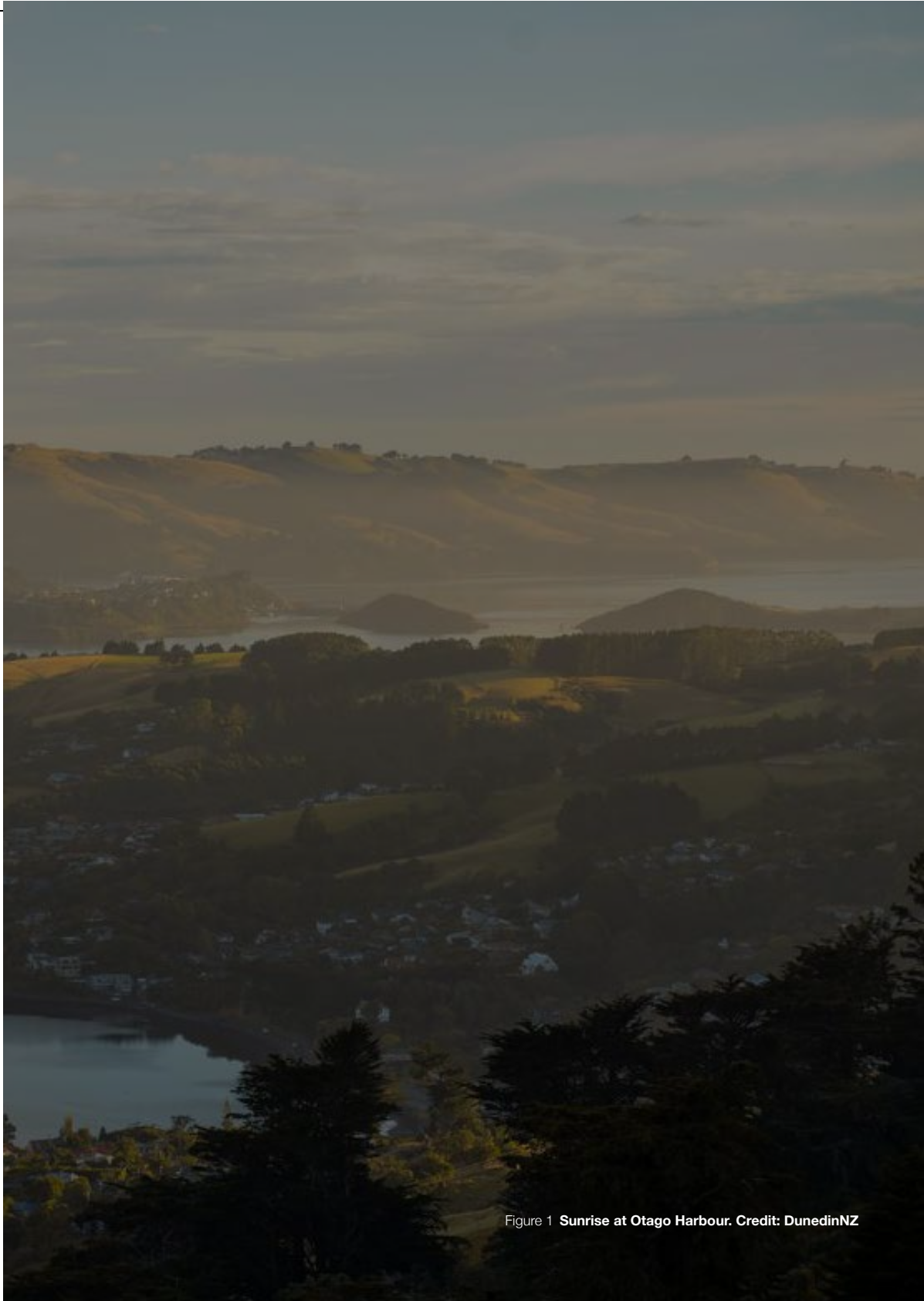


Figure 1 Sunrise at Otago Harbour. Credit: DunedinNZ



He Mihi

Tēnēi te ruru te koukou nei

Kīhai i māhitihiti

Kīhai i māarakaraka

Te upokonui o te ruru

TEREKOU

He po he po

He ao

Ka awatea

E tuku ana kā mihi o te raki nei ki te kaupapa nunui ake nei ko kā kōrero e pa ana Te awa Ōtākou, he tai timu he tai pari,

o kā ara tapuwae o rātou e heke ana mai, he pataka kai mo kā reanga i kā ra o mua, a, mo rātou angāwhakamua.

Ko Te awa Ōtākou he ara nui, he ara pai mo te tini me te mano e haere ana ki etahi kokonga o te wahapū, ki kā wāhi nohoaka o etahi kaika huri noa te hapua,

mai Pukekura ki te wahapū tae noa ki Ōtepoti ki uta.

*Kia hora te marino, kia whakapapa pounamu te moana
Kia tere te kārohirohi i mua i to huarahi.*

***This is the ruru (morepork) who calls
Whose head does not bow
From side to side, up and down
The head of the ruru is steadfast on its shoulders
As it calls us from the darkness
And into the world of light
To a dawn of new understanding***

Many are the greetings on this special occasion, heralding discussion on the sea river Ōtākou, the tide that ebbs and flows, ployed by the many past and present, sustainer of generations, past, present and for the future.

Ōtākou the sea river of many journeys, of many features, benefactor to the multitudes, of the many communities, from Pukekura at the mouth to Otepoti at the head of the harbour.

May peace be widespread

May the sea glisten like greenstone

and may the shimmer of light guide you on your way

Edward Ellison - Ūpoko, Te Rūnanga o Ōtākou

Figure 2 Otakou Awa Credit: Aukaha



Contents

Executive Summary	8
1 Introduction	12
1.1 Need for and Purpose of this Report	13
1.2 Nature and Structure of the Report	14
1.3 What has Informed this Report	16
1.4 Study Area	18
2 Reflections on the Past	20
2.1 Whakapapa	22
2.2 Geological History	26
2.3 Human Histories + Connections to the Harbour	28
2.4 Tikaka / Values	34
2.5 Ongoing land use change and development	35
2.6 Summary of impacts	53
3 Understanding the Present	54
3.1 The Harbour Today	56
3.2 Health of Te Awa Ōtākou	60
3.3 The Harbour Community	66
3.4 Regulatory Role-players and Responsibilities	79
3.5 Current Issues	86
4 Looking to the Future	130
4.1 Opportunities	132
4.2 Conclusions and Recommendations	169
References	170



Glossary

Atua _ An ancestor or deity.

Awa _ River, in this context it is the harbour.

Hapū _ Large kinship group and the primary political unit in traditional Māori society.

Iwi _ Tribal groupings. A collection of whānau who share descent from a common ancestor.

Kāika _ Village, Home, Residence.

Kaimoana _ Seafood.

Kaitiaki _ Custodian, minder, caregiver, protector.

Kaitiakitaka _ The action of guardianship. Custodianship.

Koputai _ Port Chalmers.

Kou _ End point.

Mahi _ Work.

Mahika Kai _ Food Workings. Often associated with the traditional gathering traditions.

Mana whenua _ People of place, local authority.

Manu _ Bird.

Mātauraka _ Knowledge.

Mihi _ Acknowledgements.

Noa _ Unrestricted, void.

Ōtepoti _ Dunedin.

Pakakohi _ Taranaki Tribe.

Pūrākau _ Creation narratives that depict people, place and mythological beings of importance.

Rakatira _ Chief. A person of significance.

Rakiriri _ Goat Island.

Rongoā _ Traditional medicine and healing.

Rūnaka _ (Rūnanga). Iwi authority and council.

Tapu _ Sacred, Restricted, set apart.

Tauraka waka _ Waka landing sites.

Te Waipounamu _ The South Island of New Zealand.

Tikaka _ (tikanga) traditional practice, custom, procedure.

Tuaki _ Cockles, a New Zealand endemic shellfish.

Tūpuna _ Ancestors.

Waka _ Canoe.

Whakapapa _ Lineage. Genealogy.

Whare _ House, structure, dwelling.

Whata _ Raised platform.



Mātauraka Māori - Intellectual Property

This body of work contains mātauraka Kāi Tahu knowledge, which is intellectual property held collectively and represented by Aukaha and mana whenua. It is important to acknowledge the **Wai 262 Claim** which addresses the ownership and use of Māori knowledge, cultural expressions, indigenous species of flora and fauna, all known as taoka (treasure), and inventions and products derived from indigenous flora and fauna and/or utilised Māori knowledge.

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Figure 3 **Otakou Awa** Credit: Aukaha



Executive Summary



Figure 4 Port to Port Cruise. Credit: DunedinNZ



Executive Summary

Te awa Ōtākou (Otago Harbour) has played and continues to play a critical role in the cultural, social, and economic wellbeing of Ōtepoti (Dunedin) and wider Otago. With its strategic location, the harbour supports commercial fisheries, trade access, and serves as a significant asset for both local and regional economies. Te awa Ōtākou is also highly valued for recreation and amenity, deeply embedded in the city and region's identity.

However, the health and sustained function of the harbour are under ongoing pressure. Human activities such as land development, roading, stormwater management, wastewater overflow, harbour dredging, land reclamation and fishing have led to habitat degradation, pollution, and the loss of ecological, recreational, and cultural values. Climate change - rising sea levels, changing rainfall patterns, and increasing temperatures - compounds these challenges, demanding decisive, long-term planning and action.

The Otago Regional Council (ORC) has commissioned this report in response to calls from the local community and mana whenua for sustained, collective action aimed at restoring the health of Te awa Ōtākou. This report lays the foundation for developing a way forward.

The approach to the work has been in line with that of the ORC's Integrated Catchment Management Programme: community led, non-regulatory, intergenerational, and solutions focussed – it seeks to build on and align existing community effort and local government work-programmes with an emphasis on demonstrating success and building momentum through action.

The report has been informed by a stakeholder mapping process, and engagement with upwards of 40 individuals and organisations representing the broad spectrum of user and interest groups across the system. This understanding was complemented by a review of key documents and information which was distilled in arriving at the seven primary themes under which issues and opportunities are reported, these being:

- Accessibility
- Environmental Health
- Tourism
- Arts and Culture
- Infrastructure Resilience
- Climate Resilience
- Governance.

The report is structured with a temporal lens, over three sections – Reflecting on the Past, Understanding the Present, and Looking to the Future. As a stocktake, it paints a rich picture of the history of Te Awa Ōtākou and documents the drivers of change in its health over time, including present issues and how climate change is amplifying these. The report is graphically rich in an effort to bring the value of this significant asset to life and stimulate the required response to restore and sustain its health and the associated values.

The overriding issue identified through the engagement and document review is that despite a shared purpose and multiple examples of cooperation between the wide variety of harbour users, much of the effort still happens in isolation of a common understanding of, and vision for, the harbour. There is also no harbour wide institutional mechanism to enable collective action at the harbour scale. There are also common challenges and barriers, best overcome through a collective response. Importantly the report is peppered with examples of the significant effort toward the common vision of a healthy and thriving harbour and in the region of 100 opportunities have been documented.



Executive Summary

The ORC ICM approach provides the blueprint for achieving a common vision and coordinating actions towards this. The process commences with establishing an 'integrated catchment group' through which to initiate the development of an action plan comprising a vision and supporting objectives to inform the further refinement and prioritisation of the actions.

The ICM programme is being rolled out at a Freshwater Management Unit (FMU) scale with the harbour falling within the Dunedin and Coast FMU. However, given the highly developed nature of the catchment and the multiple uses/users and strategic importance of the harbour, for the approach to be successful, it is recommended that it is applied at the scale of the Harbour catchment.

A highlight of this process has been the effective partnership between mana whenua, the ORC and DCC, and involvement of staff and councillors from both organisations. This partnership serves as a solid foundation for taking this mahi forward.





1 Introduction

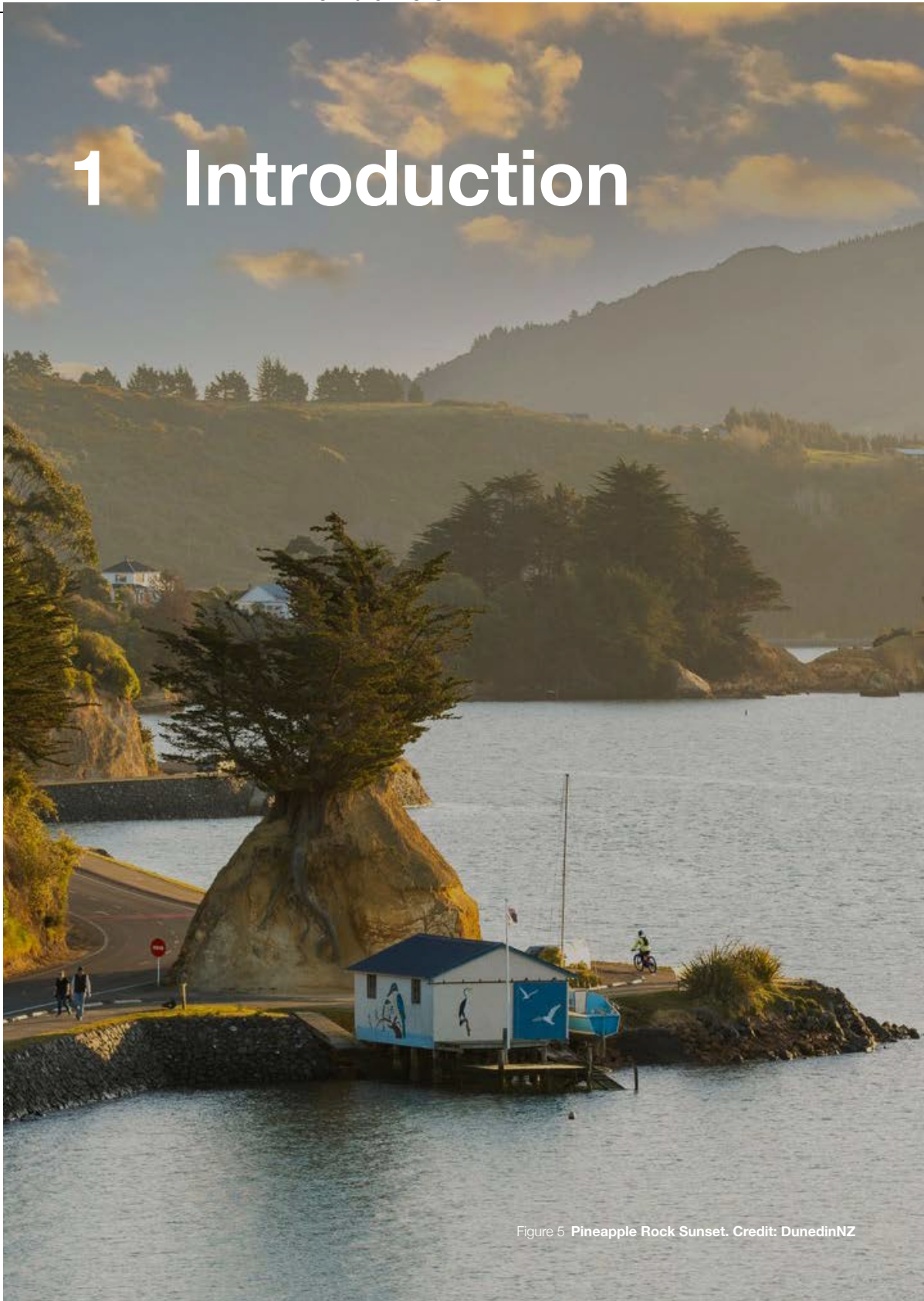


Figure 5 Pineapple Rock Sunset. Credit: DunedinNZ



1.1 Need for and Purpose of this Report

Te awa Ōtākou - The Otago Harbour has historically played and continues to play an important role in supporting the cultural, social and economic well-being of the people of Ōtepoti (Dunedin) and wider Otago. With a long and fascinating geological history which continues to unfold in the face of sea-level rise and climate change, Te awa Ōtākou has provided the region more than just its name. As a valuable source of mahika kai to tangata whenua, the tidal flats, coastal waters and open ocean beyond have for centuries sustained the community and provided deep cultural values. Given its scale and strategic position on the coast, it supports commercial fisheries and access to trade and is therefore a critical asset in the local and regional economy. The accessibility of Te awa Ōtākou to the community means it is highly valued for recreation and amenity, part of the city and region’s identity.

The benefits from the many values provided by Te awa Ōtākou are dependent on its ecological health and sustained, resilient function. As a tidal inlet system, Te awa Ōtākou is influenced by the complex interactions of human land and water-uses, and terrestrial, coastal and marine processes.

The demand on Te awa Ōtākou and the resources it supports alongside the development of Ōtepoti has translated into innumerable pressures on the ecosystem. Access to the port is reliant on regular dredging, while the urbanisation and densification of Ōtepoti has resulted in altered stormwater flows, wastewater overflows and continued coastal encroachment. Meanwhile, recreational and commercial fisheries have depleted fish stocks. Combined, these human activities have resulted in degradation and loss of habitat, pollution, and degraded recreational, amenity and cultural values.

This context is overlain with the intensifying impacts of climate change including rising sea levels, increasing temperatures and changing rainfall patterns which demand immediate response framed by long-term thinking.



The health of the harbour reflects the health of our people.



Donna Matahaere, mana whenua.

It is important to note a study with essentially the same purpose as this work, though not the same approach¹, was undertaken in the early 1990s. It sought to address a fragmented response to the declining health of the harbour. It was comprehensive, involving working groups and technical reports and culminated in a wide array of recommendation actions for taking forward a proposed ‘Phase 2’. As reflected in this report there has been substantive action by the wide array of stakeholders in relation to these recommendations. Despite this notable effort, only a portion of the recommendations have been implemented over the following 30 years and where so not always at the scale required to shift the trajectory. Hence, many of the issues noted in the earlier work are echoed in this report. Possibly the most significant reason for the outcomes of the 1990’s work not being more fully acted on was the failure to establish a harbour ‘forum’ or body to give effect to a co-ordinated approach to

1 The Otago Harbour Planning Study Draft Issues and Options Report (ORC & DCC, 1991). The 1991 report explored detailed research on subject matter relevant to this report, which was supplemented by supporting knowledge generation studies (and reports) overseen and undertaken through working groups for the various themes.



Introduction

implementing more of the many useful recommendations. There have been numerous subsequent calls for such a structure.

Failure to effectively build on the 1990's work has meant that planning and implementation of responses undertaken in terms of varying policy and mandates, all dealing with certain areas of the harbour or specific elements or aspects, have continued to happen somewhat in isolation and thereby not always considered the system as a whole. The interdependencies across the harbour mean that not all actions have proven successful in limiting the anticipated impacts. The lack of a comprehensive understanding of the harbour has also meant that some actions have had negative implications for other aspects, features, values and users.

The Otago Regional Council (ORC) is mandated to promote the sustainable management of resources in the coastal marine area. In giving effect to this responsibility and in response to a call by the people who call Te awa Ōtākou home, ORC has commissioned this review of issues, but more importantly identification of opportunities that will spur the sustained, collective action required to restore the health of the harbour and wellbeing of the people of Ōtepoti, and those connected to it.



Figure 6 Otakou_Awa Credit: Aukaha

1.2 Nature and Structure of the Report

This report seeks to lay the foundation for developing a collective solution in the next phase of work. The key concepts and principles underpinning the work are summarised below.

The current state of the harbour is the result of centuries of human intervention. Halting and altering the trajectory of the harbour's health will similarly take time. So, while there are quick wins to be had, substantive improvements across the broader system are more likely to be achieved in the longer term which requires factoring climate change into opportunities. The work has therefore taken an approach of **looking back to look forward through an intergenerational lens**. This highlights the involvement of the youth as the future custodians of this important asset and as an essential ingredient of a successful turnaround.

This is a **non-regulatory** process, which is important because it requires long-term thinking that transcends regulatory processes and political cycles. It also provides the freedom for people to be aspirational and innovative, aspects often curtailed by rules.

A final important lens taken in this work is that it is **'solutions-focussed'**. While the issues are acknowledged and gaps in understanding cause and effect need to be plugged, the report seeks to highlight and celebrate the many local successes. It suggests how they may be replicated and upscaled to achieve system-wide improvement, to build positive momentum rather than dissecting issues and apportioning blame.

The report is structured as follows, incorporating the approach and principles introduced above:

Introduction - Contextualising this mahi – this chapter introduces the need for the work, the nature of the report and additional outputs to support the next steps in the process (**Chapter 1**).

Reflection on Past – The history of Te awa Ōtākou is documented to remind ourselves of its origins, and the varied values and benefits it has provided over time, but also how and why these have been diminished or lost (**Chapter 2**)

Understanding the Present - The current state of play is explored with reflection first on the benefits currently provided by Te awa Ōtākou, and the value people place on it despite its diminished health. The report explores how historical and emerging issues including climate change are impacting on the wellbeing of the harbour and its communities (**Chapter 3**). Examples of success stories addressing these issues, driven by the significant efforts of the harbour's custodians, are also shared here.

Looking to the Future – Opportunities to enhance the wellbeing of Te awa Ōtākou (and in turn, its communities) are explored. These options are varied and include physical interventions, policy to incentivise change, financial instruments to enable ongoing mahi and upscale the effort, and research and monitoring to address gaps in understanding and track progress towards agreed objectives and outcomes (**Chapter 4**). Real change demands collective action that galvanises the effort of ORC, Dunedin City Council (DCC) and other agencies with that of the mana whenua, community, business, who all apply passion, resources, knowledge and energy towards the harbour and community health daily. Their contribution needs to be recognised, harnessed and supported. A major focus of **Chapter 4** is therefore the governance mechanisms required to support collective action.



Figure 7 **Otakou_Awa** Credit: Aukaha



Introduction

The holistic understanding held by mana whenua and their sensitive approach to the protection and use of the harbour has not had adequate influence in recent history. Mana whenua’s voice is woven throughout this report with an overarching statement introducing each chapter. The partnership between ORC, DCC and mana whenua in collectively guiding the scope, process and review of this work is a notable example of giving effect to the intent of Te Tiriti, and has established a solid foundation for taking this mahi forward.

The health of the harbour is at a pivotal point in its history, with unique local habitats at risk of being lost and local species heading for extinction. As collective custodians the community of the harbour cannot afford to again fail the harbour by not following through collectively on the aspirations and opportunities laid out in this report.

The good news that emerged in pulling this work together is that while people acknowledge the issues, they all have a common, deep passion for the harbour and its health, and are actively interested in identifying and bringing the solutions to life. In support of this positive perspective, the report is sprinkled with graphics, stories and quotes that bring the harbour to life, remind us of its intrinsic value and spur the call to action. Despite the overall negative trend, there are many success stories, and ongoing positive efforts to be celebrated and enhanced.

There is a solid foundation in place to build on - it’s time to get stuck in. System-wide change will however take time, patience, and above, all, open collaboration and relationship building. Initial success will be measured by the mana whenua, community, councils and other mandated organisations getting started on quick-win actions in a cohesive and collective manner.

1.3 What has Informed this Report

There is wealth of information on all aspects of Te awa Ōtākou from geological information to dredging data, benthic surveys, and economic studies. There is similarly a long list of interested and affected people and organisations connected with the Harbour and each other in multiple ways. It is not the intention here, nor were there the time or resources to undertake an exhaustive literature review or engagement process.



Figure 8 Stakeholder Workshop, July 2024.



Figure 9 Project Team at Aramoana for Sunrise, July 2024. Credit: Kate Blackburne



The work has therefore drawn on key references which summarise the required understanding. These resources are referenced throughout and can be built on as required to support the ongoing generation of knowledge about Te awa Ōtakou over time. The identification of the key reference material was generated primarily through guidance provided by the project partners, ORC, DCC, and mana whenua. The list was supplemented by additional references identified in the engagement process.

Engagement was informed by a stakeholder mapping process that built on a database from the recent Dunedin City Council (DCC) processes to inform the harbour reserve management strategy. Organisations were categorised into their primary interest areas - social, economic, cultural and environmental, although many organisations have interests spanning more than one category. A list of organisations identified as representing interest groups was identified and approximately 40 meetings were held. These hui were semi-formal in structure with participants asked to:

- Reflect on their history and connection with the harbour
- Document current issues and challenges
- Provide insight into solutions in the form of existing, planned or blue-sky opportunities

The ORC also provided information on its website to generate awareness of the process and invited parties to register their interest. Responses will bolster the stakeholder database and further engagement beyond this first phase.

Those engaged also directed the team to relevant information to substantiate their picture of the status quo. The process culminated in two interactive working sessions, with ORC and DCC councillors. The purpose being to raise awareness of the project, and garner their input in terms of issues and opportunities.

A clear set of overarching themes and issues had emerged and were being repeated regardless of who was speaking. A level of confidence was therefore achieved that the approach had unearthed the majority of the major issues and opportunities.

The team then went through a process of analysing engagement feedback and reference material to distil the primary and associated sub-issues and opportunities under each main theme.

Engagement and writing have been a collaborative process, shared between an interdisciplinary team from Aukaha (1997) Ltd, Morphem Environmental, Studio Pacific Architecture, and the University of Otago Marine Sciences Department. The research team worked closely with a core group of officials from ORC and DCC who provided support with every aspect of the process, from identifying reference material to organising and facilitating engagement. There has also been oversight and final review from ORC, DCC Councillor, and Te Rūnanga o Ōtākou. It is collaboration of this nature that is required moving forward.

E mihi ana kā mihi maioha ki a koutou i whākai mai i ō tātou puna mātauraka kia ea ai tē mahi nei.

The team would like to acknowledge the organisations and people who contributed their time, knowledge, and reference material to inform the work. Your passion for a healthier harbour shone through above all else.

Introduction

1.4 Study Area

The hydrological catchment of Te awa Ōtākou forms the focus area for this study. It includes the land, built environments and watercourses from the hilltops wrapping around the harbour, down into the awa, and out to the open coast between the Mole at Aramoana and Pukekura. With the intention to capture stormwater influences on the harbour, parts of South Dunedin which drain to the harbour have been included within the study area.

Whilst the focus is on the catchment with direct influence on the health of the awa, the integral connections Te awa Ōtākou holds to the wider landscape have been recognised. These connections form as biodiversity stepping stones and corridors, land and sea transport routes, access to oceanic fishing grounds, ancestral cultural landscapes, and community linkages between people and place across the wider Ōtepoti city, Otago and surrounding regions, and beyond. Te awa Ōtākou is influenced by many factors and valued by many people. Whilst this study does not aim to detail the richness of these linkages, it considers their implications in the assessment of current challenges and future opportunities.



Figure 10 Study Area Map



Introduction

