

LANDSCAPE REPORT
PORT OF TAURANGA DREDGING & DEPOSITION RECONSENTING

Prepared For:

Port of Tauranga Limited

Brown NZ Ltd
August 2026

Contents:

PAGE

1. Introduction 3
2. Relevant Statutory Instruments 8
   - 2.1 Bay of Plenty Regional Policy Statement 8
   - 2.2 Bay of Plenty Regional Coastal Environment Plan 10
   - 2.3 Tauranga City District Plan 12
3. Iwi Management Plans & Published Histories 14
   - 3.1 Iwi Management Plans 15
   - 3.2 Published Histories 20
4. Landscape, Natural Character & Amenity Effects 25
   - 4.1 Visual Change 25
   - 4.2 Landscape Effects 25
   - 4.3 Natural Character Effects 26
   - 4.4 Amenity Effects 27
   - 4.5 Summary 28
5. Assessment Process 29
   - 5.1 Introduction 29
   - 5.2 Current State Assessment 30
   - 5.3 Future State Assessment 31
6. Current State Assessment 34
   - 6.1 Current State Description 35
   - 6.2 Key Natural Features and Values 40
   - 6.3 Existing Dredging & Deposition Effects..... 50
   - 6.4 Biophysical Landscape & Natural Character Values .. 51
   - 6.5 Locations of Significance Around the Navigation Channel & Deposition Areas 61
   - 6.6 Night-time Values 64
   - 6.7 Summary of Current Values Ratings 66
7. Future State Effects 67
   - 7.1 Biophysical Natural Character Effects 67
   - 7.2 Perceived Natural Character Effects 70
   - 7.3 Landscape Effects 70
   - 7.4 Amenity Effects 71
   - 7.5 Night-time Effects 71
   - 7.6 Summary 71
8. Cultural Values Assessments 72
9. Statutory Evaluation 77
10. Proposed Mitigation Measures 78
11. Conclusions 79

1. Introduction

The Port of Tauranga Limited ('**PoTL**')is seeking to renew its current consents for the ongoing dredging of material from key sea areas within the Tauranga Moana and the deposition of that same material offshore of Mt Maunganui within the Pacific Ocean. This report addresses the landscape, natural character and amenity effects associated with those activities. I can confirm that it has been prepared in full compliance with the Environment Court's Code of Conduct for Expert Witnesses, as contained in section 9 of the Environment Court's Practice Note 2023, and referred to in the Fast-track Approvals Act 2024: Panel Conveners' Practice and Procedure Guidance dated 22 July 2025. In making this statement, it is acknowledged that this is a technical report rather than expert evidence

The capital and maintenance dredging proposed by PoTL, together with material deposition, would physically impact the locations shown on the following plans:

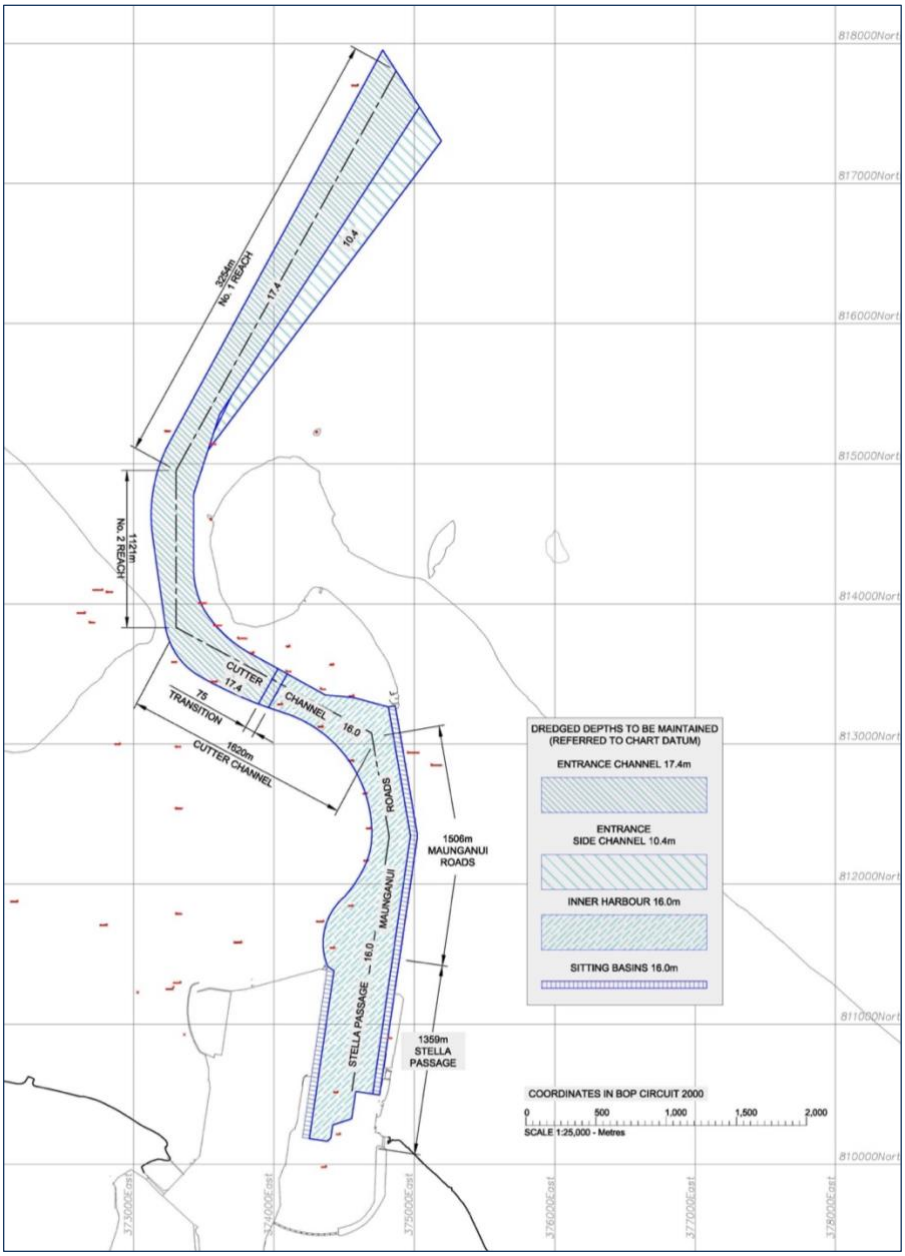


Figure 1: PoTL's proposed maintenance dredging areas

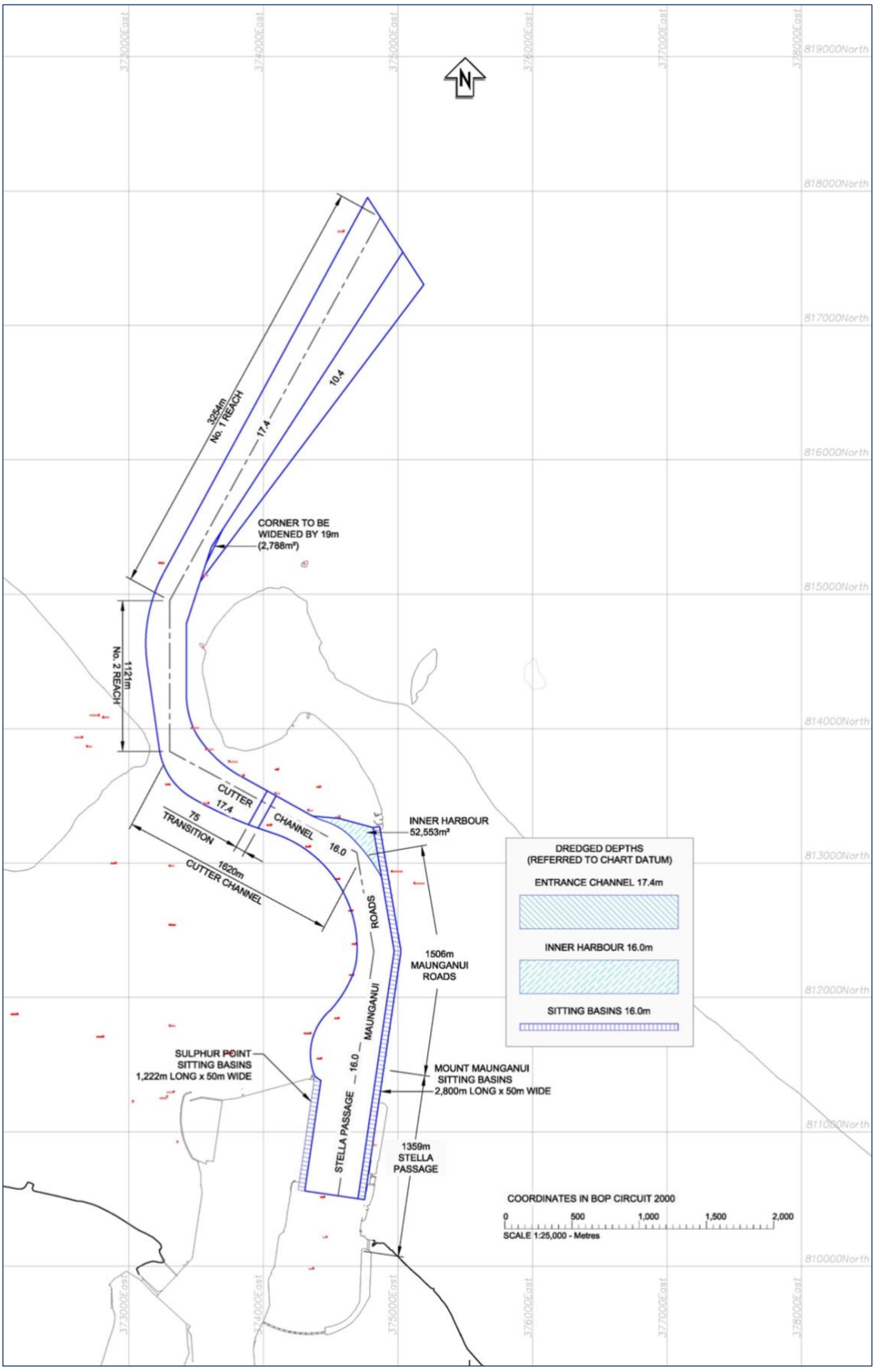


Figure 2: PoTL's proposed capital dredging areas

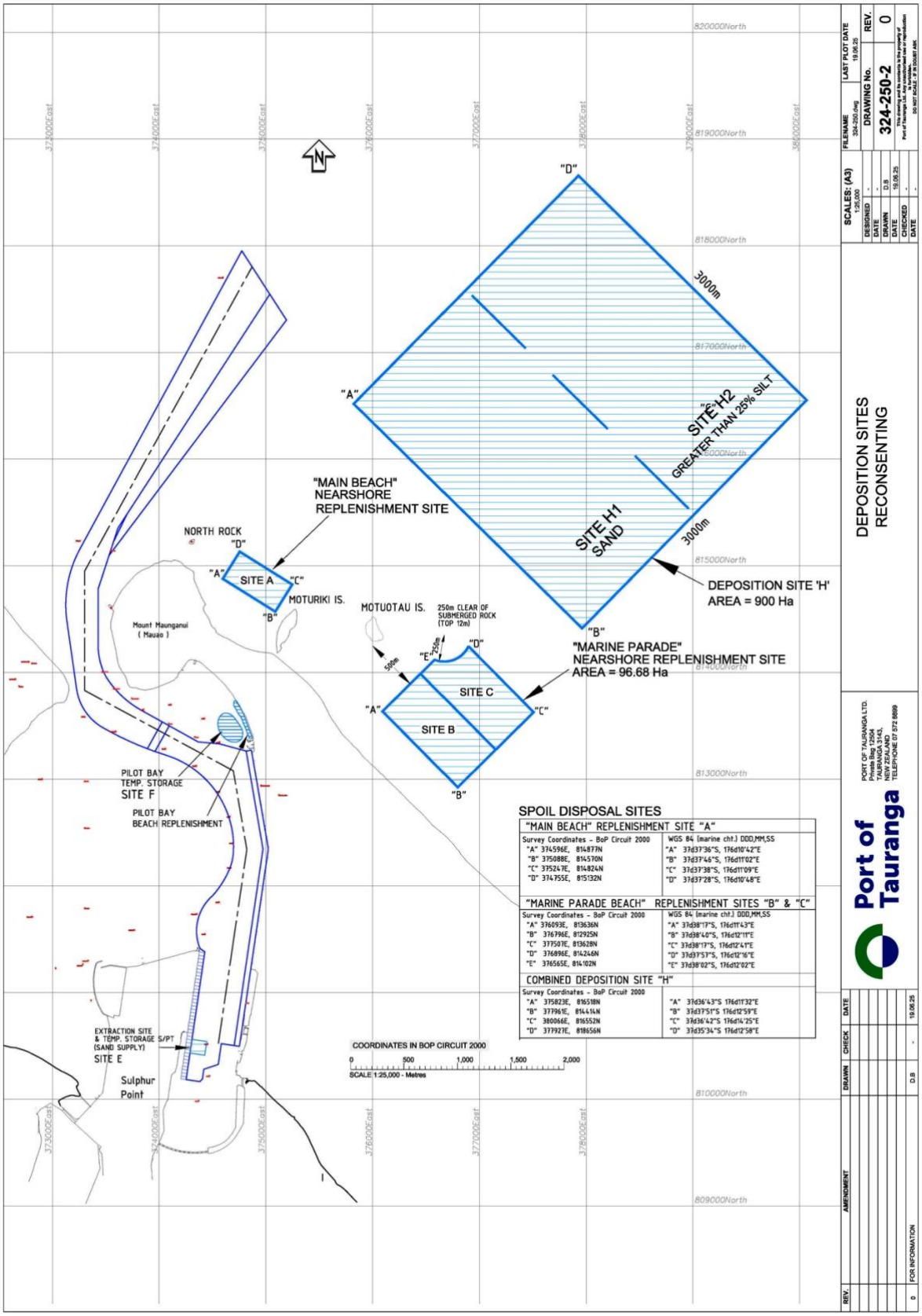


Figure 3: PotL's proposed deposition areas

The consents sought by PoTL would accommodate the on-going maintenance dredging of the Cutter Channel next to Mauao, the Maunganui Roads and Stella Passage to maintain the Port of Tauranga's shipping and port operation. This includes dredging and deposition of material that was consented in

2013, but has yet to be implemented. Consequently, the proposed consents are sought so that PotL can complete the dredging and deposition programme that was consented at that time, including:

1) Deepening of the sitting basins next to the Maunganui Port and Sulphur Point berths;

2) Deepening of the existing navigation channel at the junction of the Cutter Channel and Maunganui Roads – approaching Berth 1;

3) 'Rounding' of a corner in the Entrance Channel off Mauao;

4) An increase in the quantum of maintenance dredging from 185,000 to 250,000^{2}m, averaged over 10 years, with a cap of 350,000^{2}m in any one year; and

5) The duration of capital and maintenance dredging expected to occur over 6 weeks, approximately.

This report therefore addresses the natural character, landscape and amenity effects already associated with the Port's proposed dredging and deposition, without any new or additional operations occurring. In effect, it addresses the existing state of the Port – focusing largely, but not exclusively, on its sea areas and margins – and the effects that it generates, both presently and into the future. Consequently, this assessment sets out to:

a) Describe the current values of the Tauranga Moana and Pacific Ocean that are affected by its areas of dredging and deposition, together with the port area that it supports – including description of their current values and whether they are stable or changing;

b) Evaluate the effects (positive and adverse) of the proposed dredging and deposition activities on the landscape, natural character and amenity values of the Tauranga Moana, Pacific Ocean, Mt Maunganui and Tauranga – through the next consent period (assumed to be up to the year 2060); and

c) Offer any recommendations in relation to the avoidance, amelioration, and mitigation of the effects identified.

In undertaking this assessment, it is recognised that the Port's existing berths, sheds, container terminal and stacks, cranes, lighting, other structures, secure operational areas, and shipping form part of the existing environment that is functionally linked to the areas of dredging and deposition and also frequently integrated with them, both physically and visually. In effect, the Port's structures and activities are a direct corollary of PoTL's ongoing dredging and deposition activities. However, these are not the subject of this assessment.

Instead, this report is designed to contribute to the assessment of the Port of Tauranga's proposed dredging and deposition against key provisions of the *Bay of Plenty Regional Policy Statement,* the *Bay of Plenty Regional Coastal Environment Plan,* and the *Tauranga City District Plan.* These statutory documents include provisions that address the protection of the Region's Outstanding Natural Features and Landscapes ('**ONFLs**') such as most of Tauranga Harbour and Mauao. They also address the

protection of key Areas of Significant Cultural Value ('**ASCVs**'), including Te Paritaha ('**Centre Bank**') and the marina area around Mauao, Moturiki Island and Motuotau Island, which abut PoTL's area of dredging activity.

In addition, PoTL's proposals are evaluated in the context of four iwi management plans that address the protection of Te Awanui's natural and cultural heritage values, including its ecology and kaimoana values.

As a result, the assessment of natural character effects within this report inevitably traverses areas of related expertise – such as hydrology and coastal processes, water quality, geomorphology, and marine ecology – that go beyond the specialist skills of landscape architects. Accordingly, this assessment, and some of its findings, are reliant on the empirical assessments undertaken by experts in those allied fields that are brought together under the broad umbrella of 'natural character' effects.

2. Relevant Statutory Instruments

The areas of dredging activity and deposition are not subject to any specific landscape overlays in the *Bay of Plenty Regional Coastal Environment Plan.* However, the Coastal Environment within and around the Port and these areas of activity is still subject to objectives and policies of the *NZ Coastal Policy Statement*, together with those parts of the *Bay of Plenty Regional Policy Statement*, the *Bay of Plenty Regional Coastal Environment Plan,* and the *Tauranga City Plan* that address effects on landscape, natural character and amenity values. These provisions are devolved from the NZ Coastal Policy Statement, which includes Clause (1) of Policy 13:

> *(1) To preserve the natural character of the coastal environment and to protect it from inappropriate subdivision, use, and development: ……*
>
> *(b) avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of activities on natural character in all other areas of the coastal environment.*

Policy 15(b) similarly goes on to require protection of "*the natural features and natural landscapes (including seascapes) of the coastal environment from inappropriate subdivision, use, and development*" via avoidance of "*significant adverse effects*" and avoidance, remediation, or mitigation of "*other adverse effects of activities on other natural features and natural landscapes in the coastal environment*".

2.1 Bay of Plenty Regional Policy Statement

The operative Bay of Plenty RPS contains a number of objectives and policies that also address the preservation of natural character values and the protection of outstanding natural landscapes, in accordance with Sections 6(a) and (b) of the Resource Management Act. Relevant policies include the following.

> ***Policy CE 2B: Managing adverse effects on natural character within the coastal environment***
>
> *Preserve the natural character of the coastal environment and protect it from inappropriate subdivision, use and development by including provisions in regional and district plans, and when making decisions on resource consents to:*
>
> *(a) Avoid adverse effects of activities on the attributes that comprise natural character in areas of the coastal environment with outstanding natural character as identified in the maps and tables in Appendix I and J;*
>
> *(b) Avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of activities on the attributes comprising the natural character in all other areas of the coastal environment, recognising that areas identified in maps in Appendix I as having high or very high natural character can be especially sensitive to the adverse effects of inappropriate subdivision, use and development; and*
>
> *(c) Recognise that open coastal water in the region is of at least high natural character.*

Policy CE 3A: Identifying the key constraints to use and development of the coastal marine area

Identify the major constraints to the future use and development of the coastal marine area taking into account:

(a) The scale, location and requirement of existing uses and activities;

(b) The natural physical characteristics and values of the coastal environment;

(c) The particular requirements of identifiable future uses;

(d) The required links to the landward portion of the coastal environment, integral to the operation of uses and activities located in the coastal marine area; and

(e) The role of the coastal environment in accommodating regionally significant infrastructure.

Policy CE 8B: Ensuring subdivision, use and development is appropriate to the natural character of the coastal environment

When assessing the effect of subdivision, use and development on the natural character of the coastal environment, particular regard shall be given to:

(a) The level of natural character as shown in Maps in Appendix I, as described in Appendix J, and the level of protection to be afforded by Policy CE 2B;

(b) The criteria contained in Set 1 of Appendix F to further refine natural character for resource consents or site-specific mapping;

(c) Maintaining coastal margins in a natural state and protecting the natural values of beaches and dune systems, including their ability to reduce the impacts of coastal hazards such as tsunami and storm surge;

(d) The appropriateness of the introduction or accumulation of man-made modifications recognising activities that are:

(i) planned (consented, zoned or designated); …….

Policy CE 14B: Providing for ports

Recognise the national and regional significance of the Port of Tauranga and the need for it to be located within the coastal environment by:

(a) Safeguarding the capacity and efficiency of:

(i) Current port operations

(ii) Activities that have a functional need to be located in and around the port;

(iii) The strategic road, rail and sea routes to the port; and

(b) Providing, as appropriate, in the regional coastal plan, for future port operations and capacity; and

(c) Having regard to potential adverse effects on the environment, providing for the need to maintain shipping channels and to renew/replace structures as part of ongoing maintenance; ……

The related 'Explanation' for Policy CE 2B also states as follows:

This policy confirms that the effects of some activities may not be adverse in light of an area's natural character attributes and a consideration of whether the activity itself is appropriate in this location.

For example, the attributes for Tauranga Harbour include channel markers (scattered throughout the harbour and visible during the night time) and commercial areas. These features diminish natural character but comprise the harbour at the time it was assessed.

This explanation goes well beyond just channel markers to also encompass the fuller array of existing structures and operations within the areas of port operations at both Mt Maunganui and Sulphur Point. These, together with shipping – which is perhaps the most distinctive and eloquent 'expression' of a port environment – must also be considered as part of the natural character and landscape context for ongoing dredging and deposition operations.

2.2 Bay of Plenty Regional Coastal Environment Plan

The operative BOPRCEP contains a range of issues, objectives policies and rules that address the protection of higher order landscape and natural character values within the Bay of Plenty Region's coastal environment and Coastal Marine Area, together with additional provisions that pertain to the management of development and uses within the Tauranga Port Zone:

2.2 Natural Heritage

Objective 2 *Protect the attributes and values of:*

(a) Outstanding natural features and landscapes of the coastal environment; and

(b) Areas of high, very high and outstanding natural character in the coastal environment;

from inappropriate subdivision, use, and development, and restore or rehabilitate the natural character of the coastal environment where appropriate.

Objective 3 *Safeguard the integrity, form, functioning and resilience of the coastal environment and sustain its ecosystems by:*

(a) Protecting Indigenous Biological Diversity Areas A,

(b) Maintaining Indigenous Biological Diversity Areas B;

(c) Promoting the maintenance of indigenous biodiversity in general; and

(d) Enhancing or restoring indigenous biodiversity where appropriate.

Objective 4 *Prevent the further loss of the quality and extent of rare and threatened habitats in the coastal environment of the region. These include coastal forest, seagrass beds, saltmarsh wetlands and sand dunes.*

Objective 5 *Enable the restoration and rehabilitation of the natural heritage of the coastal environment, including:*

(a) Kaimoana resources;

(b) Natural heritage landforms or features that would increase resilience to natural hazards, and

(c) Degraded cultural sites which tangata whenua wish to restore for natural heritage and cultural reasons.

2.8 Activities in the Coastal Marine Area

Objective 25 *Exclusive occupation of parts of the common marine and coastal area is provided for in appropriate locations (recognising the positional requirements of some activities) for temporary or permanent activities that have a functional need to be in the coastal marine area and are incompatible with other activities.*

Objective 30 *Activities and structures in the coastal marine area are located, designed and undertaken in a manner that is appropriate given the values and existing uses of their location.*

Objective 32 *Inappropriate reclamation or drainage of the foreshore or seabed is avoided.*

Objective 36 *Provide for safe and efficient navigation of ships and aircraft in the coastal marine area.*

2.10 Port Zone

Objective 52 *The current operational needs of the Port of Tauranga are provided for as a matter of priority while avoiding, remedying or mitigating the effects of those activities on cultural values and the environment.*

Objective 53 *The future expansion and operational needs of the Port of Tauranga and its shipping channels are provided for in appropriate locations, having regard to the potential adverse effects on the environment.*

It is notable that these objectives appear to address the Bay of Plenty Regional Council's obligations under sections 6(a) and (b) of the Resource Management Act, with the plan going on to identify Outstanding Natural Features and Landscapes (ONFLs) in the coastal environment, together with Areas of Significant Cultural Value (ASCVs), in its Schedules 3 and 6. However, there is no corresponding identification, mapping or scheduling of those parts of the coastal environment that have high to outstanding levels of natural character. This appears to rely on the overlap between the ONFLs, ASCVs, and other values addressed in the plan's schedules. Relevant policies for the **Port Zone** include the following:

PZ 8 *Have regard to the role of beach replenishment sites for the continued operation of the Port or Tauranga and take into account the potential benefits of using sand from dredging for the purpose of beach replenishment. Drawing No 324-75 of Schedule 9 – Outline Development Plan Port of Tauranga, identifies appropriate beach replenishment sites for sand dredgings from the Port of Tauranga, but other areas may also be appropriate for beach replenishment.*

In addition, the following assessment matters and rules also apply to 'capital works within the Port Zone:

PZ 10 ***Restricted Discretionary – Specified dredging activities***

Any discharge and disturbance (including removal of sand, shingle, shell, or other natural material) of, the foreshore or seabed for the following activities as shown on Plan 270-67 in Schedule 9 to this Plan:

(a) Construction of the Sulphur Point North End Berth and Shipping Channel,

(b) Construction of the Sulphur Point Wharf Extension South Sitting Basin and Shipping Channel,

(c) Deepening of the Sulphur Point Town Reach,

(d) *The Mount Maunganui Wharfs Future Berth Deepening as shown on Plan 270-25B, and*

Deepening of the existing entrance passing lane, is a restricted discretionary activity.

The Regional Council restricts its discretion to the following matters:

(a) The area, quantity, location and timing of disturbance and discharge.

(b) Effects on the hydrodynamic and geomorphic regime of the harbour and open coastline.

(c) Effects on marine life and ecosystems.

(d) The release and spread of harmful aquatic organisms.

(e) Coastal water quality including the provisions of Section 3 – Coastal Discharges and Schedule 13 to this Plan.

(f) Effects on other harbour users, navigation and public safety during construction.

(g) Site specific historical or cultural values under ss 6(e) or 7(a) of the RMA.

(h) The review of conditions and the timing and purpose of that review.

(i) The amount and type of any financial contribution.

(j) Compliance monitoring.

Applications for activities under this rule shall be considered without public notification unless special circumstances exist.

PZ 14 Recognise that:

a) ASCV 4A and the shipping channels overlap, and that the extent of the shipping channel shown on ASCV 4A is the toe line and that the batter slopes formed will be within Te Paritaha O Te Awanui as will the necessary channel markers; and

b) Te Paritaha O Te Awanui is situated in a natural dynamic environment that changes and shifts over time.

Under Rule PZ 6, the Regional Council also reserves control in relation to the '*occupation of the common marine and coastal area by structures and activities in the Port Zone that were lawfully established at the date this Plan became operative".* Such control pertains to the duration of Port consents and:

(b) Measures to avoid, remedy or mitigate adverse effects associated with maintenance and use of the structure including on indigenous biodiversity or cultural values under ss 6(e) or 7(a) of the RMA.

(c) Measures to avoid, remedy or mitigate adverse effects on hydrodynamics and geomorphics.

2.3 The Tauranga City District Plan

The Tauranga City Plan contains a number of objectives and policies that address the landscape and natural character values of the harbour environs, and effects on those values. Key provisions include the following:

6A.1.7 Objective – Harbour Environment Landscape Character

The landscape character values of the City's harbour environment is maintained and enhanced.

6A.1.7.1 Policy - Maintenance and Enhancement of Landscape Character of the Harbour Environment

By ensuring that subdivision, use and development along the margins of Tauranga Harbour does not adversely affect the landscape character values of that environment by:

a) Maintaining and enhancing the characteristics and elements that determine the amenity of the surrounding area;

b) Ensuring the bulk and scale of built form is compatible with the character of the harbour environment;

d) Maintaining and enhancing amenity between different land uses by screening, buffering or otherwise providing an appropriate interface treatment;

e) Achieving a high amenity interface between private and public space;

f) Maintaining and enhancing the natural character interface between urbanised and harbour margins environment;

g) Protecting areas of cultural value;

i) Siting buildings, structures, infrastructure and services to avoid or minimise visual impacts on the harbour margins environment;

k) Maintaining and enhancing indigenous vegetation, notable trees and heritage trees;

l) Managing the interface between urban activities and adjoining landscapes to maintain the integrity of identified outstanding natural features and landscapes and important amenity landscapes;

m) Ensuring activities maintain and enhance the factors, values and associations of outstanding natural features and landscapes and/or important amenity landscapes.

6A.1.8 Objective – Interface with the Coastal Marine Area (being MHWS), Outstanding Natural Features and Landscapes and Important Amenity Landscapes

The open space character of the coastal marine area and the factors, values and associations of outstanding natural features and landscapes and important amenity landscapes and their margins is maintained and enhanced.

6A.1.8.1 Policy – Interface with the Coastal Marine Area (being MHWS), Outstanding Natural Features and Landscapes and Important Amenity Landscapes

By ensuring that buildings, structures and activities along the margins of the coastal marine area, outstanding natural features and landscapes and important amenity landscapes do not compromise the natural character, factors, values and associations of those areas, through:

a) The impact of the bulk and scale of buildings, structures and activities on the amenity of the environment;

b) Significant modification of the existing landform or topography and the extent of earthworks;

d) Buildings, structures and activities detracting from the existing open space character and the factors, values and associations of outstanding natural features and landscapes and important amenity landscapes and their margins;

e) The effects on indigenous and exotic flora and fauna, with an overall goal to retain existing vegetation patterns and enhance those patterns around the outstanding natural features and landscapes and important amenity landscapes and their margins through mitigation planting.

3. Iwi Management Plans & Published Histories

At least four iwi management plans address Te Awanui / Tauranga Harbour, of which the following are particularly relevant to the project:

Tauranga Moana Iwi Management Plan (2016-2026); and

Ngāi Te Rangi Iwi Management Plan (1995).

In highlighting these iwi management plans, I need to reiterate that other management plans have been prepared by other iwi and hapū that also refer to their associations with Te Awanui / Tauranga Harbour, the values that it holds for them, and the management strategies / policies that they consider the harbour should be subject to. Those other management plans include, for example, the *Matakana and Rangiwaea Islands Hapū Management Plan* (updated 2017) and the *Ngai Tukairangi - Ngai Tapu Hapū Management Plan* (2014). However, the two management plans referenced above provide more direct guidance about the cultural values and associations that tangata whenua have with those parts of Te Awanui near the Port. They also include policies that specifically address the Port's future development and management, while sharing many of the broader – harbour-wide – policy imperatives that are found in other management plans.

In addition, a number of published histories help to inform this assessment by addressing particular features and harbour properties / values that have been important to both iwi and pakeha in the past, and that remain significant in terms of cultural and public perceptions of Te Awanui / Tauranga Harbour. They include the following – in chronological order:

The Journal of the Tauranga Historical Society (Inc) No.29, Oct-Dec 1966, Tauranga Historical Society (Inc), 1966.

A History of Tauranga County, Evelyn Stokes (1980) Dunmore Press Ltd.

Stories of Tauranga Moana – Occasional Paper No.9, Dame Evelyn Stokes (1980), Centre of Māori Studies and Research University of Waikato.

Overview Report Prepared for The Waitangi Tribunal, Ngati Kahu, Ngati Rangi and Ngati Pango for the Wai 42a Claim, Antoine Coffin (1996).

Overview Report Prepared for The Waitangi Tribunal (Te Whenua O Te Kupu Whakaari, Ngai Tama Rawaho) for the Wai 215 and Wai 659 Claims, George Matua Evans (1997).

Te Raupatu O Tauranga Moana – Volume 2: Documents Relating to Tribal History, Confiscation and Reallocation of Tauranga Lands, Dame Evelyn Stokes (1992), University of Waikato.

Report Prepared for The Waitangi Tribunal for the Wai 540 and Wai 215 Claims, Roimata Minhinick (1997).

Overview Report Prepared for The Waitangi Tribunal about Ngaiterangi and The Crown, Bassett Kay Research (1998).

Report Prepared for The Waitangi Tribunal for the Wai 215 and Wai 672 Claims, Roimata Minhinick (1999).

The Central Tauranga Heritage Study Part One, Matthews and Matthews Architects (2008) for Tauranga City Council and Environment Bay of Plenty.

Tauranga Moana Fisheries, Reclamations and Foreshores Overview Report Volume 1 (Main Report), Robert A McLean (1999).

3.1 Iwi Management Plans

The Tauranga Moana Iwi Management Plan 2016-2026

At page 2, it is stated that the purpose of the Plan is to "articulate the collective vision and aspirations of Ngāti Ranginui, Ngāi Te Rangi and Ngāti Pūkenga, in relation to Tauranga Moana". This overarching statement then leads into Parts A, B, C and D of the Plan which 'set the scene' and address the current harbour, outline policies applicable to it, discuss policy / plan implementation, and provide references to supporting documents. From my reading of the Plan, the following are key statements:

> ***2. Tauranga Moana: Where Are We***
>
> ***Tō Tātou Tuakiri Our Identity:*** *Tauranga Moana is central to our cultural wellbeing and identity … …*
>
> ***Tō Tātou Taonga Our Treasure:*** *Tauranga Moana is a taonga, a life source and food bowl for marine life and our people. …..*
>
> ***Tō Tātou Tūranga Our Place:*** *Tauranga Moana is a beautiful place to wake up to every day and be able to take the whanau to just relax, gather kai and have fun. …..*
>
> ***3. Tauranga Moana: Who Are We***
>
> ***3.3 Ngāi Te Rangi***
>
> *Origins*
>
> *Ngāi Te Rangi is a Mataatua tribe, with a rich history which began from our journeys from the East Coast. After many battles, Ngāi Te Rangi resided in Whangarā, then Opotiki, and through intermarriage and many gruelling battles, finally settled in Tauranga Moana. This historical journey is known as Te Heke o Rangihouhiri.*
>
> *The tribe was originally called Ngāti Rangihouhiri. However, after their ancestor Te Rangihouhiri died in one of the country's most bloodiest battles (Poporohuamea), the tribe was renamed Ngāi Te Rangi*

Section 4 of the Plan, states that the "foundation for this Plan lies within the values, principles and beliefs of Ngāi Te Rangi, Ngāti Ranginui me Ngāti Pūkenga in relation to the natural world." It then goes on to describe key concepts related to the natural world, including the union of "Ranginui (Sky Father) and Papatūānuku". Those concepts and perceptual relationships include 'a sea to the mountains' approach to looking at the natural environment as a whole, Mauri, Kaitiatikanga, Ahi Kā and mana whenua.

Turning to Part B of the Management Plan, addressing policies, it is stated that a "mātauranga-based policy framework has been used to articulate and organise resource management planning concepts and tools (e.g. policy) – as they relate to the health and wellbeing of Tauranga Moana - with a Māori lens." The resulting policy framework includes a focus on "Tūhauora Tinana: Healthy Waters" and "Tūhauora Wairua: Cultural Heritage".

In Section 6.4 of the Plan this focus becomes more specifically targeted on the coast, including 'coastal development structures and dredging'. Among the coastal issues identified are those that relate to the mauri of Te Awanui and its coastal margins, including:

> *"Coastal use and development, including port activities, marina development, dredging, reclamation, structures as well as recreational activities"; and*
>
> *Conflicts between values, such as between 'cultural values and interests', 'natural and ecological values' and 'existing uses and aspirations for further development'.*

Key **Coastal Objectives** are identified as comprising:

- *Water is clean enough for swimming and sustaining plentiful and healthy kaimoana.*
- *Waterways are accessible for our enjoyment and customary use. e.g. gather kaimoana.*
- *Our coastal sites and areas of cultural significance are acknowledged and actively protected.*
- *Ecosystems are healthy and diverse and are protected from biosecurity threats, including pest plants, fish and organisms.*
- *Cumulative impacts on water quality are investigated and managed.*
- *There is balance between natural, cultural, recreational and ecological values of Tauranga Moana and commercial use and development.*

Related **Policies** include:

POLICY 7 - Ensure a holistic and integrated management approach to restoring the health and wellbeing of coastal water within Tauranga Moana (including Te Awanui / Tauranga Harbour).

POLICY 8 - Work together to address conflicting uses and values within Tauranga Moana (including Te Awanui / Tauranga Harbour).

POLICY 9 - Avoid further degradation of water quality within Tauranga Moana.

POLICY 10 - Reduce the impacts of sediment on Te Awanui (Tauranga Harbour).

POLICY 12 - Maintain and enhance relationship with Port of Tauranga.

POLICY 15 - Manage the effects of coastal structures (including moorings and jetties) and infrastructure in Tauranga Moana.

POLICY 14 - Avoid further reclamation of the foreshore and seabed.

POLICY 16 - Ensure that dredging activities do not adversely affect the mauri of Tauranga Moana.

Of these, Policies 12, 14 and 16 are most directly pertinent to the current port proposals. The more relevant 'Actions' identified under these policies include:

12.1 *Tauranga Moana Iwi and hapū to continue working closely with Port of Tauranga to manage the effects of port activities on the cultural health of the harbour, 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 reclamations.*

c) *Dredging and disposal of dredge spoil.*

d) *Water quality and pollution concerns……..*

14.1 *Oppose any further reclamation of the foreshore and seabed.*

14.2 *For any reclamation proposal, Tauranga Moana Iwi and hapū must be involved to ensure that:*

a) *tangata whenua values are recognised and provided for, particularly in relation to decision making.*

b) *there are no adverse effects on sites and areas of cultural significance or mahinga kai areas.*

c) *if required, a cultural impact assessment is prepared.*

15.4 *In relation to the placement, alteration or extension of structures, within Tauranga Moana:*

a) *Ensure that:*

i) *tangata whenua values are recognised and provided for.*

ii) *early and meaningful engagement occurs with Tauranga Moana Iwi and hapu ……*

b) *Avoid adverse effects on sites and areas of cultural significance, wetlands or mahinga kai areas.*

16.1 *Oppose any further adverse effects as a result of dredging, in relation to:*

a) *The pipi bed known as Te Paritaha o Te Awanui.*

b) *The sandbank area on Matakana Island known as Panepane.*

16.2 *For any dredging proposal, Tauranga Moana Iwi and hapū must be involved to ensure that:*

a) *tangata whenua values are recognised and provided for, particularly in relation to decision making.*

b) *there are no adverse effects on sites and areas of cultural significance or mahinga kai areas.*

c) *if required, a cultural impact assessment is prepared.*

d) *the effects of dredging on sites and areas of cultural significance or mahinga kai areas can be monitored. ……..*

e) *opportunities to use dredged materials are explored to address coastal erosion near areas of high significance to tangata whenua e.g. marae, pa site, urupa.*

These policies often extend beyond the traditional realms of landscape and perhaps even natural character effects. Even so, some of the key themes to emerge from them include:

- The holistic concept of Te Awanui, as a body of sea and land that is inseparable from its constituent 'parts';
- The value attached to the life force of the sea and Tauranga Moana;
- Te Awanui as both a home and source of food (mahinga kai);
- The desire for protection of key harbour features, including wetlands, Te Paritaha and Panepane;
- A strong cultural aversion to further dredging of Te Awanui's seabed and reclamation;
- A cultural aversion to further structures and development within and around the margins of Te Awanui.

However, at a policy level these imperatives are more tempered in relation to the Port of Tauranga (Policy 12.1), with a strong focus on the PoTL both involving, working with iwi and hapū, in relation to:

- The port's activities and any expansion of them;
- Changes to the hydrological flows within those parts of the harbour associated with the port (seemingly its cutter channel past Panepane and Mauao, the Maunganui Roads and Stella Passage in particular);
- Dredging and spoil disposal; and
- Water quality and Pollution.

In effect, it appears that the management plan's cultural 'bottom lines' are strongly focused on further dredging within the harbour, the related modification of Te Awanui's geomorphology and hydrological flows, and adverse effects on water quality. At the same time, Policy 14 is clearly opposed to any further reclamation within Te Awanui.

The Ngāi Te Rangi Iwi Management Plan 1995

Ngāi te Rangi iwi is one of the three iwi responsible for the production and implementation of the Tauranga Moana Iwi Management Plan 2016 -2026 discussed above. Even so, Ngāi te Rangi's 1995 Iwi Management Plan focuses on its own specific values and areas of concern. In relation to Te Awanui / Tauranga Harbour, Section 2.4 the Management Plan therefore asserts that:

> *The Tauranga harbour, inland waterways and estuaries are of special significance to Ngaiterangi. The increasing industrial, commercial, residential, and recreational activities taking place on and around the harbour and their effects on the quality of the harbour waters, wildlife, and kaimoana beds are a cause for continuing concern amongst the hapu of Ngaiterangi.*
>
> *Ngaiterangi hapu still exercise customary fishing and seafood harvesting practices m the harbour and bays. The most common kaimoana harvested includes patiki, titiko, pupu, tuangi, ureroa, scallops, as well as a range of wetfish. With the increasing growth of the city and port of Tauranga there has been a noticeable decline, and in some cases disappearance of kaimoana in the area.*
>
> *Dredging of the harbour, and the construction of the harbour bridge have combined to alter tidal flows, affecting kaimoana beds and their locations. The discharge of wastes into the harbour also raises concerns about the quality of the kaimoana, and associated health issues……*

The related policy statement says:

> *The Tauranga harbour - Te Awanui - has special significance for the people of Tauranga Moana, both as a recreational amenity for the wider community and as a traditional food source for the hapu of Ngaiterangi. Its estuaries and inland waterways are of high cultural significance to the hapu of Ngaiterangi who still exercise customary harvesting practices today in their traditional food gathering - mahinga mataitai - areas.*
>
> *Activities on or around the harbour and inland waterways must be controlled in order to maintain and enhance the harbour and estuarine ecosystems, its related value as a food source for tangata whenua, and as a recreational amenity for the wider community.*
>
> *The quality of the harbour is to be enhanced and maintained through the following measures:*
>
> - *All residential, commercial, and industrial activities that involve the discharge of material into the Tauranga harbour, or that affect the physical appearance, or ecosystem of the harbour will require a resource management consent. The granting of such resource consents is to be discretionary. Where resource consents are granted, a levy is to be imposed which is to be paid into a fund to be established for ongoing harbour care and protection.*

Focusing directly on the Port of Tauranga and its activities, Section 2.5 of the management plan includes the following policy statement:

> *Ngaiterangi recognises the contribution the Port of Tauranga makes to the economic growth of the region. There is a need to balance economic growth with environmental sustainability (environmental sustainability includes the need to protect the special relationship that tangata whenua have with the environment). Where the two are in conflict, environmental sustainability must take precedence. All activities of the Port of Tauranga must be undertaken in terms of this ethic.*
>
> - *Only essential dredging of the harbour required to maintain shipping lanes and remove sediment/sand build up, should take place.*
> - *Sand dredgings must first be made available for the restoration or maintenance of estuarine beaches and foreshores, and for other projects that are consistent with good environmental management.*
> - *The natural physical appearance of the harbour is to be retained. Future development plans of the Port of Tauranga must have regard to the need to both protect and contribute to the maintenance of, the harbour.*

This statement suggests a degree of weighing up of the Port's positive (non-landscape) effects with those environmental impacts that may well have landscape and natural character implications. In particular, it implies that the port's geomorphological and hydrological effects, together with those specific to Te Paritaha and Panepane, need to be balanced against the economic benefits of the port and related activities. It is unclear if there are any 'bottom lines' in this regard, although the more general policy statements about protecting ancestral lands and kaimoana areas might be a step in that direction.

The Plan then goes on to address waahi tapu and cultural heritage sites which might also be regarded as absolute 'no go' areas, together with related matters – including views to, and the appearance of, Mauao – before addressing RM issues of significance within the rohe of individual hapu and marae. Among the issues identified as being of significance for Ngāi Tukairangi are the (Section 3.1):

- *"activities of the Port of Tauranga and their effects on the harbour, estuary, ecosystem, marae*"; and
- "*industrialisation of the Port area and the effects on Whareroa Marae*".

These are elaborated on at Section 3.1.3, which states that:

> *The Whareroa Marae has suffered heavily from the effects of industrialisation of the port area. The marae is now hemmed in by sulphur works, petrol and oil storage sites, timber treatment and other types of factories, the Tauranga Harbour bridge and its associated causeway, and recreational boating berths. Customary mahinga mataitai areas off the marae foreshore, where kaimoana was harvested to support tangihanga and other marae activities, have been destroyed ……*

Again, this section of the iwi management plan focuses very strongly on the biophysical effects of further port expansion and activities within Stella Passage and the Maunganui Roads.

3.2 Published Histories

The history of Tauranga, Mt Maunganui and Te Awanui / Tauranga Harbour is, for the most part, wide ranging. Consequently, while many of the 'published histories' described above reference the harbour as a whole and the features associated with it – like Mauao and Matakana Island – few directly address that part of the harbour in the direct vicinity of Stella Passage, or what are now the Mt Maunganui and Sulphur Point berths. At this broader level, some of the histories also describe local taniwha: Poriori and Te Pura associated with the Wairoa River[1] and Mangatawa[2] – the whale guardian of Te Awanui / Tauranga Harbour – while Antoine Coffin's 1996 report for the Waitangi Tribunal also describes the importance of the Wairoa River as a conduit between Tauranga Harbour and the interior of the Bay of Plenty. Others, though, help to explain the appeal of Te Awanui / Tauranga Harbour and its surrounds to early Māori settlers[3]:

> *……. The region which forms Tauranga County was particularly favourable for settlement of a large Maori population. The climate was mild. The harbour of Tauranga and lagoons around Maketu provided safe anchorage. The name Tauranga means Anchorage, resting place or fishing ground. The long and varied coastline provided a variety of habitats in estuaries, mud flats, swamps, open sandy beach and rocky shore, for a variety seafood, especially the shell fish, pipi, tuatua and paua, as well as kina (sea urchins) and koura (crayfish). A wide variety of fish could be caught in the rivers, sheltered harbour waters and the open ocean. ……..*

Yet, the area's abundance also created competition for its kaimoana and other resources[4]:

> *…… The great canoe Tainui first landed at Whangaparaoa and then sailed west across the Bay of Plenty, searching for a place where the people could settle down. They saw the headland of Mauao and decided to investigate this shore. They saw the waves crashing on the rocks at the base of Mauao and steered well clear. They did not know about the sandbank called Ruahine. The great*

---

1 Pp.67-70 *Overview Report Prepared for The Waitangi Tribunal, Ngati Kahu, Ngati Rangi & Ngati Pango for the Wai 42a Claim*, Antoine Coffin (1996)

2 Pp.13 &14 *Stories of Tauranga Moana – Occasional Paper No.9*, Dame Evelyn Stokes (1980), Centre of Māori Studies and Research University of Waikato

3 Pp.21 & 22 *A History of Tauranga County*, Dame Evelyn Stokes (1980) Dunmore Press Ltd.

4 Pp.45 & 46 *Stories of Tauranga Moana – Occasional Paper No.9*, Dame Evelyn Stokes (1980), Centre of Māori Studies and Research University of Waikato.

canoe grounded on the sandbank. It was stuck fast. All efforts to pull her off into deeper water failed. The commander was Hoturoa and he thought there must be a reason for this mishap, some evil omen at work. He looked around and found the cause in the old lady called Wahinerua. Hotu ordered this kuia to be thrown overboard and her body thrust under the hull of the canoe. The men heaved again and paddled furiously. The canoe slowly moved over the body of Wahinerua and slipped off the sandbank into deeper water. ……

……. The great canoe Tainui sailed on into Tauranga Moana and anchored in the deep waters south-east of Rangiwaea. This place was called Tauranga, an anchorage o resting place, and this is how this name was given to the district of Tauranga Moana. For a time the people of Tainui stayed but the region was already well populated. If Tainui were to settle here, they would have to fight for land to live on They decided to move on and not to overstay their welcome. The canoe was paddled toward the western reaches of the harbour. A stop was made at Te Puna At Poututeranga a thanksgiving was offered to the gods for a safe passage from Hawaiki

As the canoe Tainui moved on up the harbour, Hoturoa realised they were approaching shallow waters. Off Opuhi on Matakana they stopped again to unload some of their ballast so that the canoe could glide safely through the shallows and over the mudflats of the western harbour. There is a. big pile of boulders just off Opuhi, of a kind of rock not found anywhere else on Matakana. This is Ratahi, the ballast of the canoe Tainui. And some of the old people will say that those boulders are still growing bigger every year.

Near Katikati, the headland now called Bowentown at the western entrance of Tauranga Moana, the canoe Tainui moved into deeper waters. Here another stop was made. The Ngamarama people here made the Tainui visitors very welcome. A few of the Tainui people were so happy there, they decided to stay and married local people. The rest of the people of Tainui moved on. …….

Dame Evelyn Stoke's 1992 publication – *Te Raupatu O Tauranga Moana Volume 2: Documents Relating to Tribal History, Confiscation and Reallocation of Tauranga* – helps to link this early history of Tauranga to the present-day distribution of iwi around its moana in a quite concise manner[5]:

…….. The Tauranga district has a history of intense Maori occupation probably going back over a thousand years, which is reflected in the abundance of archaeological sites on the coastal lowlands and islands of the harbour. The basis of this occupation is the abundant food resources of the region, especially the resources of the harbour, kaimoana, sea foods. For this reason the district has been fought over many times, as various groups sought access to this food resource. In the course of this long occupation, many cultural and historical associations have been developed with local landmarks, harbour features, fishing grounds and shellfish beds, wahi tapu (sacred places), urupa (burial grounds), pa (fortified villages) and kainga (unfortified villages). These associations remain, regardless of present ownership of land.

The focus of the tribal area of Tauranga Moana as this name implies, is the harbour. It is occupied by various hapu (subtribes) of Ngaiterangi and Ngati Ranginui of Mataatua and Takitimu descent respectively·. As such it is a self contained tribal area with its own organisations incorporating both tribes, independent of the larger tribal confederations of Tainui to the west and Te Arawa to the east. There are 24 marae mostly located around the shores of the harbour …….

…… In the traditional culture of Tauranga Moana the harbour was as much, if not more significant than the land. It was the source of food, and the means of access and continuing communication between the village communities around its shores. This is expressed in the whakatauki (saying) which describes the tribal area.

Ko Mauao te maunga

Ko Tauranga te moana

Ko Tupaea te tangata

Mauao, or Mount Maunganui, is the sacred mountain, Tauranga is the sea or harbour, the most important landscape feature of the tribal area, and Tupaea is the man, the nineteenth century chief whose mana extended over the whole tribal area. The mana of the tribes of Tauranga Moana extended over both sea and land. …….

The mana of the tribes of Tauranga Moana has traditionally been associated with their control of kaimoana, seafoods. The mana of the tribes today is still measured by their ability to provide a wide variety of seafoods at marae gatherings. Visitors from other tribal areas expect to be able to

[5] Pp.35, 37 & 39 *Te Raupatu O Tauranga Moana – Volume 2: Documents Relating to Tribal History, Confiscation and Reallocation of Tauranga Lands*, Dame Evelyn Stokes (1992), University of Waikato.

enjoy this traditional form of hospitality when they visit Tauranga marae. It is a matter of tribal honour that this tradition should be maintained.

Other histories also focus on both the harbour itself and Mauao as key landmarks and landscape features[6]:

Ko Mauao te Maunga

Ko Tauranga te Moana

This proverbial saying is a figurative way of describing the area through its most prominent landmark, the sacred mountain of Mauao, and its most important landscape feature, the Tauranga Moana, (harbour or sea). Over time, the person whose name was recited at the end of the above saying changed as the arrival of each waka upon Te Tai Rawhiti changed the landscape slightly. The Tauranga district has a history of intense occupation 'probably going back over a thousand years'. The moana itself was rich in food, and an important means of communication to the hapu and iwi who governed its shores. Signs of past Maori occupation are evident in the extensive earthworks and many middens on Mauao which can still be seen today. …..

In addition, the importance of Te Awanui / Tauranga Harbour to the local tribes and marae, both physically and spiritually, is also explained in many of the local histories . In particular, its importance as a source of kaimoana is repeatedly described in various reports prepared for the Waitangi Tribunal, together with the importance of its health and the exercise of kaitiaki over it, eg[7]:

……. The estuaries of Oreanui and Waikareao were a major food supply for Ngai Tama Rawaho and once had an abundance of kaimoana. The entrance to the Tauranga harbour between Panepane on Matakana, and Mauao on the Maunganui is opposite the isthmus of Otumoetai The mountain fed rivers and streams ensured a plentiful supply of fresh water to maintain a balance in salinity levels of the inner harbour waters, creating a unique habitat.

The unpolluted waters, free of sediment and debris, at particular times of the year provided an ideal habitat for the masses of spawning kahawai. They were the principle species of a long food chain which extended well beyond Tuhua. The migration pattern of fish determined the Ngai Tama Rawaho social interaction with other hapu, marking the seasons to allow inland hapu the opportunity to partake in the harvest of seafood. Sadly today this is not the situation. …….

Perhaps unsurprising, therefore, many of those same reports also raise significant concerns about development within, and management of, Te Awanui / Tauranga Harbour in Tauranga's post-colonial era[8]:

……. The destruction of wahi tapu and the deprivation of the use of waterways resulting from the Tauranga Joint Generation Committee actions in the late 1960s, led to Ngati Hangarau Kaumatua, Kaikohe Roretana stating:

> *Omanawa and Te Korokoro falls were used to prophesy good luck and ill fortune and death. When Koro Koro sounded, it was a sign of bad luck and sometimes death, while Omanawa Falls were a sign of good luck. We are proud of our fortune tellers which foretold the luck of the Tribe. When you go into this land and treat it as common earth you make yourselves vandals in our eyes.*

This korero is reflected in the waiata composed by Te Turupa 'mo tana hoa a Kereti' who was killed at the battle of Te Ranga in 1864. Both were of Ngati Hangarau. …….

…… Thus the waterways were part of the people, a part of Ngati Hangarau history retold when expressed in traditional waiata. Traditional ties of Ngati Hangarau also amounted to shared guardianship, authority and control Some areas within their rohe were managed by whanau on behalf of the Hapu (such as the Ngamanawa area and surrounding waterways), shared between Hapu on behalf of the Iwi (such as the Wairoa river) or defended by Hapu of each Iwi over the whole of the Tauranga Moana (such as against the Crown at the battles of Pukehinahina Gate Pa and Te Ranga). According to Alice Rerepeti Tuira, a kuia of Ngati Hangarau, the Hapu have used,

---

6 P. 10 *Report Prepared for The Waitangi Tribunal for the Wai 540 & Wai 215 Claims*, Roimata Minhinick (1999).

7 P.21 *Overview Report Prepared for The Waitangi Tribunal (Te Whenua O Te Kupu Whakaari, Ngai Tama Rawaho) for the Wai 215 & Wai 659 Claims*, George Matua Evans (1997).

8 Pp.8 & 9 *Report Prepared for The Waitangi Tribunal for the Wai 215 & Wai 672 Claims*, Roimata Minhinick (1999).

protected and developed these waters in conjunction with the need to preserve them for future generations since the arrival of the waka Takitimu.

The exercise of tino rangatiratanga by Ngati Hangarau within their rohe is also reflected .in the occupation and use of the area. The basis of this occupation was the abundance of food resources. ……

Some of those concerns, which encompass the area within the rohe of Ngāi Te Rangi, also touch on the Port's development and activities associated with it[9]:

……. The use of the harbour and pa sites around the harbour as public recreation facilities creates a conflict with Ngaiterangi cultural values. The result of such usage has been the desecration of significant wahi tapu. Ngaiterangi maintain that the foreshores were never sold to the Crown and remain Ngaiterangi land. Since at least 1885 Ngaiterangi have been requesting that their customary rights over these areas and the harbour as a whole be recognised.

The Crown's legislation vesting control of the harbour in the Tauranga Harbour Board failed to provide for Ngaiterangi representation…….

……. The large scale development of the international cargo port at Mount Maunganui has severely impacted on the ability of Ngaiterangi to exercise their customary rights over the foreshore. The development of the port was encouraged and facilitated by the Crown. The development was seen as being of national benefit, and the drive to develop the region took precedence over any Treaty of Waitangi responsibilities. …….

……. While Ngaiterangi have been protesting their loss of tino rangatiratanga over the harbour for more than 100 years, the level of impact on the harbour and wahi tapu has grown sharply in the last 50 years, …….. This was a period of rapid industrial and residential expansion in the Bay of Plenty……

…… Ngaiterangi have consistently argued that they have a strong association with the harbour. Hori Ngatai said:

> *My mana over these places has never been taken away. I have always held authority over these fishing places and preserved them and no tribe is allowed to come here and fish without my consent being given.*

Ngaiterangi made no distinction between areas above and below the high water mark. Both were important resources. The harbour for Ngaiterangi was an invaluable resource as a food source and communication link. The foreshores or mudflats around the harbour, as well as being significant food gathering and growing resources, were also used for settlements. The coastal sands and swamps were valued as food sources. Because the harbour and the surrounding lands played a part in the daily existence of Ngaiterangi it has therefore been considered a source of mana that deserves and requires protection. A desire to protect the harbour is evident in the customs that have developed that recognise the relationship Ngaiterangi have with the harbour and their sense of kaitiakitanga. Ngaiterangi have increasingly felt the loss of this Kaitiakitanga over the harbour and foreshores. …..

…….. The value of the harbour has been recognised and fought over by a number of iwi and as a result:

> *many cultural and historical-associations have been developed with local landmarks, harbour features, fishing grounds and shellfish beds, wahi tapu (sacred places), urupa (burial grounds), pa (fortified villages) and kainga (unfortified villages). These associations remain, regardless of present ownership of land.*

Therefore, well before the arrival of Pakeha in the area Ngaiterangi were guided by custom in their relationship with the harbour. These customs established territorial and accepted usage patterns between iwi and hapu. These customary rights or rules were the lore that established the law about where and when fish could be gathered and by whom. This had the effect of protecting the resource and maintaining the balance of power between iwi ……

….. At no time have Ngaiterangi given -up their duty of kaitiakitanga over the harbour….

---

9 P.11 *Overview Report Prepared for The Waitangi Tribunal about Ngaiterangi & The Crown*, Bassett Kay Research (1998).

The concerns expressed by Ngāi Te Rangi in the last of these documents reflect the historic evolution of Te Awanui / Tauranga Harbour's occupation and use, but also bring the iwi's associations with, and attachments to, it into the 21st Century. They are consistent with the values and associations described in both the *Tauranga* Moana Iwi and Ngāi Te Rangi Iwi Management Plans, with much attention drawn to:

- Balancing development and conservation within Te Awanui / Tauranga Harbour;
- Protecting Te Awanui / Tauranga Harbour's water quality and ecological health;
- Maintaining associations with, and protecting, marine mammals;
- Protecting Te Awanui / Tauranga Harbour's kaimoana, including a wide range of fish and shell fish species;
- Maintaining the role of iwi as kaitiaki / guardians of the harbour and its sea life; and
- Protecting key landmarks and landscape features within and around the harbour, such as Mauao.

4. Landscape, Natural Character & Amenity Effects

Assessments addressing changes to both urban and coastal environments and landscapes often refer to a range of effects: visual, landscape, natural character and amenity. The following summaries help to clarify the distinctions between these different types of effect. In particular, they make it clear that the focus of this study is primarily on Landscape Effects and Natural Character Effects. Visual change can, in turn alter or modify, landscapes and freshwater environments, without necessarily having an effect in its own right. At the same time, there is often strong overlap between Landscape and Amenity Effects. Accordingly, visual change is considered in relation to all three related types of effects – Landscape, Natural Character and Amenity – while, for reasons outlined below, Landscape and Amenity Effects are addressed jointly, under one heading in the assessment sections of this report.

4.1 Visual Change

Visual change and 'effects' reflect changes to the visual composition, configuration and character of a locality and / or landscape, together with the perceived scale of such changes – in terms of their relative prominence and legibility. However, an assessment of visual effects does not address the values associated with such change, which are more appropriately addressed in relation to the landscape, amenity and natural character attributes of an area. Visual change and 'effects' are, in effect, devoid of value: they convey a sense of the magnitude of visible change that would be experienced from a viewpoint or viewpoints, but not the impact that this has on the values and identity of the subject site and its surrounds. As such, visual effects are no more than a stepping stone to addressing the more meaningful range of effects on landscape, amenity and natural character values – as appropriate to any given situation.

4.2 Landscape Effects

"Landscape" is an all-encompassing term. The New Zealand Institute of Landscape Architects (**NZILA**) Charter (2010) describes "*Landscape*" as being "*the cumulative expression of natural and cultural elements, pattern and processes in a geographical area."* Moreover, the Charter's Preamble offers the following, slightly more fulsome, description of landscapes:

> *"Landscapes are the result of unique combinations of biophysical, cultural and social processes, evolving over time and interwoven with memory, perception and tradition. They include land, water systems and marine areas, and play a vital role in human nurture, fulfilment and in shaping individual and collective identity. Landscapes range from the outstanding and the memorable, to the familiar and commonplace …."*

In addition, the NZILA's *Te Tangi A Te Manu*[10] *– Aotearoa New Zealand Landscape Assessment Guidelines, 2022* (p. 35, section 4.22) – identifies landscape values as comprising three 'layers' of attributes:

[10] P.35 *Te Tangi A Te Manu – Aotearoa New Zealand Landscape Assessment Guidelines* (2022)

Physical, associative, and perceptual dimensions

The current professional practice of conceptualising 'landscape' as the overlap of its physical, associative, and perceptual dimension is reflected in 'case law' including the following recent decision[11]:

> *"Landscape means the natural and physical attributes of land together with air and water which change over time and which is made known by people's evolving perceptions and associations."*
>
> *"In keeping with the Act such a definition enables the development of landscape assessment which takes account of:*
>
> 1. *natural and physical environment: and*
> 2. *perceptual; and*
> 3. *associative aspects (beliefs, uses, values and relationships) which may change over time"*

As such, landscape effects relate to modification of both the biophysical and sensory (or perceptual) characteristics and values of an environment. Often, these are addressed in terms of changes to the biophysical values within a landscape, together with its visual legibility and memorability, expressiveness, aesthetic value, and its sense of place or identity and other 'associative' matters. Changes to the character and values of a landscape may also affect people's appreciation of its cultural and historical dimensions.

4.3 Natural Character Effects

Natural character values and effects overlap with those pertaining to landscape, albeit with more emphasis upon the biophysical attributes and perceived naturalness of (in this case) freshwater environments, together with any effects on those environs.

The *NZ Coastal Policy Statement* (2010) provides guidance in relation to the components of NZ's coastal domain that underpin both values and effects, but not its freshwater environs – such as those of the Waitaki River system. In particular, Policy 13 (2) of the NZCPS provides some useful guidance about the broad range of elements / features / characteristics that might be applicable to both the ascribing of natural character values to "*wetlands, and lakes and rivers and their margins"* [Section 6(a) of the Resource Management Act] and the analysis of effects on them:

> *(a) natural elements, processes and patterns;*
>
> *(b) biophysical, ecological, geological and geomorphological aspects;*
>
> *(c) natural landforms such as headlands, peninsulas, cliffs, dunes, wetlands, reefs, freshwater springs and surf breaks;*
>
> *(d) the natural movement of water and sediment;*
>
> *(e) the natural darkness of the night sky;*
>
> *(f) places or areas that are wild or scenic;*
>
> *(g) a range of natural character from pristine to modified; and*

11 Paras: 300-301 *[2011] NZEnvC 384, Mainpower NZ Limited v Hurunui District Council, ('Mount Cass Wind Farm'),*

(h) experiential attributes, including the sounds and smell of the sea; and their context or setting.

Thus, coastal environments that are highly natural will be much more sensitive and susceptible to the effects of change than those that are already highly developed and modified. Yet, whereas landscape values can often be 'driven' by one or two key factors (e.g. the dramatic profile of Mauao and local / iwi connections with the maunga), natural character values tend to 'step' in line with the combined natural qualities of any environment – covering its water bodies, geomorphology and landforms, vegetation cover, land uses / activities and wider 'context'. Locations of high natural character value will generally reflect high levels of naturalness across all of these layers. Consequently, natural character effects are derived from changes to the characteristics of a coastal environment, either in part or whole, that affect its elements, features, patterns, and processes. These effects become adverse when such changes diminish that coastal environment's biophysical and/or perceived degree of naturalness.

4.4 Amenity Effects

Effects on amenity values, in terms of Section 7(c) of the RMA, overlap with those on the 'sensory' and 'associative' qualities attached to landscape values, insofar as the description of Amenity Values in the Act describes them as comprising:

> *those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes.*

This indicates that 'amenity' pertains to areas that are known, understood and appreciated by those who live within them or visit them – often on a reasonably regular basis. Amenity values also relate to such factors as noise, lighting, smells and awareness of activity and movement; in effect, the fuller spectrum of sensory factors that contribute to perception and appreciation of an area's character, pleasantness and aesthetic coherence. Inevitably, this also brings into play perceptions of identity and sense of place that reflect the more particular, even unique, qualities of a locality or environment. Concepts of familiarity, shared ownership (in a figurative sense) and pride of place are also important in this regard. Finally, Section 7(c) refers to "*cultural and recreational attributes*", which often pertains to areas used for both passive and more active recreation. Consequently, amenity effects arise from changes to, and degradation of, these qualities. This can include 'nuisance' effects that degrade the 'pleasantness', 'aesthetic coherence' and other values associated with a particular locale – which often pertain to such matters as:

- Visual dominance or over-dominance
- Loss of open space and perceived spaciousness
- Encroachment on privacy
- Over-shadowing
- Noise.

4.5 Summary

To summarise, Figure 4, below, identifies the various 'factors' / criteria associated with Amenity, Landscape and Natural Character values, together with their identification.

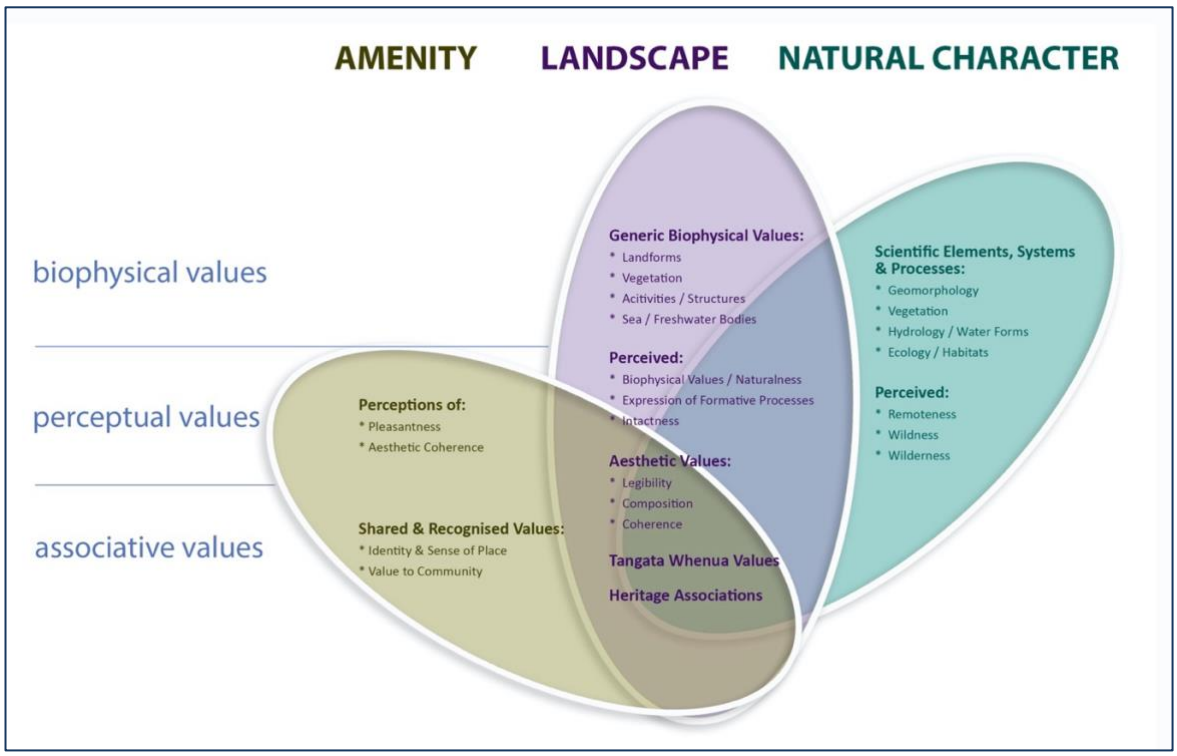


Figure 4. Landscape, Amenity and Natural Character 'factors' and assessment criteria

NOTE: Although Table 1 appears to show discrete columns of 'factors' / criteria below *Amenity, Landscape* and *Natural Character*, there are key areas of overlap:

- across all three columns in relation to "Perceptual Values";
- between *Landscape* and *Natural Character* in terms of Biophysical Values; and
- between *Amenity* and *Landscape* in relation to Associative Values.

In fact, Tangata Whenua Values and some Heritage Associations also contribute to Natural Character values, but this table focuses on the areas of strongest overlap and difference.

5. Assessment Process

5.1 Introduction

This report focuses on the effects associated with the dredging and deposition of seabed material in the Tauranga Moana and Pacific Ocean. The stages associated with this assessment comprise:

a) Description of the existing environment embracing the areas of dredging and deposition near the Port, and adjoining parts of Mt Maunganui and Tauranga City;

b) Identification of any natural features and values of significance in terms of the landscape and coastal environment of Tauranga Moana, the Pacific Ocean, and their margins (with particular reference to relevant statutory instruments);

c) Identification of any amenity values associated with the Tauranga Moana, the Pacific Ocean, and their margins;

d) Assessment of the actual and potential effects that dredging and deposition give rise to at present;

e) Assessment of any additional or different effects that future dredging and deposit would have during the proposed consent period;

f) Identification of any measures that would avoid, remedy or mitigate those effects to the point that they are less than minor; and

g) Identification of any additional measures that could be employed by the PoTL to ensure that the 'proposed' dredging and deposition, together with port activities and structures, generate a positive environmental outcome.

It should be noted that Points b) and c), above, would normally address any cultural values associated with the Tauranga Moana and Pacific Ocean. This is particularly important, given Whareroa Marae's close proximity to the existing port and Stella Passage, together with the close association that Ngāi Te Rangi, Ngati Ranginui and Ngāti Pukenga have with the main body of Te Awanui. However, I have been advised that these matters are to be addressed in a separate report that will focus on the cultural values and connections associated with both sea bodies, together with the effects of dredging and deposition on those values.

Even so, a number of landscapes, features and marine areas are identified in statutory documents as being important from both a broad multi-cultural perspective and Māori / iwi standpoint. These include such prominent landscapes / features as parts of Tauranga Harbour and Mauao. In such instances, this report addresses their values, together with effects on them, from a broad landscape standpoint, without delving more forensically into their cultural values. Consequently, such features and landscapes are not ignored or overlooked, but in relation to Māori values specifically, it is considered more appropriate for those with specialist expertise to address such values and effects on them.

5.2 Current State Assessment

The assessment of the 'current state' of the Tauranga Moana and Pacific Ocean starts with evaluation of the current environment around the areas of current PoTL dredging and deposition, together with its more specific landscape, natural character, landscape and amenity values. In evaluating different parts of the harbour and its surrounds, a 7-point rating scale is employed, with Tables 1-3 (below and overleaf) helping to explain each set of ratings.

Table 1. Natural Character Values Ratings – Physical & Perceived

	Typical Natural Character Attributes:	*Values Rating:*
1	Severely degraded / modified harbour / sea environment reflected in the state of its geomorphology, water quality habitat values, & margins	Very Low
2	Highly degraded / modified harbour / sea environment reflected in the state of its geomorphology, water quality habitat values, & margins	Low
3	Modified harbour / sea environment reflected in the state of its geomorphology, water quality habitat values, & margins are significantly modified / degraded	Low-Moderate
4	Modified harbour / sea environment in which modification / degradation is apparent but not consistently so	Moderate
5	A sea or harbour environment that remains predominantly natural but that is modified in places	Moderate-High
6	A sea or harbour environment that is very largely natural with few signs of modification / degradation	High
7	A highly natural sea or harbour environment in which its geomorphology, water quality habitat values, & margins are very largely untouched – both physically and perceptually	Outstanding

Table 2. Landscape Values Ratings

	Typical Landscape / Amenity Attributes:	*Values Rating:*
1	Severely degraded landscape that is devoid of coherence, aesthetic appeal, legibility, expressiveness, naturalness and other values	Very Low
2	Highly modified landscape with very limited cohesion, aesthetic appeal, legibility, expressiveness, naturalness and other values	Low
3	Modified landscape containing some elements that have a limited degree of appeal	Low-Moderate
4	Modified landscape with some natural remnants, together with other elements and patterns, that create appeal in places	Moderate
5	Landscape containing native remnants, together with other elements and patterns that generate appreciable cohesion, aesthetic appeal, legibility, expressiveness, and naturalness – but not consistently so	High
6	Landscape containing a high proportion of native / endemic remnants; that displays significant cohesion, aesthetic appeal, expressiveness, intactness and naturalness	Very High
7	A very highly natural, legible & appealing landscape that is unified, cohesive, highly expressive and aesthetically appealing	Outstanding

Table 3. Amenity Values Ratings

	Typical Landscape / Amenity Attributes:	*Values Rating:*
1	Severely degraded environment lacking coherence, aesthetic appeal, pleasantness & other values	Very Low
2	Highly modified environment with very limited cohesion, aesthetic appeal or pleasantness	Low
3	Modified environment displaying limited coherence, appeal, pleasantness and identity	Low-Moderate
4	Modified environment displaying aesthetic coherence, appeal, pleasantness and identity in places	Moderate
5	Environment containing elements and patterns that generate appreciable aesthetic coherence, appeal, pleasantness and sense of place – but not consistently so	High
6	Environment that displays significant aesthetic coherence, appeal, pleasantness and sense of place	Very High
7	An environment that is highly unified with very significant aesthetic coherence, appeal, pleasantness and sense of place	Outstanding

5.3 Future State Assessment

The PoTL is proposing to continue its present dredging and deposition operations, as consented in 2011, together with some capital dredging that was also consented at that time. These activities would be confined to Stella Passage, the Maunganui Roads, the Cutter Channel, the Entrance Channel and the deposition sites already described. As such, it is not anticipated that there would be any change to the ranges of activities and related effects that are visited on the various harbour / ocean environs already subject to dredging and deposition – or exposed to them. For the most part, therefore, this report represents a natural character / landscape / amenity 'stocktake' of the dredging and deposition areas and associated port, and their effects.

In summary, therefore, this report focuses on the effects that are already derived from PoTL's consented operations, together with those that would accrue with the capital dredging, which was first consented in 2011 and is still proposed.

Evaluation Areas

Reflecting this focus, the Future State Assessment focuses on effects pertaining to a range of features and receiving environments, including, the areas subject to dredging and deposition activities by the PoTL, key areas that are exposed to those areas of activity, and identified features and landscapes of particular value (and sensitivity) that are identified in relevant statutory documents, e.g. Mauao and Te Paritaha (see Section 5.2).

The process of assessing effects in relation to these 'locations' addresses them holistically, rather than via individual viewpoints. This is because too many viewpoints would be required to address the complete range of receiving environments around PoTL's areas of dredging and deposition activity – each with their own variable character, differing physical / visual contexts, range of viewing quadrants and distances to the Port and dredging / deposition areas. Moreover, the Port and its dredging / deposition areas do not occupy a single location, which would further complicate such an exercise: it would be excessively complex. Instead, therefore, the effects of the proposal are addressed 'in the round', descriptively, for each of the locations set out above.

Assessment Variables

Even so, the assessment process has regard to a range of factors that sequentially address:

- The existing landscape / environment and its values;
- The relative visibility and prominence of the dredging / deposition and port 'proposals'; and
- Their related effects on landscape, natural character and amenity values

– as set out below:

Existing Values:

1. *The general nature of the 'landscape / environment' – including identification of any key qualities, features, views or connections / associations (e.g. Mauao in a range of views)*
2. *Any key views encompassing the areas of dredging and deposition activity*
3. *Any key urban / suburban qualities and transitions*

Visibility / Prominence:

4. *Viewing distance to the Area of areas of dredging and deposition activity*
5. *The natural orientation of views / outlook relative to the areas of dredging and deposition activity*
6. *The relative elevation of the areas of dredging and deposition activity, and receiving environment*
7. *Intervening elements – landforms, vegetation, etc.*

Landscape Effects:

8. *Any effects in relation to the biophysical characteristics and naturalness of Te Awanui, the Pacific Ocean and their margins (including Mauao and Matakana Island)*
9. *Any effects in relation to the perceived naturalness, expressiveness, aesthetic value, legibility, transient values and 'shared and recognised' values of the harbour, ocean and their margins*
10. *Any effects in relation to key features (e.g. Mauao)*

Perceived Natural Character Effects:

12. *Any effects in relation to the biophysical values of Te Awanui, the Pacific Ocean and the rest of the coastal environment*
13. *Any effects in relation to the perceived naturalness of the harbour, ocean and rest of the coastal environment*
14. *Any effects in relation to key features or locations identified within the CMA and the rest of the coastal environment*

Amenity Effects:

15. *Any effects in relation to the aesthetic coherence and 'pleasantness' and identity of the local landscape / environment*
16. *Any effects in relation to the sense of place and identity of the local landscape / environment*
17. *Any effects in relation to specific features, views (e.g. from Whareroa Marae and other significant vantage points)*

Taking these various factors into account, the Future State Assessment culminates in an overall **Impact Rating** for each of each place / feature / receiving environment. These ratings employ the following scale (**Table 4**, overleaf), which is aligned with the 7-point scale of ratings recommended in the NZILA's *Te Tangi A Te Manu / Aotearoa New Zealand Landscape Assessment Guidelines (2022).*

Table 4.

	Adverse Effects:	*Effects Rating:*	*RMA Rating:*
1	*No appreciable change to, or degradation of, the subject area's landscape, natural character or amenity values*	*Very Low*	*Less Than Minor*
2	*Limited degradation of, the subject area's landscape, natural character or amenity values*	*Low*	
3	*Increasingly evident degradation of the subject area's landscape, natural character or amenity values*	*Low - Moderate*	*Minor*
4	*Reasonably apparent degradation of the subject area's landscape, natural character or amenity values – in part of whole*	*Moderate*	*More Than Minor*
5	*Marked degradation of the subject area's landscape, natural character or amenity values*	*Moderate*	
6	*Very obvious degradation of the subject area's landscape, natural character or amenity values*	*High*	*Significant Effect*
7	*Severe degradation of degradation of the subject area's landscape, natural character or amenity values*	*Very High*	

6. Current State Assessment

The following Attachments accompany this section, comprising photos of the landscapes and seascapes that encompass the areas of (currently) consented dredging and deposition:

Attachments 8-12:	Stella Passage Views
Attachments 13-15:	Views of the Maunganui Roads
Attachment 16:	View of the Entrance Channel Near Mauao
Attachment 17:	Views of the Pacific Ocean Deposition Areas
Attachment 18:	Views From Te Paritaha & Matakana Island Jetty
Attachment 19:	View From Near Panepane Point (Matakana Island)
Attachment 20:	Views of the Pilot Bay Mooring Area
Attachment 21:	Views From the Pilot Bay Shoreline
Attachment 22:	View from Mauao: Southern Side – Tomokanga Te Ara Tututanga Trail
Attachment 23:	View from Mauao: Western Side – Te Kawa Waipuna
Attachment 24:	View from Mauao: Crest – Te Ara Waikorire Lookout
Attachment 25:	View from Mauao: Eastern Side – Te Ara Rangiwhakamoana Trail
Attachment 26:	View from Maunganui Beachfront
Attachment 27:	View from Marine Parade Reserve

In addition, this section is accompanied by the following Attachments, which address representative views from the Mt Maunganui and Sulphur Point coastal hinterlands, together with viewpoints at Otūmoetai, as well as in the Mission Cemetery and on Dive Crescent at the edge of central Tauranga:

Attachment 30:	Views from Whareroa Marae & Boat Ramp Car Park
Attachments 31-35:	Views of the Port from Totara Road and Hinterland
Attachment 36:	Views from Maunganui Road to Port
Attachments 37 & 38	Views from Mt Maunganui's residential area towards The Port
Attachments 39 & 40:	Views from the Harbour Bridge Marina, Beach and Harbour Bridge to Stella Passage
Attachments 41 & 42:	Views of the Sulphur Point Industrial Area and Container Terminal
Attachment 43:	Views to the Sulphur Point Container Terminal from Marine Park & the Tauranga Marina Car Park
Attachments 44 & 45:	Views from the Tauranga Marina and Beach to the Sulphur Point Container Terminal and Maunganui Roads
Attachment 46:	Views from Otūmoetai and Otūmoetai Beach towards the Maunganui Roads and Port
Attachment 47:	Views from the Mission Cemetery and Dive Crescent Towards the Port

6.1 'Current State' Description

The following descriptions address PoTL's areas of dredging and deposition activity. They are designed to provide a general appreciation of these areas, while also highlighting factors / matters that are relevant to this assessment in terms of key features and values, and other findings that are relevant to the effects associated with PoTL's consent applications.

Stella Passage, The Maunganui Roads, Cutter Channel & The Entrance Channel

Looking from as far away as Mauao, but also across Tauranga Harbour from the west, views of the Port reveal a robust maritime landscape that is anchored by Sulphur Point and its visually distinctive container cranes, the Port's sheds and container stacks, the Maunganui log berths and shipping, cruise ships, light standards and – lower down – the sea channel that links the port area. Starting off Mauao, before passing Matakana Island, Pilot Bay, and both sides of the Port, before terminating at the Tauranga Harbour Bridge, this key navigation channel starts of in a relatively natural state, marked by navigation aids next to the channel and on Matakana Island, before becoming more 'formalised' between Te Paritaha bank and the Maunganui Berths, then quite emphatically structured within the engineered bounds of Stella Passage.

This transition is matched by changes to its immediate setting, starting with the rising volcanic mantle of Mauao largely covered in a mixture of coastal forest and shrubland, while Matakana Island on the opposite side of the harbour entrance and Cutter Channel, comprises a dune barrier island that is mostly covered in production pine forest. Both are exposed to the swells and surf of the Pacific Ocean's open seas, but whereas Mauao is ringed by volcanic tephra and reefs, the elongated spit form of Matakana Island is fronted by dunes and a sand beachfront that culminates in Panepane Point at the southern edge of the harbour 'gateway'.

Pilot Bay, just inside Mauao is lined by a gently arcing beachfront and baked by both its distinctive line of Norfolk Island pines and a broad sweep of mostly one to three-storey residential development. This housing extends down as far as the PoTL offices on Salisbury Avenue, with a large grouping of increasingly tall and intensive apartment buildings concentrated closer to Mauao, while the Maunganui Road shopping centre is also located inland of Pilot Bay, near its southern end. Directly offshore, moored yachts and the odd launch sit within a quite large mooring area between The Mall and its beachfront, and the landward edge of the Maunganui Roads navigation channel. The far side of the channel sits up against Te Paritaha bank, but its demarcation is not obvious, other than via the occasional navigation marker.

First approaching, then moving past the head of Sulphur Point, the Mt Maunganui side of the Port is increasingly demarcated by the cruise ship, general cargo and log port berths that line that side of the harbour – together with berthed vessels – while the Port's cargo and frozen goods sheds, then log stacks, dominate the area behind this straight 'edge'. Opposite, the Sulphur Point container terminal berths also emerge, often highlighted by the presence of large container ships and the even taller cranes that serve them. Backed by row upon row of container stacks across the terminal, the cranes' activity accentuates their presence, although they are at least as prominent when stationary in their upright, 'resting' position.

Within the very rectilinear basin of Stella Passage, other elements are also readily apparent, including:

- The shipping, cranes, containers, roading, lights, buildings and sand pile on, and at the edge of, the current Sulphur Point port area – around Berths 23-25;
- The log freighters, log stacks, hard standing, lights and sheds of Berths 7-11;
- The more intermittent presence of other freight ships, cruise liners, hard standing, sheds and lighting of Berths 1-6;
- The petroleum / fuel jetty, shipping and buildings around Berth 16;
- The tank farm behind the fuel jetty;
- Butters Landing, at the southern end of the Maunganui Berths, with its Matakana Island ferry , ramp and port servicing / storage area;
- The outer pontoons / breakwaters and piling of the Tauranga Bridge Marina, together with the lines of piers and berthed vessels inside it;
- A scattering of yachts and launches moored mainly between the marina and the Tauranga Harbour Bridge;
- Both that bridge and the much lower, Whareroa Bridge next to the both the Harbour Bridge Marina and the Whareroa Boat Ramp; and
- Industrial premises off Reid Place and Cross Road near the southern end of the Sulphur Point Container Terminal.

Largely contained by both the Tauranga Harbour and Whareroa Bridges, this amalgam of buildings, structures, vessels, and activities is symptomatic of a 'hard-edged', robust, maritime environment. Together with the container terminal and industrial premises arrayed behind PoTL's main port areas and the Harbour Bridge Marina, they contribute to the feeling of a large node of development and uses that is at the highly modified end of the landscape and natural character spectrums. This is accentuated by the daily comings and goings of container ships, log ships and fuel carriers, the more irregular arrival and departure of cruise liners, and the use of Stella Passage by a wide range of other vessels. These activities also impact on the public perception of the water area between Sulphur Point and Mt Maunganui that is subject to both current and proposed port dredging. As a result, both Stella Passage and the areas directly flanking it are quite different from the areas immediately outside this 'harbour reach'.

At a broad scale, Stella Passage combines with the Maunganui Roads to also be an important physical conduit between the main body of Tauranga harbour and the sequence of inlets at the southern end of the harbour: most notably, Waipu Bay and its estuary, and Te Tahuna o Rangataua, which, in turn, frame Tauranga's CBD, the Matapihi and Maungatapu Peninsulas, and seaside suburbs like Greerton, Welcome Bay and the inland margins of Papamoa. Together with the elevated profile of the Tauranga Harbour Bridge, it also establishes an important point of demarcation between Tauranga and Mt Maunganui.

The Pacific Ocean Deposition Areas

The five deposition areas employed by PoTL comprise the Main Ocean Deposition Ground which is regularly employed to dispose of sand and silt within the Pacific Ocean's deeper waters, and those employed for more sporadic beach and surf replenishment closer to Main Beach / Ōwhare and that part of Maunganui Beach south of Motuotau Island (Attachment 17). Both locations are part of the open ocean, although the plane of the sea is also broken by the rocky, volcanic profile of Moturiki and Motuotau Islands, together with a crown of native vegetation spread across that part of both above MHWS. The deposition sites are framed by ocean swells and surf closer to the Maunganui beachfront, then the broad sweep of white sand that Mt Maunganui is renowned for – only interrupted by the craggy profile of the islets just referred to. The beachfront then transitions into a sequence of grassed dunes behind Main Beach / Ōwhare and a large strip of marram and (to a lesser degree) spinifex-covered dunes south of Moturiki Island.

Around and behind Marine Parade, Mt Maunganui's profile rapidly evolves into a rather uneven line of Norfolk Island pines interspersed with housing. As near Pilot Bay, this sequence of development rises up into the mass of 4-11 storey apartment buildings near Mauao and is only significantly disrupted by the pohutukawas and other vegetation atop the elevated landform of Hopukiore Reserve / Mt Drury that is aligned with the causeway out to Moturiki Island. Naturally, this largely planar, spit, landscape culminates in the much more expressive form of Mauao at the northern end of Mt Maunganui.

The other feature most notable about the area around the deposition areas is the shifting array of turquoise to azure and navy blue colours apparent across the sea's plane. Broken only by the sequential lines of the ocean's waves and their surf, more elevated views from Mauao (Attachment 25), as well as from Moturiki Island and parts of the Marine Parade Reserve, reveal a rich patina of such colours that is further mottled where the volcanic reefs around the base of Mauao and the islands off Maunganui Beach underly the sea's surface and, in places protrude through it.

There is very little awareness of navigation aids or any other structures off Mt Maunganui's main beachfront – looking towards the deposition areas – although ships queueing for the Port's berths are visible on a daily basis. Otherwise, there is a very marked dichotomy between the highly developed, suburban and urban areas that lie inland of Marine Parade and the much more, natural, often spectacular amalgam of dunes, beachfront and ocean that lie seaward of it. Mauao is both a key visual frame for such views and an adjunct to the open ocean that it adjoins.

The Maunganui Port & Mt Maunganui

As inferred above the Maunganui berths are backed by a mixture of port offices, general cargo and cool store buildings, silos, railway lines, an extensive array of log stacks, and a broad swathe of hard standing that is used by trucks, log handlers, mobile cranes, and other equipment. Light standards also criss-cross the Port. Fuel lines and storage tanks also traverse the fuel jetty at Berth 16, while Butters Landing combines a ferry ramp with storage areas for equipment and port structures, a small-boat berth, and offices. Notwithstanding these port operations and the very hard-edged, maritime nature of this environment, a colony of black and red-billed gulls, together with some terns, also resides within the Port compound, on the rock armouring found between its southern-most log ship berth and the fuel jetty.

This line of port operations west of Totara Street then merges with most of Tauranga's medium and heavy industrial premises across that road corridor – extending from Hewletts Road and Tasman Quay (in the south) to Rata Street (in the north), near the Maunganui Road retail centre, then the PoTL offices at Salisbury Avenue. This area also extends south of Hewletts Road to embrace the sizeable Ballance Agri-nutrients plant and additional fuel storage facilities. In effect, it comprises Tauranga City's medium to heavy industrial heartland, extending eastwards to meet Maunganui Road. Whereas precincts at Tauriko and Greerton provide the focus for lighter industrial activity, the area around Totara Street and Hewletts Road is notable for the aforementioned Ballance industrial complex, Mt Maunganui's 'tank farm', Dominion Salt, various logistics centres, forestry storage areas, and a wide range of other 'heavier' industrial operations. It also contains some of the Port's storage sheds and additional container facilities.

However, the Bay Oval sports arena, Blake Park, hockey turfs, netball courts and other sporting facilities are also located near its northern end – still on the Port's periphery between Matai Street and the port railway line (from north to south). Extending further northwards, more retail-focused premises are found between Totara Street and Tawa Street, while several blocks of residential development are located between Tawa Street and Maunganui Road. Another 'ribbon' of retail activities – car yards, Supercheap Autos, etc – straddles Hewletts Road, while the southern end of the core industrial area effectively terminates at Tauranga Airport and, rather less sympathetically, Whareroa Marae – next to both Waipu Bay and the Ballance Agri-nutrients plant and premises.

This range of activities extends across Te Awanui's former dune and coastal terrace hinterland, establishing a broad buffer zone between most of the existing port and residential areas closer to Maunganui Beach, together with the Maunganui Road and Central Parade shopping centres. At the same time, Te Awanui Drive combines with the Tauranga Harbour Bridge, adjoining marina, and even the profile of the Ballance plant, to further isolate both the Maunganui side of the Port and most of the industrial area just described from Waipu Bay and the Tauranga CBD.

Sulphur Point

The narrow peninsula form of Sulphur Point, immediately west of Stella Passage, was created in 1969 with the decision to establish a container port at Tauranga / Mt Maunganui. As a result, between 1970 and 1989, the "Teremoana" dredged 5.5 million cubic metres from the Maunganui Roads and Stella Passage, which was all pumped ashore via pipelines to form the port reclamations during that period. The resulting 'peninsula' now covers some 95ha, and the following photo (overleaf) shows the extent of this modification in 1969:

Consequently, Sulphur Point now bears little relation to the beachfront and spit extant prior to those developments. Most of the artificial landform is now covered by PoTL's container terminal, which extends from Mirrielees Road to the northern end of Sulphur Point. Between the terminal and Te Awanui Drive an array of maritime industries operate, including vessel haul-out facilities, repair yards, a ferry / barge landing, and engineering workshops – nearly all addressing Stella Passage. Moana Pacific Fisheries are also located on Cross Street, almost directly abutting the southern end of the container terminal.



Figure 5. Sulphur Point Reclamation 1969

West of this area, a Holcim Concrete plant, then part of the container terminal and its railway corridor that extend through to Te Awanui Drive, are located next to the Dive Crescent fly-over. A bulk retail centre and the Chapel Street wastewater treatment plant then reach through to near the edge of the Waikareao Estuary – across Chapel Street. Progressing northwards, Cross Street merging with Keith Allen Drive separates the main body of the container terminal from a University of Waikato coastal marine station; then the pohutukawas, Norfolk Island pines and open space of Marine Park; and – at the head of the peninsula – the Tauranga Marina. The Tauranga Fish and Dive Club and Sulphur Point Boat Ramp sit within the reserve, while a boat sales office and yard are sited at the southern end of the marina car park. The Tauranga Yacht and Power Boat Club sits at the head of Sulphur Point, next to a smaller boat ramp and a public beach, whereas the actual marina projects out westwards into the mouth of the Waikareao Estuary.

The rectilinear form of the peninsula, as a whole', together with its angled head, marina embayment and straight line of container berths emphasise the artificial nature of Sulphur Point in plan or aerial views. The Port's container terminal – highlighted by its cranes, berthed ships, container stacks, sheds, light standards and security fencing – dominate the local landscape, while Sulphur Point's complementary array of industrial, maritime and bulk retail structures do little to alleviate its utilitarian character – even with the intervention of the Marine Park facing back towards Otūmoetai Beach.

Indeed, both the Chapel Street Bridge and the railway bridge immediately north of it – both crossing the Waikareao Estuary mouth – tend to reinforce a western shoreline that remains notable for its rock

armouring, boat ramps, car parks, marinas and some buildings. The trees and open space lining the Marine Park, wastewater plant, and other parts of that shoreline help to screen much of the container terminal and those industrial elements set back from the estuary channel, creating a degree of transition, but the more functional qualities of Sulphur Point remain apparent – with the current container cranes as its signature feature.

Otūmoetai

Closely linked to Sulphur Point, Otūmoetai is a suburb of bungalows, many of which date back to the 1960s and '70s. Even so, more recent renovation and redevelopment is conspicuous down the edge of Otūmoetai Beach, enjoying panoramic views of Te Awanui, Mauao, Matakana Island and the distal end of Sulphur Point. Yet, few of these features are apparent in views from the majority of the suburb, with intervening housing, fencing, walling and gardens limiting views from the majority of properties spread across a shallow harbour terrace and gently rising ridges behind it. Just those living next to Otūmoetai Beach and others occupying some of its more elevated ridges enjoy clearer views of both the harbour and Sulphur Point.

Looking from Otūmoetai Beach the northern end of Sulphur Point is clearly visible and 'present', together with the Tauranga Marina – which screens out a significant proportion of the Maunganui Roads in views from near the Waikareao Estuary. Even so, views out across Te Awanui remain expansive, with the container cranes and Mauao affording a sense of visual counterpoint between two quite different types of 'feature'. Moving away from the estuary mouth (Attachment 46), more of the Maunganui Roads emerge beyond the outer breakwater and vessels of the intervening marina. Yet, the entire navigation channel emerges as little more than a flat body of water on the far side of the harbour. It, together with the harbour and port entrance, melds with the flat expanse of sea that stretches from the rock revetment in the immediate foreground to the horizon beyond Mauao and Matakana Island. There is no demarcation of the channel, beyond that inferred by arriving and departing ships.

By contrast views from a few more elevated parts of Otūmoetai, such as the end of Pillans Road, reveal more of the Waikareao Estuary, together with the industrial development and containers spread across Sulphur Point. But very little of the main harbour, Mauao, or the Maunganui Roads and Cutter Channel is visible. Instead, much more of the development on Sulphur Point is apparent, intermixed with some of the Port's taller container stacks, the pohutukawas and Norfolk Island pines near the wastewater treatment plant and, the open space of the Marine Reserve. The container cranes are signature features of the eastern skyline, but not as prominent and commanding as in views from Sulphur Point and its closer margins.

6.2 Key Natural Features & Values

The contrasting values associated with Te Awanui and its margins are clearly reflected in the delineation of ONFLs, together with Areas of Significant Cultural Value, near the Port and PoTLS's area of exclusive seabed – in Schedules 3 and 6 of the BOPRCEP and Maps 09a, 09b, 11a, 11b and 12 (as shown below and overleaf). Importantly, though, the BOPRCEP does not contain a schedule that addresses or identifies Areas of Outstanding Natural Character or High Natural Character within the Coastal Environment. This appears to be a significant gap in terms of the Plan's implementation of Section 6(a) of the Resource Management Act.



Figure 6. Regional Coastal Environment Plan: Map 09a



Figure 7. Regional Coastal Environment Plan: Map 09a



Figure 8. Regional Coastal Environment Plan: Map 11a



Figure 9. Regional Coastal Environment Plan: Map 11b

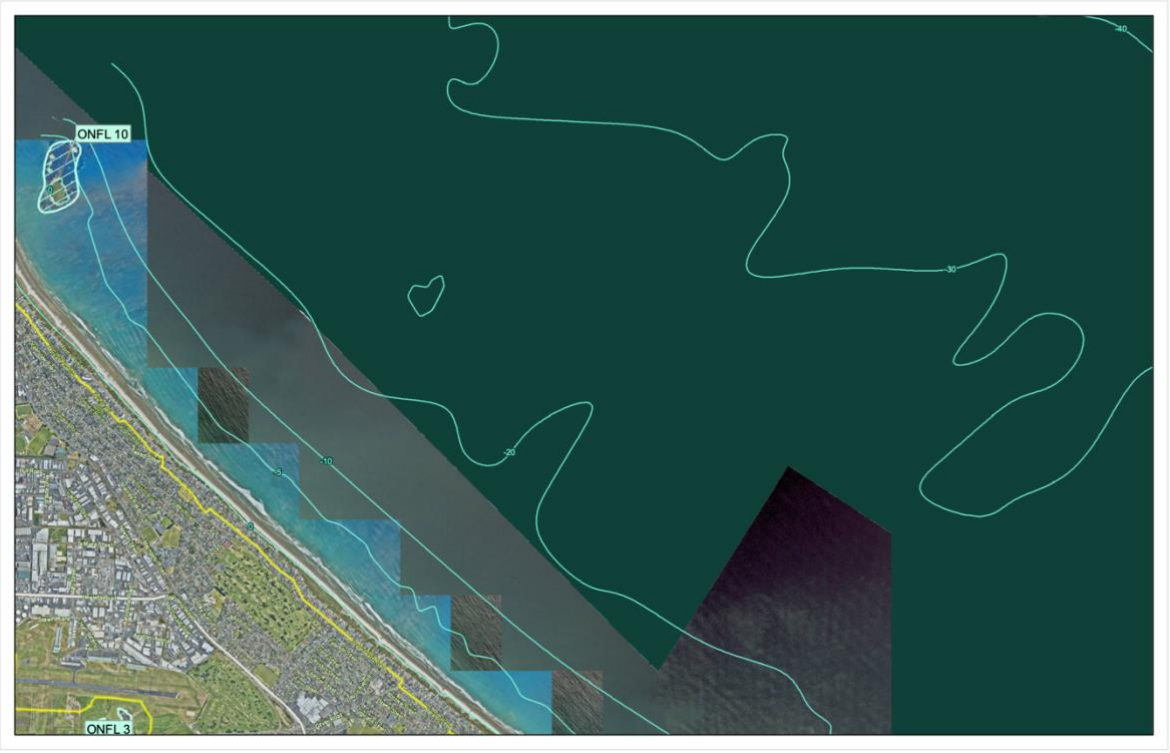


Figure 10. Regional Coastal Environment Plan: Map 12a

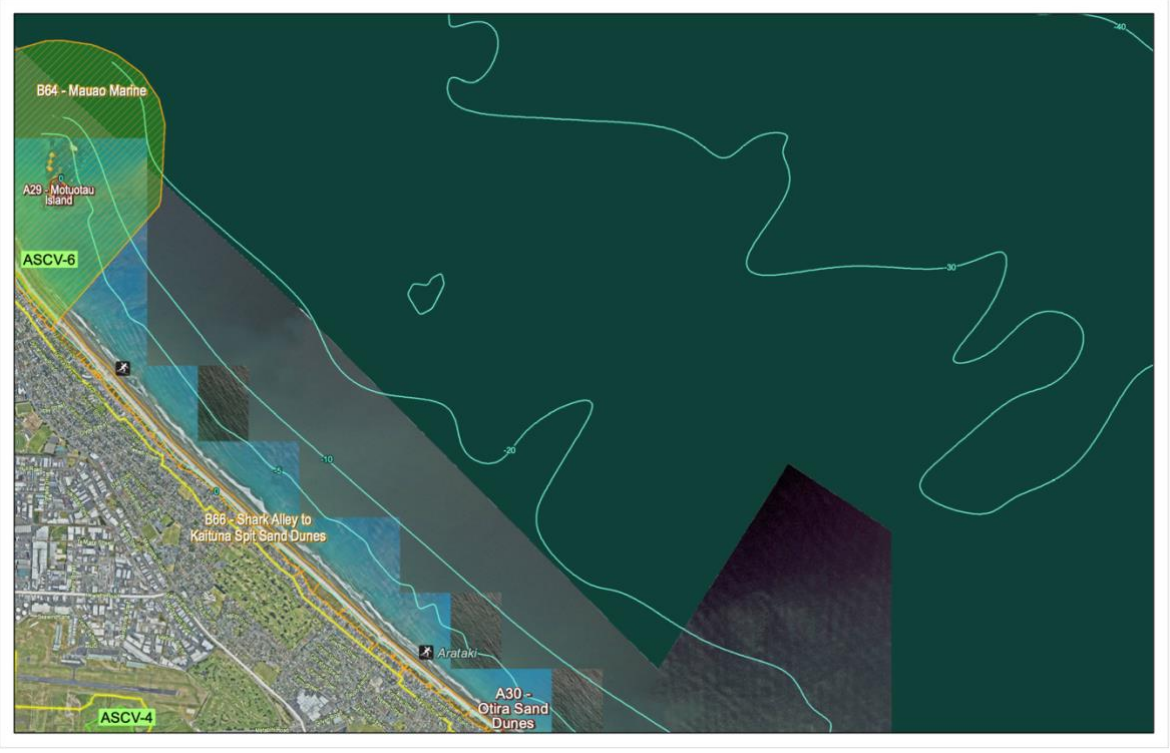


Figure 11. Regional Coastal Environment Plan: Map 12ba

As these plans show, ONFL3 (Te Awanui), ONFL 5 (Matakana Island), ONFL 10 (Mauao and Motuotau Island), ASCV-4A (Te Paritaha) and ASCV-6 (Mauao, Moturiki Island and Motuotau Island Marine Area) specifically exclude Stella Passage, the Maunganui Roads and the Cutter Channel, with the ONFL boundary skirting all three. This 'exclusion' also includes both marinas that flank the port, the outer Waikareao Estuary Channel (north of the railway bridge), and those parts of Waipu Bay that form the southern navigation channel between Stella Passage and Tauranga's CBD. Even so, all three inshore

Beach Replenishment Areas (Deposition Areas A-C) are located within ASCV-6 (Mauao, Moturiki Island and Motuotau Island Marine Area) and the Maunganui Roads directly abut ASCV-4 (Te Paritaha). The following descriptions of each of these landscapes, features and areas of cultural significance are drawn from **Schedules 3** and **6** of the BOPRCEP:

Schedule 3: Outstanding Natural Features & Landscapes

ONFL 3 – Te Awanui:

Te Awanui Tauranga Harbour, Waimapu Estuary & Welcome Bay – ONFL 3	Map Sheets 2a, 3a, 4a, 6a, 7a, 8a, 9a, 10a, 11a, 12a, 13a, 14a

Description:

Tauranga Harbour is a shallow tidal estuary of 224 km2. At low tide, 93% of the seabed is exposed. The harbour and its estuarine margins comprise numerous bays, estuaries, wetland and saltmarsh. The key attributes which drive the requirement for classification as ONFL, and require protection, relate to the high natural science values associated with the margins and habitats; the high transient values associated with the tidal influences; and the high aesthetic and natural character values of the vegetation and harbour patterns.

Current uses:

Bridges, national grid infrastructure, wharves, moorings, residential development, boardwalks, stormwater and sewer infrastructure, boat ramps, reclamations, recreational activities such as water skiing, fishing, boating, channel markers, navigational signs.

Evaluation		**Rating**
Natural Science Factors	Representativeness: The spatial relationship the harbour has with the land, providing estuaries, bays and beaches, is of significant value in representing the character of the landscape. This value is further enhanced by the scale of the water body, its dynamic patterns, and areas of native estuarine vegetation – all of which are highly representative of the harbour.	H
	Research and education: The proximity of the harbour to Tauranga, and the accessibility to large parts of the harbour edge, allows for educational and research opportunities both in the marine and terrestrial environments. Rarity: The natural harbour margins and waters are not a rare landscape feature at a regional level.	M-H
Aesthetic Values	Coherence: The extent of the harbour waters, its associated sand and shell banks and patterns result in a coherent landscape.	L
	Vividness: The value associated with the vividness of Tauranga Harbour is not resultant from any particular section or margin (though it is recognised some margins may be more vivid than others), rather it is the extensive relationship of the complete harbour waters, which define the landform, the extent of the harbour and its coastal patterns, that is highly recognisable and memorable within the region.	H
	Naturalness: Tauranga Harbour below the MHWS has low modification and includes extensive areas of sea grass and saltmarsh around the margins of the mainland and island, as well as mangroves, and vegetation patterns which transition to freshwater wetlands at river mouths. The harbour also features shell and sand banks used by indigenous birds. Consequently the landscape has a high diversity of habitats and vegetation types that combined result in a naturalistic landscape.	
	Intactness: Inlets and water ingress to the harbour has been modified to concentrate flows of water around built elements; however other parts, such as the northern and southern estuaries, remain largely unmodified. It is noted that the removal of mangroves (around settled areas) has damaged the sub tidal sea floor and produced unnatural lines in the vegetation, this combined with the modifications associated with the southern extent of the harbour (reclamation and harbour margin development), detract from the level of intactness. However, the natural processes which are evident in this landscape (i.e. the changing water levels), result in an overall aesthetically cohesive landscape, with largely intact coastal processes.	M-H
Expressiveness (Legibility)	The harbour margin features an indented coastline, with a series of headlands, estuaries and embayments and some isolated areas of remnant coastal vegetation. These features, together with the natural processes of the harbour waters, are highly valued for expressing the natural processes which influence, and change this landscape.	H
Transient values	The tidal flow is a significant component of the transient values and results in a constantly changing landscape, which is particularly prevalent around the harbour margins and northern entrance. Also of value is the presence of avifauna which further contribute seasonal changes to the landscape.	M-H
Shared and recognised values	Nationally recognised and valued.	H
Maori values	Ancient pa, mahinga kai, wāhi tapu, kāinga, taunga ika. Te Awanui is a significant area of traditional history and identify for the three Tauranga Moana Iwi – Ngai Te Rangi, Ngati Ranginui and Ngati Pūkenga. Waitaha of Arawa also has strong ancestral connections to Te Awanui. Te Awanui includes many cultural heritage sites, many of which are recorded in Iwi and Hapū Management Plans and other historical documents and files (including Treaty Settlement documents). The Coastal Marine Area is identified as an area of Significant Cultural Value (ASCV 4) in Schedule 6.	M-H
Historical associations	Landscape contains a very high concentration of recorded archaeological sites that are associated with Māori occupation and use of the harbour resources.	

ONFL 6 – Te Ura Kotikoti (Matakana Barrier Arm):

Te Ura Kotikoti (Matakana barrier arm) – ONFL 5	Map Sheets 3a, 4a, 6a, 8a, 9a, 11a

Description:

Te Ure Kotikoti, the barrier arm of Matakana Island, is the largest sand barrier island in New Zealand. The coastal extent of the barrier arm forms a large sand dune system that extends some 23 km between the northern and southern Tauranga Harbour entrances. The key values and attributes which support the classification as an ONFL and require protection are its high natural science values, its high aesthetic values, and the very high associative values of the barrier, including shared and recognised values, Māori values and historical associations.

Current uses:

Production forestry including planting and harvesting activities, former (now unused) forest mill structures and associated dwellings, infrastructure including forest roading, wharf and ramp, and kaitiakitanga and cultural activities.

He hanga nā te waha o te ngutu nō mua iho anō (Although it is created by the mouth, it is actually from ancient times)

Ki te ao mārama – Introduction

Māori ancestral sayings are taonga from the past; they have mana, and transmit or involve Māori values, tikanga, people, places and taonga for the preservation, safety and peaceful social interaction between Māori and their natural and spiritual worlds. Whakataukī, whakatauāk (proverb, aphorism), kupu whakarite (metaphor, simile) and pepeha (tribal saying, motto or proverb) convey information on life and society, ecosystems, the natural world and traditional ecological or metaphysical knowledge.

Relevant Māori values or attributes are identified in the following format:

1 The ancestral saying – a whakataukī, a whakatauākī or a pepeha

2 (A translation or explanation of the ancestral saying), and

3 *A descriptive context for each ancestral saying, where appropriate*.

The whakataukī, whakatauākī, kupu whakarite and pepeha express the intrinsic Māori values of Te Uri Koti Koti (Matakana sand barrier). They are relevant to both Matakana hapū and people and their communities generally.

Evaluation		**Rating**
Mātauranga urutapu pūtaiao *Natural Science*	Whakatanga / Representativeness: **Abiotic:** The high natural science values derived from the geomorphological and coastal processes which have formed this highly recognisable landform feature and its consequent topography as a large sand barrier should be protected from activities that could substantially interfere with or alter the appearance, functioning and integrity of those features. Such activities would include large-scale earthworks and reclamation. These values and attributes would tend to be more resilient than vulnerable in the face of such activities, provided that there are clear boundaries set to minimise issues of capacity and sensitivity. **Te whakaruruhau – Te Ure Kotikoti** ((The source of the name - Te Ure Kotikoti, sheltering qualities of physical landform)	*Te Tai Pari ki Tirohanga (high)*
	Biotic: *The name Te Ure Kotikoti derives from traditions and customary knowledge oncerned with the landscape's evolutionary sequences. Thus the name is directly connected to a consequence of a natural process. The barrier island's sheltering qualities act both culturally as the korowai whakaruruhau mō Tauranga Moana, and physically as a buffer between Mauao (Mount Maunganui) and Te Kura a Māia (Bowentown Heads) to natural coastal hazards such as erosion and tsunami events.* Biotic: Strong uniform cover, primarily production plantation forest with areas of indigenous vegetation regeneration in isolated locations. It also provides a shrubland / wetland understorey around the island's periphery, as well as diverse biota, taonga species (flora and fauna) and habitats within, including wetlands. The taonga species are of high value to the Hapū of Matakana me Rangiwaea. **Kei ngā mea tino whakamīharo o te moutere, ngā puna waiariki, ngā moana, ngā puna wainuku, ngā nohonga whakawhānau whakatipu ika, manu, ngāngara, ngā tohutohu o te moana, ngā ngaru o te moana, ngā iwi taketake rerekē, he taonga tuku iho** (The geothermal springs, the ocean waters (estuarine and open coast), assemblage of freshwater aquifers and freshwater inputs, nurseries and breeding grounds for fish, birds [and other fauna], seafaring and seasonal indicators, the people who are different from other indigenous peoples of the world, are highly valued as taonga).	*Te Paretata o te remu – (low)*
	Kaupapa rangahau me te whai mātauranga / Research and education: The distinctive nature of the geomorphology and some of the native fauna has led to organisations such as the Matakana Island Environment Group promoting research and education on the Island. Cultural, ecological, geological, geomorphological, paleo botanical, archaeological and mātauranga Māori research on the Island has been undertaken and is ongoing with the support of the hapū. Mātauranga Māori, this knowledge is held by the hapū. Intactness of traditional knowledge has particular significance for the Island and its hapū. **Ngā Kete o te Wānanga** How knowledge is conveyed and how it influences management. Knowledge transmission is connected to and reliant on intact, properly functioning and landscape integrity. **He kare moana, he manu tirikohu** (a ripple on the sea, a plunging/diving bird) Used to express the ability of the tīpuna to tell what kind of fish were running by the ripples they made on the surface and by the type of birds and their behaviour at sea. Points to diverse fish life and long, strong associations, observations and interaction with the moana environs.	*Te Paringatai ki Waikoura (moderate – high)*

	Seasons and cycles, both land and water, are integral to the hapū relationship with the land and seascape. Ngā āhuatanga ahurei	
	Rarity: **Kāore he moutere i kō atu i kō mai i a Matakana** There is no other island like Matakana, as recorded in whakapapa of people and place. The Island's location, enclosing the Tauranga Harbour, together with it being the largest barrier island in New Zealand, is significant. Matakana is the only island of its kind in the southern hemisphere. Two harbour entrances and the associated natural harbour hydrology and dune land ecosystems create an extremely rare feature regionally, nationally and internationally.	*Te Tai Pari ki Tirohanga (high)*
Ngā hononga rerehua *Aesthetic Values*	Ngā āhua reretahi / Coherence: Matakana Island's function as a barrier for the harbour and its essentially uniform appearance, principally from middle- and long-distance views, stand out. Those attributes should be protected from activities that could substantially alter its integrity, such as substantial permanent changes to its cover in trees, including the location of large or extensive buildings (including areas of smaller buildings) or cleared areas. It is generally accepted that the transient values are not high and so temporary changes, which in the context of the island include cyclic harvesting of sections of the production forest would not be prevented. Given the on-going effects of forest harvesting, the island appears to be relatively resilient to the effects of existing activities in these categories, but it may still be appropriate to consider a level of protection which would meet the risk of any significant change in the present regime for the forest. **Te marae koiora o Tangaroa. He ākau taiao kore kāinga, ka tau. He kāroaroa, he pā whakawairua** (The wellbeing of the domain of Tangaroa; It is serene; It is deliberate. It is calm and in harmony - an expression of the state of mauri of a place or person) *The natural space of Tangaroa, functioning properly, uninterrupted, unimpeded; able to respond naturally; a coastal environment with no built form.* **Te korowai o Papatūānuku me āna āhua piringa** *Refers to the natural forest-clad dune island features set against a natural coastal backdrop. It is the green of the trees against the white of the sand, and no human structures or built form.* **E anga tō mata ki te moana Otuhua, ki te ara haerenga o ngā tīpuna** (Turn to face the ocean we know as Otuhua, to the pathway travelled by our ancestors) *Used here to refer to the ocean beach and the unimpeded views that connect ngā hapū to other islands (Kārewa, Tuhua, Mōtītī) and to their tipuna who traversed these waters.*	*Te Tai Pari ki Tirohanga (high)*
	Ngā āhua pūahoaho, me ngā āhua pupuri / Vividness: **Ka whakahokahokai anō au kia topa iho i te ipukarea ki te Paretata (mai Mauao)** (I stretch out to soar down the ancestral homeland to Paretata (from Mauao to Paretata) *Metaphor used to express the ocean beach being reflective of the people. The coastal side of the island is distinct in the memory. Its isolation, remoteness and air of tranquillity contribute to this.* The scale of the barrier, its location between the two entrances to Tauranga Harbour, the extent of the long, white sandy beach, and the cohesive nature of its landcover and landform, results in the island being highly legible from many locations. It is also a symbolic feature that offers a visual counterpoint to Mauao and Te Kura a Māia. **Ko te tūhonotanga ki te whenua, ko taku moutere tēnā (My island, my home – sense of place)** *Te Ure Kotikoti is a symbolic feature including its whakapapa and relationship with, and contrast to, Mauao. It has significance as a tohu (wayfinding landmark). Such interaction is experienced from a wide range of viewpoints from land, sea and air.*	*Te Panekiretanga ki Mauao (very high)*
	Ngā āhua taketake / Naturalness: A perceived naturalness is maintained over the barrier as a whole due to the presence of vegetation cover (currently exotic), dynamic coastal processes and residual dunes, and absence of built form (apart from Mill Site buildings, Panepane Point's wharf, boat ramp and Port of Tauranga Navigational Beacon). Clear skies and clear nights void of light pollution contribute to the sense of isolation.	*Te Tai Pari ki Tirohanga (high)*
	Mauri tau / Intactness: **He iwi taketake tātou** (We are indigenous to the Island - from birth through death – our naturalness is one with the whenua; one cannot be separated from the other). *Ngā hapū are part of the island's intact naturalness.* The sand barrier as a landform remains intact in its entirety. The seaward coastal margin of the island includes dunes that feature high quality and diverse indigenous vegetation beneath the pine canopy, including threatened plant species. This provides a relatively undisturbed habitat for a wide range of threatened and uncommon shore birds, notably the New Zealand dotterel, and other taonga species. Some of the natural systems and processes related to the geophysical form of the barrier island remain apparent, although the majority of the sand barrier has been modified by production forestry.	*Te Rae ki Pane Pane (moderate)*
Expressiveness (Legibility)	**Kaua e huri tō tuarā ki a Tangaroa, hei kai mā te ika** (We do not turn our backs on Tangaroa for we shall be food for the fish.) *As people, we cannot assume management of Tangaroa, we must understand the concept of the life of the moana.* The barrier was formed from dynamic volcanic and coastal processes. As a whole, the form and context of the sand barrier as a natural feature is expressive of the continuing natural processes that form this coastal feature. These include the daily coastal and tidal flows, seasonal coastal processes and natural events.	*Te Paringatai ki Waikoura (moderate – high)*

	Unu tai - ngā tai a Pahipahi (What water is where you are from – the waters of Pahipahi) *This speaks to the origins of the people being linked to the origins of the island's physical landscape. The emphasis is Pahipahi being the source of the geomorphological characteristics of the island, specifically Te Ure Kotikoti.*	
Transient values	**Ko ngā mahi a Hinemoana** (The intactness of natural processes are evident through the actions of Hinemoana) *Erosion events occur on the ocean-beach. On one hand it is sad to see the whenua or Papatūānuku horo away into the sea but on the other hand, it gives credence and pays tribute to our worldview in relation to the ongoing battles between our atua. It also recognises the processes associated with climate change.* Ephemeral processes including tidal patterns, natural erosion and accretion of the coastal margins and dune system are apparent and vary from day to day. The dynamic interplay of wind and waves constantly form and reform the barrier interface with the harbour and ocean. The migratory patterns and movements of birds and kaimoana species add to this mixture of daily and seasonal change, while fluctuating weather patterns add another layer to the various 'moods' of Matakana Island. Transient values are less apparent within the interior of the sand barrier. Fauna tends to concentrate near the Island's margins, and the homogeneity of most of the vegetation cover limits the appreciation of seasonal and daily (including tidal) changes that are more apparent around its sea margins. **Ka ngaro ka ngaro, ka ea ka ea, Te Paretataa o te remu** (it is lost/gone, it lost/gone, it appears, it appears - Te Paretataa o te remu) *Used here in reference to the white tern that symbolises certain cultural conditions at certain times of the year. The birds return to the sandbanks. The pronunciation of the name Paretataa reflects the call of the tern.*	*Whaitua ki Te Ureture – (low – moderate)*
Shared and recognised values	Highly recognisable with a large viewing audience, which is also experienced through science, and recreation uses and kaitiakitanga. Known as a local and regional landmark, Matakana Island is in numerous examples of promotional material for the region and two districts. The island's location and its limited accessibility creates a valued sense of remoteness and isolation. **Tākiri ko te ata i o matawhau.** (The connection of Mauao which stands sentinel over all the islands, inner harbour and offshore, of Tauranga Moana) The whakataukī expresses the visual and landscape connections to the chiefly maunga, Mauao and the mainland where many of our wider whānau live. The expression is shared wider with Tauranga Moana, regionally and nationally. The island's location and its accessibility (by boat only) help create a sense of remoteness and isolation. The community is small and includes non-resident forestry land owners and operators, but is otherwise predominantly a Māori community connected through whakapapa to the island. This creates a strong identity with, and connection to, the island through tikanga, social, cultural, recreational and employment activities.	*Te Panekiretanga ki Mauao (very high)*
Maori values	**I kā tonu taku ahi, e mana anō** (My fire still burns, our mana remains intact) *The expression used here is to express the cultural integrity of place. Ngā hapū of Matakana and Rangiwaea are ahi kā. As recounted from their ancestors, their occupation is not of living by the sea but of being of the land and of the sea. The landscape is a coherent whole and to ngā hapū that coherence is highly intact. Like a rock in the ocean constantly battered by the crashing waves and yet remains steadfast, it's formidable resilience able to dissipate the outside pressures and forces like the people of these islands – like its tides they will always rise to protect it.* Te Ure Kotikoti is the traditional name given to the sand barrier by Māori. It is a landscape that is rich in natural, cultural and spiritual resources. The Matakana me Rangiwaea Island Hapū Management Plan records values and sites of significance, including ancient pā, kāinga, urupā, mahinga kai. The key values are the strong ancestral relationship of tangata whenua to the island and numerous places on it, absence of built form, and the place of the island in the wider context of Te Awanui/Tauranga Harbour and the other nearby landmarks such as Mauao. **Ka noho hei puhi ki te moana** ("I remain steadfast on the Island") *An expression of an eponymous ancestress who sent her people away to safety to save them. The identity of ngā hapū is inextricably linked to the islands and moana environments and like their tūpuna before them, the hapū will go to great lengths to protect their unique island-coastal indigeneity and their relationship to the islands and moana.* **Ko te kaakahi, ko te kōrehurehu i runga i te moana āio** (the 'kaakahi' is the haze on the calm sea which is seen on fine days and looks a little like smoke on the sea). Used here to describe a special natural phenomenon typically only experienced by ngā hapū o te hau kāinga. It is understood to be a tohu pai, a special characteristic associated with offshore islands and whanaunga-whakapapa and a feature of the ocean-beaches expansive view-shafts and pristine naturalness. **Wāhi tapu** Wāhi tapu are prevalent throughout the Te Ure Kotikoti landscape. Even where there have been past modifications, they are highly sensitive and vulnerable and integral to the cultural landscape. **Ko ngā āhuatanga o te hau kāinga** (traditional values and practices on mana whenua) The Matakana Island sand barrier – Te Ure Kotikoti continues to be considered by the hapū and tangata whenua generally, to be significant as a repository for transferring cultural harvesting traditions and practices, and associated hapū narratives.	*Te Panekiretanga ki Mauao (very high)*

Historical associations	The hapū have an enduring history with Matakana Island with continuous ownership and occupation over many generations. The hapū have always exercised kaitiakitanga and applied their mātauranga and continue to do so today. **He whenua rangatira** (these sovereign lands) *The uninterrupted, undisputed and enduring occupation of Matakana Island by the 5 hapū provides unequivocal testimony of their relationship and their coastal indigeneity. The hapū themselves form a core part of the landscape's naturalness. To sever, extinguish or alienate the hapū relationships with Te Ure Kotikoti, or the way it is viewed or 'managed', would severely compromise its integrity, functioning and naturalness.* **Mana i te whenua** (authority–autonomy from the land) *The ability of the hapū to govern ourselves as we have done for centuries, to determine our own internal political, environmental, economic, and social rights and objectives, and to act collectively in accordance with those objectives, is paramount to the wellbeing of the hapū and the Island's natural environments.* *Our rights and obligations to the land come from our mana i te whenua. The ultimate authority and responsibility belongs to the hapū with mana i te whenua. It is the ancestral landscape which defines the historical relationship between the hapū and the natural island environment. It is quite literally, the embodiment of the cultural heritage. The state of ancestral landscapes is therefore inextricably linked to the spiritual, emotional, physical and social wellbeing of the hapū and is further cemented through enduring kaitiakitanga practices. This extends to the decision- making that affects the Island and its people, and the role that the 5 hapū have in that.* **Taonga tuku iho** (divine gifts from our tīpuna) *Our tūpuna intended for us to receive taonga, and they protected our taonga. This duty predates Te Tiriti o Waitangi but is also recognised by the principles (active duty to protect taonga).Taonga enhance our experience in this world and the lives that we live.* *The protection of taonga is a duty bestowed on the hapū current generations.*	*Te Panekiretanga ki Mauao (very high)*

ONFL 10 – Mauao:

Mauao (Mt Maunganui) Moturiki Island and Motuotau Island – ONFL 10	Map Sheets 9a, 11a, 12a

Description:

Maūao (Mount Maunganui)

Mauão comprises a large volcanic rhyolitic lava dome which supports native coastal and bush vegetation, a rocky coastline and sandy beach and grazing paddocks. The key attributes which drive the requirement for classification as ONFL, and require protection, relate to the high natural science values and expressiveness associated with the geomorphology; the natural character values of its native coastal vegetation; and the distinctive overall form, prominence and position which contribute high aesthetic values – resulting in a feature that is highly distinct and symbolic within the region's landscape.

Moturiki Island

Moturiki comprises a volcanic rhyolitic lava dome which supports native coastal and bush vegetation, a rocky coastline and a recreation reserve. The key attributes which drive the requirement for classification as ONFL, and require protection, relate to the high aesthetic and representative values associated with its location and protruding form, and the natural science values associated with its geomorphology.

Motuotau Island

Motuotau comprises a volcanic rhyolitic lava dome which supports native coastal and bush vegetation, a rocky coastline and a recreation reserve. The key attributes which drive the requirement for classification as ONFL, and require protection, relate to the high aesthetic and representative values associated with its location and form, the natural character of its coastal native vegetation and associated reefs; and the natural science value associated with its geomorphology.

Current uses:

Maūao (Mount Maunganui)

Base walking track, 4WD track to summit, walking tracks to summit; navigational markers & lights, water storage tanks, water reticulation, farm fencing.

Moturiki Island

Walking track, navigational markers & light.

Motuotau Island

N/A.

Evaluation		**Rating**
Natural Science Factors	Representativeness: The distinctive overall form of all three features, both in shape, height and in the prominence derived from the coastal edge location, contributes a clear and recognisable characteristic of the landscape and the local geomorphology – which are highly valued.	H
	Research and education: The location, prominence and accessibility of the features together with the legibility (particularly of Mauão) contribute significant educational value to the landscape.	M
	Coherence: The land use patterns vary between the features, however all three include areas of native coastal vegetation which are concordant with the coastal edge. Mauão in particular features areas of both pasture and vegetation, which creates a coherence between former land uses and natural values.	M

Aesthetic Values	Vividness: The location within an urban context, together with the prominence derived from the form and coastal location and the cultural associations, results in Mauão being particularly memorable and symbolic to the regional landscape.	H
	Naturalness: All three features have experienced some human modification or use over time – which has affected the natural values to a degree. Currently the management of Mauão and Moturiki relates to conservation and public access which in their present form do not detract from the outstanding values of these features.	M
	Intactness: The intactness of the coastal edges and regenerating native vegetation is highly valuable, particularly on Motuotau. Previous quarrying on Moturiki has affected the natural contours of the island and its degree of intactness. Similarly, management of Mauão has introduced a number of human modifications, however in their current state they do not disrupt the overall perceived naturalness of Mauão – which is largely derived from its form (shape and height) and vegetated grassy slopes.	M-H
Expressiveness (Legibility)	With regard to Mauão, the distinctive volcanic form, attributed by the cone shape, and prominence, attributed by the height in relation to the surrounding low-lying coastal location, results in a highly expressive geomorphological landscape feature. The sequence and relationship of Moturiki and Motuotau together with the distinctive from of Mauão add to the highly valued expressiveness derived from these features.	H
Transient values	The transient values are largely associated with seasonal changes in native vegetation (such as pohutukawa on Mauão and Motuotau) and the intertidal movements around the coastal edges (including the rocky edges and beach movements surrounding Moturiki). These transient values reinforce the coastal location but do not significantly contribute to the outstanding values of the landscape features.	M
Shared and recognised values	Nationally known landscape feature strongly associated with Tauranga City and the Bay of Plenty. Iconic. Natural features are recognised in the Tauranga Coastal Reserves Management Plan 1998.	
Maori values	Cultural icon, recited in oral tradition, navigation beacon, ancient pa, ancient battle site – Kokowai, urupā, reg. archaeological site. Ancient pa – Moturiki, mahinga kai. Mauão is the ancestral tupuna of Tauranga Moana iwi, Ngai Te Rangi, Ngati Ranginui and Ngati Pūkenga. Moturiki and Motuotau hold strong ancestral significance for Ngai Te Rangi. The Coastal Marine Area is identified as an Area of Significant Cultural Value (ASCV 6) in Schedule 6.	
Historical associations	Connections to historical European activity. Physical evidence includes Stone Jetty, identified as site CH 6 in the Historic Heritage Inventory – see Schedule 7. Landscape contains internationally significant archaeological landscape. Sites are recorded in the New Zealand Archaeological Association Site Recording Scheme and comprise physical evidence of past human activity. Mauão is a Historic Reserve in accordance with the Reserves Act 1977.	

For reasons that are unknown, the last three categories addressed for ONFL 10 are not attributed any ratings. However, the descriptive assessment indicates that they could well be “high” for Shared and Recognised Values and Māori Values, and “moderate-high” for Historical Associations, perhaps “high” again.

Schedule 6: Areas of Significant Cultural Value

Two Areas of Significant Cultural Value (Schedule 6) are identified in close proximity to the existing areas of dredging and deposition activity:

Te Paritaha:

SITE NAME: TE PARITAHA O TE AWANUI
SITE NUMBER: ASCV-4A MAP SHEETS: 11b

Te Paritaha o Te Awanui is the original name for the large sand bank located offshore from Waikorere (Pilot Bay) Panepane (Matakana Island), Te Papa (Sulphur Point), and Otumoetai. Te Paritaha literally means "to flow over" and Te Awanui is the traditional name for the eastern portion of the Tauranga harbour.

Te Paritaha o Te Awanui is the largest pipi bed within Te Awanui (Tauranga Harbour), and is renowned for its abundant supply of pipi. The bed has been a customary harvesting ground for many generations and is still an important harvesting area today for the whanau and hapū of Ngāti Ranginui, Ngai Te

Rangi and Ngāti Pūkenga. Te Paritaha is one of the few remaining sustainable shellfish beds within the harbour.

Te Paritaha is a taonga and a key source of sustenance for whānau, hapū and iwi of Tauranga Moana. Tauranga Moana whānau, hapū and iwi have a duty to protect the sustaining qualities of Paritaha. It is essential to protect the mauri of Paritaha to ensure that intertribal cultural practices of old will continue into the future.

The traditional practice of "ta koha" or reciprocity is the process of providing kaimoana and/or local resources to visitors or to traditional Maori both locally and inter regional events. The significance of these processes should not be under estimated. They are critical to ensuring the maintenance and enhancement of inter-tribal relationships and the physical and spiritual wellbeing of Maori. The practice invokes a deep sense of obligation underpinned by the principles of manaakitanga, Kaitiakitanga and mana.

Te Paritaha is said to be the source of mauri for all other pipi beds in Te Awanui. The role of whānau hapū and iwi as kaitiaki is to protect the mauri of Paritaha. Mauri in this regard refers to the integrity, form, functioning (including natural biological and ecological processes), resilience, physical and spiritual characteristics & qualities, mana-atua, mana-tangata, tapu life principle, tikanga and kawa practices, connectedness & interdependency and accessibility. This involves ensuring that the full physical extent of the integrity of Paritaha is acknowledged. In this way, the kaimoana that Paritaha supports is also protected.

Mauao, Moturiki Island & Motuotau Island Marine Area:

SITE NAME: MOTURIKI ISLAND AND MOTUOTAU ISLAND
SITE NUMBER: ASCV-6 MAP SHEETS: 9b, 11b, 12b

Moturiki and Motuotau are of particular cultural significance to Ngāiterangi Iwi. Mauão (Mount Maunganui) and Moturiki Island are both sites of pa, with numerous shell middens on the flanks of Mount Maunganui.

The land area adjacent to Moturiki (Leisure) and Motuotau (Rabbit) Islands is known as Hopukiore. The tribes who have occupied the area since the arrival of the waka migration from Hawaiki to Aotearoa were Ngāmarama, Ngāti Ranginui, Waitaha and Ngāiterangi.

The sea around these islands has been and remains an important source of kaimoana (seafood) for these iwi, in an area traditionally abundant with kina, pāua, mussel, tuatua, crayfish, snapper, tarakihi and kahawai. Māori retain their kaitiakitanga over their rohe moana.

During the 17th Century the east side of Moturiki, known as Te Takanga, was occupied by Pakira of Ngāti Kuku, whose pā was called "Ahikahore". The Westside was occupied by Tauaiti of Ngāi Tūwhiwhia hapū, and his Mahinga kai (cultivation gardens) was at Hopukiore. Tauaiti's whare (house) was called "Te Wairere", and his Pātaka (food storage house) was known as "Marutuahu". This was also the name given to the mussel rock north-east of Moturiki "Te Toka o Marutuahu'. The beach between Moturiki and the land is called "Ōwhare".

Motuotau was never settled permanently, but was claimed by Whare Tapu of Ngāiterangi Iwi. This was an island where mutton-birds, fern root and seafood were gathered.

6.3 Existing Dredging & Deposition Effects

The landscape, natural character and amenity effects associated with PoTL's dredging and deposition operations are the focus of this assessment. Although the existing port is (as indicated in Sections 4.0

and 4.1) linked to these operations, the scope and findings of this report remain firmly fixed on the effects associated with the PoTL's dredging and deposition activities. These effects are addressed in two parts, initially focusing on the biophysical values of those parts of Te Awanui and the Pacific Ocean near the current areas of dredging and deposition activity in terms of their:

- Bathymetry and geomorphological values;
- Water quality values;
- Ecological values (including in relation to kaimoana);
- Habitat values for marine mammals ; and
- Habitat values for Avifauna.

The second area of assessment addresses perceptual landscape and natural character values related to areas of human activity and occupation that are near, or exposed to, the Port and Stella Passage, the Maunganui Roads, the Cutter Channel, and the ocean deposition sites. These include:

- Whareroa Marae
- Mt Maunganui's Main Residential Areas
- Pilot Bay
- Mauao
- The Western Side of Sulphur Point and Its Marine Park
- Otūmoetai
- Te Paritaha o Te Awanui
- Panepane Point
- ONFLs 3, 5 and 10
- ASCV-4a and ASCV-6

6.4 Biophysical Landscape & Natural Character Values

1. Harbour & Ocean Bathymetry / Geomorphology

The water form and geomorphology of the 'inner / port harbour' – stretching from a still largely natural harbour entrance between Mauao and Matakana Island to a highly structured, Stella Passage – has existed since 1989. By that time, Sulphur Point had been developed and the MV Teremoana had completed its capital dredging to form the current navigation channel and berth pockets. Although the sea surface of these merge with that of the wider harbour, and even Waipu Bay, the margins of those areas subject to ongoing maintenance dredging traverse a range of conditions, with those found in Stella Passage at the highly modified end of the landscape and natural character spectrum (Attachments 8-12). Physically, the linear channel of Stella Passage is both defined and constrained by its hard-edged berths, which cater to log carriers, fuel transporters and container ships down both sides. In addition, the Tauranga Harbour Bridge, Whareroa Bridge, Te Awanui Drive and the Tauranga Bridge Marina also contribute to the physical framing and delineation of Stella Passage, its navigation channel and berth pockets.

Outside Stella Passage, however, there is a marked contrast between the naturally convex form of Te Paritaha (ASCV-4A) and the much more structured, flat-bottomed, profile of both the Maunganui Roads

and the Cutter Channel, which curve around the bank – from the northern end of Stella Passage to near Matakana Island. Closer to Mauao, the eastern side of the Cutters Channel and Entrance Channel also merges with the shallower, gently sloping, seabed of Pilot Bay and its quite extensive mooring area – which, in turn, transitions into a shallow littoral zone that provides a safe and popular swimming area next to The Mall. This results in a clear division between the more and less modified parts of the harbour's sea floor, as well as between the Port's demarcated navigation channel – often plied by shipping – and the harbour waters either side of it. Closer to the harbour entrance, the Cutter Channel and Entrance Channel are also flanked by Matakana Island's linear, ocean beach and low dunes, which extend some 20km north of Panepane Point, while the edge of Mauao is marked by jagged volcanic pavement and reefs, interspersed with a few sandy coves.

Between these opposing coastlines, evidence of a defined navigation channel is largely restricted to navigation markers and a larger beacon on Matakana Island (Attachment 23: the channel, markers, beacon and beach at Te Kawa Waipuna). The existing navigation channel also appears to merge seamlessly with the sea areas of Te Awanui and the Pacific Ocean, although the underwater situation inevitably changes, with the harbour approaches' defined area of dredging activity creating an artificial trough that transitions rapidly into the sea areas around it – including the littoral margins of Matakana Island and M Mauao.

Outside of the harbour entrance, the ocean seabed embracing the current port deposition areas shelves gently away from Mt Maunganui and its beachfront, interrupted only by the volcanic incursions of Moturiki and Motuotau Islands directly off the peninsula. Above that sea floor, the ocean's surface and the surf that it is known for create an even more homogenous

Returning to the more immediate area of Stella Passage and Tauranga Port, the artificial profile of Sulphur Point, together with the modified geomorphology of the Passage, were created by the MV Teremoana between 1965 and 1989 (when the Sulphur Point wharves were officially opened). Changes to the geomorphology of both have occurred in conjunction with capital dredging that was completed in 1978[12], 1992[13], and 2015/16[14]. Maintenance dredging has otherwise occurred on a regular basis to maintain the profile of the entry channel, the Maunganui Roads and Stella Passage.

The historical changes in channel formation and depths are discussed in MetOcean Solution's report, *Tauranga Harbour Historical Configurations Modelling* (January 2025), which also leads into discussions about the Port's future proposals for the port's navigation channel p.23, third bullet point):

> *The Port of Tauranga plan to apply for consent for another Capital Dredging works that will increase the channel depths to 16 m CD in Stella passage and Maunganui Roads and 17.4 m CD in the outer channel, the design also increases the channel footprint. Three reclamation areas on both sides of Stella Passage will increase the number of berths, with piled wharves alongside the reclaimed areas. The design plans for this are displayed in Figure 2-5 and Figure 2-6. A 30 m buffer was used to establish batter slopes around the dredge extent.*

[12] To a uniform channel depth of 10.7m

[13] To depths of 13m (high tide) and 11.7m (low tide)

[14] To depths of 14.5m inside Tauranga Harbour and 15.8m outside it

Changes to that channel, from Stella Passage out to the harbour entrance off Mauao, are also illustrated in Metocean's Figures 2-8 and 2-9, as shown below (with both images and accompanying text shown):

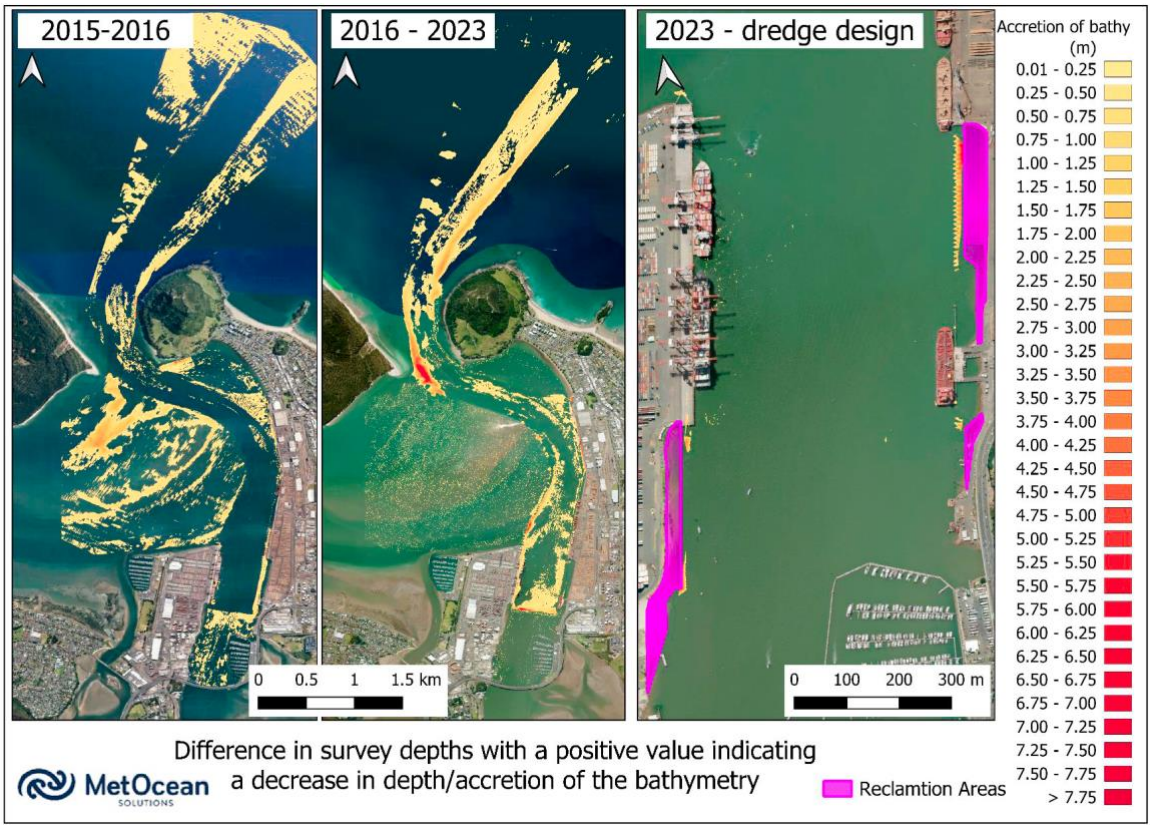


Figure 2-8: Differences between bathymetry surveys modelled showing an accretion of bathymetry (shallowing in depth) between the three of the four configurations. For the future dredge design the reclamation areas are shown along with the increase in bathymetry under some of the piled wharves.

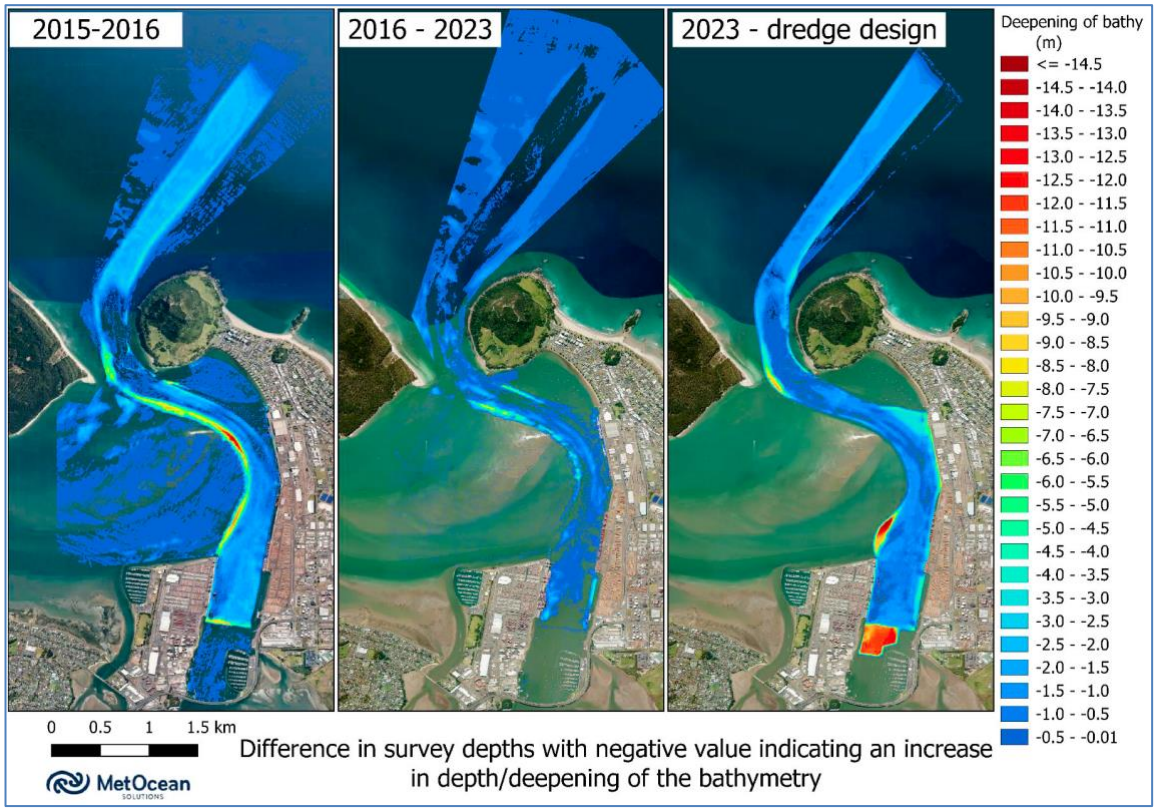


Figure 2-9: Differences between bathymetry surveys modelled showing a deepening of bathymetry (increase in depth) between the four configurations.

These indicate that both the (recent) historic and current alignments of Stella Passage, the Maunganui Roads and the Cutter Channel have remained closely aligned with the channel first formed in conjunction with the development of Sulphur Point from 1969 onwards. The channel has been progressively deepened to its current nominal depths of 14.5m inside Tauranga Harbour and 15.8m outside it. Figures 2-9 also shows the design depths of the dredging that is to be undertaken in 2026 under the current consents – typically down to 16.0m inside Tauranga Harbour and 17.4m outside it.

To summarise, therefore, the 1969 to 1989 changes to the bathymetry and geomorphology of the southern harbour were very significant, while changes since then have been largely incremental. Whereas most of Te Awanui remains in a relatively natural state, that is clearly not the case in relation to the harbour floor near Stella Passage and the Port's shipping channel.

Dr Willem de Lange's report, *Port of Tauranga Dredging Reconsenting - Assessment of Effects on Turbidity and Morphodynamics* (November 2025) appears to largely support these findings, focusing more on the margins of the main Port channels and harbour. More specifically, Dr de Lange identifies that there has some past erosion of the margins of Te Paritaha as a result of past channel widening, but this has been counterbalanced by accretion near the Lower Western Channel and Otumōetai Channel margins. Importantly, though, he also points out (p.55) that the:

> *……. post-dredging batter slope adjustments discussed above, had negligible impact on the extent of Te Paritaha, or the trend of shoaling that has been occurring since the 1852 hydrographic chart was surveyed.*

Furthermore, he acknowledges that detailed analysis of the shoreline of Matakana Island using aerial photos dating back to 1945 has indicated steady erosion of the margins of the island near Panepane Point, albeit at variable rates. These rates are described (p.57) as being "consistent with wave-induced erosion of the beach and dunes, and "*transport of eroded sediment into the harbour as explained by de Lange (202261, 202362, and 2024)"*. These changes are then described as being aligned with climate variability and La Nina conditions, under which wave energy increases markedly. Dr de Lange does not appear to consider that the profile of Matakana Island and its shoreline is impacted by past capital and maintenance dredging within the Cutter and Entrance Channels.

Regardless, the natural character values associated with the harbour floor near Stella Channel are of a very low order, while those of, the Maunganui Roads, the Cutter Channel and Entrance Channel climb up from a low to moderate level, overall.

2. Water Quality

Although MetOcean Solution's report does not directly address the issue of water quality, it does address the issues of water current velocities linked to the consented deepening of the Port's Entrance and Cutter Channels, the Maunganui Roads, and Stella Passage, which is to occur in 2026 and might affect water turbidity. However, MetOcean's modelling of the changes to surface current speeds after the completion of PoTL's capital dredging in 2016 – subject to all activities and changes in and around Te Awanui – have both increased and decreased near the Port, depending on tidal conditions and weather patterns. Away from the main shipping channel, most flow velocities have indeed typically decreased.

Streamlined Environmental Ltd address the issue of the harbour's water quality more directly in their report, *Water Quality Aspects of Port of Tauranga Dredging Reconsenting* (October 2025). In particular, this report concentrates on the Total Suspended Solids (TSS) that would be produced by a Trailing Suction Hopper Dredge like the MV William Fraser (see overleaf), using data obtained from PoTL during capital and maintenance dredging from 2015 to 2022.



Figure 12. The MV William Fraser

As is described at Section 4.1 of the Streamlined Environmental report:

> ……. *the impacts on visual water clarity and turbidity are the most likely to be of concern from the dredging and disposal process. Suspended solids (measured as total suspended solids: TSS) are a major contributor to increased turbidity and reduced water clarity. TSS – also called suspended particulate matter (SPM) – may influence aquatic ecosystems while in suspension and when it settles out. In suspension, the main impact of SPM is to reduce light penetration and thus affect primary production. Adverse effects can also occur on fish due to mechanical and abrasive impairment of gills. When it settles, SPM can cause adverse effects by smothering of benthic organisms and their habitats (ANZECC, 2000b).*
>
> *The RCEP has two qualitative standards for visual clarity (as a result of an activity and after reasonable mixing). The first is that "there shall be no conspicuous change in the colour or visual clarity", with a quantitative standard that "the decrease in secchi disc vertical depth or black disc horizontal range shall not be greater than 20%". The second is that "the visual clarity of the water shall be suitable for bathing", with a quantitative standard that "the horizontal sighting distance of a 200 mm black disc should exceed 1.6 metres'.*

Utilising the measurements undertaken by PoTL, the report goes on to state that past dredging appears to have had a (p.70) "*statistically significant and measurable effect on turbidity downstream* [of the dredge] *relative to upstream*". Even so, the report also determines that (p.71):

> *In summary, based on a conservative ANZECC (2000) approach, for the majority (93%) of the time, the dredging procedure is undertaken in a manner that produces turbidity of the plume below ANZECC (2000) default trigger levels, and effects are less than minor. For the times (7%) when turbidity is elevated to above ANZECC (2000) default trigger levels, effects are likely to be transient but minor.*

While it is acknowledged that TSS levels can also rise near Te Paritaha and the Bridge Marina, these are typically of a short duration and (p.76) "*for the majority of the time concentrations are very low*". Overall, the report concludes that (p.84):

> ……. *TSS concentrations are highest within a 200m range of the dredging and reduce rapidly outside this zone, with the plume mostly contained within the channels. Spikes in TSS concentrations are rare*

outside the 200m zone. This supports the empirical data summarised in this report. Although our assessment is based on turbidity measurements and not TSS the conclusions are consistent, namely that effects from TSS/turbidity are likely to be less than minor for the majority of the time while short-term spikes may show minor effects but these will be transient.

Furthermore, in addressing potential eutrophication and toxicity effects, together with changes to the harbour waters' temperature, pH, salinity and dissolved oxygen levels, it is concluded that such effects would range from less than minor (for eutrophication) to negligible (in relation to the other effects).

Dr Willem de Lange's report, *Port of Tauranga Dredging Reconsenting - Assessment of Effects on Turbidity and Morphodynamics* (November 2025), appears to support Streamlined Environmental's findings, primarily in relation to suspended solids in the water train. In particular, it appears to indicate that the use of a low turbidity valve in capital dredging operations over 2015 and 2016 (p.26) "*significantly reduced the extent of the near-field plume in 2015/16, and a far-field plume was not observed*". Dr de Lange goes on to endorse the concept of real time monitoring of turbidity to manage plumes in the future, and in relation to Te Paritaha he also makes the point (pp.33 and 34) that even though spring tide flood flows might entrain some sediment in the 'flood tidal jet over Te Paritaha', this "*is not likely to occur with a smaller capacity TSHD, and has not been observed with previous dredging campaigns"*. As a result, his conclusions include the following statement at p.71:

The modelling results indicate for all scenarios that the Bridge Marina and Whareroa Marae Foreshore would not be exposed to sediment plumes exceeding the threshold, and were unlikely to experience detectable plumes. Te Paritaha was subject to limited (1 or 2 over 62 days of simulation, depending on the weather conditions simulated) short-duration events exceeding threshold. These events involved dredging in the Entrance Channel during extreme peak spring flood tide currents, where turbulence re-entrained the near-bed plume into the surface waters with a large TSHD. This is unlikely to occur with a smaller TSHD. It should also be noted, that adverse ecological impacts required continual exceedance for days and this did not occur in the simulations.

Turning to the disposal of dredged material, Dr de Lange makes the point that:

All the disposal sites were chosen using two main criteria:

- *The sediment texture of the seabed - the philosophy was to have natural characteristics as similar as possible to the deposited dredged sediment, so that the disposed sediment would behave the same way in response to natural processes and preserve the natural habitat for any biota present; and*
- *Whether the sites would be non-dispersive or dispersive – which characterizes the mobility of the dredged sediment and determines whether sediment would stay where it was put, or would spread outside the disposal site.*

Analyses of the disposal areas indicates that (p.37) "*these sites are behaving as intended*", and that (p.39):

…… the dredge mounds are structureless, indicating that there has been little reworking since deposition on the seafloor. Surficial samples show that overall, the seabed is covered with medium moderately sorted sand, with a composition similar to the original seabed as reported by Michels and Healy (1999).

With the deposition areas not appearing to entrain sediment back to the sea surface, it seems that they are relatively inert, except when subject to the deposition of material. Dr de Lange indicates that this

will remain the case, provided that the dredged sediment is released sufficiently far from the disposal field boundaries.

On the basis of these analyses, the current water quality values of Stella Passage are considered to be low-moderate, overall, whereas those within the Maunganui Roads, Cutter Channel and Entrance Channel appear to range from moderate to moderate-high. The Pacific Ocean's values are high, even near the deposition sites.

3. Ecology & Habitats

Dr Sharon de Luca's report – *Assessment of Effects on Marine Ecological Values* (November 2025) – focuses on the effects that both past dredging and the PoTL's Proposed (capital and maintenance) dredging will have on the ecology of Te Awanui / Tauranga Harbour. In particular, it focuses on effects on Te Awanaui's:

1. seabed soft sediment (channel and adjacent to existing wharves),
2. Hardshore (reefs, wharves, and riprap),
3. Te Paritaha pipi bed and sediment,
4. Reef and soft sediment kaimoana,
5. Relocated boulder habitat from Tanea Reef,
6. Marine vegetation,
7. Fish,
8. Invasive species and
9. The disposal field (including the adjacent Motuotau subtidal reef)

In Section 5.2 of her report, Dr de Luca describes the significance of these marine habitats as follows:

> *I have assessed the habitats against the RPS criteria (Appendix 1) and concur with Grace's significance assessment of the relevant criteria above.*
>
> *No taxa (nor ecosystem) present in the southern basin of Te Awanui are recognised as Threatened or At Risk or Naturally Uncommon triggering New Zealand Coastal Policy Statement (NZCPS) policy 11 (a) or (b) apart from seagrass (Zostera muelleri subsp. novazelandica) which is an At Risk (Declining) taxa (de Lange et al., 2013) (which some fish species use as a nursery ground) and marine mammals that are occasionally or seasonally present in the Harbour.*
>
> *Seagrass is ubiquitous in Te Awanui (occupying 3740 Ha), with areas located adjacent to Whareroa marae, upstream of the Tauranga Harbour bridge, along the Ōtūmoetai shoreline, within the wider Waipu Estuary …….. plus small patches on Te Paritaha.*
>
> *There are no marine mammal resident in Tauranga Harbour/Te Awanui, but three species (bottlenose dolphins, killer whales and New Zealand fur seals) visit occasionally or seasonally (winter/spring) despite the high existing levels of shipping traffic in Te Awanui (McConnell, 2025).*
>
> *The habitats within Te Awanui are typical of a working Port in a harbour/estuarine environment. Seagrass, orca and bottlenose dolphins aside, the marine habitats and species are not relevant to considerations of the NZCPS 11 (a) as there are no At Risk or Threatened marine species or ecosystems present.*

Her report than focuses on the major marine habitats found within and outside the harbour, from Stella Passage to Te Paritaha, the rocky reefs of Mauao, Moturiki and Motuotau, and the 'harbour entrance

gorge'. Describing the current state of the 'Stella Passage and Shipping Channel Soft Sediment Benthic Habitat' at section 5.3.8, she states as follows (p.29):

> *Leonard et al. (2020) characterised the Te Awanui channel floor in the Stella Passage as being reflective of a working port seabed, comprising an ecologically productive benthic community with naturally diverse indigenous native infaunal species. Leonard et al. (2020) stated that most benthic habitats within ports in New Zealand are characterised by fine sediment and dominated by low native biodiversity and a high abundance of exotic species presence, whereas Te Awanui presents sandy sediment and predominantly native marine organisms.*
>
> *It is anticipated in this assessment that there is similarly high natural variability (heterogeneity) and diversity of benthic organisms in the relatively stable soft sediment subtidal benthic community structure within Stella Passage at present.*
>
> *Battershill (2022) describes the soft sediment subtidal assemblages to be expected of a healthy harbour environment. Battershill (2022b) notes that horse mussel beds and associated flora and fauna are well established in the Stella Passage.*

Turning to the adjoining marine environment of Te Paritaha, Section 5.3.9 of Dr de Luca's report focuses on the bank's kaimoana values and, in particular, the presence of pipi across it. Key findings by Ross and Culliford (2018) and Boffa Miskell Ltd (2022 - 2025) are summarised as follows (pp.29 and 30):

> *Comparisons with the results of previous surveys of Te Paritaha by Fairlie et al. (2016) and Ross & Culliford (2018) show a large decline in the abundance of adult pipis between 2016 and 2022, with no sign of recovery in 2023. The studies of Fairlie et al. (2016) and Ross & Culliford (2018) showed that the abundance of large pipi in the early aftermath of the 2015 capital dredging (i.e., in 2016 and 2017) was in line with pre-dredging levels. However large declines must have occurred in the period 2016/2017 – 2022, causing a shift to a population structure dominated by recruits and juveniles.*
>
> *Similar patterns of natural declining abundances of large individuals have been observed in intertidal populations of both pipi and cockles across the upper North Island (Berkenbusch et al., 2022; Berkenbusch & Hill-Moana, 2023). The reasons for the general decline of large individuals within northern pipi and cockle populations remain unknown, but are likely to include harvesting pressure, changes in the benthic environment (e.g., grain size and topography of the seabed), adverse weather conditions (particularly unusually hot weather), poor water quality, parasites and bacteria (Berkenbusch et al., 2022; Berkenbusch & Hill-Moana, 2023). ……*
>
> *Pollutants in the seabed and the water column is also unlikely to be the main driver of the decline of large pipi at Te Paritaha, as the 2023 surveys found low levels of contaminants both within the sediment and within the pipi as body burden.*
>
> *While large pipi remain virtually absent in the intertidal area of Te Paritaha, the high recruitment rates observed across the study area in 2023 suggest that healthy aggregations of reproductive individuals are present within Te Awanui. ……..*
>
> *The May 2025 pipi monitoring data aligns with the previous surveys by Boffa Miskell, showing a continued decline in pipi abundance across the three shallow subtidal grids and four subtidal transects since the 2023 recruitment event. ……, however, there is growing evidence of maturation within the Te Paritaha pipi population, with the proportion of adult individuals increasing across all sites compared to previous survey rounds. Despite this trend, large harvestable pipi remain scarce.*
>
> *Overall, the May 2025 survey results suggest the 2023 recruitment event has contributed to a measurable cohort of maturing individuals, supporting the potential recovery of the pipi populations across Te Paritaha. However, the scarcity of harvestable adults continues to remain on trend with broader regional trends observed across the upper North Island. Summer monitoring is scheduled*

for the 7th, 8th and 9th of November, 2025, following the same sampling methods and protocols as above.

In relation to the chemistry of Te Paritaha's sediment, the report also found (Section 5.3.9.1, p.32) "*low concentrations of all contaminants (some heavy metals were above laboratory detection limits), with PAHs, PCBs, and TBT below laboratory detection limits"*.

Addressing fish species within and near the Port, Dr de Luca concludes that (Section 5.5, p.43):

> *The Port area consistently supported species diversity and significant populations of adult fish, particularly kahawai. Species detected in 2019 included eagle ray, snapper, trevally, kingfish, gurnard, kahawai, parore, and spotty (Leonard et al., 2020). …….*
>
> *In summary, these observations are indicative of a consistent and diverse fish population in Te Awanui, with the port area supporting adult fish populations. Recreational fishing is popular, and shark populations suggest a stable pelagic food web (Kellett, 2021).*
>
> *The active port area provides a suitable habitat for diverse and abundant fish (Leonard et al., 2020). Recreational fishers are often located in the Stella Passage and immediately adjacent to the wharfs/ships indicating suitably sized pelagic and semi-pelagic fish species (Battershill, 2022). Port operations and dredging activity do not appear to influence fish abundance (Battershill, 2022). In his summation of evidence for the Stella Passage POTL project, Battershill (2022) states that the active port area supports suitable habitats for a range of fish species, including recreational target species.*

Based on these findings, it appears that the harbour and ocean habitats are at, or near, a state of equilibrium, with habitats having adjusted to the presence of the current navigation channel. In addition, new habitats have emerged within Stella Passage and around the Port's hard structures, while past losses of sea grass appear to have slowed down and may be showing signs of some recovery.

On the other hand, Te Paritaha's pipi community appears to have been eroded, and the absence of larger, mature pipi appears to be an on-going concern, although Dr de Luca does not appear to attribute this to past dredging associated with the Port.

In concluding her report, Dr de Luca determines that (Section 13.0) the "*ecological values of the marine environment within the dredging and disposal areas and the Southern Te Awanui are overall assessed as High"* and that (Section 14.1.2, p.67) the effects of dredging related to its plume have, in the past, proven to be of a of a moderate order with no more than minor effects outside that zone.

4. Marine Mammals

In addressing the effects of current and future dredging on marine mammals, SLR Consulting's report – *Assessment of Effects: Marine Mammal Dredging Reconsent Project* (November 2025) – focuses initially on present-day effects. Prepared by Helen McConnell, Section 3.2 of the report states as follows:

> *Assessment of the DOC sightings and stranding data and the available scientific literature indicates that marine mammals are not resident to Tauranga Harbour/Te Awanui. There are however, two species - bottlenose dolphins, and killer whales - that occur inside Tauranga Harbour/Te Awanui as occasional visitors, and New Zealand fur seals which are regular visitors to the harbour. These three species, along with common dolphins, have a regular presence outside Tauranga Harbour/Te Awanui where sightings rates are higher.*

Outside of Tauranga Harbour/Te Awanui several other species may also be present, including blue whales, minke whales, Bryde's whales, false killer whales, Gray's beaked whales, humpback whales, long-finned pilot whales, southern right whales, sei whales, and leopard seals. While rare visits inside the harbour from these species cannot be entirely dismissed (i.e. the DOC sightings record includes rare sightings of humpback whales, southern right whales, leopard seals, pilot whales, beaked whales, pygmy sperm whales, and common dolphins inside the harbour), in the Bay of Plenty these species are typically associated with more open coastal waters.

The remaining species represented in the DOC Marine Mammals Sighting Database and the DOC Marine Mammals Incident Database probably only occur as rare visitors to the AOI, hence are unlikely to be present around the proposed dredging activities.

Furthermore, acoustic monitoring of marine mammals near the entrance to Tauranga Harbour and Mauao indicates that dolphins are the main visitors to the harbour, and at Stella Passage these were detected on 6 days out of 229 over the survey period, mostly for a short duration. It is unclear exactly which species of dolphin passed through Stella Passage, but they appear likely to be bottlenose dolphins. Contrasting with this situation, orcas were only detected at the harbour entrance, not within or near Stella Passage, and this occurred on 27 days out of 221 in the survey period. Leopard seals are also occasional, but infrequent, visitors to Te Awanui.

Based on these findings, Ms McConnell concludes as follows in Section 3.4 of her report (Environmental Values of Significance, p.25):

While the AOI clearly constitutes marine mammal habitat, and some feeding, breeding, resting and migration behaviours occur here, the findings above conclude that the AOI is not considered to be of greater ecological significance/importance relative to other areas of the Bay of Plenty or other parts of each species wider home range. In particular there is no evidence to suggest that the AOI itself constitutes important habitat for any marine mammal species either during vulnerable life stages or migration; neither is it considered critical to the conservation of any species or the maintenance of healthy population growth rates. Instead, and for all marine mammal species that occur here, the AOI forms part of a much larger overall distribution that collectively contributes to population health.

The remaining criteria in NZCPS Policy 11(a) and (b) were also considered and no other species, ecosystems or habitats specified in that policy are relevant to marine mammals in the AOI. In particular, the site is not in an area set aside for full or partial protection of indigenous biological diversity under other legislation which protects marine mammals or their habitats (in terms of Policy 11(a)(vi)).

Her summary, in Section 3.6, affirms these findings:

Waters of the AOI are used by at least 20 species and although some foraging, breeding, resting and migratory behaviours do occur here, this habitat has not been specifically identified as ecologically significant to any marine mammal (relative to other habitat along the east coast of the North Island). In particular, all species that use the AOI have large home ranges, so the AOI would only represent a very small part of their overall distribution. Both sightings data and acoustic monitoring data indicate that only dolphins (mostly bottlenose), killer whales and New Zealand fur seals use waters inside Tauranga Harbour/Te Awanui, albeit on an occasional basis and despite high existing levels of shipping traffic here. Further to this, the offshore sites into which the dredge spoil will be disposed are located relatively close to shore (in terms of marine mammal home-ranges), and many of the open water species listed in Table 1 will typically occur further offshore.

Relying on this assessment, it is considered that Stella Passage and its port margins have a low level of natural character value currently in relation to marine mammals, the Maunganui Roads and and Cutter Channel have a low-moderate level of natural character, while the Entrance Channel and ocean beyond have a moderate-high and very high level of natural character, respectively – even near the deposition fields.

Summary

Table 5, below, summarises the findings in relation to Biophysical Natural Character:

Table 5. Biophysical Natural Character Values

	Natural Character Values: Stella Passage	Natural Character Values: Entrance Channel, Cutter Channel & Maunganui Roads	Natural Character Values: Pacific Ocean
1. Harbour Bathymetry / Geomorphology	Very Low-Low	Low	Low-Moderate
2. Water Quality	Moderate	Moderate-high to High	High
3. Ecology & Habitats	Moderate	Moderate-High	High
4. Marine Mammals	Low	Low-Moderate to moderate-high	Very High

6.5 Locations of Significance Around the Navigation Channel & Deposition Areas

1. Whareroa Marae

Viewed from the western edge of edge of Whareroa Marae, close to Waipu Bay, the existing port is largely obscured and contextualised by:

- Te Awanui Drive and the Whareroa Bridge, together with traffic on both;
- The Ballance Agri-nutrients plant and its large A-frame main building;
- The northern edge of the Tauranga Harbour Bridge Marina;
- The Whareroa boat ramp and car park; and
- The maturing Pohutukawas either side of Whareroa Bridge

Even so, part of Stella Passage is visible beneath Whareroa Bridge's main span and between its piers, together with part of the Port's container terminal and the distant outline of the Kaimai Ranges. Sometimes, the upper superstructure and gantries of the Port's container cranes are also visible, rising above the pohutukawas to the north of Whareroa Bridge. Within this highly modified and industrialised environment, current dredging activities focus on the berth pockets and main channel within Stella Passage that is north of Butters Landing – within parts of its confined sea area that is not visible from Whareroa Marae and its margins.

Landscape Values Rating: **Low**
Perceived Natural Character Values Rating: **Very Low**
Amenity Values Rating: **Low**

2. Mt Maunganui's Main Residential Areas

As indicated in the discussion about Stella Passage, the Maunganui Roads and the Cutter Channel, most of the residential area between Maunganui Road and the main dune ridge that separates the western half of Mt Maunganui from that facing the Pacific Ocean enjoys quite limited views of the Port at present. These are mainly restricted to visiting cruise ships, some of the Port's larger buildings and silos, and the tops of its container cranes. Within this area, generally east of Maunganui Road, the Port, therefore, has a quite low profile – sleeved by a range of light to heavy industry and commercial premises – and none of the dredging undertaken in Stella Passage and the channels linked to it is visible from this area.

Looking out from Marine Parade and Mt Maunganui's main beaches at night-time, the Pacific Ocean is largely a 'dark sky' environment that contrasts with The Mount's entertainment areas broad sweep of residential development extending towards Papamoa. Although shipping at anchor, together with any night-time dredging, creates small 'pools' or 'islands' of light within this 'dark sky' area, they do little to alter its fundamental character, and it is extremely difficult to distinguish shipping from night-time deposition activities, except when the latter occurs close inshore.

Landscape Values Rating:	**Low** (the harbour) / **Very High** (ocean)
Perceived Natural Character Values Rating:	**Very Low** (the harbour) / **High** (ocean)
Amenity Values Rating:	**Low-Moderate** (the harbour) / **Very High** (ocean)

3. Pilot Bay

As indicated in the discussion about the Maunganui Roads and the Cutter Channel, most of the residential area behind The Mall is also largely screened from both those channels and Stella Passage, together with most of the Port. Conversely, those properties fronting The Mall have a more open, albeit 'end on', view of its Maunganui and Sulphur Point berths. They also have expansive views out over much of the outer harbour, Mauao and Panepane Point. Despite this, current dredging and deposition / operations are effectively 'lost' amid the shipping that regularly plies its way in and out of the Port and the moored vessels within Pilot Bay. At the same time, both the Maunganui Roads and Cutter Channel are effectively subsumed by the waters of Te Awanui that stretch to the Otumōetai and the far side of the outer harbour near Omokoroa. Consequently, both the current dredging activities and channel temporary storage of dredged material offshore of Pilot Bay have a very limited impact on locals' perceptions of the harbour landscape and wider coastal environment.

Landscape Values Rating:	**Moderate-High**
Perceived Natural Character Values Rating:	**Low-Moderate**
Amenity Values Rating:	**High**

4. Mauao

As described in relation to the Harbour Entrance, the main landscape and natural character 'interventions' associated with that part of the harbour pertain to its navigation aids, while actual dredging activities and the undersea navigation channel are largely absorbed by a setting that remains both expansive and largely (though not wholly) natural. In views from Mauao's lower pedestrian trails and coastline, there is also awareness of vessels plying their way and out of Te Awanui, while in more elevated views from near the maunga's crest, there is also greater awareness of both the Maunganui

Roads and Cutter Channel skirting Te Paritaha and the main body of the Port. However, these elements are contextualised by the expanse of the wider harbour, together with the urban areas of both Tauranga and Mt Maunganui backed by the Kaimai Range, Matapihi Peninsula and a sequence of rising hill country south of Rangataua and Welcome Bays. Dredging operations are largely subsumed by shipping in and put of the Port, together with the movement of vessels in and out of nearby marinas and local ferries. Even so, views from more elevated vantage points closer to the crest of Mauao can, on occasion, reveal their dredging plumes. Although temporary storage of dredged material off Pilot Bay and beach nourishment near Main Beach, together with deposition operations further offshore (which also generate plumes) are also theoretically visible from such locations, the greater bulk of such operations occur at night-time, which limits such exposure.

Landscape Values Rating:	**High**
Perceived Natural Character Values Rating:	**Moderate**
Amenity Values Rating:	**High**

5. The Western Side of Sulphur Point and its Marine Park

Most of the eastern side of Marine Park (together with the neighbouring car parks linked to the Tauranga Marina and the Sulphur Point Boat Ramp) address Keith Allen Drive, then PoTL's container terminal. The outlook across Keith Allen Drive is hard-edged. It is dominated by the large sheds, container stacks, container cranes, light columns, vehicle movements and a broad swathe of hard standing. It is also flanked by maritime and marine engineering, then bulk retail activities outside the Port, together with the Tauranga Marina. This array of development screens nearly all of Stella Passage – and most of the activity within it – and much of the Maunganui Roads merging with the Cutter Channel near Mauao. Only the public reserve and beach at the northern end of the marina reveals substantially more of the outer harbour. Yet, even viewed from this quarter, most of the sea surface and dredging operations within Stella Passage are screened from view, while the navigation channels and dredging operations associated with them are almost impossible to differentiate from the rest of the harbour and the maritime traffic traversing it. As a result, the current dredging and temporary storage of dredged material off Pilot Bay (mainly at night-time), have no appreciable impact on the Marine Park and other public areas near Tauranga Marina.

Landscape Values Rating:	**Low**
Perceived Natural Character Values Rating:	**Low**
Amenity Values Rating:	**Low**

6. Otūmoetai

As is indicated above, most of Otūmoetai has limited contact with Te Awanui and the Port. However, that part of the suburb next to Otūmoetai Beach and perched on some higher ridges obtains partial views of both, as described in relation to the Maunganui Roads, then the Cutter Channel. Even so, such views remain largely dominated by the main body of Tauranga Harbour or the Waikareao Estuary in the foreground, then Sulphur Point – including its container terminal and cranes – with Mt Maunganui and Mauao beyond. In such views, Stella Passage's channel, and dredging activities within it, remain subsumed by the complex array of elements around the container terminal. Turning northwards, to look out across the harbour in the general direction of Mauao, this situation changes, but as for views from

near Tauranga Marina, it is virtually impossible to clearly differentiate the Maunganui Roads and Cutter Channel from the rest of the outer harbour. Furthermore, both dredging operations and the storage of dredged material off Pilot Bay remain embedded within the shipping and other maritime activities associated with the far side of the harbour and its port area.

Landscape Values Rating:	**Moderate-High**
Perceived Natural Character Effects Rating:	**Low**
Amenity Effects Rating:	**Moderate-High**

7. Te Paritaha o Te Awanui

Similarly, views across and from Te Paritaha reveal a coastal landscape and maritime environment very similar to that described in relation to Otūmoetai Beach; one in which Sulphur Point is prominent, but most of the Maunganui port area melds with the developed matrix of Mt Maunganui, while Sulphur Point and its berths are backed by Tauranga City. Mauao is a highly distinctive feature in such views, but slightly peripheral to the main body of the harbour, while the Maunganui Roads and Cutter Channel are impossible to distinguish from the expansive sea area of Te Awanui. Again, dredging operations within these channels and the temporary storage of dredged material near Pilot Bay remain subordinate to the shipping movements and other activities associated with the Port, Sulphur Point and the wider harbour.

Landscape Values Rating:	**Moderate-High**
Perceived Natural Character Values Rating:	**Low-Moderate**
Amenity Values Rating:	**Moderate-High**

8. Panepane Point and Matakana Island

See the analysis for Te Paritaha o Awanui above.

Landscape Values Rating:	**High**
Perceived Natural Character Values Rating:	**Moderate**
Amenity Values Rating:	**High**

9. ONFLs 3, 5 and 10

Based on this analysis of effects in relation to the Entrance Channel, the Deposition Sites, Mauao and Panepane Point, it is considered that the current values associated with all three ONFLs are of a **high to very high** order.

10. ASCV-4a & ASCV-6

Based on this analysis of effects in relation to the Harbour Entrance, the Deposition Sites, Mauao, Te Paritaha o Te Awanui and Panepane Point, it is considered that the current values associated with both ASCVs are of a **low-moderate-high** order.

It is important, however, to note that this is in relation to landscape, natural character and amenity values without input from local iwi and hapu. The connections, values and significance that both the ONFLs and ASCVs have for local iwi and hapu are the subject of an assessment process that is separate from this report (as is indicated in Section 4.1).

6.6 Night-time Values

A number of key locations are exposed to PoTL's area of dredging activity at night-time. These include Pilot Bay and the Tauranga Harbour Bridge, whereas other locations – including most of Mt Maunganui's residential area, Pilot Bay and Otūmoetai – are largely screened from it by the existing Port and other development. The following night-time photos taken from the Harbour Bridge and Pilot Bay capture more direct views of Stella Passage and the Maunganui Roads (Attachments 48 and 49):



Figure 13. Looking towards the Maunganui Roads and Stella Passage from Pilot Bay



Figure 14. Looking towards the Maunganui Roads and Stella Passage from Tauranga Harbour Bridge

These and other night-time photos reveal most of Stella Passage, the Maunganui Roads, Cutter Channel and Entrance Channel either shrouded in darkness or illuminated by peripheral lighting within the Port and surrounding urban areas. As such, most of the Port's channels merge with the dark expanse of the outer harbour's sea area. Even so, most of Stella Passage remains visually defined by the lighting on both the Maunganui and Sulphur Point wharves, including that on the container terminal's cranes and the ships berthed at the Port.

Looking offshore from Main and Maunganui Beaches, this situation is somewhat different, with the night-time seascape and night sky of the Pacific Ocean contrasting very markedly with the lighting found down Marine Parade and behind it. Yet, ships also sit offshore at night-time, so that these 'islands' of light contrast with the 'dark sky' nature of most of the actual sea area.

Within both of these areas, dredging, beach nourishment and deposition activities are an integral part of the shipping movements in and out of Te Awanui, but it is virtually impossible to differentiate them from other night-time shipping movements and activities: they meld with those night-time operations, and have little or no impact on the landscape, natural character and amenity values of Mt Maunganui, Pilot Bay, Mauao, Otūmoetai, Main Beach and other areas near the Port.

6.7 Summary of Current Values Ratings

Table 6. Daytime Values

	Landscape Ratings:	Perceived Natural Character Ratings:	Amenity Ratings:
Locations of Significance Around the Areas Subject to Dredging & Deposition:			
1. Whareroa Marae	Low	Very Low	Low
2. Mt Maunganui's Residential Areas	Low (harbour) / Very High (ocean)	Very Low (harbour) High (ocean)	Low-Moderate (harbour) Very High (ocean)
3. Pilot Bay	Moderate-High	Low-Moderate	High
4. Mauao	High	Moderate	High
5. The Western Side of Sulphur Point	Low	Low	Low
6. Otūmoetai	Moderate-High	Low	Moderate-High
7. Te Paritaha o Te Awanui	Moderate-High	Low-Moderate	Moderate-High
8. Panepane Point	High	Moderate	High
9. ONFLs 3, 5 and 10	High-Very High		
10. ASCV-4a and ASCV-6	Low-Moderate -High		

Table 7. Night-time Values

	Landscape Ratings:	Perceived Natural Character Ratings:	Amenity Ratings:
Locations of Significance Around the Areas Subject to Dredging & Deposition:			
1. Whareroa Marae	Very Low	Very Low	Low
2. Mt Maunganui's Residential Areas	Low (harbour) / High (ocean)	Very Low (harbour) High (ocean)	Very Low (harbour) High (ocean)
3. Pilot Bay	Moderate	Low	High
4. Mauao	High	Low	High
5. The Western Side of Sulphur Point	Low	Very Low	Low
6. Otūmoetai	Moderate	Low – Very Low	Low-Moderate

7. Future State Effects

As indicated in section 1 of this report, it is understood that the PoTL is proposing to maintain those areas already subject to dredging at the harbour entrance, within the Cutter Basin, Maunganui Roads and Stella Passage, although the in-harbour depth of the Port's channels will increase in 2026 from 14.5m to 16m and the channel depth outside Tauranga Harbour from 15.8m to 17.4m – in accordance with PoTL's current consents. Beyond this time frame and those consents, limited capital dredging are proposed that would result in deepening 'a corner' of the Maunganui Roads near Pilot Bay and the cruise ship berth, as well as a corner of the Entrance Channel that is to be widened by approximately 10m. These operations are shown on Figures 1 and 2 (above) and Attachment 1.

Beach replenishment and deposition will continue to occur – as now – at Pilot Bay, near Main Beach (Sites A-C), and within offshore sites SH1 and SH2 (as depicted in Figure 3, above, and Attachment 2). I have reviewed these proposals and addressed their effects in relation to:

- Biophysical Natural Character Effects
- Perceived Natural Character Effects
- Landscape Effects
- Amenity Effects

7.1 Biophysical Natural Character Effects

Bathymetry / Geomorphology

Although the limited dredging now proposed beyond 2026 would marginally extend the current channel near the intersection of the Maunganui Roads with the Cutter Channel, the navigation channel's overall configuration would remain close to that first established in conjunction with Sulphur Point from 1969 through to 1889. Indeed, the proposed area of additional dredging proposed near Pilot Bay would remain within the area of current dredging at the northern end of the Maunganui Roads, while the proposed deepening of part of the Entrance Channel's passing lane would occur on the edge of the catchment already subject to dredging offshore of Mauao. These operations would remain clear of the key areas of environmental and cultural sensitivity of Te Paritaha and ACSV-4A.

PoTL's proposals would incrementally deepen the margins of the Port's existing channels at these locations, but would not otherwise alter their configuration and depth (post 2026), or the nature of ongoing dredging and deposition / beach nourishment operations. Consequently, the areas subject to geomorphic modification would remain closely tied to the original area of harbour modification that was first commenced in 1969. This is also the case in relation to areas of deposition within the Pacific Ocean, the temporary storage area at Pilot Bay, and beach replenishment areas off Main Beach.

Water Quality

Streamlined Environmental's water quality assessment indicates in section 4.1 that, based on past dredging programmes, the proposed dredging and greater channel depths would typically slow down the flows through and around the main navigation channel – for example, by between 4.3% and 5.2% for the tug berth and A Beacon, respectively. Overall, it therefore appears that the consented dredging

depths to be achieved in 2026 would typically help to offset historic increases in current flows near the Port (notwithstanding a modelled 6.7% increase in flow rates at the northern end of Sulphur Point).

The proposed dredging would also limit most TSS / turbidity 'spikes' to those parts of the harbour within 200m of the TSHD. Consequently, it would not result in any smothering of local habitats, including those on Te Paritaha. Moreover, it would not give rise to any eutrophication, additional toxicity, or other adverse biophysical changes within Tauranga Harbour's water column. This indicates that the effects of the proposed dredging would remain entirely subordinate to those of the consented and ongoing maintenance dredging operations off Pilot Bay and Mauao.

Ecology & Habitats

In Section 14.1.2 of Dr de Luca's ecological assessment, it is stated that fine silt particles generated by dredging have the potential to lead to the physical degradation of water quality through the smothering and light attenuation in relation to shellfish and seagrass (as examples). However, within the mixing zone consented for current dredging (200m upstream and 600m downstream of a dredge), it is further stated that (p.67):

> *Modelling and field observations suggests that TSS reaches background concentration before any affected flow reaches the boundary of the mixing zone, based on observation, an array of suspended sediment sensors, and spot sampling. de Lange (2025) concluded that the turbidity event associated with the dredging would have similar or lower effects than that from natural processes that occur in the harbour……*
>
> *The modelling (Montaño, 2024) shows that the potential for adverse impacts from the dredge plume is dependent on the distance between the dredge and the areas of concern. This modelling is an absolute worst case as the dredging proposed has been significantly reduced after this modelling was carried out. For a BHD the 200 m mixing zone is sufficient to avoid adverse impacts (strictly the suspended sediment concentrations are always well below 75 mg.l-1). For a TSHD with no overflow, the 200 m mixing zone distance is also sufficient, while with overflow the 600 m mixing zone is sufficient (de Lange, 2025).*
>
> *Based on the assessment of sediment plume by de Lange (2025), it is concluded that any elevated TSS or turbidity will occur within the mixing zone and that there will be no more than minor effects outside of the mixing zone.*

Turning to the issue of effects on the pipi bed across Te Paritaha, the report goes on to state that (p.68):

> *The results of Montaño (2024) indicate that the additional suspended sediment due to dredging is unlikely to boost ambient levels above the threshold level for pipi under normal weather conditions. This is especially the case with the reduced dredging volumes sought by the reconsenting.*
>
> *The main effect on water quality is the immediate increase in turbidity experienced during physical dredging operations. Due to the physical disturbance of the dredge on the seabed, there will be some immediate effect on the channel floor benthos in the dredge area and down current. However, hydrodynamic and geomorphological studies suggest that no long-term adverse effects are expected (de Lange 2025, de Lange 2023, Mullarney & de Lange, 2018).*

In relation to fish species, Dr de Luca opines that they are likely to swim away from areas of concentrated TSS (p.68):

There are few published studies on how estuarine and marine fish respond to total suspended solids (TSS) and less is known about behavioural thresholds. In situations where concentrations of TSS are not lethal, pelagic, demersal and benthic fish are likely to avoid (swim away from) the area with elevated TSS (NIWA, 2014). Avoidance of the sediment plume by pelagic, demersal and mobile benthic species is likely to occur where concentrations of TSS are predicted to reach 100 mg/L (NIWA, 2014).

Turning to the issue of dredge spoil disposal, Section 14.1.4 of Dr de Luca's report then states (p.70):

During disposal of dredge spoil, resuspended sediment could be deposited on the benthic habitat of the dredge spoil area and surrounding habitats. Dredge spoil has the potential to disperse from the soft sediment disposal site and deposit on nearby subtidal reef communities.

However, that same section then concludes that:

The 2022 and 2024 surveys of Motuotau Island did not find any changes in the community structure that could be attributed to the Port of Tauranga's dredging activities, nor did earlier surveys (Boffa Miskell Ltd, 2025b).

Dr de Luca's report then addresses the effects of underwater noise, which are identified as being of a low order, before concluding that the accumulative ecological effects derived from the proposed dredging would also be of a low order.

Marine Mammals

SLR Consultant's assessment of effects in relation to marine mammal effects concludes as follows on in section 4.3.2:

The likelihood of adverse effects on marine mammals from habitat modification (reduced visibility and reduced quality or availability of prey) during the proposed dredging activities will be very low and the magnitude of predicted effects will be negligible as:

- *Dredging does not represent a novel activity either within Tauranga Harbour/Te Awanui or outside the Harbour (including the disposal sites) and despite these activities occurring here, marine mammals continue to utilise these areas;*
- *While sediment plumes will certainly occur as a result of dredging activities, elevated suspended sediment levels will be restricted both spatially and temporally (see Montaño, 2024 & 2025) both during dredging and spoil disposal, and because of this the footprint of affected benthic habitats will be small compared to the potential marine mammal foraging habitat in the AOI;*
- *The capital dredging project is only anticipated to have a six-week duration after which annual maintenance dredging (c. six weeks per year) will be required;*
- *No marine mammals rely solely on the affected area;*
- *Marine mammals are highly mobile and have ample opportunity to avoid areas of turbidity;*
- *Marine mammals are well adapted to forage and navigate at depth where natural light is limited or in turbid coastal waters where visibility is restricted;*
- *Instead of vision, toothed whales and dolphins use echolocation to navigate and detect prey and baleen whales and pinnipeds feel for prey with their sensitive whiskers (Peyensen et al. 2012; Denhardt et al. 1998);*

- *While some marine mammals do have a benthic component to their diets, none are solely reliant on benthic prey (consuming a mixture of benthic and pelagic prey species);*
- *Any marine mammal species that do forage within the AOI can access nearby alternative foraging habitat of similar quality, noting that all the marine mammal species expected in the AOI have a home-range that is vast in comparison to the area that will be subject to disturbance effects; and*
- *Any area of reduced abundance of fish or other epifauna prey that results from habitat removal (i.e., dredging) or a reduction in habitat quality (i.e., suspended sediment) will be localised around the area where seabed disturbance occurs.*

In relation to other matters, the report goes on to describe the likely effects of ship strike as being low, the likelihood of mammals absorbing contaminants as also being low, and the likelihood of cumulative effects – mainly in relation to bottlenose dolphins and orcas – as also being low.

7.2 Perceived Natural Character Effects

The proposed dredging and deposition of material would have no appreciable impact on the perceived extent of the Port's navigation channel or the proposed deposition and replenishment areas when viewed from the following locations:

- Whareroa Marae
- Mt Maunganui's Main Residential Areas
- Pilot Bay
- The Western Side of Sulphur Point and Its Marine Park
- Otūmoetai
- ONFLs 3 and 5
- ASCV-4a and ASCV-6

The proposed deepening and marginal widening of parts of the entrance and harbour channels would be inseparable from the existing navigation channel – framed by the highly modified environs of Stella Passage, Sulphur Point and central Mt Maunganui. At worst, exposure to the proposed dredging and Pilot Bay beach replenishment would result in a very marginal increase to the level of modification and 'development' associated with Tauranga's harbour area, but such effects are unlikely to rise above a very low level. Moreover, the flat viewing plane from most vantage points around the Port channels – from Mauao to Stella Passage - would reinforce this 'merger'.

Furthermore, with both dredging and deposition operations confined to parts of both the harbour and ocean that are already subject to the frequent movement of ships, ferries, yachts and launches, the proposed operations would have a negligible impact on the inherent character and naturalness of both Te Awanui and the inshore areas of the Pacific Ocean near Main Beach and Motuotau Island.

7.3 Landscape Effects

In line with this analysis, the proposed dredging and sand / silt deposition would result in extremely limited change to the character and landscape values of both the harbour and Pacific Ocean when

viewed from all of the locations listed above. At most, such changes would be extremely hard to discern and of a very low order – even in relation to views from Mauao, Te Paritaha and Panepane Point. They would not meaningfully expand the footprint of the harbour, or create any appreciable sense of encroachment in relation to the neighbouring ONLs of the outer harbour, Matakana Island, Mauao and Waipu Bay. As such, there would be very little change to the aesthetic character of the inner / southern harbour, its legibility, memorability and expressiveness, or its degree of naturalness – as discussed above. Again, therefore, any effects in relation to the proposed dredging and deposition would be of a very low order.

7.4 Amenity Effects

Similarly, the marginally expanded extent of dredging proposed, together with the more wide-spread deepening of the Port channels, would not be sufficiently apparent that they would affect public appreciation of the harbour's aesthetic character and cohesion, the amenity values of key locations like Pilot Bay and Mauao, or public perception of the harbour's identity and sense of place. Again, therefore, any amenity effects would be of a very low order.

7.5 Night-time Effects

Changes to PoTL's dredging operations that are difficult to discern in daytime would be impossible to appreciate at night-time. As a result, the amenity effects associated with the proposed extraction and deposition would also be of a very low order.

7.6 Summary

Table 8, below, summarises the effects associated with the revised dredging and deposition regime:

Table 8. Effects Assessment

	Biophysical Natural Character Effects:	Perceived Natural Character Effects:	Landscape Effects:	Amenity Effects:	Night-time Effects:
1. Stella Passage	Low	Very Low	Very Low	Very Low	N/A
2. Maunganui Roads & Pilot Bay	Low	Very Low	Very Low	Very Low	Very Low
3. The Cutter Channel	Low – Very Low	Very Low	Very Low	Very Low	Very Low
4. The Entrance Channel	Low – Very Low	Very Low	Very Low	Very Low	Very Low
5. The Ocean Deposition & Main Beach Replenishment Areas	Low – Very Low	Very Low	Very Low	Very Low	Very Low

8. Cultural Values Assessments

A large number of Cultural Values Assessments (CVAs) have been received in response to PoTL's dredging and deposition proposals. In particular, CVAs have been received from the following hapu and iwi that raise concerns about the landscape and natural character effects associated with the proposals:

Ngā Hapū o Ngatī Ranginui Settlement Trust

Ngā Pōtiki

Ngāti Ranginui Fisheries Trust

Ngāi Tamarawaho

Ngāti Hangarau

Ngāi Tukairangi

The following table identifies the key issues raised by the hapu and iwi in their CVAs and addresses each of those subjects or themes in turn:

Key Issue:	Review & Response:
Lack of adequate assessment and mitigation of adverse cultural impacts on the City Plan's viewshafts and the amenity values of Te Awanui more generally	Chapter 6 of the City Plan addresses the protection of key views to Mauao, both from public vantage points and local marae (Appendices 6C and 6D), while Tauranga City Council's Mapi GIS portal shows multiple viewshafts traversing the Port, Stella Passage and the Maunganui Roads. Included in those viewshafts are the following from local marae: 1. Tamapahore Mangatawa 2. Tahuwhakatiki 3. Hungahungatoroa 4. Waikari 5. Hairini 6. Huria 7. Peterehema 8. Wairoa The City Plan's specific recognition of sightlines from these marae, acknowledges the intrinsic connection that local hapu and iwi have with Mauao, and many of these viewshafts cross the Port and PoTL's proposed dredging and disposal areas. However, they do so at heights that are well above the superstructures of TSH dredges or barges transporting dredged material. In addition, the additional light pollution and vessel movements that are of concern to the Ngāti Ranginui Fisheries Trust would occur within the most heavily trafficked part of Te Awanui, so that those effects would be incremental and marginally additive at most. Consequently, the dredging and deposition operations would not affect the defined viewshafts to Mauao, including those from local marae; nor would they appreciably alter the perceived levels of lighting and ship/vessel movement within Te Awanui.

Effects on other sightlines and landscapes of significance to local hapu and iwi	At paragraphs 6.4-69 of Ngāi Tamarāwaho's CVA, concerns are also raised about the effects that the PoTL proposals would also have on Puketoromiro, Orini Pā and the Kōpūrererua Valley, Taurikura, Kōpūrererua, Mauao and the sacred waterways around Sulphur Point, and Te Paritaha within the cultural landscape of Te Awanui. In conjunction with these concerns, a wide range of values, connections and meanings are addressed in the CVA e.g. (section 6.6): *The pūrākau of Taurikura is central to the sacredness of the waterways connected to Sulphur Point and Waikareao.* *The 2025 CVA records Taurikura as a kaitiaki of Ngāi Tamarāwaho, a chief's daughter who fled her village in shame after refusing to collect water for her grandfather. She transformed herself into a ngārara and created the Kōpūrererua, travelling past what is now Sulphur Point, past Awanui, Awaroa and Awaiti, and toward Karewa.* *This pūrākau locates Kōpūrererua, Sulphur Point and the harbour waters within a sacred narrative of transformation, movement and guardianship. It explains why the waters on this side of Te Matau cannot be understood only as drainage, estuary, port margin or navigation space. They are part of a cultural and spiritual pathway.* Section 16 of the CVA reinforces this description, focusing on the cultural sensitivities associated with wāhi tapu, urupā, and the archaeological values associated with the locations described above, together with the broader cultural landscape spread around Te Awanui. The past changes to Te Awanui and its coastline near the Port, are set out in section 6.1 of this report addressing the harbour's 'current state', while the description of ONFL 03 (Te Awanui) also contains references to some of its Maori values. Of more direct relevance to this issue are the Iwi Management Plans described in section 3.1, which have been prepared by local hapu and iwi. Together with the published histories of Te Awanui (and Tauranga more generally) found in section 3.2, these help to further elaborate on both the changes that have occurred to the Te Awanui landscape and its values under both Maori and colonial / Pakeha occupation, and they provide guidance in relation its future management. Even so, this assessment effectively begins with the 'existing environment' of the harbour and its margins, including both current and consented dredging and deposition activities, as in an RMA context this establishes the baseline for evaluation of the PoTL proposals. Both the management plans and published histories are also quite explicit about the mix of major and more gradual changes that have reshaped Te Awanui over time – especially in the 20th Century. These changes are also commented on in section 9.7 of Ngāi Tamarāwaho's CVA, although within that same paragraph the following point is also made: *Ngāi Tamarāwaho do not accept the normalisation of a degraded baseline. A harbour already modified by decades of port activity should not be used as the benchmark for deciding that further effects are small. That approach hides the cultural loss that has already occurred.* Yet, within the present RMA environment and the baseline just referred to, the focus of this report is necessarily on a comparison of Te Awanui's current state and the changes that the proposed operations would bring to it. It is not possible to evaluate them against what is effectively a pre-colonisation state. It is appreciated that a significant price has been paid for the changes since that time – in terms of Te Awanui's character, values and meaning – that are important for Ngāi Tamarāwaho and other hapu / iwi.

Quarrying of Mangatawa for Port infrastructure has modified the hapu's significant cultural landscape and should be addressed in relation to PoTL's current proposals	The effects of past quarrying at Mangatawa have not been addressed in this report, as again they relate to historic actions and effects, not to those that are now proposed, which are the core focus of this assessment.
Degraded landscape baseline	In a similar vein to Ngāi Tamarāwaho, the Ngāti Hangarau CVA's paragraph 9.4 states that: *The Landscape assessment concludes that visual effects will be "very low" because the port is already a highly industrialised environment. From a cultural perspective, accepting this degraded baseline normalises the historical erasure of our Mana Whenua. The channels are not merely shipping lanes; they intersect with sacred ara (pathways) carved by Mauao. Cultural mitigation requires active restorative justice.* However, it appears that from Ngāti Hangarau's standpoint, the proposed dredging and deposition activities' landscape effects could be mitigated in the following manner: *To counterbalance the industrial footprint and the ongoing coastal changes, POTL must actively integrate Taonga Tuku Iho into the project's design. The erection of ceremonial carved pou, comprehensive bilingual signage, and educational installations sharing local pūrākau (ancestral stories) help to exercise proper host responsibility to the public and all who enter our rohe. The benefits flow on to port workers who can gain a deeper understanding of the rohe within which they work.* This constructive and educative approach is helpful, although it appears to be somewhat of an 'outlier' in relation to other iwi's concerns about this issue.
General comments around how landscapes are defined etc	At paragraphs 85 and 88 of Ngā Pōtiki's CVA, the following is stated: *85. Ngā Pōtiki landscape values are grounded in our whakapapa and kōrero tuku iho, and expressed through the interconnected features of our takiwā, including Mangatawa, Mauao, Te Tāhuna o Rangataua, and the wider harbour system. These landscapes are not defined solely by their physical form, but by the relationships between land, water, and people. It is this connection to taiao that upholds Ngā Pōtikitanga.* And: *88. Te Tāhuna o Rangataua binds Ngā Pōtiki together and provides a physical and spiritual connection to Te Awanui. As the epicentre of Ngā Pōtikitanga, it is through our interaction with this landscape that identity, mātauranga, and cultural practices are maintained. While the current Project is located within Te Awanui, Ngā Pōtiki assess its effects within a kuta ki tai framework, recognising that Te Awanui and Te Tāhuna o Rangataua form an integrated system. From this perspective, changes within Te Awanui influence the integrity and functioning of the wider cultural landscape.* I agree with these comments. The proposed dredging and deposition need to be considered in the context of Te Awanui as a holistic and interconnected entity. In addition, these qualities have to be balanced against the retention of the status quo in relation to most of the proposed dredging and deposition, including the quite limited scale and incremental of the additional dredging – not already implemented or consented – that is proposed.
Technical landscape assessments associated with Port activities consider visual effects primarily in terms of physical visibility and scenic amenity, but do not fully account for the cultural significance of these relationships or how they are altered over time	Two key areas of concern are addressed in this 'technical landscape' assessment: the biophysical and perceptual effects of the proposed dredging and deposition operations. In relation to associative and cultural values, it is acknowledged that most landscape assessments have limitations. In this regard, the CVAs are critical, as short of engaging with the kaumatua of individual hapu and iwi, or a pūkenga acting as a translator of values on their behalf, it is very difficult to address the wealth of cultural values and associations with a landscape like that of Te Awanui.

	In this instance, the CVAs prepared by multiple hapu and iwi in response to PoTL's proposals are important as they complement and inform the technical assessments, such as are found in this report.
Mitigation proposals in the Table at paragraph 102 of the Ngāti Ranginui Fisheries Trust submissions	In relation to the Table at paragraph 102, the following actions appear to be relevant from a landscape standpoint: Hononga: A pūkenga could be engaged by PoTL to act on behalf of the various hapu and iwi who have prepared CVAs – to both distil down values of importance to local tangata whanua, to distil down areas of concern and to present a unified view on the cultural effects associated with the proposed dredging / deposition and other port proposals; Mana: The provision of proposed consent conditions, access to technical experts, and the resourcing of a rōpū that represents Tauranga's tribes and acts as a point of engagement in relation to PoTL's furture projects; While undertaking these actions would not affect my assessment of effects of the project, I have no issue with them being undertaken from a landscape perspective, noting that these measures are focused more broadly on cultural effects rather than being specific to cultural landscapes. Although Ngāi Tukairangi's CVA suggests a wide range of conditions on p.81 (addressing Tauranga's cultural landscape, marae well-being and community effects, it is difficult to see how the conditions proposed in that CVA actually respond to the very limited landscape and natural character effects identified in this report.
The cumulative effects associated with the proposed dredging, both in terms of effects on traditional connections with the harbour and its accommodation of the Port's large-scale infrastructure, encroachment on Whareroa Marae and its impact on natural coastal features and disposal sites	At pages 46-48 of Ngāi Tukairangi's CVA, concerns are raised about these matters and the draft Brown NZ report is criticised for not addressing the cultural effects of a reduced pipi population on Te Paritaha Bank. In response to these matters, it is recognised that the Port relies on dredging and the deposition of material to function, and within these activities, the port's infrastructure and effects on both natural features around the harbour and the deposition areas would not occur. My brief has, however, been to focus exclusively on the additive effects of the proposed dredging and deposition, and not on the wider port environment that these proposals would help to support. As such, I have not addressed the perceived encroachment of the Port's infrastructure, lighting, and other activities on Whareroa Marae or the environment found more generally around the Port. The effects in relation to Te Paritaha and its pipi population are acknowledged in my report, but in the Forum 4 discussion I was asked to summarise the key findings of my assessment. I explained that Dr De Luca had identified a decline in pipi numbers at Te Paritaha between 2016 and 2023, but that the causes of this decline were uncertain and appeared to relate to pollution of the Harbour's seabed and water column (p.58 above). However, "*the high recruitment rates observed across the study area in 2023 suggest that healthy aggregations of reproductive individuals are present within Te Awanui".* Dr De Luca's assessment then went on to indicate that dredging would have no long-term effects on pipi health and abundance: they would 'simply swim away from areas of increased turbidity' (p.68 above). There was no direct discussion about these matters in the Forum 4 discussion as part of our review of landscape effects, and I did not apprehend that Ngāi Tukairangi had specific concerns about Dr de Luca's findings that I could, or should, address.
Inadequate recognition of cultural values and effects	At pages 67 and 71, concerns are raised about 'methodological gaps' in the assessments of effects undertaken for PoTL. Such gaps in relation to cultural matters are acknowledged in this assessment. Yet, it is important in this regard to remember that *Te Tangi a te Manu* states as follows at paragraph 5.43:

	5.43 Some landscape architects lack the skills and experience to engage effectively with tāngata whenua or may consider it outside their area of expertise. Some clients and local authorities may also think that landscape and tāngata whenua matters are to be treated separately. In such situations, the best compromise may be to draw on CIA or other published documents. In addition to making clear the role of landscape architects are expected to have in relation to such matters, this implies that judgments about effects on cultural landscape values need to be informed, not second-hand. If there has not been active engagement with iwi then landscape architects should not presume that they can represent such groups 'off their own bat'. In this regard, the judicial findings in *Tauranga Environmental Protection Society Inc v Tauranga City & Ors* appeal (ENV-2018-AKL-000256) are also notable. Coming out at a very similar time to the release of TTaM, the High Court's decision (CIV-202-470-31 [2021 NZHC 101]) comments that it is not up to experts to speak on behalf of iwi or hapu in relation to the nature and effects of any proposal on value and landscapes (in that instance related to the Maungatapu Marae, Rangataua Bay, the Tauranga Moana and Mauao). Rather, these should be explained by kaumatua or other iwi / hapu representatives. This decision appears to take a different approach to the explanation and analysis of cultural values and effects from TTaM. Indeed, I have always understood that the techncial forums (such as Forum 4) and the CVAs would complment the technical assessments undertaken by myself and PoTL's other specialists. Consequently, this assessment addresses cultural landscape values and effects in a limited fashion, via the iwi management plans and published histories described in Sections 3.1 and 3.2 of this assessment.
Suggestions in relation to conditions that would appropriately reflect the effects of the proposed dredging and deposition	No conditions are identified in this report due to the very limited landscape and natural character effects identified in it. Although Ngāi Tukairangi's CVA suggests a wide range of conditions on p.81 (addressing Tauranga's cultural landscape, marae well-being, and community effects, it is difficult to see how the conditions proposed in that CVA actually respond to the very limited effects identified in this report.
Ongoing beach sand depletion at Waikorire	In Appendix 1 of the Ngāi Tukairangi CVA it is stated that ongoing depletion of the beach at Waikorire is due to dredging and is a landscape matter. However, this issue is outside my area of expertise, and I am unable to offer an opinion in relation to it.

9. Statutory Evaluation

The various provisions of the BOPRPS, BOPRCEP and the TCP set out to:

- Preserve the natural character values of the coastal environment;
- Protect the Region's ONFLs, including most of Tauranga Harbour, Matakana Island;
- Protect the Region's ASCVs, notably that of Te Paritaha and the combined Mauao, Moturiki and Motuotau Island Marine Area;
- Support the Port Zone applied to Tauranga Port as a critical piece of the Region's and City's infrastructure

Inevitably, there is a degree of tension between these provisions, notably where they address environments with different values that physically meet or are juxtaposed with one another – as is the case within Te Awanui. However, Port Zone Policy PZ 4 plays an important role in respect of PoTL's reconsenting, stating as follows:

> *PZ 4 Recognise that maintenance dredging within the Port Zone is necessary for the continued operation of the Port, and is appropriate where it is to provide for the purpose of the Port Zone as described in Policy PZ 5.*

Rule PZ 5 then proceeds to outline the following matters that need to be addressed in any Controlled Activity application for maintenance dredging:

> ***Controlled – Maintenance dredging activities***
>
> *Any discharge and disturbance (including removal of sand, shingle, shell, or other natural material) of, the foreshore or seabed associated with maintenance dredging is a controlled activity.*
>
> *The Regional Council has reserved its control over the following matters:*
>
> *(a) The area, quantity, location and timing of disturbance and discharge.*
>
> *(b) Effects on the hydrodynamic and geomorphic regime of the harbour and open coastline, including maintenance of beaches and related sediment transport processes.*
>
> *(c) Effects on fisheries, indigenous biodiversity and ecosystems. The release and spread of harmful aquatic organisms.*
>
> *(d) Coastal water quality including the provisions of Section 3 – Coastal Discharges and Schedule 13 to this Plan.*
>
> *(e) Effects on other harbour users, navigation and public safety during dredging.*
>
> *(f) Site specific historical or cultural values under ss 6(e) or 7(a) of the RMA.*
>
> *(g) The review of conditions and the timing and purpose of that review.*
>
> *(h) The amount and type of any financial contribution.*
>
> *(i) Compliance monitoring.*

(j) Applications for activities under this rule shall be considered without public notification unless special circumstances exist.

Of these matters, just (a) and (f) are addressed in detail in this report, together with (b) – relying primarily on the assessments of other experts to round out the evaluation of natural character effects.

Turning to PotL's proposed capital works and Rule PZ 10, the following assessment matters have also been considered:

(k) The area, quantity, location and timing of disturbance and discharge.

(l) Effects on the hydrodynamic and geomorphic regime of the harbour and open coastline.

(m) Effects on marine life and ecosystems.

(n) Coastal water quality including the provisions of Section 3 – Coastal Discharges and Schedule 13 to this Plan.

(o) Site specific historical or cultural values under ss 6(e) or 7(a) of the RMA.

In relation to these matters, it is assessed that ongoing dredging and deposition would have a very low to low (ie. less than minor) level of effect in relation to:

- ONFLs 3, 5 and 10;
- ASCV-4a and ASCV-6;
- Te Awanui in general;
- The Pacific Ocean near Mt Maunganui and Mauao;
- Those urban and suburban areas that are both near and exposed to Te Awanui and the Pacific Ocean, including residential areas within Mt Maunganui, at Otūmoetai and on the margins of the Tauranga CBD; and
- Whareroa Marae, much more specifically.

Overall, it is therefore considered that the capital and maintenance dredging works, together with silt deposition and beach replenishment, proposed by PoTL are appropriate in terms of the statutory provisions addressed in this report.

10. Mitigation Measures

Given the extremely limited nature of the proposed dredging and deposition on Mt Maunganui's landscape and natural character values, no measures have been identified that would mitigate the effects of the proposed activities.

11. Conclusions

In conclusion, the Current State Assessment within this report has identified that the landscape, natural character and amenity effects associated with PoTL's ongoing dredging and deposition operations, together with its proposed capital dredging, would be limited and appropriate from a statutory standpoint. Overall, the proposed activities are considered to be acceptable and appropriate, given their location, context, scale, and limited intensity.

Although the very limited capital dredging now proposed would have a physical impact on a specific part of Te Awanui and a specific part of the harbour entrance off Mauao, this is not reflected in the biophysical and perceived natural character effects identified in relation those works, nor the landscape and amenity effects also identified in respect of them. Instead, it is anticipated that the effects of the future operations proposed by PoTL would be small-scale, quite isolated, and of a very low to negligible order, overall.

Stephen Brown

BTP, Dip LA, Fellow NZILA, Affiliate NZPI

