4. Existing Environment

4.1 Physical setting

Northport is a deep-water commercial port located at Marsden Point in Northland. The port is located at the entrance to the Whangarei Harbour, between the Marsden Point CINZL facility to the east, and One Tree Point to the west (see **Figure 19** below).

Figure 19: *Location Map (Source: Google Earth)*

Road access is via SH15 which connects directly to SH1 (see **Figure 20** below).

Figure 20: *Road connections*

Northport currently has three berths available for handling dry cargo vessels, with a total length of 570m. An additional 270m of linear berth (Berth 4) is consented but not yet constructed.

The overall Northport footprint is made up of multiple titles (see copies attached in **Appendix 7**). Much of the port is also located on reclaimed (crown owned) leased land.

The existing facility totals 49.1ha of land, with most of this area now being used for cargo operations (see **Figure 21** below). Of the existing 49.1ha footprint, 33.615ha is reclaimed land.

***Figure 21**: Northport aerial photograph (Source: Quickmap/Google Earth)*

4.2 Cultural setting

4.2.1 General

The project area and its surrounds are rich in Māori history.

4.2.2 Patuharakeke

Patuharakeke is derived from Ngāti Manaia, Ngāi Tāhuhu, Ngāti Wharepaia, Ngāti Ruangaio, Te Parawhau and Ngāti Tu. Prior to Patuharakeke taking the name Patuharakeke the hapū was more generally known as Ngāti Tu with some elements identifying themselves as Te Ākitai and Te Parawhau. All of these hapū have origins in Ngāi Tāhuhu and/or Ngāti Manaia. Patuharakeke are a composite hapū of descent from most major contemporary iwi/hapūgroups in the north. These include Ngātiwai, Ngāpuhi-nui-tonu, Ngāti Whātua and Te Uri o Hau.[22]

[22] Patuharakeke Hapu Management Plan (2014).

The Patuharakeke CVA at **Appendix 24** states: “Patuharakeke are tangata whenua of the area Northport operates in and hold mana whenua status over Poupouwhenua/Marsden Point.” It also records that the Patuharakeke Te Iwi Trust Board (PTITB) represents their interests in matters including *inter alia* environmental and resource management issues.

The Patuharakeke rohe is shown in **Figure 22** below.

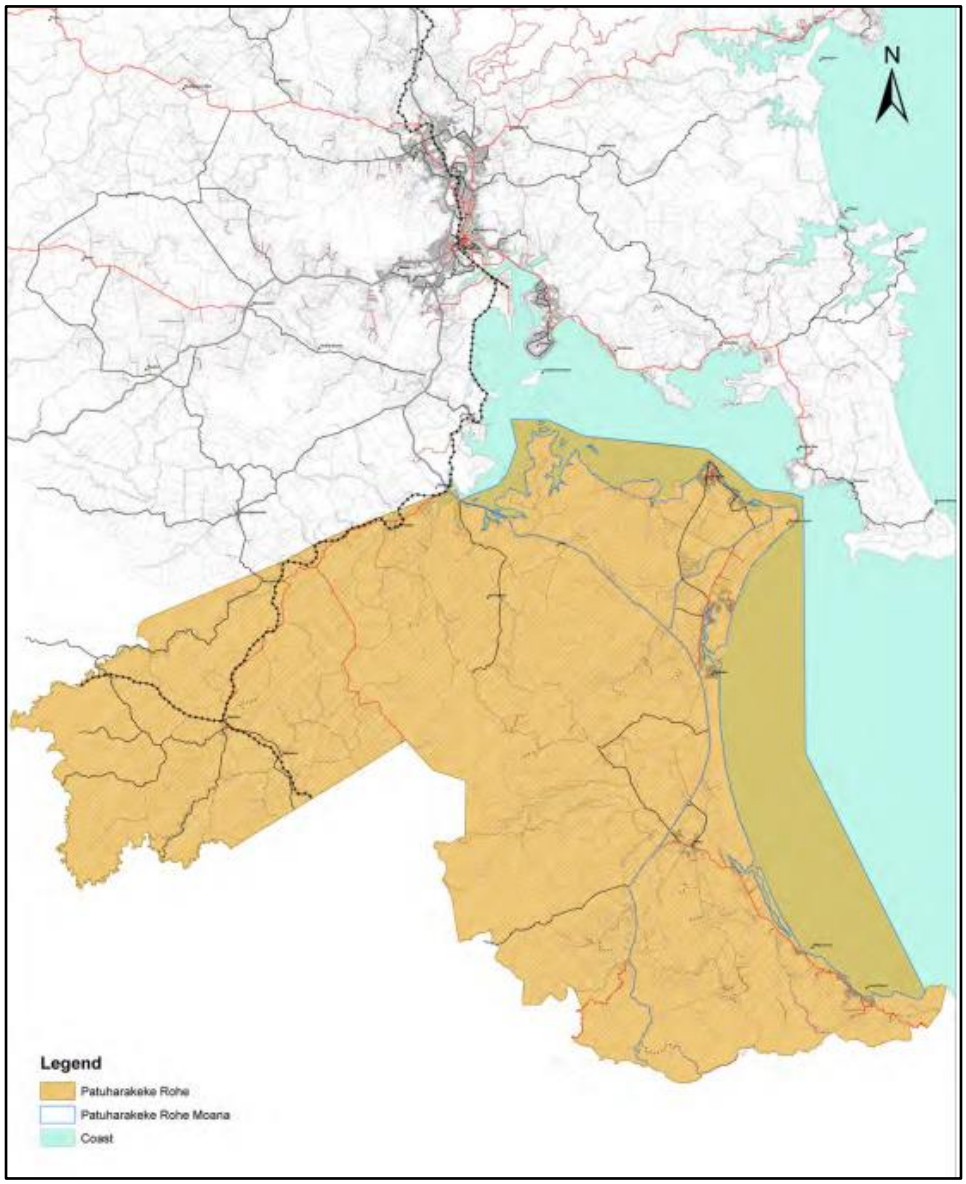

Figure 22: *Patuharakeke Mainland Rohe (Source: Patuharakeke Hapū Management Plan)*

4.2.3 Te Parawhau

Te Parawhau hapū and whānau are located at the southern boundary of Ngāpuhi. The Te Parawhau estate encompasses the area from Tangiteroria in the west, east to Whangārei and south to Brynderwyn. They are connected by geneology to most hapū of Whangārei. Both the Whangārei Harbour and the upper Northern Wairoa of the Kaipara Harbour are inclusive of Te Parawhau’s estates.

4.2.4 Ngātiwai

According to the Ngātiwai website,[23] Ngātiwai claims mana whenua and mana moana from Rākaumangamanga to Mahurangi, across to Aotea, and returning to Rākaumangamanga by way of the many islands and waters of Te Moana Nui a Toi. The Ngātiwai rohe is shown in **Figure 23** below.

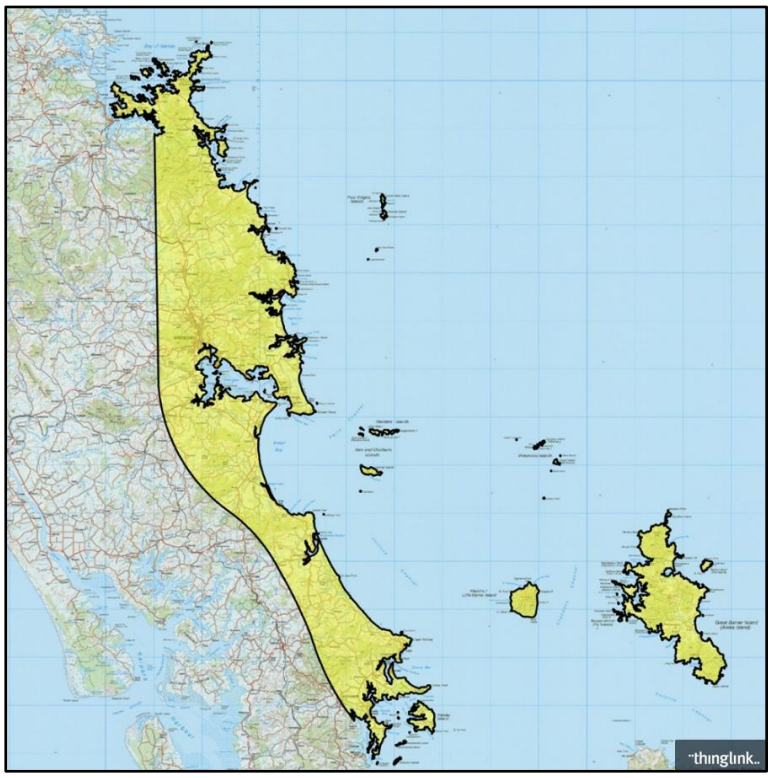

Figure 23: *Ngātiwai rohe (Source:* https://ngatiwai.iwi.nz/te-iwi-o-ngatiwai/)

4.2.5 Patuharakeke relationship with Northport

The relationship between PTITB and Northport was recently formalised through a Te Whakahononga Relationship Agreement in 2019 to assist an effective, stronger working relationship between the two parties. PTITB have a history of providing cultural and environmental advice and support to Northport and both parties strive to engage with one another in the spirit of good faith and transparency.

4.2.6 Iwi/Hapu Management Plans and Documents

General

There are several Iwi/Hapu Environmental Management Plansheld by the NRC. These are:

- Te Iwi o Ngatiwai Iwi Environmental Policy Document (2007)

[23] https://ngatiwai.iwi.nz/te-iwi-o-ngatiwai/

- Whatitiri Hapu Resource Management Plan (2016)
- Patuharakeke Hapu Management Plan

These documents are summarised below.

Te Iwi o Ngatiwai Iwi Environmental Policy Document (2007)

The stated purpose of this document is to:

- State the core values of Te Iwi o Ngatiwai, from an Iwi perspective, around generic environmental issues.
- Assist Ngatiwai hapu and whanau to produce documents that identify and state their own specific local environmental issues.

The document focuses on the responsibilities of District and Regional councils under the RMA and is designed for parties proposing development within the Ngatiwai rohe. It contains guidelines for an open, transparent, accountable, and collectively agreed upon process for Councils to take into account Iwi and Hapu documents lodged with them.

The document refers to the Ngatiwai Trust Board Resource Management Unit (NTBRMU) whose role is to develop the resource management capacity of Ngatiwai, ensuring the sustainable management of the natural, physical, and cultural resources of the iwi.

The NTBRMU aims to:

- Fulfil kaitiaki responsibility so that human interaction with environment is managed in a sustainable way that protects the mauri of natural, physical, and cultural resources.
- Maintain the cultural and spiritual integrity of Te Whakaputanga o nga Rangatira o Niu Tireni (The Declaration of Independence) and Te Tiriti o Waitangi as founding political documents for governance of NZ.
- Weigh up principles and values of Ngatiwai for the Environment with those of the Crown in a meaningful and positive way to ensure the sustainability of its resources for future generations.

The document is set out according to the genealogical sequences of Ngatiwai. The sections have been positioned into the stages of creation. These subsections are then split into issues, objectives, policies, and methods. The various stages are as follows:

Te Unaunahi Tuatahi – Minerals and substances that make up the earth and sky.

Summarised into the following three sections with supporting objective, policies, and methods:

- Minerals
- Air quality
- Water

Te Unaunahi Tuarua – Flora and fauna which cloak the earth.

Summarised into the following two sections with supporting objective, policies, and methods:

- Indigenous flora
- Indigenous trees

Te Unaunahi Tuatoru – The animal world. Focuses on Indigenous fauna only.

Te Unaunahi Tuawha – The human related elements. Focusses on engagement.

Te aho Tapu

Summarised into eight sections:

- Matauranga Ngatiwai
- Wahi Tapu
- Rahui
- Taniwha
- Ngatiwai Landscape
- Customary Materials
- Exotic Plantation Forestry
- Genetically Modified Organisms

Whatitiri Hapu Resource Management Plan (2016)

This document is written on behalf of Te Uriroroi, Te Parawhau and Te Mahurehure Ki Whatitiri.

The document recognises that hapu and whanau are facing increasing pressure to respond and have input into a variety of issues, such as treaty claims, court proceedings and resource management issues and has been prepared in recognition of the need for a centralised strategy to deal with these issues.

The stated vision of the document is:

- A healthy Maori community where hapu prospers and participates fully in the management of lands and waters for the betterment of the entire community, in the area known as Whatitiri, depicted in the Whatitiri Resource Management Unit map.

The stated Mission is to revitalise the health and wellbeing of the environment and their people.

The plan has been developed to:

- Ensure the engagement and participation in the planning and decision-making processes of council's, agencies, and developers with respect to their rohe.
- Assert their tino rangatiratanga over their ancestral taonga.
- Clearly identify the environmental management kaupapa of the Whatitiri RMU.

The stated values of the plan are:

- Kaitiakitanga – Our duty of care and responsibility toward our taonga tuku iho.
- Whānaungatanga – Building ongoing positive relationships with whānau, hapū, iwi, crown agencies and the wider community.
- Manākitanga – Our ability to sustain our whānau and our manuhiri.
- Matauranga – To protect, revive, enrich and utilise our knowledge in our capacity as kaitiaki.
- Tikanga – To retain the traditions of our tupuna in all our operations.

A key focus of the plan is on building and maintaining durable relationships. They recognise that the implementation of their policies will be dependent on the strength of relationships with whanau and all others who interact within the rohe. It is vital that they are acknowledged as kaitaiaki and empowered to actively practice kaitiakitanga in regard to all resources in their rohe.

The remainder of the document is split into seven sections on natural resource issues, with each of these sections containing issues, objectives, policies, and methods. These are:

- Relationships
- Kaitiakitanga
- Water
- Land
- Biodiversity
- Heritage, landscapes and wahi tapu
- Genetic engineering

Patuharakeke Hapu Management Plan

This plan was developed to:

- Ensure the appropriate engagement and participation of Patuharakeke in the planning and decision-making process of councils, agencies, and developers with respect to their rohe.
- Assert tino rangatiratanga and kaitiakitanga over our natural environment and all ancestral taonga.
- Achieve the full intent of empowering legislative provisions.
- Clearly identify the environmental management kaupapa of Patuharakeke.

The stated vision of the plan is "*I nga ra e hi ika, he kupenga tatai awhai nuku*" – If you wish to catch fish, first you need to ensure your net is in good order. This provides all-encompassing contemporary vision of healthy environment as well as tribal activities, structures, management practices and operations that reflect the present and where they want to get to.

The stated mission of the plan is to revitalise the mauri of their taonga tuku iho.

The plan states that Patuharakeke's response to resource management issues is shaped by:

- A body of knowledge about their land, water and resources built over many generations;
- An holistic worldview that sees people in a familial and symbiotic relationship with the other manifestations of nature around them rather than in domination of it;
- The desire to protect key cultural values and practices such as mauri, tikanga, rahui and waahi tapu that are central to our identity, sense of place and cultural well-being; and
- An historical context where the dispossession of land that followed colonial settlement and Te Tiriti o Waitangi and the confiscation of Poupouwhenua and acquisition of Ruakaka, Mata and Waipu via imperfect purchases had a profound effect on the spiritual, cultural and traditional relationship between Patuharakeke and the environment. As the physical landscape changed, so did the ability of tangata whenua to access and manage the resources upon which they depended.

Key principles of the plan are:

- Whakapapa – The foundation of our framework for managing resources, this demonstrates the relationships between the various elements of the world around us, including human beings.
- Kaitiakitanga – Our duty of care and responsibility toward our taonga tuku iho.
- Whanaungatanga – Building ongoing positive relationships.
- Manaakitanga – Our ability to care for and sustain our whanau and our manuhiri.
- Matauranga – To protect, revive, enrich and utilise our knowledge in our capacity as kaitiaki.
- Mana Whenua – Our right to exercise authority over our rohe and the resources therein.
- Mauri – Protection of the 'life force' contained in all places, species, minerals, ecosystems in our rohe. It can also be understood as a measure of the health and vitality of those elements.
- Tikanga – To retain the traditions of our tupuna in all our operations.

The plan seeks to use the following methods to incorporate cultural values and objectives into RMA processes:

- Cultural Impact Assessments.
- Cultural Values Assessments.
- Cultural Health Monitoring.
- Sites of Significance Mapping.

The plan identifies that Patuharakeke have adopted various structures over the past two decades to better enable their participation in policy and planning including formation of the Patuharakeke Te Iwi Trust Board (PTITB).

Strengthening existing relationships and creating new meaningful ones are a key focus of the document and there are several issues, objectives, policies, and methods relating to this.

The plan identifies a range of resource issues and contains issues, objectives, policies, and methods in respect to each of these. The identified resource issues are as follows:

- Recognition of Kaitiakitanga
- Te Tiriti o Waitangi
- Kaitiaki Monitoring tools – Patuharakeke must be involved in the monitoring of all aspects of the health of their rohe.
- Ranginui including:
  - Discharges to air
  - Climate change
- Papatuanuku including:
  - General matters
  - Marae and Kainga
  - Maori Land Rating
  - Soil and Minerals
  - Vegetation clearance and commercial forestry
  - Subdivision and development
  - Utilities, amenities and infrastructure
  - Public access
  - Overseas investment and purchase of land
  - Waste management
  - Genetic engineering
- Wai Maori
- Tane Mahuta
- Waahi Tapu me Waahi Taonga
- Tangaroa including:
  - Coastal water quality
  - Foreshore and seabed
  - Access to the coastal environment

- Offshore oil exploration and mining
- Industrial activities at poupouwhenua
- Marine mammals
- Customary fisheries
- Aquaculture

These matters have been encapsulated in the Patuharakeke CVA and CEA included with this application.

4.2.7 Marine and Coastal Area (Takutai Moana) Act 2011

There are multiple (35) applicant groups that have applied for Customary Marine Title (CMT) under the Marine and Coastal Area (Takutai Moana) Act 2011 (MACA) (see **Appendix 8** for a full list of the claimants).

No CMT has currently been confirmed in the project area, and there are currently no planning documents prepared by a customary marine title group that would be relevant under clause 3(c) of Schedule 4 of the RMA.

4.2.8 Treaty of Waitangi claims

All three groups are known to have treaty claims in the project area.

4.3 Existing port activities

4.3.1 General

Northport handles a significant share of the region's export trade. Current port uses are shown spatially on the plan in **Figure 24** below and are described generally as follows:

- Log marshalling (approximately 46% of the port area).
- Container handling (approximately 15% of the port area).
- Multi cargo (approximately 12% of the port area).
- Woodchip (approximately 5% of the port area).
- LVL (approximately 3% of the port area).
- Coal (approximately 2% of the port area).
- Other wood products (approximately 1% of the port area).

- Agricultural imports (approximately 1% of the port area).
- Admin (approximately 10% of the port area).

***Figure 24**: Existing port uses (Source: ME)*

Northport has traditionally focused on handling high volume, low value trade goods. This is mostly raw primary outputs for exports (logs and woodchip) or raw primary inputs that are imported to support production (agriculture and cement). However, the port also handles some high value goods including engineered timber, horticulture products and marine products. There have also been one-off imports of specialist machinery/vehicles and construction products (e.g. steel for the Auckland Convention Centre).

More recently Northport has handled several large container ships to assist in alleviating congestion at Ports of Auckland, including the 261m container ship *Constantinos P* and the 294m *Tianjin Bridge* (see **Figure 25** below).

Figure 25: *Tianjin Bridge docked at Northport (January 2021)*

4.3.2 Cargo types and storage

Cargo types handled by Northport will vary over time according to demand and supply in various markets around the world. It is expected that the type of cargo may broaden (i.e. cars, cruise ships) and that containers will become a larger part of the Northport freight mix.

A summary of existing cargoes handled by Northport is provided below.

Containers

Northport already handles container-based freight and will continue to do so. Construction of the already consented Berth 4 and the associated reclamation will increase the capacity for container handling at Northport, as will the eventual installation of ship to shore cranes.

Current containerised export cargoes include LVL (laminated veneer lumber), packaged timber, tri-board and veneer, kiwifruit, and bagged cement.

Containers have standardised dimensions meaning that they can be stacked (see **Figure 26** below).

Figure 26: *Stacked shipping containers (six high)*

Logs

Logs account for a significant percentage of the bulk cargo currently handled by Northport.[24] Logs are stored on the port in preparation for export, and ultimately loaded onto ships via ship-mounted cranes (see **Figure 27** below). Logs are currently exported to China, India and Korea.

Log exports are expected to reduce in the medium term due to the current stage of the Northland harvest cycle.

Figure 27*: Log storage at Northport*

[24] In 2018 and 2019 log exports accounted for 78% of the bulk cargo throughput at Northport (Source: MMH announcement to NZX 29/08/19).

Woodchip

Woodchip is stored on the port in preparation for export to Japan (see **Figure 28** below). The chip is loaded onto ships via a conveyor system.

Figure 28: *Woodchip and intake conveyor at Northport*

Other bulk cargo

Dry bulk import cargoes currently handled by Northport include clinker from Japan, gypsum from Thevenard, coal, and animal feed supplements (including molasses, distillers dried grain, palm kernel expeller, and soy).

Future cargoes

As previously stated, future cargoes will depend on future markets. However, foreseeable port cargoes include imported vehicles, cruise ships (passengers), and bulk liquids. High value containerised horticulture exports (such as kiwifruit, avocados, berries and pipfruit) are also expected to increase. Northport's changing freight tasks and opportunities to diversify are outlined in the Issues and Options report at **Appendix 2**.

4.3.3 Shipping operations

Northport is among the most modern ports in New Zealand. It is the country's only port constructed entirely under the RMA framework. Although originally primarily built for the export of forest products from Northland, Northport is a flexible multipurpose facility catering for a range of cargoes and their associated vessel types.

There are three companies running regular port shipping operations in the Whangarei Harbour. These are Northport and CINZL (both based at Marsden Point), and Golden Bay Cement (based at Portland).

Northport is currently a three-berth facility capable of handling ships with up to a 13m draft. The three oil jetties serving CINZL (to the east of Northport) are capable of handling tankers with a deadweight of up to 150,000 tonnes and with a maximum draft of 15.2m. Portland Cement Terminal has one jetty which serves the Golden Bay Cement Company cement works. One specialised bulk cement vessel uses this facility on a regular basis.

An analysis of shipping movements in the harbour between 2014 and 2020 shows that (on average) there are approximately 24 weekly movements involving vessels over 500 gross tonnes (12 in and 12 out).[25] Approximately 12 of these are related to Northport, approximately 8 are related to CINZL,[26] approximately 3 are related to Golden Bay Cement, and less than one movement can be attributed to the upper harbour (Port Nikau).

All vessels that visit Northport exceed 500 gross tonnes and so must be piloted.[27] Piloting operations are carried out by NTL. Ships are turned in the swing basin adjacent to Northport before berthing (see **Figure 29** below).

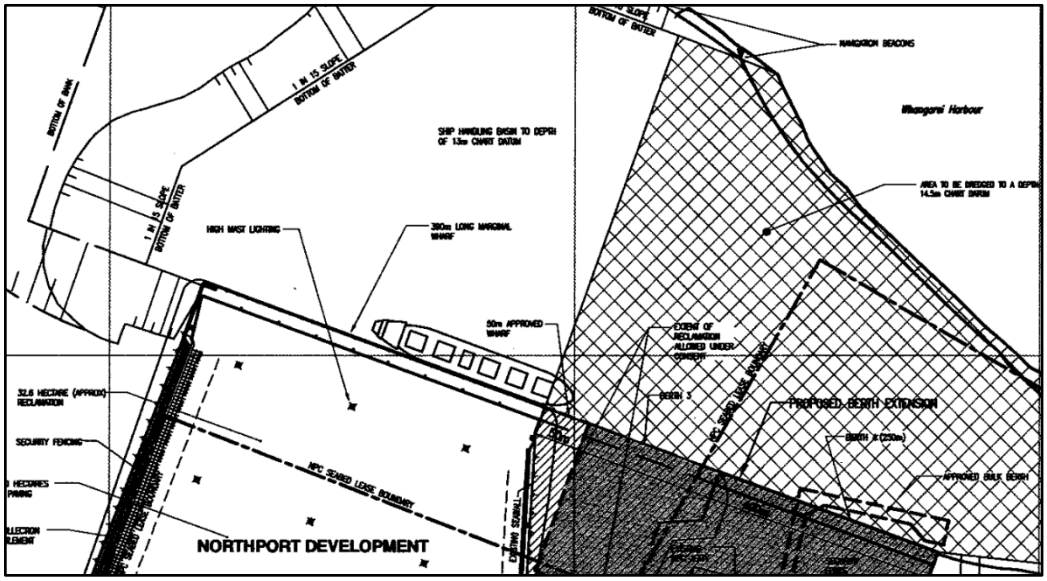

Figure 29: *Ship turning (swing) basin (Source: NRC consent AUT.005055.23.01)*

The NRC oversees the Whangarei Harbour Safety Management System (WHSMS), which implements the national legislative and policy framework at the regional level. The NRC can and does delegate its functions under the WHSMS. Specifically, Northport has delegated responsibility for:

- Aids to navigation;

[25] This excludes smaller craft such as maintenance and fishing vessels.
[26] Movements associated with the import terminal are similar to the movements associated with the refinery.
[27] *Maritime Rules: Part 90: Pilotage*, Maritime New Zealand (13 December 2019).

- Hydrographic surveys and maintenance dredging; and
- Local navigation information in Whangarei Harbour.

Also, NTL has responsibility for the provision of pilotage and towage in Whangarei Harbour.

4.4 Surrounding land environment

4.4.1 Marsden Maritime Holdings Industrial Land

There is 185ha of industrial land owned by Marsden Maritime Holdings Ltd (MMH)[28] adjoining the southern boundary of Northport (see **Figure 30** below).

Figure 30: *Marsden Maritime Holdings Ltd overall landholding (excluding Marsden Cove)*

Much of this land is yet to be developed and is currently being grazed. However, the land immediately adjacent to the port has been developed and leased by MMH to a range of different businesses (see **Figure 31**).

[28] MMH owns 50% of Northport.

Figure 31: *Marsden Maritime Holdings Ltd existing industrial development adjacent to Northport*

The activities carried out on the MMH lease land include:

- Grain storage.
- Construction company headquarters.
- Log scaling.
- Log processing (debarking).
- Concrete batching plant.
- Plastics manufacturing.
- Various commercial activities.

4.4.2 Channel Infrastructure NZ

Immediately opposite the MMH land on the eastern side of SH15 is the Channel Infrastructure New Zealand (CINZL) fuel import terminal (see **Figure 32** below).

***Figure 32**: CINZL terminal (note Matukaroro Island in the foreground and Northport to the west)*

CINZL imports refined fuels and distributes them throughout Northland and Auckland, largely via a purpose-built 170-kilometre pipeline to a storage terminal in Wiri (South Auckland), and then distribution by road or by further pipeline to Auckland International Airport.

4.4.3 Other industrial uses

There are a range of other industrial uses on land near the port. These uses include:

- BOC and Air Liquide CO2 plants (CINZL owned land).
- Sand mining (Hansen Earthworks and Drainage).
- Timber storage and manufacturing (including the Carter Holt Harvey LVL mill).

There is also a consented (but not yet constructed) 31ha solar farm on CINZL land to the south of the CINZL facility between Mair Road and Rama Road.

4.4.4 Rural Uses

Almost all the MMH land on the southern side of Marsden Bay Drive is currently being grazed. The exception to this is the boat hardstand facility adjacent to the Marsden Cove Marina, and an adjacent small-scale commercial and industrial development.

4.4.5 Residential communities

There are several residential communities in the vicinity of Northport. These communities are shown on the plan in **Figure 33** below.

On the southern side of the harbour is the residential area of One Tree Point (including Albany Road and the Marsden Cove waterways development). On the northern side of the harbour are the residential areas of McLeod Bay, Reotahi, Taurikura, and Urquarts.

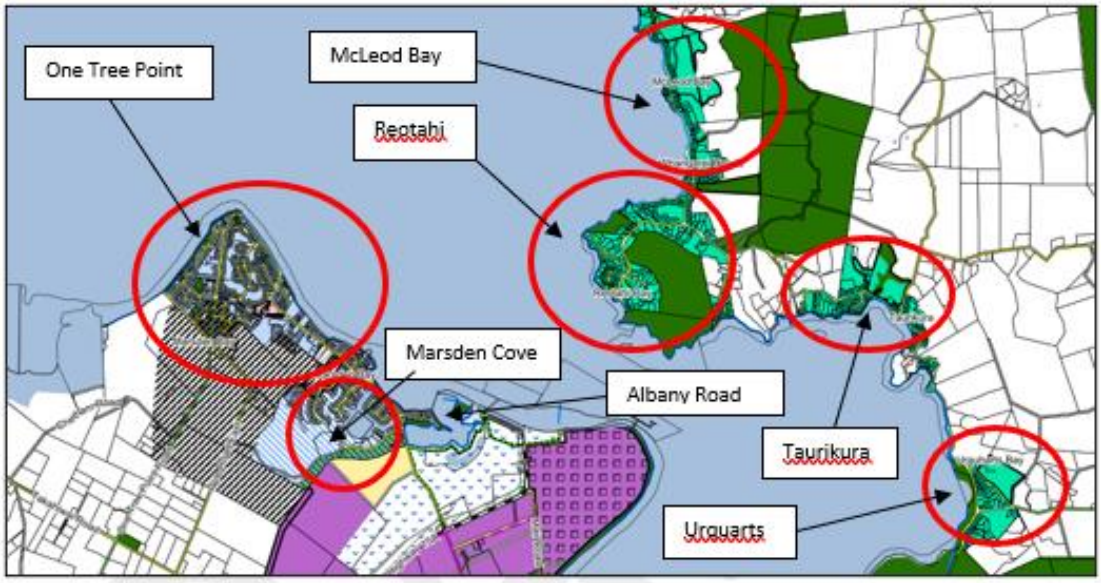

Figure 33: *Residential communities in the surrounding environment (Source: Operative Whangarei District Plan)*

4.5 Coastal processes

4.5.1 General

The existing environment for coastal processes has been identified by Tonkin and Taylor (T+T) with the technical assistance of Met Ocean (MO). The conclusions from the T+T report are summarised below. Further detail is provided in the T+T report in **Appendix 10.**

4.5.2 Channels and sand banks

The Whangarei Harbour is accessed through a natural tidal channel which varies in depth from –CD 14.7m to 32m at its deepest point. Home Point and Busby Head define the outer limits of the main channel. The existing harbour bathymetry (water depth) is shown in **Figure 34**.

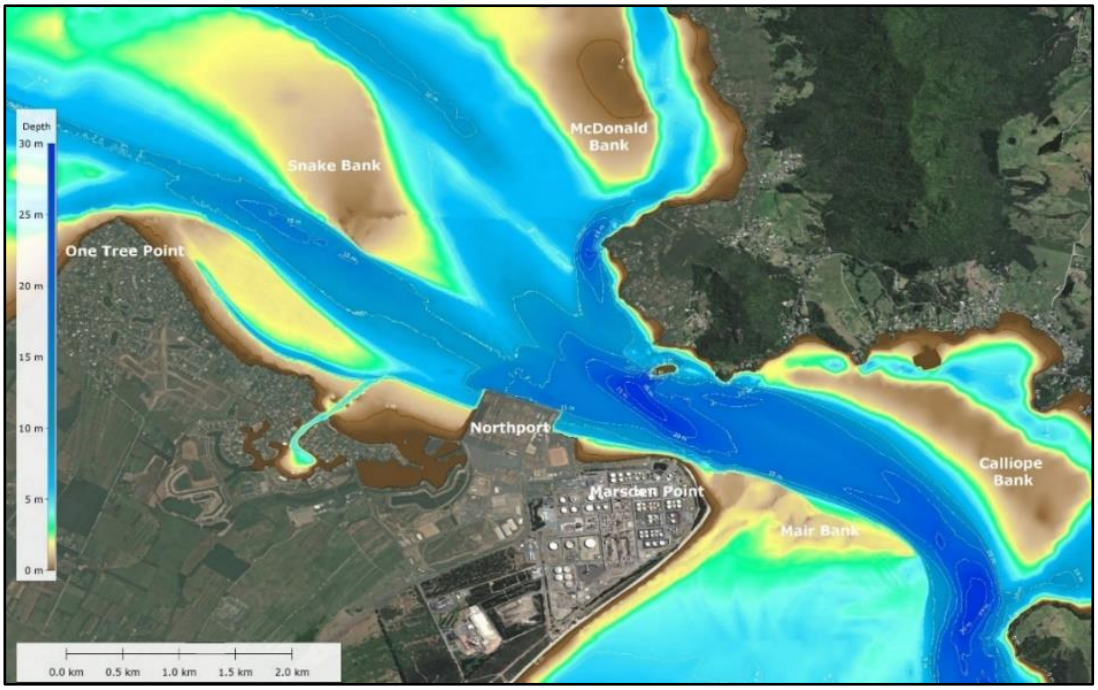

Figure 34: *Existing Harbour bathymetry (MSL) (Source: Met Ocean)*[29]

The harbour entrance channel is flanked by Mair Bank to the south and Calliope Bank to the north. Snake Bank is located to the north-west of Northport. Sand from this bank is continually being mobilised, along and off the end of the bank, and deposited into the swing basin. This has resulted in the (recent) need for maintenance dredging in the Northport swing basin.

4.5.3 Marsden Cove Marina entrance channel

The artificially constructed Marsden Cove Marina entrance channel is located 750 to the west of Northport (see **Figure 35** below). Marsden Cove incorporates a 230-berth marina and surrounding residential development. Additional canal and associated residential development are currently under construction.

[29] *Predicted morphological response to proposed capital dredging and land reclamation*, April 2018 (Met Ocean – **Appendix 9**).

Figure 35: *Marsden Cove entrance channel (Source: Google Earth)*

4.5.4 Hydrodynamic and morphological setting

Whangarei Harbour is a meso-tidal[30] 98km² drowned river valley.

The harbour is relatively shallow due to extensive intertidal flats.[31]

The harbour is accessed through a relatively narrow tidal inlet which is around 790 m wide and 32 m deep at its deepest point. The inlet is bounded by tertiary volcanic rocks on the northern side and a Holocene prograded sandy barrier spit on the southern side (Marsden Point).

The inlet channel separates a large ebb tide delta that extends seaward to around the 20 m depth contour. Mair Bank is situated on the southern side of the channel, with Calliope Bank on the northern side. Snake Bank and McDonald Bank are the two main flood-tidal deltas located within the harbour upper harbour area (see **Figure 36**).

[30] 2-4m tidal range.
[31] 58% of the high tide area is made up of inter-tidal flats.

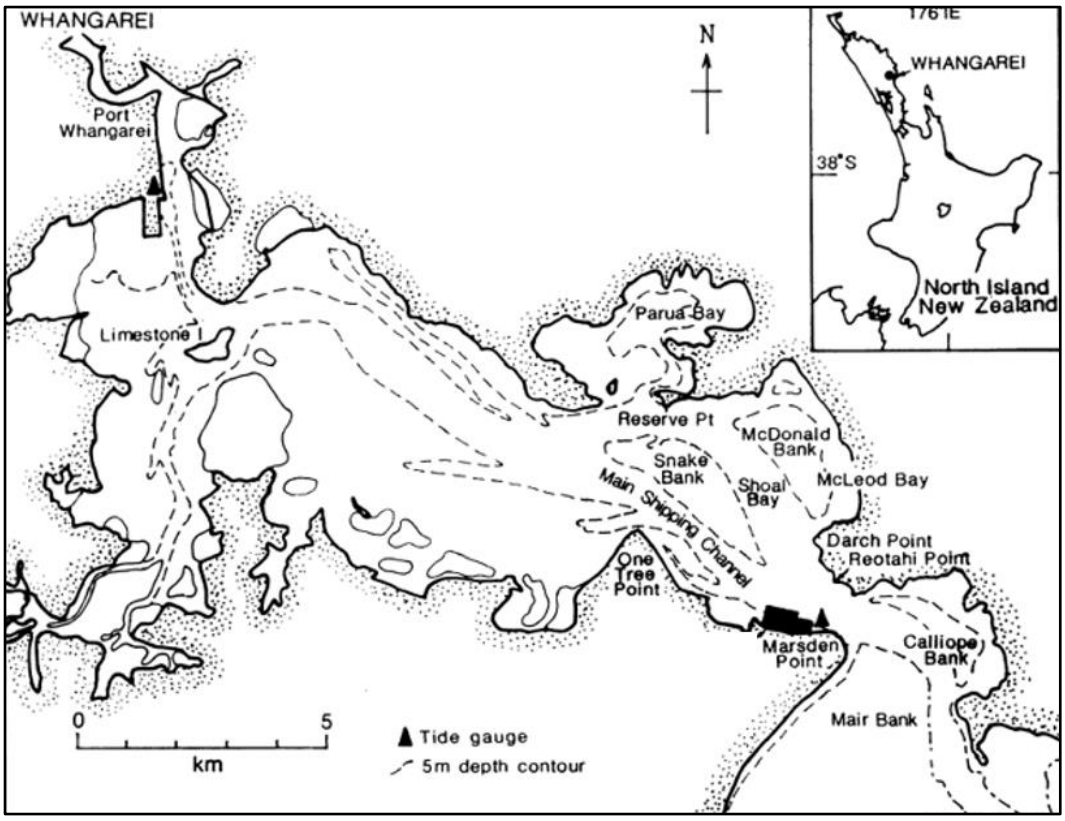

Figure 36: Location of shoals and banks

4.5.5 Sediment data

Seabed

The sediments in the vicinity of Northport are predominantly fine to medium sands with a reasonable proportion of shell, and a small quantity of silts and clays (see **Figure 37**).

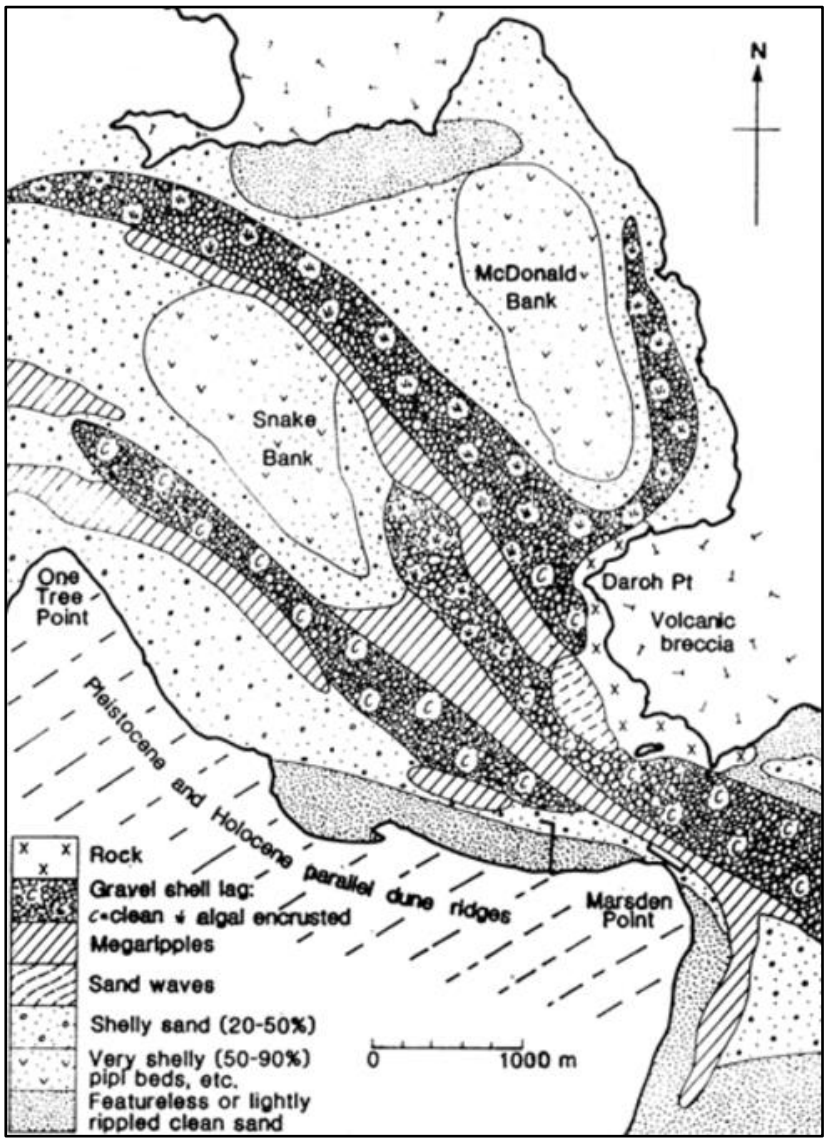

Figure 37: *Sediment facies for Whangarei Harbour*

Suspended sediment

Based on sampling in 2008 and 2009, average suspended sediment values of around 6 mg/L occur on the intertidal areas of the harbour seabed, and within the channel and ebb tide shoal areas.

4.5.6 Bathymetry (depth)

Northport has undertaken an extensive bathymetric monitoring program of the access channel, swing basin, and berths over the last two decades. The purpose of the monitoring is to assess the naturally occurring morphological response (including sedimentation) and to confirm that the required navigable depth is available. Hydrographic surveys using single and multi-beam echo-sounders have been conducted annually, with data available for the period 2006-2022. The bathymetry map for 2022 is shown in **Figure 38** below.

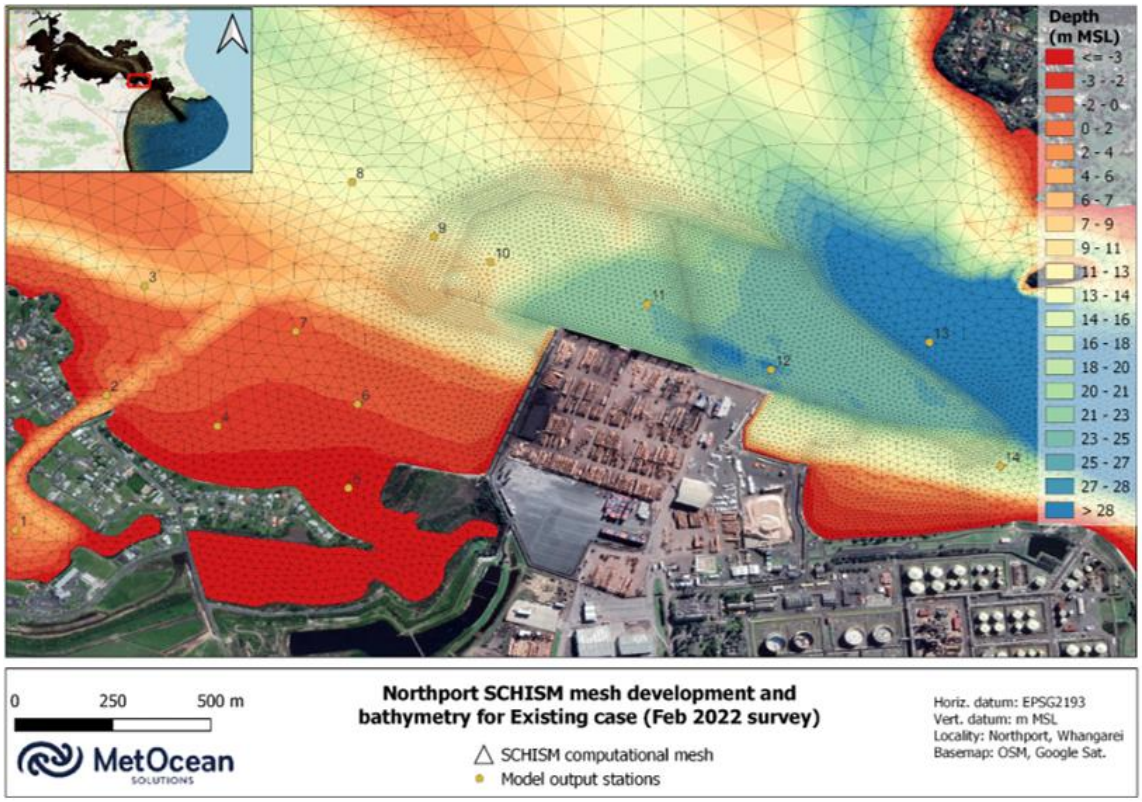

Figure 38: *Existing bathymetry*

As shown on the map in **Figure 38**, the harbour depth in the vicinity of Northport varies between 14.7m and 32m as per the 2022 data.

4.5.7 Current velocities

Current velocities in the vicinity of Northport vary between ebb (outgoing) and flood (incoming) tidal stages. During outgoing tidal stages, current velocities tend to be stronger adjacent to the port berths and within the swing basin as the harbour drains through the main channel linking the harbour entrance to the inner Whangarei harbour. Conversely, during incoming tidal stages current velocities are stronger on the north side of the harbour and aligned with the main entrance channel (see **Figure 39** below).

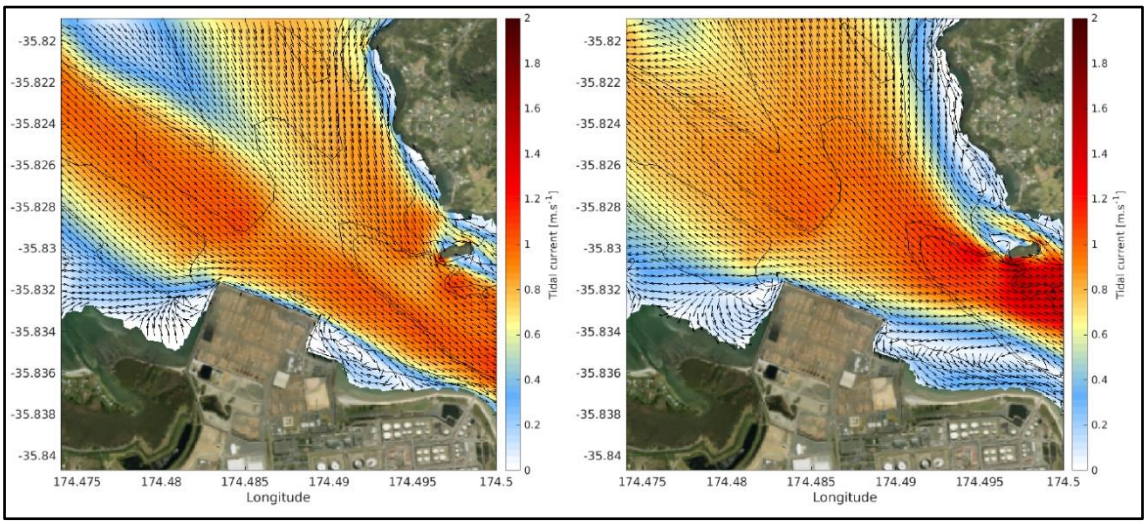

Figure 39: *Modelled peak ebb (left) and flood (right) flows in the vicinity of Northport*

Tidal current velocities gradually decrease up-harbour, from a peak around 1 m/s (≈2 knots) at Marsden Point to 0.8 m/s (≈1.5 knots) at Limestone Island. Tidal streams are strongest in the area adjacent to Home Point southeast of Marsden Point, where rates up to 1.5 m/s (≈ 3 knots) may be experienced. The constricted tidal inlet results in currents reaching peak depth-averaged velocities of 1.1-1.3 m/s(≈2.1 to 2.3 knots) during spring tides at Marsden Point.

Met Ocean modelling predicts only very slight differences between current velocities for the existing harbour configuration and the harbour configuration assuming the exercise of the CINZL channel deepening consent.

4.5.8 Sediment transport

There is evidence of sand wave migration from Snake Bank into the port area, and some local scour and deposition around the faces and corners of the port reclamation (see **Figure 40** below).

Figure 40: *Satellite and aerial photograph imagery showing morphological change adjacent to Northport*

4.6 Marine ecology

4.6.1 General

The present environment for marine ecology (excluding marine mammals and avifauna) has been investigated by Coast and Catchment (C+C) with technical assistance from 4Sight. The conclusions from the C+C report are summarised below. Further detail is provided in the C+C report in **Appendix 11.**

4.6.2 Ecological setting

The consolidation, review, and analysis of existing information, together with the data gathered through quantitative surveys and rapid intertidal and subtidal video surveys, illustrates that the harbour ecological system is made up of at least four distinct zones being:

- The outer harbour and entrance including flood and ebb tide deltas, a channel complex, and relatively narrow intertidal sandflats;
- Parua Bay, on the northern shore of the harbour, which is a largely enclosed, sheltered, depositional inlet;
- The mid-harbour between the shell bank that historically traversed the main channel and Limestone Island, with its broad intertidal and subtidal flats, and channel system;
- The sheltered upper harbour, that splits into Hātea and Mangapai Rivers which narrow upstream and become increasing influenced by freshwater inputs and adjoining landuses.

Northport sits within the Outer Harbour Ecological Zone (OHEZ) (see plan in **Figure 41** below)

***Figure 41**: Outer Harbour Ecological Zone (OHEZ)*

The OHEZ is a discrete and ecologically significant system. It includes flood and ebb tide deltas, a channel complex, and relatively narrow intertidal sandflats. It is a complex zone subject to strong currents with around 610 ha above chart datum (CD) and 1970 ha below CD. It contains diverse physical habitats, extensive areas of biogenic habitat (including extensive shell gravel beds, seaweed meadows, seagrass beds, sponges, horse mussels, scallops, and significant beds of other shellfish). This is reflected in the high diversity of ecological taxa in that zone. The coastal margin and central area of this zone almost completely consists of mapped Significant Ecological Areas (SEAs) and a marine reserve, with areas that have not been mapped as SEAs mainly consisting of subtidal channels.

4.6.3 Assessment methodology

As described in detail in the C+C report (**Appendix 11**) ecological values were assessed through the following methods:

- A literature review.
- The analysis of relevant, available data.
- A qualitative intertidal survey of Marsden Bay.
- A rapid quantitative intertidal survey of Marsden Bay.
- A video survey of subtidal habitats around Northport.

A summary of the fieldwork undertaken by 4Sight is provided in **Appendix 29**.

4.6.4 Mapped ecological areas

There are several ecological overlay zones in the vicinity of the existing port being a Significant Ecological Area (SEA), Significant Bird Area (SBA) and Significant Marine Mammal and Seabird Area (SMMSB) (see **Figure 42** below).

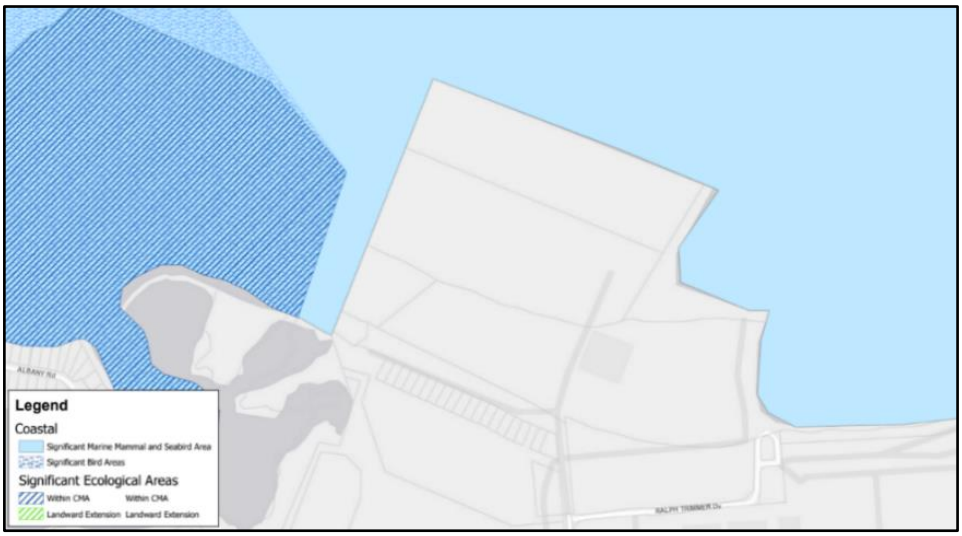

Figure 42: *Proposed Regional Plan (Appeals Version) planning map excerpt (ecological area overlays)*

4.6.5 Marine reserve

On the opposite side of the harbour to Northport (approximately 670m to the northeast) is the Motukaroro Marine Reserve (see **Figure 43**). The reserve is a mix of sandy beach, rocky reef and small high-current outcrops including Matukaroro/Passage Island.

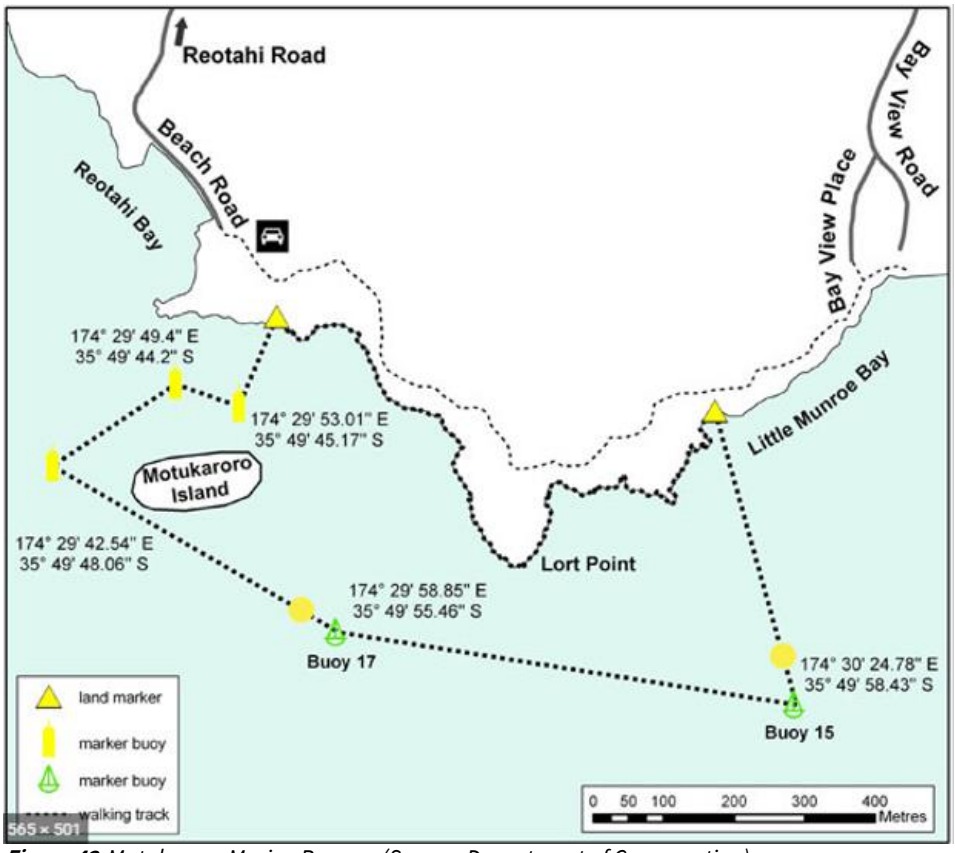

Figure 43: *Matukaroro Marine Reserve (Source: Department of Conservation)*

4.6.6 Coastal vegetation

General

The most conspicuous marine plants in the Whangarei Harbour are the dense stands of mangroves that line a large proportion of the southern and upper harbour shores. However, no mangroves are present to the east of Northport (see **Figure 44).**

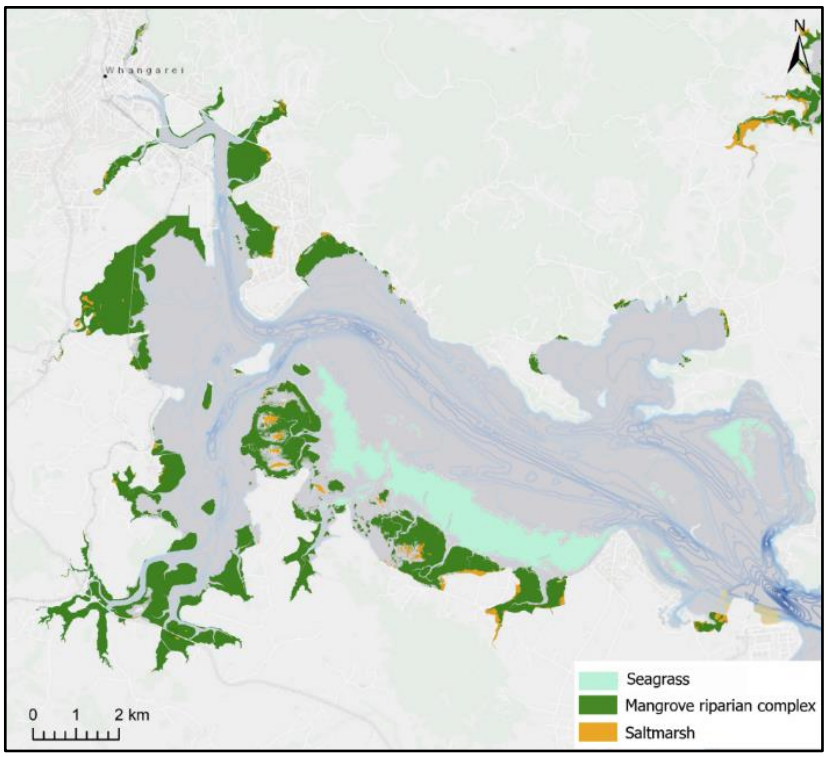

***Figure 44**: Seagrass, saltmarsh, and mangrove extents in the Whangarei Harbour (Source: NRC, 2015)*

Seagrass (*Zostera muelleri*) is abundant on the intertidal flats between One Tree Point and Northport), including patches within, and near, the proposed development area (see **Figure 45** below).

***Figure 45**: Seagrass within the proposed expansion footprint*

Threatened or at-risk species

Seagrass is listed as an “At Risk” species under the New Zealand Threat Classification System (NZTCS) due to the seagrass population being very large, but subject to low to high ongoing or predicted decline. It is a non-endemic species that is secure overseas, and experiences extreme population fluctuations.

4.6.7 Macroalgae

General

Natural rocky habitats and associated macroalgae communities are a relatively minor feature of the Whangarei Harbour. Intertidal and subtidal reef surveys at the outer harbour and surrounding Bream Bay area indicate they contain typical macroalgae assemblages, with seaweed species.

While natural rocky reefs are not present in the Northport area, the Port revetments provide hard artificial reef structures similar to natural reefs. Surveys of these revetments indicate that they have been colonised by common macroalgae.

There are also macroalgal communities in the sediment habitats (known as macroalgae meadows). Macroalgae meadows were one of the key ecological features observed in video footage during the recent video survey around Northport.

Threatened or at-risk species

Four of the taxa in the outer Whangarei Harbour have been listed as at risk under the NZTCS. These are:

- *Microdictyon mutabile*, an endemic green seaweed that inhabits the mid to low intertidal on sheltered, gently sloping rocks in Northern New Zealand, where is forms extensive undulating pads. Locations where it is known to be present in Auckland, include Rangitoto Island, Howick, Birkenhead, Archilles Point, Point Resolution (Parnell), Torpedo Bay (Devonport), The Tor (Waiake Beach), Stanmore Bay, Army Bay (Whangaparāoa), Flat Roch (Tawharanui), Motutapu Island, Motuihe Island, The Noises, Hobbs Bay (Tiritiri Matangi Island), Great Barrier Island, and Kaikoura Island.
- *Feldmannia mitchelliae*, a filamentous brown seaweed that is little known and poorly studied in New Zealand but is widespread internationally
- *Hincksia granulosa*, a filamentous brown seaweed that is little known and poorly studied in New Zealand but is widespread internationally, particularly in temperate seas.
- *Aeodes nitidissima*, a red seaweed that grows on rocks in the low-intertidal subtidal, on open coasts and harbours. It is reported as being widespread, with a New Zealand distribution of Three Kings Islands, North Island, South Island, Stewart Island, Chatham Island, Auckland Island and Campbell Island.

None of these species are known to be located in the expansion footprint.

4.6.8 Benthic macrofauna

Sediment dwelling communities

Sampling carried out in 2020 (see **Figure 46** below for locations) characterised the intertidal sand flats surrounding the port as having high benthic diversity, with numbers of individuals varying between low to moderately high.

Polychaete worms were the most abundant and diverse taxa group, followed by crustaceans and molluscs. Investigations indicated that taxa were patchily distributed around the harbour with high abundances at some sites and low or zero counts at others.

The intertidal benthic community in Marsden Bay, including the Marsden Cove–One Tree Point SEA to the west of Northport, is similar to that found at sites in other northern, southern, and upper harbour SEAs. Finer scale intertidal sampling has confirmed that the area around the port is characterised by high benthic diversity with variation along and down the shore, and differences between the western and eastern sides of Northport.

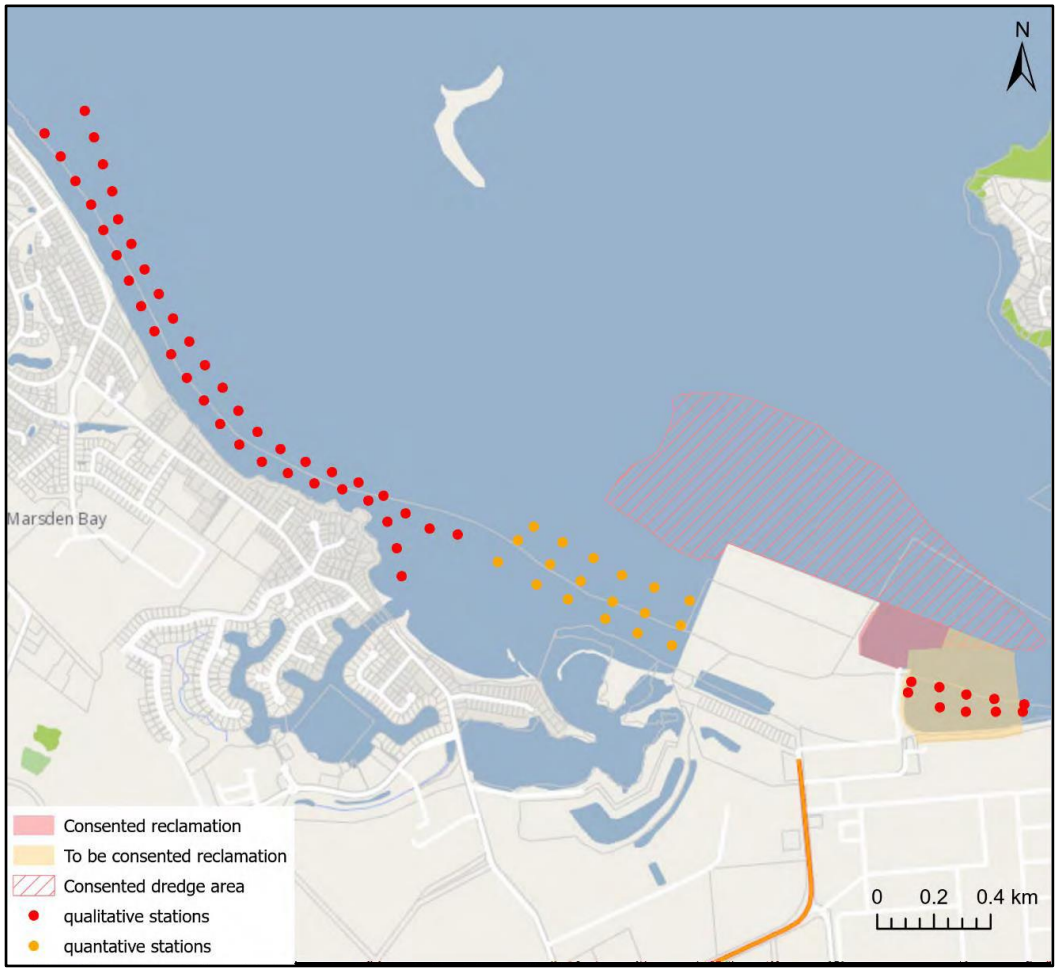

***Figure 46**: Location of the qualitative and quantitative intertidal survey locations*

Subtidal sampling has also shown that the seabed around the port contains a very diverse assemblage of benthic macroinvertebrates. Similar numbers of taxa were obtained in two recent

subtidal surveys of the outer harbour/harbour entrance.[32] It is considered highly unlikely that any of the taxa in the proposed expansion footprint is unique to the proposed reclamation area.

Overall, the macrofaunal diversity in intertidal and subtidal benthic habitats around the port is high, with taxa diversity and abundance lower on the eastern side of the port.

Subtidal epibenthic communities

The mid-to outer harbour contains a variety of physical seabed and biogenic habitats. Habitat forming macro-faunal species include horse muscles, green lipped mussels, dog cockles, sponges, ascidians, and dead shell.

A subtidal video survey carried out in November 2021 indicated that the ecological values of subtidal seabed habitats and communities around Northport were generally high, and largely consisted of patchy and/or contiguous sand and biogenic features including:

- Extensive areas of shell;
- Macroalgae meadows;
- Areas that are almost completely covered with a variety of sessile organisms including macroalgae, sponges, bryozoans, hydroids, and other invertebrates;
- Numerous small holes and sediments, which are likely to be worm tubes, shellfish siphons, and/or crustacean burrows.

Large biota observed included starfish, horse muscles, scallops, cushion stars, and anemones, turret shells, Mediterranean fan worm, hydroids, and bryozoans.

A transect through the proposed reclamation area displayed clear changes towards the shore with the habitat in the outer transect consisting of sand with little epibiota, the central transect consisting of sand with patches of red algae densely packed with turret shells, scattered starfish, algae, sponges, and an octopus den, and the inner transect consisting of bare sand with numerous cushion stars.

The seafloor of the previous dredged area was almost completely covered with a variety of sessile organisms including sponges, bryozoans, hydroids and macroalgae. Other parts of the previously dredged area contained a mix of sand, scattered and dense shell, and biogenic species such as red algae and sponges.

Shellfish

Cockles

Cockles are known to be widespread in the Whangarei Harbour. The highest densities have been recorded at Marsden Bay and McLeod Bay.

[32] Kerr & Grace (2016), West and Don (2016).

The benthic survey conducted in November 2021 found moderate to very high abundances of cockles on the mid-shore across the entire length of Marsden Bay (including some in the area to the east of Northport), with the highest densities found near the entrance to Marsden Cove Marina. Almost all of the cockles found were below harvestable size of 30 mm (see **Figure 47**).

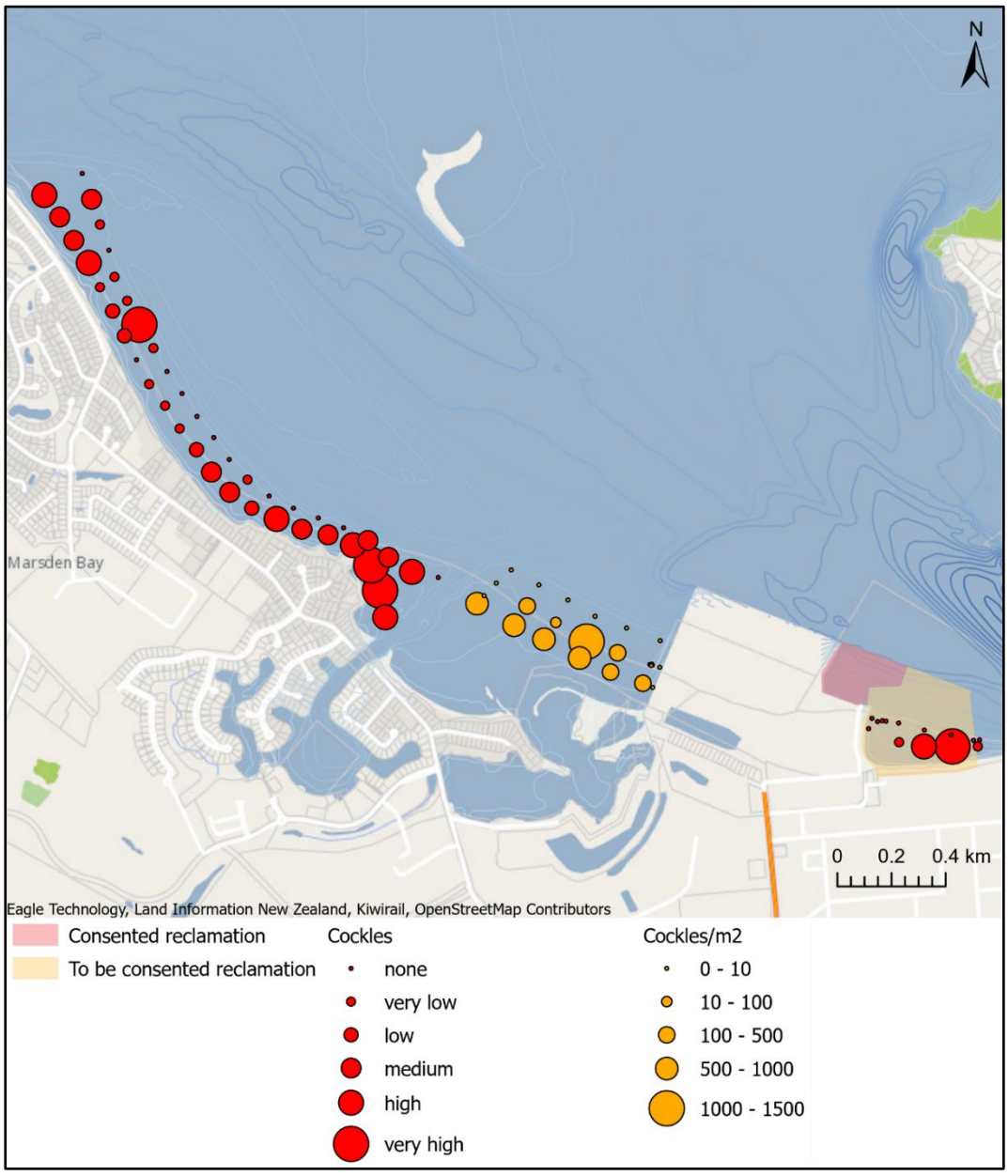

Figure 47: *Abundance of cockles in Marsden Bay (November 2021)*

Pipis

Based on surveys of Marsden and Mair Banks between 2013 – 2019, pipis have a very patchy distribution with low numbers of large harvestable (<50 mm) pipi.

Juvenile pipis were found at several sites in the mid-to outer harbour, with highest densities found Marsden Bay and the western side of Northport (although few were of harvestable size (>50 mm).

No pipi were found to the east of Northport (see **Figure 48**).

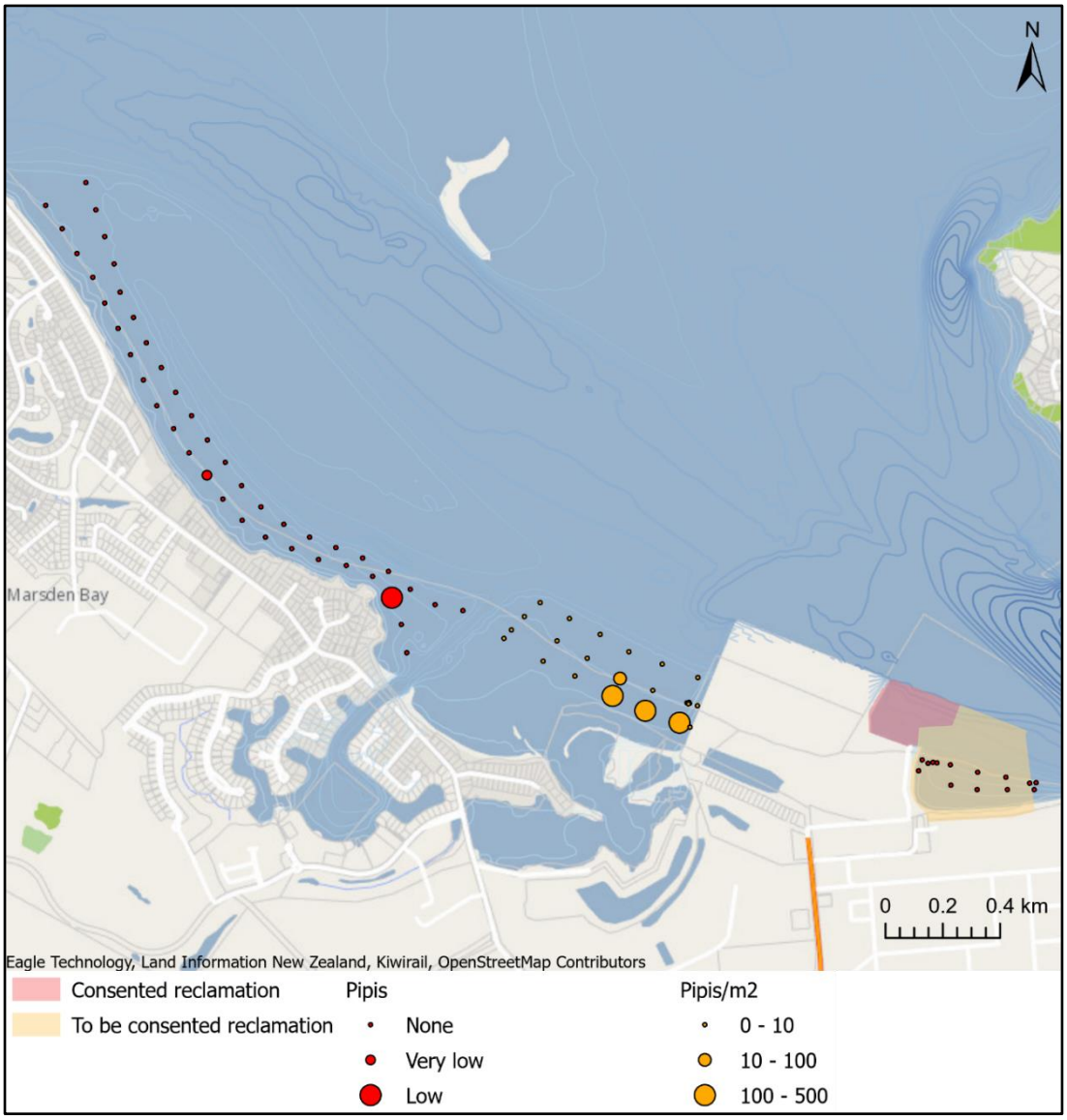

***Figure 48**: Abundance of pipi in Marsden Bay (November 2021)*

Scallops

There are large scallop beds found in various parts of the harbour, including on the sand flats at Takahiwai, in Marsden Bay, in Shoal Bay (between McDonald and Snake Banks), from McLeod Bay along the inside channel as far as Parua Bay, in the channel between Limestone and Rat Islands, and in and around the harbour entrance. Recreational scallop dredging occurs frequently in these areas. However, due to declining numbers, there is currently a temporary closure in place imposed by the Minister of Oceans and Fisheries.

Green-lipped mussels

Green-lipped mussels are reported to have been common in the channel adjacent to Mair Bank. However, they disappeared in the late 1960s due to commercial dredging. Another bed reappeared in 2015, however that too has almost completely disappeared due to intensive harvesting. The area is now subject to a rahui over the collection of shellfish.

Threatened or at-risk species

One top shell gastropod (*Cantharidus* sp.) and one bivalve (*Mysella* sp.) were recorded in the intertidal area within the reclamation footprint during a survey in 2020. While some species of *Cantharidus* and *Mysella* are listed as at-risk on the NZTCS, in both instances it is considered extremely unlikely that the species recorded in the expansion footprint are one of the at-risk species referred to in the NZTCS. The recorded species are very common around Northport (see recorded *Mysella* in **Figure 49** below).

Figure 49: *Mysella* sp. *counts in the vicinity of Northport (June 22)*

4.6.9 Reef communities

There is a limited amount of reef habitat in the Whangarei Harbour, with most occurring on the northern coastline towards the harbour entrance. Overall, species assemblages on natural Whangarei reef habitats are typical of those found in north-eastern New Zealand.

The Northport revetments are, in effect, narrow artificial reefs with similar habitat and community values to the naturally occurring reefs in the harbour. Macroalgae observed in the revetments included: *E. radiata*; *S. sinclairii*; *Carpophyllum flexuosum*; *Dictyota kunthii*; *Hildenbrandia* sp.; *Colpomenia* sp.; *Ralfsia* sp.; various species of red turfing algae; and crustose coralline algae.

A variety of common sponges, molluscs and echinoderms were observed growing on the revetments, along with compound and solitary ascidians, polychaetes including Mediterranean fan worm *Sabella spallanzanii* and the parchment worm *Chaetopterus* sp.

Crustaceans included low numbers of crayfish *Jasus edwardsii* and a reasonably diverse fish assemblage was also recorded with four species of triplefin and a range of other common reef species that included silver drummer *Kyphosus sydneyanus*; red *moki* cheilodactylus spectabilis; silver sweep *scorpis lineolata*; big eye *pempheris adspersa* and marble fish *Aplodactylus arctidens*. Other more cosmopolitan species included kingfish *Seriola lalandi*; trevally *Pseudocaranx dentex*; and parore *Girella tricuspidate*.

None of the reef species known to be present in and around the Northport revetments are listed as threatened or at risk.

4.6.10 Fish

A large variety of fish utilise the Whangarei Harbour. The most common species observed during the video survey by C&C were snapper, spotty, trevally, goatfish, leatherjacket, and parore, although the harbour is also known for a range of other species including jack mackerel, rig, eagle rays, grey mullet, sand flounder, trevally, yellow-belly flounder, kahawai, and kingfish. The video survey showed the abundance of snapper was significantly higher in biogenic habitats (horse muscles, seagrass, and sponges) compared to bare sediment or reef.

Fish communities around the Northport rock revetments appear to be similar to those that inhabit reefs in and around the harbour. These include leatherjackets, red moki, spotty, sweep, triplefins, kingfish, jack mackerel, two spot demoiselle, and goatfish.

None of the fish species recorded are listed as threatened or at risk.

4.7 Avifauna

4.7.1 General

The present environment for avifauna has been reviewed by Boffa Miskell (BML) with technical assistance from C+C and 4Sight. The conclusions from the BML report are summarised below. Further detail is provided in the BML report in **Appendix 13.**

4.7.2 General description of habitat

The Whangarei Harbour coast and river estuaries along Bream Bay have saltmarsh and mangrove communities that provide important breeding and feeding habitat for banded rail, fernbird, herons, and shag species. There are also several wading bird roost sites within the harbour, including Port Whangarei, Portland, Skull Creek, Takahiwai, Marsden Bay, Northern Harbour and Airport, and Ruakaka.

There are several islands within the Whangarei Harbour which provide habitat to several marine avifauna species. These include Matakohe/Limestone Island, located in the inner harbour, which contains a small population of breeding grey-faced petrel (*Pterdroma macroptera gouldi*; classified as *Not Threatened*). Also, little penguin, classified as *At Risk – Declining,* have been recorded breeding on several islands close to Northport, including High and Calliope Islands. White-fronted tern and red-billed gull have both been recorded breeding on Frenchman Island.

In regard to pelagic seabirds such as other petrels and shearwaters, the majority of species recorded have been using the open water habitat of Bream Bay rather than the Whangarei Harbour waters.

To the immediate east of Northport is a 750m beach bound to the east by the CINZL jetty. The landward extent of the coastal dune that runs behind this beach is approximately 20-30m wide, with the vegetation cover including spinifex, lupin and pohutukawa. The CINZL jetty has been noted as a key roosting area for white-fronted tern.

To the east of the CINZL jetty is Mair and Marsden banks. These have been identified as regionally significant shellfish beds. Birds are known to forage in these areas, with black-backed gull, red-billed gull and variable oystercatcher being the most abundant species recorded in the intertidal zone (although they were not identified as significant high tide roost areas).

4.7.3 Recorded species

A total of 73 bird species, comprising 21 introduced and 53 native species, have been recorded in the wider Whangarei Harbour area. Of the 53 native species, 37 are primarily associated with freshwater, coastal or oceanic habitats.

Of those, 19 species were recorded during the 4Sight surveys, including 4 species classified as *Threatened* and 11 classified as *At Risk.* These species are identified in **Table 5**, while the survey locations are shown in **Figure 50.**

***Table 5**: Native species recorded during 4Sight wading birds survey (2017/18, 2019/20 and 2021)*

SPECIES		SPECIES CODE	THREAT CLASSIFICATION[33]
Reef heron	*Egretta sacra sacra*	RF	*Threatened - Nationally Endangered*
Caspian tern	*Hydroprogne caspia*	CTe	*Threatened - Nationally Vulnerable*
Northern NZ dotterel	*Charadrius obscurus aquilonius*	NZD	*Threatened - Nationally Increasing*
Wrybill	*Anarhynchus frontalis*	Wry	*Threatened - Nationally Increasing*
Banded dotterel	*Charadrius bicinctus bicinctus*	BDo	*At Risk - Declining*
Bar-tailed godwit	*Limosa lapponica baueri*	BtG	*At Risk - Declining*
Lesser knot	*Calidris canutus rogersi*	Lkn	*At Risk - Declining*
Red-billed gull	*Larus novaehollandiae scopulinus*	RbG	*At Risk - Declining*
South Island pied oystercatcher	*Haematopus finschi*	SIPO	*At Risk - Declining*
White-fronted tern	*Sterna s. striata*	WfT	*At Risk - Declining*
Pied shag	*Phalacrocorax varius varius*	Psh	*At Risk - Recovering*
Variable oystercatcher	*Haematopus unicolor*	VOC	*At Risk - Recovering*
Black shag	*Phalacrocorax carbo novaehollandiae*	BSh	*At Risk - Relict*
Little shag	*Phalacrocorax melanoleucos brevirostris*	LSh	*At Risk - Relict*
Royal spoonbill	*Platalea regia*	RSp	*At Risk - Naturally Uncommon*
Pied stilt	*Himantopus h. leucocephalus*	PSt	*Not Threatened*
Southern black-backed gull	*Larus d. dominicanus*	SBBG	*Not Threatened*
White-faced heron	*Egretta novaehollandiae*	WfH	*Not Threatened*
Eastern curlew	*Numenius madagascariensis*		*Vagrant*

***Figure 50** Bird survey locations*

[33] Robertson et al. (2017).

In summary:

- Northern New Zealand Dotterel (classified as *Threatened – Nationally Increasing*) have been recorded along much of the coastal margin from One Tree Point to the CINZL facility, as well as on the Northport site.
- International migrant waders, being bar-tailed godwit (*At Risk - Declining*) and lesser knot (*At Risk - Declining*) have been recorded primarily around the Blacksmith's Creek area, although a few godwit have also been recorded further west up to One Tree Point and to the east of Northport.
- Variable oystercatcher (*At Risk - Recovering*), South Island Pied oystercatcher (*At Risk - Declining*) and pied stilt (*Not Threatened*) have primarily been recorded to the east of Northport and adjacent to the Marsden Cove Marina channel.
- Gulls and terns have been recorded dispersed along the coast, with large concentrations of red-billed gull (*At Risk - Declining*) to the east of Northport.
- Reef Heron (*Threatened – Nationally Endangered*), White Faced Heron (*Not Threatened*) and spoonbill (*At Risk – Nationally Uncommon*) have been recorded in relatively low numbers and only along the coast west of Northport.
- Pied Shag (*At Risk – Recovering*), Black Shag (*At Risk – Relict*), and Little Shag (*At Risk – Relict*), have been recorded in low numbers and primarily associated with the port, though a few birds were recorded in the Blacksmith's Creek/Wildlife Refuge area.

4.7.4 Feeding resources

Intertidal communities within the Whangarei Harbour generally fall into one of three broad types being:

- Sheltered tidal creeks (upper harbour).
- Semi-exposed sandflats (mid-harbour).
- Exposed sandflats (lower harbour).

These community types are largely driven by substrate type. A change in community composition exists from muddy upper harbour to sandier lower harbour sites. Intertidal flats comprise 58% of the marine area habitat in the lower harbour, supporting extensive cockle and pipi beds.

The intertidal habitat within the proposed reclamation footprint is clean, unpolluted sands with varying amounts of shell. This habitat hosts a benthic macroinvertebrate community which is also found on the intertidal shores to the west, and which is considered to be of moderate biodiversity but low abundance. The intertidal zone is not notable relative to that wider community and has comparatively less biodiversity and significantly less abundance of biota.

4.7.5 High tide activity (roosting)

High-tide counts were undertaken in 2017/18, 2019/20, and again in 2021.

Northport site

Despite Northport being an active port site, ten species were recorded roosting to the east of the port in the 2019/20 and 2021 surveys. Red-billed gull were the most abundant and dense species recorded, followed by NZ Dotterel and VOC.

East of Northport

High numbers of shorebirds were recorded roosting to the immediate east of Northport during the 2017/18, 2019/20 and 2021 high tide wading bird surveys, though the diversity of species roosting on the eastern sites was lower than that recorded at the western sites.

The species for which the highest mean abundance and densities were recorded were South Island pied oystercatcher (SIPO), VOC, and Red-billed gull.

West of Northport

Bar-tailed godwit and lesser knot were the most abundant species recorded to the immediate west of Northport.

SIPO were the most abundant species recorded adjacent to the Marsden Cove Marina Channel (further to the west).

4.7.6 Mid and low tide activity (foraging)

East of Northport

The most abundant species recorded foraging to the east of Northport were SIPO, red-billed gull, and VOC. The benthic infauna survey identified known prey items of both oystercatcher species present in this area, although the abundance of prey items for both oystercatcher species was relatively low compared to the western side of the port.

West of Northport

Data collected over the 2017/18, 2019/20 and 2021 low and mid-tide counts showed Lesser knot as the most abundant species recorded. Bar-tailed godwit were also prevalent, as were Northern NZ Dotterel, but in relatively low numbers. The benthic infauna survey identified known prey items of both oystercatcher species present in this area.

4.7.7 Nesting

Northport site

During the 2018/19 survey, variable oystercatcher were recorded breeding on top of the tug bay revetment on the eastern side of Northport. Later in the season (24/1/19), two pairs of VOC (each with one chick) and one pair of New Zealand dotterel (with three chicks) were recorded on the Northport site.

During the 2019/20 survey, the port site had the highest number of nesting birds recorded. This included a pair of Northern NZ dotterel successfully raising chicks on top of the coal pile, a pair of VOC with chicks on the tug revetment, and a pied stilt on a nest with four eggs next to the molasses pond.

The December 2019 kororā survey along the eastern and western riprap of the Northport site detected no sign of nesting birds. While outside of the breeding season, the June 2021 survey of the same area using a DOC-certified conservation dog gave three weak indications along the western riprap. Exploration of the crevices that the dog indicated on found no sign of birds or feathers. Nevertheless, given the riprap does provide potential kororā habitat, and a weak indication was given at three locations, a precautionary approach is to assume that these locations are used by nesting kororā.

East of Northport

No wading or shorebird species were recorded nesting during either the 2018/19 or 2019/20 season.

West of Northport

Variable oystercatcher was confirmed breeding within the Blacksmiths Creek mangrove survey area during both the 2018/19 and 2019/20 seasons, as well as on the Northport west revetment in 2019/20.

4.7.8 Feeding and roosting in the wider harbour

In 2017 a Bioresearches Group Limited coastal survey identified the relative importance of eight locations around the lower harbour for feeding and roosting for gulls and wading birds. The key findings at each of those sites were as follows:

- **Bream Bay beach:**
  - Low species diversity (n=6) – Red-billed gull (53.3%), black-backed gull (20.7%), variable oyster catcher (13.3%), white-fronted tern, Caspian tern and Australasian gannet.
  - Primarily used by gulls as a resting / roosting habitat.

- **Mair Bank:**

  - Moderate species diversity (n=10) – Black-backed gull (max = 196), red-billed gull (max = 70), variable oystercatcher (max = 66), Caspian tern, little shag, northern NZ dotterel, pied shag, pied stilt, SIPO and white-faced heron.
  - Predominant habitat use was resting, primarily black-backed gull and but occasional Caspian tern, red-billed gull and VOC.
  - Of the few feeding records, 5.7% were on the beach, 19.9% on the inner bank and 74.4% on the outer bank.

- **Refining NZ jetty to Northport:**

  - Moderate species diversity (n=10) – SIPO (max = 437), red-billed gull (max = 154), VOC (max = 60), black-backed gull, Caspian tern, northern NZ dotterel, pied shag, pied stilt, spur-wing plover, white-fronted tern.
  - Dominant habitat use was resting rather than feeding.

- **One Tree Point:**

  - High species diversity (n = 15) – Black-backed gull (max = 114), white-fronted tern (max = 71), bar-tailed godwit (max = 60), red-billed gull (max = 58), VOC (max = 54), lesser knot (max = 37), Caspian tern, curlew, little shag, mallard, northern NZ dotterel, paradise shelduck, pied stilt, SIPO and white-faced heron.
  - Approximately equal use for feeding and resting, but no high tide wading roost habitat.

- **Snake Bank:**

  - Moderate species diversity (n = 8) – SIPO (max = 63), black-backed gull, bar-tailed godwit, little shag, red-billed gull, VOC, white-faced heron, and white-fronted tern.
  - Feeding the predominant activity, and primarily by SIPO.
  - Differs from Mair Bank in that black-backed and red-billed gulls were not as prominent, and SIPO rather than VOC was the most common oystercatcher species.
  - This site is a shore commute from birds roosting at Marsden Bay.

- **Reotahi Bay:**

  - Low species diversity (n = 6) – red-billed gull (77.6%), white-fronted tern (10%), black-backed gull, Caspian tern, white-faced heron and VOC.
  - Almost exclusively (98.2%) for resting (in the intertidal area) or roosting on poles, boulders and trees.

- **Taurikura Bay:**

– Moderate species diversity (n = 11) – red-billed gull (~75%), Australasian gannet, black-backed gull, Caspian tern, kingfisher, little shag, pied shag, red-billed gull, reef heron, spur-wing plover, VOC and white-faced heron.

– Primarily resting habitat.

- **Urquharts Bay:**

– Moderate – high species diversity (n = 12) - Australasian gannet, black-backed gull, Caspian tern, little shag, pied shag, red-billed gull, reef heron, SIPO, spur-winged plover, VOC, white-faced heron and white-fronted tern.

– Main activity recorded was resting and roosting, primarily by gulls.

The comparative population composition and habitat use for these sites is shown in **Table 6** below.

***Table 6**: Comparative population composition and habitat use*

	Bream Bay Beach	Mair Bank	CINZL jetty to Northport	One Tree Point	Snake Bank	Reotahi Bay	Taurikura Bay	Urquarts Bay
% feeding	11.8	17.5	1.5	47.6	63.5	1.8	20.9	23.3
% resting / roosting	88.2	83.5	98.5	52.4	36.5	98.2	79.1	76.7
% wading birds	13.3	16.1	65.1	34.4	84.2	4.2	12.1	23.9
% gulls	74	82.9	31.0	42.3	12.9	84.4	81.1	68.2

4.7.9 Ecological value

The 15 species recorded as utilising the area east of Northport (areas East 1 and East 2 on **Figure 50**) comprises four species that are considered to have 'Very High' value, four species of 'High Value', three species of 'Moderate Value' and four species of 'Low Value' according to the Environment Institute of Australia and New Zealand (EIANZ) (See **Table 7** on the following page).

***Table 7**: Coastal and estuarine avifauna species values*

SPECIES	THREAT CLASSIFICATION	ECOLOGICAL VALUE34	WEST 3	
			High	Low-mid
Australasian bittern	*Threatened – Nationally Critical*	Very High		
Reef heron	*Threatened - Nationally Endangered*	Very High		ü
Banded dotterel	*Threatened - Nationally Vulnerable*	Very High		
Caspian tern	*Threatened - Nationally Vulnerable*	Very High	ü	ü
Lesser knot	*Threatened - Nationally Vulnerable*	Very High	ü	ü
Wrybill	*Threatened - Nationally Vulnerable*	Very High		
Banded rail	*At Risk - Declining*	High		
Eastern bar-tailed godwit	*At Risk - Declining*	High	ü	ü
Red-billed gull	*At Risk - Declining*	High	ü	ü
South Island pied oystercatcher	*At Risk - Declining*	High	ü	ü
White-fronted tern	*At Risk - Declining*	High		
Pied shag	*At Risk - Recovering*	Moderate		
Northern NZ dotterel	*At Risk - Recovering*	Moderate	ü	ü
Variable oystercatcher	*At Risk - Recovering*	Moderate	ü	ü
Black shag	*At Risk - Naturally Uncommon*	Moderate		
Royal spoonbill	*At Risk - Naturally Uncommon*	Moderate		
Little shag	*Not Threatened*	Low	ü	
Pied stilt	*Not Threatened*	Low	ü	ü
Southern black-backed gull	*Not Threatened*	Low	ü	ü
White-faced heron	*Not Threatened*	Low	ü	ü

4.8 Marine Mammals

4.8.1 General

The present environment for marine mammals has been reviewed by the Cawthron Institute (CI). The conclusions from the CI report are summarised below. Further detail is provided in the CI report in **Appendix 14.**

4.8.2 General Description

Many of New Zealand's marine mammal species live or pass through the upper and central eastern coastal waters of the North Island. At least 27 *cetacean* (whales, dolphins, and porpoises) and two *pinniped* (seals and sea lions) species have been recorded along the north-eastern coastline of the North Island.

[34] As per the EIANZ criteria.

Several marine mammal species visit the Whangarei Harbour waters and the wider region on a regular basis. The Whangarei Harbour entrance represents a small fraction of similar habitats available to support the various species that utilise the Harbour and wider Bream Bay ecosystem.

The distribution patterns of the more common marine mammal species to frequent Whangarei and nearby waters are shown on **Table 8**, along with the conservation threat status.

***Table 8**: Distribution patterns of the more common marine mammal species to frequent Whangarei and nearby waters.*

Common name	Species name	NZ Threat Classification System	IUCN Listing	Residency category in Northland	Patterns of Seasonality (relative to proposal area)
Bottlenose dolphin	*Tursiops truncatus*	Nationally Endangered	Least Concern	Common Seasonal to Year-Round	Resident sub-population to north in Bay of Islands that ranges between Doubtless Bay, Great Barrier Island and Tauranga. Occasional visits to Whangarei / Bream Bay, perhaps more over summer months. Generalist feeders. Currently in decline.
Common dolphin	*Delphinus delphis (including D. capensis)*	Not Threatened	Least Concern	Common Seasonal to Year-Round	Common throughout north-eastern waters year-round. Feed on schooling or more pelagic fish species. Generally observed in waters deeper off Whangarei / Bream Bay with occasional inshore sighting.
NZ fur seal	*Arctocephalus forsteri*	Not Threatened	Least Concern	Common Seasonal to Year-Round	Present year-round with multiple haul-out sites in the Hauraki Gulf and regular sightings off the Hen & Chickens Islands and Bay of Islands. More susceptible to human effects in breeding colonies. Feed mainly over shelf waters.
Leopard seal	*Hydrurga leptonyx*	Naturally uncommon	Least Concern	Seasonal to Semi-Common	Solitary animals occasionally observed within Whangarei Harbour (e.g. Marsden Cove Marina) as well as various haul-out sites and marinas between Auckland and Northland.
Orca (killer whale)	*Orcinus orca*	Nationally Critical	Data Deficient	Seasonal to Semi-Common	Frequent north-eastern waters year-round, more common in late winter / early spring. Forage in harbours, estuaries and coastal areas on rays, fish and other marine mammal species. Overseas populations noted for heavy pollutant loads due to high trophic level.
Bryde's whale	*Balaenoptera edeni*	Nationally Critical	Least Concern	Seasonal to Semi-Common	Commonly observed whale species in north-eastern waters year-round. Feed on small schooling fish and sometimes krill. Regularly move through Bream Bay, travelling between Bay of Islands and Hauraki Gulf.
Southern right whale	*Eubalaena australis*	At Risk - Recovering	Least Concern	Seasonal Migrant	Frequent more inshore, shallow regions of Northland during seasonal migration periods, particularly with new-born calves. Once present, they can remain in the Northland region for several days to weeks. Most often seen between August and November.
Humpback whale (Oceania)	*Megaptera novaeangliae*	Migrant	Endangered	Seasonal Migrant	Pass by Whangarei / Bream Bay on both north and south migrations but more prevalent and closer to shore on southern return migration when with calves (mainly Oct to late Dec).
Pilot whale	*Globicephala melas*	Not Threatened	Least Concern	Offshore Semi-Common	While a more offshore species, inshore sightings occur mainly over summer months. Forages off shelf waters. Known for frequent and mass strandings in Bream Bay and surrounding waters.
Sperm whale	*Physeter macrocephalus*	Data deficient	Vulnerable	Offshore Visitor	Increased sightings along the north-eastern coasts, mainly over summer and autumn months.

4.8.3 Potentially affected species

Species occurring commonly in the area of interest[35] and more likely to be affected by the project are bottlenose dolphin (*Tursiops truncatus*), common dolphin (*Delphinus delphis*), orca (*Orcinus orca*), and Bryde's whale (*Balaenoptera edeni*). These, and other more common species are further described below.

Bottlenose dolphins

An inshore population of bottlenose dolphins is known to range between Doubtless Bay to the north and Tauranga to the south. Sightings near Whangarei have mainly occurred over the spring and early summer months. The species is listed as *nationally endangered* by the New Zealand Threat Classification System, making them potentially more vulnerable to disturbance or changes within their distribution range.

[35] Area of interest: the coastal waters between the Bay of Islands and the Hauraki Gulf.

Common dolphins

Several localised populations of common dolphins are found year-round. The species has mainly been observed in deeper waters (30m +). The species is listed as *not threatened*, although there is little known about the actual population size and movements in the area of interest.

Orca

Orca are frequently sighted along the coastline between the Bay of Islands and Hauraki Gulf. They have been observed year-round but are thought to be more common in the area of interest during late winter and early spring.

The orca that occur within Northland waters appear to be generalist feeders, opportunistically foraging on a variety of prey species.

Based on the sighting data and the timing of individual re-sightings from various Visser publications, orca do not spend a large amount of time in any one location. By way of example, they would not enter the Whangarei Harbour and remain solely within it for a whole week, much less a day or two. Instead, they most likely wander in and out again over the course of several hours and may perhaps re-visit on subsequent days or not again for several months.

The tendency by orca to forage in and around enclosed harbours makes this species potentially susceptible to harbour developments. Orca are currently listed as *nationally critical* by the New Zealand Threat Classification System based on their natural low abundance.

Bryde's whales

Bryde's whales are one of the most commonly observed whales in New Zealand waters. They are frequently reported in the area of interest, particularly over the late spring and summer months. They pass through Whangarei offshore waters as they travel between the Bay of Islands and Hauraki Gulf. The species is thought to seasonally migrate along the north-eastern coast of the North Island to and from the subtropics.

A small residential population of whales is found year-round within the Hauraki Gulf region. Their natural tendency to remain just below the surface of the water most of the time (91%) and their spatial overlap with the main shipping channels of Auckland makes them highly vulnerable to ship strikes. This species is listed as *nationally critical* in New Zealand waters due to low abundance and the high proportion of mortalities due to ship strikes.

New Zealand fur seals

New Zealand fur seals are year-round residents within Bay of Plenty and Coromandel Peninsula waters with established breeding colonies and several known haul-out sites. Regular sightings of adults and pups are now common in the Hauraki Gulf region with frequent sightings around the Hen and Chickens Islands. There has also been occasional visiting seal within the Whangarei region as this species appears to be expanding northward.

Fur seals are considered non-migratory but are known to easily and repeatedly cover large distances to find food. Some adults will travel out to open waters over winter while younger animals focus over shallower continental shelf waters.

Leopard seals

Although thought to mainly occur around Antarctic pack ice, Leopard seals are known to disperse northwards over the colder autumn and winter months when individuals are occasionally observed in New Zealand waters. Leopard seals prey on a variety of species (e.g. krill, penguins, birds, fish, seals), eating their prey where it is taken.

There are several reports of solitary animals observed within the Whangarei Harbour, and at various haul-out sites and marinas between Auckland and Northland.[36] An individual leopard seal (*Owha*) is known to reside semi-seasonally around Marsden Cove marina.

Southern right whales

Several baleen whale species migrate through Northland waters from early winter (May) to the late spring months (November). Most whale species begin their northern migrations in late autumn or winter; humpbacks travel from May to August and southern right whales from July to September.

Southern right whales can be slow migrators, especially cow/calf pairs, with a tendency to remain in shallow protected bays and coastal waters when calving. They can be observed with newborn calves from August onwards, particularly around the Northland region. Approximately 40–50% of all cow/calf pairs are observed between Northland and Hawke's Bay waters and may remain within nearshore waters for up to four weeks.

Southern right whales are considered *at risk - recovering* by the NZ threat classification systems as their preference for shallow, protected bays and coastal waters (particularly for calving) overlaps with numerous anthropogenic activities in New Zealand's waters.

Humpback whales

Humpback whales along the eastern coastline of the North Island are generally reported during their returning south-bound migration. They begin by returning with their newborn calves in later September, passing through Northland waters until late November/December. While humpbacks tend to travel more directly between headlands, they do occasionally wander briefly into nearby harbour and bays.

The Oceania sub-population of humpbacks (including New Zealand) is considered *endangered* by the IUCN[37] due to their slower recovery rate.

[36] The number of reported sightings is likely biased high (i.e. a very small number of individuals are reported multiple times) given the novelty of seeing this species.
[37] International Union for the Conservation of Nature.

Other offshore species

Other offshore species observed in area of interest waters include pilot whales, sperm whales, false killer whales, beaked whales, pygmy sperm whales, and blue whales. It is thought that there is a general inshore movement within Northland waters for some of these species over the summer months.

4.8.4 Summary

According to the CI report, there is no evidence indicating that any of the identified species have home ranges restricted solely to the Whangarei Harbour and nearby Bream Bay waters.

While several whale species have known migration routes past this region, harbour waters are not considered part of any important migration corridors as most animals generally pass further offshore (more than 5 km), with only a few individuals wandering near or into the harbour entrance each year.

Based on current knowledge, the proposal area is not ecologically more significant in terms of feeding, resting, or breeding habitats for any marine mammal species relative to other regions along the north-eastern coastline. However, because the area of interest waters periodically supports threatened or endangered species (such as bottlenose dolphins, orca, Bryde's whales, and southern right whales), Policy 11(a) of the NZCPS is relevant in respect to these species.

4.9 Landscape setting

4.9.1 General

The existing landscape setting has been reviewed by Brown New Zealand Limited (BNZL). The conclusions from the BNZL report are summarised below. Further detail is provided in the BNZL report in **Appendix 15.**

4.9.2 Mapped Landscape and Natural Character Areas

There are several 'Outstanding Natural Landscape', 'Outstanding/High Natural Character', and 'Outstanding Natural Features' in the wider Whangarei Harbour environment. These areas are mapped in both the PRP where they are in the CMA, and in the Operative WDP where they are located outside the CMA (on land) (see **Figures 51 and 52**).

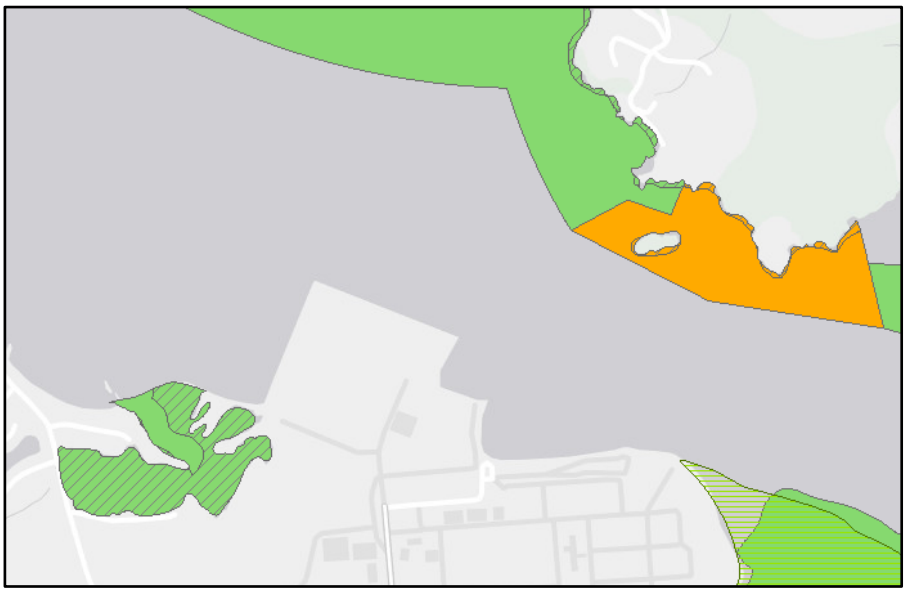

*Figure **51:** Outstanding (orange) and High (green) Natural Character Areas in the Proposed Regional Plan*

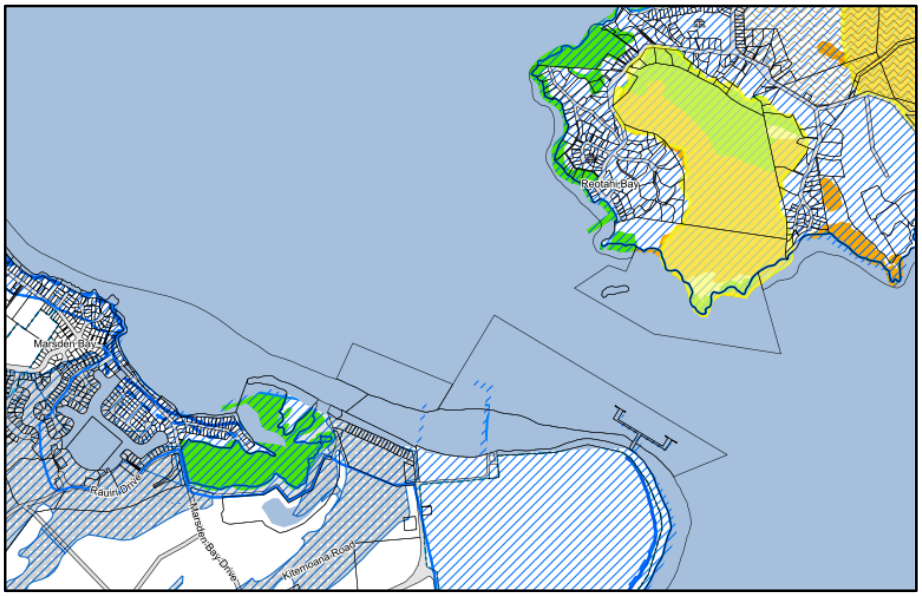

***Figure 52:** Outstanding Natural Features (green), Outstanding Natural Landscape Areas (yellow)in the Operative Whangarei District Plan.*

The existing landscape and natural character values of the environment surrounding Northport are described in detail in the BNZL report (**Appendix 15**). The surrounding landscape can be summarised as one of multiple contrasting natural and anthropocentric elements and features.

Natural elements and features include the harbour, volcanic peaks and native forests of Whangarei Heads, Blacksmith's Creek to the west, the open dune terraces and coastal plains of Ruakaka to the south, and the open expanse of the Pacific Ocean to the east.

Anthropocentric elements and features include the chain of coastal settlements on the north side of the harbour,[38] the CINZL facility, and Northport. These contrasting natural and man-made elements are evident in both proximate and distant views.

The CINZL facility, with its complex array of land-based structures and two large jetties projecting out into the main harbour channel, together with the deep-water berths of Northport dominate the landscape on the south side of the harbour.

4.10 Archaeology

4.10.1 General

Existing archaeology in the vicinity of the proposed expansion has been reviewed by Clough and Associates (C+A). The conclusions from the C+A report are summarised below. Further detail is provided in the C+A report in **Appendix 16.**

4.10.2 Archaeological sites

Twelve archaeological sites are recorded within 1km of the port facility. These sites are all midden deposits (see **Table 9 and Figure 53**).

Table 9: *Archaeological sites previously recorded within a 1,000m radius of the port facility*

NZAA Number	Easting	Northing	Site Type
Q07/72	1734116	6032829	Midden
Q07/105	1733615	6033227	Midden
Q07/106	1733415	6033127	Midden
Q07/107	1733515	6033127	Midden
Q07/108	1733616	6033028	Midden
Q07/325	1733316	6032927	Midden
Q07/1152	1733516	6032827	Midden
Q07/1153	1733716	6032928	Midden
Q07/1154	1733816	6033028	Midden

[38] Parua Bay, McLeod Bay, Taurikura and Urqhuarts.

Q07/1157	1733432	6032882	Midden
Q07/1162	1733506	6032827	Midden
Q07/1163	1733496	6032827	Midden

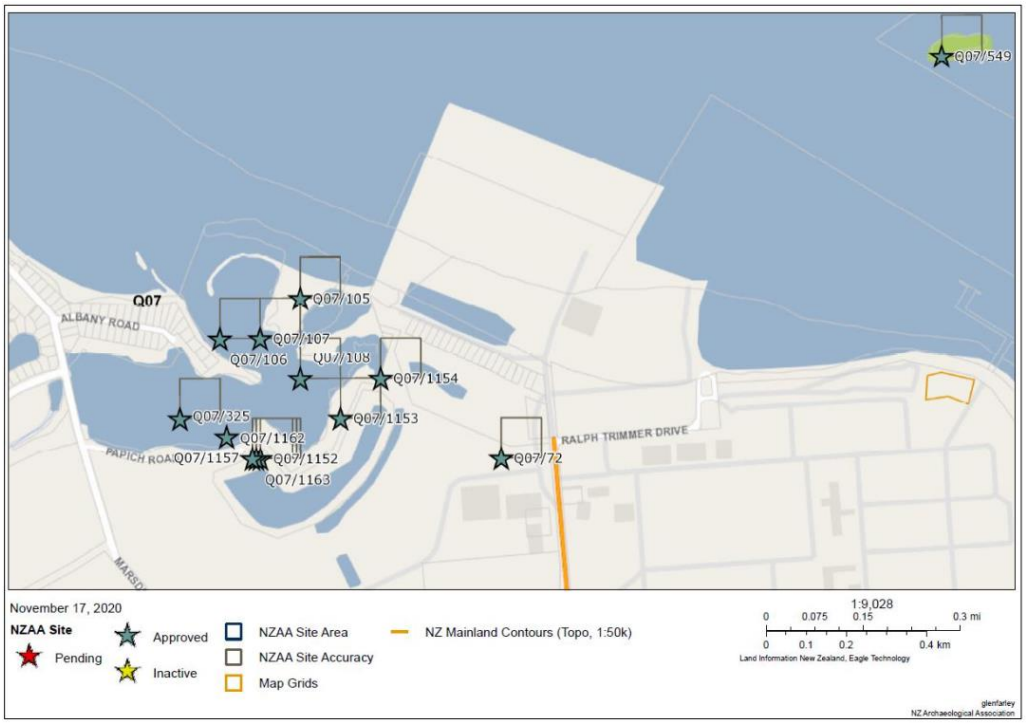

Figure 53: *Previously recorded archaeological sites in the vicinity of Northport.*

No archaeological sites are recorded within the footprint of the proposed port expansion.

4.11 Navigation safety

4.11.1 Navigation aids

The shipping channel between the Fairway Buoy and Snake Bank Beacon is marked by buoys and leading beacons (see **Figure 54**).

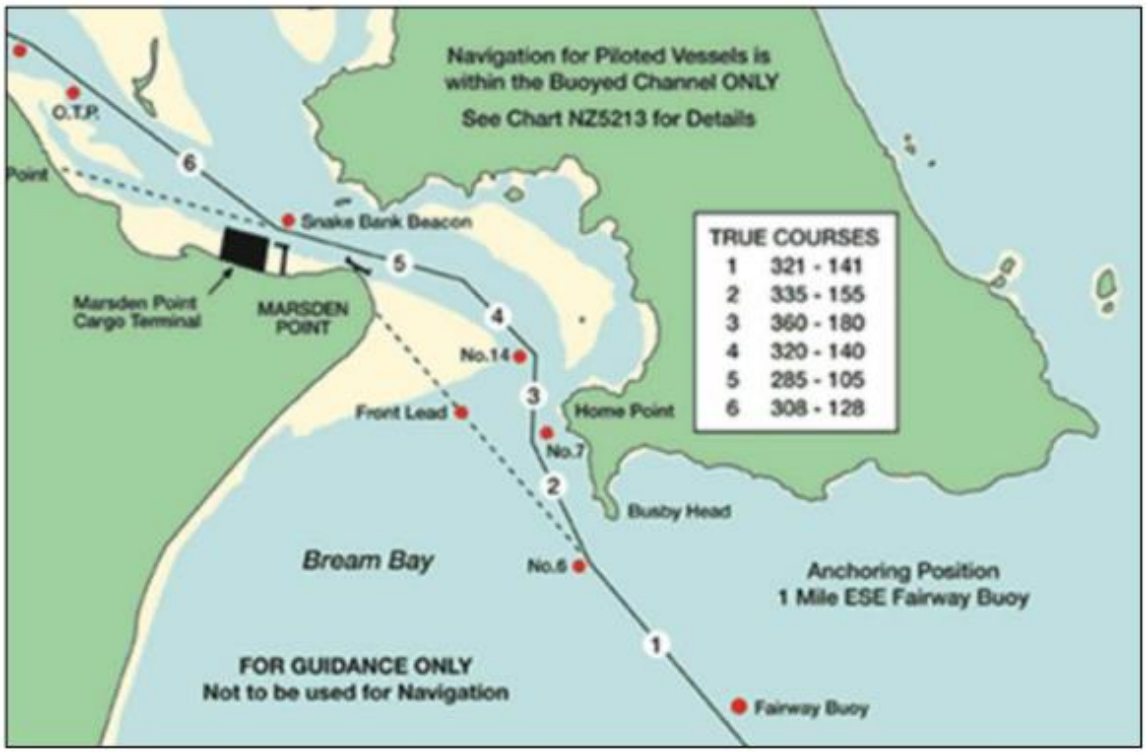

Figure 54: Navigation aids

4.11.2 Harbour radio

Maritime New Zealand (MNZ) is responsible for ensuring the provision of appropriate distress and safety radio communications systems.

Whangarei Harbour Radio is used to coordinate the commercial and recreational vessel movements in the harbour. Under a memorandum of understanding between the NRC and Northport on the provision of local navigation information, Northport operates the 24/7 radio capability and repeater station, assists with coordination of vessel movements, broadcasts local navigation and safety warnings, provides information regarding pilotage requirements, and provides monthly data to the Harbourmaster on vessel movements. Marine VHF Ch 16 (Distress and Calling) is monitored by Northport for initial contact, navigation warnings and distress, and Marine VHF Ch 11 is used for commercial shipping movements within Whangarei Harbour.

Northport also provides the Local Port Service (LPS) which is an information service designed to improve port safety and co-ordination of port services within the port community by dissemination of port information to vessels, pilots, and berth/terminal operators. All port Services Officers have been trained to IALA standards. The system records and holds on file all LPS images for a limited time.

While Northport has certain delegated responsibilities for harbour communications, the NRC and the Harbourmaster retain oversight functions/responsibilities. The Harbourmaster is required to work in conjunction with the port operator(s) to establish a radio service and traffic monitoring system.

4.11.3 Dynamic Under Keel Clearance System (DUKC)

Northport contracts with OMC for the provision of the DUKC system. The system takes into account different components of ship motion and if the under-keel clearance and the manoeuvrability margin is below the required safety limit then the software will advise the operator not to transit.

The system operates in the Whangarei Harbour as follows:

- North Tugz operates the DUKC system for vessels using Marsden Point facilities following procedures implemented by the Whangarei Harbour Safety Committee;
- DUKC assists vessels using the CINZ jetties and users pay a charge to Northport for that service; and
- Northport provides all hardware, buoys, computer equipment and OMC software.

The WHSMS outlines specific requirements based on ship data and meteorological conditions for the use of the DUKC system. The Harbourmaster may give directions relating to the transit of vessels, and therefore has some interface with the DUKC.

Under the Service Level Agreement for the DUKC, OMC provides notifications to Northport, reports generated for Northport, analysis at Northport's request, site visits to review the operation in consultation with Northport, and upgrades to the service as approved by Northport. Northport is responsible for hydrographic surveys and maintenance dredging, and to communicate survey information to ensure that it is used to update the DUKC system.

OMC state that its DUKC system is world-leading software navigation technology that has an unblemished safety record due to its ability to scientifically model how much under keel clearance ships have, and that it is the only system that has proven capability to predict the vertical component of navigation during the actual transit.

4.11.4 Channel configuration

The Marsden Point and Northport fairway has a minimum depth of - 14.7 m CD, a minimum width of 200 metres in the vicinity of Home Point and is subject to spring tidal streams of up to 3 knots.

The channel has a critical turn of 40° in the vicinity of buoys 12 and 14. For these reasons, the channel is challenging for pilotage, particularly in spring ebb tides and strong winds between Home Point and buoy 16.

The channel is marked by navigation buoys from the fairway buoy to the Northport Berths. A PEL Leading Light is used to define the centreline of the approach channel from fairway buoy to buoys 3 and 6. In addition there are three sets of leads located in the vicinity of Marsden Cove/ One Tree Point to assist in determining cross distance off the Northport berths when approaching.

4.11.5 Marine spill response plan

The Northland Marine Oil Spill Contingency Plan has been prepared as part of the NRC's statutory responsibility under the Maritime Transport Act 1994 to conduct a Tier 2 response for marine oil spills that occur within the Northland CMA (see **Appendix 17**). It forms the Northland region element of the New Zealand Marine Oil Spill Kit Response Strategy and has been prepared in accordance with the Maritime Transport Act 1994 and Marine Protection Rule 130C.

There is a related agreement detailing a joint response between the NRC, CINZL, Northport, NTL, and Marsden Cove Marina for any spills in the lower Whangarei Harbour (Marsden Point Integrated Response Agreement). The agreement details the establishment of an Emergency Operations Centre (EOC) at CINZL, the purpose of which is to ensure that prompt actions are taken to mitigate the effects of any spill in this area.

Task plans have been developed for possible scenarios which sit inside the CINZL Oil Transfer Site Marine Oil Spill Contingency Plan. Once the incident is handed to the Regional On-Scene Commander (ROSC), the ROSC plan will become the plan that is phased in and adhered to.

4.12 Biosecurity

4.12.1 Regulatory context

New Zealand operates a national 'biosecurity system' to protect its environmental, economic, social, and cultural (including spiritual) values from the impacts of non-indigenous species.

Northland has an operational Regional Pest and Marine Pathway Management Plan (2017-2027) required under s100B of the Biosecurity Act 1993. This plan is focused on controlling the following pest species in the marine environment:

- Asian paddle crab
- Australian droplet tunicate
- Japanese Mantis Shrimp
- Mediterranean fan worm
- Pyura sea squirt
- Styela sea squirt
- Undaria seaweed

The plan includes the following measures:

- Communication and advice programmes to assist vessel owners and stakeholders with ensuring compliance with rules.
- A Hull Surveillance Programme assessing a minimum of 2,000 vessels over 3 years. Any vessel carrying a named marine pest in an area without that pest being widely established, will be

placed under a Notice of Direction and directed to make a plan to have the vessel cleaned. In addition, owners of vessels that exceed the MPMP fouling threshold will be advised and issued a warning letter encouraging them to have the vessel cleaned and explaining that enforcement action will follow if they fail their next inspection and move between designated places.

- Notices of direction on vessels found with listed marine pests will be tracked in IRIS (councils online incident logging database).
- Owners of structures that constitute high risk in terms of marine pest spread will be subject to consideration and assessment in accordance with species rules.

In addition to the matters covered under the Marine Pathway Plan, there are further regulations administered by the Ministry for Primary Industries (MPI) relating to international ships.

4.12.2 Ballast water management

Ballast water from international ships is subject to the 'Import Health Standard' (2016) (IHS) administered by the Ministry for Primary Industries and prepared in accordance with s24A of the Biosecurity Act 1993

The IHS states that no ballast water may be discharged into New Zealand waters unless it meets one of the following options, and it has received permission from an inspector:

a) Option 1

The ballast water has been exchanged with mid-ocean seawater on route to New Zealand in areas free from coastal influences preferably at least 200 nautical miles (nm) from the nearest land; and in water of over 200m in depth. Accepted techniques are either emptying and refilling ballast tanks or holds with an efficiency of 95% volumetric exchange, or pumping through the tanks a water volume equal to at least three times the tank capacity; or

b) Option 2

The ballast water is fresh water (not more than 2.5 parts per thousand of sodium chloride); or

(c) Option 3

The ballast water has been treated using a shipboard treatment system listed in the MPI List of Approved Ballast Water Treatment Systems.

Furthermore, the IHS states that sediment which has settled and been removed from ballast tanks, ballasted cargo holds, sea-chests, anchor lockers or other equipment must not be discharged into New Zealand waters. If sediment cleared from these areas is intended for landing in New Zealand, the sediment must not be landed until an inspector has given clearance. It must be taken, as directed by an inspector, to a landfill that has no drainage to the sea either directly or indirectly via other water bodies.

4.12.3 Relevant Proposed Regional Plan provisions

The PRP contains rules relating to marine pests. These rules relate to:

- In water cleaning of vessel hull and niche areas or structures and barges (C.1.7.1, C.1.7.2, and C.1.7.4).
- Vessel hull maintenance on the foreshore (C.1.7.3)
- Marine pests and by biofouling (C.1.7.5)

Rule C.1.7.5 is the most relevant to port operations. Specifically, this rule triggers the need for a non-complying resource consent for navigation, mooring, or anchoring of vessels with marine pests that are not authorised under the Biosecurity Act 1993.

4.13 Noise

4.13.1 General

The present noise environment has been reviewed by MDL. The conclusions from the MDL report are summarised below. Further detail is provided in the MDL report in **Appendix 4.**

4.13.2 Existing noise environment

Northport operates on land zoned 'Port Zone' pursuant to the WDP. The port is bordered by the fuel jetty and import terminal (formerly the oil refinery) to the east, other 'Port zoned' properties (owned by MMH) to the south, and residential dwellings in Marsden Bay to the west and Reotahi to the north across Whangārei Harbour.

There are four distinct receiving environments being:

(1) Reotahi is a coastal settlement on the northern side of the Whangārei Harbour, 1 – 1.5 km from Northport. Existing dwellings are zoned 'Rural Village Residential' in the WDP.

(2) Marsden Bay is a coastal settlement on the southern side of Whangārei Harbour, approximately 500m west of the Northport log yard. Existing dwellings are zoned 'General Residential'.

(3) Industrial areas to the south of Northport are not noise sensitive (e.g. Marsden Point import terminal and the Carter Holt LVL Plant).

(4) Coastal, Rural, and other Open Space Zones are used for recreational purposes during the day.

4.13.3 Existing noise monitoring

MDL conducted noise monitoring at Reotahi and Marsden Bay between May and July 2018 while three log ships were berthed at Northport. Further monitoring was undertaken in Reotahi in May 2021 while container operations were in progress.

The 2018 noise measurements showed the highest noise levels being those received at Reotahi, but these complied with the operative WDP day-time noise limits and were just compliant with the 45 dB $L_{Aeq\ (15min)}$ operative WDP night-time noise limit.

The 2021 noise measurements were overall lower than the 2018 measurements, indicating that container operations create less noise than intensive log handling activities.

Overall, the monitoring indicates that existing Northport operations comply with the permitted limits in the NAV chapter of the WDP.

4.13.4 Existing consent conditions

Northport holds existing WDC land use consents for port activities on the reclamation associated with Berths 1 and 2, and Berths 3 and 4 respectively. Berths 1-3 and their associated reclamations have been constructed, but Berth 4 is still to be built. Regardless, Berth 4 and its associated noise is part of the existing environment.

The consent conditions relating to port noise in the WDC land use consents are as follows:

Berths 1-2

12. The noise level (L10) as measured within any residential zoned boundary or the notional boundary of any existing rural dwellings shall not exceed the following limits:

All Days:

0700am – 1000pm 55dBA L10

10pm-0700am 45dBA L10

10pm – 0700am 65dBA Lmax

The noise levels shall be measured and assessed in accordance with the requirements of NZS 6801: 1991 Measurement of Sound and NZS 6802: 1991 Assessment of Environmental Sound.

Berths 3-4

7. The Consent Holder shall ensure that all activities on the site (except construction activities where the noise limits differ from those below) to which this consent applies, are designed and conducted so that the following noise limits are not exceeded at any point, within any residential zone or within the notional boundary of any existing rural dwelling:

07.00am – 10.00pm 55dBA L10

10.00pm – 07.00am 45dBA L10

10.00pm – 07.00am 65dBA Lmax

All noise emissions from the port shall be measured cumulatively.

The noise levels shall be measured in accordance with NZS6801:1999 Acoustics - Measurement of Environmental Sound and assessed in accordance with NZS6802:1991 Assessment of Environmental Sound.

The conditions in the two consents are for all intents and purposes the same. While there are now less restrictive provisions in the NAV chapter of the District Plan, these consent limits represent the existing noise environment for assessment purposes. Northport currently operates within the limits specified in these consents.

4.14 Traffic environment

4.14.1 General

The present traffic environment has been reviewed by WSP. The conclusions from the WSP report are summarised below. Further detail is provided in the WSP design report in **Appendix 18.**

4.14.2 Port traffic

Northport inbound and outbound freight is currently transported by truck via State Highway 15. There is currently no rail link to the port.

SH15 extends 8.5km from the port to the SH15/SH1 roundabout.[39] It is a two-lane road which was declared a state highway in 2004, the purpose being to provide a highway connection to Northport.

In 2018,[40] port traffic accounted for approximately 64% of total traffic on SH15. Logging related traffic is a large contributor to overall port traffic and is subject to seasonal and cyclical peaks and troughs. According to the Northport wood availability forecast (2018 and 2022) there is likely to be a reduction in the availability of logs in the medium term, followed by a longer-term increase in supply.

Approximately 300 people work at the port and Northport uses a ride share scheme for staff, with use of their company vehicles.

4.14.3 Intersections

There are seven public road intersections on the 8.5km route from the roundabout to Northport, these being:

- SH1/SH15 roundabout.
- SH15/Salle Road intersection.

[39] The total length of SH15 is 126km. It runs from Okaikau to Northport, including concurrent sections with both SH14 and SH1.
[40] The 2018 pre-Covid numbers are considered to accurately reflect the current situation, noting the reduction of logging related traffic.

- SH15/One Tree Point/McCathie Road intersection.
- SH 15/Marsden Point Road Intersection.
- SH15/Marsden Bay Drive/Rama Road Intersection.
- SH15/Mair Road Intersection.
- SH15/Ralph Trimmer Drive

None of these intersections are currently at capacity.

4.14.4 Crash history

There were 12 reported crashes on the 8.5km stretch of SH15 from SH1 to Northport during the five-year period from 2016 to 2020. Of the 12 crashes, one resulted in a fatality, and two resulted in minor injury. Crash data has not been updated post 2020 to avoid COVID affected traffic data.

4.14.5 Pedestrian and cycle routes

There are no specific cycle facilities on SH15 or the feeder roads. Given the rural environment surrounding SH15, the 100km/h speed limit, and the high volume of heavy vehicles, it is not considered suitable for either pedestrians or cyclists.

4.15 Recreation and public access

4.15.1 General

The present environment for recreational activities in the vicinity of Northport has been reviewed by Rob Greenaway and Associates (RGA). The conclusions from the RGA report are summarised below. Further detail is provided in the RGA report in **Appendix 19.**

4.15.2 Range of recreation activities

There is a range of recreation activities, public areas and facilities in the environment surrounding Northport.

These can be categorised as:

- Terrestrial recreation and access
- Beach activities, walking, cycling, and running
- Fishing
- Shellfish gathering, and diving
- Boating

4.15.3 Terrestrial recreation and access

Access to both sides of the Port area is available by legal road (Papich Road on the western side, and Ralph Trimmer Drive on the eastern side).

There is a public carpark and toilets at the end of Ralph Trimmer Drive.

From the end of Ralph Trimmer Drive an esplanade reserve (administered by the Whangarei District Council) extends along the beach to the east of Northport and around Marsden Point as far as Mair Road. It then connects with a crown owned reserve which extends further along the coast to the south (see **Figure 55** below).

***Figure 55**: Public areas and facilities to the east of Northport*

4.15.4 Beach activities, walking, cycling, and running

The beach to the east of Northport to the east of Northport is used for a range of beach activities. Strava data shows that it is used for running, although this is not as popular as the beach to the south (accessed from Mair Road). It also shows that the walkway to the fishing jetty on the western side of the port is popular.

The water taxi pontoon on the eastern side of the port is the southern connection to the Te Araroa Trail. There are water taxi services available between Reotahi and this pontoon.

4.15.5 Fishing

There is a fishing jetty and associated access along the western side of the existing port accessed by foot via Papich Road (see **Figures 56** and **57**). There is also a ferry pontoon on the eastern side

of the port accessed from the end of Ralph Trimmer Drive (see **Figure 55**). Both these facilities and the associated access are a requirement of the consents for the existing port, although the eastern pontoon was required for ferry berthing rather than for fishing. Both facilities are popular shore-based fishing sites within the Marsden Bay/One Tree Point area.

***Figure 56**: Western fishing jetty*

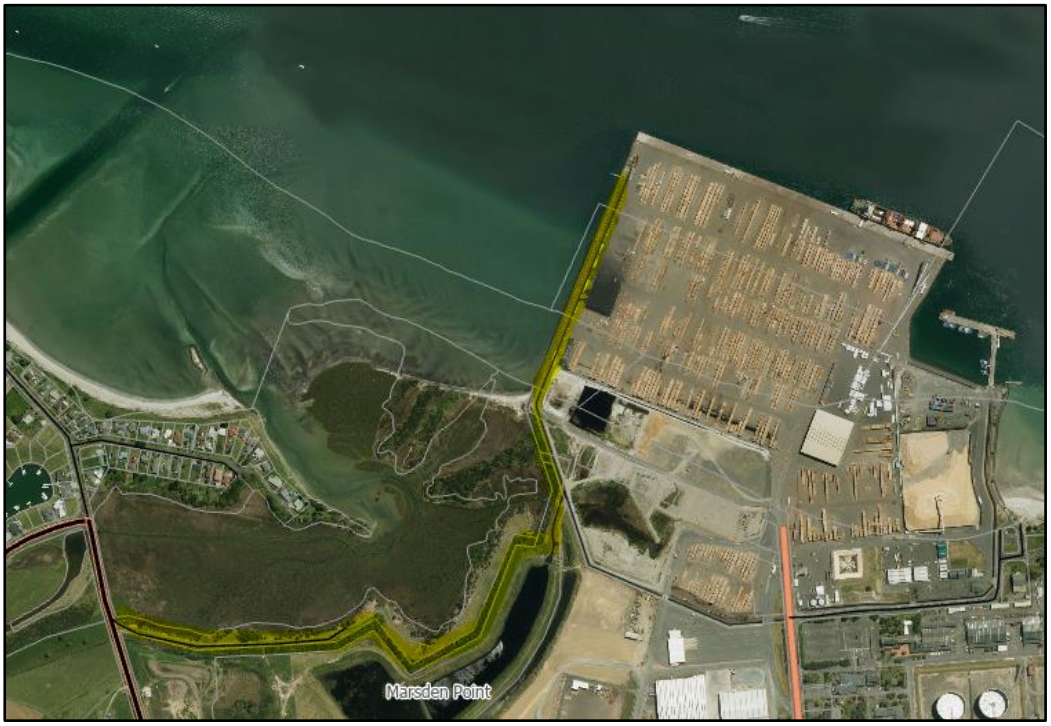

***Figure 57**: Walkway extending from Papich Road to western fishing jetty (highlighted yellow)*

In addition to fishing from the western jetty and eastern pontoon, spinning for kahawai and kingfish is also popular from the beach to the east of Northport.

The Whangārei Harbour area is a relatively heavily fished setting, with similar vessel densities to the Bay of Islands and the inner Hauraki Gulf – although the latter has several areas with two to three times the density of vessels. The recreational fishing vessel density of the harbour and surrounding area is shown in **Figure 58** below.

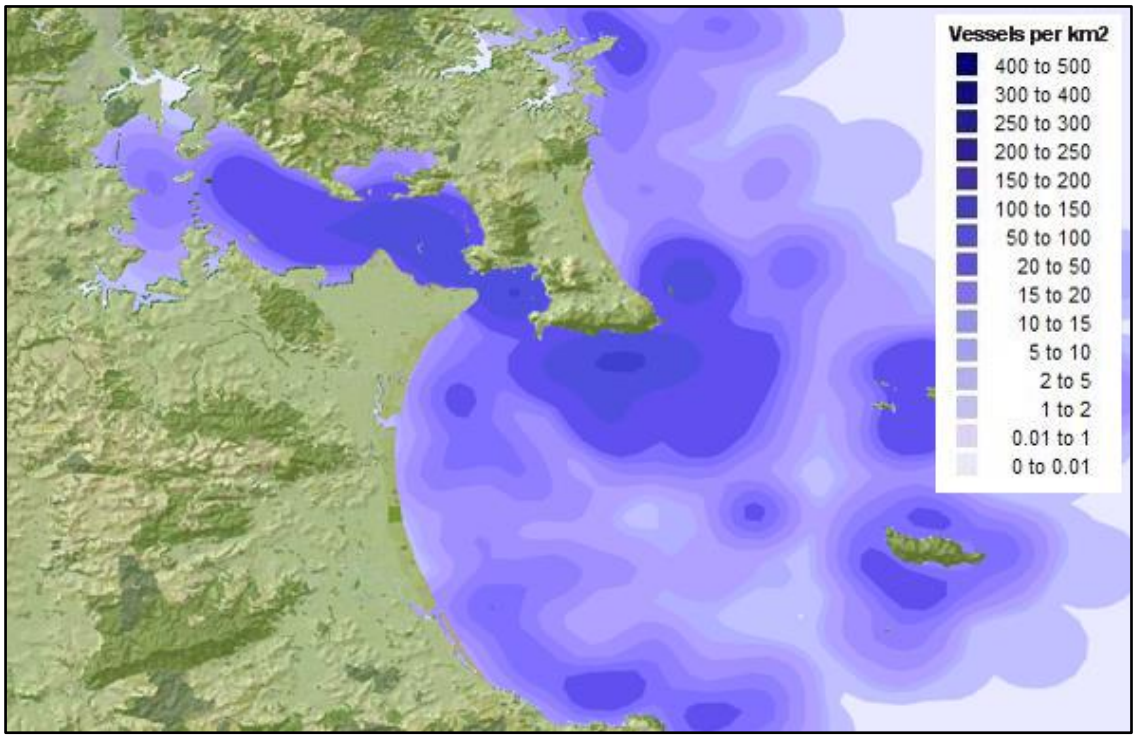

***Figure 58**: Recreational fishing vessel density (Source: MPI NABIS data)*

4.15.6 Shellfish gathering, and diving

There are no known pipi beds within the proposed expansion area. While there are cockles, these are mostly below 'harvestable' size.

In the surrounding environment, pipi and scallops are gathered from around Snake Bank to the west of the Port, pipi at Marsden Point and at Mair Bank, and scallops to the north of Urquharts Bay. There are other scallop diving sites within Whangārei Harbour, but Snake Bank and Urquharts Bay are the most popular.

There are several popular dive sites in the Whangarei Heads area, although none within the proposed port expansion area.

4.15.7 Boating

Most boating activity in the vicinity of Northport is confined to the main channel. However, there is some public use of the ferry pontoon on the eastern side of the port.

There are several anchorages, boat ramps, and boat clubs in the harbour (see **Figure 59** below). None of these are located within the proposed expansion area.

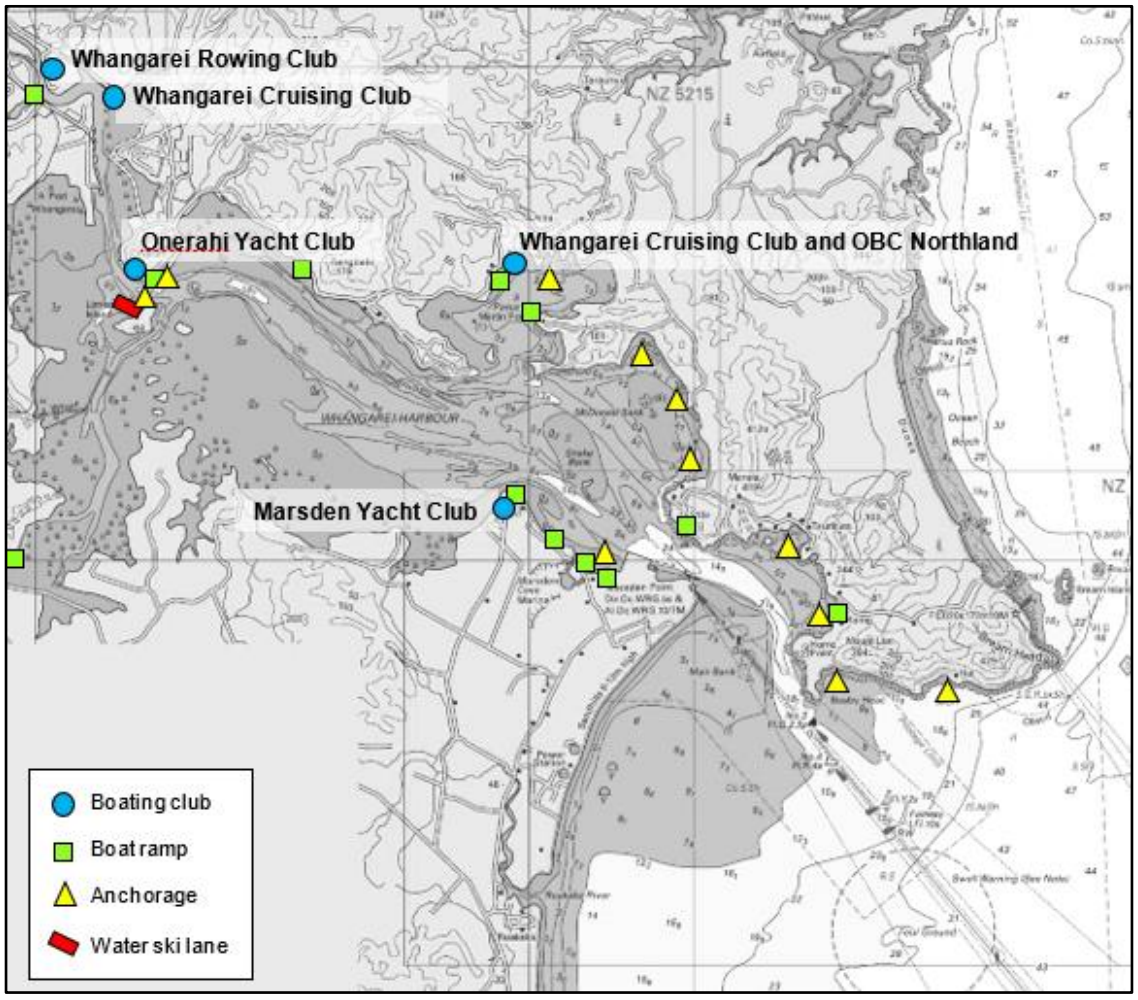

***Figure 59**: Anchorages, boat clubs and boat launching in the Whangarei Harbour*

4.15.8 Public reserves

The land immediately behind the beach to the east of Northport is a WDC owned esplanade reserve. Access to this reserve is obtained via Ralph Trimmer Drive (a public road vested in the WDC). There is a small Council owned parking area and public toilet located at the entrance to the beach (within the road reserve) (see **Figure 60**).

***Figure 60**: Council carpark at the end of Ralph Trimmer Drive*

To the immediate west of the existing port reclamation is a small stream (known as Blacksmith's Creek) which discharges to the Whangarei Harbour (see **Figure 61** below).

***Figure 61:** Blacksmiths Creek (western end of Northport)*

This area (vested in the Crown) is a small, mangrove dominated delta at the stream mouth that provides a roosting area for a range of species including Godwit, Knot, SIPO, VOC, Red-billed gull, and Banded Dotterel.

4.16 Stormwater discharges and harbour water quality

4.16.1 General

The present environment for stormwater treatment and disposal from the existing Northport facility has been reviewed by Hawthorn Geddes (HGL). The conclusions from the HGL report are summarised below. Further detail is provided in the HGL report in **Appendix 20.**

4.16.2 Stormwater collection and treatment system

Stormwater from the existing Northport operations area is managed via a canal and pond-based system established under an existing NRC discharge consent.[41] The system was constructed to provide treatment for stormwater runoff from the port prior to discharge to the Whangarei harbour. The pond was extended in 2016 to accommodate an extension of the hardstand area behind the port, and in 2018 baffles and two forebay bunds were installed within the pond to limit "shortcutting".

Stormwater from the site is conveyed via open collection channels to a partitioned settlement pond. Treatment of suspended solids occurs through trapping behind a weir at the terminal end of the collection channel system, and through settlement in two serially connected pond cells. Water is pumped from the final pond cell and discharged, along with stormwater from Marsden Maritime Holdings Ltd to the harbour via an outfall diffuser beneath the port berths.

4.16.3 Existing conditions of consent and compliance

Stormwater discharges from the Northport are managed in accordance with an existing consent (CON20090505532), which includes a range of monitoring requirements, compliance standards, and indicators for assessing treatment performance ("Action Levels"). Among other things, water quality standards for the harbour currently include limits on changes to temperature, pH, dissolved oxygen, water clarity and hue, and concentrations of copper, lead and zinc, which are applied from the edge of a 300–500 m mixing zone.

Current consent conditions require a greater range of parameters (compared with the range of parameters to which water quality standards apply, as outlined above) to be monitored. Event related sampling of pond water quality (prior to discharge to the coastal environment) needs to be carried out on three occasions each year, with three samples to be collected over each of those days. Every sample must be analysed for total suspended solids, volatile suspended solids, turbidity (NTU) and pH. In addition, the first sample of the first discharge event must be analysed for aluminium, copper, lead, zinc, polycyclic aromatic hydrocarbons, and resin acids.

[41] CON20090505532.

Conservative Action Levels are prescribed for particular contaminants to enable the early detection and investigation of issues before an environmentally harmful situation arises. Consent requirements for discharge water quality monitoring are complimented by conditions that require:

- Whole effluent toxicity testing (WETT) of stormwater on at least one occasion, with the need for further testing to be considered if new contaminants are introduced;
- Pond influent monitoring once each year to enable treatment efficiency to be checked.

Results from the monitoring indicate that Northport has displayed a high level of compliance with its conditions of consent, and that the quality of discharged stormwater is reasonably good. Little, if any, need for dilution in the mixing zone was required to achieve compliance, or reduce concentrations to levels below ANZG (2018) 95% protection guideline values. Specifically:

- All of the prescribed metals were well below consented concentration limits for the receiving environment (based on ANZG (2018) 95% guideline values), after providing for 200 times dilution within the mixing zone.
- In most cases, metal concentrations were below the receiving environment limit before they left the pond. The exception was copper, but that only had pond concentrations of around two times the receiving environment limit.
- Based on expected dilution rates, copper concentrations will be well below consent standards and guideline values after reasonable mixing.
- Polycyclic aromatic hydrocarbons concentrations in eleven samples collected between November 2013 and December 2014 had concentrations below levels of detection.

Continuous pond monitoring between 2019 and 2020, and spot sampling between September 2018 and September 2019, has shown that pond water is reasonably aerated (average dissolved oxygen concentration at the discharge was 7.24 mg/L), turbidity and total suspended solids (TSS) concentrations were low with an average of 9.53 NTU and a TSS maximum of 15 mg/l), and that the average pH of 7.47 was within consent limits.

4.16.4 Harbour water quality

The 2015 NRC state of the environment report, together with performance information for the Northport stormwater system (including compliance/monitoring data) indicates that water quality is high in the lower harbour and around the port.

4.17 Air quality

4.17.1 General

The present environment for air quality in the vicinity of Northport has been reviewed by Pattle Delamore Partners Limited (PDP). The conclusions from the PDP report are summarised below. Further detail is provided in the PDP report in **Appendix 21.**

4.17.2 Regulatory setting

Northport is located in the Marsden Point Airshed under the Marsden Point Air Quality Strategy (MPAQS) (see **Figure 62**).

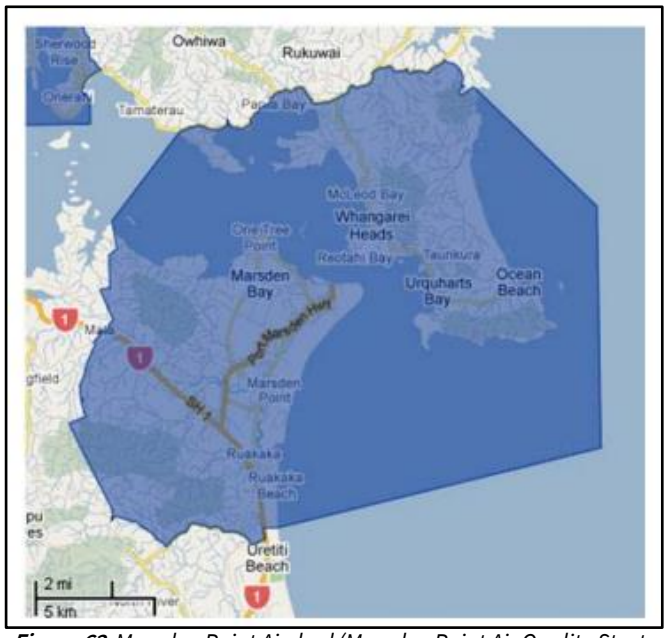

Figure 62: *Marsden Point Airshed (Marsden Point Air Quality Strategy)*

Contaminants identified as being critical in the MPAQS are particulate matter smaller than ten micron (PM_{10}), sulphur dioxide (SO_2) and nitrogen dioxide (NO_2), with further potential for discharges of other contaminants. In particular, emissions from the (former) New Zealand Refining Company Ltd (NZRC) together with emissions from Carter Holt Harvey LVL Plant were estimated to produce 98% of the PM10 levels, 99% of the NOx levels and 100% of the SO_2 levels (NRC, 2007a).[42]

The Operative Regional Air Quality Plan (ORAQP) contains special information requirements for discharge consent applications in the Marsden Point Airshed, with an emphasis on applications involving discharges of SO_2, inhalable particulate (smaller than 10 microns in size) and NO_2.

The PRP contains a policy requiring that the MPAQS be taken into account when considering resource consent applications.

[42] Northland Regional Council (2007a) *'Marsden Point Air Quality Strategy'* Whangarei, New Zealand.

4.17.3 Location

Northport is bordered by industrial activities on MMH owned land to the south, and the CINZL facility to the south-east.

The nearest residential dwellings relative to the proposed port expansion are located approximately 1,000 meters to the north at Reotahi and 1,200 metres to the west in the Albany Road area.

4.17.4 Meteorology

The wind rose shows that the predominant winds are from the west and typically have lower wind speeds. Wind speeds greater than 5 m/s, when there is greater potential for dust to be carried towards the residential properties to the southwest of the port, occur between 1.8 and 3.4% of the time (See **Figure 63** below).

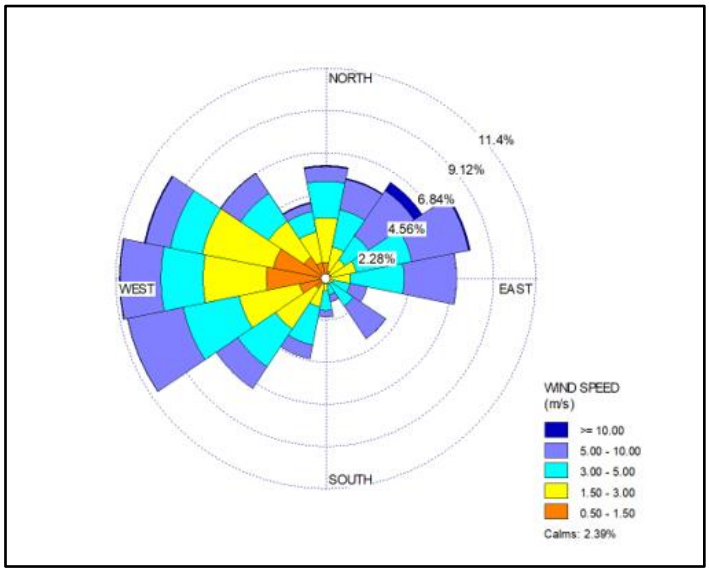

Figure 63: *Wind Speed and Wind Direction Distribution on the Site for 2011-2012 (1-hour average)*

4.17.5 Background air quality

The closest publicly available air quality monitoring site is located at Bream Bay College, approximately 5 km south of Northport and measures PM_{10}. The data from the last 5 years of monitoring indicates that PM_{10} concentrations are typically below 30 µg/m^3 and are generally considered to be low.

While there is no $PM_{2.5}$ (particulate matter less than 2.5 microns) monitoring undertaken in the Marsden Point area, it is possible to calculate likely $PM_{2.5}$ concentration, which in this case is expected to be below 11 µg/m^3.

The predicted 1-hour average concentration NO_2 is 37 µg/m^3 and the 24-hour average concentration 23 µg/m^3. These represent low concentrations of air contaminants.

The scaling down of refinery operations means that SO_2 concentrations will be well below the National Environmental Standards.

Overall, the air quality around Northport is relatively good.

4.17.6 Sensitive receptors

The closest sensitive receptor to the port expansion (a dwelling) is located approximately 1,000 metres from the proposed port expansion (at Reotahi). Because nuisance dust effects are not generally experienced more than 500m from the source, there are no sensitive receivers for fugitive dust in the vicinity of Northport, apart from potential users of the beach between Northport and CINZL during construction.

4.18 Economic contribution

4.18.1 General

An economics analysis has been undertaken by Market Economics (ME). The conclusions from the ME report are summarised below. Further detail is provided in the ME report in **Appendix 22.**

4.18.2 Current contribution to the Northland economy

Northport currently facilitates $438 million in value added and the equivalent of 6,300 jobs in the Northland economy. It is of considerable regional significance.

4.18.3 Evolution of trade facilitated by Northport

Northport has historically focused on handling high volume, low value trade, which is mostly raw primary outputs for export (logs and woodchip) or raw primary inputs that are imported to support production (agriculture or cement). In more recent times, the Port has increasingly been handling more high value goods such as engineered timber, horticulture products, and marine products (see **Figure 64** below). There has also been one-off imports of specialist machinery/vehicles and construction products (e.g. steel for Auckland's convention centre).

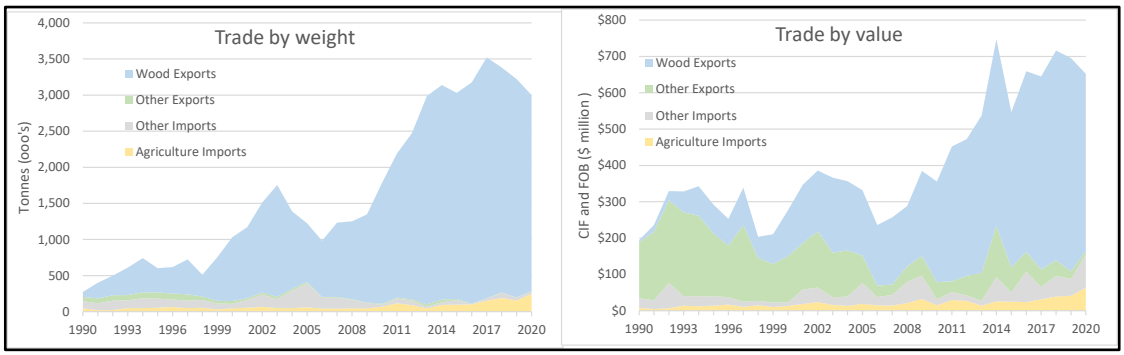

Figure 64: *Ports of Whangarei Harbour Trade 1989 – 2020 YE June (excl. Marsden CINZL facility)*

Since the early nineties wood exports have dominated the trade handled by Northport (and Port Whangarei before 2007).[43] The official trade data shows that wood was the largest commodity handled in 2020, both in terms of weight (90%)[44] and value (75%)[45]. The recent rapid growth in wood trade has been driven by the maturing of forests in Northland and associated harvest, which has become known as 'the wall of wood' that peaked in 2017 and is now declining as available forests are harvested. There have also been recent reductions in processed wood exports.[46]

Import of agricultural inputs (feed and fertilizer) has also been a significant trade task for the port in Whangarei. The level of agricultural inputs handled by the port has grown significantly over the last three decades. However, this trade is still small compared to wood exports. The official trade data shows that imports of agricultural inputs accounted for 8% of weight and 10% of the value of trade handled at Northport in 2020.

The other exports and imports represent a small proportion of the trade handled by Northport (approx. 1% of weight). However, this trade has much higher value than wood or agricultural inputs, with all other exports representing 2% of the value of goods and other imports 14%.

Since Northport operations commenced in 2002 the trade tasks handled in the Whangarei harbour (excluding the CINZL facility) have grown by 3.9% per annum and the value of trade has grown by 3.0% per annum. Northport trade tasks peaked at 3.7 million tonnes in the 2017 year and were at 3.0 million tonnes in 2020. While total volumes have dropped over the last four years, the value of trade handled has remained relatively strong at around $650 million in 2020 (YE June).

It is also important to note that the Covid19 pandemic impacted global trade and local economic activity in 2020, which explains some of the change in trade handled by Northport. For example, the month of April 2020 was down by almost 60% compared to the previous April. However, trade handled by Northport has rebounded with most months since then having higher trade than the previous year.

4.18.4 Recent developments

Three recent developments at Northport which have enabled new higher value products at the Port are the purchase of mobile harbour cranes, cruise ships (booked), and the development of additional paved area.

Mobile harbour cranes

The port has invested in two mobile container cranes which allows it to handle container trade (the first commissioned in 2015 and a second in 2020). While Northport did handle containers prior to purchase of the cranes using 'geared ships', coastal shipping of containers through Northport increased from August 2017 and the first international container vessels arrived in May 2018. This

[43] Statistics New Zealand (2020) Overseas Trade Imports and Exports (incl. re-export) Merchandise Trade Monthly 1989-2020 NZ Port by HS2.
[44] Gross Weight (KG).
[45] Value measured in CIF ($NZ) and FOB ($NZ) dollars of the day.
[46] Carter Holt Harvey LVL Plant has stopped exports in 2020 and will reduce activity at the Marsden Point plant by 68%.

service allows Northport to undertake additional roles in trade handling, both locally and serving the rest of the country.

Cruise ships

Northport has the ability to host cruise ship calls. Pre-Covid19, Northport had taken multiple bookings for cruise vessel visits in the 2021/22 season, which was expected to coincide with the completion of new tourism facilities in Whangarei. All were cancelled due to Covid19 and associated border closures.

There are currently 12 bookings for the 2024/2025 season.

Cruise ships ranging between 230m and 300m in length have obvious implications for Northport in terms of capacity to handle merchant ships when cruise vessels are in port.

Pre-pandemic, the cruise industry was growing very fast, internationally (7% per annum[47]), nationally (14% per annum[48]) and regionally (17% per annum[49]). While it will take some time to get back to such strong growth rates, there is an opportunity for Northport to tap into this market. The implications of Covid19 are that cruise activity is expected to quickly rebound and it is important for Northport to plan for the eventual needs of the industry.

Development of additional paved area

Northport has recently sealed all the remaining vacant port area. This investment allows the area to be utilised for handling light freight and opens up additional opportunities for different types of trade – including handling light vehicles.

Northport, unlike most ports in New Zealand, has ample scope to modify its operations to meet the changing demands of the economy in the Region and Upper North Island. The port has been proactive in its planning to provide a range of services that encourages businesses to use the facility to trade.

4.19 Existing resource consents held by Northport

Northport currently holds the following relevant NRC and WDC resource consents (Note: Consents relevant to Berths 1 and 2 are unshaded, and those relevant to Berths 3 and 4 are shaded grey).

[47] Internationally, cruise tourism has been growing consistently since the early 90s, at approximately 7% per annum from 4 million passengers in 1989 to 27 million passengers in 2018. Cruise Lines International Association (2017) 2018 Cruise Industry Outlook.

[48] Nationally, cruise tourism has also been growing rapidly since the late 90s. The number of passengers undertaking a cruise in New Zealand, has grown by around 14% per annum, which is much faster than the global rate of growth. Market Economics (2002-2017) Cruise Tourism Studies for Cruise New Zealand and McDermott Fairgray (1997-2001) Cruise Tourism Studies for Tourism Board.

[49] Statistics New Zealand (2018) Cruise Passenger Counts.

Northland Regional Council

Table 10: *Existing NRC consents*

Consent ref.	Consent Type	Date issued	Activity
Dredging			
AUT. 005055.1 1.01 (CON19960505511)	Coastal permit (maintenance dredging)	02/12/1999	Maintenance dredging of turning basin.
AUT.005055.02.02 (CON19960505502)	Coastal permit (maintenance dredging) (renewal)	26/02/2010	Maintenance dredging of turning basin.
AUT.005055.22.01 (CON20030505522)	Coastal permit (capital dredging)	17/11/2004	Capital dredging associated with the development of berths 3 and 4.
AUT.011809.01.01 (CON20041180901)	Coastal permit (maintenance dredging)	30/03/2004	Maintenance dredging at the Refining NZ jetties.
AUT.005055.29.01 (CON20030505529)	Coastal permit (maintenance dredging)	19/10/2004	Maintenance dredging of the turning basin associated with berths 3 and 4.
Stormwater and air discharges			
AUT.005055.05.02 CON19960505505)	Discharge permit (stormwater) (renewal)	26/02/2010	Discharge of stormwater and decant water from dredge tailings to the CMA.
AUT.005055.32.01 (CON20090505532)	Discharge permit (stormwater)	19/03/2010	To discharge treated stormwater associated with the operation of a port to the CMA.
CON20030505530	Certificate of compliance (discharge of water		Discharge of water during construction

	during construction)		
CON20030505531	Certificate of compliance (discharge of dust during operation of new wharf)		Discharge of dust during operation of new wharf
AUT.005055.28.01 (CON20030505528)	Discharge permit (stormwater)	19/10/2004	To discharge stormwater and decant water from the berth 3 and 4 reclamation and associated structures.
Reclamation			
AUT.005055.23.01 (CON20030505523)	Coastal permit (reclamation)	17/11/2004	To reclaim approximately 5.2 ha of seabed associated with the development of berths 3 and 4.
Structures			
AUT.005055.04.01 (CON19960505504)	Coastal permit (structure)	02/12/1999	Wharf and piles used for port operations.
AUT.008925.01.01 (CON20000892501)	Coastal permit (structure)	04/04/2000	Navigation beacon with access platform.
AUT.005055.17.01 CON20030505517)	Coastal permit (structure)	18/03/2003	Fishing jetty at west wall.
AUT.005055.08.01 CON19960505508)	Coastal permit (structure)	02/12/1999	Barge berths, water taxi landing, quarantine station
CON19960505507	Coastal Permit (works in CMA)		Construct and use extension to existing jetty
AUT.013187.01.01 CON20051318701)	Coastal permit (structure)	24/05/2005	Tide monitoring gauge at Frenchman Island.
AUT.005055.36.01	Coastal permit (structure)	16/08/2018	Pontoon facility.

AUT.005055.24.01 CON20030505524)	Coastal permit (structure)	17/11/2004	To erect and place new wharves and related structures for new berths 3 and 4 in the CMA.
AUT.011811.01.01 (CON20041181101)	Coastal permit	13/03/2004	Remedial scour protection works at Refining NZ jetties.
CON20030505525	Coastal Permit (works in the CMA)	19/10/2004	To alter any part of the existing jetty not covered under CON19960505506 (original consent for jetty alteration).
AUT.005055.27.01 (CON20030505527)	Coastal permit (structure)	19/10/2004	Direction, placement and use of structures for barge berths, tug berths and a water taxi.
Occupation of CMA			
AUT.005055.01.01 (CON19960505501)	Coastal permit (occupy CMA)	02/12/1999	To occupy the seabed and water space for new walls and related structures for berths 1 and 2.
AUT.005055.26.01 (CON20030505526)	Coastal permit (occupy CMA)	19/10/2004	To occupy the seabed and water space for new walls and related structures for berths 3 and 4.
Micellaneous			
AUT.005055.34.01 (CON20090505534)	Land use consent (renewal)	26/02/2010	To deposit dredging material (during construction)

Whangarei District Council

Table 11: *Existing WDC consents*

Consent ref.	Consent Type	Date issued	Activity
TP96/316	Land use consent		▪ Use of land for port and port -related activities including wharfs, terminals, associated loading and unloading structures, cargo sheds, port storage and transport operating areas, poor related buildings (including storage sheds, stevedoring facilities, berth operations shed, gatehouse) and all ancillary activities. ▪ The construction, use and maintenance of covered and uncovered storage areas. ▪ Construction and use of the Mission to Seamen Facility incorporating recreational and administration activities with a residential component for the Mission to Seamen in manager. ▪ Construction, operation and maintenance of stormwater collection and bark separation system including stormwater signalling and storage ponds. ▪ Earthworks and the use of land for the deposition of dredged material during construction of the port and maintenance dredging of the turning basin. ▪ The construction and use of a water taxi facility including access Road and public car park, barge terminals, and public toilets on the Eastern edge of the reclamation. ▪ Construction and use of segregated transport corridor.
LU0841040	Land use consent (hazardous substances)	19/02/2009	The transport, storage and/or use of hazardous substances associated with port activities including the loading/unloading of materials.
LU1500068	Land use consent (harbour cranes)	05/06/2015	The establishment and operation of two harbour cranes on the existing port deck and wharfs.
	Land use consent	19/10/2004	Use of land for port and port related activities
	Land use consent	19/10/2004	Construction and use of buildings, stormwater, and ancillary works.

4.20 Existing unimplemented resource consents

4.20.1 Berth 4 reclamation and wharf (Northport)

The Berth 3 and 4 consents have not yet been fully implemented. Specifically, the fourth berth and its associated reclamation and wharf structure have not yet been constructed. Northport is in the early stages of constructing this berth in response to market demand.

4.20.2 Channel optimisation (Channel Infrastructure NZ)

On 14th December 2018, the Environment Court approved the various resource consents required for the Refining NZ Crude Shipping Project (AUT.037197 – see copy attached in **Appendix 23**). These currently unimplemented consents provide for the deepening and realignment of the shipping channel in the approach to the Whangarei Harbour. The works extend approximately 5 nautical miles from the Fairway Buoy to the CINZL jetty (see **Figure 65** below). The possibility that these consents may be implemented requires them to be considered in the various environmental effects assessments, particularly those relating to coastal processes (i.e. hydrodynamics and morphology) and marine ecology.

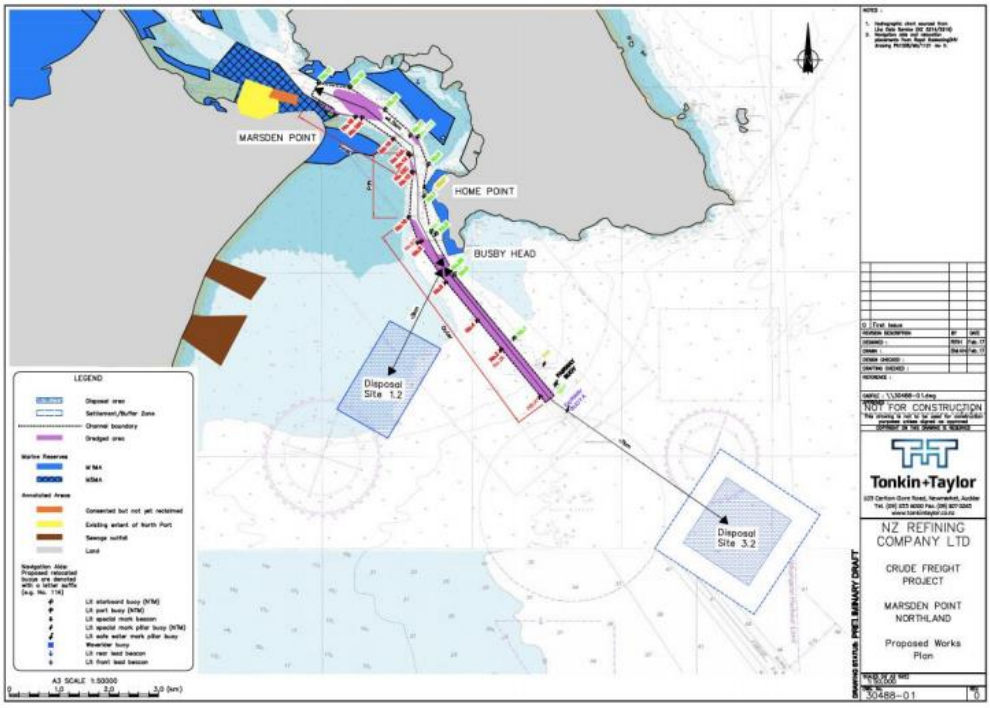

Figure 65: *Proposed channel optimisation works (Source: Refining NZ)*[50]

[50] Proposed deepening in realigning of the Whangarei Harbour entrance and approaches 'Assessment of Environmental Effects Report and Resource Consent Applications', Ryder Consulting Ltd.