

IN THE ENVIRONMENT COURT
AT AUCKLAND

I TE KŌTI TAIAO O AOTEAROA
KI TĀMAKI MAKĀURAU

Decision [2025] NZEnvC 322

IN THE MATTER OF

an appeal under s 120 of the Resource
Management Act 1991

BETWEEN

NORTHPORT LIMITED

(ENV-2024-AKL-174)

Appellant

AND

NORTHLAND REGIONAL
COUNCIL

WHANGĀREI DISTRICT COUNCIL

Respondent

Court: Environment Judge J A Smith sitting alone under s 279 of the
Act

Last case event: 26 September 2025

Date of Decision: 2 October 2025

Date of Issue: 2 October 2025

CONSENT DETERMINATION

A: Under section 279(1)(b) of the Resource Management Act 1991, the
Environment Court, by consent, orders that:

- (1) the appeal is allowed and resource consents are granted subject to the
updated conditions as set out in **Appendix A**; and
- (2) the appeal is otherwise dismissed.



NORTHPORT LIMITED v NORTHLAND REGIONAL COUNCIL & WHANGĀREI
DISTRICT COUNCIL

B: Under section 285 of the Resource Management Act 1991, there is no order as to costs.

REASONS

Introduction

[1] This determination relates to an appeal by Northport Limited (**Northport**) against a decision by Northland Regional Council (**NRC**) and Whangārei District Council (**WDC**) to refuse Northport's application for resource consents for the expansion of its existing port facility at Marsden Point, Whangārei (the **Appeal**).

[2] The parties to the Appeal have advised the Court that they have agreed updated conditions of resource consent which resolve all issues between them. They have, by agreement, requested that the Court allow the Appeal and grant the resource consents sought by Northport subject to the updated conditions. The parties have advised that there are no issues as to costs between them.

[3] I am minded to make the determination sought. Before explaining my rationale for this decision, I firstly provide an overview of Northport's application and the findings in the first-instance decision, before turning to the Appeal, the parties' respective positions, and the uncontested evidence that is before me.

Northport's resource consent application

[4] Northport is the owner and operating company for the deep-water multi-purpose commercial cargo port located at Marsden Point in Northland. Northport seeks resource consents to construct, operate and maintain an expansion of its existing port facility, including:

- (a) reclamation of part of the Coastal Marine Area (**CMA**) to the immediate east of Northport, including associated deposition and discharge of decant water;
- (b) capital and associated maintenance dredging;
- (c) wharf structures on the northern (seaward) edge of the proposed

reclamation;

- (d) sheet piling and rock revetment structures on the eastern edge of the reclamation;
- (e) treatment of operational stormwater via the existing pond-based stormwater system and/or proprietary systems, and subsequent discharge to ground and the CMA;
- (f) port related activities on the proposed reclamation and wharves, and on parts of the proposed development above Mean High Water Springs (**MHWS**);
- (g) construction of a high-tide roosting habitat in the intertidal area to the west of Northport's existing port facilities, to avoid the loss of high tide bird roosting habitat in Marsden Bay due to the port expansion;
- (h) construction of a public access at the end of Ralph Trimmer Drive through to a proposed reserve and related amenities at the eastern edge of the proposed reclamation area (the **Pocket Park**); and
- (i) construction of a tug berthing facility and fishing pontoon at the eastern edge of the proposed reclamation

(the **Application**).

[5] A major part of the Application is the construction of a fifth berth (Berth 5) to adjoin Berth 4, which involves:

- (a) reclaiming approximately 11.7ha of CMA to form land for the proposed berth and an adjacent container handling terminal;
- (b) extending the existing wharf for a further 250m along the northern face of the reclamation; and
- (c) undertaking bulk earthworks within an area of approximately 2ha above MHWS, including over an existing Esplanade Reserve.

[6] A key aspect of the Application is the Pocket Park. This is a proposed ~4,395m² public park/reserve area at the eastern edge of the new reclamation/expanded port area. In addition to public open space recreation areas, the Pocket Park is to include a car park and public toilet facility relocated from the end of Ralph Trimmer Drive, and a new pontoon for the Te Araroa Trail water taxi, which may also be used for fishing, swimming, and socialising. The Pocket Park is intended to mitigate loss of the existing Marsden Bay beach and WDC-owned esplanade reserve area.

[7] The overall bundle of resource consents sought from each council (WDC and NRC) required for the port expansion has Discretionary Activity status.

Council decision

[8] I must have regard to the first-instance decision and to understand the reasons Northport's Application was originally declined before being able to consider how updates to the Application (including to the proposed conditions) address effects of the activity on the environment and align with the planning framework.¹

[9] In the decision dated 9 July 2024 (NRC reference APP.005055.38.01; WDC reference LU2200107) (the **Council Decision**), Independent Hearing Commissioners refused the Application because, in summary, in terms of both cultural values of the tāngata whenua and recreational values and public access to and along the coastal marine area, there would be significant adverse effects and inconsistency with number of the relevant objectives and policies of the statutory documents, and Part 2 of the RMA would not be met.

[10] Regarding cultural values, the evidence presented from a cultural perspective was that if the Application were granted, it would result in significant adverse effects, and the Commissioners considered it was not open to them to decide otherwise.² Because of this, the Commissioners found that Policy D.1.4 of the PRPN-AV,³ the

¹ RMA section 290A; *Selwyn Quarries Ltd v Canterbury Regional Council* [2019] NZEnvC 153 at [14].

² At [291].

³ Providing that resource consent for an activity may generally only be granted if the adverse effects from the activity on the values of places of significance to tāngata whenua in the

cornerstone policy for managing effects on places of significance to tāngata whenua, was not met. Effects could not be mitigated by the conditions proposed, which mostly related to tāngata whenua's involvement in facilitating the port development; something that tāngata whenua did not want as they sought that the Application be refused.⁴ As such, the Application would not recognise and provide for the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga as required by RMA s 6(e), and would not enable tāngata whenua to fully exercise kaitiakitanga over the area – being a RMA s 7 matter.

[11] Regarding recreation values and public access, the Commissioners found that the Application was contrary to the relevant objectives and policies of the Natural Open Space Zone (**NOSZ**) as the natural, ecological, landscape, cultural and heritage values within the land zoned NOSZ would not be enhanced; rather, lost and replaced with access roading and the Pocket Park.⁵ The Commissioners found that the loss of recreational and amenity values and public access (being a s 6 matter of national importance) had not been sufficiently mitigated or offset. While accepting that public access and recreational opportunities would still be provided (albeit not over the area to be reclaimed), due to the scale of the reclamation, and the extent of the loss of beach (and its associated values), sufficient mitigation or offsetting for that loss had not been provided to address residual significant effects.

[12] The Council Decision expressly acknowledged⁶ that the Application provided that any adverse effects of *all other matters* were avoided or appropriately mitigated (or offset) and would be consistent with the relevant objectives and policies of the statutory planning documents. These included: economics, coastal processes, marine ecology, marine mammals, avifauna, terrestrial ecology, landscape, natural character, visual amenity, noise, navigation, traffic, stormwater and air quality.

[13] Further, the Council Decision accepted⁷ that had the Application been granted, there would be a range of *significant positive effects*: namely, economic and social

coastal marine area and water bodies are avoided, remedied or mitigated so they are no more than minor.

⁴ At [329].

⁵ At [60].

⁶ At [7].

⁷ At [6].

benefits associated with a dedicated container terminal at Whangārei, which would be part of an integral and efficient national network of safe ports.

Appeal

[14] On 29 July 2025, Northport filed the Appeal. Northport's specific reasons for the Appeal are that the Council Decision erred with respect to findings on cultural values/effects and findings on recreational/public access values and effects, and the application of the relevant statutory planning provisions to these two matters.

[15] I note at this stage that the Court concludes that only these findings were the subject of the Appeal and its consequent affect leading to refusal of consent. This leads me to conclude that if these issues can be adequately addressed then the consent is otherwise appropriate given the other conclusions of the Commissioners at first instance.

[16] Further I conclude that the Commissioners decision considered all the evidence and their conclusions on both the cultural and recreational issues were well founded. This Court must be satisfied that these issues are adequately addressed so that the relevant objectives and policies and the sustainable management purpose of the RMA are achieved.

[17] As we understand the settlement now proposed the Applicant accepts and believes it has now satisfied these criteria.

[18] Eight s 274 interested parties joined the Appeal:

- (a) Seafuels Limited (**Seafuels**);
- (b) Marsden Maritime Holdings Limited (**MMH**);
- (c) Patuharakeke Te Iwi Trust Board (**Patuharakeke**);
- (d) Kiwirail Holdings Limited (**Kiwirail**);
- (e) The Royal Forest and Bird Protection Society of New Zealand Incorporated (**Forest and Bird**);

- (f) Port of Tauranga Limited (**PoT**);
- (g) Te Pouwhenua o Tiakiriri Kukupapa Trust representing Te Parawhau (**Te Parawhau**); and
- (h) Ruakaka Developments Limited (**RDL**).

[19] The s274 parties' positions on the Appeal at the time of filing their notices were:

- (a) MMH, PoT and Kiwirail supported the relief sought;
- (b) Patuharakeke and Te Parawhau opposed the relief sought and supported the findings in the Councils' decision in relation to cultural values and recreational/public access values and effects;
- (c) Forest and Bird opposed the relief sought on the basis that the relief sought would lead to perverse outcomes for marine mammals, benthic ecology, avifauna, coastal processes, and climate change effects;
- (d) Seafuels neither supported nor opposed the relief sought; instead, it sought to ensure that any consent conditions would not create inappropriate navigation safety issues; and
- (e) RDL opposed the relief sought on the basis that the adverse traffic effects from Northport's expansion had not been appropriately mitigated.

Agreement reached

[20] The Court afforded the parties time to engage directly on the Appeal. As a result, full agreement has been reached. I record that:

- (a) RDL, Patuharakeke, and Te Parawhau have *withdrawn* their s274 party notices relating to the Appeal; and
- (b) The remaining parties have agreed, as confirmed in the joint memorandum of counsel dated 23 September 2025, that the resource consents sought in the Application can be granted subject to updated

conditions (refer below) with no issue as to costs. The parties have sought a determination from the Court for the resolution of the Appeal on this basis.

[21] **Appendix A** contains the agreed updated conditions. They comprise:

- (a) Updated NRC conditions;
 - (b) Updated WDC conditions (construction); and
 - (c) Updated WDC conditions (operations).
- (together, the **Updated Conditions**).

Evidence before the Court

[22] The parties' joint memorandum of counsel dated 23 September 2025 was supported by an affidavit of Mr Brett Hood affirmed 25 September 2025. Mr Hood is a consultant planner for Northport in respect of the Application. Mr Hood's affidavit is not opposed by any party to the appeal.

[23] Mr Hood explains the revisions that have been made to the consent conditions since presented at the Commissioner hearing, following Northport's direct engagement with the parties to the appeal. It provides an updated planning assessment of the Application and its effects as managed by the Updated Conditions, with a focus on cultural values of tāngata whenua and effects and recreational/public access values and effects.⁸ Mr Hood also analyses the directives in respect of port activities in the planning instruments. I comment on Mr Hood's analysis of these matters below.

[24] I also record that Mr Hood's affidavit contains information as to the existing resource consents held by Northport, site information regarding Northport's Marsden Point facility and the surrounding environment, and relevant District and Regional Plan zones. I accept the evidence presented on these matters and do have further regard to that evidence below.

⁸ This focus is due to the findings in the Council Decision, as summarised above.

Updated conditions

[25] I set out below in table format what I understand to be the fundamental changes that have been made to condition sets from those informing the Council Decision.

[26] I understand that all parties (including Patuharakeke and Te Parawhau, notwithstanding that they have withdrawn from the proceedings) had the opportunity to review and provide feedback during the development of the updated conditions, and that feedback was incorporated into finalised sets of Updated Conditions presented to the Court.

Updated NRC conditions

New / amended condition	Explanation / rationale
Condition 56	Increased funding for integrated marine planning initiative (\$500,000.00 + GST over 9 years).
Conditions 57-68	New conditions introduced following discussions with Forest and Bird. The conditions require: • Shorebird pre and post construction monitoring, requirement to prepare Shorebird Monitoring and Management Report (SMMR), implementation of any additional measures needed to mitigate effects on shorebirds (57-65). • Blacksmiths Creek predator control plan and implementation (66-68).

Updated WDC conditions (construction)

New / amended condition	Explanation / rationale
Conditions 18-31	New conditions to offset the loss of coastal open space and recreation values. The conditions require: • Achievement of stated recreation outcomes (18) • Works details and administration, including landowner approval, consultation with affected parties and the Tangata Whenua Relationship Group, timeframes for delivery and compliance with engineering construction standards (19-23). • Mair Road improvement works (24-27) a. Sealing the currently unsealed portion of Mair Road and the public carpark area to the relevant Environmental Engineering Standard (EES) or equivalent standard. b. Ablution facilities at the end of Mair Road. c. Construction or refurbishment of beach access from the public carpark to the beach. d. Stormwater management improvement works to minimise related coastal erosion from the road and carpark area runoff designed to EES or equivalent standard. e. Landscaping including dune restoration around the carpark. f. If one or more of the works items are unable to be delivered, alternative mutually agreeable works providing equivalent value.

	• Marsden Bay Drive improvement works (28-31) a. Formalise the carparking area of the Marsden Bay Reserve with an all-weather surface, edging and drainage to the relevant EES or equivalent standard b. Replacement toilets. c. Upgraded playground to a 'Local Reserve / Neighbourhood' standard d. Passive recreation facilities such as seating, picnic tables and connecting pathways and all ability access from the carpark to the beach. e. Landscaping including coastal edge restoration. f. Measures to manage traffic and environmental impacts of the works. g. If one of more of the works items are unable to be delivered, alternative mutually agreeable works providing equivalent value.
Condition 32(e) and Conditions 58-59	New condition introduced following discussions with Forest and Bird: • Condition requiring that pre-construction engineering plans include <i>(e) Design details of prominent signage advising of the ecological value of the foreshore area as shorebird habitat and the importance of dog control</i> (32(e)) • Native lizard survey and relocation – relevant to landward earthworks in WDC esplanade reserve (58, 59).

Updated WDC conditions (operations)

New / amended condition	Explanation / rationale
Deletion of proposed active modes connection <i>Angier</i> condition.	The parties agree that this <i>Angier</i> condition was not directly related to the effects of the Project, Commissioners gave it little to no weight, there is uncertainty about location of the intended WDC cycleway, and also whether it can actually be implemented due to third party approval requirements. Alternative offset mitigation conditions have been pursued as detailed in Paragraph 45 Table 2 (conditions 18-31).

Planning analysis

[27] I next consider Mr Hood's planning assessment of the Application and its effects, as managed by the Updated Conditions, against the relevant statutory and planning framework.

[28] In accordance with s 104(1)(b)(i)-(iv) of the RMA, the relevant provisions of the following documents are relevant to the Application:

- (a) New Zealand Coastal Policy Statement (**NZCPS**);
- (b) Regional Policy Statement for Northland (**RPS**);
- (c) Operative Regional Coastal Plan for Northland (**RCP**);
- (d) Regional Plan for Northland;
- (e) Proposed Regional Plan for Northland – Appeals Version (**PRP- AV**);
and
- (f) Whangārei District Plan – Operative in Part (**WDP-OP**)

[29] The below sections contain a broad analysis on the directives in the above documents in respect of port activities, then a closer analysis of the matters in contention in the Appeal: cultural values/effects, and recreational values/effects.

Port-specific directives

[30] The NZCPS, the PRPN-AV and the WDP-OP all contain “directive” objectives and policies. In particular, those provisions include extensive use of the term “enable” (in the context of relevant activities / development) in addition to policies seeking “avoidance” of certain effects.

[31] Objective 6 of the NZCPS is:

To enable people and communities to provide for their social, economic, and cultural wellbeing and their health and safety, through subdivision, use, and development, recognising that:

- the protection of the values of the coastal environment does not preclude use and development in appropriate places and forms, and within appropriate limits;
- some uses and developments which depend upon the use of natural and physical resources in the coastal environment are important to the social, economic and cultural wellbeing of people and communities;
- functionally some uses and developments can only be located on the coast or in the coastal marine area

[32] Practically speaking, a berthing facility for ships must be located in the coastal marine area; and naturally, a facility that enables the export and import of goods is important to the social and economic wellbeing of people and communities. Mr Hood considers that the Northport development is within an appropriate area, being adjacent to existing port facilities and within an area that has been identified for port activities for many years – noting its identification in the legacy RCP as appropriate for port facilities at least as early as 2004 when it was made operative. As such, Mr Hood considers that the NZCPS “directive” as expressed in Objective 6 is to “enable” people and communities to provide for such a facility as the port in this location.

[33] Policy 9 of the NZCPS is a specific policy for ports. It provides high level strategic context for the Project, by recognising the importance of ports to a sustainable national transport system in New Zealand, and requiring consideration of

where, how and when to provide in Regional Policy Statements and in plans for the efficient and safe operation of ports, the development of their capacity for shipping, and their connections with other transport modes. Mr Hood considers the Project directly aligns with, and gains considerable support from, Policy 9 as it is founded on a need to integrate with and assist the national network of ports in New Zealand to provide for the efficient and essential movement of national and international freight. Central to this is the reality that providing for the development of the capacity of ports for shipping requires long lead times for gaining consents, securing funding, design, and construction. Accordingly, a long-term view is required.

[34] Policy D.5.8 in the PRPN-AV is to:

Recognise that the purpose of the Coastal Commercial Zone and Marsden Point Port Zone is to enable the development and operation of existing and authorised maritime-related commercial enterprises or industrial activities located within these zones.

while D.5.9 is:

Development in the Coastal Commercial Zone and the Marsden Point Port Zone will generally be appropriate provided it is:

- 1) consistent with:
 - a) existing development in the Coastal Commercial Zone or the Marsden Point Port Zone, and
 - b) existing development on adjacent land above mean high water springs, and
 - c) development anticipated on the land above mean high water springs by the relevant district plan, or
- 2) associated with Regionally Significant Infrastructure in the Marsden Point Port Zone. Development that is inconsistent with (1) or (2) will not necessarily be inappropriate.

[35] Mr Hood's evidence is that part of the proposed expansion within the coastal marine area is within the Marsden Point Port Zone (**MPPZ**). Northport is identified as Regionally Significant Infrastructure (**RSI**) in the PRPN-AV. The directive in the PRPN-AV (particularly D.5.8) is to enable the development of the existing facilities within the MPPZ. Mr Hood interprets this as providing direct support to the proposed development (including expansion), and operation, of Northport.

[36] Objective PORTZ-O1 and Policy PORTZ-P1⁹ of the WDP-OP are to recognise and provide for the importance of the port as RSI and the contribution it makes to the economic and social wellbeing of the District and Region. These provisions provide further recognition of the importance (regional significance) of the port and support existing and future port operations and activities. The directive in the WDP-OP is to provide for a wide range of existing and future port operations within the Port Zone. Mr Hood again interprets this as providing direct support to the proposed expansion of Northport.

[37] Objective PORTZ-O2 of the WDP-OP requires recognition of the unique characteristics of the port. Further, it requires that the ongoing operation of port activities, and the future development and expansion of the port be provided for. This directive provision reinforces the appropriateness of the location for existing and future port activities and development.

[38] Mr Hood also refers to the provisions in the 'Coastal Environment' chapter of the WDP-OP which direct development to appropriate locations where there is existing development,¹⁰ and recognise that there is often a functional need to locate, operate, maintain and upgrade infrastructure in certain locations in the coastal area proximate to existing infrastructure,¹¹ noting the specific reference to recognising and providing for RSI in Objective CE-O10. Mr Hood considers these provisions provide support for Northport's proposed expansion being appropriate in the proposed location given the existing Northport and Channel Infrastructure facilities and the MPPZ applying to this part of the CMA. He says there is a clear functional need for the expansion to be located adjacent to the existing port in accordance with CE-P25, this being an important directive policy supporting the proposed upgrading/expansion of the port.

[39] I accept Mr Hood's assessment of port-related directives. Enabling development (including expansion of existing activities) is clearly supported by the policy and plan framework. This does not mean other objectives and Policies

⁹ The wording of which is "to recognise the regional significance of the Port by providing for a wide range of existing and future port operations and port activities within the Port Zone."

¹⁰ CE-O5, CE-O10.

¹¹ CE-P25.

including those related to Cultural and /or Recreational matters are not similarly supported. Often the issue becomes whether all these relevant Objectives and Policies can be accommodated.

Cultural values and effects

NZCPS

[40] Mr Hood identifies Objective 3 and Policy 2 of the NZCPS, which relate to taking account of the principles of the Treaty of Waitangi and kaitiakitanga in relation to the coastal environment. These provisions have been given effect to by Objective 3.12 of the RPS, and subsequently by Objective F.1.9 and a range of supporting policies in the PRPN-AV (discussed below).

[41] Mr Hood's evidence is that the relationship of tāngata whenua with their lands, rohe and resources and the related effects of the Application on this relationship has been a key focus for Northport. He considers the proposed Updated Conditions, including the conditions specifically addressing cultural matters, which are agreed with tāngata whenua, are a comprehensive response to the issues identified by tāngata whenua, consistent with the intent of these policy and plan provisions.

RPS

[42] Objective 3.12 of the RPS is to recognise and provide for tāngata whenua's kaitiaki role in decision-making over natural and physical resources.

[43] Mr Hood considers the role of tāngata whenua in decision-making has been recognised in the Northland and Whangārei contexts through Regional and District plan provisions, iwi management plans, and through meaningful and ongoing engagement with tāngata whenua on the Application. He considers that Northport has actively sought to understand the relationship of tāngata whenua over the lands, rohe, and resources and the related effects of the Application on this relationship, including via provision of a Cultural Values Assessment and Cultural Effects Assessment. He says that this has culminated in the agreed Updated Conditions designed to mitigate or otherwise manage adverse effects to the extent practicable, and the subsequent withdrawal of Patuharakeke and Te Parawhau from the appeal.

[44] I accept this evidence and that these conditions provide for both the Port and tāngata whenua to benefit through this development. Given that some cultural grievances relating to the Port are historic I conclude that this consent provides a real opportunity for a reset in the relationship and potential for partnership, at least for environmental matters. Failure to meet the conditions or marginalise this relationship may lead to an erosion of trust and the difficulties seen at some other developments within key cultural and recreational assets.

PRPN-AV

[45] The relevant objectives and policies of the PRPN-AV relating to tāngata whenua are Objectives F.1.9 and F.1.12, supported by Policies D.1.1, D.1.2, D.1.3, D.1.4, and D.1.5. These provide direction on how engagement should be undertaken between an applicant and tāngata whenua; how Māori culture, Māori cultural values and their effects should be identified; and how effects can be avoided, remedied or mitigated.

[46] Objective F.1.9 is a process orientated provision that is a replica of Objective 3.12 of the RPS, being to recognise and provide for the kaitiaki role of tāngata whenua in decision-making.

[47] I accept Mr Hood's evidence that the process followed from project inception to the Council hearing, and now in the context of the Appeal, is consistent with the intent of Objective F.1.9, and the supporting policies D.1.1 and D.1.2, including due to the following reasons:

- (a) ahead of the Council hearing, Northport sought an adjournment to allow a further opportunity for iwi/hapū submitters to consider and provide feedback on the updated draft cultural conditions and for Northport and iwi/hapū submitters to engage further around the cultural concerns raised and alternative responses to those concerns;
- (b) prior to the conclusion of the Council hearing, a three-month adjournment was sought by Northport to enable engagement with iwi/hapū submitters in an attempt to narrow/resolve issues. Ultimately,

this proved unsuccessful but was an important process step in providing for the kaitiaki role of those iwi/hapū submitters; and

- (c) in the Appeal proceeding, Northport has sought multiple extensions to Court reporting dates to allow the parties to the Appeal the opportunity for direct discussions on the matters in contention and to provide input to the Updated Conditions. A total extension period of 10 months has been sought by Northport for these discussions.

[48] Objective F.1.12 deals more specifically with effects and seeks to protect places of significance to tāngata whenua from inappropriate use and development. Policy D.1.5 describes what constitutes a place of significance to tāngata whenua.¹²

[49] Mr Hood says that while there are no mapped places of significance to tāngata whenua in the Project footprint, there is a mapped place of significance to tāngata whenua at Te Poupouwhenua (Mair and Marsden Bank).

[50] Objective F.1.12 is supported by Policy D.1.4. This reads: “*Resource consent for an activity may generally only be granted if the adverse effects from the activity on the values of places of significance to tāngata whenua in the coastal marine area and water bodies are avoided, remedied or mitigated so they are no more than minor.*”

[51] I accept the evidence of Mr Hood which references the finding in the Council Decision that the “generally” qualifier is the cornerstone of this Policy and that this enables consent to be granted in some situations where effects on the values of places of significance to tāngata whenua are unable to be managed so that they are no more than minor.¹³ However, irrespective of this discussion, I find that the extensive engagement undertaken and the fact that iwi/hapū submitters no longer oppose the Appeal demonstrates alignment with Objectives F.1.9 and F.1.12 and Policy D.1.4.

¹² Reading “*a landscape of significance to tāngata whenua, which is a collection of related resources identified and described within a mapped area, with the relationship between those component resources identified*” with the footnote to that policy stating: “*A landscape of significance to tāngata whenua may include Sites and/or Areas of Significance to Tāngata Whenua.*”

¹³ Paragraph 312.

WDP-OP*Tāngata Whenua chapter*

[52] The objectives in the Tāngata Whenua (**TW**) chapter are focused on the protection of taonga, the relationship of tāngata whenua with the natural environment, and to enable rangatiratanga and kaitiakitanga over ancestral lands. The supporting policies provide guidance on how the objectives are to be achieved in practice (including when considering resource consent applications), as follows:

- (a) by ensuring that the views of tāngata whenua are represented at every stage of the process;
- (b) by ensuring that Sites of Significance to Māori and other taonga are not adversely affected;
- (c) by ensuring that waterbodies are maintained and enhanced, and access provided for tāngata whenua; and
- (d) by ensuring effective consultation and participation in resource management processes.

[53] Mr Hood's evidence is that Northport has sought to involve the concerns of tāngata whenua throughout the initial design, consenting, and Appeal phases of the Project, and to understand and address their views. This has culminated in iwi/hapū submitters withdrawing from the proceeding. Mr Hood acknowledges that not all residual matters were able to be practically addressed through conditions of consent or design responses, and that these have been addressed in direct agreements that Northport has entered into with both Patuharakeke and Te Parawhau.

[54] I find that Northport's approach to consultation and its efforts to manage cultural and environmental effects aligns with the intent of the tāngata whenua policies. I remind the parties that continued engagement and respect is key to an enduring relationship.

Port zone chapter

[55] Objective PORTZ-O6 is to recognise and provide for the relationship of Māori and their culture and traditions in the future development and expansion of the port. Policy PORTZ-P9 requires this to be achieved by limiting the height of buildings and storage areas and requiring an assessment of cultural values.

[56] Mr Hood’s evidence is that because tāngata whenua have now agreed that the consents may be granted, and the Updated Conditions are now agreed, the Application can be regarded as being aligned with PORTZ-O6. I agree.

District Growth and Development Chapter (DGD) chapter

[57] Objective DGD-O8 is to “*ensure that growth and development takes into account Māori cultural values*”.

[58] Mr Hood’s evidence is that meaningful consultation with tāngata whenua has been undertaken by Northport and that Māori cultural values have been a key driver in the evolution of the Application, consistent with this objective. Mr Hood’s evidence describes how conditions of consent have been developed and refined to address many of the effects on cultural values that have been raised. Given the withdrawal of tāngata whenua from the proceeding and their engagement as to the Updated Conditions, I agree with this assessment.

Riparian and coastal margins chapter

[59] The objectives and policies¹⁴ for riparian and coastal margins include a focus on enhancing the relationship of tāngata whenua with their sites and taonga. Objective RCM-05 relevantly provides that “*the relationship of tāngata whenua with their sites and other taonga is enhanced*”.

[60] Mr Hood’s evidence is that the Application provides for the relationship of tāngata whenua with their sites and other taonga by maintaining access (including for ceremonial purposes) to Te Poupouwhenua (Mair and Marsden Bank), and through a range of other measures incorporated in the Updated Conditions. Those other

¹⁴ RCM-O5 and RCM-P9.

measures include (for example) development of the Pocket Park and associated access.¹⁵ I agree with Mr Hood's evidence on this point.

Conclusion

[61] I find no gaps in Mr Hood's evidence. I consider the Application is broadly consistent with the objective and policy framework as it relates to cultural values and effects. Given the importance of the Port to the Northland economy I reiterate the importance of developing an ongoing respectful relationship between the Port and the relevant tāngata whenua. In my view this is critical to the future of the Port and Northlands economy.

Recreation and public access

NZCPS

[62] Objective 4 and Policies 18 and 19 of the NZCPS seek to maintain and enhance public open space qualities and recreation opportunities in the coastal environment, including walking access to and along the coast. This is caveated in Objective 4 and Policy 19 where it is specifically recognised that there may be exceptional circumstances when maintaining and enhancing walking access to and along the coast is not practicable, including for health and safety reasons.

[63] Mr Hood's evidence is that the proposed incorporation of public access and enhanced open space facilities through development of the Pocket Park, and the Mair Road and Marsden Bay coastal improvement works, is consistent with these provisions, recognising that some loss of public open space is necessary to enable the port to expand and safely operate in providing for its regionally (and nationally) significant infrastructure function.

RPS

[64] Policy 5.1.2 seeks to enable people and communities to provide for their wellbeing through appropriate subdivision, use, and development that ensures sufficient development setbacks from the coastal marine area to maintain and enhance

¹⁵ WDC (construction) conditions.

public access, open space, and amenity values; and allow for the natural functioning of coastal processes and ecosystems.

[65] Mr Hood's evidence is that consistent with the intent of this policy, the Application, if granted, will improve the economic well-being of Northland and its communities by consolidating and developing the existing port facilities,¹⁶ retaining public access to the residual beach area and the eastern side of the reclamation and improving public amenities as per the pocket park concept and Marsden Bay / Mair Road improvement works,¹⁷ minimising effects on the functioning of coastal processes and ecosystems¹⁸, being compatible with existing development in the surrounding environment (i.e. existing port and Channel Infrastructure facility),¹⁹ and through servicing the expanded port with adequate infrastructure.²⁰

[66] I accept that evidence and consider the Application is not at odds with these policies, but nor can it be said that it fully aligns with them. The reality of the situation is that a port expansion must, of necessity, restrict public access at the localised scale which is why the Updated Conditions include a number of agreed recreational enhancements to offset these impacts.

[67] I consider that, while there is not full alignment of the Application with the RPS' policies, I acknowledge that this is a very difficult task given the practical reality of this port expansion project. I now consider the related effects are sufficiently offset through the Updated Conditions.

PRPN-AV

[68] Objectives and policies in the PRP-AV relevant to recreation/public access are E.1.1 and F.1.8:

E.1.1 - Catchment-specific values

Recognise the following values in the Doubtless Bay, Waitangi, Poutō, Mangere and Whāngarei Harbour Catchments:

¹⁶ Policy 5.1.2(a).

¹⁷ Policy 5.1.2(b)(i).

¹⁸ Policy 5.1.2(b)(ii).

¹⁹ Policy 5.1.2(c).

²⁰ Policy 5.1.2(d).

- 1) cultural and recreational uses associated with fresh and coastal waters, ...

F.1.8 Use and development in the coastal marine area

Use and development in the coastal marine area:

- 3) recognises the need to maintain and enhance public open space and recreational opportunities

[69] Mr Hood's evidence is that the Application aligns with Objective E.1.1 because:

- (a) there is no longer opposition to the Application by tāngata whenua who use the coastal waters for cultural uses; and
- (b) recreational uses of the coastal waters have been taken into account and provided for in the Application through the proposed Pocket Park's incorporation of a public wharf area adjoining the new reclamation, from which there are multiple access points to the water and an area designated for swimming.

[70] Mr Hood's evidence is that the Application aligns with Objective F.1.8 because:

- (a) the Application makes efficient use of space in the CMA by expanding the existing facility, which is appropriately located within the MPPZ and adjacent to port and heavy industry zoned land, as opposed to constructing a new port elsewhere (representing consolidated development and efficient use of existing infrastructure resources); and
- (b) the various technical studies provided with the Application AEE conclude that the scale and design is necessary to provide for the future needs of Northland and North Auckland communities; the scale and design is compatible with the location; and the Application has effects (both within and outside the CMA) that fall within appropriate limits.

[71] I agree with Mr Hood's evidence on these matters. The Application's design recognises the need to maintain and enhance public open space and recreational

opportunities through the proposed Pocket Park and associated amenities, and the continued provision of public access to the coastal margin.

WDP-OP

Port zone chapter

[72] Objective PORTZ-O4 and Policy PORTZ-P6 relate to maintaining public access to the CMA, provided this does not adversely affect the efficient and safe operation of the port, or public health and safety.

[73] Mr Hood's evidence is that the Application responds to these provisions with a range of public access and amenity proposals, including by providing public access to the eastern side of the reclamation without compromising the efficient and effective operation of the expanded port, and public health and safety.

[74] I accept this evidence. Again, I consider that a partnership with the community may see other recreation benefits. Examples include walkways and cycleways in the area and improvements to alternative recreational access.

District Growth and Development (DGD) chapter

[75] Policy DGD-P4 is *"to ensure that the scale and nature of new land use activities are commensurate with the anticipated level of amenity and the stated issues and objectives for the relevant zone"*.

[76] Mr Hood's evidence is that notwithstanding that the proposed activities on the expanded port are consistent with the anticipated level of amenity and the stated objectives for the adjoining Port Zone (terrestrial), and the MPPZ (within the CMA), management measures (most notably in relation to noise) have been incorporated in the Application and Updated Conditions to appropriately manage effects on amenity values in nearby residential zones, and in the residual NOSZ.

[77] I accept Mr Hood's evidence and consider there is alignment with DGD-P4.

Natural Open Space Zone chapter

[78] Objective NOSZ-O1 and Policy NOSZ-P1 seek to protect and enhance the values of the NOSZ (the zone applying to the esplanade reserve behind the beach).

[79] Mr Hood's evidence is that while it cannot be said that the Application implements this policy, the existing open space values in this locality are influenced/comprised by the existing Northport and Channel Infrastructure facilities. The mitigation proposed by Northport minimises effects on the NOSZ in this locality to the greatest extent practicable, while creating new open space resources in the immediate vicinity (Mair Road and Marsden Bay Drive).

[80] Objective NOSZ-O2 and Policies OSZ-P2 and NOSZ-P3 all seek to manage the effects of buildings and structures on the qualities and values of the NOSZ.

[81] Apart from relocating the existing toilet building at the end of Ralph Trimmer Drive to the eastern end of the expanded port, no other buildings are proposed in the NOSZ. Given the scale of structures on nearby land (including Northport and Channel Infrastructure structures on land and in the CMA) the relocated toilet building will not compromise the values and qualities of the NOSZ.

[82] Policy NOSZ-P5 seeks to manage adverse effects on the amenity and character of the NOSZ by managing activities to ensure that they support ongoing conservation.

[83] Mr Hood's evidence is that while the Application does not directly align with NOSZ-P5 as it does not avoid adverse effects on the amenity and character of the NOSZ, measures are proposed to support and enhance the ongoing conservation of species that currently utilise the NOSZ (i.e. Variable Oystercatcher, Northern NZ Dotterel, lizards) by providing appropriate habitat, and that additional measures are proposed in respect to dune restoration.²¹

[84] I accept Mr Hood's assessment of the provisions of the NOSZ.

²¹ NRC conditions 53-55.

Riparian and Coastal Margins chapter

[85] Objective RCM-03 is to “*maintain and enhance public access, where appropriate, to and along the coast and rivers*”.

[86] Mr Hood says that the Application satisfies this provision by incorporating public access to the eastern side of the reclamation and residual eastern beach area in the overall design. This includes via a public park/reserve area and associated amenities to enhance the use of this space, and through the proposed enhancement of public access offsite at Marsden Bay Drive and Mair Road.

Coastal Environment chapter

[87] Objective CE-06 of this chapter is to “maintain and enhance public access to and along the coast *where appropriate*” (emphasis added).

[88] Mr Hood says that the Application maintains access to and along the coast to the greatest extent practicable, whilst providing for the safe and efficient operation of the port, aligning with this objective.

Conclusion

[89] I agree with Mr Hood’s evidence regarding recreation and public access. The language of the provisions of the statutory instruments is one of recognising the need to maintain and enhance public open space and recreational opportunities, accepting that this is cast as “where appropriate” in the WDP-OP. I consider the intent of these provisions is achieved through the Updated Conditions. Moreover, the focus remains on achieving these recreational benefits where appropriate into the future. Opportunities will arise for the Port to assist the community into the future and a community partnership should be considered as a long-term strategy.

Other effects

[90] Other effects of the Application relate to economics, coastal processes, marine ecology, marine mammals, avifauna, terrestrial ecology, landscape, natural character, visual amenity, noise, navigation, traffic, stormwater and air quality.

[91] Given the findings in the Council Decision on all other effects, and Mr Hood's uncontested evidence that any adverse effects of these other matters are avoided or appropriately mitigated (or offset) and that the Application is consistent with the relevant objectives and policies of the statutory planning documents, I do not consider that I need to individually record my findings on these matters. I am comfortable recording that all other effects of the Application are acceptable. Further I have recorded my view that these findings were not the subject of the Appeal.

Part 2 of the RMA

[92] The PRPN-AV and WDP-OP have been prepared in contemplation of Part 2 of the RMA. As such, the Application can be determined in reliance of the provisions of the PRPN-AV and WDC-OP without recourse to Part 2 of the RMA.

[93] However, I acknowledge that Part 2 matters were considered in the Council Decision – in particular, ss 6(d) and 6(e) and 7(a). On these matters, I find:

- (a) in regard to s 6(d), the Application recognises and provides for public access to the CMA to the greatest extent practicable (s 6(d)), which is achieved through incorporation of the Pocket Park and related amenities in the design, and through additional enhancement works at Mair Road and Marsden Bay Drive. I would add that the obligation is ongoing and partnership with the community is key to long term equity; and
- (b) in regard to ss 6(e) and 7(a), the Application has recognised and provided for the relationship of iwi with their ancestral lands, water, and other taonga through early and ongoing engagement, through the inclusion of appropriate conditions of consent, and through the ongoing engagement, which has resulted in the withdrawal by Patuharakeke and Te Parawhau from the proceedings. Again, long term partnership is essential.

[94] The common theme here is to emphasise that the purpose of the RMA is sustainable management on an intergenerational basis. Given the Port gives exclusive occupation of public land there is an expectation of public contract. Where that is ignored ongoing opposition to the activity comes to the fore. This is an opportunity

for the Port to model that an efficient Port can contribute to its local community by being a part of it. I make this comment from a long background with major infrastructure, including key ports in New Zealand. The various community committees provide a real opportunity for building these relationships. I am heartened by the various conditions supporting such committees:

- (a) it appears a Community Liaison Group already exists (see Condition 25(a)(iv) of the WDC conditions (operations) which states the Port Noise Liaison Group is to be established as a sub-committee of the existing Community Liaison Group).
- (b) Condition 25 of the WDC conditions (operations) provides for a Port Noise Liaison Committee;
- (c) Conditions 244 – 250 of the NRC conditions provide for a Tangata Whenua Relationship Group; and
- (d) Condition 56 of the NRC conditions provides for a Steering Committee.

Findings of the Court on the Application

[95] Overall, I consider that the objectives and policies in the NZCPS, PRPN-AV and WDP support port facilities at this location. I consider that the intent of the provisions with respect to cultural values and effects and recreational values and effects, are met through the Updated Conditions, which are agreed by the parties. Although not strictly necessary for the Court to determine, I consider that matters in Part 2 of the RMA are appropriately provided for.

[96] Therefore, I determine that the resource consents sought in the Application can be granted subject to the Updated Conditions. The Updated Conditions appropriately address relevant policy directions while mitigating effects. They are extensive and comprehensive, recognising the relevant policy requirements and establishing suitable limits and management controls for the port expansion.

Lapse period

[97] The Updated Conditions agreed by all parties provide for a 20-year lapse period. Mr Hood’s evidence is that this timeframe is consistent with other large-scale infrastructure projects, and I find it generally appropriate.

Consent duration

[98] The Updated Conditions provide for the NRC consents (except for the coastal permit for reclamation) to be granted with a 35-year duration. I agree that this duration is appropriate, including for the following reasons:

- (a) consistent with Policy D.2.14 of the PRPN-AV, it reflects the need for security of tenure given the level of investment involved, and the long-term perspective required for port development; noting that the Application constitutes RSI; and
- (b) consistent with Policy 4.8.3 of the RPS, there is no evidence of other reasonably foreseeable demands for occupying space at this location in the MPPZ beyond Northport activities. The purpose of the MPPZ is to *“enable the development of existing and authorised maritime-related commercial enterprises”*.²²

[99] I find it appropriate that the coastal permit for the reclamation is granted with an unlimited duration pursuant to s 123(a) of the RMA.

Costs

[100] As referred above, the parties have informed me that there are no issues as to costs between them. I therefore determine that costs are to lie where they fall accordingly.

Record of matters considered

[101] I record for completeness that in determining this Appeal, I have considered:

- (a) the Council Decision;

²² Policy D.5.8.

- (b) the notice of appeal and attachments dated 29 July 2024;
- (c) the section 274 party notices;
- (d) memoranda of counsel filed with the Court between November 2024 and September 2025 (the most recent being the joint memorandum of counsel in support of the draft determination dated 23 September 2025);
- (e) the affidavit of Brett Hood dated 25 September 2025; and
- (f) the Updated Conditions.

[102] I make this determination under section 279(1)(b) of the RMA. I understand that for present purposes:

- (a) all parties, through their counsel, have executed the memorandum requesting this determination;
- (b) all parties agree that the Updated Conditions are appropriate and that they form an appropriate basis on which to resolve the appeal in full; and
- (c) all parties are satisfied that all matters proposed for the Court's endorsement fall within the Court's jurisdiction, and conform to the relevant requirements and objectives of the Act including, in particular, Part 2.

[103] I am satisfied that this outcome is one that reasonably represents the various interests of the parties. It has been a long and considered process to get to this point. The parties have taken a pragmatic, balanced approach in resolving this appeal, and I find that granting the Appeal subject to the agreed Updated Conditions is the most appropriate way to achieve the purpose of the RMA and the objectives of the relevant statutory planning instruments.

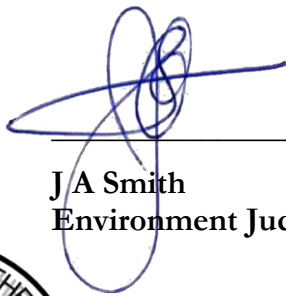
[104] Overall, I consider the sustainable management purpose, and the other relevant requirements of the RMA, are adequately met in granting the Appeal.

Determination

[105] The Court determines that:

- (a) the appeal is allowed, and the resource consents are granted subject to the Updated Conditions as set out in **Appendix A**; and
- (b) the appeal is otherwise dismissed.

[106] There is no issue as to costs.



J A Smith
Environment Judge | Kaiwhakawā o te Kōti Taiao



NRC CONDITIONS: NORTHPORT LIMITED (UPDATED 22.09.25)

PORT EXPANSION, SH15, MARSDEN POINT

To undertake the following activities at or near Ralph Trimmer Drive, Marsden Point and/or within the Whangārei Harbour:

- Reclamation of part of the Coastal Marine Area (CMA) to the immediate east of Northport, including associated deposition and discharge of decant water.
- Capital and associated maintenance dredging.
- Wharf structures on the northern (seaward) edge of the proposed reclamation.
- Sheet piling and rock revetment structures on the eastern edge of the reclamation.
- Treatment of operational stormwater via the existing pond-based stormwater system and/or proprietary systems, and subsequent discharge to ground and the CMA.
- Port related activities on the proposed reclamation and wharves, and on parts of the proposed development above MHWS.
- Construction of additional beach roosting habitat to the west of Northport.
- Construction of a public access from the existing car park at the end of Ralph Trimmer Drive (to be replaced) through to a proposed reserve and related amenities at the eastern edge of the proposed reclamation.
- Construction of a tug berthing facility and fishing pontoon at the eastern edge of the proposed reclamation.

Note: All location coordinates in this document refer to Geodetic Datum 2000, New Zealand Transverse Mercator Projection (unless expressly stated otherwise).

SUBJECT TO THE FOLLOWING CONDITIONS:

DEFINITIONS

“Allowable Duration”	is the maximum number of hours in a rolling 30-day period during which the Intensity prescribed at a telemetered turbidity monitoring location in relation to turbidity trigger Tiers 1 and 2 or Tier 3 Compliance Level may be exceeded without a management action being required. The maximum number of hours for each Tier is as follows: (i) Tier 1: 144 (ii) Tier 2: 36 (iii) Tier 3: 7.2;
“AQMP”	means the Air Quality Management Plan;
“BMP”	means the Biosecurity Management Plan(s);
“Capital DMP”	means the Capital Dredging Management Plan;

“CEMP”	means the Construction Environmental Management Plan;
“Certification”	has the meaning set out in Condition 24;
“Channel Infrastructure”	means Channel Infrastructure NZ Ltd and its wholly-owned subsidiaries and any successor in title to some or all of its coastal structures including existing jetties (including the fire pump intake dolphin moorings and spillway) and other coastal structures including outfalls and a boat ramp;
“CIH”	means the Cultural Indicators Hub;
“CMA”	means the coastal marine area as defined in s2 of the RMA;
“Commencement of reclamation works”	means earthworks/filling and other physical works associated with construction of the Project in the CMA. Works associated with preliminary investigations/reporting do not fall within this definition;
“Commencement of these consents”	means the date the last of the consents applied for by Northport for its Expansion Project commences according to s 116 of the RMA;
“Council”	means Northland Regional Council or its successor;
“CRMS”	means Craft Risk Management Standard;
“DOC”	means Department of Conservation
“Dredge Spoil”	means seabed material that has been removed by a dredge;
“Declared Depth”	means the depth below Chart Datum that is required for navigational safety, therefore set as the minimum requirement for the dredge operator to achieve. This excludes the over dredge tolerance in both the vertical and horizontal planes;
Detailed design	means the preparation of detailed engineering design, plans/drawings and cost estimates, supported by design analysis and calculations, and technical specifications, ready for construction.
“DMMOZ”	means the Dredging Marine Mammal Observation Zone;
“EMMOZ”	means the Extended Marine Mammal Observation Zone;
“EMMP”	means the Environmental Monitoring and Management Plan;
“Exceedance”	means the exceedance of an Allowable Duration;
“Expansion Project”	means the Northport expansion to the east of the existing port for the purpose of constructing, operating, and maintaining a container terminal as authorised by these consents (and associated district consents), including reclamation and wharf construction and all associated activities and works;

“FNU”	Formazin Nephelometric Unit;
“First Annual Discharge”	means the first pump activated discharge from the stormwater system of each twelve (12) month period following the anniversary of the first pump activated discharge after Practical Completion.
“FTU”	means Formazine Turbidity Unit;
“HTBR”	means High Tide Bird Roost
“Index-linked”	means linked to the Consumer Price Index, but capped at 2.5%, and compounding over 5-years, with adjustment to the level of funding at every 5-yearly review.
“Intensity”	means the turbidity level (in NTU/FTU) established for each Tier at each telemetered turbidity monitoring location using the methodology contained in the document titled <i>“Turbidity Monitoring for the Northport Expansion Project”</i> (1 June 2023, Environmetrics Australia), and the following percentiles: (i) Tier 1: 80% (ii) Tier 2: 95% (iii) Tier 3: 99%;
“Maintenance DMP”	means the Maintenance Dredging Management Plan;
“MMMP”	means the Marine Mammal Management Plan;
“MMO”	means a suitably qualified and experienced person (holding a tertiary ecology or similar qualification and experience working with marine mammals, or a person with at least 2 years marine mammal observation experience from similar projects) that has successfully completed an appropriate MMO training course, followed by a 1 day on site training course delivered by a suitably qualified marine scientist.
“MMOZ”	means Marine Mammal Observation Zone;
“NPL”	means Northport Limited.
“NTU”	means nephelometric turbidity unit;
“Pocket Park”	means the public park (recreational open space) area near the south-eastern corner of the Expansion Project site, as shown in Boffa Miskell <i>“Proposed Concept Plan”</i> , BM220519-201 (Revision B, 25.7.22) at Appendix 1 .

“Practical Completion”	in relation to the reclamation, means the date that the completed reclamation (or any part thereof) is available for port activities;
“Predicted Dredging Turbidity”	means the TSS from the dredging that is predicted from the hydrodynamic modelling detailed in Appendix 9 of the Assessment of Environmental Effects supporting the application lodged in October 2022;
“RFB”	Royal Forest and Bird Protection Society of New Zealand Inc
“RG”	Tangata Whenua Relationship Group
“RMA”	means the Resource Management Act 1991;
“Sandbank Renourishment Area”	means the additional avifauna roosting habitat (for the benefit of Tōrea pango <i>Variable oystercatcher</i> and Tūturiwhatu <i>New Zealand dotterel</i>) that is authorised by these consents to be established through the deposition of sand within the CMA to the west of the Expansion Project (as generally shown in Tonkin+Taylor <i>“Bird Roost Concept”</i> , DWG No. 1017349-02 (Revision 1, August 2022));
“SCMP”	means the Stakeholder and Communications Management Plan described in Conditions 15-18;
“SMMP”	means Stormwater Operations, Monitoring, and Maintenance Plan
“SMMR”	means Shorebird Monitoring and Management Report.
“Suitably Qualified and Experienced”	means a person or persons with a recognised qualification and/or experience relevant to the topic being assessed;
“Tier 3 Compliance Level”	means the turbidity compliance level for each of the telemetered turbidity monitoring locations established in accordance with Condition 159 and the document titled <i>“Turbidity Monitoring for the Northport Expansion Project”</i> (1 June 2023, Environmetrics Australia).
“TSS”	means Total Suspended Solids, measured in mg/L;
“Water Taxi Pontoon”	means the pontoon adjacent to the eastern end of the proposed reclamation which is proposed to be used for water taxi services, as shown in “Northport relocated tug facility – eastern end concept plan”, D60-X (Issue R0, September 2022) at Appendix 1 .
“Working Day”	means any day of the year other than: (a) A Saturday, a Sunday, Waitangi Day, Good Friday, Easter Monday, Anzac Day, the Sovereign’s birthday, Matariki, and Labour Day; and (b) If Waitangi Day or Anzac Day falls on a Saturday or a Sunday, the following Monday; and

- (c) A day in the period commencing on 20 December in any year and ending with 10 January in the following year.

“Wharf”

means the wharf structure to be constructed adjacent to the proposed reclamation, which is proposed to accommodate Berth 5, as shown in “Plan Reference” at **Appendix 1**.

GENERAL CONDITIONS

1. Works/activities authorised by these consents must be undertaken in general accordance with the application received by Council on 6 October 2022 and all supporting information, including the following documents and plans (including as amended through the application and hearing process). If there is any conflict between the relevant documents/plans and these conditions of consent, these conditions of consent prevail.

AEE reports

- Marshall Day Acoustics Ltd *‘Northport Container Terminal Expansion Noise Assessment’* (Rp 002 R07 20200547) dated 29 September 2022.
- Enviser Ltd *‘Draft Construction Environmental Management Plan’* (Enviser ref. 1116) dated October 2022.
- MetOcean Solutions *‘Effects of Proposed Reclamation and Dredging Layout on Hydrodynamics’* dated August 2022.
- Tonkin and Taylor Ltd *‘Coastal Process Assessment’* (ref. 1017349 v3) dated September 2022.
- Coast and Catchment Ltd *‘Assessment of Ecological Effects’* Report number 2021-24 dated September 2022.
- Boffa Miskell Ltd *‘Coastal Avifauna Assessment’* Rev. G dated 3 October 2022.
- Cawthron Institute *‘Potential Effects of the Proposed Northport reclamation on Marine Mammals in the Whangarei Harbour Region’* Report no. 3652 dated September 2022.
- Brown NZ Ltd *‘Assessment of Landscape, Natural Character and Amenity Effects’* dated September 2022.
- Clough and Associates Ltd *‘Archaeological Assessment’* dated June 2022.
- WSP Ltd *‘Concept Design Report’* Ref. 6-DV652.00 Rev. C dated August 2022.
- Rob Greenaway and Associates *‘Recreation Effects Assessment’* dated September 2022.
- Hawthorn Geddes Ltd *‘Stormwater Pond Assessment Report’* HG ref. 12377 Rev. 3 dated 10.8.22.
- Pattle Delamore Partners Ltd *‘Air Quality Assessment’* Ref. A03566800R001 dated 5.8.22.
- Market Economics Ltd *‘Economic Assessment’* Ref. NPL 001.20 dated September 2021.
- Patuharakeke Te Iwi Trust Board *‘Interim Cultural Effects Assessment’* dated November 2021.
- Patuharakeke Te Iwi Trust Board *‘Cultural Effects Assessment’* dated December 2022
- Styles Group *‘Assessment of Underwater Noise Effects’* dated 2 August 2022.
- Northport *‘Navigation Safety Report’* dated September 2022.
- WSP Ltd *‘Traffic Impact Assessment’* Ref. 1-19278.01/00006 dated 30.08.22.
- 4Sight Ltd *‘Intertidal Ecology Report’* dated May 2018.

RFI responses

- Response to information request dated 25 October 2022.
- Response to information request dated 21 February 2023.
- Response to information request dated 13 July 2023.

Plans/drawings

- WSP Ltd 'Design Drawings' 1-19278.01(03) – Sheets C01 (Rev. D), C02 (Rev. D), C03 (Rev. D), and C04 (Rev E).
- Tonkin + Taylor 'Bird Roost Concept Layout Plan' 1017349-02 dated August 2022.
- Boffa Miskell Ltd – 'Pocket Park Concept Plan' – BM220519-201 and BM 220519-200 (Rev B).
- Reyburn and Bryant – 'Northport Expansion (Berth 5) – O14656 (Rev. A).
- Northport – 'Relocated Tug Facility Eastern End – Concept Plan' (R0) dated September 2022.
- 'One Tree Point – Manganese Point Line' plan dated 30 January 2024.
- 'Underwater Noise Measurement Point' plan dated 16 February 2024.

Other documents

- Stormwater Monitoring Analytes
- Envirometrics Report

2. The location of the activities authorised by these consents must be in general accordance with the plans at **Appendix 1**.

Advice Note: 'General accordance' includes any changes to the location and extent of the reclamation, wharf, tug berthing facility and water taxi pontoon required by Condition 32 or Condition 39, noting the extent of occupation of these structures (excluding the rock revetment below MHWS) cannot increase or extend further seaward from the footprint shown in the plans in Appendix 1 as an in general accordance change.

3. At least thirty (30) working days in advance of the date of the commencement of works authorised by these consents, the consent holder must contact the Council to arrange for a site meeting with the consent holder's contractor(s) and a Council compliance officer prior to commencement of construction works. The details to be provided at the meeting, and then in writing no more than five (5) working days after the meeting, must include:
 - (a) The intended date of the commencement of works and a programme for the works.
 - (b) A draft programme for the CEMP and any other design plan, engineering plan, report or management plan required to be submitted for certification under these conditions (if not already provided).
 - (c) The intended date for providing the final design drawings to demonstrate how the works are in general accordance with the conditions of these consents, including **Appendix 1**.
 - (d) The nominated Consent Holder contact and contractor representative (or equivalent) for the works
 - (e) Any intended staging of the CEMP and works.
 - (f) A list of the proposed Suitably Qualified and Experienced Persons and Chartered Engineers proposed to be used in preparation of any design plans, engineering plan(s), report, or management plan requiring Council certification.

4. The consent holder must keep the CMA free of litter and other debris arising from the exercise of these consents.
5. The consent holder must maintain all structures and the reclamation authorised by these consents in good order and repair. Maintenance works authorised by these consents must be routine maintenance and repair, including to the exterior walls of the reclamation consistent with the scale and form of the initial approved reclamation.
6. A copy of these consents and the most up-to-date certified versions of all management plans required by these consent conditions must be kept on site at all times and made available to all persons undertaking activities authorised by these consents.
7. The consent holder must notify the Council in writing within five (5) working days of Practical Completion of the reclamation.
8. The consent holder must notify the Council in writing within ten (10) working days following the date of the completion of all construction works authorised by these consents.
9. All monitoring/sampling required under these consents must be undertaken by or under the supervision of a Suitably Qualified and Experienced person(s).

Review under s128 of the RMA

10. The Council may serve notice on the consent holder of its intention to review the conditions of these consents pursuant to Section 128 of the RMA either:
 - (a) Annually during the month of March, for any one or more of the following purposes:
 - (i) To require the adoption of the Best Practicable Option to remove or reduce any adverse effect on the environment; or
 - (ii) To deal with any change(s) to the materials handled through the Port Terminal; or
 - (iii) To respond to any new technology, standards or monitoring parameters relevant to the environmental monitoring undertaken in accordance with these consents.
 - (b) At any time, to deal with any adverse effects on the environment which may arise from the exercise of the consents and which it is appropriate to deal with at a later stage, including effects identified in the consent holders monitoring results or reports (including CIH monitoring and the report in Condition 61) from activities authorised by these consents and/or as a result of Council's state of the environment monitoring in the area.
11. The consent holder must meet all reasonable costs of any such review.

Accidental discovery protocol

12. If subsurface archaeological evidence is unearthed during construction (e.g. intact shell midden, hangi, or storage pits relating to Māori occupation; or cobbled floors, brick or stone foundations, or rubbish pits relating to 19th century European occupation), work in the immediate vicinity must cease. Heritage NZ Pouhere Taonga, iwi / hapū representatives of the RG, and the Council must be notified as soon as reasonably practicable.
13. Work must not recommence in the immediate vicinity of the discovery until either: it has been determined that no Heritage New Zealand Pouhere Taonga approval(s) are required; or that any necessary Heritage New Zealand Pouhere Taonga approval(s) have been obtained.

14. In the event of koiwi tangata (human remains) being uncovered, work in the immediate vicinity of the remains must cease. Heritage NZ Pouhere Taonga, NZ Police, iwi / hapū representatives of the RG, and the Council must be contacted so that appropriate arrangements can be made.

Advice Note: *The Heritage New Zealand Pouhere Taonga Act 2014 makes it unlawful for any person to destroy, damage or modify the whole or any part of an archaeological site without the prior authority of Heritage New Zealand Pouhere Taonga. For the avoidance of doubt, the accidental discovery protocol conditions apply to works undertaken within land and CMA.*

Stakeholder and Communications Management Plan

15. The consent holder must prepare and implement a SCMP not later than 12 months prior to commencement of construction works. The purpose of the SCMP is to set out a framework for how the consent holder will communicate with the community, stakeholders and affected parties for the duration of construction, and the operation of the Expansion Project.
16. The SCMP must set out, prior to construction, how the consent holder will:
 - (a) Identify the stakeholders for communication;
 - (b) Inform the community of project process and likely commencement of construction works and programme;
 - (c) Engage with the community and stakeholders to foster good relationships and provide opportunities for learning about the project;
 - (d) Utilise the project website to provide updates to the community;
 - (e) Communicate with tangata whenua regarding construction of the project;
 - (f) Respond to queries and complaints; and
 - (g) Provide updates on progress with management plans.
17. The SCMP must set out the framework for how, during construction and operation, the consent holder will:
 - (a) Engage with stakeholders such as Channel Infrastructure, Seafuels, affected landowners, tangata whenua, community groups, recreational boating groups, Mountains to Sea Conservation Trust, local businesses and representative groups, residents' organisations, other interested groups or individuals, network utility operators, Whangarei District Council and associated local authorities, and the Council;
 - (b) Inform the Whangarei district community of construction progress, including proposed hours of work;
 - (c) Inform the Whangarei district community of ongoing dredging;
 - (d) Engage with the communities to foster good relationships and to provide opportunities for learning about the project;
 - (e) Provide information of key project milestones; and
 - (f) Make each management plan publicly available once a management plan is finalised, and for the duration of project works.
18. The consent holder must prepare the SCMP in consultation with the following parties and submit the final SCMP for certification with the CEMP:
 - (a) The Council;

- (b) Whangarei District Council; and
- (c) Iwi/hapū representatives of the RG,.

Website

- 19. The consent holder must, for the duration of these resource consents, maintain a website that is accessible to, and readily usable by, the public.
- 20. The website must include the following information:
 - (a) Copies of relevant resource consents;
 - (b) A statement summarising steps toward progressing commencement of these consents, and the consent holder's expected timeframe for commencement. This statement must be updated at least annually.
- 21. From the commencement of reclamation and capital dredging authorised by these consents through to Practical Completion, the website must include the following information:
 - (a) Copies of these resource consents;
 - (b) A summary of real-time data collected from the telemetered turbidity monitoring stations required under these conditions;
 - (c) Quarterly monitoring reports prepared under Condition 169.
 - (d) A record of all Tier 3 Compliance Level Exceedances that are correlated with identification of any extraordinary natural events;
 - (e) Any Tier 3 Compliance Level Exceedance report prepared under Condition 180.
 - (f) All certified management plans required by these conditions and any certified variations;
 - (g) All written reports, peer reviews, written evidence, reviews, and outcomes and recommendations prepared under these consent conditions;
 - (h) A mechanism for members of the public to raise matters with, make an enquiry of, or lodge a complaint with the consent holder (with any complaints received to be maintained in the Complaints Register in accordance with Condition 22 below); and
 - (i) Updated project timing and duration information for the Project and activities conducted in accordance with these resource consents, including but not limited to, reclamation, capital dredging, preclusion or reinstatement of public access to Marsden Bay Beach and Ralph Trimmer Drive.

Complaints

- 22. The consent holder must maintain a Complaints Register for the purpose of recording and dealing with any complaints that are received by the consent holder in relation to the exercise of these resource consents. The Complaints Register must record, where this information is available:
 - (a) Name of complainant, if provided to the consent holder;
 - (b) The date and time of the complaint;
 - (c) A description of the complaint;

- (d) The location of the issue raised;
 - (e) Weather conditions at the time of complaint, including a description of wind speed and wind direction when the complaint occurred (if relevant);
 - (f) Any possible cause of the issue raised;
 - (g) Any investigations that the consent holder undertook in response to the complaint;
 - (h) Any corrective action taken to address the cause of the complaint, including the timing of that corrective action; and
 - (i) Any feedback provided to the complainant.
23. The consent holder must provide a copy of the complaints register to the Council's Compliance Manager within five working days of receiving a request to do so from the Council.

Certification

24. Where any condition requires the consent holder to submit design plans, engineering plans, a report or management plan to the Council for "**certification**" it must mean the process set out in the following paragraphs (a) to (d) and the terms "certify" and "certified" must have the equivalent meanings:
- (a) The consent holder supplies design plans, engineering plans, reports or management plans to the Council, and the Council assesses the documentation submitted. The certification process for design plans, engineering plans, management plans and reports required by conditions of this consent must be confined to confirming that the plans or reports give effect to their purposes, consent condition requirements, and schedule requirements, and contain the required information;
 - (b) Should the Council determine that the documentation supplied in accordance with (a) above achieves the requirements of the relevant condition(s), the Council must issue a written confirmation of certification to the consent holder;
 - (c) If the Council's response is that it is not able to certify a design plan, engineering plan, management plan or report, it must provide the consent holder with reasons and recommendations for changes to the plan or report in writing. The consent holders must consider any reasons and recommendations of the Council and resubmit an amended design plan/engineering plan/management plan/report for certification;
 - (d) A design plan, engineering plan, management plan or report cannot be subject to a third-party approval. The Council in deciding whether to certify the design plan, engineering plan, management plan or report, however, may also obtain advice from other qualified person(s).
25. The process in Condition 24 must be repeated until the Council is able to provide written confirmation that the requirements of the applicable condition(s) have been satisfied.
26. The consent holder must comply with the certified management plan or report at all times.

Lapse

27. These consents will lapse 20 years from commencement.

Consent surrender

28. Within three (3) months of the date of Practical Completion of the Expansion Project reclamation, the consent holder will give notice of the surrender of the existing resource consent for the current stormwater collection, treatment, and disposal system (CON20090505532 issued on 13 April 2010)

Advice Note: *The surrender of the above resource consents will consolidate the stormwater resource consents and conditions applying to the expanded Northport, meaning that a single consent and single set of conditions will apply to all Northport operational stormwater.*

UNAUTHORISED DISCHARGES / HAZARDOUS SPILLS

29. During construction the consent holder must take all practicable measures to prevent unauthorised discharges of hazardous substances into the CMA. Such measures must include:

- (a) Measures to prevent oil and fuel leaks from vehicles and machinery, including maintaining machinery and equipment in good working order;
- (b) Refuelling of land-based machinery and vehicles not occurring within 20 metres of the CMA where practicable, and occurring under supervision throughout the whole activity;
- (c) All refuelling equipment having a shut-off valves;
- (d) The stationary land-based storage of fuel and other hazardous substances not occurring within 20 metres of the CMA;
- (e) All vehicles and/or works areas having a spill kit capable of absorbing the quantity of fuel and other hazardous substances that may leak or be spilt; and
- (f) Spill containment equipment being immediately available and kept on-site at all times.

Advice Note: *Nothing in Condition 29 is intended to affect existing obligations under other legislation, including the Maritime Transport Act and associated statutory instruments such as marine protection rules.*

30. The consent holder must, on becoming aware of any discharge and/or spill associated with the consent holder's operations that is not authorised by these consents:
- (a) Immediately take such action, or execute such work as may be necessary, to stop and/or contain the discharge/spill;
 - (b) Immediately notify the Council by telephone of the discharge/spill;
 - (c) Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the discharge/spill; and
 - (d) Report to the Council in writing within one (1) week on the cause of the discharge and the steps taken or being taken to effectively manage the discharge and prevent any recurrence.

During Council's opening hours, telephone contact with the Council must be via the Council's landline. If the relevant person cannot be spoken to directly, or it is outside of the Council's opening hours, then the Environmental Emergency Hotline must be contacted.

Advice Note: *The Environmental Emergency Hotline is a 24 hour, seven day a week, service that is free to call on 0800 504 639.*

31. In addition to the requirements in Condition 30, for any spill of a hazardous substance into the CMA that is greater than 20 litres, the consent holder must provide the Council with the following information within 24 hours:
- (a) The date, time, location and estimated volume of the spill;
 - (b) The cause of the spill;
 - (c) The type of contaminant(s) spilled;
 - (d) Observations of any spilt material within the marine environment;
 - (e) Clean up procedures undertaken;
 - (f) Details of the steps taken to control and remediate the effects of the spill on the receiving environment;
 - (g) An initial assessment of the potential ecological effects of the spill; and
 - (h) Measures to be undertaken to prevent a recurrence.

DESIGN AND CONSTRUCTION OF RECLAMATION, MARINE STRUCTURES, SANDBANK RENOURISHMENT AREA AND STORMWATER INFRASTRUCTURE

Engineering Plans

32. The consent holder must submit detailed engineering plans (including drawings and calculations if applicable) prepared in accordance with an appropriate design standard / guideline and any other requirements of the conditions of this consent, to the Council for certification prior to works commencing. These can be submitted in stages. The plans must include:
- (a) Berth 5 reclamation, and revetment;
 - (b) Berth 5 wharf, sea wall(s), and associated coastal structures;
 - (c) Tug facility, and Water taxi pontoon.
 - (d) Sandbank Renourishment Area;
 - (e) Stormwater infrastructure, including:
 - (i) Floatables trap at weir-controlled-spillways; and
 - (ii) Any new or upgraded canals, weirs, spillways and associated stormwater infrastructure servicing proposed Berth 5 or Berths 1 – 4; and
 - (f) A staging plan to demonstrate how the terminal can be modified at a later date from Reach stacker operations to RTG crane terminal operations so as not to reduce capacity and delays through construction and avoid the need for additional coastal occupation.

33. The design and engineering plans must be independently peer reviewed by a Suitably Qualified and Experienced person and when submitting the plans, the consent holder must provide to Council written evidence of this review and how the review comments have been responded to.
34. The structures and infrastructure related to the container terminal must be designed to the relevant Importance Level to provide lifeline utility services. The consent holder when submitting the plans, must provide written evidence from the Ministry of Civil Defence (or Equivalent) of the necessary Importance Level.

Reclamation design and construction

35. The reclamation must be constructed within the area marked 'Proposed Reclamation' on plan C03 contained in **Appendix 1**.
36. The reclamation must be designed by a suitably experienced Chartered Professional Engineer, with input from other relevant specialists.
37. A Chartered Professional Engineer with relevant experience in reclamation construction must oversee the construction of the reclamation to ensure it complies with the design. A statement must be provided by the engineer to Council confirming the construction was undertaken in accordance with the design (by way of a Producer Statement 4 or equivalent).
38. Any material deposited into the reclamation areas for bulk filling must only consist of the following:
 - (a) Dredge Spoil; and/or
 - (b) Imported inert fill material, such as sand, soil, rock, gravel, and crushed concrete; and/or
 - (c) Fill stabilising agents such as cement or lime.

Marine structures design and construction

39. The design of the reclamation, wharf, tug berthing facility, and Water Taxi Pontoon must:
 - (a) be prepared by a suitably experienced Chartered Professional Engineer
 - (b) not give rise to any navigation or safety effects, including on the operation of the adjacent Channel Infrastructure jetties (including the effects of ships berthed at Berth 5 and on shipping movements to and from Channel Infrastructure's jetty 3) and potential recreational conflicts.
 - (c) be reviewed by an independent Suitably Qualified and Experienced person to confirm that there are no navigation or safety effects associated with the design including in respect of the operation of the adjacent Channel Infrastructure jetties including shipping movements to and from Channel Infrastructure's jetty 3 and potential recreational conflicts. The review must be submitted to Council for certification at least two (2) months prior to construction of these structures and must have regard to and incorporate where appropriate:
 - (i) any recommended changes to the design to manage predicted changes to hydrodynamics and minimise effects on the Channel Infrastructure structures (including berth pockets) and turning basin, including the mooring of commercial vessels frequenting the Channel Infrastructure structures set out in the report required by Condition 128125(a)(ii) and (iii); and

- (ii) any outcomes and recommendations of the Full Mission Bridge Simulations required by Condition 128, to be provided to Channel Infrastructure and Seafuels at the same time as the independent Suitably Qualified and Experienced person; and
 - (d) be provided to Channel Infrastructure and Seafuels, along with the results of the independent review required by Condition 39(c) with an opportunity for Channel Infrastructure and Seafuels to make comment within 20 working days on navigation or safety effects associated with the operation of the adjacent Channel Infrastructure jetties including shipping movements to and from Channel's jetty 3, and including in relation to successive versions of the design before it is finalised;
 - (e) be updated to address any effects identified in the independent review required by Condition 39(c) above and respond to and reasonably incorporate any comments provided by Channel Infrastructure or Seafuels pursuant to Condition 39(d) above;
 - (f) be submitted to the Council for certification at least three (3) months prior to construction of the reclamation or structures, along with the results of the independent review required by Condition 39(c) above, any updates to respond to the independent review required by Condition 39 above, and/or any comments provided by Channel Infrastructure or Seafuels pursuant to Condition 39(d) above and where incorporated, that practicable alternatives have been considered.
40. For the purposes of Condition 39:
- (a) The design of the reclamation, wharf, tug berthing facility, and Water Taxi Pontoon, includes the design detail, as well as the extent and location of each structure and the berthing of ships at these structures.
 - (b) Navigation and safety effects includes (but is not limited to) the effects of vessels berthed at the Wharf, tug berthing facility and Water Taxi Pontoon.
 - (c) The requirement for the design to have no navigation or safety effects applies in all existing operable weather conditions (including wind) and tide conditions, that have occurred over the preceding 12 months and must not take into account any changes that could potentially be made to a third parties' structures or operations to mitigate any navigation or safety effects (unless their permission is obtained).
41. The consent holder will notify Channel Infrastructure and Seafuels when it engages the Suitably Qualified and Experienced person in accordance with Condition 39(c) so that Channel Infrastructure and Seafuels may prepare internally for its review of the design in accordance with Condition 39(d).
42. A Chartered Professional Engineer with relevant experience must oversee the construction of the wharf, tug berthing facility, and Water Taxi Pontoon structures to ensure they comply with the design. A statement must be provided by the engineer to Council confirming the construction was undertaken in accordance with the design (by way of a Producer Statement 4 or equivalent).
43. The tug berthing facility must be located at the general location shown in "*Northport relocated tug facility – eastern end concept plan*", D60-X (Issue R0, September 2022) at **Appendix 1**.
- Advice Note:** 'General location' includes any changes to the location and extent of the tug berthing facility required by Condition 32 or Condition 39.
44. The Water Taxi Pontoon must be located at the general location shown in plan "*Northport expansion – Berth 5*", 014656 (July 2023) at **Appendix 1**.

Advice Note: Public access to the Water Taxi Pontoon will be via the public Pocket Park.

Advice Note: 'General location' includes any changes to the location and extent of the Water Taxi Pontoon required by Condition 32 or Condition 39.

Sandbank Renourishment Area

45. At least three (3) months prior to the commencement of the sandbank (bird roost) construction works the consent holder must prepare and submit to the Council a Sandbank (Bird Roost) Management Plan ("SBRMP"). The purpose of the SBRMP is to ensure that the ongoing structural integrity of the Sandbank Renourishment Area in providing replacement roosting habitat for Tōrea pango (Variable oystercatcher) and Tūturiwhatu (New Zealand dotterel), Tarāpunga (Red Billed Gull) and Tōrea (South Island Pied oystercatcher), and minimise any consequential effects on bird foraging in the vicinity.
46. The SBRMP must include:
 - (a) an assessment of performance standards and specifications (including minimum area and height above mean high water springs) to achieve its purpose;
 - (b) the construction methodology, including how tracking of any vehicles and machinery over the surrounding intertidal area will be avoided;
 - (c) maintenance monitoring, in accordance with Conditions 209-212;
 - (d) the likely duration of the Sandbank operating as an effective high tide bird roost, including between renourishment;
 - (e) and the likely nourishment frequency and volumes required;
 - (f) confirmation from a Suitably Qualified and Experienced person that the material used in the Sandbank Renourishment Area construction contains no contaminants above background levels, based on the average of no less than five sediment sample locations within the western intertidal area of Marsden Bay.
47. The final design of the Sandbank Renourishment Area must be in general accordance with Tonkin + Taylor "*Bird Roost Concept*", DWG No. 1017349-02 (Revision 1, September 2022) (see **Appendix 1**) and the Avifauna section of the CEMP and the SBRMP.
48. Before the commencement of construction works on the proposed reclamation, the consent holder must construct the Sandbank Renourishment Area.
49. A Chartered Professional Coastal Engineer with relevant experience must oversee the construction of the sandbank to ensure it complies with the SBRMP and sand renourishment area plans. A statement must be provided by the engineer to Council confirming the construction was undertaken in accordance with the design.
50. Subject to obtaining the necessary consents to do so, the Consent Holder must maintain the bird roost in perpetuity.

Advice Note: If the ongoing maintenance of the bird roost requires replacement resource consents, it is the Consent Holders intention to obtain these consents in order to maintain the avifauna roost in perpetuity, or at least as long as the port is operating.

ENVIRONMENTAL MITIGATION

Public access

51. Prior to commencement of the works, the consent holder must provide or facilitate an alternate location for the Te Araroa trail and Water Taxi to connect from Reotahi to Marsden Point and must maintain this facility until Practical Completion of the replacement Water Taxi Berth.
52. The consent holder must maintain existing public access to and along the foreshore and public reserve areas to the greatest extent practicable, except where these consents authorise exclusive occupation and/or where necessary for operational requirements or to ensure public safety.

Contribution to Indigenous Duneland Vegetation

53. Prior to the commencement of reclamation works, the consent holder must make a donation of \$100,000.00 (Index-Linked) to an established group(s) whose purpose includes the conservation, maintenance and restoration of indigenous duneland ecosystems within the Waipu Ecological District. The intended purpose of the donation is to enable the group to undertake duneland revegetation, weed and/or pest control within the Waipu Ecological District.
54. Prior to distribution of funds the Consent Holder must provide confirmation to the Council of compliance with Condition 53, including the intended use and timing of the donation.
55. Within three months of completion of the works identified in Condition 53, the Consent Holder must provide confirmation to the Council that the works have been undertaken, including a report detailing the location and scale of works, and any proposed ongoing management.

Integrated marine planning initiative

56. Within 6 months of Commencement of these resource consents, the Consent Holder must use reasonable endeavours to establish a Steering Committee to examine and promote Integrated Marine Planning and Governance for Bream Bay having regard to the draft Discussion Document dated 28 July 2023. The consent holder's obligations include, as a minimum:

- (a) Inviting stakeholders and members of the RG to participate in a Steering Committee;
- (b) Providing funding towards the establishment, administration, and promotion of the roles and outcomes of, a Steering Committee ('Steering Committee Funding'). The Steering Committee Funding will be \$100,000.00 (plus GST, if any) for the first year, and \$50K (plus GST, if any) for a period of 8 years thereafter (total sum not to exceed \$500,000.00 (plus GST, if any)), beginning the first full calendar year following the commencement of these consents. A record of payments constituting the Steering Committee Funding for each full calendar year is to be provided by the consent holder to the Council's Compliance Manager not later than 31 March the following year; and
- (c) Generally promoting the Steering Committee to assist it to carry out its functions and achieve the outcomes sought.
- (d) Promote appropriate steps to manage vessel movements in order to minimise marine mammal ship strike, such as adoption of the Hauraki Gulf Transit Protocol.

Advice Note: *The consent holder has offered, on an Augier basis, to use its reasonable endeavours to establish and promote a Steering Committee to examine integrated co-governance of Bream Bay, including the promotion of an Integrated Marine Planning Framework that provides for the integration of all interests towards the wellbeing of the marine environment. Information regarding Northport's aim in promoting and establishing a Steering Committee, including its' proposed constitution, structure, functions, and outcomes sought is set out in the Statement of Intent.*

It is acknowledged that the likely constitution of a Steering Committee will include representatives of central and local government, quasi-governmental bodies, interest groups, industry, and hapū/iwi/Māori. As such, it is recognised that the obligations on Northport secured through these consent conditions need to be appropriately scoped.

Shorebird Pre and Post Construction Monitoring (NRC consent)

Pre construction monitoring

57. Prior to the commencement of the Expansion Project works in the CMA the Consent Holder must commission a suitably qualified and experienced ornithologist to carry out baseline monitoring of all shorebird use of the area shown on the plan below from and including 'Expanded 2', eastward to and including 'East 3', (the "monitoring area"), for roosting and foraging.



58. The monitoring in Condition 57 must:

- (a) Be completed prior to and within 3 years of the commencement of the Expansion Project works in the CMA.
- (b) Be for a minimum period of two years .
- (c) Include one high-tide and one low-tide survey per month.
- (d) Include, but not be limited to, monitoring of Variable oystercatcher, New Zealand dotterel, Red billed gull and South Island Pied Oystercatcher

Post Construction Monitoring

59. Within three (3) months of completion of the Expansion Project works in the CMA the Consent Holder must commission a suitably qualified and experienced ornithologist to monitor all shorebirds roosting in the 'monitoring area', including the HTBR.

60. The monitoring in Condition 59 must:

- (a) Be for a minimum period of 2 years.
- (b) Include quarterly high-tide and low-tide surveys.
- (c) Include, but not be limited to monitoring of Variable oystercatcher, New Zealand dotterel, Red billed gull and South Island Pied Oystercatcher

Shorebird Monitoring and Management Report (NRC consent)

61. Within three (3) months of completing the monitoring under Conditions 59-60, the Consent Holder must provide a draft Shorebird Monitoring and Management Report (SMMR) prepared by a suitably qualified and experienced ornithologist to RFB for their comment in accordance with Condition 62.

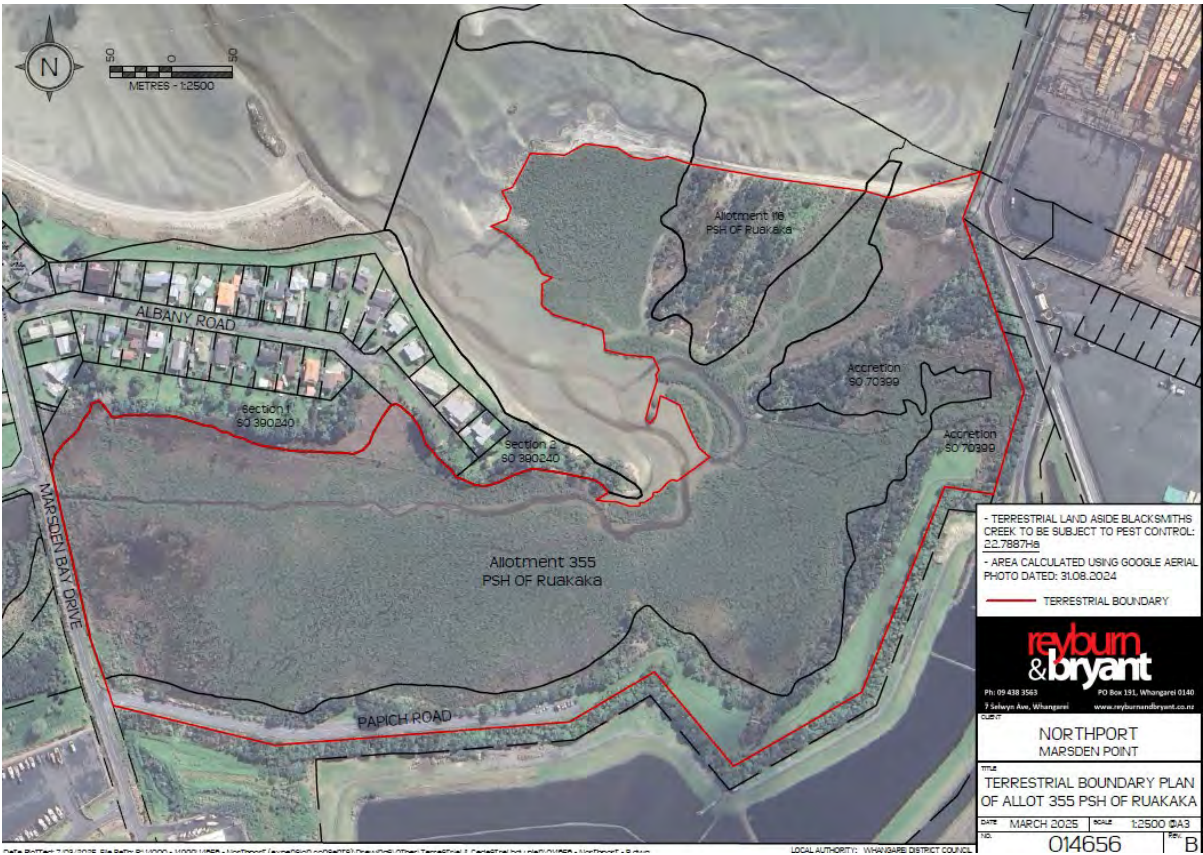
The draft SMMR must include:

- (a) An analysis of the pre and post construction monitoring data gathered in accordance with conditions 57-60. and an assessment of the extent to which:

- (i) the HTBR is providing roosting habitat for shorebird species within the 'monitoring area';
 - (ii) the Expansion Project has had an adverse effect on shorebird roosting within the 'monitoring area'; and
 - (iii) the HTBR could be modified to enhance its use as a high tide roost habitat; and
 - (b) In the event that the analysis in (a) above identifies that the Expansion Project is having adverse effects on shorebird roosting in the 'monitoring area' that are not being addressed by the HTBR:
 - (i) An assessment of what additional measures may be available to address those adverse effects.
62. If the analysis/assessment in Conditions 61 (a) and (b) above identifies additional measures to address any adverse effects, the Consent Holder must assess the feasibility of the additional measures and, of those, which measures it is practicably able implement. That information must be provided to RFB and DOC with the draft SMMR, with an invitation to provide feedback within four (4) weeks.
63. The final SMMR must include:
- (a) Any feedback received from RFB in accordance with Condition 62 on the draft SMMR and the identification of any measures in Condition 62 that are not agreed and the reasons for that; and
 - (b) Confirmation of those additional measures that the Consent Holder is practicably able to implement.
64. The final SMMR must be provided to the Council and RFB within four (4) weeks of receiving feedback from RFB in accordance with Condition 63.
65. Subject to obtaining any necessary statutory and/or property related approvals, the Consent Holder must implement the additional matters identified in the final SMMR provided to the Council under Condition 64.

Blacksmiths Creek Predator Control (NRC consent)

66. At least three (3) months prior to construction of the HTBR, the Consent Holder must submit to the Council for certification a Predator Control Plan for Blacksmiths Creek. The purpose of the Predator Control Plan is to protect shore birds from predation by rodents, feral cats, and mustelids. For the purposes of this condition, "Blacksmiths Creek" is the area shown outlined in red on the plan below:



67. The Predator Control Plan must include the following information:
- (i) Target pest species, which must include rodents, feral cats, mustelids.
 - (ii) Predator control measures to be used.
 - (iii) The frequency of pest management activities.
 - (iv) Monitoring frequency and methods.
 - (v) Adaptation to respond to outcomes of monitoring.
 - (vi) Evidence of consultation with RFB.
68. Subject to obtaining landowner approval, the Consent Holder must implement the Predator Control Plan for a period of 35 years from the date of the commencement of construction of the HTBR.

CONSTRUCTION MANAGEMENT

Construction noise

69. Construction noise from activities within the CMA, including from capital and maintenance dredging, must not exceed the noise limits in the following table:

RESIDENTIAL ZONES AND DWELLINGS IN RURAL AREAS:

Upper limits for construction noise received in residential zones and dwellings in rural areas

Time of week	Time period	Noise limits (dB)	
		L _{Aeq}	L _{AFmax}
Weekdays	0630-0730	55	75

	0730-1800	70	85
	1800-2000	65	80
	2000-0630	45	75
	0630-0730	45	75
Saturdays	0730-1800	70	85
	1800-2000	45	75
	2000-0630	45	75
	0630-0730	45	75
Sundays and public holidays	0730-1800	55	85
	1800-2000	45	75
	2000-0630	45	75
	0630-0730	45	75

INDUSTRIAL OR COMMERCIAL AREAS:***Upper limits for construction noise received in industrial or commercial areas on all days***

Time period	Noise limits (dB L _{Aeq})
0730-1800	70
1800-0730	75

70. Construction noise must be measured and assessed in accordance with New Zealand Standard NZS 6803:1999 “Acoustics – Construction Noise”.

Construction dust

71. The consent holder must manage dust associated with construction works to avoid having an offensive or objectionable effect beyond the boundary of the land or structures owned or occupied by the consent holder.

Advice Note: *There is potential for discharges to air in the form of dust from at least the following activities:*

- a) The stockpiling, crushing or handling of material;*
- b) The loading and unloading of material and the movement of vehicles associated with the handling of material;*
- c) Transport of material;*
- d) Vehicle movements;*
- e) The deposition of material associated with the construction of the reclamation; and*
- f) Fugitive dust from unconsolidated surfaces.*

72. If dust from site activities results in any form of nuisance effect beyond the boundary of land or structures owned or occupied by the consent holder, the consent holder must immediately review the dust mitigation measures and amend or implement additional dust control methods necessary to prevent a reoccurrence.

Avifauna

Kororā Little Penguin

73. Within 24 hours prior to any works resulting in the disturbance of existing revetment rock, the consent holder must undertake surveys by a Suitably Qualified and Experienced coastal ornithologist and a certified penguin detector dog to determine the presence or absence of kororā *Little Penguin* within the existing eastern boundary riprap revetment.
74. If an active burrow or moulting penguin is discovered under Condition 73, until such time that nesting or moulting is complete, the following applies:
- (a) No rock removal or piling activities must be undertaken within 10 m of the active burrow or moulting penguin; and
 - (b) No other construction activity may occur in proximity to an active burrow or moulting penguin unless that activity can achieve a maximum sound level of 75 dB LAeq(15min) as measured outside of the entrance of a burrow containing an active burrow or moulting penguin.
75. If kororā *Little Penguin* are present within 10 m of a proposed reclamation works area, any rock removal works must be undertaken in the presence of a Suitably Qualified and Experienced coastal ornithologist.
76. The consent holder must ensure that no kororā *Little Penguin* are trapped by reclamation construction works.

Advice Note: *Catching, holding, and/or releasing kororā Little Penguin will require authorisation from the Department of Conservation under the Wildlife Act 1953.*

Advice Note: *“Active burrow” is defined as a kororā burrow containing, or suspected to contain, a nesting bird, viable nest contents (i.e. eggs and / or chicks) or moulting bird based on the time of the year and other evidence observed at the burrow location by a Suitably Qualified and Experienced coastal ornithologist.*

Tōrea pango Variable oystercatcher

77. If reclamation construction works are to occur during September to March inclusive (being Tōrea pango *Variable oystercatcher* breeding season), surveys must be undertaken by a Suitably Qualified and Experienced coastal ornithologist to determine potential Tōrea pango *Variable oystercatcher* nesting habitat within the proposed works footprint(s).
78. If reclamation construction works are to occur during the Tōrea pango *Variable oystercatcher* breeding season and within 20 metres of an area identified as potential Tōrea pango *Variable oystercatcher* nesting habitat, a Suitably Qualified and Experienced coastal ornithologist must survey for the presence of active nests.
79. If an active nest is detected, a 20 metres exclusion zone must be implemented for all reclamation construction machinery and personnel.

Advice Note: *Refer also the requirements in these conditions for constructing and maintaining the Sandbank Renourishment Area to provide additional avifauna roosting habitat.*

Marine mammals

Marine Mammal Observation Zone (MMOZ)

80. Before commencing any pile driving activity, the consent holder must establish a MMOZ and an Extended Marine Mammal Observation Zone (EMMOZ) within which personnel having the necessary training and experience must act as observers to search the MMOZ for marine mammals as far as reasonably practicable, including pre-start and during works observations.
- (a) The MMOZ extent must be any CMA within 200 metres of the pile driving.
 - (b) The EMMOZ extent must be any CMA within 800 metres of the pile driving and be enacted for a period of 5 days following a reported sighting of a baleen whale or popoiangore leopard seal in the wider Whangarei Area (Bream Bay to Tutukaka).
 - (c) The pre-start observation zone will extend from a line between One Tree Point and Manganese Point and the eastern boundary of the MMOZ (or EMMOZ if in place).
 - (d) Pre-start observations must occur for 30 minutes prior to the commencement of piling each day.
81. The default MMOZ extent must be confirmed (or adjusted) following the verification of in-situ pile driving sound levels and model verification in accordance with the procedures set out in the Conditions 86-92.

Pile driving prohibition requirements

82. If:
- (a) dolphin, toothed whale or pinniped (other than a leopard seal) is sighted in waters within the MMOZ; or
 - (b) a baleen whale or popoiangore leopard seal is sighted in waters within the EMMOZ;
- pile driving must not commence or must immediately cease; and must only commence or re-commence once all marine mammals have left the relevant location(s) specified in (a) and (b) above and in accordance with Condition 83 below.
83. if a baleen whale or popoiangore leopard seal passes through the EMMOZ and continues westward up the harbour:
- (a) An additional MMO must be stationed at One Tree Point and that MMO must observe the waters to the west of a line between One Tree Point and Manganese Point as shown on the plan entitled 'One Tree Point – Manganese Point Line' dated 30 January 2024 in **Appendix 4** and the waters between the EMMOZ and the line between One Tree Point and Manganese Point.
 - (b) Piling must remain ceased whilst:
 - (a) the sighted baleen whale is observed to be west of the EMMOZ.
 - (b) the sighted popoiangore leopard seal is observed to be west of the EMMOZ but east of the line between One Tree Point and Manganese Point
 - (c) Piling can recommence if:
 - (i) The sighted popoiangore leopard seal crosses the line between One Tree Point and Manganese Point in a westerly direction.
 - (ii) The sighted popoiangore leopard seal enters the Marsden Cove Marina.
 - (iii) The sighted baleen whale or popoiangore leopard seal exits the eastern edge of the EMMOZ.

- (d) If a popoiangore leopard seal is observed crossing the line between One Tree Point and Manganese Point in eastward direction towards the port, piling must cease and can only recommence if the mammal is visually confirmed to exit the eastward edge of the EMMOZ or has not been sighted for 1 hour.
- 84. The distances in Condition 80 must be confirmed (or adjusted) following the verification of in-situ pile driving sound levels in accordance with Conditions 86-92.
- 85. During the first five instances of dolphin or orca entering the harbour and crossing the line between One Tree Point and Manganese Point in a westward direction, the following must occur:
 - (a) An additional MMO must be stationed at One Tree Point
 - (b) That MMO and the one stationed at Northport, must observe the dolphin or orca behaviour to track and record the general behaviour of these same animals as they return to the east, cross the One Tree Point line and eventually exit the harbour.

If the MMO, in consultation with a suitably qualified and experienced marine mammal expert, determine there are obvious signs of avoidance or deterrence by these species, then piling must cease in future instances of dolphin or orca travelling eastward across a line between One Tree Point and Manganese Point

Pile-driving sound level verification

- 86. The Consent Holder must carry out acoustic monitoring during Pile Driving to measure the unweighted twenty-four hour cumulative Sound Exposure level (SELcum(24h)) at the point shown on the plan entitled 'Underwater Noise Measurement Point' dated 16 February 2024 in **Appendix 5**. The unweighted SELcum(24h) must be derived from the impact driven and vibro-driven piling operations over a twenty-four hour period.
- 87. The acoustic monitoring required under Condition 86 must include, but not be limited to, measurement work undertaken within two weeks of commencing pile driving activities for the wharf and during normal operating conditions on each of the different pile diameters for a minimum of three days each.
- 88. The monitoring results collected in accordance with Conditions 86 and 87 must be compared to the unweighted twenty-four hour cumulative Sound Exposure level (SELcum(24h)) and must not exceed 180dB re 1µPa2s (SELcum(24 hour)) during the first year of piling
- 89. Within 2 weeks of completion of the measurements work completed under Conditions 86 and 87, an acoustic monitoring report must be prepared by the Consent Holder. The report must detail the acoustic monitoring undertaken, the piling activity during the monitoring and a comparison of the monitoring results to the criteria in Condition 88. A copy of the report must be provided to the NRC.
- 90. If piling activities are to extend into a second successive winter, the monitoring set out in Conditions 86 and 87 must be repeated in June of that year. The unweighted twenty-four hour cumulative Sound Exposure level (SELcum(24h)) measured during this monitoring must be not exceed 170 dB re 1µPa2s at the measurement point shown on the plan entitled 'Underwater Noise Measurement Point' dated 16 February 2024 in **Appendix 5**.
- 91. The radius of the MMOZ and the EMMOZ in Condition 80 may be reduced in size if the acoustic monitoring and subsequent model verification carried out in accordance with Conditions 86 and 87 establishes that:

- (a) the unweighted 190 dB re 1 μ Pa2s SELcum(24h) contour which sets the MMOZ is less than 200 metres from the Pile Driving unit.
 - (b) the unweighted 176 dB re 1 μ Pa2s SELcum(24h) contour which sets the EMMOZ is less than 800m from the Pile Driving unit.
92. Any reduction in the size of the MMOZ must be approved in writing by the Council on the basis of provision of the results of representative acoustic monitoring in accordance with Condition 91.

Pile driving timing and scheduling

93. Pile driving must only be undertaken during daylight hours (half hour after sunrise and half hour before sunset).
94. To the extent practicable, pile driving must be scheduled and carried out to minimise the potential impact on marine mammals. This includes scheduling commencement of pile driving at a time which minimises the need for it to occur over successive marine mammal “seasons” (i.e. back-to-back winters).

Advice Note: Conditions 80-94 are for the purposes of minimising any risk of hearing impairment to marine mammals from pile-driving activities. Refer also the various controls required by the Marine Mammals section of the CEMP.

Discharge of reclamation decant water

95. Reclamation construction decant water must be discharged to coastal water via pipeline with an outlet(s) that is:
- (a) adjacent to the active reclamation edge; and
 - (b) at least 1 (one) metre below Mean High Water Springs.
96. Monitoring of the reclamation construction decant discharge must occur as follows:
- (a) On a daily basis during decant discharge, the consent holder must measure the outlet discharge turbidity in NTU/FTU and compare this value with the turbidity trigger value in NTU/FTU that equates to a TSS of 300mg/l. The NTU/FTU equivalent must be established following contemporaneous TSS and turbidity testing of the discharge in the first week of operations.
 - (b) If the measured median turbidity, over a one-hour period, exceeds the trigger value in (a), the consent holder must:
 - (i) Implement management practices to reduce the turbidity of the discharge;
 - (ii) Collect a sample of discharge from the outlet pipe at a point prior to discharge into the CMA; and
 - (iii) Analyse the sample for TSS concentration and compare it with the TSS trigger value in (a) above.
97. The consent holder must provide the results of sampling completed under Condition 96 upon request.
98. If a discharge sample collected in accordance with Condition 96 exceeds the TSS concentration limit the following must occur:
- (a) The consent holder must immediately cease the discharge and implement any management practices required to reduce the TSS concentration of the decanted discharge, after which the discharge may recommence;
 - (b) Within one (1) hour of resuming the discharge, the consent holder must measure the outlet discharge turbidity in NTU/FTU to reassess for compliance with Condition 96; and

- (c) If compliance with Condition 96 is not achieved, the consent holder must undertake further management measures to reduce the TSS concentration of the decanted discharge and inform the Council within 48 hours.

Discharge of stormwater during construction

- 99. The discharge of stormwater from the reclamation and/or wharf area while under construction must only be:
 - (a) into the decant discharge system;
 - (b) directly into coastal water; or
 - (c) into the existing canal and pond-based stormwater system.
- 100. Any construction stormwater discharge system(s) discharging directly to coastal water must be designed to achieve a NTU/FTU concentration of equivalent to 300mg/l TSS using the relationship established in accordance with Condition 96(a) at the point of discharge for all rainfall events up to and including the 1 in 20-year storm event.
- 101. The Consent Holder must monitor the stormwater discharges twice a year to ensure that they meet the 300mg/l TSS in Condition 100. The monitoring results must be forwarded to Council within 10 working days.

Construction and Environmental Management Plan (CEMP)

- 102. At least three (3) months prior to the commencement of construction authorised by these consents, the consent holder must submit a Construction and Environmental Management Plan (CEMP) to the Council for certification. The objectives of the CEMP are:
 - (a) to detail the environmental monitoring and management procedures to be implemented during the Expansion Project's construction phase to ensure that appropriate environmental management practices are followed and adverse construction effects are minimised to the extent practicable; and
 - (b) to ensure construction effects of the Expansion Project are in accordance with the assessments accompanying the resource consent applications.
- 103. The CEMP must include the following sections:
 - (a) Construction phase roles and responsibilities protocols;
 - (b) Environmental Risk Assessment;
 - (c) Dust;
 - (d) Hazardous Substances;
 - (e) Erosion and Sediment Control;
 - (f) Marine Works;
 - (g) Wildlife, including:
 - (i) Avifauna; and
 - (ii) Marine Mammals;
 - (h) Archaeology;
 - (i) Construction Noise; and
 - (j) Complaints Procedures and incident reporting.

104. The CEMP must be prepared by a Suitably Qualified and Experienced person, with advice from relevant technical experts, and be in general accordance with the draft CEMP provided as part of the resource consent application (*Enviser, Draft Construction and Environmental Management Plan, October 2022*).
105. The CEMP must be certified in writing by the Council's Compliance Manager prior to construction works authorised by these consents first commencing, and the consent holder must undertake all activities authorised by these consents in accordance with the certified CEMP (including any certified variation).
106. The CEMP may be submitted in stages to reflect the design and construction programme. If staging is proposed and any of the matters in Condition 103 are not relevant, a statement must be provided of why management of these effects are not relevant to the particular stage of works.
107. Any variation to the CEMP must be subject to certification by the Council.
108. Specific requirements for certain sections of the CEMP are set out in the conditions below.

Dust

109. The dust section must set out dust management practices during construction to achieve the outcomes of Conditions 71-72, and to minimise the risk of dust discharges having an offensive or objectionable effect beyond the boundary of land or structures owned or occupied by the consent holder, and must include:
 - (a) A description of the potential Expansion Project construction dust sources;
 - (b) The methods to be used for controlling dust at each source including:
 - (i) Stabilisation of unconsolidated surfaces using water, wetting agents, chemical dust suppressants, and/or other surface modification methods;
 - (ii) Assessing meteorological conditions in advance to determine whether dust minimisation measures need to be activated or adjusted;
 - (iii) Regular sweeping of sealed surfaces;
 - (iv) Minimising vehicle speeds to 20km/h on unsealed surfaces; and
 - (v) Handling and stockpiling practices, including guidelines for removal and stockpiling during windy conditions.
 - (c) A description of inspection and monitoring procedures;
 - (d) A system of training for employees and contractors to make them aware of the requirements of the dust management section of the CEMP;
 - (e) A method for recording and responding to dust complaints from the public; and
 - (f) Procedures for managing dust when staff are not on site.

Erosion and Sediment Control

110. The erosion and sediment control section of the CEMP must include measures for managing the decant discharge and any other construction stormwater discharges during reclamation, including the following information:
 - (a) A plan of the location of the discharge;

- (b) A description of the best practice methods that will be used to manage the quantity and quality of the discharge, so that the discharges achieve the turbidity conditions standards;
- (c) Methods to avoid and contain spillages during pumping; and
- (d) Methods to monitor, report on, and manage the decant discharge in accordance with Conditions 95-98; and
- (e) Methods to establish whether contaminants are present in sediment that could pose an unacceptable risk to the health of marine organisms (that is, if they are above the relevant Interim ANZECC Guidelines for Sediment (ISQG-Low)), and if contaminants are observed above those guideline values, a strategy to manage the risk to a point that is deemed acceptable.

Avifauna

111. The Avifauna section of the CEMP must be written by a Suitably Qualified and Experienced ornithologist and must address the measures required to ensure compliance with Conditions 73-79, set out construction protocols to avoid injury/mortality of coastal avifauna, and include:

- (a) Detailed descriptions and methodologies setting out how adverse effects on Kororā *Little Penguin* and Tōrea pango *Variable oystercatcher* will be managed, including:
 - (i) For Kororā *Little Penguin*, to ensure compliance with Conditions 73 to 76 (relating to pre-construction surveys, implementation of construction works exclusion zones, and measures to reduce underwater noise from pile driving); and
 - (ii) For Tōrea pango *Variable oystercatcher*, to ensure compliance with Conditions 77 to (requiring protocols for pre- and during-constructions surveys, and implementation of exclusions zones around active nests and nesting birds).
 - (iii) Low impact sediment controls and dredging methodology as specified in the Coastal Avifauna Assessment; and
 - (iv) Piling methodology for protection of Kororā as specified in the Coastal Avifauna Assessment.
- (b) Measures to minimise the effects of artificial construction lighting on avifauna, including a description of the outdoor lighting to be used during construction to reduce the potential for bird strike, and may include:
 - (i) targeting of luminaires;
 - (ii) use of shields or baffles;
 - (iii) use of light dimmers and/or timers for areas that are not constantly in use; and
 - (iv) use of coloured and/or LED lights to reduce overall light intensity.

Marine Mammals

112. The Marine Mammals section of the CEMP must include (as an attachment) a Marine Mammal Management Plan (MMMP) which must detail:

- (a) The potential for adverse effects of noise produced by construction activities on marine mammals that may be present within Whangarei Harbour.
- (b) Procedures for the verification of the in-situ noise levels produced from pile-driving activities by measuring the underwater noise of these activities within two weeks of pile-driving commencement, and a process for identifying and implementing any corresponding adjustments to mitigation actions, if required (including revised Marine Mammal Observation Zones (MMOZs) and associated pile driving prohibition procedures).
- (c) Underwater noise management, including passive acoustic monitoring where appropriate, and implementation measures for the MMOZs provided in Condition 112(f).
- (d) Procedures for the continuation of acoustic monitoring at the established baseline stations across the Whangārei Harbour during pile-driving activities.
- (e) Piling methodology procedures for the reduction of noise levels at source, which may include:

- (i) The use of vibro-driving where practicable;
- (ii) “Soft start” or “ramping up” procedures over a ten-minute period in accordance with best practice for impact and vibro-piling where practicable;

Advice Note: “Soft start” and “ramping up” are procedures whereby pile-driving energy is gradually increased to normal operating levels to give nearby marine animals an opportunity to move away from the area before sound levels increase to an extent that may cause discomfort or injury.

- (iii) The use of a sacrificial non-metallic (e.g. wooden) hammer cushion caps or dollies for impact piling to reduce underwater noise where practicable;
 - (iv) Modifications to pile striking by changing the contact time of the hammer (to reduce the noise generated by impacts through a reduction in the amplitude of the pile vibration) where practicable;
 - (v) Available technologies to reduce noise at source and their implementation where practicable (for example bottom-driven piles, air balloons inflated within open piles to reduce ringing, and/or bubble curtain technology); and/or
 - (vi) The use of available technologies to reduce underwater noise propagation (e.g. bubble curtains).
- (f) Protocols for the implementation of Marine Mammal Observation Zones (MMOZs) and associated pile driving prohibition procedures, including:
 - (i) Establishment of MMOZs, including relevant procedures, within which personnel having the necessary training and experience will act as observers to search the MMOZ for marine mammals;
 - (ii) Reporting and logging of marine mammal sightings; and
 - (iii) Establishment of pile driving prohibition procedures if a marine mammal is cited within an MMOZ.
 - (g) Protocols for the implementation of a Dredging Marine Mammal Observation Zone (DMMOZ) located 50 metres all around an actively dredging dredge vessel and associated dredging prohibition procedures including:

- (i) Establishment of the DMMOZ, including relevant procedures, within which personnel having the necessary training and experience will act as observers to search the DMMOZ for marine mammals;
 - (ii) Reporting and logging of marine mammal sightings; and
 - (iii) Establishment of dredging prohibition procedures if a marine mammal is cited within an DMMOZ.
 - (h) Protocols for marine mammal training of construction staff and the required training and experience of the designated Marine Mammal Observers.
 - (i) Vessel operating guidelines to minimise the risk of vessel strike (including compliance with the Marine Mammals Protection Regulations 1992), equivalent to the Hauraki Gulf Transit Protocol with relation to speed limits, watch keeping, and reporting.
 - (j) Protocols for reducing risk of entanglement of marine mammals in construction equipment.
 - (k) Protocols for the control of construction-related debris and waste, including waste management protocols for the secure onboard storage of items such as lines, nets, and waste to avoid entanglement of marine mammals or their ingestion of waste material.
 - (l) Protocols for the maintenance and inspection of marine-based construction equipment having the potential for effects on marine mammals (for example the monthly inspection and maintenance of marine silt curtains, if used).
 - (m) Procedures for the liaison with:
 - (i) the Department of Conservation *Te Papa Atawhai* to request up-to-date regional sighting information for the duration of construction works (excluding maintenance dredging), particularly for visiting baleen whales; and
 - (ii) Marsden Cove marina staff to request up-to-date sighting information for Leopard seals *Popoia ngore* in the Marina for the duration of construction works (excluding maintenance dredging). This might include, subject to agreement, installing appropriate signage at the marina with a contact telephone number for the Northport Service Centre; and
 - (iii) Iwi and/or hapū representatives of the RG.
 - (n) Procedures, including timeframes, for reviewing management actions to ensure their continuing efficacy during operations.
 - (o) Incident reporting procedures.
113. The MMMP must be in general accordance with the draft MMMP provided as part of the resource consent application (*Enviser, Draft Marine Mammal Management Plan, September 2022*).

COMMERCIAL SHIPPING

Safety Management Plan ('SMP')

114. The consent holder must prepare a draft SMP and, following consultation on the content of the draft SMP with representatives from Channel Infrastructure, North Tugz Limited, Seafuels, the Whangarei Harbour Safety Committee, and the Harbourmaster (including provision of at least fifteen (15) working days for feedback to be provided), the consent holder must no later than three (3) months prior to the commencement of Expansion Project capital dredging provide the draft SMP to the Council for Certification.
115. The objective of the SMP is to specify procedures for the management of Expansion Project capital dredging, reclamation, and construction operations to ensure that any actual or potential adverse effects of capital dredging and reclamation on other commercial shipping operations in the Whangarei Harbour, with respect to harbour safety and vessel navigation, are appropriately managed.
116. In order to achieve the objective set out in Condition 115, the SMP must, as a minimum, include:
- (a) The processes and procedures, including real-time communication protocols, that will be implemented to minimise disruption to commercial shipping schedules, including for ships visiting Channel Infrastructure and Northport;
 - (b) The process and procedures, including real-time communication protocols, that will be implemented to avoid, as far as reasonably practicable, disruption to commercial shipping movements to / from Channel Infrastructure's jetties 1 and 2;
 - (c) The measures/procedures that will be implemented in relation to Expansion Project capital dredging and reclamation operations to manage any potential conflicts between the capital dredging and reclamation programmes and other commercial shipping, including ships visiting Channel Infrastructure and Northport;
 - (d) The measures/procedures that will be implemented in relation to Expansion Project capital dredging, and reclamation operations to maintain the safety of all commercial shipping in Whangarei Harbour;
 - (e) Any changes required to the existing Dynamic Under Keel Clearance System as a result of the Expansion Project, and the necessary implementation processes for any such changes;
 - (f) The training and/or information regarding the above matters that will be provided to dredge vessel crews.
117. The consent holder must undertake all activities authorised by these resource consents in accordance with the Certified SMP.
118. Any amendments to the Certified SMP proposed by the consent holder must be supported by a report from a Suitably Qualified and Experienced person, following consultation by the consent holder with representatives from Channel Infrastructure, Seafuels, North Tugz Limited, the Whangarei Harbour Safety Committee, and the Harbourmaster. Any amendments to the MSP must be Certified by the Council.

Potential sedimentation at Channel Infrastructure jetties and turning basin

119. In order to inform the coastal process shoreline monitoring required by Conditions 213-216 the consent holder must undertake an initial pre-Expansion Project baseline sub-tidal, inter—tidal, and dry beach survey of the

shoreline from Northport to Mair Bank (inclusive), including the Channel Infrastructure jetty area. The pre-Expansion Project baseline bathymetry survey must be completed prior to commencement of Expansion Project capital dredging and must expressly consider the bathymetry in the vicinity of the following areas:

- (a) the Channel Infrastructure jetty structures, including the berth pockets and turning basin, and
- (b) other marine structures owned/operated by Channel Infrastructure (and existing as at 1 January 2023), including the firepump intake, outfall locations, boat ramp and spillway.

120. A report on the outputs of the pre-dredging baseline survey required by Condition 119 to be provided to Channel Infrastructure within 4 months of the completion of the survey.

Advice Note: *The consent holder agrees to also make available to Channel Infrastructure copies of all reports required by Condition 215 (reporting on the coastal process shoreline monitoring required to be undertaken by the consent holder) immediately after they are provided to Council in accordance with those conditions.*

121. The consent holder must procure an independent Suitably Qualified and Experienced person to review any reports or other data provided to the Council in accordance with Conditions 120 and 215, and to prepare a further report that, as a minimum:

- (a) Describes the levels of sedimentation or erosion in the areas in the vicinity of the Channel Infrastructure structures and turning basin, and outlines any changes that have occurred since the pre-Expansion Project baseline bathymetry survey, and/or any preceding report produced under this condition; and
- (b) Based on the monitoring undertaken, assess whether it is possible to determine that any materially increased sedimentation or erosion at the Channel Infrastructure structures or turning basin has been caused by the Expansion Project and to quantify the relative contribution of the Expansion Project to the observed changes to other processes.

122. The consent holder must no later than 18 months following the completion of Expansion Project capital dredging submit the report required by Condition 121 to Channel Infrastructure. Thereafter, reports must be submitted annually to Channel Infrastructure for a further five years. At the end of that five year period, if the opinion of the independent Suitably Qualified and Experienced person is that material changes to levels of sedimentation or erosion in the areas in the vicinity of the Channel Infrastructure structures and turning basin continue to be observed, then monitoring and reporting in accordance with Condition 123 must be reviewed and updated to reflect the observed changes and establish a new monitoring regime and timeframe..

123. Where a report produced under Condition 122 concludes that the Expansion Project has contributed to materially increased sedimentation or erosion at the Channel Infrastructure structures or turning basin, the consent holder must engage with Channel Infrastructure to determine an appropriate mechanism to fund the actual and reasonable costs for any:

- (a) measures including maintenance dredging required to be undertaken to return the levels of sedimentation at the Channel Infrastructure structures or turning basin to pre-Expansion Project levels, and/or
- (b) monitoring and/or scour protection works required to be undertaken to manage erosion at the Channel Infrastructure structures or turning basin due to the Expansion Project.

124. The consent holder will contribute funding for the actual and reasonable costs to implement the measures and works in Condition 123(a) and (b) proportionate to the consent holders' contribution to increased sedimentation or erosion at the Channel Infrastructure structures or turning basin.

Advice Note: *The above conditions do not require the consent holder to obtain any authorisations required for any maintenance dredging or scour protection works at the Channel Infrastructure structures or turning basin. It is anticipated that potential maintenance dredging and/or scour protection works will be able to be carried out pursuant to existing resource consents held by Northport and Channel Infrastructure. If additional resource consents are required, obtaining such consents must be the responsibility of the consent holder.*

Potential changes to mooring forces

125. The consent holder must engage an independent Suitably Qualified and Experienced person(s) to:

- (a) Prior to finalising the design of the reclamation, wharf, tug berthing facility, and Water Taxi Pontoon in accordance with Condition 39:
 - (i) confirm that the model used to inform the report 'Hydrodynamic Modelling Additional Output Locations: of Proposed Reclamation and dredging Layout on Hydrodynamics' (MetOcean Solutions, April 2023) accurately reflects the actual (i.e. constructed/existing) format and extent of structures within the study area, and if necessary to update the model's parameters relied on in that report to reflect the environment as it exists; and
 - (ii) using the model referenced in Condition 125(a)(i) above, prepare a report describing the changes in hydrodynamics in the immediate vicinity of the Channel Infrastructure structures (including berths) and turning basin resulting from the Expansion Project; and
 - (iii) using the information obtained from Condition 125(a)(ii) above, determine whether any changes to the design of the reclamation, wharf, tug berthing facility, and Water Taxi Pontoon are required in order to manage predicted changes to hydrodynamics and minimise effects on the Channel Infrastructure structures (including berths) and turning basin including the mooring of commercial vessels frequenting Channel Infrastructure structures;
- (b) Prior to construction commencing, review the modelled changes in current velocities predicted in the report in Condition 125 (a)(ii) reflecting the finalised design subject to Condition 125(a)(iii) above and either:
 - (i) confirm that the modelled changes in hydrodynamics will not materially change mooring of commercial vessels frequenting the Channel Infrastructure structures (including berths), or
 - (ii) if appropriate, recommend that instruments be deployed to quantify the post-construction changes in hydrodynamics in the immediate vicinity of the Channel Infrastructure structures (including berths) and turning basin and prepare a report in accordance with Condition 125(c) below; and
- (c) Produce a report for certification by the Council which must, as a minimum:
 - (i) Describe the changes in hydrodynamics in the immediate vicinity of the Channel Infrastructure structures (including berths) and turning basin, and whether those changes are materially different to the modelled changes predicted in the report required by Condition 125(a)(ii) reflecting the finalised design subject to Condition 125(a)(iii) above; and

- (ii) If the changes in hydrodynamics are materially different to the modelled changes predicted in the report required by Condition 125(a)(ii) reflecting the finalised design subject to Condition 125(a)(iii) above, assess whether it is possible to determine that any such changes in hydrodynamics at the Channel Infrastructure structures (including berths) or turning basin have been caused by the Expansion Project; and
 - (iii) Assess whether any changes determined in Condition 125(c)(ii) above will give rise to a material change to the arrival, departure and mooring of commercial vessels frequenting the Channel Infrastructure jetties.
126. The consent holder must provide the reports produced pursuant to Condition 125(a)(ii) and 125(c), any confirmation pursuant to Condition 125(b)(i) to Channel Infrastructure within one month of their completion.
127. Where a report produced pursuant to Condition 125 concludes that the Expansion Project has contributed to changes in hydrodynamics at the Channel Infrastructure structures (including berth pockets) or turning basin which are materially different to predicted in the report required by Condition 125(a)(ii) above and which will materially affect mooring of commercial vessels frequenting the Channel Infrastructure structures, the consent holder must:
- (a) Engage with Channel Infrastructure to determine an appropriate mechanism to upgrade the existing mooring equipment to accommodate the changed hydrodynamics and ensure that the mooring capability of Channel Infrastructure's structures (including berth pockets) is maintained; and
 - (b) Contribute funding for the actual and reasonable costs necessary to upgrade the existing mooring equipment proportionate to the consent holders' contribution to changed hydrodynamics affecting the mooring equipment.

Advice Note: *The above conditions are in addition to the other design requirements in these conditions, and the other coastal process monitoring for geomorphological changes in these conditions. They are specifically aimed to provide assurance for Channel Infrastructure that any actual effects associated with the Expansion Project on mooring forces at its jetties will be consistent with the predicted (modelled) effects, and further, to facilitate a management response in the unlikely event that the actual effects are materially different than predicted.*

Full mission bridge simulation

128. Prior to construction of the port expansion, the consent holder must provide to Council for certification results of Full Mission Bridge Simulations (FMBS) with outcomes and recommendations (e.g. ship size, environmental conditions, tug capacities and emergency response) agreed by an independent Suitably Qualified and Experienced observer. The FMBS are to include:
- (a) Navigation to and from pilot boarding through to berthing at the extended berth associated with the resource consent application, all tide conditions, agreed limiting conditions (i.e. Harbourmaster limits for wind, waves, currents) with real time / model inputs into simulator;
 - (b) Assessment of passing ship, swing safety, emergency planning / procedures and minimum towage requirements;
 - (c) Manoeuvres into/out of Channel Infrastructure's jetty 3 bunker facility with new facility berths occupied / passing effects and safety / emergency procedures and risk assessment.

Advice Note: *The FMBS's are to include independent verification / observer as well as representation from other industry (i.e. CINZ and Seafuels). The comprehensive inclusion of MetOcean modelling and limiting criteria for navigation, together with suitable sized (design) vessels and support vessels (tugs) to enable a range of arrival and*

departure manoeuvres as well as ad-hoc (unplanned) emergencies such as loss of steerage and / or loss of propulsion. The FMBS must also include a comprehensive full-scale mock-up of the simulated ships' bridge including a high-resolution, full-scale display of the relevant ship and surrounding area (as seen from the ship's bridge), the relevant controller hardware where installed on an existing ship such as telegraph, thrusters, independent helm and Azi Pods, together with other instruments required for navigation and manoeuvring.

Oil spill risk assessment

129. At least six months prior to Practical Completion, the consent holder must provide an Oil Spill Risk Assessment (OSRA) to Council for certification. The OSRA must be for the purpose of informing any required updates or changes to the Northland Marine Oil Spill Contingency Plan and associated spill response procedures and equipment requirements. The OSRA must, at a minimum, consider all navigation (i.e. whole transit from boarding to departure of Pilot), emergency procedures, and potential sources and scale of oil spill and response times.

DREDGING

Capital dredging

130. Conditions 131-190 apply to capital dredging only.

General

131. The Consent Holder must not undertake capital dredging between the months of 1 October to 31 January in two successive years.
132. At least ten (10) working days in advance of the date of the commencement of capital dredging associated with these consents, the consent holder must:
- (a) notify the Council of the commencement of capital dredging; and
 - (b) advertise the anticipated dredging in the Northern Advocate (or equivalent); and
 - (c) advise the anticipated location and timing of the dredging on its website.
133. Capital dredging must:
- (a) be undertaken only within the area marked "Extent of Proposed Dredge Area" on the plan C04 contained in **Appendix 1**; and
 - (b) result in a Declared Depth of no deeper than 14.5 metres for Area G on and 16.0 metres for Area H on plan C04 contained in **Appendix 1**.
134. The consent holder must record the locations and periods of all dredging, the method of dredging, and the quantities of in situ material dredged (in cubic metres) and must provide these records to the Council within 20 working days after the dredging work is completed.
135. Except for incidental dredging discharges, all seabed material dredged during the capital dredging programme must be:
- (a) Placed in the reclamation associated with the Expansion Project; or

- (b) Deposited on land at Marsden Point presently owned by the consent holder or Marsden Maritime Holdings Ltd; or
 - (c) Deposited in any other authorised location.
136. The consent holder must notify the Council within ten (10) working days following the date of the completion of capital dredging works associated with these consents.
137. As soon as practicable following completion of the capital dredging, the consent holder must provide a bathymetric plan defining the location and depth of the dredging area and batters within the CMA to the entities listed below. The plan must include GPS co-ordinate data (using Transverse Mercator 2000 or an equivalent system).

Hydrographic Surveyor

Maritime New Zealand

Toitū Te Whenua Land Information New Zealand	PO Box 25620
PO Box 5501	Wellington 6140
Wellington 6145	

Northland Regional Council

Channel Infrastructure

Private Bag 9021	Private Bag 9024
Whangarei Mail Centre	Whangarei 0148
Whangarei 0148	

Timing of capital dredging with respect to capital dredging authorised by AUT.037197.01-13

138. Capital dredging under these consents must not commence:
- (a) during capital dredging authorised under consents *AUT.037197.01-13*; or
 - (b) within a 6 month period following the completion of a capital dredging event authorised under consents *AUT.037197.01-13* –

in each case only where the capital dredging event undertaken pursuant to consents *AUT.037197.01-13* is within Harbour Area A (inner), as described in those consents.

Advice Note: *Channel Infrastructure holds resource consents AUT.037197.01-13 for the deepening and realignment of the Whangārei Harbour shipping channel and associated works. Condition 78 of those resource consents requires the consent holder to notify the Council, and other parties, of each dredging event at least two (2) weeks before commencing dredging. Condition 79 also requires the consent holder to publicly advertise the location and timing of dredging in the Northern Advocate at least one (1) week, but not more than two (2) weeks, in advance of commencing dredging operations on each occasion.*

Advice Note: Condition 138 is for the purpose of managing potential cumulative marine ecological effects associated with capital dredging under these resource consents and consents AUT.037197.01-13 held by Channel Infrastructure.

Capital Dredging Management Plan (Capital DMP)

139. The consent holder must, at least three (3) months prior to capital dredging commencing, submit to the Council a Capital Dredging Management Plan (Capital DMP) for certification.
140. The objective of the Capital DMP is to describe the capital dredging plant, work methodologies, and environmental management systems to be used for the delivery of the capital dredging to ensure that any actual or potential adverse effects associated with capital dredging are appropriately managed. The Capital DMP may cross reference or include relevant sections of the CEMP, particularly those relating to Wildlife.
141. The plan must provide the following information:
 - (a) A description of proposed works, together with drawings;
 - (b) A description of the number and types of dredges to be used;
 - (c) A dredging programme including a timetable, sequence of events and expected duration of all proposed works;
 - (d) A description of dredging methodology to be used;
 - (e) A description of how the location and quantities of Dredge Spoil and/or in situ seabed material are to be recorded;
 - (f) A description of the maintenance of equipment and systems that are to be used during dredging;
 - (g) Community liaison arrangements, including arrangements for liaising with Channel Infrastructure;
 - (h) A description of the storage and handling of hazardous substances during dredging;
 - (i) Protocols for managing accidental discharge of sediments or other contaminants into the CMA;
 - (j) A description of the outdoor lighting to be used to reduce the potential for bird strike, for example targeting of luminaries and the use of shields or baffles;
 - (k) A description of measures to manage any conflicts between the dredging program and organised sporting events in Whangārei harbour;
 - (l) A description of a turbulence reducing (green or environmental) valve to be incorporated with the overflow system (if a TSHD is used);
 - (m) A description of all other relevant measures, systems, and training that will be implemented to manage adverse effects on the receiving environment during the operation of the dredge vessel; including measures relating to biofouling, management of waste, and refuelling.
 - (n) Details of the training for personnel involved in the operation of the dredge so that they may recognise any potential archaeological material including koiwi tangata or taonga, and to ensure compliance with the conditions of these consents and the DMP;
 - (o) Measures required to ensure compliance with relevant terrestrial noise limits in Condition 69 including the following matters:

- i) Procedures for noise monitoring at the commencement of capital dredging for each dredge used to determine actual noise emissions;
 - ii) Ongoing monitoring methods and procedures to ensure compliance with the noise limits;
 - iii) Procedures for the promotion of the awareness of noise management for the crew of each dredging vessel, including maintenance of noisy plant or equipment; and
 - iv) A procedure for the receipt, response and management of any noise related complaints received during the dredging period.
- (p) Procedures to be implemented to manage underwater dredging noise;
- (q) Other relevant requirements specified in these conditions of consent (including other management plans); and
- (r) A Contingency response plan.
142. The Capital DMP must be certified in writing by the Council prior to capital dredging first commencing, and the consent holder must undertake capital dredging in accordance with the certified Capital DMP.
143. Any variation to the Capital DMP must be subject to certification by the Council.
144. The consent holder must provide the Capital DMP, and any variations to the Capital DMP, to Channel Infrastructure within ten (10) working days of the document's certification by the Council.
145. Appropriate navigation signals must be shown at all times during dredging activities.

Environmental Monitoring and Management Plan (EMMP)

146. At least three (3) months prior to the commencement of marine ecology assurance monitoring required by these consents, the consent holder must provide an EMMP to the Council for certification.
147. The objectives of the EMMP are:
- (a) *Turbidity monitoring and management*: to detail how capital dredging turbidity monitoring and management actions are implemented to minimise the risk of elevated turbidity that can be attributed to capital dredging and to ensure that turbidity during dredging does not exceed the expected background combined with the modelled turbidity, therefore ensuring that related effects on sensitive marine ecology (including SEAs) are within predicted levels; and
 - (b) *Marine ecology assurance monitoring*: to facilitate the comparison of changes in the marine receiving environment caused by Expansion Project capital dredging with those predicted in the information filed in support of the resource consent application, including by:
 - (i) Characterising the responses of surrounding sub-tidal and inter-tidal habitats and benthic communities to sediments suspended and deposited offsite during channel dredging, and subsequent changes after dredging is complete.
 - (ii) Confirming whether benthic habitats and communities similar to those currently existing re-establish on the dredged basin once dredging is complete, and if not, determine why.

- (c) *Bathymetric and shoreline surveys*: to collect spatial data on the seabed and shoreline to assess any physical changes to the coastline and seabed that may result from the Expansion Project and potential actions if adverse changes associated with the Expansion Project are identified through monitoring.

148. The EMMP must include the following topics:

Turbidity monitoring and management

- (a) The monitoring of turbidity plumes, including roles and responsibilities of groups involved in monitoring;
- (b) Management actions to be undertaken in response to an exceedance of a turbidity trigger or Tier 3 Compliance Level;

Marine ecology assurance monitoring

- (c) Detailed assurance monitoring survey methodologies providing for:
 - (i) sub-tidal marine ecology assurance monitoring in accordance with Conditions 182-183;
 - (ii) inter-tidal marine ecology assurance monitoring in accordance with Conditions 184-186;
 - (iii) the collection of assurance monitoring data on the following key physical and ecological indicators:
 - sediment grain size;
 - the composition of sub-tidal and inter-tidal infaunal communities (including diversity, abundance, evenness);
 - the distribution and cover of seagrass and macroalgae beds; and
 - the presence (and/or abundance) and distribution of sub-tidal epifauna (or indicator species).
- (d) Where relevant, methodologies for the analysis of marine ecology assurance monitoring data collected;
- (e) A process for the refinement of the Marsden Bay seagrass monitoring area pursuant to Condition 186;

Bathymetric and shoreline surveys:

- (f) The methodologies for the bathymetric and shoreline surveys required by Condition 214; and

Miscellaneous

- (g) The EMMP content requirements specified in other conditions of these consents;
- (h) Reporting requirements specified in these conditions of consent and otherwise needed to achieve the objectives of the EMMP;
- (i) Identification of any other relevant management plans (for example the CEMP, Capital DMP, Maintenance DMP) and the linkages with those plans; and
- (j) Documentation procedures for handling complaints relating to capital dredging.

Monitoring of Turbidity

149. As part of the EMMP, the consent holder must detail how the capital dredging turbidity plumes are to be monitored to:
- (a) Confirm whether or not turbidity plumes exceed the turbidity triggers and Tier 3 Compliance Level that are to be specified under Condition 152;

- (b) Assess whether a turbidity event is determined to be an extraordinary natural event; and
 - (c) Assess the relative contributions of dredging and non-dredging sources to observed turbidity.
150. The EMMP must include the following details, and the Consent Holder must consult with the Council on these details at least 60 working days prior to providing the EMMP for certification:
- (a) The monitoring equipment to be used, including the use of nephelometers;
 - (b) The process for pre deployment calibration, in-situ validation and post deployment verification.
 - (c) The process for data processing, including data editing, and replacing missing records.
 - (d) The location of the monitoring equipment;
 - (e) The setting up and maintenance of monitoring equipment;
 - (f) The establishment of real-time monitoring; and
 - (g) Data management;
 - (h) Quality assurance /quality control methods including management of missing and aberrant data.

Management Actions in Response to Turbidity Plumes

151. As part of the EMMP, the consent holder must detail the management actions to be carried out in response to elevated turbidity as defined by the turbidity Tier 1 and Tier 2 triggers.
152. To achieve Condition 151, the EMMP must include the following:
- (a) Details of the rationale for classifying the turbidity observations into two (2) tiers of turbidity triggers and one (1) Tier 3 Compliance Level;
 - (b) Details of how the Tier 1, and Tier 2 turbidity triggers and Tier 3 Compliance Level are determined using the methodology referred to in Condition 173;
 - (c) Setting out the Intensity values for Tier 1, and Tier 2 turbidity triggers and Tier 3 Compliance Level which are based on the 80th, 95th, and 99th percentile of baseline plus Predicted Dredging Turbidity respectively; and
 - (d) Description of the management actions (including potentially ceasing dredging at a particular location) set out in Condition 154 and how they may be applied by the dredge operator when a Tier 1, or Tier 2 turbidity trigger or Tier 3 Compliance Limit is exceeded.
153. The EMMP must also include procedures on:
- (a) Investigating whether the exceedance of the trigger is caused by capital dredging; and
 - (b) Where necessary, increasing monitoring effort to better understand the characteristics of the turbidity causing an Exceedance, such as carrying out manual turbidity measurements in the vicinity of the monitoring station.
154. The EMMP must include a suite of management response measures that may be undertaken in response to an Exceedance of a turbidity trigger, including:
- (a) A change in the location of dredging;
 - (b) A change in the dredging process, including timing of dredging within the tidal phase; and/or

- (c) The cessation of dredging in the vicinity of a telemetered turbidity monitoring station.
- 155. The EMMP must be in general accordance with the draft EMMP provided as part of the resource consent application [*'Draft Construction Environmental Management Plan'* (Enviser ref. 1116) dated October 2022].
- 156. The EMMP must be certified in writing by the Council prior to commencement of pre-dredging marine ecology assurance monitoring required by these conditions, and the consent holder must undertake capital dredging, and pre-, during-, and post-dredging marine ecology assurance monitoring and reporting, in accordance with the certified EMMP (including any certified variation).
- 157. Any variation to the EMMP must be subject to certification by the Council.
- 158. A copy of the EMMP and all amended EMMPs must be provided to iwi/hapū by the Consent Holder as soon as practicable, and in any event not more than five (5) Working Days following certification.

Capital dredging turbidity monitoring

- 159. The consent holder must undertake a capital dredging monitoring and reporting programme in accordance with Conditions 160 to 165.
- 160. The telemetered turbidity monitoring stations must be operational whilst dredging is undertaken. If an instrument fails, or requires maintenance, dredging can only continue if:
 - (a) The instrument (or an equivalent) is replaced within 48 hours; and
 - (b) Manual turbidity readings are collected on a 4 hourly basis during daylight hours.
- 161. The purpose of the capital dredging monitoring programme is to:
 - (a) Ensure that turbidity during dredging does not exceed the expected background combined with the modelled turbidity, therefore ensuring that the related effects on sensitive marine ecology (including SEAs) are within predicted levels.
 - (b) Provide baseline water quality information to enable the calculation of trigger levels; and
 - (c) Monitor capital dredging so that any management actions can be implemented to address unanticipated environmental effects.
- 162. The consent holder must carry out baseline water quality monitoring required by Conditions 166 to 167 over a period of at least one (1) year, prior to the first commencement of capital dredging authorised by these consents.
- 163. There must be no fewer than three (3) stations carrying out telemetered monitoring of turbidity (NTU) for the purposes of baseline water quality monitoring and capital dredging management.
- 164. For the purposes of the baseline water quality monitoring, the consent holder must
 - (a) Monitor for turbidity (in NTU/FTU) at all locations and salinity at one location. Each parameter must be monitored at a frequency of not less than once every 15 minutes. The specific location of the water quality monitoring stations, the parameters to be monitored at each station, and the methodology and equipment to be used are to be detailed in the EMMP.
 - (b) Monitor turbidity for at least 12 months, with a target of 95% data recovery over the 12 months.

- (c) At each monitoring location, monthly water sampling must be undertaken to contemporaneously record the TSS and NTU/FTU levels at that location.
165. The monitoring programme contained in the EMMP must be designed and carried out by a person(s) who is suitably experienced in marine environment monitoring.

Reporting

166. The consent holder must prepare a baseline water quality monitoring report. The report must:
- (a) Present and discuss the results of baseline water quality monitoring; and
 - (b) Detail the pre deployment calibration, in-situ field validation, data processing, and quality assurance.
 - (c) Recommend any amendments to the EMMP for the purposes of future water quality monitoring required by these consents to change the location of a station(s) within the relevant zone or the monitoring parameters at each station, provided that the amended locations or monitoring parameters at the station better achieve the purpose of the EMMP.
167. The baseline water quality monitoring report must be provided to the Council at least two (2) months prior to the first commencement of capital dredging. This report must be used to re-certify the EMMP to set the turbidity triggers and Tier 3 compliance limit.
168. During and after capital dredging, the consent holder must provide to the Council, at least quarterly, a report that summarises the:
- (a) Water quality monitoring data from the previous quarter and any monitoring or equipment issues that occurred during that period;
 - (b) Details of equipment calibration, in situ field validation, data processing, and quality assurance.
 - (c) Collation of other monitoring undertaken; and
 - (d) Details of any Exceedance(s), the management response measures carried out and the results of monitoring after the management response measures have been completed.
169. There must be no fewer than two (2) quarterly reports prepared immediately after capital dredging is completed.
170. Within nine (9) months of the completion of capital dredging, the consent holder must provide the Council a Dredging Turbidity Monitoring and Management Report. The report must provide a summary of the turbidity monitoring and management response measures carried out during the capital dredging (excluding for marine ecology assurance monitoring, the requirements for which are set out below) and must include, but not be limited, to the following:
- (a) Summary of the turbidity monitoring undertaken; and
 - (b) Summary of the management actions carried out and the results of monitoring after the management actions have been completed.

Turbidity Triggers and Tier 3 Compliance Limit

Establishment of turbidity triggers and Tier 3 Compliance Level:

171. The consent holder must establish turbidity triggers and a Tier 3 Compliance Limit for each of the telemetered turbidity monitoring locations. There must be two (2) tiers of turbidity triggers and one (1) Tier 3 Compliance Limit, each with an Intensity and Allowable Duration value.
172. The purpose of turbidity triggers is to:
 - (a) Initiate a management action(s), as detailed in the EMMP and required under Condition 154, in the event of a Tier 1 or 2 turbidity trigger exceedance;
 - (b) Cease dredging in the vicinity of a monitoring location in the case of an Exceedance of the Tier 3 Compliance Limit as set out in Conditions 177 to 181.
173. Turbidity triggers and Tier 3 Compliance Levels must be established in accordance with the methodology (including the modified-Intensity-Frequency-Duration approach) in the document titled *"Turbidity Monitoring for the Northport Expansion Project"* (1 June 2023, Environmetrics Australia) included as **Appendix 3**.
174. Upon completion of the baseline water quality monitoring, the Intensity component of the turbidity triggers and Tier 3 Compliance Level for each telemetered turbidity monitoring location must be calculated using the baseline turbidity data referred to in Condition 162 plus the Predicted Dredging Turbidity at that location, using the methodology referred to in Condition 173.
175. The consent holder must provide to the Council, at least two (2) months prior to commencement of capital dredging, a written report prepared by a Suitably Qualified and Experienced person which demonstrates that the turbidity triggers and Tier 3 Compliance Level have been established in accordance Conditions 172 and 174.
176. The report prepared under Condition 175 must be certified in writing by the Council's Compliance Manager prior to the first commencement of capital dredging authorised by these consents.

Tier 3 Compliance Levels and Exceedance Events

177. The telemetered turbidity monitoring stations required under Condition 163 are to be used to determine whether there has been a Tier 3 Compliance Level Exceedance.
178. If a monitoring station records an Exceedance of the Tier 3 intensity value for more than 7.2 hours over a rolling 30-day period, capital dredging must cease in the vicinity of that monitoring station and only recommence in the following circumstances:
 - (a) The number of Tier 3 "exceedance hours" has fallen below the 7.2 hours available at that station over a rolling 30-day period, or
 - (b) The turbidity recorded at that station is less than the Tier 3 NTU/FTU intensity value calculated for that station; or
 - (c) The exceedance is due to an extraordinary natural event as detailed in Condition 180.

179. The consent holder must ensure that methods for managing and achieving compliance with the requirements of Condition 178 must be set out in the EMMP.
180. Notwithstanding Condition 178, capital dredging may continue in the vicinity of a telemetered turbidity monitoring station provided that:
- (a) The consent holder provides the Council a written report, within 24 hours of a Tier 3 Compliance Level Exceedance referred to in Condition 178 which demonstrates that the elevated turbidity is due to an extraordinary natural event and not attributable to dredging; and
 - (b) If the Council, acting in its technical capacity, disagrees with the findings of the report the capital dredging must cease in the vicinity of the affected monitoring station(s) and only recommence in accordance with Conditions 178(a) and 178(b). If the Council provides no written response after two (2) working days then it is deemed that the Council agrees with the findings of the report prepared under Condition 180(a) and dredging may continue.

Advice Note: An extraordinary natural event should be a significant and self-evident natural event that has clearly caused an Exceedance of the Tier 3 Compliance Level at one (1) or more of the turbidity monitoring stations. The high-concentration turbidity plumes would have been generated from events such as a tsunami, a weather event causing significant flooding, extreme swells, or a land slip.

181. The consent holder must place a copy of the report prepared under Condition 180(a) on its website.

Marine ecology assurance monitoring

Sub-tidal monitoring

182. The consent holder must undertake marine benthic ecology assurance monitoring of sub-tidal biota and sediments:
- (a) in accordance with the certified EMMP; and
 - (b) in general accordance with the following table and plan:

Timing requirements of each sub-tidal sampling round (✓ means sampling is required; ✕ means no sampling is required)

	Within a one year period within 18 months prior to dredging commencing		During dredging (except in the dredge basin)		One year after dredging is complete		Three years after dredging is complete	
Area	Spring summer	Autumn / winter	Spring summer	Autumn / winter	Spring summer	Autumn / winter	Spring summer	Autumn / winter
Existing Dredge	✓	✓	✕	✕	✓	✓	✓	✓
West Impact	✓	✓	✓	✓	✓	✓	✕	✕
East Impact	✓	✓	✓	✓	✓	✓	✕	✕
North Impact	✓	✓	✓	✓	✓	✓	✕	✕
Reference	✓	✓	✓	✓	✓	✓	✓	✓

Plan showing indicative sample areas for sub-tidal benthic ecological monitoring



183. The spring/summer and autumn/winter sampling rounds required in Condition 182 must be as close to six (6) months apart as practicable.

Inter-tidal and sub-tidal monitoring

184. The consent holder must undertake marine ecology assurance monitoring of inter-tidal infauna, sediments, and seagrass:
- (a) in accordance with the certified EMMP; and
 - (b) in general accordance with the following table and plans:

Timing requirements of each inter-tidal sampling round (✓ means sampling is required; * means sampling is required if the previous monitoring round shows that scientifically significant adverse effects have occurred)

	Within a one year period within 18 months prior to dredging commencing		During dredging		One year after dredging is complete		Three years after dredging is complete	
Area	Spring / summer	Autumn / winter	Spring / summer	Autumn / winter	Spring / summer	Autumn / winter	Spring / summer	Autumn / winter
Marsden Bay benthic sediments and ecology	✓	✓	✓	✓	✓	✓	*	*
Tamaterau benthic sediments and ecology (reference location)	✓	✓	✓	✓	✓	✓	*	*
Marsden Bay inter-tidal and sub-tidal seagrass	✓	✓	✓	✓	✓	✓	*	*

Plan showing indicative sample areas for inter-tidal sediment and infauna monitoring



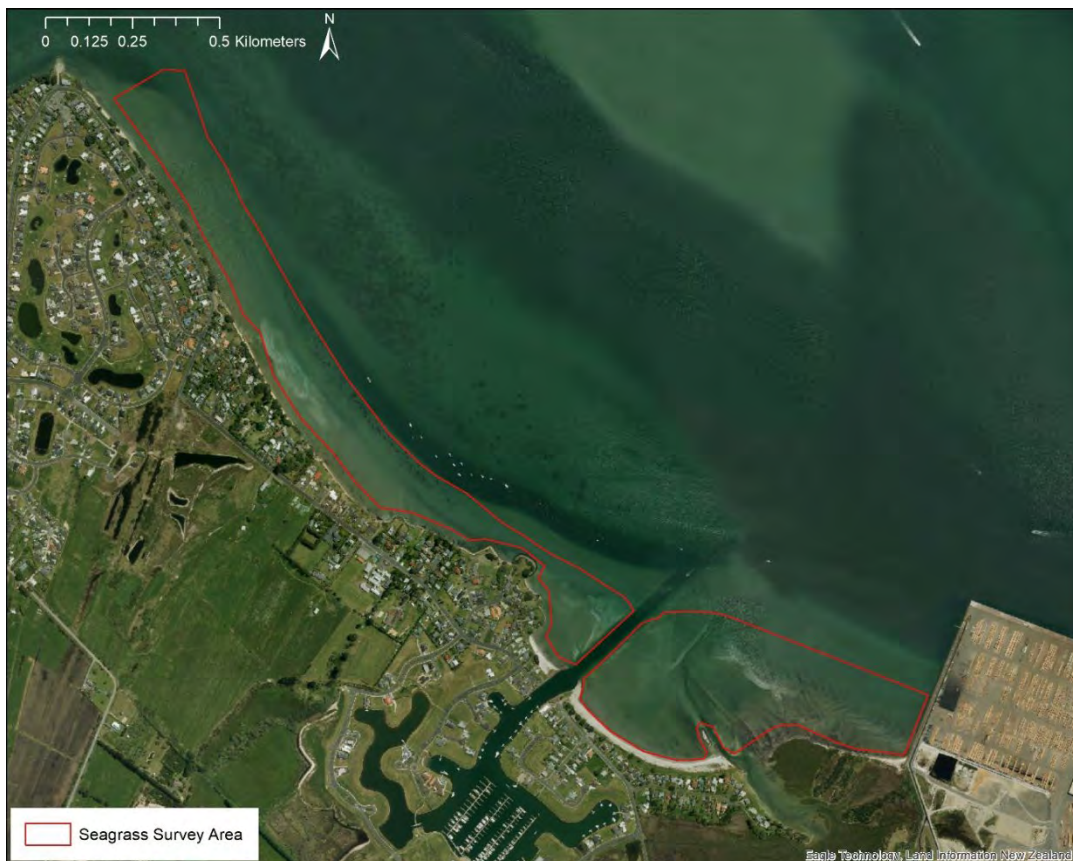
185. The spring/summer and autumn/winter sampling rounds required in Condition 3 must be as close to six (6) months apart as practicable.
186. The Marsden Bay seagrass monitoring required by Condition 184 must include either:

- a) The mapping of seagrass at Marsden Bay using georeferenced and ortho-corrected photogrammetry obtained by UAV (drone) survey; or if this is not practicable,
- b) Video transects through intertidal and subtidal seagrass beds.

The initial survey area must be in general accordance with the below plan. Subsequent survey areas may be refined following the process to be set out in the EMMP.

Advice Note: Video transects can be used if drone photogrammetry is prevented by drone flight restrictions, or water visibility is insufficient to map subtidal beds.

Indicative area for Marsden Bay inter-tidal and sub-tidal seagrass monitoring



Marine ecology assurance monitoring reporting

- 187. After the completion of each set of annual (i.e. spring/summer and autumn/winter) marine ecology assurance monitoring required by these consents, the consent holder must engage a Suitably Qualified and Experienced marine ecologist to produce a report detailing the assurance monitoring undertaken during that period, including with reference to any previous assurance monitoring in order to illustrate any relevant trends over time.
- 188. Each monitoring report required under Condition 187 must be provided to the Council within three (3) months of the completion of the relevant set of annual marine ecology assurance monitoring.

Advice Note: The marine ecology assurance monitoring conditions above are consistent with the document titled "Ecological Assurance Monitoring Plan" attached to the Draft EMMP submitted during the resource consent hearing for the expansion Project. The above conditions are intended to set out the key requirements and standards

of the marine ecology assurance monitoring that is required under these consents, with the EMMP to set out the detailed monitoring methodologies.

189. The last monitoring report covering the period 3-years after dredging is completed in accordance with Conditions 182 and 184, must consider and assess whether the observed ecological effects of dredging are within the bounds of those anticipated in the report titled Northport expansion project: Assessment of marine ecological effects lodged in support of this consent. If the observed effects exceed those anticipated, the Consent holder must engage a suitably qualified and experienced person to assess whether benthic habitats and communities are recovering, but at a lower than anticipated rate; and:
- (a) If so, provide an estimate of likely timeframes for residual effects to resolve and recommendations on further monitoring to track that recovery; and
 - (b) If recovery is not occurring, to assess the reasons why and options, including a proposal for remedying or mitigating those effects.
190. In the event that Condition 189(b) applies, and following certification by the Council, the consent holder must implement the proposed remediation or mitigation measures to the satisfaction of the Council.

Maintenance dredging

191. Conditions 192-208 apply to maintenance dredging only.
192. Maintenance dredging must not be undertaken between 1 October and 31 January inclusive unless it is necessary to do so as a result of unforeseen events or there is no practicable alternative timing.
193. Maintenance dredging must:
- (a) Only be undertaken within the area marked "Extent of Proposed Dredge Area" on the plan C04 contained in **Appendix 1**; and
 - (b) Result in a Declared Depth of no deeper than 14.5 metres for Area G and 16 metres for Area H on plan C04 contained in **Appendix 1**.
194. Except for urgent dredging required for navigational safety or stability of structures, at least ten (10) working days in advance of the date of the commencement of a maintenance dredging programme associated with these consents, the consent holder must:
- (a) Notify the Council of the intended maintenance dredging;
 - (b) Advertise the intended maintenance dredging in the Northern Advocate (or equivalent); and
 - (c) Advise the anticipated location and timing of maintenance dredging on its website.
195. The consent holder must ensure that a copy of this consent is provided to the person who is to carry out the dredging, prior to any work commencing. A copy of the consent must be held on the dredger.
196. When any maintenance dredging is carried out, the consent holder must record the periods of dredging, the method of dredging and the quantities of material dredged (in cubic metres) and must provide these records to the Council within twenty (20) working days after the maintenance dredging work is completed.

197. Maintenance dredging must not cause any of the following effects on the quality of the receiving waters, as measured at or beyond a 100 metre distance from the marked "Dredge Area" on WSP Ltd 'Design Drawings' 1-19278.01(03) – Sheet C04 (Rev E) contained in **Appendix 1**.
- (a) The turbidity of the water (NTU/FNU) or visual clarity (Secchi depth) must not be increased by more than 33% of the background turbidity at the time of measurement;
 - (b) The production of any conspicuous oil or grease film, scums or foams, or floatable or suspended materials, or emissions of objectionable odour; and
 - (c) The destruction of natural aquatic life by reason of a concentration of toxic substances.
198. During periods of maintenance dredging, visual checks must be carried out daily and in the event that such a check shows evidence of conspicuous change in visual clarity in the water column, testing must be carried out and reported in accordance with Condition 197.
199. The results of each monitoring campaign must be reported to the Council within one (1) week of monitoring being completed, or within 24 hours of any non-compliance.
200. Except for incidental dredging discharges, all material dredged during maintenance dredging must be:
- (a) Placed in the reclamation associated with the Expansion Project; or
 - (b) Deposited on land at Marsden Point presently owned by the consent holder or Marsden Maritime Holdings Ltd (Companies Office Number 389360); or
 - (c) Deposited in any other authorised location.
201. The consent holder must notify the Council within ten (10) working days following the date of the completion of a maintenance dredging programme associated with these consents.
202. On completion of a maintenance dredging programme, the consent holder must provide to the Council a bathymetric plan defining the location and depth of the dredging area and batters within the CMA. The plan must include GPS co-ordinate data (using Transverse Mercator 2000).

Maintenance Dredging Management Plan (Maintenance DMP)

203. At least three (3) months prior to maintenance dredging commencing, the consent holder must submit to the Council a Maintenance Dredging Management Plan (Maintenance DMP) for certification. The objective of the Maintenance DMP is to describe the maintenance dredging plant, work methodologies, and environmental management systems to be used to ensure that potential adverse effects associated with maintenance dredging are appropriately managed.
204. The plan must provide the following information:
- (a) A description of proposed works, together with drawings;
 - (b) A description of the number and types of dredges to be used;

- (c) A dredging programme including a timetable, sequence of events and expected duration of all proposed works;
 - (d) A description of dredging methodology to be used;
 - (e) A description of how the location and quantities of Dredge Spoil are to be recorded, and (if necessary) evidence that the dredge spoil disposal location is appropriately authorised;
 - (f) A description of the maintenance of equipment and systems that are used during dredging;
 - (g) Community liaison arrangements, including arrangements for liaising with Channel Infrastructure;
 - (h) A description of the storage and handling of hazardous substances during dredging;
 - (i) Protocols for managing accidental discharge of sediments or other contaminants into the CMA;
 - (j) A description of the outdoor lighting to be used to reduce the potential for bird strike, for example targeting of luminaries and the use of shields or baffles;
 - (k) A description of measures to manage any conflicts between the dredging program and organised sporting events in Whangārei harbour;
 - (l) A description of a turbulence reducing (green or environmental) valve to be incorporated with the overflow system;
 - (m) A description of all other relevant measures, systems, and training that will be implemented to manage adverse effects on the receiving environment during the operation of the dredge vessel; including measures relating to biofouling, management of waste, and refuelling.
 - (n) Details of the training for personnel involved in the operation of the dredge so that they may recognise any potential archaeological material including koiwi tangata or taonga, and to ensure compliance with the conditions of these consents;
 - (o) Procedures to be implemented to manage underwater dredging noise within the noise limits specified in these consents, including how any noise complaints are to be received and actioned; and
 - (s) Other relevant requirements specified in these conditions of consent (including other management plans); and
 - (p) A Contingency response plan and incident reporting.
205. The Maintenance DMP must be certified in writing by the Council prior to maintenance dredging first commencing, and the consent holder must undertake maintenance dredging in accordance with the certified Maintenance DMP (including any certified variation).
206. Any variation to the Maintenance DMP must be subject to certification by the Council.
207. The consent holder must provide the Maintenance DMP, and any variations to the Maintenance DMP, to Channel Infrastructure within ten (10) working days of the document's certification by the Council.
208. Appropriate navigation signals must be shown at all times during dredging activities.

SANDBANK RENOURISHMENT AREA GEOMORPHOLOGICAL MONITORING AND MAINTENANCE

209. The consent holder must commission inter-tidal and sub-tidal geomorphological surveys of the Sandbank Renourishment Area and the CMA within 200m of the Sandbank Renourishment Area.
210. The monitoring required by Condition 209 must be undertaken every two years for the first ten (10) years following the construction of the Sandbank Renourishment Area, and thereafter every five years.
211. Within three (3) months of each survey required by Conditions 209 and 210, the consent holder must provide to the Council for certification a report by a Suitably Qualified and Experienced coastal processes expert addressing the following:
- (a) The geomorphological performance of the Sandbank Renourishment Area; and
 - (b) The efficacy of potential periodic renourishment “top-up(s)” through the deposition of additional sand/material, including a recommendation on whether such top-up(s) are necessary to achieve the purpose of the Sandbank Renourishment Area; and, if so, the proposed details for such top-up(s) or any changes to a current top-up(s) regime (including the location, volume, and frequency of proposed additional sand deposition).
212. Where a report certified under Condition 211 recommends Sandbank Renourishment Area top-up(s), top-up(s) to the initial Sandbank Renourishment Area must be undertaken in accordance with the latest certified report.

COASTAL PROCESSES: BATHYMETRIC AND SHORELINE MONITORING

213. The consent holder must commission an independent and Suitably Qualified and Experienced person to undertake sub-tidal, inter-tidal, and dry beach surveys of the following areas to monitor for potential long-term coastal geomorphological changes associated with the development authorised by these consents:
- (a) Marsden Bay including the Marsden Cove Marina channel and Blacksmiths Creek channel; and
 - (b) The shoreline from Northport to Mair Bank (inclusive), including the Channel Infrastructure jetty area as described in Condition 119.
214. The detailed methodologies for the surveys required by Condition 213 are required to be set out in the EMMP (see EMMP Conditions 146-0).
215. The monitoring required by Condition 213, and associated reporting, must be undertaken in accordance with the frequencies in the following table. Reporting must include:
- (a) a comparison between the most recent surveys and surveys undertaken in previous project phases to identify any trends over time; and
 - (b) observations based on the results of the analysis, including in the context of ambient conditions such as wind speed and direction, water level variations, and any significant climate events; and
 - (c) any recommendations around proposed mitigation measures such as sand back-passing, beach nourishment, groynes and other structures.

Bathymetric and shoreline monitoring and reporting frequencies

Project Phase	Monitoring frequency	Reporting frequency
Within a one year period within 18 months prior to capital dredging commencing	Two surveys over the 12 month period	Nil
During dredging and in the first year post capital dredging	6 monthly (biannual) surveys	One report within six (6) months of the final survey completion
1-5 years post-completion of capital dredging	One survey annually	One report within six (6) months of the final survey completion

216. In the event that Condition 215(c) applies, and following certification by the Council that the recommendations will address the change in bathymetric and or shoreline profiles, the consent holder must implement the proposed remediation or mitigation measures to the satisfaction of the Council.

MARINE BIOSECURITY

217. At least three (3) months prior to the arrival of a dredge or reclamation vessel in New Zealand, the consent holder must submit a Biosecurity Management Plan(s) (BMP(s)) to the Council for certification.
218. The objective of the BMP(s) is to specify how the risk of a biosecurity incursion via introduction by Expansion Project construction vessels is to be primarily avoided, and to ensure effective treatment of all plant and equipment used in association with the works authorised by these consents to ensure that these do not become a vector for the spread of any unwanted or risk species. The BMP must include:
- (a) A description of the construction vessel(s) and its (their) attributes that affect biosecurity incursion risk, including key operational attributes (e.g. voyage speed, periods of time idle), maintenance history (including prior inspection and cleaning undertaken), and voyage history since last dry-docking and antifouling (e.g. countries visited and duration of stay);
 - (b) A description of the key sources of potential marine biosecurity risk from ballast water, sediments and biofouling. This must cover the hull, niche areas, and associated equipment, and consider both submerged and above-water surfaces;
 - (c) Findings from previous inspections, if available;
 - (d) If Northport is the first New Zealand destination since the latest hull cleaning, a description of the risk mitigation that has been or will be taken prior to arrival in New Zealand, including:
 - (i) Routine preventative treatment measures and their efficacy, including the age and condition of the antifouling coating, and marine growth prevention systems for sea chests and internal sea water systems;

- (ii) Any specific treatments for submerged and above-water surfaces that will be undertaken to address the Import Health Standards and CRMS requirements prior to departure for New Zealand. These could include, for example, in-water removal of biofouling, or above-water cleaning to remove sediment;
- (iii) Any additional risk mitigation planned during transit to New Zealand, including expected procedures for ballast water management;
- (iv) Expected desiccation period of above-water surfaces on arrival to New Zealand (i.e. period of air exposure since last dredging operations);

219. The BMP(s) must be prepared by a suitably experienced person.
220. The BMP(s) must be certified in writing by the Council's Compliance Manager prior to construction works authorised by these consents first commencing, and the consent holder must undertake all activities authorised by these consents in accordance with the certified BMP(s) (including any certified variation).
221. Any variation to the BMP(s) must be subject to certification by the Council.
222. Prior to dredging commencing, the consent holder must provide written certification from a Suitably Qualified and Experienced person to the Council to confirm that all plant and equipment entering the CMA associated with the exercise of these consents is free from unwanted or pest marine species.

OCCUPATION AND USE OF THE CMA FOR PORT CONSTRUCTION, OPERATION, AND MAINTENANCE

223. These consents authorise the consent holder to occupy, on an exclusive basis, and use for the purposes of these consents (including port construction, operation, and maintenance):
- (a) Those parts of the Whangārei Harbour being the proposed reclamation area (for the period such occupation is necessary); and
 - (b) Those parts of the Whangārei Harbour containing all approved port structures, including batter slopes, as shown on plan C03 contained in **Appendix 1**.
224. These consents authorise the consent holder to occupy, on a nonexclusive basis, and use for the purposes of these consents (including port operation and maintenance) an area generally within a line 60 metres seaward of all approved port structures and the proposed reclamation area, as shown on plan C03 contained in **Appendix 1**.

OCCUPATION AND USE OF THE CMA FOR WATER TAXI PONTOON

225. The Water Taxi Pontoon is to be completed within twelve (12) months of Practical Completion.
226. Notwithstanding Condition 225, the consent holder must allow for reasonable public recreational access on the Water Taxi Pontoon, except as required to ensure operational or public safety, or in an emergency response scenario.

Advice Note: *Public access to the Water Taxi Pontoon will be via the public Pocket Park.*

EARTHWORKS (TERRESTRIAL)

227. Before commencement of earthworks (terrestrial), final engineering plans must be prepared and provided to the Council and Whangārei District Council. The plans must include:
- (a) The finished interface between the spatial extent of the port and the adjoining esplanade reserve.
 - (b) A demonstration of how public access has been facilitated to the residual beach area to the east.

STORMWATER DISCHARGES (OPERATIONAL)

General

228. Conditions 229 to 237 apply to all operational stormwater discharges from Northport from Practical Completion of the reclamation.

Advice Note: *It is intended that the consent holder will surrender the existing resource consent for the current stormwater collection, treatment, and disposal system (CON20090505532 issued on 13 April 2010) concurrently with the commencement of the application of Conditions 229 to 237 in accordance with Condition 28. This will consolidate the stormwater resource consents and conditions applying to the expanded Northport, meaning that a single consent and single set of conditions will apply to all Northport operational stormwater.*

229. Operational stormwater must be treated and discharged either:
- (a) Via connection to the existing canal and pond-based stormwater system discharging to the CMA at co-ordinate location 1733997E 6033711N; and/or
 - (b) Via alternative proprietary stormwater treatment systems/devices prior to discharge to the CMA, subject to prior certification by Council that they are capable of meeting the compliance parameters in these consent conditions.

Stormwater Monitoring and Maintenance Plan (SMMP)

230. Within three (3) months of practical completion the consent holder must submit for Certification a Stormwater Monitoring and Maintenance Plan (SMMP) for the operational stormwater treatment system and all of its components. The SMMP is to be prepared by a suitably qualified and experienced practitioner with experience in the design and implementation of stormwater quality management practices and procedures for industrial sites.

The purpose of the SMMP is to set out how the stormwater system will be managed and monitored over the development of the Northport stormwater catchment to achieve compliance with the performance-based conditions below. It is intended to also enable the identification of contingency and improvement actions that will be taken in response to monitoring trigger and compliance thresholds.

The SMMP must include:

- (a) Measures to reduce the entrainment of contaminants into stormwater including, but not limited to, source control measures such as sweeping, vacuuming and/or covering potential contaminant sources.
- (b) Methods to remove, as far as practicable, coarse sediments and debris, suspended sediment, adsorbed contaminants, and dissolved contaminants.

- (c) Operational and maintenance details for:
 - (i) Pond and associated pumps;
 - (ii) Canals;
 - (iii) Spillways;
 - (iv) Removal of silt and any contaminants settled in spillways;
 - (v) Isolation and removal of any spills on the port apron before entering canals;
 - (vi) Repair of any erosion;
 - (vii) Removal of blockages;
 - (viii) Pond and canal sludge management; and
- (d) Sludge management details under 230(c)(viii) must include:
 - (i) The methodology for managing sludge build up in the stormwater basin so as to minimise the potential discharge of contaminants to groundwater.
 - (ii) The inspection regime and record keeping requirements for the canals and ponds;
 - (iii) Maintenance requirements and the sediment testing regime for TPH, copper, lead, zinc and aluminium.
 - (iv) The predicted frequency of desludging; and
 - (v) The likely disposal location(s), including any secondary approvals required if contaminant levels do not meet cleanfill guidelines and the disposal site is not to a consented disposal facility
- (e) Mechanism for monitoring and review of analytes that are identified in **Appendix 2**.

231. The consent holder shall notify the Council Monitoring Manager in writing of any proposed change(s) to the types of cargo handled through the Port Terminal from those detailed in the application, where they have the potential to materially affect stormwater quality, at least one week prior to the proposed change(s) occurring, and shall, if required to do so by the Council Monitoring Manager, in writing, update the SMMP to reflect any additional monitoring that may be required.

Advice Note: *The current terminal activities are forestry products, containers, fertiliser, animal feed, gypsum, project cargo (e.g. construction materials) and coal.*

232. The consent holder must make an underwater examination of diffuser(s) and pipelines at least once every two (2) years and take such measures as are necessary to ensure that diffuser(s) operate as designed and that all the stormwater discharges, except for the emergency overflow(s), pass through diffuser(s).

Attributable compliance limits

233. Water within the Northport stormwater network immediately upstream of the confluence with discharges from the Marsden Maritime Holdings site (i.e. at the downstream limit of the Northport 525 mm gravity pipework), or prior to discharge from any proprietary system to the CMA, must not exceed the following compliance limits:

Parameter	Compliance limit(s)
pH	Between 6.5 and 9
Total copper	0.01 g/m ³
Total lead	0.044 g/m ³
Total zinc	0.15 g/m ³
Ammoniacal nitrogen (NH ₄ -N)	1.86 g/m ³
Total suspended solids	100 g/m ³

Monitoring location and frequency

234. Stormwater monitoring will be undertaken at a point downstream of the pumps and prior to the confluence with discharges from the Marsden Maritime Holdings site (i.e. at the downstream limit of the Northport dedicated gravity pipework), at the influent location of canal flows into the stormwater basin, and prior to discharge from any proprietary system to the CMA.
235. The following sampling frequency must be applied at a minimum:
- At the discharge location identified in Condition 237, at the first pump activated discharge following practical completion, and for the first annual discharge thereafter, one sample per day must be collected during operational hours until the discharge has ceased.
 - At the discharge location identified in Condition 234 at least two subsequent times each year after the first annual discharge, when a pump activated discharge is occurring, with one sample per day collected during operational hours until the discharge has ceased.
 - At the influent location to the pond from the canals coincident with the first annual discharge, and also at each of the two subsequent times thereafter within each year when a pump activated discharge is occurring, one sample per day must be collected during operational hours until the discharge has ceased.

Reporting

236. Following completion of one year of monitoring undertaken in accordance with the SMMP, and annually thereafter, the consent holder shall, within two months forward a report to the Council that describes the following as a minimum:
- a) A summary and interpretation of the monitoring results, including a review of trends and performance of the stormwater treatment system based on the analysis of trigger and compliance parameters
 - b) The outcome of any recommendations made relating to the diffuser inspection required by Condition 232 and how remedial actions have or will be undertaken to address those issues identified
 - c) A copy of data in a tabulated spreadsheet format with a comparison of the results of compliance limits and historical results – including specific assessment of all monitoring information such as the duration of discharge events, prior pond volumes or levels, rainfall intensity and duration of rainfall events, and comment on how that information is used to inform stormwater management outcomes for the site
237. The consent holder must notify the Council as soon as practicable and no later than 24 hours after becoming aware of the limits and performance standards specified in this resource consent being exceeded and/or of any accidental discharge, stormwater treatment system breakdown, or other circumstances which are likely to result in the limits and performance standards of this resource consent being exceeded. The consent holder must, within 10 working days of the incident occurring, provide a written report to the Council, identifying the exceedance, possible causes, steps undertaken to remedy the effects of the incident and measures that will be undertaken to ensure future compliance.

PORT ACTIVITIES AIR DISCHARGES (OPERATIONAL)

238. Conditions 239 – 241 apply to all Northport port operations from Practical Completion of the reclamation.
239. At least three (3) months prior to the commencement of any Expansion Project Port Activities (excluding Expansion Project construction) an Air Quality Management Plan (AQMP) must be prepared and submitted to the Council for certification. The objective of the AQMP is to detail dust management procedures that will be implemented by the consent holder to minimise discharges of dust from port operations and to ensure that effects are in accordance with the assessments accompanying the resource consent applications. The plan must include guidelines to control dust associated with the handling of bulk material and stockpiles, including regarding the following:
- (a) Use of appropriate equipment when transferring material, such as hoppers.
 - (b) The use of covers.
 - (c) Limiting drop heights.
 - (d) Undertaking work in favourable wind conditions.
 - (e) Having a method available to apply water to dampen material when required and as appropriate.
 - (f) The regular sweeping of sealed surfaces.
 - (g) Restrictions on activities during strong winds.

- (h) Limitations on the height of stockpiles.
 - (i) Installation of wind breaks.
 - (j) Minimising vehicle speeds to 20km/h on unsealed surfaces.
 - (k) Inclusion of procedures to minimise emissions.
240. The AQMP must be certified in writing by the Council prior to the commencement of port operations on the reclamation or wharf authorised by these consents, and the consent holder must undertake port operations in accordance with the certified AQMP (including any certified variation).
241. Any variation to the AQMP must be subject to certification by the Council. The consent holder is to review the AQMP at no greater than three yearly intervals.

CULTURAL

Co-Design Process

242. To provide an on-going opportunity for Māori knowledge and tikanga / mātauranga Māori to be included into the design of the expansion of Northport, with the intention of aligning, to the extent practicable, western science and engineering with kaupapa Māori research and core Māori values, the Consent Holder must, subject to the establishment of the Tangata Whenua Relationship Group (RG) in accordance with Condition 244, invite the RG to nominate three uri, as determined by the RG, to participate in and report back on:
- a) The detailed design of the physical works authorised by these consents, including but not limited to:
 - i) Reclamations;
 - ii) Marine structures, including wharves, tug berthing facilities and water taxi pontoon;
 - iii) The Sandbank Renourishment Area;
 - iv) The Pocket Park;
 - v) Stormwater infrastructure;
 - vi) Dredging activities; and
 - vii) Earthworks, and
 - b) the preparation of all management plans required by the conditions of these consents.
243. The Consent Holder must meet the actual and reasonable costs associated with giving effect to Condition 245.

Tangata Whenua Relationship Group

244. The Consent Holder must, not later than 6 months prior to the commencement of detailed design, provide a written offer to the relevant representative entities of tangata whenua groups of Poupouwhenua and Whangārei Te Rerenga Parāoa to establish and maintain a Tangata Whenua Relationship Group ('RG'), noting that:
- (a) For the purposes of these resource consents the 'relevant representative tangata whenua groups' are: Patuharakeke, Te Parawhau, and Ngātiwai;

- (b) The entities nominated to represent the tangata whenua groups listed in clause (a) of this condition must be identified by tangata whenua. Tangata whenua must advise both the Consent Holder and the council as to whom their representative entities will be;
- (c) The RG must be responsible for self-determination, including without limitation: the name by which it must be formally known, methods of decision-making, and rates of remuneration for members; and
- (d) Other tangata whenua groups may be invited to join the RG where they have been endorsed by the majority of the members of the RG.

Advice Note: *There are existing groups exercising various roles aimed at improving the health of Whangārei Te Rerenga Parāoa, including for example the “Kaitiaki Roopu” which was established under previous resource consents granted to Northport for its port expansion. The RG is distinct from the existing Kaitiaki Roopu.*

245. Each of the above parties listed in Condition 244 who accepts the Consent Holder’s offer may nominate up to three representatives to the RG. If invited in writing by the RG, the Consent Holder may also nominate one representative and an alternative representative to the RG (up to three representatives).

Functions of the RG

246. The functions of the RG are to:

- (a) Recognise and provide for the kaitiakitanga of Māori who have a kaitiaki relationship with Poupouwhenua and Whangārei Te Rerenga Parāoa, within the framework of these resource consents;
- (b) Facilitate the involvement of Māori who have a kaitiaki relationship with Poupouwhenua and Whangārei Te Rerenga Parāoa in the exercise of these resource consents;
- (c) Provide a forum for Māori who have a kaitiaki relationship with Poupouwhenua and Whangārei Te Rerenga Parāoa, to engage with the Consent Holder and the council regarding the exercise of these resource consents; and
- (d) Promote the aspirations of its people, including:
 - i) Environmental restoration and/or betterment;
 - ii) Whānau health;
 - iii) Educational opportunities for tangata whenua;
 - iv) Cultural well-being; and
 - v) Economic and social well-being for tangata whenua.

Roles of the RG

247. The roles of the RG are to:

- (a) Identify initiatives to develop expertise and capacity building for tangata whenua. These could include, for example, establishing educational scholarships, providing post-graduation research funding, identifying opportunities for professional training (e.g. Directors Institute course), apprenticeships,

and/or port operator training (e.g. forklift licence), and/or proposing suitable candidates for employment opportunities.

- (b) Nominate people with knowledge of mātauranga Māori to train as marine mammal observers;
- (c) Nominate people with knowledge of mātauranga Māori to train as field technicians for collection of samples of water/substrate/shellfish as required by these consents or more generally for Northport's operations;
- (d) Receive draft reports and information from the Consent Holder required pursuant to these resource consents, including but not limited to notification of any discovery of archaeological material;
- (e) Review and comment, as necessary, on the following (amongst other things): the draft CEMP; the draft EMMP; the draft MMMP; and the draft Capital DMP and draft Maintenance DMP;
- (f) Review and comment, as necessary, on the draft monitoring reports produced by the Consent Holder prior to them being submitted to the council to ensure the RG views are made known to council prior to any review;
- (g) Work collaboratively with the council and the Consent Holder to determine and implement appropriate procedures to control any adventive pests and weeds present within any disturbed area;
- (h) Take an active role in reviewing and reporting using the Cultural Indicators Hub ('CIH') as the primary reporting tool as defined in Condition 248 below;
- (i) Receive from the Consent Holder notification of any receiving water quality limit exceedances; and consult with the council's Compliance Manager regarding any receiving water quality limit exceedances;
- (j) Provide advice on enhancing access to mahinga kai sites;
- (k) Identify, develop, establish and/or approve suitable studies or projects designed to improve water quality, coastal processes, environmental, ecological, and cultural health of the Whangārei Harbour entrance (including its shores) and northern Bream Bay.
- (l) Review and comment on the source of imported material for construction of the reclamation.

Consent Holder's obligations

248. The Consent Holder's obligations in respect of the RG must be limited to:

- (a) Where requested by the RG, to provide a venue and/or Secretariat for RG meetings;
- (b) Explore and discuss with the RG opportunities to engage persons nominated by the RG to undertake roles as marine mammal observers and/or field technicians for collection of samples of water/substrate/shellfish as required by these consents or more generally for Northport's operations;
- (c) Identify to the RG external business opportunities for tangata whenua where they arise, including in associated or ancillary businesses. Examples might be providing services to cruise ship operators and/or passengers; or preferential purchase of specimen plants for landscaping requirements;
- (d) Provide copies of the relevant draft management plans, reports and documentation required by the

conditions of this resource consent to the RG;

- (e) Consider and, if requested by the RG, provide a written or other agreed appropriate response to recommendations made by the RG, to the extent detailed in these conditions or otherwise agreed by the RG;
- (f) To make available any staff members or independent experts engaged by the Consent Holder to appear before the RG, with the costs of the experts' attendances and any necessary preparation to be met by the Consent Holder;
- (g) Subject to any operational or health and safety constraints, provide a reasonable opportunity for tangata whenua to visit the Expansion Project Site periodically during the works to observe, categorise and discharge their obligations as kaitiaki;
- (h) Be involved in the development, implementation and monitoring of cultural indicators as contemplated by Condition 257 below; and
- (i) Provide monthly email updates to the RG during construction works to advise of:
 - (i) Key progress milestones,
 - (ii) The outcomes of monitoring conducted in accordance with these resource consents, and
 - (iii) Any exceedances of relevant conditions of these resource consents.

RG Funding

249. In order for the RG to fulfil its functions and roles, as set out in Conditions 247 and 248, the Consent Holder must fund the RG as follows:
- (a) Not later than 30 working days following formation of the RG the Consent Holder must pay to a suitable bank account nominated by the RG:
 - i. \$25,000.00 (plus GST, if applicable) for the establishment of the RG, and
 - ii. \$25,000.00 (plus GST, if applicable) for administration.
250. Thereafter, on the anniversary of the payments in Condition 249 above, the Consent Holder must, for the balance of the duration of these consents, pay to the RG \$50,000.00 per annum for the administration costs of the group and identification of studies or projects that are demonstrated by the RG to be consistent with Condition 248(k), providing the RG is established and operational. Subsequent annual administration payments are to be Index-Linked. The Consent Holder will meet the reasonable costs of implementing studies agreed with the RG.

General

251. The Consent Holder must provide written confirmation to the council's Compliance Manager within two weeks of receiving acceptance of offers to participate in the RG pursuant to Condition 245.
252. The first RG meeting must be held as soon as practicable following establishment of the RG. The RG must determine how it conducts/administers its functions under these resource consents.

253. The Consent Holder must provide written verification to the Council and Whangarei District Council of all payments made in accordance with Conditions 249-250 within five working days of each payment being made.
254. Except where expressly provided in Condition 256(a), or where the context requires otherwise, all of the Consent Holder's obligations with respect to the RG under these resource consents are conditional on the RG being established in accordance with these conditions.

Cultural Monitoring Framework

Cultural Indicators Hub ('CIH') – overview

255. For the purposes of these conditions, the CIH is an online monitoring and reporting platform that:
- (a) Facilitates the visualisation of monitoring data and other information recorded by the consent holder during construction and operation of the expanded container port, as authorised by these consents;
 - (b) Demonstrates the performance of the expanded container port against any cultural indicators developed and implemented by tangata whenua, incorporating mātauranga Māori as appropriate, and as further described in Condition 260 below;
 - (c) Can be used as a tool for tangata whenua to support the exercise of its kaitiakitanga; with authorised independent access to the online platform;
 - (d) Can be used to inform recommended changes to any management plans, including those specified in Condition 248(e), as part of any annual update, or as part of any more comprehensive review; and
 - (e) Subject to restrictions requested by tangata whenua, is otherwise publicly visible thereby providing real time information on the performance of the construction and operation of the expanded container port when measured against the conditions of consent.

Development of cultural indicators

256. The consent holder must, as early as possible but no less than 6 months prior to the date of the commencement of works authorised by these consents, invite the RG to develop cultural indicators that assess the effects of the dredging, reclamation and construction works authorised by these resource consents on Poupuwhenua and Whangārei Te Rerenga Parāoa. The cultural indicators are to be incorporated into the CIH described in Condition 255, provided that:
- (a) If the cultural indicators are not developed by the RG prior to the commencement of works authorised by these consents, the CIH must be constructed in a manner that allows the cultural indicators to be added at a later date, and until that time the CIH must be operated and display other key information as described in Condition 255 above;
 - (b) The RG may review and amend the cultural indicators from time to time and the consent holder must update the CIH to incorporate any such amendments as soon as practicable following any new or amended cultural indicators.

Cultural Monitoring Framework - obligations

257. The Consent Holder must ensure all monitoring data as required by these consents and agreed by RG is visualised on the CIH.
258. The methodology of the cultural monitoring and assessment must be determined following consultation with the RG. Any assessments must be carried out by persons with knowledge of mātauranga Māori appointed by the RG, or by Suitably Qualified and Experienced person(s) appointed by the consent holder on the recommendation of the RG.
259. The cultural indicators referred to in Condition 255 may include, but are not limited to, assessing changes in water quality, the health of taonga species and culturally significant flora and/or fauna, and the health of Poupuwhenua and/or Whangārei Te Rerenga Parāoa.
260. The addition to the CIH, the RG must be able to nominate an appropriate person(s) to undertake and provide a written report on the cultural indicators monitoring on an annual basis of the Expansion Project. The written report will be submitted to Council on an annual basis, for their information.

Advice Note: Reasonable actual costs associated with commissioning external person(s) to establish and implement cultural indicators will be the responsibility of the consent holder, rather than the RG.

Advice Note: Nothing in these Conditions 244-260 compels the consent holder to engage any person(s) for the delivery of monitoring.

Port noise (operational)

261. The Consent Holder must manage operational port noise in accordance with WDC Conditions 18-29. [insert WDC consent reference].

Advice Note: The Port Noise Standard (NZS 6809:1999 Acoustics – Port Noise Management and Land Use Planning) encapsulated in the WDC conditions applies cumulatively for port activities on land and in the CMA.

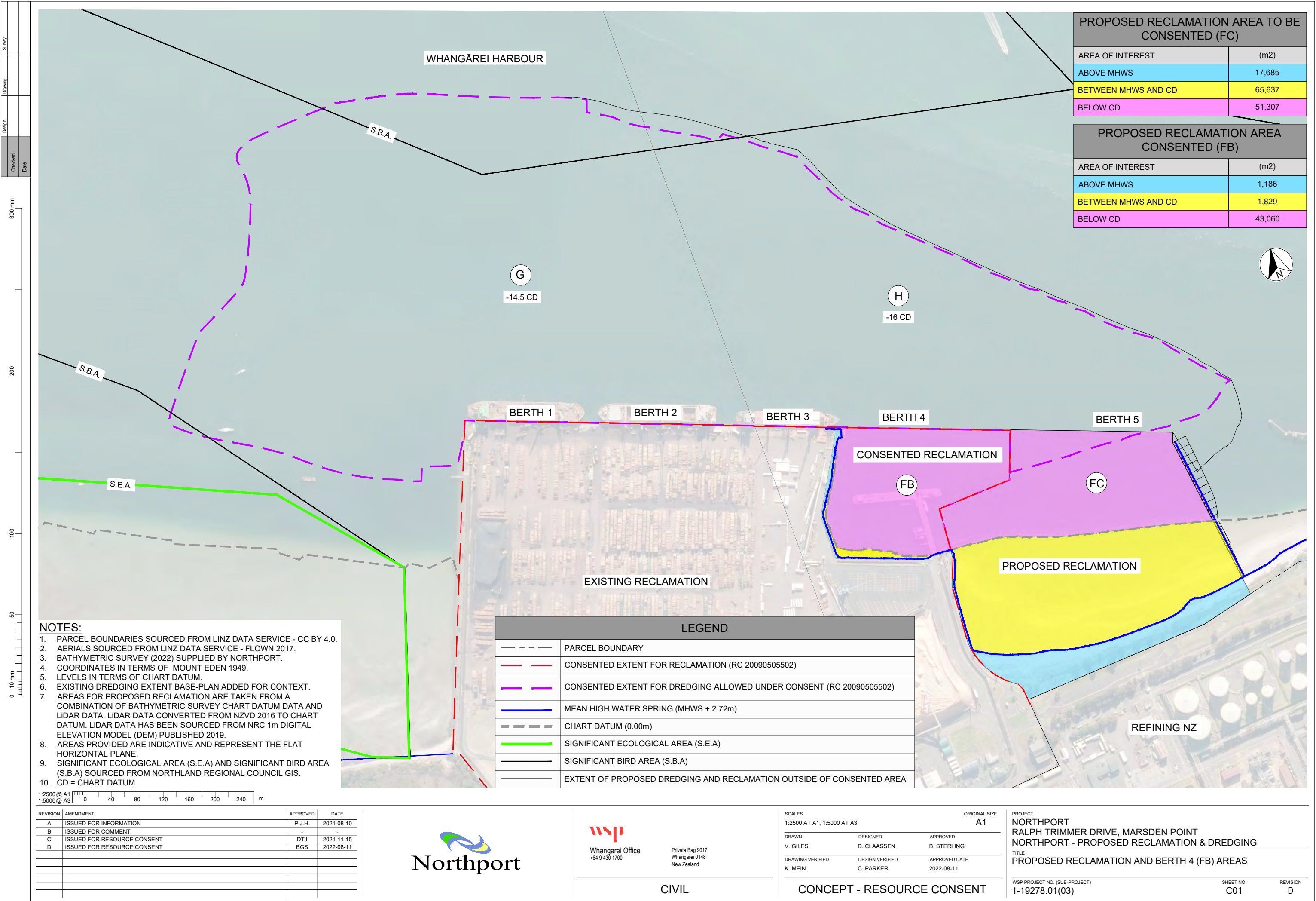
EXPIRY DATES: UNLIMITED

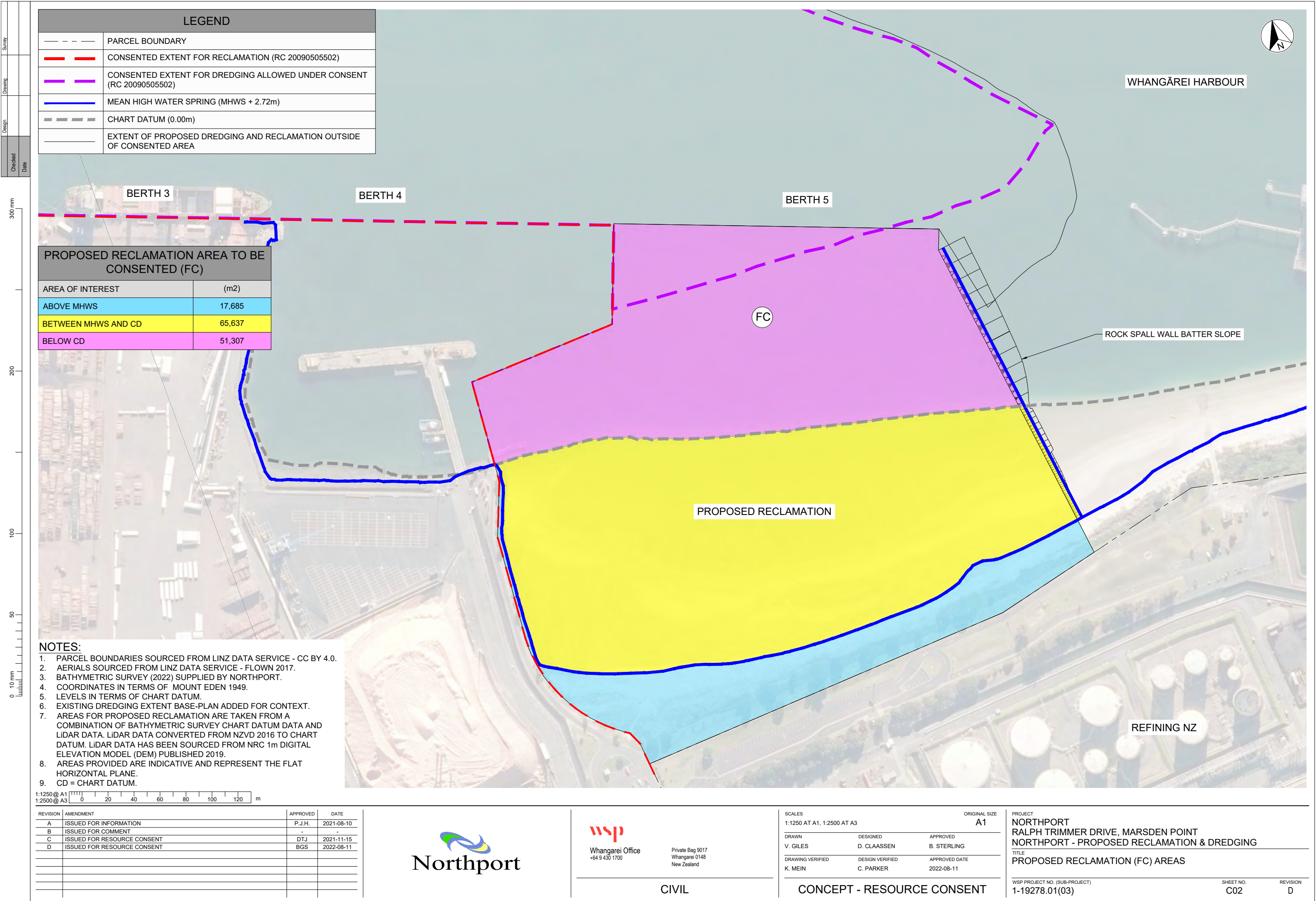
[INSERT DATE 35 YR FROM COMMENCEMENT]

AUT[XXXXXX] (Reclamation)

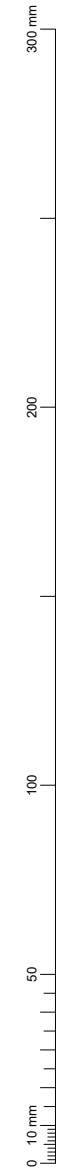
All other consents

APPENDIX 1: PLANS





Survey	
Drawing	
Design	
Checked	
Date	



LEGEND	
	PARCEL BOUNDARY
	MEAN HIGH WATER SPRING (MHWS + 2.72m)
	CONSENTED EXTENT FOR RECLAMATION (RC 20090505502)
	EXTENT OF PROPOSED RECLAMATION
	EXTENT OF BULK EARTHWORKS



- NOTES:
1. PARCEL BOUNDARIES SOURCED FROM LINZ DATA SERVICE - CC BY 4.0.
 2. AERIALS SOURCED FROM LINZ DATA SERVICE - FLOWN 2017.
 3. COORDINATES IN TERMS OF MOUNT EDEN 1949.
 4. TUG JETTY & FISHING JETTY LOCATION & DESIGN TO BE CONFIRMED.
 5. COORDINATES TO 1m ACCURACY.

SETOUT PLAN - EASTERN RECLAMATION AND WHARF EXTENTS
SCALE 1:1250

1:1250@ A1
1:2500@ A3

REVISION	AMENDMENT	APPROVED	DATE
A	ISSUED FOR INFORMATION	P.J.H.	2021-08-10
B	ISSUED FOR COMMENT		
C	ISSUED FOR RESOURCE CONSENT	DTJ	2021-11-15
D	ISSUED FOR RESOURCE CONSENT	BGS	2022-08-11



Whangarei Office
+64 9 430 1700

Private Bag 9017
Whangarei 0148
New Zealand

CIVIL

SCALES		ORIGINAL SIZE
1:1250 AT A1		A1
DRAWN	DESIGNED	APPROVED
V. GILES	D. CLAASSEN	B. STERLING
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE
K. MEIN	C. PARKER	2022-08-11

CONCEPT - RESOURCE CONSENT

PROJECT
NORTHPORT
RALPH TRIMMER DRIVE, MARSDEN POINT
NORTHPORT - PROPOSED RECLAMATION & DREDGING

TITLE
SETOUT PLAN
PROPOSED RECLAMATION AND WHARF EXTENTS

WSP PROJECT NO. (SUB-PROJECT)
1-19278.01(03)

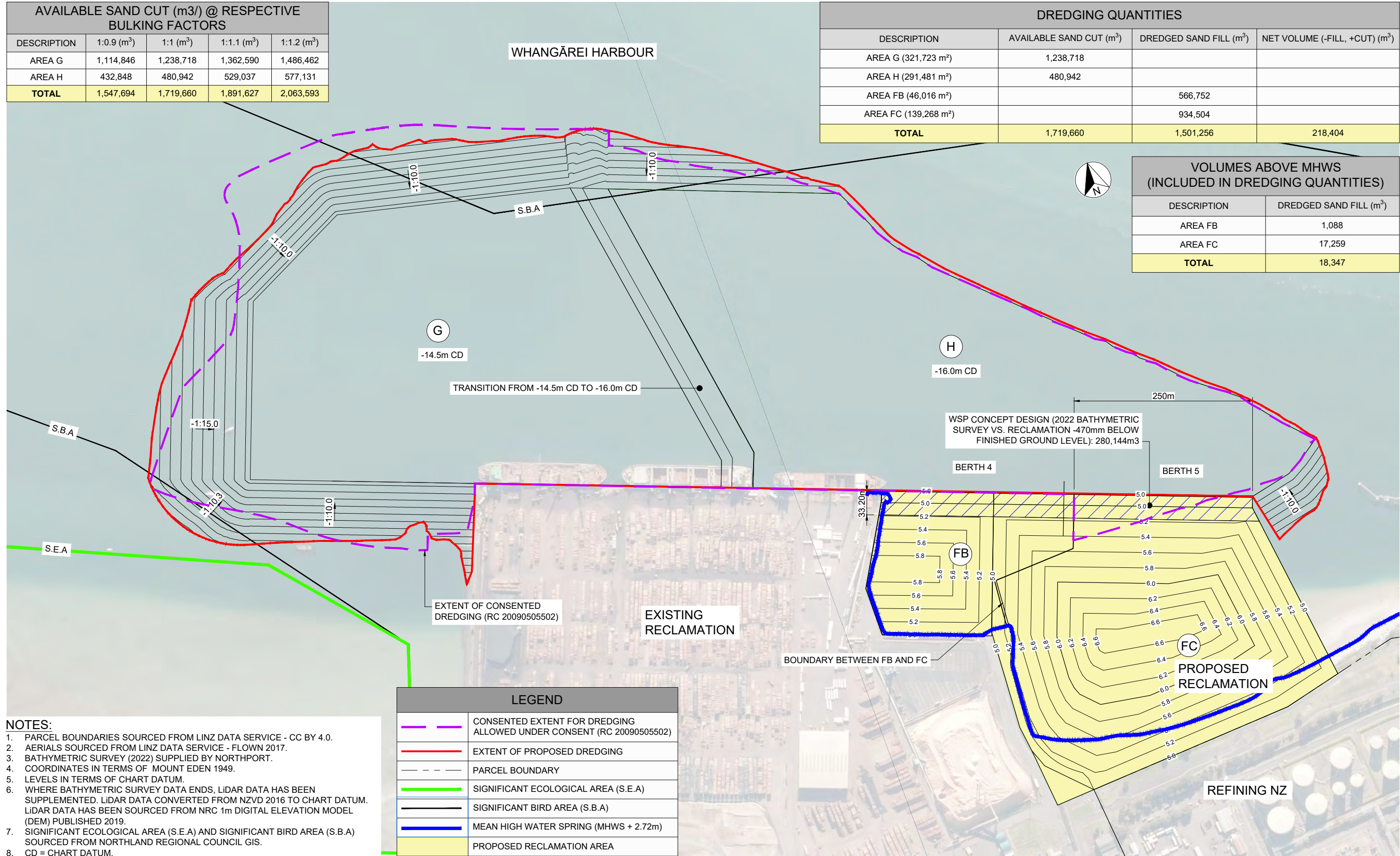
SHEET NO.
C03

REVISION
D

AVAILABLE SAND CUT (m3/) @ RESPECTIVE BULKING FACTORS				
DESCRIPTION	1:0.9 (m³)	1:1 (m³)	1:1.1 (m³)	1:1.2 (m³)
AREA G	1,114,846	1,238,718	1,362,590	1,486,462
AREA H	432,848	480,942	529,037	577,131
TOTAL	1,547,694	1,719,660	1,891,627	2,063,593

DREDGING QUANTITIES			
DESCRIPTION	AVAILABLE SAND CUT (m³)	DREDGED SAND FILL (m³)	NET VOLUME (-FILL, +CUT) (m³)
AREA G (321,723 m²)	1,238,718		
AREA H (291,481 m²)	480,942		
AREA FB (46,016 m²)		566,752	
AREA FC (139,268 m²)		934,504	
TOTAL	1,719,660	1,501,256	218,404

VOLUMES ABOVE MHWS (INCLUDED IN DREDGING QUANTITIES)	
DESCRIPTION	DREDGED SAND FILL (m³)
AREA FB	1,088
AREA FC	17,259
TOTAL	18,347



REVISION	AMENDMENT	APPROVED	DATE
A	ISSUED FOR INFORMATION	P.J.H.	2021-08-10
B	ISSUED FOR COMMENT		
C	ISSUED FOR RESOURCE CONSENT	DTJ	2021-11-15
D	ISSUED FOR RESOURCE CONSENT	BGS	2022-08-11
E	ISSUED FOR RESOURCE CONSENT - RECLAMATION AREAS & VOLUMES UPDATED	BGS	2022-08-19



Whangarei Office
+64 9 430 1700

Private Bag 9017
Whangarei 0148
New Zealand

CIVIL

SCALES
1:2500 AT A1, 1:5000 AT A3

ORIGINAL SIZE
A1

DRAWN V. GILES	DESIGNED D. CLAASSEN	APPROVED B. STERLING
DRAWING VERIFIED K. MEIN	DESIGN VERIFIED C. PARKER	APPROVED DATE 2022-08-19

CONCEPT - RESOURCE CONSENT

PROJECT
NORTHPORT
RALPH TRIMMER DRIVE, MARSDEN POINT
NORTHPORT - PROPOSED RECLAMATION & DREDGING

TITLE
DREDGING PLAN - PROPOSED RECLAMATION
AND EXISTING CONSENTED DREDGING

WSP PROJECT NO. (SUB-PROJECT)
1-19278.01(03)

SHEET NO.
C04

REVISION
E

- NOTES:
1. VERTICAL DATUM: LOCAL CHART DATUM (4.816m BELOW LINZ BENCHMARK DJM9)
 2. AERIAL PHOTO SOURCED FROM LINZ DATA SERVICE (Image Date 2015)
 3. EXISTING GROUND CONTOURS CREATED FROM A COMBINED DEM COMPRISING :
 - 3.1. NORTHLAND REGIONAL COUNCIL 2016 LIDAR (NZVD2016 +1.75m)
 - 3.2. DML SURVEY 2015 (CD)





Exceptional thinking together

0

PRELIMINARY DRAFT

CAD

CHK

DATE

APPROVED

DATE

0

PRELIMINARY DRAFT

CAD

CHK

DATE

APPROVED

DATE

☐ BACKDRAFTING REQUIRED

☐ READY TO ISSUE

CAD SELF CHECK

DESIGN CHECK

DRAFTING CHECK

BACKDRAFTER - EDITS MADE

BACKCHECKER - EDITS CONFIRMED

CHECK PRINT

INITIAL

DATE

www.tonkintaylor.co.nz

DESIGNED DRAWN DESIGN CHECKED DRAWING CHECKED		RRH BKD	Aug.22 Aug.22	DRAWING STATUS PRELIMINARY DRAFT PROJECT PHASE CONCEPT DESIGN		CLIENT PROJECT	NORTHPORT LTD VISION FOR GROWTH PORT DEVELOPMENT	
NOT FOR CONSTRUCTION		THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION PURPOSES UNLESS SIGNED AS APPROVED		TITLE BIRD ROOST CONCEPT LAYOUT PLAN		SCALE (A3)	1:2000	DWG No. 1017349-02
REV		DESCRIPTION		APPROVED		DATE		REV 0



REV	DATE	DESCRIPTION
A	20.07.22	FOR INFORMATION
B	25.07.22	FOR INFORMATION

APPRV'D
SCo
SCo

NORTHPORT
RECLAMATION

PROPOSED CONCEPT PLAN

Design	SCo	Scale	Date
Drawn	DHi	1:750 @ A1	20.07.22
Check	SCo	1:1500 @ A3	

FOR INFORMATION

DRAWING NO. **BM220519-201** REVISION **(B)**

This graphic has been prepared by Boffa Miskell Limited on the specific instructions of our Client. It is solely for our Client's use in accordance with the agreed scope of work. Any use or reliance by a third party is at that party's own risk. Where information has been supplied by the Client or obtained from other external sources, it has been assumed that it is accurate. No liability or responsibility is accepted by Boffa Miskell Limited for any errors or omissions to the extent that they arise from inaccurate information provided by the Client or any external source.



ORIGINAL IN COLOUR

Boffa Miskell

Printed 19/08/2022 11:47:56 am

KEY

REV	DATE	DESCRIPTION
A	27.07.22	FOR INFORMATION
B	22.08.22	FOR INFORMATION

APPRVD
SCo
SCo

**NORTHPORT
RECLAMATION**

EXISTING CONDITIONS

Design Drawn Check	SCo DHi SCo	Scale 1:1000 @ A1 1:2000 @ A3	Date 27.07.22
DRAWING NO. BM220519-200		REVISION (B)	

U:\2022\BM220519_SCo_Northport_expansion_Pocket_Park\ICAD\BM220519_Base.dwg



ISSUE	DATE	DETAILS	APPRVD	BY



Northport

P.O BOX 44
RUAKAKA, NEW ZEALAND
TEL 09 432 5010

vision4growth.co.nz

Title: NORTHPORT RELOCATED TUG FACILITY EASTERN END - CONCEPT PLAN				
Path k:\engineer\gregb\consents\vision for growth project\plans\eastern tug facility.dwg		Dwg No D60-X		Issue: R0
Drawn: B SWEENEY	Checked:	Scale: 1:500 (A1) 1:1000(A3)	Date: SEPT 2022	Sheet: 01

APPENDIX 2: STORMWATER MONITORING ANALYTES

Appendix 2: Stormwater Monitoring Analytes

Location	Parameters
Stormwater monitoring will be undertaken at a point downstream of the pumps and prior to the confluence with discharges from the Marsden Maritime Holdings site (i.e. at the downstream limit of the Northport gravity pipework), or prior to discharge from any proprietary system to the CMA (see Condition 223).	Aqueous Contaminants pH Turbidity as NTU or FTU Dissolved oxygen Biological oxygen demand (BOD₅) Chemical oxygen demand Total aluminium Total copper Total lead Total zinc Total suspended solids Volatile suspended solids Ammoniacal Nitrogen Total Nitrogen Total Phosphorus Total petroleum hydrocarbons Resin acids Phenols PAHs including: - Acenaphthene - Anthracene - Benzo(α)anthracene - Benzo(α)pyrene - Fluranthene - Fluorene - Napthalene - Phenanthrene - Pyrene

APPENDIX 3: ENVIRONMETRICS REPORT



An **Environmetrics Australia** Technical Report

PO Box 7117
Beaumaris VIC, 3193
+61-3-9018-7121
www.environmetrics.net.au

Turbidity Monitoring for the Northport Expansion Project

By
Prof. David R. Fox,

1 June 2023

Limitations Statement

This report documents statistical issues associated with the establishment of turbidity trigger values for a large-scale capital dredging project. Its findings, recommendations, and conclusions are based on desk-top investigations using *indicative* data sets. As such, no claim is made as to the applicability of the approaches to any specific project. The passage of time, manifestation of latent conditions or impact of future events may require further exploration, subsequent data analysis, and re-evaluation of the findings, observations, conclusions, and recommendations expressed in this document. Accordingly, Environmetrics Australia Pty. Ltd. accepts no liability or responsibility whatsoever for or in respect of any use of or reliance upon this document, its recommendations or any other information contained herein by any party.

Executive Summary

Northport Ltd has submitted applications to the Northland Regional Council (Ref. APP.040976.01.01) and the Whangarei District Council (Ref. LU2200107) for resource consents to enable the expansion of Northport's existing facilities to increase freight storage and handling capacity. Northport currently consists of three berths, with a fourth berth and associated reclamation consented but not yet constructed. The current application proposes to construct a fifth berth together with an associated 11.7ha reclamation. The expansion will necessitate the removal of approximately 1.7M m³ of material during a capital dredge program, with the majority used to form the reclamation.

This report sets out a framework for the collection and processing of turbidity data during an approximate 12-month monitoring period *prior* to any works being undertaken. This *background data* will be used to: (a) characterise the *spatio-temporal* aspects of naturally occurring turbidity in the vicinity of the port; and (b) develop a tiered 'early warning' mechanism to be used to monitor and manage turbidity levels in the harbour during the dredging program.

The information, methods and protocols detailed in this report draw upon the knowledge, expertise and experience *Environmetrics Australia* has acquired over the past 16 years on major capital dredging projects in Australia and New Zealand. These methods have been subjected to exhaustive peer-review by scientific experts in both countries and their efficacy demonstrated by the successful management of turbidity during a number of large-scale dredging projects.

As detailed in this report, a number of matters need to be considered before the commencement of the baseline monitoring program. These relate to:

- The identification of 'extreme' weather and oceanographic events;
- The treatment of data collected during such events;
- Protocols for the treatment of 'unusual' or 'aberrant' turbidity readings;
- Procedures to deal with blocks of missing data due to instrument failure, communication issues, or other unforeseen events;
- Refinement of the data smoothing/filtering algorithm to balance responsiveness of the monitoring system with effective turbidity signal extraction;
- Experimental design and analysis to estimate the site-specific relationships between *total suspended solids* (TSS in mg/L) and turbidity measured in Nephelometric Turbidity Units (NTU);
- Harmonisation and integration of *modelled* TSS with background measurements;
- Development of turbidity 'trigger values' that underpin the early-warning and turbidity management system.

List of Figures

Figure 1. Example of raw turbidity data (open circles) with missing values. Smoothed signal shown in red.	8
Figure 2. Illustration of temporal ‘in-filling’ of raw turbidity data. Original series with 3-day gap (left) and after data imputation (right).	8
Figure 3. Depiction of IFD components for a turbidity time-series (see text for explanation).	12
Figure 4. Distribution of weights $w(s,4,8)$	18

Table of Contents

Executive Summary.....	1
Table of Contents.....	3
1. INTRODUCTION	4
1.1 Extreme Events	4
1.2 Unusual Events / aberrant data	5
2. DATA PROCESSING	6
2.1 Missing values	7
2.2 Smoothing	9
2.3 Use of the KZ filter for dredging projects.....	10
3. HARMONISING MODELLED AND MEASURED TURBIDITY	10
3.1 Characterising the TSS-NTU relationship	11
4. DEVELOPING A TIERED TURBIDITY TRIGGER SYSTEM	11
4.1 The Intensity-Frequency-Duration (IFD) method.....	12
4.2 Which data to use?	12
4.3 Assimilation of modelled TSS data and baseline monitoring data	14
4.4 The modified IFD method (m-IFD)	14
5. REFERENCES	16
APPENDIX 1: Implementing the KZ Filter	17
Computations.....	17
Implementation in EXCEL.....	18
APPENDIX 2: Turbidity data processing and analysis.....	20
APPENDIX 3: Treatment of missing blocks of data	22

1. INTRODUCTION

This report sets out a data processing and analysis framework to both monitor and manage turbidity levels during dredging operations associated with the Northport Expansion Project (NEP). The main components of this framework are: (i) pre-processing and statistical QA/QC of 'raw' turbidity data (measured in Nephelometric Turbidity Units or NTUs); (ii) establishment of turbidity 'trigger values' or TVs for use during the capital dredging program; and (iii) guidance for the implementation of a real-time turbidity monitoring and alerting system. The aims of (i) are to identify 'aberrant' readings and/or 'outliers' to ensure the integrity and reliability of subsequent statistical calculations. The objective of (ii) is to provide ecologically relevant metrics that provide natural resource managers and port authorities with a tiered, early-warning capability of turbidity levels of concern while (iii) provides computational details required to implement this early-warning mechanism.

1.1 Extreme Events

In the context of autonomously acquired turbidity data, the distinction between an *aberrant* reading and *outlier* has important ramifications. We define an *outlier* to be a truly erroneous observation whose occurrence is explainable through documented observation and/or other lines of evidence. *Importantly, the outlier status is not a declaration based on a subjective assessment of 'extremeness'.* Situations that can give rise to outliers include, for example, instrument malfunction, data recording and/or transcription errors and (possibly) the influence of other extreme events such as long return period floods and storm events. Removal of data whose outlier status is either wholly or in part due to extreme weather events is a contentious issue with some arguing that the resulting high values are not true outliers but instead, are legitimate observations that are to be expected when monitoring the natural environment. The counter argument is that retention of such data will distort comparisons with background conditions that were quantified in the absence of such extreme natural events.

At some stage the Project Proponents and the Regulator will need to agree on: (i) what constitutes an 'extreme' natural event and (ii) the treatment of data collected during such an event and whether that treatment is the same for both baseline monitoring dredge monitoring. To facilitate that discussion, we next discuss some of the issues that need to be addressed in developing data inclusion/exclusion criteria.

The NEP will monitor background turbidity at defined locations for not less than 12 months. This minimum sampling horizon is desirable since it allows seasonal effects in the turbidity signal to be captured. However, the representativeness of the baseline data can be significantly compromised if the 12-month period is characterised by an over- (or under-) representation of extreme oceanographic and/or meteorological events during the monitoring period. Definitive advice on how to best deal with this type of situation does not exist.

Our view is that if the statistical distribution of baseline turbidity data is significantly (in the statistical sense) altered by a pattern of extreme oceanographic and/or meteorological events whose probability of occurrence is deemed to be very low, then there is a *prima facie* case to undertake a statistical adjustment of the data to better reflect long-term, natural background conditions.

It is difficult to be prescriptive about exactly *how* this would be achieved in any given instance, but in general terms the approach would seek to adjust the data through a weighting scheme that attenuates the impact of the ‘excess’ storm events or adjusts to compensate for the under-representation of storm events. We do not believe data collected during a ‘significant’ storm event in the dredging phase of the project should undergo any such adjustment. Our reasons are twofold: (i) the baseline data will have already been adjusted to compensate for any over-representation of significant events; and (ii) decision-making about turbidity exceedances during dredging need to be taken in real-time. However, an overall assessment of whether there has been an excess number of extreme events during the dredging campaign cannot be made until dredging campaign is complete.

As an alternative to a statistical adjustment of the baseline data, separate sets of trigger values could be developed for several extreme-event scenarios using modelled turbidity impacts due to storms of different intensities and durations.

1.2 Unusual Events / aberrant data

Perhaps more common than turbidity outliers are the occurrences of *aberrant* turbidity readings. For example, instruments moored in the receiving water body will often ‘see’ (and hence record) both spatial and temporal ‘patchiness’ in water clarity. So, while the turbidity readings taken when a ‘slug’ of highly turbid water passes the instrument sensor

are entirely legitimate, they are anomalous and not representative of the water quality more generally. One way of reducing sampling bias is to increase both the spatial and temporal resolution however this becomes prohibitively expensive.

The data smoothing technique proposed in section 2.3 of this report (known as the KZA filter) was successfully used to manage dredging operations during the Port of Lyttleton's Channel Deepening Project (LPC 2018). A key feature of the KZA filter is its robustness to these 'spiky', transient turbidity readings. Accordingly, (and on the assumption the NEP adopts the KZA methodology), we do not believe there is any need to make any additional adjustment or remove these transient turbidity readings.

In the following sections of this report, we provide details of turbidity data processing and the development and use of early-warning sentinel based on turbidity 'triggers'. It is important to appreciate from the outset that this is an imprecise science. Implicit in the use of turbidity to monitor a marine environment for adverse impacts is the strong, but largely untested assumption that the aquatic ecosystem and all that it comprises will be 'protected' provided turbidity is kept below a threshold level. While this assertion has intuitive appeal (for example, we know seagrass need light and turbidity attenuates the photosynthetically active component of light), the *level* or threshold value that achieves the overarching objective of ecosystem protection more generally is unknown and perhaps unknowable – even if one exists.

Current best practice as articulated in the ANZECC/ARMCANZ (2000 a,b) Australian and New Zealand Water Quality Guidelines (and the update by Warne et al. 2014) provides an initial starting point but is not prescriptive. While the Guidelines outline a framework for water quality assessments, they acknowledge the need and indeed advocate the use of locally derived procedures and metrics that are best suited to the specific environment and circumstances under consideration. With this in mind, we believe the Guidelines provide a substantive 'fall-back' position when the science and data are insufficient to refine and enhance the recommended monitoring and reporting procedures.

2. DATA PROCESSING

NB: The recommendations and guidance provided in this section relate to the processing of baseline turbidity data and trigger-value derivation.

We recommend two stages of data integrity checks be undertaken. The first stage checks are to be performed by the contractor responsible for data collection. This preliminary screening of the raw data should be limited to annotating entries in the data file to flag instances of individual readings that the contractor knows to be: (i) an *outlier* due to documented and verifiable faulty, unreliable, or unserviceable equipment or telemetry issues; or (ii) an *aberrant* observation obtained during adverse weather or oceanographic conditions.

Stage 2 checks draw upon statistical QA/QC procedures and should be performed by a professional statistician. The focus of stage 2 checks is to:

- Identify extreme and unusual data in terms of their *statistical* properties.
- Use statistical data imputation techniques in accordance with agreed protocols to overcome problems created by blocks of missing data.
- Use statistical smoothing techniques in accordance with agreed protocols to attenuate the influence of aberrant observations.

2.1 Missing values

This section is included for completeness and acknowledges the challenges presented by large blocks of missing data in both the pre-dredging and during-dredging data collection phases of the project. While statistically sound, the remedial actions suggested here have not been comprehensively assessed as part of any Australian or New Zealand dredging project. Accordingly, this section should be regarded as an articulation of further R&D requirements.

Missing values are problematic for statistical analyses generally but pose challenges in environmental settings since different methods of treating the ‘missingness’ will produce different outcomes thus potentially leading to different environmental assessments. Fortunately, this problem is largely avoided when dual turbidity loggers are used. However Environmental Management Plans need to anticipate periods of missing data and articulate data management procedures during such times.

An example of a turbidity data having some relatively large gaps in the temporal sequence is shown in Figure 1. These large gaps cannot be overcome by smoothing techniques such as the KZ filter (section 2.3) and cause the complete breakdown of the EWMA smoothing technique.

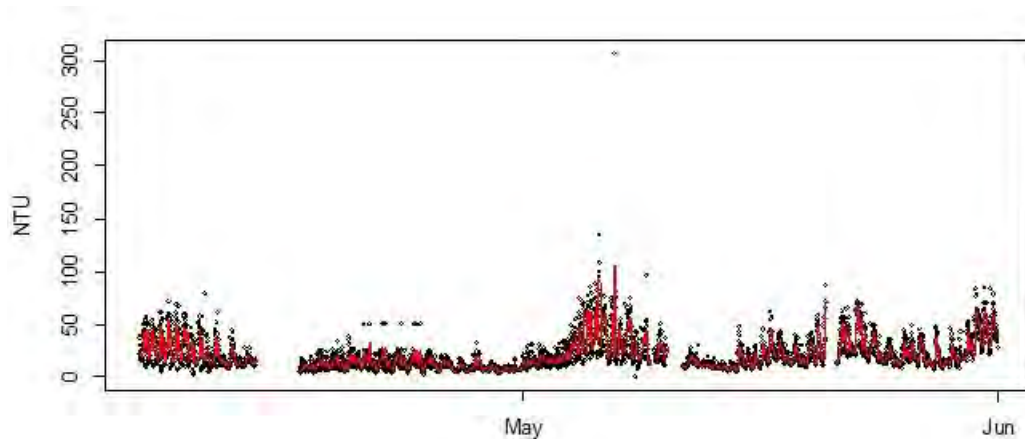


Figure 1. Example of raw turbidity data (open circles) with missing values. Smoothed signal shown in red.

To date, the only effective and credible means of dealing with the level of ‘missingness’ indicated in Figure 1 is to *impute* the values of the missing data using advanced statistical modelling techniques. Models developed by *Environmetrics Australia* utilise information on ancillary variables such as wind speed, wind direction, tide, currents, and rainfall together with the autoregressive properties of the sequence prior to and following the missing period to reconstruct the missing temporal sequence. An example of the results of this approach are shown in Figure 2 which shows the in-filling of a 3-day gap in turbidity readings.

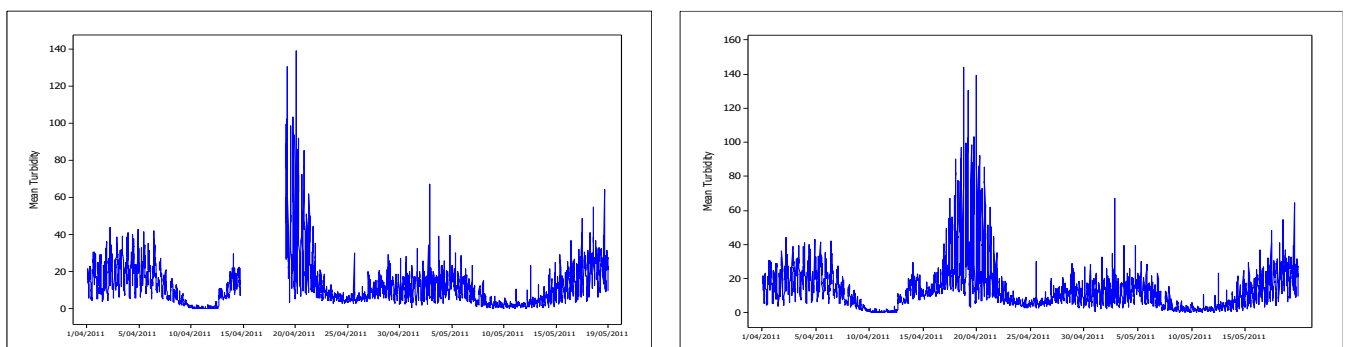


Figure 2. Illustration of temporal ‘in-filling’ of raw turbidity data. Original series with 3-day gap (left) and after data imputation (right).

Whether or not project proponents commission R&D work to develop local adaptations of predictive background turbidity models and project-specific methods of data imputation is largely a cost-benefit decision for them. Without these tools there is little that can be done to overcome blocks of missing data other than to simply record “NA” in the data record and revert to a management response driven more by heuristics than science. Whatever these actions and management decisions are, they need to be documented in

the EMP. Further considerations associated with missing data in the context of turbidity monitoring are discussed in Fox (2018).

2.2 Smoothing

Statistical smoothing may be viewed as a companion activity to the aberrant data detection issue discussed in the previous section although the emphasis is somewhat different.

There are numerous statistical smoothing techniques available to smooth turbidity data and estimate the underlying signal. For many years, the preferred smoothing technique for autonomous turbidity data was the *exponentially weighted moving average* or EWMA as described in the Australian and New Zealand Water Quality Guidelines (ANZECC/ARMCANZ 2000a,b).

The EWMA was successfully used as both a *management* and *compliance* tool during the Port of Melbourne's Channel Deepening Project (https://en.wikipedia.org/wiki/Port_Phillip_Channel_Deepening_Project) and Gladstone Port Corporation's Western Basin Dredging and Disposal Project (<https://www.gpcl.com.au/ports-and-trade/major-projects/western-basin-dredging-and-disposal-project/>).

A *moving average* (MA) is a locally-weighted average that attenuates high frequency oscillations in a time-varying signal and hence is referred to as a *low-pass* filter. The simplest MA is based on the concept of stepping a 'window' across the time series and plotting the (arithmetic) mean of the points falling in the window. The *degree of smoothing* is controlled by the width of the window. *Weighted* moving averages operate in the same way except data falling within the windows are not equally weighted as they are in the simple MA. While various weighting schemes are available, most assign the greatest weight to observations near the centre of the window and diminishing with increasing distance from the centre.

While the overall performance of the EWMA as a dredge monitoring and management tool has been judged to be highly successful and appropriate, operationally, the 6-hour time delay introduced by the EWMA computation can be problematic in that it unnecessarily delays response times when worsening water quality is self-evident.

Another, potentially more serious drawback of the EWMA is its inability to be calculated once missing data in the turbidity time-series are encountered. This is due to the *recursive* nature of the EWMA's computation meaning the current value of the EWMA is dependent on the previous value, and so if the previous value is "missing" the current

value cannot be calculated and it too is flagged as “missing”. A robust smoothing technique that does not suffer from this drawback is the Kolmogorov-Zurbenko (KZ) filter.

THE KOLMOGOROV-ZURBENKO (KZ) FILTER

The Kolmogorov-Zurbenko (KZ) filter belongs to the class of low-pass filters and as such is potentially useful for smoothing turbidity time-series data. In essence the KZ filter is computed by taking k time iterations of a moving average (MA) filter of m points. It therefore has only 2 parameters – k and m both of which have clear physical interpretations. In addition to its ease of computation and unlike the EWMA, the KZ filter easily deals with missing data situations and is near optimal (Yang and Zurbenko 2010).

2.3 Use of the KZ filter for dredging projects

The use of the KZ filter to monitor and managing turbidity was first used during Lyttleton Port Corporation’s Channel Deepening Project (Fox 2016). The proposed methodology was approved following a rigorous scientific peer-review as part of Environment Canterbury’s Consent process and was a key component of the raw turbidity data processing system adopted by LPC. For the LPC CDP, a K-Z filter with $m = 4$ and $k = 8$ was used. Anecdotal evidence following the LPC CDP suggests the K-Z filter performed very well although there was possibly scope to re-examine the choice of m and k with a view to reducing the time-delay (3 hours) that this $\{m,k\}$ combination induced in the turbidity calculations (J. Pettersson, *pers. com.*).

3. HARMONISING MODELLED AND MEASURED TURBIDITY

A basic tenet of the environmental consent process for the proposed dredging activity is that, overall, there is no measurable increase in background turbidity levels beyond what has been predicted by hydrodynamic modelling. Output from hydrodynamic models represents the *additional* total suspended sediment (TSS) arising from the dredging operations and is expressed as a concentration (typically in mg/L). In-situ turbidity loggers use a light-based proxy for TSS known as nephelometric turbidity units or NTU. Although not perfect, NTU measurements are generally strongly correlated with TSS and this relationship can be exploited to harmonise modelled output with monitored data.

3.1 Characterising the TSS-NTU relationship

The precise functional form of the TSS-NTU relationship can not be determined in advance of any data collection. Experience has shown that individual site and possibly seasonal models need to be developed to account for spatial and temporal influences on the TSS-NTU relationship. In any event, the model given by Equation 1 which converts TSS at site i during season j into NTU has been found to provide a good compromise between complexity and usefulness.

$$NTU = \alpha_{ij} \cdot TSS^{\beta_{ij}} \quad (1)$$

The parameters α_{ij} and β_{ij} require estimation and this is typically done during the baseline data collection period using contemporaneous measurements of both NTU and TSS at about 0.5m depth. The details of this aspect of the baseline monitoring program will require careful planning and elicitation *prior* to the commencement of baseline monitoring and should be undertaken by a multidisciplinary team with expertise in field sampling, hydrodynamics, statistics, and local knowledge of the environment to be monitored.

4. DEVELOPING A TIERED TURBIDITY TRIGGER SYSTEM

For the NEP, we propose to adopt the same turbidity alerting system that was successfully used by LPC for its channel deepening project. The approach utilised the related concepts of *intensity*, *frequency*, and *duration* (IFD) of turbidity ‘exceedances’ proposed by McArthur et al. (2002).

A thorough appraisal of the statistical and mathematical underpinnings of the IFD method undertaken by *Environmetrics Australia* for the LPC revealed serious shortcomings that had hitherto gone undetected despite the methodology having been adopted for major projects in Australia (Rio Tinto’s Cape Lambert project, Woodside’s Northwest Shelf project, Chevron’s Wheatstone and Gorgon projects, and Inpex’s Ichthys project).

Since the IFD method forms the kernel of the proposed turbidity monitoring and ‘compliance’ program, we believe it important that all stakeholders have a common understanding of both the concepts and mechanics of the approach. These are explained in the next section.

4.1 The Intensity-Frequency-Duration (IFD) method

The three components of the IFD approach are identified in Figure 3. The IFD method originally contemplated by McArthur et al. (2002) treated the three components as if they were *independent* and set trigger values on the intensity and duration. As was shown by Fox (2018) this is incorrect.

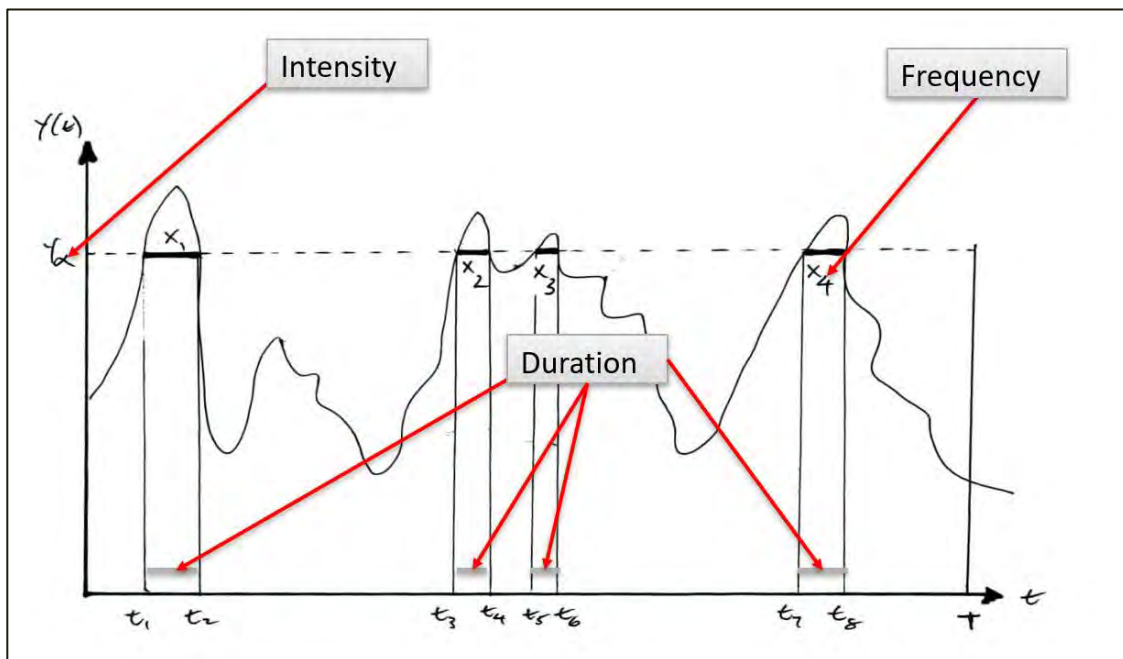


Figure 3. Depiction of IFD components for a turbidity time-series (see text for explanation).

4.2 Which data to use?

The use of turbidity ‘trigger values’ as an early-warning mechanism for dredging projects was an adaption of water quality monitoring procedures espoused in the Australian and New Zealand Water Quality Guidelines (ANZECC and ARMCANZ 2000). That advice was predicated on the notion of a trigger-value being set as some high-order percentile of *background* conditions.

The incorporation of *frequency* and *duration* (of exceedance) considerations into the trigger-value derivation process was the result of individual jurisdictions and projects taking on board ANZECC and ARMCANZ (2000) advice (for toxicants), that wherever possible, water-quality assessments should be based on locally derived criteria.

The approval of large-scale dredging projects and their embedded monitoring programs served to provide regulatory endorsement of the incremental modifications to the

trigger-value methodology. The difficulty was that no one had stopped to undertake an holistic assessment of the *statistical* implications of what had been approved.

The reliance on the analysis of only background conditions for establishing trigger values was challenged during the review of the MacArthur et al. (2002) IFD method Fox (2018). Their procedure was predicated on the key requirement that the trigger-value methodology “*requires that natural SSCs [suspended sediment concentrations] plus that due to disposal cannot exceed the natural bounds*” MacArthur et al. (2002).

Fox (2018) demonstrated that the MacArthur et al. (2002) IFD method which allowed for *simultaneous* increases in both frequency and duration of exceedances resulted in outcomes in the 3D background I-F-D space that were infeasible. The procedure was thus incapable of honouring the proponent’s own requirement that natural turbidity plus that due to dredging cannot exceed natural bounds.

Furthermore, Fox successfully argued during the LPC Consent hearing (Christchurch, May 1-9, 2017) that basing turbidity triggers on background data alone was logically inconsistent with the objectives of the consenting process. The argument advocating the use of background turbidity *plus* modelled turbidity in developing a modified IFD trigger system went as follows:

- (i) Dredging (temporarily) increases turbidity and that increase has been quantified by hydrodynamic modelling;
- (ii) Approval of the project gives license to (i);
- (iii) The monitored turbidity signal during dredging cannot honour a relationship between the I, F and D components that were derived from background turbidity alone;
- (iv) The I, F, and D components of turbidity exceedances need to be adjusted to capture the characteristics of the modified turbidity signal. Limits can then be placed on these components which:
- (v) acknowledge the link between I – F – D components; and
- (vi) ensure that more extreme turbidity events during dredging are within the limits of what has been predicted.

In view of the foregoing, we do not believe it necessary to re-visit the arguments in support of the use of background *and* modelled turbidity for the development of the

IFD trigger-value methodology for the NEP. The results of detailed mathematical and statistical investigations into the modified IFD (m-IFD) were provided as part of the LPC CDP consenting process and are available at ECAN's website (<https://bit.ly/3wjK4hN>).

We next outline the computations involved in the m-IFD method.

4.3 Assimilation of modelled TSS data and baseline monitoring data

The output from hydrodynamic modelling is predicted hourly *additional* suspended sediment (TSS) concentrations arising from dredging activities at Tier 3 monitoring

1. Express modelled TSS concentrations (mg/L) as a turbidity in NTU;
2. Apply K-Z filter to empirical turbidity data;
3. Average smoothed turbidity data over 1-hour periods;
4. For each site:
 - a. Merge data from steps 1 and 2 by month, day, and hour (year is disregarded);
 - b. Add modelled NTU and background NTU to obtain total NTU.

locations The steps involved in combining this data with the background data are outlined in the box below.

4.4 The modified IFD method (m-IFD)

The essence of the m-IFD procedure is the recognition that the fraction of time in an exceedance state must be no greater than α - the level used to determine the intensity trigger for discrete event sampling. Since it is the product of both frequency and (average) duration which determines the total exceedance time, these two components do not need to be separately managed – only the total time.

“Overall, we are satisfied that the m-IFD approach provides adequate assurance in this case”.

*From Commissioners' consent decision on LPC's CDP project,
Environment Canterbury*

For example, suppose the reporting period is 30 days or 720 hours. Using an intensity trigger based on the 95th. percentile of the turbidity data implies that only 5% of turbidity readings will exceed this level (assuming an 'in-control' process). Equivalently, the total time that turbidity exceeds this trigger can be no more than 36

hours. The composition of exceedance events contributing to this 36-hour duration limit is somewhat immaterial – it could be due to many short-duration exceedances, a small number of long exceedances or, as is more likely, a range of durations.

Implementation and management of this system is very simple having only two steps:

1. For a chosen intensity level α determine the intensity trigger, Y_α ;
2. For a fixed monitoring interval $[0, T]$ set a limit on the cumulative exceedance time equal to $\alpha \cdot T$.

Thus, for a 30-day moving window, the *Allowable Cumulative Exceedance Times* (ACET) for $\alpha = \{0.8, 0.95, 0.99\}$ are 144 hours, 36 hours, and 7.2 hours respectively.

A management response is required when the limit in 2 above has been (or is about to be) exceeded.

5. REFERENCES

- ANZECC and ARMCANZ (2000a). National Water Quality Management Strategy, Paper No. 4 Australian and New Zealand Guidelines for Fresh and Marine Water Quality Volume 1: The Guidelines (Chapters 1–7), Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand.
- ANZECC and ARMCANZ (2000b). National Water Quality Management Strategy, Paper No. 7a Australian Guidelines for Water Quality Monitoring and Reporting, Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand.
- McArthur, C., Ferry, R., Proni, J. (2002) Development of guidelines for dredged material disposal based on abiotic determinants of coral reef community structure. *Proc. Third Specialty Conference on dredging and dredged material disposal*, Coasts, Oceans, Ports and Rivers Institute (COPRI) of ASCE, May 5, 2002, Orlando, FL USA.
- ECAN (undated) DECISION OF HEARING COMMISSIONERS SIR GRAHAM PANCKHURST (Chair), PETER ATKINSON AND RAEWYN SOLOMON, Environment Canterbury. <https://www.ecan.govt.nz/document/download/?uri=3209249> (Accessed January 19, 2023).
- Fox, DR. 2016, Statistical Considerations Associated with the Establishment of Turbidity Triggers : Candidate Methodologies for Large-Scale Dredging Projects. Report to Lyttleton Port of Christchurch, 16 September 2016; (May 11, 2017 revision).
- Fox, DR. 2017. Implementation of a modified IFD approach for turbidity monitoring. Environmetrics Australia Technical Report, Beaumaris, Victoria, Australia. April 18, 2017.
- Fox, DR. 2018. Data Imputation - Implications for Trigger Values. Environmetrics Australia Technical Report, Beaumaris, Victoria, Australia. February 19, 2018.
- Warne, M.J., Batley, G.E., Braga, O., Chapman, J.C., Fox, D.R., Hickey, C.W., Stauber, J.L., Van Dam, R. (2014). Revisions to the derivation of the Australian and New Zealand guidelines for toxicants in fresh and marine waters, *Environmental Science and Pollution Research*, 21(1), 51-60.
- Yang, W., Zurbenko, I. 2010, Kolmogorov–Zurbenko filters. *WIREs Computational Statistics*, 2, 340-351.

APPENDIX 1: Implementing the KZ Filter

The Kolmogorov-Zurbenko (KZ) filter belongs to the class of low-pass filters and as such is potentially useful for smoothing turbidity time-series data. In essence the KZ filter is computed by taking k time iterations of a moving average (MA) filter of m points. It therefore has only 2 parameters – k and m both of which have clear physical interpretations. In addition to its ease of computation and unlike the EWMA, the KZ filter easily deals with missing data situations and is near optimal (Yang and Zurbenko 2010).

The KZ filter applied to a time series $X(t)$, $t = 0, \pm 1, \pm 2, \dots$, is given as:

$$KZ_{m,k} [X(t)] = \sum_{s=-k(m-1)/2}^{k(m-1)/2} \frac{a_s^{m,k}}{m^k} X(t+s) \quad (6)$$

where $a_s^{m,k}$ are given by the polynomial coefficients of $(1 + z + \dots + z^{m-1})^k$

$$\sum_{s=-k(m-1)/2}^{k(m-1)/2} z^{s+k(m-1)/2} a_s^{m,k} = (1 + z + \dots + z^{m-1})^k \quad (7)$$

Computations

As mentioned above, the KZ filter computed by taking k time iterations of a moving average (MA) filter of m points as follows as described in Yang and Zurbenko (2010):

1. First iteration is to apply a MA filter to m points:

$$KZ_{m,k=1} [X(t)] = \frac{1}{m} \sum_{s=-(m-1)/2}^{(m-1)/2} X(t+s) \quad (8)$$

2. Second iteration is to apply a MA operation to the result of the first iteration:

$$\begin{aligned} KZ_{m,k=2} [X(t)] &= \sum_{s=-(m-1)/2}^{(m-1)/2} \frac{1}{m} KZ_{m,k=1} [X(t+s)] \\ &= \sum_{s=-2(m-1)/2}^{2(m-1)/2} \frac{a_s^{m,k=2}}{m^2} X(t+s) \end{aligned} \quad (9)$$

3. k^{th} iteration:

$$KZ_{m,k} [X(t)] = \sum_{s=-k(m-1)/2}^{k(m-1)/2} \frac{a_s^{m,k}}{m^k} X(t+s) \quad (10)$$

Implementation in EXCEL

For the LPC CDP, Fox (2016) recommended using the K-Z filter with $m = 4$ and $k = 8$. An alternative to the iterated application of a 4-point moving average to the raw turbidity data is the use of equation 1 directly. A formula for computing the coefficients $a_s^{m,k}$ was not provided by Yang and Zurbenko (2010) and so these have been obtained by direct computation elsewhere. Denoting the scaled coefficients $\frac{a_s^{m,k}}{m^k}$ in equation 1 by $w(s, m, k)$ we see that $KZ_{m,k}[X(t)]$ is a *weighted average* of the current turbidity reading and the immediately adjacent (in time) $\frac{k(m-1)}{2}$ values either side of it. This is because

$$\sum_s w(s, m, k) = 1.$$

For $w(s, 4, 8)$, a weight of 0.123474 is applied to the current raw data value. Diminishing weights are applied to the neighbouring 12 data points either side of the current raw data value. These are {0.11792, 0.102661, 0.081299, 0.058334, 0.03772, 0.02179, 0.011108, 0.004913, 0.001831, 0.000549, 0.000122, 0.000015}. As can be seen from Figure 1, the pattern of weighting is very similar to a gaussian weighting scheme.

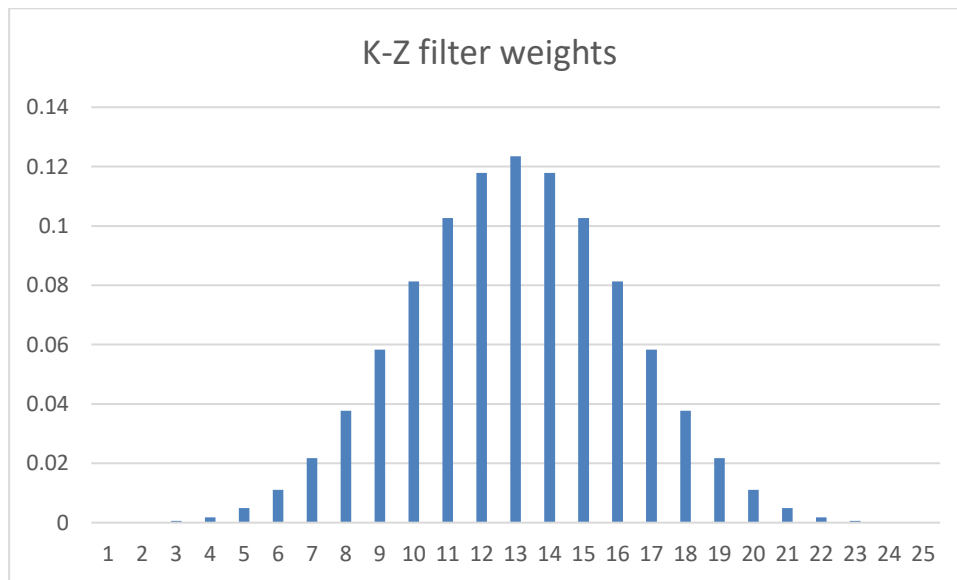


Figure 4. Distribution of weights $w(s, 4, 8)$.

Implementation in Excel is straightforward as is illustrated in Figure 2 which shows the underlying calculation for the raw turbidity reading at CH1 on 1/11/2016 at 14:31. The recorded turbidity was 4 NTU. This is given the highest weight of 0.123474. The next

highest weight of 0.11792 is applied to each of the 2 adjacent readings (3.85 and 4.1). A weight of 0.102661 is applied to the next pair (3.55, 3.65) and so on. Multiplying each of the 25 measured turbidity readings by its corresponding weight and summing gives the final result shown in the highlighted cell. As can be seen from the formula bar at the top of Figure 2, the whole calculation is achieved with one line of code which can be copied and pasted in all the remaining cells to be populated with smoothed data.

D112				{=SUM(C100:C124*coeffs!\$A\$1:\$A\$25)}			
	A	B	C	D	E	F	G
98	CH1	1/11/2016 11:01	4.65	4.488857			
99	CH1	1/11/2016 11:16	4.55	4.403583			
100	CH1	1/11/2016 11:31	4.45	4.327945			
101	CH1	1/11/2016 11:46	4.4	4.257495			
102	CH1	1/11/2016 12:01	3.95	4.192333			
103	CH1	1/11/2016 12:16	3.9	4.134992			
104	CH1	1/11/2016 12:31	3.9	4.088			
105	CH1	1/11/2016 12:46	4.4	4.052113			
106	CH1	1/11/2016 13:01	3.5	4.025907			
107	CH1	1/11/2016 13:16	4.05	4.006563			
108	CH1	1/11/2016 13:31	4.4	3.991221			
109	CH1	1/11/2016 13:46	4.15	3.978144			
110	CH1	1/11/2016 14:01	3.55	3.96701			
111	CH1	1/11/2016 14:16	3.85	3.958221			
112	CH1	1/11/2016 14:31	4	3.95172			
113	CH1	1/11/2016 14:46	4.1	3.94591			
114	CH1	1/11/2016 15:01	3.65	3.937377			
115	CH1	1/11/2016 15:16	4.2	3.921663			
116	CH1	1/11/2016 15:31	3.85	3.894909			
117	CH1	1/11/2016 15:46	4.35	3.8559			
118	CH1	1/11/2016 16:01	3.8	3.808003			
119	CH1	1/11/2016 16:16	3.7	3.76055			
120	CH1	1/11/2016 16:31	3.5	3.729277			
121	CH1	1/11/2016 16:46	3.55	3.735545			
122	CH1	1/11/2016 17:01	3.65	3.803899			
123	CH1	1/11/2016 17:16	3.15	3.957862			
124	CH1	1/11/2016 17:31	3.45	4.214423			
125	CH1	1/11/2016 17:46	3.45	4.578029			
126	CH1	1/11/2016 18:01	3.9	5.035984			
127	CH1	1/11/2016 18:16	5.7	5.556922			
128	CH1	1/11/2016 18:31	6.6	6.093458			
129	CH1	1/11/2016 18:46	6.95	6.589646			
130	CH1	1/11/2016 19:01	7.85	6.991738			
131	CH1	1/11/2016 19:16	8.55	7.259772			
132	CH1	1/11/2016 19:31	9	7.377002			
133	CH1	1/11/2016 19:46	9.25	7.353405			
134	CH1	1/11/2016 20:01	7.05	7.221899			

APPENDIX 2: Turbidity data processing and analysis

I: Data Processing: Quality Assurance

1. Turbidity data will be collected at times, places and sampling frequencies set out in the EMMP;
2. Data integrity and quality will be assured via a two-stage process: (i) an initial QA/QC of the raw turbidity data; and (ii) a comprehensive *statistical QA/QC* of the supplied turbidity data.
3. The first-stage QA/QC activities will be undertaken at the time of data acquisition using procedures and processes specified by the responsible Contractor;
4. The *statistical QA/QC* component will be undertaken by an accredited statistician and utilise statistical methods consistent with the activities described in this report.

II: Data Processing: Smoothing

1. The impact of transient, high-frequency oscillations in the time-series of quality-assured turbidity data will be reduced through a process of statistical smoothing;
2. The smoothing technique will be an implementation of the Kolmogorov-Zurbenko (KZ) Filter with parameters $m=4$ and $k=3$ as described in **Appendix 1** of this report.

III: Data Processing: Treatment of Missing values

1. Treatment of missing individual turbidity readings shall be in accordance with procedures and processes specified by the Contractor responsible for the implementation of the turbidity monitoring program;
2. Treatment of contiguous blocks of missing data for periods in excess of 24 hours shall utilise methods identified in Appendix 3 of this report.

IV: Statistical Analysis of Background Turbidity

1. Data used to develop a statistical profile of background turbidity shall have undergone steps I-III above;
2. Statistical procedures used to develop the background turbidity profile shall be consistent with those outlined in this report, including (but not limited to):
 - Graphical, tabular and numerical summaries organised by site and time;
 - Quantification of spatial and temporal patterns, dependencies and anomalies in the measured turbidity signals;
 - Investigation into the influences of natural forcings such as wind speed, wind direction, rainfall, currents, and tide.
 - Estimation of the parameters in the NTU-TSS relationship and assessment of spatial-temporal dependencies of same;

- Identification of appropriate theoretical distributions to describe overall turbidity properties;
- Assessment of the representativeness of climatic and oceanographic conditions during the background data collection period.

V: Trigger Values

1. Trigger values will utilise monitored data that has undergone steps I-III and augmented with the incremental turbidity due to dredging as predicted by hydrodynamic modelling. The conversion between modelled TSS and NTU will be achieved using the models identified in IV above;
2. The modified IFD approach as detailed in Appendix 2 of this report shall be used to establish numerical trigger values;
3. The *intensity* levels associated with the 'Tier 1, 'Tier 2, and 'Tier 3 classifications shall correspond to high order., percentiles of the data in V.1 above (80th., 95th., and 99th are suggested);
4. The permissible number (*frequency*) of 'Tier1, 'Tier2, and 'Tier3 exceedances in a reporting period will be determined in accordance with the method outlined in section 4.6 of The Report and attached as **Appendix D**;
5. The maximum average *duration* of 'Tier 1, 'Tier 2, and 'Tier 3 exceedances in a reporting period will be determined in accordance with the method outlined in section 4.6 of The Report and attached as **Appendix D**;
6. The management response associated each of the 'Tier 1, 'Tier 2, and 'Tier 3 triggers is not required provided both the number and average duration of turbidity exceedances in the reporting period are within the limits identified in V.4 and V.5 above;
7. Contemporaneous control charting of *median* turbidity at sentinel sites and the rolling 80th. percentile of turbidity at a selected reference site(s) as described in section 4 of The Report may be used as an internal LPC back-up monitoring tool.

V1: Cause and Effect

1. In the event turbidity conditions resulting in a 'Tier 3' exceedence a detailed analysis of all turbidity data obtained from steps I-III up to and including the time of exceedance will be undertaken using methods described in sections 2.2 and 2.3 of The Report;
2. The findings associated with the analyses undertaken in V1.1 will be used by LPC to assist in the assessment of the relative contributions of 'natural' and dredge-related turbidity to the measured turbidity signal.

APPENDIX 3: Treatment of missing blocks of data

An advantage of the KZ Filter (*see Appendix 1*) is that it is robust to the presence of small amounts of missing data. With a 15-minute time-increment and $m=3$ and $k=3$, the KZ-filter will be a weighted average of the current turbidity reading and the three adjacent readings. Although a smoothed turbidity reading will be produced at the same frequency as the sampling (ie. one every 15 minutes) it will lag the raw data by 45 minutes. As discussed in The Report, missing data pose various challenges for the subsequent statistical analysis and treatment of the turbidity series. Under the scheme outlined in this document, the KZ filtering of data can continue provided there is no more than six (6) contiguous missing values of the recorded turbidity. Where more than 6 contiguous readings are reported as 'missing', advanced statistical modelling techniques as discussed in section 2.1 shall be used to statistically 'impute' the likely values of the missing data. This data imputation will be done in such a way that the resulting sequence:

- (i) is consistent with the autocorrelation of the actual data recorded prior to the period of 'missingness';
- (ii) utilises actual data recorded at nearby locations using spatial covariance modelling techniques;
- (iii) has statistical properties that are consistent with actual data recorded immediately prior and following the period of 'missingness'.

APPENDIX 4: MANGANESE POINT LINE PLAN



APPENDIX 5: UNDERWATER NOISE MANAGEMENT PLAN



WDC CONDITIONS: NORTHPORT LIMITED (UPDATED 22.09.25)

PORT EXPANSION, SH15, MARSDEN POINT (Construction)

To undertake the following activities at or near Ralph Trimmer Drive, Marsden Point:

- Construction of a public access from the existing car park at the end of Ralph Trimmer Drive (to be replaced) through to a proposed reserve and related amenities at the eastern edge of the proposed reclamation.
- Construction of port facility above MHWS including earthworks.

Note: *All location coordinates in this document refer to Geodetic Datum 2000, New Zealand Transverse Mercator Projection (unless expressly stated otherwise).*

SUBJECT TO THE FOLLOWING CONDITIONS

DEFINITIONS:

“Building”	means a temporary or permanent moveable or immovable physical construction that: (a) is partially or fully roofed, and (b) is fixed or located on or in land, but (c) excludes any motorised vehicle or other mode of transport that could be moved under its own power.
“Certification”	Has the meaning set out in Condition 8:
“Council”	means Whangārei District Council or its successor;
“Expansion Project”	means the Northport expansion to the east of the existing consented and/or constructed port for the purposes of constructing, operating, and maintaining a container terminal as authorised by these consents (and associated regional consents), and all associated activities and works;
“Major Structure”	means any: (a) vehicle used as residential activity, excluding temporary activities. (b) network system exceeding 1.5m in height above ground level or 3m² ground coverage. (c) fence or wall, or combination of either, greater than 2m in height above ground level. Where there is less than a 1m separation distance between any separate fence or wall, or combination of either, then their height must be measured from the lowest ground level of to the highest point of either.

- (d) tank or pool exceeding 35,000 litres.
- (e) structure greater than 2.2m in height above ground level or greater than 9m² ground coverage, including outdoor stockpiles or areas of storage, but excluding amateur radio configurations.

“Pocket Park”

means the public park (recreational open space) area near the south-eastern corner of the Expansion Project site, as shown in Boffa Miskell *“Proposed Concept Plan”*, BM220519-201 (Revision B, 25.7.22); and

“Port Activities”

means the use of land and/or Buildings for port related activities, including but not limited to:

- (a) port and ancillary port activities;
- (b) cargo handling, including the loading, unloading, storage, processing and transit of cargo;
- (c) debarking;
- (d) fumigation;
- (e) transport, storage and goods handling activities;
- (f) maritime passenger handling/services;
- (g) construction, maintenance and repair of port operations and facilities;
- (h) port administration;
- (i) refuelling/fuel handling facilities;
- (j) activities associated with surface navigation, berthing;
- (k) maintenance or repair of a reclamation or drainage system;
- (l) marine and port accessory structures and services;
- (m) repair and maintenance services and facilities ancillary to port activities;

“Practical Completion”

in relation to the reclamation, means the date that the completed reclamation (or any part thereof) is available for Port Activities;

“RMA”

means the Resource Management Act 1991;

“Suitably Qualified and Experienced”

means a person or persons with a recognised qualification and/or relevant experience relevant to the topic being assessed.

“Tangata Whenua Relationship Group”

means the group to be established pursuant to Northland Regional Council resource consent [insert NRC consent ref]

GENERAL

1. Works/activities authorised by these consents must be undertaken in general accordance with the application received by Council on 6 October 2022 and all supporting information, including the following documents and plans (including as amended through the application and hearing process). If there is any conflict between the relevant documents/plans and these conditions of consent, these conditions of consent prevail.

AEE reports

- Marshall Day Acoustics Ltd '*Northport Container Terminal Expansion Noise Assessment*' (Rp 002 R07 20200547) dated 29 September 2022.
- Enviser Ltd '*Draft Construction Environmental Management Plan*' (Enviser ref. 1116) dated October 2022.
- MetOcean Solutions '*Effects of Proposed Reclamation and Dredging Layout on Hydrodynamics*' dated August 2022.
- Tonkin and Taylor Ltd '*Coastal Process Assessment*' (ref. 1017349 v3) dated September 2022.
- Coast and Catchment Ltd '*Assessment of Ecological Effects*' Report number 2021-24 dated September 2022.
- Boffa Miskell Ltd '*Coastal Avifauna Assessment*' Rev. G dated 3 October 2022.
- Cawthron Institute '*Potential Effects of the Proposed Northport reclamation on Marine Mammals in the Whangarei Harbour Region*' Report no. 3652 dated September 2022.
- Brown NZ Ltd '*Assessment of Landscape, Natural Character and Amenity Effects*' dated September 2022.
- Clough and Associates Ltd '*Archaeological Assessment*' dated June 2022.
- WSP Ltd '*Concept Design Report*' Ref. 6-DV652.00 Rev. C dated August 2022.
- Rob Greenaway and Associates '*Recreation Effects Assessment*' dated September 2022.
- Hawthorn Geddes Ltd '*Stormwater Pond Assessment Report*' HG ref. 12377 Rev. 3 dated 10.8.22.
- Pattle Delamore Partners Ltd '*Air Quality Assessment*' Ref. A03566800R001 dated 5.8.22.
- Market Economics Ltd '*Economic Assessment*' Ref. NPL 001.20 dated September 2021.
- Patuharakeke Te Iwi Trust Board '*Interim Cultural Effects Assessment*' dated November 2021.
- Patuharakeke Te Iwi Trust Board '*Cultural Effects Assessment*' dated December 2022.
- Styles Group '*Assessment of Underwater Noise Effects*' dated 2 August 2022.
- Northport '*Navigation Safety Report*' dated September 2022.
- WSP Ltd '*Traffic Impact Assessment*' Ref. 1-19278.01/00006 dated 30.08.22.
- 4Sight Ltd '*Intertidal Ecology Report*' dated May 2018.

RFI responses

- Response to information request dated 25 October 2022.
- Response to information request dated 21 February 2023.
- Response to information request dated 13 July 2023.

Plans/drawings

- WSP Ltd 'Design Drawings' 1-19278.01(03) – Sheets C01 (Rev. D), C02 (Rev. D), C03 (Rev. D), and C04 (Rev E).
 - Boffa Miskell Ltd – 'Pocket Park Concept Plan' – BM220519-201 and BM 220519-200 (Rev B).
 - Reyburn and Bryant – 'Northport Expansion (Berth 5) – O14656 (Rev. A).
 - Northport – 'Relocated Tug Facility Eastern End – Concept Plan' (R0) dated September 2022.
 - Northport 'Mair Road Reserve Concept Plan' ref. D60-15-13-2-002 R0 dated July 2025.
 - Northport 'Mair Road Reserve Designations Plan' dated June 2025.
 - Northport 'Marsden Bay Reserve Concept Plan' ref. D60-15-13-2-003 dated June 2025.
2. A copy of these consents and the most up-to-date certified versions of all management plans required by these consent conditions must be kept on site at all times and made available to persons undertaking activities authorised by these consents.
 3. Within ten (10) working days of the section 245(5) certificate being issued for the reclamation the consent holder must provide a copy of the certificate to the Council.
 4. All monitoring/sampling required under these consents must be undertaken by or under the supervision of a Suitably Qualified and Experienced person(s).
 5. At least thirty (30) working days in advance of the date of the commencement of works authorised by these consents (excluding the works under conditions 18-31), the consent holder must contact the Council to arrange for a site meeting with the consent holder's contractor(s) and the Council compliance officer prior to commencement of construction works. The details to be provided at the meeting, and then in writing no more than five (5) working days after the meeting, must include:
 - (a) The intended date of the commencement of works and a programme for the works.
 - (b) A draft programme for the CEMP and any other design plan, engineering plan, report or management plan required to be submitted for certification under these conditions (if not already provided).
 - (c) The intended date for providing the final design drawings to demonstrate how the works are in general accordance with the conditions of these consents, including **Appendix 1**.
 - (d) The nominated Consent Holder contact and contractor representative (or equivalent) for the works
 - (e) Any intended staging of the works
 - (f) A list of the proposed Suitably Qualified and Experienced Persons and Chartered Engineers proposed to be used in preparation of any design plans, engineering plan(s), report or management plan requiring Council certification.

Complaints

6. The consent holder must maintain a Complaints Register for the purpose of recording and dealing with any complaints that are received by the consent holder in relation to the exercise of these resource consents. The Complaints Register must record, where this information is available:

- (a) Name of complainant, if provided to the consent holder;
 - (b) The date and time of the complaint;
 - (c) A description of the complaint;
 - (d) The location of the issue raised;
 - (e) Weather conditions at the time of complaint, including a description of wind speed and wind direction when the complaint occurred (if relevant).
 - (f) Any possible cause of the issue raised;
 - (g) Any investigations that the consent holder undertook in response to the complaint; and
 - (h) Any corrective action taken to address the cause of the complaint, including the timing of that corrective action; and
 - (i) Any feedback provided to the complainant.
7. The consent holder must provide a copy of the complaints register to the Council within five working days of receiving a request to do so from the Council.

Certification

8. Where any condition requires the consent holder to submit design plans, engineering plans, a report or management plan to the Council for “**certification**” it must mean the process set out in the following paragraphs (a) to (d) and the terms “certify” and “certified” must have the equivalent meanings:
- (a) The consent holder supplies design plans, engineering plans, reports, or a management plan to the Council, and the Council assesses the documentation submitted. The certification process for design plans, engineering plans, management plans and reports required by conditions of this consent must be confined to confirming that the plans or reports give effect to their purposes, consent condition requirements, and schedule requirements, and contain the required information;
 - (b) Should the Council determine that the documentation supplied in accordance with (a) above achieves the requirements of the relevant condition(s), the Council must issue a written confirmation of certification to the consent holder;
 - (c) If the Council’s response is that it is not able to certify a design plan, engineering plan, management plan or report, it must provide the consent holder with reasons and recommendations for changes to the plan or report in writing. The consent holders must consider any reasons and recommendations of the Council and resubmit an amended design plan, engineering plan, management plan, or report for certification;
 - (d) A design plan, engineering plan, management plan or report cannot be subject to a third-party approval. The Council in deciding whether to certify the design plan, engineering plan, management plan or report, however, may also obtain advice from other qualified person(s).
9. The process in Condition 8 must be repeated until the Council is able to provide written confirmation that the requirements of the applicable condition(s) have been satisfied.
10. The consent holder must comply with the certified management plan or report at all times.

Review under s128 of the RMA

11. The Council may serve notice on the consent holder of its intention to review the conditions of these consents pursuant to Section 128 of the RMA either:
 - (a) Annually during the month of March, for any one or more of the following purposes:
 - (i) To require the adoption of the Best Practicable Option to remove or reduce any adverse effect on the environment; or
 - (ii) To deal with any change(s) to the materials handled through the Port Terminal; or
 - (iii) To respond to any new technology, standards or monitoring parameters relevant to the environmental monitoring undertaken in accordance with these consents.
 - (b) At any time, for the following purpose:
 - (i) To deal with any adverse effects on the environment which may arise from the exercise of the consents and which it is appropriate to deal with at a later stage, including effects identified in the consent holders monitoring results or reports from activities authorised by these consents and/or as a result of Council's state of the environment monitoring in the area.
12. The consent holder must meet all reasonable costs of any such review.

Stakeholder and Communications Management Plan (SCMP)

13. The consent holder must prepare and implement a SCMP not later than 12 months prior to commencement of construction works authorised by this consent (excluding the works under conditions 18-31). The purpose of the SCMP is to set out a framework for how the consent holder will communicate with the community, stakeholders and affected parties for the duration of construction, and the operation of the Expansion Project.
14. The SCMP must set out, prior to construction, how the consent holder will:
 - (a) Identify the stakeholders for communication;
 - (b) Inform the community of project process and likely commencement of construction works and programme;
 - (c) Engage with the community and stakeholders to foster good relationships and provide opportunities for learning about the project;
 - (d) Utilise the project website to provide updates to the community;
 - (e) Communicate with the Tangata Whenua Relationship Group regarding construction of the project;
 - (f) Respond to queries and complaints; and
 - (g) Provide updates on progress with management plans.
15. The SCMP must set out the framework for how, during construction and operation, the consent holder will:

- (a) Engage with stakeholders such as Channel Infrastructure, Seafuels, affected landowners, the Tangata Whenua Relationship Group, community groups, local businesses and representative groups, residents' organisations, other interested groups or individuals, network utility operators, Northland Regional Council and associated local authorities, Waka Kotahi, and the Council;
 - (b) Inform the Whangarei district community of construction progress, including proposed hours of work;
 - (c) Inform the Whangarei district community of ongoing dredging;
 - (d) Engage with the communities to foster good relationships and to provide opportunities for learning about the project;
 - (e) Provide information of key project milestones; and
 - (f) Make each management plan publicly available once a management plan is finalised, and for the duration of project works.
16. The consent holder must prepare the SCMP in consultation with the following parties and submit the final SCMP for certification with the CEMP:
- (a) The Council;
 - (b) Whangarei District Council; and
 - (c) Tangata Whenua Relationship Group

LAPSING OF CONSENTS

17. This resource consent will lapse twenty (20 years) after commencement.

OFFSET MITIGATION FOR LOSS OF COASTAL OPEN SPACE AND RECREATION VALUES

General

18. Conditions 24-31 require the Consent Holder to prepare for Certification improvement works plans for Mair Road and the Marsden Bay Drive esplanade area to provide offset mitigation for the loss of recreational and coastal open space values from the Project. The improvement works must contribute toward the following outcomes:
- a. **Access to the coast:** Facilitating safe access to the coast for recreational activities, including swimming and fishing, and to encourage engagement with the marine environment.
 - b. **Passive recreation:** Developing areas for passive recreation, such as picnic spots and playgrounds, to provide family-friendly, inclusive, and relaxing environments.
 - c. **Land/harbour interface improvements:** Enhancing the interface between the land and harbour, promoting visual and physical connections to the water while preserving and enhancing ecological values.
19. The works must be designed in accordance with the WDC Engineering Standards (2020 Edition or most relevant at the time) and any other relevant design standard/guidelines (e.g. Playground design

guidelines) and all costs associated with designing, implementing, and reporting on the works must be met by the Consent Holder.

The Improvement Works plans must include details of the following matters:

- a. How the scope of works will be achieved or the outcomes delivered.
 - b. Landowner (Department of Conservation and WDC Roding / Parks) consultation/approvals, concessions, lease agreement and terms.
 - c. Any related resource consents, engineering plan approvals or other statutory approvals.
 - d. The estimated costs and programme to implement the improvement works.
 - e. Tangata Whenua Relationship Group feedback on the proposed improvement works.
 - f. Public feedback on the proposed improvement works.
 - g. The engineering and design standards applied to the works.
 - h. The design life, defects periods and any warranties.
 - i. The process for transferring to WDC a maintenance schedule, RAMM data and as built documents.
 - j. Maintenance agreements where the landowner is not WDC.
 - k. Measures to manage traffic and environmental impacts of the works.
20. The timeframe in conditions 24 and 28 for providing the Improvement Works plans may, following a written request from the Consent Holder, be extended by the Council, provided it is satisfied that:
- a. The Consent Holder has been actively engaging with the landowner, the Tangata Whenua Relationship Group, the Council and the public as required by Condition 19, but that more time is needed; and/or
 - b. More time is needed to obtain any necessary resource consents/approvals.
21. The programme required for each Improvement Works plan by Condition 19(d) may show works being staged and a duration of up to five (5) years.
22. Within twelve (12) months of Certification of the Improvement works plan by the Council, the Consent Holder must begin implementing the works in accordance with the Certified programme of works.
23. Within twelve (12) months of the Improvement Works commencing, the Consent Holder must update the Council on the progress of those works, and continue to do so annually, until they are complete.

Mair Road Improvement Works

24. Within twenty-four (24) months of the commencement of this consent, except where condition 20 applies, the consent holder must provide to the Council for Certification a Mair Road Improvements Works Plan (MRIWP) prepared, certified, and implemented in accordance with Conditions 18-23.

25. The objective of the MRIWP is to document the design and delivery of the improvement works to the Mair Road carpark, beach access, and surrounding reserve area that contribute to the outcomes in Condition 18.
26. The scope of works to achieve Condition 25 is shown generally on the Concept Plan ref. D60-15-13-2-002 R0 dated July 2025 (**Appendix 3**) and includes:
 - a. Sealing the currently unsealed portion of Mair Road and the public carpark area to the relevant EES or equivalent standard.
 - b. Ablution facilities at the end of Mair Road.
 - c. Stormwater management improvement works to minimise related coastal erosion from the road and carpark area runoff designed to EES or equivalent standard.

Advice note: The improvement works under this condition are exempt from the SCMP, CEMP, and CTMP conditions.
27. If one or more of the scope items in condition 26 is /are unable to be delivered then by mutual agreement another scope item(s) that contributes to the outcomes in 31 and provides equivalent value must be included in the MRWIP.

Marsden Bay Drive Improvement Works

28. By 30 September 2039, except where condition 20 applies, the consent holder must provide to the Council for Certification a Marsden Bay Drive Improvements Works Plan (MBDIWP), prepared in accordance with Conditions 18-23.
29. The objective of the MBDIWP is to document the design and delivery of Improvement Works to the Marsden Bay Drive esplanade area to provide the outcomes in Condition 18.
30. The scope of works to achieve Condition 29 is shown generally on the Concept Plan ref. D60-15-13-2-003 dated June 2025 (**Appendix 4**) and includes:
 - a. Formalise the carparking area of the Marsden Bay Reserve with an all-weather surface, edging and drainage to the relevant EES or equivalent standard.
 - b. Replacement toilets.
 - c. Upgraded playground to a 'Local Reserve / Neighbourhood' standard.
 - d. Passive recreation facilities such as seating, picnic tables and connecting pathways and all ability access from the carpark to the beach.
 - e. Landscaping including coastal edge restoration.
 - f. Measures to manage traffic and environmental impacts of the works.

Advice note: The improvement works under this condition are exempt from the SCMP, CEMP, and CTMP conditions.

31. If it is mutually agreed between the Consent Holder and the Council that it is no longer efficient or effective to complete the scope of works at Marsden Bay Drive, then an equivalent scope of works that contributes to the outcomes in Condition 18 must be undertaken at an alternative location on publicly accessible land in the One Tree Point / Marsden Point area. If this agreement occurs, the same process in Conditions 18-23 must be followed.

DESIGN AND CONSTRUCTION OF RECREATIONAL FEATURES AND TRANSPORT INFRASTRUCTURE

Engineering Plan Approval

32. Prior to the commencement of construction authorised by these consents (excluding the works under conditions 18-31) the consent holder must provide a detailed set of engineering plans to the Council for approval. The plans must be prepared in accordance with Council's Engineering Standards (2020 Edition or most relevant version at the time) and are to include:
- (a) Earthworks plans showing the finished interface between proposed the Berth 5 reclamation and the adjoining esplanade reserve. Plans should demonstrate how public access (which offers a maximum 1:12 gradient for people with all levels of mobility) has been facilitated to the residual beach area to the east;
 - (b) Design details of the construction of the Pocket Park private accessway, including the connection to Ralph Trimmer Drive, including a typical cross section, long section, culverts, drainage flow paths and overland flow;
 - (c) Pocket Park and associated recreational features, including at least 26 car parks, street lighting, and a new public toilet as generally depicted on the Boffa Miskell "Proposed Concept Plan" BM220519-201 (Revision B, 25.7.22) at **Appendix 2**; and
 - (d) Design details of reticulated network connections for sewer and water for the Pocket Park facilities (public toilet and water fountain).
 - (e) Design details of prominent signage advising of the ecological value of the foreshore area as shorebird habitat and the importance of dog control.
33. All work on the approved engineering plans in Condition 32 is to be carried out to the satisfaction of the Council (noting the timeframe in Condition 45 for completion of the Pocket Park). Compliance with this condition must be determined by;
- (a) Site inspections undertaken as agreed in Council's engineering plan approval letter/ Inspection and Test Plan;
 - (b) Results of all testing, video inspection records of all wastewater and stormwater reticulation, PE pipeline pressure testing and weld data logging results;
 - (c) PS4 and approval of supporting documentation provided by the developer's representative/s including evidence of inspections by those persons, and all other test certificates and statements required to confirm compliance of the works as required by Council's QA/QC Manual and the Council's Engineering Standards (2020 Edition or most relevant version at the time); and

(d) PS3 "Certificate of Completion of Development Works" from the Contractor.

34. No construction works authorised by each of the engineering plans in Condition 32 are to commence until the relevant engineering plan has been approved.
35. The consent holder must submit certified RAMM data for all new/upgraded roading infrastructure prepared by a suitably qualified person in accordance with Council's Engineering Standards (2020 Edition or most relevant version at the time) to the satisfaction of the Development Engineer or their delegated representative.
36. The consent holder must ensure that spoil from the site must not be tracked out onto Council or State Highway Road formations.
37. All damage to street footpaths, stormwater kerb and channels, road carriageway formation, street berm and services by the demolition and construction works associated with the Consent Holder's activities must be reinstated in accordance with Council's Engineering Standards (2020 Edition or most relevant version at the time). Any reinstatement works must be undertaken at the expense of the consent holder and be completed to the approval of the Council within six (6) months of practical completion.

Advice note: *It is the consent holders responsibility to obtain any necessary non-RMA approvals to undertaken repair works within the road reserve.*

38. The consent holder must ensure the assets listed in Condition 37 above remain in good working order while the consents are being exercised.

Pocket Park – Maintenance

39. At least three (3) months prior to the commencement of construction authorised by these consents the consent holder must prepare and submit a Pocket Park Maintenance Management Plan for certification by the Council. The purpose of this plan is to detail ongoing maintenance requirements and responsibilities for the Pocket Park, and to ensure recreational value is maintained for the public.
40. The Pocket Park Maintenance Management Plan must be prepared with opportunity for input from the Council Infrastructure Planning and/or Parks Department (or equivalent at the time) and the Tangata Whenua Relationship Group formed under Condition 244 of the NRC consent, where appropriate.

Landscape Planting

41. At least three (3) months prior to the commencement of construction authorised by these consents the consent holder must prepare a Landscape Planting Plan for the Expansion Project, including the Pocket Park, for certification by the Council.

The Plan must be prepared by a Suitably Qualified landscape architect and be for the purpose of detailing amenity planting associated with the construction of Berth 5, public coastal structures (water taxi and swimming steps), and the Pocket Park (including the access to Ralph Trimmer Drive). The Plan must be designed to reflect the coastal landscape and natural character values of the Whangārei Harbour entrance and Bream Bay area and must contain, at a minimum:

- (a) Details of security fencing, lighting, and landscaping measures to avoid a utilitarian feel, particularly along the Pocket Park access to Ralph Trimmer Drive;
- (b) Measures to address Crime Prevention Through Environmental Design risks and encourage opportunities for passive surveillance;
- (c) Replacement planting of multi-stemmed pohutukawa trees (*Metrosideros excelsa*) along the eastern edge of the revetment, between the Pocket Park and water taxi jetty, at a minimum density of one tree per 10m; and
- (d) Details of how specimen trees have been incorporated into the design, where appropriate, as replacements for the Public Trees removed from the coastal margins of the esplanade reserve.

42. The Landscape Planting Plan must include at a minimum:

- (a) A schedule of the species to be planted, including the name, numbers, location, spacing and size of plant species at time of planting, planting density, details on the timing of plantings, and details of any existing vegetation to be retained;
- (b) Proposed site preparation and plant establishment measures; and
- (c) Ongoing maintenance and monitoring requirements, including any recommended ongoing pest and weed controls.

Advice Note: Any planting will be designed and maintained to meet the security requirements of Maritime Security Act 2004.

- 43. Within 12 months of Practical Completion, all planting required by the certified Landscape Planting Plan in Condition 41 above must be implemented in accordance with the details of that Plan. All planting must be undertaken to the satisfaction of the Council.
- 44. Wherever practicable, all specimens must be eco-sourced from within the Waipu Ecological District, as identified by the Department of Conservation's Protected Natural Areas Programme.

PUBLIC ACCESS

- 45. The construction of the Pocket Park required by Condition 33 must be completed within 12 months of Practical Completion.
- 46. Prior to Practical Completion, the Consent Holder must demonstrate to the satisfaction of Council that public access to and along the Pocket Park has been formalised by an appropriate legal mechanism.
- 47. Restricted access from Ralph Trimmer Drive to East Beach must occur for no longer than eighteen (18) months total.
- 48. Public walking access from Ralph Trimmer Drive to the residual Marsden Bay beach area must be maintained during construction except for short durations where health and safety requires restriction.

Advice note: See also public access section of the CEMP.

CONSTRUCTION

Accidental discovery protocol

49. In the event of discovery of archaeological material during construction (e.g. intact shell midden, hangi, or storage pits relating to Māori occupation; or cobbled floors, brick or stone foundations, or rubbish pits relating to 19th century European occupation), work in the immediate vicinity must cease. Heritage NZ Pouhere Taonga, the Tangata Whenua Relationship Group and the Council must be notified as soon as reasonably practicable.
50. Work must not recommence in the immediate vicinity of the discovery until either: it has been determined that no Heritage New Zealand Pouhere Taonga approval(s) are required; or that any necessary Heritage New Zealand Pouhere Taonga approval(s) have been obtained.
51. In the event of koiwi tangata (human remains) being uncovered, work in the immediate vicinity of the remains must cease. The Tangata Whenua Relationship Group, Heritage NZ Pouhere Taonga, NZ Police and the Council must be contacted so that appropriate arrangements can be made.

Advice Note: *The Heritage New Zealand Pouhere Taonga Act 2014 makes it unlawful for any person to destroy, damage or modify the whole or any part of an archaeological site without the prior authority of Heritage New Zealand Pouhere Taonga.*

Construction noise

52. Expansion Project construction noise from activities on land must not exceed the noise limits in Table One:

Table One: construction noise limits

RESIDENTIAL ZONES AND DWELLINGS IN RURAL AREAS:

Upper limits for construction noise received in residential zones and dwellings in rural areas

Time of week	Time period	Noise limits (dB)	
		L _{Aeq}	L _{AFmax}
Weekdays	0630-0730	55	75
	0730-1800	70	85
	1800-2000	65	80
	2000-0630	45	75
Saturdays	0630-0730	45	75
	0730-1800	70	85
	1800-2000	45	75
	2000-0630	45	75
Sundays and public holidays	0630-0730	45	75
	0730-1800	55	85
	1800-2000	45	75
	2000-0630	45	75

INDUSTRIAL OR COMMERCIAL AREAS:

Upper limits for construction noise received in industrial or commercial areas on all days

Time period	Noise limits (dB L_{Aeq})
0730-1800	70
1800-0730	75

53. Construction noise must be measured and assessed in accordance with New Zealand Standard NZS 6803:1999 “Acoustics – Construction Noise”.

Advice Note: *Northland Regional Council resource consents for the Expansion Project include noise limits for construction noise from activities within the coastal marine area.*

Construction Traffic Management Plan

54. At least three (3) months prior to the commencement of Expansion Project construction works (excluding the works under conditions 18-31), the consent holder must submit a Construction Traffic Management Plan (CTMP) to the Council for certification. The objective of the CTMP is to detail the procedures, requirements and standards necessary for managing traffic effects during construction of the Expansion Project so that safe facilities for local movements by all relevant transport modes are maintained throughout the construction period. The CTMP must include:
- (a) The estimated numbers, frequencies, routes and timing of construction traffic movements;
 - (b) Any restriction on construction traffic routes, including Marsden Point Road;
 - (c) Methods required to manage vehicular traffic and/or to manage traffic congestion;
 - (d) Methods to manage the effects of temporary traffic management activities on general traffic;
 - (e) Measures to manage the safety of all transport users;
 - (f) Site access routes and access points for heavy vehicles,
 - (g) The size and location of parking areas for plant, construction vehicles and the vehicles of workers and visitors;
 - (h) Identification of detour routes and other methods for the safe management and maintenance of all users on existing roads;
 - (i) Methods to maintain vehicle access to property where practicable, or to provide alternative access arrangements when it will not be;
 - (j) Methods to maintain public access to Marsden Bay beach during construction, and signage to inform the public about beach access;
 - (k) The management approach to loads on heavy vehicles, including covering loads of fine material, the use of wheel-wash facilities at site exit points and the timely removal of any material deposited or spilled on public roads;

- (l) Methods that will be undertaken to communicate traffic management measures to affected road users such as residents/public/emergency services; and
 - (m) Measures to ensure the safe disembarking/embarking of passengers on cruise vessels.
55. The CTMP must be prepared by a Suitably Qualified and Experienced person and in accordance with Council's requirements for CTMPs (as applicable) and New Zealand Guide to Temporary Management (April 2023) (or equivalent at the time). The CTMP must be prepared in consultation with Waka Kotahi and Council.
56. The CTMP must be certified in writing by the Council prior to construction works authorised commencing, and the consent holder must undertake all activities authorised by these consents in accordance with the certified CTMP (including any certified variation).
57. Any variation to the CTMP must be subject to certification by the Council.

Native Lizard Survey & Relocation

58. The Consent Holder must engage a suitably qualified and experienced herpetologist or ecologist to conduct a native lizard species habitat and presence survey in areas that may be impacted by the Project Works. The survey is to be conducted no less than 6 months prior to the start of the Project Works. The purpose of the survey and any subsequent salvage and relocation is to minimise any potential effects on indigenous lizard species within the project footprint.
59. If the survey conducted in accordance with condition 58 above confirms the presence of any such species, the Consent Holder must:
- a. instruct a suitably qualified and experienced herpetologist or ecologist to recommend best practice methods to capture and relocate the species to another suitable site, provided the new site:
 - i. has the required habitat,
 - ii. has been subject to predator control measures for at least 6 months prior to the first transfer, and
 - iii. will receive ongoing predator control for three years after the last transfer;
 - b. undertake capture and relocation, preferably within the Whangarei takiwā, under the supervision of a suitably qualified and experienced herpetologist or ecologist;
 - c. Provide a report to the consent authority on the surveys undertaken and the results. Copies of the report are also to be provided to RFB and DOC.

Advice Note: native lizard capture and relocation must also be carried out in accordance with a Wildlife Act Authority.

Construction and Environmental Management Plan

60. At least three (3) months prior to the commencement of construction authorised by these consents (excluding the works under conditions 18-31), the consent holder must submit a Construction and Environmental Management Plan (CEMP) to the Council for certification. The objectives of the CEMP are:

- (a) To detail the environmental monitoring and management procedures to be implemented during the Expansion Project's construction phase to ensure that appropriate environmental management practices are followed and adverse construction effects are minimised to the extent practicable; and
 - (b) To ensure construction effects of the Expansion Project are in accordance with the assessments accompanying the resource consent applications.
- 61. The CEMP must include the following sections:
 - (a) Construction phase roles and responsibilities protocols;
 - (b) Environmental Risk Assessment;
 - (c) Dust;
 - (d) Construction Noise;
 - (e) Traffic, including to demonstrate how the relevant conditions will be satisfied;
 - (f) Archaeology;
 - (g) Hazardous Substances;
 - (h) Public access, including to demonstrate how condition 48 will be satisfied;
 - (i) Erosion and Sediment Control; and
 - (j) Communications Protocols and Complaints Procedures.
- 62. The CEMP must be prepared by a Suitably Qualified and Experienced person, with advice from relevant technical experts, and be in general accordance with the draft CEMP provided as part of the resource consent application (Enviser, Draft Construction and Environmental Management Plan, October 2022).
- 63. The CEMP must be certified in writing by the Council prior to construction works authorised by these consents first commencing, and the consent holder must undertake all activities authorised by these consents in accordance with the certified CEMP (including any certified variation).
- 64. The CEMP may be submitted in stages to reflect the design and construction programme. If staging is proposed and any matters in Condition 61(c-i) are not relevant, a statement must be provided of why management of these effects are not relevant to the particular stage of works.
- 65. Any variation to the CEMP must be subject to certification by the Council.

Pavement damage to Ralph Trimmer Drive during construction

- 66. At least three (3) months prior to construction works commencing, the consent holder must engage a Suitably Qualified and Experienced roading engineer to prepare a pre-construction conditional baseline assessment of the entirety of Ralph Trimmer Drive for certification by Council. The purpose of the assessment is to document the standard of the road corridor, footpath, kerb and channel, and associated stormwater infrastructure prior to construction works commencing.

67. Within six (6) months of Practical Completion, the consent holder must engage a Suitably Qualified and Experienced roading engineer to undertake a post-construction conditional assessment of the entirety of Ralph Trimmer Drive for certification by Council. Where the post-construction condition assessment identifies that Ralph Trimmer Drive has deteriorated as the result of construction works relating to the Expansion Project, the consent holder must, at its own cost, rectify the damage or pay the equivalent amount to the Council. Any reinstatement works required by this condition must be undertaken at the expense of the consent holder and be completed to the approval of the Council within twelve (12) months of practical completion.

APPENDIX 1: PLANS

Survey	
Design	
Checked	
Date	

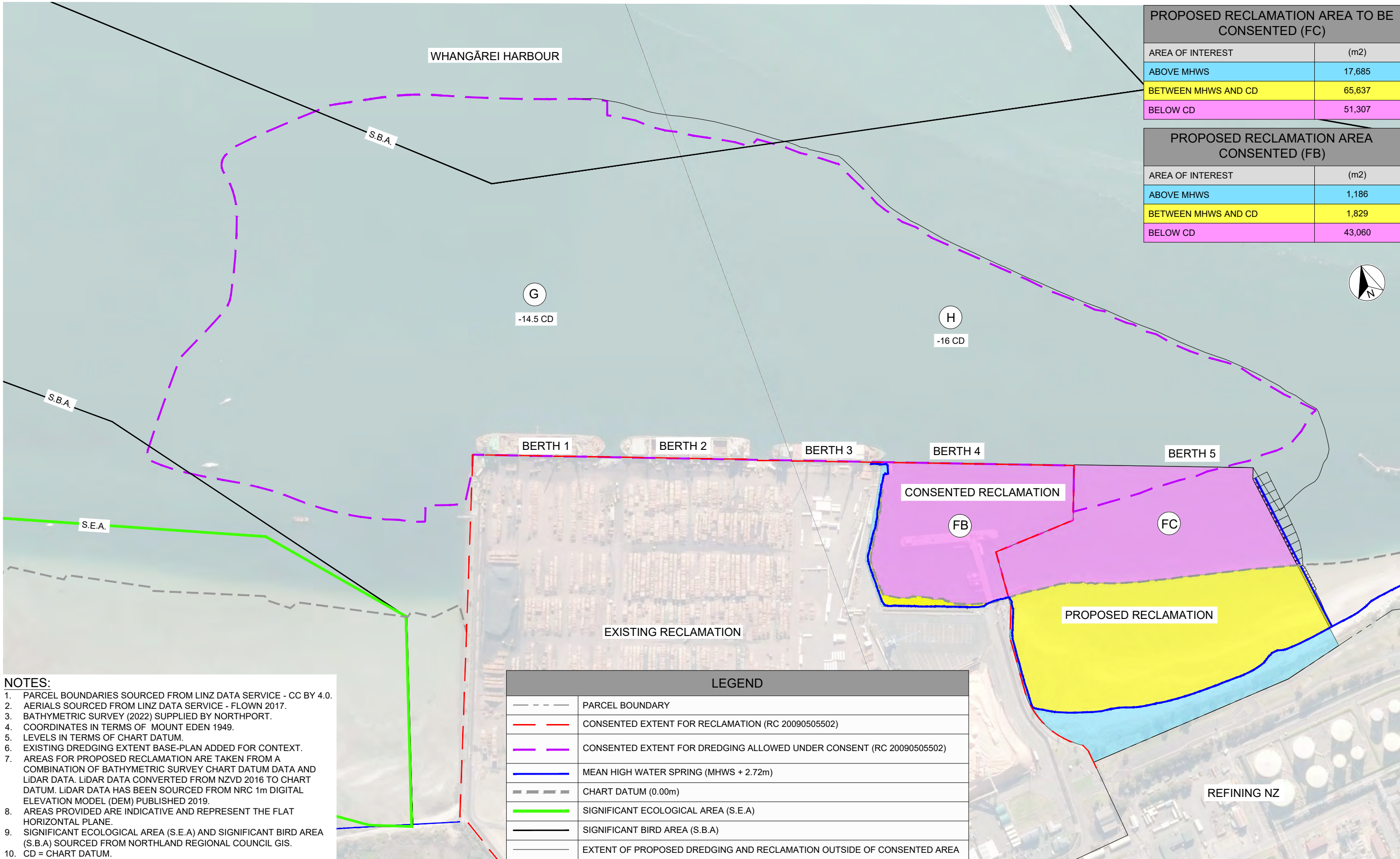
300 mm

200

100

50

0 10 mm



PROPOSED RECLAMATION AREA TO BE CONSENTED (FC)	
AREA OF INTEREST	(m2)
ABOVE MHWS	17,685
BETWEEN MHWS AND CD	65,637
BELOW CD	51,307

PROPOSED RECLAMATION AREA CONSENTED (FB)	
AREA OF INTEREST	(m2)
ABOVE MHWS	1,186
BETWEEN MHWS AND CD	1,829
BELOW CD	43,060



- NOTES:**
1. PARCEL BOUNDARIES SOURCED FROM LINZ DATA SERVICE - CC BY 4.0.
 2. AERIALS SOURCED FROM LINZ DATA SERVICE - FLOWN 2017.
 3. BATHYMETRIC SURVEY (2022) SUPPLIED BY NORTHPORT.
 4. COORDINATES IN TERMS OF MOUNT EDEN 1949.
 5. LEVELS IN TERMS OF CHART DATUM.
 6. EXISTING DREDGING EXTENT BASE-PLAN ADDED FOR CONTEXT.
 7. AREAS FOR PROPOSED RECLAMATION ARE TAKEN FROM A COMBINATION OF BATHYMETRIC SURVEY CHART DATUM DATA AND LIDAR DATA. LIDAR DATA CONVERTED FROM NZVD 2016 TO CHART DATUM. LIDAR DATA HAS BEEN SOURCED FROM NRC 1m DIGITAL ELEVATION MODEL (DEM) PUBLISHED 2019.
 8. AREAS PROVIDED ARE INDICATIVE AND REPRESENT THE FLAT HORIZONTAL PLANE.
 9. SIGNIFICANT ECOLOGICAL AREA (S.E.A) AND SIGNIFICANT BIRD AREA (S.B.A) SOURCED FROM NORTHLAND REGIONAL COUNCIL GIS.
 10. CD = CHART DATUM.

LEGEND	
---	PARCEL BOUNDARY
---	CONSented EXTENT FOR RECLAMATION (RC 20090505502)
---	CONSented EXTENT FOR DREDGING ALLOWED UNDER CONSENT (RC 20090505502)
---	MEAN HIGH WATER SPRING (MHWS + 2.72m)
---	CHART DATUM (0.00m)
---	SIGNIFICANT ECOLOGICAL AREA (S.E.A)
---	SIGNIFICANT BIRD AREA (S.B.A)
---	EXTENT OF PROPOSED DREDGING AND RECLAMATION OUTSIDE OF CONSented AREA

REVISION	AMENDMENT	APPROVED	DATE
A	ISSUED FOR INFORMATION	P.J.H.	2021-08-10
B	ISSUED FOR COMMENT	-	-
C	ISSUED FOR RESOURCE CONSENT	DTJ	2021-11-15
D	ISSUED FOR RESOURCE CONSENT	BGS	2022-08-11



Whangarei Office
+64 9 430 1700

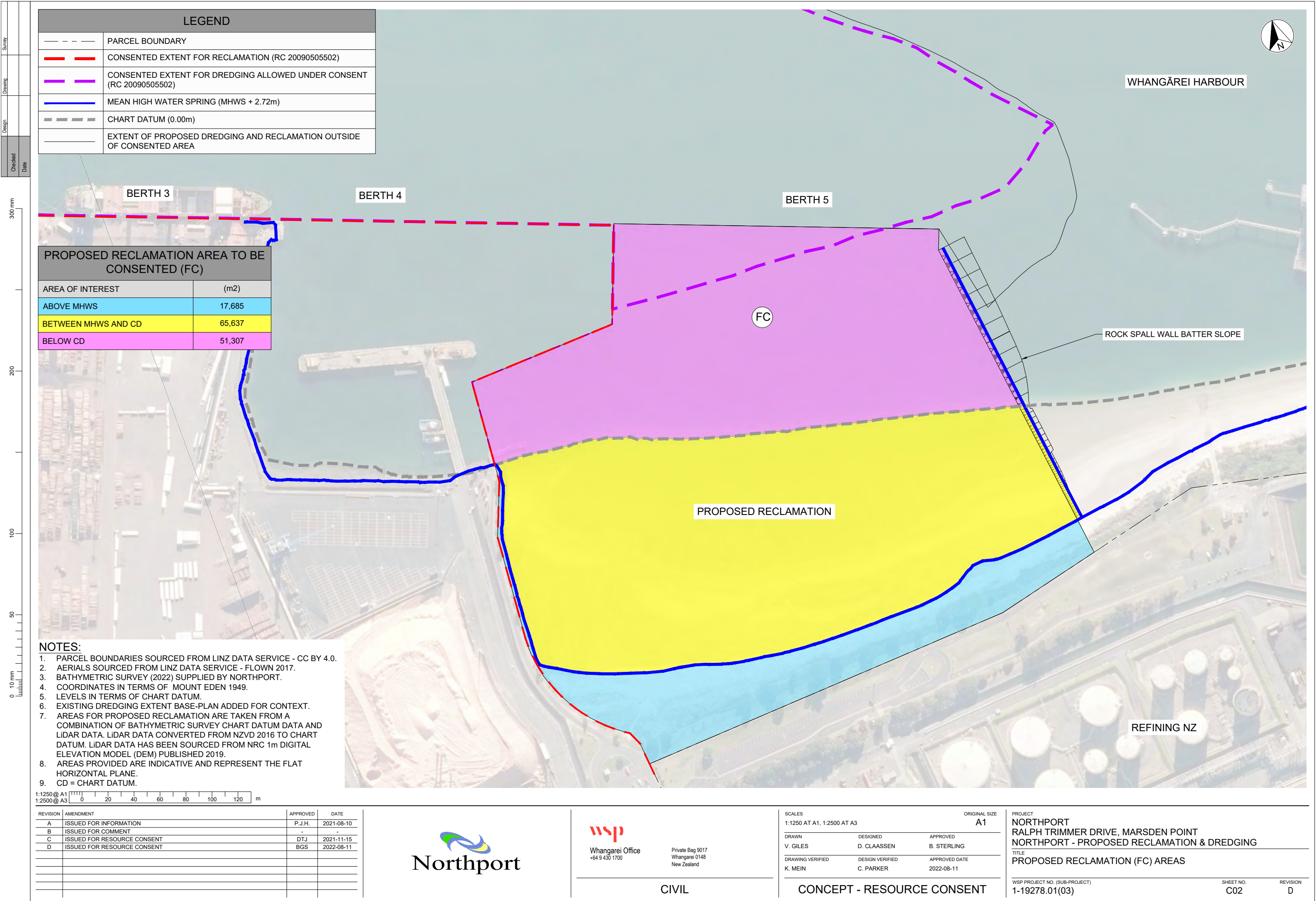
Private Bag 9017
Whangarei 0148
New Zealand

CIVIL

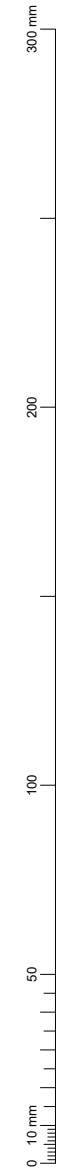
SCALES		ORIGINAL SIZE
1:2500 AT A1	1:5000 AT A3	A1
DRAWN	DESIGNED	APPROVED
V. GILES	D. CLAASSEN	B. STERLING
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE
K. MEIN	C. PARKER	2022-08-11

CONCEPT - RESOURCE CONSENT

PROJECT	NORTHPORT
RALPH TRIMMER DRIVE, MARSDEN POINT	
NORTHPORT - PROPOSED RECLAMATION & DREDGING	
TITLE	PROPOSED RECLAMATION AND BERTH 4 (FB) AREAS
WSP PROJECT NO. (SUB-PROJECT)	1-19278.01(03)
SHEET NO.	C01
REVISION	D



Survey	
Drawing	
Design	
Checked	
Date	



LEGEND	
	PARCEL BOUNDARY
	MEAN HIGH WATER SPRING (MHWS + 2.72m)
	CONSENTED EXTENT FOR RECLAMATION (RC 20090505502)
	EXTENT OF PROPOSED RECLAMATION
	EXTENT OF BULK EARTHWORKS



- NOTES:
1. PARCEL BOUNDARIES SOURCED FROM LINZ DATA SERVICE - CC BY 4.0.
 2. AERIALS SOURCED FROM LINZ DATA SERVICE - FLOWN 2017.
 3. COORDINATES IN TERMS OF MOUNT EDEN 1949.
 4. TUG JETTY & FISHING JETTY LOCATION & DESIGN TO BE CONFIRMED.
 5. COORDINATES TO 1m ACCURACY.

SETOUT PLAN - EASTERN RECLAMATION AND WHARF EXTENTS
SCALE 1:1250

1:1250@ A1
1:2500@ A3

REVISION	AMENDMENT	APPROVED	DATE
A	ISSUED FOR INFORMATION	P.J.H.	2021-08-10
B	ISSUED FOR COMMENT		
C	ISSUED FOR RESOURCE CONSENT	DTJ	2021-11-15
D	ISSUED FOR RESOURCE CONSENT	BGS	2022-08-11



Whangarei Office
+64 9 430 1700

Private Bag 9017
Whangarei 0148
New Zealand

CIVIL

SCALES		ORIGINAL SIZE
1:1250 AT A1		A1
DRAWN	DESIGNED	APPROVED
V. GILES	D. CLAASSEN	B. STERLING
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE
K. MEIN	C. PARKER	2022-08-11

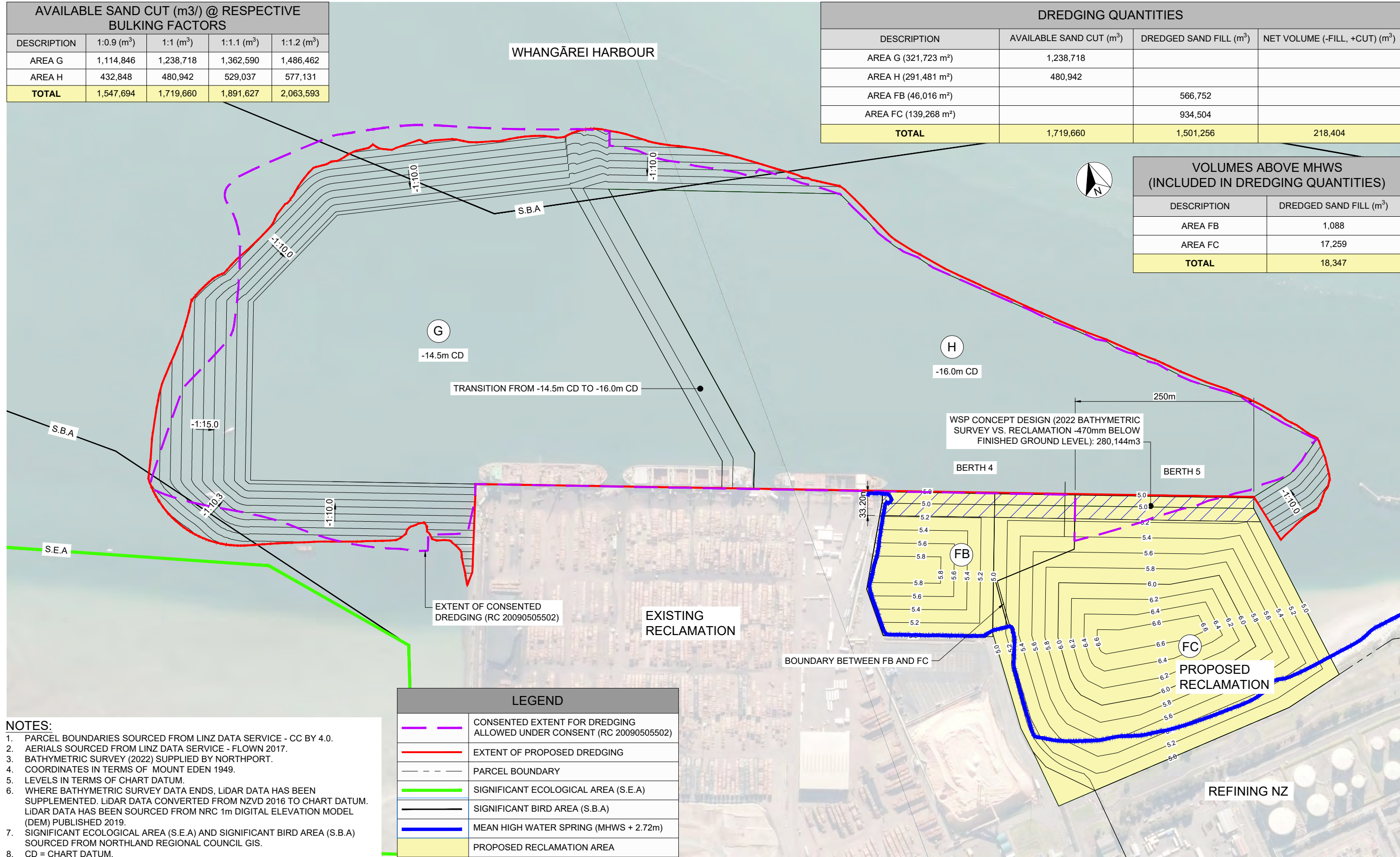
CONCEPT - RESOURCE CONSENT

PROJECT	
NORTHPORT RALPH TRIMMER DRIVE, MARSDEN POINT NORTHPORT - PROPOSED RECLAMATION & DREDGING	
TITLE	
SETOUT PLAN PROPOSED RECLAMATION AND WHARF EXTENTS	
WSP PROJECT NO. (SUB-PROJECT)	SHEET NO.
1-19278.01(03)	C03
	REVISION
	D

AVAILABLE SAND CUT (m3/) @ RESPECTIVE BULKING FACTORS				
DESCRIPTION	1:0.9 (m³)	1:1 (m³)	1:1.1 (m³)	1:1.2 (m³)
AREA G	1,114,846	1,238,718	1,362,590	1,486,462
AREA H	432,848	480,942	529,037	577,131
TOTAL	1,547,694	1,719,660	1,891,627	2,063,593

DREDGING QUANTITIES			
DESCRIPTION	AVAILABLE SAND CUT (m³)	DREDGED SAND FILL (m³)	NET VOLUME (-FILL, +CUT) (m³)
AREA G (321,723 m²)	1,238,718		
AREA H (291,481 m²)	480,942		
AREA FB (46,016 m²)		566,752	
AREA FC (139,268 m²)		934,504	
TOTAL	1,719,660	1,501,256	218,404

VOLUMES ABOVE MHWS (INCLUDED IN DREDGING QUANTITIES)	
DESCRIPTION	DREDGED SAND FILL (m³)
AREA FB	1,088
AREA FC	17,259
TOTAL	18,347



- NOTES:
1. PARCEL BOUNDARIES SOURCED FROM LINZ DATA SERVICE - CC BY 4.0.
 2. AERIALS SOURCED FROM LINZ DATA SERVICE - FLOWN 2017.
 3. BATHYMETRIC SURVEY (2022) SUPPLIED BY NORTHPORT.
 4. COORDINATES IN TERMS OF MOUNT EDEN 1949.
 5. LEVELS IN TERMS OF CHART DATUM.
 6. WHERE BATHYMETRIC SURVEY DATA ENDS, LIDAR DATA HAS BEEN SUPPLEMENTED. LIDAR DATA CONVERTED FROM NZVD 2016 TO CHART DATUM. LIDAR DATA HAS BEEN SOURCED FROM NRC 1m DIGITAL ELEVATION MODEL (DEM) PUBLISHED 2019.
 7. SIGNIFICANT ECOLOGICAL AREA (S.E.A) AND SIGNIFICANT BIRD AREA (S.B.A) SOURCED FROM NORTHLAND REGIONAL COUNCIL GIS.
 8. CD = CHART DATUM.

1:2500@A1
1:5000@A3

REVISION	AMENDMENT	APPROVED	DATE
A	ISSUED FOR INFORMATION	P.J.H.	2021-08-10
B	ISSUED FOR COMMENT		
C	ISSUED FOR RESOURCE CONSENT	DTJ	2021-11-15
D	ISSUED FOR RESOURCE CONSENT	BGS	2022-08-11
E	ISSUED FOR RESOURCE CONSENT - RECLAMATION AREAS & VOLUMES UPDATED	BGS	2022-08-19



Whangarei Office
+64 9 430 1700

Private Bag 9017
Whangarei 0148
New Zealand

CIVIL

SCALES
1:2500 AT A1, 1:5000 AT A3

ORIGINAL SIZE
A1

DRAWN V. GILES	DESIGNED D. CLAASSEN	APPROVED B. STERLING
DRAWING VERIFIED K. MEIN	DESIGN VERIFIED C. PARKER	APPROVED DATE 2022-08-19

CONCEPT - RESOURCE CONSENT

PROJECT
NORTHPORT
RALPH TRIMMER DRIVE, MARSDEN POINT
NORTHPORT - PROPOSED RECLAMATION & DREDGING

TITLE
DREDGING PLAN - PROPOSED RECLAMATION
AND EXISTING CONSENTED DREDGING

WSP PROJECT NO. (SUB-PROJECT)
1-19278.01(03)

SHEET NO.
C04

REVISION
E



ISSUE	DATE	DETAILS	APPRVD	BY



Northport

P.O BOX 44
RUAKAKA, NEW ZEALAND
TEL 09 432 5010

vision4growth.co.nz

Title: NORTHPORT RELOCATED TUG FACILITY EASTERN END - CONCEPT PLAN			
Path k:\engineer\gregb\consents\vision for growth project\plans\eastern tug facility.dwg	Dwg No D60-X	Issue: R0	
Drawn: B SWEENEY	Checked:	Scale: 1:500 (A1) 1:1000(A3)	Date: SEPT 2022 Sheet: 01

APPENDIX 2: POCKET PARK PLAN

This graphic has been prepared by Boffa Miskell Limited on the specific instructions of our Client. It is solely for our Client's use in accordance with the agreed scope of work. Any use or reliance by a third party is at that party's own risk. Where information has been supplied by the Client or obtained from other external sources, it has been assumed that it is accurate. No liability or responsibility is accepted by Boffa Miskell Limited for any errors or omissions to the extent that they arise from inaccurate information provided by the Client or any external source.



ORIGINAL IN COLOUR

KEY



Printed 25/07/2022 12:01:13 pm

REV	DATE	DESCRIPTION
A	20.07.22	FOR INFORMATION
B	25.07.22	FOR INFORMATION

APPRVD
SCo
SCo

NORTHPORT
RECLAMATION

PROPOSED CONCEPT PLAN

Design	SCo	Scale	Date
Drawn	DHi	1:750 @ A1	20.07.22
Check	SCo	1:1500 @ A3	

FOR INFORMATION

DRAWING NO.	REVISION
BM220519-201	(B)

U:\2022\BM220519_SCo_Northport_expansion_Pocket_Park\CAD\BM220519_Base.dwg

This graphic has been prepared by Boffa Miskell Limited on the specific instructions of our Client. It is solely for our Client's use in accordance with the agreed scope of work. Any use or reliance by a third party is at that party's own risk. Where information has been supplied by the Client or obtained from other external sources, it has been assumed that it is accurate. No liability or responsibility is accepted by Boffa Miskell Limited for any errors or omissions to the extent that they arise from inaccurate information provided by the Client or any external source.



ORIGINAL IN COLOUR

Boffa Miskell

Printed 19/08/2022 11:47:56 am

KEY

REV	DATE	DESCRIPTION
A	27.07.22	FOR INFORMATION
B	22.08.22	FOR INFORMATION

APPRVD

SCo

SCo

NORTHPORT RECLAMATION

EXISTING CONDITIONS

Design	SCo	Scale	1:1000 @ A1	Date	27.07.22
Drawn	DHi				
Check	SCo		1:2000 @ A3		

FOR INFORMATION

DRAWING NO. BM220519-200

REVISION (B)

U:\2022\BM220519_SCo_Northport_expansion_Pocket_Park\ICAD\BM220519_Base.dwg

APPENDIX 3: MAIR ROAD CONCEPT PLAN



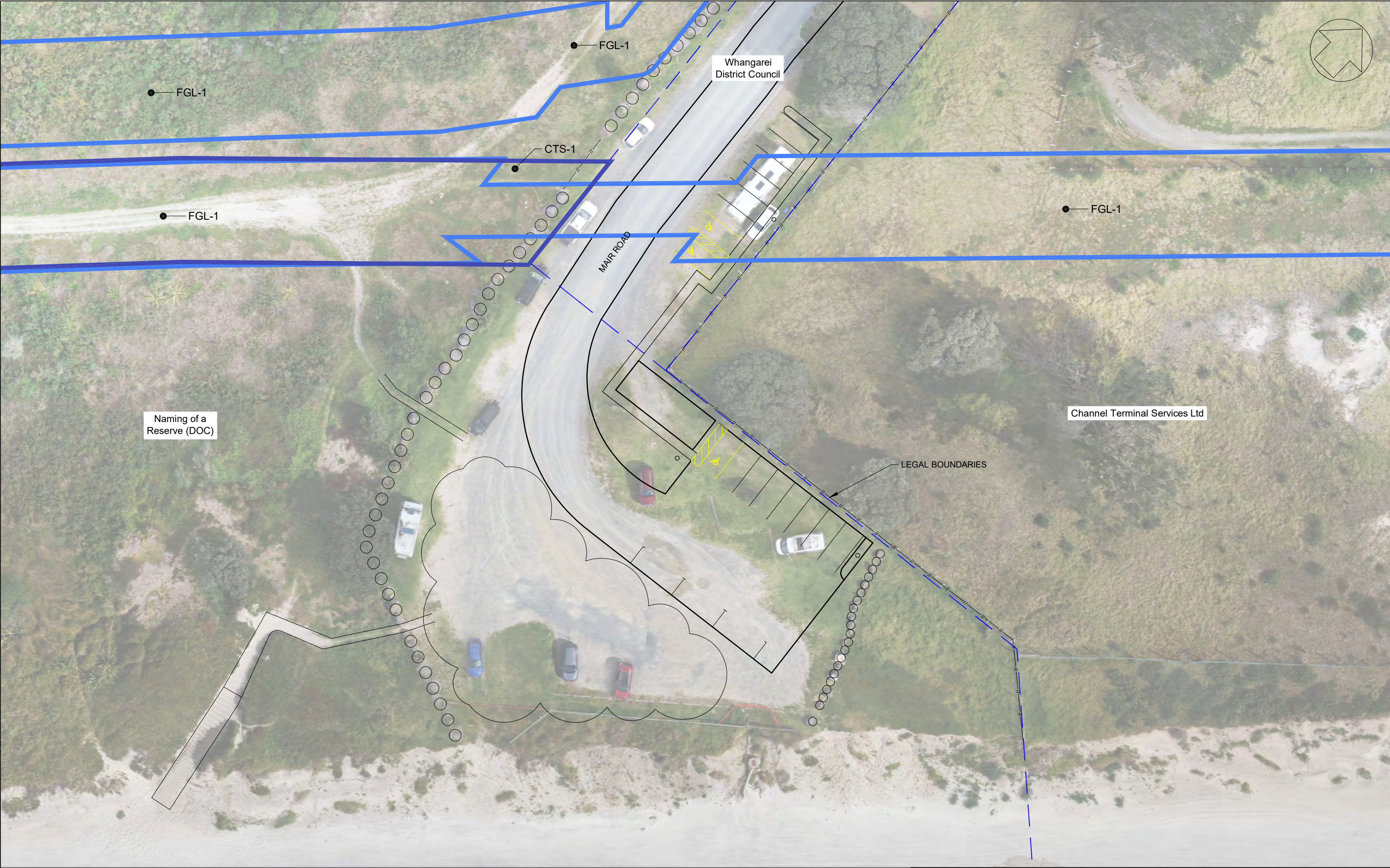
R0	12/6/25	Concept Plan	12/6/25	GB
ISSUE	DATE	DETAILS	APPRVD	BY



LEGEND	
	LIGHT POLE
	EXISTING ROCK BARRIERS
	LEGAL BOUNDARIES


Northport
P.O BOX 44
RUAKAKA, NEW ZEALAND
TEL 09 432 5010

Title: NORTHPORT MAIR ROAD RESERVE CONCEPT PLAN				
Path k:\engineer\gregb\maier road survey\maier road - concept plan.dwg	Dwg No D60-15-13-2-002	Issue: R0		
Drawn: T RYAN	Checked: B SWEENEY	Scale: 1:200 (A1) 1:400 (A3)	Date: JUN 2025	Sheet: 01



R0	30/06/2025	FIRST GAS AND CHANNEL TERMINAL SERVICES DESIGNATIONS	30/06/2025	GB
ISSUE	DATE	DETAILS	APPRVD	BY

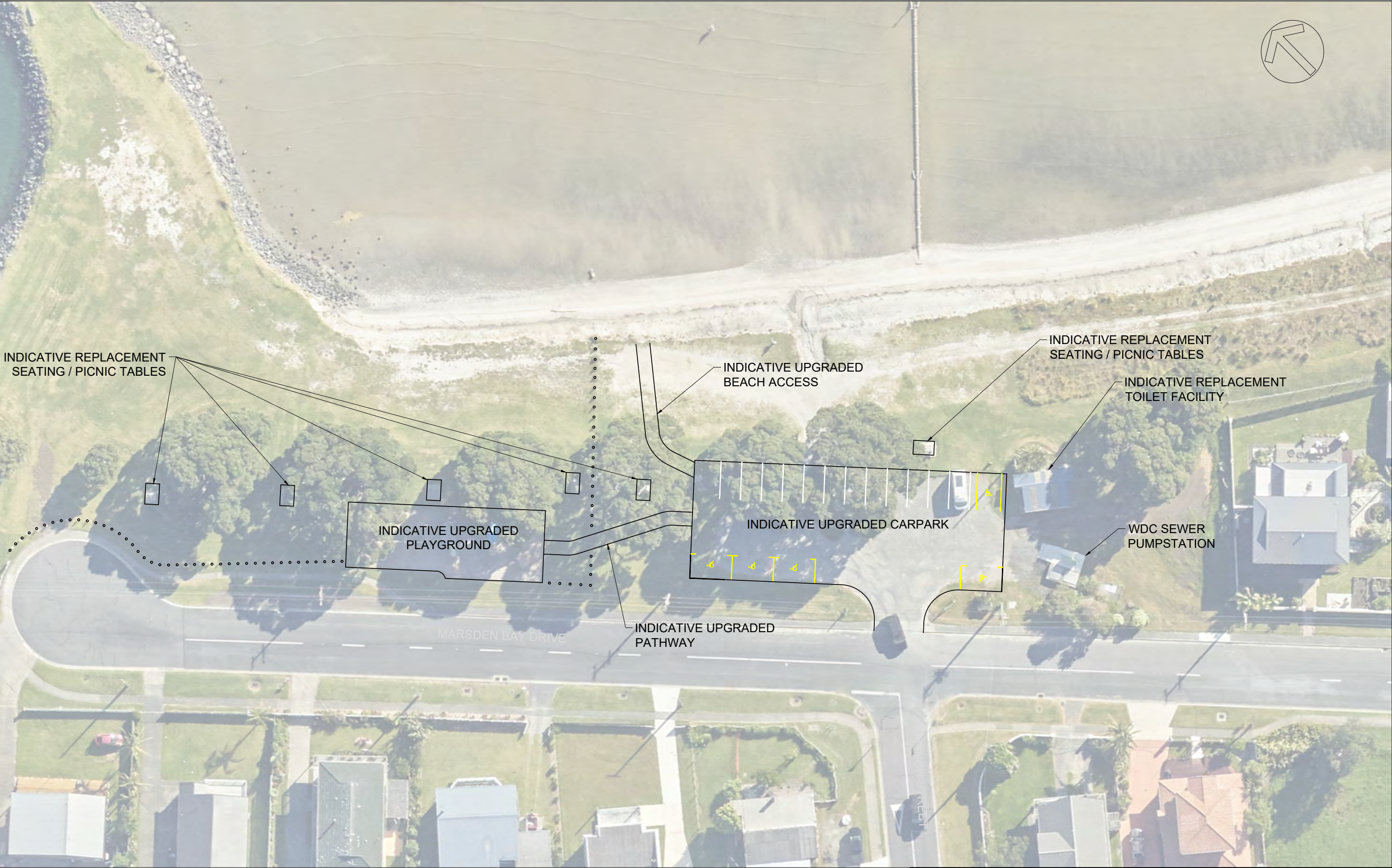


LEGEND	
	LEGAL BOUNDARIES
	FGL-1 DESIGNATION
	CTS-1 DESIGNATION

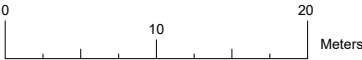

Northport
P.O BOX 44
RUAKAKA, NEW ZEALAND
TEL 09 432 5010

Title: NORTHPORT MAIR ROAD RESERVE DESIGNATIONS PLAN				
Path k:\engineer\gregb\mair road survey\mair road - designations plan.dwg		Dwg No D60-15-13-2-004		Issue: R0
Drawn: T RYAN	Checked: B SWEENEY	Scale: 1:200 (A1) 1:400 (A3)	Date: JUN 2025	Sheet: 01

APPENDIX 4: MARSDEN BAY RESERVE CONCEPT PLAN



ISSUE	DATE	DETAILS	APPRVD	BY




Northport
P.O BOX 44
RUAKAKA, NEW ZEALAND
TEL 09 432 5010

Title: NORTHPORT MARSDEN BAY RESERVE CONCEPT PLAN			
Path k:\engineer\gregb\mair road survey\marsden bay drive reserve\marsden bay reserve - concept plan.dwg	Dwg No D60-15-13-2-003	Issue: R0	
Drawn: B SWEENEY	Checked:	Scale: 1:250 (A1) 1:500 (A3)	Date: JUN 2025 Sheet: 01

WDC CONDITIONS: NORTHPORT LIMITED (UPDATED 22.09.25)

PORT EXPANSION, SH15, MARSDEN POINT (Operations)

To undertake the following activities at or near Ralph Trimmer Drive, Marsden Point:

- Port activities on the proposed reclamation and wharves, and on those parts of the proposed port development area above Mean High Water Springs (including activities on the reserve area and associated amenities).

Note: *All location coordinates in this document refer to Geodetic Dat22um 2000, New Zealand Transverse Mercator Projection (unless expressly stated otherwise).*

SUBJECT TO THE FOLLOWING CONDITIONS

DEFINITIONS:

“Building”	means a temporary or permanent moveable or immovable physical construction that: (a) is partially or fully roofed, and (b) is fixed or located on or in land, but (c) excludes any motorised vehicle or other mode of transport that could be moved under its own power.
“Council”	means Whangārei District Council or its successor;
“Current Port Noise Contour Map”	means the map showing predicted incident port noise levels required to be prepared and updated pursuant to Condition 25(e).
“Commencement of these consents”	means the date the last of the consents applied for by Northport for its Expansion Project commences according to s 116 of the RMA;
“Expansion Project”	means the Northport expansion to the east of the existing consented and/or constructed port for the purposes of constructing, operating, and maintaining a container terminal as authorised by these consents (and associated regional consents), and all associated activities and works;
“Major Structure”	means any: (a) vehicle used as residential activity, excluding temporary activities. (b) network system exceeding 1.5m in height above ground level or 3m² ground coverage. (c) fence or wall, or combination of either, greater than 2m in height above ground level. Where there is less than a 1m separation distance between any separate fence or wall, or combination of either, then

their height must be measured from the lowest ground level of to the highest point of either.

- (d) tank or pool exceeding 35,000 litres.
- (e) structure greater than 2.2m in height above ground level or greater than 9m² ground coverage, including outdoor stockpiles or areas of storage, but excluding amateur radio configurations.

“Pocket Park”

means the public park (recreational open space) area near the south-eastern corner of the Expansion Project site, as shown in Boffa Miskell *“Proposed Concept Plan”*, BM220519-201 (Revision B, 25.7.22); and

“Port Activities”

means the use of land and/or Buildings for port related activities, including but not limited to:

- (a) port and ancillary port activities;
- (b) cargo handling, including the loading, unloading, storage, processing and transit of cargo;
- (c) debarking;
- (d) fumigation;
- (e) transport, storage and goods handling activities;
- (f) maritime passenger handling/services;
- (g) construction, maintenance and repair of port operations and facilities;
- (h) port administration;
- (i) refuelling/fuel handling facilities;
- (j) activities associated with surface navigation, berthing;
- (k) maintenance or repair of a reclamation or drainage system;
- (l) marine and port accessory structures and services;
- (m) repair and maintenance services and facilities ancillary to port activities;

“Practical Completion”

in relation to the reclamation, means the date that the completed reclamation (or any part thereof) is available for Port Activities;

“RMA”

means the Resource Management Act 1991;

“Suitably Qualified and Experienced”

means a person or persons with a recognised qualification and/or relevant experience relevant to the topic being assessed.

“VPH”

Means vehicles per hour

GENERAL:

1. Works/activities authorised by these consents must be undertaken in general accordance with the application received by Council on 6 October 2022 and all supporting information, including the following documents and plans (including as amended through the application and hearing process). If there is any conflict between the relevant documents/plans and these conditions of consent, these conditions of consent prevail.

AEE reports

- Marshall Day Acoustics Ltd '*Northport Container Terminal Expansion Noise Assessment*' (Rp 002 R07 20200547) dated 29 September 2022.
- Enviser Ltd '*Draft Construction Environmental Management Plan*' (Enviser ref. 1116) dated October 2022.
- MetOcean Solutions '*Effects of Proposed Reclamation and Dredging Layout on Hydrodynamics*' dated August 2022.
- Tonkin and Taylor Ltd '*Coastal Process Assessment*' (ref. 1017349 v3) dated September 2022.
- Coast and Catchment Ltd '*Assessment of Ecological Effects*' Report number 2021-24 dated September 2022.
- Boffa Miskell Ltd '*Coastal Avifauna Assessment*' Rev. G dated 3 October 2022.
- Cawthron Institute '*Potential Effects of the Proposed Northport reclamation on Marine Mammals in the Whangarei Harbour Region*' Report no. 3652 dated September 2022.
- Brown NZ Ltd '*Assessment of Landscape, Natural Character and Amenity Effects*' dated September 2022.
- Clough and Associates Ltd '*Archaeological Assessment*' dated June 2022.
- WSP Ltd '*Concept Design Report*' Ref. 6-DV652.00 Rev. C dated August 2022.
- Rob Greenaway and Associates '*Recreation Effects Assessment*' dated September 2022.
- Hawthorn Geddes Ltd '*Stormwater Pond Assessment Report*' HG ref. 12377 Rev. 3 dated 10.8.22.
- Pattle Delamore Partners Ltd '*Air Quality Assessment*' Ref. A03566800R001 dated 5.8.22.
- Market Economics Ltd '*Economic Assessment*' Ref. NPL 001.20 dated September 2021.
- Patuharaake Te Iwi Trust Board '*Interim Cultural Effects Assessment*' dated November 2021.
- Patuharaake Te Iwi Trust Board '*Cultural Effects Assessment*' dated December 2022.
- Styles Group '*Assessment of Underwater Noise Effects*' dated 2 August 2022.
- Northport '*Navigation Safety Report*' dated September 2022.
- WSP Ltd '*Traffic Impact Assessment*' Ref. 1-19278.01/00006 dated 30.08.22.
- 4Sight Ltd '*Intertidal Ecology Report*' dated May 2018.

RFI responses

- Response to information request dated 25 October 2022.
- Response to information request dated 21 February 2023.
- Response to information request dated 13 July 2023.

Plans/drawings

- WSP Ltd 'Design Drawings' 1-19278.01(03) – Sheets C01 (Rev. D), C02 (Rev. D), C03 (Rev. D), and C04 (Rev E).
 - Boffa Miskell Ltd – 'Pocket Park Concept Plan' – BM220519-201 and BM 220519-200 (Rev B).
 - Reyburn and Bryant – 'Northport Expansion (Berth 5) – O14656 (Rev. A).
 - Northport – 'Relocated Tug Facility Eastern End – Concept Plan' (R0) dated September 2022.
 - Stephen Brown Landscape Architecture Plan dated December 1999.
 - Boffa Miskell Plan dated 31/01/2002
 - Future Port Noise Contour Map
2. A copy of these consents and the most up-to-date certified versions of all management plans required by these consent conditions must be kept on site at all times and made available to persons undertaking activities authorised by these consents.
3. Within ten (10) working days of the section 245(5) certificate being issued for the reclamation the consent holder must provide a copy of the certificate to the Council.
4. All monitoring/sampling required under these consents must be undertaken by or under the supervision of a Suitably Qualified and Experienced person(s).

Complaints

5. The consent holder must maintain a Complaints Register for the purpose of recording and dealing with any complaints that are received by the consent holder in relation to the exercise of these resource consents. The Complaints Register must record, where this information is available:
- (a) Name of complainant, if provided to the consent holder;
 - (b) The date and time of the complaint;
 - (c) A description of the complaint;
 - (d) The location of the issue raised;
 - (e) Weather conditions at the time of complaint, including a description of wind speed and wind direction when the complaint occurred (if relevant).
 - (f) Any possible cause of the issue raised;
 - (g) Any investigations that the consent holder undertook in response to the complaint; and
 - (h) Any corrective action taken to address the cause of the complaint, including the timing of that corrective action; and
 - (i) Any feedback provided to the complainant.
6. The consent holder must provide a copy of the complaints register to the Council within five working days of receiving a request to do so from the Council.

Certification

7. Where any condition requires the consent holder to submit design plans, engineering plans, a report or management plan to the Council for “**certification**” it means the process set out in the following paragraphs (a) to (d) and the terms “certify” and “certified” have the equivalent meanings:
 - (a) The consent holder supplies design plans, engineering plans, reports, or a management plan to the Council, and the Council assesses the documentation submitted. The certification process for design plans, engineering plans, management plans and reports required by conditions of this consent must be confined to confirming that the plans or reports give effect to their purposes, consent condition requirements, and schedule requirements, and contain the required information;
 - (b) Should the Council determine that the documentation supplied in accordance with (a) above achieves the requirements of the relevant condition(s), the Council must issue a written confirmation of certification to the consent holder;
 - (c) If the Council’s response is that it is not able to certify a design plan, engineering plan, management plan or report, it must provide the consent holder with reasons and recommendations for changes to the plan or report in writing. The consent holders must consider any reasons and recommendations of the Council and resubmit an amended design plan, engineering plan, management plan, or report for certification;
 - (d) A design plan, engineering plan, management plan or report cannot be subject to a third-party approval. The Council in deciding whether to certify the design plan, engineering plan, management plan or report, however, may also obtain advice from other qualified person(s).
8. The process in Condition 7 must be repeated until the Council is able to provide written confirmation that the requirements of the applicable condition(s) have been satisfied.
9. The consent holder must comply with the certified management plan or report at all times.

Review under s128 of the RMA

10. The Council may serve notice on the consent holder of its intention to review the conditions of these consents pursuant to Section 128 of the RMA either:
 - (a) Annually during the month of March, for any one or more of the following purposes:
 - (i) To require the adoption of the Best Practicable Option to remove or reduce any adverse effect on the environment; or
 - (ii) To deal with any change(s) to the materials handled through the Port Terminal; or
 - (iii) To respond to any new technology, standards or monitoring parameters relevant to the environmental monitoring undertaken in accordance with these consents.
 - (b) At any time, for the following purpose:
 - (i) To deal with any adverse effects on the environment which may arise from the exercise of the consents and which it is appropriate to deal with at a later stage, including effects identified in

the consent holders monitoring results or reports from activities authorised by these consents and/or as a result of Council's state of the environment monitoring in the area.

11. The consent holder must meet all reasonable costs of any such review.

Stakeholder and Communications Management Plan

12. The Consent Holder must continue to comply with the following requirements of the Stakeholder and Communications Management Plan (SCMP) approved under Conditions 13-16: of [Insert WDC consent reference]

- (a) Procedures for responding to queries and complaints; and
- (b) Engaging with stakeholders such as Channel Infrastructure, Seafuels, affected landowners, the Tangata Whenua Relationship Group, community groups, local businesses and representative groups, residents' organisations, other interested groups or individuals, network utility operators, Northland Regional Council and associated local authorities, Waka Kotahi, Whangarei Harbour Marine Reserves Advisory Group, Whangarei Harbour Kaitiaki Roopu and the Council;
- (c) Informing the Whangarei community of any proposed maintenance dredging;
- (d) Engaging with the community to foster good relationships and to provide opportunities for learning about the port;
- (e) Making each management plan relating to ongoing port operations publicly available once a management plan is finalised.

Advice note: *The SCMP prepared under Conditions 13-16 of the WDC land use consent for port construction [insert WDC consent reference] may contain a separate section relating to port operations only, covering matters (a)-(e) above.*

LAPSING OF CONSENTS

13. This resource consent will lapse twenty (20 years) after commencement, except the consents for port activities that are subject to Section 116(2) of the RMA for which the lapse date is five (5) years after the commencement of those resource consents.

Advice Note: *Pursuant to section 116(2)(b) of the RMA any district resource consent relating to an area of the coastal marine area that is proposed to be reclaimed must not commence until the proposed location of the activity has been reclaimed and a certificate has been issued under section 245(5) in respect of the reclamation.*

CONSENT SURRENDERS

14. Within three (3) months of the date of Practical Completion of the Expansion Project reclamation, the consent holder will give notice of the surrender of the following resource consents:

- (a) RC36355.1 (Berth 1 and 2); and

Sensitivity: General

- (b) Decision #11 – Whangārei District Council: Land Use Consent No. 1 (Berth 3 and 4) (no known consent reference number).

Advice Note: *The surrender of the above resource consents will consolidate, including for monitoring and enforcement purposes, resource consents and conditions applying to the expanded Northport.*

MAINTENANCE OF POCKET PARK AND LANDSCAPING PLANTING

Pocket Park – Maintenance

15. The consent holder must maintain the Pocket Park in perpetuity in accordance with the Maintenance Management Plan certified by Condition 39 of the WDC land use consent for port construction [insert WDC consent reference].

Landscape Planting – Maintenance

16. The consent holder must maintain the landscape planting in perpetuity in accordance with the approved Landscape Planting Plan in Condition 41 of the WDC construction consent. If any plants fail or are removed, they must be replaced as soon as practicable and prior to the end of the following planting season (April – October) with an equivalent specimen.

PORT OPERATION

Port Activities – location

17. From the first commencement of any of these resource consents, Port Activities may occur on any land within the area shown in the figure at **Appendix 1**

Operational noise

Application

18. Upon Practical Completion of the Expansion Project reclamation, Conditions 19 to 29 apply to all Port Activities within the area shown in the figure at **Appendix 1**.

Advice Note: *In accordance with Condition 14, the consent holder is required to provide written notice to the Council of its intention to surrender the existing Berth 1 and 2 and Berth 3 and 4 resource consents relating to port noise. This will consolidate, including for monitoring and enforcement purposes, the operational port noise resource consents and conditions applying to the expanded Northport, meaning that a single resource consent and single set of conditions will apply to all Northport operational port noise.*

Port noise limits

19. Noise from Port Activities within the areas shown in the figure at **Appendix 1** must be measured and assessed in accordance with NZS 6809:1999 Acoustics – Port Noise Management and Land Use Planning.
20. Noise from Port Activities within the areas shown in the Figure at **Appendix 1**, when received on land, must not exceed the levels shown in the Future Port Noise Contour Map in **Appendix 3** which reflects limits of 58 dB L_{dn} (5-day) in the Settlement Zone in Reotahi and 54 dB L_{dn} (5-day) in the Residential zone in

Advice Note: The noise contours in the Future Port Noise Contour Map were interpolated between grid points calculated at 10m intervals and 1.5m above ground level. Topographical contours and building outlines were sourced from LINZ (2017) and assumed a generic building height of 4.5m.

Port noise mitigation

21. Where the measured or predicted incident port noise level shown on the Current Port Noise Contour Map (required under Condition (e) exceeds 55 dB L_{dn} (5-day) at the external façade of a habitable space in a residential unit existing at the Commencement of these consents, the consent holder must offer to the landowner the option to install (at the consent holder's cost) mechanical ventilation and cooling. The Current Port Noise Map is informed by a periodic review as part of the Port Noise Management Plan detailed in Condition 25(e). Any works must:
- (a) Achieve an indoor design noise level no greater than 40 dB L_{dn} (5-day) in all habitable rooms of the residential unit when the windows and doors are closed;
 - (b) Satisfy clause G4 of the New Zealand Building Code;
 - (c) Provide occupant-controlled ventilation that provides at least six (6) air changes per hour, or occupant controlled cooling that can maintain the inside temperature of the habitable room below 25°C;
 - (d) Provide relief for equivalent volumes of spill air; and
 - (e) Locate any outdoor heat pump condenser unit at least 5m from the direct external entrance to a living area.
22. Mechanical ventilation and cooling noise within dwellings identified in Condition 21 must be measured in accordance with AS/NZS 2107:2016 "Acoustics- Recommended design sound levels and reverberation times for building interiors". The mechanical ventilation and cooling design noise levels in habitable spaces must not exceed the following on the low-speed setting:
- (i) 30 dB L_{Aeq} in bedrooms, and
 - (ii) 40 dB L_{Aeq} in all other habitable spaces.
23. If the offer under Condition 21 is accepted by the landowner, the mechanical ventilation/cooling, must be installed at the expense of the consent holder as soon as practicable and no later than 18 months of the offer being accepted.

Advice Note: The consent holder's obligations extend only to installation of the mechanical ventilation or cooling. To avoid doubt, the consent holder is not responsible for ongoing maintenance.

24. Acceptance of the offer under Condition 21 may be made by the landowner within 24 months of the offer.

Port Noise Management Plan

25. At least three (3) months prior to the commencement of any Expansion Project Port Activities (excluding Expansion Project construction) a Port Noise Management Plan must be prepared in accordance with the

requirements in Section 8 of NZS 6809:1999 Acoustics – Port Noise Management and Land Use Planning and submitted to the Council for certification. The Port Noise Management Plan must contain the following information:

- (a) The Port Noise Management Plan objectives and methods to achieve the objectives, including:
 - (i) To ensure the consent holder complies with the noise limits in Condition 20;
 - (ii) To provide a framework for the measurement, monitoring, assessment, and management of port noise levels;
 - (iii) To identify and adopt the best practicable options for the management of noise effects;
 - (iv) To engage with the community and manage noise complaints in a timely manner, including through participation in a Port Noise Liaison Committee to be established as a sub-committee of the existing Community Liaison Group;
- (b) Noise modelling, continuous noise monitoring, auditing, and reporting procedures to be undertaken and funded by the consent holder;
- (c) Practices that will be used to manage noise effects, including procedures for achieving noise reduction through port operational procedures and staff and contractor training;
- (d) Procedures to receive and respond to complaints, and to maintain a register of all complaints received, the details of the complaints, and any action taken to investigate and/or resolve the complaints;
- (e) The Current Port Noise Contour Map;
- (f) Identification of all properties where Condition 21 applies;
- (g) Details of the Port Noise Liaison Committee required under Condition 25(a)(iv) including:
 - (i) The functions and processes of the Committee, including to consider all noise issues arising from the port and to ensure that mitigation functions identified in the Port Noise Mitigation Plan are carried out;
 - (ii) The members for the Committee and their roles, with Committee seat invitations being required to be made as follows:
 1. Two representatives of the port operator;
 2. Two port user representatives (with invitations to be made to two different port users);
 3. One representative of Northland Regional Council;
 4. One representative of Whangārei District Council;
 5. One community representative for Reotahi;
 6. One community representative for Albany Road;
 7. One representative of the Ruakākā Parish Residents & Ratepayers Association;
 8. One representative of the Whangārei Heads Citizens Association;
 9. One representative of Patuharakeke Te Iwi Trust Board; and
 10. One representative of Ngātiwai Trust Board;

11. One representative of Te Parawhau Hapu.
 - (iii) Details of the secretarial and logistical support to the Committee which must be provided and fully funded by the consent holder;
 - (iv) The frequency of Committee meetings, which must be annually at a minimum, and procedures for calling an emergency meeting of the Committee;
 - (v) Procedures for recording minutes of the Committee, which must be made publicly available;
 - (vi) Procedures for consideration by the consent holder of any recommendations by the Committee; and
- (h) Where applicable, any recommendations made by the Port Noise Liaison Committee, and any actions by the consent holder to implement those recommendations (this requirement must not apply to the first Port Noise Management Plan produced).
26. The Port Noise Management Plan, including the appended Current Port Noise Contour Map, must be reviewed annually (at a minimum). An annual report must be prepared for the Port Noise Liaison Committee that:
 - (a) Details any changes to the Port Noise Management Plan and Current Port Noise Contour Map resulting from the revision; and
 - (b) Provides a record of:
 - (i) All acoustic mitigation works undertaken in the preceding twelve (12) months, including records of offers of mitigation that have been refused or not responded to; and
 - (ii) Any physical monitoring undertaken and the results of that monitoring.
27. The Port Noise Management Plan must be certified in writing by the Council prior to Expansion Project activities (excluding Expansion Project construction works) commencing. The consent holder must undertake all activities in accordance with the certified Port Noise Management Plan.
28. Any material variation to the Port Noise Management Plan, including as a result of a revision under Condition 26, must be subject to certification by the Council.
29. The first Port Noise Management Plan must be in general accordance with the draft Port Noise Management Plan provided as part of the resource consent application (*Marshall Day Acoustics: Northport Port Noise Management Plan, Rp 001 20170776, 3 August 2022*).

Operational lighting

30. From the first commencement of any of these resource consents, within the area shown in the figure at **Appendix 1**:
 - (a) Artificial lighting required for health and safety purposes will not exceed the following standards:
 - (i) 15 Lux at the boundary of a road reserve; and
 - (ii) 10 Lux at the boundary of any other allotment not within the ownership of the consent holder.

(b) Subject in each case to (a) above, the consent holder must ensure that:

- (i) new flood lighting luminaires installed use LED (Light Emitting Diode) or LEP (Light Emitting Plasma) lamps or any other advanced technology lamps;
- (ii) all lighting poles have recessive colour finishes;
- (iii) where practicable, lighting is directed below the horizontal plane;
- (iv) the colour temperature of lamps used for new flood lighting are no more 4000°K; and
- (v) new flood lighting luminaires are designed so that the principal output is, as far as practicable, directed to within the container terminal and adjoining wharfs or to land that is zoned Port Zone.

31. The consent holder must engage a Suitably Qualified and Experienced lighting engineer to design/review new flood lighting installed at Northport.

Operational lighting management plan

32. At least three (3) months prior to Practical Completion, the consent holder must prepare an Operational Lighting Management Plan ("OLMP") for certification by the Council. The objectives of the OLMP is to minimise visual impacts and impacts on avifauna from the use artificial lighting during night-time Port operations authorised by this consent, having regard to Condition 30 and the requirements of the Avifauna Management Plan required by the regional consent conditions [insert NRC consent reference]. The OLMP must:

- (a) Detail the positions and technical specifications of all exterior light sources and indicate the means by which compliance with the relevant Whangārei District Plan artificial lighting standards are to be achieved; and
- (b) Include comments of the Community Liaison Group on the plan and the consent holder's response to these.

Operational transport

Crash Monitoring Assessment

33. No later than 12 months following Practical Completion, the consent holder must engage an independent Suitably Qualified and Experienced Person to undertake a "Crash Monitoring Assessment", utilising Waka Kotahi's Crash Analysis System (CAS).

Thereafter the consent holder must undertake a Crash Monitoring Assessment biennially (every two years) for twenty years. The purpose of the Crash Monitoring Assessment is to determine a trend in crashes to identify any safety concerns (based on 7-days (Monday-Sunday), measured over 5-year periods) along SH15 from SH1 to Ralph Trimmer Drive, including at all intersections.

The "Crash Monitoring Assessment" must include details of:

- (a) The number and type of crashes, identifying those involving speed, such as loss of control and turning crashes, including where sight lines are only just met, with a focus on fatal and serious crashes;

Sensitivity: General

- (b) Vehicle type, weather, date/time of the crash (where such information is available); and
 - (c) Any mitigation recommended to address safety concerns.
34. The consent holder must provide a copy of the Crash Monitoring Assessment to Council, Waka Kotahi NZ Transport Agency, and the road controlling authority within one month of its completion.

SH15 Traffic Monitoring Report

35. No later than 18 months following Practical Completion, the consent holder must prepare a SH15 Traffic Monitoring Report, utilising the telemetry traffic data collected continuously on SH15 by Waka Kotahi, if available.

Advice Note: *The telemetry station site is located on SH15, just north-east of Bens View Road.*

Thereafter, the consent holder must undertake a SH15 Traffic Monitoring Report either:

- (a) Annually until replaced by the Northport Traffic Monitoring Report if the telemetry traffic data collected continuously on SH15 by Waka Kotahi is available to the consent holder; or
- (b) Once every three years until replaced by the Northport Traffic Monitoring Report, if the consent holder is required to collect traffic data (which is to be collected at the same location as the Waka Kotahi Telemetry site).

The purpose of the SH15 Traffic Monitoring Report is to identify if traffic volumes on SH15 at the telemetry site exceed either one of the following:

- (i) 970 vph two-way; or
- (ii) 670 vph one way;

for three or more days in any calendar month.

The consent holder must submit a copy of each SH15 Traffic Monitoring Report to the Council and Waka Kotahi NZ Transport Agency and the road controlling authority within one month of its completion.

Northport Traffic Monitoring Report

36. If the SH15 Traffic Monitoring Report required by Condition 35 shows that either of the traffic volumes on SH15 at the telemetry site are exceeded, the consent holder must continuously measure the volume of all port traffic at or near all the Northport entry and exit points during peak times as specified in Condition 37 Table Two: *Northport Peak Traffic Volumes*, and report on these volumes in the Northport Traffic Monitoring Report.

The Northport Traffic Monitoring Report is to be prepared six monthly or until all the intersections listed in Condition 37 Table Two: *Northport Peak Traffic Volumes* have received the recommended mitigation, as detailed within the Intersection Assessment Report required by Condition 39.

The consent holder must submit a copy of each Northport Traffic Monitoring Report to the Council, Waka Kotahi NZ Transport Agency, and the road controlling authority within one month of its completion.

Northport Traffic and Peak Times

37. If the Northport Traffic Monitoring Report identifies that port traffic exceeds the volumes set out in Table Two: *Northport Peak Traffic Volumes*, the consent holder must, within ten working days, Advise the

Sensitivity: General

Council, Waka Kotahi NZ Transport Agency and the road controlling authority of the exceedance and which of the following options it is proceeding with:

- (a) Reduce and maintain all port traffic below the Peak Trigger Volumes in Table Two; or
- (b) Engage a Suitably Qualified and Experienced person to undertake and prepare an Intersection Assessment Report as per Condition 39. Table 2

Table Two: Port Traffic Trigger Volumes

Intersection	Northport Inbound AM Peak Hour Trigger Volumes (vph)	Northport Outbound AM Peak Hour Trigger Volumes (vph)	Northport Inbound PM Peak Hour Trigger Volumes (vph)	Northport Outbound PM Peak Hour Trigger Volumes (vph)
SH15/Marsden Bay Drive	700	200	300	600
SH15/Marsden Point Road	700	200	200	700
SH15/One Tree Point Road	300	200	200	300

Advice Note: For the purpose of these consents, the AM Peak hours are between the hours of 0630-0830 and the PM peak hours are between the hours of 1600-1800, weekdays excluding public holidays.

38. If the Consent Holder has elected to reduce and maintain all port traffic below the levels in Condition 37 Table 2: *Northport Peak Traffic Volumes*, then within two months of the initial exceedance, the consent holder must provide written notice to Council, Waka Kotahi NZ Transport Agency, and the road controlling authority that identifies either that:
- (i) Traffic volumes are compliant with the limits specified in Table 2 above; or
 - (ii) Traffic volumes remain in excess of the limits specified within Table 2 above measured during a continuous five-day weekday count.

If, within six months, the Consent Holder cannot reduce and maintain traffic volumes to the limits specified in Table 2: *Northport Peak Traffic Volumes*, then it must action Condition 39.

Intersection Assessment Report

39. If required by conditions 37 or 38, the Consent Holder must engage a Suitably Qualified and Experienced person to undertake and prepare an Intersection Assessment Report.

The purpose of the Intersection Assessment Report is to investigate safety and operational concerns and identify mitigation measures to address those safety and operational concerns at the intersection(s) for which the trigger volumes in Condition 37 Table 2: *Northport Peak Traffic Volumes* have been exceeded.

The report must include:

- (a) Traffic data collected at the relevant intersection(s) including traffic movements during peak and interpeak periods.

- (b) Intersection modelling methodologies and expected operation of these intersections, including Level of Service (LOS), queueing, and delays for 3 traffic volume scenarios:
 - (i) Using the observed data; and
 - (ii) Two future scenarios (reflecting appropriate design years based on port expansion timing), that include expected Northport traffic growth and other traffic growth.
 - (c) Safe System assessments for the relevant intersection(s) listed in Table 2.
 - (d) Recommended mitigation to address safety and operational concerns to achieve:
 - (i) LOS-D or better on each approach to the intersection (for scenarios that include existing traffic conditions and future scenarios that include all existing and anticipated port traffic generated by activities authorised by these consents); and
 - (ii) A degree of saturation for turning movements no higher than 95%
40. A copy of the Intersection Assessment Report is to be submitted to the Council, Waka Kotahi NZ Transport Agency, and the road controlling authority within three months of:
- (i) Condition 37(b) being notified to the Council, Waka Kotahi NZ Transport Agency and the road controlling authority as the selected option; or
 - (ii) Condition 38 being activated.
41. Until the recommended mitigation detailed within the Intersection Assessment Report (required by Condition 39) is implemented at the intersection(s), or as otherwise agreed by Council, Waka Kotahi NZ Transport Agency and the road controlling authority, all port traffic at peak times must be kept below the volumes outlined in Condition 37 Table 2: *Northport Peak Traffic Volumes*.

BUILDINGS, STOCKPILES AND MAJOR STRUCTURES

42. Upon Practical Completion of the Expansion Project reclamation, within the area shown in **Appendix 1**:
- (a) Building height and Major Structure height (excluding public utilities, light towers, silos, aerals, tanks, cargo handling equipment, cranes, and shipping containers) must not exceed 20m above ground level.
 - (b) The height of public utilities, light towers, silos, aerals, tanks, and cargo handling equipment (excluding cranes and shipping containers) must not exceed 60m above ground level.
 - (c) The operational height for cranes must not exceed 85m above ground level.
 - (d) The height of shipping container stacks must not exceed 30m above ground level.
 - (e) The height of stockpiles must not exceed 20m above ground level.

Advice Note: *The definitions of “Building” and “Major Structure” in these resource consents are based on the current corresponding definitions in the Whangārei District Plan (Operative in Part 2022).*

PUBLIC ACCESS

43. The consent holder must provide public recreational access to and across the Pocket Park, except as required to ensure operational or public safety, or in an emergency response scenario.

Sensitivity: General

Advice Note: *Revocation of the esplanade reserve for the Pocket Park must have Council resolution prior to construction.*

44. The consent holder must continue to provide public access to the existing fishing jetty on the western edge of the reclamation from Papich Road.

LANDSCAPE PLANTING

45. The consent holder must continue to maintain the landscape planting shown on the Stephen Brown Landscape Architecture Plan dated December 1999 and as amended on the Boffa Miskell Plan dated 31/01/2002 (copies of plans attached as **Appendix 2**) but excluding the Pohutukawa planting on the eastern side of the reclamation (area shown outlined in red on the plan in **Appendix 2**) which is to be removed.

Advice Note: *Any planting will be designed and maintained to meet the security requirements of Maritime Security Act 2004.*

APPENDIX 1: PLANS

Survey	
Design	
Checked	
Date	

300 mm

200

100

50

0 10 mm

NOTES:

1. PARCEL BOUNDARIES SOURCED FROM LINZ DATA SERVICE - CC BY 4.0.
2. AERIALS SOURCED FROM LINZ DATA SERVICE - FLOWN 2017.
3. BATHYMETRIC SURVEY (2022) SUPPLIED BY NORTHPORT.
4. COORDINATES IN TERMS OF MOUNT EDEN 1949.
5. LEVELS IN TERMS OF CHART DATUM.
6. EXISTING DREDGING EXTENT BASE-PLAN ADDED FOR CONTEXT.
7. AREAS FOR PROPOSED RECLAMATION ARE TAKEN FROM A COMBINATION OF BATHYMETRIC SURVEY CHART DATUM DATA AND LIDAR DATA. LIDAR DATA CONVERTED FROM NZVD 2016 TO CHART DATUM. LIDAR DATA HAS BEEN SOURCED FROM NRC 1m DIGITAL ELEVATION MODEL (DEM) PUBLISHED 2019.
8. AREAS PROVIDED ARE INDICATIVE AND REPRESENT THE FLAT HORIZONTAL PLANE.
9. SIGNIFICANT ECOLOGICAL AREA (S.E.A) AND SIGNIFICANT BIRD AREA (S.B.A) SOURCED FROM NORTHLAND REGIONAL COUNCIL GIS.
10. CD = CHART DATUM.

1:2500 @ A1
1:5000 @ A3

REVISION	AMENDMENT	APPROVED	DATE
A	ISSUED FOR INFORMATION	P.J.H.	2021-08-10
B	ISSUED FOR COMMENT	-	-
C	ISSUED FOR RESOURCE CONSENT	DTJ	2021-11-15
D	ISSUED FOR RESOURCE CONSENT	BGS	2022-08-11



Whangarei Office
+64 9 430 1700

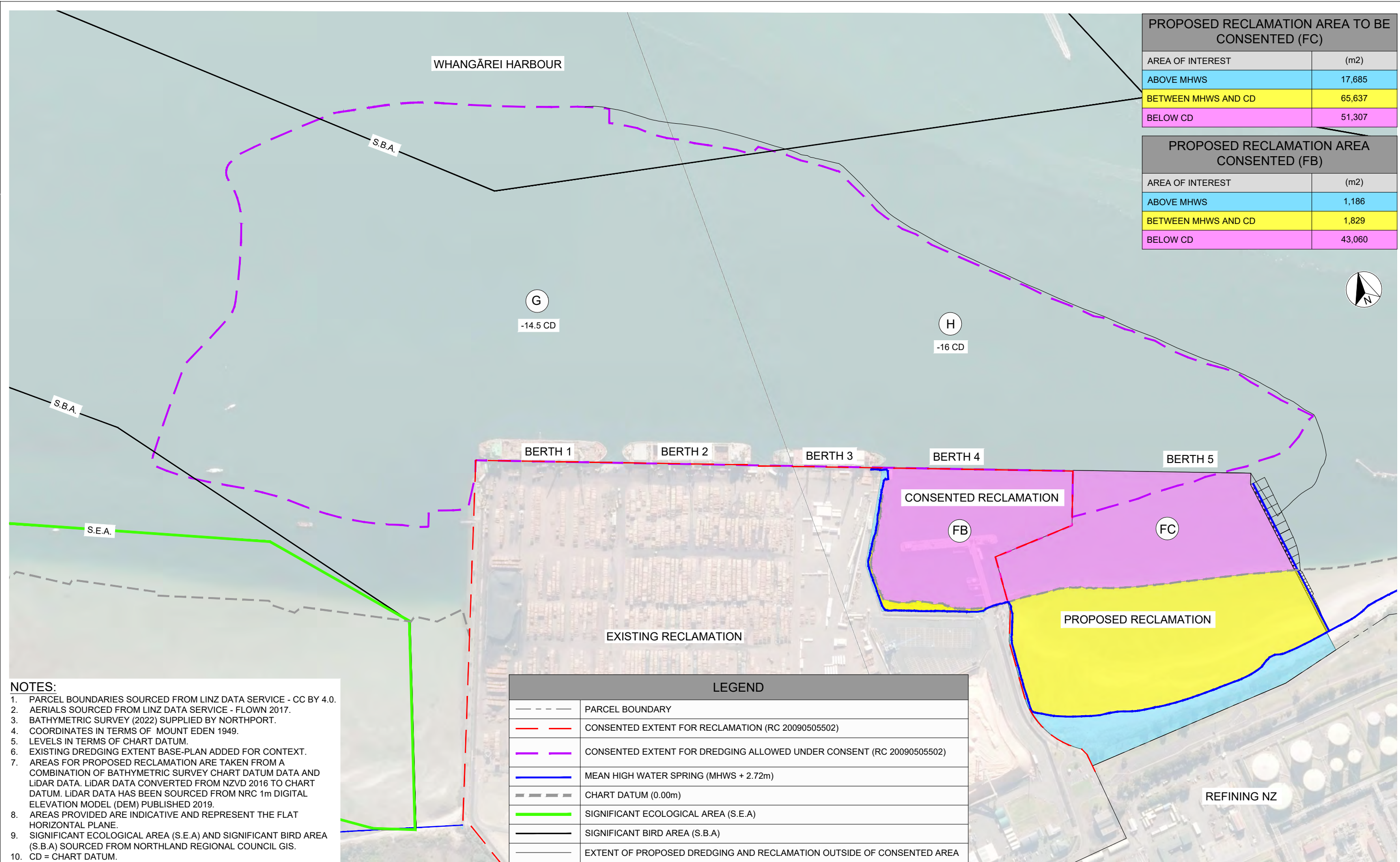
Private Bag 9017
Whangarei 0148
New Zealand

CIVIL

SCALES		ORIGINAL SIZE
1:2500 AT A1, 1:5000 AT A3		A1
DRAWN	DESIGNED	APPROVED
V. GILES	D. CLAASSEN	B. STERLING
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE
K. MEIN	C. PARKER	2022-08-11

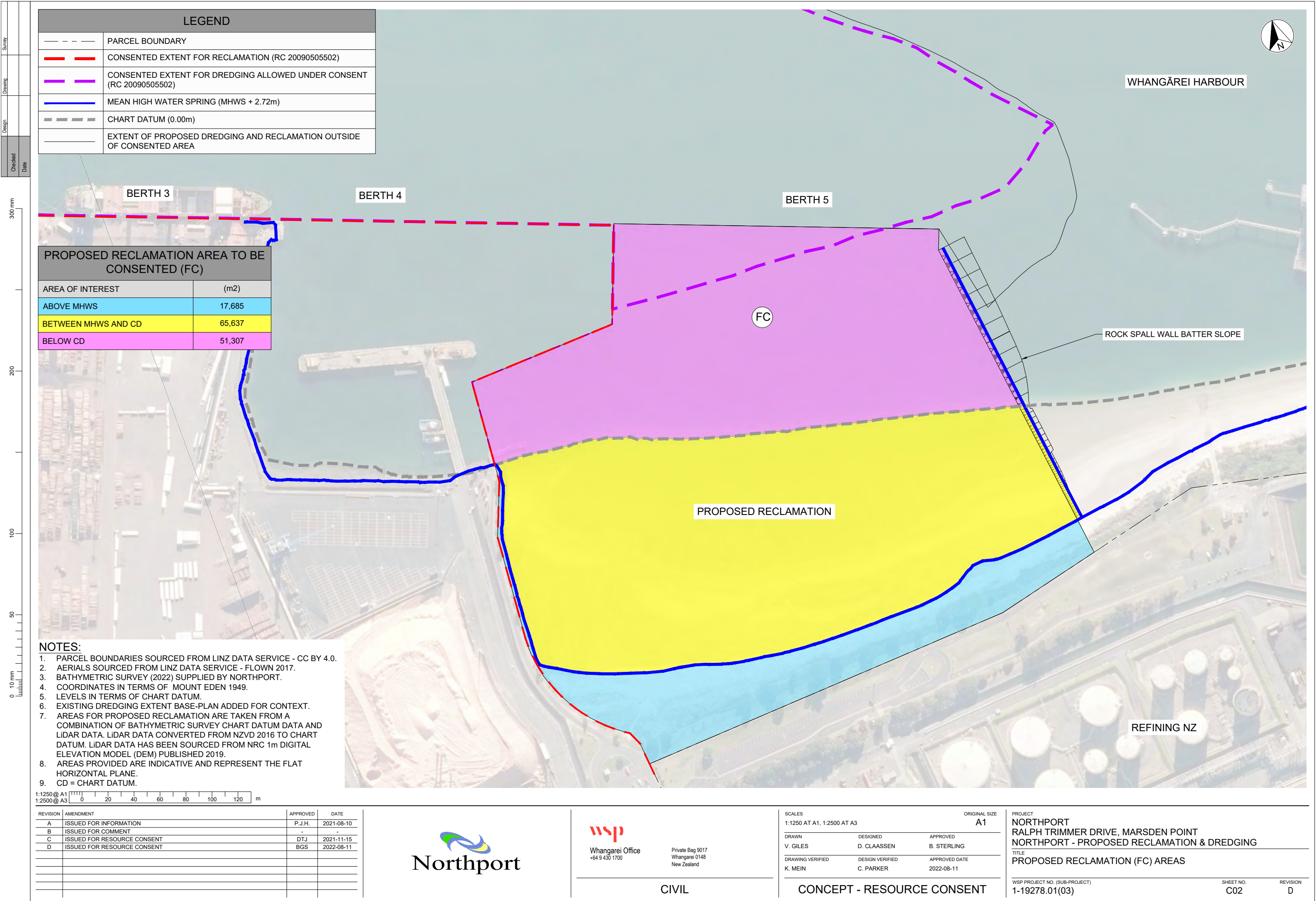
CONCEPT - RESOURCE CONSENT

PROJECT	NORTHPORT
	RALPH TRIMMER DRIVE, MARSDEN POINT
	NORTHPORT - PROPOSED RECLAMATION & DREDGING
TITLE	PROPOSED RECLAMATION AND BERTH 4 (FB) AREAS
WSP PROJECT NO. (SUB-PROJECT)	1-19278.01(03)
SHEET NO.	C01
REVISION	D

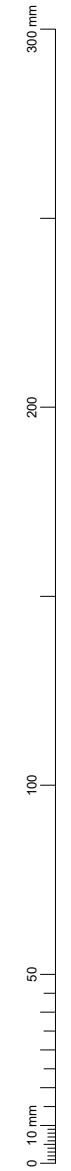


PROPOSED RECLAMATION AREA TO BE CONSENTED (FC)	
AREA OF INTEREST	(m2)
ABOVE MHWS	17,685
BETWEEN MHWS AND CD	65,637
BELOW CD	51,307

PROPOSED RECLAMATION AREA CONSENTED (FB)	
AREA OF INTEREST	(m2)
ABOVE MHWS	1,186
BETWEEN MHWS AND CD	1,829
BELOW CD	43,060



Survey	
Drawing	
Design	
Checked	
Date	



LEGEND	
	PARCEL BOUNDARY
	MEAN HIGH WATER SPRING (MHWS + 2.72m)
	CONSENTED EXTENT FOR RECLAMATION (RC 20090505502)
	EXTENT OF PROPOSED RECLAMATION
	EXTENT OF BULK EARTHWORKS



- NOTES:
1. PARCEL BOUNDARIES SOURCED FROM LINZ DATA SERVICE - CC BY 4.0.
 2. AERIALS SOURCED FROM LINZ DATA SERVICE - FLOWN 2017.
 3. COORDINATES IN TERMS OF MOUNT EDEN 1949.
 4. TUG JETTY & FISHING JETTY LOCATION & DESIGN TO BE CONFIRMED.
 5. COORDINATES TO 1m ACCURACY.

SETOUT PLAN - EASTERN RECLAMATION AND WHARF EXTENTS

SCALE 1:1250

1:1250@ A1
1:2500@ A3

REVISION	AMENDMENT	APPROVED	DATE
A	ISSUED FOR INFORMATION	P.J.H.	2021-08-10
B	ISSUED FOR COMMENT		
C	ISSUED FOR RESOURCE CONSENT	DTJ	2021-11-15
D	ISSUED FOR RESOURCE CONSENT	BGS	2022-08-11



Whangarei Office
+64 9 430 1700

Private Bag 9017
Whangarei 0148
New Zealand

CIVIL

SCALES		ORIGINAL SIZE
1:1250 AT A1		A1
DRAWN	DESIGNED	APPROVED
V. GILES	D. CLAASSEN	B. STERLING
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE
K. MEIN	C. PARKER	2022-08-11

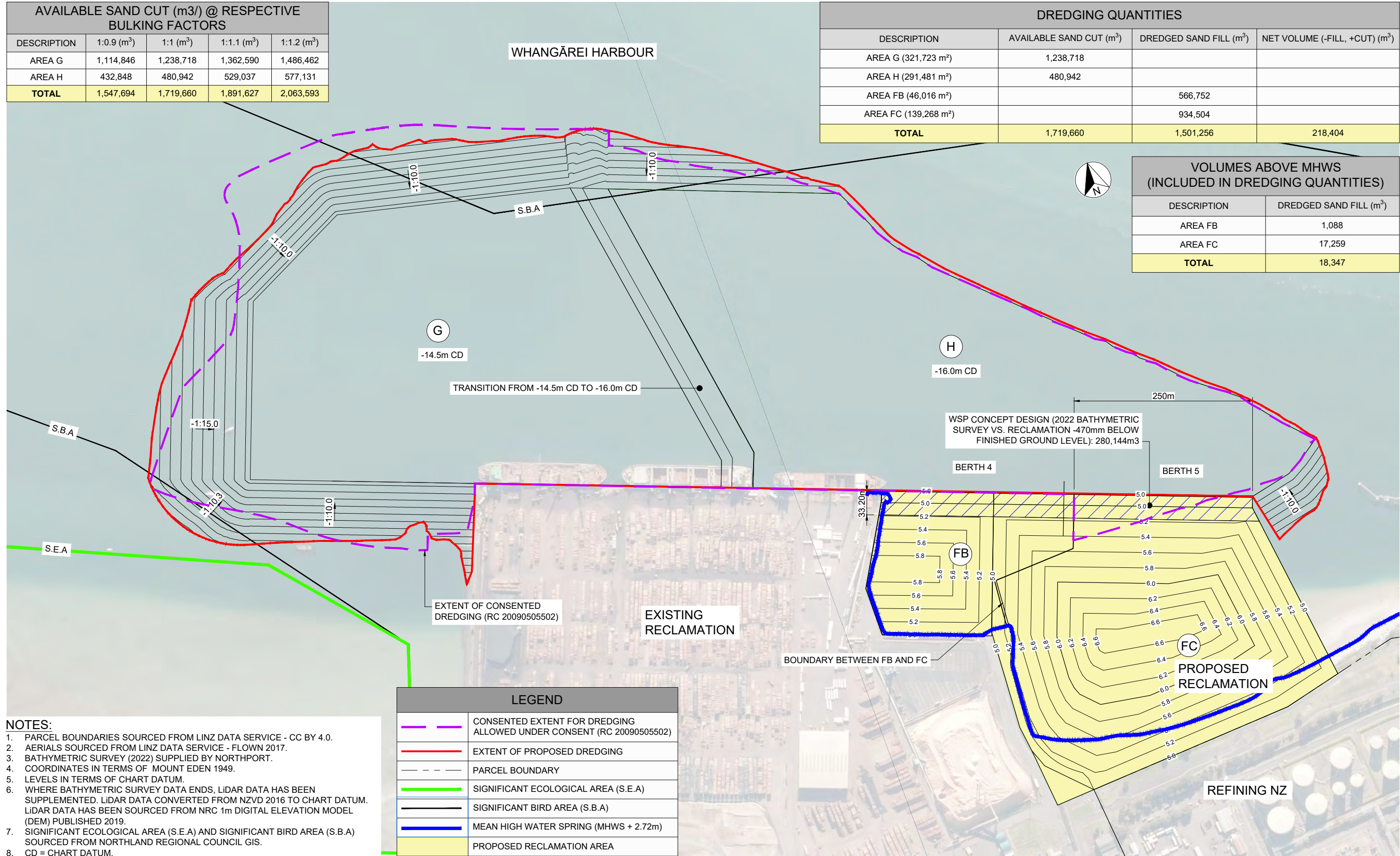
CONCEPT - RESOURCE CONSENT

PROJECT	
NORTHPORT	
RALPH TRIMMER DRIVE, MARSDEN POINT	
NORTHPORT - PROPOSED RECLAMATION & DREDGING	
TITLE	
SETOUT PLAN	
PROPOSED RECLAMATION AND WHARF EXTENTS	
WSP PROJECT NO. (SUB-PROJECT)	
1-19278.01(03)	
SHEET NO.	REVISION
C03	D

AVAILABLE SAND CUT (m3/) @ RESPECTIVE BULKING FACTORS				
DESCRIPTION	1:0.9 (m³)	1:1 (m³)	1:1.1 (m³)	1:1.2 (m³)
AREA G	1,114,846	1,238,718	1,362,590	1,486,462
AREA H	432,848	480,942	529,037	577,131
TOTAL	1,547,694	1,719,660	1,891,627	2,063,593

DREDGING QUANTITIES			
DESCRIPTION	AVAILABLE SAND CUT (m³)	DREDGED SAND FILL (m³)	NET VOLUME (-FILL, +CUT) (m³)
AREA G (321,723 m²)	1,238,718		
AREA H (291,481 m²)	480,942		
AREA FB (46,016 m²)		566,752	
AREA FC (139,268 m²)		934,504	
TOTAL	1,719,660	1,501,256	218,404

VOLUMES ABOVE MHWS (INCLUDED IN DREDGING QUANTITIES)	
DESCRIPTION	DREDGED SAND FILL (m³)
AREA FB	1,088
AREA FC	17,259
TOTAL	18,347



- NOTES:**
1. PARCEL BOUNDARIES SOURCED FROM LINZ DATA SERVICE - CC BY 4.0.
 2. AERIALS SOURCED FROM LINZ DATA SERVICE - FLOWN 2017.
 3. BATHYMETRIC SURVEY (2022) SUPPLIED BY NORTHPORT.
 4. COORDINATES IN TERMS OF MOUNT EDEN 1949.
 5. LEVELS IN TERMS OF CHART DATUM.
 6. WHERE BATHYMETRIC SURVEY DATA ENDS, LIDAR DATA HAS BEEN SUPPLEMENTED. LIDAR DATA CONVERTED FROM NZVD 2016 TO CHART DATUM. LIDAR DATA HAS BEEN SOURCED FROM NRC 1m DIGITAL ELEVATION MODEL (DEM) PUBLISHED 2019.
 7. SIGNIFICANT ECOLOGICAL AREA (S.E.A) AND SIGNIFICANT BIRD AREA (S.B.A) SOURCED FROM NORTHLAND REGIONAL COUNCIL GIS.
 8. CD = CHART DATUM.

1:2500@A1
1:5000@A3

REVISION	AMENDMENT	APPROVED	DATE
A	ISSUED FOR INFORMATION	P.J.H.	2021-08-10
B	ISSUED FOR COMMENT		
C	ISSUED FOR RESOURCE CONSENT	DTJ	2021-11-15
D	ISSUED FOR RESOURCE CONSENT	BGS	2022-08-11
E	ISSUED FOR RESOURCE CONSENT - RECLAMATION AREAS & VOLUMES UPDATED	BGS	2022-08-19



Whangarei Office
+64 9 430 1700

Private Bag 9017
Whangarei 0148
New Zealand

CIVIL

SCALES
1:2500 AT A1, 1:5000 AT A3

ORIGINAL SIZE
A1

DRAWN V. GILES	DESIGNED D. CLAASSEN	APPROVED B. STERLING
DRAWING VERIFIED K. MEIN	DESIGN VERIFIED C. PARKER	APPROVED DATE 2022-08-19

CONCEPT - RESOURCE CONSENT

PROJECT
NORTHPORT
RALPH TRIMMER DRIVE, MARSDEN POINT
NORTHPORT - PROPOSED RECLAMATION & DREDGING

TITLE
DREDGING PLAN - PROPOSED RECLAMATION
AND EXISTING CONSENTED DREDGING

WSP PROJECT NO. (SUB-PROJECT)
1-19278.01(03)

SHEET NO.
C04

REVISION
E



ISSUE	DATE	DETAILS	APPRVD	BY



Northport

P.O BOX 44
RUAKAKA, NEW ZEALAND
TEL 09 432 5010

vision4growth.co.nz

Title: NORTHPORT RELOCATED TUG FACILITY EASTERN END - CONCEPT PLAN				
Path k:\engineer\greg\consents\vision for growth project\plans\eastern tug facility.dwg	Dwg No D60-X		Issue: R0	
Drawn: B SWEENEY	Checked:	Scale: 1:500 (A1) 1:1000(A3)	Date: SEPT 2022	Sheet: 01

This graphic has been prepared by Boffa Miskell Limited on the specific instructions of our Client. It is solely for our Client's use in accordance with the agreed scope of work. Any use or reliance by a third party is at that party's own risk. Where information has been supplied by the Client or obtained from other external sources, it has been assumed that it is accurate. No liability or responsibility is accepted by Boffa Miskell Limited for any errors or omissions to the extent that they arise from inaccurate information provided by the Client or any external source.



ORIGINAL IN COLOUR

KEY



Printed 25/07/2022 12:01:13 pm

REV	DATE	DESCRIPTION
A	20.07.22	FOR INFORMATION
B	25.07.22	FOR INFORMATION

APPRVD
SCo
SCo

NORTHPORT
RECLAMATION

PROPOSED CONCEPT PLAN

Design	SCo	Scale	Date
Drawn	DHi	1:750 @ A1	20.07.22
Check	SCo	1:1500 @ A3	

FOR INFORMATION

DRAWING NO.	REVISION
BM220519-201	(B)

U:\2022\BM220519_SCo_Northport_expansion_Pocket_Park\CAD\BM220519_Base.dwg

This graphic has been prepared by Boffa Miskell Limited on the specific instructions of our Client. It is solely for our Client's use in accordance with the agreed scope of work. Any use or reliance by a third party is at that party's own risk. Where information has been supplied by the Client or obtained from other external sources, it has been assumed that it is accurate. No liability or responsibility is accepted by Boffa Miskell Limited for any errors or omissions to the extent that they arise from inaccurate information provided by the Client or any external source.



ORIGINAL IN COLOUR

Boffa Miskell

Printed 19/08/2022 11:47:56 am

KEY

REV	DATE	DESCRIPTION
A	27.07.22	FOR INFORMATION
B	22.08.22	FOR INFORMATION

APPRVD
SCo
SCo

**NORTHPORT
RECLAMATION**

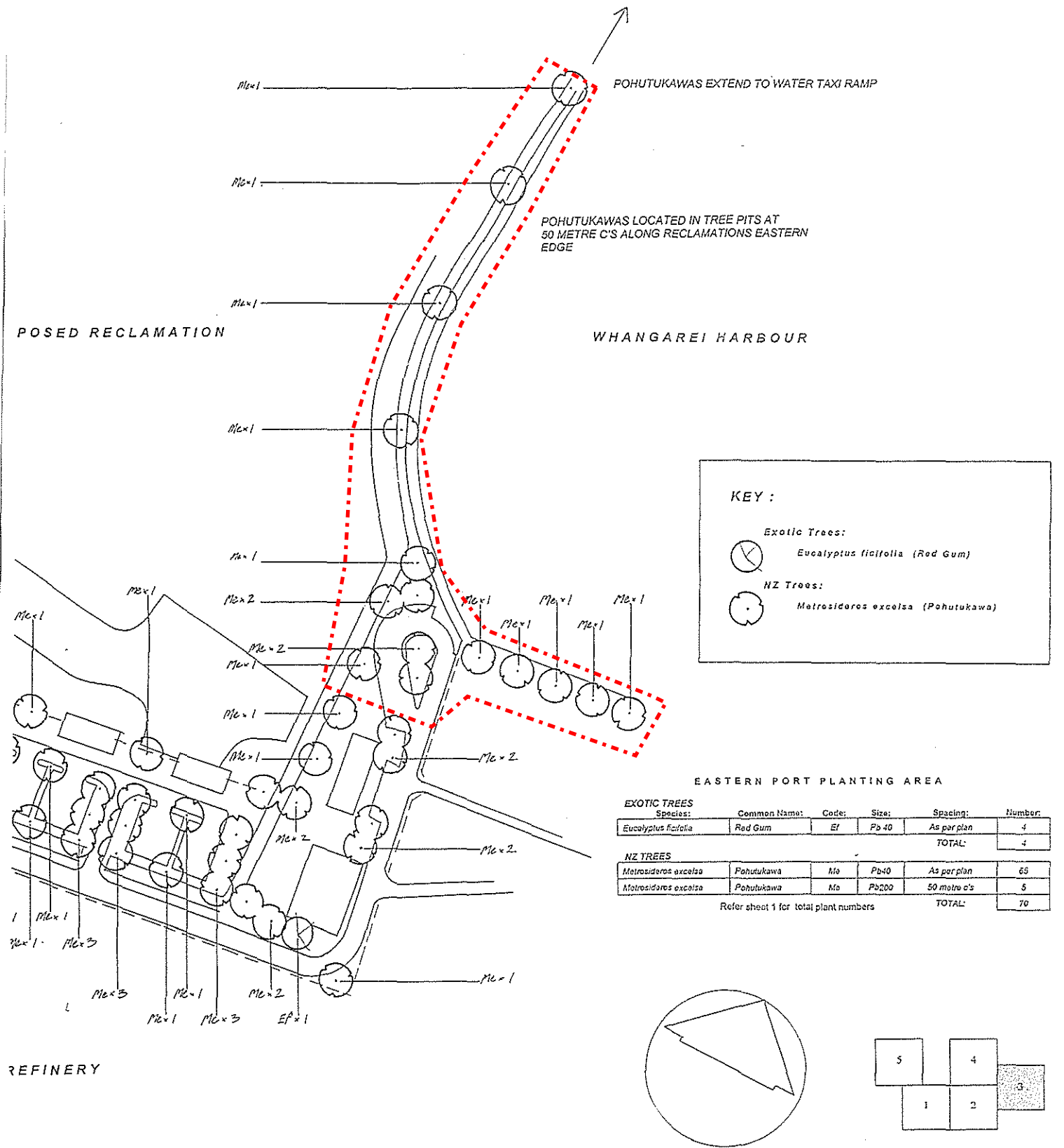
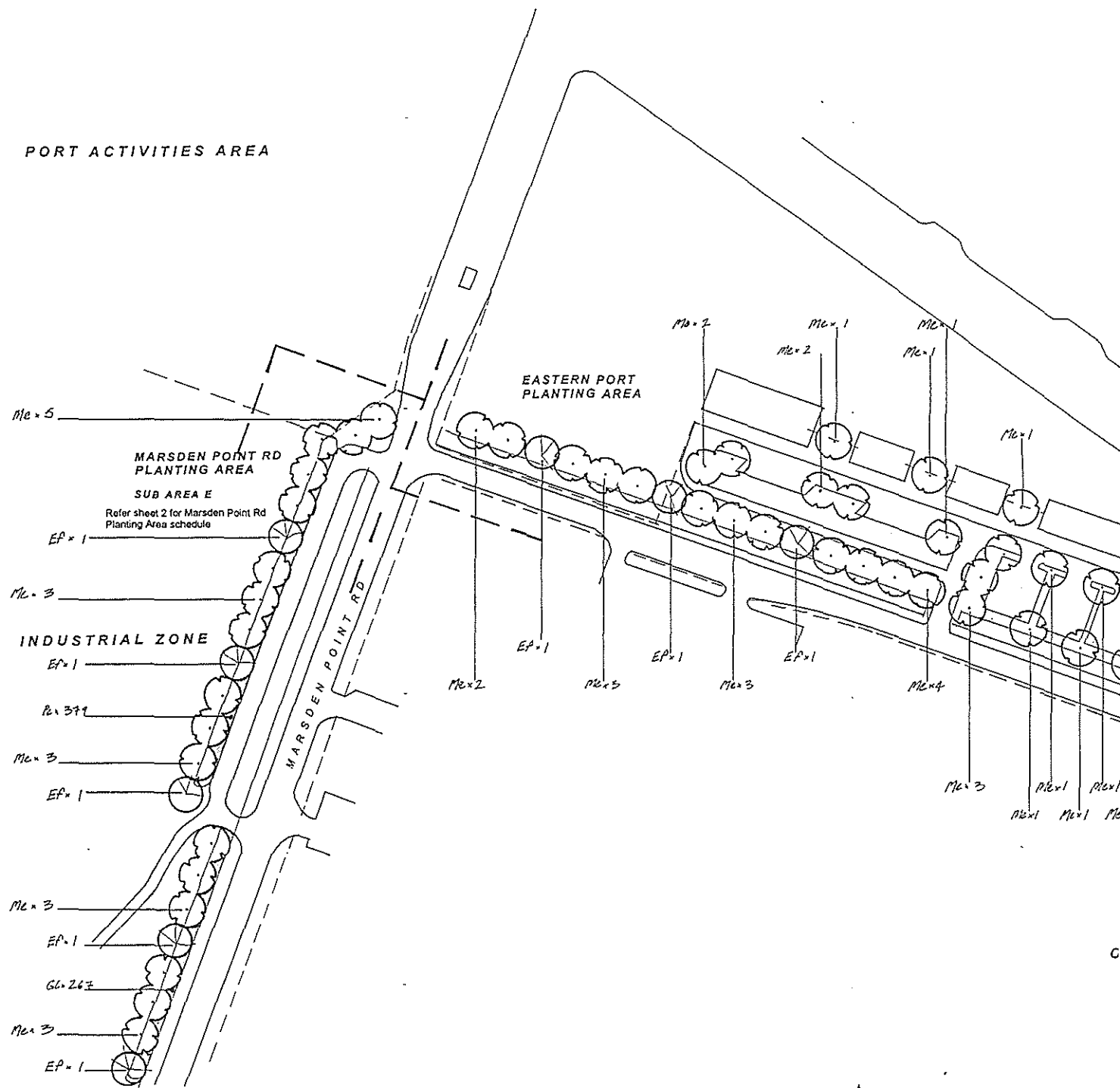
EXISTING CONDITIONS

Design Drawn Check	SCo DHi SCo	Scale 1:1000 @ A1 1:2000 @ A3	Date 27.07.22
DRAWING NO. BM220519-200		REVISION (B)	

U:\2022\BM220519_SCo_Northport_expansion_Pocket_Park\ICAD\BM220519_Base.dwg

APPENDIX 2: LANDSCAPE PLANTING PLANS

..... TREES TO BE REMOVED (BERTH 5 EXPANSION)



Botanical name	Common name	Size	Quantity
TREES			
<i>Corynocarpus laevigata</i>	Karaka	Pt 18	40
<i>Dacrydium dacrydoides</i>	Kaikaitake	Pt 19	55
<i>Metrosideros excelsa</i>	Pohutukawa	Pt 15	53
<i>Podocarpus totara</i>	Totara	Pt 18	82
<i>Sophora microphylla</i>	Kowhai	Pt 18	30
SHRUBS			
<i>Cordyline australis</i>	Cabbage tree	Pt 5	80
<i>Cordyline frutescens</i>	Tournefortia	Pt 2	1200
<i>Leptospermum scoparium</i>	Manuka	Pt 400	
<i>Phormium tenax</i>	Hanaleia	Pt 2	3200



APPENDIX 3: FUTURE NOISE MAP

