

APPENDIX 31

EXISTING NORTHPORT RESOURCE CONSENTS

Appendix 31 include:

- Appendix 31A: Resource Consents for Vision for Growth;
- Appendix 31B: Resource Consents for Berths 1 and 2;
- Appendix 31C: Resource Consents for Berths 3 and 4.

APPENDIX 31A

RESOURCE CONSENTS FOR VISION FOR GROWTH



Resource Consent

Document Date: 11.11.2025

COPY OF CONDITIONS IMPOSED BY THE ENVIRONMENT COURT DECISION ENV-2021-AKL-000129 DATED 24 OCTOBER 2024

NOTE: Pursuant to Section 116 of the Resource Management Act 1991, the date of commencement of this consent is **02 October 2025**

NORTHPORT LIMITED

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

- | | |
|-------------------------|---|
| AUT.005055.38.01 | Reclamation of part of the Coastal Marine Area (CMA) to the immediate east of Northport, including associated deposition and discharge of decant water. |
| AUT.005055.39.01 | Capital and associated maintenance dredging. |
| AUT.005055.40.01 | Wharf structures on the northern (seaward) edge of the proposed reclamation. |
| AUT.005055.41.01 | Sheet piling and rock revetment structures on the eastern edge of the reclamation. |
| AUT.005055.42.01 | Treatment of operational stormwater via the existing pond-based stormwater system and/or proprietary systems, and subsequent discharge to ground and the CMA. |
| AUT.005055.43.01 | Port related activities on the proposed reclamation and wharves, and on parts of the proposed development above MHWS. |
| AUT.005055.44.01 | Construction of additional beach roosting habitat to the west of Northport. |
| AUT.005055.45.01 | 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. |
| AUT.005055.46.01 | 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”	means 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 “Turbidity Monitoring for the Northport Expansion Project” (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 “Proposed Concept Plan”, 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 Variable oystercatcher and Tūturiwhatu New Zealand dotterel) 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 “Bird Roost Concept”, 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 “Turbidity Monitoring for the Northport Expansion Project” (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 260) 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 125(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.

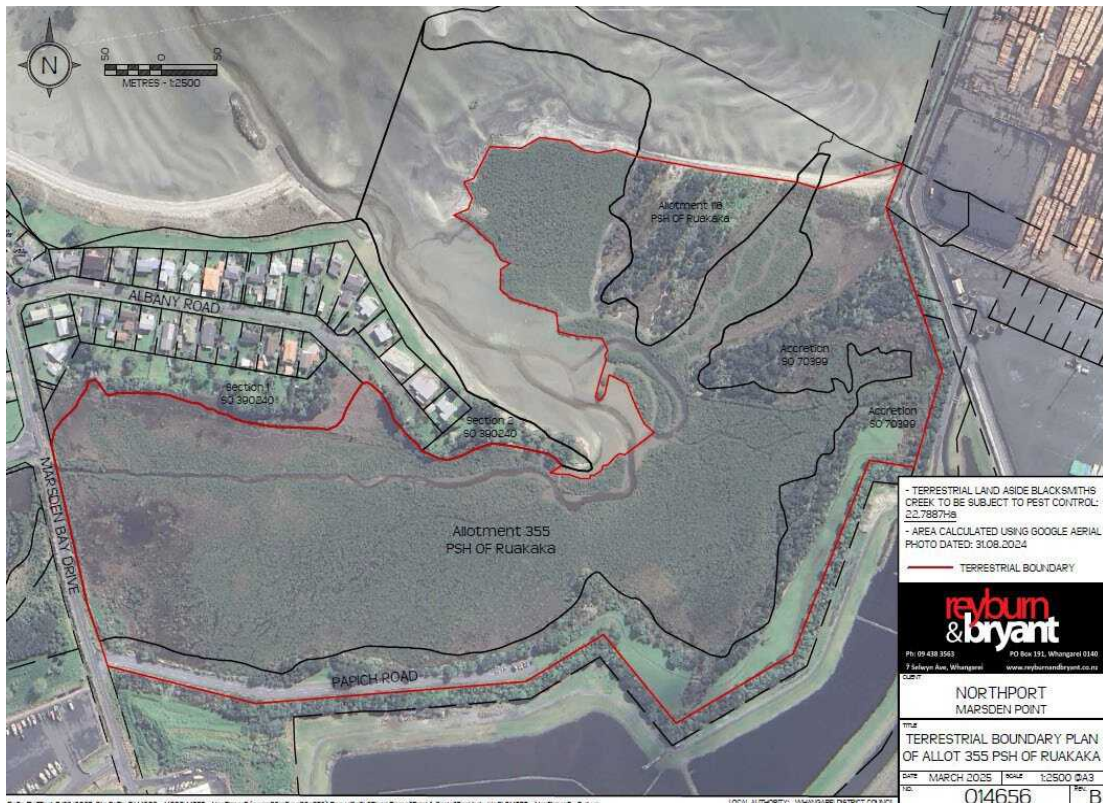
The draft SMMR must include:

- (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:
- Target pest species, which must include rodents, feral cats, mustelids.
 - Predator control measures to be used.
 - The frequency of pest management activities.
 - Monitoring frequency and methods.
 - Adaptation to respond to outcomes of monitoring.
 - 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
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

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:
 - (i) The sighted baleen whale is observed to be west of the EMMOZ.
 - (ii) 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 (SEL_{cum}(24h)) measured during this monitoring must not exceed 170 dB re 1μPa_{2s} 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 1μPa_{2s} SEL_{cum}(24h) contour which sets the MMOZ is less than 200 metres from the Pile Driving unit.
 - (b) The unweighted 176 dB re 1μPa_{2s} SEL_{cum}(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 – 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 – 79 (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 *Popoianore* 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 fire pump 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 four (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), and 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

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

Maritime New Zealand

PO Box 25620
Wellington 6140

Northland Regional Council

Private Bag 9021
Whangarei Mail Centre
Whangarei 0148

Channel Infrastructure

Private Bag 9024
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 – 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)

Area	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	
	Spring summer	Autumn inter	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:

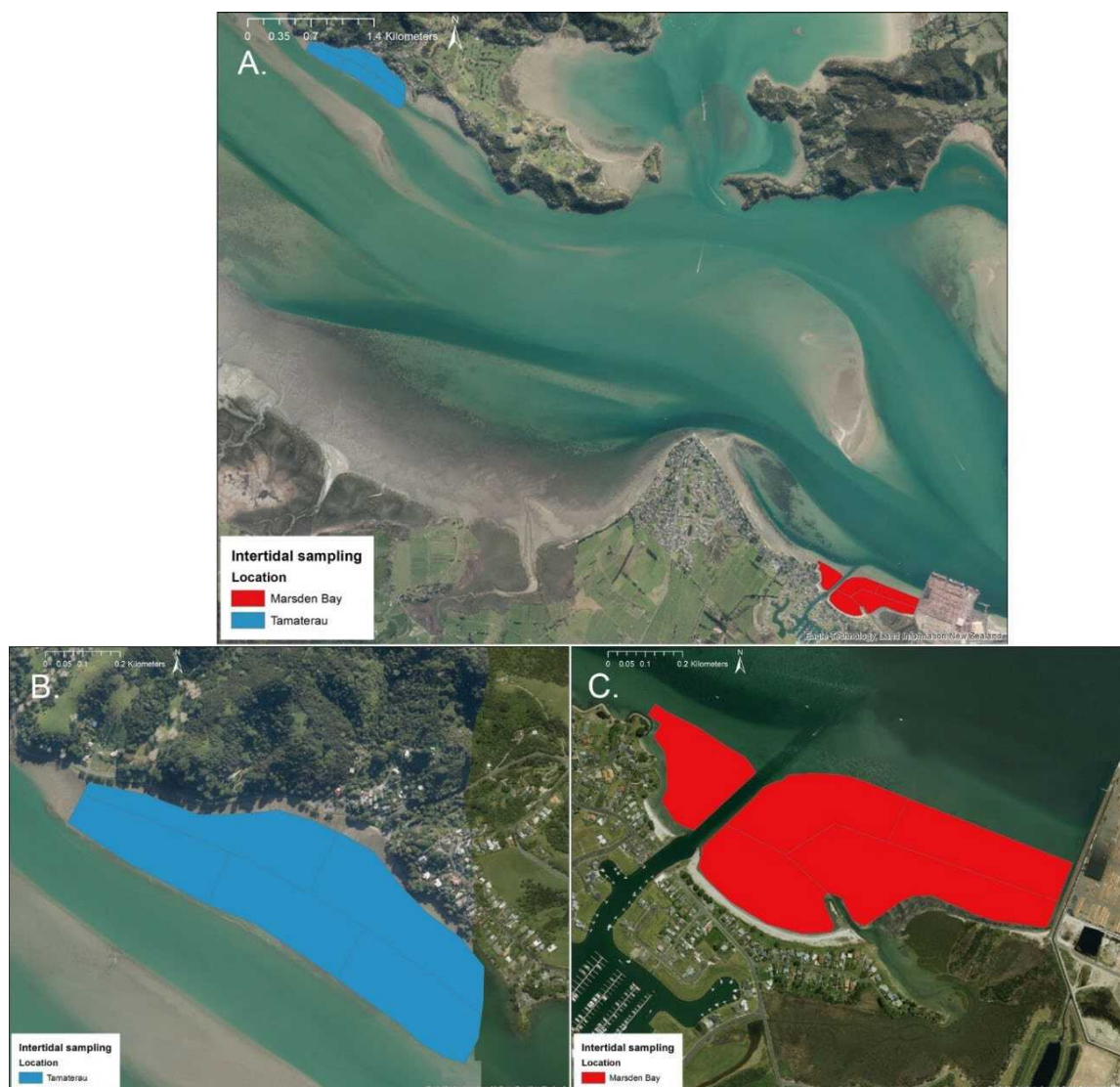
- (a) In accordance with the certified EMMP; and
- (b) In general accordance with the following table and plans:

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		✓	✓	✓	✓	✓	✓	x	x

and ecology									
Tamaterau benthic sediments and ecology (reference location)	✓	✓	✓	✓	✓	✓	✓	x	x
Marsden Bay inter-tidal and sub-tidal seagrass	✓	✓	✓	✓	✓	✓	✓	x	x

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

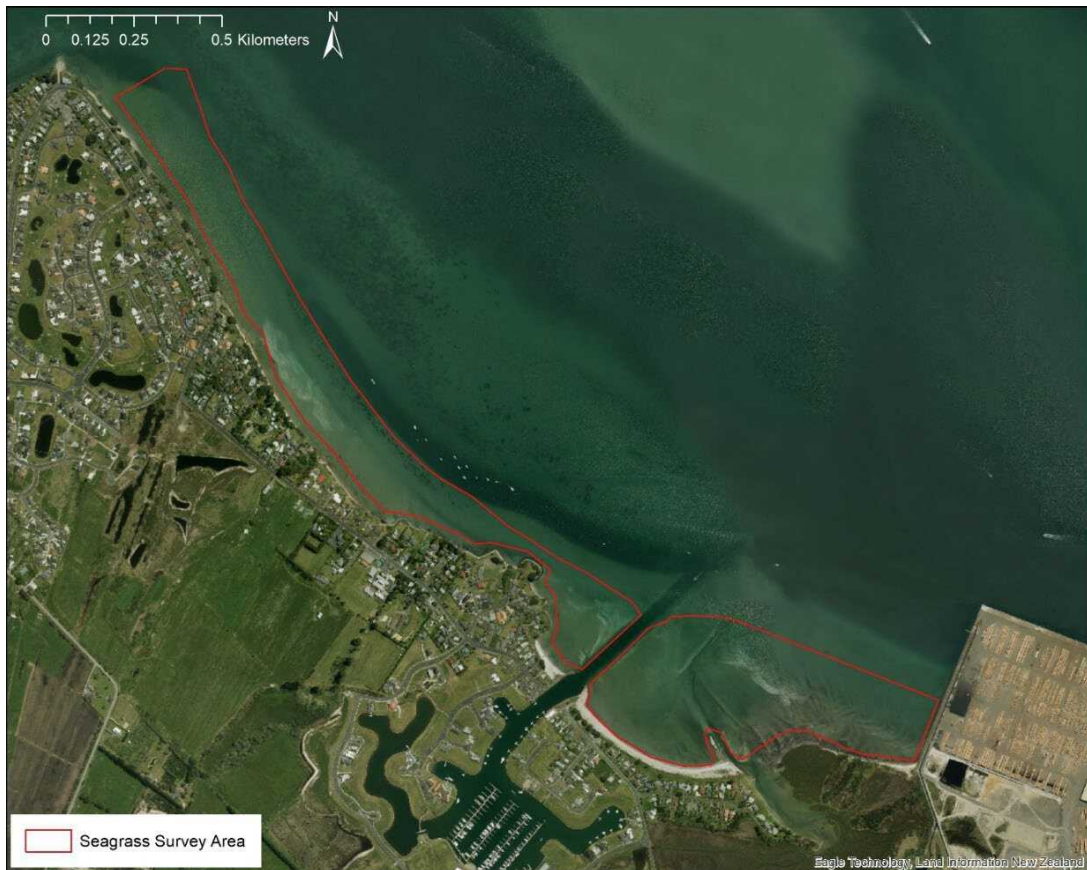


185. The spring/summer and autumn/winter sampling rounds required in Condition 3 must be as close to six (6) months apart as practicable.
186. The Marsden Bay seagrass monitoring required by Condition 184 must include either:
 - a) The mapping of seagrass at Marsden Bay using georeferenced and ortho-corrected 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
 - (p) Other relevant requirements specified in these conditions of consent (including other management plans); and
 - (q) 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 – 155).
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 – 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 – 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:
- (a) 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.
 - (b) 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.
 - (c) 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:
 - (b) Patuharakeke, Te Parawhau, and Ngātiwai;
 - (c) 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;
 - (d) 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
 - (e) 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 256 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. In 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. [WDC Consent Reference: LU2200107].

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	AUT.005055.38.01 (Reclamation)
	02 OCTOBER 2060	All other consents

Pursuant to Section 133A of the Resource Management Act 1991, minor corrections have been made to the conditions of this consent which have been authorised under delegated authority from the council by Stuart Savill, Consents Manager, on 11 November 2025.

APPENDIX 1: PLANS

Survey	
Design	
Checked	
Date	

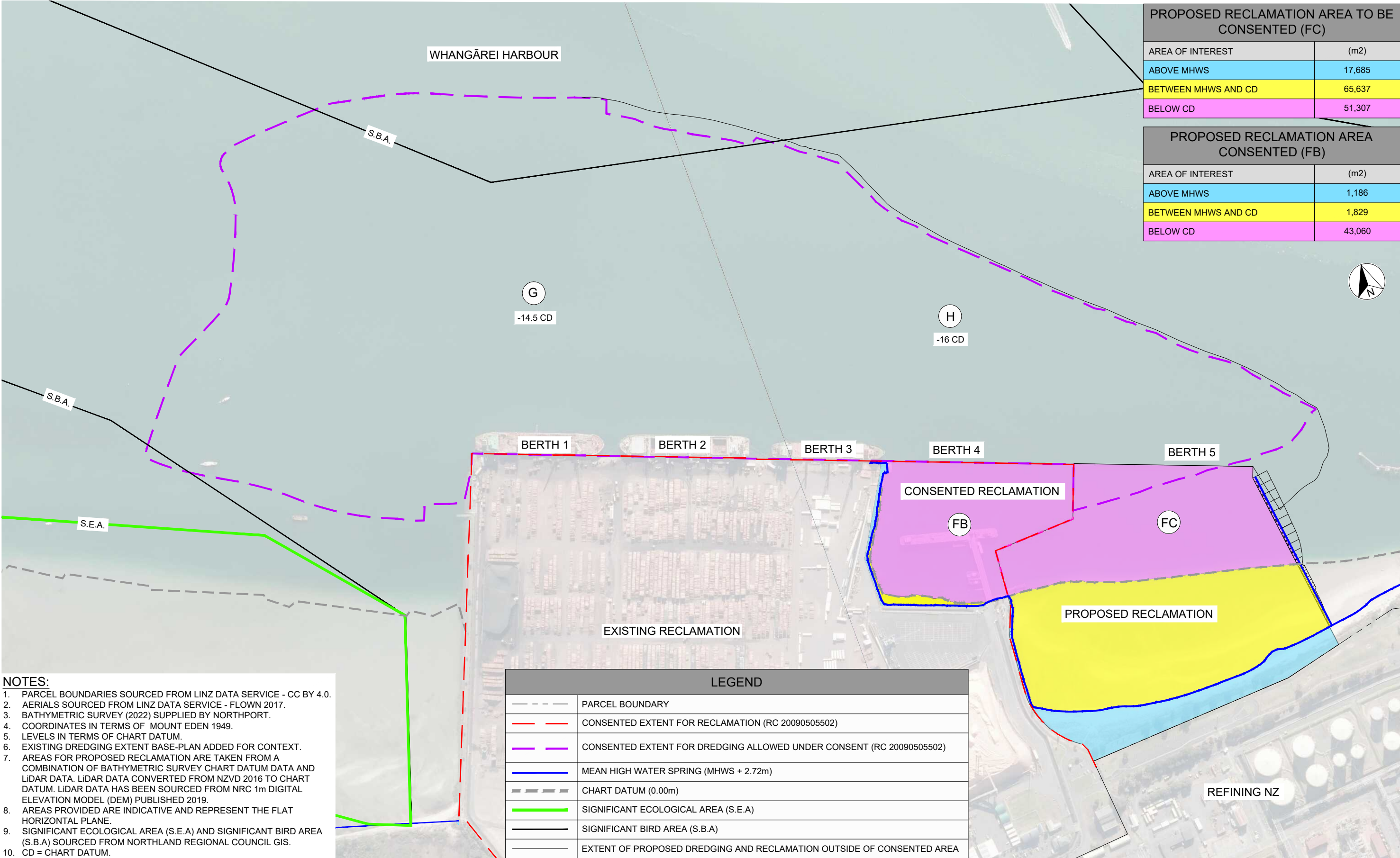
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- NOTES:**
1. PARCEL BOUNDARIES SOURCED FROM LINZ DATA SERVICE - CC BY 4.0.
 2. AERIALS SOURCED FROM LINZ DATA SERVICE - FLOWN 2017.
 3. BATHYMETRIC SURVEY (2022) SUPPLIED BY NORTHPORT.
 4. COORDINATES IN TERMS OF MOUNT EDEN 1949.
 5. LEVELS IN TERMS 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
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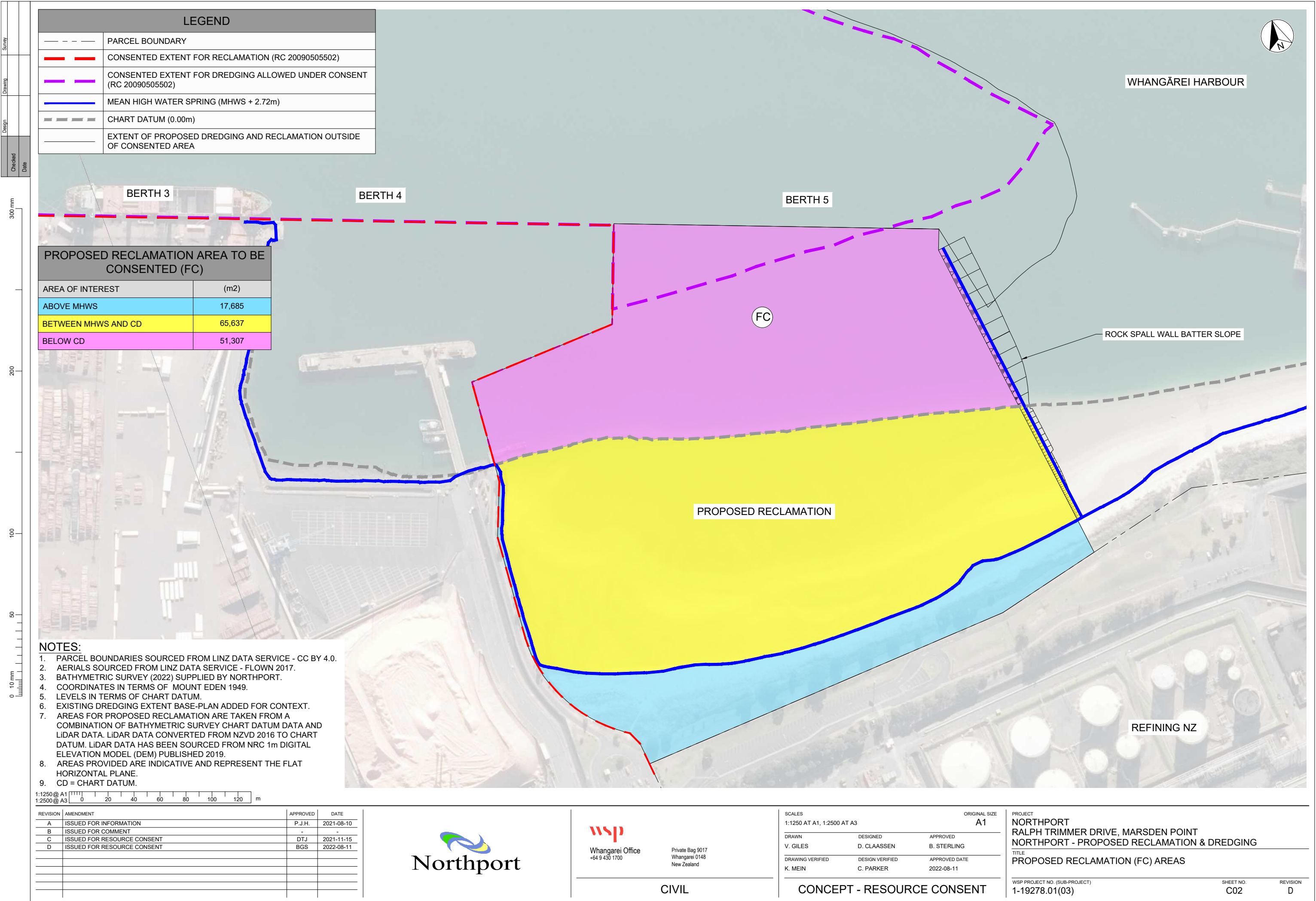
Private Bag 9017
Whangarei 0148
New Zealand

CIVIL

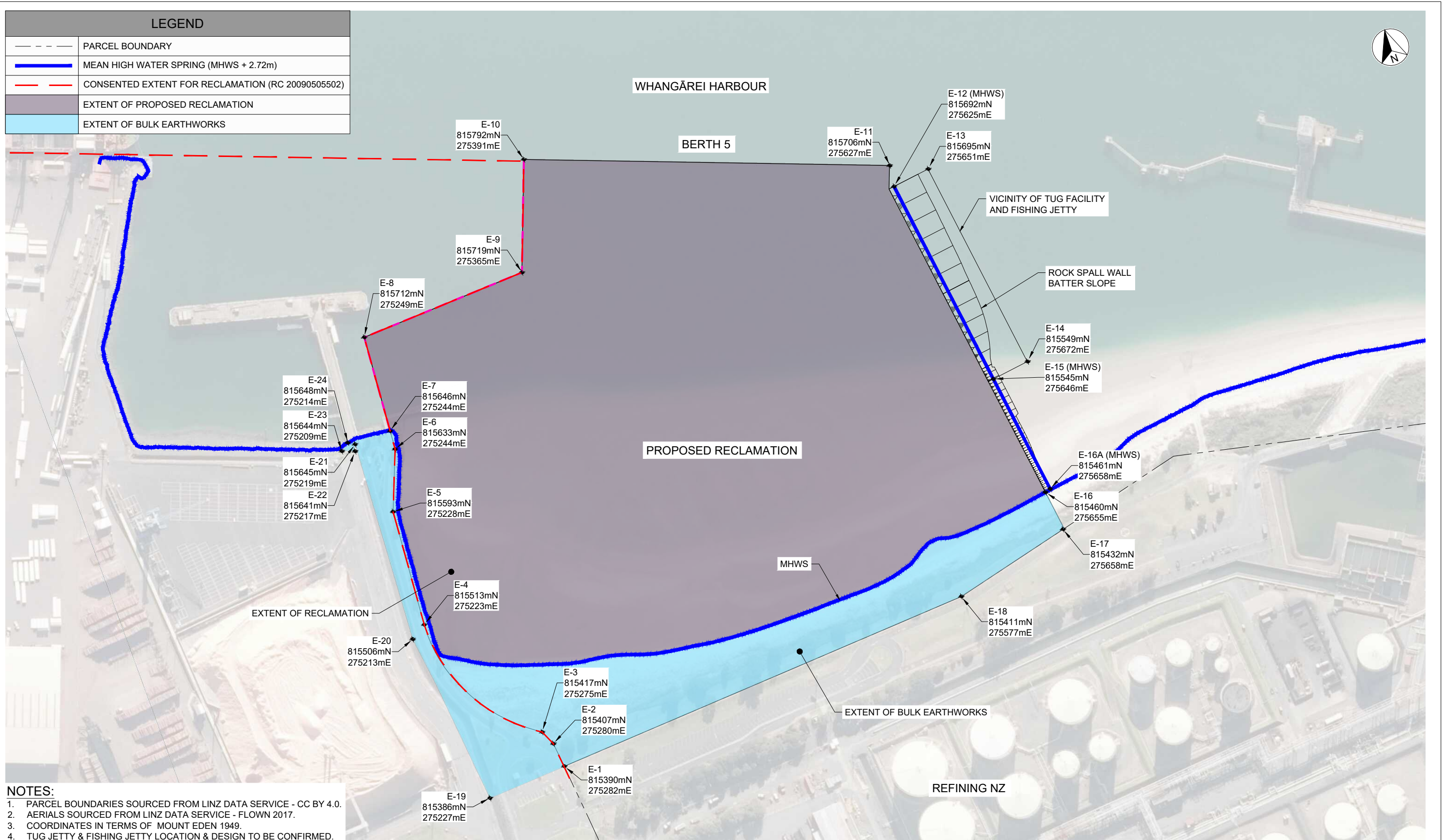
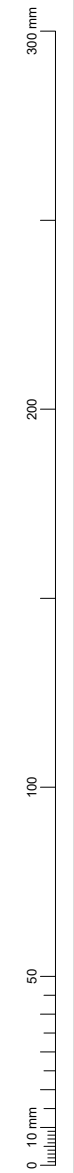
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1:2500 AT A1, 1:5000 AT A3		A1
DRAWN	DESIGNED	APPROVED
V. GILES	D. CLAASSEN	B. STERLING
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE
K. MEIN	C. PARKER	2022-08-11

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	



- 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



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+64 9 430 1700

Private Bag 9017
Whangarei 0148
New Zealand

CIVIL

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

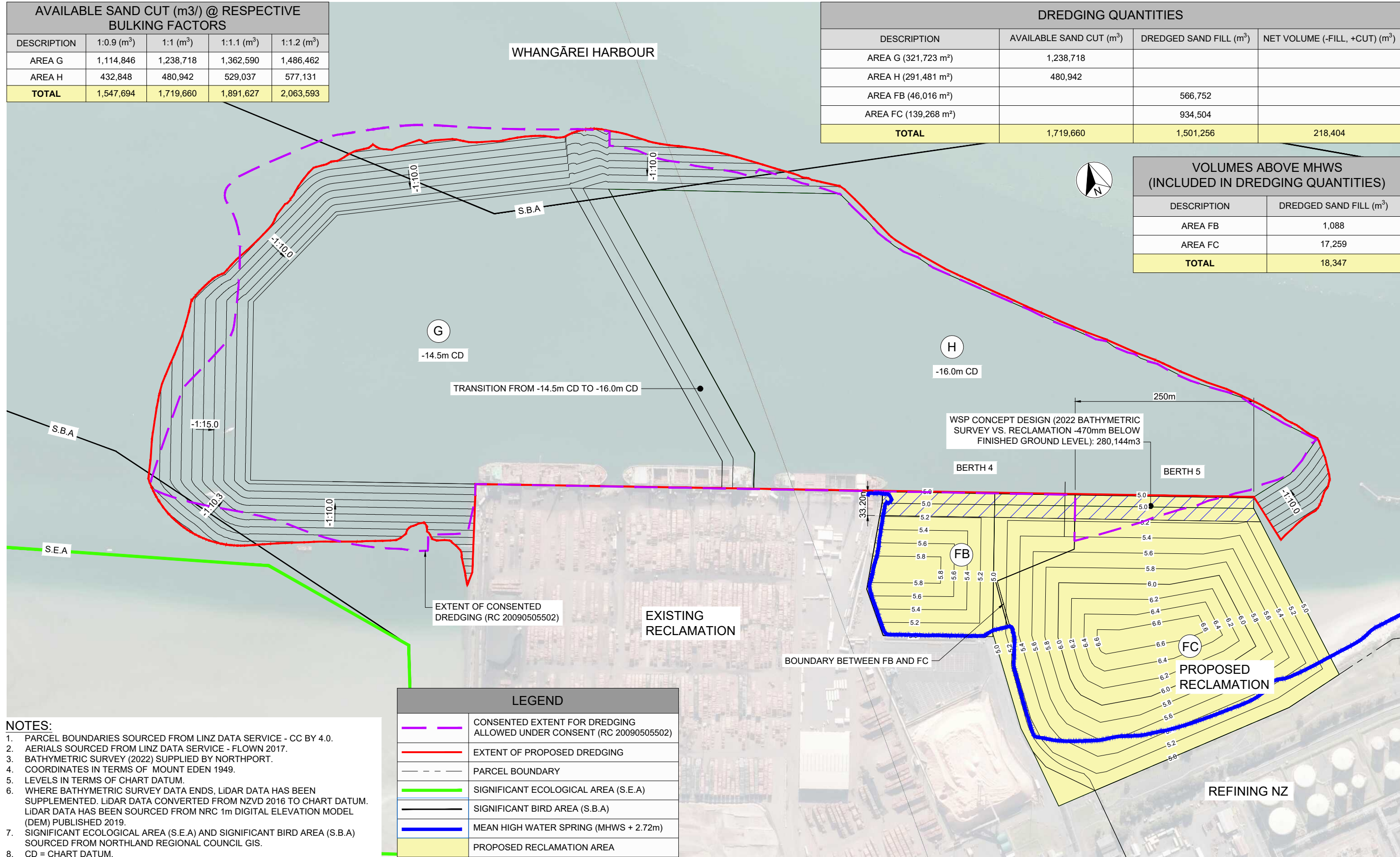
CONCEPT - RESOURCE CONSENT

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



- NOTES:
1. PARCEL BOUNDARIES SOURCED FROM LINZ DATA SERVICE - CC BY 4.0.
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 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



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+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

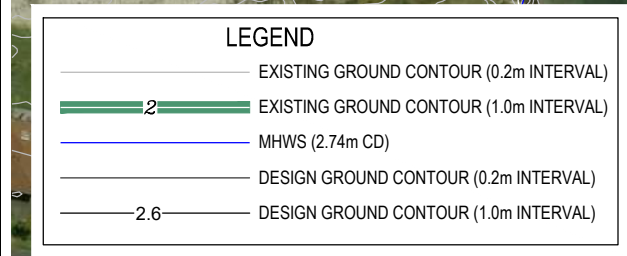
TITLE
DREDGING PLAN - PROPOSED RECLAMATION
AND EXISTING CONSENTED DREDGING

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

SHEET NO.
C04

REVISION
E

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)



ORIGINAL IN COLOUR

☐ BACKDRAFTING REQUIRED		CHECK PRINT	
☐ READY TO ISSUE	INITIAL	DATE	
CAD SELF CHECK			
DESIGN CHECK			
DRAFTING CHECK			
BACKDRAFTER - EDITS MADE			
BACKCHECKER - EDITS CONFIRMED			



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DESIGN CHECK

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

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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

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KEY

REV	DATE	DESCRIPTION
A	27.07.22	FOR INFORMATION
B	22.08.22	FOR INFORMATION

APPRVD
SCo
SCo

**NORTHPORT
RECLAMATION**

EXISTING CONDITIONS

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Northport

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

vision4growth.co.nz

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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 - Flroranthene - 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.

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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.

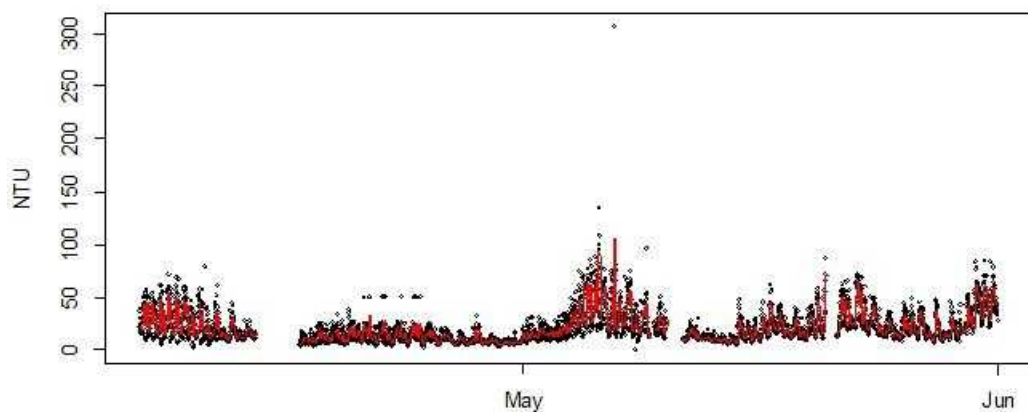


Figure 1. Example of raw turbidity data (open circles) with missing values. Smoothed signal shown in red.

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.

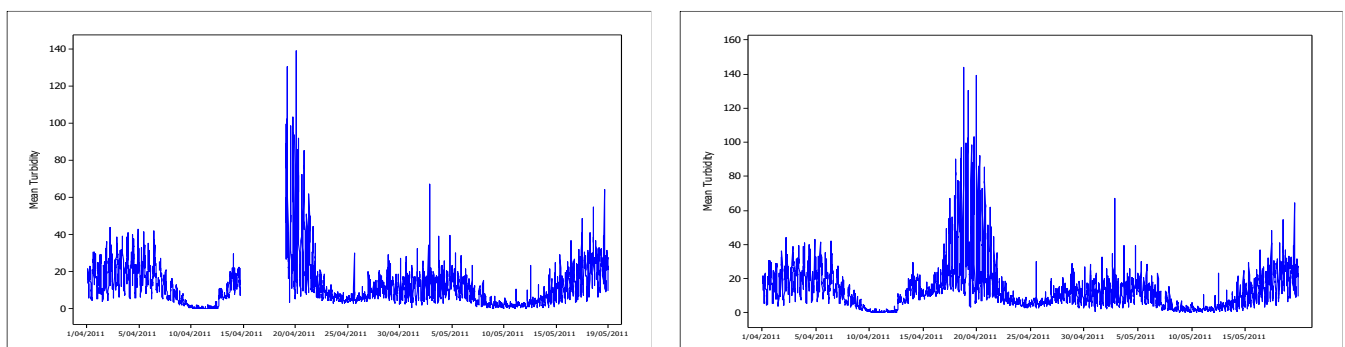


Figure 2. Illustration of temporal ‘in-filling’ of raw turbidity data. Original series with 3-day gap (left) and after data imputation (right).

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.

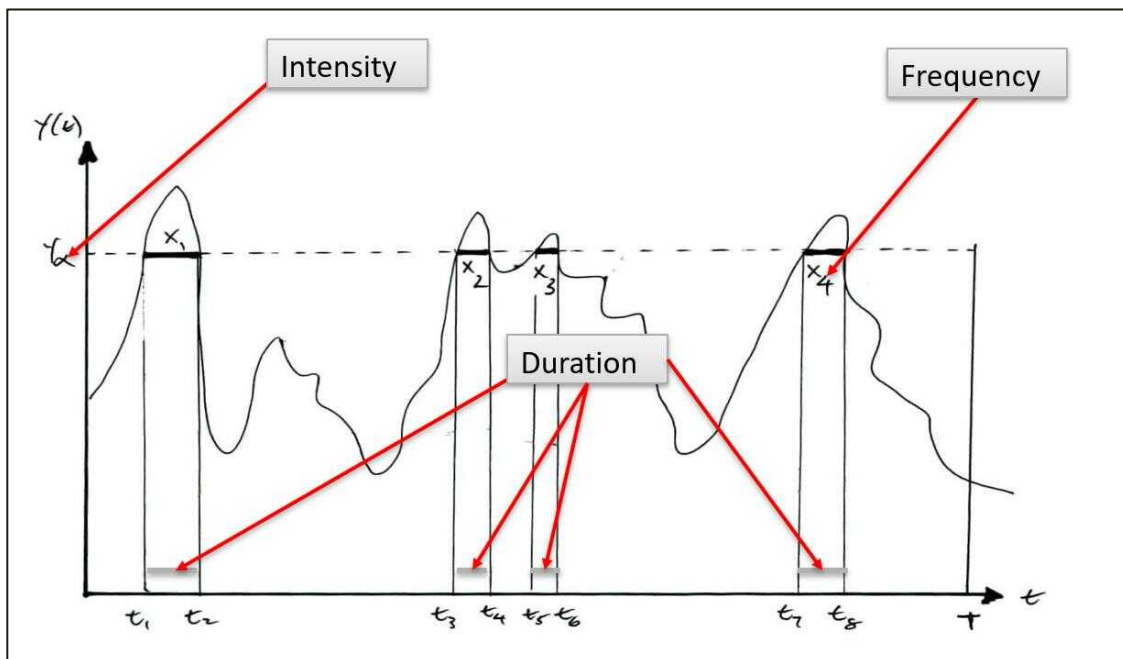


Figure 3. Depiction of IFD components for a turbidity time-series (see text for explanation).

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.

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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 $\mathbb{E}Z_{m,k}[X(t)]$ 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.

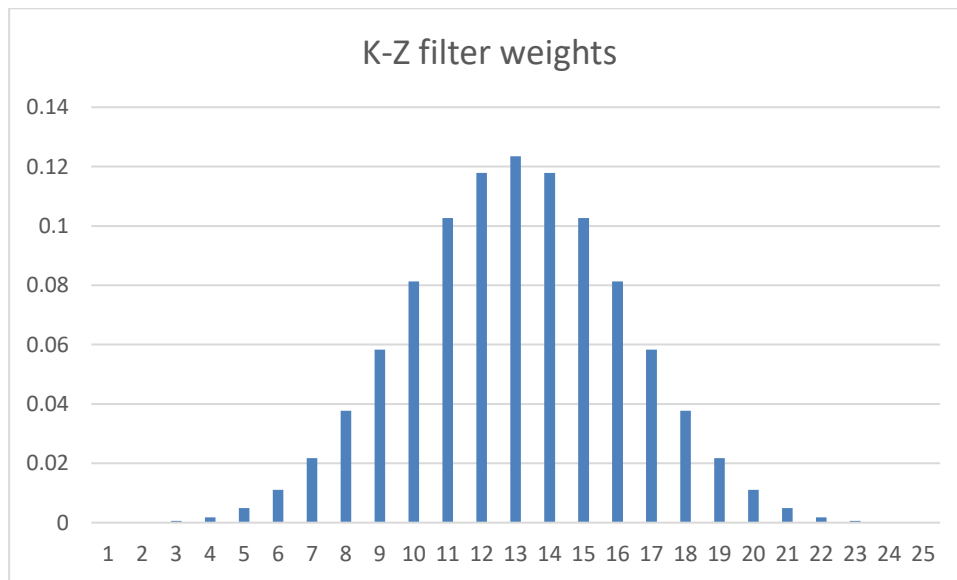


Figure 4. Distribution of weights $w(s, 4, 8)$.

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:

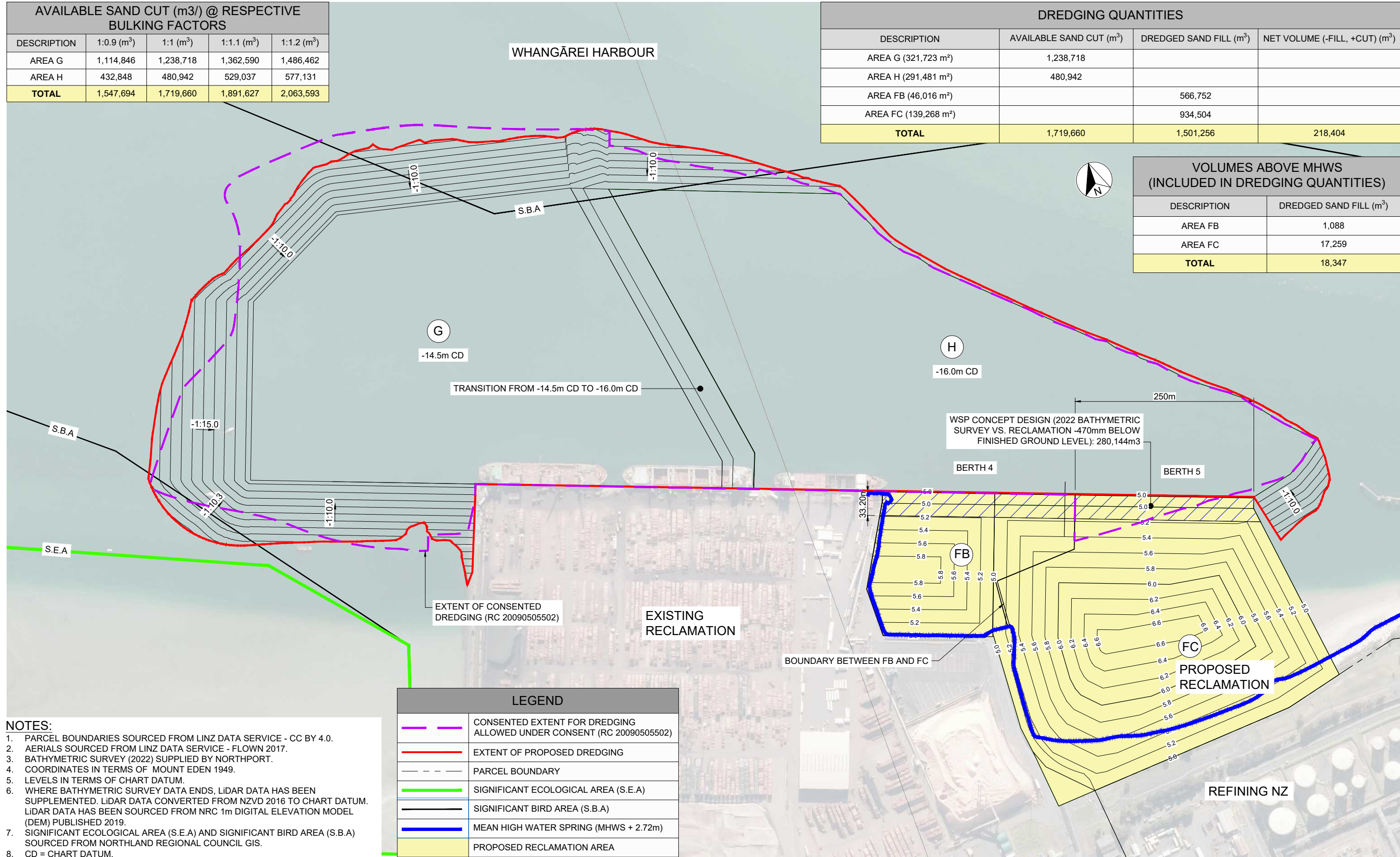
- (i) is consistent with the autocorrelation of the actual data recorded prior to the period of 'missingness';
- (ii) utilises actual data recorded at nearby locations using spatial covariance modelling techniques;
- (iii) has statistical properties that are consistent with actual data recorded immediately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

APPENDIX 4: MANGANESE POINT LINE PLAN

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

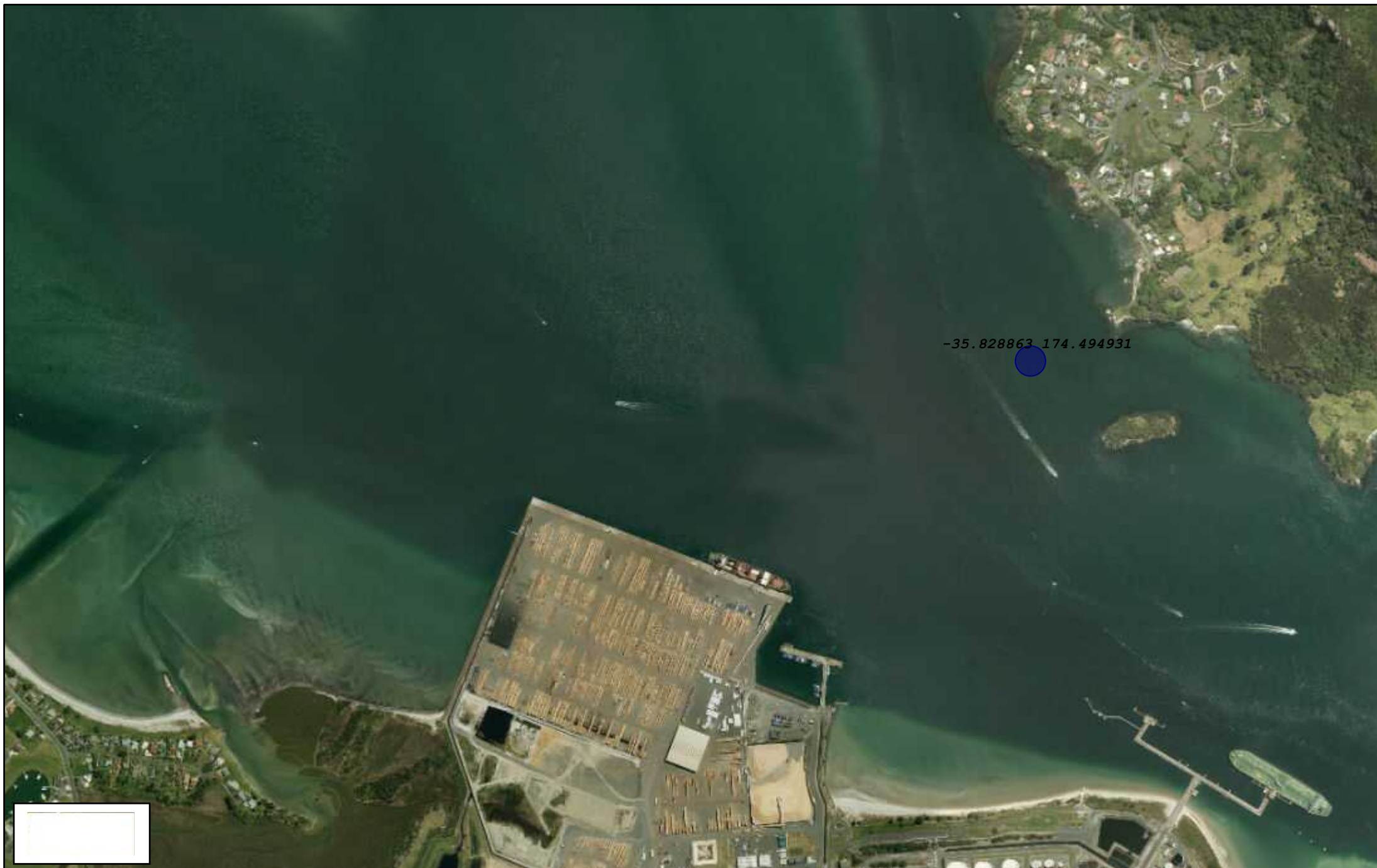
TITLE
DREDGING PLAN - PROPOSED RECLAMATION
AND EXISTING CONSENTED DREDGING

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

SHEET NO.
C04

REVISION
E

APPENDIX 5: UNDERWATER NOISE MANAGEMENT PLAN



APPENDIX 31B

RESOURCE CONSENTS FOR BERTHS 1 AND 2



Decision #4 - Recommendation to the Minister of Conservation : Coastal Permit No. 4

Date of commencement of consent: As provided in section 119(7) of the RMA 1991 (the Act)

Date of expiration of consent: Thirty five (35) years

Date of lapsing of consent (if not given effect to): Seven (7) years from date of commencement

Purpose of Consent: To construct and use piles and wharf structures in the coastal marine area abutting the reclamation.

Legal Description of Land: The relevant parts of the land described in Schedule A (below), otherwise as more specifically described in this permit and in the plans and other information submitted by the applicant.

Schedule A:

A.	Crown land comprising foreshore and seabed
----	--

STANDARD CONDITIONS OF CONSENT:

1. The Consent Holder shall undertake all authorised activities in general accordance with the descriptions and plans submitted with the application or as modified in evidence, and shall carry out all works in accordance with the approved Construction/Management Plan.
2. The Consent Holder shall submit to the Northland Regional Council full copies of all final design drawings at least twenty [20] working days prior to the commencement of works associated with this consent.
3. The Consent Holder shall notify the Northland Regional Council at least ten (10) working days in advance of the date of the commencement of works associated with this consent.
4. The Consent Holder shall notify the Northland Regional Council within ten (10) working days following the date of the completion of all activities associated with this consent.
5. The Consent Holder shall pay all Crown charges set by the Northland Regional Council under Section 36 of the Resource Management Act 1991, including charges relating to any transfer of the consent, and to any changes to consent conditions.
6. The Northland Regional Council may serve notice on the Consent Holder of its intention to review the conditions of this consent pursuant to section 128 of the RMA, for the purposes specified therein or to address significant unanticipated adverse effects, at six (6) monthly intervals starting from the notified date of the commencement of works associated with this consent.
7. The Consent Holder shall maintain all structures covered by this consent in good order and repair. Maintenance works authorised by this Consent shall be routine maintenance and repair consistent with the scale and form of the initial approved structures.

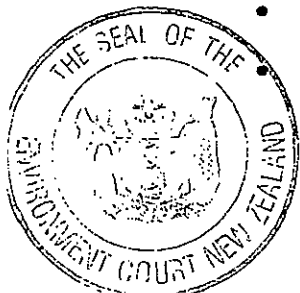
SPECIAL CONDITIONS OF CONSENT:

8. Where from any cause a contaminant (including fuel or sewage) associated with the Consent Holder's operations escapes otherwise than in conformity with this consent, the Consent Holder shall:

Immediately take such action or execute such work as may be necessary to stop and/or



- contain such escape; and
- (ii) Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the escape; and
 - (iii) Report the escape to the Northern Regional Council within one week of its occurrence and the steps taken or being taken to clean up, remedy any adverse effects and prevent any recurrence of such escape.
9. The Consent Holder shall keep the coastal marine area free of litter and other debris [including offcuts, pipes, and rock debris] arising from the exercise of this consent.
10. The Consent Holder shall carry out or commission, at its own expense, the monitoring work described in paragraphs 2 to 8 inclusive of Addendum D in the report by Barnett Consultants Limited dated August 1994 entitled "Marsden Point Port Development Hydrodynamic Study Addenda to Original Report" which covers:
- Bathymetric monitoring
 - Side scan sonar
 - Current profiling
 - Drogue tracking
 - Tide recording
 - Weather recording
 - Ship movement recording
11. All works in connection with the construction of the wharf (including marine activities such as ship movements, loading and unloading) shall be undertaken in a manner which minimises adverse effects on:
- (i) New Zealand Refining Company's [NZRC] jetties; and
 - (ii) the safe and efficient use of Whangarei Harbour in the vicinity of Marsden Point.
12. The Consent Holder shall submit to the Northland Regional Council for approval the following management plans with which it shall comply:
- (i) At least twenty[20] working days prior to construction works commencing the Consent Holder shall, to the extent that the information has not already been supplied in an overall project management plan for the Marsden Point deep water port, submit to the Northland Regional Council a construction management plan which shall provide the following information
 - Description of proposed works and drawings;
 - A programme including a timetable, sequence of events and expected duration of all proposed works;
 - A breakdown of the project into construction packages for later submission in greater detail
 - Community liaison arrangements
 - Contingency response plan
 - Community Liaison Group (CLG) comments on the construction management plan and the Consent Holder's response to those comments.



The Northland Regional Council shall, within twenty working days of receipt of the plan notify the Consent Holder of its approval of the plan or, failing approval, of the respects in which the plan fails to comply with the information or evidence supplied by the Consent Holder in support of its application.

(ii) At least twenty [20] working days before construction commences on any package of work identified in the construction management plan, the following additional information shall be supplied to the Northland Regional Council:

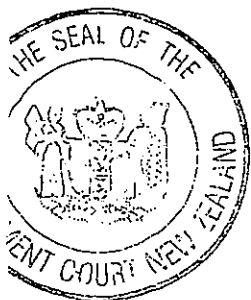
- Design and construction report which shall cover where appropriate:
 - Dredging activities
 - Perimeter dyke construction
 - Geotextile lining of bund wall
 - Pile driving activities
 - Dust control measures
 - Noise controls proposed
- Community Liaison Group (CLG) comments on the design and construction report and NPC response
- Plans and specifications providing sufficient detail to show compliance with the resource consent
- Monitoring procedures where applicable
- Reporting procedures where applicable

The Northland Regional Council shall, within twenty working days of receipt of the additional information, notify the Consent Holder of its approval of the additional information or, failing approval, of the respects in which it fails to comply with the information or evidence supplied by the Consent Holder in support of its application.

(iii) The Consent Holder may, at any time, submit variations to the approved construction management plan or the approved additional information required under this condition to the Northland Regional Council, together with comments from the Community Liaison Group and the Consent Holder's response to those comments. Any variation shall be subject to the Northland Regional Council's powers of approval under this condition and the same time limits shall apply save that, where the variation is minor, the Northland Regional Council shall notify its approval or otherwise of the proposed variation within five working days.

13. The Consent Holder shall, immediately upon completion of the marine works associated with the consent, notify in writing [and shall include a scale plan of the completed works]:

The Hydrographer
RNZ Navy
P O Box 33-341
TAKAPUNA

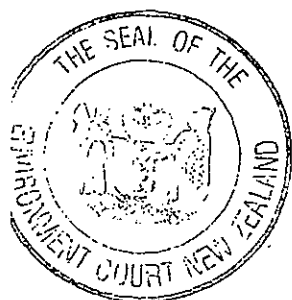


Maritime Safety Authority
P O Box 27 006
WELLINGTON

14. The Consent Holder shall not exceed the recommended upper noise limits described in *NZS6803P:1984 The Measurement and Assessment of Noise from Construction, Maintenance, and Demolition Work*. Such noise shall be measured and reported in accordance with this Standard. Where this Standard refers to noise limits in *NZS6802:1991 Assessment of Environmental Sound*, then these noise limits shall apply.
15. The Consent Holder shall submit to the Northland Regional Council and Whangarei District Council for their approval, at least twenty [20] working days prior to exercising this Consent, an Acoustic Design Report, prepared by a suitably qualified and experienced person. This report shall, among other things, detail:
 - (i) the reasonable potential for cumulative noise emissions from the site;
 - (ii) the means by which noise emissions from the site will be minimised and maintained below the noise performance standards specified in this consent;
 - (iii) any variation in sound propagation arising from the topography and characteristics of the area, taking into account meteorological conditions that would increase noise levels at the locations under consideration.
 - (iv) any comments of the Community Liaison Group and the responses to these.
16. At least twenty [20] working days prior to commencement of construction, and following appropriate consultation with the Community Liaison Group, the Consent Holder shall submit to the Northland Regional Council and Whangarei District Council for their approval a Noise Information Monitoring Programme. This Programme shall include the proposed times, duration and location of the measurements, and procedures for logging and responding to noise complaints.
17. The Consent Holder shall maintain public access to and ensure operation is able to continue for the water taxi operation during construction.
18. The Consent Holder shall erect adequate signage during the construction period in the vicinity of the site advising the public of construction activity and noting any special precautions that should be taken.

ADVICE NOTE:

Nothing in this consent authorises the discharge of ballast water or any other contaminants from ships into the coastal marine area.



Decision #5 - Northland Regional Council : Recommendation to the Minister of Conservation: Coastal Permit No. 11

Date of commencement of consent: As provided in section 119(7) of the RMA 1991 (the Act)

Date of expiration of consent: Thirty five (35) years

Date of lapsing of consent (if not given effect to): 15 years from the date of commencement

Purpose of Consent: Disturbance of the seabed by maintenance dredging of the turning basin within the design depth of 13m below Chart Datum extending approximately 300m westward of the reclamation and approximately 420m out from the berth face.

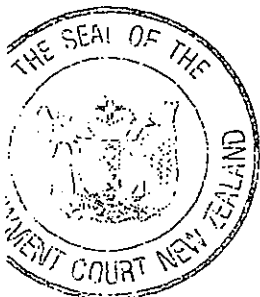
Legal Description of Land: The relevant parts of the land described in Schedule A (below), otherwise as more specifically described in this permit and in the plans and other information submitted by the applicant.

Schedule A:

A.	Crown land comprising foreshore and seabed
----	--

STANDARD CONDITIONS OF CONSENT:

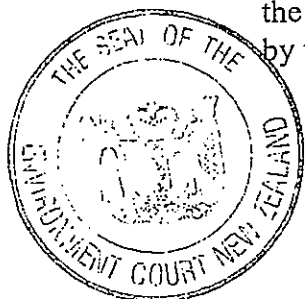
1. The Consent Holder shall undertake all authorised activities in general accordance with the descriptions and plans submitted with the application or as modified in evidence, and shall carry out all works in accordance with the approved Construction/Management Plan.
2. The Consent Holder shall submit to the Northland Regional Council full copies of all final design drawings at least twenty (20) working days prior to commencement of works associated with this consent.
3. The Consent Holder shall notify the Northland Regional Council at least ten (10) working days in advance of the date of commencement of works associated with this consent.
4. The Consent Holder shall pay all Crown charges set by the Northland Regional Council under Section 36 of the Resource Management Act 1991, including charges relating to any transfer of the consent, and to any changes to consent conditions.
5. The Northland Regional Council may serve notice on the Consent Holder of its intention to review the conditions of this consent pursuant to section 128 of the RMA, for the purposes specified therein, or to address significant adverse effects that were not anticipated at the date of determination of this consent, at six (6) monthly intervals starting from the notified date of the commencement of the works associated with this consent.



SPECIAL CONDITIONS OF CONSENT

6. Where from any cause, a contaminant (including fuel or sewage) associated with the Consent Holder's operations escapes otherwise than in conformity with this consent, the Consent Holder shall:
- (i) Immediately take such action or execute such work as may be necessary to stop and/or contain such escape; and
 - (ii) Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the escape; and
 - (iii) Report the escape to the Northland Regional Council within one week of its occurrence and the steps taken or being taken to clean up, remedy any adverse effects and prevent any recurrence of such escape.
7. At least twenty [20] working days prior to the commencement of maintenance dredging the consent holder shall submit a management plan that shall provide the following information:
- (i) A description of proposed works; and
 - (ii) A programme including a timetable, sequence of events and expected duration of the proposed works; and
 - (iii) Plans and specifications providing sufficient detail to show compliance with the resource consent, including monitoring and reporting procedures; and
 - (iv) Community liaison arrangements; and
 - (v) The Community Liaison Group's comments on the management plan and the consent holder's response to these comments.

The Northland Regional Council shall within twenty [20] working days of receipt of the plan notify the Consent Holder of its approval of the plan, or failing approval, of the respects in which the plan fails to comply with information or evidence supplied by the Consent Holder in support of its application.

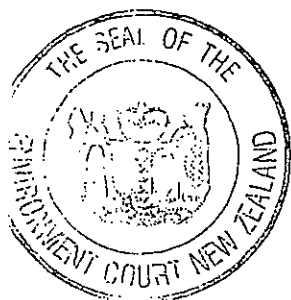


The Consent Holder may, at any time, submit variations to the approved management plan, together with any comments of the Community Liaison Group, and the Consent Holder's response to those comments. Any variation shall be subject to the Northland Regional Council's powers of approval under this condition, and the same time limits shall apply, save that where the variation is minor, the Northland Regional Council shall notify its approval or otherwise of the proposed variation within five working days.

8. The Consent Holder shall keep the Coastal Marine Area free of litter and other debris arising from the exercise of this consent.
9. All works in connection with the maintenance of the dredge basin (including marine activities such as any vessel movements, loading and unloading) shall be undertaken in a manner that minimises adverse effects on:
 - (i) New Zealand Refining Company's Marsden Point jetties; and
 - (ii) the safe and efficient use of Whangarei Harbour in the vicinity of Marsden Point.

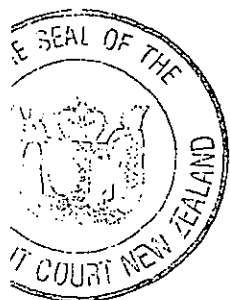
and to this end maintenance dredging shall when reasonably practicable be undertaken during winter months.

10. The Council reserves the right to modify the timing of monitoring associated with the exercise of all coastal permits for the Marsden Point deep water port so that any effects of the maintenance dredging can be measured and assessed.
11. All maintenance dredging, including any operations consequent upon the excavation and transportation of dredged material, shall be carried out in a manner that minimises the suspension of sediment into the water column so that the following standards are met immediately outside of an 800 metre radius of the point of dredging:
 - (i) The visual clarity (as measured using a black disk or Secchi disk) of harbour water shall not be reduced by more than 20% of the median background visual clarity at the time of measurement.
 - (ii) The hue shall not be changed by more than 10 Munsell units of the median background hue at the time of measurement.



- (iii) Where Z_{eu} is the euphotic depth, defined as the depth at which photosynthetically available radiation [PAR] is reduced to 1% of the level of surface water, the light penetration in the harbour water deeper than $0.5 Z_{eu}$ shall not be changed by more than 10% of the median background euphotic depth at the time of measurement. The light penetration in harbour water shallower than $0.5 Z_{eu}$ shall not be reduced by more than 20% of the median background euphotic depth at the sediment bed, at the time of measurement.
- (iv) There shall be no conspicuous scums or foams, floatable or suspended material in the harbour waters.

- 12. During periods of maintenance dredging, monitoring of the harbour waters for compliance with Condition 11 shall be carried out at not greater than fortnightly intervals. For periods of dredging less than one week, monitoring shall be done on not less than one occasion. These frequencies may be varied from time to time with the written approval of the Northland Regional Council.
- 13. The results of each monitoring event shall be reported to the Northland Regional Council within one week of monitoring being completed, or within 24 hours of any non-compliance. The Council reserves the right to require additional monitoring in the event of non-compliance with Condition 11.
- 14. When any maintenance dredging is carried out, the Consent Holder shall record the periods of dredging, method of dredging and the quantities of material dredged (in cubic metres), and shall submit these records together with post-dredging sounding plans to the Northland Regional Council within ten working days after maintenance dredging work is completed.



Decision #17 - Whangarei District Council : Land Use Consent No. 3

Date of commencement of consent: As provided in section 116 of the RMA 1991 (the Act)

Date of expiration of consent: Unlimited

Date of lapsing of consent (if not given effect to): Seven (7) years from date of commencement

Purpose of Consent: The use of land for port and port related activities as shown on Development Plan Ref.96055-1 Revision E dated 9 April 1997, and as described in the accompanying Assessment of Effects on the Environment [AEE] and associated plans and drawings and as set out in paragraph 5 of the Consent Holder's amended application for resource consents dated 14 August 1996 including wharves, terminals, associated loading and unloading structures, cargo sheds, port storage and transport operating areas, port related buildings (including storage sheds, stevedoring facilities, berth operations shed, gatehouse) and all ancillary activities.

Legal Description of Land: The land described in paragraph 3 of the Consent Holder's amended application for resource consents dated 14 August 1996, a copy of which is attached, including those parts of all roads to be stopped which adjoin the Consent Holder's property, and as shown on the Development Plan 96055-1 Revision E dated 9 April 1997.

STANDARD CONDITIONS OF CONSENT:

1. The Consent Holder shall undertake all authorised activities in general accordance with the descriptions and plans submitted with the application or as modified in evidence, and shall carry out all works in accordance with any approved Construction/Management Plan.
2. The Consent Holder shall submit to the Whangarei District Council full copies of all final design drawings at least twenty [20] working days prior to commencement of works associated with this consent.
3. The Consent Holder shall notify the Whangarei District Council at least ten (10) working days in advance of the date of the commencement of activities associated with this consent.
4. The Consent Holder shall pay all administration charges associated with this consent prior to work commencing.
5. The Whangarei District Council may serve notice on the Consent Holder of its intention to review the conditions of this consent pursuant to section 128 of the RMA, for the purposes specified therein or to address significant unanticipated adverse effects, at twelve (12) monthly intervals starting from the notified date of the commencement of works associated with this consent.

SPECIAL CONDITIONS OF CONSENT:

The Consent Holder shall pay a reserves contribution of \$NZ375,000 to the Whangarei District Council [or such sum as may otherwise be determined as representing 0.5% of the assessed value of the development], within twelve [12] months of using land for the



purpose of this consent.

7. Until such time as the new District Plan is operative and formal zoning provisions are made, and except where otherwise indicated in conditions granted with respect to this consent, the rules relating to :

- (i) bulk and location requirements
- (ii) maximum height of buildings
- (iii) location of buildings (yards)
- (iv) minimum distance from the sea

and the performance standards relating to:

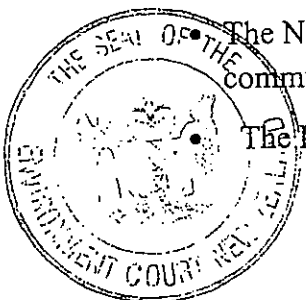
- (i) landscaping and appearance
- (ii) air pollution
- (iii) glare
- (iv) noise
- (v) vibration
- (vi) dust
- (vi) soil and water protection
- (vii) use of hazardous substances

as contained under the Marsden Point Special Industrial Zone provisions of the operative district plan shall apply.

8. For the purposes of this consent, permitted activities on the reclamation shall only be those activities for which application has been made and consent granted and which are shown on the Development Plan Ref.96055-1 Revision E dated 9 April 1997, the associated drawings, and evidence provided.
9. In consultation with the Whangarei District Council, the Consent Holder shall make provision for bus shelters along Marsden Point Road north of the McCathie Road intersection, and at McLeod's Bay.
10. (i) The Consent Holder shall establish, convene and provide reasonable administrative support for a Community Liaison Group [CLG]. The CLG shall be convened at least three months prior to the commencement of port construction work. At least the following parties shall be invited each to nominate one representative to the Group:
- Patuharakeke
 - Resident or Ratepayers Groups and Citizens Associations representing the communities at:
 - Ruakaka
 - Reotahi
 - Rangiora (sea side of Takahiwai hills including One Tree Point)
 - Whangarei Heads
 - Bream Bay College

The Northland Regional Council and the Whangarei District Council representing their communities of interest

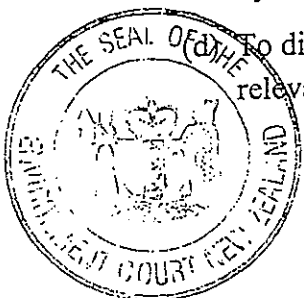
The Department of Conservation



- Any other directly affected party that the CLG identifies and recommends for inclusion with the agreement of the Consent Holder.

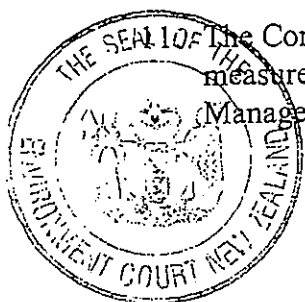
As the project moves through its various stages there will be the potential to affect different parties and accordingly it is expected that membership of the Community Liaison Group may change.

- ii. The Consent Holder shall confirm in writing with the Northland Regional Council and Whangarei District Council that the Community Liaison Group has been established.
 - iii. The Community Liaison Group shall be chaired by an independent person appointed by the Consent Holder from a list of agreed candidates confirmed by the CLG at its inaugural meeting. The Chairman's role shall be to facilitate communication between the Consent Holder and the Community Liaison Group. The appointment shall be reviewed annually by the appointing parties or earlier if any party has reason to require such review.
 - iv. The Consent Holder shall appoint two senior officers, either one of whom will represent the Consent Holder at all meetings of the Community Liaison Group.
 - v. The Consent Holder shall ensure that where the Chair considers it necessary, appropriate technical experts attend meetings.
 - vi. The Consent Holder shall provide the venue and administrative support [including secretarial services] for all meetings of the Community Liaison Group. Meetings are to be held at a time and place convenient for the majority of the group members.
 - vii. The Consent Holder shall arrange regular site inspections for the Community Liaison Group to ensure they are kept informed of all aspects of the project.
 - viii. The purpose of the Community Liaison Group is to provide a forum to address relevant community concerns and needs arising from the exercising of resource consents for the development and operation of a port at Marsden Point. The role shall include the following:
 - (a) To receive reports from the Consent Holder on progress on the port development;
 - (b) To facilitate ongoing communication and consultation with the local community [including directly affected parties] and the diligent resolution of any observations, concerns or complaints that members of that community may have about the construction or operation of the port at Marsden Point, its effects on the environment, the exercise of its resource consents, and ways of alleviating those concerns and dealing with complaints;
 - (c) Through the Chair, to alert and provide information to the Northland Regional Council and Whangarei District Council about any matters remaining unresolved between the Consent Holder and the Community Liaison Group which may need to be addressed by those Councils;
- To discuss management plans [including draft management plans] to ensure that relevant community concerns and needs are taken into account in their preparation;



- (e) To receive the results of monitoring undertaken by the Consent Holder in relation to the port development and operation, to be advised of its implications, and to make this information available to the above-mentioned communities;
 - (f) To recommend suitable studies or projects designed to find ways of improving water quality, environmental ecological, and cultural health of the Whangarei Harbour [including its shores] to the Northland Regional Council [and where appropriate other consent authorities] for action; and
 - (g) To receive copies of any reports on environmental incidents requested by the consent authorities, where these are related to resource consents held by NPC for the Marsden Point Port.
- ix. The Consent Holder shall take all reasonable steps to investigate, in a prompt manner, any complaint [including any incident] forwarded to the Consent Holder by a member of the Community Liaison Group and to advise the complainant and the CLG member of any action taken. A register is to be kept of all complaints received and actions taken and is to be available to the Community Liaison Group at its regular meetings. This role does not replace any statutory obligation of the Consent Holder and consent authorities.
- x. Through the Chair, the Consent Holder shall use its best endeavours to ensure that regular meetings of the Community Liaison Group are held at intervals not exceeding three months for a period of at least five years after the commencement of port construction unless the Group dissolves itself by unanimous decision. The Chair may, if it is considered appropriate, call a special meeting of the Community Liaison Group.
- xi. Through the Chair, the Consent Holder shall send the meeting agenda and relevant papers [including Management Plans] to group members not less than 5 working days before any meeting of the CLG for the purpose of enabling group members to obtain input from others prior to the meeting. It would be expected that minor matters involving amendments to plans, recent monitoring results, or updated progress reports could be tabled at the meeting.
- xii. Through the Chair, the Consent Holder shall, as far as practicable, ensure that Minutes of all Community Liaison Group meetings are forwarded to members of the group as well as to the Northland Regional Council and Whangarei District Council within two weeks of any meeting being held.
- xiii. The Community Liaison Group may regulate its own procedures and, if considered appropriate for the better functioning of the Group, may prepare a Protocol Manual detailing such procedural and administrative matters as are deemed necessary.
- 10A The Consent Holder will meet quarterly with representatives of Patuharakeke Hapu to review the progress and operation of the project and to review monitoring results.

The Consent Holder shall ensure that the spill of light onto any residentially zoned land or measured at any rural dwelling shall not exceed 10 lux and shall submit a Lighting Management Plan to the Whangarei District Council for approval at least twenty [20]



working days prior to any night-time work commencing. The Lighting Management Plan shall detail the positions and technical specifications of all exterior light sources and indicate the means by which this standard is to be achieved. The Lighting Management Plan shall include comments of the Community Liaison Group on the plan and the Consent Holder's response to these.

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

All Days:

0700am - 1000pm 55dBA L10

10.00pm - 0700 am 45dBA L10

10.00pm - 0700am 65 dBA Lmax

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

13. The Consent Holder shall not exceed the recommended upper noise limits described in *NZS6803P:1984 The Measurement and Assessment of Noise from Construction, Maintenance, and Demolition Work*. Such noise shall be measured and reported in accordance with this Standard. Where this Standard refers to noise limits in *NZS6802:1991 Assessment of Environmental Sound*, then these noise limits shall apply.

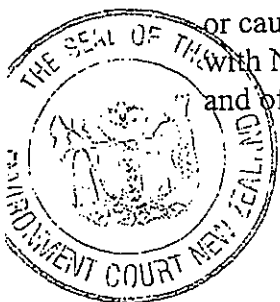
14. The Consent Holder shall submit to the Whangarei District Council and Northland Regional Council for their approval, at least twenty [20] working days prior to exercising this Consent, an Acoustic Design Report, prepared by a suitably qualified and experienced person. This report shall, among other things, detail:

- (i) the reasonable potential for cumulative noise emissions from the site;
- (ii) the means by which noise emissions from the site will be minimised and maintained below the noise performance standards specified in this consent;
- (iii) any variation in sound propagation arising from the topography and characteristics of the area, taking into account meteorological conditions that would increase noise levels at the locations under consideration;

(iv) any comments of the Community Liaison Group and the responses to these.

15. At least twenty [20] working days prior to the commencement of earthworks, and following appropriate consultation with the Community Liaison Group, the Consent Holder shall submit to the Whangarei District Council for its approval a Monitoring Programme for noise. This Programme shall include the proposed times, duration and location of the measurements, and the mechanism and procedure for complaints.

16. The Consent Holder shall provide to Council after the construction and within three [3] months of the commencement of the operation of the port, a Compliance Certificate, prepared by a suitably qualified and experienced person. This Certificate shall advise whether activities on the site(s) exceed noise performance standards at locations determined by the Monitoring Programme. The Consent Holder shall then further monitor or cause to have monitored the long term average sound emission levels in accordance with NZS6801:1991 Measurement of Sound and shall provide reports of this monitoring and of compliance on a three [3] monthly basis until Condition 17 to this consent applies.



17. If the operation of the port is found to have consistently complied with the required noise performance standards at the end of the first year of operation, then the monitoring shall be reported annually thenceforth on the anniversary of the commencement of operations.
18. All costs associated with noise monitoring shall be paid for by the Consent Holder.
19. The Consent Holder shall provide, construct and maintain public access from One Tree Point Road to the western edge of the reclamation, including vehicular access to a carpark, and walking access. The design and construction is to be approved by the Whangarei District Council. The car park shall be formed at a suitable point within 400 metres of One Tree Point Road, and the road and the walking access shall be constructed to a standard that conforms with the requirements of the Council's draft Environmental Engineering Standards 1998 ie Class F Service Lane for the road and Clause 5.3 Pedestrian Access and Cycle Tracks for the walking access.

A 10m wide right-of-way easement shall be granted to the Whangarei District Council over the vehicular access and walkway and an easement shall be granted over the carpark.

The Consent Holder shall provide construct and maintain an access strip of not less than 6 metres width for public recreational and access purposes along the western rock wall (edge of the reclamation) to a point 70m from the northern wharf face.

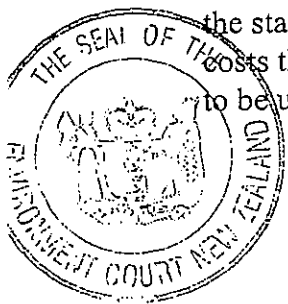
20. The Consent Holder shall provide, construct and maintain an access strip of not less than 10m width for public vehicular access to the eastern side of the reclamation. This access strip shall be constructed to a standard that conforms with the Council's Class F Service Lane, Urban Roads requirement as specified in its draft Environment Engineering Standards 1998.

The Consent Holder shall provide, construct and maintain a restricted access strip of not less than 6m useable width along the eastern side of the reclamation to the water taxi landing with provision for restricting access in accordance with s.237B of the RMA. This access strip shall be constructed to a standard that conforms with the Council's Category B (Urban Private Way Cross Sections) access requirement as specified in its draft Environmental Engineering Standards 1998.

21. Subject to gaining any additional necessary resource consents, and following consultation with the Whangarei District Council, the Consent Holder shall pay the Council a sum not to exceed \$30,000 for upgrading the McLeod's Bay public wharf.
22. Following consultation with the Community Liaison Group, the Consent Holder shall submit to the Whangarei District Council for approval, at least twenty [20] working days prior to the commencement of any site works, a Comprehensive Landscape Plan generally in accordance with the landscape proposal submitted by the Consent Holder in support of its application for resource consents, for the whole area, including:
 - (i) Public access to the harbour edge
 - (ii) Recreational area on waterfront
 - (ii) Buffer strip to Blacksmiths Creek
 - (iii) Stormwater and silt detention systems
 - (iv) Shelter planting to road corridor



- (v) A planted amenity strip of 5m width (in order to achieve a continuous, dense vegetative screening effect) along the eastern side of the transport corridor (adjoining the western side of Marsden Point Road) from where it will meet the Consent Holder's land, south to the intersection of Marsden Point and One Tree Point Roads. Such landscape plantings are to be implemented either concurrently with the development of the transport corridor, or prior to the development of the industrial zoned land adjoining the western side of the proposed transport corridor, whichever is the sooner.
 - (vi) A concept plan for the provision of an amenity planting strip along the northern side of One Tree Point Road between the intersection of that road with Marsden Point Road and Blacksmiths Creek. The concept plan shall outline the anticipated timeframes for planting, and species proposed, in order to achieve effective vegetative screening of the adjoining industrial zoned land while minimising the potential for conflict to arise with property access points, power lines, buildings and other services.
 - (vii) Specimen trees along parts of the foreshore edge
23. The Consent Holder shall, as part of the Comprehensive Landscape Plan, provide for the planting of Pohutukawa trees *Metrosideros excelsa*, with a minimum specification of PB200/3m size on installation, on the eastern and western edges of the reclamation a minimum one per 50m perimeter length of the reclamation. All trees are to be installed and maintained in accordance with good horticultural practice and replaced, if damaged, with another of similar size to that destroyed.
 24. The Consent Holder shall implement the approved Comprehensive Landscape Plan at least twelve [12] months prior to the commencement of operation of the facility.
 25. The Consent Holder shall provide the Whangarei District Council with details of building form and colour prior to any application for building consent being lodged. The visual impact of buildings is to be minimised by the appropriate use of colour, building form, roof lines, and structure compatible with its setting.
 26. The Consent Holder shall supply the Whangarei District Council with a copy of the Dust Management Plan prepared for the Northland Regional Council, and copies of all air quality monitoring reports forwarded to the Northland Regional Council.
 27. The Consent Holder shall not undertake any discharges of dust to air which have objectionable or offensive effects beyond the boundary of the Consent Holder's premises.
 28. Prior to any port construction traffic using the approach roads from State Highway 1 to the Port, the Consent Holder shall, in consultation with the Whangarei District Council, commission an independent assessment of the state of the relevant roads. Thenceforth the Consent Holder shall contribute to the maintenance of Whangarei District Council roads, used by construction traffic which were the subject of the independent assessment, during the port construction period. The amount of the contribution shall be determined by assessing the difference between the normal expected maintenance costs prior to the commencement of construction works and the actual maintenance costs over the construction period, and allocating to the project that proportion of the difference reasonably attributable to wear and tear caused by its construction traffic having regard to the state of the roads as determined by the independent assessment. In assessing such costs the fact that the roads and intersections specified in Condition 29 of this consent are to be upgraded following construction of the Port shall be taken into account.

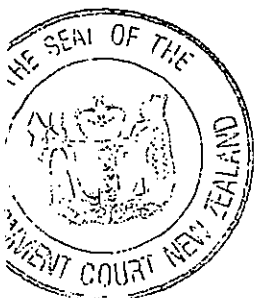


29. The Consent Holder shall pay a contribution of \$1,5m plus gst to the Whangarei District Council towards the costs of upgrading the Ruakaka Bypass route from State Highway 1 to the proposed port, including relevant parts of One Tree Point Road, McCathie Road, Marsden Point Road, and intersections. Payments shall be made progressively as the upgrading work is undertaken
30. The Consent Holder shall ensure that heavy vehicle access shall only be permitted through that part of the heavy vehicle transport corridor on the northern side of One Tree Point Road until agreement is reached and implemented with the Whangarei District Council on a suitable design for the intersection of One Tree Point Road and the heavy vehicle transport corridor.
31. The Consent Holder shall, at least twenty [20] working days prior to commencing construction work on the Marsden Point deepwater port submit to the Whangarei District Council an overall project management plan which shall provide the following information:
 - description of main elements of the project
 - a construction programme including a timetable, sequence of events and expected duration of the proposed works
 - a breakdown of the project into work packages for later submission by way of construction management plans and further information
 - community liaison arrangements
 - contingency response plan.

Subject to submitting a copy of any change to the Whangarei District Council, the overall project management plan may be updated or varied by the Consent Holder from time to time.

ADVICE NOTE:

1. The Whangarei District Council will consider the merits of implementing a Bylaw under the Local Government Act to restrict the use of Marsden Point Road south of McEwen Road by port destination heavy vehicles.
2. Until such time as the determination of the application to Stop Papich Road and a portion of Marsden Point Road is made, and disposal, if appropriate, agreed, the Consent Holder must gain the agreement of the Whangarei District Council, as landowner, prior to any work commencing that affects those existing roads [including any road reserve].



- (c) Northland Port Corporation (NZ) Limited as lessee of part of the coastal marine area.
- (d) Whangarei District Council (Private Bag, Whangarei) in respect of Papich Road and that part of Marsden Point Road adjoining the applicant's land at Marsden Point.
- (e) Electricity Farm Land Holdings No 1 Limited in respect of Section 39 Block VII Ruakaka Survey District and Section 1 Survey Office Plan 44270.
- (f) Wartelboer Motors Limited in respect of Lot 1 DP 57552.

Occupier

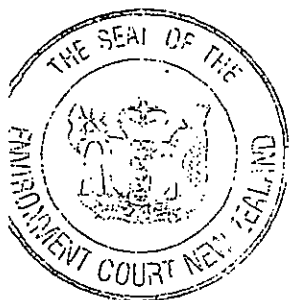
- (a) Northland Port Corporation (NZ) Limited.
- (b) Mission to Seamen in respect of Mission to Seamen facility.
- (c) Electricity Farm Land Holdings No 1 Limited in respect of Section 39 Block VII Ruakaka Survey District and Section 1 Survey Office Plan 44270.
- (d) Wartelboer Motors Limited in respect of Lot 1 DP 57552.

3. Location

The location to which this application relates is:

- (a) On Land

Property at Marsden Point and One Tree Point Roads, the legal descriptions of which are given below, including those areas shown as designations 380 and 381 in the Whangarei District Council Transitional District Plan - Whangarei County Section, Map 28 and including Papich Road and Marsden Point Road so far as it adjoins the applicant's property. The land area is shown on the plan



attached to this application being a plan prepared by Simpson Shaw & Co reference no 96055-1 ("the development plan") and on the plans in the Assessment of Effects on the Environment accompanying this application.

(b) In the Coastal Marine Area

Marsden Point below Mean High Water Springs adjacent to Papich Road and extending eastwards up to and slightly beyond the existing Northland Port Corporation jetty. The area is shown on the development plan and on the plans in the Assessment of Effects on the Environment accompanying this application.

Legal Description

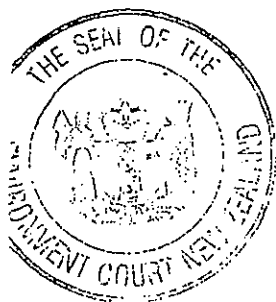
The legal descriptions of the areas subject of these applications are as follows:

Coastal Marine Area

Except for approximately 80m² in the vicinity of the proposed barge terminal, the area is covered by a deemed coastal permit derived from Designation 493 in the Whangarei District Council Transitional District Plan Whangarei County Section 1987, Map 28 and Map 1, sheet 14

Land

	<u>Title</u>	<u>Description</u>	<u>Area(ha)</u>
1	31B/968	Pt lot 5 DP 51845	55.707
2	7C/228	Lot 1, 2, Pt 4 DP 51845	5.3620
3	1825/15	Lot 1 DP 47603	0.0824
4	1825/16	Lot 2 DP 47603	0.0812
5	5D/1475	Lot 3 & 4 DP 47603 & Allot 291 Ruakaka Parish	0.2881
6	2042/48	Lot 5 DP 47603	0.0812
7	1851/11	Lot 6 DP 47603	0.0812

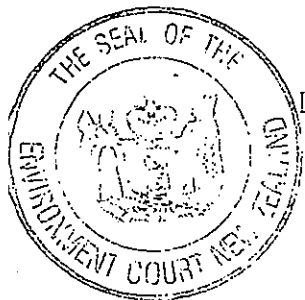


8	1B/857	Lot 6 DP 43643 & Lot 7 DP 47603	0.1621
9	64D/523	Lot 8 DP 47603	0.0812
10	1837/43	Lot 9 DP 47603	0.0812
11	1871/19	Lot 11 DP 47603	0.0812
12	1920/99	Lot 12 DP 47603	0.0812
13	2032/82	Lot 13 DP 47603	0.0812
14	3B/388	Lot 6 DP 51845	0.0920
15	1837/44	Lot 16 DP 47603	0.0812
16	1931/89	Lots 2, 3, 4, 5 DP 43643	0.3238
17	31C/50	Lot 3 DP 51845	0.4755
18	3B/10	Lot 1 DP 52380	4.0478
19	5C/446	Lot 1 DP 53892	8.0937
20	10B/670	Sec 1 Blk VIII Ruakaka SD	5.7136
21	1620/23	Lot 1 DP 43643	0.0809
22	1825/18	Lot 10 DP 47603	0.0812
23	1825/17	Lot 15 DP 47603	0.0812
24	16A/57	Sect 63 Blk VII Ruakaka SD	59.9794
25	95C/994	Lot 1 DP 168926	41.7886
26	22D/1444	Lot 1 DP 65603	0.4046
27	7B/1104	Lot 1 DP 54490	0.8096
28	13B/922	Lot 1 DP 57552	0.3726
29	88C/755	Section 39 Block VII Ruakaka SD Sect 1 SO Plan 44270	<u>37.0379</u>
<u>Total area of land titles</u>			<u>221.7148 ha</u>

the roads to be stopped as shown on the application plan have no present legal description.

4. Types of Resource Consents Sought

Land Use Consents



Decision #3 - Recommendation to the Minister of Conservation : Coastal Permit No. 3

Date of commencement of consent: As provided in section 119(7) of the RMA 1991 (the Act)

Date of expiration of consent: Unlimited

Date of lapsing of consent (if not given effect to): Seven (7) years from date of commencement

Purpose of Consent: To reclaim approximately 32ha of foreshore and seabed, as shown on Development Plan Ref.96055-1 Revision E dated 9 April 1997, including the deposition of dredged material, disturbance of the foreshore and seabed, and building of retaining walls [including any diversion of seawater as a consequence of building the retaining walls and the reclamation].

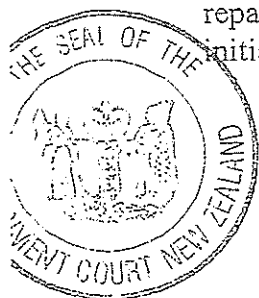
Legal Description of Land: The relevant parts of the land described in Schedule A (below), otherwise as more specifically described in this permit and in the plans and other information submitted by the applicant.

Schedule A:

A.	Crown land comprising foreshore and seabed
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STANDARD CONDITIONS OF CONSENT:

1. The Consent Holder shall undertake all authorised activities in general accordance with the descriptions and plans submitted with the application or as modified in evidence, and shall carry out all works in accordance with the approved Construction/Management Plan
2. The Consent Holder shall submit to the Northland Regional Council full copies of all final design drawings at least twenty (20) working days prior to work commencing.
3. The Consent Holder shall notify the Northland Regional Council at least ten (10) working days in advance of the date of the commencement of works associated with this consent.
4. The Consent Holder shall notify the Northland Regional Council within ten (10) working days following the date of the completion of all works and activities associated with this consent.
5. The Consent Holder shall pay all Crown charges set by the Northland Regional Council under Section 36 of the Resource Management Act 1991, including charges relating to any transfer of the consent, and to any changes to consent conditions.
6. The Northland Regional Council may serve notice on the Consent Holder of its intention to review the conditions of this consent pursuant to section 128 of the RMA, for the purposes specified therein or to address significant unanticipated adverse effects, at six (6) monthly intervals starting from the notified date of the commencement of works associated with this consent.
7. The Consent Holder shall maintain all structures covered by this consent in good order and repair. Maintenance works authorised by this Consent shall be routine maintenance and repair to the exterior walls of the reclamation consistent with the scale and form of the initial approved reclamation.



SPECIAL CONDITIONS OF CONSENT:

8. Prior to the commencement of any works associated with this Consent and the associated consent for capital dredging, the Consent Holder shall enter into a bond with the Northland Regional Council in the amount of \$NZ5 million in respect of the performance of all works and associated mitigation measures required to be carried out by conditions attached to this Consent and the associated consent for capital dredging. Such a bond shall be prepared to the satisfaction of the Northland Regional Council's Solicitor. All costs associated with the preparation and registration of the bond shall be met by the Consent Holder. The purpose of this bond shall include the following:

- (a) To provide a mechanism to have finance immediately available to mitigate or control the environmental consequences of the inability of the Consent Holder to complete the project.
- (b) To provide a mechanism immediately available to the Northland Regional Council to enable:
 - (i) restoration of the site to an appropriate form should the project works not be completed; and /or
 - (ii) completion of the project works to an environmentally acceptable state, including in particular any landscaping required by the Whangarei District Council.
- (c) To provide for the likely costs involved in the planning, management administration and monitoring of the measures described in (a) and (b) above.

The bond shall continue in place for twelve [12] months following the date of completion of the reclamation, the associated capital dredging, or the associated mitigation measures [whichever is the later].

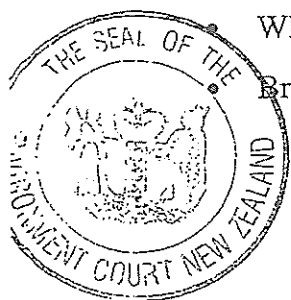
The Northland Regional Council shall review the bond sum annually after the commencement of works secured by the bond and, on each review, the bond sum shall be reduced to the value of work outstanding.

9(i). The Consent Holder shall establish, convene and provide reasonable administrative support for a Community Liaison Group [CLG]. The CLG shall be convened at least three months prior to the commencement of port construction work. At least the following parties shall be invited each to nominate one representative to the Group:

- Patuharakeke
- Resident or Ratepayers Groups and Citizens Associations representing the communities at:
 - Ruakaka
 - Reotahi
 - Rangiora (sea side of Takahiwai hills including One Tree Point)

Whangarei Heads

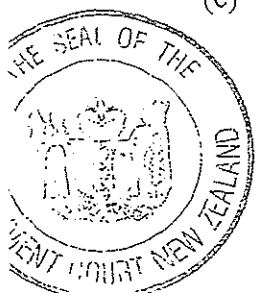
Bream Bay College



- The Northland Regional Council and the Whangarei District Council representing their communities of interest
- The Department of Conservation
- Any other directly affected party that the CLG identifies and recommends for inclusion with the agreement of the Consent Holder.

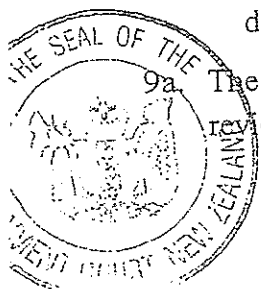
As the project moves through its various stages there will be the potential to affect different parties and accordingly it is expected that membership of the Community Liaison Group may change.

- ii. The Consent Holder shall confirm in writing with the Northland Regional Council and Whangarei District Council that the Community Liaison Group has been established.
- iii. The Community Liaison Group shall be chaired by an independent person appointed by the Consent Holder from a list of agreed candidates confirmed by the CLG at its inaugural meeting. The Chairman's role shall be to facilitate communication between the Consent Holder and the Community Liaison Group. The appointment shall be reviewed annually by the appointing parties or earlier if any party has reason to require such review.
- iv. The Consent Holder shall appoint two senior officers, either one of whom will represent the Consent Holder at all meetings of the Community Liaison Group.
- v. The Consent Holder shall ensure that where the Chair considers it necessary, appropriate technical experts attend meetings.
- vi. The Consent Holder shall provide the venue and administrative support [including secretarial services] for all meetings of the Community Liaison Group. Meetings are to be held at a time and place convenient for the majority of the group members.
- vii. The Consent Holder shall arrange regular site inspections for the Community Liaison Group to ensure they are kept informed of all aspects of the project.
- viii. The purpose of the Community Liaison Group is to provide a forum to address relevant community concerns and needs arising from the exercising of resource consents for the development and operation of a port at Marsden Point. The role shall include the following:
 - (a) To receive reports from the Consent Holder on progress on the port development;
 - (b) To facilitate ongoing communication and consultation with the local community [including directly affected parties] and the diligent resolution of any observations, concerns or complaints that members of that community may have about the construction or operation of the port at Marsden Point, its effects on the environment, the exercise of its resource consents, and ways of alleviating those concerns and dealing with complaints;
 - (c) Through the Chair, to alert and provide information to the Northland Regional Council and Whangarei District Council about any matters remaining unresolved between the



Consent Holder and the Community Liaison Group which may need to be addressed by those Councils;

- (d) To discuss management plans [including draft management plans] to ensure that relevant community concerns and needs are taken into account in their preparation;
 - (e) To receive the results of monitoring undertaken by the Consent Holder in relation to the port development and operation, to be advised of its implications, and to make this information available to the above-mentioned communities;
 - (f) To recommend suitable studies or projects designed to find ways of improving water quality, environmental ecological, and cultural health of the Whangarei Harbour [including its shores] to the Northland Regional Council [and where appropriate other consent authorities] for action; and
 - (g) To receive copies of any reports on environmental incidents requested by the consent authorities, where these are related to resource consents held by NPC for the Marsden Point Port.
- ix. The Consent Holder shall take all reasonable steps to investigate, in a prompt manner, any complaint [including any incident] forwarded to the Consent Holder by a member of the Community Liaison Group and to advise the complainant and the CLG member of any action taken. A register is to be kept of all complaints received and actions taken and is to be available to the Community Liaison Group at its regular meetings. This role does not replace any statutory obligation of the Consent Holder and consent authorities.
- x. Through the Chair, the Consent Holder shall use its best endeavours to ensure that regular meetings of the Community Liaison Group are held at intervals not exceeding three months for a period of at least five years after the commencement of port construction unless the Group dissolves itself by unanimous decision. The Chair may, if it is considered appropriate, call a special meeting of the Community Liaison Group.
- xi. Through the Chair, the Consent Holder shall send the meeting agenda and relevant papers [including Management Plans] to group members not less than 5 working days before any meeting of the CLG for the purpose of enabling group members to obtain input from others prior to the meeting. It would be expected that minor matters involving amendments to plans, recent monitoring results, or updated progress reports could be tabled at the meeting.
- xii. Through the Chair, the Consent Holder shall, as far as practicable, ensure that Minutes of all Community Liaison Group meetings are forwarded to members of the group as well as to the Northland Regional Council and Whangarei District Council within two weeks of any meeting being held.
- xiii. The Community Liaison Group may regulate its own procedures and, if considered appropriate for the better functioning of the Group, may prepare a Protocol Manual detailing such procedural and administrative matters as are deemed necessary.
- 9a The Consent Holder will meet quarterly with representatives of Patuharakeke Hapu to review the progress and operation of the project and to review monitoring results.

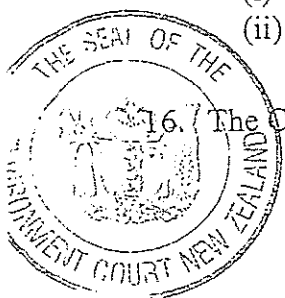


10. The Consent Holder shall pay to the Northland Regional Council up to \$25,000 per annum toward scientific studies for the purpose of monitoring the effects of the development on the water quality and ecology of the Whangarei Harbour, as detailed in conditions to Coastal Permit No.2

The first such contribution shall be made 12 months after the date on which port construction works commence and subsequent contributions shall be paid annually over the same number of years as the payments required by Condition 10 of Coastal Permit No.2, but in any event for no longer than 10 years.

11. Where from any cause a contaminant (including fuel or sewage) associated with the Consent Holder's operations escapes otherwise than in conformity with this consent, the Consent Holder shall:
- (i) Immediately take such action or execute such work as may be necessary to stop and/or contain such escape; and
 - (ii) Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the escape; and
 - (iii) Report the escape to the Northern Regional Council within one week of its occurrence and the steps taken or being taken to clean up, remedy any adverse effects and prevent any recurrence of such escape.
12. The Consent Holder shall keep the coastal marine area free of litter and other debris [including offcuts, pipes, and rock debris] arising from the exercise of this consent.
13. The Consent Holder shall carry out or commission, at its own expense, the monitoring work described in paragraphs 2 to 8 inclusive of Addendum D in the report by Barnett Consultants Limited dated August 1994 entitled "Marsden Point Port Development Hydrodynamic Study Addenda to Original Report" which covers:
- Bathymetric monitoring
 - Side scan sonar
 - Current profiling
 - Drogue tracking
 - Tide recording
 - Weather recording
 - Ship movement recording
14. The Consent Holder shall carry out, or commission at its own expense, monitoring of beach profiles for a distance of not less than 500m each side of the reclamation, at not greater than six [6] monthly intervals for a period of ten [10] years following completion of the reclamation. A baseline survey shall be carried out prior to construction works commencing. The results of this monitoring shall be reported to the Northland Regional Council immediately following completion of each survey.
15. All works in connection with the construction of the reclamation (including marine activities such as ship movements, loading and unloading) shall be undertaken in a manner which minimises adverse effects on:
- (i) New Zealand Refining Company's [NZRC] jetties; and
 - (ii) the safe and efficient use of Whangarei Harbour in the vicinity of Marsden Point.

16. The Consent Holder shall carry out at its own expense a study to determine current speeds



and directions in the vicinity of NZRC's jetties prior to any construction commencing in the coastal marine area, and within six [6] months following completion of the capital dredging works. The results of these studies shall be forwarded to the Northland Regional Council and shall be made publicly available.

17. The Consent Holder shall make available to the Northland Regional Council the results of all bathymetric studies undertaken in agreement with the NZRC. These results will be made publicly available. In the event that they indicate unanticipated adverse effects, the conditions of this consent may be reviewed as *per* Condition 6 above.

18. The Consent Holder shall submit to the Northland Regional Council for approval the following management plans with which it shall comply:

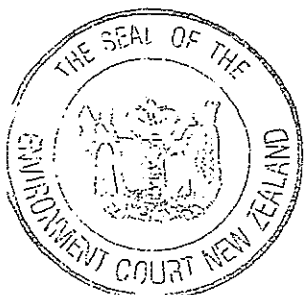
(i) At least twenty[20] working days prior to construction works commencing the Consent Holder shall, to the extent that the information has not already been supplied in an overall project management plan for the Marsden Point deep water port, submit to the Northland Regional Council a construction management plan which shall provide the following information

- Description of proposed works and drawings;
- A programme including a timetable, sequence of events and expected duration of all proposed works;
- A breakdown of the project into construction packages for later submission in greater detail
- Community liaison arrangements
- Contingency response plan
- Community Liaison Group (CLG) comments on the construction management plan and the Consent Holder's response to those comments.

The Northland Regional Council shall, within twenty working days of receipt of the plan notify the Consent Holder of its approval of the plan or, failing approval, of the respects in which the plan fails to comply with the information or evidence supplied by the Consent Holder in support of its application.

(ii) At least twenty [20] working days before construction commences on any package of work identified in the construction management plan, the following additional information shall be supplied to the Northland Regional Council:

- Design and construction report which shall cover where appropriate:
 - Dredging activities
 - Perimeter dyke construction
 - Geotextile lining of bund wall
 - Pile driving activities
 - Dust control measures



- Noise controls proposed
- Community Liaison Group (CLG) comments on the design and construction report and NPC response
- Plans and specifications providing sufficient detail to show compliance with the resource consent
- Monitoring procedures where applicable
- Reporting procedures where applicable

The Northland Regional Council shall, within twenty working days of receipt of the additional information, notify the Consent Holder of its approval of the additional information or, failing approval, of the respects in which it fails to comply with the information or evidence supplied by the Consent Holder in support of its application.

(iii) The Consent Holder may, at any time, submit variations to the approved construction management plan or the approved additional information required under this condition to the Northland Regional Council, together with comments from the Community Liaison Group and the Consent Holder's response to those comments. Any variation shall be subject to the Northland Regional Council's powers of approval under this condition and the same time limits shall apply save that, where the variation is minor, the Northland Regional Council shall notify its approval or otherwise of the proposed variation within five working days.

19. The Consent Holder shall ensure that all reclamation fill shall be from the dredged turning basin unless otherwise approved by the Northland Regional Council.
20. The Consent Holder shall ensure that all quarried rock used to construct bund walls is clean prior to placement and will not leach contaminants into the coastal marine area.
21. The Consent Holder shall, immediately upon completion of the marine works associated with the consent, notify in writing [and shall include a scale plan of the completed works]:

The Hydrographer
RNZ Navy
P O Box 33-341
TAKAPUNA

Maritime Safety Authority
P O Box 27 006
WELLINGTON

22. The Consent Holder shall not exceed the recommended upper noise limits described in NZS6803P:1984 *The Measurement and Assessment of Noise from Construction, Maintenance, and Demolition Work*. Such noise shall be measured and reported in accordance with this Standard. Where this Standard refers to noise limits in NZS6802:1991 *Assessment of Environmental Sound*, then these noise limits shall apply.

The Consent Holder shall submit to the Northland Regional Council and Whangarei District Council for their approval, at least twenty [20] working days prior to exercising this Consent, an Acoustic Design Report, prepared by a suitably qualified and experienced



person, together with the relevant management plan(s). This report shall, among other things, detail:

- (i) the reasonable potential for cumulative noise emissions from the reclamation site;
- (ii) the means by which noise emissions from the reclamation site will be minimised and maintained below the noise performance standards specified in this consent;
- (iii) any variation in sound propagation arising from the topography and characteristics of the area, taking into account meteorological conditions that would increase noise levels at the locations under consideration;
- (iv) any comments of the Community Liaison Group and the responses to these.

24. At least twenty [20] working days prior to commencement of reclamation, and following appropriate consultation with the Community Liaison Group, the Consent Holder shall submit to the Northland Regional Council and Whangarei District Council for their approval a Noise Information Monitoring Programme. This Programme shall include the proposed times, duration and location of the measurements, and procedures for logging and responding to noise complaints.

25. Within twelve [12] months of the commencement of reclamation works, the Consent Holder shall consult with the Community Liaison Group on the feasibility of constructing a short pier jetty at an oblique angle at the northern end of the access strip on the western rock wall for the purpose of providing an all tide fishing platform. The results of that consultation shall be reported to the Northland Regional Council and the Whangarei District Council and, if agreed to by the Councils, the work shall be undertaken by the Consent Holder and the costs deducted from the reserves contribution.

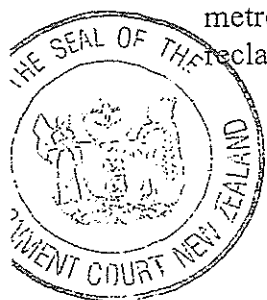
26. (i) The Consent Holder shall provide, construct and maintain an access strip of not less than 10m width for public vehicular access to the eastern side of the reclamation. This access strip shall be constructed to a standard that conforms with the Council's Class F Service Lane, Urban Roads requirement as specified in its draft Environment Engineering Standards 1998.

(ii) The Consent Holder shall provide, construct and maintain a restricted access strip of not less than 6m usable width along the eastern side of the reclamation to the water taxi landing with provision for restricting access in accordance with s.237B of the RMA. This access strip shall be constructed to a standard that conforms with the Council's Category B (Urban Privateway Cross Sections) access requirement as specified in its draft Environmental Engineering Standards 1998

27. The Consent Holder shall maintain public access to and ensure operation is able to continue for the water taxi operation during construction.

28. The Consent Holder shall erect adequate signage during the construction period in the vicinity of the site advising the public of construction activity and noting any special precautions that should be taken.

29. The Consent Holder shall provide, construct and maintain an access strip of not less than 6 metres width for public recreational purposes along the western rock wall (edge of reclamation) to a point 70 m from the northern wharf face



Advice Notes:

1. The Consent Holder is advised that landscaping conditions relating to the reclamation once formed are attached to the Whangarei District Council land use consents. These should be considered adjunctive conditions to this consent for the purposes of bond Condition 8.



**NORTHLAND PORT CORPORATION (NZ) LIMITED AND NORTHPORT LIMITED,
P O BOX 848, WHANGAREI**

Date of commencement of consent: As provided in section 116 of the RMA 1991 (the Act)

Date of expiration of consent: Thirty five (35) years

Date of lapsing of consent (if not given effect to): 16 November 2014 (*Section 125 application granted 9 May 2006*).

Purpose of Consent: Diversion and damming of stormwater in the course of construction and port operations arising from the construction and use of buildings and other structures including stormwater settlement and storage ponds.

Legal Description of Land: The land described in paragraph 3 of the Consent Holder's amended application for resource consents dated 14 August 1996, a copy of which is attached, including those parts of all roads to be stopped which adjoin the Consent Holder's property, and as shown on the Development Plan 96055-1 Revision E dated 9 April 1997.

STANDARD CONDITIONS OF CONSENT:

- 1 The Consent Holder shall undertake all authorised activities in general accordance with the descriptions and plans submitted with the application or as modified in evidence, and shall carry out all works in accordance with the approved Construction/Management Plan.
- 2 The Consent Holder shall submit to the Northland Regional Council full copies of all final design drawings at least twenty [20] working days prior to commencement of works associated with this consent.
- 3 The Consent Holder shall notify the Northland Regional Council at least ten (10) working days in advance of the date of the commencement of activities associated with this consent.

- 4 The Consent Holder shall pay all Crown charges set by the Northland Regional Council under Section 36 of the Resource Management Act 1991, including charges relating to any transfer of the consent, and to any changes to consent conditions.
- 5 The Northland Regional Council may serve notice on the Consent Holder of its intention to review the conditions of this consent pursuant to section 128 of the RMA, for the purposes specified therein or to address significant unanticipated adverse effects, at four (4) monthly intervals starting from the notified date of the commencement of works associated with this consent.

SPECIAL CONDITIONS OF CONSENT:

- 6 Stormwater from all areas where construction earthworks and other construction works are taking place shall be diverted and discharged to the coastal marine area via a discharge point located within the coastal marine area where land is being reclaimed for the port development.
- 7 The Consent Holder shall ensure that all stormwater diversion and drainage channels, including flood flowpaths, are maintained substantially free of litter and debris.
- 8 Wherever practicable the Consent Holder shall develop riparian planting using native wetland species in accordance with the Comprehensive Landscape Plan approved by the Whangarei District Council.

ISSUED at Whangarei this Eleventh Day of June 2006

Allan Richards
Coastal Consents Team Leader

NOTE 1 This consent is as issued by the Environment Court in November 1999 with the exception of a Section 125 extension to the lapsing period that was granted on 9 May 2006. New wording to "Date of lapsing of consent (if not given effect to):"
(Note added 11 June 2006)

NORTHPORT LIMITED, PO BOX 848, WHANGAREI 0115

To place and use a jetty in the coastal marine area, and to occupy the coastal marine area with a jetty, at Marsden Point, Map Reference Q07: 452-953, subject to the following conditions:

- 1 This consent only applies to the area identified on NRC Plan No. 3385 **attached**.
- 2 The Consent Holder shall notify the Council in writing of the date construction is intended to commence, at least two weeks beforehand.
- 3 The Consent Holder shall notify the Council in writing as soon as the works are completed.
- 4 The Consent Holder shall mark the structure with the number **5055** in black lettering on a white background clearly displayed and in such a manner as to be clearly visible from the land.
- 5 The Consent Holder shall, immediately upon completion of the installation of all works associated with this consent, notify in writing:

Nautical Information Advisor
Land Information New Zealand
Private Box 5501
Wellington

Maritime Safety Authority
P O Box 27-006
Wellington

The Whangarei District Council
Private Bag 9023
Whangarei

Northland Regional Council
Private Bag 9021
Whangarei

The Consent Holder shall include a scale plan of the completed works with the notification.

- 6 Vessels shall not berth alongside the jetty, other than in emergencies, for longer than one hour.
- 7 Signage is to be erected to clearly indicate the one hour berthing time limit.

- 8 The Consent Holder shall maintain all facilities covered by this consent in good order and repair.
- 9 The Consent Holder shall keep the coastal marine area free of debris resulting from the Consent Holder's activities.
- 10 The Consent Holder shall, for the purposes of adequately monitoring the consent as required under Section 35 of the Act, on becoming aware of any contaminant associated with the Consent Holder's operations escaping otherwise than in conformity with this consent:
 - (a) Immediately take such action, or execute such work as may be necessary, to stop and/or contain such escape; and
 - (b) Immediately notify the Council by telephone of an escape of contaminant; and
 - (c) Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the escape; and
 - (d) Report to the Council in writing within one week on the cause of the escape of the contaminant and the steps taken or being taken to effectively control or prevent such escape.
- 11 The Council may, in accordance with Section 128 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions of this consent. Such notice may be served annually during the month of November. The review may be initiated for any one or more of the following purposes:
 - (a) To deal with any adverse effects on the environment that may arise from the exercise of the consent and which it is appropriate to deal with at a later stage, or to deal with any such effects following assessment of the results of the monitoring of the consent and/or as a result of the Council's monitoring of the state of the environment in the area.
 - (b) To require the adoption of the best practicable option to remove or reduce any adverse effect on the environment.
 - (c) To provide for compliance with rules in any regional plan that has been made operative since the commencement of the consent.
 - (d) To deal with any inadequacies or inconsistencies the Council considers there to be in the conditions of the consent, following the establishment of the activity the subject of the consent.
 - (e) To deal with any material inaccuracies that may in future be found in the information made available with the application. (Notice may be served at any time for this reason.)
 - (f) To change existing, or impose new limits on conditions.

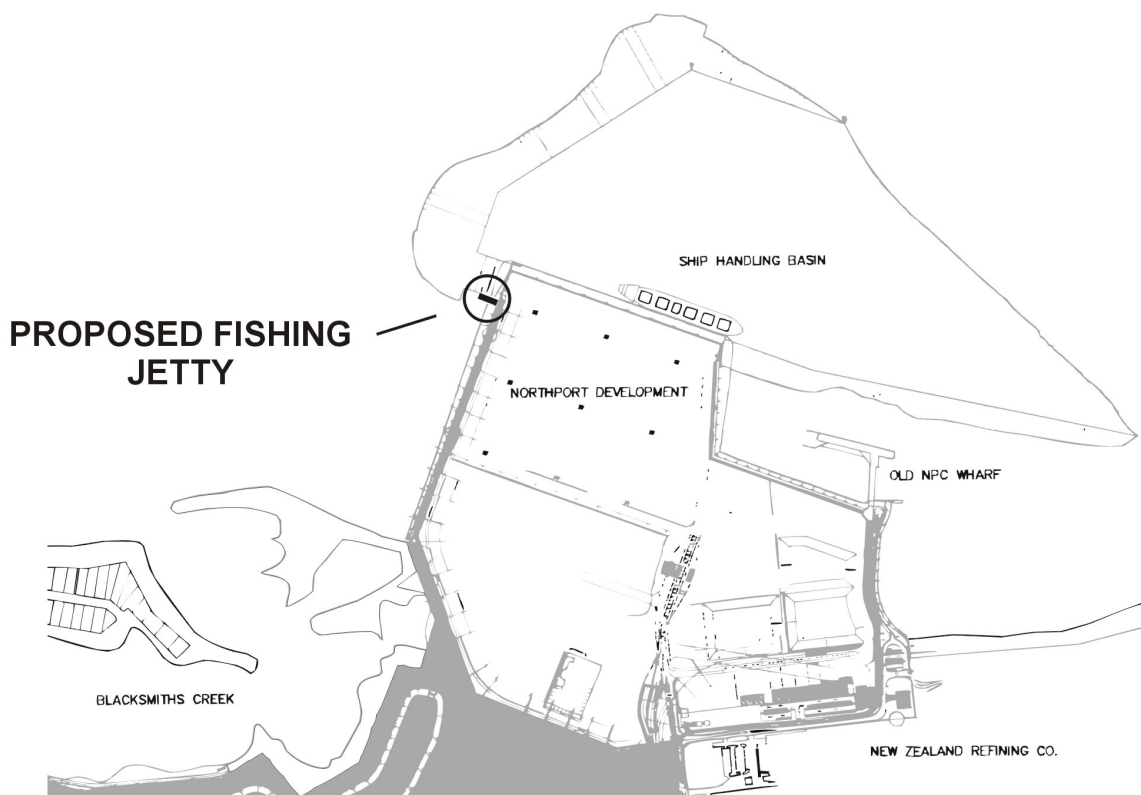
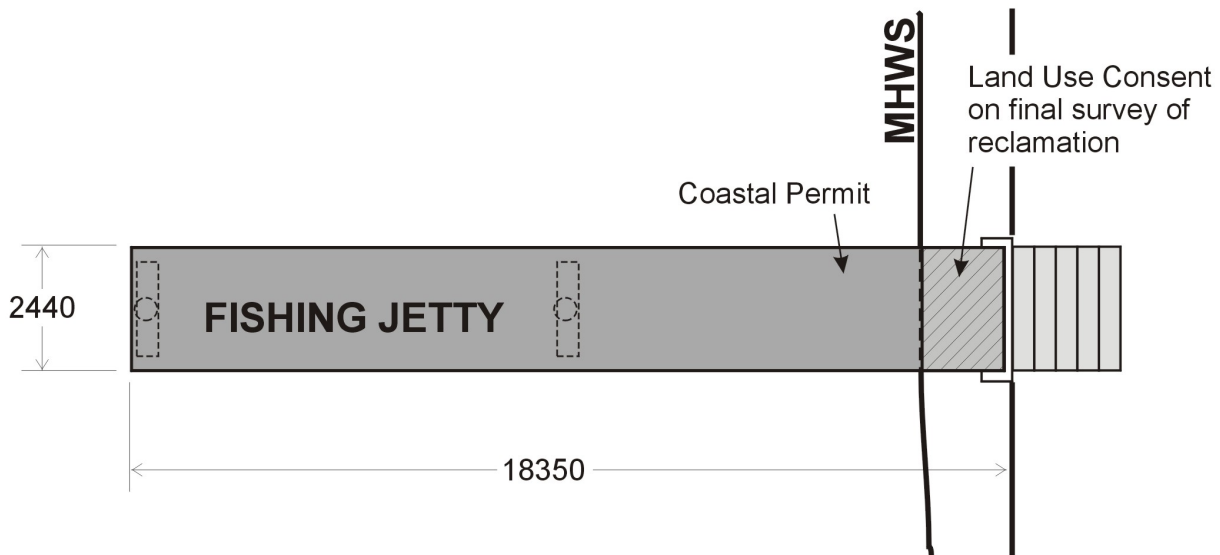
The Consent Holder shall meet all reasonable costs of any such review.

- 12 Prior to the expiry cancellation, or lapsing of this consent the Consent Holder shall remove all structures (other than reclamations) and other materials and refuse associated with this consent from the consent area and shall restore the consent area to the satisfaction of the Council, unless an application for a replacement consent has been properly made beforehand.

EXPIRY DATE: 30 NOVEMBER 2034

ISSUED at Whangarei this Ninth day of April 2003

Allan Richards
Coastal Consents Team Leader



	By	Date
Dwn.	C N Anderson	03/03
App'd		
	Amendment	
No.	By	Date

RESOURCE CONSENT CON20030505517
for
Northport Ltd
Fishing Jetty -
Marsden Point

NORTHLAND
REGIONAL
COUNCIL



Scale
N.T.S.

Plan No.
3385

NORTHLAND PORT CORPORATION (NZ) LIMITED & NORTHPORT LIMITED,
P O BOX 848, WHANGAREI 0115

Date of commencement of consent: As provided in section 116 of the RMA 1991 (the Act).

Date of expiration of consent: Unlimited.

Date of lapsing of consent (if not given effect to): 16 November 2014 (*Section 125 application granted 9 May 2006*).

Purpose of Consent: Earthworks on land, including excavation, depositing of material, compaction and other works and excavations necessary for construction, operation and maintenance of the port and associated support facilities and systems including the establishment of the stormwater settlement pond and stormwater storage facilities as shown on Development Plan Ref.96055-1 Revision E dated 9 April 1997.

Legal Description of Land: The land described in Paragraph 3 of the Consent Holders amended application for resource consents dated 14 August 1996, a copy of which is attached, including those parts of all roads to be stopped which adjoin the Consent Holder's property, and as shown on the Development Plan 96055-1 Revision E dated 9 April 1997.

STANDARD CONDITIONS OF CONSENT:

- 1 The Consent Holder shall undertake all authorised activities in general accordance with the descriptions and plans submitted with the application or as modified in evidence, and shall carry out all works in accordance with the approved Construction/Management Plan.
- 2 The Consent Holder shall submit to the Northland Regional Council full copies of all final design drawings at least twenty [20] working days prior to commencement of works associated with this consent.
- 3 The Consent Holder shall notify the Northland Regional Council at least ten (10) working days in advance of the date of the commencement of works associated with this consent.

- 4 The Consent Holder shall notify the Northland Regional Council within ten (10) working days following the date of the completion of all activities associated with this consent.
- 5 The Consent Holder shall pay all Crown charges set by the Northland Regional Council under Section 36 of the Resource Management Act 1991, including charges relating to any transfer of the consent, and to any changes to consent conditions.
- 6 The Northland Regional Council may serve notice on the Consent Holder of its intention to review the conditions of this consent pursuant to section 128 of the RMA, for the purposes specified therein or to address significant unanticipated adverse effects, at four (4) monthly intervals starting from the notified date of the commencement of works associated with this consent.

SPECIAL CONDITIONS OF CONSENT:

- 7 The Consent Holder shall submit to the Northland Regional Council for approval the following management plans with which it shall comply:
 - (i) At least twenty [20] working days prior to construction/demolition commencing the Consent Holder shall, to the extent that the information has not already been supplied in an overall project management plan for the Marsden Point deep water port, submit to the Northland Regional Council a construction management plan which shall provide the following information:
 - Description of proposed works and drawings
 - A programme including a timetable, sequence of events and expected duration of all proposed works
 - A breakdown of the project into packages for later submission in greater detail
 - Community liaison arrangements
 - Contingency response plan
 - Community Liaison Group comments on the plan and the Consent Holder's response to those

The Northland Regional Council shall, within twenty working days of receipt of the plan notify the Consent Holder of its approval of the plan or, failing approval, of the respects in which the plan fails to comply with the information or evidence supplied by the Consent Holder in support of its application.
 - (ii) At least twenty [20] working days before construction commences on any package of work identified in the construction management plan, the following additional information shall be supplied to the Northland Regional Council:
 - Design and construction report which shall cover where appropriate
 - Earthworks activities
 - Development works
 - Sediment control measures
 - Stormwater settlement measures

- Dust control measures
- Noise controls proposed
- Washdown and cleaning of vehicles / earthmoving equipment
- Community Liaison Group comments on the plan and the Consent Holder's response to those
- Plans and specifications providing sufficient detail to show compliance with all relevant resource consents and the Northland Regional Council's Guidelines for Urban Earthworks
- Monitoring procedures
- Reporting procedures

The Northland Regional Council shall, within twenty working days of receipt of the additional information, notify the Consent Holder of its approval of the additional information or, failing approval, of the respects in which it fails to comply with the information or evidence supplied by the Consent Holder in support of its application.

- (iii) The Consent Holder may, at any time, submit variations to the approved construction management plan or the approved additional information required under this condition to the Northland Regional Council together with comments of the Community Liaison Group and the Consent Holder's response to those comments. Any variation shall be subject to the Northland Regional Council's powers of approval under this condition and the same time limits shall apply save that, where the variation is minor, the Northland Regional Council shall notify its approval or otherwise of the proposed variation within five working days

- 8 Where from any cause a contaminant (including fuel or sewage) associated with the Consent Holder's operations escapes otherwise than in conformity with this consent, the Consent Holder shall:
 - (a) Immediately take such action or execute such work as may be necessary to stop and/or contain such escape; and
 - (b) Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the escape; and
 - (c) Report the escape to the Northern Regional Council within one week of its occurrence and the steps taken or being taken to clean up, remedy any adverse effects and prevent any recurrence of such escape.
- 9 The Consent Holder shall not place litter and other debris [including offcuts, pipes, and rock debris] arising from the exercise of this consent in a position where it may enter Blacksmiths Creek or the coastal marine area.
- 10 No waste oil, grease cartridges, fuel containers or any other potentially contaminating material is to be left on site following the completion of earthworks.

- 11 Prior to any work commencing on the site, the Consent Holder shall, in consultation with Patuharakeke Te Hapu, commission a cultural assessment report to identify any areas of waahi tapu and/or other special sites. A copy of this report shall be provided to both the Northland Regional Council and Whangarei District Council. Where a Waahi tapu or other special site is identified in this report the Consent Holder will take all reasonable steps, in consultation with Patuharakeke Te Hapu, to record and/or protect any such waahi tapu or special site and observe any appropriate cultural protocols.
- 12 The Consent Holder shall ensure that NZ Archaeological Association recorded sites N 24/46 and N 24/590 are identified and securely protected by fencing prior to any earthworks commencing on the site. Written confirmation of this, and of agreements and implementation referred to in the preceding condition shall be forwarded to the Northland Regional Council and, where appropriate, the Whangarei District Council at least twenty [20] working days prior to work commencing.
- 13 The Consent Holder shall ensure that work in the immediate vicinity of any discovered or suspected archaeological site uncovered during the course of earthworks ceases immediately, and that the NZ Historic Places Trust, Northland Regional Council, Whangarei District Council and Patuharakeke Te Hapu are informed. Work shall not continue in the vicinity of any such site until authorised by the Northland Regional Council.
- 14 The Consent Holder shall not exceed the recommended upper noise limits described in *NZS6803P:1984 The Measurement and Assessment of Noise from Construction, Maintenance, and Demolition Work*. Such noise shall be measured and reported in accordance with this Standard. Where this Standard refers to noise limits in *NZS6802:1991 Assessment of Environmental Sound*, then these noise limits shall apply.
- 15 The Consent Holder shall submit to the Northland Regional Council and Whangarei District Council for their approval, at least twenty [20] working days prior to exercising this Consent, an Acoustic Design Report, prepared by a suitably qualified and experienced person. This report shall, among other things, detail:
 - (i) The reasonable potential for cumulative noise emissions from the site;
 - (ii) The means by which noise emissions from the site will be minimised and maintained below the noise performance standards specified in this consent;
 - (iii) Any variation in sound propagation arising from the topography and characteristics of the area, taking into account meteorological conditions that would increase noise levels at the locations under consideration;
 - (iv) Any comments of the Community Liaison Group and responses to these.
- 16 At least twenty [20] working days prior to the commencement of earthworks, and following appropriate consultation with the Community Liaison Group, the Consent Holder shall submit to the Northland Regional Council and Whangarei District Council for their approval a Noise Information Monitoring Programme. This Programme shall include the proposed times, duration and location of the measurements, and procedures for logging and responding to noise complaints.
- 17 The Consent Holder shall maintain public access to and ensure operation is able to continue for the water taxi operation during construction.

- 18 The Consent Holder shall erect adequate signage during the earthworks construction period in the vicinity of the site advising the public of construction activity and noting any special precautions that should be taken.
- 19 The Consent Holder shall, at least twenty [20] working days prior to commencing construction work on the Marsden Point deepwater port submit to the Northland Regional Council an overall project management plan which shall provide the following information:
- Description of main elements of the project
 - A construction programme including a timetable, sequence of events and expected duration of the proposed works
 - A breakdown of the project into work packages for later submission by way of construction management plans and further information
 - Community liaison arrangements
 - Contingency response plan
- Subject to submitting a copy of any change to the Northland Regional Council, the overall project management plan may be updated or varied by the Consent Holder from time to time.
- 20 Following construction of the new stormwater storage pond, the Consent Holder shall submit a Certificate from a suitably qualified and experienced engineer, certifying that all constructed batter faces associated with the exercise of this consent have been constructed to achieve a Factor of Safety of not less than 1.5.
- 21 To minimise erosion and sedimentation, all batter faces shall be established with a suitable vegetative, or other groundcover, to achieve an 80% groundcover within 12 months immediately following the works.

ADVICE NOTE:

The Consent Holder is advised that any activity affecting archeological sites, whether that site is recorded, registered or not, is subject to the approval process of the Historic Places Act 1993.

ISSUED at Whangarei this Eleventh Day of June 2006

Allan Richards
Coastal Consents Team Leader

- NOTE 1** Decision granted on 27 August 2003 to change "Purpose of Consent" and addition of two new Conditions 20 and 21.
(Note added 11 June 2006)
- NOTE 2** Section 125 extension to the lapsing period that was granted 9 May 2006. New wording to "Date of lapsing of consent (if not given effect to):"
(Note added 11 June 2006)

NORTHLAND PORT CORPORATION (NZ) LIMITED AND NORTHPORT LIMITED, P O BOX 848, WHANGAREI

Date of commencement of consent: As provided in section 116 of the RMA 1991 (the Act)

Date of expiration of consent: Thirty five (35) years

Date of lapsing of consent (if not given effect to): 16 November 2014 (*Section 125 granted 9 May 2006*).

Purpose of Consent: To take water from the stormwater storage pond and discharge by way of spray irrigation to land generally depicted on Development Plan Ref.96055-1 Revision E dated 9 April 1997 as "irrigation areas".

Legal Description of Land: The relevant parts of the land described in Schedule A (below), otherwise as more specifically described in this permit and in the plans and other information submitted by the applicant.

Schedule A:

1.	Lot 1 DP 168926
2.	Sec 63 Blk VII Ruakaka SD, SO 45336
3.	Pt Lot 5 DP 51845
4.	Lot 1 DP 54490
5.	Northern portion of Pt Lot 4 DP 51845
6.	Western portion of Lot 1 DP 53892
7.	South Western portion of Pt Lot 1 DP 52380

STANDARD CONDITIONS OF CONSENT:

- 1 The Consent Holder shall undertake all authorised activities in general accordance with the descriptions and plans submitted with the application or as modified in evidence, and shall carry out all works in accordance with the approved Construction/Management Plan.
- 2 The Consent Holder shall submit to the Northland Regional Council full copies of all final design drawings at least twenty [20] working days prior to commencement of works associated with this consent.
- 3 The Consent Holder shall notify the Northland Regional Council at least ten (10) working days in advance of the date of the commencement of activities associated with this consent.
- 4 The Consent Holder shall pay all Crown charges set by the Northland Regional Council under Section 36 of the Resource Management Act 1991, including charges relating to any transfer of the consent, and to any changes to consent conditions.
- 5 The Northland Regional Council may serve notice on the Consent Holder of its intention to review the conditions of this consent pursuant to section 128 of the RMA, for the purposes specified therein or to address significant unanticipated adverse effects, at twelve (12) monthly intervals starting from the notified date of the commencement of activities associated with this consent.

SPECIAL CONDITIONS OF CONSENT:

- 6 At least twenty [20] working days prior to the commencement of irrigation the Consent Holder shall submit to the Northland Regional Council for approval a Stormwater Irrigation Management Plan with which it shall comply, covering all aspects of stormwater irrigation operation including:
 - (i) a description of daily operation of the spray irrigation system;
 - (ii) contingency measures for unforeseen or emergency situations;
 - (iii) baseline soil quality sampling data and means by which to ensure safeguarding the condition of the structure;
 - (i) determination of the need for a maximum rate of application [and, if so, the quantitative annual limit];
 - (v) a quantitative method of irrigation scheduling in order to optimise irrigation and minimise soil saturation and surface runoff;
 - (vi) definition of areas where a higher than 10mm per hour application rate is sustainable due to higher soil infiltration rates;
 - (vii) criteria for calculation of appropriate buffer zones;
 - (viii) records (including frequency of provision) to be supplied to Northland Regional Council.

The Consent Holder shall nominate a Company officer(s) directly responsible for the continuous efficient operation and maintenance of the complete spray irrigation system.

- 7 All aspects of stormwater irrigation shall be carried out in accordance with the Stormwater Irrigation Management Plan.
- 8 The Stormwater Irrigation Management Plan shall be reviewed after the first year of operation of the spray irrigation system and then at not greater than two yearly intervals.

- 9 The Consent Holder shall ensure that the stormwater application rate of the irrigation system does not exceed 10mm per hour [except where the Stormwater Irrigation Management Plan indicates a higher application rate is sustainable due to higher soil infiltration rates]. The Consent Holder shall operate the spray irrigation system to ensure that there is no significant ponding, surface runoff (overland flow) and/or contamination of surface and groundwater resulting from the application of stormwater to the irrigated area.
- 10 The Consent Holder shall ensure that the spray irrigation system is managed in such a way as to ensure that the operation of the system does not cause offensive odours, create any public nuisance, create any adverse drainage impacts beyond the boundary of the properties, and/or allow spray drift to travel beyond appropriate buffer zones and enter:
- (i) Streams;
 - (ii) Drains;
 - (iii) Public roadways;
 - (iv) Adjacent property boundaries, except with the written consent of the adjoining land owner(s) and occupier(s).

Areas used for the transport corridor, the port, and the storage pond shall not be used for spray irrigation.

- 11 Prior to the commencement of spray irrigation the Consent Holder shall establish the baseline soil quality within every area which will receive stormwater during the term of this consent. Baseline sampling shall incorporate composite topsoil samples from two [2] sites of each of the four [4] representative soil types within the irrigation area, and at least one control site where no irrigation will take place. The results of this baseline sampling shall be provided to the Northland Regional Council at least twenty [20] working days prior to the commencement of spray irrigation.
- 12 The Consent Holder shall ensure that the testing of each area shall be representative, so that comparisons can be made over time to determine if there are any significant differences in soil chemistry or other soil properties between control site(s) and stormwater application sites. Applications of agrichemicals, including fertilisers, and other substances which may influence the soils tested shall also be recorded.
- 13 At least twenty [20] working days prior to the commencement of spray irrigation, the Consent Holder shall submit a Monitoring Programme to the Northland Regional Council for approval detailing how the soil testing will be undertaken (including soil sampling and testing techniques, control site selection criteria, testing determinands and statistical tests for significant differences). The testing determinands shall include:
- (i) Resin acids
 - (ii) Sodium, Potassium, Magnesium and Calcium
 - (iii) Cation Exchange Capacity
 - (iv) pH
 - (v) Total Lead
 - (vi) Total Zinc
 - (vii) Total Copper
 - (viii) Olsen Phosphorus (a measure of plant available phosphorus).

- 14 The Consent Holder shall conduct annual soil testing in September each year, within

every area which received irrigated stormwater within the previous twelve [12] months, and also at the control site(s).

- 15 The Consent Holder shall supply to the Northland Regional Council the results of each annual soil testing event within two months of each event being completed.
- 16 In the event of the development of apparent pasture toxicity or deficiency symptoms within any stormwater irrigation areas, the pasture herbage from those areas shall be analysed to determine the cause, and appropriate corrective measures shall be implemented to the satisfaction of the Northland Regional Council.
- 17 The application rate of the irrigation system shall be measured during commissioning of the system to ensure that the application rate does not exceed 10 mm per hour or the near saturated hydraulic conductivity of the soil, whichever is the higher.
- 18 The Consent Holder shall monitor the quality of the stormwater in the storage ponds at not greater than two monthly intervals for at least two years after commencement of stormwater irrigation. Thereafter, the frequency of stormwater quality monitoring may be changed in accordance with Condition 24 of this Consent. The Consent Holder shall submit to the Northland Regional Council for approval a Stormwater Monitoring Programme detailing how the stormwater testing will be undertaken, including sampling and testing techniques [which may be coordinated with the Monitoring Programme for stormwater discharge to the coastal marine area]. The testing determinands shall include:
 - (i) BOD
 - (ii) Suspended Solids
 - (iii) Resin Acids
 - (iv) pH
 - (v) Sodium, Calcium, Magnesium and Potassium
 - (vi) Nitrate, TKN, Ammoniacal Nitrogen
 - (vii) Total Phosphorus and Dissolved Reactive Phosphorous
 - (viii) Electrical Conductivity
- 19 The Consent Holder shall supply to the Council annually [or sooner upon the written request of the Northland Regional Council], after the commencement of stormwater irrigation, the analytical results from the stormwater quality monitoring.
- 20 The Consent Holder shall install at least three [3] groundwater monitoring wells to the satisfaction of the Council, for the purpose of monitoring the groundwater levels and groundwater quality upgradient, directly downgradient of the areas spray irrigated, and downgradient of the stormwater storage pond.
 - a) Prior to the commencement of spray irrigation the Consent Holder shall establish the baseline groundwater quality upgradient, directly downgradient of the areas spray irrigated, and downgradient of the stormwater storage pond. Baseline sampling shall incorporate representative quarterly monitoring over at least a twelve [12] month period. The results of this analysis shall be provided to the Northland Regional Council at least twenty [20] working days prior to the commencement of spray irrigation. The testing determinands shall include:

- (i) Resin Acids
 - (ii) pH
 - (iii) Major Cations and Anions
 - (iv) Nitrate, Ammoniacal Nitrogen
 - (v) Dissolved Reactive Phosphorous
 - (vi) Electrical Conductivity
 - b) The Consent Holder shall monitor the groundwater levels and quality upgradient, directly downgradient of the areas spray irrigated, and downgradient of the stormwater storage pond at not greater than three [3] -monthly intervals for at least two [2] years after commencement of stormwater irrigation.
- 21 At least twenty [20] working days prior to the commencement of spray irrigation, the Consent Holder shall submit to the Northland Regional Council for approval a Groundwater Monitoring Programme detailing how the groundwater testing will be undertaken, including sampling and testing techniques. The testing determinands shall include:
- (i) Resin Acids
 - (ii) pH
 - (iii) Major Cations and Anions
 - (iv) Nitrate, Ammoniacal Nitrogen
 - (v) Dissolved Reactive Phosphorous
 - (vi) Electrical Conductivity
- 22 The Consent Holder shall supply to the Northland Regional Council the results of the groundwater quality monitoring at not greater than three-monthly intervals for at least two years after commencement of stormwater irrigation.
- 23 The Consent Holder shall submit to the Northland Regional Council a Groundwater Monitoring Programme detailing how the quantitative statistical analysis of the monitoring data will be undertaken in order to detect changes in groundwater quality over time
- 24 The Northland Regional Council, in consultation with the Consent Holder, shall review the Consent Holder's Stormwater and Groundwater Monitoring Programmes and the results of the monitoring at 2, 5, 10 and 20 years after the commencement of this Consent for the purposes of reviewing sampling and testing methods, control site selection criteria, testing determinands, statistical tests for significant differences and testing frequencies.
- 25 The Consent Holder shall meet the reasonable costs of the reviews, Northland Regional Council inspections and monitoring.

- 26 The Consent Holder shall carry out, or commission at its own expense, within twelve [12] months of commencement of this consent, a study of the Blacksmiths Creek catchment for the purpose of identifying practical measures for improving the water quality of Blacksmiths Creek. The Consent Holder shall submit to the Northland Regional Council for its approval an outline programme for the study before the study commences. If the study concludes that a wetland is a suitable and feasible option, the Consent Holder shall make available an area to be agreed between it and the Northland Regional Council, of approximately 0.5 hectares, of its land for the purpose of enabling wetland treatment of water flows in Blacksmiths Creek.

ISSUED at Whangarei this Eleventh Day of June 2006

Allan Richards
Coastal Consents Team Leader

NOTE 1 This consent is as issued by the Environment Court in November 1999 with the exception of a Section 125 extension to the lapsing period that was granted on 9 May 2006. New wording to "Date of lapsing of consent (if not given effect to):"
(Note added 11 June 2006)

Decision # 16 - Northland Regional Council : Discharge Permit No. 2

Date of commencement of consent: As provided in section 116 of the RMA 1991 (the Act)

Date of expiration of consent: Thirty five (35) years

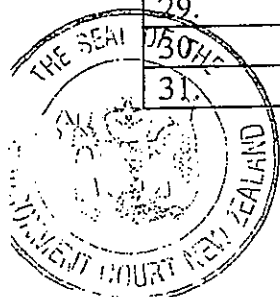
Date of lapsing of consent (if not given effect to): Seven (7) years from date of commencement

Purpose of Consent: Discharge of particulate matter and contaminants into the air in the course of construction and port operations.

Legal Description of Land: The relevant parts of the land described in Schedule A (below), otherwise as more specifically described in this permit and in the plans and other information submitted by the applicant.

Schedule A:

	Description
1.	Pt Lot 5 DP 51845
2.	Lot 1, 2, Pt 4 DP 51845
3.	Lot 1 DP 47603
4.	Lot 2 DP 47603
5.	Lot 3 & 4 DP 47603 & Allot 291 Ruakaka Parish
6.	Lot 5 DP 47603
7.	Lot 6 DP 47603
8.	Lot 6 DP 43643 & Lot 7 DP 47603
9.	Lot 8 DP 47603
10.	Lot 9 DP 47603
11.	Lot 11 DP 47603
12.	Lot 12 DP 47603
13.	Lot 13 DP 47603
14.	Lot 6 DP 51845
15.	Lot 16 DP 47603
16.	Lots 2, 3, 4, 5 DP 43643
17.	Lot 3 DP 51845
18.	Lot 1 DP 52380
19.	Lot 1 DP 53892
20.	Sec 1 Blk VIII Ruakaka SD
21.	Lot 1 DP 43643
22.	Lot 10 DP 47603
23.	Lot 15 DP 47603
24.	Sect 63 Blk VII Ruakaka SD
25.	Lot 1 DP 168926
26.	Lot 1 DP 65603
27.	Lot 1 DP 54490
28.	Lot 1 DP 57552
29.	Section 39 Block VII Ruakaka SD Sect 1 SO Plan 44270
30.	Portions of Papich, Marsden Point and One Tree Point Roads
31.	Crown Land comprising foreshore and seabed to be reclaimed

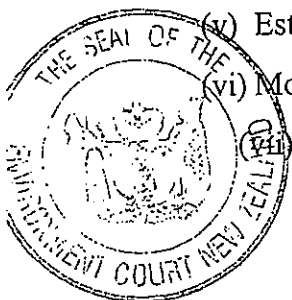


STANDARD CONDITIONS OF CONSENT:

1. The Consent Holder shall undertake all authorised activities in general accordance with the descriptions and plans submitted with the application or as modified in evidence, and shall carry out all works in accordance with the approved Construction/Management Plan.
2. The Consent Holder shall submit to the Northland Regional Council full copies of all final design drawings at least twenty [20] working days prior to commencement of works associated with this consent.
3. The Consent Holder shall notify the Northland Regional Council at least ten (10) working days in advance of the date of the commencement of activities associated with this consent.
4. The Consent Holder shall pay all Crown charges set by the Northland Regional Council under Section 36 of the Resource Management Act 1991, including charges relating to any transfer of the consent, and to any changes to consent conditions.
5. The Northland Regional Council may serve notice on the Consent Holder of its intention to review the conditions of this consent pursuant to section 128 of the RMA, for the purposes specified therein or to address significant unanticipated adverse effects, at four (4) monthly intervals starting from the notified date of the commencement of works associated with this consent.

SPECIAL CONDITIONS OF CONSENT:

6. The Consent Holder shall comply with the following air quality emission standards at the site boundary, or as otherwise determined under Condition 10 of this Consent:
 - (i) Inhalable Particulate = $120\mu\text{g}/\text{m}^3$ [24hr average]
 $40\mu\text{g}/\text{m}^3$ [annual average]
 - (ii) Deposited Particulate = $4\text{g}/\text{m}^2$ [30 day mean]
 $<4\text{g}/\text{m}^2$ [above background non-urban 30 day mean]
7. At least twenty [20] working days prior to the commencement of port construction works, the Consent Holder shall submit to the Northland Regional Council for approval a Dust Management Plan for both construction and operation of the port and its related activities. The Dust Management Plan shall detail the means by which discharges to air will be minimised and the air quality standards imposed by this consent are to be achieved and include the following matters:
 - (i) Dust control cleaning and maintenance systems;
 - (ii) Housekeeping and general cleaning programme;
 - (iii) Dust suppression measures for stockpiles (including sand dredgings stockpiles) and unpaved areas;
 - (iv) Storage, handling and transportation of dry cargo;
 - (v) Establishment and maintenance of wind protection measures;
 - (vi) Monitoring and reporting;
 - (vii) Community Liaison Group comments on the plan and the Consent Holder's

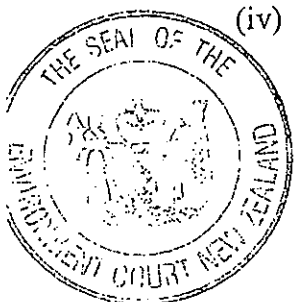


response.

The Northland Regional Council shall, within twenty [20] working days of receipt of the plan notify the Consent Holder of its approval of the plan or, failing approval, of the respects in which the plan fails to comply with the information or evidence supplied by the Consent Holder in support of its application. The Consent Holder may, at any time, submit variations to the approved plan to the Northland Regional Council together with comments of the Community Liaison Group and the Consent Holder's response to those comments. Any variation shall be subject to the Northland Regional Council's powers of approval under this condition and the same time limit shall apply save that, where the variation is minor, the Northland Regional Council shall notify its approval or otherwise of the proposed variation with 5 working days.

The Dust Management Plan may be reviewed after the first year of operation at the request of the Consent Holder

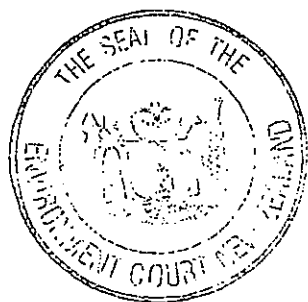
8. The Dust Management Plan shall include all mitigation measures recommended in evidence relating to:
 - covered storage of fine material;
 - enclosed conveyors;
 - regular cleaning of paved surfaces;
 - controlling carryout of mud and dirt onto paved roads;
 - wet suppression of unpaved areas;
 - limiting vehicle speed;
 - covering fine material contained in trucks;
 - provision of planted wind protection;
 - use of wind break fencing, binding products and grass plantings on the reclamation area;
 - ship loading and unloading.
9. The Consent Holder shall not undertake any discharges of dust to air which have objectionable or offensive effects beyond the boundary of the Consent Holder's premises.
10. Particulate and dust emissions shall be monitored in the vicinity of the site(s) during the exercise of this consent as follows:
 - (i) At least four [4] monitoring sites shall be established, including a background site located approximately 1 kilometre from the port. The other sites shall be located to the north east, south east close to the refinery boundary, and south west of the port, at approximately 500m separation distance.
 - (ii) Dust deposition monitoring shall be carried out at all four [4] monitoring sites, while total suspended particulate (TSP) shall be measured at two of the sites (north-east and background site).
 - (iii) Dust deposition monitoring should be carried out on monthly programme according to ISO DIS 4222.2 or by other methods approved by the Northland Regional Council .
 - (iv) TSP is to be measured by means of high volume air sampler on a one [1] day in six [6] routine, or more frequently, if required to investigate specific complaints.



- (v) In the event that concerns regarding health effects arise, ambient PM10 measurements shall be carried out using methods approved by the Northland Regional Council.

The Northland Regional Council, in consultation with the Consent Holder, shall, in the event that the Consent Holder consistently operates within the air quality emission standards specified by this consent review the requirements of this condition 12 months after the Consent Holder commences port operations and may undertake such a review at yearly intervals thereafter.

11. The Consent Holder shall ensure that all dust suppression systems used for mitigation purposes are water based. No oils are to be applied to any surface for dust suppression purposes, including paved and unpaved roads, stockpiles, yards and construction areas.
12. The Consent Holder shall provide all dust deposition and total suspended particulate (TSP) monitoring records to the Northland Regional Council within five (5) working days of the receipt of results. Where results indicate an exceedance of conditions, a written explanation of the probable cause(s) and any remedial measures taken shall accompany those results.
13. The Consent Holder shall log all air discharge complaints received in respect of the port construction and operation (including, dust, odour, smoke and vehicle emissions). The log shall include the date, time, position and nature of the complaint; the name, address and telephone number of the complainant (if available); details of the key operating parameters and the remedial action taken to prevent further incidents from occurring. The log shall be made available to the Northland Regional Council and interested parties on request, and include the designation of clearly defined responsibilities for undertaking any remedial actions required.
14. If monitoring results, or complaints related to dust emissions, indicate that discharges of particulate matter or dust are excessive, the Consent Holder shall, as soon as is reasonably practicable, implement such remedial actions as are reasonably required to suppress dust, and monitor the effects of any subsequent dust and dust suppression methods introduced as the Northland Regional Council requires.



Decision #22 - Whangarei District Council : Land Use Consent No. 8

Date of commencement of consent: As provided in section 116 of the RMA 1991 (the Act)

Date of expiration of consent: Unlimited

Date of lapsing of consent (if not given effect to): Ten (10) years from date of commencement

Purpose of Consent: The construction and use of a water taxi facility including access road and public carpark, barge terminals, and public toilets on the eastern edge of the reclamation, as shown on Development Plan Ref.96055-1 Revision E dated 9 April 1997 and Dwg D60-3-002 7 April 1997.

Legal Description of Land: The relevant parts of the land described in Schedule A (below), otherwise as more specifically described in this permit and in the plans and other information submitted by the applicant.

Schedule A:

	Description
1.	Crown land comprising foreshore and seabed to be reclaimed

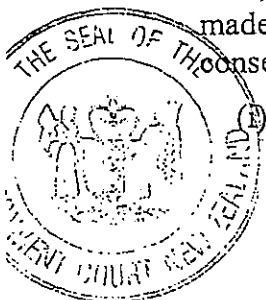
STANDARD CONDITIONS OF CONSENT:

1. The Consent Holder shall undertake all authorised activities in general accordance with the descriptions and plans submitted with the application or as modified in evidence, and shall carry out all works in accordance with any approved Construction/Management Plan.
2. The Consent Holder shall submit to the Whangarei District Council full copies of all final design drawings at least twenty [20] working days prior to commencement of works associated with this consent.
3. The Consent Holder shall notify the Whangarei District Council at least ten (10) working days in advance of the date of the commencement of activities associated with this consent.
4. The Consent Holder shall pay all administration charges associated with this consent prior to work commencing.
5. The Whangarei District Council may serve notice on the Consent Holder of its intention to review the conditions of this consent pursuant to section 128 of the RMA, for the purposes specified therein or to address significant unanticipated adverse effects, at twelve (12) monthly intervals starting from the notified date of the commencement of works associated with this consent.

SPECIAL CONDITIONS OF CONSENT:

6. The Consent Holder shall not place litter and other debris arising from the exercise of this consent in a position where it may enter the coastal marine area.
7. Where construction and use are not otherwise covered by the operative transitional District Plan, until such time as the new District Plan is operative and formal zoning provisions are made, and except where otherwise indicated in conditions granted with respect to this consent, the rules relating to :

bulk and location requirements



- (ii) maximum height of buildings
- (iii) location of buildings (yards)
- (iv) minimum distance from the sea

and the performance standards relating to:

- (i) landscaping and appearance
- (ii) air pollution
- (iii) glare
- (iv) noise
- (v) vibration
- (vi) dust
- (vi) soil and water protection
- (vii) use of hazardous substances

as contained under the Marsden Point Special Industrial Zone provisions of the operative district plan shall apply.

8. The Consent Holder shall ensure that the spill of light onto any residentially zoned land or measured at any rural dwelling shall not exceed 10 lux and shall submit a Lighting Management Plan to the Whangarei District Council for approval at least twenty [20] working days prior to any night-time work commencing. The Lighting Management Plan shall detail the positions and technical specifications of all exterior light sources and indicate the means by which this standard is to be achieved. The Lighting Management Plan shall include comments of the Community Liaison Group on the plan and the Consent Holder's response to these.
9. The noise level (L10) as measured within any residentially zoned boundary or the notional boundary of any existing rural dwelling shall not exceed the following limits:

All Days:

0700am - 1000pm 55dBA L10

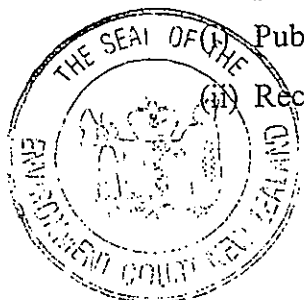
10.00pm - 0700 am 45dBA L10

10.00pm - 0700am 65 dBA Lmax

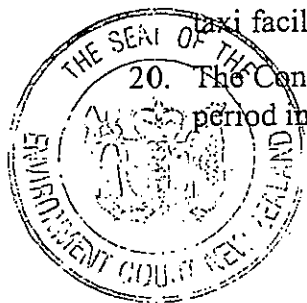
The noise levels shall be measured and assessed in accordance with the requirements of NZS 6801:1991 Measurement of Sound and NZS 6802:1991 Assessment of Environmental Sound

10. The Consent Holder shall not exceed the recommended upper noise limits described in *NZS6803P:1984 The Measurement and Assessment of Noise from Construction, Maintenance, and Demolition Work*. Such noise shall be measured and reported in accordance with this Standard. Where this Standard refers to noise limits in *NZS6802:1991 Assessment of Environmental Sound*, then these noise limits shall apply.
11. Following consultation with the Community Liaison Group, the Consent Holder shall submit to the Whangarei District Council for approval, at least twenty [20] working days prior to the commencement of any site works, a Comprehensive Landscape Plan generally in accordance with the landscape proposal submitted by the Consent Holder in support of its application for resource consents, for the whole area, including:

- (i) Public access to the harbour edge
- (ii) Recreational area on waterfront



- (ii) Buffer strip to Blacksmiths Creek
 - (iii) Stormwater and silt detention systems
 - (iv) Shelter planting to road corridor
 - (v) A planted amenity strip of 5m width (in order to achieve a continuous, dense vegetative screening effect) along the eastern side of the transport corridor (adjoining the western side of Marsden Point Road) from where it will meet the Consent Holder's land, south to the intersection of Marsden Point and One Tree Point Roads. Such landscape plantings are to be implemented either concurrently with the development of the transport corridor, or prior to the development of the industrial zoned land adjoining the western side of the proposed transport corridor, whichever is the sooner.
 - (vi) A concept plan for the provision of an amenity planting strip along the northern side of One Tree Point Road between the intersection of that road with Marsden Point Road and Blacksmiths Creek. The concept plan shall outline the anticipated timeframes for planting, and species proposed, in order to achieve effective vegetative screening of the adjoining industrial zoned land while minimising the potential for conflict to arise with property access points, power lines, buildings and other services.
 - (vii) Specimen trees along parts of the foreshore edge
12. The Consent Holder shall implement the approved Comprehensive Landscape Plan at least twelve [12] months prior to the commencement of operation of the facility.
 13. The Consent Holder shall provide the Whangarei District Council with details of building form and colour prior to any application for building consent being lodged. The visual impact of buildings is to be minimised by the appropriate use of colour, building form, roof lines, and structure compatible with its setting.
 14. The Consent Holder shall supply the Whangarei District Council with a copy of the Dust Management Plan prepared for the Northland Regional Council, and copies of all air quality monitoring reports forwarded to the Northland Regional Council.
 15. The Consent Holder shall not undertake any discharges of dust to air which have objectionable or offensive effects beyond the boundary of the Consent Holder's premises.
 16. Facilities may not be used until a water supply and wastewater and sewage disposal system to a design approved by the Whangarei District Council [including, as necessary, upgrading costs for connection to Council's water supply and/or sewerage system to the extent that those costs relate to upgrading work intended to serve the building authorised by this consent having regard to other users of the Council's system] is installed.
 17. The Consent Holder shall be responsible for the construction and maintenance of the public toilets.
 18. The Consent Holder shall maintain public access to and ensure operation is able to continue for the water taxi operation during construction.
 19. The Consent Holder shall provide and maintain a passenger weather shelter at the water taxi facility.
 20. The Consent Holder shall erect adequate signage during the earthworks construction period in the vicinity of the site advising the public of construction activity and noting any



special precautions that should be taken.

21. The Consent Holder shall provide, construct and maintain an access strip of not less than 10m width for public vehicular access to the eastern side of the reclamation. This access strip shall be constructed to a standard that conforms with the Council's Class F Service Lane, Urban Roads requirement as specified in its draft Environment Engineering Standards 1998.

The Consent Holder shall provide, construct and maintain a restricted access strip of not less than 6m useable width along the eastern side of the reclamation to the water taxi landing with provision for restricting access in accordance with s.237B of the RMA. This access strip shall be constructed to a standard that conforms with the Council's Category B (Urban Privateway Cross Sections) access requirement as specified in its draft Environmental Engineering Standards 1998



attached to this application being a plan prepared by Simpson Shaw & Co reference no 96055-1 ("the development plan") and on the plans in the Assessment of Effects on the Environment accompanying this application.

(b) In the Coastal Marine Area

Marsden Point below Mean High Water Springs adjacent to Papich Road and extending eastwards up to and slightly beyond the existing Northland Port Corporation jetty. The area is shown on the development plan and on the plans in the Assessment of Effects on the Environment accompanying this application.

Legal Description

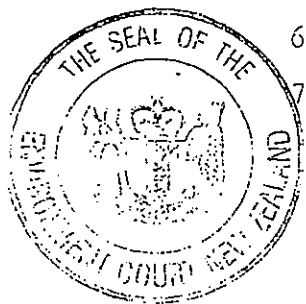
The legal descriptions of the areas subject of these applications are as follows:

Coastal Marine Area

Except for approximately 80m² in the vicinity of the proposed barge terminal, the area is covered by a deemed coastal permit derived from Designation 493 in the Whangarei District Council Transitional District Plan Whangarei County Section 1987, Map 28 and Map 1, sheet 14

Land

	<u>Title</u>	<u>Description</u>	<u>Area(ha)</u>
1	31B/968	Pt lot 5 DP 51845	55.707
2	7C/228	Lot 1, 2, Pt 4 DP 51845	5.3620
3	1825/15	Lot 1 DP 47603	0.0824
4	1825/16	Lot 2 DP 47603	0.0812
5	5D/1475	Lot 3 & 4 DP 47603 & Allot 291 Ruakaka Parish	0.2881
6	2042/48	Lot 5 DP 47603	0.0812
7	1851/11	Lot 6 DP 47603	0.0812

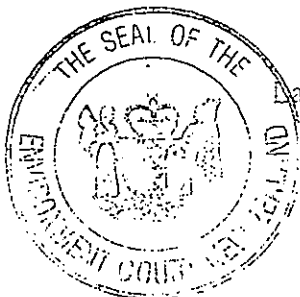


8	1B/857	Lot 6 DP 43643 &	
		Lot 7 DP 47603	0.1621
9	64D/523	Lot 8 DP 47603	0.0812
10	1837/43	Lot 9 DP 47603	0.0812
11	1871/19	Lot 11 DP 47603	0.0812
12	1920/99	Lot 12 DP 47603	0.0812
13	2032/82	Lot 13 DP 47603	0.0812
14	3B/388	Lot 6 DP 51845	0.0920
15	1837/44	Lot 16 DP 47603	0.0812
16	1931/89	Lots 2, 3, 4, 5 DP 43643	0.3238
17	31C/50	Lot 3 DP 51845	0.4755
18	3B/10	Lot 1 DP 52380	4.0478
19	5C/446	Lot 1 DP 53892	8.0937
20	10B/670	Sec 1 Blk VIII Ruakaka SD	5.7136
21	1620/23	Lot 1 DP 43643	0.0809
22	1825/18	Lot 10 DP 47603	0.0812
23	1825/17	Lot 15 DP 47603	0.0812
24	16A/57	Sect 63 Blk VII Ruakaka SD	59.9794
25	95C/994	Lot 1 DP 168926	41.7886
26	22D/1444	Lot 1 DP 65603	0.4046
27	7B/1104	Lot 1 DP 54490	0.8096
28	13B/922	Lot 1 DP 57552	0.3726
29	88C/755	Section 39 Block VII	
		Ruakaka SD Sect 1	
		SO Plan 44270	<u>37.0379</u>
		<u>Total area of land titles</u>	<u>221.7148 ha</u>

the roads to be stopped as shown on the application plan have no present legal description.

4. Types of Resource Consents Sought

Land Use Consents



~~NORTHLAND PORT CORPORATION (NZ) LIMITED, P O BOX 848, WHANGAREI
(C/ M POYNTER, BOFFA MISKELL LTD., P O BOX 250, WHANGAREI)~~

**NORTHPORT LIMITED and NORTHLAND PORT CORPORATION (NZ) LIMITED,
P O BOX 848, WHANGAREI**

Date of commencement of consent: As provided in section 116 of the RMA 1991 (the Act)

Date of expiration of consent: Thirty-five (35) years

Date of lapsing of consent (if not given effect to): Seven (7) years from date of commencement

Purpose of Consent: In the course of operation of the port to discharge stormwater runoff via the stormwater collection and treatment system to Marsden Bay, when the on-land stormwater storage pond facilities reach their design discharge level and when volumes of stormwater and/or land drainage conditions do not allow on-land disposal to irrigation areas

Legal Description of Land: The relevant parts of the land described in Schedule A (below), otherwise as more specifically described in this permit and in the plans and other information submitted by the applicant.
Schedule A:

A.	Crown land comprising foreshore and seabed
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STANDARD CONDITIONS OF CONSENT:

1. The Consent Holder shall undertake all authorised activities in general accordance with the descriptions and plans submitted with the application or as modified in evidence, and shall carry out all works in accordance with the approved Construction/Management Plan.
2. The Consent Holder shall submit to the Northland Regional Council full copies of all final design drawings at least twenty [20] working days prior to commencement of works associated with this consent.
3. The Consent Holder shall pay all Crown charges set by the Northland Regional Council under Section 36 of the Resource Management Act 1991, including charges relating to any transfer of the consent, and to any changes to consent conditions.

4. The Northland Regional Council may serve notice on the Consent Holder of its intention to review the conditions of this consent pursuant to section 128 of the RMA, for the purposes specified therein or to address significant unanticipated adverse effects, at twelve (12) monthly intervals starting from the notified date of the commencement of works associated with this consent.

SPECIAL CONDITIONS OF CONSENT:

5. The Consent Holder shall ensure that stormwater discharged from the stormwater collection and treatment system to the coastal marine area during the operation of the port shall not cause the water quality of the receiving waters immediately outside of the mixing zone as shown on **NRC Plan No 3259** to fall below the following standards:

- (i) The temperature shall not be changed by more than 3°C.
- (ii) The pH shall not be changed by more than 0.2.
- (iii) The concentration of dissolved oxygen shall not be reduced below 80% saturation.
- (iv) The visual clarity (as measured using a black disk or Secchi disk) shall not be reduced by more than 20% of the median background visual clarity at the time of measurement
- (v) The hue shall not be changed by more than 10 Munsell units of the median background hue at the time of measurement.
- (vi) The light penetration in water deeper than 0.5 Z_{eu} shall not be changed by more than 10%, nor shall the light penetration in water shallower than 0.5 Z_{eu} be reduced by more than 20% of the median background euphotic depth at the sediment bed at the time of measurement.

[Z_{eu} is the euphotic depth, defined as the depth at which photosynthetically available radiation [PAR] is reduced to 1% of the level at the water surface].

- (vii) There shall be no conspicuous oil or grease film, scums or foams, floatable or suspended materials, or emissions of objectionable odours.
- (viii) The concentrations of the following metals shall not exceed the following limits:

Total copper 5 milligrams per cubic metre
Total lead 5 milligrams per cubic metre
Total zinc 50 milligrams per cubic metre

- (ix) Based on not less than ten [10] samples collected within any thirty [30] day period, the median concentration of faecal coliform bacteria shall not exceed 14 per 100 millilitres, nor shall the 90 percentile concentration exceed 43 per 100 millilitres.
- (x) There shall be no destruction of aquatic life by reason of a concentration of toxic substances.

6. During each period when stormwater is discharged from the storage pond, the suspended solids concentration in the stormwater at the point of discharge shall not exceed:
 - (i) a median concentration of 50 g/m³ for 100% of the time;
 - (ii) a maximum concentration of 100 g/m³ for 95% of the time.
7. At least twenty [20] working days prior to the commencement of construction of the stormwater treatment system, the Consent Holder shall prepare, and submit to the Northland Regional Council for approval, a discharge and receiving water monitoring programme for the purpose of establishing compliance with the above standards. For the first twelve [12] month period after the stormwater treatment system begins discharging, the receiving waters shall be monitored at not greater than two-monthly intervals.
8. Where from any cause a contaminant (including fuel or sewage) associated with the Consent Holder's operations escapes otherwise than in conformity with this consent, the Consent Holder shall:
 - (i) Immediately take such action or execute such work as may be necessary to stop and/or contain such escape; and
 - (ii) Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the escape; and
 - (iii) Report the escape to the Northern Regional Council within one week of its occurrence and the steps taken or being taken to clean up, remedy any adverse effects and prevent any recurrence of such escape.
9. The Consent Holder shall notify the Council once the stormwater storage pond reaches its design discharge level, and shall then commence stormwater monitoring as follows:
 - (i) Monitoring of the stormwater storage pond water shall be carried out at not greater than six monthly intervals. On each monitoring occasion a single discrete sample shall be taken immediately adjacent to the stormwater storage pond outlet. Samples shall be tested for toxicity using not less than three representative marine species. The choice of toxicity test species and test endpoints to be measured shall be submitted to the Council for approval at least twenty [20] working days prior to stormwater sampling. For each of the three [3] toxicity tests the EC₂₅ (the concentration of stormwater estimated to produce a toxic effect in 25% of the test organisms) shall be greater than the equivalent of a 200-fold dilution of the stormwater. The dilution water used for toxicity tests shall be an uncontaminated sample of Whangarei Harbour water, collected on an incoming tide at the harbour entrance, at a point agreed to by the Council.
 - (ii) The concentrations of faecal and total coliform bacteria shall be measured in the settlement and storage pond water samples.
 - (iii) The results of stormwater toxicity monitoring shall be reported to the Council within one month of each sampling occasion.
10. The stormwater ponds shall be maintained free of floatable solids, oil and grease, and foams, and shall not emit objectionable odours.

11. In the event that the nature of materials handled through the port introduce environmental risks not associated with those materials identified in the application for this consent, the Northland Regional Council may, according to Condition 4 of this consent, review the conditions of this consent for the purpose of imposing suitable additional conditions.
12. The Northland Regional Council, in consultation with the Consent Holder, shall review the Consent Holder's monitoring programme and the results of that monitoring between 6 and 8 months, 12 and 16 months, 5 and 6 years, and 10 and 11 years after the commencement of this consent for the purpose of reviewing monitoring methods, sites and frequencies. Any changes to the monitoring programme shall be subject to the approval of the Northland Regional Council. The Consent Holder shall meet the reasonable costs of these reviews.

ISSUED at Whangarei this Twenty-eighth day of August 2001

**TRANSFER TO: NORTHPORT LIMITED and
 NORTHLAND PORT CORPORATION (NZ) LIMITED**

TRANSFER DATE: 28 MAY 2002

NORTHPORT LIMITED, P O BOX 44, RUAKAKA 0250

To carry out remedial measures associated with structure maintenance, required as a result of seabed scouring due to coastal processes, at the New Zealand Refining Company jetties at Marsden Point, Whangarei Harbour, Map Reference 1735400 E: 6033150 N (Geodetic Datum 2000, New Zealand Transverse Mercator Projection), subject to the following conditions:

- 1 This consent applies only to the jetty area identified on NRC Plan No. 3448 **attached.**
- 2 Remedial measures under this consent shall only take place upon:
 - (a) The Consent Holder producing evidence to the Council that there has been a significant change to the recorded seabed levels at the jetties, such that lateral or vertical capacity of jetty piles and/or dolphins are affected, or will be affected if further lowering of seabed levels is likely; and
 - (b) The New Zealand Refining Company Limited providing its written agreement that the remedial measures are necessary.
- 3 The Consent Holder shall forward a copy of the engineering review of the geotechnical requirements for jetty stability, referred to in the application documents, upon its receipt from the New Zealand Refining Company Limited
- 4 The Consent Holder shall ensure that regular monitoring of seabed levels around the structures is carried out as follows:
 - (a) Once every two months, for a period of 12 months following completion of the dredging of Marsden Point Port berths three and four; and then
 - (b) Once every two years thereafter.

- 5 At least four weeks prior to commencing remedial work, the Consent Holder shall submit a management plan to the Council, for its certification, that:
- (a) Details the nature of the remedial work proposed;
 - (b) Describes the method of undertaking the work;
 - (c) Any impacts expected and how these impacts will be controlled; and
 - (d) Proposed appropriate monitoring.

Note: It is intended that the Council will, within one week of its receipt of the management plan, certify that the proposed work falls within the activities provided for by this consent, or otherwise detail the matters in which the proposed remedial works falls outside the coverage of this consent.

If urgent safety circumstances occur where the above timeframes are inappropriate, then the Consent Holder shall immediately advise the Council of the particular circumstances and shall then continue to liaise with the Council so that compliance with items (a), (b), (c) and (d) is achieved and that the Council's certification may be timely given.

- 6 The Consent Holder shall notify the Council in writing of the date remedial work is intended to commence, at least two weeks beforehand on each occasion, except where urgent safety circumstances occur as set out in Condition 5.
- 7 The Consent Holder shall notify the Council in writing as soon as remedial work is completed on each occasion.
- 8 The Consent Holder shall keep the coastal marine area free of debris resulting from the Consent Holder's activities.
- 9 Notwithstanding the generality of Condition 8, only clean material, free from contaminant and loose material (e.g. concrete rubble, steel, undersized rocks and rock fragments) that might release contaminants into the coastal marine area, shall be used in remedial work.
- 10 All loose material, such as rock spalls, forming part of the remedial works shall be of sufficient size and density and placed so as to preclude their movement out of the remedial works site under the most extreme action likely to be imparted on them.
- 11 The Consent Holder shall, for the purposes of adequately monitoring the consent as required under Section 35 of the Act, on becoming aware of any contaminant associated with the Consent Holder's operations escaping otherwise than in conformity with this consent:
- (a) Immediately take such action, or execute such work as may be necessary, to stop and/or contain such escape;
 - (b) Immediately notify the Council by telephone of an escape of contaminant;

- (c) Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the escape; and
 - (d) Report to the Council in writing within one week on the cause of the escape of the contaminant and the steps taken or being taken to effectively control or prevent such escape.
- 12 The Council may, in accordance with Section 128 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions of this consent. Such notice may be served annually during the month of May. The review may be initiated for any one or more of the following purposes:
 - (a) To deal with any adverse effects on the environment that may arise from the exercise of the consent and which it is appropriate to deal with at a later stage, or to deal with any such effects following assessment of the results of the monitoring of the consent and/or as a result of the Regional Council's monitoring of the state of the environment in the area;
 - (b) To require the adoption of the best practicable option to remove or reduce any adverse effect on the environment;
 - (c) To provide for compliance with rules in any regional plan that has been made operative since the commencement of the consent;
 - (d) To deal with any inadequacies or inconsistencies the Council considers there to be in the conditions of the consent, following the establishment of the activity the subject of the consent;
 - (e) To deal with any material inaccuracies that may in future be found in the information made available with the application. (Notice may be served at any time for this reason); and
 - (f) To change existing, or impose new limits on conditions.

The Consent Holder shall meet all reasonable costs of any such review.

- 13 Prior to the expiry, cancellation, or lapsing of this consent the Consent Holder shall remove all structures and other materials and refuse associated with this consent from the consent area and shall restore the consent area to the satisfaction of the Council, unless an application for a replacement consent has been properly made beforehand.
- 14 For the purposes of the lapsing provisions of Section 125 of the Act, this consent shall not lapse until its expiry date.

EXPIRY DATE: 31 MAY 2032

ISSUED at Whangarei this Twenty-third day of April 2004

**D L Roke
Consents Manager**



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APPENDIX 31C

RESOURCE CONSENTS FOR BERTHS 3 AND 4

Decision #1 - Recommendation to the Minister of Conservation: Coastal Permit No. 1

Date of commencement of consent: As provided in Section 119(7) of the RMA 1991 (the Act).

Date of expiration of consent: Fifteen [15] years

Date of lapsing of consent (if not given effect to): Ten [10] years from date of commencement.

Purpose of Consent: Disturbance of the seabed by excavation (capital dredging) to allow an extension beyond the dredged area authorised by existing consent NLD96 5055(02) and the deepening of approximately 17.5 hectares of the existing dredged area from RL -13m to RL -14.5m (Chart Datum) as shown on Northport Development Berth 3 & 4 Plan Ref. D60-00-069 Issue 3 dated 24 December 2003.

Legal Description of Land: The relevant parts of the land described in Schedule A (below), otherwise as more specifically described in this permit and in the plans and other information submitted by the applicant.

Schedule A:

1.	Crown land comprising seabed
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STANDARD CONDITIONS OF CONSENT:

1. The Consent Holder shall undertake all authorised activities in general accordance with the descriptions and plans submitted with the application or as modified in evidence, and shall carry out all works in accordance with the Construction Management Plan.
2. The Consent Holder shall submit to the Northland Regional Council full copies of all final design drawings at least twenty [20] working days prior to commencement of works associated with this consent.
3. The Consent Holder shall notify the Northland Regional Council at least ten [10] working days in advance of the date of the commencement of works associated with this consent.
4. The Consent Holder shall notify the Northland Regional Council within ten [10] working days following the date of the completion of all works associated with this consent.
5. The Consent Holder shall pay all Crown charges set by the Northland Regional Council under Section 36 of the Resource Management Act 1991, including charges relating to any transfer of the consent, and to any changes to consent conditions.

6. The Northland Regional Council may serve notice on the Consent Holder of its intention to review the conditions of this consent pursuant to Section 128 of the RMA for the purposes specified therein, or to address significant unanticipated adverse effects, during the twenty [20] working days following six [6] monthly intervals starting from the notified date of the commencement of works associated with this consent.
7. The Consent Holder shall ensure that copies of this consent are provided to the person who is to carry out the work, prior to construction. A copy of the consent shall be held on site.

SPECIAL CONDITIONS OF CONSENT:

8. The Consent Holder shall pay a financial contribution to the Northland Regional Council of up to \$10,000 per annum to the Harbour Improvement Fund established by Condition 11 on Coastal Permit No. 2 [NLD96 5055 (02)] for projects approved under that condition. The first such additional contribution to be paid twelve [12] months after the date on which the construction of the port expansion works authorised by this consent commence for a period of ten [10] years. The purpose of the fund is to enable improvements to the health of the Whangarei Harbour, including its flora and fauna.
9. At least twenty [20] working days prior to construction works commencing, the Consent Holder shall, to the extent that the information has not already been supplied in an overall project management plan for the Marsden Point deep water port, submit to the Northland Regional Council a Construction Management Plan with which it shall comply, and which shall provide the following information:
 - (i) A description of proposed works, together with drawings;
 - (ii) A construction programme including a timetable, sequence of events and expected duration of all proposed works;
 - (iii) A breakdown of the project into construction packages for later submission in greater detail;
 - (iv) Community liaison arrangements;
 - (v) Contingency response plan;
 - (vi) Community Liaison Group (CLG) comments on the Plan and the Consent Holder's response to those comments;
 - (vii) Confirmation that the New Zealand Refining Company has been supplied a copy of the Plan; and
10. The Northland Regional Council shall, within twenty working days of receipt of the plan notify the Consent Holder of any respects in which the plan fails to comply with the information or evidence supplied by the Consent Holder in support of its application, or with the conditions of this consent. Any such deficiencies shall be remedied by the Consent Holder and the Construction Management Plan resubmitted to the Northland Regional Council prior to commencement of work set out in the plan.

11. At least twenty [20] working days before construction commences on any package of work identified in the Construction Management Plan, the following additional information shall be supplied to the Northland Regional Council in a Design and Construction Report with which it shall comply and which shall cover, where appropriate:

- (i) Dredging activities;
- (ii) Perimeter dyke construction;
- (iii) Geotextile lining of bund wall;
- (iv) Pile driving activities;
- (v) Dust control measures;
- (vi) Noise controls proposed;

and shall include:

- (vii) Community Liaison Group (CLG) comments on the Report and the Consent Holder's response;
- (viii) Confirmation that the New Zealand Refining Company has been supplied with a copy of the Plan;
- (ix) Plans and specifications providing sufficient detail to show compliance with the resource consent;
- (x) Monitoring procedures where applicable; and
- (xi) Reporting procedures where applicable.

The Northland Regional Council shall, within twenty [20] working days of receipt of the additional information, notify the Consent Holder of any further the respects in which it fails to comply with the information or evidence supplied by the Consent Holder in support of its application.

Any such deficiencies shall be remedied by the Consent Holder and the Design and Construction Report resubmitted to the Northland Regional Council prior to commencement of the works described in the report.

12. The Consent Holder may, at any time, submit variations to the Construction Management Plan or any Design and Construction Reports to the Northland Regional Council, together with comments from the Community Liaison Group, the Consent Holder's response to those comments, and confirmation that the New Zealand Refining Company has been supplied with a copy of the variations. Any variation shall be subject to the Northland Regional Council's powers under this condition and the same time limits shall apply save that, where the variation is minor, the Northland Regional Council shall notify its acceptance or otherwise of the proposed variation within five [5] working days.
13. All material dredged during the capital dredging programme shall be placed in the reclamation or deposited on land at Marsden Point presently owned by the Consent Holder or Northland Port Corporation (NZ) Ltd.

14. All works in connection with the construction of the dredge basin (including marine activities such as ship movements, loading and unloading) shall be undertaken in a manner that minimises adverse effects on:
- (i) New Zealand Refining Company's [NZRC] Marsden Point jetties; and
 - (ii) the safe and efficient use of Whangarei Harbour in the vicinity of Marsden Point.
15. The Consent Holder shall carry out, at its own expense, a study to determine current speeds and directions in the vicinity of NZRC's jetties within six [6] months following completion of the capital dredging works. The results of these studies shall be forwarded to the Northland Regional Council and shall be made publicly available by the Consent Holder.
- The Consent Holder shall make available to the Northland Regional Council the results of all bathymetric studies undertaken in agreement with the NZRC and the results made publicly available. In the event that they indicate unanticipated adverse effects, the conditions of this consent may be reviewed as *per* Standard Condition 6 above.
16. The Consent Holder shall, immediately upon completion of the capital dredging works associated with this consent, notify in writing [and shall include a scale plan of the completed works]:
- Nautical Information Advisor
LINZ
Private Box 5501
WELLINGTON
- Maritime Safety Authority
P O Box 27 006
WELLINGTON
17. The Consent Holder shall keep the Coastal Marine Area free of litter and other debris arising from the exercise of this consent.
18. Where from any cause a contaminant (including fuel or sewage) associated with the Consent Holder's operations escapes otherwise than in conformity with this consent, the Consent Holder shall:
- (i) Immediately take such action or execute such work as may be necessary to stop and/or contain such escape; and
 - (ii) Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the escape; and
 - (iii) Report the escape to the Northland Regional Council within one [1] week of its occurrence and the steps taken or being taken to clean up, remedy any adverse effects and prevent any recurrence of such escape.
19. Dredging shall be carried out using the appropriate design of cutter head and operation to minimise suspension of sediment into the water column to the extent that:

- (i) The visual clarity (as measured using a black disk or Secchi disk) of harbour water shall not be reduced by more than 20% of the median background visual clarity at the time of measurement; and
 - (ii) There shall be no conspicuous scums or foams, floatable or suspended material in harbour water, as a result of dredging immediately outside of a 400 metre radius of the point of dredging.
20. During dredging, visual checks shall 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 shall be carried out in accordance with Condition 21.
21. The results of each monitoring event shall be reported to the Northland Regional Council within one week of monitoring being completed, or within 24 hours of any non-compliance. The Council reserves the right to require additional monitoring in the event of non-compliance with Condition 20 above.
22. All construction works shall be designed and conducted to ensure that noise from those activities does not exceed the noise limits in the following table. Sound levels shall be measured and assessed in accordance with the provision of NZS6803:1999 Acoustics-Construction Noise.

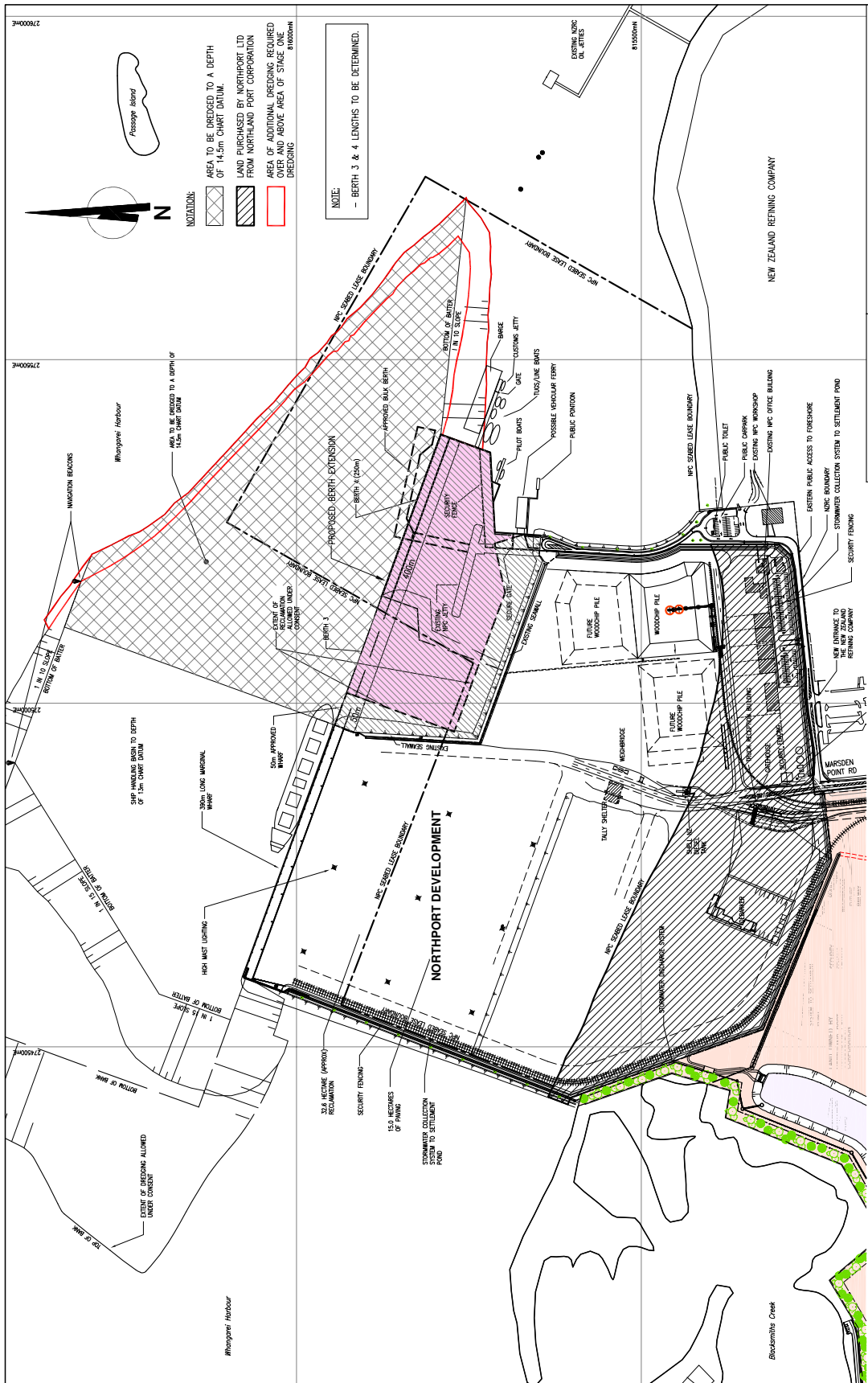
At Dwellings in Residential or Rural Area						
Time Period	Weekdays (dBA)		Saturdays (dBA)		Sundays and public holidays (dBA)	
	L _{eq}	L _{max}	L _{eq}	L _{max}	L _{eq}	L _{max}
0700 – 0730	55	75	45	75	45	75
0730 – 1800	70	85	70	85	55	85
1800 – 2000	65	80	45	75	45	75
2000 – 0700	45	65	45	65	45	65

Between 10pm and 7am construction noise shall be measured cumulatively with port noise activities using the L_{eq} and L_{max} descriptors.

23. As part of the **Construction Management Plan**, the Consent Holder shall submit to the Northland Regional Council and the Whangarei District Council, at least twenty [20] working days prior to exercising this Consent, an Acoustic Design Report, prepared by a suitably qualified and experienced person.
24. The Acoustic Design Report shall include a formal project noise management plan that provides for all of those matters set out in Annex E of NZS 6803:1999 *Acoustics – Construction Noise*. All matters identified in the plan shall be adhered to during the construction programme. The plan shall be of sufficient detail to be able to demonstrate that compliance with the above noise limits, monitoring and mitigation measures will be achieved at all times. The report shall detail as a minimum:

- (i) the reasonable potential for cumulative noise emissions from the site;
 - (ii) the means by which noise emissions from the site will be minimised and maintained below the noise performance standards specified in this consent;
 - (iv) any variation in sound propagation arising from the topography and characteristics of the area, taking into account meteorological conditions that would increase levels at the locations under consideration; and
 - (v) any comments of the Community Liaison Group and the responses to these.
25. Prior to any dredge operation occurring between the hours of 10pm and 7am:
- (i) The dredge shall be monitored to demonstrate compliance with construction noise limits cumulatively with port noise activities.
 - (ii) The monitoring shall be undertaken by a suitably qualified and experienced person who must prepare a Compliance Report detailing the noise emissions from the dredge measured at a distance of 100 metres in four quadrants generally on the axes of the vessel.
 - (iii) The Compliance Report must:
 - (a) detail the operating mode of the dredge and any measures that have been put in place for noise mitigation;
 - (b) predict the noise levels at measurement locations 1 to 4 inclusive [refer Hegley Acoustic Consultants report October 2003 - Northport Development Noise Monitoring Sites] using the various dredge locations that will result in the maximum noise exposure at each location;
 - (c) describe the port noise levels assumed in the assessment (based on the busy operation of the port), the distances involved; and
 - (d) set out the methodology used in arriving at any conclusion that noise limits will be complied with.
 - (iv) The Consent Holder shall submit the Compliance Report to the Northland Regional Council and the Whangarei District Council at least twenty [20] working days prior to any requirement to operate the dredge between the hours of 10pm and 7am.
26. Subsequent to commencing dredging between the hours of 10pm and 7am, dredge noise shall be monitored to demonstrate compliance with the construction noise limits. The monitoring shall include times when the port is busy and shall be of sufficient duration and frequency to demonstrate that dredge noise is complying with the limits as the dredge moves around the area to be dredged.
- If the noise limits are not met then dredging shall cease immediately between 10pm and 7am until mitigation measures are instigated and it can again be demonstrated to Council that the dredging can be made to comply.
27. At least twenty [20] working days prior to the commencement of dredging the Consent Holder shall submit to the Northland Regional Council and the Whangarei District Council an Operational Noise Management Plan. This plan shall include:

- (i) the frequency and content of training and ongoing education that is to be given to management and workers including contractors at the port;
 - (ii) how checks are to be made on the impulse noise emissions at night including monitoring and rectification;
 - (iii) how complaints are to be received and actioned on a 24hr basis; and
 - (iv) the proposed times, duration and location of monitoring (The times that are selected shall be of sufficient quantity to provide a check on the variability of noise from the port, including various combinations of ship and ship loading activities that are likely to occur).
28. The Acoustic Design Report and Noise Management Plan shall:
- (a) demonstrate how the noise limits are to be complied with on an ongoing basis measures required to prevent noise (including impulsive noise) being generated unreasonably; and
 - (b) include proposals for the development and trial of a system for the self detection at the Port of significant impulse noise. The object of the system shall be to alert contractors and workers at the Port to significant impulse noise as it occurs in a way that assists in improving impulse noise management and reduces the level of noise generated by the operations in question. If trials are successful the Consent Holder shall implement such a system. If trials are unsuccessful the Consent Holder shall endeavour to identify and implement an alternate means of achieving the same objective. The results of the trial and other actions to be reported to the Community Liaison Group.
29. All reports on the noise monitoring and mitigation measures shall be submitted to the Northland Regional Council and Whangarei District Council and shall be provided to the Community Liaison Group.
30. Within four [4] years after completion of capital dredging associated with the 3rd berth development the consent holder shall commission an expert marine biologist to provide a report identifying an area or areas where maintenance dredging has not been undertaken and is unlikely to be required and the extent of natural re-colonisation of marine life of life in those area. The report shall include recommendations as to whether the consent holder should undertake the trial provision of coarse shell or similar substrate within an identified trial area to assist with re-colonisation. The consent holder shall submit to the NRC a copy of the report and shall, if so required by the NRC, implement the recommendations as to a trial in the report and shall in consultation with the NRC agree the area to be trialled, the subsequent monitoring required and any extension of the area if the trial proves sufficiently beneficial. If no action is taken as a result of the initial report, a review of the initial findings will be undertaken at five [5] yearly intervals after dredging, unless and until two consecutive reviews confirm that natural colonization would not be materially assisted by the trial.



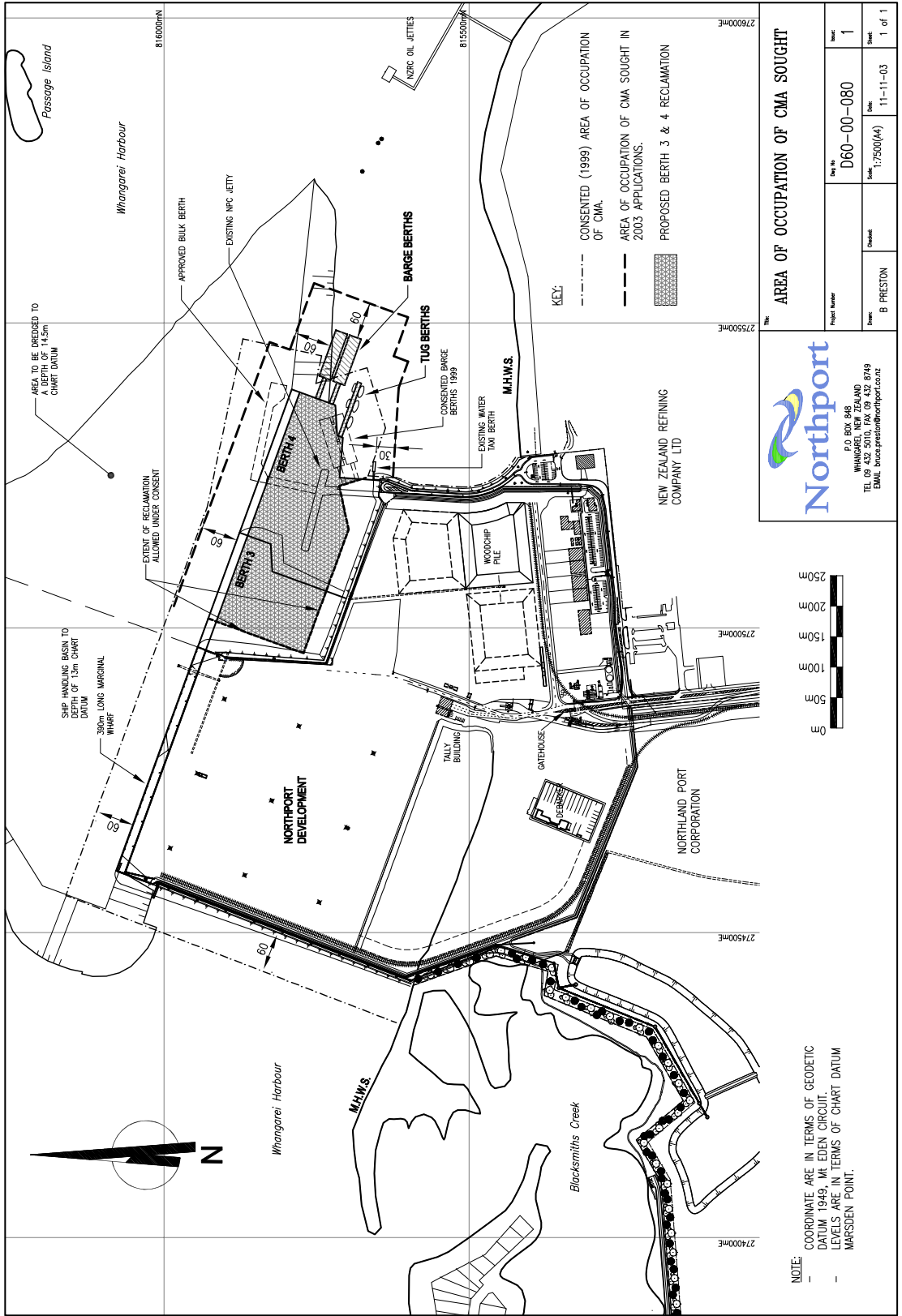
NOTE:
- COORDINATES ARE IN TERMS OF GEODETIC DATUM 1949,
MA EDEN CIRCUIT.
- LEVELS ARE IN TERMS OF CHART DATUM.

NORTHPORT DEVELOPMENT
BERTH 3 & 4

Northport
P.O. BOX 848
WHANGAREI, NEW ZEALAND
TEL 09 432 5010, FAX 09 432 8749
EMAIL: info@northport.co.nz

Drawn By	B PRESTON	Scale	1:25000(A)	Issue	1
Drawn No	D60-00-069	Scale	1:3000(A3)	Issue	3

ISSUE	DATE	DETAILS	APPROV	BY
3	24-12-03	FERRY AND PONTON AREA REVISED		CJB
2	29-10-03	AREA NOT DREDGED TO DATE EASTERN END DREDGE BASIN ADDED		BMP
1	18-9-03	NPC LAND TRANSFERRED TO NPL ADDED, NOTES ADDED TO WHARF EXTENSIONS		BMP
0	1-5-03	ISSUED		BMP



Decision #2 - Recommendation to the Minister of Conservation: Coastal Permit No. 2

Date of commencement of consent: As provided in Section 119(7) of the RMA 1991 (the Act).

Date of expiration of consent: Unlimited.

Date of lapsing of consent (if not given effect to): Ten [10] years from date of commencement.

Purpose of Consent: To reclaim approximately 5.2 ha of seabed, as shown on Northport Development Berth 3 & 4 Plan Ref. D60-00-069, Issue 3 dated 24 December 2003, including the deposition of dredged material, disturbance of the seabed, and building of rock retaining walls [including any diversion of seawater as a consequence of building the retaining walls and the reclamation].

Legal Description of Land: The relevant parts of the land described in Schedule A (below), otherwise as more specifically described in this permit and in the plans and other information submitted by the applicant.

Schedule A:

1.	Crown land comprising foreshore and seabed
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STANDARD CONDITIONS OF CONSENT:

1. The Consent Holder shall undertake all authorised activities in general accordance with the descriptions and plans submitted with the application or as modified in evidence, and shall carry out all works in accordance with the Construction Management Plan
2. The Consent Holder shall submit to the Northland Regional Council full copies of all final design drawings at least twenty [20] working days prior to work commencing.
3. The Consent Holder shall notify the Northland Regional Council at least ten [10] working days in advance of the date of the commencement of works associated with this consent.
4. The Consent Holder shall notify the Northland Regional Council within ten [10] working days following the date of the completion of all works and activities associated with this consent.
5. The Consent Holder shall pay all Crown charges set by the Northland Regional Council under Section 36 of the Resource Management Act 1991, including charges relating to any transfer of the consent, and to any changes to consent conditions.
6. The Northland Regional Council may serve notice on the Consent Holder of its intention to review the conditions of this consent pursuant to Section 128 of the RMA for the purposes specified therein, or to address significant unanticipated adverse effects, during the twenty [20] working days following six [6] monthly intervals starting from the notified date of the commencement of works associated with this consent.

7. The Consent Holder shall maintain all structures covered by this consent in good order and repair. Maintenance works authorised by this consent shall be routine maintenance and repair to the exterior walls of the reclamation consistent with the scale and form of the initial approved reclamation.
8. The Consent Holder shall ensure that copies of this consent are provided to the person who is to carry out the work, prior to construction. A copy of the consent shall be held on site.

SPECIAL CONDITIONS OF CONSENT:

9. At least twenty [20] working days prior to construction works commencing the Consent Holder shall, to the extent that the information has not already been supplied in an overall project management plan for the Marsden Point deep water port, submit to the Northland Regional Council a Construction Management Plan with which it shall comply and which shall provide the following information:

- (i) A description of proposed works, together with drawings;
- (ii) A construction programme including a timetable, sequence of events and expected duration of all proposed works;
- (iii) A breakdown of the project into construction packages for later submission in greater detail;
- (iv) Community liaison arrangements;
- (v) Contingency response plan;
- (vi) Community Liaison Group (CLG) comments on the Plan and the Consent Holder's response to those comments; and
- (vii) Confirmation that the New Zealand Refining Company has been supplied with a copy of the Plan.

The Northland Regional Council shall, within twenty [20] working days of receipt of the plan notify the Consent Holder of any respects in which the plan fails to comply with the information or evidence supplied by the Consent Holder in support of its application, or with the conditions of this consent. Any such deficiencies shall be remedied by the Consent Holder and the Construction Management Plan resubmitted to the Northland Regional Council prior to commencement of work set out in the plan.

10. At least twenty [20] working days before reclamation works commence on any package of work identified in the Construction Management Plan, the following additional information shall be supplied to the Northland Regional Council in a Design and Construction Report with which it shall comply and which shall cover, where appropriate:
 - (i) Dredging activities;
 - (ii) Perimeter dyke construction;
 - (iii) Geotextile lining of bund wall;

- (iv) Pile driving activities;
- (v) Dust control measures;
- (vi) Noise controls proposed;

and shall include:

- (vii) Community Liaison Group (CLG) comments on the Report and the Consent Holder's response;
 - (viii) Confirmation that the New Zealand Refining Company has been supplied with a copy of the Plan;
 - (ix) Plans and specifications providing sufficient detail to show compliance with the resource consent;
 - (x) Monitoring procedures where applicable;
 - (xi) Reporting procedures where applicable.
11. The Northland Regional Council shall, within twenty [20] working days of receipt of the additional information, notify the Consent Holder of any further respects in which it fails to comply with the information or evidence supplied by the Consent Holder in support of its application, and the conditions of this consent.
- Any such deficiencies shall be remedied by the Consent Holder and the Design and Construction Report resubmitted to the Northland Regional Council prior to commencement of the works described in the report.
12. The Consent Holder may, at any time, submit variations to the Construction Management Plan or any Design and Construction Reports to the Northland Regional Council, together with comments from the Community Liaison Group, the Consent Holder's response to those comments, and confirmation that the New Zealand Refining Company has been supplied with a copy of the variations. Any variation shall be subject to the Northland Regional Council's powers under this condition and the same time limits shall apply save that, where the variation is minor, the Northland Regional Council shall notify its acceptance or otherwise of the proposed variation within five [5] working days.
13. All material dredged during the capital dredging programme shall be placed in the reclamation or deposited on land at Marsden Point presently owned by the Consent Holder or Northland Port Corporation (NZ) Ltd.
14. The Consent Holder shall keep the Coastal Marine Area free of litter and other debris arising from the exercise of this consent.
15. The Consent Holder shall use the forum provided by the Community Liaison Group established in connection with the original port development under Coastal Permit No. 3 [NRC CON 20030505503] to address relevant community concerns and needs arising from the exercise of resource consents for the development and operation of the extension to the port at Marsden Point.

The Consent Holder will meet quarterly with representatives of Patuharakeke Hapu to review progress and operation of the project and to review monitoring results.

16. Where from any cause a contaminant (including fuel or sewage) associated with the Consent Holder's operations escapes otherwise than in conformity with this consent, the Consent Holder shall:
- (i) Immediately take such action or execute such work as may be necessary to stop and/or contain such escape;
 - (ii) Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the escape; and
 - (iii) Report the escape to the Northland Regional Council within one week of its occurrence and the steps taken or being taken to clean up, remedy any adverse effects and prevent any recurrence of such escape.
17. All works in connection with the construction of the reclamation (including marine activities such as ship movements, loading and unloading) shall be undertaken in a manner which minimises adverse effects on:
- (i) New Zealand Refining Company's [NZRC] jetties; and
 - (ii) The safe and efficient use of Whangarei Harbour in the vicinity of Marsden Point.
18. The Consent Holder shall carry out at its own expense a study to determine current speeds and directions in the vicinity of NZRC's jetties within six [6] months following completion of the reclamation works. The results of these studies shall be forwarded to the Northland Regional Council and shall be made publicly available.
19. The Consent Holder shall, immediately upon completion of the reclamation works associated with the consent, notify in writing [and shall include a scale plan of the completed reclamation works]:
- Nautical Information Advisor
LINZ
Private Box 5501
WELLINGTON
- Maritime Safety Authority
P O Box 27 006
WELLINGTON
20. The Consent Holder shall provide the Northland Regional Council with a copy of the plan of survey submitted to the Minister of Conservation under Section 245 of the Resource Management Act 1991.
21. At least twenty [20] working days prior to the commencement of any works, the Consent Holder shall submit to the Northland Regional Council full design drawings for the discharge system with specifications confirming the adequacy of the system to meet the conditions imposed by this consent on decant water discharges.

22. The Consent Holder shall carry out, or commission at its own expense, monitoring of beach profiles for a distance of not less than 500m each side of the port reclamation, at not greater than six [6] monthly intervals for a period of ten [10] years following completion of the reclamation. The results of this monitoring shall be reported to the Northland Regional Council immediately following completion of each survey.
23. The Consent Holder shall ensure that all reclamation fill shall be from the dredged turning basin unless otherwise approved by the Northland Regional Council.
24. The Consent Holder shall ensure that all quarried rock used to construct bund walls is clean prior to placement and will not leach contaminants into the Coastal Marine Area.
25. At least twenty [20] working days prior to the commencement of the discharge of decant water commences the Consent Holder shall submit a Monitoring Programme design to the Council. The Monitoring Programme shall be adequate to establish that during discharge of decant water the following standards are met:
 - (i) The suspended solids concentration in the decant discharge at the point where it leaves the reclamation area during each discharge period shall not exceed 300g/m³ for 95% of the samples or for 95% of the time.
 - (ii) The mixing zone for decant water discharge shall extend 800m up- and down-current and 500m to the north of the decant water outfall.
- 25A. During the decant discharge, visual checks shall be carried out daily and in the event that such a check shows evidence of conspicuous sediment or discolouration in the water column, testing shall be carried out to ensure that visual clarity [as measured using a black disc or Secchi disc] in the receiving water at the down-current edge of the mixing zone shall not be reduced by more than 20% of the median background visual clarity at the time of measurement. The details of the visual checks, including how they will be recorded, and the visual clarity testing shall be included in the Monitoring Programme as required by Condition 25.
- 25B
 - (a) The results of each monitoring event undertaken pursuant to Conditions 25 and/or 25A shall be reported to the Northland Regional Council within one week of monitoring being completed, or within 24 hours of any non-compliance. The Northland Regional Council reserves the right to require additional monitoring in the event of non-compliance with standards.
 - (b) Monitoring at the mixing zone boundary undertaken pursuant to Conditions 25 and/or 25A shall continue until such time as the Northland Regional Council is satisfied that the perimeter walls of the reclamation are sealed and no further seepage from reclaimed material is detected.
26. Prior to the exercise of this consent the Consent Holder shall submit to the Northland Regional Council a management plan including details of proposed dredged material disposal sites, drainage and contour levels.
27. The Northland Regional Council shall within twenty [20] working days of receipt of the plan, notify the Consent Holder of any respects in which the plan fails to comply with information or evidence supplied by the Consent Holder in support of its application.

28. The Consent Holder may, at any time, submit variations to the management plan, together with any comments of the Community Liaison Group, and the Consent Holder's response to those comments. Any variation shall be subject to the Northland Regional Council's powers under this condition, and the same time limits shall apply, save that where the variation is minor, the Northland Regional Council shall notify its acceptance or otherwise of the proposed variation within five [5] working days.
29. The Northland Regional Council, in consultation with the Consent Holder, shall review the Consent Holder's monitoring programme and the results of that monitoring between 6 and 8 months, 12 and 16 months, 5 and 6 years, and 10 and 11 years after the commencement of this consent for the purpose of reviewing monitoring methods, sites and frequencies. Any changes to the monitoring programme shall be subject to the approval of the Northland Regional Council. The Consent Holder shall meet the reasonable costs of these reviews.
30. The Consent Holder shall ensure that all stormwater diversion and drainage channels, including flood flowpaths, are maintained substantially free of litter and debris.
31. All construction works shall be designed and conducted to ensure that noise from those activities does not exceed the noise limits in the following table. Sound levels shall be measured and assessed in accordance with the provision of NZS6803:1999 Acoustics-Construction Noise.

At Dwellings in Residential or Rural Area						
Time Period	Weekdays (dBA)		Saturdays (dBA)		Sundays and public holidays (dBA)	
	L _{eq}	L _{max}	L _{eq}	L _{max}	L _{eq}	L _{max}
0700 – 0730	55	75	45	75	45	75
0730 – 1800	70	85	70	85	55	85
1800 – 2000	65	80	45	75	45	75
2000 – 0700	45	65	45	65	45	65

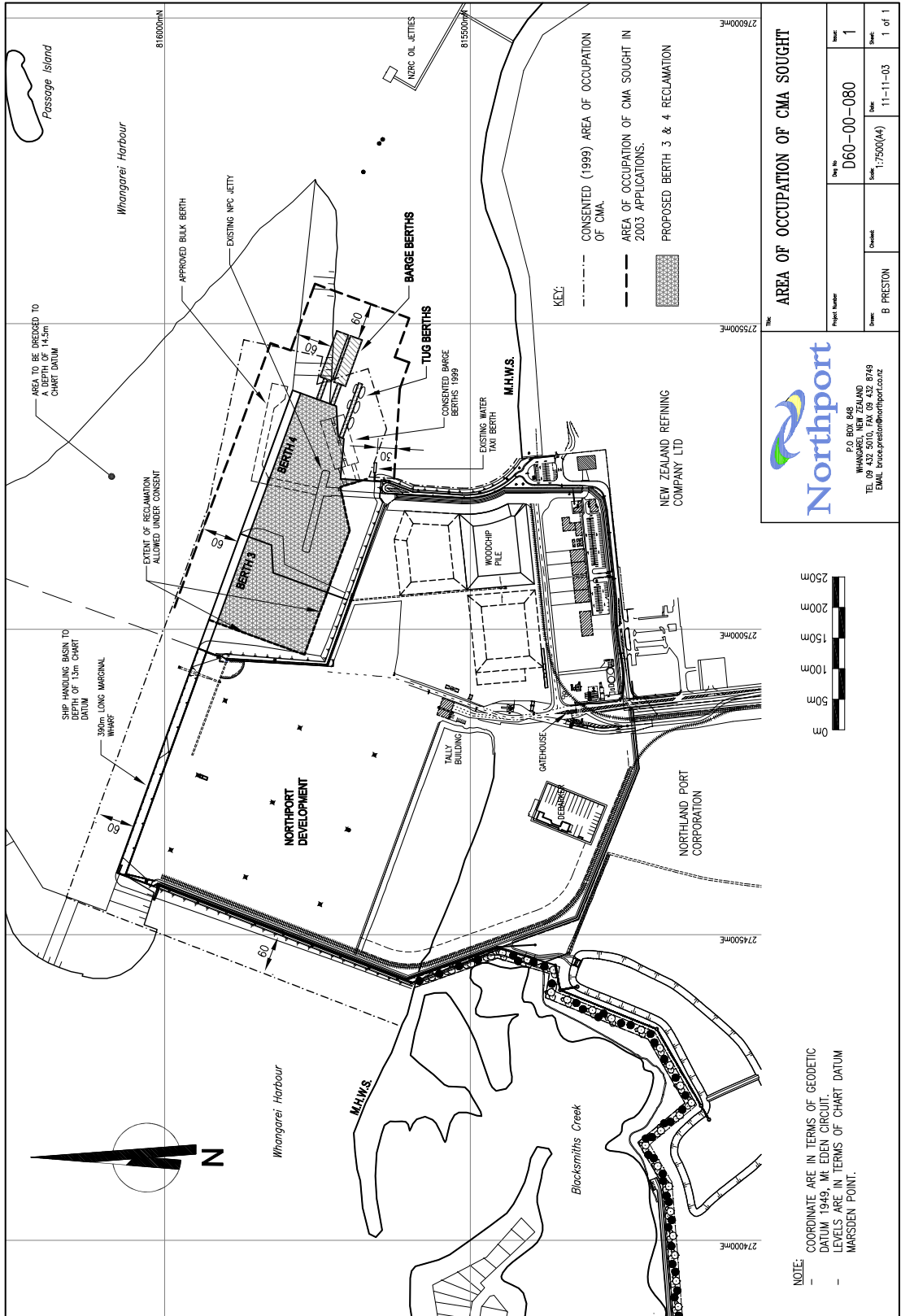
Between 10pm and 7am construction noise shall be measured cumulatively with Port noise activities using the L_{eq} and L_{max} descriptors.

32. As part of the **Construction Management Plan** the Consent Holder shall submit to the Northland Regional Council and the Whangarei District Council at least twenty [20] working days prior to exercising this Consent, an Acoustic Design Report, prepared by a suitably qualified and experienced person.
33. The Acoustic Design Report shall include a formal project noise management plan that provides for all of those matters set out in Annex E of NZS 6803:1999 *Acoustics – Construction Noise*. All matters identified in the plan shall be adhered to during the construction programme. The plan shall be of sufficient detail to be able to demonstrate that compliance with the above noise limits, monitoring and mitigation measures will be achieved at all times. The report shall detail as a minimum:
- (i) the reasonable potential for cumulative noise emissions from the site;
 - (ii) the means by which noise emissions from the site will be minimised and maintained below the noise performance standards specified in this consent;

- (iii) any variation in sound propagation arising from the topography and characteristics of the area, taking into account meteorological conditions that would increase levels at the locations under consideration; and
 - (iv) any comments of the Community Liaison Group and the responses to these.
- 34. At least twenty [20] working days prior to the commencement of construction the Consent Holder shall submit to the Northland Regional Council and the Whangarei District Council an Operational Noise Management Plan. This plan shall include:
 - (i) the frequency and content of training and ongoing education that is to be given to management and workers including contractors at the port;
 - (ii) how checks are to be made on the impulse noise emissions at night including monitoring and rectification;
 - (iii) how complaints are to be received and actioned on a 24hr basis; and
 - (iv) the proposed times, duration and location of monitoring (The times that are selected shall be of sufficient quantity to provide a check on the variability of noise from the port, including various combinations of ship and ship loading activities that are likely to occur).
- 35. The Acoustic Design Report and Noise Management Plan shall:
 - (a) demonstrate how the noise limits are to be complied with on an ongoing basis measures required to prevent noise (including impulsive noise) being generated unreasonably; and
 - (b) include proposals for the development and trial of a system for the self detection at the Port of significant impulse noise. The object of the system shall be to alert contractors and workers at the Port to significant impulse noise as it occurs in a way that assists in improving impulse noise management and reduces the level of noise generated by the operations in question. If trials are successful the Consent Holder shall implement such a system. If trials are unsuccessful the Consent Holder shall endeavour to identify and implement an alternate means of achieving the same objective. The results of the trial and other actions to be reported to the Community Liaison Group.
- 36. All reports on the noise monitoring and mitigation measures shall be submitted to the Northland Regional Council and Whangarei District Council and shall be provided to the Community Liaison Group.

Advice Note:

- 1. The Consent Holder is advised that noise and landscaping conditions relating to the reclamation once formed are attached to the Whangarei District Council land use consents.



Decision #3 - Recommendation to the Minister of Conservation: Coastal Permit No. 3

Date of commencement of consent: As provided in Section 119(7) of the RMA 1991 (the Act).

Date of expiration of consent: Thirty five [35] years.

Date of lapsing of consent (if not given effect to): Ten [20] years from date of commencement.

Purpose of Consent: To erect and place new wharves and related structures for new berths 3 and 4 in the Coastal Marine Area abutting the reclamation, and use these for port-related purposes.

Legal Description of Land: The relevant parts of the land described in Schedule A (below), otherwise as more specifically described in this permit and in the plans and other information submitted by the applicant.

Schedule A:

1.	Crown land comprising seabed
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STANDARD CONDITIONS OF CONSENT:

1. The Consent Holder shall undertake all authorised activities in general accordance with the descriptions and plans submitted with the application or as modified in evidence, and shall carry out all works in accordance with the Construction Management Plan.
2. The Consent Holder shall submit to the Northland Regional Council full copies of all final design drawings at least twenty [20] working days prior to the commencement of works associated with this consent.
3. The Consent Holder shall notify the Northland Regional Council at least ten [10] working days in advance of the date of the commencement of works associated with this consent.
4. The Consent Holder shall notify the Northland Regional Council within ten [10] working days following the date of the completion of all activities associated with this consent.
5. The Consent Holder shall pay all Crown charges set by the Northland Regional Council under Section 36 of the Resource Management Act 1991, including charges relating to any transfer of the consent, and to any changes to consent conditions.
6. The Northland Regional Council may serve notice on the Consent Holder of its intention to review the conditions of this consent pursuant to Section 128 of the RMA for the purposes specified therein, or to address significant unanticipated adverse effects, during the twenty 20 working days following six [6] monthly intervals starting from the notified date of the commencement of works associated with this consent.

7. The Consent Holder shall maintain all structures covered by this consent in good order and repair. Maintenance works authorised by this Consent shall be routine maintenance and repair consistent with the scale and form of the initial approved structures.
8. The Consent Holder shall ensure that copies of this consent are provided to the person who is to carry out the work, prior to construction. A copy of the consent shall be held on site.

SPECIAL CONDITIONS OF CONSENT:

9. At least twenty [20] working days prior to construction works commencing the Consent Holder shall, to the extent that the information has not already been supplied in an overall project management plan for the Marsden Point deep water port, submit to the Northland Regional Council a Construction Management Plan with which it shall comply and which shall provide the following information:

- (i) A description of proposed works, together with drawings;
- (ii) A construction programme including a timetable, sequence of events and expected duration of all proposed works;
- (iii) A breakdown of the project into construction packages for later submission in greater detail;
- (iv) Community liaison arrangements;
- (v) Contingency response plan;
- (vi) Community Liaison Group (CLG) comments on the Plan and the Consent Holder's response to those comments;
- (vii) Confirmation that the New Zealand Refining Company has been supplied a copy of the Plan;and

The Northland Regional Council shall, within twenty [20] working days of receipt of the plan notify the Consent Holder of any respects in which the plan fails to comply with the information or evidence supplied by the Consent Holder in support of its application, or with the conditions of this consent. Any such deficiencies shall be remedied by the Consent Holder and the Construction Management Plan resubmitted to the Northland Regional Council prior to commencement of work set out in the plan.

10. At least twenty [20] working days before construction commences on any package of work identified in the Construction Management Plan, the following additional information shall be supplied to the Northland Regional Council in a Design and Construction Report with which it shall comply and which shall cover, where appropriate:

- (i) Pile driving activities;
- (ii) Noise controls proposed;

and shall include:

- (iii) Community Liaison Group (CLG) comments on the Report and the Consent Holder's response;
 - (iv) Plans and specifications providing sufficient detail to show compliance with the resource consent;
 - (v) Monitoring procedures where applicable;
 - (vi) Reporting procedures where applicable; and
 - (vii) Confirmation that the New Zealand Refining Company has been supplied a copy of the Plan.
11. The Northland Regional Council shall, within twenty [20] working days of receipt of the additional information, notify the Consent Holder of any further respects in which it fails to comply with the information or evidence supplied by the Consent Holder in support of its application.
- Any such deficiencies shall be remedied by the Consent Holder and the Design and Construction Report resubmitted to the Northland Regional Council prior to commencement of the works described in the report.
12. The Consent Holder may, at any time, submit variations to the Construction Management Plan or any Design and Construction Reports to the Northland Regional Council, together with comments from the Community Liaison Group, the Consent Holder's response to those comments, and confirmation that the New Zealand Refining Company has been supplied with a copy of the variations. Any variation shall be subject to the Northland Regional Council's powers under this condition and the same time limits shall apply save that, where the variation is minor, the Northland Regional Council shall notify its acceptance or otherwise of the proposed variation within five [5] working days.
13. The Consent Holder shall keep the Coastal Marine Area free of litter and other debris arising from the exercise of this consent.
14. The Consent Holder shall use the forum provided by the Community Liaison Group established in connection with the original port development under Coastal Permit No. 3 [NRC CON 20030505503] to address relevant community concerns and needs arising from the exercise of resource consents for the development and operation of the extension to the port at Marsden Point.
- The Consent Holder will meet quarterly with representatives of Patuharakeke Hapu to review progress and operation of the project and to review monitoring results.
15. Where from any cause a contaminant (including fuel or sewage) associated with the Consent Holder's operations escapes otherwise than in conformity with this consent, the Consent Holder shall:
- (i) Immediately take such action or execute such work as may be necessary to stop and/or contain such escape; and
 - (ii) Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the escape; and

- (iii) Report the escape to the Northland Regional Council within one week of its occurrence and the steps taken or being taken to clean up, remedy any adverse effects and prevent any recurrence of such escape.
- 16. The Consent Holder shall ensure that all stormwater diversion and drainage channels, including flood flowpaths, are maintained substantially free of litter and debris.
- 17. All construction works shall be designed and conducted to ensure that noise from those activities does not exceed the noise limits in the following table. Sound levels shall be measured and assessed in accordance with the provision of NZS6803:1999 Acoustics-Construction Noise.

At Dwellings in Residential or Rural Area						
Time Period	Weekdays (dBA)		Saturdays (dBA)		Sundays and public holidays (dBA)	
	L _{eq}	L _{max}	L _{eq}	L _{max}	L _{eq}	L _{max}
0700 – 0730	55	75	45	75	45	75
0730 – 1800	70	85	70	85	55	85
1800 – 2000	65	80	45	75	45	75
2000 – 0700	45	65	45	65	45	65

Between 10pm and 7am construction noise shall be measured cumulatively with port noise activities using the L_{eq} and L_{max} descriptors.

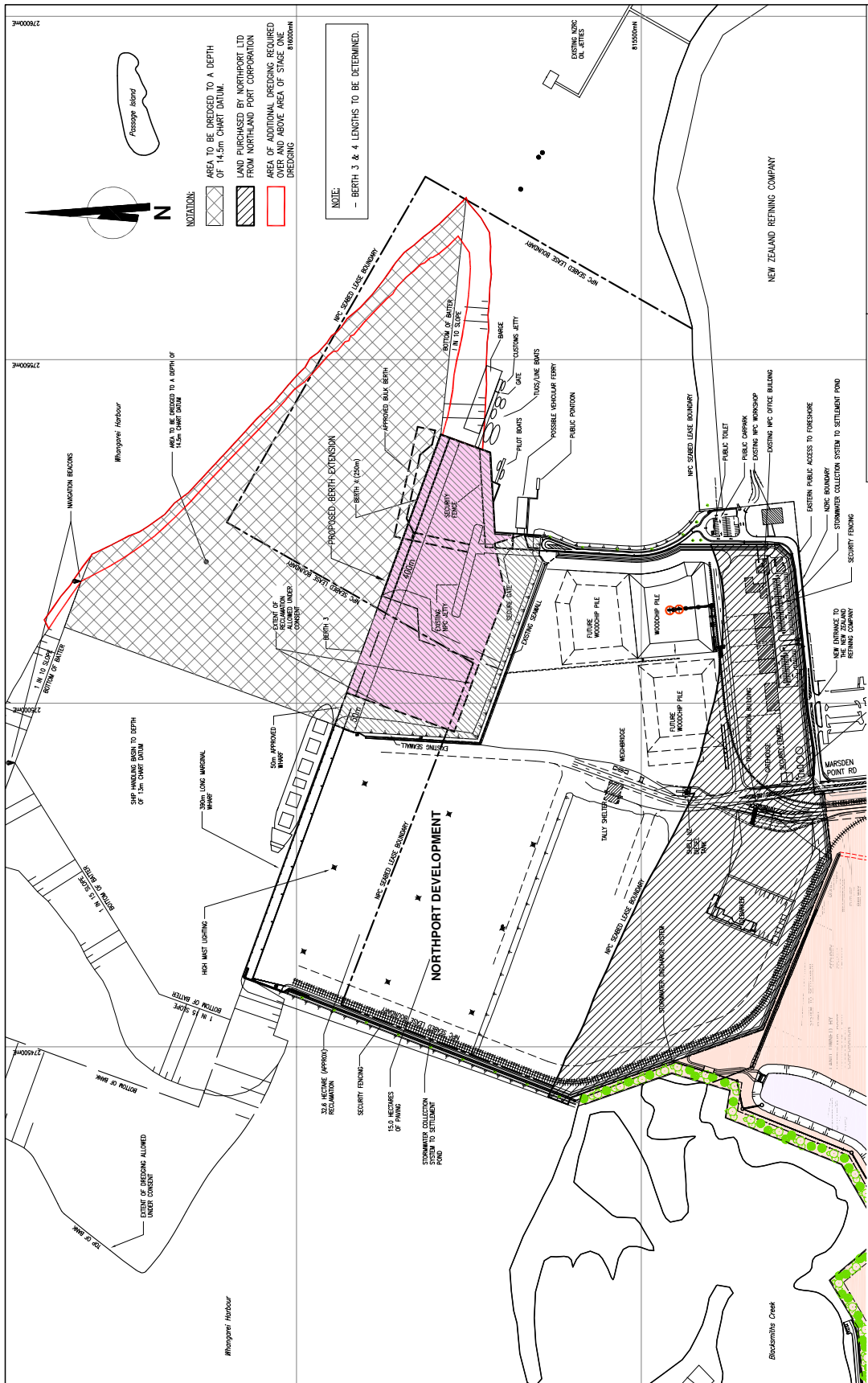
- 18. As part of the **Construction Management Plan** the Consent Holder shall submit to the Northland Regional Council and the Whangarei District Council at least twenty [20] working days prior to exercising this Consent, an Acoustic Design Report, prepared by a suitably qualified and experienced person.
- 19. The Acoustic Design Report shall include a formal project noise management plan that provides for all of those matters set out in Annex E of NZS 6803:1999 *Acoustics – Construction Noise*. All matters identified in the plan shall be adhered to during the construction programme. The plan shall be of sufficient detail to be able to demonstrate that compliance with the above noise limits, monitoring and mitigation measures will be achieved at all times. The report shall detail as a minimum:
 - (i) the reasonable potential for cumulative noise emissions from the site;
 - (ii) the means by which noise emissions from the site will be minimised and maintained below the noise performance standards specified in this consent;
 - (iii) any variation in sound propagation arising from the topography and characteristics of the area, taking into account meteorological conditions that would increase levels at the locations under consideration; and
 - (iv) any comments of the Community Liaison Group and the responses to these.
- 20. At least twenty [20] working days prior to the commencement of construction the Consent Holder shall submit to the Northland Regional Council and the Whangarei District Council an Operational Noise Management Plan. This plan shall include:

- (i) the frequency and content of training and ongoing education that is to be given to management and workers including contractors at the port;
- (ii) how checks are to be made on the impulse noise emissions at night including monitoring and rectification;
- (iii) how complaints are to be received and actioned on a 24hr basis; and
- (iv) the proposed times, duration and location of monitoring (The times that are selected shall be of sufficient quantity to provide a check on the variability of noise from the port, including various combinations of ship and ship loading activities that are likely to occur).

21. The Acoustic Design Report and Noise Management Plan shall:

- (a) demonstrate how the noise limits are to be complied with on an ongoing basis measures required to prevent noise (including impulsive noise) being generated unreasonably; and
- (b) include proposals for the development and trial of a system for the self detection at the Port of significant impulse noise. The object of the system shall be to alert contractors and workers at the Port to significant impulse noise as it occurs in a way that assists in improving impulse noise management and reduces the level of noise generated by the operations in question. If trials are successful the Consent Holder shall implement such a system. If trials are unsuccessful the Consent Holder shall endeavour to identify and implement an alternate means of achieving the same objective. The results of the trial and other actions to be reported to the Community Liaison Group.

22. All reports on the noise monitoring and mitigation measures shall be submitted to the Northland Regional Council and Whangarei District Council and shall be provided to the Community Liaison Group.



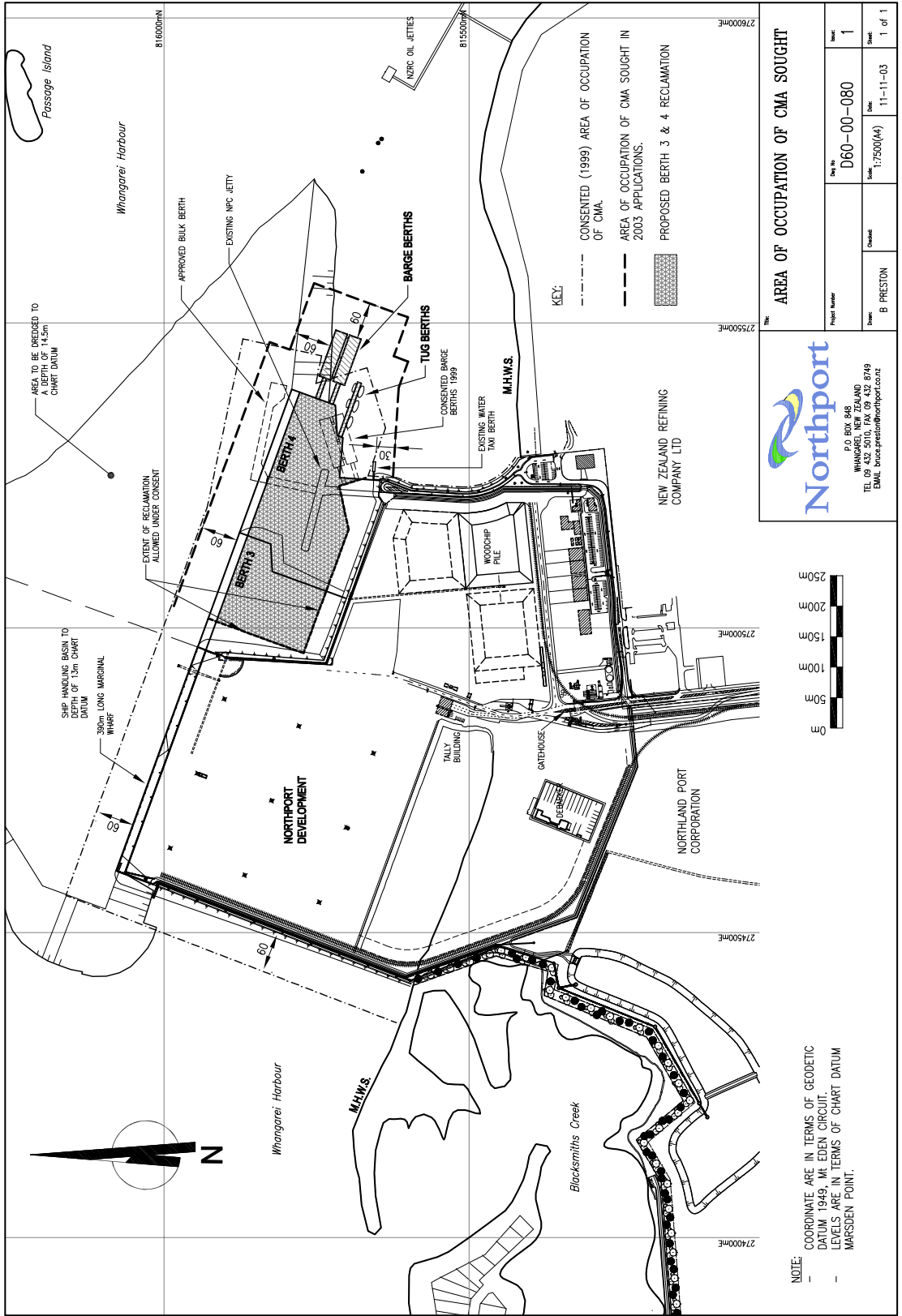
NOTE:
- COORDINATES ARE IN TERMS OF GEODETIC DATUM 1949,
MA EDEN CIRCUIT.
- LEVELS ARE IN TERMS OF CHART DATUM.

NORTHPORT DEVELOPMENT
BERTH 3 & 4

Northport
P.O. BOX 848
WHANGAREI, NEW ZEALAND
TEL 09 432 5010, FAX 09 432 8749
EMAIL: info@northport.co.nz

Drawn By	B PRESTON	Scale	1:2500(A1)	Issue	1
Drawn No	D60-00-069	Scale	1:5000(A3)	Issue	3

ISSUE	DATE	DETAILS	APPROV	BY
3	24-12-03	FERRY AND PONTON AREA REVISED		CJB
2	29-10-03	AREA NOT DREDGED TO DATE EASTERN END DREDGE BASIN ADDED		BMP
1	18-9-03	NPC LAND TRANSFERRED TO NPL ADDED, NOTES ADDED TO WHARF EXTENSIONS		BMP
0	1-5-03	ISSUED		BMP



Decision #4- Northland Regional Council:
Coastal Permit No. 4
Resource Consent:

Pursuant to the Resource Management Act 1991, The Northland Regional Council (hereinafter called "The Council") does hereby grant a Resource Consent to:

NORTHPORT LIMITED, P O BOX 44, RUAKAKA

Date of commencement of consent: As provided in Section 116 of the RMA 1991 (the Act).

Date of expiration of consent: Ten [10] years.

Date of lapsing of consent (if not given effect to): Ten [10] years from date of commencement.

Purpose of Consent: To alter the existing jetty by demolishing any part of it not authorised under NRC consent number CON19960505505.

Legal Description of Land: The relevant parts of the land described in Schedule A (below), otherwise as more specifically described in this permit and in the plans and other information submitted by the applicant.

Schedule A:

1.	Crown land comprising seabed
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STANDARD CONDITIONS OF CONSENT:

1. The Consent Holder shall undertake all authorised activities in general accordance with the descriptions and plans submitted with the application or as modified in evidence, and shall carry out all works in accordance with the Construction Management Plan.
2. The Consent Holder shall notify the Council at least ten [10] working days in advance of the date of the commencement of works associated with this consent.
3. The Consent Holder shall notify the Council within ten [10] working days following the date of the completion of all activities associated with this consent.
4. The Consent Holder shall ensure that copies of this consent are provided to the person who is to carry out the work, prior to construction. A copy of the consent shall be held on site.

SPECIAL CONDITIONS OF CONSENT:

5. The Consent Holder shall pay all Crown charges set by the Council under Section 36 of the Resource Management Act 1991, including charges relating to any transfer of the consent, and to any changes to consent conditions.

6. At least twenty [20] working days prior to construction works commencing the Consent Holder shall, to the extent that the information has not already been supplied in an overall project management plan for the Marsden Point deep water port, submit to the Council a Construction Management Plan with which it shall comply and which shall provide the following information:
- (i) A description of proposed works, together with drawings;
 - (ii) A construction programme including a timetable, sequence of events and expected duration of all proposed works;
 - (iii) A breakdown of the project into construction packages for later submission in greater detail;
 - (iv) Community liaison arrangements;
 - (v) Contingency response plan;
 - (vi) Community Liaison Group (CLG) comments on the Plan and the Consent Holder's response to those comments; and
 - (vii) Confirmation that the New Zealand Refining Company has been supplied with a copy of the Plan.

The Council shall, within twenty [20] working days of receipt of the plan notify the Consent Holder of any respects in which the plan fails to comply with the information or evidence supplied by the Consent Holder in support of its application, and the conditions of this consent.

Any such deficiencies shall be remedied by the Consent Holder and the Construction Management Plan resubmitted the Council prior to commencement of work set out in the plan.

7. At least twenty [20] working days before construction commences on any package of work identified in the Construction Management Plan, the following additional information shall be supplied to the Council in a Design and Construction Report with which it shall comply and which shall cover, where appropriate:
- (i) Dust control measures;
 - (ii) Noise controls proposed;
- and shall include:
- (iii) Community Liaison Group (CLG) comments on the Report and the Consent Holder's response;
 - (iv) Confirmation that the New Zealand Refining Company has been supplied with a copy of the Plan;
 - (v) Plans and specifications providing sufficient detail to show compliance with the resource consent;
 - (vi) Monitoring procedures where applicable;
 - (vii) Reporting procedures where applicable.

8. The Council shall, within twenty [20] working days of receipt of the additional information, notify the Consent Holder of any further respects in which it fails to comply with the information or evidence supplied by the Consent Holder in support of its application.

Any such deficiencies shall be remedied by the Consent Holder and the Design and Construction Report submitted to the Council prior to commencement of the works described in the report.

9. The Consent Holder may, at any time, submit variations to the Construction Management Plan or any Design and Construction Reports to the Council, together with comments from the Community Liaison Group, the Consent Holder's response to those comments, and confirmation that the New Zealand Refining Company has been supplied with a copy of the variations. Any variation shall be subject to the Council's powers under this condition and the same time limits shall apply save that, where the variation is minor, the Council shall notify its acceptance or otherwise of the proposed variation within five [5] working days.
10. The Consent Holder shall keep the Coastal Marine Area free of litter and other debris arising from the exercise of this consent.
11. The Consent Holder shall use the forum provided by the Community Liaison Group established in connection with the original port development under Coastal Permit No. 3 [CON 20030505503] to address relevant community concerns and needs arising from the exercise of resource consents for the development and operation of the extension to the port at Marsden Point.

The Consent Holder will meet quarterly with representatives of Patuharakeke Hapu to review progress and operation of the project and to review monitoring results.

12. Where from any cause a contaminant (including fuel or sewage) associated with the Consent Holder's operations escapes otherwise than in conformity with this consent, the Consent Holder shall:
 - (i) Immediately take such action or execute such work as may be necessary to stop and/or contain such escape; and
 - (ii) Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the escape; and
 - (iii) Report the escape to the Council within one week of its occurrence and the steps taken or being taken to clean up, remedy any adverse effects and prevent any recurrence of such escape.
13. All construction works shall be designed and conducted to ensure that noise from those activities does not exceed the noise limits in the following table. Sound levels shall be measured and assessed in accordance with the provision of NZS6803:1999 Acoustics-Construction Noise.

At Dwellings in Residential or Rural Area						
Time Period	Weekdays (dBA)		Saturdays (dBA)		Sundays and public holidays (dBA)	
	L _{eq}	L _{max}	L _{eq}	L _{max}	L _{eq}	L _{max}
0700 – 0730	55	75	45	75	45	75
0730 – 1800	70	85	70	85	55	85
1800 – 2000	65	80	45	75	45	75
2000 – 0700	45	65	45	65	45	65

Between 10pm and 7am construction noise shall be measured cumulatively with port noise activities using the L_{eq} and L_{max} descriptors.

Decision #6 Northland Regional Council:
Coastal Permit No. 6
Resource Consent:

Pursuant to the Resource Management Act 1991, The Northland Regional Council (hereinafter called "The Council") does hereby grant a Resource Consent to:

NORTHPORT LIMITED, P O BOX 44, RUAKAKA

Date of commencement of consent: As provided in Section 116 of the RMA 1991 (the Act).

Date of expiration of consent: Thirty five [35] years.

Date of lapsing of consent (if not given effect to): Ten [10] years from date of commencement.

Purpose of Consent: Erection, placement and use of structures for barge berths, tug berths and a water taxi landing and facilities on the eastern edge of the reclamation as shown on Northport Development Berths 3 & 4 Plan ref. D60-00-069 Issue 3 dated 24 December 2003 (Appendix 9.1)

Legal Description of Land: The relevant parts of the land described in Schedule A (below), otherwise as more specifically described in this permit and in the plans and other information submitted by the applicant.

Schedule A:

1.	Crown land comprising seabed
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STANDARD CONDITIONS OF CONSENT:

1. The Consent Holder shall undertake all authorised activities in general accordance with the descriptions and plans submitted with the application or as modified in evidence, and shall carry out all works in accordance with the Construction Management Plan.
2. The Consent Holder shall submit to the Council full copies of all final design drawings at least twenty [20] working days prior to commencement of works associated with this consent.
3. The Consent Holder shall notify the Council at least ten [10] working days in advance of the date of the commencement of works associated with this consent.
4. The Consent Holder shall notify the Council within ten [10] working days following the date of the completion of all activities associated with this consent.
5. The Consent Holder shall pay all Crown charges set by the Council under Section 36 of the Resource Management Act 1991, including charges relating to any transfer of the consent, and to any changes to consent conditions.

6. The Council may serve notice on the Consent Holder of its intention to review the conditions of this consent pursuant to Section 128 of the RMA for the purposes specified therein, or to address significant unanticipated adverse effects, during the twenty [20] working days following six (6) monthly intervals starting from the notified date of the commencement of works associated with this consent.
7. The Consent Holder shall maintain all facilities covered by this consent in good order and repair. Maintenance works authorised by this Consent shall be routine maintenance and repair consistent with the scale and form of the initial approved structures.
8. The Consent Holder shall ensure that copies of this consent are provided to the person who is to carry out the work, prior to construction. A copy of the consent shall be held on site.

SPECIAL CONDITIONS OF CONSENT:

9. At least twenty [20] working days prior to construction works commencing the Consent Holder shall, to the extent that the information has not already been supplied in an overall project management plan for the Marsden Point deep water port, submit to the Council a Construction Management Plan with which it shall comply and which shall provide the following information:
 - (i) A description of proposed works, together with drawings;
 - (ii) A construction programme including a timetable, sequence of events and expected duration of all proposed works;
 - (iii) A breakdown of the project into construction packages for later submission in greater detail;
 - (iv) Community liaison arrangements;
 - (v) Contingency response plan;
 - (vi) Community Liaison Group (CLG) comments on the Plan and the Consent Holder's response to those comments;
 - (vii) Confirmation that the New Zealand Refining Company has been supplied a copy of the Plan; and

The Council shall, within twenty working days of receipt of the plan notify the Consent Holder of any respects in which the plan fails to comply with the information or evidence supplied by the Consent Holder in support of its application, and the conditions of this consent.

Any such deficiencies shall be remedied by the Consent Holder and the Construction Management Plan resubmitted to the Council prior to commencement of work set out in the plan.

10. At least twenty [20] working days before construction commences on any package of work identified in the Construction Management Plan, the following additional information shall be supplied to the Council in a Design and Construction Report with which it shall comply and which shall cover, where appropriate:

- (i) Pile driving activities;
- (ii) Dust control measures;
- (iii) Noise controls proposed;

and shall include:

- (iv) Community Liaison Group (CLG) comments on the Report and the Consent Holder's response;
- (v) Plans and specifications providing sufficient detail to show compliance with the resource consent;
- (vi) Monitoring procedures where applicable;
- (vii) Reporting procedures where applicable;
- (viii) Confirmation that the New Zealand Refining Company has been supplied a copy of the Plan.

The Council shall, within twenty [20] working days of receipt of the additional information, notify the Consent Holder of any further respects in which it fails to comply with the information or evidence supplied by the Consent Holder in support of its application.

Any such deficiencies shall be remedied by the Consent Holder and the Design and Construction Report resubmitted to the Council prior to commencement of the works described in the report.

11. The Consent Holder may, at any time, submit variations to the Construction Management Plan or any Design and Construction Reports to the Council, together with comments from the Community Liaison Group, and the Consent Holder's response to those comments, and confirmation that the New Zealand Refining Company has been supplied with a copy of the variations. Any variation shall be subject to the Council's powers under this condition and the same time limits shall apply save that, where the variation is minor, the Council shall notify its acceptance or otherwise of the proposed variation within five [5] working days.
12. The Consent Holder shall keep the Coastal Marine Area free of litter and other debris arising from the exercise of this consent.
13. The Consent Holder shall use the forum provided by the Community Liaison Group established in connection with the original port development under Coastal Permit No. 3 [CON 20030505503] to address relevant community concerns and needs arising from the exercise of resource consents for the development and operation of the extension to the port at Marsden Point.

The Consent Holder will meet quarterly with representatives of Patuharakeke Hapu to review progress and operation of the project and to review monitoring results.

14. Where from any cause a contaminant (including fuel or sewage) associated with the Consent Holder's operations escapes otherwise than in conformity with this consent, the Consent Holder shall:
 - (i) Immediately take such action or execute such work as may be necessary to stop and/or contain such escape; and
 - (ii) Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the escape; and
 - (iii) Report the escape to the Council within one week of its occurrence and the steps taken or being taken to clean up, remedy any adverse effects and prevent any recurrence of such escape.
15. All construction works shall be designed and conducted to ensure that noise from those activities does not exceed the noise limits in the following table. Sound levels shall be measured and assessed in accordance with the provision of NZS6803:1999 Acoustics-Construction Noise.

At Dwellings in Residential or Rural Area						
Time Period	Weekdays (dBA)		Saturdays (dBA)		Sundays and public holidays (dBA)	
	Leq	L _{max}	Leq	L _{max}	Leq	L _{max}
0700 – 0730	55	75	45	75	45	75
0730 – 1800	70	85	70	85	55	85
1800 – 2000	65	80	45	75	45	75
2000 – 0700	45	65	45	65	45	65

Between 10pm and 7am construction noise shall be measured cumulatively with port noise activities using the Leq and L_{max} descriptors.

Decision #8 - Northland Regional Council:
Coastal Permit No. 8
Resource Consent:

Pursuant to the Resource Management Act 1991, The Northland Regional Council (hereinafter called "The Council") does hereby grant a Resource Consent to:

NORTHPORT LIMITED, P O BOX 44, RUAKAKA

Date of commencement of consent: As provided in Section 116 of the RMA 1991 (the Act).

Date of expiration of consent: Thirty five [35] years.

Date of lapsing of consent (if not given effect to): Ten [10] years from date of commencement

Purpose of Consent: Disturbance of the seabed by maintenance dredging of the turning basin within the design capital dredging depth of 14.5m below Chart Datum as shown on Northport Development Berth 3 & 4 Plan Ref. D60-00-069 Issue 3 dated 24 December 2003, and removal of associated sand, shingle and other material.

Legal Description of Land: The relevant parts of the land described in Schedule A (below), otherwise as more specifically described in this permit and in the plans and other information submitted by the applicant.

Schedule A:

1.	Crown land comprising seabed
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STANDARD CONDITIONS OF CONSENT:

1. The Consent Holder shall undertake all authorised activities in general accordance with the descriptions and plans submitted with the application or as modified in evidence, and shall carry out all works in accordance with the Construction Management Plan.
2. The Consent Holder shall notify the Council at least ten [10] working days in advance of the date of the commencement of works associated with this consent.
3. The Consent Holder shall notify the Council within ten [10] working days following the date of the completion of all activities associated with this consent.
4. The Consent Holder shall pay all Crown charges set by the Council under Section 36 of the Resource Management Act 1991, including charges relating to any transfer of the consent, and to any changes to consent conditions.
5. The Council may serve notice on the Consent Holder of its intention to review the conditions of this consent pursuant to Section 128 of the RMA for the purposes specified therein, or to address significant unanticipated adverse effects, during the twenty [20] working days following six [6] monthly intervals starting from the notified date of the commencement of works associated with this consent.

6. The Consent Holder shall ensure that copies of this consent are provided to the person who is to carry out the work, prior to construction. A copy of the consent shall be held on site.

SPECIAL CONDITIONS OF CONSENT:

7. At least twenty [20] working days prior to the commencement of maintenance dredging the Consent Holder shall, to the extent that the information has not already been supplied in an overall project management plan for the Marsden Point deep water port, submit to the Council a Construction Management Plan with which it shall comply and which shall provide the following information:

- (i) A description of proposed works;
- (ii) A programme including a timetable, sequence of events and expected duration of the proposed works;
- (iii) Plans and specifications providing sufficient detail to show compliance with the resource consent, including monitoring and reporting procedures;
- (iv) Community liaison arrangements;
- (v) The Community Liaison Group's comments on the Plan and the Consent Holder's response to these comments;
- (vi) Confirmation that the New Zealand Refining Company has been supplied with a copy of the Plan.

The Council shall within twenty [20] working days of receipt of the plan notify the Consent Holder of any the respects in which the plan fails to comply with information or evidence supplied by the Consent Holder in support of its application, and the conditions of this consent.

Any such deficiencies shall be remedied by the Consent Holder and the Construction Management Plan resubmitted the Council prior to commencement of works set out in the plan.

8. The Consent Holder may, at any time, submit variations to the Construction Management Plan, together with any comments of the Community Liaison Group, the Consent Holder's response to those comments and confirmation that the New Zealand Refining Company has been supplied with a copy of the variations. Any variation shall be subject to the Council's powers under this condition, and the same time limits shall apply, save that where the variation is minor, the Council shall notify its acceptance or otherwise of the proposed variation within five [5] working days.
9. The Consent Holder shall keep the Coastal Marine Area free of litter and other debris arising from the exercise of this consent.
10. All works in connection with the maintenance of the dredge basin (including marine activities such as any vessel movements, loading and unloading) shall be undertaken in a manner that minimises adverse effects on:
 - (i) New Zealand Refining Company's Marsden Point jetties; and

- (ii) the safe and efficient use of Whangarei Harbour in the vicinity of Marsden Point.
- 11. The Council reserves the right to modify the timing of monitoring associated with the exercise of all coastal permits for the Marsden Point deep water port so that any effects of the maintenance dredging can be measured and assessed.
- 12. All maintenance dredging, including any operations consequent upon the excavation and transportation of dredged material, shall be carried out in a manner that minimises the suspension of sediment into the water column so that the following standards are met immediately outside of a 400 metre radius of the point of dredging:
 - (i) The visual clarity (as measured using a black disk or Secchi disk) of harbour water shall not be reduced by more than 20% of the median background visual clarity at the time of measurement.
 - (ii) There shall be no conspicuous scums or foams, floatable or suspended material in the harbour waters.
- 13. During periods of maintenance dredging, visual checks shall 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 shall be carried out and reported in accordance with Condition 14.
- 14. The results of each monitoring event shall be reported to the Council within one week of monitoring being completed, or within 24 hours of any non-compliance. The Council reserves the right to require additional monitoring in the event of non-compliance of standards.
- 15. When any maintenance dredging is carried out, the Consent Holder shall record the periods of dredging, the method of dredging and the quantities of material dredged (in cubic metres), and shall submit these records together with post-dredging sounding plans to the Council within ten [10] working days after the maintenance dredging work is completed.
- 16. All material during maintenance dredging shall be deposited on land at Marsden Point presently owned by the Consent Holder or Northland Port Corporation (NZ) Ltd. Should this result in a decant discharge to the harbour the discharge shall be sampled at the point of entry to harbour at not greater than weekly intervals and tested for suspended solids content. The frequency of the sampling required by this condition may be varied with the approval of the Northland Regional Council. This content shall not exceed 300g/m³ for 95% of the samples or for 95% of the time.
- 17. Any dredged material that is not required by the Consent Holder for reclamation purposes should be stockpiled and made available for a reasonable period for any beach nourishment purposes in the Whangarei Harbour and Bream Bay environs. For the purposes of this condition, the "reasonable period" shall be determined in consultation with the Northland Regional Council having regard to:
 - i) Whether any beach renourishment project has been identified;
 - ii) The amount of dredged material likely to be required for any such project;

- iii) Whether a resource consent for the project is held or can reasonably be obtained.

Before removing any dredged material that has been stockpiled, the Consent Holder shall advise the Northland Regional Council of the pending removal.

Notwithstanding the above, stockpiling of material will not be required if the above criteria are not met when the relevant dredging is occurring.

18. The Consent Holder shall use the forum provided by the Community Liaison Group established in connection with the original port development under Coastal Permit No. 3 [CON 20030505503] to address relevant community concerns and needs arising from the exercise of resource consents for the development and operation of the extension to the port at Marsden Point.

The Consent Holder will meet quarterly with representatives of Patuharakeke Hapu to review progress and operation of the project and to review monitoring results.

19. Where from any cause a contaminant (including fuel or sewage) associated with the Consent Holder's operations escapes otherwise than in conformity with this consent, the Consent Holder shall:
- (i) Immediately take such action or execute such work as may be necessary to stop and/or contain such escape; and
 - (ii) Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the escape; and
 - (iii) Report the escape to the Council within one [1] week of its occurrence and the steps taken or being taken to clean up, remedy any adverse effects and prevent any recurrence of such escape.
20. All maintenance works shall be designed and conducted to ensure that noise from those activities does not exceed the noise limits in the following table. Sound levels shall be measured and assessed in accordance with the provision of NZS6803:1999 Acoustics-Construction Noise.

At Dwellings in Residential or Rural Area						
Time Period	Weekdays (dBA)		Saturdays (dBA)		Sundays and public holidays (dBA)	
	Leq	L _{max}	Leq	L _{max}	Leq	L _{max}
0700 – 0730	55	75	45	75	45	75
0730 – 1800	70	85	70	85	55	85
1800 – 2000	65	80	45	75	45	75
2000 – 0700	45	65	45	65	45	65

Between 10pm and 7am construction noise shall be measured cumulatively with port noise activities using the L_{eq} and L_{max} descriptors.

21. As part of the **Construction Management Plan** the Consent Holder shall submit to the Northland Regional Council and the Whangarei District Council at least twenty [20] working days prior to exercising this Consent, an Acoustic Design Report, prepared by a suitably qualified and experienced person.
22. The Acoustic Design Report shall include a formal project noise management plan that provides for all of those matters set out in Annex E of NZS 6803:1999 *Acoustics – Construction Noise*. All matters identified in the plan shall be adhered to during the construction programme. The plan shall be of sufficient detail to be able to demonstrate that compliance with the above noise limits, monitoring and mitigation measures will be achieved at all times. The report shall detail as a minimum:
 - (i) the reasonable potential for cumulative noise emissions from the site;
 - (ii) the means by which noise emissions from the site will be minimised and maintained below the noise performance standards specified in this consent;
 - (iii) any variation in sound propagation arising from the topography and characteristics of the area, taking into account meteorological conditions that would increase levels at the locations under consideration; and
 - (iv) any comments of the Community Liaison Group and the responses to these.
23. Prior to any dredge operation occurring between the hours of 10pm and 7am:
 - (i) The dredge shall be monitored to demonstrate compliance with construction noise limits cumulatively with port noise activities.
 - (ii) The monitoring shall be undertaken by a suitably qualified and experienced person who must prepare a Compliance Report detailing the noise emissions from the dredge measured at a distance of 100 metres in four quadrants generally on the axes of the vessel.
 - (iii) The Compliance Report must:
 - (a) detail the operating mode of the dredge and any measures that have been put in place for noise mitigation; and
 - (b) predict the noise levels at measurement locations 1 to 4 inclusive [refer Hegley Acoustic Consultants report October 2003 - Northport Development Noise Monitoring Sites] using the various dredge locations that will result in the maximum noise exposure at each location; and
 - (c) describe the port noise levels assumed in the assessment (based on the busy operation of the port), the distances involved; and
 - (d) set out the methodology used in arriving at any conclusion that noise limits will be complied with.
 - (iv) The Consent Holder shall submit the Compliance Report to the Northland Regional Council and the Whangarei District Council at least twenty [20] working days prior to any requirement to operate the dredge between the hours of 10pm and 7am.

24. Subsequent to commencing dredging between the hours of 10pm and 7am, dredge noise shall be monitored to demonstrate compliance with the construction noise limits. The monitoring shall include times when the port is busy and shall be of sufficient duration and frequency to demonstrate that dredge noise is complying with the limits as the dredge moves around the area to be dredged.

If the noise limits are not met then dredging shall cease immediately between 10pm and 7am until mitigation measures are instigated and it can again be demonstrated to Council that the dredging can be made to comply.

25. At least twenty [20] working days prior to the commencement of dredging the Consent Holder shall submit to the Northland Regional Council and the Whangarei District Council an Operational Noise Management Plan. This plan shall include:
- (i) the frequency and content of training and ongoing education that is to be given to management and workers including contractors at the port; and
 - (ii) how checks are to be made on the impulse noise emissions at night including monitoring and rectification; and
 - (iii) how complaints are to be received and actioned on a 24hr basis; and
 - (iv) the proposed times, duration and location of monitoring (The times that are selected shall be of sufficient quantity to provide a check on the variability of noise from the port, including various combinations of ship and ship loading activities that are likely to occur).
26. The Acoustic Design Report and Noise Management Plan shall demonstrate how the noise limits are to be complied with on an ongoing basis including:
- (a) measures required to prevent noise (including impulsive noise) being generated unreasonably, and;
 - (b) proposals for the development and trial of a system for the self detection at the Port of significant impulse noise. The object of the system shall be to alert contractors and workers at the Port to significant impulse noise as it occurs in a way that assists in improving impulse noise management and reduces the level of noise generated by the operations in question. If trials are successful the Consent Holder shall implement such a system. If trials are unsuccessful the Consent Holder shall endeavour to identify and implement an alternate means of achieving the same objective. The results of the trial and other actions to be reported to the Community Liaison Group.
27. All reports on the noise monitoring and mitigation measures shall be submitted to the Council and Whangarei District Council and shall be provided to the Community Liaison Group.

**Decision #9- Northland Regional Council:
Certificate of Compliance No. 1**

Certificate of Compliance

Section 139 of the Resource Management Act 1991

This is to certify that pursuant to Section 139 of the Resource Management Act 1991 the proposals described in the schedule below are permitted activities in accordance with the Plans of the Northland Regional Council and in compliance with Section 15(1) of the Resource Management Act.

SCHEDULE

Person Requesting the Certificate:	Northport Ltd P O Box 44 Ruakaka
Date Request Received:	6 November 2003
Description of the Proposal:	The discharge of water [including stormwater] to the Whangarei Harbour during construction of the reclamation and associated wharf structure.

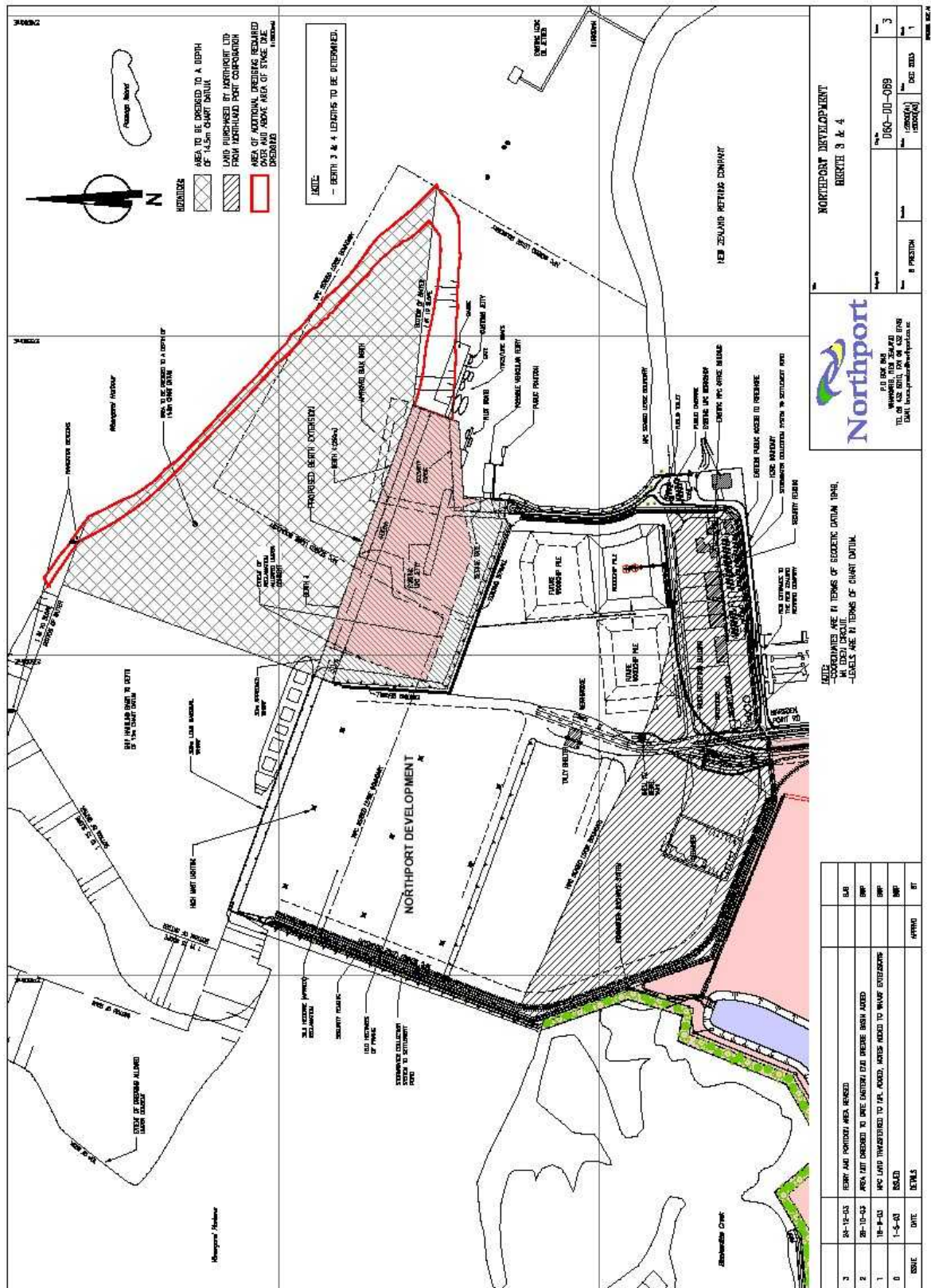
Signed by:

AUTHORISER

date

Note:

- *The information provided by the applicant in support of the request for this Certificate has been relied upon. Any error or omissions within that supporting information identified after the issue of this certificate may render this certificate null and void.*
- *This Certificate of Compliance does not in anyway negate the need to comply with any enactment, regulation or the like.*



NORTHPORT DEVELOPMENT SHEET 3 & 4			
Scale	1:1000	Scale	1:1000
Drawn	DAK-JUL-08B	Scale	1:1000
Sheet	3	Scale	1:1000
Sheet	3	Scale	1:1000

Northport
P.O. BOX 100
WELLINGTON 6140
TEL: 04-499 9911
FAX: 04-499 9912
Email: info@northport.co.nz

ALL COORDINATES ARE IN TERMS OF SECTORS DATUM 1949.
ALL DISTANCES ARE IN TERMS OF CHART DATUM.

NO	DATE	REVISION	BY
1	24-12-03	REVISION AND PORTFOLIO AREA REVISION	DAK
2	28-10-03	AREA NOT DESIGNATED TO THE EASTERN DUE WINDS DESIGN ADDED	DAK
3	18-08-03	APC LAND TRANSFERRED TO THE PORT, ADDED TO WHARF EXTENSIONS	DAK
4	1-8-03	ADDED	DAK
5	DATE	REVISION	BY

**Decision #10- Northland Regional Council:
Certificate of Compliance No. 2**

Certificate of Compliance

Section 139 of the Resource Management Act 1991

This is to certify that pursuant to Section 139 of the Resource Management Act 1991 the proposals described in the schedule below are permitted activities in accordance with the Plans of the Northland Regional Council and in compliance with Section 15(1) of the Resource Management Act.

SCHEDULE

Person Requesting the Certificate:	Northport Ltd P O Box 44 Ruakaka
Date Request Received:	6 November 2003
Description of the Proposal:	The discharge of dust into the air arising from the movement of materials on the new reclamation and wharves which have a dust producing capacity.

Signed by:

AUTHORISER

date

Note:

- *The information provided by the applicant in support of the request for this Certificate has been relied upon. Any error or omissions within that supporting information identified after the issue of this certificate may render this certificate null and void.*
- *This Certificate of Compliance does not in anyway negate the need to comply with any enactment, regulation or the like.*

**Decision #11 - Whangarei District Council :
Land Use Consent No. 1**

Resource Consent:

Pursuant to the Resource Management Act 1991, The Whangarei District Council (hereinafter called "The Council") does hereby grant a Resource Consent to:

NORTHPORT LIMITED, P O BOX 44, RUAKAKA

Date of commencement of consent: As provided in Section 116 of the RMA 1991 (the Act).

Date of expiration of consent: Unlimited.

Date of lapsing of consent (if not given effect to): Ten [10] years from date of commencement.

Purpose of Consent: The use of land for port and port-related activities as shown on Northport Development Berths 3 & 4 Plan Ref.D60-00-069, Issue 3 dated 24 December 2003, and as described in the accompanying Assessment of Effects on the Environment [AEE] and associated plans and drawings.

Legal Description of Land: The relevant parts of the land described in Schedule A (below), otherwise as more specifically described in this consent and in the plans and other information submitted by the applicant.

Schedule A:

	Description
1.	Crown land comprising seabed to be reclaimed

STANDARD CONDITIONS OF CONSENT:

1. The Consent Holder shall undertake all authorised activities in general accordance with the descriptions and plans submitted with the application or as modified in evidence, and shall carry out all works in accordance with any Construction Management Plan.
2. The Consent Holder shall notify the Council at least ten [10] working days in advance of the date of the commencement of activities associated with this consent.
3. The Consent Holder shall pay all administration charges associated with this consent prior to work commencing.
4. The Council may serve notice on the Consent Holder of its intention to review the conditions of this consent pursuant to Section 128 of the RMA, for the purposes specified therein or to address significant unanticipated adverse effects, during the twenty [20] working days following twelve [12] monthly intervals starting from the notified date of the commencement of works associated with this consent.

5. For the purposes of this consent, until such time as the proposed Whangarei District Plan is operative and the relevant zoning provisions of the Marsden Point Port Environment apply, and except where otherwise indicated in conditions granted with respect to this consent, all those relevant provisions of the proposed Plan relating to the Marsden Point Port Environment shall apply.
6. The Consent Holder shall use the forum provided by the Community Liaison Group established in connection with the original port development under Coastal Permit No. 3 [NRC 20030505503] to address relevant community concerns and needs arising from the exercise of resource consents for the development and operation of the extension to the port at Marsden Point.

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

All noise emissions from the port shall be measured cumulatively.

8. The Consent Holder shall:

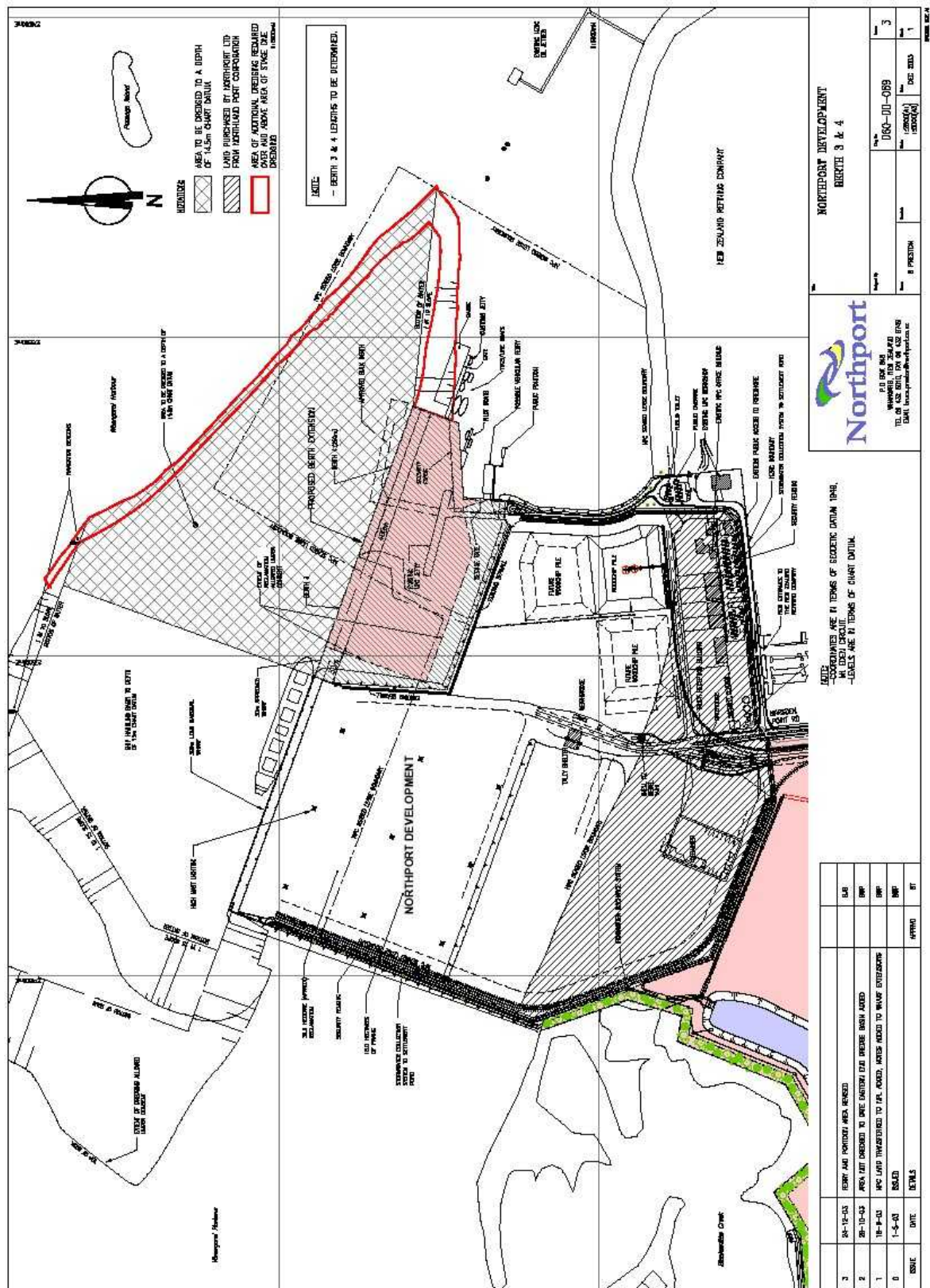
- (i) ensure that the spill of light onto any residentially zoned land or measured at any rural dwelling shall not exceed 10 lux; and
- (ii) use its best endeavours to minimise light spill beyond its land boundaries and/or port structures; and
- (iii) submit a Lighting Management Plan to the Council at least twenty [20] working days prior to any night-time operation of the lights authorised by this consent. The Lighting Management Plan shall:
 - (a) detail the positions and technical specifications of all exterior light sources and indicate the means by which this standard is to be achieved; and
 - (b) include comments of the Community Liaison Group on the plan and the Consent Holder's response to these.

9. The Consent Holder shall submit to the Council, at least twenty [20] working days prior to commencement of any site works, a detailed landscape planting plan for the edge of the proposed development between the water taxi berth and the proposed tug berths comprising a strip of planting not less than 2m wide.
10. All planting shall utilise indigenous plants that have been grown from genetic stock from the ecological district that the site is located within. Species selection shall draw upon plants that are naturally found in rocky, coastal habitats.
11. All vegetation shall be planted and maintained in accordance with good horticultural and ecological practice. Any dead vegetation shall be replaced with plants of the same or compatible species.
12. The Consent Holder shall, if reasonably practicable, implement the detailed landscape planting plan prior to the commencement of the operation of the facility, having regard to the construction programme and planting season.
13. The Consent Holder shall provide the Council with details of building form and colour (by British Standard specification) prior to any application for building consent being lodged. The visual impact of buildings (excluding lamp standards) is to be minimised by appropriate use of colour, building form, roof lines and structure compatible with its setting.

Advice Note:

As regards the possibility of a rail link being established in the future from Northport at Marsden Point to Oakleigh, or vice versa, to connect with the national network, Northport, while not being in a position to facilitate such an outcome, remains supportive of the ultimate realisation of this endeavour.

The Marsden Point port design incorporates provision for rail if required in the future. The Consent Holder has advised its intention to hold the land intended for provision of rail for a minimum period of ten [10] years from the date on which port operations commenced.



NORTHPORT DEVELOPMENT SHEET 3 & 4			
Scale	1:1000	1:2000	1:5000
Drawn	DAK-JUL-088		
Check			
Rev	1	2	3

Northport
P.O. BOX 100
WILSONS PROMENADE
TOWN OF AUCKLAND
NEW ZEALAND
Email: info@northport.co.nz

ALL COORDINATES ARE IN TERMS OF SECTORS DATUM 1949.
ALL ELEVATIONS ARE IN TERMS OF CHART DATUM.

NO	DATE	REVISION	BY
1	24-12-03	REVISION AND PORTFOLIO AREA REVISION	DAK
2	28-10-03	AREA NOT COVERED IN DATE EASTERN DATE WERE SHOWN ADDED	DAK
3	18-08-03	APC LAND TRANSFERRED TO THE PORT, WERE ADDED TO WHARF EXTENSIONS	DAK
4	1-8-03	REVISION	DAK

Please Quote File: 5055

13 April 2010

Northport Limited
C/O DLA Phillips Fox
PO Box 160
Shortland Street
Auckland 1140

Private Bag 9021
36 Water Street
WHANGAREI 0140
New Zealand

Phone: (09) 438 4639
Freephone: 0800 002 004
Environmental Hotline:
0800 504 639
Fax: (09) 438 0012
Email: mailroom@nrc.govt.nz

www.nrc.govt.nz

Dear Sir or Madam

**MINOR CORRECTION TO RESOURCE CONSENT DECISION CON20090505532 –
NORTHPORT LIMITED**

Pursuant to Section 133A of the Resource Management Act 1991 ("the Act"), and acting under delegated authority from the Council, I have authorised a minor correction to resource consent CON20090505532. The correction relates to the following (shown in bold):

Condition 2: The Consent Holder shall make an underwater examination of the diffusers and pipelines at least once every two years, and take such measures as are necessary to ensure that the diffusers operates as designed and that all the stormwater discharges, **except for the emergency overflow**, pass through the diffusers.

Heading of Condition 4: Notwithstanding any other condition, the exercise of this consent shall **not** result in any of the following effects on coastal water quality **the water** at or beyond the mixing zone, as shown on **Northland Regional Council** Plan No: 3259A:

Condition 5: The quality of **the treated** stormwater **as measured at any outlet discharged** from the storage and settlement pond system **by the pumps** shall meet the following:

- (a) A pH within the range of 6.5 to 9.0;
- (b) A total suspended solids median concentration **not greater than of** 50 grams per cubic metre and a 95 percentile concentration **not greater than of** 100 grams per cubic metre.

I understand that you are in agreement with this correction wording.

The corrected copy of the consent is **enclosed** for your records. To avoid confusion with the consent documents we recommend that you dispose of the consent document dated 19 March 2010, as it is superseded by the enclosed document.

If you have any queries regarding this correction, please contact Jan-Arie Jongkees of our Whangarei office.

Yours faithfully



Allan Richards
Acting Consents Senior Programme Manager



Resource Consent

Pursuant to the Resource Management Act 1991, the Northland Regional Council (hereinafter called "the Council") does hereby grant a Resource Consent to:

NORTHPORT LIMITED, C/O DLA PHILLIPS FOX, PO BOX 160, SHORTLAND STREET, AUCKLAND 1140

To discharge stormwater associated with the operation of a port after treatment within a storage and settlement pond system to the Whangarei Harbour via an existing outlet structure at location co-ordinates 1733997E 6033711N, on Crown Land comprising foreshore and seabed

Note: All location co-ordinates in this document refer to Geodetic Datum 2000, New Zealand Transverse Mercator Projection.

Subject to the following conditions:

1. The stormwater discharge outlet structure at the Marsden Point port terminal berthface shall be in general accordance with the attached drawings entitled "Marsden Point Port Development Stage 1 Stormwater Outfall" prepared by Civil Structural, drawing number 9101101 SO 33^A, and entitled "Northport Development Layout at Western End of Wharf" prepared by Northport, drawing number D60-30-06-01-015 dated June 2002 (**attached**).

Advice Note: *The drawings attached to this consent are reduced copies and therefore may not be to scale and may be difficult to read. In the event that compliance and/or enforcement action is to be based on compliance with the attached drawings, it is important that the original drawings are sighted and used. The Council holds an electronic copy of these drawings and can be viewed at the Council's Whangarei Office.*

2. The Consent Holder shall make an underwater examination of the diffuser and pipelines at least once every two years, and take such measures as are necessary to ensure that the diffuser operates as designed and that all the stormwater discharges, except for the emergency overflow, pass through the diffuser.
3. A report on all such examinations and action taken to remedy defects, as required under Condition 2, shall be forwarded to Council Monitoring Manager within one month of the examination being completed.

4. Notwithstanding any other condition, the exercise of this consent shall not result in any of the following effects on coastal water quality at or beyond the mixing zone, as shown on Northland Regional Council Plan No: 3259A:

- (a) The temperature shall not be changed by more than 3°C;
- (b) The pH shall not be changed by more than 0.2;
- (c) The concentration of dissolved oxygen shall not be reduced below 80% saturation;
- (d) The visual clarity shall not be reduced by more than 20% of the median background visual clarity at the time of measurement, as measured by black disk or an authorised alternative method;
- (e) The hue shall not be changed by more than 10 Munsell units of the median background hue at the time of measurement;
- (f) There shall be no conspicuous oil or grease films, scums or foams, or floatable or suspended materials, or emissions of objectionable odour;
- (g) There shall be no destruction of natural aquatic life by reason of a concentration of toxic substances; and
- (h) The concentrations for the following determinands shall not be exceeded;

Determinands	Concentration in milligrams per cubic metre
Total copper	1.3
Total lead	4.4
Total zinc	15

5. The quality of stormwater discharged from the storage and settlement pond system by the pumps shall meet the following:

- (a) A pH within the range of 6.5 to 9.0;
- (b) A total suspended solids median concentration not greater than 50 grams per cubic metre and a 95 percentile concentration not greater than 100 grams per cubic metre.

6. The stormwater storage and settlement pond system shall, as far as is practicable, be maintained free of floatable solids, oil and grease, and foams, and shall not emit objectionable odours.

7. To minimise the potential for the contamination of stormwater by natural wood chemicals, the Consent Holder shall, as far as is practicable, maintain log storage areas, internal drains and any debris traps, so that they are free of wood material that is being stored on-site.

8. Sediment collected from the maintenance of the stormwater system, including internal drains and any debris traps, shall be disposed off at a site that is authorised to accept such wastes. The Consent Holder shall forward to the Council Monitoring Manager within two weeks of the disposal of any such material, details of the quantity of material disposed off and the location of where the material has been disposed off.

9. The Consent Holder shall surrender resource consent CON20060505510 before 1 May 2010.
10. The Consent Holder shall notify the Council Monitoring Manager as soon as practicable once the stormwater storage and settlement pond system reaches its design discharge level and shall then commence stormwater monitoring in accordance Schedule 1 (**attached**). The Consent Holder may make changes to Schedule 1 with the written approval of the Council Monitoring Manager.
11. The Consent Holder shall notify the Council Monitoring Manager in writing of any proposed change(s) to the materials handled through the Port Terminal as detailed in the application, at least one week prior to the proposed change(s) occurring.

Advice Note: *The current Port Terminal activities as described in the application are for forestry products, containers, and fertiliser & coal products. The Council will need to consider any proposed change(s) to the new materials(s) handled and determine whether the conditions of consent require reviewing as a result of the proposed change(s) due to a change in the nature or quantity of contaminants discharged.*

12. Where from any cause a contaminant (including fuel) associated with the Consent Holder's operations escapes otherwise than in conformity with this consent, the Consent Holder shall:
 - (a) Immediately take such action or execute such work as may be necessary to stop and/or contain such escape; and
 - (b) Immediately notify the Council by telephone of an escape of contaminant; and
 - (c) Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the escape; and
 - (d) Report the escape to the Council within one week of its occurrence and the steps taken or being taken to clean up, remedy any adverse effects and prevent any recurrence of such escape.
13. The Council may in accordance with Section 128 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions of these consents. Such notice may be served annually during the month of March. The review may be initiated for any one or more of the following purposes:
 - (a) To deal with any adverse effects on the environment that may arise from the exercise of the consents and which it is appropriate to deal with at a later stage, or to deal with any such effects following assessment of the results of the monitoring of the consents and/or as a result of the Council's monitoring of the state of the environment in the area;
 - (b) To require the adoption of the Best Practicable Option to remove or reduce any adverse effect on the environment;
 - (c) To provide for compliance with rules in any regional plan that has been made operative since the commencement of the consents;
 - (d) To deal with any change(s) to the materials handled through the Port Terminal. (Notice may be served at any time for this reason.); and

- (e) To deal with any material inaccuracies that may be found in the information made available with the application. (Notice may be served at any time for this reason.)

The Consent Holder shall meet all reasonable costs of any such review.

EXPIRY DATE: 2 DECEMBER 2034

This consent is granted this Thirteenth Day of April 2010 under delegated authority from the Council by:

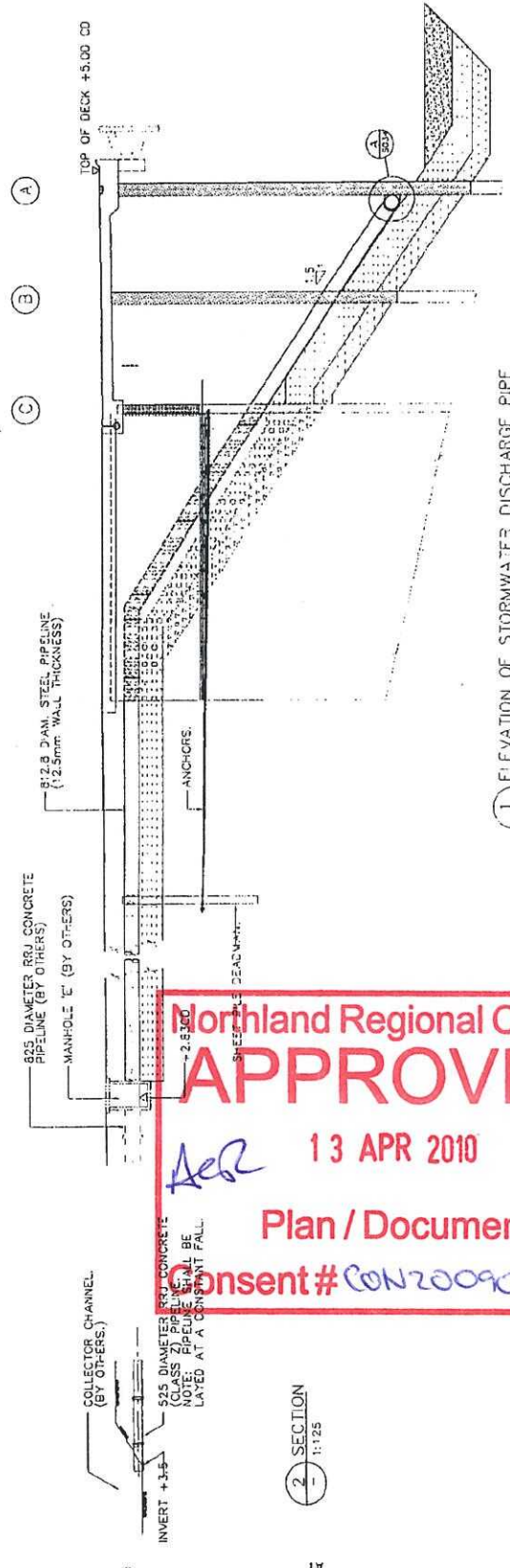
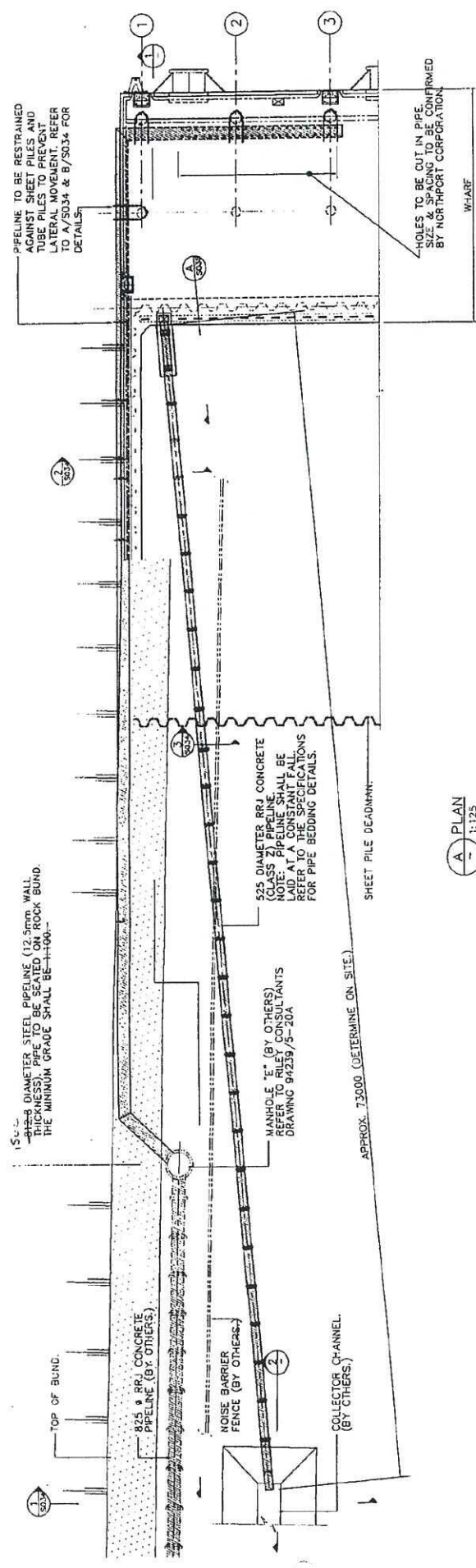


Allan Richards
Acting Senior Consents Programme Manager

APPROXIMATE SHEET PILE SPACING IN 3'S

1 2 3

6000



Northland Regional Council

APPROVED

13 APR 2010

Plan / Document

Consent # CON20090505532

2 SECTION

1:125

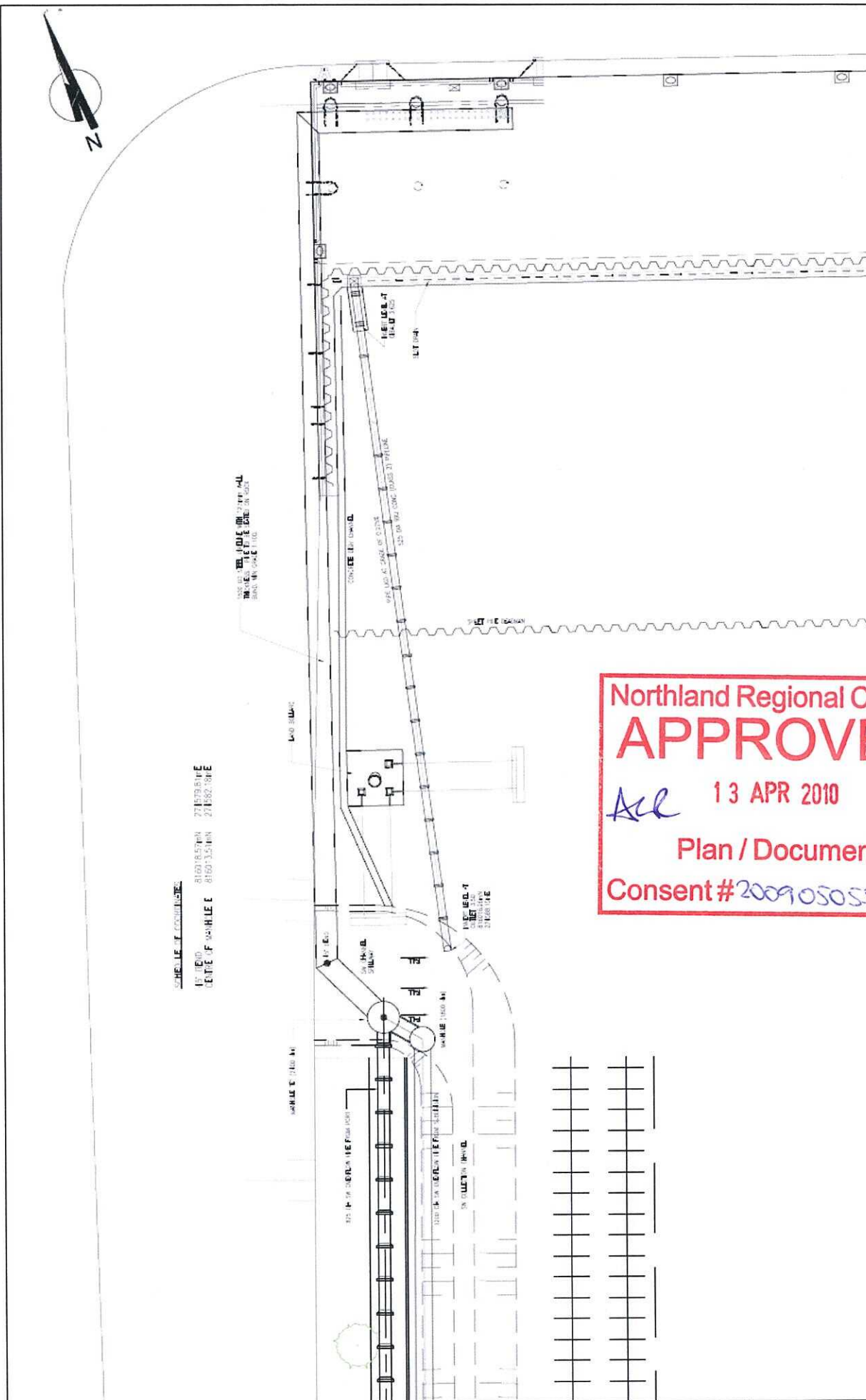
FOR REVIEW

MARSDEN POINT
PORT DEVELOPMENT
STAGE 1

STORMWATER OUTFALL

CIVIL STRUCTURAL

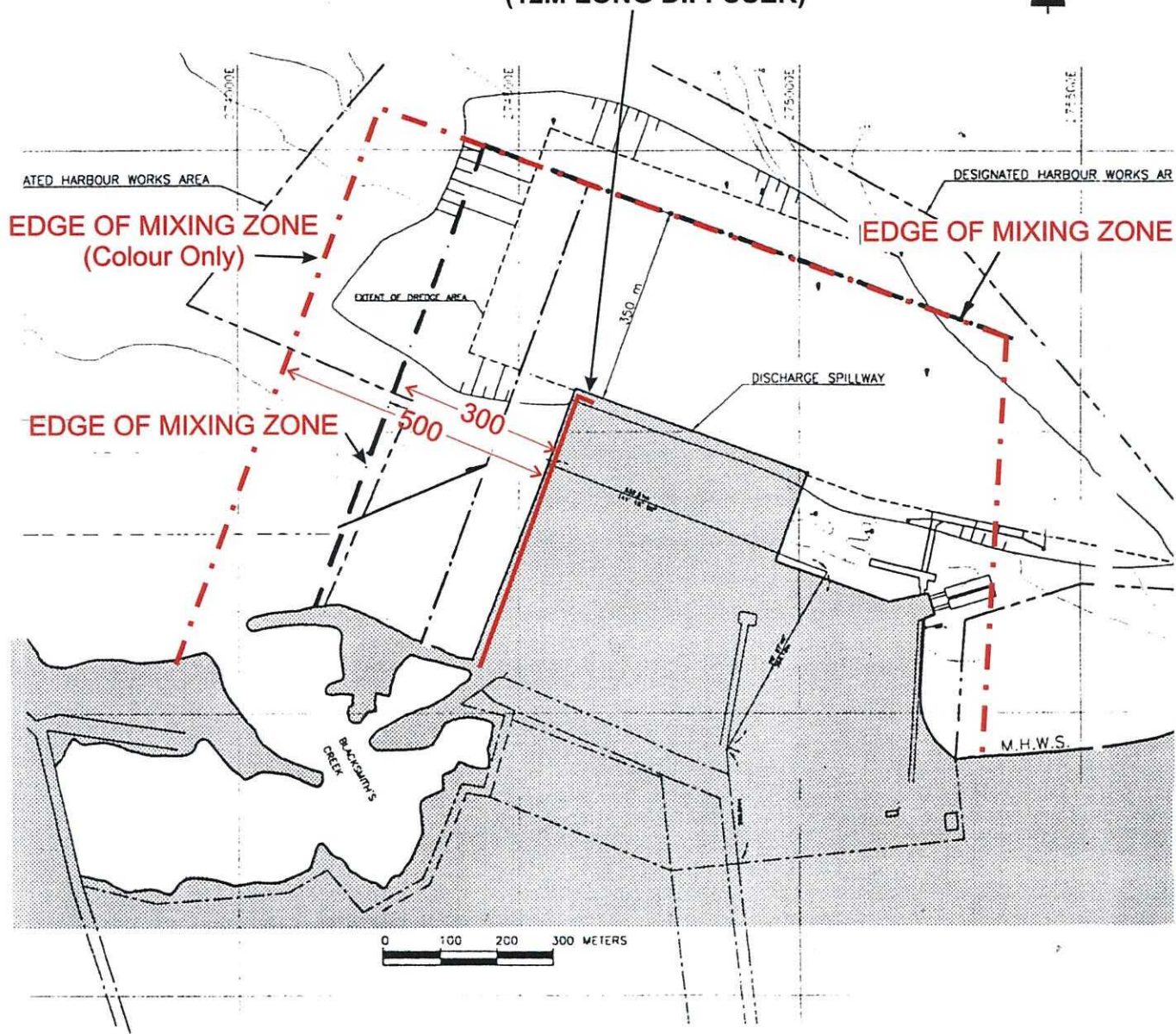
9101101 S033 4



Northland Regional Council
APPROVED
ALL 13 APR 2010
Plan / Document
Consent # 20090505532



**DISCHARGE POINT
(12M LONG DIFFUSER)**



Location Co-ordinates:
Datum: NZTM
Easting: 1733997
Northing: 6033711

**NORTHLAND
REGIONAL
COUNCIL**

RESOURCE CONSENT CON20090505532
for
Northport Ltd
Stormwater Mixing Zone

Scale: N.T.S.

Drawn: CNA 02/10

App'd: *Al. Pihl* 04/10

Plan No.

3259A

SCHEDULE 1

MONITORING PROGRAMME – RESOURCE CONSENT CON20090505532

The Consent Holder shall undertake the monitoring as follows:

1 WATER QUALITY OF DISCHARGES FROM THE STORMWATER SETTLEMENT AND STORAGE POND SYSTEM

1.1 Routine Water Monitoring for Discharges from the stormwater settlement and storage pond to Whangarei Harbour

The stormwater system and discharges shall be monitored in accordance with Table 1 attached below

If any of the following determinands in the stormwater being discharged to the coastal marine area exceed the Action Values specified in Table A, the Consent Holder will notify the NRC within two weeks of receiving the sample result and investigate the source of the contaminant and advise the NRC as to the findings of the investigation and any management response.

Table A

Determinands	Action values: Concentration in milligrams per cubic metre
Total Aluminium	5
Total copper	13
Total lead	44
Total zinc	150
PAHs	
– Acenaphthene	58
– Anthracene	0.1
– Benzo(α)anthracene	0.18
– Benzo(α)pyrene	0.1
– Fluoranthene	10
– Fluorene	30
– Napthalene	500
– Phenanthrene	6
– Pyrene	0.25

Note: ANZECC for PAH, 99% protection level as recommended in Section 8.3.7.7 and also CEQG (Canadian aquatic guidelines). For aluminium, ANZECC 8.3.7 Marine guidelines recommend 0.5 mg/m as an indicative low reliability figure.

Values in Table A are intended to act as an early warning to identify if concentrations are increasing relative to previously documented monitoring values/trends and warrant investigation notwithstanding that they may be well below levels of environmental concern taking into account mixing and dilution.

TABLE 1: SCHEMATIC MONITORING DIAGRAM –

Location	Sampling Frequency	Parameters	Criteria	Notes
Point of discharge from treatment pond system	First discharge per season, and two other discharge events each year			Advice NRC when ponds reach design discharge level for the first time each year prior to discharge occurring
	Three samples spaced evenly over each day (operational hours) until discharge has ceased. First sample to be taken as close as possible to when discharge first occurs.	TSS, VSS, NTU and pH	TSS as in Condition 5(b)	T and DO are considered not useful in this situation as they will reflect conditions intrinsic to the wetland and in any event cannot have any influence on water quality in this particular marine receiving environment.
	Taken with first sample from first discharge event only.	Al, Cu, Pb, Zn, PAH, and resin acids. Total N and Total P to be included if fertiliser products have been stored on site in the previous season.	<u>Action values</u> see table A in 1.1 above. Resin acids, Total N and P concentrations will be assessed against available literature and previous concentrations to determine potential for adverse effects. All parameters to be assessed for any increasing trends over time.	If the resin acid results for the first discharge of the season are below any applicable ANZECC effect threshold after theoretical mixing, resin acids need not be further analysed in that season.
Pond Influent	One-off under existing regime	WETT (Toxicity Testing)	As specified in point 1.3 below	One further WETT will be undertaken under the present port conditions. The need for any further WETT will be considered only if new port operations introduce new contaminant(s) into the stormwater.
	To be done with "First discharge per season" referred to above	T, pH, DO, TSS, Cu, Pb, Zn, resin acids, phenols, PAH, VSS	Trend data only, no compliance limits.	Test to be used as an indication of pond effectiveness under different conditions eg size of storm, contributing area

TABLE 1: SCHEMATIC MONITORING DIAGRAM –

Location	Sampling Frequency	Parameters	Criteria	Notes
Point of discharge from treatment pond system	First discharge per season, and two other discharge events each year			Advice NRC when ponds reach design discharge level for the first time each year prior to discharge occurring
	Three samples spaced evenly over each day (operational hours) until discharge has ceased. First sample to be taken as close as possible to when discharge first occurs.	TSS, VSS, NTU and pH	TSS as in Condition 5(b)	T and DO are considered not useful in this situation as they will reflect conditions intrinsic to the wetland and in any event cannot have any influence on water quality in this particular marine receiving environment.
	Taken with first sample from first discharge event only.	Al, Cu, Pb, Zn, PAH, and resin acids. Total N and Total P to be included if fertiliser products have been stored on site in the previous season.	<u>Action values</u> see table A in 1.1 above. Resin acids, Total N and P concentrations will be assessed against available literature and previous concentrations to determine potential for adverse effects. All parameters to be assessed for any increasing trends over time.	If the resin acid results for the first discharge of the season are below any applicable ANZECC effect threshold after theoretical mixing, resin acids need not be further analysed in that season.
	One-off under existing regime	WETT (Toxicity Testing)	As specified in point 1.3 below	One further WETT will be undertaken under the present port conditions. The need for any further WETT will be considered only if new port operations introduce new contaminant(s) into the stormwater.
Pond Influent	To be done with "First discharge per season" referred to above	T, pH, DO, TSS, Cu, Pb, Zn, resin acids, phenols, PAH, VSS	Trend data only, no compliance limits.	Test to be used as an indication of pond effectiveness under different conditions eg size of storm, contributing area

1.2 Pumping Hours

The Consent Holder shall measure the pumping hours, the date, the time, and the quantity of water when the discharge to Whangarei Harbour occurs.

Advice Note: *The application states that the approximately average volume of stormwater to be discharged is assessed at 200,000 cubic metres per annum. The size of the discharge pipe and the proposed capacity of the pumps limit the pumped discharge rate to approximately 2,520 cubic metres per hour.*

1.3 Wett Method

The WETT method for toxicity analyses shall be undertaken on not less than three representative marine species, including at least one algae, one invertebrate, and one fish. The choice of toxicity test species, dilutions, test endpoints to be measured, and "toxicity effect" shall be submitted to the Council for approval at least twenty working days prior to stormwater sampling. For each of the three [3] toxicity tests the EC₂₅ (the concentration of stormwater estimated to produce a toxic effect in 25% of the test organisms) shall be greater than the equivalent of a 200-fold dilution of the stormwater. The dilution water used for toxicity tests shall be an uncontaminated sample of Whangarei Harbour water, collected on an incoming tide at the harbour entrance, at a point agreed to by the Council. There shall be no significant toxicity after a 200-fold dilution of the stormwater. For the purposes of this condition "significant toxicity" is defined as no more than a 25% toxic effect measured in the most sensitive test species used. Testing of the samples shall be carried out in accordance with the methodology outlined in the NIWA document entitled "Standard Methods for Whole Effluent Toxicity Testing: Development and Application" dated November 1998.

- 1.4 The pH and TSS results taken in accordance with Table 1 will be recorded in an ongoing spreadsheet a copy of which shall be forwarded to the Council Monitoring Manager as required by Condition 2 below. Any results recorded which do not achieve the criteria included in Condition 5 shall be reported to the Council Monitoring Manager together with an explanation within seven days of their receipt by Northport.

2 REPORTING

- 2.1 The Consent Holder shall forward to the Council Monitoring Manager by 31 August each year an annual report for the previous period 1 July to 30 June detailing the results of the monitoring required by Section 1 of this monitoring programme and an assessment of compliance with the conditions of consent.

3 REVIEW

The Regional Council, in conjunction with the Consent Holder, may undertake a review of the monitoring programme every two years. The review will take into account the Consent Holders monitoring results, any monitoring undertaken by the Regional Council and the level of development within the catchment areas. The Consent Holder shall meet the reasonable costs of any such review.

4 FIELD MEASUREMENTS, RECORDS, SAMPLE COLLECTION, SAMPLE TRANSPORT, DETECTION LIMITS, AND LABORATORY REQUIREMENTS

4.1 Records

A record of rainfall conditions preceding and during sampling shall be kept. This record shall be based on a nearby rainfall recording site agreed by the Council.

4.2 Sample Collection

All samples collected as part of this monitoring programme shall be collected using standard methods and approved containers.

4.3 Sample Transport

All samples collected as part of this monitoring programme shall be transported in accordance with standard procedures and under chain of custody to the laboratory.

4.4 Detection Limits

The detection limits for the analysis of metals in sediment and water samples collected shall be equivalent to, or better than, those specified below:

Metal	Sediment samples (milligrams per kilogram)	Water samples (milligrams per cubic metre)
total copper	2	1.0
total lead	0.4	0.2
total zinc	4	2.0
total arsenic	2	N/A
total cadmium	0.1	N/A
total chromium	2	N/A

4.5 Laboratory Requirements

All samples collected as part of this monitoring programme shall be analysed at a laboratory with registered quality assurance procedures (see definition below), and all analyses shall be conducted using standard methods.

Registered quality assurance procedures are procedures that ensure that the laboratory meets good management practices and would include registrations such as ISO 9000, ISO Guide 25, and Ministry of Health Accreditation.