4SIGHT CONSULTING

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Eastland Port

Gisborne Port
Maintenance Dredging and Disposal
Port Navigation Channel, Vessel Turning Basin and Wharves 4-8.

Coastal Permit Applications
Assessment of Effects on the Environment
Appendices A – R

February 2020

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February 2019

REPORT INFORMATION AND QUALITY CONTROL

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1 INTRODUCTION

1.1 Report Basis

This report has been prepared for the Eastland Port Ltd (Eastland Port hereafter) in support of coastal permit applications to the Gisborne District Council (the Council hereafter) to continue to undertake maintenance dredging for the areas adjacent to Wharves 4, 5, 6, 7 and 8, Vessel Turning Basin (VTB hereafter) and Port Navigation Channel (PNC hereafter) areas within the Port of Gisborne, and dispose of the dredge spoils at the existing disposal ground approximately 4km offshore.

Eastland Port and the predecessor port operators have held coastal permits and other authorities for maintenance dredging of the port and associated offshore disposal operations for many years. The current permits expire later this year. This AEE report explain the current and proposed future maintenance dredging and disposal operations, the reasons why the new applications are being made and assesses the environmental effects of them in terms of the Resource Management Act (the RMA hereafter). It explains the basis of the 20 year terms of the permits being sought and proposes a set of consent conditions, which are very similar to those in place at present.

Section 88 of the RMA requires all resource consent applications be supported by an Assessment of Environmental Effects (AEE) describing the actual or potential adverse effects the activity may have on the environment and the ways in which any adverse effects may be mitigated. Such an assessment is also expected to cover various related matters listed in the Fourth Schedule, including a description of the proposed activity, consultation with any affected parties and monitoring. All of these matters are covered in this AEE report.

The AEE covers the provisions in the Tairāwhiti Resource Management Plan (TRMP hereafter), which apply to the project and 'trigger' the need for the applications. The TRMP rules are in turn linked to provisions in Sections 12 and 15 of the RMA. The report also covers other key provisions in the RMA, together with the RMA Marine Pollution Regulations, the Marine and Coastal Area (Takutai Moana) Act, Ngā Rohe Moana o Ngā Hapū o Ngāti Porou Act and NZ Coastal Policy Statement, that the Council is expected to refer to and use in assessing the applications.

1.2 Report Contents

The AEE report covers the proposed maintenance dredging and dredge spoil disposal operations and associated port engineering and environmental planning aspects of the project. It is the `base' document for seeking the necessary resource consents. The report contains the following:

- A description of the existing and proposed port maintenance dredging and dredge spoil disposal operations and associated resource consents in place (Section 2);
- An assessment of the relevant TRMP, the rules that are not met and the associated reasons for the application (Section 3);
- An environmental effects assessment of the proposal (Section 4);
- An assessment of the applications in terms of the notification provisions in Section 95 of the RMA, along with a record of the consultation with parties who are potentially affected or interested in the proposal (Section 5);
- A 'policy' assessment of the proposal based on the provisions in Section 104 and Part 2 of the RMA, along with the TRMP objectives and policies that are applicable (Section 6); and
- A summary of the report findings (Section 7).

The AEE report is to be read in conjunction with the accompanying A4 appendices and A3 folio of figures documents.

The appendices contain the completed resource consent application forms, supporting technical reports and other relevant information.

The folio of figures contains the key engineering and other plans from the AEE and technical reports that are to scale and a consistent A3 landscape size for ease of use.

1.3 Supporting Plans and Reports

The application and this AEE are supported by plans and reports from the following consultants:

- Coastal processes engineering – MetOcean Solutions (MetOcean) and Worley (formerly WorleyParsons);
- Geology and geotechnical engineering – Tonkin & Taylor Ltd (T+T) and Marine & Earth Sciences (MES);
- Ecology and water quality – 4Sight Consulting Ltd (4Sight);
- Heritage – In Situ Heritage Ltd (In -Situ);
- Noise– Malcolm Hunt & Associates Ltd (Hunt)

The key findings of the expert reports are identified within this AEE. Copies of the full reports are in the accompanying appendices document.

1.4 Coastal Permit Applications

The following coastal permit applications are being made for the maintenance dredging and dredge spoil disposal operations at the port:

Coastal Permit Application for Maintenance Dredging at the Port of Gisborne

This application seeks consent for the following activities:

- Maintenance dredging of up to approximately 140,000m^3 of material each year from the vessel berthing areas adjacent to Wharves 4, 5, 6, 7, and 8, the vessel turning basin and port navigation channel, being a controlled activity under Rule DP1.6.4(3) of the TRMP;
- Decant water discharges to coastal waters, associated with the maintenance dredging operations, being a discretionary activity under Rule DP1.6.2(4) of the TRMP;
- Noise emissions from the maintenance dredging operations adjacent to Wharves 4, 5, 6, 7 and 8, vessel turning basin and the port navigation channel, being a discretionary activity under Rule DP11.2.16 (3) of the TRMP.

Coastal Permit Application for Disposal of Dredge Spoils at the Offshore Spoil Disposal Ground in Poverty Bay

This application seeks consent for the following activities:

- Disposal of up to approximately 140,000m^3 of maintenance dredge spoils each year from the port maintenance dredging areas at the offshore spoil disposal ground in Poverty Bay, being a discretionary activity under Rule DP1.6.4(2) of the TRMP and Regulation 4 of the and RMA Marine Pollution Regulations;
- Decant water discharges to coastal waters associated with the maintenance dredge spoil disposal operations, being a discretionary activity under Rule DP1.6.2(4) of the TRMP and Regulation 4 of the and RMA Marine Pollution Regulations.

Appendix A contains a copy of the completed Council application form.

No other resource consent applications are required for the proposed activities.

2 PORT MAINTENANCE DREDGING & DISPOSAL ACTIVITIES

2.1 Port of Gisborne

The Port of Gisborne was established in the late 1800's and has been progressively extended and upgraded to its current level of development. The breakwater and groyne were constructed in the early 1900's, and the Turanganui river training wall was built in the 1930's. Significant capital dredging and wharf construction occurred in the late 1960's, and some reclamation was undertaken in the 1970's.

The port is the second largest exporter of logs in New Zealand. In 2018 approximately 3.0 million JAS (Japanese Agricultural Standard) tonnes was exported. Kiwifruit, squash, and other local products are also shipped from the port. It is also used by a commercial fishing craft and some cruise ships.

The general layout of the port is shown in the 4Sight aerial photograph-based plan in **Figure 1**. The breakwater, Butlers Wall and the Turanganui River training wall provide protection to the wharves, marina and other water-based facilities. The innermost Wharves 1-3 are used for recreational and commercial pleasure craft predominantly, whilst Wharves 4 and 5 are used for commercial fishing vessels. Wharf 6 is located towards the centre of the port and used to berth the port dredge and the fishing fleet. The outermost Wharf 7 and Wharf 8 are used for log and other produce loading and unloading. The old slipway adjacent to the Turanganui River training wall has been decommissioned.

The land-based port facilities are primarily accessed from Rakaiatane Rd, which is linked to Kaiti Beach Rd. There are three logyards; being the Upper logyard in Crawford Rd, the Southern logyard accessed from the adjacent port entry area on Rakaiatane Rd, and the Wharfside logyard (being redeveloped at present) also accessed from this same road.

Figure 1: Aerial Photograph of Gisborne Port

2.2 History of Capital and Maintenance Dredging at the Port

The port has a long history of both capital and maintenance dredging. The port was first constructed in the late 1880's following establishment of the Gisborne Harbour Board. The history of the port, including major breakwater, wharf and other developments is described in the In-Situ Heritage Ltd (In-Situ) Heritage Inventory and Whole of Port Archaeological Assessment (2015) in **Appendix B**.

Section 3.4.1- Port Development, of the In-Situ report documents the nature of some of the past capital dredging activities. It records the following:

"*In 1885 the Harbour Board decided to construct a breakwater to improve access to the port, extending from the eastern side of the river mouth. A blockhouse was built....and Island. A breakwater was also constructed on the western side of the river. These developments, along with dredging and blasting meant that from the late 1880's to the mid 1910's coastal streamers were able to use the harbour, until further silting in 1916 prevented access*."

Since its formation, the Harbour Board had debated various plans to develop the harbour, provide improved berthage for large ships, and to address problems with constant silting of the river. These plans were finally realised in the late 1920's. Between 1927 and 1928 a river training wall and diversion channel were constructed to separate the river from Kaiti Basin, and the basin was excavated to form the inner harbour. The excavation of the inner harbour... land held by other parties. The Kaiti Basin Harbour was completed in late 1931."

"*After a hiatus of several years, Gisborne was reinstated from 1950 as an overseas port. It also developed...as a fishing port. In 1967 an overseas terminal was opened, which included ... and the dredging of the ships' turning circle adjacent to the wharf. A second overseas wharf was opened in 1997*." (emphasis added)

The report describes former historic places in the port area, including the Te Poho o Rawiri marae and the Kaiti Freezing Works. The report contains several historical photographs of the port. One of the photographs from the 1935-1940 period showing the former freezing works and inner harbour is reproduced in **Figure 2**.

Figure 2: Historical Photograph (1935-1940) of Gisborne Port

Capital dredging has been undertaken at different times as new port facilities are established and to serve larger vessels, especially log carriers. Maintenance dredging is undertaken on a regular basis to remove sediment, most of which comes from the Waipaoa and Turanganui rivers that discharge large volumes of material into Poverty Bay.

Recent Capital Dredging

Eastland Port dredging records indicate that the most recent capital dredging was carried out in 2012 and 2013 when approximately 4,500m^3 was removed from the Vessel Turning Basin (VTB). In 2011 approximately 32,000m^3 of material was removed from the port navigation channel. The work was undertaken by a Westport harbour dredge (the Kawatiri). A smaller amount of material (around 21,000m^3) was removed by the same dredge from the channel in 2009.

This capital dredging, along with earlier work around Wharf 6-8, and the disposal of dredgings to the (OSDG), was authorised by a suite of coastal permits issued by the Council in 2009. The permits (CP 2008-103663-103668) authorised capital dredging of 88,000m^3 from an area of approximately 15.1ha. The permits had a five-year term and have expired.

Current Maintenance Dredging

The maintenance dredging of the port has become more critical over recent years as the port navigation channel, turning basin and work berths have been deepened to provide additional depth for logging vessels. For the port to be operated efficiently, both now and in the future, regular maintenance dredging is required. The approximate extent of the area that is maintenance dredged each year is shown in the aerial photograph-based plan in **Figure 3**.

Figure 3: Aerial Photograph of the Gisborne Port Maintenance Dredging Area and Offshore Disposal Ground

The extent and nature of the most recent maintenance dredging and disposal consents issued in June 2013 and September 2015 are outlined later in the report. The maintenance dredging has over the years generally been carried out by the dredge Pukunui. Other dredges are used, especially after storm events like Cyclone Bola, when larger than normal sediment loads are deposited within the port, and when the Pukunui is being serviced. The Pukunui had a major refit in March 2013, which has significantly improved its efficiency.

Annual Dredging and Disposal Report

Annual records are kept of all capital and maintenance dredgings and associated disposal of material at the OSDG. Each year they are provided by Eastland Port to the Council and the Port Community Liaison Group (PCLG). **Appendix C** contains a copy of the most recent October 2019 report.

Section 2- General, of the report records the annual (1 July-30 June) maintenance dredging records for the 2003-2019 period. **Table 1** contains a breakdown of the annual dredging records for the period from the report.

Five dredges are recorded as being used during this period. Most of the dredged material (approximately 931,150m^3) was removed by the Eastland Port owned dredge - Pukunui. The report notes that the Pukunui is used all year round and other dredges are used on an as required basis.

Table 1: Gisborne Port 2003-2019 Maintenance Dredging Estimates Summary

Year	Pukunui (m^3)	New Era (m^3)	Kawatiri (m^3)	Brage R (m^3)	Albatross (m^3)	Total (m^3)
2003	22,400	60,000				82,400
2004	31,650					31,650
2005	16,500					16,500
2006	20,100	57,000				77,100
2007	57,000					57,000
2008	52,000					52,000
2009	110,800		20,825			131,625
2010	95,100					95,100
2011	106,300		31,900			138,200
2012	77,700(1)					77,700
2013	79,480(2)					79,480
2014	62,080					62,080
2015	38,200			44,000		82,200
2016	41,440		73,950			121,350
2017	52,400				18,161	70,561
2018	51,550					51,550
2019	16,490					16,490
Total	**931,150**	**117,000**	**126,675**	**44,000**	**18,161**	**1,236,986**

Note 1: The October 2019 report records a total of 79,200m^3 of dredging of which 1,500m^3 was of a capital nature and not included in this table.

Note 2: The October 2019 report records a total of 82,480m^3 of dredging of which 3,000m^3 was of a capital nature and not included in this table.

Source: Eastland Port October 2019 Annual Dredging Report

Based on the latest annual report records approximately 1,236,986m^3 of maintenance dredged material was removed from the port between 2003 and 2019. Over the 17-year period this equates, on average, to approximately 72,764m^3 per annum. The annual dredging estimates varied from 16,500m^3 (in 2005) to 138,200m^3 (in 2011).

Section 2 of the annual report notes that day to day records of the dredging and disposal operations are kept and made available to the Council upon request. The daily records identify in general terms the port area dredged, type of material, number and volume of loads, and other information.

2.3 Offshore Spoil Disposal Ground

The (OSDG) has been utilised for the disposal of all maintenance dredgings over the last approximately 17 years. The use of the site was approved by the Environment Court as part of a set of capital and maintenance dredging and disposal consents in August 2000 (Ref. RMA No. 2076/98). Eastland Port annual report records indicate that the OSDG was first used in 2003.

The OSDG comprises an area of 3km^2, approximately 4km to the south-west of the port within Poverty Bay. The location of the disposal ground is shown in **Figure 2**.

A review of past reports indicates the OSDG was chosen for the following reasons:

- The site is close to the mouth of the Waipaoa River and has a naturally muddy surficial seabed lithology;
- The muddy based benthic ecology is relatively sparse and of no special significance;
- There are no reefs nearby and the area is not used significantly for fishing or other recreational boating activities; and
- The general direction of sediment transport in the area tends to be offshore which reduces the likelihood of material re -entering the port or affecting any of the beaches in the Gisborne area.

The geophysical, hydrological, ecological and other values of the OSDG are described later in this report. Water depths in the area are recorded as being in the order of 18-20m below chart datum (BCD).

2.4 Maintenance Dredging of Navigation Channel, Vessel Turning Basin, and Wharves 7 and 8 Areas

Most of the maintenance dredging undertaken by Eastland Port over the years has related to the outer port, i.e. the PNC, VTB and Wharves 7 and 8.

Current Maintenance Dredging and Disposal Coastal Permits

The current coastal permits for maintenance dredging of the PNC, VTB and Wharf 7 and 8 areas, along with disposal of dredged material at the OSDG, were issued on 10 September 2015. They have a five-year term. **Appendix D** contains copies of the permits.

The current permits authorise up to 140,000m^3 of material to be dredged from the outer port area, i.e. from the PNC, VTB, Wharf 7 and Wharf 8 areas, and for the same amount of dredge spoil material to be disposed of at the OSDG. (Ref. Permit Headings on Page 1)

Figure 4 contains Plan A from the permit showing the approximate authorised area of maintenance dredging. This plan also shows the approximate locations of the three sediment quality sampling sites in the VTB, near Butlers Wall and in the mid PNC, which form the basis of the annual sediment quality monitoring programme.

Figures 5 & 6 contain copies of the more detailed former WorleyParsons (now Worley) plans that were submitted with the applications and are referenced in the consent conditions. As shown on the plans a dredge depth of 10.5m Below Chart Datum (BCD) was proposed for the PNC, 9.3m BCD for the VTB and 8.0m BCD for the Wharf 7 and Wharf 8 berth pockets. The batter slopes adjacent to Butlers Wall and the river training wall were shown as varying in the plans.

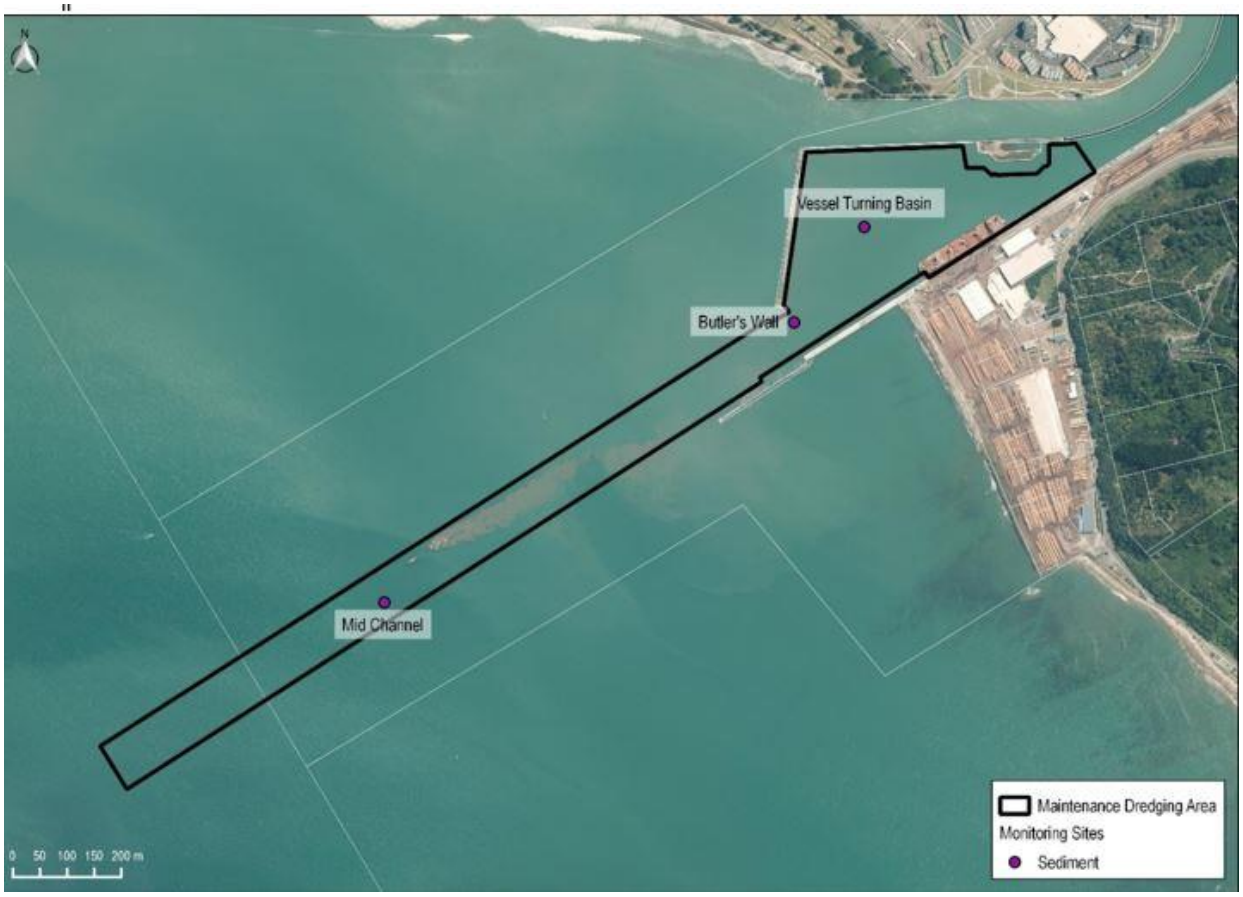


Figure 4: Plan of Consented PNC, VTB and Wharves 7 and 8 Maintenance Dredging Area

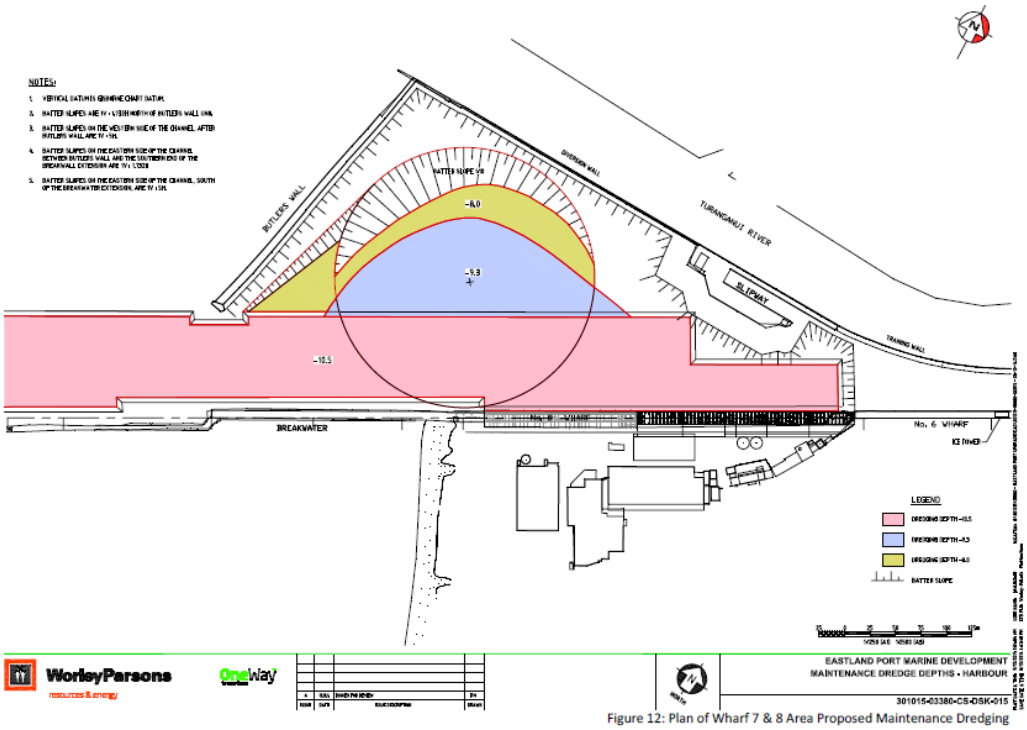


Figure 12: Plan of Wharf 7 & 8 Area Proposed Maintenance Dredging

Figure 5: Plan of Existing Vessel Turning Basin and Wharves 7 and 8 Maintenance Dredging Area

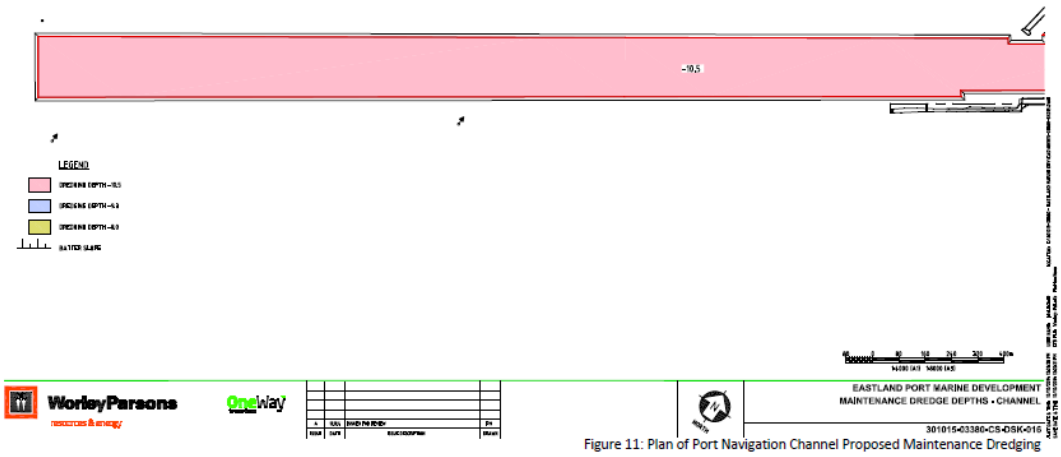


Figure 11: Plan of Port Navigation Channel Proposed Maintenance Dredging

Figure 6: Plan of Existing Port Navigation Channel Maintenance Dredging Area

Basis of the Current Annual 140,000m^3 Maintenance Dredging Volume

The WorleyParsons engineering report submitted with the applications contained the following supporting information on the maintenance dredging operations, including how the annual maximum dredge volume of 140,000m^3 was determined:

- The port dredging volumes had varied over the preceding years with the highest being approximately 138,200m^3 in 2011;
- Eastland Port was investigating the future form of the port and vessel needs (as part of the Twin Berths Project described later in this report), but for the foreseeable future the company was seeking to achieve a PNC depth of 10.5 BCD;
- The previous coastal permits authorised maintenance dredging to 10.5m BCD and this was carried out in the PNC and Wharf 8 berth pockets. The vessel turning basin and Wharf 7 area were not dredged to the authorised depth;
- The different dredge levels for the port were based on 2014 hydrographic survey and investigation of future vessel types and needs;
- Annual dredge volumes have been close to or exceeded 100,000m^3 four times since 2009; and
- Annual spikes in sedimentation arising from storm events need to be planned for so an allowance for up to 140,000m^3 a year was proposed.

Council Limited Notification Process

The Council report on the coastal permits contains the same 'base' information on the approved maintenance dredging and disposal volumes, along with an assessment of the plan provisions in place at the time. It also explains the associated limited notification process that was followed.

The Council decision report records that Maritime NZ had been consulted by Eastland Port and effectively provided an affected party written approval. It also noted the consultation undertaken with conservation, heritage, iwi, rock lobster fisheries and other organisations, but as no formal approvals were provided, limited notification of them was undertaken.

Seven organisations were limited notified and no submissions were received. The organisations notified were Te Runanga o te Turanganui a Kiwa, Ngai Tamanuhiri, Ngati Oneone, Tairawhiti Rock Lobster Industry Association, Port Community Liaison Group (PCLG), recreation water users, Department of Conservation and Heritage NZ (Pouhere Taonga).

Current Consent Conditions

The current coastal permits have eighteen (18) conditions attached to them. The key consent conditions are:

- Condition 5: The PCLG is to be provided with copies of all monitoring and other reports and convened to meet at not less than six monthly intervals;
- Condition 7: The maintenance dredging operations not resulting in any conspicuous change in water colour within two hours of the operations;
- Condition 8: A 'heavy metals' sediment quality monitoring programme involving nine different parameters is to be undertaken each February or March, the results compared to the ANZECC 2000 Interim Sediment Quality Guideline-Low values and reported to the Council;
- Condition 9: An elutriate test of metals potentially mobilised by dredging sediments is also required to be carried out every three years (in February or March), the results compared to the ANZECC marine water guidelines for '95% species protection' and reported to the Council;
- Condition 12: The noise emissions from the maintenance dredging operations are to comply with specified L_{eq} and L_{max} levels measured on the land beyond the port;
- Condition 14: The dredgings are to be 'evenly discharged and spread' over the disposal site and 'not concentrated'. Each dredging barge disposal track over the disposal ground is to be logged and a copy of the log provided to the Council by 31 October each year;
- Conditions 15: After reasonable mixing, there is to be no conspicuous change to the colour of the surface waters and after six (6) hours of the last discharge of each dumping run;
- Condition 16: Annual hydrographic and side scan sonar surveys of the disposal ground are to be carried out with the results provided to the Council by 31 October each year;
- Condition 17: Benthic in-faunal sampling and analysis of the sediments from sites within and near the disposal ground are to be undertaken after five (5) years in a manner consistent with past NIWA work and the results provided to the Council and PCLG by 31 October of the year sampling occurs ; and
- Condition 18: Submission of a coastal processes engineering report to the Council detailing investigations into the long-term capacity of the disposal ground within 6 months of the consent commencement, along with annual progress report over the five-year term of the consent, and a final report at least 6 months before its expiry.

The most recent results of annual heavy metals port sediment quality, triennial port sediment elutriate test and the five yearly OSDG benthic monitoring surveys required under Conditions 8, 9 and 17 are outlined later in this report.

The permits also have 'standard' conditions that enable the Council to review them at yearly intervals to require the Best Practicable Option (BPO) or other methods be adopted to remove or reduce any adverse effects.

2.5 Maintenance Dredging Associated with Redevelopment of Wharves 6 and 7

Eastland Port lodged resource consent applications with the Council in October 2017 to upgrade Wharves 6 and 7. The two wharves are over 60 years old and need to be upgraded to cater in the short term for the port tugs and larger vessels in the longer term. At the same time applications were lodged with the Council to redevelop the adjacent slipway, which has not been used since 2005 and serves to limit ship movements in the adjacent VTB. The slipway, which contains some contaminated soils, is to be remediated/redeveloped and made smaller, through declamation, so vessels can more easily manoeuvre within the VTB.

Coastal Permit Application to Undertake Capital Dredging and Future Maintenance Dredging at Wharf 6

The coastal permit application part of the Wharves 6 and 7 consent package sought approval to capital dredging of two berth pockets adjacent to Wharf 6 to enable the port tugs to be accommodated here.

Consent was also sought to future maintenance dredging of the same area and disposal of the dredge spoils at the OSDG. The application also sought consent for maintenance dredging of the newly created berth pockets at Wharf 6. No capital dredging of Wharf 7 was sought as that was still being investigated as part of the larger Twin Berths project that involves upgrading of Wharf 8 and the port breakwater.

The key dredging related components of the Wharves 6 & 7 coastal permit application were outlined in the *4Sight Wharves 6 & 7 Redevelopment: Assessment of Environmental Effects (October 2017)* and the appended *WorleyParsons Wharves 6 & 7 Upgrade Engineering Report (October 2017).* They are as follows:

- The capital dredging will involve removing approximately 28,500m^3 of hard rock material from an area of approximately 7,400m^2;
- The dredging is expected to be undertaken using a barge mounted backhoe because of the accuracy required near the new wharf quay wall;
- The ongoing maintenance dredging of the area is expected to involve removing approximately 1,500m^3 of soft material on average each year using a cutter suction dredge as part of the current port maintenance dredging operations;
- The capital and maintenance dredgings are to be loaded into either unpowered split hopper or bottom dumping barges and towed to the OSDG for disposal in the same manner as the current approved maintenance dredging operations.

The proposed area of Wharf 6 capital dredging is shown on the WorleyParsons Site Plan reproduced in **Figure 7**.

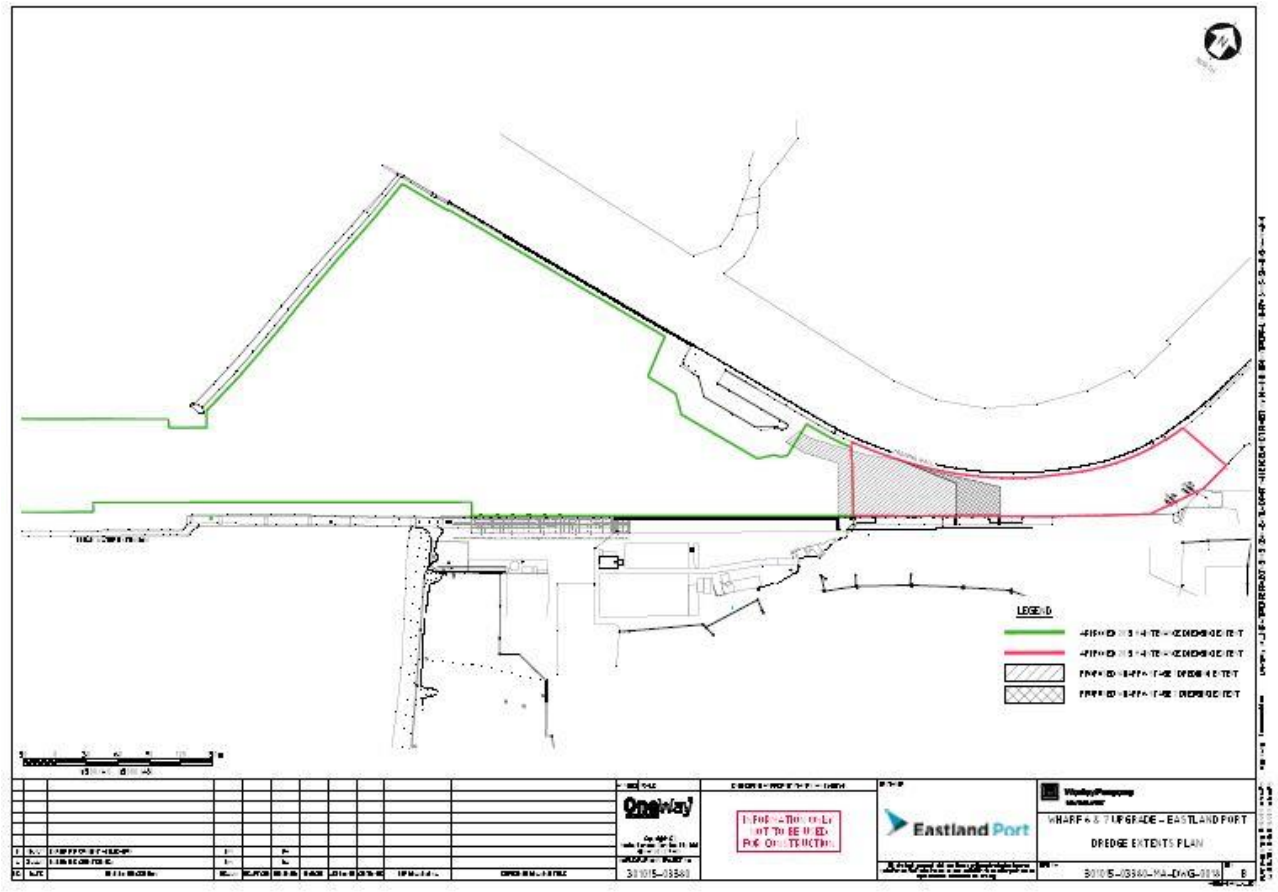


Figure 7: Plan of Approved Wharf 6 Capital and Maintenance Dredging Area

Council Decisions and Appeals

The Wharves 6 and 7 and slipway redevelopment projects resource consent applications packages were lodged with the Council in October 2017. After receipt and consideration of submissions a hearing was held by an independent hearing panel in late May 2018. Council decisions approving the applications, subject to conditions, were issued in September 2018.

Two appeals against the Council decisions were lodged with the Environment Court in October 2018. The appeals were lOSDG by Ian Ruru on behalf of Ngati Oneone, Ngati Porou Seafoods Group, Te Aitanga a Mahaki Iwi Trust and Te Runanga o Turanganui a Kiwa (the iwi collective hereafter) and the Rongowhakaata Iwi Trust.

Eastland Port, along with the two appellants and the Council, had two Court directed mediation meetings in May and September 2019. There have been further informal meetings and the parties are required to report back to the Court by the end of February 2020.

Based on the meetings to date Eastland Port are optimistic that the Council decisions to approve the capital and maintenance dredgings for the Wharf 6 redevelopment project will be upheld, although some of the associated consent conditions, primarily relating to an iwi consultation group, juvenile crayfish settlement devices and sediment/water quality are expected to be amended. Eastland Port have agreed to several amended consent conditions with the parties. They have been taken into account in preparing this application package and are explained later in this AEE report.

2.6 Maintenance Dredging in the Wharf 4 and 5 Areas

Maintenance dredging has in the past taken place in and around Wharves 4, 5 and 6. The most recent coastal permit for maintenance dredging from this area (and disposal of dredgings at the OSDG) was issued by the Council on 30 June 2013 and expired on 30 June 2018.

Recently Expired Coastal Permit for Maintenance Dredging and Disposal for Wharves 4, 5 and 6

The coastal permit for maintenance dredging of the Wharf 4, 5 and 6 areas and associated disposal of dredge spoils was issued by the Council on 30 June 2013. It had a five-year term and expired on 30 June 2018. **Appendix E** contains a copy of the expired consent. **Figure 8** contains a plan attached to the permit showing the authorised maintenance dredging area.

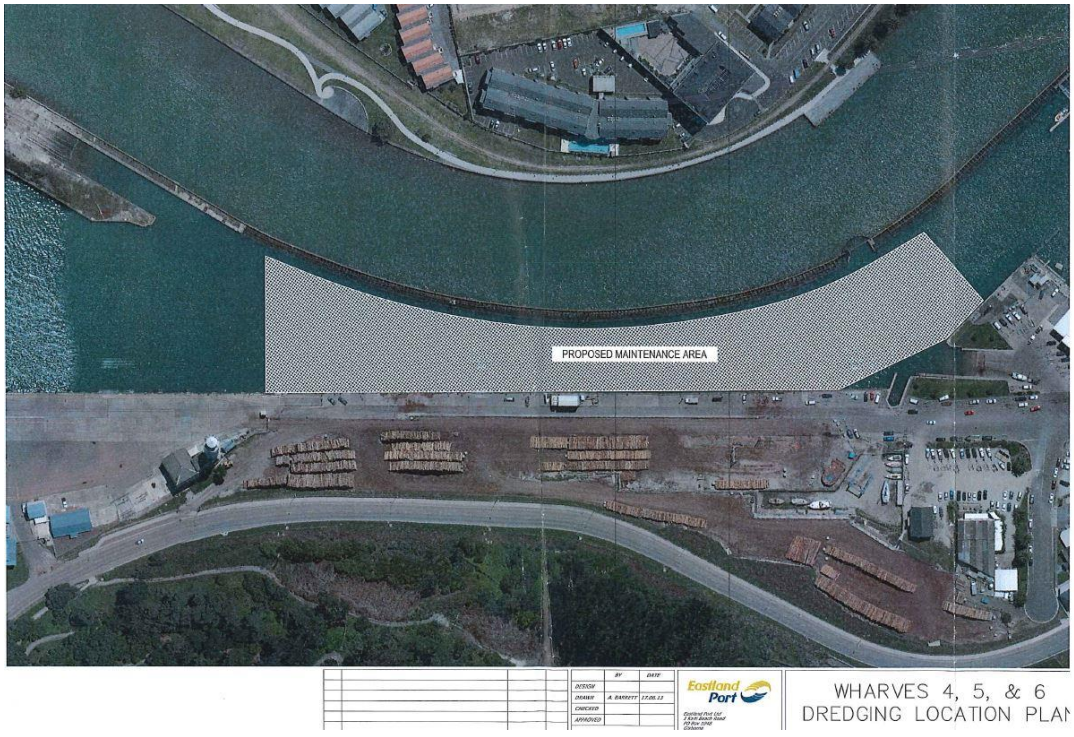


Figure 8: Plan of Previously Consented Wharf 4, 5 & 6 Maintenance Dredging Area

The consent refers to maintenance dredging in this area being carried out to a depth of up to 7m below chart datum. The associated Eastland Port application sought consent to an initial dredge volume of 10,000-12,000m^3, and then 500-1,500m^3 annually. The Council permit did not place any limits on the volume of material able to be maintenance dredged nor disposed of.

Eastland Port considered applying to renew these maintenance dredging and disposal consents in 2018. However, with lodgement of the Wharf 6 and 7 redevelopment consent applications back in October 2017 and the Twin Berths project investigations well underway it was decided to incorporate them into this application package in order to have one set of maintenance dredging and disposal consents for the whole port.

2.7 Recent Maintenance Dredging and Disposal Monitoring Results and Associated Investigations

Annual Port Maintenance Dredging Heavy Metals Annual Sediment Quality Monitoring

The most recent annual port sediment quality monitoring investigations required under Condition 8 of the current consents were undertaken by 4Sight in March 2019. They were reported on to the Council in the *4Sight Maintenance Dredging Annual Sediment Quality Monitoring Report (April 2019)*. **Appendix F** contains a copy of this report. The key findings of the report are outlined later in this report.

Section 1 of the report refers to the relevant consent conditions, whilst Section 2 explains the sampling and laboratory testing (by Hills Laboratories) procedures. Section 3 details the latest results and in Table 1 documents them alongside those taken since 2006. This section notes that Total Petroleum Hydrocarbons (TPH) is also tested in addition to the nine required metals.

Section 4 discusses the results in relation to the applicable ANZEEC guidelines referenced in the consent condition and states the following:

"The 2019 sediment sampling results are all below the applicable ANZECC 2000 ISQG-Low values and are compliant with Condition 8 (b) of the consent. Results are also consistent with the typical range of values previously reported for each parameter.

Metals levels appear somewhat variable over the period of the data set, but in all cases, concentrations are relatively low and consistent between years, taking into account the stated statistical accuracy of the analytical results reported in the Hills laboratory reports. As previously reported, nickel remains close to (but still below) the ANZECC ISQG-low trigger value at the Turning Basin."

Triennial Elutriate Testing of Metals in Port Sediments

The first three yearly elutriate testing of metals in the port sediments required under Condition 9 of the current consents was undertaken by 4Sight in March 2017 and was reported on in the *4Sight Maintenance Dredging Annual Sediment Quality Monitoring Report (April 2017)*. **Appendix F** contains a copy of this report. Elutriate testing was proposed by 4Sight and Eastland Port as part of the 2015 maintenance dredging and disposal applications and was not required under the earlier 2000 consents issued by the Environment Court.

Section 1 of the report explains the elutriate testing process, and notes the following:

"*An elutriate test is used to investigate what happens when sediments are removed from the seabed and exposed to aerated seawater. The test involves agitation of the sampled sediments under controlled laboratory conditions then filtering and testing of residual liquid for target contaminants. This testing procedure simulates what happens during a dredging process as sediment is disturbed and lost to the water column during the excavation process.*

Consent Condition 9(b) identifies the testing is to include the sediment (as sampled at the port), the local seawater (collected from the port at the time of sampling) and used as the elutriation fluid, and the filtered elutriates which provide a measure of the contaminants potentially generated into the water column.

Consent Condition 9(c) identifies the parameters to be tested in the seawater and the elutriate as the same as noted above for the sediments but with both valent forms of chromium to be tested (Cr III and Cr VI). Results are to be assessed against ANZECC 2000 Marine Water Quality Guidelines at the 95% level of protection (refer Table 3.4.1 of ANZECC 2000)"

Section 3.2 explains the sampling and test results, noting the following:

"*Seawater collected from the Turning Basin was used in the elutriate testing on sediments sampled from the Turning Basin and the Butlers Wall. Elutriate values were generated for the Turning Basin and Butlers Wall sediments.*

"*The Turning Basin elutriate values were below analytical detection except for arsenic and copper. There is no marine arsenic trigger value provided in ANZECC 2000. The elutriate copper concentration was 1.9 ug/l which is also above the ANZECC 95% protection level of 1.3 ug/l. Thus, in this case there was an increase in copper concentration relative to 'background' (1.7ug/l), but this was small (0.2 ug/l).*

The Butlers Wall elutriate values were below detection for all values except for arsenic which showed a similar concentration to the Turning Basin value".

Sections 4 and 5 discuss the implications of the results and records:

"*The elutriate testing suggests that the maintenance dredging may cause a small increase in copper concentration in the water column, but the concentrations of other metals are unaffected. The increase in copper is small and while it causes a slightly greater exceedance relative to the 95% species protection trigger it remains within the (*Sic ANZECC*) 90% species protection threshold*."

The elutriate testing confirms there should be no significant adverse water quality effect on metal concentrations in the water column due to the dredging."

This same section of the report notes that the ANZECC 90% species protection level (rather than the 95% level) was adopted by the Council as part of the decision the vary the coastal permit for the treated stormwater discharge from the Southern logyard stormwater discharge issued in June 2016. This decision was issued the year after the current maintenance dredging consents by the Council. This matter is explained in more detail later in this AEE report with reference to the appended 4Sight expert ecology and water quality report.

Five Yearly Off- Shore Disposal Ground Benthic Ecology Monitoring

The last NIWA 5 yearly benthic fauna and sediment quality investigation was undertaken in 2014, following an earlier monitoring investigation in 2008 and two background investigations in 1992 and 1996.

Appendix G contains a copy of the *NIWA Effects of Dredge Disposal on Benthic Fauna of the Eastland Port Offshore Disposal Ground Report (May 2014*). The NIWA report contains four sections and associated appendices and figures.

Section 2 -Methods, contains a figure showing the approximately 80 sampling sites, which are described as 'inner', 'edge' and 'outer'. It is reproduced as **Figure 9** in this AEE.

Section 3- Results, contains the following findings:

- The OSDG is a high energy location exposed to a large ambient load of river sourced sediment;
- It contains benthic soft sediment communities, with 79 distinct macrofaunal taxa, mainly polychaetes, bivalves and amphipods;
- Taxonomic diversity, abundance, evenness and rare species present were not statistically different at the 'inner', 'edge' and outer sites inside, outside or on the edge of the disposal ground; and
- The communities are comparable to those that were recorded before any disposal occurred, as reflected in the 1997 and 1999 studies.

Section 4 -Discussion, summarises published research findings on the effects of the disposal of dredged material on offshore benthic communities and ecosystems generally. Like the Gisborne Port monitoring findings, they generally show the resilience of the communities to dredge spoil disposal and high numbers of organisms across the different sampling locations. As noted at the end of the section 'no statistical differences were found in community composition, richness, evenness, and two diversity indices, that were able to be related to the disposal of dredge spoils.'

Under Condition 17 a five yearly monitoring report was expected to be provided to the Council and PCLG earlier this year. Eastland Port have commissioned 4Sight and NIWA to undertake the required 5 yearly benthic ecology and sediment quality investigations and this work is programmed to be undertaken in early 2020.

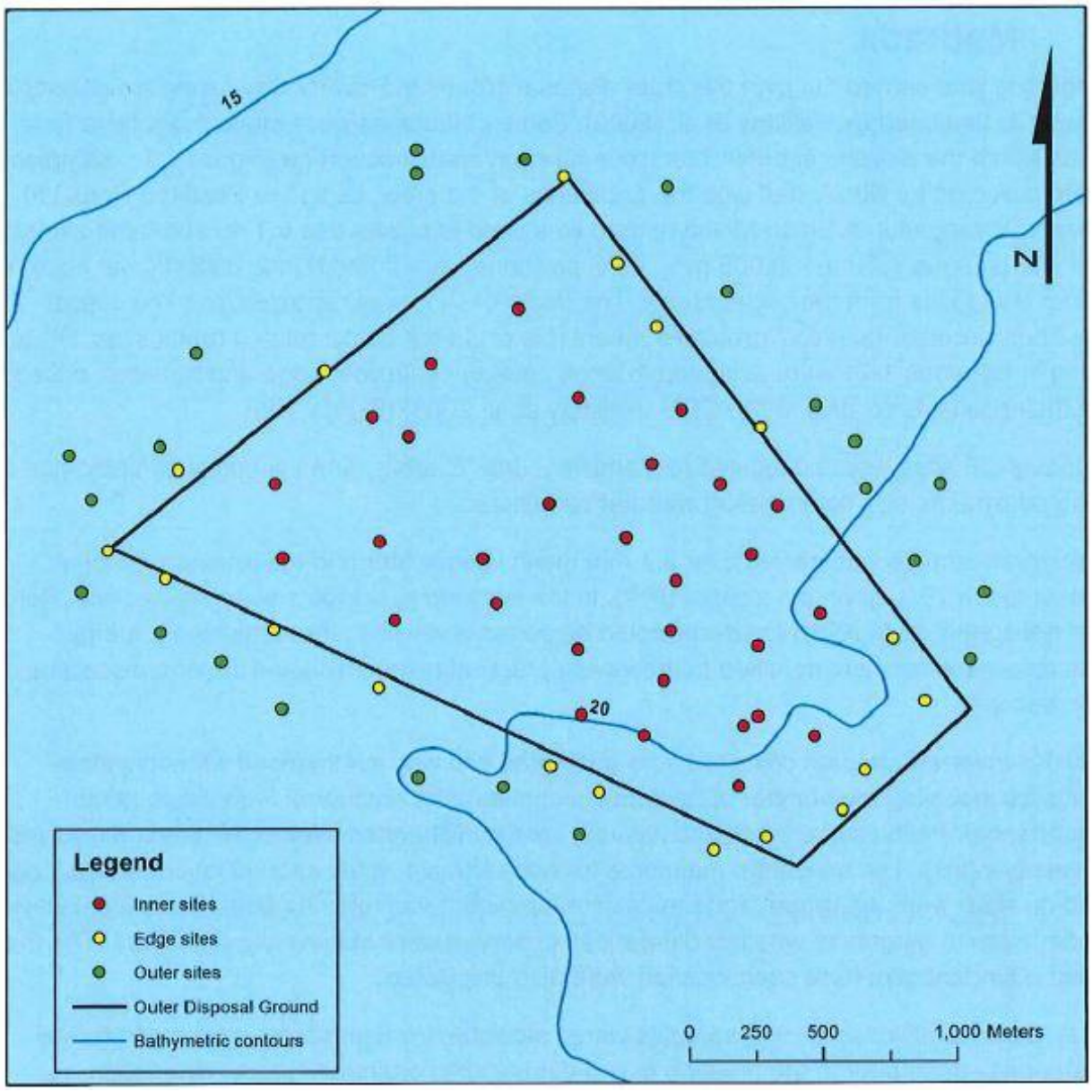


Figure 9: Offshore Disposal Ground Benthic Sampling Sites

Source: NIWA Report

Recent Off -Shore Disposal Ground Coastal Processes Investigations

Appendix H contains a copy of the *WorleyParsons Maintenance Dredging and Disposal-Offshore Disposal Ground Coastal Process Investigations Report (December 2015)* provided to the Council in accordance Condition 19 in late December 2015. This interim report outlined the coastal processes investigation programme to be taken over the 5-year term of the consent, and which has now been completed by MetOcean.

The now completed MetOcean investigations are summarised in a report entitled *Eastland Port Maintenance Dredging and Disposal Project: Report Summarising Findings (Rev B- 21 February 2020).* It is in **Appendix I.** The report summarises the findings of eleven (11) specialist reports, which are also in **Appendix I**, several of which are cited later in this report in support of the subject applications.

Appendix I also contains the following supporting reports (in date order):

- *Eastland Port Maintenance Dredging and Disposal Project-Wave Hindcast Validation – Rev B – 19 September 2017;*

- *Eastland Port Maintenance Dredging and Disposal Project-Wave Hydrodynamic Hindcast Validation – Rev D 21 September 2017;*
- *Eastland Port Maintenance Dredging and Disposal Project-Morphological Model Validation – Rev D – 31 January 2018.*
- *Eastland Port Maintenance Dredging and Disposal Project- Establishment of Empirical Equations to Predict Long Shore Wave Climate at Berth – Rev B – 22 February 2018.*
- *Eastland Port Maintenance Dredging and Disposal Project –Disposal Plume Modelling - Rev B- 10 April 2018;*
- *Eastland Port Maintenance Dredging and Disposal Project – Surfing Wave Dynamics at Midway Beach – Rev C – 22 August 2018.*
- *Eastland Port Maintenance Dredging and Disposal Project–Summary of Effects of Offshore Disposal Ground - Rev C- 12 September 2018.*
- *Eastland Port Maintenance Dredging and Disposal Project – Morphological Response to Maintenance Dredging – Rev F – 21 June 2018.*
- *Eastland Port Maintenance Dredging and Disposal Project – Morphological Response of the Disposal Ground to Maintenance Dredging – Version 0.4 – 10 December 2019.*
- *Eastland Port Maintenance Dredging and Disposal Project- Maintenance Dredge Plume Modelling– Rev C – 13 December 2019; and*
- *Eastland Port Maintenance Dredging and Disposal Project- Morphological Response of the Shoreline to Maintenance Dredging and Disposal of Sediments– Version 0.6 -23 January 2020.*

The reports in **Appendix I** relating to the OSDG will, following lodgement of the new application package, also be sent to the Council with a 4Sight explanatory covering letter requesting they be considered as the final reports required under Condition 18 of the current consents.

2.8 Twin Berths Project

The Eastland Port Twin Berth Development Project is explained and illustrated on the company website, (http://www.eastland.nz/eastland-port/twin-berth/). The project has three key components; these being:

- The Wharves 6 & 7 and Slipway redevelopment project subject of the Environment Court mediation outlined earlier intended to provide more vessel manoeuvring space and better facilities for the port tugs and fishing fleet;
- Remediation of the port breakwater, along with extension of Wharf 8 and an adjacent proposed reclamation to enable two handy-max sized vessels to berth and be loaded/unloaded simultaneously; and
- Capital dredging of the PNC, VTB and other parts of the port to cater for deeper draught vessels and safer more effective vessel movements within the port, along with maintenance dredging of the deepened port.

The breakwater, Wharf 8, reclamation and capital dredging resource consent application packages are expected to be OSDG with the Council at or around the same time. Based on the current investigation programme these applications are expected to be OSDG with the Council by the end of 2020.

Upgrading of the Breakwater and Wharf 8 and an Associated Proposed Reclamation

Eastland Port commissioned business case, engineering and environmental (ecology, heritage, landscape and noise) investigations into the breakwater, Wharf 8 and reclamation redevelopment components of the Twin Berths project.

The preliminary engineering investigations indicate that Wharf 8 will need to be upgraded and extended along the breakwater to safely berth two handy-max vessels at once. Parts of the breakwater are over 140 years old, in a poor state and need upgrading.

A small reclamation is also required to enable vessel loading along the extended Wharf 8 and provide some additional operational space. It is also expected to structurally support the inner part of the breakwater and provide better access to the outer part of the breakwater for the required remediation.

Port Capital Dredging and Offshore Disposal

Eastland Port has also commissioned investigations into the coastal processes, ecology and engineering aspects of a future capital dredging programme.

The capital dredging programme is aimed at providing increased depth and manoeuvring space for vessels within the port and the channel. Preliminary investigations indicate that approximately 200,000m^3 of material is likely to need removing to achieve the desired water depths in different areas of the port. The future capital dredge spoil disposal operations are expected involve use of the current OSDG in Poverty Bay.

2.9 Investigations into Future Port Maintenance Dredging and Disposal

The proposed port wide maintenance dredging operations subject of this resource consent application package are based on investigations into past dredging operations, current dredge levels and coastal processes affecting the port and wider bay area. They also take into account the Twin Berth project investigations into shipping trends; supply chain demands and other matters that will influence the future use of the port.

Most of the investigations have been carried out by MetOcean and Worley. Tonkin & Taylor Ltd (T+T), Marine & Earth Sciences Pty Ltd (MES) and Hunter Hydrographic Services (Hunter) have also undertaken work.

Tonkin & Taylor Ltd and Marine & Earth Sciences Investigations

T+T and MES have undertaken the following geophysical and geotechnical engineering investigations into the port as part of the Twin Berths project, and the associated slipway and wharf redevelopment applications currently with the Environment Court:

- *Tonkin & Taylor Ltd: Eastland Port Redevelopment: Geotechnical Investigation Factual Report- Job No 29987- October 2015; and*
- *Marine & Earth Sciences Pty Ltd: Eastland Port Upgrade-Marine Geophysical Surveys – March 2016;*

The reports outline the underlying geology of the port and are of some relevance to the proposed maintenance dredging and disposal operations. They are not appended to this AEE, but can be made available to Council staff/consultants and other parties.

Hunter Hydrographic Services Port Seabed Surveys

The MetOcean, Worley and other investigations have utilised data from the annual hydrographic survey of the port seabed undertaken by Hunter Hydrographic Surveys (Hunter).

The most recent Hunter surveys were of the outer harbour and navigation channel area were undertaken in December 2019 and in **Appendix J**. The plans record seabed levels in terms of Gisborne Chart Datum (1926). Gisborne Chart Datum (CD) is a localised measurement of the depth of water below predicted Lowest Astronomical Tide (LAT) in the Gisborne area.

Worley Investigations

The most recent investigations by Worley into historical dredge volumes/levels, the material regularly being dredged, methods of maintenance dredging and the future area and expected volume of maintenance dredging, are summarised in the Worley report entitled *Eastland Port Ltd – Maintenance Dredging and Disposal Operations – Port Navigation Channel Vessel Turning Basin and Wharves 4-8- Coastal Permit Applications – Engineering Report (10 February 2020)* in **Appendix K**.

The key findings of the Worley report are summarised later in this AEE report. Attached to the report are a set of plans showing the proposed areas of maintenance dredging in the report and associated dredge levels and volumes. They are also reproduced as figures in this AEE.

MetOcean Investigations

MetOcean have undertaken several commensurate investigations into the coastal processes affecting the port and wider Poverty Bay area and the effects of the current maintenance dredging and disposal operations. They are in **Appendix I**. As outlined earlier the investigations were carried out partly to satisfy Condition 18 of the current maintenance dredging and disposal consents. However, they also have used as the key serve as a sound basis for the new applications outlined in this AEE. The key findings of the of the reports as they relate to the proposed future maintenance dredging and disposal operations are outlined later in this AEE.

2.10 Proposed Maintenance Dredging

The extent and nature of the proposed maintenance dredging operations are described in the Worley and MetOcean reports. The T+T geotechnical engineering report, MES geophysical report and Hunter plans contain information on the recent and current port seabed bathymetry.

Existing Port Seabed Bathymetry

The MES report contains the mapped findings of a geophysical survey of the seabed and sub-seabed conditions. A series of colour figures are appended to the report showing the different seabed levels in the PNC, VTB and Wharf areas. The MES plan showing the overall port seabed contours is reproduced in **Figure 10.**

The MES plans show the port seabed contours ranging from approximately 0.8m below the Lowest Astronomical Tide (LAT) in the inner harbour to over 16m below LAT at the outer end of the PNC. LAT is the lowest tide level which can be predicted to occur under average meteorological conditions and under any combination of astronomical conditions.

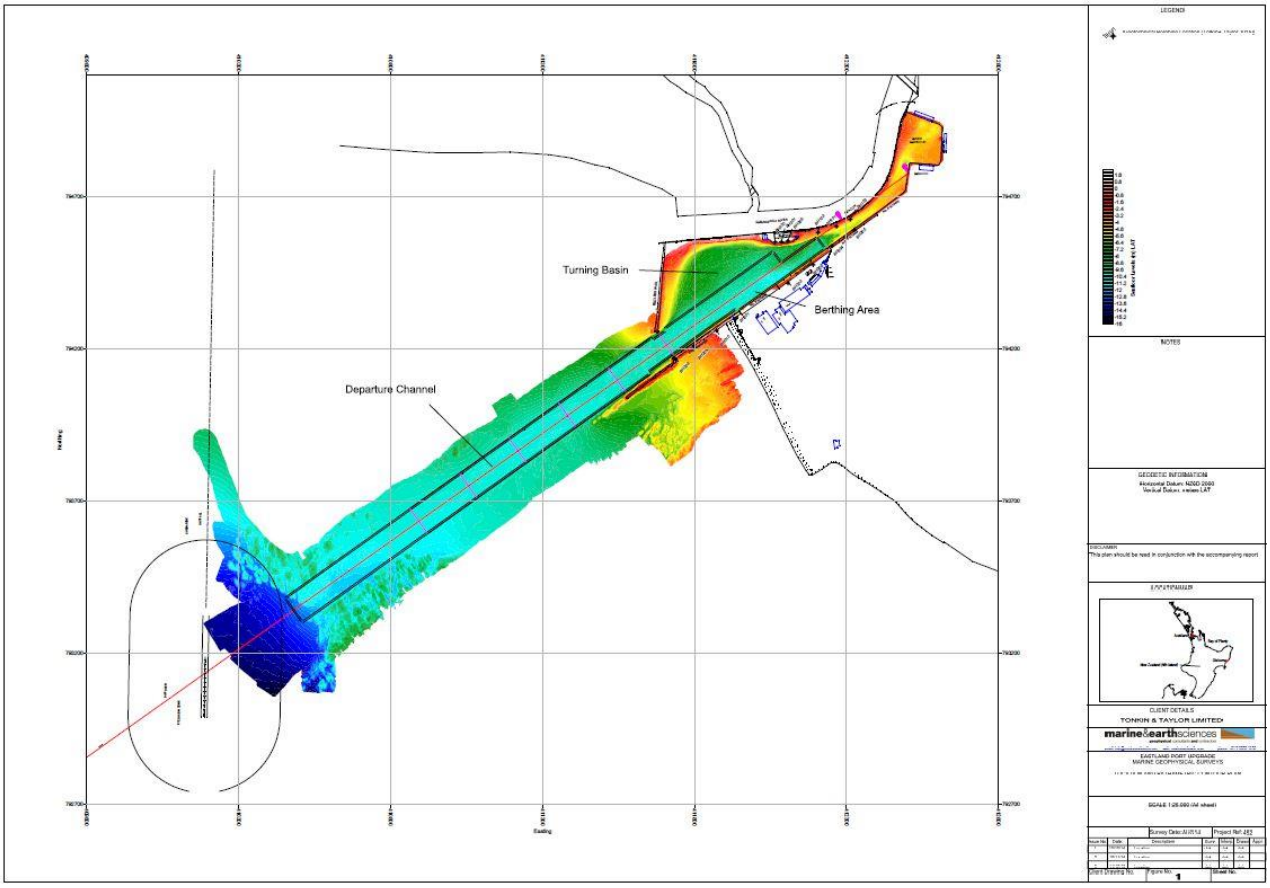


Figure 10: Plan of Gisborne Port Bathymetry

The latest December 2019 Hunter port survey plans in **Figures 11-13** show the port seabed levels in more detail.

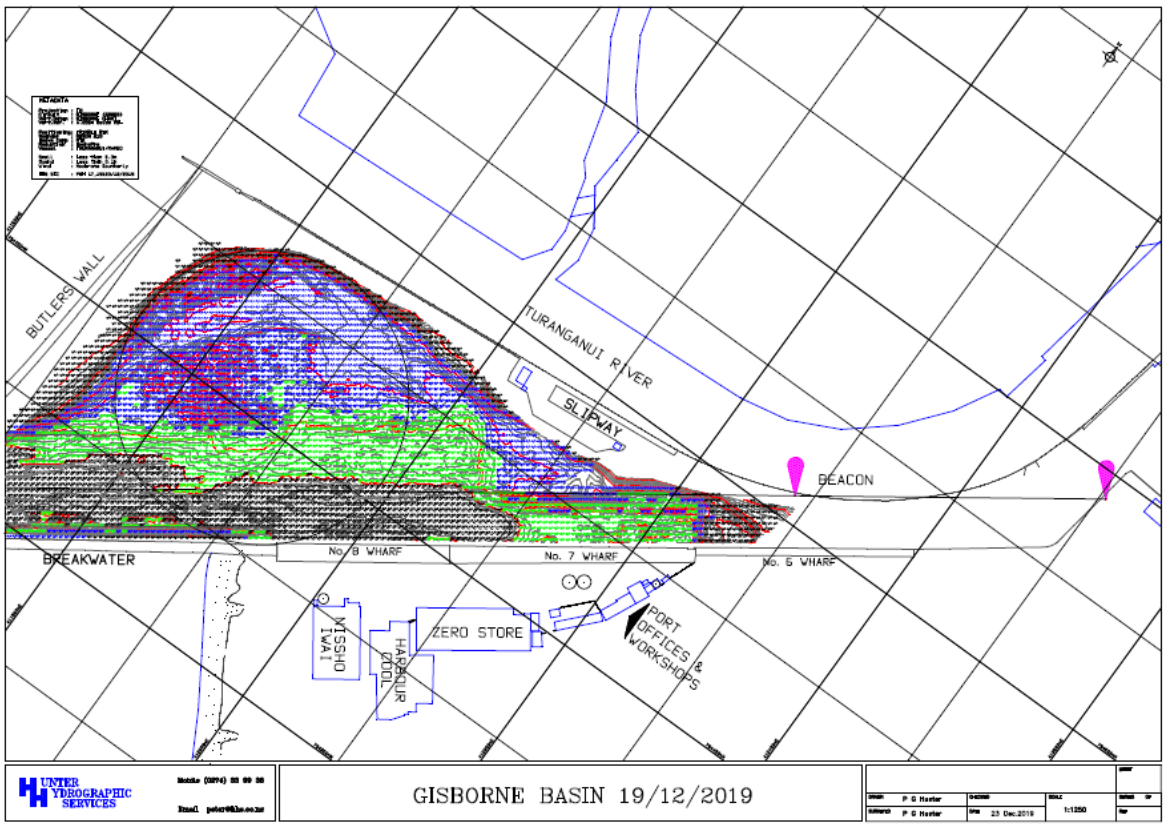


Figure 11: Gisborne Port Vessel Turning Basin Bathymetry

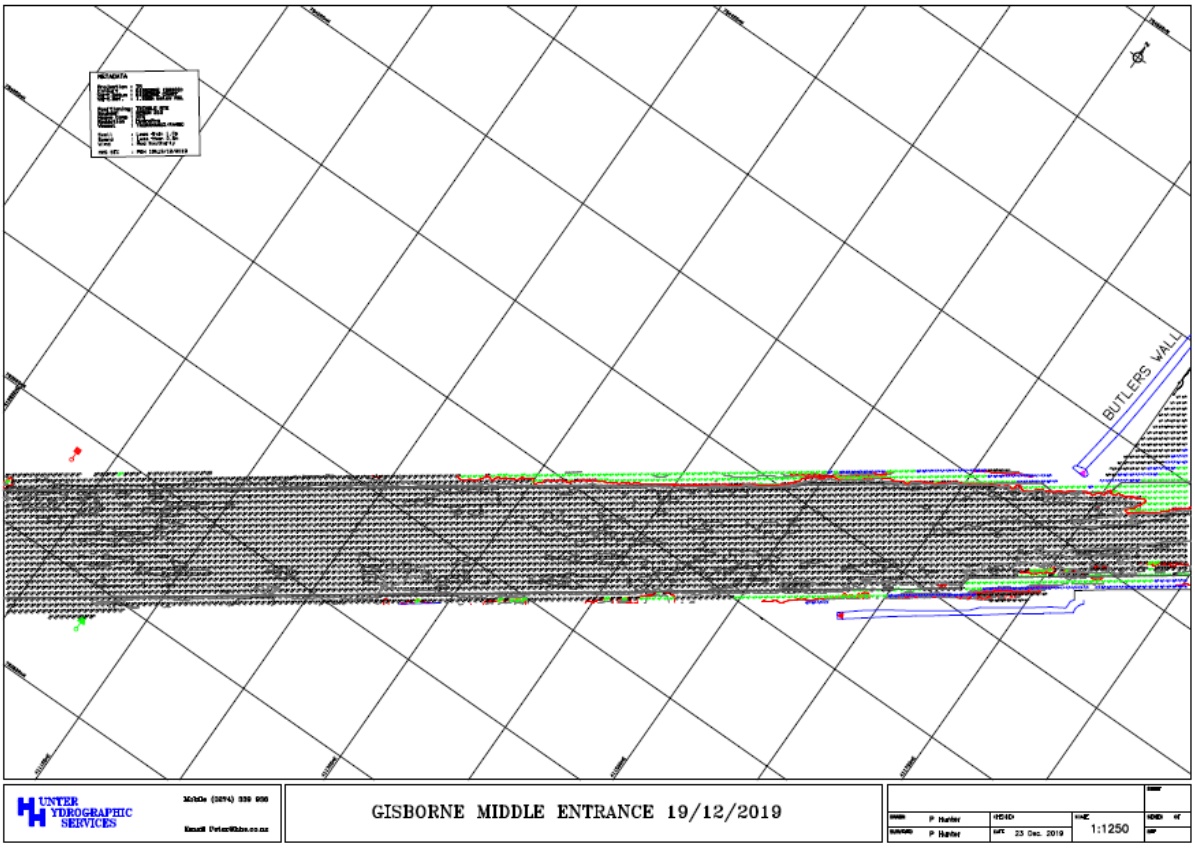


Figure 12: Gisborne Port Inner Navigation Channel Bathymetry

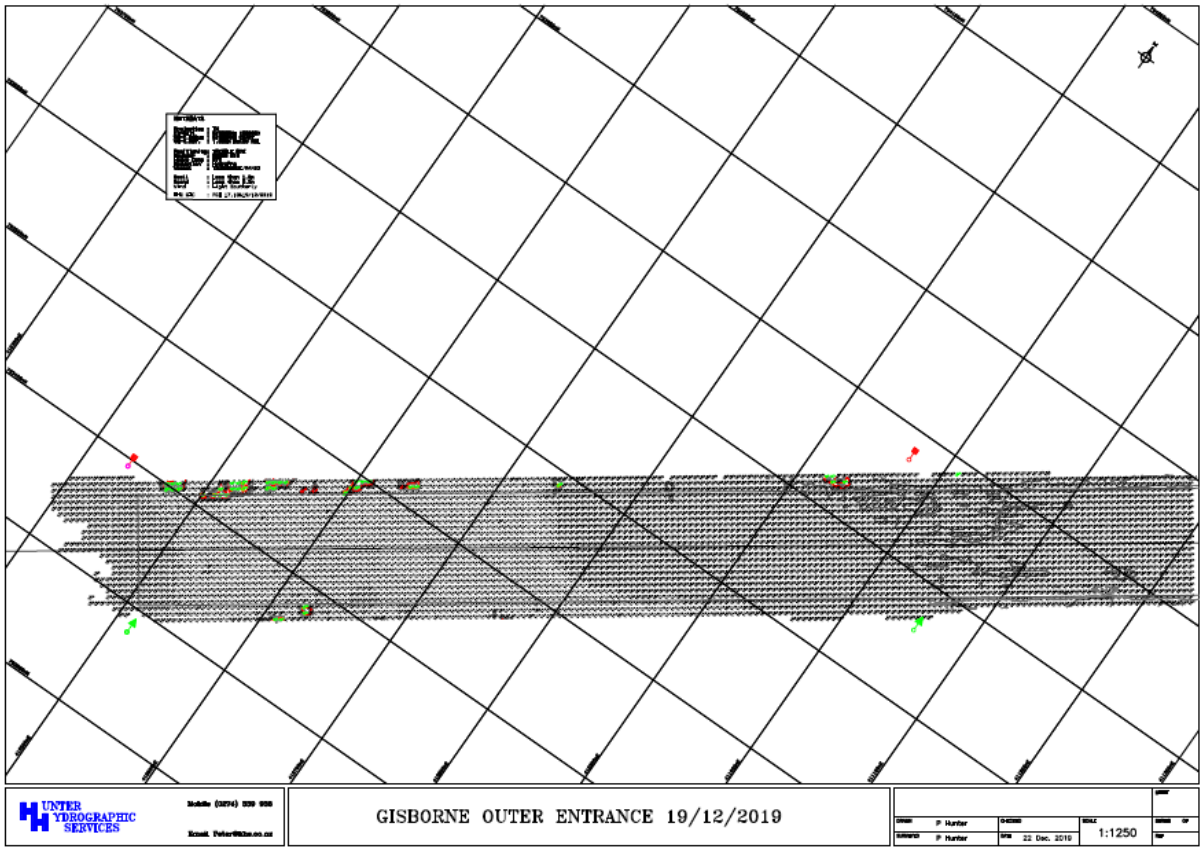


Figure 13: Gisborne Port Outer Navigation Channel Bathymetry

Area and Depth of Proposed Maintenance Dredging Area

The Worley plans in **Figures 14-17** show the area of the proposed port maintenance dredging operations. They are expected to extend from the outer (western) end of the PNC to the inner (eastern end) of Wharf 4.

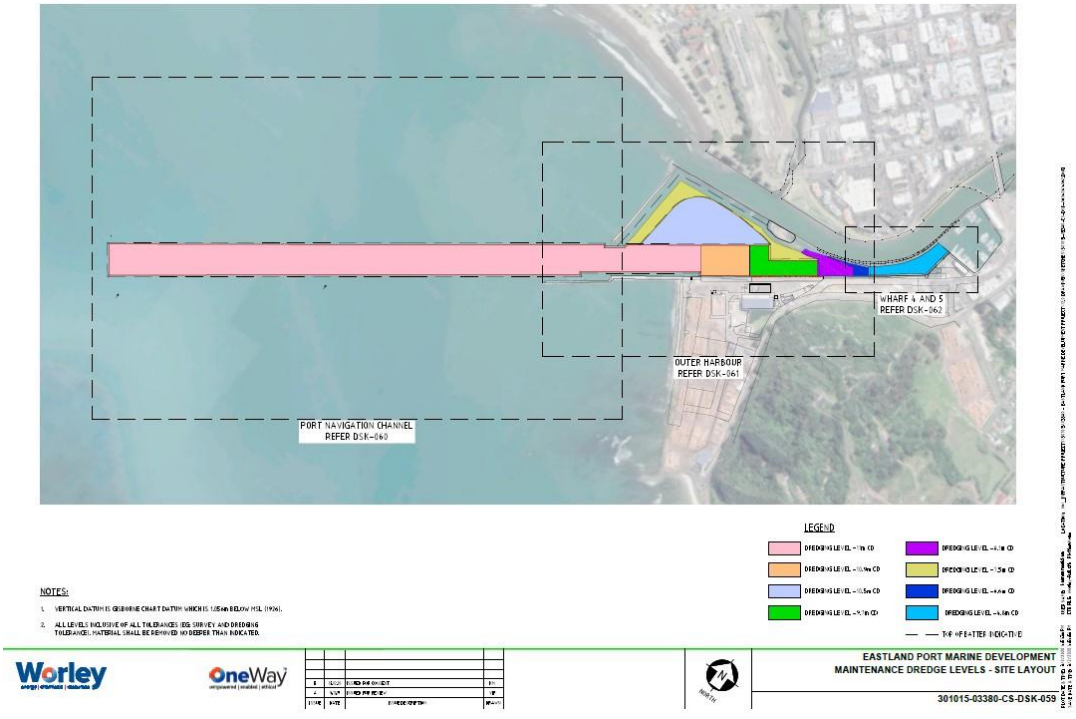


Figure 14: Gisborne Port Maintenance Dredging Area Plan

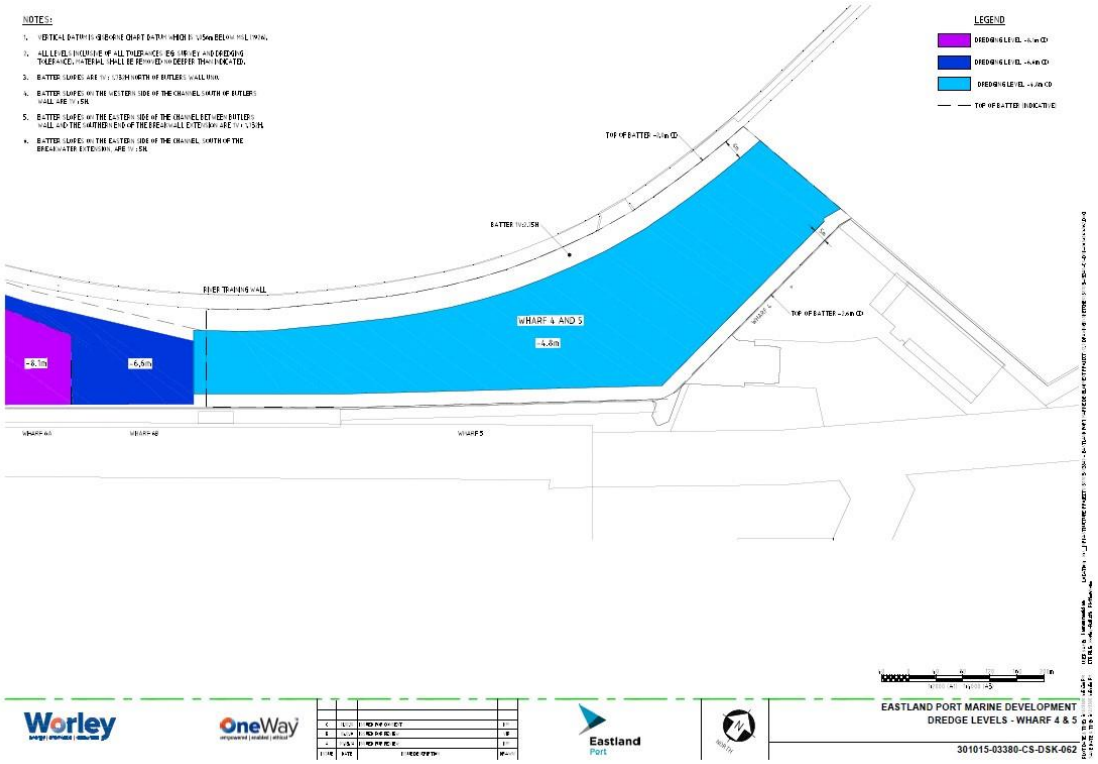


Figure 15: Proposed Maintenance Dredging Plan for Wharves 4, 5 & 6

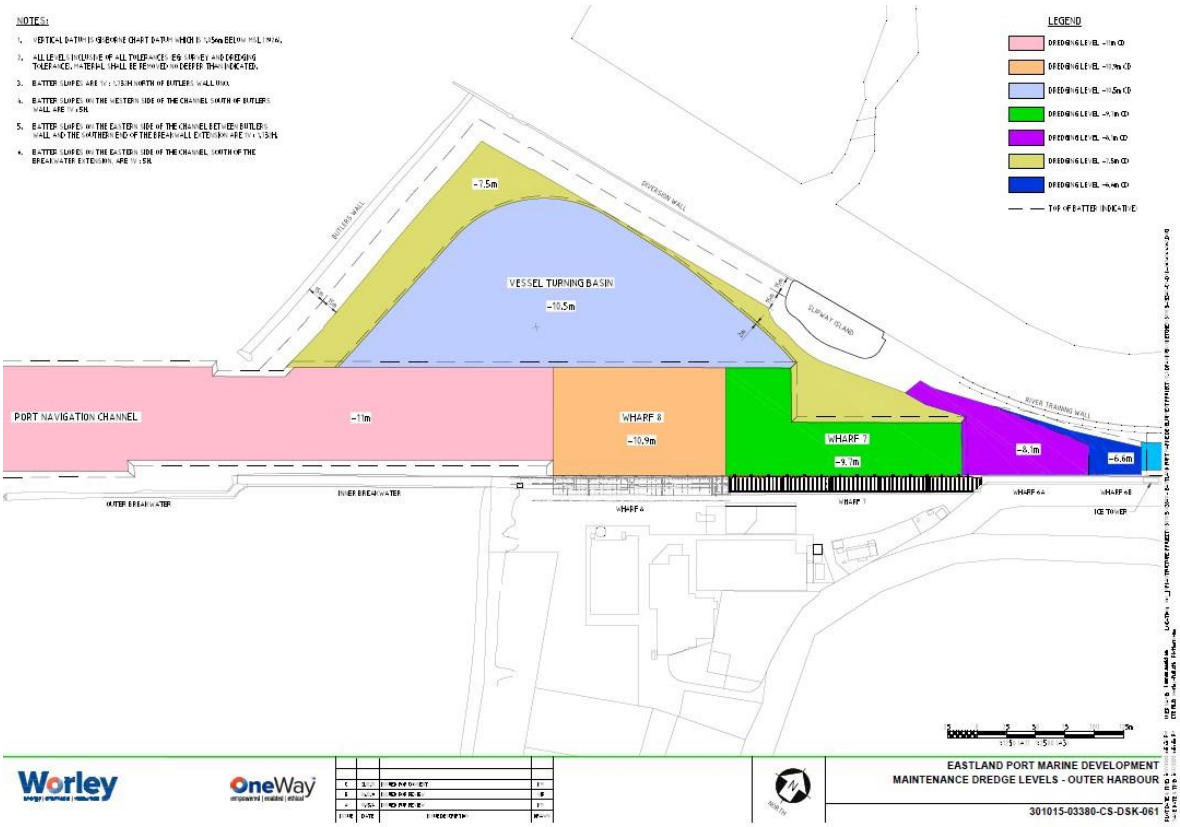


Figure 16: Proposed Maintenance Dredging Plan for the Vessel Turning Basin and Wharves 7 and 8

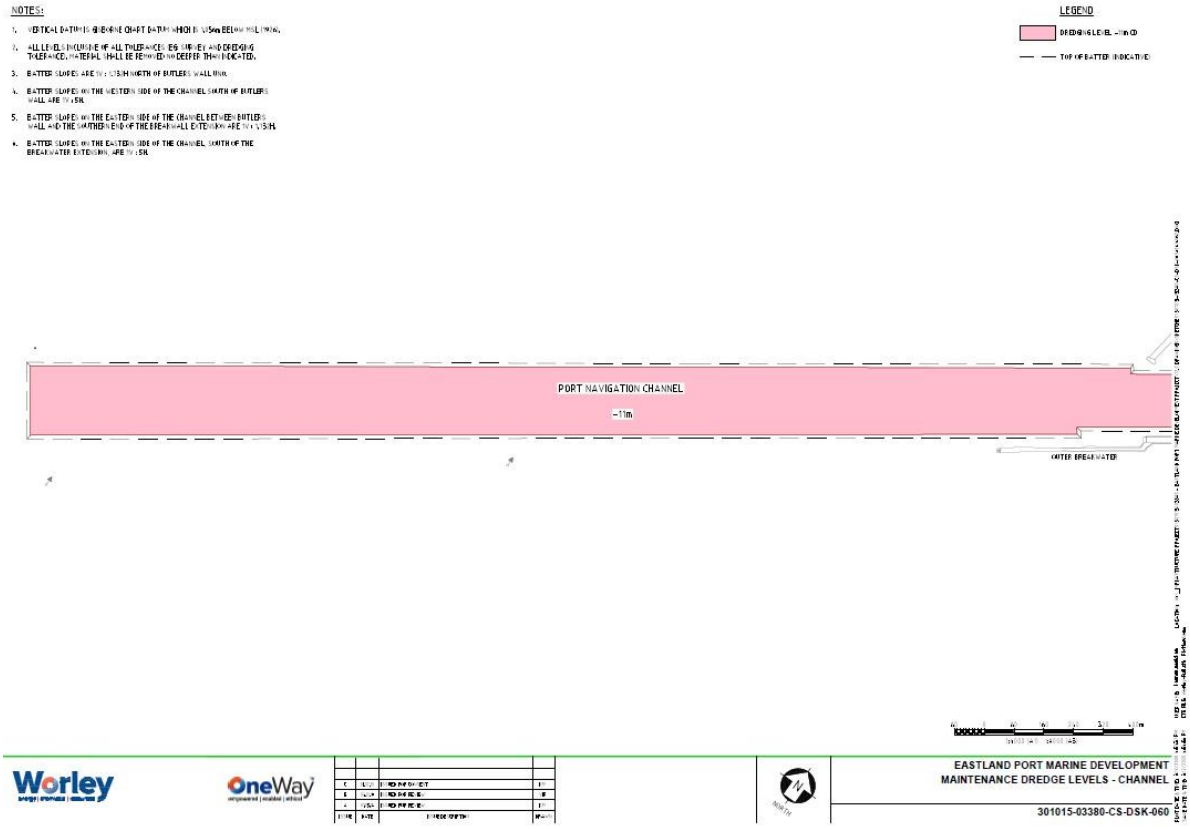


Figure 17: Proposed Maintenance Dredging Plan for the Port Navigation Channel

The total proposed maintenance dredging area is approximately 24.7ha, as noted in the Worley report. It includes the area adjacent to Wharf 6 that is the subject of the coastal permit application before the Environment Court.

The Worley plans and report record the different proposed maintenance dredging levels in different areas of the port and their relationship to the current consents and the Wharf 6 capital dredging and disposal consents. They are summarised in **Table 2**.

Table 2: Gisborne Port Maintenance and Capital Dredging Depth Summary

Port Area	Approved Maintenance Dredge Level (m below chart datum)	Approved Capital Dredge Level (m below chart datum)	Proposed Maintenance Dredge Level (m below chart datum)
Port Navigation Channel (PNC)	-10.5m CD		-11.0m CD
Vessel Turning Basin (VTB)	-9.3 & 8.0 CD		-10.0 & 7.5m CD
Wharf 8 Berth Pocket	-10.5m CD		-10.9m CD
Wharf 7 Berth Pocket	-14m CD		-9.7m CD
Wharf 6 Tug Berth 1	-8.1m CD	-8.1m CD	-8.1m CD
Wharf 6 Tug Berth 2	-6.6m CD	-6.6m CD	-6.6m CD
Wharves 4 & 5	-7.0m CD		-4.8m CD

Source: Worley Report

Section 2.1 of the report notes that proposed maintenance dredging levels relate to the 'design dredge level'. This is the 'operational dredge level', i.e. the minimum required to safely navigate vessels, plus an 'allowance of 0.6m' to account for dredging equipment and surveying tolerances. This same section of the report also notes that the 'design dredge level' has been determined taking into account the need to maintain the structural integrity of the various breakwater, river training wall, wharf and other port related structures.

Frequency of Proposed Maintenance Dredging

The maintenance dredging is to be carried out periodically throughout the year, like at present, with the most frequent dredging occurring in the outer PNC and VTB. Section 2.3 of the Worley report notes that based on a review of recent annual port maintenance dredging records, dredging occurs on average approximately 95 days a year, with the range being 51 days (in 2016) to 134 (in 2014). Section 2.4 records the presence of a few sedimentation 'hot spots' in the port, notably the inner PNC where recent records indicate approximately 50% of the material is removed from, followed by the rest of the PNC and VTB.

Most of the maintenance dredging is undertaken during the 'summer' period of October through to April when weather conditions allow for the most efficient dredging. However, maintenance dredging does occur at times over the 'winter' months too.

Material to be Maintenance Dredged

The nature of the material that is regularly maintenance dredged is explained in the 2020 MetOcean dredging plume report, and Worley reports. Some background information is also provided in the earlier T&T and MES reports.

Section 4 of the T+T report notes that the sediments and rock in the port are "*marine sediments (silty clays) overlying Miocene aged Tolaga Group siltstone and mudstone"* (p3). It records the presence of the reclaimed wharf and slipway areas, along with 'thicker colluvium and weathered rock profiles adjacent to the Wharfside logyard'.

Section 3 of the Worley report refers to MetOcean and 4Sight investigations of the surficial material to be maintenance dredged. It notes that the material is predominantly silt, except in the PNC where it is predominantly sand. Table 2 in the report contains breakdown of the material in the VTB, and two different areas in the PNC.

Maintenance Dredging Methods

The methods of maintenance dredging are outlined in Sections 3 of the MetOcean *Maintenance Dredging Plume Modelling* report. Some information is also provided in Section 4 of the Worley report.

Section 3.2.1 of the MetOcean report outlines the general nature of the proposed maintenance dredging operations.

The report notes that Eastland Ports Pukunui Trailer Suction Hopper Dredge (TSHD) is likely to be used for most of the maintenance dredging. It also notes that a Back Hoe Dredger (BHD) may be used in less accessible inner port areas. Also, that a larger TSHD, such as the Albatros, could be used following storm events and larger than expected sediments inputs.

Section 3.2.1 of the report describes the TSHD method. Material is sucked into the vessel hopper using a drag head. Investigations show that following the initial pumping typically approximately 20% of the material is solid by volume. Additional material is then pumped into the hopper with the water generally overflowing across the deck on Pukunui and similar small dredgers. Once the hopper facility area has reached capacity it then is transported to the disposal ground.

Section 2 of the report contains information on the size and capacity of the Pukunui expected to be used. This information is reproduced in **Table 3**. The Pukunui dredge is owned by Eastland Port and based permanently at the port.

The table also contains comparative information on the Albatros, which possibly could be used. It is privately owned and has a much greater (almost four times) hopper capacity. Whilst Eastland Port endeavours to undertake its own dredging program, it relies on external dredging capacity when it cannot achieve this itself. This generally follows high rainfall winter periods with heavy seas which have a two-fold effect as more soft material is deposited and Eastland Port is prevented from undertaking maintenance dredging.

Table 3: Gisborne Port Trailer Suction Hopper Dredge Information

Vessel	Pukunui	Albatros
Length	30m	75m
Draft -Empty	1.2m	3.2m
Draft - Full	2.4m	3.8m
Hopper Volume	480m^3	1,860m^3
Hopper Infilling Time	2 hours	2-5 hours
Travel Time to and from Disposal Site	2 hours	2 hours

Source: MetOcean Report

Section 3.2.1 of the MetOcean report contains a photograph of the Pukunui undertaking maintenance dredging in the PNC, which is reproduced in **Figure 18**. The photograph shows how with removal of the finer muddy material, a dredging plume is associated with the hopper overflow.

Section 3.2.2 of the MetOcean report contains a photograph of BHD operation at the port. It is reproduced in **Figure 19** of this report. The report notes that the BHD operation involves removing seabed material using a backhoe arm with a bucket at the end mounted on a small barge. The excavated material is then dumped into a TSHD, like the Pukunui for transport to the disposal ground. As with the TSHD operation the bucket loads being dumped into the hopper vessel contain sediment and water, some of which is discharged over the sides.

The report notes that it can take 1.5-4.0 hours to fill the Pukunui hopper using a backhoe depending on the nature of the material being removed and other factors. Eastland Port advise that a BHD has been used occasionally in the past, with the most recent use being in 2018 for the Wharves 7 and 8 berth pockets.

Figure 18: Photograph of Pukunui Trailer Suction Hopper Dredge Maintenance Dredging Operation

Figure 19: Photograph of Back Hoe Dredger Maintenance Dredging Operation

Annual Volume of Maintenance Dredging

The applications seek consent to maintenance dredge up to approximately 140,000m^3 of material a year. This estimate, as outlined in Section 2.2 of the Worley report is primarily based on analysis of past maintenance dredging records, with the maximum in recent years being approximately 138,200m^3 in 2011. The Worley report notes that the long-term average maintenance dredging volume is expected to be in the range of 70,000- 80,000m^3, but that allowance should be made for up to 140,000m^3 to account for future weather conditions including the effects of the La Niña and El Niño weather patterns.

Maintenance Dredging Hours of Operation

Eastland Port advise that the maintenance dredging operations, be generally undertaken primarily during daytime hours, i.e. between 7am and 6pm. However, during 'winter' the maintenance dredging operations may extend into the 'evening' by 3-4 hours, i.e. until 10pm. 'Night-time' (after 10pm) maintenance dredging is unlikely, although may occur at times, if weather conditions prevent maintenance dredging for a long period of time.

2.11 Proposed Transport and Disposal of Dredge Spoils

The dredge spoil disposal operations associated with the proposed maintenance dredging operations will be the same or very similar to those undertaken currently.

The dredge spoils are loaded directly or indirectly into a barge and towed to the OSDG before being disposed of. Further details on the loading, transportation and dumping of the dredge spoils are provided in the MetOcean *Disposal Plume Modelling* Report.

The disposal operations, like the dredging, is expected to be undertaken primarily during daylight hours, subject to the provisos noted earlier.

The MetOcean report notes that generally suspended sediment concentration (SSC) plume pattern from the disposal operations consists of relatively contained plume in the surface and mid-depth layers, becoming more dispersed (with radius of approximately 200m) in the bottom layer, due to the formation of a density current. Predicted deposition patterns are predominantly circular, with thinner northwest-directed features resulting from the deposition of the passive plumes.

2.12 Proposed Monitoring of Dredging Activities

The proposed maintenance dredging operations are to be monitored in a similar manner to those at present. The proposed monitoring has the following three components:

- Coastal Processes;
- Ecology and Water Quality; and
- Noise.

Coastal Processes Monitoring

The effects of the future maintenance dredging operations on coastal processes are to be monitored by Eastland Port, as outlined in the MetOcean report entitled *Eastland Port Maintenance Dredging and Disposal Project -Proposed Coastal Processes Monitoring Requirements (February 2020)* in **Appendix L**. Section 2- Dredging Operations Monitoring, of the report proposes the following:

- Biannual (twice a year) hydrographic surveys of the port maintenance dredging area;
- Records kept of all maintenance dredging operations, including dredger used, start stop locations and approximate volumes of material dredged;
- Annual reporting of the port survey findings and dredging locations/volumes to the Council, and
- Annual review of the Council's beach profile monitoring survey results and inclusion of advice on the need for additional/complimentary Eastland Port baseline monitoring of beach profiles inshore of the PNC.

The first three components are effectively the same as those undertaken by Eastland Port in accordance with the conditions of the current coastal permits. The fourth component is 'new' and explained in more detail in Section 2 of the MetOcean report, with reference to the current Council beach profile survey programme outlined in the report.

Ecological and Water Quality Monitoring

The ecological and water quality effects of the proposed maintenance dredging operations are proposed to be monitored, in a similar manner to the current consents.

The proposed monitoring is explained in the 4Sight report entitled *Gisborne Port Maintenance Dredging and Disposal Ecology and Water Quality Assessment Report (February 2020)* in **Appendix M.** The report explanation is provided with reference to the current consent conditions that require the following:

- Day to day surveillance to ensure there is not 'any conspicuous change in water colour within two hours of the operations' (Condition 7).
- Annual monitoring of a range of 'heavy metals' (10 in total) in the seabed sediments (each February or March) at three sites within the port which are representative of the dredging footprint, in relation to the ANZECC 2000 Interim Sediment Quality Guideline-Low values and associated reported to the Council (Condition 8); and
- Triennial elutriate testing of 'heavy metals' potentially mobilised by dredging seabed sediments (each February or March), also within the port in relation to the ANZECC marine water guidelines and associated reporting to the Council (Condition 9).

Section 3.4 of the 4Sight report discusses the results of the sediment heavy metals monitoring over the last thirteen years (2006-2019). As outlined in the report ten (10) different parameters are monitored at the locations in the VTB, near Butlers Wall and in the mid PNC all of which are consistently below the specified ANZECC metal guidelines in the consent conditions. Total Petroleum Hydrocarbons (TPH) are not required to be analysed in the maintenance dredging monitoring, but was voluntarily added by Eastland Port to the monitoring suite for the VTB and Butlers Wall sites in 2017 and 2018. TPH is not monitored at the PNC site due to the coarseness of the sediments at that location and the high energy location which makes it unlikely that there would be a potential for significant accumulation of TPH.

Section 5.1 of the report proposes that a fourth sediment quality monitoring site in the Inner Port (near Wharves 4 - 6) be added in light of the proposed maintenance dredging in this area shown on the Worley plans. The approximate location of the proposed fourth monitoring site is shown in the 4Sight plan in **Figure 20**.

Figure 20: Plan of Proposed Maintenance Dredging Sediment Quality Monitoring Sites

The same section of the 4Sight ecology report considers the current range of metals being testing is appropriate, consistent with ANZECC 2000 Interim Sediment Quality Guidelines and no different or additional parameters are considered to warrant consideration, other than TPH as discussed above. The report notes that the ANZECC 2000 guidelines have been replaced by the ANZAST 2018 Australian and New Zealand Guidelines for Fresh and Marine Water Quality, but the applicable numerical guideline values assigned to each metal remain the same.

Section 5.1 of the report recommends that the testing for heavy metals and TPH in the PNC and VTB sediments continue in its current form. This is because it provides an appropriate level of surveillance of effects relative to ANZEEC (2000) ISDF Low Values and verification of their suitability of the dredged material for offshore disposal.

Section 4.2.1.4 also discusses the one set of results from elutriate testing undertaken in March 2017. They are also noted as being compliant with the ANZECC guidelines in the consent conditions. The report proposes that the existing ANZECC values at the 90% marine species protection level, be adopted as this is consistent with the Council's Southern logyard stormwater discharge coastal permit change to consent conditions decision. This decision recognises the lower water quality appropriate for a port environment of this nature. Section 5.1 recommends that the elutriate testing be continued in the future, noting that the next testing is expected to be undertaken in March 2020.

Noise Monitoring

The noise effects of the maintenance dredging and disposal operations are proposed to be monitored as part of the port wide noise monitoring programme. The extent and nature of the monitoring programme is briefly outlined in Section 7.2.1 of the Hunt & Associates report entitled *Gisborne Port Maintenance Dredging and Disposal: Assessment of Environmental Noise Effects (February 2020)* in **Appendix N**.

The Hunt report notes that the monitoring is intended to demonstrate compliance with the noise limits in conditions being offered by Eastland Port as part of this application package. The proposed noise limit conditions are based on those established by the Council as part of the Wharf 6 and 7 and slipway redevelopment consent decisions. Although these decisions are still subject of the outstanding Environment Court appeals, the notices of appeal do not challenge the noise related conditions.

2.13 Proposed Monitoring of Disposal Activities

Coastal Processes Monitoring

The MetOcean *Morphological Response of the Proposed Offshore Disposal Ground Report* contains the findings of an investigation into the physical process affecting the existing OSDG, as well as the likely effects of the proposed maintenance dredge disposal activities on it and the surrounding area. The investigation was based around open-source Delft3D numerical modelling system used to run high resolution process-based morphodynamic simulations over Poverty Bay. The numerical modelling involved fully coupled wave, current and seabed interactions.

The modelling approach consisted of simulating the disposal ground dynamics over two complete, but climatically different (i.e. La Niña and El Niño climatic conditions), one-year periods. The simulation involved applying an input reduction technique and morphological acceleration factors. In order to isolate the effect of the dredged sediment on the disposal ground, the initial model conditions assumed sediment is available only within the disposal ground, which is then progressively dispersed throughout the sequence of representative events. Additionally, the effect of the disposal mound on the wave climate was examined by comparing the model wave heights between the pre-and post-disposal environments.

The key report findings are as follows;

- The ongoing use of the disposal ground for disposal of maintenance dredge material over the next 20 years (as being sought in the applications) is predicted to have 'negligible' effects on the nearshore wave climate. The wave energy is expected to be redistributed along the beach areas adjacent to the Waipaoa River mouth. The resultant increase in significant wave height during energetic storm events is, not expected to exceed approximately 1cm, or 0.2% of the incident wave height. The relative scale of effects is not expected to alter either the nearshore morphodynamics or inshore surfing conditions;
- Within the 1-year period simulated, between 68% and 83% of the disposal mound associated with the maintenance dredging activities is expected to be eroded due to the weakly-consolidated silt composition of the disposed material. This corresponds to between 50,000m^3 and 100,000m^3 of sediment being advected (transported) from the disposal ground annually under La Niña and El Niño conditions respectively;
- With ongoing use of the disposal ground a notable segregation of silt, fine-grained sand and very fine sand is anticipated, like at present;
- The silt component of the disposal material (which is approximately 66% of the total) is predicted to be transported offshore to the east towards the continental shelf in accordance with earlier report findings (Bever 2010 referenced in the MetOcean report). Small deposition of silt may occur to the west of the bay during relatively calm wave conditions;
- The fine-grained sand fraction of the disposal material (19%) are expected to migrate south-south-westward by near-bed suspended transport, with sediment expected to move out to the 20 – 24m isobaths within the 1-year period modelled;
- The medium-grained sand fraction of the disposal material (approximately 15%) is expected to be weakly transported over the disposal area and its margins by bed-load transport; and
- No diffusion of disposed sediments is expected over the adjacent beach areas.

The MetOcean *Proposed Coastal Processes Monitoring* Report documents the coastal processes monitoring of the OSDG being proposed for the new applications, which includes continuation of the current annual hydrographic and side scan sonar surveys of the OSDG, along with the provision of dredging disposal records to the Council each year.

Section 3- -Offshore Disposal Ground Monitoring, explains the nature of the current OSDG surveys and dredging disposal recording processes and proposes some minor changes to them (Ref. Items 1 and 3 on page 8). In terms of the OSDG surveys the report proposes that an additional 'control area' to the northeast also be surveyed. The 'control area' is shown in Figure 2.2, which is reproduced in **Figure 21** of this AEE.

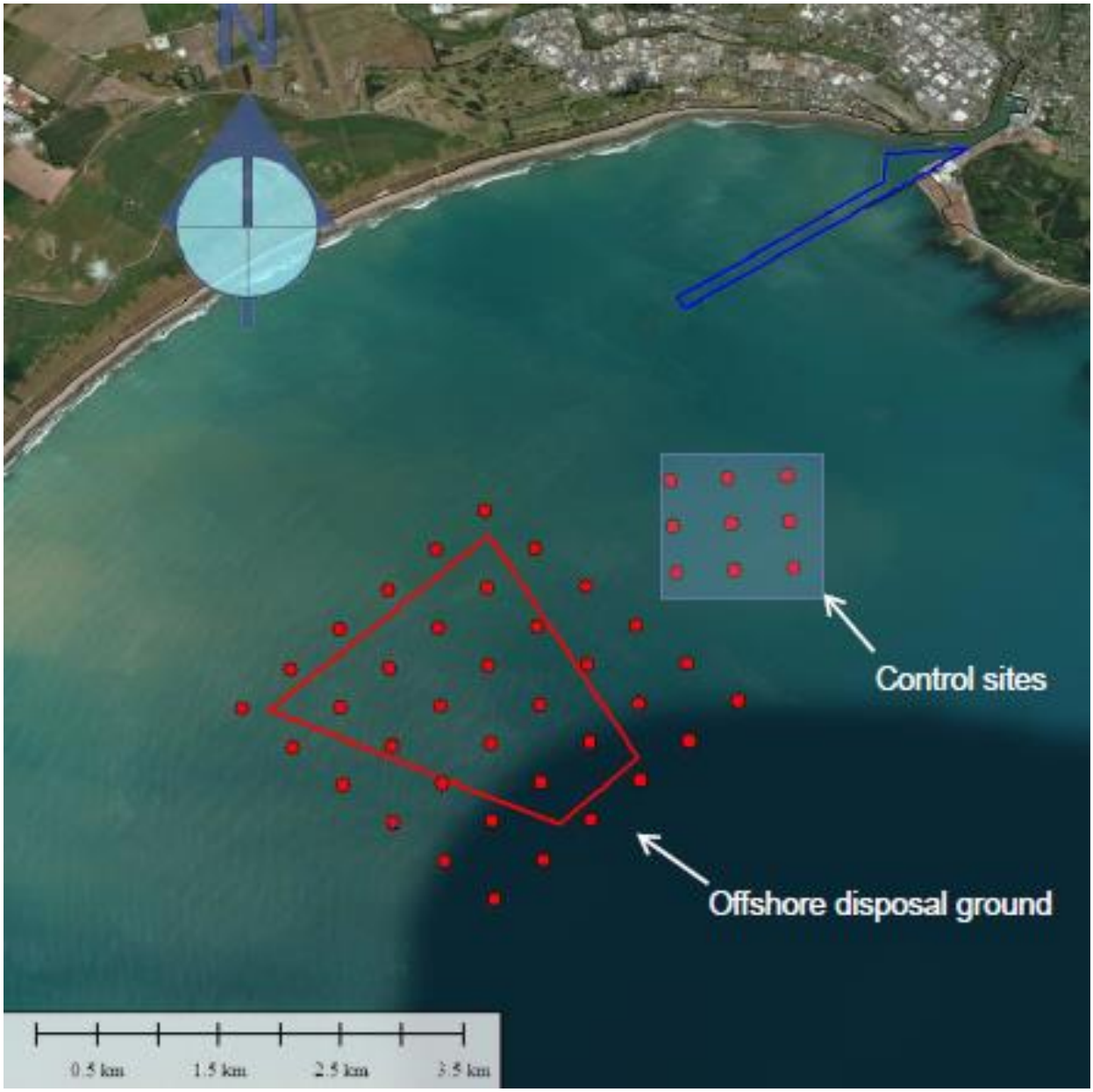


Figure 21: Offshore Spoil Disposal Ground- Proposed Coastal Processes Monitoring Survey Control Area

Source: MetOcean Report

The report notes that the hydrographic surveys have shown that the OSDG is in a state of dynamic equilibrium and by and large dispersive with regards to dredge disposed sediment. However, in order to separate morphological changes due to the disposal of dredged material from those naturally occurring within Poverty Bay, it recommends that the 'control area' also be hydrographically surveyed each year.

The report recommends all OSDG surveys are reduced to an appropriate defined datum and supplied in a suitable horizontal co-ordinate system. It also recommends that the survey data be rendered into a 3-dimensional surface or contours and survey results compared to the immediate prior survey in order to examine morphological trends.

Section 3 of the report also proposes annual to biennial sediment sampling of the OSDG and 'control area'. In proposing this monitoring work MetOcean notes that because the surficial sediment in the bay is a mixture of sand and mud limitations are imposed on the available analysis techniques. In order to get a good representation of the sediment textural distribution, the report proposes that the sediment sample analysis be undertaken using an appropriate and standardised method.

The favoured method is the Malvern laser particle size analyser used in the earlier sediment survey work. The MetOcean report notes that the analysis is intended to identify if a textural change to the surficial sediment occurs over time due to maintenance dredge disposal activities. The 'control area' hydrological and sediment survey investigation results are expected to be included in the Annual Report to be submitted to the Council each year.

Ecological and Water Quality Monitoring

The ecological effects of the dredge spoil disposal operations are proposed to be monitored in a similar manner to with the current consents. The existing monitoring is explained in Sections 3 of the 4Sight Ecology and Water Quality report, and with reference to the current consent conditions that require five-yearly benthic in-faunal sampling and analysis of the sediments from sites within and near the OSDG. Section 3.5 of the report notes the generally consistent results from the three related monitoring programmes over the years and the absence of any results or trends in data that confirm, or which might suggest, adverse ecological or water quality effects from the activities.

Section 5 of the 4Sight report outlines the OSDG ecological and water quality monitoring being proposed with the applications, which includes continuation of the current five yearly benthic fauna monitoring. The report also outlines an additional monitoring programme for 'heavy metals' and sediment quality at the OSDG and at nearby reference sites.

The additional sediment quality monitoring work will include that recently initiated by Eastland Port and undertaken by 4Sight as part of the revised consent conditions for the Wharves 6 and 7 redevelopment project agreed with the Rongowhakaata Iwi Trust and likely to be endorsed by the other parties and the Environment Court as part of the current mediation proceedings. The additional monitoring of sediment texture and chemistry for the dredge spoils was agreed to Eastland Port because of cultural concerns about the quality of the material proposed to be dredged from the Wharf 6 area and disposed of at the OSDG.

Section 3.5.1.1 of the 4Sight ecology and water quality report sets out the findings of the August 2019 survey, carried out in response to the Wharf 6 dredging disposal concerns. It notes that four sites within the OSDG were sampled/analysed, along with two reference sites to the east and west. The monitoring sites are shown in Figure 13 in the 4Sight report. These same monitoring sites and analysis are proposed to be used to cover the OSDG disposal operations associated with the port wide maintenance dredging and disposal applications subject of this AEE.

2.14 Relationship of the Proposed Activities to Site Ownership and Occupation

The land-based facilities at the port are located on land owned by Eastland Port and the Council.

Marine and Coastal Area Act Provisions

The seabed areas within the port are part of the 'common marine and coastal area' as defined in the Marine and Coastal Area (Takutai Moana) Act 2011. Prior to enactment of this legislation some of the seabed areas were held in freehold titles by the Council. Section 11 of the Marine and Coastal Area Act divested the Council of the seabed titles as at the date of the Act's enactment and they are now part of the 'common marine and coastal area'. The OSDG is also located within part of the 'common marine and coastal area'.

Eastland Port Ltd Coastal Occupation Permit

Eastland Port hold a coastal permit for occupation of the coastal marine area (CMA) in and adjacent to the port. The permit was issued under Section 384A of the RMA to the former Port Gisborne Ltd on 27 July 1994. The permit has a term of over 32 years and expires on 30 September 2026.

The occupation permit covers the area shown on a plan attached to it, which is reproduced in **Figure 22**. It does not include the PNC. Coastal permits issued under Section 384A are limited to occupation for 'port related commercial undertakings.'

The term 'port related commercial undertakings' is defined in Section 2 of the Port Companies Act 1988. It covers "*the activities of commercial ships and other commercial vessels… or the operation of facilities on a commercial basis for ships, vessels… [or activities] facilitate[ing] the shipping or unshipping of goods or passengers.*"

Figure 22: Gisborne Port Existing Coastal Permit Occupation Area

Source: Eastland Port Coastal Permit

2.15 Consent Terms

Eastland Port is seeking twenty (20) year terms for the coastal permits. This is based on the findings of the MetOcean reports into the ability of the OSDG to accommodate the proposed dredgings over this period, along with a review of past Gisborne Port consents and those for other New Zealand ports.

Table 4 summarises the nature of the most recent coastal permits for capital and maintenance at the Port of Gisborne. As outlined in the table, all of the capital dredging and disposal permits have had five-year terms. However, the maintenance dredging and disposal consents have generally had longer terms.

The 1993 and 1998/2000 coastal permits for maintenance dredging and disposal at Gisborne Port had fifteen (15) year terms. The most recent 2015 coastal permits only have five (5) year terms because of the limited coastal processes information on the disposal ground available at the time. However, now that MetOcean has undertaken a comprehensive investigation of the effects of the continued offshore disposal, a longer-term consent is being sought.

The Wharves 6 and 7 maintenance dredging and disposal consents currently under Environment Court mediation have ten (10) year terms, as noted in the table. These consent terms were set by the Council back in 2018 and without the benefit of the recent MetoOceans coastal processes monitoring report.

Table 4: Gisborne Port Summary of Recent and Current Dredging and Disposal Consents

Consents & Applications [1]	**Area (ha)**	**Volume (m^3)**	**Term (Years)**	**Expiry date**
1993 Port Maintenance Dredging & Disposal (Expired)	Unknown	60-80,000/year estimated [2]	15	October 2008
1998 Capital Dredging of PNC & VTB & Disposal (Expired)	Unknown	Unknown	5	June 2004
1998 Port Maintenance Dredging & Disposal (Expired)	Shown on plan	100,000/year estimated [3]	15 [4]	September 2015 [5]
2009 Port Capital Dredging & Disposal (Expired)	Shown on plan	88,000 estimated	5	July 2014
2013 Wharves 4-6 Maintenance Dredging & Disposal (Expired)	Shown on plan	Not specified	5	June 2018
2015 PNC, VTB, Wharves 7 & 8 Maintenance Dredging & Disposal (Current)	Shown on plan	Not specified	5	September 2020
2018 Wharf 6 Capital Dredging (Decision Subject to Appeal)	0.74ha & shown on plan	28,500m^3estimated	5	Dependent on appeal outcome
2018 Wharves 6 Maintenance Dredging & Disposal (Decision Subject to Appeal)	0.74ha and shown on plan	1,500m^3/year estimated	10	Dependent on appeal outcome

Notes

1. Prior to the introduction of the Resource Management Act in 1991 capital and maintenance dredging was authorised under the former Harbours Act and former Water and Soil Conservation Act.
2. Records indicate that the 1993 RC application was based around an annual maintenance dredging of 60,000m^3-80,000m^3. A consent condition was imposed limiting disposal to no more than 200,000m^3/year without notifying Council and undertaking any additional monitoring required by Council.
3. Records indicate the 1998 RC application was based around an average annual maintenance dredging of 100,000m^3 with advice that it could be around 250,000m^3 in stormy years and around 750,000m^3 in extreme conditions.
4. Records indicate that the 1998 RC application for maintenance dredging sought a 35-year term. A 15-year term was granted in the 1999 decisions issued by the Minister Conservation.
5. The 1999 RC decisions were appealed by Port Gisborne Ltd and Te Runanga o Turanganui a Kiwa. The appeals were settled between the parties and were subject of Environment Court consent orders issued in September 2000.

Table 5 summarises the known information on maintenance dredging permits for other NZ ports. As outlined in the table the consent terms vary, with most of the recent ones (since 2002) being for 25-35 years. Most of the other port resource consents involve much larger volumes with Port Taranaki, Port Lyttleton and Port Otago involving two to four times the annual maintenance dredging volume expected at the Port of Gisborne.

Table 5: New Zealand Ports Summary of Recent Maintenance Dredging and Disposal Consents

Port	Consent Date of Issue	Consent Term	Maintenance Dredging Volume	Disposal Method
Marsden Point (Vessel Turning Basin)	2004	35 years	Not specified	Land
Marsden Point (Vessel Berths)	2004	35 years	Up to 50,000m^3/year	Land
Auckland	Current permits expire in August 2027 December 2019 applications	35 years	15,000 tonnes/year associated with a 2.5 million tonnes capital dredging programme	Offshore disposal ground east of Cuvier Island
Tauranga	2010	Not known	Associated with 15,000,000m^3 of capital dredging	Five offshore disposal grounds
Napier	2008	25 years	Inner harbour sites 1, 2 & 3 of 18,900m^3/annum	Offshore disposal ground
	2018 Port Redevelopment (1)	35 years	Stage 1 capital dredging of 1,140,000m^3 and Stage 2-5 of 3,2000,000m^3, plus unspecified maintenance dredging	New offshore disposal ground
Taranaki	2002	25 years	Up to 570,000m^{3}annually and up to 1,045,000m^3 over 3 years	Offshore disposal ground of 70ha
Nelson	2009	30 years	Annual average of 50,000m^3 over 3 years and up to 70,000m^3 in any one year	Offshore disposal grounds
Lyttleton	2014	35 years	Annual average of 900,000m^3	Offshore disposal ground of 256ha
Otago	2001	10 years	Annual average of up to 450,000m^3	Three offshore disposal grounds
	2017 (2)	25 years (1)	Annual volume not specified. Associated with 7.2 million m^3 of capital dredging	New 2km diameter offshore disposal ground

Notes

(1) The Port Napier resource consents were subject decisions from Independent Commissioners with both the capital and maintenance dredging consents having 35-year terms and the land-based construction works having a 15-year term

(2) The Port Otago resource consents were issued by the Environment Court with a 20-year term set for the associated capital dredging consent.

2.16 Consent Conditions

The proposed maintenance dredging and disposal operations are, like the current operations, expected to be managed through resource consent conditions. Monitoring proposals have also been identified based on recommendations in the expert reports, which are also expected to be the subject of consent conditions.

Appendix O contains a set of Eastland Port draft consent conditions. They are modelled on the current (2015) maintenance dredging and disposal consent, and the (2018) Council decisions for the Wharves 6 and 7 and slipway redevelopment projects. Twenty three (23) conditions are being suggested, 18 of which are the same or very similar to the current conditions, outlined earlier in this report.

The new or revised draft conditions cover the following matters:

- Condition 3A- Marine Pest Management Plan. This proposed condition covers the measures expected to be put place to avoid, remedy or mitigate the effects of the possible spread of recorded marine pests present in the port and harbour, or potentially associated with contracted dredging vessels from other parts of the country. The basis of the condition is set out in the 4Sight Ecology and Water Quality Report and later in this AEE. It is modelled on a condition in the Council decisions on the Wharf 6/7/slipway redevelopment project.
- Condition 5A – Kaitiaki Partnership Group. This condition is expected to cover the group of invited iwi, hapu and whanau representatives with mana whenua that is in the Council decisions on the for the Wharf 6/7/Slipway redevelopment projects, and subject to Environment Court appeals. The final Court decisions are likely to set out the purposes and functions of such a group, which includes acting as an ongoing forum for Eastland Port and Council consultation with iwi, hapu and whanau and development of a port wide Cultural Values Framework, as set out in the Council decision.
- Condition 6- Area of Maintenance Dredging. The map attached to this condition has been amended to show a fourth sediment quality monitoring site (in the Inner Port) outlined in the 4Sight Ecology and Water Quality Report. The area also coincides with that shown on the Worley engineering plans/report and outlined earlier in this AEE.
- Condition 8 – Sediment Quality Monitoring Programme. This condition covers the additional PAH and resins acids monitoring work to be undertaken, consistent with the Wharf 6/7/slipway mediation outcome, as outlined in the 4Sight Ecology and Water Quality Report and this AEE. The correct reference to the appropriate ANZECC guidelines is also included, as explained in the 4Sight Ecology and Water Quality Report.
- Condition 12 - Limits on Noise Emissions- This condition uses the port wide noise emission standards set out in the Council Wharf 6/7/slipway decisions, rather than those in the current consents which are based around 'essential port activities', which are no longer appropriate, as explained in the Hunt Noise Report and this AEE.
- Condition 12A- Noise Monitoring. This is an additional condition that is consistent with that in the Council Wharf 6/7/slipway decisions and simply requires Eastland Port monitor and report on the noise emissions from the maintenance dredging operations utilising the recently established Portside Hotel noise monitoring facility.
- Condition 12B- Maintenance Dredging Coastal Processes Effects Monitoring. This is additional condition which requires monitoring of the effects of the maintenance dredging operations, with reference to the Council's current beach profile monitoring, as recommended in the MetOcean Coastal Processes Monitoring Report.
- Condition 16 – Offshore Spoil Disposal Ground Hydrographic Surveys – This condition has been altered to include the control area identified in the MetOcean Coastal Processes Monitoring Report.
- Condition 17-Offshore Spoil Disposal Ground Benthic Ecology Monitoring Programme. A few changes are proposed to this condition, including proposed nearby 'reference sites.'. This matter is explained in the 4Sight Ecology and Water Quality Report and later in this AEE.
- Condition 17A – Offshore Spoil Disposal Sediment Quality Monitoring. This is an additional condition that is consistent with that being proposed by Eastland Port as part of the Wharf 6/7/slipway appeal mediation process, regarding the annual testing and analysis of sediments at the OSDG and identified control sites.

- Condition 18 - Offshore Spoil Disposal Ground Coastal Processes Investigations and Monitoring. This condition revises the current condition regarding ongoing monitoring of the effects of the OSDG on coastal processes in Poverty Bay and the long-term capacity of the OSDG for the terms of the consent being sought. It is based on the recommendations in the MetOcean Coastal Processes Monitoring Report.

The draft conditions have prepared simply for discussion purposes and to show the Eastland Port desire for consistency with the current Council/final Court decisions on the Wharf 6/7/slipway decisions and monitoring and other recommendations in the appended expert reports. Eastland Port and 4Sight are expecting that the draft conditions will be refined and added to during the Council assessment and decision making processes.

3 ACTIVITIES REQUIRING RESOURCE CONSENTS

3.1 Overview of National Regulations and Standards and Council Plans

The proposed maintenance dredging of the Gisborne Port and associated offshore disposal of dredge spoil is subject to rules in the Tairawhiti Resource Management Plan (TRMP) and the Resource Management (Marine Pollution) Regulations. The activities are not subject to any national environmental standards, such as the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES-Contaminants in Soil).

The TRMP rules primarily determine which activities require resource consent approval (i.e. they are either controlled, restricted discretionary, discretionary or non-complying activities) and which activities do not require consent (i.e. they are permitted). The TRMP rules on disposal of dredge spoils in the CMA are linked to the Marine Pollution Regulations. The following sections of this report cover all the applicable TRMP rules and the regulations.

3.2 Tairāwhiti Resource Management Plan

The TRMP rationalises the Council's seven existing RMA based plans, including the District Plan, Coastal Plan and Freshwater Plan into one document. The Plan has six parts (A-F), along with several schedules (G) and appendices (H) and maps.

Several parts of the TRMP have provisions that are applicable to the project. The key rules are in Part C - Region Wide Provisions, Part D - Area Based Provisions and Part F- Procedural Matters. Some of the definitions of key terms in Part E - Definitions, are also relevant.

Relevant Area Based Rules (Part D)

The rules for the "Port Management Area" in Chapter DP1 apply to both the working port area to be capital/maintenance dredged and the disposal of dredge spoils at the OSDG.

Relevant Region Wide Rules (Part C)

The region wide rules on noise emissions in Chapter C11 - General Controls, are also applicable to the proposed capital/maintenance dredging and disposal operations.

Proposed Plan Changes & Variations

The Council has notified four proposed changes/variations to the TRMP. Details on them are provided on the Council website.

4Sight investigations indicate that none of the rules in the proposed plan changes have any legal effect under Section 86B of the RMA.

3.3 Port Management Area Zoning

The coastal marine area (CMA) part of the port is zoned "Port Management Area" (Port MA), as shown (in blue) on the TRMP extract in **Figure 23**. The OSDG has the same Port MA zoning, as shown (in blue) in the same figure.

The plan map shows another Port MA zoned disposal ground (in blue) in the inner part of the bay. It has never been used for the disposal of dredgings. The plan map also shows the extent of the "Significant Values Management Area" (in green) and "General Management Area" (in pink) within Poverty Bay.

3.4 Water Classifications

The Port and OSDG are also subject to the TRMP water classification provisions. The TRMP extract in **Figure 24** shows the different water classification areas.

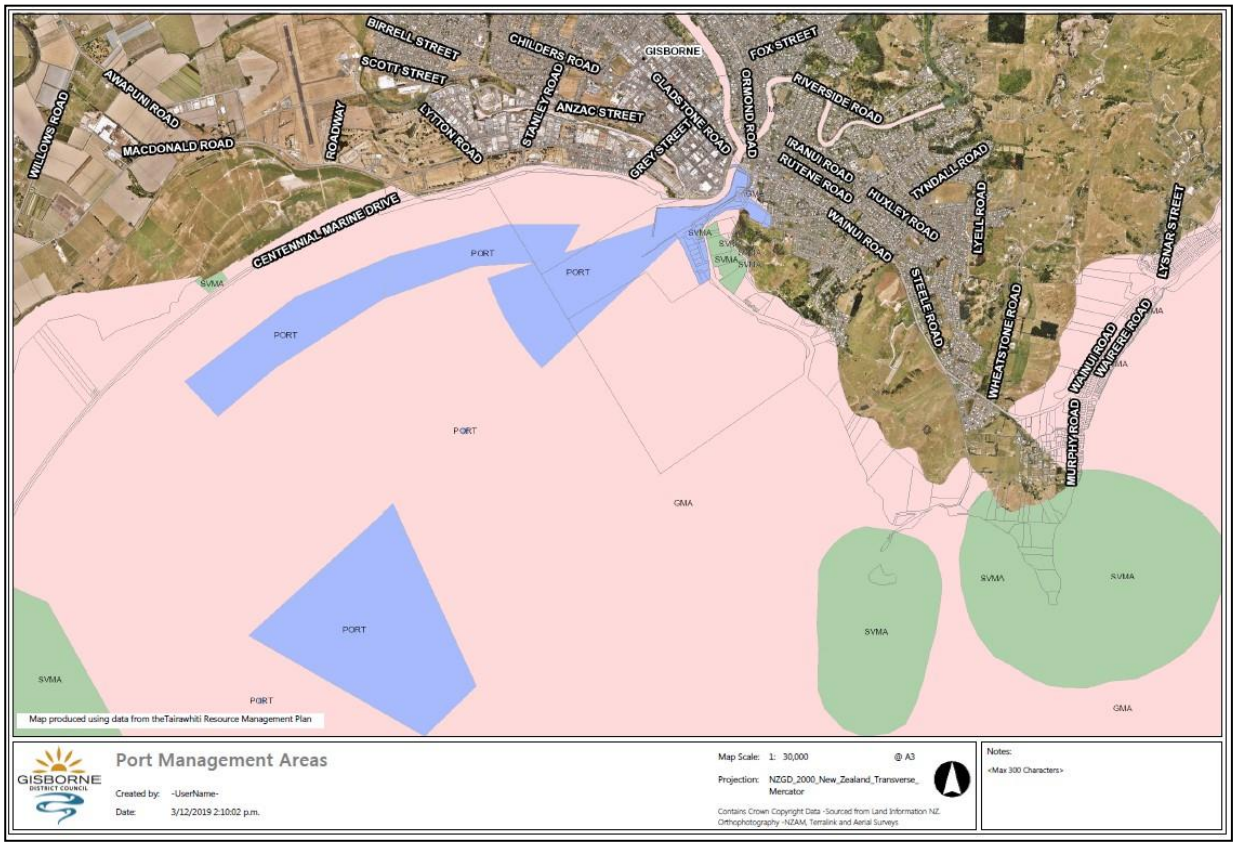


Figure 23: Tairāwhiti Plan Coastal Marine Area Map of Poverty Bay

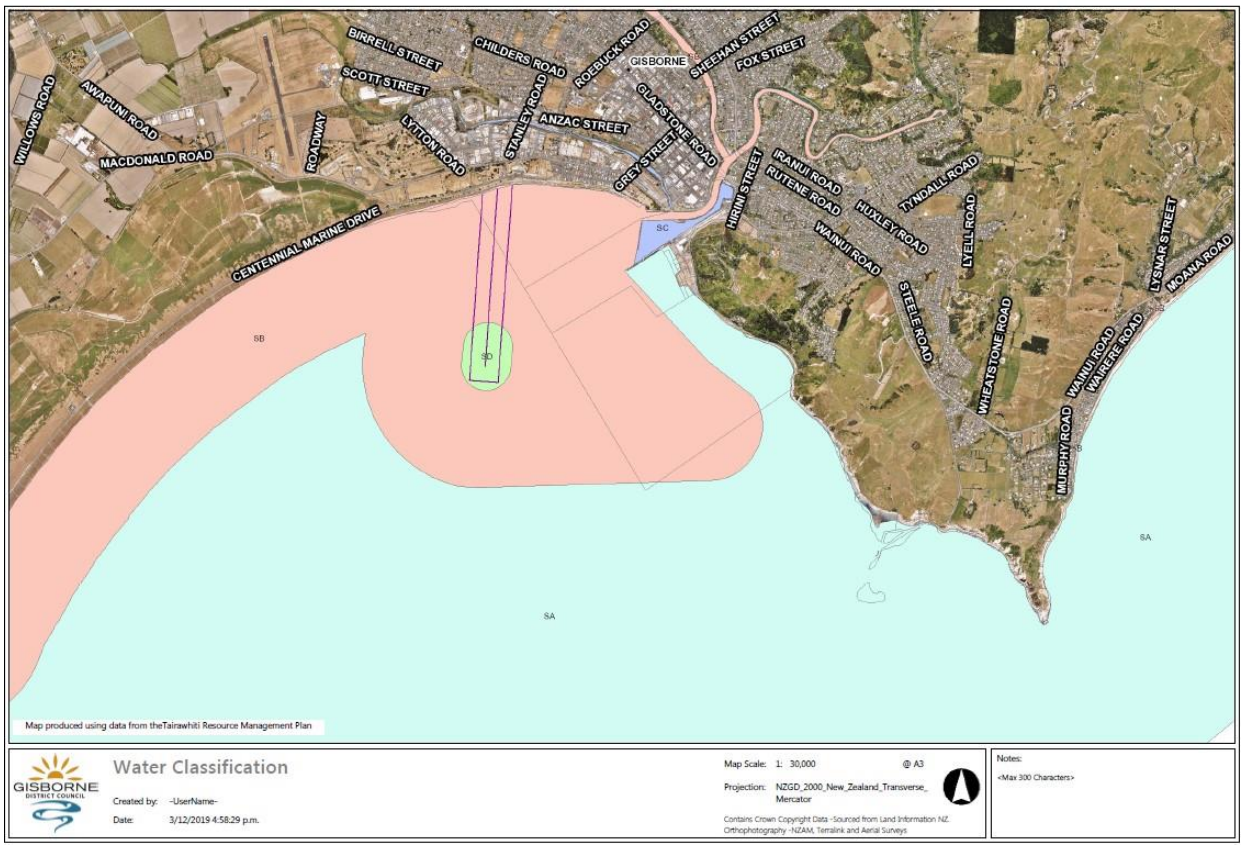


Figure 24: Tairāwhiti Plan Water Classification Map of Poverty Bay

Port Area SC & SB Classifications

The waters of the main Port area, including around Wharves 4, 5, 6, 7 and 8 and the VTB, have an SC classification (shown in blue), whilst the waters in and around the Port Navigation Channel have a SB Classification (shown in pink). The area of the bay around the nearby Council wastewater outfall in the bay has a SD classification as shown in Figure **22**.

Offshore Disposal Ground SA Classification

The coastal waters around the OSDG have a SA Classification. The respective extents of the water classification areas are defined in Schedule G14 to the TRMP. There purposes and the standards that apply within them are explained in the TRMP itself.

3.5 Relevant Port Management Area Rules

DP 1 – Port Management Area, of the TRMP contains a set of rules on activities in the Port MA. The following rules are relevant to the proposal:

- Rule DP1.6.4– Alteration of the Foreshore and Seabed Dredging; and
- RuleDP1.6.2 – Discharges.

3.6 Rule on Alteration of the Foreshore and Seabed

Rule DP 1.6.4- Rules for the Alteration of Foreshore and Seabed, provides for the following activities;

- Maintenance dredging for navigation purposes in the Port MA - a controlled activity;
- Deposition of dredge spoils of up to 50,000m^3 from the Port MA within the identified offshore disposal ground- a permitted activity; and
- Deposition of dredge spoils of more than 50,000m^3 from the Port MA within the identified offshore disposal ground- a discretionary activity.

Controlled Activity Rule on Maintenance Dredging

Rule DP1.6.4 (3) provides for *"Maintenance dredging in the Port Management Area of the Coastal Marine Area for navigation purposes"* as a controlled activity. The rule provision is tied to a standard that requires *"any resource consents required for the disposal of dredge spoil have been obtained."* The coastal permit application covers both maintenance dredging and dredge spoil disposal, so the standard is met.

The term maintenance dredging is defined in the glossary as:

"Any dredging of the bed of the sea necessary to maintain water depths to previously approved levels for the safe and convenient navigation of vessels, in navigation channels and at berthing and mooring facilities, including marina developments."

The proposed maintenance dredging fits within the definition. It will be confined to the port 'navigation channel, berthing and mooring facilities' and is 'necessary to maintain water depths at previously approved depths for the safe and convenient navigation of vessels.'

Under the rule the Council has restricted its control to two matters, being:

- "*The timing of dredging*" and;
- "*The exact location of any dredging if this is required to avoid any important site or value.*"

In terms of the first matter, information on the expected timing of the maintenance dredging is provided in this AEE report and the appended expert reports.

In terms of the second matter, the phrase 'important site or value' is not explained in the rule or defined in the plan. The rule is simply explained in terms of the ensuing 'principal reason' which reads as follows:

"Dredging of the Port is an essential and important part of port operations. This rule provides certainty that the activity can occur in the future but recognises that some adverse effects may be avoided, remedied or mitigated".

Eastland Port investigations carried out as part of the application preparation process have not identified any 'important site' that will be affected by the proposed maintenance dredging operations. As outlined later in this report earlier, the maintenance dredging operations will not adversely affect Te Toka a Taiau, a culturally significant former sacred rock(s), near the river training wall opposite Wharf 6, as only soft sediments and no rocks, are to be removed.

The 4Sight Ecology and Water Quality Report notes that the proposed maintenance dredging will not adversely affect any 'important ecological site or value'. The report notes that the maintenance dredging operations will have some indirect water quality related effects on the benthic habitat utilised by juvenile crayfish and other species in and around the adjacent wharf and other port structures. However, the report notes that the seabed adjacent to the wharf structures has been regularly maintenance dredged in the past and is regularly disturbed by shipping vessel movements in the port. Also, as noted above, only soft sediments are maintenance dredged and no papa or other hard substrate will affected.

The controlled activity status of maintenance dredgings means that the Council has limited decision making powers in respect of it. Section 87A(2) of the RMA states:

(2) *If an activity is described in this Act, regulations (including any national environmental standard), a plan, or a proposed plan as a controlled activity, a resource consent is required for the activity and—*

(a) the consent authority must grant a resource consent except if—

(i) section 106 applies; or

(ii) section 55(2) of the Marine and Coastal Area (Takutai Moana) Act 2011 applies; and

(b) the consent authority's power to impose conditions on the resource consent is restricted to the matters over which control is reserved (whether in its plan or proposed plan, a national environmental standard, or otherwise); and

(c) the activity must comply with the requirements, conditions, and permissions, if any, specified in the Act, regulations, plan, or proposed plan.

The Section 106 provisions do not apply here as no land subdivision is involved. The Section 55 MACA provisions also do not apply as no protected area rights are 'in effect', only some applications seeking such rights, as detailed later in this report.

On this basis the Council's authority appears to be confined to imposing conditions on the maintenance dredging consent, but only for those matters over which it has reserved control in the TRMP, as no national environmental standards come into play here. As outlined above, under the TRMP rule the Council appears to have has restricted its discretion to 'the timing of dredging' and 'the exact location of any dredging if this is required to avoid any important site or value.'

Permitted Activity and Discretionary Activity Rules on Disposal of Dredgings

"*The deposition of dredge spoils from the Port Management Area within the Port Management Area*" is a permitted activity under Rule DP1.6.4 (2) provided three standards are met.

They are:

a) Deposition occurs within Spoil Dump Outer Zone as depicted on the planning maps of this plan;

b) Involves quantities of less than 50,000m^3 over any 12-month period; and

(c) Does not result after reasonable mixing in the production of conspicuous oil or grease scums or floating scums or foams.

Standard (a) is further explained with reference to the NZMG geographic grid coordinates of the OSDG.

The rule also states that if one of the standards is not met then the 'deposition of dredge spoils' is a discretionary activity. As outlined earlier in this report the annual volume of maintenance dredgings from the different Eastland Port operations (including the Wharf 6 area) will at times exceed the 50,000m^3 'threshold' set in the rule, so it requires consideration as a discretionary activity. The other two conditions will be met.

All of the dredgings are to be deposited within the OSDG shown on the planning map. As outlined in the 4Sight Ecology and Water Quality Report, the disposal activity has not in the past, and is not expected in the future, to present a risk of oil or grease scums or floating scums or foams being produced.

The coastal permit application seeks consent to dispose of up 140,000m^3 a year at the OSDG, of which up to 50,000m^3/year are a permitted activity. As outlined in Section 2.2 of this AEE, past records show that in some years less than 50,000m^3 a year are disposed of at the OSDG and this is likely to occur in the future.

3.7 Rules on Discharges Associated with Dredging and Disposal

Rule on Observance of Water Quality Standards

Rule DP1.6.2 requires the following:

Observance of Water Quality Standards

> *"All discharges to the coastal marine area after reasonable mixing and disregarding the effect of any natural perturbations', shall observe any relevant water quality standards set out in Method C3.10.4(12) for the Classification Area defined in Schedule G14 of this Plan".*

The proposed maintenance dredging and disposal operations relate to the Port and OSDG that have respective SC and SA water quality classifications. The standards associated with each classification are explained in the 4Sight Ecology and Water Quality Report. As set out in the report the two different classes have a number of common standards on water temperature, pH, clarity and colour, along with a few key class-specific standards.

The highest SA classified waters (around the OSDG) have a standard that requires that aquatic organisms shall *"not be rendered unsuitable for human consumption by the presence of contaminants"* and that the water shall "*not to be rendered unsuitable for bathing by the presence of contaminants*". Both matters, along with the other standards, are addressed in the 4Sight Report. Based on this report, the requirement that discharges to the CMA "*after reasonable mixing and disregarding the effect of any natural perturbations', shall observe any relevant water quality standards set out in Method C3.10.4 (12) for the Classification Area defined in Schedule G14 of this Plan"* is considered to be met.

Discretionary Activity Rule on Other Discharges & RMA Marine Pollution Regulations

Rule DP1.6.2 (4) deems "*all discharges to water of the CMA not more specifically addressed elsewhere by rules in this plan or the Resource Management Marine Pollution Regulations, excepting stormwater and uncontaminated seawater discharges"* to be discretionary activities. Section 4(2) of the Resource Management Marine Pollution Regulations 1999 (Marine Pollution Regulations hereafter) deems several 'dumping' activities in the CMA to be discretionary activities in coastal plans. Amongst them is clause (a) "*dredge material*".

The TRMP rules and the Marine Pollution Regulations as they apply to discharges from the dumped material are not entirely clear. Part 2 – Dumping, of the Regulations makes it clear that 'dumping of dredge material' is deemed to be a discretionary activity (Ref. Regulation 4). However, Part 3- Discharges, does not appear to cover associated discharges.

Given that under both the TRMP and Marine Pollution Regulations the disposal or dumping of the dredgings are a discretionary activity, it is logical to assign the same activity status to the discharge of the decant seawater associated with disposal operations. As such the coastal permit application seeks authority to discharge decant seawater, along with the dredgings themselves.

Regulation 4(3)(b) states that the regulation does not apply to certain discharges (which do not include discharges associated with dredge material). Arguably, other discharges are therefore covered by Regulation 4. If that interpretation is incorrect, discretionary activity consent will be required under Rule DP1.6.2(4). For the purposes of certainty, discretionary activity consent is sought under both Regulation 4 and Rule DP1.6.2(4).

3.8 Resource Management (Marine Pollution) Regulations

The key provisions in the Marine Pollution Regulations surrounding the disposal of dredged material in the CMA were outlined above. Under Regulation 4(2)(a) they are deemed to be a discretionary activity under the TRMP. The following other parts of the regulations are relevant to this part of the applications.

Regulation 5 – Assessment Criteria

Regulation 5(1) requires that every coastal permit application to dump waste or other material in the CMA must include the information listed in Part 1 of Schedule 3. The information required is quite detailed, some of which is not relevant to this application. Most of the required information is of a coastal processes/engineering or biological/water quality nature and contained in the appended MetOcean , Worley and 4Sight expert reports.

Schedule 3(1) – Information Requirements

Part 1 of Schedule 3 lists eight 'additional matters' that are required to be included with Section 88 applications involving dumping. The following summary of the required information is provided.

Clauses 1 & 2 - Waste Description and Characterisation

Clauses 1 and 2 require a description and characterisation of the 'waste'. The term 'waste' is not defined in the regulations. However, it is in the RMA and assumed to include the dredge spoil material. The MetOcean Dredge Plume and Disposal Plume reports, and 4Sight Ecology and Water Quality Report contain descriptions of the material, including its characterisation, origin, physical and biological properties. This same information is summarised in Section 2 of this AEE.

Clause 3 – Hazardous Nature, Production Process and Waste Reduction/Prevention

The information requirements in this clause are of limited relevance, as the dredged material is a 'natural' product primarily emanating from the river systems and associated catchments that flow into the bay. The 4Sight Ecology and Water Quality Report contains information on the low-level contaminants present, some of which arise from port related activities and the measures in place to reduce them even further.

Clause 4 - Contamination Sources

This clause requires, for dredged material, information on the "*sources of contamination and waste prevention strategies that may be used to control that contamination.*" As outlined above this information is provided in the 4Sight Ecology and Water Quality Report. It is also summarised in Section 2 of this report.

Clause 5 - Waste Management Options

This clause requires an assessment of waste management options. The WorleyParsons *Eastland Port Marine Development Wharf 6/7 Upgrade Engineering Report (3 October 2017)* submitted to the Council with the resource consent applications for the Wharf 6/7 redevelopment, which involved disposal of capital and maintenance dredge spoils, contained an assessment of these requirements. This assessment, which is also applicable to the subject applications (albeit that no capital dredging is involved) and is reproduced below:

"Section 5.4- Alternative Spoil Disposal Options

Alternative spoil disposal options to sea disposal were considered. These included:

- *beneficial reuse such as reclamation and fill,*
- *off-site recycling such as for construction material, and*
- *disposal on land.*

5.4.1 Beneficial Re-use / Off- Site Recycling

The potential beneficial reuse possibilities for dredged material are typically as fill, construction material or use in a soil product. Based on existing geotechnical information, dredge spoil from this location is expected to generally comprise clays and fine silts, silts and sands and very weak siltstone and mudstone. The siltstone and mudstone is very weak and breaks down readily when exposed. The problem with use of this material as fill is its poor engineering qualities. The material exhibits low strength, compressibility (for the clayey component), poor tillage and poor drainage characteristics when dredged and placed on land. It would be difficult to find a place that would accept such material as fill. At the present time, there is no known land around the port that would accept the material.

For the dredged material to be suitable for reclamation fill, ground improvement works would likely be required to provide suitable engineering qualities. The cost of the ground improvement works would not be economically viable against the use of imported clean fill as the use of lime cement dry soil mixing techniques would cost some $150 to $200 per cubic metre. The large silt and clay content of the material also make it unsuitable, without blending with

additional large quantities of sand, for use as a soil product, e.g. a topsoil. Most topsoils comprise at least 70 to 80% sand by weight, and often higher, due to drainage requirements. Consequently for every one tonne of dredged sediment, some 3 tonnes of clean sand would need to be blended with the material. Another issue is the salt content of the dredged material that would necessitate extensive freshwater irrigation (i.e. salt leaching) of the sediments before use. This process can be time consuming and requires significant land area to lay the material as a flat stockpile for irrigation.

Due to the quantities of sand involved in blending and other processing requirements, a soil product made from the dredged material would not be economically attractive against other soil products already available in the area. Such processing would require pumping the material onshore for dewatering (e.g. in geotubes) and blending with sand and the mobilization and demobilisation of a dredger and other land-based plant and equipment for the works.

The proportion of sand in the dredged material is expected to be small. For such small quantities of sand it is not practical to introduce physical separation processes such as hydrocyclones. Even if it were practical, the issue of disposal of large quantities of fine material would remain. A market for fill and/or for soil product sufficient to absorb the dredging quantities would be necessary even if the material was suitable for these purposes. It is not apparent that this market presently exists within or near to Gisborne port.

5.4.2 Disposal on Land

Another possible alternative strategy to disposal of the dredged material at sea is disposal on land. At the time of preparation of this report, available nearby land based disposal sites that would accept the material is not known. In any case, due to the ongoing quantities of material from capital and maintenance dredging and the poor engineering properties of the material (discussed above), it is not considered feasible to dispose of the material to land as the cost would be prohibitively high and there would be loss of large amounts of existing landfill space. There could also be potential impacts on the existing flora and fauna due to the earthworks and saline drainage water for the land disposal area."

Clause 6 - Dump Site Information

The information required on this matter is in this report along the MetOcean reports and 4Sight Ecology and Water Quality Report.

Clause 7 - Effects of Sea or Land Disposal Options

The information required under this clause is provided in this AEE, the appended expert reports and the above WorleyParsons report extract above.

Clause 8- Integration of Information

This AEE and the appended expert reports "*integrate information on waste characteristics, conditions at the proposed dump site techniques*" as required under Clause 8. They also cover the "*potential effects on the environment and define the nature, temporal, and spatial scales and duration of expected effects and state any assumptions*."

Schedule 3(2) Matters to be Considered by Consent Authorities

Clause 9 in this part of the schedule highlights the importance of consent conditions on four matters, all of which are addressed in this report. Consent conditions on them and several other matters, are being proposed as outlined earlier in this AEE report. This includes the Council requirement under Clause 9(d) to have regard to imposing conditions 'specifying monitoring and reporting requirements.' Clause 10 also places a similar obligations to consider monitoring programme based consent conditions.

Regulation 7- Record Keeping

Regulation 7 requires all holders of disposal permits to keep records of the source of the material, location of the disposal site, method of disposal and quantity of material disposed of.

The Eastland Port records of the maintenance dredging and disposal operations are to be provided to the Director of Maritime NZ by 1 February each year, as required under the regulations. As this matter is covered by the regulations a simple advice note, rather than a consent condition, is being proposed.

3.9 Rules on Noise Emissions

Rule C11.2.16 (3) states that any activity that generates noise within the Port MA is a permitted activity provided three standards (a, b and c) in C11.2.16.1 B are met.

The standards are quite detailed, but relate to the following matters:

- Standard a - L_{10} and L_{max} noise levels of 70dB (at all times) and 70dB (at night time, i.e. 9pm-7am) measured at the boundary of the Port MA and other specified management areas;
- Standard b – noise not resulting in the 'long-term modification of the behaviour of aggregations of marine mammal or birds'; and
- Standard c - noise from sirens and the like used for navigation and/or warning, is excluded from the above conditions.

Hunt Report Findings

Sections 5 and 7 of the report from Malcolm Hunt & Associates Ltd explain the TRMP rules and assess compliance of the proposed maintenance dredging and disposal operations with of them. As set in Section 8 in terms of Rule C11.2.16 .1 (B) the proposed maintenance dredging activities will comply with Standard B, and Standard A most of the time, as outlined in the. Standard C is not applicable to the proposal.

Standard A requires the maintenance dredging comply with L_{10} and L_{max} noise levels measured at the boundary of the Port MA and the adjacent General Management Area (that covers the adjacent Turanganui River). Section 7.1 of the Hunt Report finds that compliance is unlikely to be achieved at all times at the Port MA boundary. This is because the Port MA boundary is effectively the river training wall that is only a few metres away from the maintenance dredge area. Likewise, compliance may not be achieved in parts of the immediately adjacent General MA, i.e. the Turanganui River. However, no people live in these two management areas and few people work (other than port contracted staff) within them. As such the TRMP rule has a very limited noise effects basis and is unnecessarily restrictive.

Section 7.1 of the Hunt report also notes that the TRMP noise standard infringements are expected to relate to only a small part of the port, only occur for a short period of time (likely to be less than one day in duration), and only likely from a contracted dredging vessel, other than the regularly used Eastland Port Pukunui dredge. The normal operation of the Pukunui dredge is expected to meet the noise limits set out in the TRMP rule.

The Hunt Report predicts that the maintenance dredging operations will comply with the L_{10} and L_{max} noise levels at the closest sites in the Amenity Commercial and Residential zones. These sites are much further from the maintenance dredging area than the closest parts of the Port MA and General MA, where some non-compliance can be expected, at times. In this regard because the noise from the maintenance dredging operations is unlikely to comply in small parts of the Port MA and General MA, discretionary activity consent is being sought under Rule C11.2.16(3).

Standard B requires that noise not result in the 'long-term modification of the behaviour of aggregations of marine mammal or birds.' The Hunt Report notes that it has no numerical standard or other measure of the noise effects on the behaviour of marine mammals or birds. However, it notes that the 4Sight ecology and water quality report does not indicate that the either the port area or the OSDG contain 'aggregations of marine mammals or birds.' On this basis their behaviour is not expected to be adversely affected by either the maintenance dredging or disposal operations and Standard B will be met.

The dredge spoil disposal operations at the OSDG will comply with the same Port MA noise emissions rule, as set out in the Hunt report. Standard A will be met, along with Standard B, whilst Standard C is not applicable.

3.10 Rules on Information with Resource Consent Applications

Part F - Procedural Matters, outlines the information to be provided with all resource consent applications, some of which are drawn from Section 88 and other parts of the RMA. The most applicable are in Rule F1.2 –Coastal Provisions of the TRMP.

Coastal Provisions -Information Requirements for All Management Areas

Rule F1.2.1.2 lists five matters that all applications must include. They have been considered in preparing this AEE and the associated application. Particular attention has been paid to point 5 regarding *"monitoring that is proposed to be undertaken in order to monitor the effects of the activity".*

Eastland Port are proposing that maintenance dredging and dredge spoil disposal operations be monitored from coastal processes, ecological/water quality and noise perspectives. The nature of the proposed monitoring programme was outlined earlier in relation to the MetOcean ,4Sight and Hunt expert report findings and recommendations.

Coastal Provisions - Information Requirements for the Port Management Area

Rule F1.2.1.4 identifies ten matters that the Council may require information on in respect of activities within the Port Management Area. They are as follows:

1) *Any possible alternative locations or methods for undertaking the activity and the applicant's reason for making the proposed choice.*
2) *The consultation undertaken by the applicant and results of that consultation.*
3) *The extent to which habitats, feeding grounds, ecosystems or any other values will be adversely affected.*
4) *The extent to which Tangata Whenua values have been identified and the potential adverse effects of the activity on these.*
5) *The way in which adverse effects will be avoided, remedied or mitigated and the effectiveness of this in reducing adverse effects.*
6) *The extent to which public access might be affected.*
7) *The extent to which navigation and safety issues have been addressed and details of any adverse effects which are more than minor.*
8) *The cumulative effects of the activity, including details where appropriate of the extent of other such activities of the same nature.*
9) *The extent to which the activity will affect and be affected by natural processes.*
10) *Details of notification of other authorities (such as the NZ Hydrographic Office) as required for some activities in this plan.*

Information on the matters listed is provided in this report and the appended specialist reports.

Coastal Provisions - Additional Information Requirements

This rule contains a detailed list of matters that the Council may require information on in relation to the effects of activities on 'values.' They are broken down under the following 'values' headings:

- Natural Character;
- Maori Culture;
- Economic, Cultural & Social Wellbeing;
- Habitat & Coastal Processes;
- Water Quality;
- Unmodified & Natural Substrates & Flora;
- Peace Quiet & Background Noise;
- Structures & Unoccupied Space;
- Public Access; and
- High Quality Air.

Information on the values listed above is provided in this AEE and the appended specialist reports.

3.11 Application Activity Status

The activity status of the different parts of the applications in relation to the relevant TRMP rules and Marine Pollution Regulations are summarised in **Table 6.**

Table 6: Tairāwhiti Plan Activity Status of the Proposed Maintenance Dredging and Disposal Operations

Activity	Plan Rule	Regulation	Status
Maintenance dredging of the port for navigation purposes of up to 140,000m^3/year	DP1.6.4(3)		Controlled
Deposition of over 50,000m^3/year of dredge spoils at the OSDG	DP1.6.4(2)		Permitted
Deposition of over 50,000m^3/year of dredge spoils at the OSDG	DP1.6.4(2)	Regulation 4(3)(b)	Discretionary
Discharge of seawater from maintenance dredging of the port	DP1.6.2(4)		Discretionary
Discharge of seawater from disposal of maintenance dredge spoils at OSDG	DP1.6.2(4)	Regulation 4	Discretionary
Noise emissions from port maintenance dredging	DP11.2.16(3)		Discretionary
Noise emissions from deposition of maintenance dredge spoils at the OSDG	DP11.2.16(3)		Permitted

The activities requiring consent are either controlled or discretionary activities.

4 ASSESSMENT OF EFFECTS

4.1 Effects Overview

Key Effects

The principal effects of the proposed maintenance dredging and disposal relate to the following matters:

- Economic and Social;
- Coastal Processes and Geotechnics;
- Ecology and Water Quality;
- Archaeological, Cultural and Heritage Values;
- Landscape, Natural Character and Visual Amenities;
- Noise;
- Navigation and Safety; and
- Public Access and Recreation.

The effects assessment findings that follow are generally drawn from the specialist reports in the appendices. The assessment findings on economic and social, cultural, landscape/natural character/visual amenities, and public access/recreation, are based on information from Eastland Port staff, along with 4Sight investigations and published material, including Council reports.

Positive and Negative Effects

The effects assessment is based around the generally recognised categories of effects, being positive and adverse (or negative) of a 'more than minor', 'minor', 'less than minor' and 'de minimis' nature. The adverse effects categorisation is related to the affected party and notification provisions in the RMA that are addressed in Section 5 of this report. The lowest 'de minimis' category refers to adverse effects that are of an inconsequential or trifling nature.

The effects assessment has also been made with reference to two other matters set out in the RMA. They are:

- The 'permitted baseline', with reference to the dredging activities that are permitted activities in the TRMP and do not require consent; and
- The 'existing environment', with reference to the existing consents in place at the port.

4.2 Permitted Baseline Considerations

Section 104(2) of the RMA enables consent authorities to disregard any adverse effects on the environment if a plan or a national environmental standard permits an activity with that effect. This discretion is known as the 'permitted baseline' approach.

The disposal of up to 50,000m^3 of dredging spoils a year to the OSDG is a permitted activity under the plan, as outlined in Section 3.6 of this report. The proposal to dispose of a greater quantity (up to 140,000m^3 a year) means that the applications have a 'permitted baseline' component, the effects of which can be disregarded by the Council. In other words, in considering this matter the Council can disregard the effects of this part of the application and effectively focus on the effects of the additional annual volume of maintenance dredgings (i.e. 90,000m^3) over and above those covered by the 'permitted baseline'.

4.3 Existing Environment Considerations

The RMA case law highlights the need of consent authorities to consider applications in terms of the 'existing environment' as part of the Section 104 decision making process. The term 'existing environment', includes existing resource consents, although investigations indicate that it does not include the existing maintenance dredging and disposal consents that will expire later this year. However, the term does include the other existing resource consents held by Eastland Port for the port area, including those in place for port structures, the treated stormwater discharges from the Southern and Wharfside logyards, and the port occupation permit, identified earlier in this report.

4.4 Economic and Social

Section 2.2 of this AEE outlined the history of maintenance dredging and offshore disposal of spoil material at the port.

The harbour port in its current geometric form was created through the 1920's, when the Turanganui River was diverted away from the original river mouth (todays harbour channel) by the River Training Wall creating a harbour port. Since this time Gisborne Harbour port has seen various dredging campaigns to create the depths maintained today. A large proportion of this dredging occurred in the 1960's coinciding with Wharf 7 being opened as an international wharf. This completed the harbour as illustrated in **Figure 25** below, being the Land Information New Zealand (LINZ) Poverty Bay and Approaches to Gisborne Chart NZ 5571. The most recent capital dredging campaign in Gisborne Harbour occurred in 1999 when the channel, turning basin, and Wharf 7 & 8 were dredged to achieve -10.5mCD.

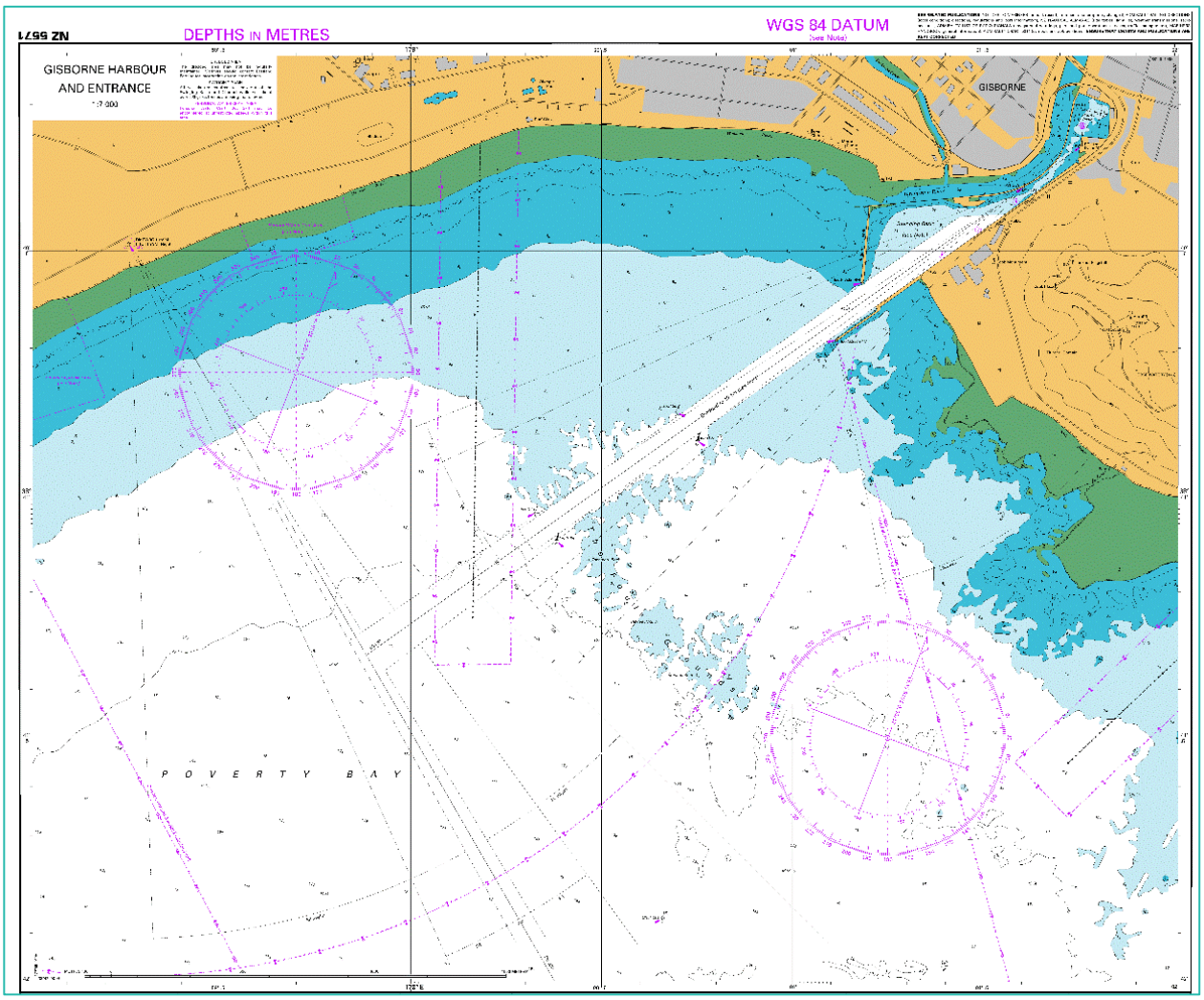


Figure 25. Gisborne Harbour and Entrance Map

Source LINZ

The channel and harbour depths created in the 1960's and late 1990's have been maintenance dredged to maintain safe, navigable passage at significant expense. The volume of material removed has not been quantified by Eastland Port, due to insufficient records pre-2003. However, the cost of this total operation would total well into the tens of millions of dollars.

The continuation of the current maintenance dredging and disposal operations are critical to effective functioning of the port.

In this regard Section 104(2A) of the RMA requires the Council to have regard to the value of the investment Eastland Port has in the current existing coastal permits, where they are being effectively renewed at least 6 months before their expiry in accordance with Section 124.

Eastland Port, and the preceding governance bodies of Gisborne Harbour, have invested considerably in capital and maintenance dredging to create and maintain the harbour and channel that exists today over near on the past 100 years. Since the purchase of Eastland Port in 2003 by the then Eastland Community Trust now Trust Tairāwhiti, Eastland Port has invested over $60 million into the port assets to help ensure the exports of Tairāwhiti are accommodated and have the most reliable access to overseas markets possible. This investment to date has mostly been focussed on increasing the capacity of land assets and storage assets but also some significant plant and machinery purchases in the form of the tugboat Waimata.

Eastland Port is planning to invest over $100 million into the port assets over the next 5 years to increase the capacity of its wharf assets to be able to berth two handy max vessels at once, and provide assets that will be able to facilitate shipping container trade and other break bulk products that cannot be presently. This will be achieved through a suite of complementary projects known as the Twin Berths, as outlined earlier in Section 2.8 of this AEE. The Twin Berth project includes the rebuilding of Wharves 6 & 7, remediation of the historic slipway, the extension of Wharf 8, reclamation, armouring of the breakwater, and capital dredging.

Maintenance dredging is required to ensure a safe and reliable navigation channel for all vessels visiting Gisborne Harbour is available year-round. Being able to perform this operation regularly is essential to the economic wellbeing of the Tairāwhiti region. The economy of the Gisborne region relies heavily on primary production in particular the success of the agriculture, forestry and fishing sectors. Statistics NZ reports note that in 2017 the Gisborne region GDP was $1,888m of which 24.5% or $462m was attributed to these three sectors. The Gisborne region reliance on these primary industries is well above the National GDP where they account for only 9.5%.

The Gisborne region reliance on primary production makes the continued operation of the port especially important for the economic wellbeing of the region. Forestry is estimated to contribute 10.2% of $192m GDP of which it is estimated over 90% is exported in log form via Eastland Port. It has been estimated the total regional GDP impact of Eastland Port related items for the 2017/18 year was approximately $455m which means that Port activities are, directly and indirectly, associated with approximately 23% of total Gisborne GDP. In 2019 a report by S Bevin entitled *Port of Gisborne Economic Impact Assessment Report* estimated the port total regional employment contribution was 5,630 or 26%.

As well as providing regionally important infrastructure, Eastland Port is a community owned asset. Eastland Port, and its parent company Eastland Group, are 100% owned by its sole shareholder Trust Tairāwhiti. Trust Tairāwhiti is the largest community trust of the Tairāwhiti region. In 2019 the Eastland Group provided a dividend of $12.1m to Trust Tairāwhiti to distribute to the Tairāwhiti community as it sees fit. In turn Trust Tairāwhiti distributed more than $10m for economic and community initiatives and organisation's throughout the region. While Eastland Port is a commercial organisation it is community owned, and the distributions that it makes are important to the growth and development of its community.

4.5 Coastal Processes and Geotechnics

Recent Port Area Surveys and Dredging Operations

The existing seabed contours within the port were explained earlier in this AEE with reference to the Hunter surveys and Worley and MetOcean reports. The nature of the recent maintenance dredging operations was also outlined based on information in the annual port surveys and expert coastal processes and geotechnical engineering reports.

The following information from the surveys and reports is relevant to the proposed maintenance dredging operations subject of the coastal permit application:

- Over the last 15 years on average approximately 72,800m^3 of material has been maintenance dredged each year with the largest being approximately 138,200m^3 in 2011;
- Most (approximately 80%) of the maintenance dredged material comes from the PNC and the rest (approximately 20%) from the VTB and wharf areas;

- Maintenance dredging operations are strongly influenced by climatic conditions with during La Niña conditions approximately 75,000m^3/year expected and approximately 120,000m^3 expected during El Niño conditions.

General Overview of Coastal Processes and Associated Engineering Investigations

The MetOcean and Worley reports explain the nature of the coastal processes affecting the port and wider Poverty Bay, along with the geotechnical engineering factors that govern maintenance dredging and disposal operations. The MetOcean reports contain a figure that shows the relationship of the port to the bay and associated water depths. Part of the figure is reproduced as **Figure 26** below.

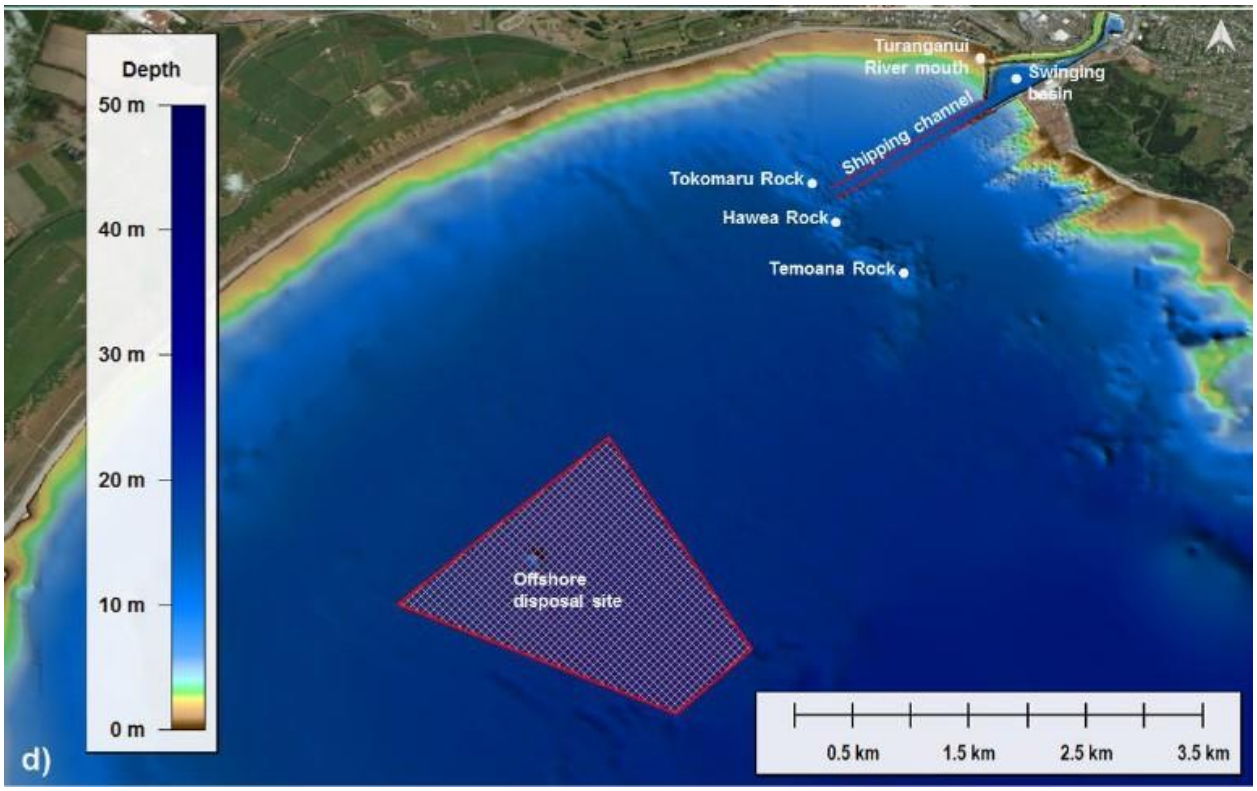


Figure 26: Plan of Gisborne Port and Offshore Disposal Ground Area Water Depths

Source: MetOcean

Section 2- Background, of the MetOcean *Morphological Response of the Shoreline to the Disposal of Maintenance Dredging and Disposal of Sediments* Report summarises the findings of the investigations by the Council, Eastland Port and other organisations into coastal processes, and in particular shoreline movements and associated coastal hazards. The key findings are:

Waikanae Beach Area

The shoreline in the Waikanae Beach and Midway Beach areas has been relatively stable since 2000 as a result of the balance between physical processes and sediment supplies. Prior to this, significant changes occurred as a result of construction of the Turanganui River training wall in the 1930's and port redevelopment in the 1960's. Before this, dating back to around 1910, progradation of the shoreline is reported to have occurred.

During storm events, sediment tends to migrate from the littoral area to the deeper offshore waters where the PNC acts as a sediment trap. The sediments tend to settle as a consolidated surficial layer in the lee of the channel.

Kaiti Beach Area

The MetOcean report refers to a 1998 report estimated that approximately 2,000m^3 of sediment annually is deposited onto Poverty Bay beaches from both the cliffs east of Kaiti Beach and the cliffs of Young Nick's Head. These sediments, along with alongshore and offshore sediment transport associated with incident waves coming from the south/south-eastern quadrant control the relative stability of Kaiti Beach.

The western section of Kaiti Beach near the main breakwater has not shown any significant trend changes since 2000, while the eastern section of the beach has been eroded. It is likely that the construction of the main breakwater in the early 1900's and the capital dredging in the 1960's significantly reduced the nourishment of Kaiti Beach via eastward directed sediment transport and fluvial inputs.

However, the breakwater also likely interrupts the westward alongshore sand transport making the deposition of material possible and leading to a relatively stable shoreline in this area.

Waipaoa River Mouth Area

The foreshore to the north of the Waipaoa River mouth is positively nourished by the large discharge of sediments and the associated northward alongshore sediment transport. The dissipation of waves by friction throughout the bay contributes to limit the erosion of sediments during storm events. As such, this part of the bay has been continuously subjected to progradation over the last century. By contrast, the beach areas located to the south of the Waipaoa River mouth, near Te Wherowhero Lagoon, have been generally eroding since 2000, likely due to the effect of incoming waves from the eastern quadrant. In absence of southward alongshore drift, the nourishment of the southern beach areas by fluvial sediments is reported to be limited.

Recent Surveys and Associated MetOcean Investigations

The MetOcean *Morphological Response of the Offshore Disposal Ground* Report describes the OSDG and summarises the survey findings over the 2005-2017 period. It also contains the findings of a Delft3D numerical modelling investigation used to run high resolution process-based morphodynamic simulations over Poverty Bay. The numerical modelling involved fully coupled wave, current and seabed interactions.

The modelling approach consisted of simulating the disposal ground dynamics over two complete, but climatically different (i.e. La Niña and "El Niño climatic conditions), one-year periods. The simulation involved applying an input reduction technique and morphological acceleration factors. In order to isolate the effect of the dredge disposal operations the initial model conditions assumed sediment is available only within the disposal ground, which is then progressively dispersed throughout the sequence of representative events. Additionally, the effect of the disposal mound on the wave climate was examined by comparing the model wave heights between the pre-and post-disposal environments.

Section 2.3 of the report describes the morphology of the disposal ground noting that it is controlled by the hydrodynamic processes at the site (waves, tidal and residual current velocities) and sediment inputs. The report notes that the disposal ground receives sediment inputs from the nearby Waipaoa River and other rivers in the bay, along with the maintenance dredge spoils. It notes that the combination of processes and various sediment sources makes it impossible to isolate the effect of maintenance disposal activities on the morphology of the disposal ground, compared to the changes resulting from natural processes. However, a review of the 2005-2017 hydrographic and sonar side scan survey records indicates the following changes:

- Between January 2005 and August 2007 most of the disposal area experienced accretion of the order 0.1-0.2m (average) and a maximum of approximately 0.5m, while the south eastern corner experienced a net deficit of sediment, with depths increasing by around 0.2m;
- Between August 2007 and November 2009 sediment accretion of the order 0.2 m was observed within the north-western corner of the disposal ground (inshore), while net erosion of a similar magnitude was likely to have occurred within the south-south east section of the disposal ground;
- Between November 2009 and June 2012 most of the disposal area experienced accretion of the order 0.1-0.2 m (average) and a maximum of approximately 0.4m; and
- Between June 2012 and February 2017, the disposal ground experienced a net negative sediment budget, with water depths increasing by 0.1-0.2m and a maximum of approximately 0.4m. Minor areas of accretion were measured within the inner most sections of the disposal ground.

The changes in the OSDG over the 12-year period are shown in a series of water depth plans in Figure 2.3 of the report. They are reproduced in **Figure 27**.

As outlined above, the report reiterates the point that it is not possible to link the changes to the morphology of the disposal ground to the port maintenance dredge disposal operations, as distinct from naturally occurring sediment transport and other coastal processes.

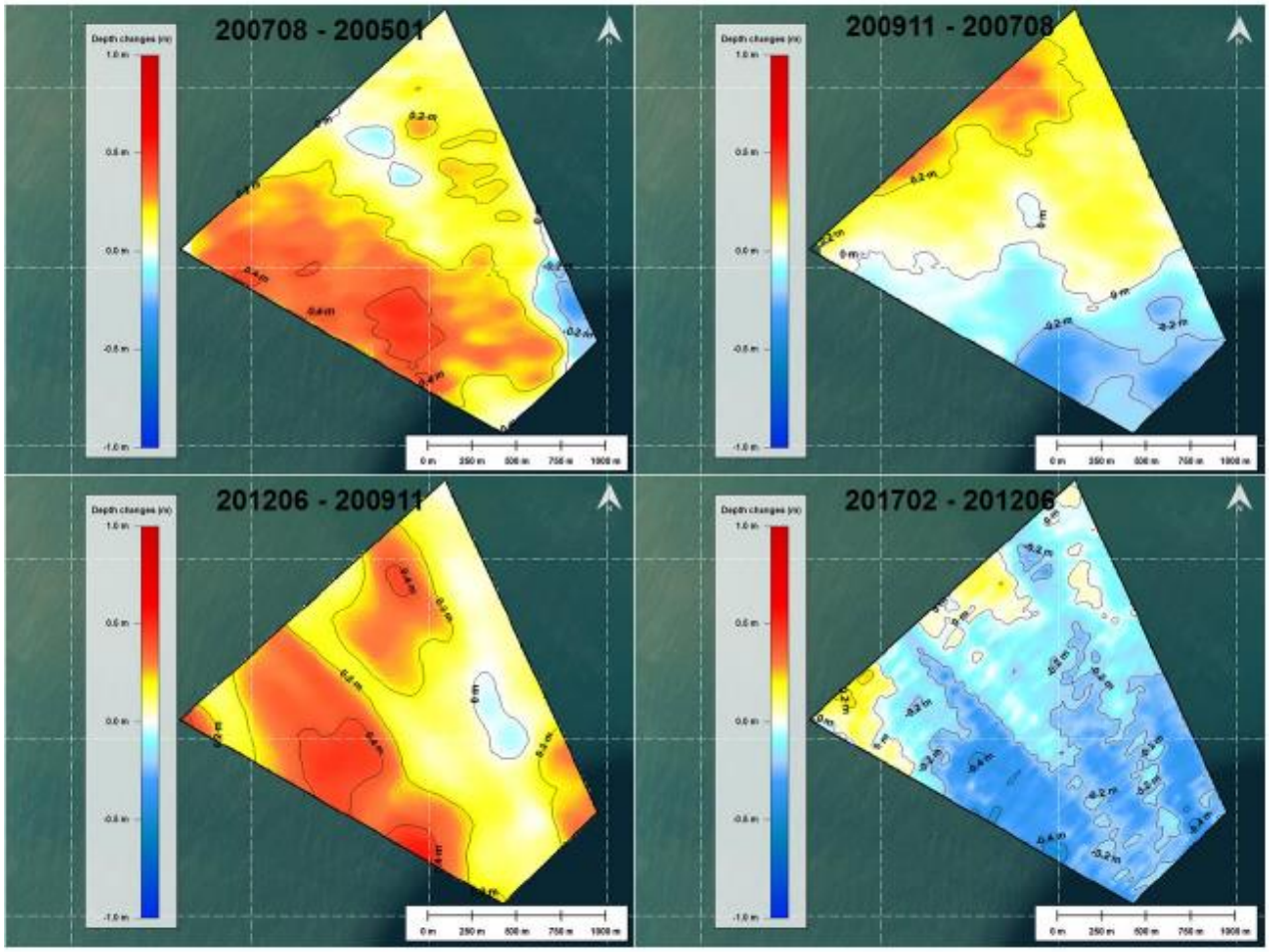


Figure 27: Plan of Changes in Water Depths in Offshore Disposal Ground Area 2005-2017

Source: MetOcean Report

Effects of Continued Maintenance Dredging

Section 3 of the MetOcean *Morphological Response of the Shoreline to Maintenance Dredging and Disposal of Sediments* Report outlines the models used to predict the changes to coastal processes in the bay arising from the continued maintenance dredging in the port and disposal of dredgings at in the OSDG.

The model predictions as outlined earlier were based around over two complete, but climatically different (i.e. La Niña and "El Niño climatic conditions), one-year periods.

Section 4.1 -Effects of the Proposed Continuation of Maintenance Dredging records the following:

- The 2014 published reports on the historic accretion of the shoreline along Midway and Waikanae beaches and although heavily modified by human behaviour is relatively stable;
- Sediment is mostly supplied by the Waipaoa River and transported along the nearby beaches, with a large portion deposited at the mouth of the Turanganui River, which is then reworked and transported by the tides to the PNC, together with fluvial material from the river itself; and
- The PNC has little impact on the dominant southerly directed wave events affecting the nearby beaches which are approximately perpendicular to it. Similarly, incident wave height is not expected to be significantly modified by the PNC. As such continued maintenance dredging is expected to have only a 'minor' effect on shoreline stability and littoral processes.

Figures 4.1, 4.2 and 4.3 in the report illustrate the significant wave height and sediment transport situations associated with the continued maintenance dredging.

Effects of the Continued Disposal of Dredgings

Section 2 of the MetOcean *Morphological Response of the Offshore Disposal* Report outlines the basis of the numerical model used to predict changes in the disposal ground and related water depths, along with effects on associated coastal processes from the ongoing disposal of dredge spoils over the next 20 years. The following assumptions were built into the model:

- Annual maintenance dredge spoil disposal operations were expected to range from 75,000m^3 in La Niña conditions and 120,000m^3 in El Niño conditions resulting in a disposal mound of between 0.028m (2.8cm) and 0.044m (4.4cm);
- The composition of the material was assumed to be 66% mud, 15% fine grained sand and 19% very fine grained sand, based on previous studies and expected to be spread over the disposal ground area of approximately 271.4ha; and
- Assumptions on critical shear stress, dry bed density, median sediment diameters and other factors were incorporated into the model,

Section 3.1 -Effects of Disposal on the Nearshore Wave Climate, finds that changes to the disposal mound from the dredge spoil activities would have negligible effects on the nearshore wave climate. The model indicates that the wave energy is expected to be redistributed along the beach areas adjacent to the Waipaoa River mouth. The resultant increase in significant wave height during energetic storm events is, however, not expected to exceed approximately 1 cm, or 0.2% of the incident wave height. Figures 3.1 to 3.7 in the report illustrate the effects of the post disposal significant wave height and differences in significant wave height caused by a 4.4cm increase in the height of the disposal mound for six representative wave classes (1-6). The nature of the different wave classes are summarised in Table 2.2 of the report.

Section 3.1 of the report notes that some very localised changes in wave direction are expected to occur as a result of the dredge spoil disposal activities. However, they are not expected to modify the overall longshore sediment transport patterns along the beach. The report finds that the changes in wave height and wave direction caused by the disposal mound are expected to have negligible effects on the nearshore morphological processes and recreational surfing conditions.

The locations of recognised surf breaks in the Bay and their relative distances from the OSDG are described and illustrated in the MetOcean report entitled *Surfing Wave Dynamics at Midway Beach, Gisborne*. This report also assesses the effects of the disposal operations on the recognised surf breaks at Tuamotu Island, and between Waikanae Beach and the Waipaoa River. The planning context of the recognised surf breaks and associated TRMP and NZ Coastal Policy Statement matters are assessed later in Section 6 of this report.

Section 3.2 -Disposal Ground Dynamics, of the *Morphological Response of the Offshore Disposal Ground* Report sets out the findings of the modelling exercise in terms of predicted morphological changes to the disposal ground.

The key findings are:

- Within the 1-year period simulated, between 68% and 73% of the disposal mound associated with maintenance dredging disposal activities is expected to be eroded due to the weakly-consolidated silt composition of the material. This corresponds to between 50,000m^3 and 100,000m^3 of sediment being advected (i.e. transported away) from the disposal ground each year for La Niña and El Niño respectively;
- A notable segregation of mud, fine-grained sand and very fine-grained sand is anticipated;
- The silt component of the disposal material (which is approximately 66% of the total) is predicted to be transported north-west and north-east of the disposal ground. Some deposition of silt may occur to the west of the bay during relatively quiescent wave conditions;
- The fine-grained sand fraction of the disposal (which is approximately 15% of the total) is expected to be weakly transported over the disposal area and its margins by bed-load transport;
- The very fine-grained sand (which is approximately 19% of the total) is expected to migrate south-south-westward by near-bed suspended transport, with sediment expected to move out to the 16–24 m isobath depths within the 1-year period modelled; and
- No diffusion of disposed sediments is expected over the adjacent beach areas around Poverty Bay.

Section 4.2 – Effects of the Proposed Offshore Disposal, of the MetOcean *Morphological Response of the Shoreline to the Disposal of Maintenance Dredging Sediments* Report assesses the effects of the continued maintenance dredge spoil disposal operations on the inshore wave climate and shoreline around Poverty Bay.

The main report findings are as follows:

- The increase in height of the disposal ground each year is expected to have a negligible effect on the incident wave refraction patterns over and inshore of it. The predicted significant wave height modifications in the order of 0.2%, and some very localised changes in wave direction, are not expected to modify the overall sediment transport patterns and beach shoreline.
- The relative changes to the incident wave climate are not expected to affect the shoreline sediment dynamics. Likewise, the morphological response of the disposal mound is not expected to result in any noticeable erosion/deposition of sediment over the inshore beach area.
- The input of sediments from maintenance disposal activities is negligible in terms of beach morphodynamics compared to the fluvial sediment inputs provided by the Waipaoa River discharges into the bay.

Proposed Maintenance Dredging and Disposal Ground Monitoring

The extent and nature of the proposed coastal processes effects monitoring of the maintenance dredging and disposal operations were outlined earlier in this AEE in relation to the MetOcean report.

The current twice yearly port hydrographic surveys are to be retained, along with annual reporting of dredge areas and volumes to the Council. In addition, the Council's beach profile monitoring data is to be reviewed each year and the Eastland Port annual report is to identify any issues/matters arising from a port management perspective, including the possible need for additional beach profile or other monitoring work to be undertaken.

The current annual hydrographic and side sonar monitoring of the OSDG is to be extended to include a nearby 'control area', where both hydrographic and sediment size/quality data is to be collected, analysed and reported on annually to the Council.

4.6 Ecology and Water Quality

TRMP Notations

The PNC, VTB and port areas adjacent to Wharves 4-8 are not affected by, or close to, any ecology-based notations in the TRMP. The nearest notations of this nature are Cooks Landing Site and Kaiti Hill (Titirangi) to the south-east of the port. They have "Terrestrial Area of Significant Conservation Value" notations. This map is reproduced in **Figure 28**.

The OSDG is not subject to any similar ecology-based notations in the TRMP. The nearest such recorded notations are the "Terrestrial Area of Significant Conservation Value" notation applying to the Waipaoa River mouth and Wherowhero lagoon (Foxley), which are some distance from the OSDG. These areas are also shown in **Figure 28**.

The conservation values of the four features are described in the record sheets in Schedule G11 of the TRMP.

4Sight Ecology and Water Quality Report

The 4Sight Ecology and Water Quality report contains six sections, along with several appendices. Section 1 – Introduction and Section 2- Port Maintenance Dredging and Disposal contain background information, similar to this AEE. The key findings of Section 3 - Existing Ecology, Water and Sediment Quality, Section 4 – Ecological and Water Quality Effects, Section 5- Proposed Monitoring and Section 6- Conclusions, are summarised later in this report.

Existing Ecology, Water and Sediment Quality

Section 3.1 – Ecology of the Port, outlines the findings of the following studies and reports on the port area;

- NIWA Port Biosecurity Study (2005)
- Council Contractor Annual Biosecurity Surveys (2004-2020)
- 4Sight Wharves 6, 7 and Slipway Intertidal and Subtidal Surveys (2017)
- 4Sight Kaiti Reef Intertidal and Subtidal Surveys (2018 & 2019)
- 4Sight Offshore Disposal Ground Sediment Quality Survey (2019)

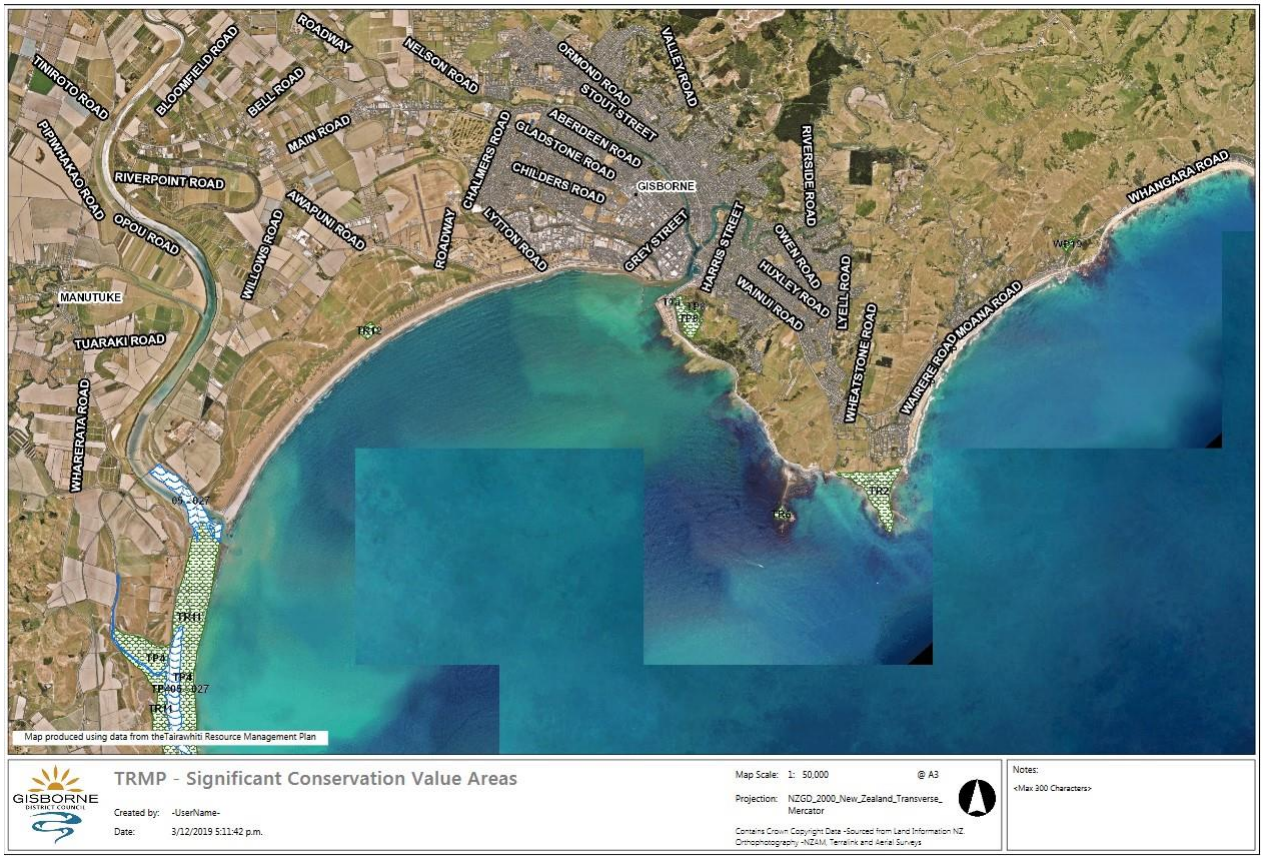


Figure 28: Tairāwhiti Plan of Terrestrial Areas of Significant Conservation Value

NIWA and Council Biosecurity Surveys

The 2005 NIWA biosecurity study recorded 205 species of higher taxa in the port, 130 of which were native, including annelids, crustaceans, molluscs, phycophyta and vertebra. At the time, the native species composition was similar to that reported at nine other NZ ports.

The most recent (2016) Council commissioned biosecurity survey found Mediterranean fan worm at several locations within the port and inner harbour area. The recorded locations are shown in Figure 3 in the 4Sight Ecology and Water Quality report. This report also assesses these matters in relation to both the current and proposed maintenance dredging and disposal operations and the recent Wharf 6/7/slipway redevelopment decisions, and are summarised later in this report.

Recent 4Sight and Auckland University Investigations

Section 3.1 of the 4Sight report also documents the investigations in 2017-2019 by 4Sight and Dr Andrew Jeffs of Auckland University into juvenile crayfish habitat in the port as part of the Wharves 6 and 7 and slipway redevelopment projects. It notes the Council decision to approve these redevelopments with reference to the acceptable effects on the juvenile crayfish habitat.

The report also summarises the findings of a 1997 scuba dive based investigation of the PNC and breakwater and surrounding area (by Cole and others), a 2002 investigation of the ecology in the vicinity of the nearby Council wastewater outfall (by Keeley and others), along with a March 2018 underwater photographic survey of the soft sandy and patch reef habitat on the southern side of the port breakwater (by 4Sight). The March 2018 survey found a diverse and healthy range of biota and absence of obvious or excessive silt despite its proximity to the port and areas that are regularly maintenance dredged. The 2019 investigations of the Kaiti Reef confirmed a predictable array of macroalgae and macroinvertebrates on the intertidal and fringing reef given the topography of the reef (its low relief) and the high exposure of the area to wave energy. There was no indication of port related effects. The 2019 survey of the texture and quality of sediments offshore from Kaiti Reef and at the OSDG confirmed low concentrations of target contaminants which again indicated that heavy metals were consistent with expected background levels. This is consistent with expectations based on the low contaminant levels documented within the port.

Water Quality Classification and River Sediment Loads

Section 3.3 – Water Quality of the Port Area, explains the water classification system affecting the port, which was explained earlier in this AEE. It then explains the influences that regular ship and tug berth activities have on water quality in terms of turbidity with reference to drone photographs (June 2017) of associated plumes.

This section of the report also documents the large volumes of sediment that regularly come down the Turanganui River with reference to a table of recent (May 2017) sampling results of total suspended solids (TSS), turbidity and vertical clarity in the VTB, the day after a large rainfall event. The TSS results were in the 130-230g/m^3 range compared to background results of 20g/m^3.

Section 3.4- Port Sediment Quality, contains a table of the recorded metals in the port sediments from the regular monitoring surveys of three locations in the port (PNC, Butlers Wall & VTB) between 2006 and 2019. They show the metal concentrations are well below the ANZECC (2000) guidelines referenced in the maintenance dredging consent conditions and considered unpolluted and suitable for offshore disposal. This part of the report also summarises the elutriate results from the 2017 survey which indicated a small increase in copper concentration in the water column, but still in compliance with the applicable ANZECC guidelines.

Offshore Disposal Ground Investigations

Section 3.4- Offshore Disposal Ground, summarises the results of the NIWA benthic ecology surveys of the disposal ground dating back to 1996, which were highlighted earlier in this AEE. This section of the report also highlights some important findings of the MetOcean and other investigations into coastal processes occurring in the bay, along with the August 2019 4Sight survey of the OSDG.

The most notable MetOcean finding is that the nearby Waipaoa River, which has a catchment area of approximately 2,200km^2, is estimated to annually discharge approximately 12.1 million m^3 of sediment into Poverty Bay. This volume of material is much greater than the estimated 0.69 million m^3 coming from the 220km^2 catchment of the Turanganui River.

The August 2019 sediment quality survey findings cover the following matters:

Metals – All eight sediment metals concentrations, except nickel, fell below (that is 'complied with') the relevant 2018 ANZG Default Guideline Values (DGV'S). Nickel exceeded the Threshold Effects Level (TEL) at all sites, including the east and west control sites and was equivalent to or exceeded the ANZG DGV by a small margin at four sites. Nickel concentrations were well below the ANZG GV-high at all sites.

Total Organic Carbon -TOC concentrations at all ODG sites fall within the 'very good' category with reference to published research (Robertson and Stevens 2007), indicating low levels of organic carbon in the sediments. Notwithstanding that one of the sites (OSG 2) had a slightly higher level of TOC compared to the other samples, none of the results indicate undesirable elevations in organic enrichment at the OSG or the control sites.

Particle Size -All sites, except OSG 2, had very similar particle size distribution profiles. In general, the samples were comprised predominantly of very fine sand, followed by a smaller component of mud and fine sand. OSG 2 had a higher proportion of mud compared to the other sites

Effects of Maintenance Dredging

Section 4- Ecological and Water Quality Effects, assesses the effects of the maintenance dredging on the port ecology and water quality. This same section also covers the effects of the dredging disposal activities on the ecological and water quality values of the disposal ground area.

Dredging Effects on Port Habitat and Biota

The key findings in Section 4.1 on the effects of the maintenance dredging operations on port habitat and biota are:

- Eastland Port has limited data on the biology of the sediments to be maintenance dredged. This is because the regular maintenance dredging of the seabed and regular shipping activity prevent the dredged footprint from developing other than an a highly itinerant and limited in-faunal and epifaunal biota. Moreover, maintenance dredging is provided for as a controlled activity in the TRMP, meaning that the Council's role in decision making on this aspect is effectively limited to the imposition of conditions. Also, as noted earlier in this AEE under the TRMP the Council has only reserved control over 'the timing of dredging and the 'location of dredging in relation to any important sites or values.' The soft sediments to be maintenance dredged are not considered to have 'important' ecological values.

- Eastland Port have over recent years focussed their ecological investigation work on the slipway, wharf and other port structure areas, along with the nearby Kaiti reef areas, that are known to support 'significant', if not 'important' biological communities.
- The biologically active part of the seabed within the port itself, i.e. east of the Butlers Wall, is typically the top 20cm of the softer sediments, which hosts limited diversity and abundance of benthic macroinvertebrate fauna dominated by common species of polychaete worm;
- The area to the west of Butlers Wall in and around the PNC within the VTB area is mainly soft sediment material and expected to be similar in nature to that in the nearby slipway area assessed as part of the 2017 ecology investigation of this area. The maintenance dredged area is expected to contain a limited abundance and diversity of benthic macroinvertebrates. Past studies and the recent 4Sight Kaiti reef work indicate that that the area has a moderately diverse biota which is evidently robust and capable of withstanding or responding to the high energy conditions which prevail at times;
- A small area of harder substrate will be affected towards the southern half of the PNC. The biota here, although different to the soft sediment substrate, is also reported to be of limited diversity and abundance due to the natural constraints of sand movement, low light conditions and intermittent significant swell energy;
- The effects of the maintenance dredging operations on the ecological values associated with the seabed habitat within the port and PNC are not considered to be significant and are assessed as 'minor and probably less than minor''.

Dredging Effects on Port Water Quality

The key findings in Section 4.2 on the effects of the proposed dredging operations on port water quality are:

- The soft sediments are to be maintenance dredged by a TSHD, with the possibility of a BHD and/or a CSD being used in difficult to access places, as outlined earlier in this AEE with reference to the MetOcean and Worley reports;
- The MetOcean investigations confirm the expectation (based on past and present dredging observations) that the TSHD operations will generate significant but relatively localised plumes of turbidity. This is unlikely to be the case for any BHD operations involved in removing difficult to access material and which are likely to generate highly localised plumes within parts of the port environment which typically experience such plumes in relation to normal shipping movements. In terms of the VTB and wharf areas the SC water quality standard (d) regarding 'conspicuous changes to natural colour and clarity' is unlikely to be met during the period of dredger activity;
- The MetOcean reports identify some possible turbidity plume mitigation measures. However, they are not considered practical from a port operational perspective, nor warranted from a water quality perspective, given the similar 'background' turbidity associated with the day to day ship and tug movements and relatively frequent river flooding and sea storm events;
- The sediments to be dredged are unpolluted and not a significant source of bio-accumulative or otherwise potentially persistent or toxic contaminants that could otherwise be transported to or affect marine life or water quality within or beyond the port zone. The quality of the dredged material poses no concerns with respect to potentially toxic or bio-accumulative hydrocarbons or heavy metals;
- Water quality related dredging effects include increases in suspended sediment and turbidity plumes. Based on the local experience with dredging at the port, and as supported by the MetOcean modelling studies, such effects will be relatively localised and will be of a similar scale and intensity to those already arising from consented maintenance dredging activity. In particular, the modelling suggests that there will not be significant sediment plumes reaching the Kaiti reef system or local beaches; and
- Water quality classification standards will be met in respect of dredging other than in relation to effects on colour and visual clarity. These effects can be dealt with as per existing consents which provide for a 2-hour period after the conclusion of dredging activity by which time plumes must have dissipated sufficiently for there not to be conspicuous visual effects. Experience at the Port of Gisborne shows that that requirement can be met.

The report notes that the 'background' turbidity within the port is primarily related to the regular shipping movements, with flooding events in the adjacent Turanganui River also being a factor at times.

The drone photograph in **Figure 29** taken on 5 July 2027 shows a typical example of the turbidity generated by tug/ship movements. The ship being berthed at Wharf 8 has generated a heavy, conspicuous plume of turbid water from the main wharf extending across to the old slipway and over much of the port basin. The same activity at Wharf 7 generates similar plumes, which also at times extend to Wharf 6 and other adjacent port facilities. These vessel influences permeate the entire inner port area and effectively become the 'background' state at such times

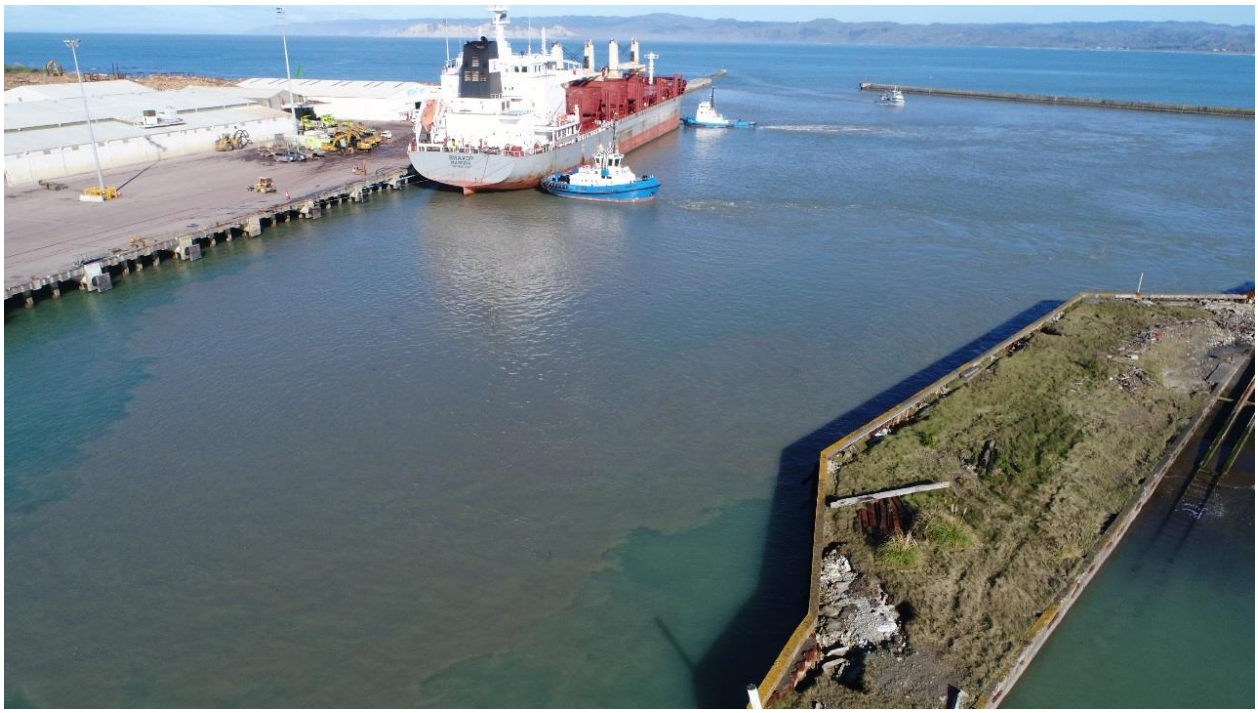


Figure 29: Drone Photograph of Turbidity from Regular Tug and Vessel Movements Within the Port

The adjacent Turanganui River on the northern side of the training wall also, on occasions, experiences highly turbid conditions. This situation is shown in **Figure 30**, which is a drone photograph taken early on a flood tide on the same day, i.e. 5 July 2017.

The photograph shows the very clear water quality conditions in the port compared to the adjacent river. Investigations by MetOcean as part of the Twin Berth project indicate that during storm events the Turanganui River carries up to 3-8 kg/m^3 of sediment. Water quality investigations undertaken by 4Sight have found 'background' suspended solids in the range 130-230g/m^3 and turbidity in the range 85-160 NTU within the port. On the other hand, background suspended sediment and turbidity beyond the port working environment have been found to be generally 20g/m^3 and 5 NTU respectively.

The photographs and associated investigations show that the frequently elevated suspended solids, turbidity and reduced visual clarity from routine port activities and natural events are important aspects of the 'existing environment'. They have to be taken into account when considering the effect of the on-going maintenance dredging operations. In short significant turbidity arises from both authorised port vessel activities and weather events.

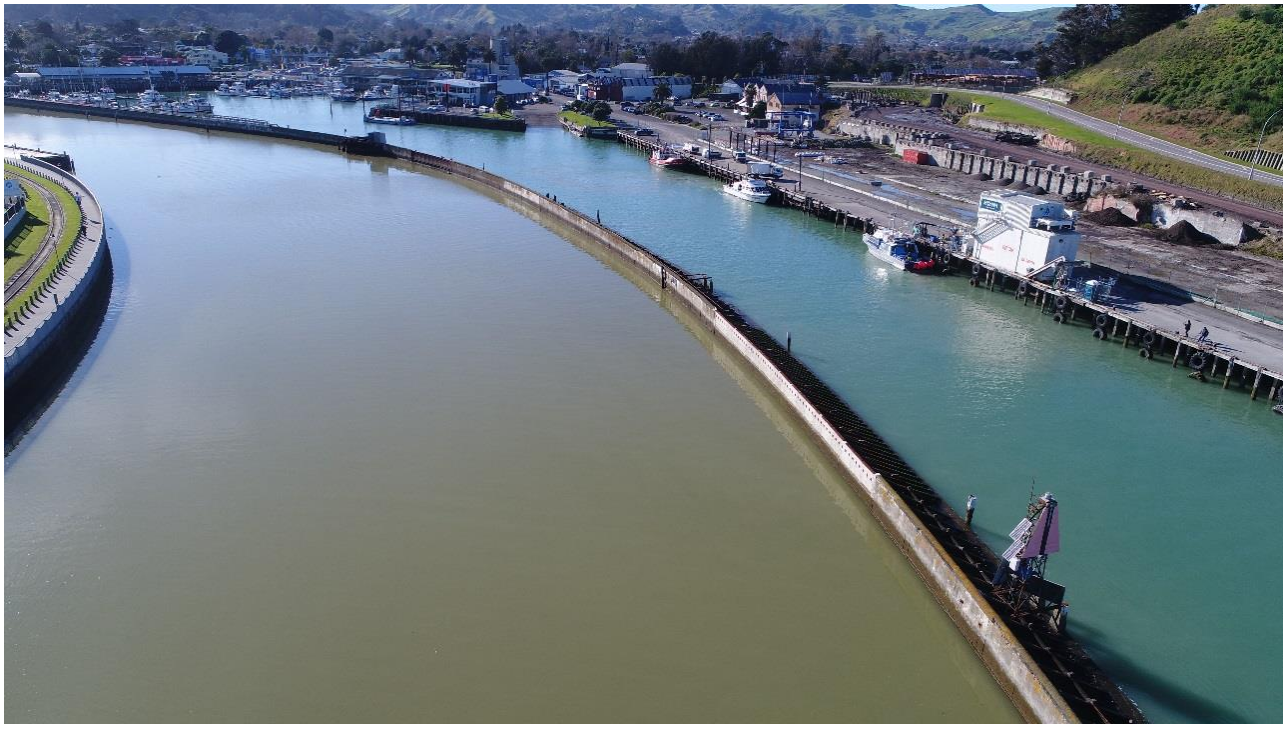


Figure 30: Drone Photograph of Turanganui River Flood Tide

Dredging Effects on Juvenile Crayfish and Settlement Habitat

Section 4.2.1.3 assesses in detail the water quality effects of the proposed maintenance dredging operations on juvenile crayfish. This is done with reference to the background ecology report and expert evidence presented at the hearing for the Wharves 6 and 7 and slipway redevelopment projects. The following key points are noted:

- The juvenile crayfish habitat is confined to a small part of the Wharf 6 and 7 structures/papa shelf area that will be replaced by a quay wall (similar to other parts of the port), but with purpose built crayfish collection devices to replicate current conditions;
- The wharf area utilised by the juvenile crayfish is regularly affected by shipping movements and maintenance dredging with the high turbidity and reduced water quality likely to be associated with a high mortality rate;
- The reduced salinity in the port is also likely to affect the mortality of juvenile crayfish in the area;
- Past investigations by NIWA (reported to be in a 1998 report that Council and 4Sight staff have not been able to find) indicated that the main juvenile crayfish settlement period was between April and September each year, with May, June and July being the 'most critical'; and
- The 1998 NIWA report proposed that dredging operations be restricted over the 6 month 'winter' period and this was made a condition of the now lapsed consent for the Wharf 4-6 maintenance dredging area.

In terms of the earlier NIWA suggested condition, Eastland Port advise that it is not feasible to effectively prohibit THSD maintenance dredging operations for a 6-month period each year. A review of the most recent annual dredging records shows that maintenance dredging is undertaken throughout the year, including during winter.

Dredging Effects on Potential Mobilisation of Metals and Elutriate Testing

Section 4.2.1.4-notes the earlier explained generally good results of the sediment quality and elutriate testing carried out within the port. The elutriate analysis indicated that maintenance dredging may cause a small increase in copper concentration in the water column, but the concentrations of other metals are unaffected. The increase in copper is expected to remain small and indicates that water quality will remain within the ANZECC (2000) 90% species protection threshold for marine waters in a 'slightly to moderately disturbed ecosystem'.

Effects of the Dredgings Disposal

The ecological and water quality effects of the maintenance dredging disposal activities are assessed in Sections 4.3 and 4.4 of the 4Sight ecology report.

Effects of Disposal on Habitat and Biota

Section 4.3 notes, that the annual volume of maintenance dredgings expected to be disposed of each year is expected to be effectively the same as the current average annual maintenance dredging volume. It records that the regular (five yearly) benthic ecology surveys of the disposal ground undertaken by NIWA since 1996 show minimal changes to the benthic soft sediment community composition in comparison to pre-disposal conditions. Also, the report finds that the impacts associated with the disposal of maintenance dredged material do not appear, from the surveys, to be significant.

The report finds that the physical characteristics of the disposal ground, which include high energy, high sediment flux due to natural riverine discharges and a net transport of sediment offshore into deeper water, largely govern the type of benthic community that occurs on the site. Such communities are naturally responsive to such conditions and the disposal of dredged material will have a relatively small-scale influence on the community make up and health.

Disposal of the dredged material is not expected to cause changes significantly beyond what has been documented in the NIWA benthic ecology monitoring surveys. On that basis, effects are assessed as being of a 'minor' nature and scale in terms of impacts on the ecology both within and adjacent to the disposal ground.

Effects of Disposal on Water Quality

Section 4.4 cites the findings of the MetOcean reports on the modelled turbidity related effects associated with the different dredging disposal operations and discusses their application to the SA water quality classification applying to the OSDG.

The water quality effects of the disposal activities at the disposal ground are also considered in the ecology report to be 'minor', even though the SA water quality classification standard (e) requiring 'no conspicuous change in water colour and clarity after reasonable mixing' will for short periods not be met.

The report finds that the more current consent condition, which provides for a 6-hour mixing period, will be met and proposes it be the basis for the future operations. The report notes that the other SA standards are expected to be met, including (e) regarding contaminant levels and the suitability of aquatic organisms for human consumption.

Biosecurity Management Considerations

Section 4.5- Biosecurity, outlines the biosecurity management associated with the maintenance dredging and disposal operations. This assessment is provided in relation to the findings of the most recent annual Council biosecurity surveys, the current Eastland Port biosecurity protocols and the biosecurity risks associated with the proposed operations. These same matters were addressed by Eastland Port and the Council as part of the Wharf 6/7 redevelopment applications and decision making process, in relation to the proposed capital and maintenance dredging component of this project.

As part of this process a condition requiring submission of a Marine Pest Management Plan (MPMP) to the Council for certification before the capital dredging work is undertaken was attached to the consents. A similar consent condition and associated MPMP is being proposed with the subject maintenance dredging applications here (Ref. Section 2.16 of AEE).

The background to the Wharf 6/7 redevelopment consent condition is explained in the following Council decision extracts:

"43. *One significant concern that did come to light during the hearing was that the Mediterranean fan worm had been discovered in the Port in 2015. This invasive exotic species, which can travel on the hulls of ships, was first discovered in Lyttleton Harbour in 2008. It has since spread via coastal shipping from the Far North to Gisborne in the North Island, and north along the east coast of the South Island. It can form dense, habitat modifying mats.*

44. It is inevitable that the disposal of spoil to the OSDG will have already spread the Mediterranean fan worm to these offshore waters. We have no information on how far they have spread off shore from the OSDG to other coastal habitats, or the extent to which they have successfully colonised the soft sediment in the OSDG.

45. Given this we see no need to decline or otherwise limit the applicant's proposal to dispose of sediment offshore. We have however required that the Marine Pest Management Plan required by Condition 9 of each consent granted includes a requirement to manage sediment discharges to the offshore disposal ground to avoid or mitigate the effects of spreading any pest organism present in sediment dredged from the port basin."

4.7 Archaeological, Cultural and Heritage Values

Crown Statutory Acknowledgments for the Gisborne District

The Council's Ngā Whakaaetanga ā Ture mō Te Tairāwhiti (January 2013) report, which is an addendum to the TRMP, outlines the Crown statutory acknowledgements in place with iwi in the Gisborne District, including those affecting the port and OSDG areas.

The report introduction describes the statutory acknowledgements in the following terms:

"A Statutory Acknowledgement is a formal acknowledgement by the Crown of the mana of tangata whenua over a specified area. It recognises the particular cultural, spiritual, historical and traditional association of an iwi with the site, which is identified as a statutory area.

Statements of statutory acknowledgements are set out in Treaty of Waitangi claim settlement legislation. The text for each statutory acknowledgement includes:

- *identification and description of the statutory area;*
- *a statement of association detailing the relationship between the relevant iwi; and*
- *details of the statutory area.*

Statutory areas only relate to Crown-owned land and include areas of land, geographic features, lakes, rivers, wetlands, and coastal marine areas. With respect to bodies of water such as lakes, rivers, and wetlands, the statutory acknowledgement excludes any part of the bed not owned or controlled by the Crown."

The Council report records the different statutory acknowledgements in place with three local iwi, being Ngati Porou (3), Rongowhakaata (8) and Ngai Tamanuhiri (2), along with relevant sections of the associated Ngati Porou Claims Settlement Act 2012, Rongowhakaata Claims Settlement Act 2012 and the Ngai Tamanuhiri Claims Settlement Act 2012.

Statutory Acknowledgment Areas Including and Adjacent to the Port and Offshore Disposal Ground

The following statutory acknowledgments include areas within the port and OSDG subject of the maintenance dredging and disposal coastal permit applications:

- Ngati Porou Statutory Acknowledgement for the Turanganui River and Waimata River;
- Rongowhakaata Statutory Acknowledgement for the Turanganui River; and
- Rongowhakaata Statutory Acknowledgement for the Coastal Marine Area.

The following statutory acknowledgments include area adjacent to the port and OSDG subject of the maintenance dredging and disposal coastal permit applications:

- Rongowhakaata Statutory Acknowledgement for the Waipaoa River;
- Rongowhakaata Statutory Acknowledgement for the Waikanae Creek;
- Nga Tamanuhiri Statutory Acknowledgement for the Waipaoa River; and
- Nga Tamanuhiri Statutory Acknowledgement for the Coastal Marine Area;

The Council report contains several deeds plan maps showing the statutory acknowledgement areas.

The maps for the Ngati Porou and Rongowhaakata Turanganui River statutory acknowledgment areas are shown as including part of the port, whilst the map for the Rongowhaakata coastal marine area is shown as including part of the port and the OSDG. The relevant maps are reproduced in **Figures 31-33** of this report.

The maps for the other statutory acknowledgement areas mentioned earlier are adjacent to the port and/or OSDG. This includes the Rongowhakaata and Nga Tamanhuriri Statutory Acknowledgements for the Waipaoa River, the Rongowhakaata Statutory Acknowledgement for the Waikanae Creek, and the Nga Tamanuhiri Statutory Acknowledgement for the coastal marine area. The latter area, which is recorded as lying to the east (inland) of the OSDG, is shown in **Figure 34**.

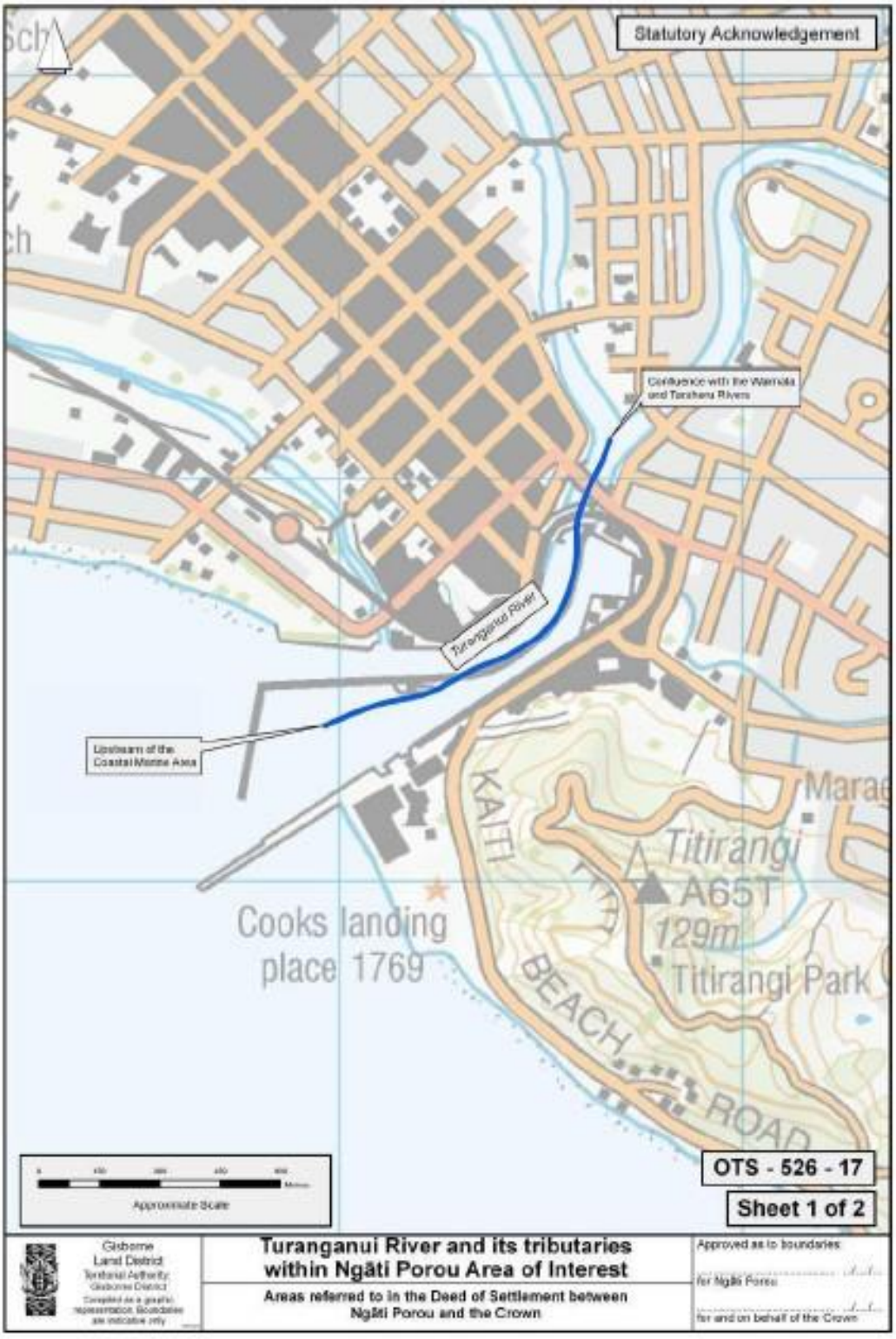


Figure 31- Council Map of Ngati Porou Turanganui River Statutory Acknowledgment Area

Figure 32 Council Map of Ngati Porou Turanganui River Statutory Acknowledgment Area

Figure 33: Council Map of Rongowhakaata Coastal Marine Area Statutory Acknowledgement Area

Figure 34: Council Map of Nga Tamanuhiri Coastal Marine Area Statutory Acknowledgement Area

The Council report introduction also outlines how the statutory acknowledgements affect the Council's processing of resource consent applications under respective Claims Settlement Acts and the RMA. In summary they include the following statutory requirements:

Claims Settlement Act Provisions Regarding Summaries of Resource Consent Applications to be Provided to Iwi Holding Statutory Acknowledgement Prior to Making any Notification Assessment

Under the respective Claims Settlement Acts the Council is required to forward summaries of resource consent applications to the relevant iwi for activities 'within, adjacent to or impacting directly' on any statutory acknowledgment area as soon as reasonably practicable after the consent authority has received the application, and prior to making any determination as to notification of the application.

RMA Provisions on Limited Notification of Resource Consent Applications

The Council is required under Section 95B of the RMA, when undertaking its limited notification assessment, to determine whether the proposed activity is on, adjacent to, or may affect land, that is subject of a statutory acknowledgement and whether the iwi may be adversely affected by the granting of the associated resource consents.

Claims Settlement Act Provisions Regarding Submissions on Applications by Iwi Holding Statutory Acknowledgement

Under the respective Claims Settlement Acts the relevant iwi governance entity and any member of that iwi may cite a statutory acknowledgement as evidence of association with the area in any resource consent application proceedings concerning activities within, adjacent to or impacting directly on any statutory acknowledgement area.

Tairawhiti Plan Provisions

The TRMP maps record no archaeological, cultural or other heritage notations within the proposed area of port capital or maintenance dredging, nor within the OSDG. The adjacent Turanganui River is identified as a waahi tapu (WY8) on the maps. No dredging activities or other activities are proposed in the river. **Figure 35** contains the relevant TRMP extract showing the river waahi tapu notation (in red hatching) and others on nearby land areas.

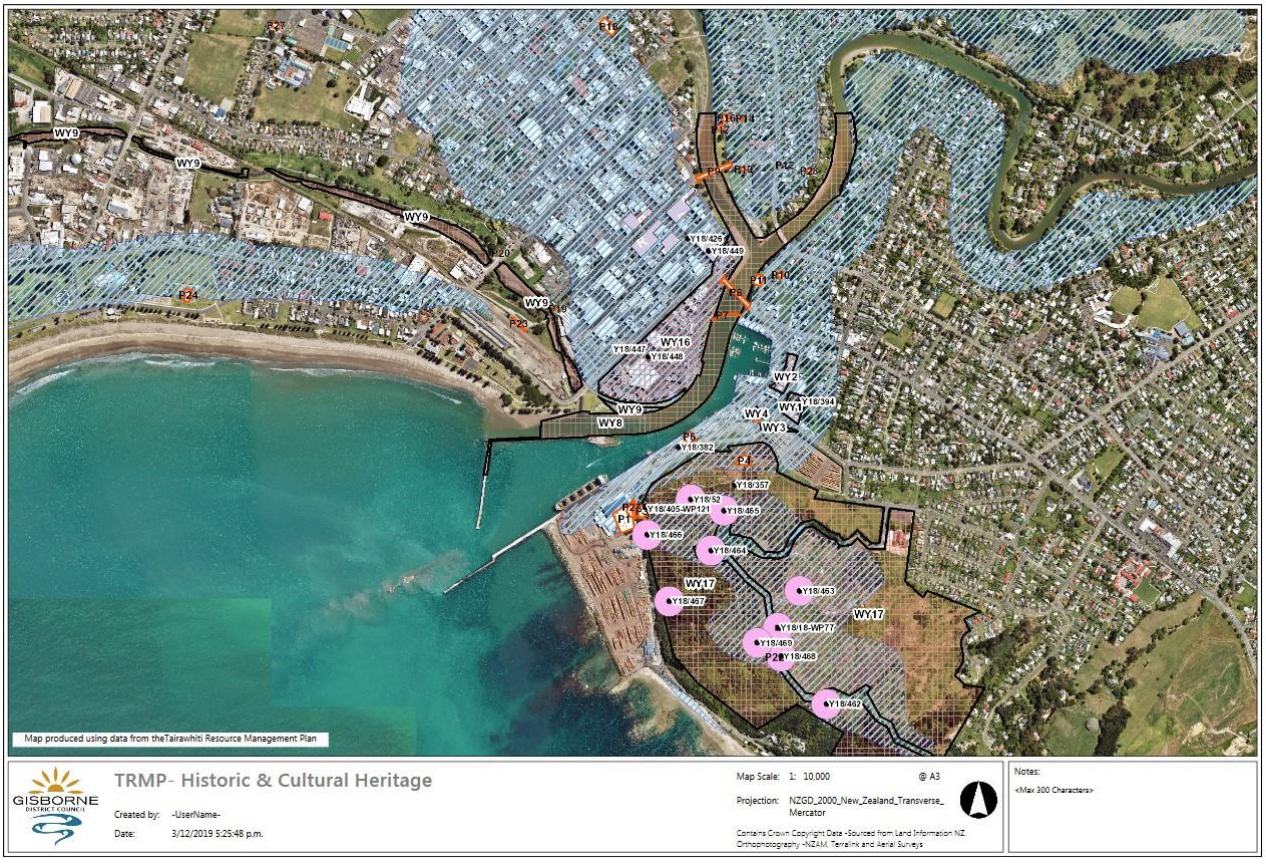


Figure 35: Tairāwhiti Plan Map of Heritage Places

Recorded Archaeological Sites

The In–Situ *Heritage Inventory and Whole of Port Archaeological Assessment (September 2015)* identifies all of the recorded archaeological sites (14) in and adjacent to the port. Figure 9 in the In–Situ report shows indicatively the recorded sites. Further details, including their NZ Archaeological Association (NZAA) site record number, are recorded in the inventory. No such recorded sites are identified within or immediately adjacent to the proposed maintenance dredging area.

Identified Heritage Places

The In –Situ report also records two heritage places, a 'boat harbour' and 'harbour infrastructure', both of which are in the CMA. They are generally shown in Figure 9 of the report, which is reproduced in **Figure 36**. The Kaiti Village area shown in the same figure is on dry land and not the CMA as indicated in the figure.

The 'boat harbour' (EPL 114) described in Table 1 (p 15) as *"Natural reef formation at western end of Kaiti Beach, near the harbour entrance, used as a landing place by tangata whenua and Captain Cook"*. This place is located approximately 120m to the south-east of the PNC and will not be affected by the proposed maintenance dredging operations. Most the feature is beneath the reclaimed land containing the Southern logyard.

The 'harbour infrastructure' (EPL 115) is described in Table 1 as "*Structures constructed as part of the development the port including breakwaters, training wall, slipway, wharves and wharf sheds*." As outlined in the Worley report, the proposed maintenance dredging activities will not affect these structures.

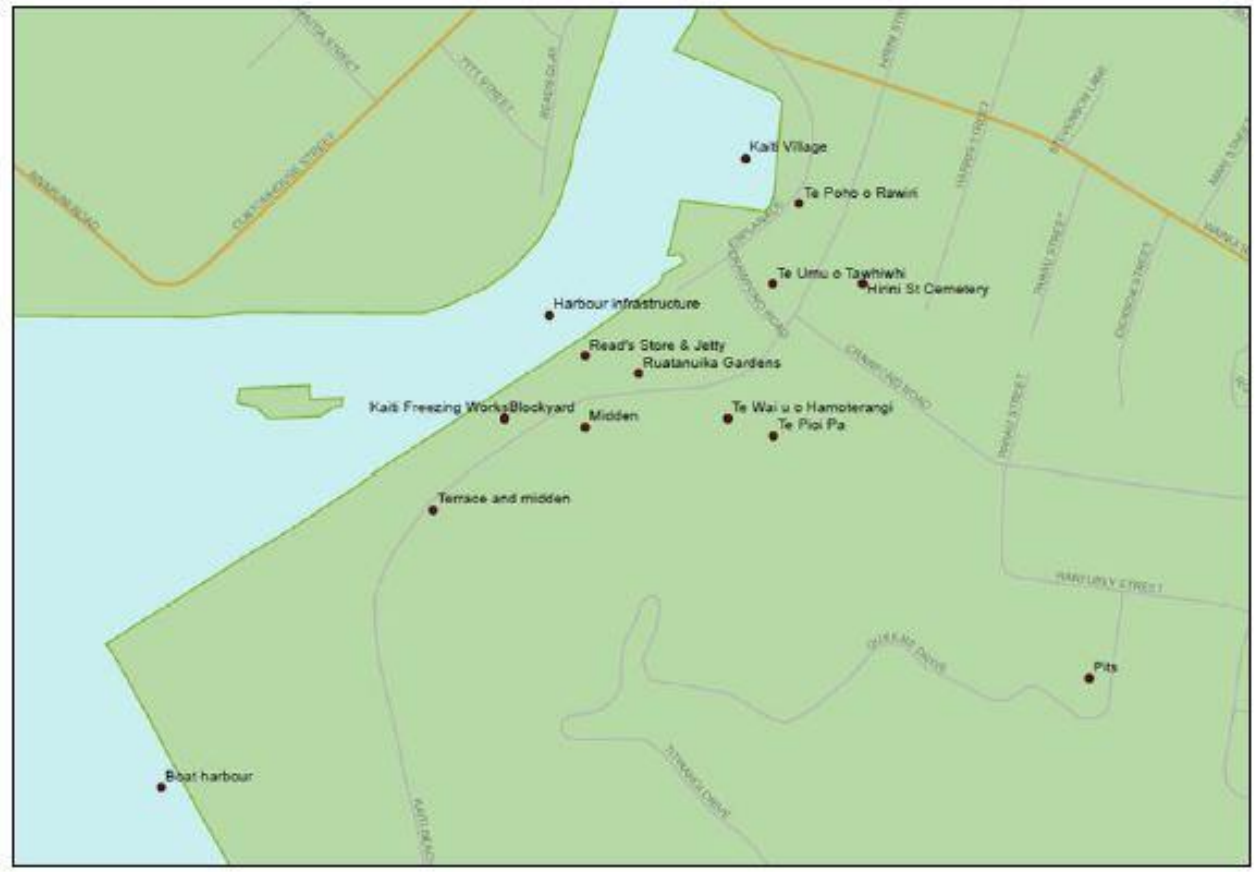


Figure 36: In-Situ Plan of Port Related Heritage Places

Section 5.1 of the In-Situ report states:

"*Post -1900 structures, many of which are an integral part of the current port infrastructure may contain remnant elements of pre-1900 structures or are illustrative of the development of the industrial history of the area. Whilst post-1900 structures may not be subject to the archaeological provisions of the HNZPTA, they demonstrate continuity of use and are part of the industrial heritage landscape. Advice should be obtained from Heritage NZ about the archaeological authority requirements for port infrastructure*."

The proposed maintenance dredging activities do not affect any 'harbour infrastructure' in terms of modifications of structures and associated land-based works. However, in accordance with the In- Situ report recommendations Eastland Port will be have advising Heritage NZ of the proposed maintenance dredging activities. The nature of the proposed advice is outlined later in this report.

Recorded Cultural Values of the Port and Turanganui a Kiwa

Eastland Port and 4Sight are not aware of any Council or iwi management plans that document the cultural values of the port and adjacent Turanganui a Kiwa. A report entitled *Ecological Impacts and Planning History: An Environmental History of the Turanganui-a Kiwa Casebook Area* prepared by Dr B Coombes of Auckland University , contains some information on them. The 2000 report was prepared for the Crown Forestry Rental Trust.

The report is in three parts. Part 2 – Remodelling Landscapes, includes Section 6 – the Making of Port of Gisborne. Section 6 contains some references to the cultural values of the port and wider Turanganui a Kiwa. It documents the historical development of the port since it was first gazetted in 1872. The three port development phases identified are the initial development of the port (pages 145-160), the diversion of the Turanganui River (pages 161-170) and reclamations for storage and infrastructure (pages 171-182).

Section 6.1 – Initial Development of the Port, documents in some detail the governmental and legislative framework surrounding the early port development years. In terms of effects on cultural values it records (on pages 152-153) the formation and progressive widening of the natural (generally rock) navigation channels and destruction of a culturally significant site, Toka-a-Taiau, a rock in the middle of the river opposite the mouth of the Waikanae River.

The report notes that Toka-a-Taiau "*served as an important, if contested, boundary marker between Ngati Porou and Ngati Kahungunu, with other iwi also claiming the rock as a boundary marker. Other narratives point to the rock as a personification of ancestors. Additionally, Toka-a-Taiau was significant as a place of the first formal meeting between Maori and English-speaking visitors.''*

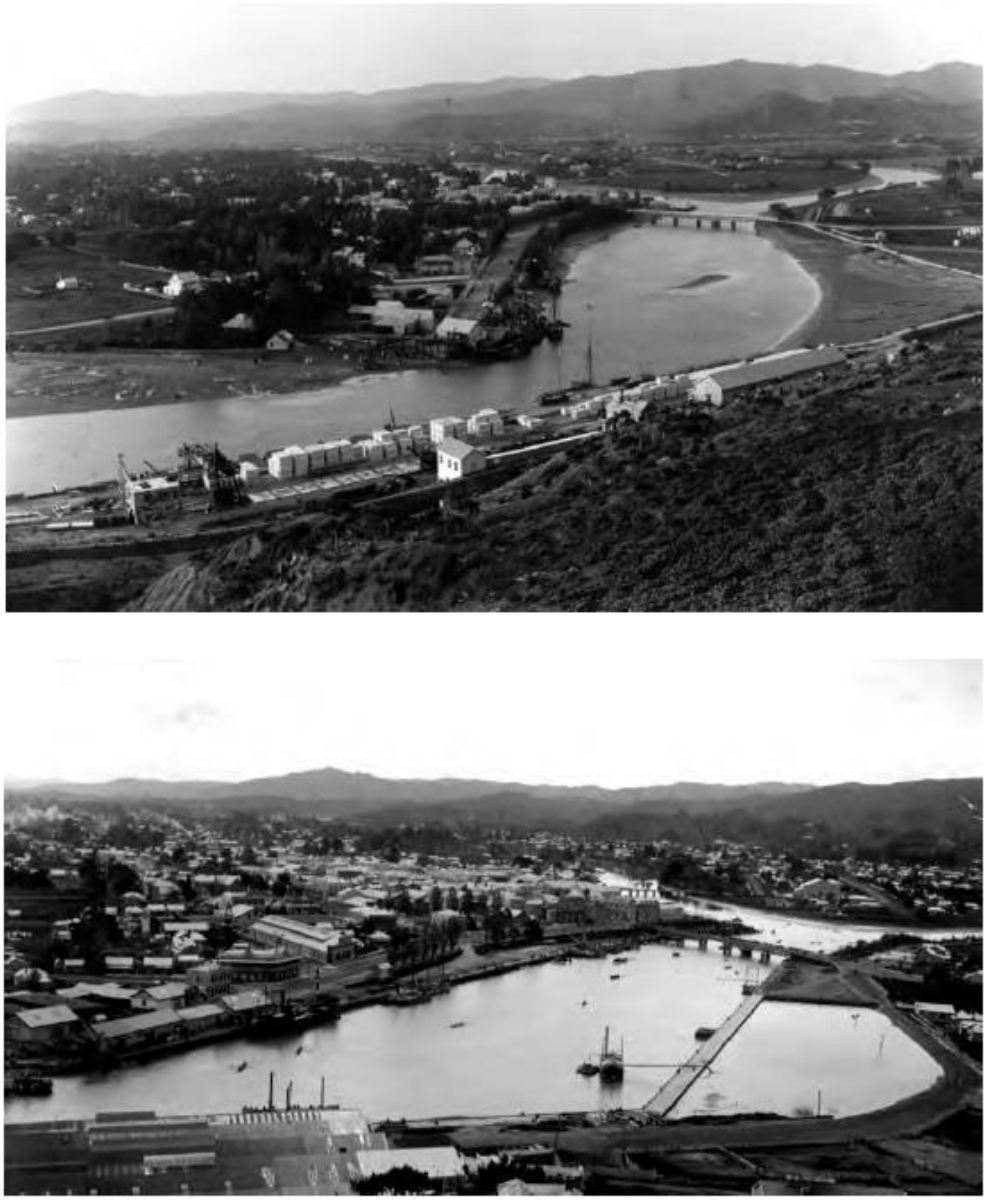
Section 6.1 records (on page 154) two important cultural 'outcomes' of the navigation channel rock removal and associated port development activities. One was a loss of traditional fishing locations and the fisheries themselves, including sources of kina, paua and koura. The other was the loss of spiritually important rocks that were associated with anchors from the migration canoes.

Later in Section 6.1 the report outlines the history of reclamation at the port, the associated loss of mudflats and effects on traditional fisheries. It notes (on page 156) that "*the mudflats served as important habitat for pipi and other kaimoana, which local Maori used extensively as a food source*". The loss of mudflats is illustrated in Figure 6.3, which is reproduced in **Figure 37**. The traditional fisheries values of the former inner harbour are explained in more detail in a subsection on fisheries (on pages 158-160).

Section 6.2- The Diversion Cut- A New Course for the Turanganui, outlines the investigations, planning and works undertaken to divert the river and expand the port in the early 1920's following some major flooding events in 1916. The sub-section on modifications to the environment notes that these works "*destroyed or damaged several pa tuna (eel weirs) along the creek (sic Waikanae) which had been used extensively by local Maori in traditional times*." (p166). Later the report (on page 167) documents the considerable loss of access to traditional resources associated with river diversion and expansion of the port.

Section 6.3- Reclamations for Storage and Infrastructure, backgrounds the most recent phase of port development involving reclamation. Investigations commenced in the early 1960's with authorisations obtained in 1969 through to 1975. The last part of this section identifies the cultural values of the Kaiti Beach area and the effects of the reclamation and the developed logyard and other facilities on them. The loss of wave cut reef platforms and fisheries are recorded, along with access to the coast in this area, in terms of being unsafe for fishing. The effects of logyard stormwater discharges on water quality are also identified.

Figure 6.3 – Reclamation of mudflats: 1891 vs 1909[a]



The mudflats depicted in the 1891 photograph – both at the bottom left and mid-right – were used extensively by local iwi for the purposes of gathering white pipi. In the 1891 photograph, a retaining wall has been constructed and the mudflats are being drained prior to their reclamation.

a. **Source:** Gisborne Museum and Arts Centre.

Figure 37: Coombes Historical Photographs of Gisborne Port

Te Toka a Taiau (Former Sacred Rock)

The 2009 Council coastal permit decision approving capital dredging and disposal, along with the related 2008 Insight application report, refer to Te Toka a Taiau, a sacred rock that was located in the Turanganui River, but removed by the former Marine Department (a Crown agency) in the late 1870's.

Both the Council decision and the Insight application documents note differences of opinion between organisations at the time as to the location of the former rock, although a plan attached to the Insight report identified two possible locations. The two possible former sacred rock locations shown on the Insight plan are adjacent to the river training wall and to the north-east of the former slipway as shown in **Figure 38**.

Figure 38: Insight Plan of Possible Te Toka a Taiau Rock Locations

Source: 2008 Insight Application Report

Eastland Port have undertaken an investigation into the likely location of Te Toka a Taiau, the findings of which are in the *Te Toka a Taiau Location Spatial Analysis Report* in **Appendix P**. The investigation involved reviewing a series of historical maps, photos and surveys, overlaid with Eastland Port's current asset map, to attempt to establish the original location of Te Toka-a-Taiau.

Section 1 of the report contains a description of Te Toka a Taiau drawn from the 2006 book *Turanganui River – A Brief History*, written by Michael Spedding for the Department of Conservation. Section 2 documents the 1876 Marine Department contract to remove rocks from the river and associated information. Section 3 contains a description of the relevant plans and reports in chronological order which refer to Te Toka a Taiau.

The report notes no single piece of information found provides unequivocal evidence of the exact location of Te Toka-a-Taiau. However, the analysis indicates that Te Toka-a-Taiau was most likely located in a position opposite what is now called Wharf 6 adjacent to the river training wall, and in between the original back lead navigation light on the river training wall, and the relocated position of it in the harbour. The likely approximate location is shown in the Eastland Port oblique aerial photograph plan in **Figure 39**.

Eastland Port recognise the significance of Te Toka a Taiau to local iwi and has recently assisted the Council recognise this on a roadside signboard as part of the Council's Taraiwhiti Navigations Project for the inner harbour area. **Figure 40** contains a photograph of the signboard on the northern side of Rakaiatane Rd, adjacent to the port.

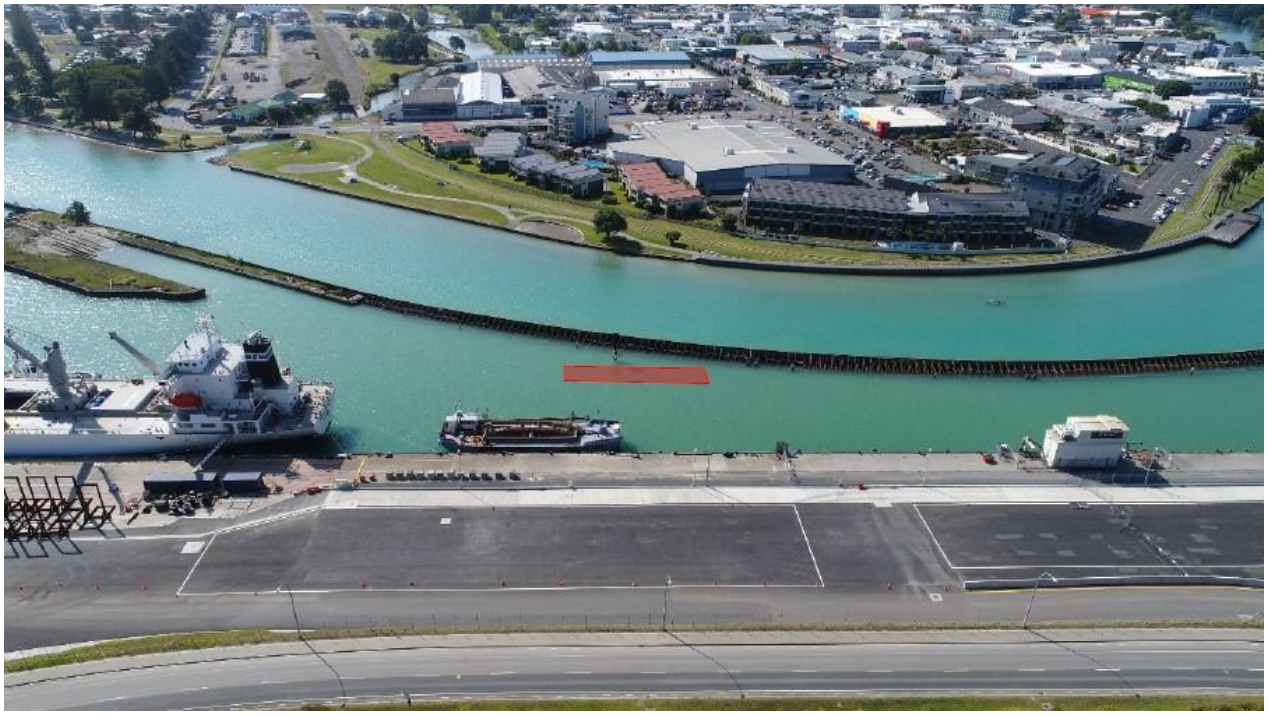


Figure 39: Eastland Port Oblique Aerial Photograph of Likely Te Toka a Taiau Rock Location

Source: 2019 Eastland Port Spatial Analysis Report

Figure 40: Photograph of Te Toka a Taiau Signboard Adjacent to the Port

Nga Kohatu Tuturu o Turanganui a Kiwa (Registered Wāhi Tapu Reefs)

The 2009 Council decision and 2008 Insight report also refer to four reef areas within Poverty Bay (Turanganui a Kiwa) that were registered wāhi tapu under the former Historic Places Act 1993. The reef areas have the same registered wāhi tapu status under the Heritage New Zealand Puhere Taonga Act 2014. The general locations of the registered wāhi tapu reefs were shown on a plan attached to the Insight report. It is reproduced in **Figure 41**.

The registered wāhi tapu reef areas are considerable distances from both the PNG maintenance dredging area and the OSDG. The northernmost reef is approximately 1km from the PNC, whilst the southernmost is over 2km from the OSDG. The three northernmost reefs (Tokomaru, Hawea and Te Moana) are shown more clearly on the more recent MetOcean aerial photograph plan in **Figure 26**.

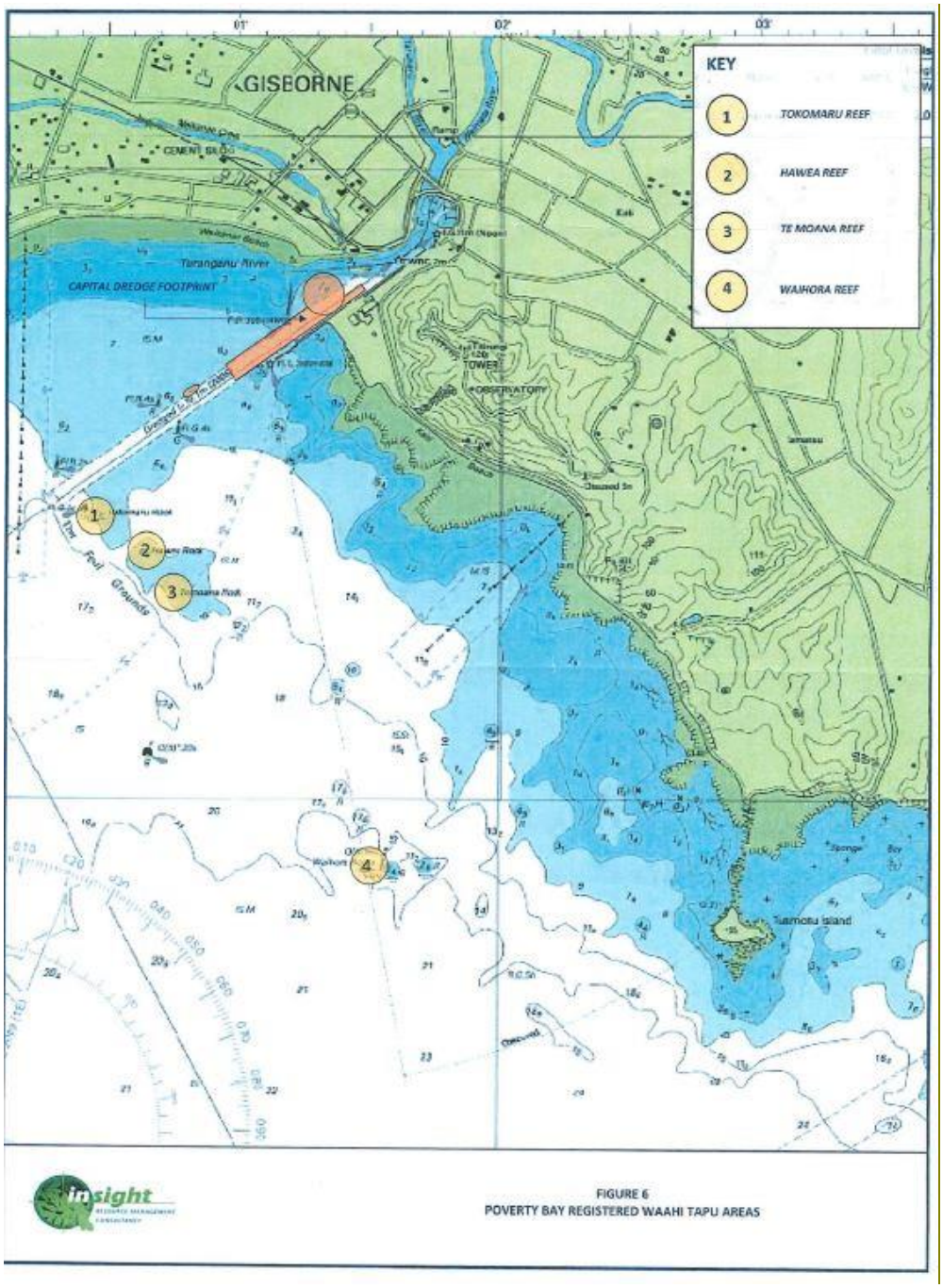


Figure 41: Insight Map of Turanganui a Kiwa Registered Wāhi Tapu Reefs

Source: 2008 Insight Application Report

Consultation with Iwi, Whanau & Proposed Kaitiaki Partnership Group

Eastland Port have met with and discussed the need to continue maintenance dredging and disposal operations with representatives of the iwi and whanau organisations who have interests in the port and Turanganui a Kiwa area. Wider consultation is also being arranged through the Port Community Liaison Group (PCLG).

The PCLG has representatives from Ngati Oneone, Te Runanga o Turanganui a Kiwa, and Rongowhakaata, along with several community organisations. Ngati Oneone are a hapu of Ngati Porou, an iwi with traditional interests in the East Cape area. The Ngati Oneone rohe includes Titirangi (Kaiti) Hill, which is adjacent to the port. The hapu were instrumental in several reefs of traditional significance in Poverty Bay being declared waahi tapu in the late 1990's and in turn being protected under the Heritage NZ Act.

Te Runanga o Turanganui a Kiwa are a mandated iwi authority representing the interests of Rongowhakaata, Ngai Tamanuhiri and Te Aitanga a Mahaki in the Turanganui a Kiwa (Poverty Bay) area. The three individual iwi also have land and water interests in and around the bay related to their different rohe. Rongowhakaata are also being consulted directly through the Rongowhakaata Iwi Trust in accordance with Council advice received by Eastland Port on this matter.

As noted earlier, the Council decisions on the Wharves 6 & 7 and Slipway redevelopment project required establishment and ongoing operation of a Kaitiaki Partnership Group. The Environment Court will determine this matter. Setting this aside, Eastland Port arranged a meeting with group of local iwi, hapu and whanau representatives on 29 January 2020 to discuss the maintenance dredging and disposal applications and other matters. Further details on this meeting are provided later in this report. Eastland Port will continue to work with the Council on establishing the group and using it as the principal mechanism for consultation on the maintenance dredging and disposal project and others planned in the future.

Marine and Coastal Area Act Applications by Iwi and Whenua Organisations for Customary Marine Title

Under the Marine and Coastal Area (Takutai Moana) Act 2011 (MACA), iwi, hapu and whanau could until March 2017 apply directly to the Crown (though the Ministry of Justice) and/or to the High Court for recognition of Customary Marine Title. A review of Ministry of Justice and High Court records found applications have been lodged by Ngati Oneone, Rongowhakaata Iwi, Te Whanau a Kai, Ngai Tamanuhiri, Ngai Tamahaua hapu and Nga Hapu o Ngati Porou over the whole or part of the port and/or OSDG areas related subject of the coastal permit applications. Two further applications have also been filed by Rihari Dargaville and Cletus Maanu Paul that apply to the whole of New Zealand. **Appendix Q** contains copies of the relevant application maps relating to the Gisborne Port and wider Poverty Bay area.

Sections 62(2) and (3) of the MACA, require applicants seeking resources consent in the CMA over which an application for Customary Marine Title recognition has been lodged to notify and seek the views of the customary marine title applicant group. In accordance with the Act, 4Sight have on behalf of Eastland Port advised (by an email letter) all of the above organisations/individuals of the maintenance dredging and disposal applications to be made to the Council and asked to provide views on them. Further information on this process, is provided in Section 5.5 of this AEE report.

Some of the Ministry of Justice and High Court application maps are at a very large scale and some are not particularly clear in terms of their relationship with the port, and OSDG. However, in accordance with the MACA, Eastland Port, have through 4Sight, advised all organisations/individuals of the maintenance dredging and disposal applications to be made to the Council and asked to provide views on them. Any views received will be provided to the Council. Further information on the MACA provisions and the associated consultation to date is provided later in Section 5.5 of this AEE report.

TRMP Considerations

Section B1 - Tangata Whenua, of the Regional Policy Statement identifies six issues. Issue B1.1 Involvement of Tangata Whenua in Resource Management discusses the Maori resource management system, including moana, waiora a tane and the associated concepts of kaitiakitanga and mauri. Issue B1.5 -Tangata Whenua and Freshwater - He Taonga Tuki Iho, identifies iwi with tribal connections to the region and the associated Crown statutory acknowledgement of land and water areas in place with Ngāti Porou, Ngāti Tamanuhiri and Rongowhakaata. The statutory acknowledgments are documented in Ngā Whaetanga ā Ture mo Te Tairāwhiti, an addendum to the TRMP.

Section B4 – Coastal Environment, outlines in more detail nine significant cultural issues surrounding the coastal environment. This section contains sets of objectives and policies, several of which refer to the cultural and spiritual values of the coastal environment.

Section C3 - Coastal Management of the Regional Plan, is based around a series of issues. Subsection No. 6 – Issue Tangata Whenua, identifies four objectives and fourteen policies relating to matters of concern to tangata whenua. Maintenance dredging and disposal activities at the port are not identified amongst then.

However, the policies on recognition of hapu, kaitiaki, protection and restoration of mauri and other matters relevant are to the applications. The references to mauri in both the Policy Statement and Regional Plan are cross referenced to the definition of the term in Part E1- Maori Terms and Concepts. It is defined (on page 1) as "*the essential life source or principal, a metaphysical quality inherent in all things, both animate and inanimate*".

4.8 Landscape, Natural Character and Visual Amenities

Tairāwhiti Plan Provisions

The port area is not affected by any 'landscape' or similar notations in the TRMP. The nearest provisions of this nature are Tuamotu Island and Tuahine Point, which have "Outstanding Landscape Unit" notations (No. 16 and No.15) shown on the map in **Figure 42**.

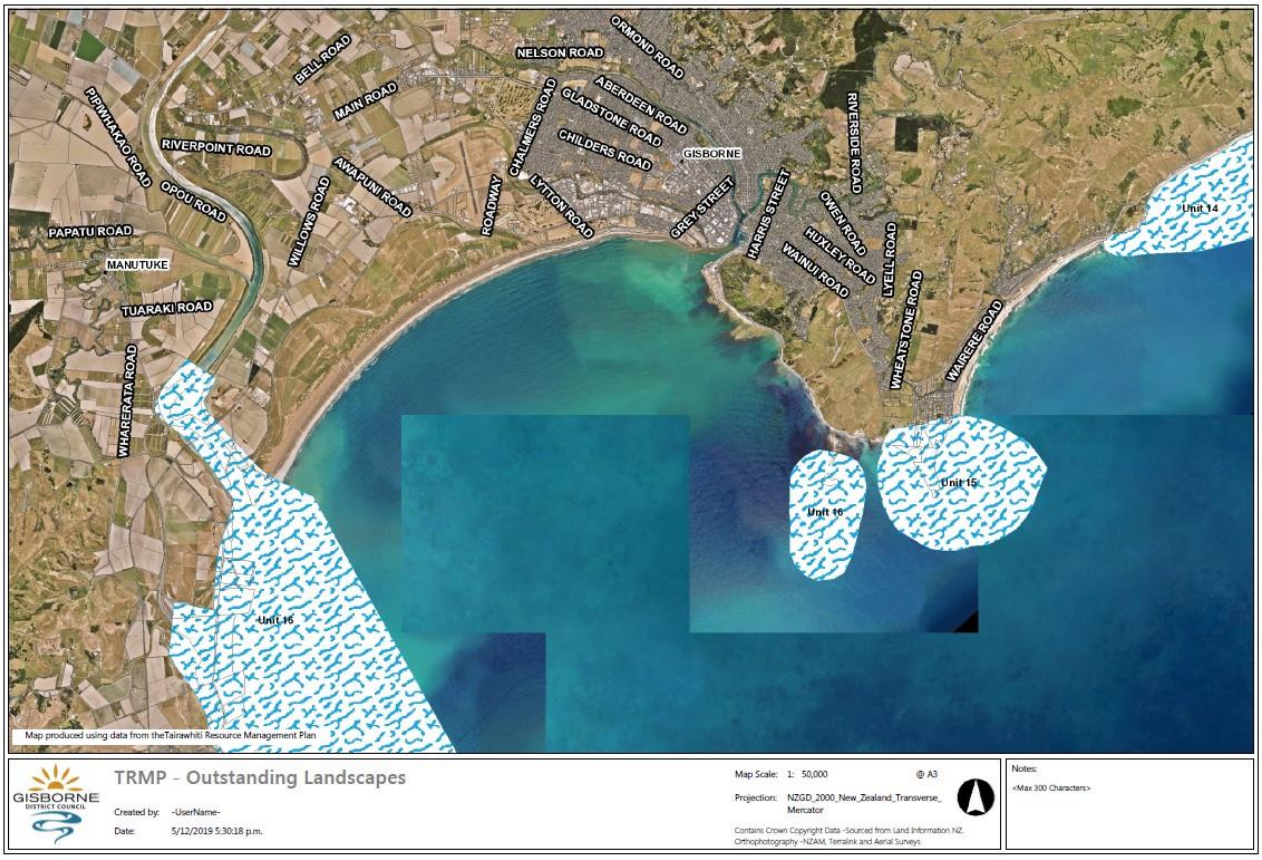


Figure 42: Tairāwhiti Plan Map of Outstanding Landscape Units

The OSDG is also not subject to any 'landscape' or similar notations in the TRMP. The nearest such notation is the "Outstanding Landscape Unit" (OLU) covering an area of land and coastal waters around the Waipaoa River mouth and extending south to Young Nicks Head. It is shown as part of Landscape Unit 16 – Tuamotu Island.

The coastal landscape, natural character and visual amenity values of the Waipaoa River mouth area are briefly identified in the wider landscape unit description in Schedule G11. Schedule G11 refers to "*between Waipaoa River mouth and Young Nicks Head, a large area of sand accretion has developed in the lee of the headland*."

The Appendix then goes on to describe the ecological values of the Wherowhero and Waipaoa estuaries. The whole unit, including Tuamotu Island on the opposite side of the bay is noted as having *"high visibility" and "low/moderate visual quality and visual absorption capacity"*.

Coastal Environment Landscape Assessment

The Boffa Miskell Ltd (BML) report entitled '*An Assessment of the Landscape Character of the Coastal Environment of the Gisborne District (1995)'* prepared for the Council is of some relevance to the application. It was used to prepare the former Coastal Plan (now part of the TRMP) and has some background information and 'policies.'

The BML report identified the OLU's mentioned above, along with a more general Poverty Bay landscape unit. The Poverty Bay unit, along with other relevant information, including the OSDG is shown in the Insight plan reproduced in **Figure 43**.

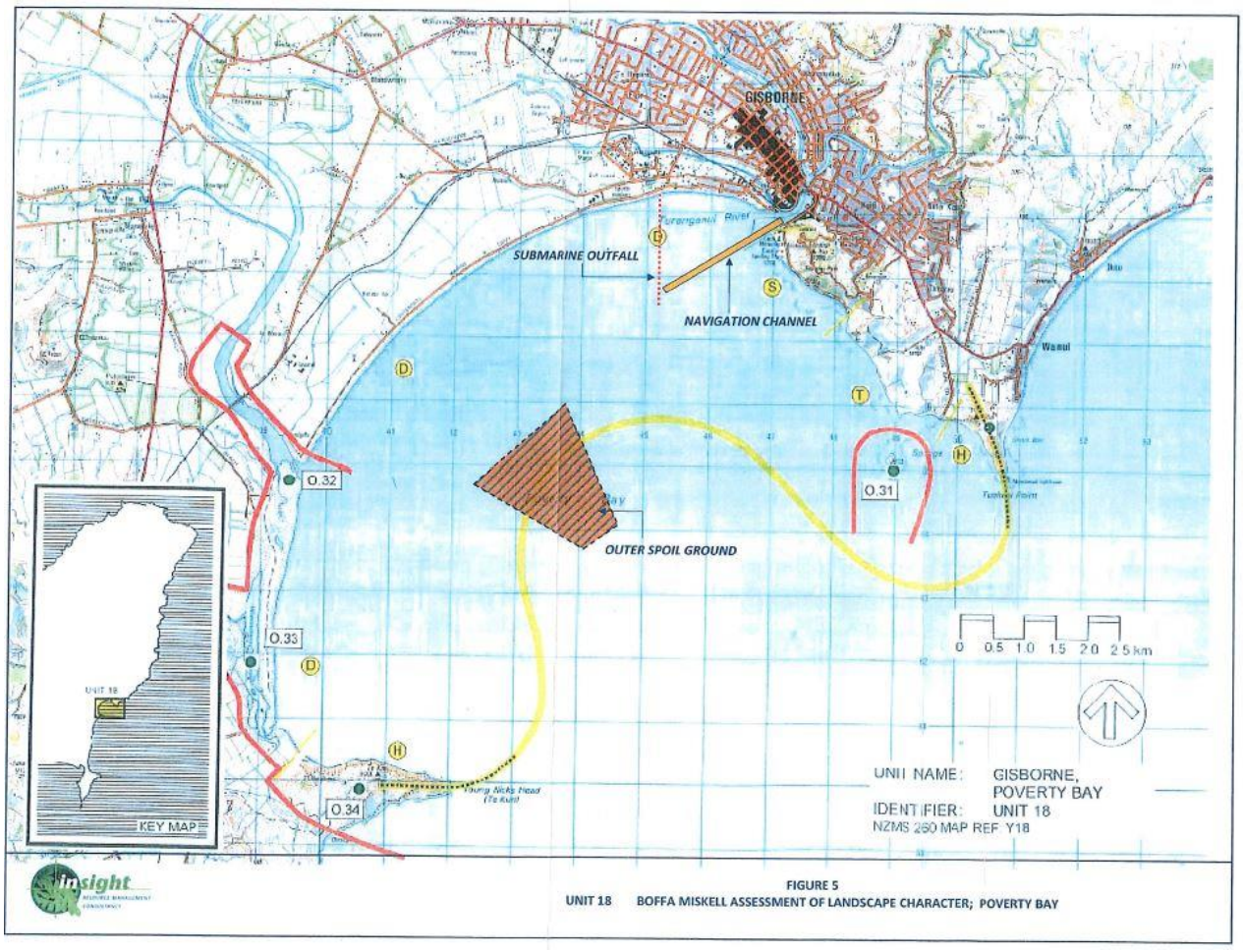


Figure 43: Boffa Miskell Gisborne- Poverty Bay Landscape Unit Map

Source 2008 Insight Application Report

The BML report contained a number of policies, including one (No. 6.9.1) on "The Sea'. This policy proposed that *"applications for development within the open water or sea be considered on their merits*".

Effects of Maintenance Dredging

The maintenance dredging area will be seen from vantage points within Titirangi Reserve and other elevated landscape features. However, taking into account the relative distances involved, the wider working port structures, background colour of the river and coastal waters and the nature of the operations, the visual amenity effects will be of a 'less than minor' nature.

The proposed maintenance dredging will be the same as that carried out over recent years at the port. The visual amenity effects will likewise be of a 'less than minor' nature.

Effects of Dredge Spoil Disposal

The OSDG is approximately 1.7km east of the Waipaoa River mouth part of the landscape unit. Also, the waters around the river mouth are subject to considerable 'natural' variations in colour, as shown in the **Figure 44** aerial photograph.

As outlined in the MetOcean reports each year the Waipaoa River discharges approximately 12.1 million m^3 of sediment into Poverty Bay. The 'background' sediment discharge from the Waipaoa River, plus the impacts of storm events on the Bay itself, along with controlled nature of the dumping operations, means that the maintenance dredging disposal activities will have 'less than minor' adverse effects on the landscape and natural character values of the landscape unit. The visual amenity effects will be of the same nature.

The dredge disposal operations will have 'less than minor' effects on the landscape and natural character values of the landscape unit. The visual amenity effects are also assessed as being of a 'less than minor' nature, as there are considerable 'natural' variations in water quality in the area.

Figure 44: Photograph of the Waipaoa River Mouth

Source: Rivers- New Zealand's Shared Legacy: D Young: 2013: page 213

4.9 Noise

The Hunt & Associates report assesses the noise effects of the proposed maintenance dredging and disposal activities. Sections 1 and 2 contain introductory information and material on noise as an environmental effect.

Section 3-describes the noise levels expected from the different dredgers to be used in the port, i.e. primarily a Trailer Suction Hopper Dredge (THSD). Sections 4-6 cover predicted noise levels, the TRMP rules and an assessment of night-time dredging, underwater noise and other matters. Section 7 contains an assessment of the TRMP rules, which were outlined earlier in this AEE, whilst Section 8 contains a summary and recommendations.

Noise from Dredging Operations

Section 3 notes the following in respect of the existing and proposed dredging operations:

- The maintenance dredging takes place throughout the year when weather conditions are favourable;
- The dredging is undertaken mainly during the daytime (7am – 7pm), but at times extends into the evening (7- 10pm) or the night (after 10pm);
- Records indicate that over recent years Eastland Ports Pukunui THSD has removed most of the material, with other THSD's, along with a Cutter Suction Dredge (CSD) and Backhoe Dredges (BHD) removing the rest. This reliance on THSD for most of the maintenance dredging s is expected in the future;
- No noise readings have been taken of the Pukunui, the THSD dredge used in the port. However, studies of similar THSD dredges in other areas indicate levels of around 108dBA;
- Published reports indicate noise levels of around 72dBA for BHD's when under load at a distance of 10m away.

The Hunt report focuses on the predicted effects of noise from the maintenance dredging operations on nearby residents and other land uses. Section 4.1 outlines the methodology of predicting noise levels. Sections 4.2 and 4.3 outline the predicted noise levels (L_{A10}, L_{Aeq} and $L_{max)}$ from the maintenance dredging operations from eight locations within the proposed maintenance dredging area on four nearby representative sites, three of which are on land. The dredge operating locations are shown in Figure 7 of the Hunt report, which is reproduced in **Figure 45** of this report.

The four noise assessment sites are shown in Figure 8 of the Hunt report, which is reproduced in **Figure 46**. They are the closest occupied building in the Amenity Commercial zone (Site 1), the nearest river training wall boundary (Site 2), the closest Residential zoned site (Site 3), and closest Heritage Reserve boundary (Site 4).

Sections 4.2 and 4.3 set out predictions of potential maximum L_{A10}, L_{Aeq} and L_{Max} levels of maintenance dredging noise received within the surrounding environment, based on modelling conforming with an ISO Standard and generally in accordance with NZS6801:2008. The results of this modelling set out in Tables 2 and 3 include the following findings:

- The maintenance dredging activity is a mobile sound source and will not concentrate noise effects in one area;
- Noise close to the dredge could reach L_{A10} of 77 dB, but such high noise levels are generally confined to within 50m of the dredging activity;
- The dredging noise received on land is generally only likely to affect areas already affected by existing port noise and that from city traffic and other sound sources;
- The Site 1 Amenity Commercial zoned building is predicted to receive L_{A10} of 64db, L_{Aeq} of 62dB and L_{Max} of 70 dB, whilst the more distant Site 3 Residential zoned building is predicted to receive L_{A10} of 47.1db , L_{Aeq} of 45.1dB and L_{Max} of 57dB,
- The predicted noise levels at the Site 2 Turanganui River training wall boundary are higher, (e.g. a L_{Max} of 80dBA) as expected, but they are of no effects significance; and
- The predicted L_{A10} and, L_{Aeq} noise levels at the Site 4 Reserve are similar to those predicted for Site 1, with an L_{Max} of 67dB.

Section 4.2 notes that at the closest residential site L_{A10} sound levels are expected to be received at levels no greater than the limits that apply to permitted (land-based) activities under the TRMP at Rule C11.2.15.1 'General Rules and Standards for Permitted Activities'. Sites within the Amenity Commercial area (e.g. Site 1) will receive noise not exceeding that permitted for normal port activities (70 dB under Rule C11.2.15.1C).

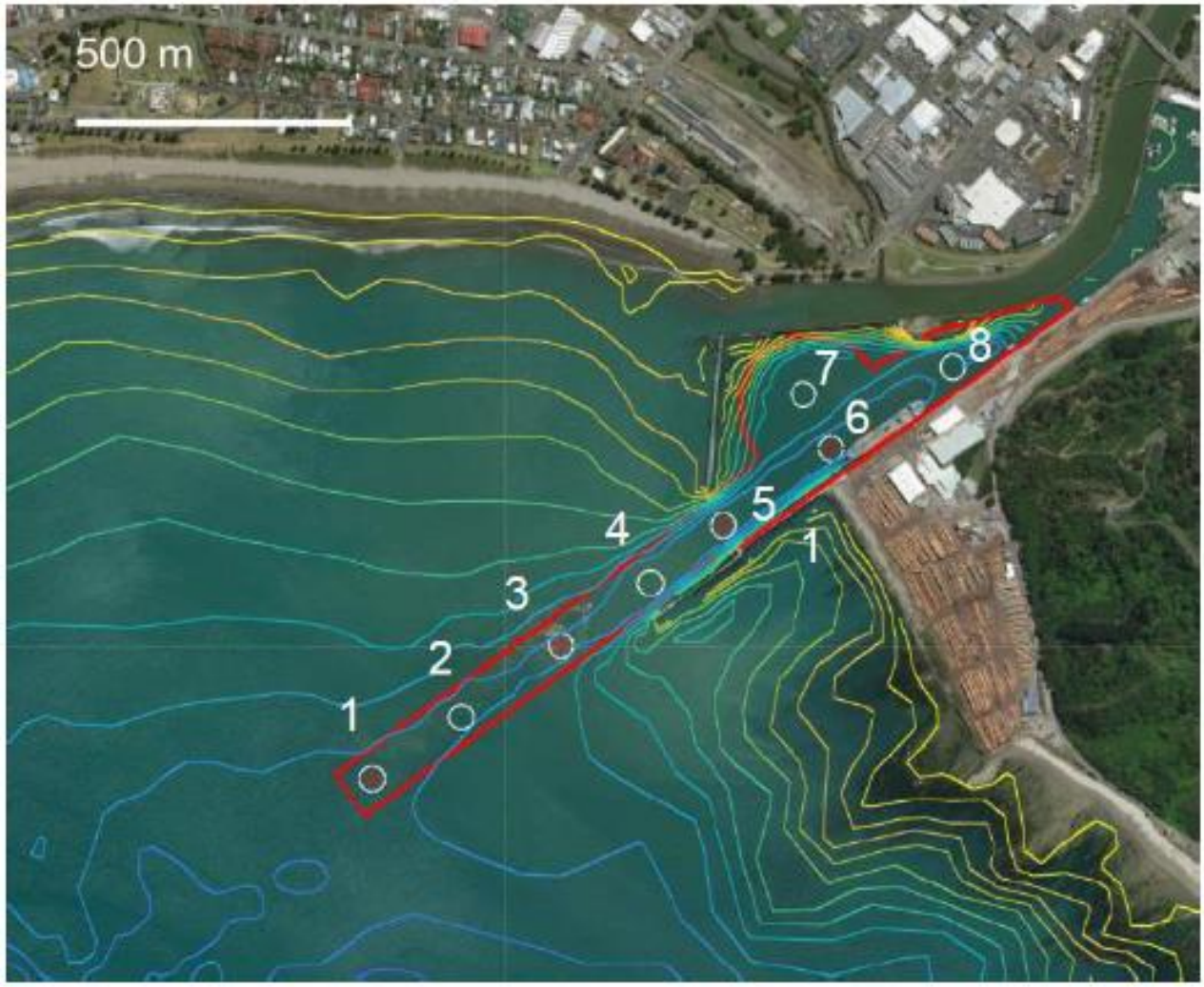


Figure 45: Hunt Report Noise Recording Sites

Figure 46: Hunt Report Port Noise Recording Sites

Section 5 explains the noise rules in the TRMP and the associated limitations with them, which were also highlighted earlier in the AEE. It, along with Section 6, also highlight the Council decisions on noise emissions associated with the Wharves 6 and 7 and Slipway redevelopment projects. The Council decisions contain very similar sets of conditions that place limits on noise emissions from all port operations in relation to identified adjacent land, including a permanent noise monitoring location on the Portside Hotel.

Sections 6.1 and 6.2 of the Hunt report record the current (2015) maintenance dredging consent condition on noise (No.12) and the key consent condition (No.40) in the more recent (2018) Council Wharves 6 and 7 redevelopment decision on port noise emissions, that is relevant to the proposed maintenance dredging operations.

The Wharf 6/7 consent latter condition reads as follows:

40. Sound from all activities in the Tairawhiti Resource Management Plan (Port-sic) Management Area excluding the rail bridge, Port A Management zone and area outside the breakwater must comply with the following noise limits when measured and assessed in accordance with NZS 6801 and NZS 6809.

(i) At any point in the Amenity Reserve Zone or Heritage Reserve Zone outside the Port Inner Control Boundary *(ii) At any point in the Heritage Reserve Zone more than 50m from the Port Management B Zone*	*65 dB Ldn*
At any point in the Amenity Commercial Zone, Residential General Zone or Inner City Residential Zone	*65 dB Ldn* *60 dB LAeq(9h) -(2200h-0700h)* *65 dB LAeq(15 min)-(2200h-0700h)* *85 dB LAFmax -(2200h-0700h)*
At the permanent port noise monitoring location (Portside Hotel)	*63 64 dB Ldn* *60 dB LAeq(9h)-(2200h-0700h)* *65 dB LAeq(15 min) -(2200h-0700h)* *85 dB LAFmax -(2200h-0700h)*

Conditions 43 and 44 in the same set of conditions also place noise monitoring obligations on Eastland Port, in terms of its port wide operations, based around a monitoring site on the roof of the Portside Hotel, established in accordance with the consent conditions for the Wharfside logyard redevelopment.

Section 7- Assessment outlines the applicable TRMP rules, along with covering the noise impacts of maintenance dredging on land (with reference to the predicted noise levels at the sites identified earlier in the report), along with underwater noise. Section 7.2- Noise Impacts on Land, explains the errors and limitations associated with the TRMP noise contour based provisions. It proposes that the Wharves 6 and 7 redevelopment consent conditions, which are port wide, be used as the benchmark for assessing the effects of the ongoing maintenance dredging operations.

Section 7.2 of the report also explains the results of the most recent (September-November 2019) noise monitoring results from the Portside Hotel location. It notes the following:

- The long-term average sound level (Ldn 65) is not exceeded at the monitoring site (which lies beyond the TRMP 65 dB contour location).
- The short-term average sound levels (L_{Aeq}) generally do not exceed 60dBA between 10pm and 7am beyond the Ldn 65 dB contour
- The night-time maximum sound level (L_{AFmax}) does not exceed 85dBA between the hours of 10pm and 7am at any point outside the 65dBA noise contour.

Section 7.2 discusses night-time dredging noise (i.e. between 10pm and 7am) and notes the 85dB L_{AFmax} limit set in the port wide noise condition identified above. It recommends the same condition be adopted for the port maintenance dredging operations. The report notes that at night-time, maintenance dredging noise would only be noticeable in the area if there were no 'essential port activities' taking place and even then, some noise is likely to be coming from 'non-essential port activities' taking place in the port area. The report also notes that the 85dB L_{AFmax} is consistent with that set for limit is set for 'essential port activities' in the TRMP.

Section 7.3 discusses the effects of underwater noise on marine mammals with reference to published reports. It notes that there are no guidelines or standards relating to dredging. However, the report notes the World Organisation of Dredging Association (WODA) research that indicates possible effects of dredging on the communication systems of cetaceans and other higher animals and associated behavioural patterns.

Section 7.5 contains an overall effects assessment, and Section 8 contains a summary and recommendations. Section 7 noise finds that the noise from the maintenance dredging operations are not likely to exceed normal port operational noise and thus are not expected to give rise to any adverse effects to the closest noise-sensitive sites, notably the apartments and hotel in the nearby Commercial Amenity zone. This same section finds that the noise from proposed activities are likewise not expected to adversely affect the more distant Residential zoned properties. The report finds that the proposed maintenance dredging noise may occasionally result in some noticeable noise in small parts of the Port MA and General MA, but it will be of a 'less than minor' effects nature in terms of port and river users.

The Hunt report also notes that proposed maintenance dredging and disposal activities are expected to be undertaken in accordance with the port wide noise set of conditions in the Council decision on the Wharves 6 and 7 and slipway redevelopment projects. In this regard the report proposes the following consent condition be attached to the maintenance dredging and disposal coastal permits:

> *"Noise emitted by dredging activities authorised by this consent shall comply with the following noise limits when measured at any point in the Amenity Commercial Zone, Residential General Zone or Inner City Residential Zone:*
> *(a) 65 dB Ldn*
> *(b) 60 dB LAeq(9h) (2200h-0700h)*
> *(c) 65 dB LAeq(15 min) (2200h-0700h)*
> *(d) 85 dB LAFmax (2200h-0700h)*
>
> *Measurement shall be in accordance with NZS6801:1991 "Measurement of Sound" and assessment shall be in accordance with NZS 6809:1999 " Acoustics - Port Noise Management and Land Use Planning*".

The report notes the last part of the proposed condition clarifies the relationship of the two NZ Standards and is slightly different to that in the Council's Wharf 6/7/slipway decisions. A noise monitoring condition very similar to that in the Council decision on the Wharves 6 and 7 and slipway redevelopment projects is also being proposed, as outlined earlier in this report.

4.10 Navigation and Safety

RMA & TRMP Considerations

The RMA and TRMP do not place any obligations on Eastland Port to advise Maritime NZ, Land Information NZ or other organisations of its maintenance dredging and disposal operations, like they do for all proposed new structures. As such no particular obligations arise and no associated consent conditions or advice notes on this matter are proposed.

Effects on Commercial Vessels

The maintenance dredging activities are critical to continued operation of the port and will have a positive effect on commercial vessel navigation and safety in and around the port.

Standard Operating Procedures

Eastland Port has in place Standard Operating Procedures (SOP'S) for the dredging and disposal operations, which covers current navigation and safety related issues. In terms of the ongoing maintenance dredging operations the SOP is expected to be reviewed on an annual basis to determine whether any new risks or hazards exist and need to be dealt with. The dredging SOP forms part of the *Eastland Port Ltd Floating Plant Specific Procedures & Training Manual.*

4.11 Public Access and Recreation

Effects of Maintenance Dredging

The existing public access arrangements to parts of the port will not be affected by the proposed maintenance dredging operations. Recreational craft from the marina and other port facilities pass through the area to be dredged.

However, they are generally prevented from using the water space for recreational activity by the Council's Navigation & Safety Bylaw 2004, notably Sections 2.2, 2.3, 2.6 and 2.9.

Effects of Disposal of Dredgings

The OSDG is not recorded in any publication as being used for, nor otherwise known to be used for any significant extent for diving, fishing or other recreational boating activities. As outlined earlier Eastland Port site management protocols are already in place regarding recreational craft access to the ground during dredge spoil disposal operations.

4.12 Summary of Effects

Table 7 summarises the above effects assessment findings for the maintenance dredging and disposal activities. The effects are of a positive and negative (adverse) nature.

Table 7: Maintenance Dredging and Disposal: Summary of Effects

Effects Category	Maintenance Dredging	Disposal of Dredgings
Economic and Social	Positive	Positive
Coastal Processes and Geotechnics	Negative (Adverse)	Negative (Adverse)
Ecology and Water Quality	Negative (Adverse)	Negative (Adverse)
Cultural and Heritage	Negative (Adverse)	Negative (Adverse)
Landscape, Natural Character and Visual Amenities	Negative (Adverse)	Negative (Adverse)
Noise	Negative (Adverse)	Negative (Adverse)
Navigation and Safety	Positive	Positive
Public Access to the Coast	Negative (Adverse)	Negative (Adverse)
Recreation	Negative (Adverse)	Negative (Adverse)

5 NOTIFICATION & CONSULTATION MATTERS

5.1 RMA Provisions on Notification

The Resource Management (Simplifying and Streamlining) Amendment Act of October 2009 substantially amended the notification provisions for resource consent applications. There is no longer a presumption that Council's should publicly notify resource consent applications. Instead the Act gives Councils a general power to publicly notify an application (Section 95A (1)) and also prescribes the circumstances when an application is required to be notified (Section 95A (2)). The Act also prescribes some circumstances when an application is not to be publicly notified (Section 95A (3)), which in turn can be 'overidden' if a Council consider that 'special circumstances' exist.

The Section 95A (2) provisions that require an application to be publicly notified are if:

- the activity will have, or is likely to have, adverse effects on the environment that are more than minor;
- the applicant requests public notification of the application; or
- a rule or national environment standard requires public notification.

Section 95B provides that if an application is not publicly notified, Council must decide if there are any 'affected persons' in relation to the activity. Limited notification of the application to 'affected' persons must be undertaken unless a rule or environmental standard precludes limited notification, or their written approval has been obtained or it is unreasonable to require this.

5.2 Section 95A Public Notification Test

Section 95A requires consent authorities to follow specific steps to determine whether to publicly notify an application. The following is an assessment of the applications against these steps:

Step 1: Mandatory Public Notification in Certain Circumstances

An application must be publicly notified if, under section 95A(3), it meets any of the following criteria:

> *(3) (a) the applicant has requested that the application be publicly notified:*
>
> *(b) public notification is required under section 95C:*
>
> *(c) the application is made jointly with an application to exchange recreation reserve land under section 15AA of the Reserves Act 1977.*

Eastland Port is not requesting public notification of the application under section 95A(3)(a). Section 95A(3)(b) applies where an applicant does not provide further information formally requested by the Council under section 92, which is not applicable here. Section 95A(3)(c) does not apply because the application does not involve any recreation reserve land exchange.

Public notification is not required and therefore Step 2 must be considered.

Step 2: Public Notification Precluded in Certain Circumstances

An application must not be publicly notified if, under section 95A(5):

> *(5) (a) the application is for a resource consent for 1 or more activities, and each activity is subject to a rule or national environmental standard that precludes public notification:*
>
> *(b) the application is for a resource consent for 1 or more of the following, but no other, activities:*
>
> *(i) a controlled activity:*
>
> *(ii) a restricted discretionary or discretionary activity, but only if the activity is a subdivision of land or a residential activity:*
>
> *(ii) a restricted discretionary, discretionary, or non-complying activity, but only if the activity is a boundary activity:*
>
> *(iv) a prescribed activity (*see *section 360H(1)(a)(i)).*

Section 95A(5)(a) does not apply as the application does not involve any activities that are subject of a national environmental standard that precludes public notification.

Section 95A(5)(b) does not apply as the application does not involve any of the circumstances set out in limbs (i)–(iv).

Public notification is not precluded and therefore Step 3 must be considered.

Step 3: Public Notification Required in Certain Circumstances

An application is required to be publicly notified if one of the following circumstances are met, under section 95A(8):

> *(8) (a) the application is for a resource consent for 1 or more activities, and any of those activities is subject to a rule or national environmental standard that requires public notification;*
>
> *(b) the consent authority decides, in accordance with section 95D, that the activity will have or is likely to have adverse effects on the environment that are more than minor.*

Section 95A(8)(a) is not applicable because the port maintenance dredging and disposal is not the subject any rule or national environmental standard that requires public notification. Section 95A(8)(b) is also not applicable because the proposal will not have any 'more than minor' adverse effects on the environment. As set out earlier in this report the effects of the proposal have been assessed as being at worst of a 'less than minor' nature.

More than Minor Effects Determination

Section 95D requires consent authorities in determining whether an activity will have or is likely to have more than minor adverse effects on the environment:

a) must disregard any effects on persons who own or occupy—

(i) the land in, on, or over which the activity will occur; or

(ii) any land adjacent to that land; and

b) may disregard an adverse effect of the activity if a rule or national environmental standard permits an activity with that effect; and

c) in the case of a controlled or restricted discretionary activity, must disregard an adverse effect of the activity that does not relate to a matter for which a rule or national environmental standard reserves control or restricts discretion; and

d) must disregard trade competition and the effects of trade competition; and

e) must disregard any effect on a person who has given written approval to the relevant application.

As outlined above, the public notification assessment effectively excludes the owners and occupiers of the site and adjacent land, where the different limited notification test outlined in the next part of this report applies.

The Site and Adjacent Land Considerations

In terms of Clause (a) the land over which the activity will occur ('the sites'), and the land adjacent to it ('the adjacent land') is identified in **Table 8** and shown in **Figure 47**.

The 'sites' are the approximately 24.7ha of the port seabed to be maintenance dredged and approximately 300ha of seabed in the OSDG. As outlined earlier both sites are part of the 'common marine and coastal area'. The term 'adjacent land' is not defined in the RMA. However, it is generally interpreted to mean land that adjoins or is in the immediate vicinity of the site(s) to which the relevant application(s) relate.

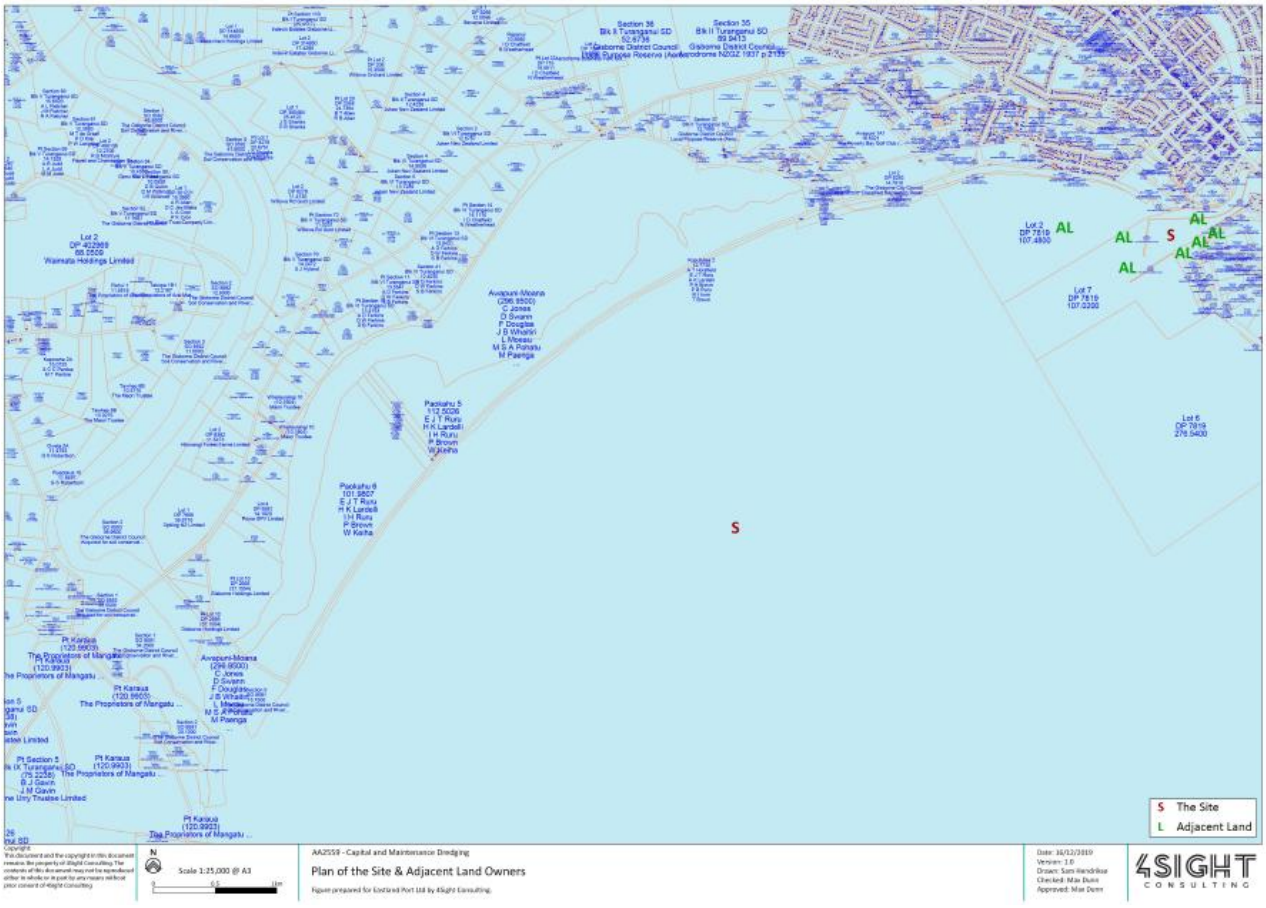


Figure 47: Plan of the Sites and Adjacent Land

The following explanation is provided on the adjacent land identified in **Figure 47** and recorded in **Table 8**:

- Lots 2 & 6 DP 7819 are seabed areas formerly owned by the Council located to the north and south of the port navigation channel and now part of the common marine and coastal area;
- Lots 17 & 22 DP 7819 are Butlers Wall and the port breakwater that are owned by the Council and occupied by Eastland Port;
- Lots 15 & 39 DP 7819 are parts of the river training wall and old slipway that are owned by the Council and occupied by Eastland Port;
- Lot 16 DP 7810 is part of the old slipway owned and occupied by Eastland Port;
- Lot 1 DP 327614 contains the Wharf 7 and 8 facilities owned and occupied by Eastland Port; and
- Lot 21 DP 7819 is a narrow strip of land along the edge of the Wharf 4-6 area that is owned by the Council and occupied by Eastland Port.

Table 8: Gisborne Port and Site and Adjacent Landowners and Occupiers

Land	Legal Description	Owner/Occupier
The Sites		
Port seabed & coastal waters	Lot 7 DP 7819	Common marine and coastal area
Seabed & coastal waters	Coastal marine area adjoining Lots 2, 6 & 7 DP 7819	Common marine and coastal area
Adjacent Land		
Seabed & coastal waters	Lot 2 DP 7810	Common marine and coastal area
Seabed & coastal waters	Lot 6 DP 7819	Common marine and coastal area
Port Breakwater	Lot 22 DP 7819	GDC/Eastland Port Ltd (EPL)
Butlers Wall	Lot 17 DP 7819	GDC/EPL
Old Slipway & River Training Wall	Lot 39 DP 7819	GDC/EPL
Old Slipway	Lot 16 DP 7819	EPL
River Training Wall	Lot 15 DP 7819	GDC
Wharves 7 & 8	Lot 1 DP 327614	EPL
Wharves 4-6	Lot 21 DP 7819	GDC/EPL

Under section 95D(a), the effects of the application on the landowners and occupiers in **Table 8** can be disregarded for the purposes of determining whether Council should publicly notify the application pursuant to section 95D. Section 95D(b), regarding the 'permitted baseline' is of some relevance to the disposal of dredged spoils, as outlined earlier in this report.

Section 95D(c) is not relevant as no parts of the proposal are restricted discretionary activities. Section 95D(d) is not relevant as trade competition is not a relevant consideration. Section 95D(e) is not relevant as no parties have provided written approvals.

Effects on the Wider Environment

Under Section 95A for an application to be publicly notified the adverse effects on the land beyond the site and the adjacent properties (i.e. on what is known as the 'wider environment') must be 'more than minor'. The Section 95A 'wider environment' notification assessment only relates to adverse effects and is different to that required for the applications under Section 104, which includes positive effects.

The Section 95A 'wider environment' assessment of the applications relates to the adverse effects of the proposed maintenance dredging and disposal on Poverty Bay and the adjacent shore-based facilities, including the port itself. It is based around four generally recognised categories of effects, these being of a 'more than minor' (requiring notification), 'minor', 'less than minor' or 'de minimis' nature. **Table 9** summarises the Section 4 findings on the effects of the application on the 'wider environment' in terms of the abovementioned four-fold categorisation of effects explained earlier in this report.

The following explanation of the **Table 9** findings is provided.

The effects of the continued port maintenance dredging and disposal on coastal processes in the wider Poverty Bay are assessed as being 'less than minor' based on the findings of the appended MetOcean reports. The Worley report identifies no geotechnical engineering issues associated with the maintenance dredging and disposal activities, which will affect the 'wider environment', including the nearby beaches and recognised surf breaks.

Table 9: Gisborne Port Maintenance Dredging and Disposal Applications: Effects on the Wider Environment

Adverse Effects Category	Maintenance Dredging	Disposal of Dredgings
Coastal Processes	Less than minor	Less than minor
Geotechnics	de minimis	de minimis
Ecology	Less than minor	Less than minor
Water Quality	Less than minor	Less than minor
Cultural	Less than minor	Less than minor
Heritage	de minimis	de minimis
Noise	Less than minor	de minimis
Navigation and Safety	Less than minor	Less than minor
Landscape and Natural Character	Less than minor	Less than minor
Visual Amenities	Less than minor	Less than minor
Public Access to the Coast	Less than minor	Less than minor
Recreation	de minimis	de minimis

The 4Sight ecology and water quality report notes that the soft sediments being dredged are unpolluted and are not a significant source of bio-accumulative or otherwise potentially persistent or toxic contaminants that could otherwise be transported or affect marine life or water quality beyond the port. The report does note that the maintenance dredging operations generate at times significant turbidity and associated adverse visual amenity effects. However, the effects are generally localised and short term and the effects on the wider Poverty Bay are of a 'less than minor' nature. The ecological and water quality effects are also assessed as being 'less than minor' on the basis of the 4Sight ecology report and associated investigations, including the most recent NIWA benthic ecology report.

The maintenance dredging operations will not affect any known archaeological sites within the port. They are also well removed from the recorded waahi tapu reefs within Poverty Bay. However, as noted earlier the proposed maintenance dredging area, like the existing consented area, is likely to include Te Toka a Taiua, although as explained earlier no hard rock or other similar material is to be removed, just the soft sediments that find their own way into the port from the Turanganui, Waipaoa and the other rivers. On this basis of the available information the effects of the maintenance dredging activities on cultural values are assessed as 'less than minor'.

The noise effects of the maintenance dredging and disposal operations on the 'wider environment', notably the nearby commercial and residential areas adjacent to the port, will be of a 'less than minor' nature, as set out in the Hunt report. They are expected to be 'masked' by those from permitted port activities and the noise from traffic on adjacent roads. Although the noise from the disposal spoil operations will not be masked by any other activities, their isolation from any sensitive receivers will make them of a 'less than minor' nature.

The maintenance dredging and disposal operations will have no adverse effects on the nearby recorded land and water-based landscape features. They will be visible from some elevated public vantage points on the land and from boats within the bay, including the nearby Waipaoa River mouth. However, the wider visual amenity effects in the context of the working port, natural changes in water colour and other factors will be of a 'less than minor' nature.

The navigation and safety effects will be of a 'less than minor' nature because of the navigation and safety bylaws and site protocols in place. The maintenance dredging and disposal operations will have negligible effects on fishing and other recreational activities in the wider bay and will not adversely affect public access to the coast.

Step 4: Further Notification in Special Circumstances

Section 95A(8) sets out a fourth step that consent authorities must undertake, i.e. determine whether an application is required to be publicly notified because 'special circumstances' exist.

Section 95A(8) states the consent authority must:

"*Determine whether special circumstances exist in relation to the application that warrant notification of the application to any other persons not already determined to be eligible for limited notification under this section (excluding persons assessed under section 95E as not being affected persons)"*

If the answer is 'yes', then those persons are required to be notified.

Special circumstances are not defined in the RMA. However, there is some case law which indicates that special circumstances are something outside the common run of things which is exceptional, abnormal or unusual, but less than extraordinary or unique.

The coastal permit applications simply seek to continue maintenance dredging and disposal operations at the port in a very similar manner to those that have been undertaken for a considerable period of time. As such, there is nothing particularly unusual or exceptional about them and there are no 'special circumstances' that warrant public notification of the applications.

5.3 Section 95A Limited Notification Test

Under Section 95B of the RMA, if an application is not publicly notified, the consent authority must undertake the following steps to determine whether to limited notification of it is required.

Step 1: Certain Affected Groups and Persons Must be Notified

The application must be limited notified to the relevant persons if it is determined that there are persons falling into the section 95B(2) and (3) categories:

> *(2) (a) affected protected customary rights groups; or*
>
> *(b) affected customary marine title groups (in the case of an application for a resource consent for an accommodated activity).*
>
> *(3) (a) whether the proposed activity is on or adjacent to, or may affect, land that is the subject of a statutory acknowledgement made in accordance with an Act specified in Schedule 11; and*
>
> *(b) whether the person to whom the statutory acknowledgement is made is an affected person under section 95E.*

In terms of section 95B(2), there are no affected protected customary rights groups or affected customary marine title groups (as those terms are defined in the RMA) and the Marine and Coastal Area (Takutai Moana) Act 2011 (*MACA*)). As outlined earlier, seven individuals or groups have lodged claims for customary marine title and/or a protected customary right under MACA in Turanganui a Kiwa/Poverty Bay (including Ngāti Oneone, Rongowhakaata Iwi, Te Whānau a Kai, Ngai Tāmanuhiri, Ngai Tamahaua hapu and Nga Hapu o Ngāti Porou). None of these seven applications have yet resulted in the grant of an order by the Court or confirmation of an agreement with the Crown, as required by section 9(1) MACA for those parties to amount to an 'protected customary rights group' or 'customary marine title group'. Consequently notification of these parties is not triggered pursuant to section 95B(2) RMA. Although not directly relevant to the RMA's statutory notification tests, Eastland Port has separately discharged its pre-lodgment obligations under Section 62(3) of the MACA, and has, through 4Sight, notified and sought the views all seven parties identified above in relation to this application. At the time of finalising this AEE, no responses of the parties notified had been received by 4Sight.

In terms of section 95B(3), the port maintenance dredging area and the OSDG site are on and adjacent to land with a Schedule 11 statutory acknowledgement. Schedule 11 to the RMA lists the following three relevant Acts as including statutory acknowledgments:

- Ngāti Porou Claims Settlement Act 2012;
- Rongowhakaata Claims Settlement Act 2012; and
- Ngai Tāmanuhiri Claims Settlement Act 2012.

As outlined earlier, the Council website contains a summary of the Schedule 11 statutory acknowledgments in place in the Gisborne District. The summary is based on the January 2013 Council publication 'Ngā Whakaaetanga ā Ture mo Te Tairāwhiti – Statutory Acknowledgements for the Gisborne District', which forms an addendum to the TRMP.

The Ngāti Porou and Rongowhakaata Statutory Acknowledgment Areas for the Turanganui River includes part of the port maintenance dredging area. The Rongowhakaata Statutory Acknowledgment Area for the Coastal Marine Area includes all of the OSDG. The Rongowhakaata and Ngai Tāmanhuriri Statutory Acknowledgements for the Waipaoa River, the Rongowhakaata Statutory Acknowledgement for the Waikanae Creek, and the Ngai Tāmanuhiri Statutory Acknowledgement for the coastal marine area are all adjacent to the port maintenance dredging area and/or the OSDG.

On the above basis, Step 1 does apply in respect of section 95B(3) and an assessment is required as to whether the three iwi with statutory acknowledgements over the port, OSDG and surrounding areas are 'affected persons' under Section 95E.

Section 95E (1) effectively requires a consent authority to consider a person affected if the adverse effects of the activity on the person are 'minor or more than minor' (but not less than minor). As outlined earlier in this AEE, from the available information on the cultural values of the areas under consideration (albeit it limited) it is likely that the effects on the iwi will be 'less than minor', although this term is a subjective one.

Notwithstanding this effects assessment 4Sight and Eastland Port consider that it is appropriate for Ngati Oneone (as a hapu of Ngati Porou), Rongowhakaata and Ngai Tāmanuhiri to receive limited notification of the maintenance dredging and disposal application. Ngati Oneone is in any event required to be notified pursuant to the Ngā Rohe Moana o Ngā Hapū o Ngāti Porou Act 2019 (*Ngāti Porou Act)*. Eastland Port has already taken steps to engage with all three parties in relation to these applications and, as noted in earlier sections of this AEE, 4Sight have already provided details of the applications to all three parties.

Step 2: Limited Notification Precluded in Certain Circumstances

Step 2 is not applicable. However, Step 3 -Certain Other Affected Persons Must be Notified, is applicable and requires consideration.

Step 3: Certain Other Affected Persons Must be Notified

Other affected persons must be notified in the following circumstances specified by sections 95B(7) and (8):

> *(7) (a) in the case of a boundary activity, an owner of an allotment with an infringed boundary; and*
>
> *(b) in the case of any activity prescribed under section 360H (1) (b), a prescribed person in respect of the proposed activity.*
>
> *(8) In the case of any other activity, determine whether a person is an affected person in accordance with section 95E.*

Section 95B(7)(a) is not applicable as the proposal does not involve a boundary activity. Nor is section 95B(7)(b) as there are no prescribed activities. Section 95B(8) is applicable in terms of whether any of the 'site' and 'adjacent' landowners and occupiers identified in **Table 8** are affected.

Section 95E(2) states that on deciding who is an affected person under section 95E, a council:

> *(2) (a) may disregard an adverse effect of an activity on a person if a rule or national environmental standard permits an activity with that effect (i.e. council may consider the "permitted baseline");*
>
> *(b) must disregard an adverse effect that does not relate to a matter for which a rule or environmental standard reserves control or restricts discretion; and*
>
> *(c) must have regard to every relevant statutory acknowledgement made in accordance with a statute set out in Schedule 11 of the Act.*

Step 4: Further Notification in Special Circumstances

As required by section 95B(10), a council must determine the following:

> *(10) whether special circumstances exist in relation to the application that warrant notification of the application to any other persons not already determined to be eligible for limited notification under this section (excluding persons assessed under section 95E as not being affected persons)*

The proposed port maintenance dredging and disposal coastal permit operations are effectively the same as those subject of the current coastal permits. There is nothing particularly unusual or exceptional about the continuation of these activities at the port and OSDG and there are not any other persons who would warrant notification of the application.

Overview of Effects of Maintenance Dredging and Disposal on the Sites and Adjacent Lands

The effects of the port maintenance dredging and disposal activities on the sites and adjacent land, involves the same categorisation of effects outlined above in relation to public notification. However, the limited notification 'threshold' in the RMA is set lower.

Under section 95B if an application is not publicly notified, the Council must decide if there are any 'affected persons' and undertake limited notification of those persons. Under section 95E(1) a person is considered 'affected' if the adverse effects of the activity on the owner or occupier are 'minor or more than minor'. For an application to be not notified it must be demonstrated under section 95E that the adverse effects on the adjacent landowners and occupiers are not more than minor.

Section 4 of this report assessed the actual or potential effects of the applications as a whole, i.e. on both the 'site and adjacent land', and the 'wider environment'. The particular effects on 'the site and adjacent land', and 'wider environment' in terms of the notification provisions in Section 95A are summarised in **Table 10.**

Effects of Maintenance Dredging

The 'site' is the common marine and coastal area containing the proposed maintenance dredging area, whilst the 'adjacent land' here is primarily the Council and Eastland Port owned land containing the various port related structures shown in **Figure 47**.

Table 10: Gisborne Port Maintenance Dredging & Disposal Activities: Effects on the Site and Adjacent Land

Adverse Effects Category	Maintenance Dredging	Dredge Spoil Disposal
Coastal Processes	Less than minor	Less than minor
Geotechnics	Less than minor	de minimis
Ecology	Minor	Less than minor
Water Quality	Less than minor	Less than minor
Cultural	Less than minor	Less than minor
Heritage	de minimis	de minimis
Noise	Less than minor	Less than minor
Navigation and Safety	Less than minor	de minimis
Landscape and Natural Character	Less than minor	Less than minor
Visual Amenities	Less than minor	Less than minor
Public Access to the Coast	Less than minor	de minimis
Recreation	de minimis	de minimis

The proposed maintenance dredging operations will be the same as those authorised under the current coastal permits. The MetOcean and Worley reports do not identify any adverse effects on coastal processes or seabed conditions, including the stability of the existing port and other facilities. As such these effects are assessed as being of a 'less than minor' nature.

The 4Sight ecology and water quality report notes that maintenance dredging will have an adverse effect on the biota in the area affected, but it will confined to the soft sediments and not directly impact the habitat of juvenile crayfish and other species that inhabit the harder papa material, wharves and other port structures. Also, that the whole port is not dredged at one time and the activity is very localised. The effects on biota in the whole port seabed are 'naturally' mitigated by the intermittency of the dredging at any given location, and need on a daily basis to stop dredging and transport the spoil to the OSDG. The soft sediment habitat is also regularly disturbed by vessel and tug boat movements. On this basis the ecological effects on the 'site' and 'adjacent land' are assessed as 'less than minor.'

The 4Sight report notes that the main water quality effect of the maintenance dredging will be the creation of a plume over a small area in the port and associated adverse visual amenity effects. However, this activity based effect will be viewed within the context of the 'natural' changes in water colour in the river and port area from heavy rainfall events and from regular vessel movements within the port itself. The report notes that the applicable water quality standards for the port will be met and the turbidity will generally not to be visually conspicuous a few hours after the completion of a dredging run. On this basis the marine ecological and water quality effects on the site and adjacent land, including juvenile crayfish and other biota inhabiting port structures and other areas, are assessed as 'less than minor'.

There are no recorded archaeological sites within the maintenance dredging and disposal areas. The maintenance dredging and disposal operations will also not affect any known sites of cultural value, other than some being within the vicinity of Te Toka a Taiu. However, as outlined earlier no rock or other solid material is to be removed and from the information available the effects are assessed as being of a 'less than minor' nature.

The low-level noise emissions from the dredging operations will generally be masked by the ambient noise from the wider port operations, including ship loading and logging truck movements and be of a 'less than minor' nature. The area to be dredged is a working port and not used to any significant extent for recreation, nor are the adjacent areas. Navigation and safety bylaws and site protocols are in place to ensure that these effects will be of a 'less than minor' nature.

Effects of Dredge Spoil Disposal

The OSDG 'site' is part of the large common marine and coastal area in Poverty Bay, whilst the 'adjacent land' are the former Council seabed areas adjacent to the port and Waikanae beach shown in **Figure 47**.

The effects of the continued dredging disposal operations on coastal processes and geotechnics in the wider Poverty Bay are assessed as being 'less than minor' or 'de minimis', based on the findings of the appended MetOcean and Worley reports.

The 4Sight expert report notes that the disposal of the dredged material has been shown in successive benthic ecological surveys to not have significant adverse effects on the soft seabed communities. Sediment accumulation from the disposal is expected to fall within the ambient flux experienced from natural events and to which the benthic communities are adapted and responsive. The applicable SA water quality standards will be met after the temporal allowance for mixing and dispersion. For the above reasons the ecological and water quality effects of the dredge spoil disposal are expected to be 'less than minor'

The noise emissions from the disposal operation will not be masked by any other activities, but their isolation from any sensitive receivers will make them also of a 'less than minor' nature. The landscape, navigation and safety and public access and recreation effects are either of 'less than minor' or 'de minimis' nature.

5.4 Ngā Rohe Moana o Ngā Hapū o Ngati Porou Act Notification Requirement

The Ngāti Porou Act came into force on 29 May 2019. As noted in Section 2, the Ngāti Porou Act gives effect to a legal agreement between the Crown and Ngāti Porou and is intended to contribute to the legal expression, protection and recognition of the continued mana of Ngāti Porou hapu in relation to their rohe.

Section 16 contains specific provisions relating to the processing of resource consent applications by the Council under the RMA. These provisions are in turn linked to Schedules 2 and 3 that describe and illustrate the rohe of Ngāti Porou hapu.

Schedule 2 and Part 7 identify Ngāti Oneone as the hapu with management interests in the area from Tokā a Taiu (in the Turanganui River) to the Pouawa River. This rohe area, which is shown on the Schedule 3 map reproduced in **Figure 48**, includes the inner harbour and port area.

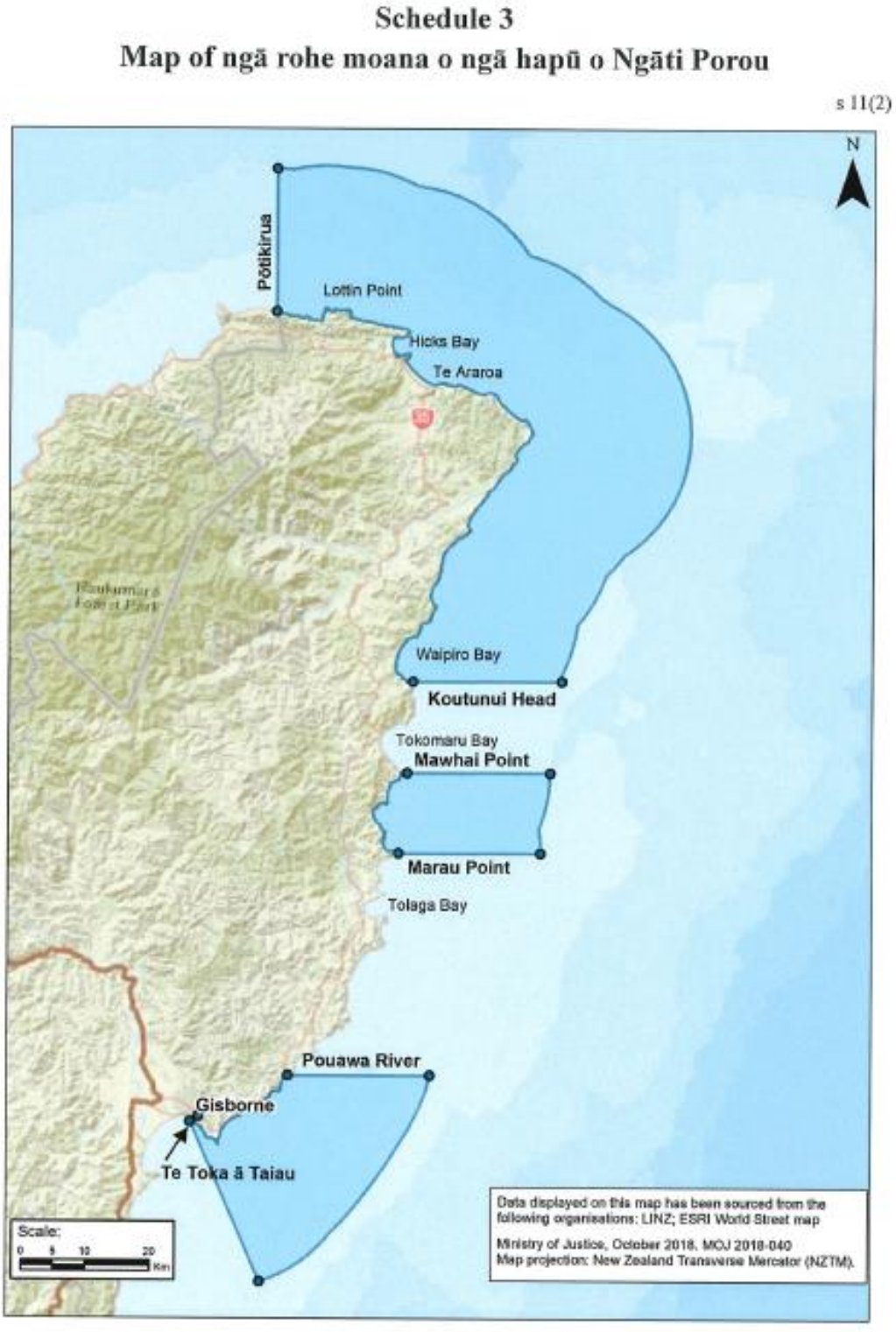


Figure 48: Ngati Porou Act Map of Hapu Rohe

Section 16 requires the Council to notify Ngāti Oneone of any application that involves 'an activity within, adjacent to or directly affecting' a hapu rohe and is being processed in a limited or non-notified manner. Alternatively, if public

notification of an application is to be undertaken by the Council, notification of the application to Ngāti Oneone is required.

The maintenance dredging and disposal activities are within the Ngāti Oneone rohe. On this basis the Council is required to notify Ngāti Oneone, under the Section 16 and related Schedule 2 and 3 provisions in the Ngati Porou Act.

5.5 Marine and Coastal Area Act Consultation Requirements

Section 62 of the MACA requires all applicants seeking coastal permits for activities in the coastal marine area to notify, and seek the views of, any group that has made an application for recognition of customary marine title before lodgement of their applications with the Council. As noted earlier, Ngati Oneone, Rongowhakaata Iwi, Te Whanau a Kai, Ngai Tamanuhiri, Ngai Tamahaua hapu and Nga Hapu o Ngati Porou have made such customary marine title applications within the Turanganui a Kiwa area. Two further recognition applications have also been filed by Rihari Dargaville and Cletus Maanu Paul that apply to the whole of New Zealand.

Eastland Port have had an informal meeting with representatives of local iwi, hapu and whanau groups, including those seeking customary marine title on the proposed maintenance dredging and disposal operations. Also, as outlined earlier, Eastland Port have, through 4Sight, formally advised the same organisations, along with the two parties with nationwide applications, of the coastal permits being sought from the Council and asked to provide views on it. **Appendix R** contains copies of the Eastland Port and 4Sight records of the January 2020 meeting and the February 2020 email/letter correspondence.

5.6 Resource Management Act Provisions on Consultation

Schedule 4 to the Act lists, amongst the matters that should be included in an AEE, *"identification of the parties affected by the proposal, the consultation undertaken, if any, and any response to the views of the any person consulted."* The following record of consultation is provided of potentially affected parties.

Gisborne District Council

The Council administer the TRMP and own some of the adjacent land in the port and wider area. Aspects of the applications have been informally discussed with Council staff over the last year or so.

A formal pre-lodgement meeting with Council staff was held on 17 February 2020, following pre-circulation of a draft AEE. The main matters discussed at the meeting were:

- The effects of the maintenance dredging operations on the port seabed ecology, including the 'baseline' information on the biota present in the soft sediments that are regularly disturbed;
- The result of the recent Council commissioned biosecurity surveys of the port and the measures to be put place to deal with possible spread of Mediterranean fan work and other marine pest species;
- The noise from maintenance dredging operations and its relationship to the port noise emission standards in the Wharf 6/7/slipway decision and/or NZ Construction Noise Standard;
- The consultation with iwi, hapu and whanau groups, including those with MACA applications and statutory acknowledgments affecting the port and OSDG areas; and
- The consent conditions being proposed as part of the applications, including the need for a Biosecurity Management Plan.

Further baseline ecology information and a biosecurity assessment have been included in the final AEE and appended 4Sight ecology and water quality report. The appended Hunt noise report covers the TRMP and NZS matters. A set of draft consent conditions are included, along with an explanation of them.

Port Community Liaison Group

The PCLG was initially set up to assist with community input to the capital and maintenance dredging and disposal operations at the port, including the ongoing monitoring programme. However, its role has been extended over recent year and it advises Eastland Port on a wider range of matters, including all resource consent applications.

The PCLG comprises representatives of the following organisations:

- The Council
- Te Runanga o Turanganui a Kiwa, including Te Aitanga a Mahaki, Rongowhakaata and Ngati Tamanuhiri;
- Ngati Oneone;
- Nga Tamanuhiri;
- Rongowhakaata;
- Department of Conservation;
- Residents from BayView Apartments, Harbourview Apartments, Kaiti Beach Rd, Parau St & Crawford Rd,
- Crayfish industry; and
- Gisborne Boardriders Club

The PCLG were advised of the impending maintenance dredging and disposal renewal applications at the last meeting on 3 December 2019. **Appendix R** contains an Eastland Port record of the December meeting. The final application package lodged with Council is to be discussed with the PCLG at the next meeting to be scheduled for March 2020.

Iwi and Whanau Organisations

The consultation with iwi and whanau organisations was outlined earlier in this report. **Appendix R** contains a record of the consultation to date.

Department of Conservation

DoC administers the NZ Coastal Policy Statement that was prepared under the RMA. A copy of the application package will in the next week be sent by email/drop box to the Department of Conservation's Gisborne office and advice of the same provided to the Council.

Heritage NZ

Heritage NZ may have interests in the applications, mainly in relation to the protected waahi tapu reefs in Poverty Bay. Also as noted earlier, Eastland Port has a protocol in place arising from the In- Situ Heritage report to advise Heritage NZ of all the development proposals affecting the port. The Tauranga (Lower North Island Area) office of Heritage NZ will in the next week be sent, by email/drop box, a copy of the application package lodged with the Council and advice of the same provided to the Council.

NZ Rock Lobster Industry Council & Tairawhiti Rock Lobster Industry Association

The NZ Rock Lobster Industry Council (NZRLIC) and Tairawhiti Rock Lobster Association (TRLIA) may have interests in the applications, in terms of the reported values of the port structures as habitat for juvenile crayfish. However, as outlined earlier the proposed maintenance dredging and disposal operations will have 'less than minor' effects on the crayfish habitat. As a courtesy, both organisations will in the next week be advised of the application package lodged with the Council, even though they are not considered to be affected parties.

Surf Break Protection Society and Gisborne Boardriders Club

The Surf Break Protection Society (SBPS) and Gisborne Boardriders Club (GBC) may have interests in the applications in terms of the effects of continued maintenance dredging on coastal processes and the quality of the recognised surfbreaks in Poverty Bay. However, as outlined earlier with reference to the MetOcean reports, the proposed maintenance dredging and disposal operations will have 'less than minor' effects on the recognised surf breaks in the bay. As a courtesy both organisations will be advised of the application package lodged with the Council, even though they are not considered to be affected parties. As noted earlier the GBC are also represented on the PCLG and will also be advised in this manner too.

5.7 Notification Assessment Summary

After assessing the provisions in Sections 95A to 95G of the RMA the coastal permit applications for the port maintenance dredging and disposal activities should be limited notified for the following reasons:

- Under Section 95A Step 1, mandatory public notification is not required;
- Under Section 95A Step 2, public notification is not precluded;
- Under Section 95A Step 4, there are no special circumstances to warrant public notification;
- Under Section 95B Step 1, the Ngati Porou and Rongowhakaata are considered affected parties through the statutory acknowledgements they hold over the port and OSDG (the site), meaning they should be notified. Eastland Port are also proposing that Nga Tamanuhiri be limited notified too because of the statutory acknowledgements in place they have over parts of the wider CMA area and Turanganui River (adjacent land);
- Under Section 95B Step 2, limited notification is not precluded;
- Under Section 95B Step 3 and section 95E, there are no other affected persons; and
- Under Section 95B Step 4, there are no special circumstances to warrant limited notification, other than in the manner outlined above.

Ngati Oneone are also required to be notified of the applications in accordance with the requirements in Section 16 of the Ngati Porou Act.

6 RESOURCE CONSENT ASSESSMENT

6.1 Section 104 Overview

Section 104 of the RMA establishes the statutory framework within which all applications are to be considered.

Section 104(3) of the RMA places obligations on consent authorities when considering or granting applications. Amongst the matters listed in subsection 3 is a requirement that applications not be granted where they would be contrary to Section 107 – Restriction on Grant of Certain Discharge Permits. The relevance of this provision, along with Section 105 – Matters Relevant to Certain Applications, to the application are covered in this part of the report.

Schedule 4 of the RMA also requires that specified information be provided with all applications and assessments of environmental effects. These provisions are also addressed in this part of the AEE.

Section 104(1)(a)

This AEE, and the accompanying expert reports cover the Section 104(1)(a) requirements regarding the actual and potential effects of the proposals. Overall the effects of the proposals are assessed as positive to less than minor adverse.

Section 104(1)(ab)

This section enables the Council to have regard to "*any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from allowing the activity*" The adverse effects of the proposals are adequately avoided remedied or mitigated by the proposed consent conditions. No offsetting or compensatory measures are being proposed.

Section 104(1)(b)

The following statutory instruments in Section 104(1)(b) are relevant to the proposals:

- TRMP; and
- NZ Coastal Policy Statement (NZCPS); and
- Resource Management (Marine Pollution) Regulations 1998

The key provisions are identified in the following sections of this report. Section 104(3) Section 3 addressed the relevant TRMP rules. The following subsections focus on the objectives and policies in the TRMP, the provisions in the NZCPS and Resource Management (Marine Pollution) Regulations that apply to the proposals.

Section 104(1)(c)

The MACA Act, Ngāti Porou Act mentioned earlier also relevant 'other matters.' Another relevant matter is a Gisborne Council report entitled *Surf Break Identification and Protection in the Gisborne District 2011*. The findings of this report are discussed later in this section.

Section 104(2)

The permitted activity rule in the TRMP that provides for up to 50,000m^3 of maintenance dredgings to be disposed at the OSDG is an important part of the 'permitted baseline' test under this provision.

Section 104(2A)

This provision is also important because the applications are being made at least 6 months before expiry of the current coastal permits in accordance with Section 124 of the RMA. As such under Section 104 (2A) the Council *"must have regard to the value of the investment of the consent holder."*

The economic value of the port to the Gisborne region and the need for Eastland Port to be able to continue to maintenance dredge the port and dispose of the spoil material at the OSDG were explained in Section 4.4 of this AEE.

Sections 104(2B) and (2C)

These provisions are not applicable.

Section 104(3)

Clause 3C relating to Section 107 is applicable and assessed in the next section of this report.

6.2 Section 105 and 107 Considerations

Section 105

Section 105(1) requires consent authorities to 'have regard' to the following matters (additional to those in Section 104) when considering coastal permits for discharges to the CMA:

(a) The nature of the discharge and the sensitivity of the receiving environment to adverse effects;

(b) The applicant's reason for the proposed choice; and

(c) Any possible alternative methods of discharge including discharge to any other receiving environment.

Information on the above matters as they relate to decant water discharges from the maintenance dredging and disposal operations is provided in the MetOcean coastal processes and 4Sight ecology and water reports and highlighted in parts of this report.

Section 107

Section 107 imposes restriction on the granting of certain discharge permits.

Subsection (1) states:

"Except as provided in subsection (2), a consent authority shall not grant a discharge permit or a coastal permit to do something that would otherwise contravene section 15 or section 15A allowing:

(a) the discharge of a contaminant or water into water; or

(b) a discharge of a contaminant onto or into land in circumstances which may result in that contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water; or

(ba) the dumping in the coastal marine area from any ship, aircraft, or offshore installation of any waste or other matter that is a contaminant,

if, after reasonable mixing, the contaminant or water discharged (either by itself or in combination with the same, similar, or other contaminants or water), is likely to give rise to all or any of the following effects in the receiving waters:

(c) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials:

(d) any conspicuous change in the colour or visual clarity:

(e) any emission of objectionable odour:

(f) the rendering of fresh water unsuitable for consumption by farm animals:

(g) any significant adverse effects on aquatic life.

The water quality related effects of the maintenance dredging and disposal operations will comply with the relevant requirements above, other than in relation to 'any conspicuous change in water colour or clarity' (Clause (d)), as set out in the 4Sight Ecology and Water Quality Report. However, Section 107(2) provides for such situations, where the discharge is of a 'temporary nature', or 'associated with necessary maintenance work', which is the situation here.

Subsection (2) reads:

"*A consent authority may grant a discharge permit or a coastal permit to do something that would otherwise contravene section 15 or section 15A that may allow any of the effects described in subsection (1) if it is satisfied—*

(a) that exceptional circumstances justify the granting of the permit; or

(b) that the discharge is of a temporary nature; or

(c) that the discharge is associated with necessary maintenance work—

and that it is consistent with the purpose of this Act to do so."

The terms 'temporary' and 'associated with necessary maintenance work' are not defined in the RMA.

However, with reference to dictionary definitions of 'temporary' the changes in water colour and clarity associated with the dredging and disposal plume discharges identified in the 4Sight expert report are assessed as such and can be approved accordingly by the Council. They can also be considered as 'associated with necessary maintenance work', as the port cannot receive log vessels and other craft without regular maintenance dredging and offshore disposal of the spoil material.

6.3 Schedule 4 Matters

Clause 1 -2 Requirements

Clauses 1 and 2 of Schedule 4 identify the information requirements applying to all applications. The information in the AEE and the completed application form satisfy these requirements.

Clause 2(1)(d) requires the applicant to identify other activities that are part of their proposal. This is intended to identify aspects of the proposal which need consents or the like outside of the RMA, for example, activities under the Hazardous Substances and New Organisms Act 1996. There are no other activities associated with this application that require other consents beyond that being sought here under the RMA.

Clause 3 Requirements

Clause 3 requires information be provided for some applications, notably (a) relating to any permitted activities which are part of the proposal, (b) if the application relates to an renewal of an existing consent and section 124 or section 165ZH(1)(c) are relevant, and (c) if the application involves an activity in the CMA and where a planning document prepared by a customary marine title group under the MACA Act exists.

As outlined earlier the application to dispose of dredge spoils at OSDG contains a TRMP permitted activity component. Also, it involves the effective renewal of any existing resource consent. The application also only involves activities in the CMA.

Clause 4 and 5 Requirements

The Clause 5 requirements as they relate to subdivision consents and applications involving reclamation are not applicable.

Clause 6 Requirements

Clause 6 lists information that must be included in AEEs. All of the matters listed are covered in this AEE.

Clause 6(1)(f) requires identification of the parties affected by the proposal, the consultation undertaken, if any, and any response to the views of the any person consulted. However, it then goes on to state the applicant is not obliged to consult any person and the provision does not create any ground for expecting this. The consultation to date with these interested and affected parties, was documented earlier in this report.

Clause 7 Requirements

This AEE contains assessments of the matters listed in Clause 7.

6.4 Tairawhiti Plan Objectives and Policies

Part B- Regional Policy Statement

Part B has nine sections. The most relevant ones are:

- B1 –Tangata Whenua;
- B3- Cultural and Historic Heritage;
- B4- Coastal Management; and
- B9- Natural Resources.

Tangata Whenua

Section B1 – Tangata Whenua, contains three issue-based sets of objectives, policies and methods.

They are directed at the principles of the Treaty of Waitangi, kaitiakitanga and cultural relationships.

As outlined earlier in this report local iwi and whanau groups with interests in Turanganui a Kiwa, including marine customary title applications under the MACA Act have been, and will continue to be, consulted, recognising the Treaty and other policy directives in this section.

Cultural and Historic Heritage

Section B3 – Cultural and Historic Heritage, has one issue-based set of objectives, policies and methods, directed at protection of recorded sites, including historic places and waahi tapu. No such sites either within the port or wider bay are affected by the proposed maintenance dredging and disposal operations.

Coastal Management

Section B4 – Coastal Management, has three issued based sets of objectives, policies and methods, along with cross references to wider ranging provisions in other chapters that apply to a variety of different environments. The three sets of objectives policies and methods relate to the following matters:

- Effects of Activities That Straddle Boundaries;
- Effects of Activities That May Destroy or Damage Coastal Natural Character; and
- Effects of Activities that May Inhibit Natural Processes or Degrade Natural Features.

The proposed maintenance dredging and disposal activities are entirely in the CMA and no land/water boundary issues arise from them. Also, with the new TRMP, this plan boundary is of much less significance. As outlined in Section 4 of this report and the appended expert reports the proposal will have less than minor adverse effects on coastal processes, natural features, and the natural character of the coastal environment.

Natural Resources

Section B9 – Natural Resources, has two issue-based sets of objectives, policies and methods.

They are on 'natural values' and 'public access.' The latter policy set are of very limited relevance. This is because the proposed maintenance dredging and disposal operations will be the same as those carried out in the past and Eastland Port are not aware that they have, or will in the future, adversely affect public access to the port or wider Poverty Bay.

The 'natural values' policy set cover 'natural character' and significant indigenous vegetation/habitats. The effects assessment in this AEE and the appended expert reports show that the proposed maintenance dredging and disposal related activities will have less than minor effects and be in accordance with these policies.

Part C- Region Wide Provisions

The most applicable Part C provisions are:

- C3 –Coastal Management (in relation to alteration of the seabed);
- C4- Cultural and Historic Heritage (in relation to nearby archaeological and other sites);
- C11- General Controls (in relation to noise)

Coastal Management

Sections C3.2, C3.3, C3.4, C3.5 and C3.6 set out 'issue' based objectives, policies and methods on coastal natural character, outstanding natural features and landscapes, significant indigenous flora and flora, public access to the coast and tangata whenua values.

The capital/maintenance dredging and disposal operations will have very little effect on coastal natural character in a general sense, other than temporary discolouration, which is more of a visual amenity effect. No outstanding natural features and landscapes are involved, so these objectives and policies are not relevant.

The four objectives and seven policies on significant indigenous flora and fauna are relevant and will be met Objective 1 and Policies 1 and 3 focus on recorded areas that either are currently or could be in the future included within the Significant Values Management Area, rather than Port Management Area, and are not relevant.

The other objectives and policies are of a more general nature. The policies are directed at 'protecting significant habitats from adverse effects' (Policy 2), 'protecting the integrity, functioning and resilience of natural processes and ecosystems' (4), 'encouraging rehabilitation and restoration of habitats where already adversely affected' (5), 'or likely to be damaged or degraded' (6). The findings of 4Sight ecology and water quality report show that the proposal is consistent with these policies.

The objectives and policies on public access to the coast are of very limited relevance. As outlined earlier, no changes are proposed to existing public access arrangements for the port or the OSDG.

The Part C objectives and policies on tangata whenua values, highlight relevant provisions of the NZCPS and 'important concepts to maoridom', including kaitiakitanga, mauri, waahi tapu and mahinga maataitai. Policy 3 states that *"the Council will encourage applicants for coastal permits in the coastal environment to demonstrate that tangata whenua have been consulted."* Consultation with the iwi and whanau organisations known as having interests in the application has been initiated. Further consultation is planned during the Council processing of the applications.

C3 also contains nine sets of objectives, policies and methods, which are 'activity' based. Only C3.9 - Alteration of the Seabed and Foreshore and C10 - Discharges, are relevant. C3.9 covers a range of activities, including 'dredging' and 'deposition'. It notes that these activities "*routinely occur in selected locations*" and "*the effects can be variable*". It goes on to state:

> *"As part of their routine operations the port company dredges the port navigation channels to maintain depth. Without this, dredging sediments would gradually build up to a point that prevented the safe navigation of deep draft vessels to and from the port. The effects of this dredging occur at both the site of the dredging and also off site, usually at spoil grounds at sea"* (page 25).

The section lists five 'issues' and then sets out three objectives and eight policies. All of the objectives and five of the policies are applicable to the proposal. Policy 2 on extraction, Policy 6 on beaches and dunes, and Policy 8 on the Significant Values Management Area are not relevant. The proposed maintenance dredging and disposal operations are consistent with the relevant C3 objectives and policies.

The 4Sight ecology and water quality report shows that Policy 1 on 'indigenous habitats and areas of strategic significance to aquatic species' and Policy 5 on the effects of 'disposal constituents' on specified ecological communities have been given due regard with appropriate mitigation measures being proposed. The report notes that the crayfish settlement within the port is unlikely to be of 'strategic' importance to the wider fishery or its sustainability.

C3.14 contains background material relating to discharges generally, the water classification system and standards mentioned earlier. It makes no specific reference to discharges from port dredging and disposal operations. The three objectives and sixteen policies are also mainly of a general nature, although some relate solely to the city's wastewater discharge to Poverty Bay. With reference to the 4Sight ecology and water quality report the provisions have been given due recognition.

<u>Cultural and Historic Heritage</u>

C4 contains 'general' objectives and policies and specific objectives and policies related to the different heritage alert overlays and waahi tapu notations. The latter are not applicable to the project. The proposed maintenance dredging and disposal operations are consistent with the one general objective and one policy.

General Objective C4.1.3 is directed at "the recognition and protection of the cultural heritage resource". The applications do this in terms of not impacting on the archaeological/heritage sites recorded in the In-Situ report, Te Toka a Taiua near Wharf 6, and the four waahi tapu reefs to the south of the PNC. The underlying General Policy C4.1.4 is directed at Council schedules in the TRMP and not applicable.

<u>General Controls (Noise)</u>

The following parts of C11.2- Noise and Vibration, are applicable to the project:

- C11.2.4 – Objectives for Noise;
- C11.2.5- Policies for Noise,
- C11.2.12 - Objectives for Noise in the Coastal Environment; and
- C11.2.13 - Policies for Noise in the Coastal Environment.

The general objectives and policies for noise are directed at protection of human health and safety and amenity values. The proposed maintenance dredging and disposal operations will achieve this. Policy 2 relating to the coastal environment recognises the special nature of the port and need to effectively manage effects. The proposed activities have been designed and will be monitored to do this.

Part D- Area Based Provisions

The Part D- Area Based Provisions, include DP1- Port Management Area, apply to both the port, including PNC, and the OSDG. Sections DP1.3, DP 1.4 and DP 1.5 set out five objectives, three policies and two methods for activities in the CMA part of the port. Maintenance dredging and disposal are not specifically mentioned. Most of the provisions are 'effects' based, and the proposed dredging and disposal activities are consistent with them.

Port Management Area

Section DP1.3 -Objectives, has five objectives, the first three of which relate to port operations and relevant to the applications. Objective 4 is directed at non port related activities, whilst Objective 5 is directed at the next review of the TRMP, and of limited relevance. Objective 2 is directed at avoiding, remediated or mitigating any adverse effects, which the maintenance dredging and disposal operations are designed to achieve.

Policies 2 and 3 in DP1.4- Policies are also directed at the TRMP review and non-port related activities Policy 1 is the most applicable and requires the Council (as 'consent authority') to "*have particular regard to the need to provide for activities related to the use and service of vessels, the storage…..*". Continued maintenance dredging of the port and disposal of spoils at the OSDG is an integral part of the port being able to 'use and service vessels.'

6.5 Gisborne District Surf Break Identification and Protection Report

This Council report, as outlined earlier, is a relevant 'other matter' to consider under Section 104. The surf break at 'The Island' (Tuamotu) is identified as 'nationally significant'. As noted earlier, it is also scheduled as the same in the NZCPS. The surf breaks at 'Big River' (Waipaoa River mouth), Roberts Rd (Waikanae Beach), 'The Pipe' (Midway Beach) the Cliff (Sponge Bay) and Sponge Bay are all identified as 'regionally significant'. The 4Sight plan in **Figure 49** shows the approximate locations of the identified surf breaks in relation to the Port and OSDG.

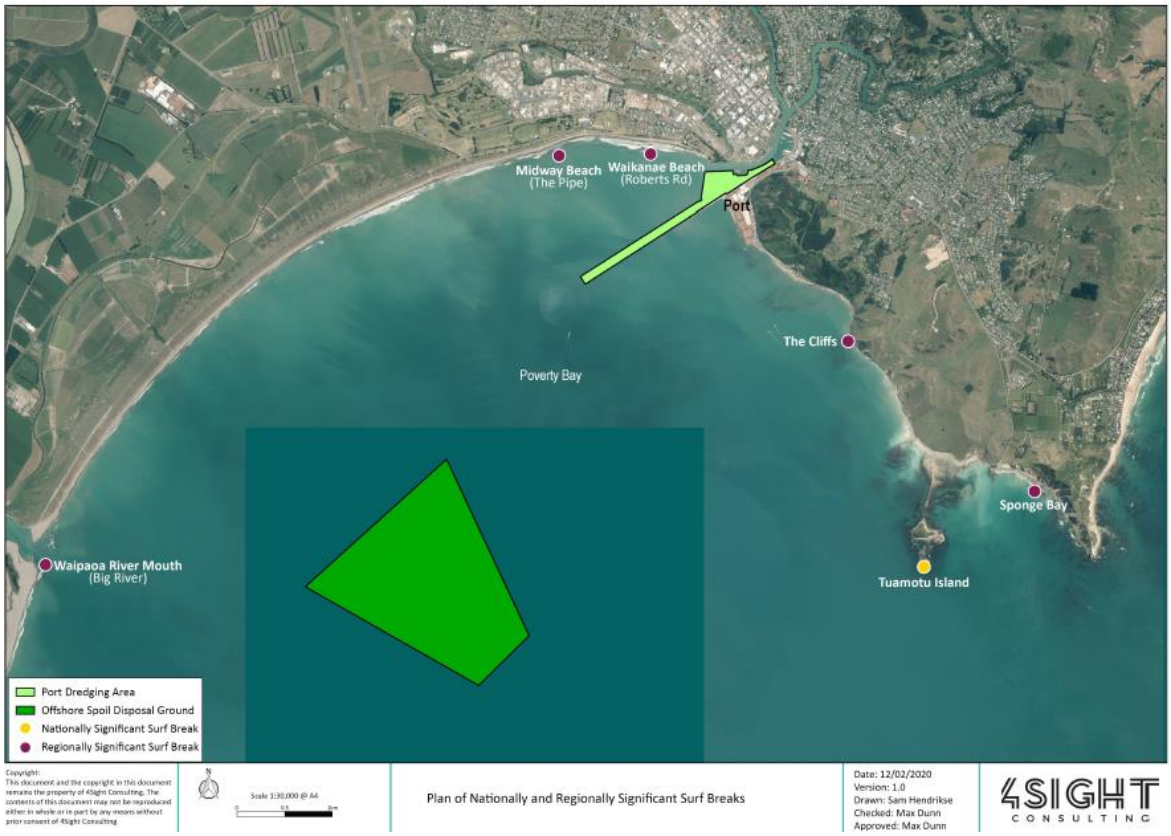


Figure 49: Plan of Nationally and Regionally Significant Surf Breaks in Poverty Bay

The report has ten chapters along with seven appendices. Appendix 6 contains descriptive material on the different surf breaks and their 'significance'.

The MetOcean report entitled *Surfing Wave Dynamics at Midway Beach, Gisborne,* notes the locations of recognised surf breaks in the Bay and their relative distances from the Port maintenance dredging and OSDG, with reference to the 4Sight plan and other plans. Section 2- Methods, of the report explains the wave hindcast, surfing wave analysis, and numerical near shore wave modelling methods used, whilst Section 3- Results, sets out the results in relation to the general and surfing wave climate (Section 3.1) and nearshore wave modelling (Section 2.2). Section 4 - Conclusions summarises the results, which are also in Section 11- Surfing Waves Dynamics of MetOcean *Report Summarising Findings*.

The key findings in the two reports are:

- The analysis of the wave climate was undertaken using a 10-year time-series of wave parameters extracted from a high-resolution wave hindcast implemented in a previous study found that Poverty Bay is exposed to a relatively narrow incidence wave angle window (140-170°T) due to refraction and diffraction processes around the bay headlands and as the waves propagate into the bay. A large majority (>80%) of swell-dominated events favourable for surfing conditions approach the sites with incidence directions between 150-160°T.
- The surf break at the Waipaoa River (i.e. Big River), does not rely on any pre-conditioning of the incident wave fields, but rather is reliant on banks controlled by the high volume river which creates consistently moving sand and shingle banks. Modelling suggests that under worst case conditions (i.e. maximum disposal mound height inclusive of both maintenance and capital dredge material and neglecting any potential morphological response) the inshore wave heights expected to be modified by an order of approximately 0.2%, with the location dependent on the incident wave direction. This is expected to have a negligible effect on recreational surfing conditions at Big River, i.e. an increase/decrease in in wave height is not expected to exceed 1cm.
- The nearshore phase-resolving wave propagation modelling illustrated that significant wave focusing develops over the offshore submerged reef system which redirects wave energy specifically towards the Midway Beach area. This is combined with wave crest 'snapping which is expected to further increase the surfability of the wave field reaching the beach. The existing shipping channel and the associated maintenance dredging required to maintain the channel are expected to have only a less than minor impact on surfing along Waikanae and Midway beaches. This is attributed to the relatively small deepening of the outer channel (compared to what would be expected) and the approximate perpendicular angle of the channel relative to the incident wave direction. Further, the general channel footprint lies outside of the focused beam of wave energy developing during best, and most frequent, wave incidence for favourable surfing conditions at Midway Beach (150-160°T).

6.6 NZ Coastal Policy Statement

The purpose of the NZCPS is to promote the sustainable management of natural and physical resources in relation to the coastal environment. Local authorities are required by the Act to give effect to the NZCPS through their plans and policy statements.

The NZCPS has seven (7) objectives and twenty-nine (29) policies, along with a schedule and glossary.

The schedule on surf breaks of national importance is relevant to the proposal because, as outlined earlier, 'The Island' (Tuamotu) is in it. This surf break is approximately 5km to the south-east of the port and approximately 4km to the east of the OSDG 4km from the port and OSDG, as shown in **Figure 49**.

Most of the objectives and policies are relevant to the project. The policies on the Treaty and related matters, activities in the coastal environment, ports, indigenous biological diversity (biodiversity), natural character, surf breaks of national importance, sedimentation and discharge of contaminants are most pertinent to the proposal. There are no specific objectives and policies on dredging and disposal. The following assessment of the NZCPS provisions is provided.

Policy 2 - Treaty of Waitangi, Tangata Whenua and Maori Heritage

This policy lists seven treaty and related kaitiakitanga matters. Clause (b) and parts of Clauses (c) (d) and (e) are directed at Council policy statement/plan preparation and of limited relevance to the applications.

The other clauses are met in terms of this AEE and the Eastland Port consultation with tangata whenua to date recognising the relationship they have with the port area and wider bay.

Policy 6 - Activities in the Coastal Environment

Policy 6 has two parts, neither of which specially mention maintenance dredging or disposal of associated material.

Part (1) lists ten matters that are to 'be recognised, considered or taken into account' in relation to the 'coastal environment', whilst Part (2) lists a further five additional matters in relation to the CMA. As such both are applicable.

Most of the Part (1) matters are directed at land-based activities in the coastal environment and of limited relevance.

Part 2(a) directs consideration of the potential contributions to the social, economic and cultural wellbeing of the community from use and development of the CMA, whilst Part 2(c) recognise that some activities have a functional need to be within the CMA, which is the situation with the applications under consideration.

Policy 9 - Ports

This policy recognises the need for safe and efficient ports. The proposed maintenance dredging and disposal activities are required for the continued safety and efficiency of the port.

Policy 11 - Indigenous Biological Diversity (Biodiversity)

Part (a) of this policy focuses on 'at risk', 'threatened' and 'nationally significant' species. No such species are affected by the proposal, as set out in Section 6.1 of the 4Sight ecology and water quality report. The same report shows that appropriate regard has been had to more general matters listed in Part (b).

Policy 13 – Preservation of Natural Character

This policy has two parts, both of which are applicable to the applications.

Part (1) is directed at 'avoiding adverse effects in areas of outstanding natural character' (Clause a) and 'avoiding, remedying and mitigating other effects' on natural character in all other areas (Clause b). The port and OSDG areas are not recorded or assessed as being of 'outstanding natural character'. As outlined in this AEE and the supporting 4Sight ecology and water quality report, the dredging and disposal operations and associated consent conditions will ensure that Clause b is met.

Part (2) notes that the assessment of natural character is not the same as natural features/landscapes/amenity values and lists eight matters that may be included in the assessment. All of the matters listed have been considered in the 4Sight report assessments in support of the applications.

Policy 16 – Surf Breaks of National Importance

This policy refers to surf breaks listed in the schedule and is in two parts. Part (a) is directed at ensuring that activities generally do not adversely affect them, whilst part (b) is a more specific and directed at ensuing that public access and enjoyment of them is maintained.

The NZCPS does not describe or show the location of 'The Island' surf break, which as noted earlier is approximately 5km to the south-east of the port and approximately 4km to the east of the OSDG. As outlined in the MetOcean reports, the maintenance dredging and disposal operations will have less than minor adverse effects on coastal processes in Poverty Bay, including the surfing wave dynamics at the Island surf break. Section 4 of the *Surfing Wave Dynamics at Midway Beach, Gisborne* Report, notes that the maintenance dredging operations are not expected to have any effect on surfing at Tuamotu Island.

Policy 22- Sedimentation

This policy is of limited relevance to the applications and more directed at land-based activities that give rise to sedimentation in coastal waters. In terms of Clause (1) Eastland Port regularly monitor, through the annual hydrographic surveys, sedimentation levels and 'their impacts on the coastal environment'.

Policy 23 - Discharge of Contaminants

Only parts (1) and (5) of this policy are applicable. Clause (b) of part (5) covers the disposal of dredged material. This matter, along with the other 'ports' provisions in part (5) are referenced in the 4Sight ecology and water quality report.

6.7 Part 2 Considerations

Section 5

Section 5 sets out the purpose of the act, which is to:

> *"…promote the sustainable management of natural and physical resources…in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while*
>
> *(a) sustaining the potential of natural and physical resources to meet the reasonably foreseeable needs of future generations; and*
>
> *(b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*
>
> *(c) avoiding, remedying, or mitigating any adverse effects of activities on the environment..."*

The proposal is consistent with the purpose of the Act. It will provide for ongoing efficient operation of the port, whilst avoiding or mitigating the potential adverse effects.

Section 6

Section 6 lists matters of national importance to be recognised and provided for in relation to the Act's purpose.

The following matters are relevant to the proposal: -

(a) *The preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use and development;*

(c) The protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna;

(d) The maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers;

(e) The relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga;

(f) The protection of historic heritage from inappropriate subdivision, use and development;

(g) The protection of recognised customary practices.

Clause (b) relating to the protection of 'outstanding natural features and landscapes from inappropriate subdivision use and development' is not relevant. The port maintenance dredging and offshore disposal ground sites are not within, nor adjacent to, any such features or landscapes.

The other matters listed will also be met, primarily for the reasons outlined above in relation to the assessment of the underlying TRMP provisions. They are of a very similar nature and in some respects more detailed and/or prescriptive.

Section 7

Section 7 lists further matters which applicants and consent authorities are to have regard to.

Most of the matters listed in Section 7 are relevant to the proposal, these being:

(a) Kaitiakitanga;

(aa) The ethic of stewardship;

(b) The efficient use and development of natural and physical resources;

(c) The maintenance and enhancement of amenity values;

(d) Intrinsic values of ecosystems;

(f) Maintenance and enhancement of the quality of the environment;

(g) Any finite characteristics of natural and physical resources;

(i) The effects of climate change;

Clause (e) has been repealed, whilst Clauses (ba) and (j) relating to energy use are of limited, if any, relevance.

The term kaitiakitanga is defined as *"the exercise of guardianship by the tangata whenua of an area in accordance with tikanga Maori in relation to natural and physical resources; and includes the ethic of stewardship."* (Section 2 refers). The proposal is consistent with this matter and the other abovementioned provisions.

Section 8

Section 8 requires all persons to take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi). This is being done in terms of the process of consultation underway with tangata whenua organisations.

7 SUMMARY

The proposed maintenance dredging and disposal operations for the PNC, VTB, and Wharves 4-8, at the Port of Gisborne require coastal permits under Section 12 of the RMA and related TRMP rules. They are either controlled or discretionary activities.

This AEE report has fully described the proposed activities with reference to expert coastal engineering, ecology, archaeology and noise reports and plans, along with the relevant RMA and TRMP provisions. It also explains the proposed terms and conditions upon which the coastal permits are being sought. This includes the twenty (20) year term sought for the coastal permits.

The report has fully assessed the environmental effects of the proposal. They are subject to the proposed consent conditions considered to be 'acceptable' for the controlled and discretionary activities involved.

The effects of the ongoing maintenance dredging and disposal operations on the 'site' and 'adjacent land', being the port and OSDG seabed, are 'less than minor' and do not require public notification. However, in light of the statutory acknowledgements relating to Ngati Porou, Rongowhakaata and Ngai Tamanuhiri, as well as notification obligations under the Ngati Porou Act, it is proposed that Ngati Oneone (as the relevant hapu of Ngati Porou) Rongowhakaata and Ngai Tamanuhiri are limited notified of the applications.

Consultation with the PCLG, local iwi,hapu and whanau with recorded interests in the port and wider bay has recently been initiated, and will be further progressed during the initial Council consent processing. Several conservation, fisheries, heritage and recreational organisations are to be advised of the applications following lodgement with the Council. The outcomes of the consultation with the different parties will be reported to the Council in due course.

The AEE and accompanying reports identify several adverse effects avoidance and mitigation measures that have been built into the project, along with some ongoing monitoring measures, to ensure that the effects are of an 'acceptable' nature. Draft consent conditions have also been proposed to show how the different measures are to be implemented during the respective maintenance dredging and disposal operations.

The AEE finds that the proposal satisfies Part 2 of the RMA. It is consistent with the Resource Management Marine Pollution Regulations, NZ Coastal Policy Statement, TRMP and other relevant planning documents.