

# Resource Consent

## Resource Consent 65566-AP

Following the processing of the Application received on the 30 October 2008, the Bay of Plenty Regional Council has granted the applicant(s):

Crown Regional Holdings Limited

Consent(s) to:

65566.0.01-CC+	Coastal Structure	Expiry	31 August 2044
65566.0.02-CC	Disturb Coastal Habitat or Plants	Expiry	31 August 2044
65566.0.03-DC	Discharge to Water	Expiry	31 August 2044
65566.0.04-CC	Disturb Coastal Habitat or Plants	Expiry	31 August 2044
65566.0.09-CC	Coastal Damming and Diversion	Expiry	31 August 2044
65566.0.10-WT	Coastal Water Take	Expiry	31 August 2044

The consent(s) are subject to the conditions specified on the attached schedule(s) for each activity. Advice notes are also provided as supplementary guidance, and to specify additional information to relevant conditions.

**The Resource Consent** hereby authorised is granted under the Resource Management Act 1991 does not constitute an authority under any other Act, Regulation or Bylaw.

DATED at Whakatane this 29th day of July 2009

For and on behalf of The Bay of Plenty Regional Council



**Fiona McTavish**  
Chief Executive



**Thriving together -  
mō te taiao,  
mō ngā tāngata**

The transfer of the whole of this resource consent was approved under delegated authority of the Bay of Plenty Regional Council dated 10 August 2021

## Bay of Plenty Regional Council

### Resource Consent

Pursuant to the Resource Management Act 1991, the **Bay of Plenty Regional Council**, by a decision dated 29 July 2009, **hereby grants**:

A resource consent:

- **Under section 12(1)(b) of the Resource Management Act 1991 and rule 13.2.4(h) of the Bay of Plenty Regional Coastal Environment Plan to undertake a discretionary activity being to Erect, Maintain and Remove Temporary and Permanent structures in, on, under or over the Foreshore and Seabed**

subject to the following conditions:

#### 1 Purpose of this Resource Consent

1.0 To undertake the following activities associated with the Opotiki Harbour Entrance project:

- Removal of material from the foreshore and seabed []
- Discharge of sediment, slurry water and sediment-laden stormwater to the coastal marine area (from dredging activities, earthworks and construction activities) []
- Disturbance of the foreshore and seabed []
- Take of coastal water []
- Diversion of coastal water []
- Erection and removal of temporary structures []
- Erection and maintenance of permanent structures that are not covered by consent 65563 (geocontainer bank reinforcement less than 300m in length, geo-container dyke)

#### 2 Location

2.0 Pakihikura (the Waioeka river mouth), Opotiki as shown on BOPRC Plan Number RC 65563/1

#### 3 Map Reference

3.0 The area is bounded by approximate map references NZMS 260 W15:8461-4821, W15:8469-4705, W15:8587-4699, W15:8563-4817

#### 4 Legal Description

4.0 Coastal Marine Area, Crown land, Sections 1-3 SO 8737, Allotments 436- 439 Waiotahi Parish, Sections 24-31, 31A, 32- 43 Opotiki Suburbs Block III (Opotiki District)

#### 5 Pre-Construction Requirements

5.1 The consent holder shall prepare and submit full engineering design details (including results of modelling, design assumptions used in the modelling process, plans and specifications) for all structures and the entrance channel realignment associated with the Opotiki Harbour Entrance project to the Chief Executive of the Bay of Plenty Regional Council or delegate, for approval at least 40 working days prior to the proposed date for commencement of works (see Advice Notes 1, 2 and 24). The purpose of this approval process is to ensure compliance with the conditions of this consent.

The detailed design process should involve review by suitably qualified and experienced, independent experts in the fields of engineering, landscape and ecology and expressly provide for

the following:

- The structural integrity of the structures authorised by this consent. In particular, development of the detailed design should take into account the following:
  - River flows into the entrance at the upstream end of the training walls to determine local scour effects and the potential for turbulence to be set up in the channel.
  - The stability of scour aprons under construction and long term wave loadings;
  - Optimisation of the armour size.
  - Stability of the geocontainers under wave attack and current.
  - Scour potentials at the outer head of the structures.
  - River closure dynamics.
- Location of the structures authorised by this consent as far landward as practicable (taking into account other constraints);
- Use of the most up-to-date flood frequency analysis for the Waioeka and Otara Rivers in the design flood flow assumptions;
- Demonstration that flood levels in the Waioeka and Otara River will not be increased following construction of the new harbour entrance during a 100-year return flood event (see condition 8.13);
- Additional information on the sediment characteristics beneath the line of the proposed entrance channel - particularly with regard to scour resistance and seismic activity - and demonstration that adequate scour protection has been provided;
- A description of the intended construction materials;
- Outline future maintenance requirements;
- Integration of the structures with the landscape, natural character and ecological features of the coastal environment in the vicinity of the works;
- Restoration of dune landforms and vegetation where they interface with structures; and
- Inclusion of cultural elements in the training wall structures where practicable.

5.2 The consent holder shall prepare and submit a Construction Management Plan (CMP) for all construction works authorised by this consent to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval, at least 40 working days prior to the proposed date for commencement of works (see Advice Notes 1, 2 and 24). The purpose of this document is to demonstrate how the consent holder will manage activities during construction to avoid, remedy or minimise environmental effects and achieve compliance with the conditions of this consent. The CMP shall be developed using the engineering design details approved in accordance with condition 5.1 of this consent and shall include, but not be limited to:

- A detailed construction methodology for all works (to include how works will be sequenced/staged to minimise adverse environmental effects);
- Demonstration that a Floodway and Drainage bylaw authority has been obtained for the works (if necessary)(see Advice Note 4);
- Demonstration that an authority has been obtained for the works under the Historic Places Act 1993 (see Advice Note 3);
- The name and 24-hour contact details of the site manager supervising the works (including the refuelling and plant) as well as the contact details for all contractors working on site;
- Roles and responsibilities of key personnel for the implementation of this consent, including appointment of a representative to be the primary contact person in regard to matters relating to this consent;
- General site management measures, including:
  - waste/litter disposal
  - effluent disposal
  - security
  - location of stockpiles
- Complaints register and reporting procedure;
- Incident register and reporting procedure;
- Evidence that a suitably qualified engineer(s) has been appointed to carry out the overall design, supervision and certification of the works (including construction of all erosion and sediment controls);
- Construction monitoring, record-keeping and maintenance requirements;
- An accidental discovery protocol for dealing with koiwi or taonga unearthed during construction activities, developed in consultation with Whakatohea Maori Trust Board.

5.3 The consent holder shall prepare and submit an Environmental Mitigation and Remediation Plan (EMP) for all construction works authorised by this consent to the Chief Executive of the Bay of Plenty Regional Council or delegate, for approval, at least 40 working days prior to the proposed date for commencement of works (see Advice Notes 1, 2 and 24). The purpose of this document is

to demonstrate how the consent holder will manage activities during construction to avoid, remedy or minimise environmental effects and rehabilitate the site after construction works have been completed to achieve compliance with the conditions of this consent (in particular conditions 8 Works, 10 Water Quality Standards and 11 Post Construction Mitigation and Remediation). The consent holder shall consult with the technical liaison group required by condition 5.4 of this consent during the development of this plan. The EMP shall include, but not be limited to:

- Identification and mapping of areas (such as dotterel nesting sites, indigenous vegetation) sensitive to disturbance by construction activities and measures to protect against such disturbance;
- Establishment and clear delineation of construction vehicle/machinery movement tracks (including the western access track) that limit disturbance to sensitive areas;
- Measures to be taken to provide for navigational aids and the management of vessels using the Harbour entrance during construction;
- Measures that will be taken to ensure that the construction works will comply with the New Zealand Standard NZS 6803.1999 Acoustics - Construction Noise (or its successor) or where it is not practicable to meet these standards, the duty under section 16 of the Resource Management Act 1991 to adopt the best practicable option to avoid unreasonable noise;
- Measures to be taken to ensure that the works authorised by this consent do not cause the water quality standards listed in condition 10 to be exceeded beyond the zone of reasonable mixing (see Advice Note 6);
- Procedures to prevent the discharge of hazardous substances or other contaminants into the coastal marine area or onto vegetation (see Advice Note 7);
- Procedures to minimise the discharge of sediment into the coastal marine area;
- Measures that will be taken to minimize the risk of fuel entering coastal or estuarine waters during refueling, especially where refueling occurs within 20 m of the coastal marine area;
- Details on how coastal process modeling will be used to mitigate environmental impacts during dredging operations and other construction related activities (see Advice Note 8);
- Measures to be undertaken to maintain and monitor the existing river entrance channel during construction, including:
  - Minimum river channel dimensions.
  - Monitoring methodology, frequency and reporting.
  - Procedures to manage stockpiled material to prevent additional flood risk or breach.
  - A contingency plan to address the risk of excessive sediment accumulation between the existing river mouth and the western training wall during construction (that could constrict the river mouth and increase flood risk).
- Measures to be taken to minimise the adverse effects of night-time lighting (see condition 8.14);
- Steps that will be taken to mitigate and rehabilitate the site post-construction (in particular to ensure compliance with conditions 11 of this consent);
- Steps that will be taken to mitigate for the loss of Dotterel habitat as a result of the works authorized by this consent (in particular to ensure compliance with condition 11.1 of this consent);
- Measures that will be taken to educate contractors regarding the requirements of the relevant resource consents and management plans, and environmental management; and
- Measures that will be taken to re-nourish beaches and replant dune systems immediately post-construction and subsequently following coastal setback. In particular, the EMP shall include, but not be limited to, the following information:
  - Identification of the plant species to be used for revegetation in each area on a plan or schedule (including all new areas of sand-dune, all existing areas of sand dune that will be affected by the harbour entrance works and areas of potential setback post-construction);
  - Desired planting density (see Advice Note 15);
  - Fertiliser application (including use of a controlled-release fertiliser at planting and post-planting fertiliser use);
  - A programme for revegetation following coastal set-back that exceeds the trigger set in condition 12.29 of this consent;
  - Weed management and pest control activities to be undertaken;
  - A programme for maintenance for a period of at least three years following completion of initial planting (maintenance activities may include the exclusion of pest browsers, the removal of weeds and replacement planting); and
  - A programme for ensuring adequate supply of plants (such as ordering and growing in advance).

5.4 The consent holder shall establish a technical liaison group to provide input during the development and implementation of the Environmental Mitigation and Remediation Plan required by condition 5.3 of this consent. The consent holder shall, as a minimum, invite representatives from the

following organisations to form part of the technical group: Environment Bay of Plenty, Waiotahi Coast Care, Department of Conservation, Whakatohea Maori Trust Board and Opotiki District Council (see Advice Note 9). The functions of the Technical Liaison Group are to:

- Review and provide constructive comment on the content of the detailed designs and EMP prior to its submission to the Regional Council; and
- Review and provide constructive comment on the implementation of the EMP.

- 5.5 The consent holder shall prepare, submit and implement a Site-wide Contingency Plan (SCP) for the contaminant of spills to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval at least 40 working days prior to works commencing (see Advice Notes 1, 2 and 24). The purpose of this document is to demonstrate how the consent holder will manage activities during construction to avoid, remedy or minimise environmental effects of unintended discharges and achieve compliance with the conditions of this consent (in particular, conditions 8.6, 8.7, 8.8 and 8.9). The contingency plan shall:
- Identify potential contaminants that will be used or stored on site (see Advice Note 7);
  - Identify designated contaminant storage facilities and re-fuelling locations;
  - Require that these locations to be bunded, and that machinery should be parked overnight or long-term only in these designated areas;
  - Require that all mobile fuel tankers carry spill kits and that spill kits are stored at bulk storage tank locations at all times;
  - Detail the contents of the spill kits, including absorbent pads, booms, pillow and socks and appropriate pegs/rope to hold the absorbent material in place;
  - Record the names of operators trained in spill response and remediation;
  - Detail an internal and external notification procedure of any spills; and
  - Identify measures to be undertaken to remediate a contaminant spill.
- 5.6 The consent holder shall develop and submit a Monitoring and Review Plan (MRP) for the Harbour Entrance Project to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval at least 40 working days prior to the proposed date for commencement of works (see Advice Notes 1, 2 and 24). This Plan shall outline how the potential environmental effects associated with the project are to be monitored (including monitoring methodologies, monitoring frequency and how results will be analysed and reported to the Regional Council). The MRP shall also provide for baseline monitoring, triggers for further monitoring or mitigation action and a description of what further monitoring and/or mitigation action may be required. Conditions 12.1 to 12.30 describe in further detail the matters that should be covered by this Plan.
- 5.7 Construction shall not commence until written approval of the designs and plans required by conditions 5.1, 5.2, 5.3, 5.5 and 5.6 of this consent has been received by the consent holder from the Chief Executive of the Bay of Plenty Regional Council or delegate.

## 6 Notification of Works

- 6.1 Not less than 20 working days prior to the start of the Opotiki Harbour Access works (including site preparation), the consent holder shall, in writing, notify the Chief Executive of the Bay of Plenty Regional Council or delegate, the Eastern Bay of Plenty Harbourmaster, the Department of Conservation and Whakatohea Maori Trust Board of the intent to start works (see Advice Note 1).
- 6.2 Not less than 20 working days prior to the start of the Opotiki Harbour Access works (including site preparation), the consent holder shall, in writing, request a site meeting between all relevant parties, including all contractors and relevant local authorities, prior to any works commencing on the site to discuss implementation of the construction management plan and environmental management measures (see Advice Note 1).
- 6.3 Not less than 10 working days prior to the commencement of the Opotiki Harbour Access works (including site preparation), the consent holder shall place notices in the local newspapers and on local radio stations (see Advice Note 10). These notices shall include, at a minimum, the following information:
- The date on which works are intended to commence;
  - The location and areas affected by the works;
  - The anticipated duration of the works; and

- The restrictions that will apply to public access and navigation.
- 6.4 A copy of this consent shall be kept at the construction site at all times until the works required to construct the new harbour entrance are complete.
- 6.5 The consent holder shall provide a copy of this consent and all documents referred to in this consent to any operator or contractor undertaking works authorised by this consent, prior to the works commencing.
- 6.6 Not less than 10 working days prior to undertaking any maintenance works under this consent, the consent holder shall, in writing, notify the Chief Executive of the Bay of Plenty Regional Council or delegate, Eastern Bay of Plenty Harbourmaster, the Department of Conservation of the intent to start works (see Advice Note 1).
- 6.7 Not less than three days prior to undertaking any maintenance works under this consent that will cause a restriction to navigation, the consent holder shall place notices in the local newspapers and on local radio stations (see Advice Note 10). These notices shall include, at a minimum, the following information:
- The date on which works are intended to commence;
  - The location and areas affected by the works;
  - The anticipated duration of the works; and
  - The restrictions that will apply to public access and navigation.

## 7 Signage

- 7.0 Prior to the commencement of the Opotiki Harbour Entrance project (including site preparation), the consent holder shall erect a prominent sign adjacent to the main entrance to the site, and maintain it throughout the period of the works. The sign shall clearly display, as a minimum, the following information:
- The name of the project and the consent holder;
  - The principal contractor;
  - A 24-hour contact telephone number for the consent holder or appointed agent;
  - A clear explanation that the contact telephone number is for the purpose of receiving complaints and information from the public about the Opotiki Harbour Entrance project; and
  - Restrictions to public access and navigation.

## 8 Works

- 8.1 All construction, dredging and earthworks shall be carried out in general accordance with the following:
- BOPRC Plan Number RC 65563/2;
  - The detailed designs (approved in accordance with condition 5.1 of this consent);
  - Construction Management Plan (approved in accordance with condition 5.2 of this consent);
  - Environmental Mitigation and Remediation Plan (approved in accordance with condition 5.3 of this consent);
  - Spill Containment Plan (approved in accordance with condition 5.5 of this consent);
  - Monitoring and Review Plan (approved in accordance with condition 5.6 of this consent).

Any amendments to the plans referenced in this condition shall be submitted to the Chief Executive of the Regional Council or delegate for review to ensure that they remain consistent with the conditions of this consent. Amended plans shall not be implemented until written approval has been received from the Regional Council.

- 8.2 The consent holder shall monitor the structures during construction to ensure that they do not represent a danger to the public.
- 8.3 The works associated with this consent shall be carried out under the supervision of a Chartered

- 8.4 Disturbance to the foreshore and seabed shall be minimised as far as practicable. This includes, but is not limited to, the following measures:
- Minimising machinery movements on the foreshore to the minimum necessary to achieve the purpose of this consent;
  - Building structures progressively from the land out to sea;
  - Locating machinery on structures (rather than on the foreshore/seabed); and
  - Completing each section of works as quickly as practicable.
- 8.5 Machinery and vehicles used to undertake the works shall be clean and well-maintained. In particular:
- Machinery and vehicles should be cleaned to remove surface hydrocarbons, seeds and other contaminants before entering site;
  - Hydraulic hoses shall be inspected and replaced when necessary to avoid failure whilst working in the coastal marine area;
  - Vegetable oil shall be used in place of hydraulic fluid wherever practicable;
  - Machines to be used in the coastal marine area shall be fitted with sealed bearings and grease caps for moving parts; and
  - All machinery is to be regularly maintained (including hydraulic hoses) in such a manner so as to minimise the potential for leakage of contaminants.
- 8.6 No fuel storage or machinery/vehicle maintenance shall be carried out within the western construction compound(s), the coastal marine area, on the foreshore or within 20 m above mean high water springs.
- 8.7 Any fuel or other hazardous substances stored on site shall be stored within portable containers so that they can be removed from the site if needed due to flood or storm events.
- 8.8 Refuelling shall only occur within the coastal marine area, on the foreshore or within 20 m above mean high water springs if it is the most practicable option and appropriate measures have been put in place to avoid or minimise any fuel or hydrocarbon spillage, including the provision of appropriate security and containment measures, where necessary.
- 8.9 The consent holder shall take all practicable measures to prevent cement dust and non-stabilised cement slurries from entering coastal or surface water. These measures shall include but not be limited to the following (see Advice Note 11):
- Ensuring appropriate controls are in place before the use of cement begins to contain and remove all cement contaminated waste and to prevent any discharge of waste water to fresh or storm water;
  - Ensuring clean storm water is diverted away from the work area;
  - Immediately containing and cleaning up any spills that occur to the satisfaction of Regional Council staff;
  - Containing all cement particles and dust within the works area and removing all cement particles and dust immediately after the completion of the work. Cement waste must be reused within the work area or disposed of at an appropriate facility;
  - Ensuring cement is allowed to fully set and there are no loose cement particles or dust residue remaining before allowing any natural flow of water back over it; and
  - Creating a designated wash down area on site for vehicles and equipment and ensuring staff know this is available.
- 8.10 The best practicable option shall be used to minimise the discharge of sediments resulting from construction works into coastal and estuarine waters. The consent holder shall detail the measures to be used in the EMP required by condition 5.3 of this consent.
- 8.11 For each year during construction, the consent holder shall fence off and signpost Dotterel nesting sites located on the eastern spit during the Dotterel breeding and nesting season (15 August to 29

February inclusive). The Department of Conservation shall be consulted regarding the areas that should be fenced. Fencing shall be erected by 14 August each year and may be removed from 1 March of the following year.

- 8.12 The construction compounds shall be fenced so as to contain the storage and construction area and to protect the surrounding dune landforms and vegetation.
- 8.13 The activities undertaken under this consent shall not result in an increase in the 100-year return period flood levels within the Waioeka and Otara Rivers at the following locations (see Advice Note 12):
- The Waioeka/Otara River confluence; or
  - The Waioeka Bridge; or
  - Approximately 850m upstream of Otara Bridge.
- 8.14 All exterior lighting associated with the construction activity shall be managed so as to avoid the spill of light or glare that might be:
- Detrimental to other users; or
  - Detrimental to wildlife; or
  - A hazard to navigation in the coastal marine area;
- unless such lighting is necessary for reasons of public safety or operational safety.
- 8.15 In the event of any archaeological site or koiwi being uncovered during the exercise of this consent, activities in the vicinity of the discovery shall cease. The consent holder shall contact the Regional Council, the Historic Places Trust and the relevant iwi authority (as identified in the Accidental Discovery Protocol required by the Construction Management Plan). The consent holder shall follow the Accidental Discovery Protocols (ADP), and shall not recommence works in the area of the discovery until the requirements of the ADP have been met (see Advice Note 1).
- 8.16 All plant, machinery, equipment, debris and construction materials, not associated with the permanent structures, shall be removed from the foreshore and coastal marine area at the completion of works.
- 8.17 All metal used to surface construction access tracks that are no longer required for maintenance shall be collected and removed at the completion of the works.
- 8.18 The consent holder shall ensure that all permanent structures erected under this consent are appropriately marked and/or lit to provide for navigation in accordance with the directions of the Eastern Bay of Plenty Harbourmaster.
- 8.19 The consent holder shall ensure that the capital works authorised under this consent are completed within a period of no longer than five years following their commencement.

## 9 Timing of Works

- 9.1 Construction activity (including site establishment works) shall not commence on the western end of the eastern spit, as shown on Plan number BOPRC 65563/3, during the period 15 August to 29 February inclusive (the Dotterel breeding and nesting period). (See Advice Note 13).
- 9.2 Construction activity within the Estuary, on the western sand spit or on the area of the eastern sand pit not included in condition 9.1 shall not commence during the period 1 October to 31 January inclusive (the Dotterel nesting period). (See Advice Note 13).
- 9.4 Works to divert the flow of the Waioeka River (the River realignment) shall not be undertaken during the inanga migration season (1 August - 31 October inclusive).

- 9.5 Maintenance works that require vehicle access on the sand spits shall not be undertaken during the period 1 October to 31 January inclusive (the Dotterel nesting period).

## 10 Water Quality Standards

- 10.1 The zone of reasonable mixing for discharges associated with dredging activities is defined as being within a 200 m radius of the excavation (dredging) site.
- 10.2 Background water quality is defined as being 500 m upstream/up-current of the most upstream/up-current dredging or construction site.
- 10.3 Dredging and associated discharge activities undertaken during the period 1 December to 29 February (inclusive) shall not result in a decrease in water clarity (as measured by the black disk method) of more than 50% below background levels, beyond the zone of reasonable mixing (see Advice Notes 21-23).
- 10.4 Dredging and associated discharge activities undertaken during the period 1 March to 14 August (inclusive) shall not result in a suspended solids concentration within the water column beyond the zone of reasonable mixing that is more than 150g/m<sup>3</sup> above the background levels.
- 10.5 The consent holder shall ensure that all other construction works authorised by this consent, and consents 64465 and 65565 that authorise reclamation and earthworks associated with the Harbour Access Improvement project do not result in any of the following effects in estuarine or coastal waters following reasonable mixing (see Advice Note 6):
- The production of conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
  - Any conspicuous change in colour or visual clarity;
  - Any emission of objectionable odour;
  - Significant adverse effects on aquatic life;
  - Water rendered unsuitable for bathing due to poor visual clarity and/or the presence of contaminants;
  - Undesirable biological growths;
  - A water temperature change of more than 3 degrees C;
  - The concentration of dissolved oxygen to fall below 80% of saturation concentration; or
  - Aquatic organisms rendered unsuitable for human consumption due to the presence of contaminants.

For the purpose of this consent, the reasonable mixing area is within a 200 m radius of any individual area of construction activity.

## 11 Post-construction Mitigation and Remediation

- 11.1 The consent holder shall establish an area that is approximately one hectare on the post-construction western spit that provides suitable habitat for NZ Dotterel nesting. That area shall be maintained using weed and predator control for a period of five years. Suitable habitat consists of flat open sand and planting on the southern perimeters.
- 11.2 The consent holder shall reshape and replant any areas affected by the works (including access tracks and construction compounds) and the newly created dune systems with appropriate plants. Indigenous species shall be used with a preference for locally sourced seed stock wherever practicable (see Advice Note 14).
- 11.3 The consent holder shall erect and maintain six interpretative signs approximately 1.5 m x 1.0 m in size that provide information on:
- The cultural and heritage values of the site;
  - The ecological and conservation values of the site;

- The Harbour Development Project; and
  - Appropriate access routes to and through the sand-dunes and Huntress Creek Conservation Area.
- 11.4 The consent holder shall fence the Huntress Creek Conservation Area, as shown on Plan Number BOPRC RC65563/4, along its northern boundary and along the legal road boundaries that pass through the conservation area. The Department of Conservation shall be consulted regarding the materials used to construct this fencing.
- 11.5 The consent holder shall make appropriate provision for public access to the new Harbour entrance. This access shall be in general accordance with the outline shown on Plan Number BOPRC 65563/5 and shall provide:
- Vehicle access to a sandy road head (consisting of bollards, rope and a signboard) on both sides of the training walls;
  - Delineation of foot tracks (using planting) along the southern side of the river closure and bank protection structures authorised by this consent that guide visitors away from potential dotterel nesting areas; and
  - Creation of a loop track in the Huntress Creek Conservation Area (see Advice Note 17).
- 11.6 Any sand used for beach and dune renourishment shall be of a comparable size and colour to the natural sediments present at the deposition site.
- 11.7 The mitigation and remediation works associated with this consent shall be carried out under the supervision of a suitably qualified terrestrial ecologist.
- 11.8 The consent holder shall conduct an official opening ceremony for the new Harbour Entrance in accordance with iwi protocol.

## 12 Monitoring and Review

- 12.1 The consent holder shall develop and implement a programme to monitor the effects of the new Harbour Entrance on water levels in the Waioeka and Otara Rivers. This monitoring shall encompass an area from the river-mouth to immediately downstream of State Highway 35.
- 12.2 The consent holder shall develop and implement a three-dimensional monitoring programme for salinity within the Waioeka Estuary. Baseline and post-construction monitoring should be undertaken. Each set of monitoring should be undertaken under a variety of conditions, including but not limited to:
- Dry and wet weather low tide with gauged river flows;
  - Dry and wet weather flood tide with gauged river flows;
  - Dry and wet weather ebb tide with gauged river flows; and
  - Dry and wet weather high tide with gauged river flows.
- 12.3 The consent holder shall analyse the salinity monitoring data, this shall include a comparison of the actual salinity changes within the estuary to those predicted by the modelling.
- 12.4 The consent holder shall establish a trigger, based on the extent of salinity change, which requires the consent holder to undertake additional monitoring (such as wetland vegetation monitoring) in order to assess the adverse environmental effects (if any) of the salinity change and options for mitigation. The consent holder shall be responsible for undertaking any mitigation, if so directed by the Chief Executive of the Regional Council or delegate.
- 12.5 The consent holder shall develop and implement a programme for monitoring the effects of the construction activities on water quality to assess compliance with conditions 10 of this consent.

- 12.6 The consent holder shall develop and implement a programme for monitoring wildlife and wildlife habitat sensitive to disturbance. As a minimum this programme shall include monitoring the extent of sea-grass beds for a period up to at least two years post-construction and dotterel breeding and feeding areas for a period up to at least five years post-construction.
- 12.7 The consent holder shall establish triggers for additional monitoring and mitigation to be undertaken by the consent holder in relation to the monitoring programme required by conditions 12.5 and 12.6 of this consent. The consent holder shall be responsible for undertaking any additional monitoring and/or mitigation.
- 12.8 The consent holder shall develop and implement a programme for surveying bed levels in the channel between the training walls and assessing compaction of sediments at the river mouth.
- 12.9 The consent holder shall develop and implement a channel maintenance programme, this shall include bed levels that trigger the need for the consent holder to undertake dredging to maintain safe-navigation through the entrance channel.
- 12.10 The consent holder shall develop and implement a programme for monitoring the effects of the Harbour development project on coastal morphology and coastal processes that is consistent with conditions 12.11 to 12.30 of this consent.

### **Beach and near-shore monitoring - details**

#### *Beach cross section surveys*

- 12.11 The consent holder shall install eight beach cross section monitoring sites: four on the western side of the proposed training walls (between the proposed training walls and Environment Bay of Plenty site CCS4) and four on the eastern side (between the proposed training walls and Environment Bay of Plenty site CCS6) as shown on Plan Number BOPRC 65563/6. On each side of the proposed training walls the location of at least one of these cross sections should coincide with the zone of maximum anticipated erosion. The seaward endpoint for each profiled dataset should be at a minimum of -1 m elevation (Moturiki Datum).
- 12.12 Durable front and back benchmarks shall be maintained at the sites at all times during the exercise of this consent.
- 12.13 Prior to commencing monitoring the consent holder shall provide to the Chief Executive of the Bay of Plenty Regional Council or delegate the following information for each of the eight new beach cross section monitoring sites:
- GPS coordinates of the front and back benchmark (NZMG);
  - Surveyed elevation (to second order survey standards) in Moturiki Datum of the front and back benchmark;
  - Description and photographs of each front and back benchmark; and
  - A plan of the location of each front and back benchmark.
- 12.14 All beach cross section surveys should be undertaken using Total Station survey or similar technology.
- 12.15 The consent holder shall undertake at least one pre-construction (baseline) beach cross section survey at each of the sites established in accordance with condition 12.11 of this consent and also at Environment Bay of Plenty sites CCS3 to CCS7 inclusive. This survey should include a full survey measured from the back marker for the eight new sites and shall be undertaken no longer than one month prior to the date when works are due to commence.
- 12.16 Beach cross section surveys should be undertaken at each of the new sites established in

accordance with condition 12.11 of this consent and also at Environment Bay of Plenty sites CCS3 to CCS7 inclusive once a month during the construction phase.

- 12.17 Beach cross section surveys should be carried out at all sites (13) as soon as practicable after any storm surge event exceeding a water level of 1.49 m RL Moturiki Datum (10% AEP).
- 12.18 The consent holder shall review the monitoring data collected in accordance with conditions 12.16 and 12.17 at six monthly intervals during the construction phase. The results of this review shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate within one month.
- 12.19 Following completion of the construction phase a review of all beach cross section monitoring data should be undertaken and a new monitoring frequency determined. The results of this review and the new monitoring frequency shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval within one month.
- 12.20 All beach cross section data shall be supplied to the Chief Executive of the Bay of Plenty Regional Council or delegate within two weeks of collection. Data supplied shall be in the form of raw and processed data (Moturiki Datum).

#### **Foredune position surveys**

- 12.21 The consent holder shall undertake a toe of foredune survey along the coastline from Environment Bay of Plenty site CCS3 to the Waiotahi River entrance (as shown on Plan Number BOPRC 65563/6) prior to construction and monthly during the construction phase. The horizontal distance between each collected survey point shall be less than 10 m. Elevation (in Moturiki Datum) shall also be measured at each point.
- 12.22 The beach toe of foredune survey data shall be supplied to the Chief Executive of the Bay of Plenty Regional Council or delegate within two weeks of collection. Data supplied shall be in the form of raw and processed data (NZMG and Moturiki Datum)
- 12.23 Following completion of the construction phase a review of all beach toe of foredune survey data should be undertaken and a new monitoring frequency determined. The results of this review and the new monitoring frequency shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval within one month.

#### **Shore parallel surveys**

- 12.24 The consent holder shall undertake a beach topographical survey immediately adjacent to the proposed training walls that extends for one kilometre either side prior to construction and monthly during the construction phase thereafter. The horizontal distance between each collected survey point shall be less than 5m.
- 12.25 The consent holder shall review beach topographical survey data at six month intervals collected in accordance with condition 12.24. The results of this review shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate within one month.
- 12.26 All beach topographical survey data shall be supplied to the Chief Executive of the Bay of Plenty Regional Council or delegate within two weeks of collection. Data supplied shall be in the form of raw and processed data (NZMG and Moturiki Datum).
- 12.27 Following completion of the construction phase a review of all beach topographical survey data should be undertaken and a new monitoring frequency determined. The results of this review and

the new monitoring frequency shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval within one month.

### **Aerial photography**

- 12.28 The consent holder shall undertake a high resolution (0.25 GSD) aerial photography survey covering the coastline (including the Waioeka River ebb delta and approximately 200 m inland from the toe of the foredune) from Environment Bay of Plenty site CCS1 to CCS8 (as shown on Plan Number BOPRC 65563/6) prior to construction.

### **Renourishment trigger**

- 12.29 The renourishment trigger is set at 50 m of landward retreat of the baseline toe of foredune position. This distance should be measured from any of the datasets outlined in the Beach and Nearshore monitoring section.
- 12.30 The consent holder shall develop a beach nourishment and dune planting programme, to be implemented when the trigger identified in condition 12.29 is met, this programme shall be in accordance with conditions 5.3, 11.2, 11.6 and 11.7 of this consent.

## **13 Certification of Works – Post Construction**

- 13.1 Within 30 working days of completion of the construction works, or earlier of so requested by the Chief Executive of the Regional Council or delegate for a specific area of works, the consent holder shall submit a certificate signed by a chartered professional engineer to certify that the structure(s) has been constructed in accordance with good engineering practice and the conditions of this consent.
- 13.2 Within 30 working days of completion of the construction works the consent holder shall submit as-built plans of the structures authorised by this consent and the results of a bed-level survey of the Harbour entrance channel to the Bay of Plenty Regional Council.

## **14 Maintenance**

- 14.1 The consent holder shall ensure that the structure authorised by this consent is maintained in a safe and structurally sound condition at all times, and, if directed by the Chief Executive of the Regional Council or delegate to undertake any maintenance work, shall do so as soon as is practicable.
- 14.2 The consent holder shall develop and implement a maintenance inspection programme. Details of this programme shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval within three months following the completion of construction activities and shall include, but not be limited to:
- An annual inspection regime for the training walls and associated structures by a chartered professional engineer, with provision for additional inspections following each wave event that produces wave heights near or exceeding the design wave height;
  - Details of measures to be undertaken in the event of damage to the training walls or associated structures, including threshold levels for requiring repair works; and
  - Details of an annual inspection regime of the scour protection works at the base of walls using multi-beam sonar scanning or similar techniques.
- 14.3 Records of the inspections undertaken in accordance with the maintenance inspection programme required by condition 14.2 of this consent shall be submitted to the Chief Executive of the Regional Council or delegate within one month of the inspection being undertaken.
- 14.4 The consent holder shall monitor the structures to ensure that they do not present a danger to the public and shall take any necessary precautions to ensure the safety of the public using the

structure.

- 14.5 Maintenance works, other than hand work, shall be carried out in accordance with notification conditions 6.6 and 6.7, works conditions 8, timing condition 9.5 and water quality condition 10.5 of this consent.

## 15 Review of Consent Conditions

- 15.1 The Bay of Plenty Regional Council, may review any or all conditions of this consent by giving notice of its intention to do so under Section 128 of the Resource Management Act 1991, at any time within three months of the receipt of any of the monitoring results, or completion of a compliance report for any of the following purposes:
- (a) To deal with any adverse effects on the environment, which may arise from the exercise of this consent, and which it is appropriate to deal with at a later stage; or
  - (b) To review the adequacy of any monitoring plans proposed and/or monitoring requirements so as to incorporate into the consent any monitoring or other requirements which may become necessary to deal with any adverse effects on the environment arising from the exercise of this consent; or
  - (c) To review the adequacy of any mitigation measures proposed and/or mitigation requirements so as to incorporate into the consent any additional mitigation requirements which are necessary to deal with any adverse effects on the environment arising from the exercise of this consent.
- 15.2 The Bay of Plenty Regional Council shall be entitled to recover from the consent holder the actual and reasonable costs of the conduct of any review, calculated in accordance with and limited to that Council's scale of charges in-force and applicable at that time under section 36 of the Resource Management Act 1991.

## 16 Resource Management Charges

- 16.0 The consent holder shall pay the Bay of Plenty Regional Council such administrative charges as are fixed from time to time by the Regional Council in accordance with section 36 of the Resource Management Act 1991.

## 17 Lapse of Consent

- 17.0 This consent shall lapse on 31 August 2024 if not given effect to by that date. For the avoidance of doubt, given effect to includes, but is not limited to, the submission and subsequent approval of the detailed design plans required under condition 5.1 of this consent.

## 18 Term of Consent

- 18.0 This consent shall expire on 31 August 2044.

## 19 The Coastal Permit

- 19.0 The Coastal Permit hereby authorised is granted under the Resource Management Act 1991 and does not constitute an authority under any other Act, Regulation or Bylaw.

## Advice Notes

- 1
1. *Notification of works and submission of information should be made in writing to the Manager Pollution Prevention, Environment Bay of Plenty, Box 364 or fax 0800 368 329 or email [notify@envbop.govt.nz](mailto:notify@envbop.govt.nz) and should include the permit number 65566.*
  2. *Consultation with Opotiki District Council (as consent authority) will be undertaken as part of this approval process. Review and approval of the detailed designs and various plans may take up to 40 working days to complete due to the need to consult with various staff members within Environment Bay of Plenty. The approval process may take more than 40 working days to complete if the plans or designs require amendment before approval can be given.*
  3. *This proposal will affect archaeological site(s). Work affecting archaeological sites is subject to a*

- consent process under the Historic Places Act 1993. An authority (consent) from the New Zealand Historic Places Trust must be obtained for the work prior to commencement. It is an offence to damage or destroy a site for any purpose without an authority. The Historic Places Act 1993 contains penalties for unauthorised site damage. The applicant is advised to contact the New Zealand Historic Places Trust for further information.*
4. *The proposal may require an authority under the Floodway and Drainage Bylaw 2008 (or its successor).*
  5. *This activity may require authorisation under the Building Act 1991.*
  6. *Schedule 13 of the Regional Coastal Plan provides guidance on what quantitative standards can be used to assess compliance with the qualitative standards listed in the coastal water quality classifications.*
  7. *Potential contaminants include, but are not limited to, hydrocarbons, hydraulic fluids and cement and concrete products.*
  8. *Page 22 of Appendix 19 of the application gives examples of potential applications of modelling support during construction.*
  9. *The consent holder shall not be deemed to be non-compliant with this condition if the invited representatives chose not to participate. Representatives from Opotiki District Council and Environment Bay of Plenty may be the same as the respective compliance officers for this consent.*
  10. *At the time of granting this consent, the appropriate local newspapers were the Opotiki News and Whakatane Beacon. The appropriate radio station was Radio 1XX.*
  11. *For more information on the effects of cement in waterways and reasonable prevention measures refer to the following document available on the Auckland Regional Council website ([www.arc.govt.nz](http://www.arc.govt.nz)), "Pollution Fact Sheet - Construction Activities".*
  12. *Additional works may be required to ensure that the construction of the Opotiki Harbour Entrance does not result in an increase in flood levels. Further resource consents may be required for these works, which should be completed before construction begins.*
  13. *Once construction works have commenced in the areas referred to in conditions 9.1 and 9.2 of this consent then they may continue during subsequent Dotterel nesting periods - subject to compliance with the other conditions of this consent.*
  14. *The Environment Bay of Plenty Coast Care Information Brochure Number 9: Backyard Buffers includes information on appropriate dune plant species.*
  15. *An appropriate maximum inter-plant spacing for foredune plants is 1 m, and for back-dune plants is 0.6 m.*
  16. *Planting is more likely to be successful if carried out between 1 May and 30 September.*
  17. *The loop track to be provided through the Huntress Creek Conservation Area shall be designed in consultation with the Department of Conservation.*
  18. *Disposal of the dredged material to land is consented under land use consent 65565.*
  19. *The consent holder is responsible for ensuring that all contractors carrying out works under this consent are made aware of the relevant consent conditions, plans and associated documents.*
  20. *The consent holder is advised that non-compliance with consent conditions may result in enforcement action against the consent holder and/or their contractors.*
  21. *Compliance with the water quality standard outlined in condition 10.3 is only likely to be achieved following high rainfall, when the river is subject to increased turbidity.*
  22. *The consent holder may take a second set of samples (up-current and down-current) to verify the first set of sampling results.*
  23. *Water quality monitoring during dredging may not be required if the river conditions are such that the impacts of the dredging on water quality will be negligible.*
  24. *The consent holder is advised that one set of detailed designs and pre-construction plans may be prepared to meet the requirements of each of the consents required for the Opotiki Harbour Entrance project.*

## Bay of Plenty Regional Council

### Resource Consent

Pursuant to the Resource Management Act 1991, the **Bay of Plenty Regional Council**, by a decision dated 29 July 2009, **hereby grants**:

A resource consent:

- **Under section 12(1)(c) of the Resource Management Act 1991 and 14.2.4(e) of the Bay of Plenty Regional Coastal Environment Plan to undertake a discretionary activity being to Disturb the Foreshore and Seabed**

subject to the following conditions:

#### 1 Purpose of this Resource Consent

1.0 To undertake the following activities associated with the Opotiki Harbour Entrance project:

- Removal of material from the foreshore and seabed
- Discharge of sediment, slurry water and sediment-laden stormwater to the coastal marine area (from dredging activities, earthworks and construction activities)
- Disturbance of the foreshore and seabed
- Take of coastal water
- Diversion of coastal water
- Erection and removal of temporary structures
- Erection and maintenance of permanent structures that are not covered by consent 65563 (geocontainer bank reinforcement less than 300m in length, geo-container dyke)

#### 2 Location

2.0 Pakihikura (the Waioeka river mouth), Opotiki as shown on BOPRC Plan Number RC 65563/1

#### 3 Map Reference

3.0 The area is bounded by approximate map references NZMS 260 W15:8461-4821, W15:8469-4705, W15:8587-4699, W15:8563-4817

#### 4 Legal Description

4.0 Coastal Marine Area, Crown land, Sections 1-3 SO 8737, Allotments 436- 439 Waiotahi Parish, Sections 24-31, 31A, 32- 43 Opotiki Suburbs Block III (Opotiki District)

#### 5 Pre-Construction Requirements

5.1 The consent holder shall prepare and submit full engineering design details (including results of modelling, design assumptions used in the modelling process, plans and specifications) for all structures and the entrance channel realignment associated with the Opotiki Harbour Entrance project to the Chief Executive of the Bay of Plenty Regional Council or delegate, for approval at least 40 working days prior to the proposed date for commencement of works (see Advice Notes 1, 2 and 24). The purpose of this approval process is to ensure compliance with the conditions of this consent.

The detailed design process should involve review by suitably qualified and experienced, independent experts in the fields of engineering, landscape and ecology and expressly provide for the following:

- The structural integrity of the structures authorised by this consent. In particular, development of the detailed design should take into account the following:
  - River flows into the entrance at the upstream end of the training walls to determine local scour effects and the potential for turbulence to be set up in the channel.
  - The stability of scour aprons under construction and long term wave loadings;
  - Optimisation of the armour size.
  - Stability of the geocontainers under wave attack and current.
  - Scour potentials at the outer head of the structures.
  - River closure dynamics.
- Location of the structures authorised by this consent as far landward as practicable (taking into account other constraints);
- Use of the most up-to-date flood frequency analysis for the Waioeka and Otara Rivers in the design flood flow assumptions;
- Demonstration that flood levels in the Waioeka and Otara River will not be increased following construction of the new harbour entrance during a 100-year return flood event (see condition 8.13);
- Additional information on the sediment characteristics beneath the line of the proposed entrance channel - particularly with regard to scour resistance and seismic activity - and demonstration that adequate scour protection has been provided;
- A description of the intended construction materials;
- Outline future maintenance requirements;
- Integration of the structures with the landscape, natural character and ecological features of the coastal environment in the vicinity of the works;
- Restoration of dune landforms and vegetation where they interface with structures; and
- Inclusion of cultural elements in the training wall structures where practicable.

5.2 The consent holder shall prepare and submit a Construction Management Plan (CMP) for all construction works authorised by this consent to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval, at least 40 working days prior to the proposed date for commencement of works (see Advice Notes 1, 2 and 24). The purpose of this document is to demonstrate how the consent holder will manage activities during construction to avoid, remedy or minimise environmental effects and achieve compliance with the conditions of this consent. The CMP shall be developed using the engineering design details approved in accordance with condition 5.1 of this consent and shall include, but not be limited to:

- A detailed construction methodology for all works (to include how works will be sequenced/staged to minimise adverse environmental effects);
- Demonstration that a Floodway and Drainage bylaw authority has been obtained for the works (if necessary)(see Advice Note 4);
- Demonstration that an authority has been obtained for the works under the Historic Places Act 1993 (see Advice Note 3);
- The name and 24-hour contact details of the site manager supervising the works (including the refuelling and plant) as well as the contact details for all contractors working on site;
- Roles and responsibilities of key personnel for the implementation of this consent, including appointment of a representative to be the primary contact person in regard to matters relating to this consent;
- General site management measures, including:
  - waste/litter disposal
  - effluent disposal
  - security
  - location of stockpiles
- Complaints register and reporting procedure;
- Incident register and reporting procedure;
- Evidence that a suitably qualified engineer(s) has been appointed to carry out the overall design, supervision and certification of the works (including construction of all erosion and sediment controls);
- Construction monitoring, record-keeping and maintenance requirements;
- An accidental discovery protocol for dealing with koiwi or taonga unearthed during construction activities, developed in consultation with Whakatohea Maori Trust Board.

5.3 The consent holder shall prepare and submit an Environmental Mitigation and Remediation Plan (EMP) for all construction works authorised by this consent to the Chief Executive of the Bay of Plenty Regional Council or delegate, for approval, at least 40 working days prior to the proposed date for commencement of works (see Advice Notes 1, 2 and 24). The purpose of this document is to demonstrate how the consent holder will manage activities during construction to avoid, remedy

or minimise environmental effects and rehabilitate the site after construction works have been completed to achieve compliance with the conditions of this consent (in particular conditions 8 Works, 10 Water Quality Standards and 11 Post Construction Mitigation and Remediation). The consent holder shall consult with the technical liaison group required by condition 5.4 of this consent during the development of this plan. The EMP shall include, but not be limited to:

- Identification and mapping of areas (such as dotterel nesting sites, indigenous vegetation) sensitive to disturbance by construction activities and measures to protect against such disturbance;
- Establishment and clear delineation of construction vehicle/machinery movement tracks (including the western access track) that limit disturbance to sensitive areas;
- Measures to be taken to provide for navigational aids and the management of vessels using the Harbour entrance during construction;
- Measures that will be taken to ensure that the construction works will comply with the New Zealand Standard NZS 6803.1999 Acoustics ♦ Construction Noise (or its successor) or where it is not practicable to meet these standards, the duty under section 16 of the Resource Management Act 1991 to adopt the best practicable option to avoid unreasonable noise;
- Measures to be taken to ensure that the works authorised by this consent do not cause the water quality standards listed in condition 10 to be exceeded beyond the zone of reasonable mixing (see Advice Note 6);
- Procedures to prevent the discharge of hazardous substances or other contaminants into the coastal marine area or onto vegetation (see Advice Note 7);
- Procedures to minimise the discharge of sediment into the coastal marine area;
- Measures that will be taken to minimize the risk of fuel entering coastal or estuarine waters during refueling, especially where refueling occurs within 20 m of the coastal marine area;
- Details on how coastal process modeling will be used to mitigate environmental impacts during dredging operations and other construction related activities (see Advice Note 8);
- Measures to be undertaken to maintain and monitor the existing river entrance channel during construction, including:
  - Minimum river channel dimensions.
  - Monitoring methodology, frequency and reporting.
  - Procedures to manage stockpiled material to prevent additional flood risk or breach.
  - A contingency plan to address the risk of excessive sediment accumulation between the existing river mouth and the western training wall during construction (that could constrict the river mouth and increase flood risk).
- Measures to be taken to minimise the adverse effects of night-time lighting (see condition 8.14);
- Steps that will be taken to mitigate and rehabilitate the site post-construction (in particular to ensure compliance with conditions 11 of this consent);
- Steps that will be taken to mitigate for the loss of Dotterel habitat as a result of the works authorized by this consent (in particular to ensure compliance with condition 11.1 of this consent);
- Measures that will be taken to educate contractors regarding the requirements of the relevant resource consents and management plans, and environmental management; and
- Measures that will be taken to re-nourish beaches and replant dune systems immediately post-construction and subsequently following coastal setback. In particular, the EMP shall include, but not be limited to, the following information:
  - Identification of the plant species to be used for revegetation in each area on a plan or schedule (including all new areas of sand-dune, all existing areas of sand dune that will be affected by the harbour entrance works and areas of potential setback post-construction);
  - Desired planting density (see Advice Note 15);
  - Fertiliser application (including use of a controlled-release fertiliser at planting and post-planting fertiliser use);
  - A programme for revegetation following coastal set-back that exceeds the trigger set in condition 12.29 of this consent;
  - Weed management and pest control activities to be undertaken;
  - A programme for maintenance for a period of at least three years following completion of initial planting (maintenance activities may include the exclusion of pest browsers, the removal of weeds and replacement planting); and
  - A programme for ensuring adequate supply of plants (such as ordering and growing in advance).

5.4 The consent holder shall establish a technical liaison group to provide input during the development and implementation of the Environmental Mitigation and Remediation Plan required by condition 5.3 of this consent. The consent holder shall, as a minimum, invite representatives from the

following organisations to form part of the technical group: Environment Bay of Plenty, Waiotahi Coast Care, Department of Conservation, Whakatohea Maori Trust Board and Opotiki District Council (see Advice Note 9). The functions of the Technical Liaison Group are to:

- Review and provide constructive comment on the content of the detailed designs and EMP prior to its submission to the Regional Council; and
- Review and provide constructive comment on the implementation of the EMP.

- 5.5 The consent holder shall prepare, submit and implement a Site-wide Contingency Plan (SCP) for the contaminant of spills to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval at least 40 working days prior to works commencing (see Advice Notes 1, 2 and 24). The purpose of this document is to demonstrate how the consent holder will manage activities during construction to avoid, remedy or minimise environmental effects of unintended discharges and achieve compliance with the conditions of this consent (in particular, conditions 8.6, 8.7, 8.8 and 8.9). The contingency plan shall:
- Identify potential contaminants that will be used or stored on site (see Advice Note 7);
  - Identify designated contaminant storage facilities and re-fuelling locations;
  - Require that these locations to be bunded, and that machinery should be parked overnight or long-term only in these designated areas;
  - Require that all mobile fuel tankers carry spill kits and that spill kits are stored at bulk storage tank locations at all times;
  - Detail the contents of the spill kits, including absorbent pads, booms, pillow and socks and appropriate pegs/rope to hold the absorbent material in place;
  - Record the names of operators trained in spill response and remediation;
  - Detail an internal and external notification procedure of any spills; and
  - Identify measures to be undertaken to remediate a contaminant spill.
- 5.6 The consent holder shall develop and submit a Monitoring and Review Plan (MRP) for the Harbour Entrance Project to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval at least 40 working days prior to the proposed date for commencement of works (see Advice Notes 1, 2 and 24). This Plan shall outline how the potential environmental effects associated with the project are to be monitored (including monitoring methodologies, monitoring frequency and how results will be analysed and reported to the Regional Council). The MRP shall also provide for baseline monitoring, triggers for further monitoring or mitigation action and a description of what further monitoring and/or mitigation action may be required. Conditions 12.1 to 12.30 describe in further detail the matters that should be covered by this Plan.
- 5.7 Construction shall not commence until written approval of the designs and plans required by conditions 5.1, 5.2, 5.3, 5.5 and 5.6 of this consent has been received by the consent holder from the Chief Executive of the Bay of Plenty Regional Council or delegate.

## 6 Notification of Works

- 6.1 Not less than 20 working days prior to the start of the Opotiki Harbour Access works (including site preparation), the consent holder shall, in writing, notify the Chief Executive of the Bay of Plenty Regional Council or delegate, the Eastern Bay of Plenty Harbourmaster, the Department of Conservation and Whakatohea Maori Trust Board of the intent to start works (see Advice Note 1).
- 6.2 Not less than 20 working days prior to the start of the Opotiki Harbour Access works (including site preparation), the consent holder shall, in writing, request a site meeting between all relevant parties, including all contractors and relevant local authorities, prior to any works commencing on the site to discuss implementation of the construction management plan and environmental management measures (see Advice Note 1).
- 6.3 Not less than 10 working days prior to the commencement of the Opotiki Harbour Access works (including site preparation), the consent holder shall place notices in the local newspapers and on local radio stations (see Advice Note 10). These notices shall include, at a minimum, the following information:
- The date on which works are intended to commence;
  - The location and areas affected by the works;
  - The anticipated duration of the works; and

- The restrictions that will apply to public access and navigation.
- 6.4 A copy of this consent shall be kept at the construction site at all times until the works required to construct the new harbour entrance are complete.
- 6.5 The consent holder shall provide a copy of this consent and all documents referred to in this consent to any operator or contractor undertaking works authorised by this consent, prior to the works commencing.
- 6.6 Not less than 10 working days prior to undertaking any maintenance works under this consent, the consent holder shall, in writing, notify the Chief Executive of the Bay of Plenty Regional Council or delegate, Eastern Bay of Plenty Harbourmaster, the Department of Conservation of the intent to start works (see Advice Note 1).
- 6.7 Not less than three days prior to undertaking any maintenance works under this consent that will cause a restriction to navigation, the consent holder shall place notices in the local newspapers and on local radio stations (see Advice Note 10). These notices shall include, at a minimum, the following information:
- The date on which works are intended to commence;
  - The location and areas affected by the works;
  - The anticipated duration of the works; and
  - The restrictions that will apply to public access and navigation.

## 7 Signage

- 7.0 Prior to the commencement of the Opotiki Harbour Entrance project (including site preparation), the consent holder shall erect a prominent sign adjacent to the main entrance to the site, and maintain it throughout the period of the works. The sign shall clearly display, as a minimum, the following information:
- The name of the project and the consent holder;
  - The principal contractor;
  - A 24-hour contact telephone number for the consent holder or appointed agent;
  - A clear explanation that the contact telephone number is for the purpose of receiving complaints and information from the public about the Opotiki Harbour Entrance project; and
  - Restrictions to public access and navigation.

## 8 Works

- 8.1 All construction, dredging and earthworks shall be carried out in general accordance with the following:
- BOPRC Plan Number RC 65563/2;
  - The detailed designs (approved in accordance with condition 5.1 of this consent);
  - Construction Management Plan (approved in accordance with condition 5.2 of this consent);
  - Environmental Mitigation and Remediation Plan (approved in accordance with condition 5.3 of this consent);
  - Spill Containment Plan (approved in accordance with condition 5.5 of this consent);
  - Monitoring and Review Plan (approved in accordance with condition 5.6 of this consent).

Any amendments to the plans referenced in this condition shall be submitted to the Chief Executive of the Regional Council or delegate for review to ensure that they remain consistent with the conditions of this consent. Amended plans shall not be implemented until written approval has been received from the Regional Council.

- 8.2 The consent holder shall monitor the structures during construction to ensure that they do not represent a danger to the public.
- 8.3 The works associated with this consent shall be carried out under the supervision of a Chartered

- 8.4 Disturbance to the foreshore and seabed shall be minimised as far as practicable. This includes, but is not limited to, the following measures:
- Minimising machinery movements on the foreshore to the minimum necessary to achieve the purpose of this consent;
  - Building structures progressively from the land out to sea;
  - Locating machinery on structures (rather than on the foreshore/seabed); and
  - Completing each section of works as quickly as practicable.
- 8.5 Machinery and vehicles used to undertake the works shall be clean and well-maintained. In particular:
- Machinery and vehicles should be cleaned to remove surface hydrocarbons, seeds and other contaminants before entering site;
  - Hydraulic hoses shall be inspected and replaced when necessary to avoid failure whilst working in the coastal marine area;
  - Vegetable oil shall be used in place of hydraulic fluid wherever practicable;
  - Machines to be used in the coastal marine area shall be fitted with sealed bearings and grease caps for moving parts; and
  - All machinery is to be regularly maintained (including hydraulic hoses) in such a manner so as to minimise the potential for leakage of contaminants.
- 8.6 No fuel storage or machinery/vehicle maintenance shall be carried out within the western construction compound(s), the coastal marine area, on the foreshore or within 20 m above mean high water springs.
- 8.7 Any fuel or other hazardous substances stored on site shall be stored within portable containers so that they can be removed from the site if needed due to flood or storm events.
- 8.8 Refuelling shall only occur within the coastal marine area, on the foreshore or within 20 m above mean high water springs if it is the most practicable option and appropriate measures have been put in place to avoid or minimise any fuel or hydrocarbon spillage, including the provision of appropriate security and containment measures, where necessary.
- 8.9 The consent holder shall take all practicable measures to prevent cement dust and non-stabilised cement slurries from entering coastal or surface water. These measures shall include but not be limited to the following (see Advice Note 11):
- Ensuring appropriate controls are in place before the use of cement begins to contain and remove all cement contaminated waste and to prevent any discharge of waste water to fresh or storm water;
  - Ensuring clean storm water is diverted away from the work area;
  - Immediately containing and cleaning up any spills that occur to the satisfaction of Regional Council staff;
  - Containing all cement particles and dust within the works area and removing all cement particles and dust immediately after the completion of the work. Cement waste must be reused within the work area or disposed of at an appropriate facility;
  - Ensuring cement is allowed to fully set and there are no loose cement particles or dust residue remaining before allowing any natural flow of water back over it; and
  - Creating a designated wash down area on site for vehicles and equipment and ensuring staff know this is available.
- 8.10 The best practicable option shall be used to minimise the discharge of sediments resulting from construction works into coastal and estuarine waters. The consent holder shall detail the measures to be used in the EMP required by condition 5.3 of this consent.
- 8.11 For each year during construction, the consent holder shall fence off and signpost Dotterel nesting sites located on the eastern spit during the Dotterel breeding and nesting season (15 August to 29

February inclusive). The Department of Conservation shall be consulted regarding the areas that should be fenced. Fencing shall be erected by 14 August each year and may be removed from 1 March of the following year.

- 8.12 The construction compounds shall be fenced so as to contain the storage and construction area and to protect the surrounding dune landforms and vegetation.
- 8.13 The activities undertaken under this consent shall not result in an increase in the 100-year return period flood levels within the Waioeka and Otara Rivers at the following locations (see Advice Note 12):
- The Waioeka/Otara River confluence; or
  - The Waioeka Bridge; or
  - Approximately 850m upstream of Otara Bridge.
- 8.14 All exterior lighting associated with the construction activity shall be managed so as to avoid the spill of light or glare that might be:
- Detrimental to other users; or
  - Detrimental to wildlife; or
  - A hazard to navigation in the coastal marine area;
- unless such lighting is necessary for reasons of public safety or operational safety.
- 8.15 In the event of any archaeological site or koiwi being uncovered during the exercise of this consent, activities in the vicinity of the discovery shall cease. The consent holder shall contact the Regional Council, the Historic Places Trust and the relevant iwi authority (as identified in the Accidental Discovery Protocol required by the Construction Management Plan). The consent holder shall follow the Accidental Discovery Protocols (ADP), and shall not recommence works in the area of the discovery until the requirements of the ADP have been met (see Advice Note 1).
- 8.16 All plant, machinery, equipment, debris and construction materials, not associated with the permanent structures, shall be removed from the foreshore and coastal marine area at the completion of works.
- 8.17 All metal used to surface construction access tracks that are no longer required for maintenance shall be collected and removed at the completion of the works.
- 8.18 The consent holder shall ensure that all permanent structures erected under this consent are appropriately marked and/or lit to provide for navigation in accordance with the directions of the Eastern Bay of Plenty Harbourmaster.
- 8.19 The consent holder shall ensure that the capital works authorised under this consent are completed within a period of no longer than five years following their commencement.

## 9 Timing of Works

- 9.1 Construction activity (including site establishment works) shall not commence on the western end of the eastern spit, as shown on Plan number BOPRC 65563/3, during the period 15 August to 29 February inclusive (the Dotterel breeding and nesting period). (See Advice Note 13).
- 9.2 Construction activity within the Estuary, on the western sand spit or on the area of the eastern sand pit not included in condition 9.1 shall not commence during the period 1 October to 31 January inclusive (the Dotterel nesting period). (See Advice Note 13).
- 9.4 Works to divert the flow of the Waioeka River (the River realignment) shall not be undertaken during the inanga migration season (1 August ♦ 31 October inclusive).

- 9.5 Maintenance works that require vehicle access on the sand spits shall not be undertaken during the period 1 October to 31 January inclusive (the Dotterel nesting period).

## 10 Water Quality Standards

- 10.1 The zone of reasonable mixing for discharges associated with dredging activities is defined as being within a 200 m radius of the excavation (dredging) site.
- 10.2 Background water quality is defined as being 500 m upstream/up-current of the most upstream/up-current dredging or construction site.
- 10.3 Dredging and associated discharge activities undertaken during the period 1 December to 29 February (inclusive) shall not result in a decrease in water clarity (as measured by the black disk method) of more than 50% below background levels, beyond the zone of reasonable mixing (see Advice Notes 21-23).
- 10.4 Dredging and associated discharge activities undertaken during the period 1 March to 14 August (inclusive) shall not result in a suspended solids concentration within the water column beyond the zone of reasonable mixing that is more than 150g/m<sup>3</sup> above the background levels.
- 10.5 The consent holder shall ensure that all other construction works authorised by this consent, and consents 64465 and 65565 that authorise reclamation and earthworks associated with the Harbour Access Improvement project do not result in any of the following effects in estuarine or coastal waters following reasonable mixing (see Advice Note 6):
- The production of conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
  - Any conspicuous change in colour or visual clarity;
  - Any emission of objectionable odour;
  - Significant adverse effects on aquatic life;
  - Water rendered unsuitable for bathing due to poor visual clarity and/or the presence of contaminants;
  - Undesirable biological growths;
  - A water temperature change of more than 3 degrees C;
  - The concentration of dissolved oxygen to fall below 80% of saturation concentration; or
  - Aquatic organisms rendered unsuitable for human consumption due to the presence of contaminants.

For the purpose of this consent, the reasonable mixing area is within a 200 m radius of any individual area of construction activity.

## 11 Post-construction Mitigation and Remediation

- 11.1 The consent holder shall establish an area that is approximately one hectare on the post-construction western spit that provides suitable habitat for NZ Dotterel nesting. That area shall be maintained using weed and predator control for a period of five years. Suitable habitat consists of flat open sand and planting on the southern perimeters.
- 11.2 The consent holder shall reshape and replant any areas affected by the works (including access tracks and construction compounds) and the newly created dune systems with appropriate plants. Indigenous species shall be used with a preference for locally sourced seed stock wherever practicable (see Advice Note 14).
- 11.3 The consent holder shall erect and maintain six interpretative signs approximately 1.5 m x 1.0 m in size that provide information on:
- The cultural and heritage values of the site;
  - The ecological and conservation values of the site;

- The Harbour Development Project; and
  - Appropriate access routes to and through the sand-dunes and Huntress Creek Conservation Area.
- 11.4 The consent holder shall fence the Huntress Creek Conservation Area, as shown on Plan Number BOPRC RC65563/4, along its northern boundary and along the legal road boundaries that pass through the conservation area. The Department of Conservation shall be consulted regarding the materials used to construct this fencing.
- 11.5 The consent holder shall make appropriate provision for public access to the new Harbour entrance. This access shall be in general accordance with the outline shown on Plan Number BOPRC 65563/5 and shall provide:
- Vehicle access to a sandy road head (consisting of bollards, rope and a signboard) on both sides of the training walls;
  - Delineation of foot tracks (using planting) along the southern side of the river closure and bank protection structures authorised by this consent that guide visitors away from potential dotterel nesting areas; and
  - Creation of a loop track in the Huntress Creek Conservation Area (see Advice Note 17).
- 11.6 Any sand used for beach and dune renourishment shall be of a comparable size and colour to the natural sediments present at the deposition site.
- 11.7 The mitigation and remediation works associated with this consent shall be carried out under the supervision of a suitably qualified terrestrial ecologist.
- 11.8 The consent holder shall conduct an official opening ceremony for the new Harbour Entrance in accordance with iwi protocol.

## 12 Monitoring and Review

- 12.1 The consent holder shall develop and implement a programme to monitor the effects of the new Harbour Entrance on water levels in the Waioeka and Otara Rivers. This monitoring shall encompass an area from the river-mouth to immediately downstream of State Highway 35.
- 12.2 The consent holder shall develop and implement a three-dimensional monitoring programme for salinity within the Waioeka Estuary. Baseline and post-construction monitoring should be undertaken. Each set of monitoring should be undertaken under a variety of conditions, including but not limited to:
- Dry and wet weather low tide with gauged river flows;
  - Dry and wet weather flood tide with gauged river flows;
  - Dry and wet weather ebb tide with gauged river flows; and
  - Dry and wet weather high tide with gauged river flows.
- 12.3 The consent holder shall analyse the salinity monitoring data, this shall include a comparison of the actual salinity changes within the estuary to those predicted by the modelling.
- 12.4 The consent holder shall establish a trigger, based on the extent of salinity change, which requires the consent holder to undertake additional monitoring (such as wetland vegetation monitoring) in order to assess the adverse environmental effects (if any) of the salinity change and options for mitigation. The consent holder shall be responsible for undertaking any mitigation, if so directed by the Chief Executive of the Regional Council or delegate.
- 12.5 The consent holder shall develop and implement a programme for monitoring the effects of the construction activities on water quality to assess compliance with conditions 10 of this consent.

- 12.6 The consent holder shall develop and implement a programme for monitoring wildlife and wildlife habitat sensitive to disturbance. As a minimum this programme shall include monitoring the extent of sea-grass beds for a period up to at least two years post-construction and dotterel breeding and feeding areas for a period up to at least five years post-construction.
- 12.7 The consent holder shall establish triggers for additional monitoring and mitigation to be undertaken by the consent holder in relation to the monitoring programme required by conditions 12.5 and 12.6 of this consent. The consent holder shall be responsible for undertaking any additional monitoring and/or mitigation.
- 12.8 The consent holder shall develop and implement a programme for surveying bed levels in the channel between the training walls and assessing compaction of sediments at the river mouth.
- 12.9 The consent holder shall develop and implement a channel maintenance programme, this shall include bed levels that trigger the need for the consent holder to undertake dredging to maintain safe-navigation through the entrance channel.
- 12.10 The consent holder shall develop and implement a programme for monitoring the effects of the Harbour development project on coastal morphology and coastal processes that is consistent with conditions 12.11 to 12.30 of this consent.

### **Beach and near-shore monitoring - details**

#### *Beach cross section surveys*

- 12.11 The consent holder shall install eight beach cross section monitoring sites: four on the western side of the proposed training walls (between the proposed training walls and Environment Bay of Plenty site CCS4) and four on the eastern side (between the proposed training walls and Environment Bay of Plenty site CCS6) as shown on Plan Number BOPRC 65563/6. On each side of the proposed training walls the location of at least one of these cross sections should coincide with the zone of maximum anticipated erosion. The seaward endpoint for each profiled dataset should be at a minimum of -1 m elevation (Moturiki Datum).
- 12.12 Durable front and back benchmarks shall be maintained at the sites at all times during the exercise of this consent.
- 12.13 Prior to commencing monitoring the consent holder shall provide to the Chief Executive of the Bay of Plenty Regional Council or delegate the following information for each of the eight new beach cross section monitoring sites:
- GPS coordinates of the front and back benchmark (NZMG);
  - Surveyed elevation (to second order survey standards) in Moturiki Datum of the front and back benchmark;
  - Description and photographs of each front and back benchmark; and
  - A plan of the location of each front and back benchmark.
- 12.14 All beach cross section surveys should be undertaken using Total Station survey or similar technology.
- 12.15 The consent holder shall undertake at least one pre-construction (baseline) beach cross section survey at each of the sites established in accordance with condition 12.11 of this consent and also at Environment Bay of Plenty sites CCS3 to CCS7 inclusive. This survey should include a full survey measured from the back marker for the eight new sites and shall be undertaken no longer than one month prior to the date when works are due to commence.
- 12.16 Beach cross section surveys should be undertaken at each of the new sites established in

accordance with condition 12.11 of this consent and also at Environment Bay of Plenty sites CCS3 to CCS7 inclusive once a month during the construction phase.

- 12.17 Beach cross section surveys should be carried out at all sites (13) as soon as practicable after any storm surge event exceeding a water level of 1.49 m RL Moturiki Datum (10% AEP).
- 12.18 The consent holder shall review the monitoring data collected in accordance with conditions 12.16 and 12.17 at six monthly intervals during the construction phase. The results of this review shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate within one month.
- 12.19 Following completion of the construction phase a review of all beach cross section monitoring data should be undertaken and a new monitoring frequency determined. The results of this review and the new monitoring frequency shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval within one month.
- 12.20 All beach cross section data shall be supplied to the Chief Executive of the Bay of Plenty Regional Council or delegate within two weeks of collection. Data supplied shall be in the form of raw and processed data (Moturiki Datum).

#### **Foredune position surveys**

- 12.21 The consent holder shall undertake a toe of foredune survey along the coastline from Environment Bay of Plenty site CCS3 to the Waiotahi River entrance (as shown on Plan Number BOPRC 65563/6) prior to construction and monthly during the construction phase. The horizontal distance between each collected survey point shall be less than 10 m. Elevation (in Moturiki Datum) shall also be measured at each point.
- 12.22 The beach toe of foredune survey data shall be supplied to the Chief Executive of the Bay of Plenty Regional Council or delegate within two weeks of collection. Data supplied shall be in the form of raw and processed data (NZMG and Moturiki Datum)
- 12.23 Following completion of the construction phase a review of all beach toe of foredune survey data should be undertaken and a new monitoring frequency determined. The results of this review and the new monitoring frequency shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval within one month.

#### **Shore parallel surveys**

- 12.24 The consent holder shall undertake a beach topographical survey immediately adjacent to the proposed training walls that extends for one kilometre either side prior to construction and monthly during the construction phase thereafter. The horizontal distance between each collected survey point shall be less than 5m.
- 12.25 The consent holder shall review beach topographical survey data at six month intervals collected in accordance with condition 12.24. The results of this review shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate within one month.
- 12.26 All beach topographical survey data shall be supplied to the Chief Executive of the Bay of Plenty Regional Council or delegate within two weeks of collection. Data supplied shall be in the form of raw and processed data (NZMG and Moturiki Datum).
- 12.27 Following completion of the construction phase a review of all beach topographical survey data should be undertaken and a new monitoring frequency determined. The results of this review and

the new monitoring frequency shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval within one month.

### **Aerial photography**

- 12.28 The consent holder shall undertake a high resolution (0.25 GSD) aerial photography survey covering the coastline (including the Waioeka River ebb delta and approximately 200 m inland from the toe of the foredune) from Environment Bay of Plenty site CCS1 to CCS8 (as shown on Plan Number BOPRC 65563/6) prior to construction.

### **Renourishment trigger**

- 12.29 The renourishment trigger is set at 50 m of landward retreat of the baseline toe of foredune position. This distance should be measured from any of the datasets outlined in the Beach and Nearshore monitoring section.
- 12.30 The consent holder shall develop a beach nourishment and dune planting programme, to be implemented when the trigger identified in condition 12.29 is met, this programme shall be in accordance with conditions 5.3, 11.2, 11.6 and 11.7 of this consent.

## **13 Certification of Works Post Construction**

- 13.1 Within 30 working days of completion of the construction works, or earlier if so requested by the Chief Executive of the Regional Council or delegate for a specific area of works, the consent holder shall submit a certificate signed by a chartered professional engineer to certify that the structure(s) has been constructed in accordance with good engineering practice and the conditions of this consent.
- 13.2 Within 30 working days of completion of the construction works the consent holder shall submit as-built plans of the structures authorised by this consent and the results of a bed-level survey of the Harbour entrance channel to the Bay of Plenty Regional Council.

## **14 Maintenance**

- 14.1 The consent holder shall ensure that the structure authorised by this consent is maintained in a safe and structurally sound condition at all times, and, if directed by the Chief Executive of the Regional Council or delegate to undertake any maintenance work, shall do so as soon as is practicable.
- 14.2 The consent holder shall develop and implement a maintenance inspection programme. Details of this programme shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval within three months following the completion of construction activities and shall include, but not be limited to:
- An annual inspection regime for the training walls and associated structures by a chartered professional engineer, with provision for additional inspections following each wave event that produces wave heights near or exceeding the design wave height;
  - Details of measures to be undertaken in the event of damage to the training walls or associated structures, including threshold levels for requiring repair works; and
  - Details of an annual inspection regime of the scour protection works at the base of walls using multi-beam sonar scanning or similar techniques.
- 14.3 Records of the inspections undertaken in accordance with the maintenance inspection programme required by condition 14.2 of this consent shall be submitted to the Chief Executive of the Regional Council or delegate within one month of the inspection being undertaken.
- 14.4 The consent holder shall monitor the structures to ensure that they do not present a danger to the public and shall take any necessary precautions to ensure the safety of the public using the

structure.

- 14.5 Maintenance works, other than hand work, shall be carried out in accordance with notification conditions 6.6 and 6.7, works conditions 8, timing condition 9.5 and water quality condition 10.5 of this consent.

## 15 Review of Consent Conditions

- 15.1 The Bay of Plenty Regional Council, may review any or all conditions of this consent by giving notice of its intention to do so under Section 128 of the Resource Management Act 1991, at any time within three months of the receipt of any of the monitoring results, or completion of a compliance report for any of the following purposes:
- (a) To deal with any adverse effects on the environment, which may arise from the exercise of this consent, and which it is appropriate to deal with at a later stage; or
  - (b) To review the adequacy of any monitoring plans proposed and/or monitoring requirements so as to incorporate into the consent any monitoring or other requirements which may become necessary to deal with any adverse effects on the environment arising from the exercise of this consent; or
  - (c) To review the adequacy of any mitigation measures proposed and/or mitigation requirements so as to incorporate into the consent any additional mitigation requirements which are necessary to deal with any adverse effects on the environment arising from the exercise of this consent.
- 15.2 The Bay of Plenty Regional Council shall be entitled to recover from the consent holder the actual and reasonable costs of the conduct of any review, calculated in accordance with and limited to that Council's scale of charges in-force and applicable at that time under section 36 of the Resource Management Act 1991.

## 16 Resource Management Charges

- 16.0 The consent holder shall pay the Bay of Plenty Regional Council such administrative charges as are fixed from time to time by the Regional Council in accordance with section 36 of the Resource Management Act 1991.

## 17 Lapse of Consent

- 17.0 This consent shall lapse on 31 August 2024 if not given effect to by that date. For the avoidance of doubt, given effect to includes, but is not limited to, the submission and subsequent approval of the detailed design plans required under condition 5.1 of this consent.

## 18 Term of Consent

- 18.0 This consent shall expire on 31 August 2044.

## 19 The Coastal Permit

- 19.0 The Coastal Permit hereby authorised is granted under the Resource Management Act 1991 and does not constitute an authority under any other Act, Regulation or Bylaw.

## Advice Notes

- 1
1. *Notification of works and submission of information should be made in writing to the Manager Pollution Prevention, Environment Bay of Plenty, Box 364 or fax 0800 368 329 or email [notify@envbop.govt.nz](mailto:notify@envbop.govt.nz) and should include the permit number 65566.*
  2. *Consultation with Opotiki District Council (as consent authority) will be undertaken as part of this approval process. Review and approval of the detailed designs and various plans may take up to 40 working days to complete due to the need to consult with various staff members within Environment Bay of Plenty. The approval process may take more than 40 working days to complete if the plans or designs require amendment before approval can be given.*
  3. *This proposal will affect archaeological site(s). Work affecting archaeological sites is subject to a*

- consent process under the Historic Places Act 1993. An authority (consent) from the New Zealand Historic Places Trust must be obtained for the work prior to commencement. It is an offence to damage or destroy a site for any purpose without an authority. The Historic Places Act 1993 contains penalties for unauthorised site damage. The applicant is advised to contact the New Zealand Historic Places Trust for further information.*
4. *The proposal may require an authority under the Floodway and Drainage Bylaw 2008 (or its successor).*
  5. *This activity may require authorisation under the Building Act 1991.*
  6. *Schedule 13 of the Regional Coastal Plan provides guidance on what quantitative standards can be used to assess compliance with the qualitative standards listed in the coastal water quality classifications.*
  7. *Potential contaminants include, but are not limited to, hydrocarbons, hydraulic fluids and cement and concrete products.*
  8. *Page 22 of Appendix 19 of the application gives examples of potential applications of modelling support during construction.*
  9. *The consent holder shall not be deemed to be non-compliant with this condition if the invited representatives chose not to participate. Representatives from Opotiki District Council and Environment Bay of Plenty may be the same as the respective compliance officers for this consent.*
  10. *At the time of granting this consent, the appropriate local newspapers were the Opotiki News and Whakatane Beacon. The appropriate radio station was Radio 1XX.*
  11. *For more information on the effects of cement in waterways and reasonable prevention measures refer to the following document available on the Auckland Regional Council website ([www.arc.govt.nz](http://www.arc.govt.nz)), "Pollution Fact Sheet - Construction Activities".*
  12. *Additional works may be required to ensure that the construction of the Opotiki Harbour Entrance does not result in an increase in flood levels. Further resource consents may be required for these works, which should be completed before construction begins.*
  13. *Once construction works have commenced in the areas referred to in conditions 9.1 and 9.2 of this consent then they may continue during subsequent Dotterel nesting periods - subject to compliance with the other conditions of this consent.*
  14. *The Environment Bay of Plenty Coast Care Information Brochure Number 9: Backyard Buffers includes information on appropriate dune plant species.*
  15. *An appropriate maximum inter-plant spacing for foredune plants is 1 m, and for back-dune plants is 0.6 m.*
  16. *Planting is more likely to be successful if carried out between 1 May and 30 September.*
  17. *The loop track to be provided through the Huntress Creek Conservation Area shall be designed in consultation with the Department of Conservation.*
  18. *Disposal of the dredged material to land is consented under land use consent 65565.*
  19. *The consent holder is responsible for ensuring that all contractors carrying out works under this consent are made aware of the relevant consent conditions, plans and associated documents.*
  20. *The consent holder is advised that non-compliance with consent conditions may result in enforcement action against the consent holder and/or their contractors.*
  21. *Compliance with the water quality standard outlined in condition 10.3 is only likely to be achieved following high rainfall, when the river is subject to increased turbidity.*
  22. *The consent holder may take a second set of samples (up-current and down-current) to verify the first set of sampling results.*
  23. *Water quality monitoring during dredging may not be required if the river conditions are such that the impacts of the dredging on water quality will be negligible.*
  24. *The consent holder is advised that one set of detailed designs and pre-construction plans may be prepared to meet the requirements of each of the consents required for the Opotiki Harbour Entrance project.*

## Bay of Plenty Regional Council

### Resource Consent

Pursuant to the Resource Management Act 1991, the **Bay of Plenty Regional Council**, by a decision dated 29 July 2009, **hereby grants**:

A resource consent:

- **Under section 15(1) of the Resource Management Act 1991 and rule 9.2.4(b) of the Bay of Plenty Regional Coastal Environment Plan to undertake a discretionary activity being to Discharge Contaminants to Water**

subject to the following conditions:

#### 1 Purpose of this Resource Consent

1.0 To undertake the following activities associated with the Opotiki Harbour Entrance project:

- Removal of material from the foreshore and seabed
- Discharge of sediment, slurry water and sediment-laden stormwater to the coastal marine area (from dredging activities, earthworks and construction activities)
- Disturbance of the foreshore and seabed
- Take of coastal water
- Diversion of coastal water
- Erection and removal of temporary structures
- Erection and maintenance of permanent structures that are not covered by consent 65563 (geocontainer bank reinforcement less than 300m in length, geo-container dyke)

#### 2 Location

2.0 Pakihikura (the Waioeka river mouth), Opotiki as shown on BOPRC Plan Number RC 65563/1

#### 3 Map Reference

3.0 The area is bounded by approximate map references NZMS 260 W15:8461-4821, W15:8469-4705, W15:8587-4699, W15:8563-4817

#### 4 Legal Description

4.0 Coastal Marine Area, Crown land, Sections 1-3 SO 8737, Allotments 436- 439 Waiotahi Parish, Sections 24-31, 31A, 32- 43 Opotiki Suburbs Block III (Opotiki District)

#### 5 Pre-Construction Requirements

5.1 The consent holder shall prepare and submit full engineering design details (including results of modelling, design assumptions used in the modelling process, plans and specifications) for all structures and the entrance channel realignment associated with the Opotiki Harbour Entrance project to the Chief Executive of the Bay of Plenty Regional Council or delegate, for approval at least 40 working days prior to the proposed date for commencement of works (see Advice Notes 1, 2 and 24). The purpose of this approval process is to ensure compliance with the conditions of this consent.

The detailed design process should involve review by suitably qualified and experienced, independent experts in the fields of engineering, landscape and ecology and expressly provide for the following:

- The structural integrity of the structures authorised by this consent. In particular, development of the detailed design should take into account the following:
  - River flows into the entrance at the upstream end of the training walls to determine local scour effects and the potential for turbulence to be set up in the channel.
  - The stability of scour aprons under construction and long term wave loadings;
  - Optimisation of the armour size.
  - Stability of the geocontainers under wave attack and current.
  - Scour potentials at the outer head of the structures.
  - River closure dynamics.
- Location of the structures authorised by this consent as far landward as practicable (taking into account other constraints);
- Use of the most up-to-date flood frequency analysis for the Waioeka and Otara Rivers in the design flood flow assumptions;
- Demonstration that flood levels in the Waioeka and Otara River will not be increased following construction of the new harbour entrance during a 100-year return flood event (see condition 8.13);
- Additional information on the sediment characteristics beneath the line of the proposed entrance channel - particularly with regard to scour resistance and seismic activity - and demonstration that adequate scour protection has been provided;
- A description of the intended construction materials;
- Outline future maintenance requirements;
- Integration of the structures with the landscape, natural character and ecological features of the coastal environment in the vicinity of the works;
- Restoration of dune landforms and vegetation where they interface with structures; and
- Inclusion of cultural elements in the training wall structures where practicable.

5.2 The consent holder shall prepare and submit a Construction Management Plan (CMP) for all construction works authorised by this consent to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval, at least 40 working days prior to the proposed date for commencement of works (see Advice Notes 1, 2 and 24). The purpose of this document is to demonstrate how the consent holder will manage activities during construction to avoid, remedy or minimise environmental effects and achieve compliance with the conditions of this consent. The CMP shall be developed using the engineering design details approved in accordance with condition 5.1 of this consent and shall include, but not be limited to:

- A detailed construction methodology for all works (to include how works will be sequenced/staged to minimise adverse environmental effects);
- Demonstration that a Floodway and Drainage bylaw authority has been obtained for the works (if necessary)(see Advice Note 4);
- Demonstration that an authority has been obtained for the works under the Historic Places Act 1993 (see Advice Note 3);
- The name and 24-hour contact details of the site manager supervising the works (including the refuelling and plant) as well as the contact details for all contractors working on site;
- Roles and responsibilities of key personnel for the implementation of this consent, including appointment of a representative to be the primary contact person in regard to matters relating to this consent;
- General site management measures, including:
  - waste/litter disposal
  - effluent disposal
  - security
  - location of stockpiles
- Complaints register and reporting procedure;
- Incident register and reporting procedure;
- Evidence that a suitably qualified engineer(s) has been appointed to carry out the overall design, supervision and certification of the works (including construction of all erosion and sediment controls);
- Construction monitoring, record-keeping and maintenance requirements;
- An accidental discovery protocol for dealing with koiwi or taonga unearthed during construction activities, developed in consultation with Whakatohea Maori Trust Board.

5.3 The consent holder shall prepare and submit an Environmental Mitigation and Remediation Plan (EMP) for all construction works authorised by this consent to the Chief Executive of the Bay of Plenty Regional Council or delegate, for approval, at least 40 working days prior to the proposed date for commencement of works (see Advice Notes 1, 2 and 24). The purpose of this document is to demonstrate how the consent holder will manage activities during construction to avoid, remedy

or minimise environmental effects and rehabilitate the site after construction works have been completed to achieve compliance with the conditions of this consent (in particular conditions 8 Works, 10 Water Quality Standards and 11 Post Construction Mitigation and Remediation). The consent holder shall consult with the technical liaison group required by condition 5.4 of this consent during the development of this plan. The EMP shall include, but not be limited to:

- Identification and mapping of areas (such as dotterel nesting sites, indigenous vegetation) sensitive to disturbance by construction activities and measures to protect against such disturbance;
- Establishment and clear delineation of construction vehicle/machinery movement tracks (including the western access track) that limit disturbance to sensitive areas;
- Measures to be taken to provide for navigational aids and the management of vessels using the Harbour entrance during construction;
- Measures that will be taken to ensure that the construction works will comply with the New Zealand Standard NZS 6803.1999 Acoustics ♦ Construction Noise (or its successor) or where it is not practicable to meet these standards, the duty under section 16 of the Resource Management Act 1991 to adopt the best practicable option to avoid unreasonable noise;
- Measures to be taken to ensure that the works authorised by this consent do not cause the water quality standards listed in condition 10 to be exceeded beyond the zone of reasonable mixing (see Advice Note 6);
- Procedures to prevent the discharge of hazardous substances or other contaminants into the coastal marine area or onto vegetation (see Advice Note 7);
- Procedures to minimise the discharge of sediment into the coastal marine area;
- Measures that will be taken to minimize the risk of fuel entering coastal or estuarine waters during refueling, especially where refueling occurs within 20 m of the coastal marine area;
- Details on how coastal process modeling will be used to mitigate environmental impacts during dredging operations and other construction related activities (see Advice Note 8);
- Measures to be undertaken to maintain and monitor the existing river entrance channel during construction, including:
  - Minimum river channel dimensions.
  - Monitoring methodology, frequency and reporting.
  - Procedures to manage stockpiled material to prevent additional flood risk or breach.
  - A contingency plan to address the risk of excessive sediment accumulation between the existing river mouth and the western training wall during construction (that could constrict the river mouth and increase flood risk).
- Measures to be taken to minimise the adverse effects of night-time lighting (see condition 8.14);
- Steps that will be taken to mitigate and rehabilitate the site post-construction (in particular to ensure compliance with conditions 11 of this consent);
- Steps that will be taken to mitigate for the loss of Dotterel habitat as a result of the works authorized by this consent (in particular to ensure compliance with condition 11.1 of this consent);
- Measures that will be taken to educate contractors regarding the requirements of the relevant resource consents and management plans, and environmental management; and
- Measures that will be taken to re-nourish beaches and replant dune systems immediately post-construction and subsequently following coastal setback. In particular, the EMP shall include, but not be limited to, the following information:
  - Identification of the plant species to be used for revegetation in each area on a plan or schedule (including all new areas of sand-dune, all existing areas of sand dune that will be affected by the harbour entrance works and areas of potential setback post-construction);
  - Desired planting density (see Advice Note 15);
  - Fertiliser application (including use of a controlled-release fertiliser at planting and post-planting fertiliser use);
  - A programme for revegetation following coastal set-back that exceeds the trigger set in condition 12.29 of this consent;
  - Weed management and pest control activities to be undertaken;
  - A programme for maintenance for a period of at least three years following completion of initial planting (maintenance activities may include the exclusion of pest browsers, the removal of weeds and replacement planting); and
  - A programme for ensuring adequate supply of plants (such as ordering and growing in advance).

5.4 The consent holder shall establish a technical liaison group to provide input during the development and implementation of the Environmental Mitigation and Remediation Plan required by condition 5.3 of this consent. The consent holder shall, as a minimum, invite representatives from the

following organisations to form part of the technical group: Environment Bay of Plenty, Waiotahi Coast Care, Department of Conservation, Whakatohea Maori Trust Board and Opotiki District Council (see Advice Note 9). The functions of the Technical Liaison Group are to:

- Review and provide constructive comment on the content of the detailed designs and EMP prior to its submission to the Regional Council; and
- Review and provide constructive comment on the implementation of the EMP.

- 5.5 The consent holder shall prepare, submit and implement a Site-wide Contingency Plan (SCP) for the contaminant of spills to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval at least 40 working days prior to works commencing (see Advice Notes 1, 2 and 24). The purpose of this document is to demonstrate how the consent holder will manage activities during construction to avoid, remedy or minimise environmental effects of unintended discharges and achieve compliance with the conditions of this consent (in particular, conditions 8.6, 8.7, 8.8 and 8.9). The contingency plan shall:
- Identify potential contaminants that will be used or stored on site (see Advice Note 7);
  - Identify designated contaminant storage facilities and re-fuelling locations;
  - Require that these locations to be bunded, and that machinery should be parked overnight or long-term only in these designated areas;
  - Require that all mobile fuel tankers carry spill kits and that spill kits are stored at bulk storage tank locations at all times;
  - Detail the contents of the spill kits, including absorbent pads, booms, pillow and socks and appropriate pegs/rope to hold the absorbent material in place;
  - Record the names of operators trained in spill response and remediation;
  - Detail an internal and external notification procedure of any spills; and
  - Identify measures to be undertaken to remediate a contaminant spill.
- 5.6 The consent holder shall develop and submit a Monitoring and Review Plan (MRP) for the Harbour Entrance Project to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval at least 40 working days prior to the proposed date for commencement of works (see Advice Notes 1, 2 and 24). This Plan shall outline how the potential environmental effects associated with the project are to be monitored (including monitoring methodologies, monitoring frequency and how results will be analysed and reported to the Regional Council). The MRP shall also provide for baseline monitoring, triggers for further monitoring or mitigation action and a description of what further monitoring and/or mitigation action may be required. Conditions 12.1 to 12.30 describe in further detail the matters that should be covered by this Plan.
- 5.7 Construction shall not commence until written approval of the designs and plans required by conditions 5.1, 5.2, 5.3, 5.5 and 5.6 of this consent has been received by the consent holder from the Chief Executive of the Bay of Plenty Regional Council or delegate.

## 6 Notification of Works

- 6.1 Not less than 20 working days prior to the start of the Opotiki Harbour Access works (including site preparation), the consent holder shall, in writing, notify the Chief Executive of the Bay of Plenty Regional Council or delegate, the Eastern Bay of Plenty Harbourmaster, the Department of Conservation and Whakatohea Maori Trust Board of the intent to start works (see Advice Note 1).
- 6.2 Not less than 20 working days prior to the start of the Opotiki Harbour Access works (including site preparation), the consent holder shall, in writing, request a site meeting between all relevant parties, including all contractors and relevant local authorities, prior to any works commencing on the site to discuss implementation of the construction management plan and environmental management measures (see Advice Note 1).
- 6.3 Not less than 10 working days prior to the commencement of the Opotiki Harbour Access works (including site preparation), the consent holder shall place notices in the local newspapers and on local radio stations (see Advice Note 10). These notices shall include, at a minimum, the following information:
- The date on which works are intended to commence;
  - The location and areas affected by the works;
  - The anticipated duration of the works; and

- The restrictions that will apply to public access and navigation.
- 6.4 A copy of this consent shall be kept at the construction site at all times until the works required to construct the new harbour entrance are complete.
- 6.5 The consent holder shall provide a copy of this consent and all documents referred to in this consent to any operator or contractor undertaking works authorised by this consent, prior to the works commencing.
- 6.6 Not less than 10 working days prior to undertaking any maintenance works under this consent, the consent holder shall, in writing, notify the Chief Executive of the Bay of Plenty Regional Council or delegate, Eastern Bay of Plenty Harbourmaster, the Department of Conservation of the intent to start works (see Advice Note 1).
- 6.7 Not less than three days prior to undertaking any maintenance works under this consent that will cause a restriction to navigation, the consent holder shall place notices in the local newspapers and on local radio stations (see Advice Note 10). These notices shall include, at a minimum, the following information:
- The date on which works are intended to commence;
  - The location and areas affected by the works;
  - The anticipated duration of the works; and
  - The restrictions that will apply to public access and navigation.

## 7 Signage

- 7.0 Prior to the commencement of the Opotiki Harbour Entrance project (including site preparation), the consent holder shall erect a prominent sign adjacent to the main entrance to the site, and maintain it throughout the period of the works. The sign shall clearly display, as a minimum, the following information:
- The name of the project and the consent holder;
  - The principal contractor;
  - A 24-hour contact telephone number for the consent holder or appointed agent;
  - A clear explanation that the contact telephone number is for the purpose of receiving complaints and information from the public about the Opotiki Harbour Entrance project; and
  - Restrictions to public access and navigation.

## 8 Works

- 8.1 All construction, dredging and earthworks shall be carried out in general accordance with the following:
- BOPRC Plan Number RC 65563/2;
  - The detailed designs (approved in accordance with condition 5.1 of this consent);
  - Construction Management Plan (approved in accordance with condition 5.2 of this consent);
  - Environmental Mitigation and Remediation Plan (approved in accordance with condition 5.3 of this consent);
  - Spill Containment Plan (approved in accordance with condition 5.5 of this consent);
  - Monitoring and Review Plan (approved in accordance with condition 5.6 of this consent).

Any amendments to the plans referenced in this condition shall be submitted to the Chief Executive of the Regional Council or delegate for review to ensure that they remain consistent with the conditions of this consent. Amended plans shall not be implemented until written approval has been received from the Regional Council.

- 8.2 The consent holder shall monitor the structures during construction to ensure that they do not represent a danger to the public.
- 8.3 The works associated with this consent shall be carried out under the supervision of a Chartered

- 8.4 Disturbance to the foreshore and seabed shall be minimised as far as practicable. This includes, but is not limited to, the following measures:
- Minimising machinery movements on the foreshore to the minimum necessary to achieve the purpose of this consent;
  - Building structures progressively from the land out to sea;
  - Locating machinery on structures (rather than on the foreshore/seabed); and
  - Completing each section of works as quickly as practicable.
- 8.5 Machinery and vehicles used to undertake the works shall be clean and well-maintained. In particular:
- Machinery and vehicles should be cleaned to remove surface hydrocarbons, seeds and other contaminants before entering site;
  - Hydraulic hoses shall be inspected and replaced when necessary to avoid failure whilst working in the coastal marine area;
  - Vegetable oil shall be used in place of hydraulic fluid wherever practicable;
  - Machines to be used in the coastal marine area shall be fitted with sealed bearings and grease caps for moving parts; and
  - All machinery is to be regularly maintained (including hydraulic hoses) in such a manner so as to minimise the potential for leakage of contaminants.
- 8.6 No fuel storage or machinery/vehicle maintenance shall be carried out within the western construction compound(s), the coastal marine area, on the foreshore or within 20 m above mean high water springs.
- 8.7 Any fuel or other hazardous substances stored on site shall be stored within portable containers so that they can be removed from the site if needed due to flood or storm events.
- 8.8 Refuelling shall only occur within the coastal marine area, on the foreshore or within 20 m above mean high water springs if it is the most practicable option and appropriate measures have been put in place to avoid or minimise any fuel or hydrocarbon spillage, including the provision of appropriate security and containment measures, where necessary.
- 8.9 The consent holder shall take all practicable measures to prevent cement dust and non-stabilised cement slurries from entering coastal or surface water. These measures shall include but not be limited to the following (see Advice Note 11):
- Ensuring appropriate controls are in place before the use of cement begins to contain and remove all cement contaminated waste and to prevent any discharge of waste water to fresh or storm water;
  - Ensuring clean storm water is diverted away from the work area;
  - Immediately containing and cleaning up any spills that occur to the satisfaction of Regional Council staff;
  - Containing all cement particles and dust within the works area and removing all cement particles and dust immediately after the completion of the work. Cement waste must be reused within the work area or disposed of at an appropriate facility;
  - Ensuring cement is allowed to fully set and there are no loose cement particles or dust residue remaining before allowing any natural flow of water back over it; and
  - Creating a designated wash down area on site for vehicles and equipment and ensuring staff know this is available.
- 8.10 The best practicable option shall be used to minimise the discharge of sediments resulting from construction works into coastal and estuarine waters. The consent holder shall detail the measures to be used in the EMP required by condition 5.3 of this consent.
- 8.11 For each year during construction, the consent holder shall fence off and signpost Dotterel nesting sites located on the eastern spit during the Dotterel breeding and nesting season (15 August to 29

February inclusive). The Department of Conservation shall be consulted regarding the areas that should be fenced. Fencing shall be erected by 14 August each year and may be removed from 1 March of the following year.

- 8.12 The construction compounds shall be fenced so as to contain the storage and construction area and to protect the surrounding dune landforms and vegetation.
- 8.13 The activities undertaken under this consent shall not result in an increase in the 100-year return period flood levels within the Waioeka and Otara Rivers at the following locations (see Advice Note 12):
- The Waioeka/Otara River confluence; or
  - The Waioeka Bridge; or
  - Approximately 850m upstream of Otara Bridge.
- 8.14 All exterior lighting associated with the construction activity shall be managed so as to avoid the spill of light or glare that might be:
- Detrimental to other users; or
  - Detrimental to wildlife; or
  - A hazard to navigation in the coastal marine area;
- unless such lighting is necessary for reasons of public safety or operational safety.
- 8.15 In the event of any archaeological site or koiwi being uncovered during the exercise of this consent, activities in the vicinity of the discovery shall cease. The consent holder shall contact the Regional Council, the Historic Places Trust and the relevant iwi authority (as identified in the Accidental Discovery Protocol required by the Construction Management Plan). The consent holder shall follow the Accidental Discovery Protocols (ADP), and shall not recommence works in the area of the discovery until the requirements of the ADP have been met (see Advice Note 1).
- 8.16 All plant, machinery, equipment, debris and construction materials, not associated with the permanent structures, shall be removed from the foreshore and coastal marine area at the completion of works.
- 8.17 All metal used to surface construction access tracks that are no longer required for maintenance shall be collected and removed at the completion of the works.
- 8.18 The consent holder shall ensure that all permanent structures erected under this consent are appropriately marked and/or lit to provide for navigation in accordance with the directions of the Eastern Bay of Plenty Harbourmaster.
- 8.19 The consent holder shall ensure that the capital works authorised under this consent are completed within a period of no longer than five years following their commencement.

## 9 Timing of Works

- 9.1 Construction activity (including site establishment works) shall not commence on the western end of the eastern spit, as shown on Plan number BOPRC 65563/3, during the period 15 August to 29 February inclusive (the Dotterel breeding and nesting period). (See Advice Note 13).
- 9.2 Construction activity within the Estuary, on the western sand spit or on the area of the eastern sand pit not included in condition 9.1 shall not commence during the period 1 October to 31 January inclusive (the Dotterel nesting period). (See Advice Note 13).
- 9.4 Works to divert the flow of the Waioeka River (the River realignment) shall not be undertaken during the inanga migration season (1 August ♦ 31 October inclusive).

- 9.5 Maintenance works that require vehicle access on the sand spits shall not be undertaken during the period 1 October to 31 January inclusive (the Dotterel nesting period).

## 10 Water Quality Standards

- 10.1 The zone of reasonable mixing for discharges associated with dredging activities is defined as being within a 200 m radius of the excavation (dredging) site.
- 10.2 Background water quality is defined as being 500 m upstream/up-current of the most upstream/up-current dredging or construction site.
- 10.3 Dredging and associated discharge activities undertaken during the period 1 December to 29 February (inclusive) shall not result in a decrease in water clarity (as measured by the black disk method) of more than 50% below background levels, beyond the zone of reasonable mixing (see Advice Notes 21-23).
- 10.4 Dredging and associated discharge activities undertaken during the period 1 March to 14 August (inclusive) shall not result in a suspended solids concentration within the water column beyond the zone of reasonable mixing that is more than 150g/m<sup>3</sup> above the background levels.
- 10.5 The consent holder shall ensure that all other construction works authorised by this consent, and consents 64465 and 65565 that authorise reclamation and earthworks associated with the Harbour Access Improvement project do not result in any of the following effects in estuarine or coastal waters following reasonable mixing (see Advice Note 6):
- The production of conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
  - Any conspicuous change in colour or visual clarity;
  - Any emission of objectionable odour;
  - Significant adverse effects on aquatic life;
  - Water rendered unsuitable for bathing due to poor visual clarity and/or the presence of contaminants;
  - Undesirable biological growths;
  - A water temperature change of more than 3 degrees C;
  - The concentration of dissolved oxygen to fall below 80% of saturation concentration; or
  - Aquatic organisms rendered unsuitable for human consumption due to the presence of contaminants.

For the purpose of this consent, the reasonable mixing area is within a 200 m radius of any individual area of construction activity.

## 11 Post-construction Mitigation and Remediation

- 11.1 The consent holder shall establish an area that is approximately one hectare on the post-construction western spit that provides suitable habitat for NZ Dotterel nesting. That area shall be maintained using weed and predator control for a period of five years. Suitable habitat consists of flat open sand and planting on the southern perimeters.
- 11.2 The consent holder shall reshape and replant any areas affected by the works (including access tracks and construction compounds) and the newly created dune systems with appropriate plants. Indigenous species shall be used with a preference for locally sourced seed stock wherever practicable (see Advice Note 14).
- 11.3 The consent holder shall erect and maintain six interpretative signs approximately 1.5 m x 1.0 m in size that provide information on:
- The cultural and heritage values of the site;
  - The ecological and conservation values of the site;

- The Harbour Development Project; and
  - Appropriate access routes to and through the sand-dunes and Huntress Creek Conservation Area.
- 11.4 The consent holder shall fence the Huntress Creek Conservation Area, as shown on Plan Number BOPRC RC65563/4, along its northern boundary and along the legal road boundaries that pass through the conservation area. The Department of Conservation shall be consulted regarding the materials used to construct this fencing.
- 11.5 The consent holder shall make appropriate provision for public access to the new Harbour entrance. This access shall be in general accordance with the outline shown on Plan Number BOPRC 65563/5 and shall provide:
- Vehicle access to a sandy road head (consisting of bollards, rope and a signboard) on both sides of the training walls;
  - Delineation of foot tracks (using planting) along the southern side of the river closure and bank protection structures authorised by this consent that guide visitors away from potential dotterel nesting areas; and
  - Creation of a loop track in the Huntress Creek Conservation Area (see Advice Note 17).
- 11.6 Any sand used for beach and dune renourishment shall be of a comparable size and colour to the natural sediments present at the deposition site.
- 11.7 The mitigation and remediation works associated with this consent shall be carried out under the supervision of a suitably qualified terrestrial ecologist.
- 11.8 The consent holder shall conduct an official opening ceremony for the new Harbour Entrance in accordance with iwi protocol.

## 12 Monitoring and Review

- 12.1 The consent holder shall develop and implement a programme to monitor the effects of the new Harbour Entrance on water levels in the Waioeka and Otara Rivers. This monitoring shall encompass an area from the river-mouth to immediately downstream of State Highway 35.
- 12.2 The consent holder shall develop and implement a three-dimensional monitoring programme for salinity within the Waioeka Estuary. Baseline and post-construction monitoring should be undertaken. Each set of monitoring should be undertaken under a variety of conditions, including but not limited to:
- Dry and wet weather low tide with gauged river flows;
  - Dry and wet weather flood tide with gauged river flows;
  - Dry and wet weather ebb tide with gauged river flows; and
  - Dry and wet weather high tide with gauged river flows.
- 12.3 The consent holder shall analyse the salinity monitoring data, this shall include a comparison of the actual salinity changes within the estuary to those predicted by the modelling.
- 12.4 The consent holder shall establish a trigger, based on the extent of salinity change, which requires the consent holder to undertake additional monitoring (such as wetland vegetation monitoring) in order to assess the adverse environmental effects (if any) of the salinity change and options for mitigation. The consent holder shall be responsible for undertaking any mitigation, if so directed by the Chief Executive of the Regional Council or delegate.
- 12.5 The consent holder shall develop and implement a programme for monitoring the effects of the construction activities on water quality to assess compliance with conditions 10 of this consent.

- 12.6 The consent holder shall develop and implement a programme for monitoring wildlife and wildlife habitat sensitive to disturbance. As a minimum this programme shall include monitoring the extent of sea-grass beds for a period up to at least two years post-construction and dotterel breeding and feeding areas for a period up to at least five years post-construction.
- 12.7 The consent holder shall establish triggers for additional monitoring and mitigation to be undertaken by the consent holder in relation to the monitoring programme required by conditions 12.5 and 12.6 of this consent. The consent holder shall be responsible for undertaking any additional monitoring and/or mitigation.
- 12.8 The consent holder shall develop and implement a programme for surveying bed levels in the channel between the training walls and assessing compaction of sediments at the river mouth.
- 12.9 The consent holder shall develop and implement a channel maintenance programme, this shall include bed levels that trigger the need for the consent holder to undertake dredging to maintain safe-navigation through the entrance channel.
- 12.10 The consent holder shall develop and implement a programme for monitoring the effects of the Harbour development project on coastal morphology and coastal processes that is consistent with conditions 12.11 to 12.30 of this consent.

### **Beach and near-shore monitoring - details**

#### *Beach cross section surveys*

- 12.11 The consent holder shall install eight beach cross section monitoring sites: four on the western side of the proposed training walls (between the proposed training walls and Environment Bay of Plenty site CCS4) and four on the eastern side (between the proposed training walls and Environment Bay of Plenty site CCS6) as shown on Plan Number BOPRC 65563/6. On each side of the proposed training walls the location of at least one of these cross sections should coincide with the zone of maximum anticipated erosion. The seaward endpoint for each profiled dataset should be at a minimum of -1 m elevation (Moturiki Datum).
- 12.12 Durable front and back benchmarks shall be maintained at the sites at all times during the exercise of this consent.
- 12.13 Prior to commencing monitoring the consent holder shall provide to the Chief Executive of the Bay of Plenty Regional Council or delegate the following information for each of the eight new beach cross section monitoring sites:
- GPS coordinates of the front and back benchmark (NZMG);
  - Surveyed elevation (to second order survey standards) in Moturiki Datum of the front and back benchmark;
  - Description and photographs of each front and back benchmark; and
  - A plan of the location of each front and back benchmark.
- 12.14 All beach cross section surveys should be undertaken using Total Station survey or similar technology.
- 12.15 The consent holder shall undertake at least one pre-construction (baseline) beach cross section survey at each of the sites established in accordance with condition 12.11 of this consent and also at Environment Bay of Plenty sites CCS3 to CCS7 inclusive. This survey should include a full survey measured from the back marker for the eight new sites and shall be undertaken no longer than one month prior to the date when works are due to commence.
- 12.16 Beach cross section surveys should be undertaken at each of the new sites established in

accordance with condition 12.11 of this consent and also at Environment Bay of Plenty sites CCS3 to CCS7 inclusive once a month during the construction phase.

- 12.17 Beach cross section surveys should be carried out at all sites (13) as soon as practicable after any storm surge event exceeding a water level of 1.49 m RL Moturiki Datum (10% AEP).
- 12.18 The consent holder shall review the monitoring data collected in accordance with conditions 12.16 and 12.17 at six monthly intervals during the construction phase. The results of this review shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate within one month.
- 12.19 Following completion of the construction phase a review of all beach cross section monitoring data should be undertaken and a new monitoring frequency determined. The results of this review and the new monitoring frequency shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval within one month.
- 12.20 All beach cross section data shall be supplied to the Chief Executive of the Bay of Plenty Regional Council or delegate within two weeks of collection. Data supplied shall be in the form of raw and processed data (Moturiki Datum).

#### **Foredune position surveys**

- 12.21 The consent holder shall undertake a toe of foredune survey along the coastline from Environment Bay of Plenty site CCS3 to the Waiotahi River entrance (as shown on Plan Number BOPRC 65563/6) prior to construction and monthly during the construction phase. The horizontal distance between each collected survey point shall be less than 10 m. Elevation (in Moturiki Datum) shall also be measured at each point.
- 12.22 The beach toe of foredune survey data shall be supplied to the Chief Executive of the Bay of Plenty Regional Council or delegate within two weeks of collection. Data supplied shall be in the form of raw and processed data (NZMG and Moturiki Datum)
- 12.23 Following completion of the construction phase a review of all beach toe of foredune survey data should be undertaken and a new monitoring frequency determined. The results of this review and the new monitoring frequency shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval within one month.

#### **Shore parallel surveys**

- 12.24 The consent holder shall undertake a beach topographical survey immediately adjacent to the proposed training walls that extends for one kilometre either side prior to construction and monthly during the construction phase thereafter. The horizontal distance between each collected survey point shall be less than 5m.
- 12.25 The consent holder shall review beach topographical survey data at six month intervals collected in accordance with condition 12.24. The results of this review shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate within one month.
- 12.26 All beach topographical survey data shall be supplied to the Chief Executive of the Bay of Plenty Regional Council or delegate within two weeks of collection. Data supplied shall be in the form of raw and processed data (NZMG and Moturiki Datum).
- 12.27 Following completion of the construction phase a review of all beach topographical survey data should be undertaken and a new monitoring frequency determined. The results of this review and

the new monitoring frequency shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval within one month.

### **Aerial photography**

- 12.28 The consent holder shall undertake a high resolution (0.25 GSD) aerial photography survey covering the coastline (including the Waioeka River ebb delta and approximately 200 m inland from the toe of the foredune) from Environment Bay of Plenty site CCS1 to CCS8 (as shown on Plan Number BOPRC 65563/6) prior to construction.

### **Renourishment trigger**

- 12.29 The renourishment trigger is set at 50 m of landward retreat of the baseline toe of foredune position. This distance should be measured from any of the datasets outlined in the Beach and Nearshore monitoring section.
- 12.30 The consent holder shall develop a beach nourishment and dune planting programme, to be implemented when the trigger identified in condition 12.29 is met, this programme shall be in accordance with conditions 5.3, 11.2, 11.6 and 11.7 of this consent.

## **13 Certification of Works Post Construction**

- 13.1 Within 30 working days of completion of the construction works, or earlier if so requested by the Chief Executive of the Regional Council or delegate for a specific area of works, the consent holder shall submit a certificate signed by a chartered professional engineer to certify that the structure(s) has been constructed in accordance with good engineering practice and the conditions of this consent.
- 13.2 Within 30 working days of completion of the construction works the consent holder shall submit as-built plans of the structures authorised by this consent and the results of a bed-level survey of the Harbour entrance channel to the Bay of Plenty Regional Council.

## **14 Maintenance**

- 14.1 The consent holder shall ensure that the structure authorised by this consent is maintained in a safe and structurally sound condition at all times, and, if directed by the Chief Executive of the Regional Council or delegate to undertake any maintenance work, shall do so as soon as is practicable.
- 14.2 The consent holder shall develop and implement a maintenance inspection programme. Details of this programme shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval within three months following the completion of construction activities and shall include, but not be limited to:
- An annual inspection regime for the training walls and associated structures by a chartered professional engineer, with provision for additional inspections following each wave event that produces wave heights near or exceeding the design wave height;
  - Details of measures to be undertaken in the event of damage to the training walls or associated structures, including threshold levels for requiring repair works; and
  - Details of an annual inspection regime of the scour protection works at the base of walls using multi-beam sonar scanning or similar techniques.
- 14.3 Records of the inspections undertaken in accordance with the maintenance inspection programme required by condition 14.2 of this consent shall be submitted to the Chief Executive of the Regional Council or delegate within one month of the inspection being undertaken.
- 14.4 The consent holder shall monitor the structures to ensure that they do not present a danger to the public and shall take any necessary precautions to ensure the safety of the public using the

structure.

- 14.5 Maintenance works, other than hand work, shall be carried out in accordance with notification conditions 6.6 and 6.7, works conditions 8, timing condition 9.5 and water quality condition 10.5 of this consent.

## 15 Review of Consent Conditions

- 15.1 The Bay of Plenty Regional Council, may review any or all conditions of this consent by giving notice of its intention to do so under Section 128 of the Resource Management Act 1991, at any time within three months of the receipt of any of the monitoring results, or completion of a compliance report for any of the following purposes:
- (a) To deal with any adverse effects on the environment, which may arise from the exercise of this consent, and which it is appropriate to deal with at a later stage; or
  - (b) To review the adequacy of any monitoring plans proposed and/or monitoring requirements so as to incorporate into the consent any monitoring or other requirements which may become necessary to deal with any adverse effects on the environment arising from the exercise of this consent; or
  - (c) To review the adequacy of any mitigation measures proposed and/or mitigation requirements so as to incorporate into the consent any additional mitigation requirements which are necessary to deal with any adverse effects on the environment arising from the exercise of this consent.
- 15.2 The Bay of Plenty Regional Council shall be entitled to recover from the consent holder the actual and reasonable costs of the conduct of any review, calculated in accordance with and limited to that Council's scale of charges in-force and applicable at that time under section 36 of the Resource Management Act 1991.

## 16 Resource Management Charges

- 16.0 The consent holder shall pay the Bay of Plenty Regional Council such administrative charges as are fixed from time to time by the Regional Council in accordance with section 36 of the Resource Management Act 1991.

## 17 Lapse of Consent

- 17.0 This consent shall lapse on 31 August 2024 if not given effect to by that date. For the avoidance of doubt, given effect to includes, but is not limited to, the submission and subsequent approval of the detailed design plans required under condition 5.1 of this consent.

## 18 Term of Consent

- 18.0 This consent shall expire on 31 August 2044.

## 19 The Coastal Permit

- 19.0 The Coastal Permit hereby authorised is granted under the Resource Management Act 1991 and does not constitute an authority under any other Act, Regulation or Bylaw.

## Advice Notes

- 1
1. *Notification of works and submission of information should be made in writing to the Manager Pollution Prevention, Environment Bay of Plenty, Box 364 or fax 0800 368 329 or email [notify@envbop.govt.nz](mailto:notify@envbop.govt.nz) and should include the permit number 65566.*
  2. *Consultation with Opotiki District Council (as consent authority) will be undertaken as part of this approval process. Review and approval of the detailed designs and various plans may take up to 40 working days to complete due to the need to consult with various staff members within Environment Bay of Plenty. The approval process may take more than 40 working days to complete if the plans or designs require amendment before approval can be given.*
  3. *This proposal will affect archaeological site(s). Work affecting archaeological sites is subject to a*

- consent process under the Historic Places Act 1993. An authority (consent) from the New Zealand Historic Places Trust must be obtained for the work prior to commencement. It is an offence to damage or destroy a site for any purpose without an authority. The Historic Places Act 1993 contains penalties for unauthorised site damage. The applicant is advised to contact the New Zealand Historic Places Trust for further information.*
4. *The proposal may require an authority under the Floodway and Drainage Bylaw 2008 (or its successor).*
  5. *This activity may require authorisation under the Building Act 1991.*
  6. *Schedule 13 of the Regional Coastal Plan provides guidance on what quantitative standards can be used to assess compliance with the qualitative standards listed in the coastal water quality classifications.*
  7. *Potential contaminants include, but are not limited to, hydrocarbons, hydraulic fluids and cement and concrete products.*
  8. *Page 22 of Appendix 19 of the application gives examples of potential applications of modelling support during construction.*
  9. *The consent holder shall not be deemed to be non-compliant with this condition if the invited representatives chose not to participate. Representatives from Opotiki District Council and Environment Bay of Plenty may be the same as the respective compliance officers for this consent.*
  10. *At the time of granting this consent, the appropriate local newspapers were the Opotiki News and Whakatane Beacon. The appropriate radio station was Radio 1XX.*
  11. *For more information on the effects of cement in waterways and reasonable prevention measures refer to the following document available on the Auckland Regional Council website ([www.arc.govt.nz](http://www.arc.govt.nz)), "Pollution Fact Sheet - Construction Activities".*
  12. *Additional works may be required to ensure that the construction of the Opotiki Harbour Entrance does not result in an increase in flood levels. Further resource consents may be required for these works, which should be completed before construction begins.*
  13. *Once construction works have commenced in the areas referred to in conditions 9.1 and 9.2 of this consent then they may continue during subsequent Dotterel nesting periods - subject to compliance with the other conditions of this consent.*
  14. *The Environment Bay of Plenty Coast Care Information Brochure Number 9: Backyard Buffers includes information on appropriate dune plant species.*
  15. *An appropriate maximum inter-plant spacing for foredune plants is 1 m, and for back-dune plants is 0.6 m.*
  16. *Planting is more likely to be successful if carried out between 1 May and 30 September.*
  17. *The loop track to be provided through the Huntress Creek Conservation Area shall be designed in consultation with the Department of Conservation.*
  18. *Disposal of the dredged material to land is consented under land use consent 65565.*
  19. *The consent holder is responsible for ensuring that all contractors carrying out works under this consent are made aware of the relevant consent conditions, plans and associated documents.*
  20. *The consent holder is advised that non-compliance with consent conditions may result in enforcement action against the consent holder and/or their contractors.*
  21. *Compliance with the water quality standard outlined in condition 10.3 is only likely to be achieved following high rainfall, when the river is subject to increased turbidity.*
  22. *The consent holder may take a second set of samples (up-current and down-current) to verify the first set of sampling results.*
  23. *Water quality monitoring during dredging may not be required if the river conditions are such that the impacts of the dredging on water quality will be negligible.*
  24. *The consent holder is advised that one set of detailed designs and pre-construction plans may be prepared to meet the requirements of each of the consents required for the Opotiki Harbour Entrance project.*

## Bay of Plenty Regional Council

### Resource Consent

Pursuant to the Resource Management Act 1991, the **Bay of Plenty Regional Council**, by a decision dated 29 July 2009, **hereby grants**:

A resource consent:

- **Under section 12(1)(e) of the Resource Management Act 1991 and rule 14.2.4(j) of the Bay of Plenty Regional Coastal Environment Plan to undertake a discretionary activity Remove, Damage, Modify or Destroy indigenous vegetation on the Foreshore and Seabed**

subject to the following conditions:

#### 1 Purpose of this Resource Consent

1.0 To undertake the following activities associated with the Opotiki Harbour Entrance project:

- Removal of material from the foreshore and seabed
- Discharge of sediment, slurry water and sediment-laden stormwater to the coastal marine area (from dredging activities, earthworks and construction activities)
- Disturbance of the foreshore and seabed
- Take of coastal water
- Diversion of coastal water
- Erection and removal of temporary structures
- Erection and maintenance of permanent structures that are not covered by consent 65563 (geocontainer bank reinforcement less than 300m in length, geo-container dyke)

#### 2 Location

2.0 Pakihikura (the Waioeka river mouth), Opotiki as shown on BOPRC Plan Number RC 65563/1

#### 3 Map Reference

3.0 The area is bounded by approximate map references NZMS 260 W15:8461-4821, W15:8469-4705, W15:8587-4699, W15:8563-4817

#### 4 Legal Description

4.0 Coastal Marine Area, Crown land, Sections 1-3 SO 8737, Allotments 436- 439 Waiotahi Parish, Sections 24-31, 31A, 32- 43 Opotiki Suburbs Block III (Opotiki District)

#### 5 Pre-Construction Requirements

5.1 The consent holder shall prepare and submit full engineering design details (including results of modelling, design assumptions used in the modelling process, plans and specifications) for all structures and the entrance channel realignment associated with the Opotiki Harbour Entrance project to the Chief Executive of the Bay of Plenty Regional Council or delegate, for approval at least 40 working days prior to the proposed date for commencement of works (see Advice Notes 1, 2 and 24). The purpose of this approval process is to ensure compliance with the conditions of this consent.

The detailed design process should involve review by suitably qualified and experienced, independent experts in the fields of engineering, landscape and ecology and expressly provide for

the following:

- The structural integrity of the structures authorised by this consent. In particular, development of the detailed design should take into account the following:
  - River flows into the entrance at the upstream end of the training walls to determine local scour effects and the potential for turbulence to be set up in the channel.
  - The stability of scour aprons under construction and long term wave loadings;
  - Optimisation of the armour size.
  - Stability of the geocontainers under wave attack and current.
  - Scour potentials at the outer head of the structures.
  - River closure dynamics.
- Location of the structures authorised by this consent as far landward as practicable (taking into account other constraints);
- Use of the most up-to-date flood frequency analysis for the Waioeka and Otara Rivers in the design flood flow assumptions;
- Demonstration that flood levels in the Waioeka and Otara River will not be increased following construction of the new harbour entrance during a 100-year return flood event (see condition 8.13);
- Additional information on the sediment characteristics beneath the line of the proposed entrance channel - particularly with regard to scour resistance and seismic activity - and demonstration that adequate scour protection has been provided;
- A description of the intended construction materials;
- Outline future maintenance requirements;
- Integration of the structures with the landscape, natural character and ecological features of the coastal environment in the vicinity of the works;
- Restoration of dune landforms and vegetation where they interface with structures; and
- Inclusion of cultural elements in the training wall structures where practicable.

5.2 The consent holder shall prepare and submit a Construction Management Plan (CMP) for all construction works authorised by this consent to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval, at least 40 working days prior to the proposed date for commencement of works (see Advice Notes 1, 2 and 24). The purpose of this document is to demonstrate how the consent holder will manage activities during construction to avoid, remedy or minimise environmental effects and achieve compliance with the conditions of this consent. The CMP shall be developed using the engineering design details approved in accordance with condition 5.1 of this consent and shall include, but not be limited to:

- A detailed construction methodology for all works (to include how works will be sequenced/staged to minimise adverse environmental effects);
- Demonstration that a Floodway and Drainage bylaw authority has been obtained for the works (if necessary)(see Advice Note 4);
- Demonstration that an authority has been obtained for the works under the Historic Places Act 1993 (see Advice Note 3);
- The name and 24-hour contact details of the site manager supervising the works (including the refuelling and plant) as well as the contact details for all contractors working on site;
- Roles and responsibilities of key personnel for the implementation of this consent, including appointment of a representative to be the primary contact person in regard to matters relating to this consent;
- General site management measures, including:
  - waste/litter disposal
  - effluent disposal
  - security
  - location of stockpiles
- Complaints register and reporting procedure;
- Incident register and reporting procedure;
- Evidence that a suitably qualified engineer(s) has been appointed to carry out the overall design, supervision and certification of the works (including construction of all erosion and sediment controls);
- Construction monitoring, record-keeping and maintenance requirements;
- An accidental discovery protocol for dealing with koiwi or taonga unearthed during construction activities, developed in consultation with Whakatohea Maori Trust Board.

5.3 The consent holder shall prepare and submit an Environmental Mitigation and Remediation Plan (EMP) for all construction works authorised by this consent to the Chief Executive of the Bay of Plenty Regional Council or delegate, for approval, at least 40 working days prior to the proposed date for commencement of works (see Advice Notes 1, 2 and 24). The purpose of this document is

to demonstrate how the consent holder will manage activities during construction to avoid, remedy or minimise environmental effects and rehabilitate the site after construction works have been completed to achieve compliance with the conditions of this consent (in particular conditions 8 Works, 10 Water Quality Standards and 11 Post Construction Mitigation and Remediation). The consent holder shall consult with the technical liaison group required by condition 5.4 of this consent during the development of this plan. The EMP shall include, but not be limited to:

- Identification and mapping of areas (such as dotterel nesting sites, indigenous vegetation) sensitive to disturbance by construction activities and measures to protect against such disturbance;
- Establishment and clear delineation of construction vehicle/machinery movement tracks (including the western access track) that limit disturbance to sensitive areas;
- Measures to be taken to provide for navigational aids and the management of vessels using the Harbour entrance during construction;
- Measures that will be taken to ensure that the construction works will comply with the New Zealand Standard NZS 6803.1999 Acoustics ♦ Construction Noise (or its successor) or where it is not practicable to meet these standards, the duty under section 16 of the Resource Management Act 1991 to adopt the best practicable option to avoid unreasonable noise;
- Measures to be taken to ensure that the works authorised by this consent do not cause the water quality standards listed in condition 10 to be exceeded beyond the zone of reasonable mixing (see Advice Note 6);
- Procedures to prevent the discharge of hazardous substances or other contaminants into the coastal marine area or onto vegetation (see Advice Note 7);
- Procedures to minimise the discharge of sediment into the coastal marine area;
- Measures that will be taken to minimize the risk of fuel entering coastal or estuarine waters during refueling, especially where refueling occurs within 20 m of the coastal marine area;
- Details on how coastal process modeling will be used to mitigate environmental impacts during dredging operations and other construction related activities (see Advice Note 8);
- Measures to be undertaken to maintain and monitor the existing river entrance channel during construction, including:
  - Minimum river channel dimensions.
  - Monitoring methodology, frequency and reporting.
  - Procedures to manage stockpiled material to prevent additional flood risk or breach.
  - A contingency plan to address the risk of excessive sediment accumulation between the existing river mouth and the western training wall during construction (that could constrict the river mouth and increase flood risk).
- Measures to be taken to minimise the adverse effects of night-time lighting (see condition 8.14);
- Steps that will be taken to mitigate and rehabilitate the site post-construction (in particular to ensure compliance with conditions 11 of this consent);
- Steps that will be taken to mitigate for the loss of Dotterel habitat as a result of the works authorized by this consent (in particular to ensure compliance with condition 11.1 of this consent);
- Measures that will be taken to educate contractors regarding the requirements of the relevant resource consents and management plans, and environmental management; and
- Measures that will be taken to re-nourish beaches and replant dune systems immediately post-construction and subsequently following coastal setback. In particular, the EMP shall include, but not be limited to, the following information:
  - Identification of the plant species to be used for revegetation in each area on a plan or schedule (including all new areas of sand-dune, all existing areas of sand dune that will be affected by the harbour entrance works and areas of potential setback post-construction);
  - Desired planting density (see Advice Note 15);
  - Fertiliser application (including use of a controlled-release fertiliser at planting and post-planting fertiliser use);
  - A programme for revegetation following coastal set-back that exceeds the trigger set in condition 12.29 of this consent;
  - Weed management and pest control activities to be undertaken;
  - A programme for maintenance for a period of at least three years following completion of initial planting (maintenance activities may include the exclusion of pest browsers, the removal of weeds and replacement planting); and
  - A programme for ensuring adequate supply of plants (such as ordering and growing in advance).

5.4 The consent holder shall establish a technical liaison group to provide input during the development and implementation of the Environmental Mitigation and Remediation Plan required by condition

5.3 of this consent. The consent holder shall, as a minimum, invite representatives from the following organisations to form part of the technical group: Environment Bay of Plenty, Waiotahi Coast Care, Department of Conservation, Whakatohea Maori Trust Board and Opotiki District Council (see Advice Note 9). The functions of the Technical Liaison Group are to:

- Review and provide constructive comment on the content of the detailed designs and EMP prior to its submission to the Regional Council; and
- Review and provide constructive comment on the implementation of the EMP.

- 5.5 The consent holder shall prepare, submit and implement a Site-wide Contingency Plan (SCP) for the contaminant of spills to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval at least 40 working days prior to works commencing (see Advice Notes 1, 2 and 24). The purpose of this document is to demonstrate how the consent holder will manage activities during construction to avoid, remedy or minimise environmental effects of unintended discharges and achieve compliance with the conditions of this consent (in particular, conditions 8.6, 8.7, 8.8 and 8.9). The contingency plan shall:
- Identify potential contaminants that will be used or stored on site (see Advice Note 7);
  - Identify designated contaminant storage facilities and re-fuelling locations;
  - Require that these locations to be bunded, and that machinery should be parked overnight or long-term only in these designated areas;
  - Require that all mobile fuel tankers carry spill kits and that spill kits are stored at bulk storage tank locations at all times;
  - Detail the contents of the spill kits, including absorbent pads, booms, pillow and socks and appropriate pegs/rope to hold the absorbent material in place;
  - Record the names of operators trained in spill response and remediation;
  - Detail an internal and external notification procedure of any spills; and
  - Identify measures to be undertaken to remediate a contaminant spill.
- 5.6 The consent holder shall develop and submit a Monitoring and Review Plan (MRP) for the Harbour Entrance Project to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval at least 40 working days prior to the proposed date for commencement of works (see Advice Notes 1, 2 and 24). This Plan shall outline how the potential environmental effects associated with the project are to be monitored (including monitoring methodologies, monitoring frequency and how results will be analysed and reported to the Regional Council). The MRP shall also provide for baseline monitoring, triggers for further monitoring or mitigation action and a description of what further monitoring and/or mitigation action may be required. Conditions 12.1 to 12.30 describe in further detail the matters that should be covered by this Plan.
- 5.7 Construction shall not commence until written approval of the designs and plans required by conditions 5.1, 5.2, 5.3, 5.5 and 5.6 of this consent has been received by the consent holder from the Chief Executive of the Bay of Plenty Regional Council or delegate.

## 6 Notification of Works

- 6.1 Not less than 20 working days prior to the start of the Opotiki Harbour Access works (including site preparation), the consent holder shall, in writing, notify the Chief Executive of the Bay of Plenty Regional Council or delegate, the Eastern Bay of Plenty Harbourmaster, the Department of Conservation and Whakatohea Maori Trust Board of the intent to start works (see Advice Note 1).
- 6.2 Not less than 20 working days prior to the start of the Opotiki Harbour Access works (including site preparation), the consent holder shall, in writing, request a site meeting between all relevant parties, including all contractors and relevant local authorities, prior to any works commencing on the site to discuss implementation of the construction management plan and environmental management measures (see Advice Note 1).
- 6.3 Not less than 10 working days prior to the commencement of the Opotiki Harbour Access works (including site preparation), the consent holder shall place notices in the local newspapers and on local radio stations (see Advice Note 10). These notices shall include, at a minimum, the following information:
- The date on which works are intended to commence;
  - The location and areas affected by the works;

- The anticipated duration of the works; and
  - The restrictions that will apply to public access and navigation.
- 6.4 A copy of this consent shall be kept at the construction site at all times until the works required to construct the new harbour entrance are complete.
- 6.5 The consent holder shall provide a copy of this consent and all documents referred to in this consent to any operator or contractor undertaking works authorised by this consent, prior to the works commencing.
- 6.6 Not less than 10 working days prior to undertaking any maintenance works under this consent, the consent holder shall, in writing, notify the Chief Executive of the Bay of Plenty Regional Council or delegate, Eastern Bay of Plenty Harbourmaster, the Department of Conservation of the intent to start works (see Advice Note 1).
- 6.7 Not less than three days prior to undertaking any maintenance works under this consent that will cause a restriction to navigation, the consent holder shall place notices in the local newspapers and on local radio stations (see Advice Note 10). These notices shall include, at a minimum, the following information:
- The date on which works are intended to commence;
  - The location and areas affected by the works;
  - The anticipated duration of the works; and
  - The restrictions that will apply to public access and navigation.

## 7 Signage

- 7.0 Prior to the commencement of the Opotiki Harbour Entrance project (including site preparation), the consent holder shall erect a prominent sign adjacent to the main entrance to the site, and maintain it throughout the period of the works. The sign shall clearly display, as a minimum, the following information:
- The name of the project and the consent holder;
  - The principal contractor;
  - A 24-hour contact telephone number for the consent holder or appointed agent;
  - A clear explanation that the contact telephone number is for the purpose of receiving complaints and information from the public about the Opotiki Harbour Entrance project; and
  - Restrictions to public access and navigation.

## 8 Works

- 8.1 All construction, dredging and earthworks shall be carried out in general accordance with the following:
- BOPRC Plan Number RC 65563/2;
  - The detailed designs (approved in accordance with condition 5.1 of this consent);
  - Construction Management Plan (approved in accordance with condition 5.2 of this consent);
  - Environmental Mitigation and Remediation Plan (approved in accordance with condition 5.3 of this consent);
  - Spill Containment Plan (approved in accordance with condition 5.5 of this consent);
  - Monitoring and Review Plan (approved in accordance with condition 5.6 of this consent).

Any amendments to the plans referenced in this condition shall be submitted to the Chief Executive of the Regional Council or delegate for review to ensure that they remain consistent with the conditions of this consent. Amended plans shall not be implemented until written approval has been received from the Regional Council.

- 8.2 The consent holder shall monitor the structures during construction to ensure that they do not represent a danger to the public.

- 8.3 The works associated with this consent shall be carried out under the supervision of a Chartered Professional Engineer.
- 8.4 Disturbance to the foreshore and seabed shall be minimised as far as practicable. This includes, but is not limited to, the following measures:
- Minimising machinery movements on the foreshore to the minimum necessary to achieve the purpose of this consent;
  - Building structures progressively from the land out to sea;
  - Locating machinery on structures (rather than on the foreshore/seabed); and
  - Completing each section of works as quickly as practicable.
- 8.5 Machinery and vehicles used to undertake the works shall be clean and well-maintained. In particular:
- Machinery and vehicles should be cleaned to remove surface hydrocarbons, seeds and other contaminants before entering site;
  - Hydraulic hoses shall be inspected and replaced when necessary to avoid failure whilst working in the coastal marine area;
  - Vegetable oil shall be used in place of hydraulic fluid wherever practicable;
  - Machines to be used in the coastal marine area shall be fitted with sealed bearings and grease caps for moving parts; and
  - All machinery is to be regularly maintained (including hydraulic hoses) in such a manner so as to minimise the potential for leakage of contaminants.
- 8.6 No fuel storage or machinery/vehicle maintenance shall be carried out within the western construction compound(s), the coastal marine area, on the foreshore or within 20 m above mean high water springs.
- 8.7 Any fuel or other hazardous substances stored on site shall be stored within portable containers so that they can be removed from the site if needed due to flood or storm events.
- 8.8 Refuelling shall only occur within the coastal marine area, on the foreshore or within 20 m above mean high water springs if it is the most practicable option and appropriate measures have been put in place to avoid of minimise any fuel or hydrocarbon spillage, including the provision of appropriate security and containment measures, where necessary.
- 8.9 The consent holder shall take all practicable measures to prevent cement dust and non-stabilised cement slurries from entering coastal or surface water. These measures shall include but not be limited to the following (see Advice Note 11):
- Ensuring appropriate controls are in place before the use of cement begins to contain and remove all cement contaminated waste and to prevent any discharge of waste water to fresh or storm water;
  - Ensuring clean storm water is diverted away from the work area;
  - Immediately containing and cleaning up any spills that occur to the satisfaction of Regional Council staff;
  - Containing all cement particles and dust within the works area and removing all cement particles and dust immediately after the completion of the work. Cement waste must be reused within the work area or disposed of at an appropriate facility;
  - Ensuring cement is allowed to fully set and there are no loose cement particles or dust residue remaining before allowing any natural flow of water back over it; and
  - Creating a designated wash down area on site for vehicles and equipment and ensuring staff know this is available.
- 8.10 The best practicable option shall be used to minimise the discharge of sediments resulting from construction works into coastal and estuarine waters. The consent holder shall detail the measures to be used in the EMP required by condition 5.3 of this consent.
- 8.11 For each year during construction, the consent holder shall fence off and signpost Dotterel nesting

sites located on the eastern spit during the Dotterel breeding and nesting season (15 August to 29 February inclusive). The Department of Conservation shall be consulted regarding the areas that should be fenced. Fencing shall be erected by 14 August each year and may be removed from 1 March of the following year.

- 8.12 The construction compounds shall be fenced so as to contain the storage and construction area and to protect the surrounding dune landforms and vegetation.
- 8.13 The activities undertaken under this consent shall not result in an increase in the 100-year return period flood levels within the Waioeka and Otara Rivers at the following locations (see Advice Note 12):
- The Waioeka/Otara River confluence; or
  - The Waioeka Bridge; or
  - Approximately 850m upstream of Otara Bridge.
- 8.14 All exterior lighting associated with the construction activity shall be managed so as to avoid the spill of light or glare that might be:
- Detrimental to other users; or
  - Detrimental to wildlife; or
  - A hazard to navigation in the coastal marine area;
- unless such lighting is necessary for reasons of public safety or operational safety.
- 8.15 In the event of any archaeological site or koiwi being uncovered during the exercise of this consent, activities in the vicinity of the discovery shall cease. The consent holder shall contact the Regional Council, the Historic Places Trust and the relevant iwi authority (as identified in the Accidental Discovery Protocol required by the Construction Management Plan). The consent holder shall follow the Accidental Discovery Protocols (ADP), and shall not recommence works in the area of the discovery until the requirements of the ADP have been met (see Advice Note 1).
- 8.16 All plant, machinery, equipment, debris and construction materials, not associated with the permanent structures, shall be removed from the foreshore and coastal marine area at the completion of works.
- 8.17 All metal used to surface construction access tracks that are no longer required for maintenance shall be collected and removed at the completion of the works.
- 8.18 The consent holder shall ensure that all permanent structures erected under this consent are appropriately marked and/or lit to provide for navigation in accordance with the directions of the Eastern Bay of Plenty Harbourmaster.
- 8.19 The consent holder shall ensure that the capital works authorised under this consent are completed within a period of no longer than five years following their commencement.

## 9 Timing of Works

- 9.1 Construction activity (including site establishment works) shall not commence on the western end of the eastern spit, as shown on Plan number BOPRC 65563/3, during the period 15 August to 29 February inclusive (the Dotterel breeding and nesting period). (See Advice Note 13).
- 9.2 Construction activity within the Estuary, on the western sand spit or on the area of the eastern sand pit not included in condition 9.1 shall not commence during the period 1 October to 31 January inclusive (the Dotterel nesting period). (See Advice Note 13).
- 9.4 Works to divert the flow of the Waioeka River (the River realignment) shall not be undertaken during

the inanga migration season (1 August ♦ 31 October inclusive).

- 9.5 Maintenance works that require vehicle access on the sand spits shall not be undertaken during the period 1 October to 31 January inclusive (the Dotterel nesting period).

## 10 Water Quality Standards

- 10.1 The zone of reasonable mixing for discharges associated with dredging activities is defined as being within a 200 m radius of the excavation (dredging) site.
- 10.2 Background water quality is defined as being 500 m upstream/up-current of the most upstream/up-current dredging or construction site.
- 10.3 Dredging and associated discharge activities undertaken during the period 1 December to 29 February (inclusive) shall not result in a decrease in water clarity (as measured by the black disk method) of more than 50% below background levels, beyond the zone of reasonable mixing (see Advice Notes 21-23).
- 10.4 Dredging and associated discharge activities undertaken during the period 1 March to 14 August (inclusive) shall not result in a suspended solids concentration within the water column beyond the zone of reasonable mixing that is more than 150g/m<sup>3</sup> above the background levels.
- 10.5 The consent holder shall ensure that all other construction works authorised by this consent, and consents 64465 and 65565 that authorise reclamation and earthworks associated with the Harbour Access Improvement project do not result in any of the following effects in estuarine or coastal waters following reasonable mixing (see Advice Note 6):
- The production of conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
  - Any conspicuous change in colour or visual clarity;
  - Any emission of objectionable odour;
  - Significant adverse effects on aquatic life;
  - Water rendered unsuitable for bathing due to poor visual clarity and/or the presence of contaminants;
  - Undesirable biological growths;
  - A water temperature change of more than 3 degrees C;
  - The concentration of dissolved oxygen to fall below 80% of saturation concentration; or
  - Aquatic organisms rendered unsuitable for human consumption due to the presence of contaminants.

For the purpose of this consent, the reasonable mixing area is within a 200 m radius of any individual area of construction activity.

## 11 Post-construction Mitigation and Remediation

- 11.1 The consent holder shall establish an area that is approximately one hectare on the post-construction western spit that provides suitable habitat for NZ Dotterel nesting. That area shall be maintained using weed and predator control for a period of five years. Suitable habitat consists of flat open sand and planting on the southern perimeters.
- 11.2 The consent holder shall reshape and replant any areas affected by the works (including access tracks and construction compounds) and the newly created dune systems with appropriate plants. Indigenous species shall be used with a preference for locally sourced seed stock wherever practicable (see Advice Note 14).
- 11.3 The consent holder shall erect and maintain six interpretative signs approximately 1.5 m x 1.0 m in size that provide information on:
- The cultural and heritage values of the site;

- The ecological and conservation values of the site;
  - The Harbour Development Project; and
  - Appropriate access routes to and through the sand-dunes and Huntress Creek Conservation Area.
- 11.4 The consent holder shall fence the Huntress Creek Conservation Area, as shown on Plan Number BOPRC RC65563/4, along its northern boundary and along the legal road boundaries that pass through the conservation area. The Department of Conservation shall be consulted regarding the materials used to construct this fencing.
- 11.5 The consent holder shall make appropriate provision for public access to the new Harbour entrance. This access shall be in general accordance with the outline shown on Plan Number BOPRC 65563/5 and shall provide:
- Vehicle access to a sandy road head (consisting of bollards, rope and a signboard) on both sides of the training walls;
  - Delineation of foot tracks (using planting) along the southern side of the river closure and bank protection structures authorised by this consent that guide visitors away from potential dotterel nesting areas; and
  - Creation of a loop track in the Huntress Creek Conservation Area (see Advice Note 17).
- 11.6 Any sand used for beach and dune renourishment shall be of a comparable size and colour to the natural sediments present at the deposition site.
- 11.7 The mitigation and remediation works associated with this consent shall be carried out under the supervision of a suitably qualified terrestrial ecologist.
- 11.8 The consent holder shall conduct an official opening ceremony for the new Harbour Entrance in accordance with iwi protocol.

## 12 Monitoring and Review

- 12.1 The consent holder shall develop and implement a programme to monitor the effects of the new Harbour Entrance on water levels in the Waioeka and Otara Rivers. This monitoring shall encompass an area from the river-mouth to immediately downstream of State Highway 35.
- 12.2 The consent holder shall develop and implement a three-dimensional monitoring programme for salinity within the Waioeka Estuary. Baseline and post-construction monitoring should be undertaken. Each set of monitoring should be undertaken under a variety of conditions, including but not limited to:
- Dry and wet weather low tide with gauged river flows;
  - Dry and wet weather flood tide with gauged river flows;
  - Dry and wet weather ebb tide with gauged river flows; and
  - Dry and wet weather high tide with gauged river flows.
- 12.3 The consent holder shall analyse the salinity monitoring data, this shall include a comparison of the actual salinity changes within the estuary to those predicted by the modelling.
- 12.4 The consent holder shall establish a trigger, based on the extent of salinity change, which requires the consent holder to undertake additional monitoring (such as wetland vegetation monitoring) in order to assess the adverse environmental effects (if any) of the salinity change and options for mitigation. The consent holder shall be responsible for undertaking any mitigation, if so directed by the Chief Executive of the Regional Council or delegate.
- 12.5 The consent holder shall develop and implement a programme for monitoring the effects of the construction activities on water quality to assess compliance with conditions 10 of this consent.

- 12.6 The consent holder shall develop and implement a programme for monitoring wildlife and wildlife habitat sensitive to disturbance. As a minimum this programme shall include monitoring the extent of sea-grass beds for a period up to at least two years post-construction and dotterel breeding and feeding areas for a period up to at least five years post-construction.
- 12.7 The consent holder shall establish triggers for additional monitoring and mitigation to be undertaken by the consent holder in relation to the monitoring programme required by conditions 12.5 and 12.6 of this consent. The consent holder shall be responsible for undertaking any additional monitoring and/or mitigation.
- 12.8 The consent holder shall develop and implement a programme for surveying bed levels in the channel between the training walls and assessing compaction of sediments at the river mouth.
- 12.9 The consent holder shall develop and implement a channel maintenance programme, this shall include bed levels that trigger the need for the consent holder to undertake dredging to maintain safe-navigation through the entrance channel.
- 12.10 The consent holder shall develop and implement a programme for monitoring the effects of the Harbour development project on coastal morphology and coastal processes that is consistent with conditions 12.11 to 12.30 of this consent.

#### **Beach and near-shore monitoring - details**

##### *Beach cross section surveys*

- 12.11 The consent holder shall install eight beach cross section monitoring sites: four on the western side of the proposed training walls (between the proposed training walls and Environment Bay of Plenty site CCS4) and four on the eastern side (between the proposed training walls and Environment Bay of Plenty site CCS6) as shown on Plan Number BOPRC 65563/6. On each side of the proposed training walls the location of at least one of these cross sections should coincide with the zone of maximum anticipated erosion. The seaward endpoint for each profiled dataset should be at a minimum of -1 m elevation (Moturiki Datum).
- 12.12 Durable front and back benchmarks shall be maintained at the sites at all times during the exercise of this consent.
- 12.13 Prior to commencing monitoring the consent holder shall provide to the Chief Executive of the Bay of Plenty Regional Council or delegate the following information for each of the eight new beach cross section monitoring sites:
- GPS coordinates of the front and back benchmark (NZMG);
  - Surveyed elevation (to second order survey standards) in Moturiki Datum of the front and back benchmark;
  - Description and photographs of each front and back benchmark; and
  - A plan of the location of each front and back benchmark.
- 12.14 All beach cross section surveys should be undertaken using Total Station survey or similar technology.
- 12.15 The consent holder shall undertake at least one pre-construction (baseline) beach cross section survey at each of the sites established in accordance with condition 12.11 of this consent and also at Environment Bay of Plenty sites CCS3 to CCS7 inclusive. This survey should include a full survey measured from the back marker for the eight new sites and shall be undertaken no longer than one month prior to the date when works are due to commence.

- 12.16 Beach cross section surveys should be undertaken at each of the new sites established in accordance with condition 12.11 of this consent and also at Environment Bay of Plenty sites CCS3 to CCS7 inclusive once a month during the construction phase.
- 12.17 Beach cross section surveys should be carried out at all sites (13) as soon as practicable after any storm surge event exceeding a water level of 1.49 m RL Moturiki Datum (10% AEP).
- 12.18 The consent holder shall review the monitoring data collected in accordance with conditions 12.16 and 12.17 at six monthly intervals during the construction phase. The results of this review shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate within one month.
- 12.19 Following completion of the construction phase a review of all beach cross section monitoring data should be undertaken and a new monitoring frequency determined. The results of this review and the new monitoring frequency shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval within one month.
- 12.20 All beach cross section data shall be supplied to the Chief Executive of the Bay of Plenty Regional Council or delegate within two weeks of collection. Data supplied shall be in the form of raw and processed data (Moturiki Datum).

#### **Foredune position surveys**

- 12.21 The consent holder shall undertake a toe of foredune survey along the coastline from Environment Bay of Plenty site CCS3 to the Waiotahi River entrance (as shown on Plan Number BOPRC 65563/6) prior to construction and monthly during the construction phase. The horizontal distance between each collected survey point shall be less than 10 m. Elevation (in Moturiki Datum) shall also be measured at each point.
- 12.22 The beach toe of foredune survey data shall be supplied to the Chief Executive of the Bay of Plenty Regional Council or delegate within two weeks of collection. Data supplied shall be in the form of raw and processed data (NZMG and Moturiki Datum)
- 12.23 Following completion of the construction phase a review of all beach toe of foredune survey data should be undertaken and a new monitoring frequency determined. The results of this review and the new monitoring frequency shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval within one month.

#### **Shore parallel surveys**

- 12.24 The consent holder shall undertake a beach topographical survey immediately adjacent to the proposed training walls that extends for one kilometre either side prior to construction and monthly during the construction phase thereafter. The horizontal distance between each collected survey point shall be less than 5m.
- 12.25 The consent holder shall review beach topographical survey data at six month intervals collected in accordance with condition 12.24. The results of this review shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate within one month.
- 12.26 All beach topographical survey data shall be supplied to the Chief Executive of the Bay of Plenty Regional Council or delegate within two weeks of collection. Data supplied shall be in the form of raw and processed data (NZMG and Moturiki Datum).
- 12.27 Following completion of the construction phase a review of all beach topographical survey data

should be undertaken and a new monitoring frequency determined. The results of this review and the new monitoring frequency shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval within one month.

### **Aerial photography**

- 12.28 The consent holder shall undertake a high resolution (0.25 GSD) aerial photography survey covering the coastline (including the Waioeka River ebb delta and approximately 200 m inland from the toe of the foredune) from Environment Bay of Plenty site CCS1 to CCS8 (as shown on Plan Number BOPRC 65563/6) prior to construction.

### **Renourishment trigger**

- 12.29 The renourishment trigger is set at 50 m of landward retreat of the baseline toe of foredune position. This distance should be measured from any of the datasets outlined in the Beach and Nearshore monitoring section.
- 12.30 The consent holder shall develop a beach nourishment and dune planting programme, to be implemented when the trigger identified in condition 12.29 is met, this programme shall be in accordance with conditions 5.3, 11.2, 11.6 and 11.7 of this consent.

## **13 Certification of Works Post Construction**

- 13.1 Within 30 working days of completion of the construction works, or earlier of so requested by the Chief Executive of the Regional Council or delegate for a specific area of works, the consent holder shall submit a certificate signed by a chartered professional engineer to certify that the structure(s) has been constructed in accordance with good engineering practice and the conditions of this consent.
- 13.2 Within 30 working days of completion of the construction works the consent holder shall submit as-built plans of the structures authorised by this consent and the results of a bed-level survey of the Harbour entrance channel to the Bay of Plenty Regional Council.

## **14 Maintenance**

- 14.1 The consent holder shall ensure that the structure authorised by this consent is maintained in a safe and structurally sound condition at all times, and, if directed by the Chief Executive of the Regional Council or delegate to undertake any maintenance work, shall do so as soon as is practicable.
- 14.2 The consent holder shall develop and implement a maintenance inspection programme. Details of this programme shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval within three months following the completion of construction activities and shall include, but not be limited to:
- An annual inspection regime for the training walls and associated structures by a chartered professional engineer, with provision for additional inspections following each wave event that produces wave heights near or exceeding the design wave height;
  - Details of measures to be undertaken in the event of damage to the training walls or associated structures, including threshold levels for requiring repair works; and
  - Details of an annual inspection regime of the scour protection works at the base of walls using multi-beam sonar scanning or similar techniques.
- 14.3 Records of the inspections undertaken in accordance with the maintenance inspection programme required by condition 14.2 of this consent shall be submitted to the Chief Executive of the Regional Council or delegate within one month of the inspection being undertaken.
- 14.4 The consent holder shall monitor the structures to ensure that they do not present a danger to the

public and shall take any necessary precautions to ensure the safety of the public using the structure.

- 14.5 Maintenance works, other than hand work, shall be carried out in accordance with notification conditions 6.6 and 6.7, works conditions 8, timing condition 9.5 and water quality condition 10.5 of this consent.

## 15 Review of Consent Conditions

- 15.1 The Bay of Plenty Regional Council, may review any or all conditions of this consent by giving notice of its intention to do so under Section 128 of the Resource Management Act 1991, at any time within three months of the receipt of any of the monitoring results, or completion of a compliance report for any of the following purposes:
- (a) To deal with any adverse effects on the environment, which may arise from the exercise of this consent, and which it is appropriate to deal with at a later stage; or
  - (b) To review the adequacy of any monitoring plans proposed and/or monitoring requirements so as to incorporate into the consent any monitoring or other requirements which may become necessary to deal with any adverse effects on the environment arising from the exercise of this consent; or
  - (c) To review the adequacy of any mitigation measures proposed and/or mitigation requirements so as to incorporate into the consent any additional mitigation requirements which are necessary to deal with any adverse effects on the environment arising from the exercise of this consent.
- 15.2 The Bay of Plenty Regional Council shall be entitled to recover from the consent holder the actual and reasonable costs of the conduct of any review, calculated in accordance with and limited to that Council's scale of charges in-force and applicable at that time under section 36 of the Resource Management Act 1991.

## 16 Resource Management Charges

- 16.0 The consent holder shall pay the Bay of Plenty Regional Council such administrative charges as are fixed from time to time by the Regional Council in accordance with section 36 of the Resource Management Act 1991.

## 17 Lapse of Consent

- 17.0 This consent shall lapse on 31 August 2024 if not given effect to by that date. For the avoidance of doubt, given effect to includes, but is not limited to, the submission and subsequent approval of the detailed design plans required under condition 5.1 of this consent.

## 18 Term of Consent

- 18.0 This consent shall expire on 31 August 2044.

## 19 The Coastal Permit

- 19.0 The Coastal Permit hereby authorised is granted under the Resource Management Act 1991 and does not constitute an authority under any other Act, Regulation or Bylaw.

## Advice Notes

- 1
1. *Notification of works and submission of information should be made in writing to the Manager Pollution Prevention, Environment Bay of Plenty, Box 364 or fax 0800 368 329 or email [notify@envbop.govt.nz](mailto:notify@envbop.govt.nz) and should include the permit number 65566.*
  2. *Consultation with Opotiki District Council (as consent authority) will be undertaken as part of this approval process. Review and approval of the detailed designs and various plans may take up to 40 working days to complete due to the need to consult with various staff members within Environment Bay of Plenty. The approval process may take more than 40 working days to complete if the plans or designs require amendment before approval can be given.*

3. *This proposal will affect archaeological site(s). Work affecting archaeological sites is subject to a consent process under the Historic Places Act 1993. An authority (consent) from the New Zealand Historic Places Trust must be obtained for the work prior to commencement. It is an offence to damage or destroy a site for any purpose without an authority. The Historic Places Act 1993 contains penalties for unauthorised site damage. The applicant is advised to contact the New Zealand Historic Places Trust for further information.*
4. *The proposal may require an authority under the Floodway and Drainage Bylaw 2008 (or its successor).*
5. *This activity may require authorisation under the Building Act 1991.*
6. *Schedule 13 of the Regional Coastal Plan provides guidance on what quantitative standards can be used to assess compliance with the qualitative standards listed in the coastal water quality classifications.*
7. *Potential contaminants include, but are not limited to, hydrocarbons, hydraulic fluids and cement and concrete products.*
8. *Page 22 of Appendix 19 of the application gives examples of potential applications of modelling support during construction.*
9. *The consent holder shall not be deemed to be non-compliant with this condition if the invited representatives chose not to participate. Representatives from Opotiki District Council and Environment Bay of Plenty may be the same as the respective compliance officers for this consent.*
10. *At the time of granting this consent, the appropriate local newspapers were the Opotiki News and Whakatane Beacon. The appropriate radio station was Radio 1XX.*
11. *For more information on the effects of cement in waterways and reasonable prevention measures refer to the following document available on the Auckland Regional Council website ([www.arc.govt.nz](http://www.arc.govt.nz)), "Pollution Fact Sheet - Construction Activities".*
12. *Additional works may be required to ensure that the construction of the Opotiki Harbour Entrance does not result in an increase in flood levels. Further resource consents may be required for these works, which should be completed before construction begins.*
13. *Once construction works have commenced in the areas referred to in conditions 9.1 and 9.2 of this consent then they may continue during subsequent Dotterel nesting periods - subject to compliance with the other conditions of this consent.*
14. *The Environment Bay of Plenty Coast Care Information Brochure Number 9: Backyard Buffers includes information on appropriate dune plant species.*
15. *An appropriate maximum inter-plant spacing for foredune plants is 1 m, and for back-dune plants is 0.6 m.*
16. *Planting is more likely to be successful if carried out between 1 May and 30 September.*
17. *The loop track to be provided through the Huntress Creek Conservation Area shall be designed in consultation with the Department of Conservation.*
18. *Disposal of the dredged material to land is consented under land use consent 65565.*
19. *The consent holder is responsible for ensuring that all contractors carrying out works under this consent are made aware of the relevant consent conditions, plans and associated documents.*
20. *The consent holder is advised that non-compliance with consent conditions may result in enforcement action against the consent holder and/or their contractors.*
21. *Compliance with the water quality standard outlined in condition 10.3 is only likely to be achieved following high rainfall, when the river is subject to increased turbidity.*
22. *The consent holder may take a second set of samples (up-current and down-current) to verify the first set of sampling results.*
23. *Water quality monitoring during dredging may not be required if the river conditions are such that the impacts of the dredging on water quality will be negligible.*
24. *The consent holder is advised that one set of detailed designs and pre-construction plans may be prepared to meet the requirements of each of the consents required for the Opotiki Harbour Entrance project.*

## Bay of Plenty Regional Council

### Resource Consent

Pursuant to the Resource Management Act 1991, the **Bay of Plenty Regional Council**, by a decision dated 29 July 2009, **hereby grants:**

A resource consent:

- **Under section 14(1) of the Resource Management Act 1991 and rule 10.2.4(g) of the Bay of Plenty Regional Coastal Environment Plan to undertake a discretionary activity being to Dam and Divert Coastal Water**

subject to the following conditions:

#### 1 Purpose of this Resource Consent

1.0 To undertake the following activities associated with the Opotiki Harbour Entrance project:

- Removal of material from the foreshore and seabed
- Discharge of sediment, slurry water and sediment-laden stormwater to the coastal marine area (from dredging activities, earthworks and construction activities)
- Disturbance of the foreshore and seabed
- Take of coastal water
- Diversion of coastal water
- Erection and removal of temporary structures
- Erection and maintenance of permanent structures that are not covered by consent 65563 (geocontainer bank reinforcement less than 300m in length, geo-container dyke)

#### 2 Location

2.0 Pakihikura (the Waioeka river mouth), Opotiki as shown on BOPRC Plan Number RC 65563/1

#### 3 Map Reference

3.0 The area is bounded by approximate map references NZMS 260 W15:8461-4821, W15:8469-4705, W15:8587-4699, W15:8563-4817

#### 4 Legal Description

4.0 Coastal Marine Area, Crown land, Sections 1-3 SO 8737, Allotments 436- 439 Waiotahi Parish, Sections 24-31, 31A, 32- 43 Opotiki Suburbs Block III (Opotiki District)

#### 5 Pre-Construction Requirements

5.1 The consent holder shall prepare and submit full engineering design details (including results of modelling, design assumptions used in the modelling process, plans and specifications) for all structures and the entrance channel realignment associated with the Opotiki Harbour Entrance project to the Chief Executive of the Bay of Plenty Regional Council or delegate, for approval at least 40 working days prior to the proposed date for commencement of works (see Advice Notes 1, 2 and 24). The purpose of this approval process is to ensure compliance with the conditions of this consent.

The detailed design process should involve review by suitably qualified and experienced, independent experts in the fields of engineering, landscape and ecology and expressly provide for

the following:

- The structural integrity of the structures authorised by this consent. In particular, development of the detailed design should take into account the following:
  - River flows into the entrance at the upstream end of the training walls to determine local scour effects and the potential for turbulence to be set up in the channel.
  - The stability of scour aprons under construction and long term wave loadings;
  - Optimisation of the armour size.
  - Stability of the geocontainers under wave attack and current.
  - Scour potentials at the outer head of the structures.
  - River closure dynamics.
- Location of the structures authorised by this consent as far landward as practicable (taking into account other constraints);
- Use of the most up-to-date flood frequency analysis for the Waioeka and Otara Rivers in the design flood flow assumptions;
- Demonstration that flood levels in the Waioeka and Otara River will not be increased following construction of the new harbour entrance during a 100-year return flood event (see condition 8.13);
- Additional information on the sediment characteristics beneath the line of the proposed entrance channel - particularly with regard to scour resistance and seismic activity - and demonstration that adequate scour protection has been provided;
- A description of the intended construction materials;
- Outline future maintenance requirements;
- Integration of the structures with the landscape, natural character and ecological features of the coastal environment in the vicinity of the works;
- Restoration of dune landforms and vegetation where they interface with structures; and
- Inclusion of cultural elements in the training wall structures where practicable.

5.2 The consent holder shall prepare and submit a Construction Management Plan (CMP) for all construction works authorised by this consent to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval, at least 40 working days prior to the proposed date for commencement of works (see Advice Notes 1, 2 and 24). The purpose of this document is to demonstrate how the consent holder will manage activities during construction to avoid, remedy or minimise environmental effects and achieve compliance with the conditions of this consent. The CMP shall be developed using the engineering design details approved in accordance with condition 5.1 of this consent and shall include, but not be limited to:

- A detailed construction methodology for all works (to include how works will be sequenced/staged to minimise adverse environmental effects);
- Demonstration that a Floodway and Drainage bylaw authority has been obtained for the works (if necessary)(see Advice Note 4);
- Demonstration that an authority has been obtained for the works under the Historic Places Act 1993 (see Advice Note 3);
- The name and 24-hour contact details of the site manager supervising the works (including the refuelling and plant) as well as the contact details for all contractors working on site;
- Roles and responsibilities of key personnel for the implementation of this consent, including appointment of a representative to be the primary contact person in regard to matters relating to this consent;
- General site management measures, including:
  - waste/litter disposal
  - effluent disposal
  - security
  - location of stockpiles
- Complaints register and reporting procedure;
- Incident register and reporting procedure;
- Evidence that a suitably qualified engineer(s) has been appointed to carry out the overall design, supervision and certification of the works (including construction of all erosion and sediment controls);
- Construction monitoring, record-keeping and maintenance requirements;
- An accidental discovery protocol for dealing with koiwi or taonga unearthed during construction activities, developed in consultation with Whakatohea Maori Trust Board.

5.3 The consent holder shall prepare and submit an Environmental Mitigation and Remediation Plan (EMP) for all construction works authorised by this consent to the Chief Executive of the Bay of Plenty Regional Council or delegate, for approval, at least 40 working days prior to the proposed date for commencement of works (see Advice Notes 1, 2 and 24). The purpose of this document is

to demonstrate how the consent holder will manage activities during construction to avoid, remedy or minimise environmental effects and rehabilitate the site after construction works have been completed to achieve compliance with the conditions of this consent (in particular conditions 8 Works, 10 Water Quality Standards and 11 Post Construction Mitigation and Remediation). The consent holder shall consult with the technical liaison group required by condition 5.4 of this consent during the development of this plan. The EMP shall include, but not be limited to:

- Identification and mapping of areas (such as dotterel nesting sites, indigenous vegetation) sensitive to disturbance by construction activities and measures to protect against such disturbance;
- Establishment and clear delineation of construction vehicle/machinery movement tracks (including the western access track) that limit disturbance to sensitive areas;
- Measures to be taken to provide for navigational aids and the management of vessels using the Harbour entrance during construction;
- Measures that will be taken to ensure that the construction works will comply with the New Zealand Standard NZS 6803.1999 Acoustics ♦ Construction Noise (or its successor) or where it is not practicable to meet these standards, the duty under section 16 of the Resource Management Act 1991 to adopt the best practicable option to avoid unreasonable noise;
- Measures to be taken to ensure that the works authorised by this consent do not cause the water quality standards listed in condition 10 to be exceeded beyond the zone of reasonable mixing (see Advice Note 6);
- Procedures to prevent the discharge of hazardous substances or other contaminants into the coastal marine area or onto vegetation (see Advice Note 7);
- Procedures to minimise the discharge of sediment into the coastal marine area;
- Measures that will be taken to minimize the risk of fuel entering coastal or estuarine waters during refueling, especially where refueling occurs within 20 m of the coastal marine area;
- Details on how coastal process modeling will be used to mitigate environmental impacts during dredging operations and other construction related activities (see Advice Note 8);
- Measures to be undertaken to maintain and monitor the existing river entrance channel during construction, including:
  - Minimum river channel dimensions.
  - Monitoring methodology, frequency and reporting.
  - Procedures to manage stockpiled material to prevent additional flood risk or breach.
  - A contingency plan to address the risk of excessive sediment accumulation between the existing river mouth and the western training wall during construction (that could constrict the river mouth and increase flood risk).
- Measures to be taken to minimise the adverse effects of night-time lighting (see condition 8.14);
- Steps that will be taken to mitigate and rehabilitate the site post-construction (in particular to ensure compliance with conditions 11 of this consent);
- Steps that will be taken to mitigate for the loss of Dotterel habitat as a result of the works authorized by this consent (in particular to ensure compliance with condition 11.1 of this consent);
- Measures that will be taken to educate contractors regarding the requirements of the relevant resource consents and management plans, and environmental management; and
- Measures that will be taken to re-nourish beaches and replant dune systems immediately post-construction and subsequently following coastal setback. In particular, the EMP shall include, but not be limited to, the following information:
  - Identification of the plant species to be used for revegetation in each area on a plan or schedule (including all new areas of sand-dune, all existing areas of sand dune that will be affected by the harbour entrance works and areas of potential setback post-construction);
  - Desired planting density (see Advice Note 15);
  - Fertiliser application (including use of a controlled-release fertiliser at planting and post-planting fertiliser use);
  - A programme for revegetation following coastal set-back that exceeds the trigger set in condition 12.29 of this consent;
  - Weed management and pest control activities to be undertaken;
  - A programme for maintenance for a period of at least three years following completion of initial planting (maintenance activities may include the exclusion of pest browsers, the removal of weeds and replacement planting); and
  - A programme for ensuring adequate supply of plants (such as ordering and growing in advance).

5.4 The consent holder shall establish a technical liaison group to provide input during the development and implementation of the Environmental Mitigation and Remediation Plan required by condition

5.3 of this consent. The consent holder shall, as a minimum, invite representatives from the following organisations to form part of the technical group: Environment Bay of Plenty, Waiotahi Coast Care, Department of Conservation, Whakatohea Maori Trust Board and Opotiki District Council (see Advice Note 9). The functions of the Technical Liaison Group are to:

- Review and provide constructive comment on the content of the detailed designs and EMP prior to its submission to the Regional Council; and
- Review and provide constructive comment on the implementation of the EMP.

5.5 The consent holder shall prepare, submit and implement a Site-wide Contingency Plan (SCP) for the contaminant of spills to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval at least 40 working days prior to works commencing (see Advice Notes 1, 2 and 24). The purpose of this document is to demonstrate how the consent holder will manage activities during construction to avoid, remedy or minimise environmental effects of unintended discharges and achieve compliance with the conditions of this consent (in particular, conditions 8.6, 8.7, 8.8 and 8.9). The contingency plan shall:

- Identify potential contaminants that will be used or stored on site (see Advice Note 7);
- Identify designated contaminant storage facilities and re-fuelling locations;
- Require that these locations to be bunded, and that machinery should be parked overnight or long-term only in these designated areas;
- Require that all mobile fuel tankers carry spill kits and that spill kits are stored at bulk storage tank locations at all times;
- Detail the contents of the spill kits, including absorbent pads, booms, pillow and socks and appropriate pegs/rope to hold the absorbent material in place;
- Record the names of operators trained in spill response and remediation;
- Detail an internal and external notification procedure of any spills; and
- Identify measures to be undertaken to remediate a contaminant spill.

5.6 The consent holder shall develop and submit a Monitoring and Review Plan (MRP) for the Harbour Entrance Project to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval at least 40 working days prior to the proposed date for commencement of works (see Advice Notes 1, 2 and 24). This Plan shall outline how the potential environmental effects associated with the project are to be monitored (including monitoring methodologies, monitoring frequency and how results will be analysed and reported to the Regional Council). The MRP shall also provide for baseline monitoring, triggers for further monitoring or mitigation action and a description of what further monitoring and/or mitigation action may be required. Conditions 12.1 to 12.30 describe in further detail the matters that should be covered by this Plan.

5.7 Construction shall not commence until written approval of the designs and plans required by conditions 5.1, 5.2, 5.3, 5.5 and 5.6 of this consent has been received by the consent holder from the Chief Executive of the Bay of Plenty Regional Council or delegate.

## 6 Notification of Works

6.1 Not less than 20 working days prior to the start of the Opotiki Harbour Access works (including site preparation), the consent holder shall, in writing, notify the Chief Executive of the Bay of Plenty Regional Council or delegate, the Eastern Bay of Plenty Harbourmaster, the Department of Conservation and Whakatohea Maori Trust Board of the intent to start works (see Advice Note 1).

6.2 Not less than 20 working days prior to the start of the Opotiki Harbour Access works (including site preparation), the consent holder shall, in writing, request a site meeting between all relevant parties, including all contractors and relevant local authorities, prior to any works commencing on the site to discuss implementation of the construction management plan and environmental management measures (see Advice Note 1).

6.3 Not less than 10 working days prior to the commencement of the Opotiki Harbour Access works (including site preparation), the consent holder shall place notices in the local newspapers and on local radio stations (see Advice Note 10). These notices shall include, at a minimum, the following information:

- The date on which works are intended to commence;
- The location and areas affected by the works;

- The anticipated duration of the works; and
  - The restrictions that will apply to public access and navigation.
- 6.4 A copy of this consent shall be kept at the construction site at all times until the works required to construct the new harbour entrance are complete.
- 6.5 The consent holder shall provide a copy of this consent and all documents referred to in this consent to any operator or contractor undertaking works authorised by this consent, prior to the works commencing.
- 6.6 Not less than 10 working days prior to undertaking any maintenance works under this consent, the consent holder shall, in writing, notify the Chief Executive of the Bay of Plenty Regional Council or delegate, Eastern Bay of Plenty Harbourmaster, the Department of Conservation of the intent to start works (see Advice Note 1).
- 6.7 Not less than three days prior to undertaking any maintenance works under this consent that will cause a restriction to navigation, the consent holder shall place notices in the local newspapers and on local radio stations (see Advice Note 10). These notices shall include, at a minimum, the following information:
- The date on which works are intended to commence;
  - The location and areas affected by the works;
  - The anticipated duration of the works; and
  - The restrictions that will apply to public access and navigation.

## 7 Signage

- 7.0 Prior to the commencement of the Opotiki Harbour Entrance project (including site preparation), the consent holder shall erect a prominent sign adjacent to the main entrance to the site, and maintain it throughout the period of the works. The sign shall clearly display, as a minimum, the following information:
- The name of the project and the consent holder;
  - The principal contractor;
  - A 24-hour contact telephone number for the consent holder or appointed agent;
  - A clear explanation that the contact telephone number is for the purpose of receiving complaints and information from the public about the Opotiki Harbour Entrance project; and
  - Restrictions to public access and navigation.

## 8 Works

- 8.1 All construction, dredging and earthworks shall be carried out in general accordance with the following:
- BOPRC Plan Number RC 65563/2;
  - The detailed designs (approved in accordance with condition 5.1 of this consent);
  - Construction Management Plan (approved in accordance with condition 5.2 of this consent);
  - Environmental Mitigation and Remediation Plan (approved in accordance with condition 5.3 of this consent);
  - Spill Containment Plan (approved in accordance with condition 5.5 of this consent);
  - Monitoring and Review Plan (approved in accordance with condition 5.6 of this consent).

Any amendments to the plans referenced in this condition shall be submitted to the Chief Executive of the Regional Council or delegate for review to ensure that they remain consistent with the conditions of this consent. Amended plans shall not be implemented until written approval has been received from the Regional Council.

- 8.2 The consent holder shall monitor the structures during construction to ensure that they do not represent a danger to the public.

- 8.3 The works associated with this consent shall be carried out under the supervision of a Chartered Professional Engineer.
- 8.4 Disturbance to the foreshore and seabed shall be minimised as far as practicable. This includes, but is not limited to, the following measures:
- Minimising machinery movements on the foreshore to the minimum necessary to achieve the purpose of this consent;
  - Building structures progressively from the land out to sea;
  - Locating machinery on structures (rather than on the foreshore/seabed); and
  - Completing each section of works as quickly as practicable.
- 8.5 Machinery and vehicles used to undertake the works shall be clean and well-maintained. In particular:
- Machinery and vehicles should be cleaned to remove surface hydrocarbons, seeds and other contaminants before entering site;
  - Hydraulic hoses shall be inspected and replaced when necessary to avoid failure whilst working in the coastal marine area;
  - Vegetable oil shall be used in place of hydraulic fluid wherever practicable;
  - Machines to be used in the coastal marine area shall be fitted with sealed bearings and grease caps for moving parts; and
  - All machinery is to be regularly maintained (including hydraulic hoses) in such a manner so as to minimise the potential for leakage of contaminants.
- 8.6 No fuel storage or machinery/vehicle maintenance shall be carried out within the western construction compound(s), the coastal marine area, on the foreshore or within 20 m above mean high water springs.
- 8.7 Any fuel or other hazardous substances stored on site shall be stored within portable containers so that they can be removed from the site if needed due to flood or storm events.
- 8.8 Refuelling shall only occur within the coastal marine area, on the foreshore or within 20 m above mean high water springs if it is the most practicable option and appropriate measures have been put in place to avoid of minimise any fuel or hydrocarbon spillage, including the provision of appropriate security and containment measures, where necessary.
- 8.9 The consent holder shall take all practicable measures to prevent cement dust and non-stabilised cement slurries from entering coastal or surface water. These measures shall include but not be limited to the following (see Advice Note 11):
- Ensuring appropriate controls are in place before the use of cement begins to contain and remove all cement contaminated waste and to prevent any discharge of waste water to fresh or storm water;
  - Ensuring clean storm water is diverted away from the work area;
  - Immediately containing and cleaning up any spills that occur to the satisfaction of Regional Council staff;
  - Containing all cement particles and dust within the works area and removing all cement particles and dust immediately after the completion of the work. Cement waste must be reused within the work area or disposed of at an appropriate facility;
  - Ensuring cement is allowed to fully set and there are no loose cement particles or dust residue remaining before allowing any natural flow of water back over it; and
  - Creating a designated wash down area on site for vehicles and equipment and ensuring staff know this is available.
- 8.10 The best practicable option shall be used to minimise the discharge of sediments resulting from construction works into coastal and estuarine waters. The consent holder shall detail the measures to be used in the EMP required by condition 5.3 of this consent.
- 8.11 For each year during construction, the consent holder shall fence off and signpost Dotterel nesting

sites located on the eastern spit during the Dotterel breeding and nesting season (15 August to 29 February inclusive). The Department of Conservation shall be consulted regarding the areas that should be fenced. Fencing shall be erected by 14 August each year and may be removed from 1 March of the following year.

- 8.12 The construction compounds shall be fenced so as to contain the storage and construction area and to protect the surrounding dune landforms and vegetation.
- 8.13 The activities undertaken under this consent shall not result in an increase in the 100-year return period flood levels within the Waioeka and Otara Rivers at the following locations (see Advice Note 12):
- The Waioeka/Otara River confluence; or
  - The Waioeka Bridge; or
  - Approximately 850m upstream of Otara Bridge.
- 8.14 All exterior lighting associated with the construction activity shall be managed so as to avoid the spill of light or glare that might be:
- Detrimental to other users; or
  - Detrimental to wildlife; or
  - A hazard to navigation in the coastal marine area;
- unless such lighting is necessary for reasons of public safety or operational safety.
- 8.15 In the event of any archaeological site or koiwi being uncovered during the exercise of this consent, activities in the vicinity of the discovery shall cease. The consent holder shall contact the Regional Council, the Historic Places Trust and the relevant iwi authority (as identified in the Accidental Discovery Protocol required by the Construction Management Plan). The consent holder shall follow the Accidental Discovery Protocols (ADP), and shall not recommence works in the area of the discovery until the requirements of the ADP have been met (see Advice Note 1).
- 8.16 All plant, machinery, equipment, debris and construction materials, not associated with the permanent structures, shall be removed from the foreshore and coastal marine area at the completion of works.
- 8.17 All metal used to surface construction access tracks that are no longer required for maintenance shall be collected and removed at the completion of the works.
- 8.18 The consent holder shall ensure that all permanent structures erected under this consent are appropriately marked and/or lit to provide for navigation in accordance with the directions of the Eastern Bay of Plenty Harbourmaster.
- 8.19 The consent holder shall ensure that the capital works authorised under this consent are completed within a period of no longer than five years following their commencement.

## 9 Timing of Works

- 9.1 Construction activity (including site establishment works) shall not commence on the western end of the eastern spit, as shown on Plan number BOPRC 65563/3, during the period 15 August to 29 February inclusive (the Dotterel breeding and nesting period). (See Advice Note 13).
- 9.2 Construction activity within the Estuary, on the western sand spit or on the area of the eastern sand pit not included in condition 9.1 shall not commence during the period 1 October to 31 January inclusive (the Dotterel nesting period). (See Advice Note 13).
- 9.4 Works to divert the flow of the Waioeka River (the River realignment) shall not be undertaken during

the inanga migration season (1 August ♦ 31 October inclusive).

- 9.5 Maintenance works that require vehicle access on the sand spits shall not be undertaken during the period 1 October to 31 January inclusive (the Dotterel nesting period).

## 10 Water Quality Standards

- 10.1 The zone of reasonable mixing for discharges associated with dredging activities is defined as being within a 200 m radius of the excavation (dredging) site.
- 10.2 Background water quality is defined as being 500 m upstream/up-current of the most upstream/up-current dredging or construction site.
- 10.3 Dredging and associated discharge activities undertaken during the period 1 December to 29 February (inclusive) shall not result in a decrease in water clarity (as measured by the black disk method) of more than 50% below background levels, beyond the zone of reasonable mixing (see Advice Notes 21-23).
- 10.4 Dredging and associated discharge activities undertaken during the period 1 March to 14 August (inclusive) shall not result in a suspended solids concentration within the water column beyond the zone of reasonable mixing that is more than 150g/m<sup>3</sup> above the background levels.
- 10.5 The consent holder shall ensure that all other construction works authorised by this consent, and consents 64465 and 65565 that authorise reclamation and earthworks associated with the Harbour Access Improvement project do not result in any of the following effects in estuarine or coastal waters following reasonable mixing (see Advice Note 6):
- The production of conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
  - Any conspicuous change in colour or visual clarity;
  - Any emission of objectionable odour;
  - Significant adverse effects on aquatic life;
  - Water rendered unsuitable for bathing due to poor visual clarity and/or the presence of contaminants;
  - Undesirable biological growths;
  - A water temperature change of more than 3 degrees C;
  - The concentration of dissolved oxygen to fall below 80% of saturation concentration; or
  - Aquatic organisms rendered unsuitable for human consumption due to the presence of contaminants.

For the purpose of this consent, the reasonable mixing area is within a 200 m radius of any individual area of construction activity.

## 11 Post-construction Mitigation and Remediation

- 11.1 The consent holder shall establish an area that is approximately one hectare on the post-construction western spit that provides suitable habitat for NZ Dotterel nesting. That area shall be maintained using weed and predator control for a period of five years. Suitable habitat consists of flat open sand and planting on the southern perimeters.
- 11.2 The consent holder shall reshape and replant any areas affected by the works (including access tracks and construction compounds) and the newly created dune systems with appropriate plants. Indigenous species shall be used with a preference for locally sourced seed stock wherever practicable (see Advice Note 14).
- 11.3 The consent holder shall erect and maintain six interpretative signs approximately 1.5 m x 1.0 m in size that provide information on:
- The cultural and heritage values of the site;

- The ecological and conservation values of the site;
  - The Harbour Development Project; and
  - Appropriate access routes to and through the sand-dunes and Huntress Creek Conservation Area.
- 11.4 The consent holder shall fence the Huntress Creek Conservation Area, as shown on Plan Number BOPRC RC65563/4, along its northern boundary and along the legal road boundaries that pass through the conservation area. The Department of Conservation shall be consulted regarding the materials used to construct this fencing.
- 11.5 The consent holder shall make appropriate provision for public access to the new Harbour entrance. This access shall be in general accordance with the outline shown on Plan Number BOPRC 65563/5 and shall provide:
- Vehicle access to a sandy road head (consisting of bollards, rope and a signboard) on both sides of the training walls;
  - Delineation of foot tracks (using planting) along the southern side of the river closure and bank protection structures authorised by this consent that guide visitors away from potential dotterel nesting areas; and
  - Creation of a loop track in the Huntress Creek Conservation Area (see Advice Note 17).
- 11.6 Any sand used for beach and dune renourishment shall be of a comparable size and colour to the natural sediments present at the deposition site.
- 11.7 The mitigation and remediation works associated with this consent shall be carried out under the supervision of a suitably qualified terrestrial ecologist.
- 11.8 The consent holder shall conduct an official opening ceremony for the new Harbour Entrance in accordance with iwi protocol.

## 12 Monitoring and Review

- 12.1 The consent holder shall develop and implement a programme to monitor the effects of the new Harbour Entrance on water levels in the Waioeka and Otara Rivers. This monitoring shall encompass an area from the river-mouth to immediately downstream of State Highway 35.
- 12.2 The consent holder shall develop and implement a three-dimensional monitoring programme for salinity within the Waioeka Estuary. Baseline and post-construction monitoring should be undertaken. Each set of monitoring should be undertaken under a variety of conditions, including but not limited to:
- Dry and wet weather low tide with gauged river flows;
  - Dry and wet weather flood tide with gauged river flows;
  - Dry and wet weather ebb tide with gauged river flows; and
  - Dry and wet weather high tide with gauged river flows.
- 12.3 The consent holder shall analyse the salinity monitoring data, this shall include a comparison of the actual salinity changes within the estuary to those predicted by the modelling.
- 12.4 The consent holder shall establish a trigger, based on the extent of salinity change, which requires the consent holder to undertake additional monitoring (such as wetland vegetation monitoring) in order to assess the adverse environmental effects (if any) of the salinity change and options for mitigation. The consent holder shall be responsible for undertaking any mitigation, if so directed by the Chief Executive of the Regional Council or delegate.
- 12.5 The consent holder shall develop and implement a programme for monitoring the effects of the construction activities on water quality to assess compliance with conditions 10 of this consent.

- 12.6 The consent holder shall develop and implement a programme for monitoring wildlife and wildlife habitat sensitive to disturbance. As a minimum this programme shall include monitoring the extent of sea-grass beds for a period up to at least two years post-construction and dotterel breeding and feeding areas for a period up to at least five years post-construction.
- 12.7 The consent holder shall establish triggers for additional monitoring and mitigation to be undertaken by the consent holder in relation to the monitoring programme required by conditions 12.5 and 12.6 of this consent. The consent holder shall be responsible for undertaking any additional monitoring and/or mitigation.
- 12.8 The consent holder shall develop and implement a programme for surveying bed levels in the channel between the training walls and assessing compaction of sediments at the river mouth.
- 12.9 The consent holder shall develop and implement a channel maintenance programme, this shall include bed levels that trigger the need for the consent holder to undertake dredging to maintain safe-navigation through the entrance channel.
- 12.10 The consent holder shall develop and implement a programme for monitoring the effects of the Harbour development project on coastal morphology and coastal processes that is consistent with conditions 12.11 to 12.30 of this consent.

#### **Beach and near-shore monitoring - details**

##### *Beach cross section surveys*

- 12.11 The consent holder shall install eight beach cross section monitoring sites: four on the western side of the proposed training walls (between the proposed training walls and Environment Bay of Plenty site CCS4) and four on the eastern side (between the proposed training walls and Environment Bay of Plenty site CCS6) as shown on Plan Number BOPRC 65563/6. On each side of the proposed training walls the location of at least one of these cross sections should coincide with the zone of maximum anticipated erosion. The seaward endpoint for each profiled dataset should be at a minimum of -1 m elevation (Moturiki Datum).
- 12.12 Durable front and back benchmarks shall be maintained at the sites at all times during the exercise of this consent.
- 12.13 Prior to commencing monitoring the consent holder shall provide to the Chief Executive of the Bay of Plenty Regional Council or delegate the following information for each of the eight new beach cross section monitoring sites:
- GPS coordinates of the front and back benchmark (NZMG);
  - Surveyed elevation (to second order survey standards) in Moturiki Datum of the front and back benchmark;
  - Description and photographs of each front and back benchmark; and
  - A plan of the location of each front and back benchmark.
- 12.14 All beach cross section surveys should be undertaken using Total Station survey or similar technology.
- 12.15 The consent holder shall undertake at least one pre-construction (baseline) beach cross section survey at each of the sites established in accordance with condition 12.11 of this consent and also at Environment Bay of Plenty sites CCS3 to CCS7 inclusive. This survey should include a full survey measured from the back marker for the eight new sites and shall be undertaken no longer than one month prior to the date when works are due to commence.

- 12.16 Beach cross section surveys should be undertaken at each of the new sites established in accordance with condition 12.11 of this consent and also at Environment Bay of Plenty sites CCS3 to CCS7 inclusive once a month during the construction phase.
- 12.17 Beach cross section surveys should be carried out at all sites (13) as soon as practicable after any storm surge event exceeding a water level of 1.49 m RL Moturiki Datum (10% AEP).
- 12.18 The consent holder shall review the monitoring data collected in accordance with conditions 12.16 and 12.17 at six monthly intervals during the construction phase. The results of this review shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate within one month.
- 12.19 Following completion of the construction phase a review of all beach cross section monitoring data should be undertaken and a new monitoring frequency determined. The results of this review and the new monitoring frequency shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval within one month.
- 12.20 All beach cross section data shall be supplied to the Chief Executive of the Bay of Plenty Regional Council or delegate within two weeks of collection. Data supplied shall be in the form of raw and processed data (Moturiki Datum).

#### **Foredune position surveys**

- 12.21 The consent holder shall undertake a toe of foredune survey along the coastline from Environment Bay of Plenty site CCS3 to the Waiohahi River entrance (as shown on Plan Number BOPRC 65563/6) prior to construction and monthly during the construction phase. The horizontal distance between each collected survey point shall be less than 10 m. Elevation (in Moturiki Datum) shall also be measured at each point.
- 12.22 The beach toe of foredune survey data shall be supplied to the Chief Executive of the Bay of Plenty Regional Council or delegate within two weeks of collection. Data supplied shall be in the form of raw and processed data (NZMG and Moturiki Datum)
- 12.23 Following completion of the construction phase a review of all beach toe of foredune survey data should be undertaken and a new monitoring frequency determined. The results of this review and the new monitoring frequency shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval within one month.

#### **Shore parallel surveys**

- 12.24 The consent holder shall undertake a beach topographical survey immediately adjacent to the proposed training walls that extends for one kilometre either side prior to construction and monthly during the construction phase thereafter. The horizontal distance between each collected survey point shall be less than 5m.
- 12.25 The consent holder shall review beach topographical survey data at six month intervals collected in accordance with condition 12.24. The results of this review shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate within one month.
- 12.26 All beach topographical survey data shall be supplied to the Chief Executive of the Bay of Plenty Regional Council or delegate within two weeks of collection. Data supplied shall be in the form of raw and processed data (NZMG and Moturiki Datum).
- 12.27 Following completion of the construction phase a review of all beach topographical survey data

should be undertaken and a new monitoring frequency determined. The results of this review and the new monitoring frequency shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval within one month.

### **Aerial photography**

- 12.28 The consent holder shall undertake a high resolution (0.25 GSD) aerial photography survey covering the coastline (including the Waioeka River ebb delta and approximately 200 m inland from the toe of the foredune) from Environment Bay of Plenty site CCS1 to CCS8 (as shown on Plan Number BOPRC 65563/6) prior to construction.

### **Renourishment trigger**

- 12.29 The renourishment trigger is set at 50 m of landward retreat of the baseline toe of foredune position. This distance should be measured from any of the datasets outlined in the Beach and Nearshore monitoring section.
- 12.30 The consent holder shall develop a beach nourishment and dune planting programme, to be implemented when the trigger identified in condition 12.29 is met, this programme shall be in accordance with conditions 5.3, 11.2, 11.6 and 11.7 of this consent.

## **13 Certification of Works □ Post Construction**

- 13.1 Within 30 working days of completion of the construction works, or earlier of so requested by the Chief Executive of the Regional Council or delegate for a specific area of works, the consent holder shall submit a certificate signed by a chartered professional engineer to certify that the structure(s) has been constructed in accordance with good engineering practice and the conditions of this consent.
- 13.2 Within 30 working days of completion of the construction works the consent holder shall submit as-built plans of the structures authorised by this consent and the results of a bed-level survey of the Harbour entrance channel to the Bay of Plenty Regional Council.

## **14 Maintenance**

- 14.1 The consent holder shall ensure that the structure authorised by this consent is maintained in a safe and structurally sound condition at all times, and, if directed by the Chief Executive of the Regional Council or delegate to undertake any maintenance work, shall do so as soon as is practicable.
- 14.2 The consent holder shall develop and implement a maintenance inspection programme. Details of this programme shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval within three months following the completion of construction activities and shall include, but not be limited to:
- An annual inspection regime for the training walls and associated structures by a chartered professional engineer, with provision for additional inspections following each wave event that produces wave heights near or exceeding the design wave height;
  - Details of measures to be undertaken in the event of damage to the training walls or associated structures, including threshold levels for requiring repair works; and
  - Details of an annual inspection regime of the scour protection works at the base of walls using multi-beam sonar scanning or similar techniques.
- 14.3 Records of the inspections undertaken in accordance with the maintenance inspection programme required by condition 14.2 of this consent shall be submitted to the Chief Executive of the Regional Council or delegate within one month of the inspection being undertaken.
- 14.4 The consent holder shall monitor the structures to ensure that they do not present a danger to the

public and shall take any necessary precautions to ensure the safety of the public using the structure.

- 14.5 Maintenance works, other than hand work, shall be carried out in accordance with notification conditions 6.6 and 6.7, works conditions 8, timing condition 9.5 and water quality condition 10.5 of this consent.

## 15 Review of Consent Conditions

- 15.1 The Bay of Plenty Regional Council, may review any or all conditions of this consent by giving notice of its intention to do so under Section 128 of the Resource Management Act 1991, at any time within three months of the receipt of any of the monitoring results, or completion of a compliance report for any of the following purposes:
- (a) To deal with any adverse effects on the environment, which may arise from the exercise of this consent, and which it is appropriate to deal with at a later stage; or
  - (b) To review the adequacy of any monitoring plans proposed and/or monitoring requirements so as to incorporate into the consent any monitoring or other requirements which may become necessary to deal with any adverse effects on the environment arising from the exercise of this consent; or
  - (c) To review the adequacy of any mitigation measures proposed and/or mitigation requirements so as to incorporate into the consent any additional mitigation requirements which are necessary to deal with any adverse effects on the environment arising from the exercise of this consent.
- 15.2 The Bay of Plenty Regional Council shall be entitled to recover from the consent holder the actual and reasonable costs of the conduct of any review, calculated in accordance with and limited to that Council's scale of charges in-force and applicable at that time under section 36 of the Resource Management Act 1991.

## 16 Resource Management Charges

- 16.0 The consent holder shall pay the Bay of Plenty Regional Council such administrative charges as are fixed from time to time by the Regional Council in accordance with section 36 of the Resource Management Act 1991.

## 17 Lapse of Consent

- 17.0 This consent shall lapse on 31 August 2024 if not given effect to by that date. For the avoidance of doubt, given effect to includes, but is not limited to, the submission and subsequent approval of the detailed design plans required under condition 5.1 of this consent.

## 18 Term of Consent

- 18.0 This consent shall expire on 31 August 2044.

## 19 The Coastal Permit

- 19.0 The Coastal Permit hereby authorised is granted under the Resource Management Act 1991 and does not constitute an authority under any other Act, Regulation or Bylaw.

## Advice Notes

1. *Notification of works and submission of information should be made in writing to the Manager Pollution Prevention, Environment Bay of Plenty, Box 364 or fax 0800 368 329 or email [notify@envbop.govt.nz](mailto:notify@envbop.govt.nz) and should include the permit number 65566.*
2. *Consultation with Opotiki District Council (as consent authority) will be undertaken as part of this approval process. Review and approval of the detailed designs and various plans may take up to 40 working days to complete due to the need to consult with various staff members within Environment Bay of Plenty. The approval process may take more than 40 working days to complete if the plans or designs require amendment before approval can be given.*

3. *This proposal will affect archaeological site(s). Work affecting archaeological sites is subject to a consent process under the Historic Places Act 1993. An authority (consent) from the New Zealand Historic Places Trust must be obtained for the work prior to commencement. It is an offence to damage or destroy a site for any purpose without an authority. The Historic Places Act 1993 contains penalties for unauthorised site damage. The applicant is advised to contact the New Zealand Historic Places Trust for further information.*
4. *The proposal may require an authority under the Floodway and Drainage Bylaw 2008 (or its successor).*
5. *This activity may require authorisation under the Building Act 1991.*
6. *Schedule 13 of the Regional Coastal Plan provides guidance on what quantitative standards can be used to assess compliance with the qualitative standards listed in the coastal water quality classifications.*
7. *Potential contaminants include, but are not limited to, hydrocarbons, hydraulic fluids and cement and concrete products.*
8. *Page 22 of Appendix 19 of the application gives examples of potential applications of modelling support during construction.*
9. *The consent holder shall not be deemed to be non-compliant with this condition if the invited representatives chose not to participate. Representatives from Opotiki District Council and Environment Bay of Plenty may be the same as the respective compliance officers for this consent.*
10. *At the time of granting this consent, the appropriate local newspapers were the Opotiki News and Whakatane Beacon. The appropriate radio station was Radio 1XX.*
11. *For more information on the effects of cement in waterways and reasonable prevention measures refer to the following document available on the Auckland Regional Council website ([www.arc.govt.nz](http://www.arc.govt.nz)), "Pollution Fact Sheet - Construction Activities".*
12. *Additional works may be required to ensure that the construction of the Opotiki Harbour Entrance does not result in an increase in flood levels. Further resource consents may be required for these works, which should be completed before construction begins.*
13. *Once construction works have commenced in the areas referred to in conditions 9.1 and 9.2 of this consent then they may continue during subsequent Dotterel nesting periods - subject to compliance with the other conditions of this consent.*
14. *The Environment Bay of Plenty Coast Care Information Brochure Number 9: Backyard Buffers includes information on appropriate dune plant species.*
15. *An appropriate maximum inter-plant spacing for foredune plants is 1 m, and for back-dune plants is 0.6 m.*
16. *Planting is more likely to be successful if carried out between 1 May and 30 September.*
17. *The loop track to be provided through the Huntress Creek Conservation Area shall be designed in consultation with the Department of Conservation.*
18. *Disposal of the dredged material to land is consented under land use consent 65565.*
19. *The consent holder is responsible for ensuring that all contractors carrying out works under this consent are made aware of the relevant consent conditions, plans and associated documents.*
20. *The consent holder is advised that non-compliance with consent conditions may result in enforcement action against the consent holder and/or their contractors.*
21. *Compliance with the water quality standard outlined in condition 10.3 is only likely to be achieved following high rainfall, when the river is subject to increased turbidity.*
22. *The consent holder may take a second set of samples (up-current and down-current) to verify the first set of sampling results.*
23. *Water quality monitoring during dredging may not be required if the river conditions are such that the impacts of the dredging on water quality will be negligible.*
24. *The consent holder is advised that one set of detailed designs and pre-construction plans may be prepared to meet the requirements of each of the consents required for the Opotiki Harbour Entrance project.*

## Bay of Plenty Regional Council

### Resource Consent

Pursuant to the Resource Management Act 1991, the **Bay of Plenty Regional Council**, by a decision dated 29 July 2009, **hereby grants**:

A resource consent:

- **Under section 14(1) of the Resource Management Act 1991 and rule 10.2.4(d) of the Bay of Plenty Regional Coastal Environment Plan to undertake a discretionary activity being to Take Coastal Water**

subject to the following conditions:

#### 1 Purpose of this Resource Consent

1.0 To undertake the following activities associated with the Opotiki Harbour Entrance project:

- Removal of material from the foreshore and seabed
- Discharge of sediment, slurry water and sediment-laden stormwater to the coastal marine area (from dredging activities, earthworks and construction activities)
- Disturbance of the foreshore and seabed
- Take of coastal water
- Diversion of coastal water
- Erection and removal of temporary structures
- Erection and maintenance of permanent structures that are not covered by consent 65563 (geocontainer bank reinforcement less than 300m in length, geo-container dyke)

#### 2 Location

2.0 Pakihikura (the Waioeka river mouth), Opotiki as shown on BOPRC Plan Number RC 65563/1

#### 3 Map Reference

3.0 The area is bounded by approximate map references NZMS 260 W15:8461-4821, W15:8469-4705, W15:8587-4699, W15:8563-4817

#### 4 Legal Description

4.0 Coastal Marine Area, Crown land, Sections 1-3 SO 8737, Allotments 436- 439 Waiotahi Parish, Sections 24-31, 31A, 32- 43 Opotiki Suburbs Block III (Opotiki District)

#### 5 Pre-Construction Requirements

5.1 The consent holder shall prepare and submit full engineering design details (including results of modelling, design assumptions used in the modelling process, plans and specifications) for all structures and the entrance channel realignment associated with the Opotiki Harbour Entrance project to the Chief Executive of the Bay of Plenty Regional Council or delegate, for approval at least 40 working days prior to the proposed date for commencement of works (see Advice Notes 1, 2 and 24). The purpose of this approval process is to ensure compliance with the conditions of this consent.

The detailed design process should involve review by suitably qualified and experienced, independent experts in the fields of engineering, landscape and ecology and expressly provide for the following:

- The structural integrity of the structures authorised by this consent. In particular, development of the detailed design should take into account the following:
  - River flows into the entrance at the upstream end of the training walls to determine local scour effects and the potential for turbulence to be set up in the channel.
  - The stability of scour aprons under construction and long term wave loadings;
  - Optimisation of the armour size.
  - Stability of the geocontainers under wave attack and current.
  - Scour potentials at the outer head of the structures.
  - River closure dynamics.
- Location of the structures authorised by this consent as far landward as practicable (taking into account other constraints);
- Use of the most up-to-date flood frequency analysis for the Waioeka and Otara Rivers in the design flood flow assumptions;
- Demonstration that flood levels in the Waioeka and Otara River will not be increased following construction of the new harbour entrance during a 100-year return flood event (see condition 8.13);
- Additional information on the sediment characteristics beneath the line of the proposed entrance channel - particularly with regard to scour resistance and seismic activity - and demonstration that adequate scour protection has been provided;
- A description of the intended construction materials;
- Outline future maintenance requirements;
- Integration of the structures with the landscape, natural character and ecological features of the coastal environment in the vicinity of the works;
- Restoration of dune landforms and vegetation where they interface with structures; and
- Inclusion of cultural elements in the training wall structures where practicable.

5.2 The consent holder shall prepare and submit a Construction Management Plan (CMP) for all construction works authorised by this consent to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval, at least 40 working days prior to the proposed date for commencement of works (see Advice Notes 1, 2 and 24). The purpose of this document is to demonstrate how the consent holder will manage activities during construction to avoid, remedy or minimise environmental effects and achieve compliance with the conditions of this consent. The CMP shall be developed using the engineering design details approved in accordance with condition 5.1 of this consent and shall include, but not be limited to:

- A detailed construction methodology for all works (to include how works will be sequenced/staged to minimise adverse environmental effects);
- Demonstration that a Floodway and Drainage bylaw authority has been obtained for the works (if necessary)(see Advice Note 4);
- Demonstration that an authority has been obtained for the works under the Historic Places Act 1993 (see Advice Note 3);
- The name and 24-hour contact details of the site manager supervising the works (including the refuelling and plant) as well as the contact details for all contractors working on site;
- Roles and responsibilities of key personnel for the implementation of this consent, including appointment of a representative to be the primary contact person in regard to matters relating to this consent;
- General site management measures, including:
  - waste/litter disposal
  - effluent disposal
  - security
  - location of stockpiles
- Complaints register and reporting procedure;
- Incident register and reporting procedure;
- Evidence that a suitably qualified engineer(s) has been appointed to carry out the overall design, supervision and certification of the works (including construction of all erosion and sediment controls);
- Construction monitoring, record-keeping and maintenance requirements;
- An accidental discovery protocol for dealing with koiwi or taonga unearthed during construction activities, developed in consultation with Whakatohea Maori Trust Board.

5.3 The consent holder shall prepare and submit an Environmental Mitigation and Remediation Plan (EMP) for all construction works authorised by this consent to the Chief Executive of the Bay of Plenty Regional Council or delegate, for approval, at least 40 working days prior to the proposed date for commencement of works (see Advice Notes 1, 2 and 24). The purpose of this document is to demonstrate how the consent holder will manage activities during construction to avoid, remedy

or minimise environmental effects and rehabilitate the site after construction works have been completed to achieve compliance with the conditions of this consent (in particular conditions 8 Works, 10 Water Quality Standards and 11 Post Construction Mitigation and Remediation). The consent holder shall consult with the technical liaison group required by condition 5.4 of this consent during the development of this plan. The EMP shall include, but not be limited to:

- Identification and mapping of areas (such as dotterel nesting sites, indigenous vegetation) sensitive to disturbance by construction activities and measures to protect against such disturbance;
- Establishment and clear delineation of construction vehicle/machinery movement tracks (including the western access track) that limit disturbance to sensitive areas;
- Measures to be taken to provide for navigational aids and the management of vessels using the Harbour entrance during construction;
- Measures that will be taken to ensure that the construction works will comply with the New Zealand Standard NZS 6803.1999 Acoustics ♦ Construction Noise (or its successor) or where it is not practicable to meet these standards, the duty under section 16 of the Resource Management Act 1991 to adopt the best practicable option to avoid unreasonable noise;
- Measures to be taken to ensure that the works authorised by this consent do not cause the water quality standards listed in condition 10 to be exceeded beyond the zone of reasonable mixing (see Advice Note 6);
- Procedures to prevent the discharge of hazardous substances or other contaminants into the coastal marine area or onto vegetation (see Advice Note 7);
- Procedures to minimise the discharge of sediment into the coastal marine area;
- Measures that will be taken to minimize the risk of fuel entering coastal or estuarine waters during refueling, especially where refueling occurs within 20 m of the coastal marine area;
- Details on how coastal process modeling will be used to mitigate environmental impacts during dredging operations and other construction related activities (see Advice Note 8);
- Measures to be undertaken to maintain and monitor the existing river entrance channel during construction, including:
  - Minimum river channel dimensions.
  - Monitoring methodology, frequency and reporting.
  - Procedures to manage stockpiled material to prevent additional flood risk or breach.
  - A contingency plan to address the risk of excessive sediment accumulation between the existing river mouth and the western training wall during construction (that could constrict the river mouth and increase flood risk).
- Measures to be taken to minimise the adverse effects of night-time lighting (see condition 8.14);
- Steps that will be taken to mitigate and rehabilitate the site post-construction (in particular to ensure compliance with conditions 11 of this consent);
- Steps that will be taken to mitigate for the loss of Dotterel habitat as a result of the works authorized by this consent (in particular to ensure compliance with condition 11.1 of this consent);
- Measures that will be taken to educate contractors regarding the requirements of the relevant resource consents and management plans, and environmental management; and
- Measures that will be taken to re-nourish beaches and replant dune systems immediately post-construction and subsequently following coastal setback. In particular, the EMP shall include, but not be limited to, the following information:
  - Identification of the plant species to be used for revegetation in each area on a plan or schedule (including all new areas of sand-dune, all existing areas of sand dune that will be affected by the harbour entrance works and areas of potential setback post-construction);
  - Desired planting density (see Advice Note 15);
  - Fertiliser application (including use of a controlled-release fertiliser at planting and post-planting fertiliser use);
  - A programme for revegetation following coastal set-back that exceeds the trigger set in condition 12.29 of this consent;
  - Weed management and pest control activities to be undertaken;
  - A programme for maintenance for a period of at least three years following completion of initial planting (maintenance activities may include the exclusion of pest browsers, the removal of weeds and replacement planting); and
  - A programme for ensuring adequate supply of plants (such as ordering and growing in advance).

5.4 The consent holder shall establish a technical liaison group to provide input during the development and implementation of the Environmental Mitigation and Remediation Plan required by condition 5.3 of this consent. The consent holder shall, as a minimum, invite representatives from the

following organisations to form part of the technical group: Environment Bay of Plenty, Waiotahi Coast Care, Department of Conservation, Whakatohea Maori Trust Board and Opotiki District Council (see Advice Note 9). The functions of the Technical Liaison Group are to:

- Review and provide constructive comment on the content of the detailed designs and EMP prior to its submission to the Regional Council; and
- Review and provide constructive comment on the implementation of the EMP.

- 5.5 The consent holder shall prepare, submit and implement a Site-wide Contingency Plan (SCP) for the contaminant of spills to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval at least 40 working days prior to works commencing (see Advice Notes 1, 2 and 24). The purpose of this document is to demonstrate how the consent holder will manage activities during construction to avoid, remedy or minimise environmental effects of unintended discharges and achieve compliance with the conditions of this consent (in particular, conditions 8.6, 8.7, 8.8 and 8.9). The contingency plan shall:
- Identify potential contaminants that will be used or stored on site (see Advice Note 7);
  - Identify designated contaminant storage facilities and re-fuelling locations;
  - Require that these locations to be bunded, and that machinery should be parked overnight or long-term only in these designated areas;
  - Require that all mobile fuel tankers carry spill kits and that spill kits are stored at bulk storage tank locations at all times;
  - Detail the contents of the spill kits, including absorbent pads, booms, pillow and socks and appropriate pegs/rope to hold the absorbent material in place;
  - Record the names of operators trained in spill response and remediation;
  - Detail an internal and external notification procedure of any spills; and
  - Identify measures to be undertaken to remediate a contaminant spill.
- 5.6 The consent holder shall develop and submit a Monitoring and Review Plan (MRP) for the Harbour Entrance Project to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval at least 40 working days prior to the proposed date for commencement of works (see Advice Notes 1, 2 and 24). This Plan shall outline how the potential environmental effects associated with the project are to be monitored (including monitoring methodologies, monitoring frequency and how results will be analysed and reported to the Regional Council). The MRP shall also provide for baseline monitoring, triggers for further monitoring or mitigation action and a description of what further monitoring and/or mitigation action may be required. Conditions 12.1 to 12.30 describe in further detail the matters that should be covered by this Plan.
- 5.7 Construction shall not commence until written approval of the designs and plans required by conditions 5.1, 5.2, 5.3, 5.5 and 5.6 of this consent has been received by the consent holder from the Chief Executive of the Bay of Plenty Regional Council or delegate.

## 6 Notification of Works

- 6.1 Not less than 20 working days prior to the start of the Opotiki Harbour Access works (including site preparation), the consent holder shall, in writing, notify the Chief Executive of the Bay of Plenty Regional Council or delegate, the Eastern Bay of Plenty Harbourmaster, the Department of Conservation and Whakatohea Maori Trust Board of the intent to start works (see Advice Note 1).
- 6.2 Not less than 20 working days prior to the start of the Opotiki Harbour Access works (including site preparation), the consent holder shall, in writing, request a site meeting between all relevant parties, including all contractors and relevant local authorities, prior to any works commencing on the site to discuss implementation of the construction management plan and environmental management measures (see Advice Note 1).
- 6.3 Not less than 10 working days prior to the commencement of the Opotiki Harbour Access works (including site preparation), the consent holder shall place notices in the local newspapers and on local radio stations (see Advice Note 10). These notices shall include, at a minimum, the following information:
- The date on which works are intended to commence;
  - The location and areas affected by the works;
  - The anticipated duration of the works; and

- The restrictions that will apply to public access and navigation.
- 6.4 A copy of this consent shall be kept at the construction site at all times until the works required to construct the new harbour entrance are complete.
- 6.5 The consent holder shall provide a copy of this consent and all documents referred to in this consent to any operator or contractor undertaking works authorised by this consent, prior to the works commencing.
- 6.6 Not less than 10 working days prior to undertaking any maintenance works under this consent, the consent holder shall, in writing, notify the Chief Executive of the Bay of Plenty Regional Council or delegate, Eastern Bay of Plenty Harbourmaster, the Department of Conservation of the intent to start works (see Advice Note 1).
- 6.7 Not less than three days prior to undertaking any maintenance works under this consent that will cause a restriction to navigation, the consent holder shall place notices in the local newspapers and on local radio stations (see Advice Note 10). These notices shall include, at a minimum, the following information:
- The date on which works are intended to commence;
  - The location and areas affected by the works;
  - The anticipated duration of the works; and
  - The restrictions that will apply to public access and navigation.

## 7 Signage

- 7.0 Prior to the commencement of the Opotiki Harbour Entrance project (including site preparation), the consent holder shall erect a prominent sign adjacent to the main entrance to the site, and maintain it throughout the period of the works. The sign shall clearly display, as a minimum, the following information:
- The name of the project and the consent holder;
  - The principal contractor;
  - A 24-hour contact telephone number for the consent holder or appointed agent;
  - A clear explanation that the contact telephone number is for the purpose of receiving complaints and information from the public about the Opotiki Harbour Entrance project; and
  - Restrictions to public access and navigation.

## 8 Works

- 8.1 All construction, dredging and earthworks shall be carried out in general accordance with the following:
- BOPRC Plan Number RC 65563/2;
  - The detailed designs (approved in accordance with condition 5.1 of this consent);
  - Construction Management Plan (approved in accordance with condition 5.2 of this consent);
  - Environmental Mitigation and Remediation Plan (approved in accordance with condition 5.3 of this consent);
  - Spill Containment Plan (approved in accordance with condition 5.5 of this consent);
  - Monitoring and Review Plan (approved in accordance with condition 5.6 of this consent).

Any amendments to the plans referenced in this condition shall be submitted to the Chief Executive of the Regional Council or delegate for review to ensure that they remain consistent with the conditions of this consent. Amended plans shall not be implemented until written approval has been received from the Regional Council.

- 8.2 The consent holder shall monitor the structures during construction to ensure that they do not represent a danger to the public.
- 8.3 The works associated with this consent shall be carried out under the supervision of a Chartered

- 8.4 Disturbance to the foreshore and seabed shall be minimised as far as practicable. This includes, but is not limited to, the following measures:
- Minimising machinery movements on the foreshore to the minimum necessary to achieve the purpose of this consent;
  - Building structures progressively from the land out to sea;
  - Locating machinery on structures (rather than on the foreshore/seabed); and
  - Completing each section of works as quickly as practicable.
- 8.5 Machinery and vehicles used to undertake the works shall be clean and well-maintained. In particular:
- Machinery and vehicles should be cleaned to remove surface hydrocarbons, seeds and other contaminants before entering site;
  - Hydraulic hoses shall be inspected and replaced when necessary to avoid failure whilst working in the coastal marine area;
  - Vegetable oil shall be used in place of hydraulic fluid wherever practicable;
  - Machines to be used in the coastal marine area shall be fitted with sealed bearings and grease caps for moving parts; and
  - All machinery is to be regularly maintained (including hydraulic hoses) in such a manner so as to minimise the potential for leakage of contaminants.
- 8.6 No fuel storage or machinery/vehicle maintenance shall be carried out within the western construction compound(s), the coastal marine area, on the foreshore or within 20 m above mean high water springs.
- 8.7 Any fuel or other hazardous substances stored on site shall be stored within portable containers so that they can be removed from the site if needed due to flood or storm events.
- 8.8 Refuelling shall only occur within the coastal marine area, on the foreshore or within 20 m above mean high water springs if it is the most practicable option and appropriate measures have been put in place to avoid or minimise any fuel or hydrocarbon spillage, including the provision of appropriate security and containment measures, where necessary.
- 8.9 The consent holder shall take all practicable measures to prevent cement dust and non-stabilised cement slurries from entering coastal or surface water. These measures shall include but not be limited to the following (see Advice Note 11):
- Ensuring appropriate controls are in place before the use of cement begins to contain and remove all cement contaminated waste and to prevent any discharge of waste water to fresh or storm water;
  - Ensuring clean storm water is diverted away from the work area;
  - Immediately containing and cleaning up any spills that occur to the satisfaction of Regional Council staff;
  - Containing all cement particles and dust within the works area and removing all cement particles and dust immediately after the completion of the work. Cement waste must be reused within the work area or disposed of at an appropriate facility;
  - Ensuring cement is allowed to fully set and there are no loose cement particles or dust residue remaining before allowing any natural flow of water back over it; and
  - Creating a designated wash down area on site for vehicles and equipment and ensuring staff know this is available.
- 8.10 The best practicable option shall be used to minimise the discharge of sediments resulting from construction works into coastal and estuarine waters. The consent holder shall detail the measures to be used in the EMP required by condition 5.3 of this consent.
- 8.11 For each year during construction, the consent holder shall fence off and signpost Dotterel nesting sites located on the eastern spit during the Dotterel breeding and nesting season (15 August to 29

February inclusive). The Department of Conservation shall be consulted regarding the areas that should be fenced. Fencing shall be erected by 14 August each year and may be removed from 1 March of the following year.

- 8.12 The construction compounds shall be fenced so as to contain the storage and construction area and to protect the surrounding dune landforms and vegetation.
- 8.13 The activities undertaken under this consent shall not result in an increase in the 100-year return period flood levels within the Waioeka and Otara Rivers at the following locations (see Advice Note 12):
- The Waioeka/Otara River confluence; or
  - The Waioeka Bridge; or
  - Approximately 850m upstream of Otara Bridge.
- 8.14 All exterior lighting associated with the construction activity shall be managed so as to avoid the spill of light or glare that might be:
- Detrimental to other users; or
  - Detrimental to wildlife; or
  - A hazard to navigation in the coastal marine area;
- unless such lighting is necessary for reasons of public safety or operational safety.
- 8.15 In the event of any archaeological site or koiwi being uncovered during the exercise of this consent, activities in the vicinity of the discovery shall cease. The consent holder shall contact the Regional Council, the Historic Places Trust and the relevant iwi authority (as identified in the Accidental Discovery Protocol required by the Construction Management Plan). The consent holder shall follow the Accidental Discovery Protocols (ADP), and shall not recommence works in the area of the discovery until the requirements of the ADP have been met (see Advice Note 1).
- 8.16 All plant, machinery, equipment, debris and construction materials, not associated with the permanent structures, shall be removed from the foreshore and coastal marine area at the completion of works.
- 8.17 All metal used to surface construction access tracks that are no longer required for maintenance shall be collected and removed at the completion of the works.
- 8.18 The consent holder shall ensure that all permanent structures erected under this consent are appropriately marked and/or lit to provide for navigation in accordance with the directions of the Eastern Bay of Plenty Harbourmaster.
- 8.19 The consent holder shall ensure that the capital works authorised under this consent are completed within a period of no longer than five years following their commencement.

## 9 Timing of Works

- 9.1 Construction activity (including site establishment works) shall not commence on the western end of the eastern spit, as shown on Plan number BOPRC 65563/3, during the period 15 August to 29 February inclusive (the Dotterel breeding and nesting period). (See Advice Note 13).
- 9.2 Construction activity within the Estuary, on the western sand spit or on the area of the eastern sand pit not included in condition 9.1 shall not commence during the period 1 October to 31 January inclusive (the Dotterel nesting period). (See Advice Note 13).
- 9.4 Works to divert the flow of the Waioeka River (the River realignment) shall not be undertaken during the inanga migration season (1 August ♦ 31 October inclusive).

- 9.5 Maintenance works that require vehicle access on the sand spits shall not be undertaken during the period 1 October to 31 January inclusive (the Dotterel nesting period).

## 10 Water Quality Standards

- 10.1 The zone of reasonable mixing for discharges associated with dredging activities is defined as being within a 200 m radius of the excavation (dredging) site.
- 10.2 Background water quality is defined as being 500 m upstream/up-current of the most upstream/up-current dredging or construction site.
- 10.3 Dredging and associated discharge activities undertaken during the period 1 December to 29 February (inclusive) shall not result in a decrease in water clarity (as measured by the black disk method) of more than 50% below background levels, beyond the zone of reasonable mixing (see Advice Notes 21-23).
- 10.4 Dredging and associated discharge activities undertaken during the period 1 March to 14 August (inclusive) shall not result in a suspended solids concentration within the water column beyond the zone of reasonable mixing that is more than 150g/m<sup>3</sup> above the background levels.
- 10.5 The consent holder shall ensure that all other construction works authorised by this consent, and consents 64465 and 65565 that authorise reclamation and earthworks associated with the Harbour Access Improvement project do not result in any of the following effects in estuarine or coastal waters following reasonable mixing (see Advice Note 6):
- The production of conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
  - Any conspicuous change in colour or visual clarity;
  - Any emission of objectionable odour;
  - Significant adverse effects on aquatic life;
  - Water rendered unsuitable for bathing due to poor visual clarity and/or the presence of contaminants;
  - Undesirable biological growths;
  - A water temperature change of more than 3 degrees C;
  - The concentration of dissolved oxygen to fall below 80% of saturation concentration; or
  - Aquatic organisms rendered unsuitable for human consumption due to the presence of contaminants.

For the purpose of this consent, the reasonable mixing area is within a 200 m radius of any individual area of construction activity.

## 11 Post-construction Mitigation and Remediation

- 11.1 The consent holder shall establish an area that is approximately one hectare on the post-construction western spit that provides suitable habitat for NZ Dotterel nesting. That area shall be maintained using weed and predator control for a period of five years. Suitable habitat consists of flat open sand and planting on the southern perimeters.
- 11.2 The consent holder shall reshape and replant any areas affected by the works (including access tracks and construction compounds) and the newly created dune systems with appropriate plants. Indigenous species shall be used with a preference for locally sourced seed stock wherever practicable (see Advice Note 14).
- 11.3 The consent holder shall erect and maintain six interpretative signs approximately 1.5 m x 1.0 m in size that provide information on:
- The cultural and heritage values of the site;
  - The ecological and conservation values of the site;

- The Harbour Development Project; and
  - Appropriate access routes to and through the sand-dunes and Huntress Creek Conservation Area.
- 11.4 The consent holder shall fence the Huntress Creek Conservation Area, as shown on Plan Number BOPRC RC65563/4, along its northern boundary and along the legal road boundaries that pass through the conservation area. The Department of Conservation shall be consulted regarding the materials used to construct this fencing.
- 11.5 The consent holder shall make appropriate provision for public access to the new Harbour entrance. This access shall be in general accordance with the outline shown on Plan Number BOPRC 65563/5 and shall provide:
- Vehicle access to a sandy road head (consisting of bollards, rope and a signboard) on both sides of the training walls;
  - Delineation of foot tracks (using planting) along the southern side of the river closure and bank protection structures authorised by this consent that guide visitors away from potential dotterel nesting areas; and
  - Creation of a loop track in the Huntress Creek Conservation Area (see Advice Note 17).
- 11.6 Any sand used for beach and dune renourishment shall be of a comparable size and colour to the natural sediments present at the deposition site.
- 11.7 The mitigation and remediation works associated with this consent shall be carried out under the supervision of a suitably qualified terrestrial ecologist.
- 11.8 The consent holder shall conduct an official opening ceremony for the new Harbour Entrance in accordance with iwi protocol.

## 12 Monitoring and Review

- 12.1 The consent holder shall develop and implement a programme to monitor the effects of the new Harbour Entrance on water levels in the Waioeka and Otara Rivers. This monitoring shall encompass an area from the river-mouth to immediately downstream of State Highway 35.
- 12.2 The consent holder shall develop and implement a three-dimensional monitoring programme for salinity within the Waioeka Estuary. Baseline and post-construction monitoring should be undertaken. Each set of monitoring should be undertaken under a variety of conditions, including but not limited to:
- Dry and wet weather low tide with gauged river flows;
  - Dry and wet weather flood tide with gauged river flows;
  - Dry and wet weather ebb tide with gauged river flows; and
  - Dry and wet weather high tide with gauged river flows.
- 12.3 The consent holder shall analyse the salinity monitoring data, this shall include a comparison of the actual salinity changes within the estuary to those predicted by the modelling.
- 12.4 The consent holder shall establish a trigger, based on the extent of salinity change, which requires the consent holder to undertake additional monitoring (such as wetland vegetation monitoring) in order to assess the adverse environmental effects (if any) of the salinity change and options for mitigation. The consent holder shall be responsible for undertaking any mitigation, if so directed by the Chief Executive of the Regional Council or delegate.
- 12.5 The consent holder shall develop and implement a programme for monitoring the effects of the construction activities on water quality to assess compliance with conditions 10 of this consent.

- 12.6 The consent holder shall develop and implement a programme for monitoring wildlife and wildlife habitat sensitive to disturbance. As a minimum this programme shall include monitoring the extent of sea-grass beds for a period up to at least two years post-construction and dotterel breeding and feeding areas for a period up to at least five years post-construction.
- 12.7 The consent holder shall establish triggers for additional monitoring and mitigation to be undertaken by the consent holder in relation to the monitoring programme required by conditions 12.5 and 12.6 of this consent. The consent holder shall be responsible for undertaking any additional monitoring and/or mitigation.
- 12.8 The consent holder shall develop and implement a programme for surveying bed levels in the channel between the training walls and assessing compaction of sediments at the river mouth.
- 12.9 The consent holder shall develop and implement a channel maintenance programme, this shall include bed levels that trigger the need for the consent holder to undertake dredging to maintain safe-navigation through the entrance channel.
- 12.10 The consent holder shall develop and implement a programme for monitoring the effects of the Harbour development project on coastal morphology and coastal processes that is consistent with conditions 12.11 to 12.30 of this consent.

### **Beach and near-shore monitoring - details**

#### *Beach cross section surveys*

- 12.11 The consent holder shall install eight beach cross section monitoring sites: four on the western side of the proposed training walls (between the proposed training walls and Environment Bay of Plenty site CCS4) and four on the eastern side (between the proposed training walls and Environment Bay of Plenty site CCS6) as shown on Plan Number BOPRC 65563/6. On each side of the proposed training walls the location of at least one of these cross sections should coincide with the zone of maximum anticipated erosion. The seaward endpoint for each profiled dataset should be at a minimum of -1 m elevation (Moturiki Datum).
- 12.12 Durable front and back benchmarks shall be maintained at the sites at all times during the exercise of this consent.
- 12.13 Prior to commencing monitoring the consent holder shall provide to the Chief Executive of the Bay of Plenty Regional Council or delegate the following information for each of the eight new beach cross section monitoring sites:
- GPS coordinates of the front and back benchmark (NZMG);
  - Surveyed elevation (to second order survey standards) in Moturiki Datum of the front and back benchmark;
  - Description and photographs of each front and back benchmark; and
  - A plan of the location of each front and back benchmark.
- 12.14 All beach cross section surveys should be undertaken using Total Station survey or similar technology.
- 12.15 The consent holder shall undertake at least one pre-construction (baseline) beach cross section survey at each of the sites established in accordance with condition 12.11 of this consent and also at Environment Bay of Plenty sites CCS3 to CCS7 inclusive. This survey should include a full survey measured from the back marker for the eight new sites and shall be undertaken no longer than one month prior to the date when works are due to commence.
- 12.16 Beach cross section surveys should be undertaken at each of the new sites established in

accordance with condition 12.11 of this consent and also at Environment Bay of Plenty sites CCS3 to CCS7 inclusive once a month during the construction phase.

- 12.17 Beach cross section surveys should be carried out at all sites (13) as soon as practicable after any storm surge event exceeding a water level of 1.49 m RL Moturiki Datum (10% AEP).
- 12.18 The consent holder shall review the monitoring data collected in accordance with conditions 12.16 and 12.17 at six monthly intervals during the construction phase. The results of this review shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate within one month.
- 12.19 Following completion of the construction phase a review of all beach cross section monitoring data should be undertaken and a new monitoring frequency determined. The results of this review and the new monitoring frequency shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval within one month.
- 12.20 All beach cross section data shall be supplied to the Chief Executive of the Bay of Plenty Regional Council or delegate within two weeks of collection. Data supplied shall be in the form of raw and processed data (Moturiki Datum).

#### **Foredune position surveys**

- 12.21 The consent holder shall undertake a toe of foredune survey along the coastline from Environment Bay of Plenty site CCS3 to the Waiotahi River entrance (as shown on Plan Number BOPRC 65563/6) prior to construction and monthly during the construction phase. The horizontal distance between each collected survey point shall be less than 10 m. Elevation (in Moturiki Datum) shall also be measured at each point.
- 12.22 The beach toe of foredune survey data shall be supplied to the Chief Executive of the Bay of Plenty Regional Council or delegate within two weeks of collection. Data supplied shall be in the form of raw and processed data (NZMG and Moturiki Datum)
- 12.23 Following completion of the construction phase a review of all beach toe of foredune survey data should be undertaken and a new monitoring frequency determined. The results of this review and the new monitoring frequency shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval within one month.

#### **Shore parallel surveys**

- 12.24 The consent holder shall undertake a beach topographical survey immediately adjacent to the proposed training walls that extends for one kilometre either side prior to construction and monthly during the construction phase thereafter. The horizontal distance between each collected survey point shall be less than 5m.
- 12.25 The consent holder shall review beach topographical survey data at six month intervals collected in accordance with condition 12.24. The results of this review shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate within one month.
- 12.26 All beach topographical survey data shall be supplied to the Chief Executive of the Bay of Plenty Regional Council or delegate within two weeks of collection. Data supplied shall be in the form of raw and processed data (NZMG and Moturiki Datum).
- 12.27 Following completion of the construction phase a review of all beach topographical survey data should be undertaken and a new monitoring frequency determined. The results of this review and

the new monitoring frequency shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval within one month.

### **Aerial photography**

- 12.28 The consent holder shall undertake a high resolution (0.25 GSD) aerial photography survey covering the coastline (including the Waioeka River ebb delta and approximately 200 m inland from the toe of the foredune) from Environment Bay of Plenty site CCS1 to CCS8 (as shown on Plan Number BOPRC 65563/6) prior to construction.

### **Renourishment trigger**

- 12.29 The renourishment trigger is set at 50 m of landward retreat of the baseline toe of foredune position. This distance should be measured from any of the datasets outlined in the Beach and Nearshore monitoring section.
- 12.30 The consent holder shall develop a beach nourishment and dune planting programme, to be implemented when the trigger identified in condition 12.29 is met, this programme shall be in accordance with conditions 5.3, 11.2, 11.6 and 11.7 of this consent.

## **13 Certification of Works Post Construction**

- 13.1 Within 30 working days of completion of the construction works, or earlier if so requested by the Chief Executive of the Regional Council or delegate for a specific area of works, the consent holder shall submit a certificate signed by a chartered professional engineer to certify that the structure(s) has been constructed in accordance with good engineering practice and the conditions of this consent.
- 13.2 Within 30 working days of completion of the construction works the consent holder shall submit as-built plans of the structures authorised by this consent and the results of a bed-level survey of the Harbour entrance channel to the Bay of Plenty Regional Council.

## **14 Maintenance**

- 14.1 The consent holder shall ensure that the structure authorised by this consent is maintained in a safe and structurally sound condition at all times, and, if directed by the Chief Executive of the Regional Council or delegate to undertake any maintenance work, shall do so as soon as is practicable.
- 14.2 The consent holder shall develop and implement a maintenance inspection programme. Details of this programme shall be submitted to the Chief Executive of the Bay of Plenty Regional Council or delegate for approval within three months following the completion of construction activities and shall include, but not be limited to:
- An annual inspection regime for the training walls and associated structures by a chartered professional engineer, with provision for additional inspections following each wave event that produces wave heights near or exceeding the design wave height;
  - Details of measures to be undertaken in the event of damage to the training walls or associated structures, including threshold levels for requiring repair works; and
  - Details of an annual inspection regime of the scour protection works at the base of walls using multi-beam sonar scanning or similar techniques.
- 14.3 Records of the inspections undertaken in accordance with the maintenance inspection programme required by condition 14.2 of this consent shall be submitted to the Chief Executive of the Regional Council or delegate within one month of the inspection being undertaken.
- 14.4 The consent holder shall monitor the structures to ensure that they do not present a danger to the public and shall take any necessary precautions to ensure the safety of the public using the

structure.

- 14.5 Maintenance works, other than hand work, shall be carried out in accordance with notification conditions 6.6 and 6.7, works conditions 8, timing condition 9.5 and water quality condition 10.5 of this consent.

## 15 Review of Consent Conditions

- 15.1 The Bay of Plenty Regional Council, may review any or all conditions of this consent by giving notice of its intention to do so under Section 128 of the Resource Management Act 1991, at any time within three months of the receipt of any of the monitoring results, or completion of a compliance report for any of the following purposes:
- (a) To deal with any adverse effects on the environment, which may arise from the exercise of this consent, and which it is appropriate to deal with at a later stage; or
  - (b) To review the adequacy of any monitoring plans proposed and/or monitoring requirements so as to incorporate into the consent any monitoring or other requirements which may become necessary to deal with any adverse effects on the environment arising from the exercise of this consent; or
  - (c) To review the adequacy of any mitigation measures proposed and/or mitigation requirements so as to incorporate into the consent any additional mitigation requirements which are necessary to deal with any adverse effects on the environment arising from the exercise of this consent.
- 15.2 The Bay of Plenty Regional Council shall be entitled to recover from the consent holder the actual and reasonable costs of the conduct of any review, calculated in accordance with and limited to that Council's scale of charges in-force and applicable at that time under section 36 of the Resource Management Act 1991.

## 16 Resource Management Charges

- 16.0 The consent holder shall pay the Bay of Plenty Regional Council such administrative charges as are fixed from time to time by the Regional Council in accordance with section 36 of the Resource Management Act 1991.

## 17 Lapse of Consent

- 17.0 This consent shall lapse on 31 August 2024 if not given effect to by that date. For the avoidance of doubt, given effect to includes, but is not limited to, the submission and subsequent approval of the detailed design plans required under condition 5.1 of this consent.

## 18 Term of Consent

- 18.0 This consent shall expire on 31 August 2044.

## 19 The Coastal Permit

- 19.0 The Coastal Permit hereby authorised is granted under the Resource Management Act 1991 and does not constitute an authority under any other Act, Regulation or Bylaw.

## Advice Notes

- 1
1. *Notification of works and submission of information should be made in writing to the Manager Pollution Prevention, Environment Bay of Plenty, Box 364 or fax 0800 368 329 or email [notify@envbop.govt.nz](mailto:notify@envbop.govt.nz) and should include the permit number 65566.*
  2. *Consultation with Opotiki District Council (as consent authority) will be undertaken as part of this approval process. Review and approval of the detailed designs and various plans may take up to 40 working days to complete due to the need to consult with various staff members within Environment Bay of Plenty. The approval process may take more than 40 working days to complete if the plans or designs require amendment before approval can be given.*
  3. *This proposal will affect archaeological site(s). Work affecting archaeological sites is subject to a*

- consent process under the Historic Places Act 1993. An authority (consent) from the New Zealand Historic Places Trust must be obtained for the work prior to commencement. It is an offence to damage or destroy a site for any purpose without an authority. The Historic Places Act 1993 contains penalties for unauthorised site damage. The applicant is advised to contact the New Zealand Historic Places Trust for further information.*
4. *The proposal may require an authority under the Floodway and Drainage Bylaw 2008 (or its successor).*
  5. *This activity may require authorisation under the Building Act 1991.*
  6. *Schedule 13 of the Regional Coastal Plan provides guidance on what quantitative standards can be used to assess compliance with the qualitative standards listed in the coastal water quality classifications.*
  7. *Potential contaminants include, but are not limited to, hydrocarbons, hydraulic fluids and cement and concrete products.*
  8. *Page 22 of Appendix 19 of the application gives examples of potential applications of modelling support during construction.*
  9. *The consent holder shall not be deemed to be non-compliant with this condition if the invited representatives chose not to participate. Representatives from Opotiki District Council and Environment Bay of Plenty may be the same as the respective compliance officers for this consent.*
  10. *At the time of granting this consent, the appropriate local newspapers were the Opotiki News and Whakatane Beacon. The appropriate radio station was Radio 1XX.*
  11. *For more information on the effects of cement in waterways and reasonable prevention measures refer to the following document available on the Auckland Regional Council website ([www.arc.govt.nz](http://www.arc.govt.nz)), "Pollution Fact Sheet - Construction Activities".*
  12. *Additional works may be required to ensure that the construction of the Opotiki Harbour Entrance does not result in an increase in flood levels. Further resource consents may be required for these works, which should be completed before construction begins.*
  13. *Once construction works have commenced in the areas referred to in conditions 9.1 and 9.2 of this consent then they may continue during subsequent Dotterel nesting periods - subject to compliance with the other conditions of this consent.*
  14. *The Environment Bay of Plenty Coast Care Information Brochure Number 9: Backyard Buffers includes information on appropriate dune plant species.*
  15. *An appropriate maximum inter-plant spacing for foredune plants is 1 m, and for back-dune plants is 0.6 m.*
  16. *Planting is more likely to be successful if carried out between 1 May and 30 September.*
  17. *The loop track to be provided through the Huntress Creek Conservation Area shall be designed in consultation with the Department of Conservation.*
  18. *Disposal of the dredged material to land is consented under land use consent 65565.*
  19. *The consent holder is responsible for ensuring that all contractors carrying out works under this consent are made aware of the relevant consent conditions, plans and associated documents.*
  20. *The consent holder is advised that non-compliance with consent conditions may result in enforcement action against the consent holder and/or their contractors.*
  21. *Compliance with the water quality standard outlined in condition 10.3 is only likely to be achieved following high rainfall, when the river is subject to increased turbidity.*
  22. *The consent holder may take a second set of samples (up-current and down-current) to verify the first set of sampling results.*
  23. *Water quality monitoring during dredging may not be required if the river conditions are such that the impacts of the dredging on water quality will be negligible.*
  24. *The consent holder is advised that one set of detailed designs and pre-construction plans may be prepared to meet the requirements of each of the consents required for the Opotiki Harbour Entrance project.*