

Decision Report

Port Otago Limited

ORC RM19.441
DCC LUC-2019-658

Resource Consent Applications

to

Otago Regional Council
Dunedin City Council

17 December 2020

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1 Introduction

- [001] In April 2020 Port Otago Limited (POL or applicant) lodged applications with the Otago Regional Council (ORC) for coastal permits¹ and with the Dunedin City Council (DCC) for earthworks and vegetation removal² land use consents to enable the construction of three rock groynes and the deposition of sand for beach renourishment purposes at Te Rauone Beach in Dunedin.
- [002] POL sought a consent duration of 20 years for the coastal permits (except for the permit to erect the groynes for which a 3-year term was sought) and an unlimited duration for the land use consents.

The applications are granted for the reasons herein.**2 Appointment**

- [003] The ORC and DCC, both acting under s34A of the Resource Management Act 1991, jointly appointed independent hearing commissioner Rob van Voorthuysen³ to hear and decide the applications.

3 Process Issues**3.1 Decision context**

- [004] The applications were publicly notified at POL's request. A large number of submissions were received, with 383 submissions in support, two in opposition and one neutral. One of the main submitters in opposition was the Department of Conservation (DOC). However, on 24 November 2020 DOC advised in writing that following consultation with POL and council staff, they had resolved the concerns raised in their submission. DOC further advised that the outcomes of that consultation were reflected in the conditions recommended by the two s42A Report authors⁴ and they no longer wished to be heard.
- [005] Consequently, there is now very little public opposition to the POL proposal.⁵ In addition, both s42A Report authors recommended that the applications be granted and there are few outstanding matters of disagreement between them and the applicant.
- [006] In light of the limited opposition to the proposal, as provided for by s113(3) of the RMA, I cross-refer to and adopt substantial parts of the s42A Report authors' assessments. The consequence of that approach is that readers of this Decision should as a minimum, obtain and read the two s42A Reports prior to, or at the same time as, they read this Decision.

3.2 Site visit and hearing

- [007] I conducted a site visit on Monday 14 December 2020, accompanied by Hillary Lennox (ORC consultant s42A author) and Andy Pullar (applicant's representative), which involved viewing Te Rauone Beach and the immediate surrounds, including the road that will be used to access the site. I held a hearing in the Edgar Centre in Portsmouth Drive, Dunedin, on Tuesday 15 December 2020.
- [008] The ORC and DCC s42A Reports, the POL opening legal submissions and evidence,⁶ and some submitter evidence⁷ was pre-circulated in conformance with a Minute I issued setting out a filing timetable.

¹ Coastal permits for occupation of the coastal marine area, erection of a structure in the coastal marine area, disturbance of the foreshore and seabed, deposition of sand in the coastal marine area and the discharge water and sand to the coastal marine area.

² Natural Hazards Mitigation Earthworks, Large scale earthworks within 5m of mean high water springs and the removal of pohuehue vine/land vegetation which is habitat for the southern grass skink.

³ Commissioner van Voorthuysen is an experienced independent commissioner, having sat on over 310 hearings throughout New Zealand since 1998. He has qualifications in natural resources engineering and public policy and was a full member of the New Zealand Planning Institute (NZPI) from 1998 to 2016.

⁴ Consultant planners Robert Buxton for DCC and Hillary Lennox for ORC.

⁵ The remaining submitter in opposition, Simon James, was concerned about effects on cockle beds and the loss of a unique piece of coastline as a result of the proposed works.

⁶ Gerard Winders (POL CEO), Jennifer Hart (coastal processes and engineering), Leigh Tait (seagrass) and Lezel Botha (planning).

⁷ A letter from Te Rūnanga ō Ōtākou Inc dated 11 December 2020.

Other submitters spoke to their submissions at the hearing.⁸ Copies of the legal submissions and statements of evidence are held by ORC and DCC. I do not separately summarise the matters covered here, but I refer to or quote from that material as appropriate in the remainder of this Decision. I took my own notes of any answers given to verbal questions that I posed to hearing participants.

[009] The applicant's Reply submissions were provided verbally at the hearing. I closed the hearing on the afternoon of Tuesday 15 December 2020, having concluded that I required no further information from any participants.

3.3 Description of the Activity

[010] The existing environment is described in the evidence of Jennifer Hart.⁹ The details of the POL proposal are described in the resource consent application¹⁰ and applicant's evidence,¹¹ and the ORC and DCC s42A Reports and there is no need for me to repeat that here. However, some of the more salient points are:

- POL wishes to construct three rock groynes and deposit sand to rehabilitate around 300m of the northern end of Te Rauone Beach, which has been subject to significant erosion over the past century. The northern end of the beach is retreating landward while the southern end of the beach has built seaward;
- The objective is to improve beach amenity with a high tide beach width of at least 5m. The scheme is not designed to directly address or ameliorate erosion, but that will be an additional benefit of the proposal;¹²
- The proposal was developed over a ten plus year period with involvement from the Te Rauone Beach Coast Care Committee¹³ (TRBCCC) and professional engineering advice;
- The groynes will extend around 80m from the existing shoreline and are intended to maintain the sand imported as part of the beach renourishment and protect the beach from further ongoing coastal erosion. Sea level rise of 0.1m has been allowed for over the 20-year groyne design life;
- The seaward end of the groynes will be at mean sea level to reduce their visual impact;
- The northern groyne will connect to an existing, unconsented sea wall (which will be partially reconstructed) located at the northern end of the beach;
- The central groyne will have a walk-through access at its landward end to allow people to walk between the two beaches at low tide. A boardwalk will be developed around the landward end of the southern groyne to provide for better access to the beach at that point;
- Rock is expected to be provided from a local Dunedin quarry and trucked to the site along Portobello Rd / Harington Point Rd. Truck movements may be up to 11 per day in each direction (approximately two to three per hour in total). A temporary Traffic Management Plan will be in place for the construction traffic;
- Following construction of the groynes the beach between them will be filled with sand recovered from the dredging channel. Sand may be trucked to the site for the initial sand base, sourced from the POL Harington Beach Bend claim area;
- Pending implementation of a DCC upgrade of the adjoining reserve, the landward edge of the renourished beach will be graded to align with the in-situ ground. Community assistance will be sought to plant this area with native sand-binding species to provide a more resilient buffer against wave action and erosion.

⁸ Christian Bininda, Desmond Smith, Steven Clearwater, Neil Harraway, Elizabeth Kirkwood, Olly Te Hata Ohlson, Michelle Taiaroa-McDonald and Tim Vial (Te Rūnanga ō Ōtākou).

⁹ In terms of the general setting; tides and hydrodynamics; wind waves and wake; and sediment transport.

¹⁰ Port Otago Ltd, Te Rauone Beach - Rock Groynes and Sand Re-nourishment, Resource Consent Application (Revised), GHD, April 2020.

¹¹ EIC Hart, paragraphs 26 to 28.

¹² EIC Hart, paragraph 25 and confirmed by Lezel Botha at the hearing.

¹³ TRBCCC is a community group formed from residents living along the coast who were concerned by the loss of the beach and amenity. The aim of the committee is to represent the community in a unified manner, to facilitate project and fund-raising requirements and to ensure the completion of the Te Rauone Beach rehabilitation project.

3.4 Consent categories

[011] POL initially applied for five coastal permits from ORC (RM19.441.01 - 05). However, following discussion with ORC this was amended to two permits:

RM19.441.01 Coastal Permit (20 year term sought):

- (i) To occupy the common marine and coastal area with three rock groyne structures, a boardwalk and appurtenant structures;
- (ii) To disturb the foreshore and seabed while undertaking groyne construction and on-going beach renourishment works;
- (iii) To deposit sand onto the foreshore and seabed while undertaking on-going beach renourishment works; and
- (iv) To discharge water and sand into water while undertaking on-going beach renourishment works.

RM19.441.02 Coastal Permit (3 year term sought):

- (i) To erect three rock groyne structures, a boardwalk and appurtenant structures that are fixed on the foreshore and seabed.

[012] The ORC s42A author advised that the coastal permits are collectively categorised as discretionary activities.¹⁴

[013] POL sought land use consent from DCC. The DCC s42A author advised that the Dunedin City District Plan 2006 (2006 District Plan) and the Proposed Second Generation Dunedin City District Plan (Proposed 2GP) both needed to be considered and in overall terms the land use consent was also a discretionary activity.¹⁵

[014] For the applicant, Lezel Botha agreed with both the ORC and DCC consent categorisations.¹⁶

[015] The DCC s42A author advised that the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 were not applicable to the site.¹⁷

4 Section 104 and 104C matters

[016] I now address relevant aspects of the application in terms of ss104 and 104C of the RMA.

[017] The POL proposal will have a number of positive effects. These were listed by the ORC s42A author¹⁸ and they primarily involve the re-establishment of a beach shape and profile consistent with the natural conditions of Te Rauone Beach before it became the subject of significant erosion. The beach will become one of the few remaining sandy beaches on the western side of the Otago Peninsula, which together with DCC's intended rejuvenation of the Te Rauone Beach Reserve, will significantly enhance local amenity values.

[018] The ORC s42A author also helpfully listed a number of potential adverse effects that she considered had been adequately addressed by POL and their technical advisors.¹⁹ I have reviewed those matters, the relevant technical reports, the applicant's evidence,²⁰ and the recommended conditions of consent for the coastal permits and agree that those matters have been adequately addressed. I do not discuss them further.

¹⁴ ORC s42A Report, section 4.

¹⁵ DCC s42A Report, paragraphs [12] to [26].

¹⁶ EIC Botha, paragraphs 17 and 22.

¹⁷ DCC s42A Report, paragraphs [27] to [28].

¹⁸ ORC s42A Report, section 7.1, page 8.

¹⁹ ORC s42A Report, section 6.1, page 4.

²⁰ Particularly that of Jennifer Hart, paragraphs 29 to 41 dealing with tides and hydrodynamics, wind, waves and wake, shoreline changes and sediment processes, general harbour and surf break, and construction.

- [019] In terms of potential adverse effects on Maori cultural values and interests, the ORC s42A author noted that Te Rūnanga o Ōtākou had submitted in support of the proposal, subject to several conditions, all of which are recommended to be imposed. On that basis the ORC s42A author considered that effects on cultural values had been addressed adequately.²¹ I agree.
- [020] The DCC s42A author noted that the Te Rūnanga o Ōtākou submissions appeared to relate solely to the coastal permits. However, the POL application included letters of support dated 21 November 2019 from Te Rūnanga o Ōtākou and 29 November 2019 from Aukaha.²² On that basis it can be concluded that effects on cultural values relating to the DCC earthworks consent have also been addressed adequately.
- [021] The DCC s42A author also discussed potential adverse effects that had been adequately addressed. I understand these to include visual amenity and natural character, biodiversity (other than as addressed below), public access, transportation (specifically heavy vehicle management) and natural hazards (other than as addressed below).²³
- [022] I now address what appeared to be the few outstanding matters, these being:
- continued access to the beach required for ongoing top-up and redistribution of sand and to repair rock work;
 - stockpiling of rock at 957 Harington Point Road;
 - likelihood of any microplastics being released from the geotextile cloth used within the groynes and possibly under gravels placed for temporary access;
 - potential effect of the groynes on neighbouring properties (particularly those to the north) during a tsunami event; and
 - other submitter issues raised at the hearing.
- [023] Potential adverse effects on seagrass beds, marine mammals and lizards did not appear to be disputed matters, but I address them nevertheless given their significance.

4.1 Seagrass beds, marine mammals and lizards

- [024] One of the more significant potential adverse effects of the POL proposal relates to potential adverse effects on adjacent nearshore seagrass beds, marine mammals and terrestrial lizards.
- [025] With regard to seagrass habitat, the applicant commissioned a report from NIWA that specified management thresholds, management interventions and a monitoring programme.²⁴ The approach recommended by NIWA (and adopted by the applicant) essentially involves monitoring (by way of drone photography and on the ground sampling) the state of seagrass beds adjacent to the site and comparing them to similar seagrass beds at nearby Omate Beach. If changes to the seagrass beds at Te Rauone Beach occur and can be attributed to the POL works (as opposed to natural variations) then works are required to halt and mitigation measures are to be undertaken ranging from assessing the rate of beach replenishment, constructing temporary barriers to protect the seagrass beds, or undertaking habitat restoration.
- [026] That approach is embedded in the conditions recommended by the ORC s42A author and I understand that the proposed approach has satisfied the initial concerns of DOC and the ORC technical advisors. I received no expert evidence contesting the approach recommended by NIWA and so I find it to be appropriate.
- [027] Regarding the concern of submitter Simon James regarding cockle beds, for POL Leigh Tait advised that direct monitoring of these infauna species was destructive. He noted a highly positive correlation between

²¹ ORC s42A Report, section 6.1, page 5.

²² DCC s42A Report, paragraph [33].

²³ DCC s42A Report, paragraphs [43] to [62].

²⁴ Managing and mitigating impacts to seagrass beds, Te Rauone erosion remediation, Prepared for Port Otago Ltd, October 2020.

seagrass beds and cockle beds and so seagrass monitoring (and remedial actions triggered by threshold exceedances) will also protect the health of cockle beds.²⁵

- [028] It is possible, but unlikely, that marine mammals (such as sealions) may be disturbed or harmed during construction of the works. In response to this potential adverse effect POL has proposed to retain a suitably qualified marine mammal expert to train the construction contractors to identify and record marine mammals that may frequent the construction area. Works will be halted if marine mammals are sighted within a specified proximity to the works (particularly the groynes protruding into the harbour). Marine mammal sighting forms have been developed for that purpose.
- [029] That approach is also embedded in the conditions recommended by the ORC s42A author and I understand that it satisfied the concerns of DOC and the ORC technical advisors. I received no expert evidence contesting the approach and so I find it to be appropriate
- [030] With respect to lizards, the applicant has agreed to prepare a 'Lizard Management Plan' (LMP) by a suitably qualified and experienced herpetologist. The (LMP) will encompass the DCC Te Rauone Recreation Reserve that includes the project footprint. It is to be provided to DCC, ORC and DOC prior to work commencing. Recommended conditions for the DCC land use consent specify the required contents of the LMP including the creation of new habitat areas to compensate for habitat lost as a result of the proposal and the relocation of lizards to that habitat.
- [031] I note the LMP was submitted to DOC in October 2020 to support an accompanying application for a Wildlife Act permit (under the Wildlife Act 1953) to undertake works over the Te Rauone Recreation Reserve, but I nevertheless consider that the LMP should be subject to DCC certification.
- [032] Finally, I note that the applicant has agreed to prepare an "Environmental Management Plan" (EMP) that deals with the above ecological matters (amongst others). A draft EMP (updated version dated 11 December 2020) was provided to me and I found it to be comprehensive and appropriate. Conditions recommended by the ORC s42A author set out the contents of the EMP and it is to be submitted to ORC for 'acceptance'. I find that it (and other management plans as appropriate) should instead be submitted for 'certification' to one or both of ORC and DCC.

4.2 Ongoing beach access

- [033] The DCC s42A author noted that continued access to the beach would be required for the ongoing top-up and redistribution of sand and to repair any rock work. He queried how ongoing access to the beach would be provided for trucks and machinery for that purpose.²⁶
- [034] In response Ms Hart advised:²⁷

While the reserve area remains in its present state, it is expected that maintenance access would be via either the existing reserve track or subject to landowner approval via private property to the northern end of the renourished beach (northern embayment). Access to the southern two groynes and embayment would be via the beach berm above Mean High Water Springs. The 5m wide access at the landward end of the central groyne provides for maintenance vehicle access from the northern embayment to the southern embayment.

- [035] I find that to be satisfactory.

²⁵ EIC Leigh Tait, paragraph 24.

²⁶ DCC s42A Report, paragraph [45].

²⁷ EIC Hart, paragraph 66.

4.3 Stockpiling of rock

- [036] The DCC s42A author noted that the proposal includes a site establishment/storage area on the neighbouring site at 957 Harington Point Road, but assumed that little or no stockpiling of rock would occur there.²⁸ In response POL representatives advised that around 50m³ to 100m³ of rock would be stored at 957 Harington Point Road to enable groyne construction. I see no particular issue with that.
- [037] On a related matter submitter Steven Clearwater considered that locally sourced rock should be used in the groynes. In response the DCC s42A author suggested that the supply of rock was primarily a commercial decision for POL to make but agreed the type of rock used would be important in terms of amenity effects.²⁹ The s42A author noted that DCC's Landscape Architect considered the proposed volcanic rock (such as that from the Logan Point quarry) was suitable for use at Te Rauone Beach. I received no expert evidence to the contrary and so accept that advice.
- [038] Having said that, at the hearing the applicant agreed that the final source of rock would be a commercial decision and Mr Buxton confirmed that the recommended DCC consent conditions did not "lock in" the use of a particular quarry. In Reply, the applicant noted that although recommended DCC condition 41 (now condition 25) referred to "the haul route identified in the revised resource consent application", that condition also provided for an alternative route to be approved by Dunedin City Council Transport should an alternative quarry be selected. I find that adequately addresses the concerns of Steven Clearwater.

4.4 Microplastics

- [039] The DCC s42A author queried whether any microplastics would be released from the geotextile cloth used within the groynes and possibly under gravels used for temporary access across the reserve and beach, noting that to primarily be a concern for release into the harbour rather than to land.³⁰
- [040] In response Ms Hart noted that matter was outside her area of expertise as it related to water and sediment quality and ecology. However, she advised that geotextile cloth is a widely-used material that is recommended for use in coastal engineering structures in industry guidance as it provides a separation and filtration function.³¹ In light of the wide spread use of geotextile cloth, and in the absence of evidence to the contrary, I am not persuaded that the possible release of microplastics from geotextile cloth is a potential effect that weighs against a grant of consent.

4.5 Tsunami

- [041] The DCC s42A author queried whether, notwithstanding the fact that the groynes will be of a low profile once the Te Rauone Beach beach renourishment works were completed, there would be any potential adverse effect on neighbouring properties (particularly those to the north of the site) during a tsunami event.
- [042] In response Ms Hart considered that a tsunami event might flow over and / or generate eddies around the seaward ends of the groynes. That would be expected to generate localised scour at the groynes and possibly displacement of groyne rock units, requiring maintenance. Reflection of a tsunami from the groynes onto neighbouring properties would not be expected given the porosity of the groynes and their relatively low crest level.³²
- [043] I find that satisfactorily addresses the concern expressed by the DCC s42A author.

²⁸ DCC s42A Report, paragraph [46] based Section 4.5 Construction in Appendix B of the application.

²⁹ DCC s42A Report, paragraph [61].

³⁰ DCC s42A Report, paragraph [49].

³¹ EIC Hart, paragraph 68.

³² EIC Hart, paragraph 69.

4.6 Other submitter issues

- [044] Submitters Desmond Smith, Christian Bininda, Olly Ohlson, Neil Harraway, Michelle Taiaroa-McDonald³³ Tim Vial³⁴ and spoke in support of the proposal and expanded on what they saw as its benefits, particularly in terms of addressing erosion and improving recreational amenity and wildlife habitat.
- [045] Submitter Elizabeth Kirkwood expressed a number of concerns regarding the proposed development of the adjoining DCC Te Rauone Beach Reserve. I advised her that was outside the scope of my considerations.³⁵ Ms Kirkwood was also concerned about windblown sand from the proposed beach nourishment works. In response the applicant noted that most of the sand would be deposited from barges with only a small amount being trucked in (trucked in sand being the main potential source of windblown sand). In light of that, and noting that the reserve already contains areas of exposed (unvegetated) sand I see no need to impose further conditions in relation to windblown sand.
- [046] Mr Buxton helpfully advised that traffic issues of concern to Ms Kirkwood (in so far as they related to the construction phase of the proposal) would be addressed by the required Traffic Management Plan. He also noted that the proposed access to the Reserve to be used for construction purposes met the District Plan sight line requirements.
- [047] Neil Harraway (Monarch Wildlife Cruises) expressed concern about potential sand accumulation in the channel leading from Wellers Rock Jetty to the main shipping channel. The ORC s42A author considered there were many contributing factors to that issue and it would be inappropriate to address it through these applications. The applicant was of the same view, noting that in any event it could not dredge that channel without obtaining a further specific consent for that purpose.
- [048] Steven Clearwater spoke to the intended source of rock and I have already addressed that in section 4.3 of this Decision. He was additionally concerned about the absence of recreational boating facilities proposed (for example a boat ramp, a marina, or a small pier attached to a groyne), but I observed that such facilities were not part of the applications and I had no jurisdiction to require them (and certainly no evidence upon which to come to a conclusion regarding their necessity or effects) and he accepted that was the case.

4.7 National environment standards and other regulations

- [049] I have already addressed the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011. The DCC s42A author noted that the land at 935 Harington Point Road is a reserve, and the requirements of the Reserves Act will also need to be complied with, including any relevant management plans. He considered that because the reserve is shown as “Local Purpose (Coastal Protection) Reserve” on the land titles, the POL proposal met that purpose.³⁶ I accept his advice on that matter.
- [050] No other relevant national environmental standards or regulations were brought to my attention and I am not aware of any.

4.8 National policy statements

- [051] The New Zealand Coastal Policy Statement 2010 (NZCPS) is relevant. The ORC s42A author undertook a thorough assessment of the provisions of the NZCPS, paying particular attention to policies that had been raised in the submission from the Department of Conservation.³⁷ She concluded that the POL proposal was generally consistent with the NZCPS. I adopt her assessment and having done so I am satisfied that having regard to the NZCPS objectives and policies does not weigh against a grant of consent.

³³ Representing herself and Te Rūnanga ō Ōtākou.

³⁴ Mr Vial is a Senior Planner at Aukaha.

³⁵ Mr Buxton provided her with a contact name at DCC Parks and Reserves.

³⁶ DCC s42A Report, paragraph [75].

³⁷ ORC s42A report, section 7.3.1, pages 9 to 13.

[052] No other relevant national policy statements were brought to my attention and I am not aware of any.

4.9 Regional Policy Statement

[053] The Otago Regional Policy Statement is in a state of flux. I understand there is the Regional Policy Statement for Otago 1998: partially operative as of 14 January 2019 (with revoked provisions) and the Partially Operative Otago Regional Policy Statement 2019. The ORC s42A author undertook a thorough assessment of the provisions of the RPS.³⁸ She concluded that in overall terms the POL proposal was consistent with the RPS. I adopt her assessment and having done so I am satisfied that having regard to the RPS objectives and policies does not weigh against a grant of consent.

4.10 Regional Plan: Coast

[054] The relevant operative plan is the Otago Regional Plan: Coast (RCP). The ORC s42A author also undertook a thorough assessment of the provisions of the RCP.³⁹ She concluded that in overall terms the POL proposal was consistent with the RCP. I adopt her assessment and having done so I am satisfied that having regard to the RCP objectives and policies does not weigh against a grant of consent.

4.11 Dunedin City District Plan

[055] The DCC s42A author advised that he had taken the objectives and policies of the Proposed 2GP into account in assessing the application. He noted that some of the objectives and policies were subject to appeal and therefore the objectives and policies of the 2006 District Plan were also relevant in some cases.⁴⁰

[056] The DCC s42A author undertook a comprehensive assessment of the relevant objectives and policies of both plans.⁴¹ His conclusion was that having regard to the relevant objectives and policies individually, and also considering them in an overall way, the POL application was consistent with the District Plan provisions. I adopt his assessment and having done so I am satisfied that having regard to the Proposed 2GP and the 2006 District Plan objectives and policies does not weigh against a grant of consent.

4.12 Iwi and hapū management plans

[057] The ORC s42A author identified the Kai Tahu Ki Otago Natural Resource Management Plan 2005 (NRMP) as being relevant, particularly Chapters 5.8 Coastal Environment and 8 Otago Harbour Catchment of that document. At the hearing I asked the Te Rūnanga ō Ōtākou representatives if they considered that the NRMP had been adequately taken into account in terms of the POL application. They replied that it had.

[058] Te Rūnanga ō Ōtākou submitted in support of the proposal.⁴² They noted that erosion at Te Rauone Beach had been of concern to the Rūnanga since at least the 1950's. Te Rūnanga ō Ōtākou considered that potential construction related adverse effects, including on the intertidal area and the movements of trucks, were a "necessary sacrifice" for what they hoped would be a long-term solution.

4.13 Section 104(1)(c) other matters

[059] The ORC s42A author noted that the Heritage New Zealand Act makes it unlawful for any person to modify or destroy, or cause to be modified or destroyed, the whole or any part of an archaeological site without the prior authority of Heritage New Zealand. There is one historic groyne that could be affected by the proposed works. The author advised that conditions of consent that she recommended required that the historic groyne be located and that an archaeological authority be obtained prior to the first exercise of the consents. I am satisfied with that approach.

³⁸ ORC s42A report, section 7.3.2, pages 13 to 18.

³⁹ ORC s42A report, section 7.3.3, pages 19 to 22.

⁴⁰ DCC s42A Report, paragraph [65].

⁴¹ DCC s42A Report, pages 12 to 19.

⁴² The Rūnanga submission was signed by Michelle Taiaroa-McDonald who also lodged a personal submission in support.

[060] I also note that the recommended conditions include a process for dealing with previously unknown archaeological discoveries. That is routine for earthworks activities and I find it to be appropriate here.

[061] No further 'other matters' were brought to my attention.

4.14 Section 105(1) matters

[062] Section 105(1) of the RMA states that where an application is for a discharge permit to do something that would otherwise contravene Section 15 or Section 15B of the Act I must have regard to certain matters. As noted by the ORC s42A author, the discharge in this case will comprise sediment generated during construction and maintenance works.⁴³ While the receiving environment (Otago Harbour and in particular the adjacent nearshore sea grass beds) could be considered sensitive, the supporting technical reports have adequately demonstrated that potential adverse effects from the discharge can be managed effectively and there are no practically feasible alternative methods of discharge or alternative receiving environments.

[063] In particular I note the 'adaptive management' regime to be employed by POL with regard to potential adverse effects on the seagrass beds that I outlined earlier in this Decision.

4.15 Section 107(1) matters

[064] Section 107(1) of the RMA states that a discharge permit shall not be granted if, after reasonable mixing, the contaminant or water discharged is likely to give rise to certain listed effects. The ORC s42A author considered that the listed effects would be unlikely to arise, provided her recommended conditions of consent were imposed and adhered to.⁴⁴ She nevertheless recommended a condition for RM19.441.01 that parroted s107(1)(c), (d), (e) and (g) of the Act. I do not consider that to be necessary because even if such discharges do arise, they will either be temporary or associated with necessary maintenance work and they can therefore be allowed under ss107(2)(b) and (c) of the RMA.

5 Part 2 matters

[065] The ORC s42A author considered that the lower order statutory instruments appropriately dealt with Part 2 matters such that no further assessment of Part 2 matters was required.⁴⁵ I agree that recourse to Part 2 matters would not add anything to the assessments that I have cross-referred to and adopted in preceding sections of this Decision. However, I note that the DCC s42A author considered that sections 6(a), 6(d), 6(e), 6(h), 7(a), 7(b), 7(c), 7(d) and 7(f) were relevant in terms of the POL proposal. He considered that, based on his assessment of the lower order statutory instruments, granting consent would promote the sustainable management of Dunedin's natural and physical resources.⁴⁶ I also agree with that.

6 Consent Duration

[066] The ORC s42A author recommended consent durations of 20 years for RM19.441.01 and 3 years for RM19.441.02. The applicant accepted that recommendation. In accordance with s123(b) of the RMA the duration of the DCC land use consent is unlimited.

7 Consent Conditions

[067] I was provided with recommended consent conditions by both s42A authors which built on the applicant's proposed conditions. A slightly revised suite of recommended ORC conditions was circulated on 11 December 2020.

[068] POL accepted the recommended conditions (while seeking to avoid overlap between the ORC and DCC conditions) but were opposed to the ORC s42A author's initially recommended condition imposing an

⁴³ ORC s42A Report, section 9.

⁴⁴ ORC s42A Report, section 10.

⁴⁵ ORC s42A Report, section 8.

⁴⁶ DCC s42A Report, paragraph [77].

obligation to remove the groynes upon expiry of the coastal permit RM19.441.01 (unless a replacement consent was obtained), the permit was surrendered or cancelled; or the groynes became derelict or abandoned.⁴⁷ I acknowledge that I am unable to impose a condition if the implementation of that condition would require a further consent to be obtained in the future.⁴⁸ The same situation arises in regard to recommended condition 26 of the DCC land use consent (titled Structure Removal). In that regard Counsel for POL submitted that under Rule 8.5.3.2 of the RP:C the demolition or removal of any structure or part of a structure that is fixed in, on, under, or over the foreshore or seabed is a discretionary activity.⁴⁹

- [069] In her 11 December 2020 document titled “Agreed Updates to Consent Conditions and Draft Environmental Management Plan” the ORC s42A author recommended omitting the condition referred to above as “it requires action to be taken after the consent has expired/been surrendered/cancelled”. She noted that nor did the condition sit well as an advice note. At the hearing Ms Lennox advised that as a result of further discussions with POL, she now recommended that no advice note be entered on the consent regarding the above matter. I am satisfied with that approach. Should the consents for the works not be replaced when they expire then the works will become unauthorised and appropriate enforcement action can be taken at that time. Having said that, at the hearing POL CEO Kevin Winders confirmed that POL intended to “look after” the groynes and beach in the long term and that had always been the case.
- [070] Ms Lennox raised the issue of possible mitigation works being required as a result of the beach profile and bathymetric surveys that will be undertaken by the consent holder. In response I have imposed a specific review condition (clause (b)) in what is now condition 31 of RM19.441.01.
- [071] In her 11 December document the ORC s42A author advised that Te Rūnanga o Ōtākou sought an amendment to Condition 8 of RM19.441.01 and Condition 7 of RM19.441.02 to the effect that a copy of the finalised Environmental Management Plan would be provided to them. I find that to be a reasonable request and I have amended Condition 8 of RM19.441.01 accordingly. At the hearing POL advised they had no issue with that.
- [072] Other than that, I consider the recommended conditions to be generally appropriate in principle. However, I find it is important to avoid overlap between the conditions on the ORC coastal permits and the conditions on the DCC land use consents. Unnecessary overlaps in conditions can lead to regulatory and enforcement uncertainty. I note Lezel Botha shared my concerns in that regard.⁵⁰ I have therefore amended the conditions recommended to me by the DCC s42A author by simply cross-referring to relevant management plans whose contents are detailed in ORC coastal permit RM19.441.01. Mr Buxton advised he was happy with that general approach when I put that to him at the hearing.
- [073] I have also omitted a number of the conditions recommended for consent RM19.441.02 where they mirrored conditions in consent RM19.441.01. I have instead simply cross-referred to consent RM19.441.02 in the respective RM19.441.01 condition. I have also amended several of the conditions recommended to me by both s42A authors to improve their clarity and certainty.
- [074] The ORC coastal permit conditions are contained in Appendix 1 to this Decision and the DCC land use conditions are contained in Appendix 2.
- [075] In light of the fact that I have amended some of the recommended conditions, it is conceivable that they may now contain errors. Accordingly, should the applicant, ORC or DCC identify any minor mistakes or defects in the attached conditions, then I am prepared to issue an amended schedule of conditions under s133A of the RMA correcting any such matters. Consequently, any minor mistakes or defects in the amended conditions should be brought to my attention prior to the end of the 20-working day period specified in section 133A of the RMA.

⁴⁷ EIC Gerard Winders, paragraph 9; EIC Lezel Botha, paragraph 89.

⁴⁸ The reason being that there can be no presumption on my part that such a consent would be sought or granted.

⁴⁹ Legal submissions, paragraph 10(c).

⁵⁰ EIC Botha, paragraph 90.

8 Determination

[076] My determinations on the POL application are set out below.

8.1 ORC coastal permits

[077] I grant Coastal Permits RM19.441.01 and RM19.441.02 sought by Port Otago Limited.

[078] My reasons are detailed in the body of this Decision, but in summary they include:

- (a) The re-establishment of a beach shape and profile consistent with the natural conditions of Te Rauone Beach before it became the subject of significant erosion will significantly enhance local amenity values;
- (b) Potential adverse effects of the proposal are either minor or can be suitably avoided, remedied or mitigated by the imposition of appropriate conditions of consent (including comprehensive monitoring and remediation of adverse effects on seagrass beds should they arise); and
- (c) The proposal is generally consistent with the relevant statutory instruments and any inconsistencies are minor and do not weigh against a grant of consent.

8.2 DCC land use consent

[079] I grant the land use consent DCC LUC-2019-658 sought by Port Otago Limited.

[080] My reasons are detailed in the body of this Decision, but in summary they include:

- (a) The re-establishment of a beach shape and profile consistent with the natural conditions of Te Rauone Beach before it became the subject of significant erosion will significantly enhance local amenity values;
- (b) Potential adverse effects of the proposal are either minor or can be suitably avoided, remedied or mitigated by the imposition of appropriate conditions of consent; and
- (c) The proposal is generally consistent with the relevant statutory instruments and any inconsistencies are minor and do not weigh against a grant of consent.

Signed by the commissioner:



Rob van Voorthuysen
Dated: 17 December 2020

Our Reference: A1415827

COASTAL PERMIT

Pursuant to Section 104B of the Resource Management Act 1991, the Otago Regional Council grants to:

Name: Port Otago Limited
Address: 15 Beach Street, Port Chalmers, Dunedin

To occupy of the common marine and coastal area with three rock groyne structures, a boardwalk and appurtenant structures; to disturb the foreshore and seabed while undertaking groyne construction and on-going beach renourishment works; to deposit sand onto the foreshore and seabed while undertaking on-going beach renourishment works; and to discharge water and sand into water while undertaking on-going beach renourishment works for the purpose of restoring Te Rauone Beach

For a term expiring 18 December 2040

Location: Te Rauone Beach, approximately 400 metres north of the intersection of Harrington Point Road and Pakihau Road, Dunedin

Legal description: Common Marine and Coastal Area, Lot 1 DP 6468, Lot 2 DP 375006, Lot 2 DP 18598

Map reference of centre point: NZTM2000 1423242E 4926381N

Conditions Specific

1. The activity authorised by this consent must be carried out in accordance with the plans and all information submitted with the application, detailed below, and all referenced by the Consent Authority as application number RM19.441:
 - a) Resource Consent Application prepared by GHD dated April 2020 including appendices;
 - b) Response to request for further information dated 3 April 2020; and
 - c) *"Managing and mitigating impacts to seagrass beds – Te Rauone erosion remediation"*, prepared by NIWA, dated October 2020.

If there are any inconsistencies between the above information and the conditions of this consent, the conditions of this consent will prevail.

2. The activity authorised by this consent must be exercised in conjunction with Coastal Permit RM19.441.02.
3. This consent and consent RM19.441.02 must not be exercised until an Archaeological Authority is in place from Heritage New Zealand Pouhere Taonga.

4. This consent and consent RM19.441.02 must not be exercised until a Department of Conservation Wildlife Authority is in place for the management of lizards.
5. The Consent Holder must notify the Consent Authority and the Otago Harbourmaster in writing of the commencement date of the initial groyne construction and beach renourishment stage, and any subsequent beach renourishment works, no less than 10 working days prior to the commencement of these works.
6. a) The Consent Holder must notify the Consent Authority in writing of the completion of the initial groyne construction and beach renourishment stage, and any subsequent beach renourishment works, and provide photographs of the area/s where work has been undertaken, no less than 10 working days following the completion of works.
b) Photographs must be in JPEG form.

Environmental Management Plan

7. a) The Consent Holder must ensure that all staff (including all sub-contractors) involved in, or supervising, works onsite have attended an Environmental Site Induction before they begin working on the site.
b) The Consent Holder must maintain a register of all those who have attended an Environmental Site Induction and make this register available to the Consent Authority upon request.
c) The Consent Holder must ensure that all personnel working on the site have access at all times to the contents of this consent and consent RM19.441.02 and the Environmental Management Plan.
8. a) The consent holder must provide the Consent Authority with a finalised Environmental Management Plan for review and certification at least 15 working days prior to the exercise of this resource consent. The Consent Authority's review and certification is for the purpose of checking compliance with the conditions of this consent and consent RM19.441.02.
b) The finalised Environmental Management Plan must be prepared with guidance from a suitably qualified and experienced person.
c) The objectives of the Environmental Management Plan must be to incorporate industry best practice, guide environmental management for the duration of the consented activities, and to establish measures to avoid, remedy or mitigate any adverse environmental effects associated with the consented activities, including (but not limited to) adverse effects of on marine wildlife, lizards and seagrass beds.
d) The Environmental Management Plan must be based on the draft Environmental Management Plan dated 11 December 2020 and include, but not be limited to:
 - i) A list of key personnel and points of contact during the project;
 - ii) A description of how the Consent Authority, Dunedin City Council (DCC), the Department of Conservation (DOC) Te Rūnanga o Ōtākou and the Te Rauone Beach Coast Care Committee (TRBCCC) will be kept informed and involved during the project and how complaints will be managed;
 - iii) A copy of a Construction Management Plan, which must include a description of the staging for the project identifying the likely duration of each stage, plus a description of the construction methodology;

- iv) A monitoring plan that describes the monitoring programme (including frequency and specific type of monitoring) of the condition of seagrass beds, marine wildlife, lizards, and public access potentially affected by the project, and noise;
 - v) A description of what actions will be taken to adaptively manage any adverse effects of the works authorised by this consent (including those in relation to seagrass beds, marine wildlife, lizards, public access, and noise) to satisfy consent conditions;
 - vi) Any additional matters set out in conditions of resource consent RM19.441.02.
- e) A copy of the finalised Environmental Management Plan must be provided to Te Rūnanga o Ōtākou.
- f) This consent and consent RM19.441.02 must be exercised in accordance with the Environmental Management Plan at all times.

Maintenance and Operation Plan

9. a) A Maintenance and Operation Plan must be prepared based on the *Outline Maintenance and Operation Plan* provided within the BECA Detailed Design Report dated 12 March 2020. This Maintenance and Operation Plan must be submitted to the Consent Authority within 2 months following the completion of the initial beach renourishment stage. The Maintenance and Operation Plan must include the following:
- i) Details of beach profile and bathymetric surveys to be undertaken, which must be at the frequency set out in Condition 10. This must include the method of survey to enable assessment of changes in vertical beach and nearshore levels;
 - ii) Details of the survey area for beach and nearshore surveys, which must extend 150m north and south of the project site. The survey area for the nearshore surveys must extend 50m seaward of the seaward end of the groynes;
 - iii) An outline of beach nourishment maintenance and actions that will be undertaken after significant storm events (as defined in Condition 10(a)), and an outline of the maintenance and actions methodologies;
 - iv) Details of inspections of seawalls and groynes, navigation markers and any health and safety signs to be undertaken, which must be at the frequency set out in Condition 10;
 - v) An outline of seawalls and groyne maintenance and actions that will be undertaken after significant storm events, and an outline of the maintenance and actions methodologies;
 - vi) Mechanisms for gathering community feedback in regard to groyne and beach conditions and reporting that feedback to the Consent Authority in line with the beach survey frequency outlined in Condition 10 below.
- b) This consent and consent RM19.441.02 must be exercised in accordance with the Maintenance and Operation Plan at all times.
10. Post construction monitoring must be included in the Maintenance and Operation Plan and must be undertaken at no less than the following frequencies:
- a) Post-significant storm event (events with 10% or less AEP) inspections of the groynes and renourishment throughout the duration of this consent;
 - b) Quarterly beach and nearshore beach profile surveys for the first year following completion of the initial construction stage;
 - c) Annual beach and nearshore beach profile surveys 2 and 3 years following completion of the initial construction stage. Any subsequent surveys must be

carried out as detailed in a report prepared by a suitably qualified and experienced person. This report must assess and provide recommendations for monitoring frequency going forward, and be provided to the Consent Authority and Te Rūnanga o Ōtākou within 6 months following the 3-year beach and nearshore survey;

- d) A bathymetric survey within one month following completion of the initial construction stage, and then at six months and twelve months after completion of the initial construction stage. Any subsequent bathymetric surveys must be carried out as detailed in a report prepared by a suitably qualified and experienced person. This report must assess and provide recommendations for monitoring frequency going forward, and be provided to the Consent Authority and Te Rūnanga o Ōtākou within 6 months following the 12-month bathymetric survey;
 - e) Annual inspections of the rock groynes, navigation markers and any health and safety signs for the first three years following completion of the initial construction stage. Any subsequent inspections must be carried out as detailed in a report prepared by a suitably qualified and experienced person. This report must assess and provide recommendations for monitoring frequency going forward, and be provided to the Consent Authority and Te Rūnanga o Ōtākou within 6 months following the 3-year inspection;
 - f) Annual surveys of bathymetry at Wellers Rock jetty for the first three years following completion of the initial construction stage. Any subsequent surveys must be carried out as detailed in a report prepared by a suitably qualified and experienced person. This report must assess and provide recommendations for monitoring frequency going forward, and be provided to the Consent Authority and Te Rūnanga o Ōtākou within 6 months following the 3-year bathymetric survey.
 - g) Results of each monitoring event must be submitted to the Consent Authority within three months of the monitoring being undertaken. Monitoring results must also be forwarded to Te Rūnanga o Ōtākou, Department of Conservation and TRBCCC.
11. a) The Maintenance and Operation Plan must be updated as required based on the post-construction monitoring for the maintenance requirements, actions and methodologies (including beach sand and rock groyne top ups and beach sand recycling methods).
- b) Following the completion of any update, a copy of the updated Maintenance and Operation Plan must be submitted to the Consent Authority and Te Rūnanga o Ōtākou within 5 working days for their information.

Seagrass Monitoring and Adaptive Management

12. Seagrass baseline and ongoing monitoring must be carried out by a suitably qualified ecologist for Te Rauone and Omate Beaches in accordance with the report entitled *Managing and mitigating impacts to seagrass beds – Te Rauone erosion remediation*, prepared by NIWA, dated October 2020 to monitor and assess the effects of the construction and beach renourishment works on seagrass beds and to indicate when management thresholds are reached, as follows:

- a) Seagrass baseline monitoring must be undertaken prior to the first exercise of this consent or consent RM19.441.02.
 - b) Aerial imaging monitoring of Te Rauone and Omate Beaches must be carried out during construction activities at a minimum of once per month, unless additional monitoring is required as part of the management interventions as outlined in Condition 12c) below.
 - c) Where any of the management thresholds are reached, increased monitoring in accordance with the report entitled *“Managing and mitigating impacts to seagrass beds – Te Rauone erosion remediation”* prepared by NIWA, dated October 2020.
 - d) Post completion of the initial groyne construction and beach renourishment stage, monitoring frequency may be reduced to three monthly for one year. The need for ongoing monitoring beyond this must be re-assessed within the reporting required by Condition 13.
13. A report summarising the results of the seagrass monitoring required by Condition 12 must be prepared by a suitably qualified ecologist(s) and submitted to the Consent Authority and Te Rūnanga o Ōtākou within two weeks of monitoring occurring. The report must analyse each new set of results (in isolation and in the context of previous results), report on how to apply the management interventions described in the report entitled *Managing and mitigating impacts to seagrass beds – Te Rauone erosion remediation*, prepared by NIWA, dated October 2020, report on differences between impact and control sites, discuss any trends between successive surveys and review overall effects. The report must also review the suitability of the 10%, 30% and 50% management thresholds for the adaptive management process and advise on any adjustments for future monitoring to ensure that adverse effects are appropriately managed.
14. Where any of the 10%, 30% and 50% management thresholds are reached, management interventions must commence in accordance with the report entitled *Managing and mitigating impacts to seagrass beds – Te Rauone erosion remediation*, prepared by NIWA, dated October 2020.
15. Groyne construction and/or beach replenishment activities must not re-start until the seagrass beds have recovered to a suitable level as detailed in the report entitled *Managing and mitigating impacts to seagrass beds – Te Rauone erosion remediation*, prepared by NIWA, dated October 2020.

Marine Mammals and Wildlife

16. The consent holder must take all reasonable efforts to minimise harm to marine mammals, seabirds and lizards whilst undertaking construction, monitoring and maintenance activities associated with the exercise of this consent and consent RM19.441.02. This includes, but is not limited to the following measures:
- a) No works are to be undertaken in the Coastal Marine Area during mid-December to early February each year to avoid the sea lion breeding season.
 - b) Contractors must be trained by a suitably qualified expert on how to identify, record and respond to marine mammals and seabirds that may frequent pre-determined monitoring zones.

- c) In the event that marine mammals are sighted within the pre-determined monitoring zone, the following actions must be taken:
 - i) No vehicles may come within 50m of a sea lion or other marine mammal.
 - ii) Contractors must withdraw to at least 50m away from an approaching sea lion (or to a greater distance if 50m allows human/sea lion interaction).
 - iii) If required, the Department of Conservation must be called for assistance and no attempts may be made to interact with, move or scare any marine mammal or seabird from the project area without guidance from the Department of Conservation.
 - iv) If a sea lion or other marine mammal is spotted in the harbour or on land within the pre-determined monitoring zone, all construction activities must be stopped until the location of the sea lion or marine mammal is ascertained or has been confirmed to have moved away.
- d) If any marine mammals or seabirds are found in a distressed state within the pre-determined monitoring zone, the Department of Conservation must be contacted in the first instance and be asked to assess the marine mammal or seabird and undertake any necessary remedial action. An appropriate wildlife facility may be contacted if the Department of Conservation is unavailable.
- e) Sightings and any management actions undertaken by the Consent Holder must be recorded, including the marine mammal or seabird species, the type of interaction(s) they had with the works (if any) and other relevant details required by the Environmental Management Plan. This record must be submitted to the Consent Authority, the Department of Conservation, Te Rūnanga o Ōtākou and TRBCCC by 1 April each year during the exercise of this consent.

Beach Renourishment

- 17. a) The volume of sand deposited as part of the initial beach renourishment stage must be in accordance with the application titled "Port Otago Ltd, Te Rauone Beach Rock Groynes and Sand Re-nourishment Resource Consent Application, dated April 2020. The sand must be deposited generally as illustrated on drawing number 3331121-CA-103 Rev G prepared by Beca, dated 06.03.20, attached as Appendix 1.
- b) An updated survey prior to construction works commencing must be undertaken to determine the final volume of sand required and that final volumetric figure must be provided to the Consent Authority no less than 5 working days prior to the start of initial beach renourishment stage.
- 18. Sand deposited onto Te Rauone Beach must only be derived from dredging material sourced from the Port Otago Harington Bend claim area as authorised by the Regional Plan: Coast for Otago or from the exercising Resource Consent 2010.193.
- 19. Sand with an average grain size of no less than 0.2mm and with less than 2% fines must be used for beach renourishment.
- 20. Within one month following the completion of the initial beach renourishment stage, a final as-built survey must be completed to determine an estimation of the actual volume of sand imported with this volumetric figure being provided to the Consent Authority.

Groynes

21. The occupation of the Common Marine Area and Coastal Marine Area is restricted to the area occupied by the groynes and their appurtenant components and accessory structures as illustrated on the plans provided with the Resource Consent Application dated April 2020.
22. The groynes and all their appurtenant components and accessory structures must be maintained in a tidy, safe and structurally sound condition at all times.
23. The assigned coastal permit number plaque (RM19.441.01) must be affixed and clearly displayed on the landward side of each groyne.

General

24. Disturbance of the beach surface by vehicle tracks and excavation activities must be minimised as far as is practicable.
25. The general public or any person(s) must not be excluded from the works area or any part of the area to which this consent or consent RM19.441.02 applies, unless such exclusion is necessary for the primary purpose of constructing, maintaining or repairing the structures or beaches, and then only to the extent necessary to enable the construction, maintenance or repair works to be undertaken.
26. Works authorised by this consent and consent RM19.441.02 may only occur between the hours of 7am to 7pm, Monday to Saturday, excluding public holidays.
27. The Consent Holder must maintain a register of any complaints relating to the exercise of this consent and consent RM19.441.02. The register must include, but is not limited to:
 - a) The date, time, location and nature of the complaint;
 - b) The name, phone number, and address of the complainant, unless the complainant elects not to supply this information;
 - c) Action taken by Consent Holder to remedy the situation and any policies or methods put in place to avoid or mitigate the problem occurring again.The complaints register must be made available for inspection by the Consent Authority upon request.
28. The site must be left in a clean and tidy state on completion of the authorised works. Disestablishment, including removal of temporary accesses, site offices, plant and any surplus materials and reinstatement of the contractor's site area must be completed at the end of the works authorised by this consent and consent RM19.441.02. All machinery, fencing, signs, chemicals, rubbish, debris and other materials must be removed upon completion of the works.
29. For the duration of all works authorised by this consent and consent RM19.441.02:
 - a) All machinery must be clean, free of contaminants and in good repair, prior to entering the common marine and coastal area;
 - b) No construction materials may be left in a position where they could be carried away by storms, floods, waves or other natural events;

c) The Consent Holder must take all practicable measures to prevent spills of hazardous substances being discharged into the common marine and coastal area. Such measures may include, but are not be limited to;

- i) All practicable measures must be undertaken to prevent oil and fuel leaks from vehicles and machinery;
- ii) Fuel storage tanks and machinery must be maintained at all times to prevent leakage of oil and other contaminants into the common marine and coastal area;
- iii) No refuelling of machinery or equipment must occur in the common marine and coastal area;
- iv) There must be no storage of fuel within 50 metres of the common marine and coastal area;
- v) A spill kit, that is capable of absorbing the quantity of oil and petroleum products that may leak or be spilt must be kept on-site at all times.

d) The Consent Holder must inform the Consent Authority immediately, and no later than 24 hours after, of a leak or spill that is greater than 50 litres and must provide the following information;

- i) The date, time, location and estimated volume of the spill;
- ii) The cause of the spill;
- iii) The type of contaminant(s) spilled;
- iv) Clean up procedures undertaken;
- v) Details of the steps taken to control and remediate the effects of the spill on the receiving environment;
- vi) As assessment of any potential effects of the spill; and
- vii) Measures to be undertaken to prevent a recurrence.

e) All damage and disturbance to the foreshore or seabed caused by vehicle traffic, or plant and equipment must be remedied as soon as practicable;

f) All machinery, equipment, construction materials, surplus spoil, or cut vegetation must be removed from the common marine and coastal area at the completion of each day's work and/or when the incoming tide dictates that work must cease.

30. In the event that an unidentified archaeological site is located during works authorised by this consent or consent RM19.441.02;

a) Work must cease immediately at that location and within 20 metres around the location.

b) All machinery must be shut down, the area must be secured, and the Heritage New Zealand Pouhere Taonga Regional Archaeologist and the Consent Authority must be notified.

c) If the site is of Maori origin, the Consent Holder must also notify the appropriate iwi groups or kaitiaki representative of the discovery and ensure site access to enable appropriate cultural procedures and tikanga to be undertaken, as long as all statutory requirements under legislation are met (Heritage New Zealand Pouhere Taonga Act 2014, Protected Objects Act 1975).

d) If human remains (koiwi tangata) are uncovered the Consent Holder must advise the Heritage New Zealand Pouhere Taonga Regional Archaeologist, NZ Police, the Consent Authority and the appropriate iwi groups or kaitiaki representative and the above process under (c) will apply. Remains are not to be disturbed or moved until such time as iwi and Heritage New Zealand Pouhere Taonga have responded.

e) Works affecting the archaeological site and any human remains (koiwi tangata) must not resume until Heritage New Zealand Pouhere Taonga gives written approval for work to continue. Further assessment by an archaeologist may be required.

f) Where iwi so request, any information recorded as the result of the find such as a description of location and content, must be provided for their records.

31. The Consent Authority may, in accordance with Sections 128 and 129 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions of this consent during the period of three months either side of the date of granting of this consent each year, or within two months of any enforcement action taken by the Consent Authority in relation to the exercise of this consent, for the purpose of:

- a) Determining whether the conditions of this consent are adequate to deal with any adverse effect on the environment that may arise from the exercise of the consent and is appropriate to deal with at a later stage, or which becomes evident after the date of commencement of the consent;
- b) In particular, imposing additional conditions related to any necessary mitigation works identified as being required as a result of the beach profile and bathymetric surveys undertaken under conditions of this consent;
- b) Ensuring the conditions of this consent are consistent with any National Environmental Standards, relevant regional plans, and/or the Otago Regional Policy Statement;
- c) Reviewing the frequency of monitoring or reporting required under this consent;
- d) Amending the monitoring programme set out in accordance with Conditions 10 and 12.

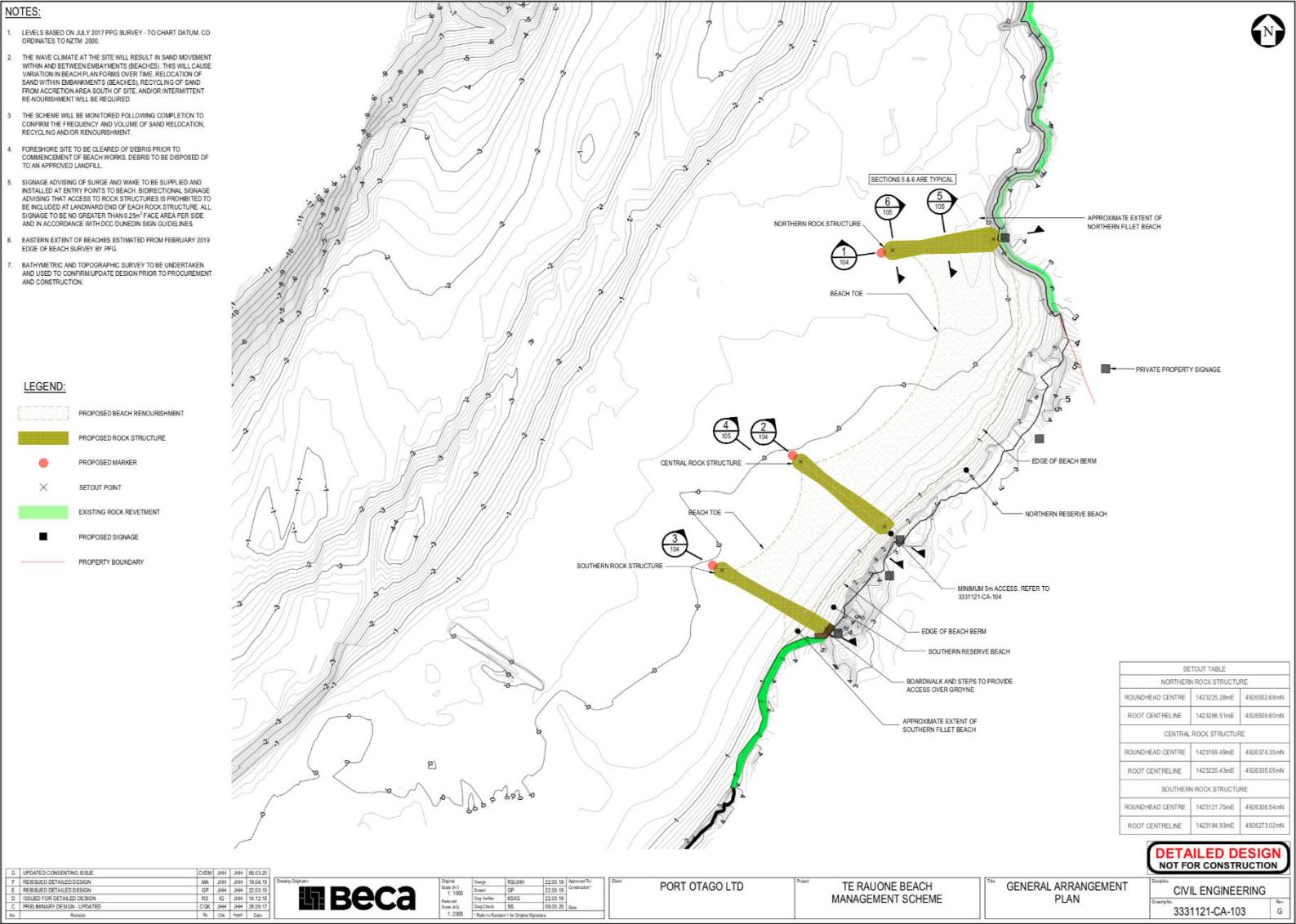
Notes to the Consent Holder

1. *Under the Heritage New Zealand Pouhere Taonga Act 2014 an archaeological site is defined as any place in New Zealand that was associated with human activity that occurred before 1900 and provides or may provide, through investigation by archaeological methods, evidence relating to the history of New Zealand (see Section 6). For pre-contact Maori sites this evidence may be in the form of Taonga (artefacts) such as tiki (adzes) or flake tools as well as bones, shells, charcoal, stones etc. In later sites of European/Chinese origin, artefacts such as bottle glass, crockery etc. may be found, or evidence of old foundations, wells, drains or similar structures. Pre-1900 buildings are also considered archaeological sites. Burials/koiwi tangata may be found from any historic period. Archaeological sites are legally protected under Sections 42(1) & (2) of the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence under Section 87 of the Heritage New Zealand Pouhere Taonga Act 2014 to modify or destroy an archaeological site without an Authority from Heritage New Zealand Pouhere Taonga irrespective of whether the works are permitted, or a consent has been issued under the Resource Management Act 1993 or Building Act 1991.*
2. *Under section 125 of the Resource Management Act 1991, this consent lapses 5 years after the date of commencement of the consent unless:*
 - a) *The consent is given effect to; or*
 - b) *The Consent Authority extends the period after which the consent lapses.*
3. *Section 126 of the Resource Management Act 1991 provides that the Consent Authority may cancel this consent by written notice served on the Consent Holder if*

the consent has been exercised in the past but has not been exercised during the preceding five years.

- 4. If you require a replacement consent upon the expiry date of this consent, any new application should be lodged at least 6 months prior to the expiry date of this consent. Applying at least 6 months before the expiry date may enable you to continue to exercise this consent under section 124 of the Resource Management Act 1991 until a decision is made on the replacement application (and any appeals are determined).*
- 5. The Consent Holder is responsible for obtaining all other necessary consents, permits, and licences, including those under the Building Act 2004, the Biosecurity Act 1993, the Conservation Act 1987, and the Heritage New Zealand Pouhere Taonga Act 2014. This consent does not remove the need to comply with all other applicable Acts (including the Property Law Act 2007 and the Health and Safety at Work Act 2015), regulations, relevant Bylaws, and rules of law. This consent does not constitute building consent approval. Please check whether a building consent is required under the Building Act 2004.*
- 6. Where information is required to be provided to the Consent Authority, this must be provided in writing to compliance@orc.govt.nz. The email heading must reference this consent and the condition/s the information relates to.*

Appendix I



Our Reference: A1415827

COASTAL PERMIT

Pursuant to Section 104B of the Resource Management Act 1991, the Otago Regional Council grants to:

Name: Port Otago Limited

Address: 15 Beach Street, Port Chalmers, Dunedin

To erect three rock groyne structures, a boardwalk and appurtenant structures that are fixed on the foreshore and seabed for the purpose of restoring Te Rauone Beach

For a term expiring 18 December 2023

Location: Te Rauone Beach, approximately 400 metres north of the intersection of Harrington Point Road and Pakihau Road, Dunedin

Legal description: Common Marine and Coastal Area, Lot 1 DP 6468, Lot 2 DP 375006, Lot 2 DP 18598

Map reference of centre point: NZTM2000 1423242E 4926381N

Conditions

Specific

1. The activity authorised by this consent must be carried out in accordance with the plans and all information submitted with the application, detailed below, and all referenced by the Consent Authority as application number RM19.441:
 - a) Resource Consent Application prepared by GHD dated April 2020 including appendices;
 - b) Response to request for further information dated 3 April 2020.

If there are any inconsistencies between the above information and the conditions of this consent, the conditions of this consent will prevail.

2. The activity authorised by this consent must only be exercised in conjunction with Coastal Permit RM19.441.01.
3. All rock placed within the coastal marine and common area must, as far as practicable, be free of foreign material prior to placement.

Review

4. The Consent Authority may, in accordance with Sections 128 and 129 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions of this consent during the period of three months either side of the date of granting of this consent each year, or within two months of any enforcement action

taken by the Consent Authority in relation to the exercise of this consent, for the purpose of:

- a) Determining whether the conditions of this consent are adequate to deal with any adverse effect on the environment that may arise from the exercise of the consent and is appropriate to deal with at a later stage, or which becomes evident after the date of commencement of the consent;
- b) Ensuring the conditions of this consent are consistent with any National Environmental Standards, relevant regional plans, and/or the Otago Regional Policy Statement;
- c) Reviewing the frequency of monitoring or reporting required under this consent.

Notes to the Consent Holder

1. *If you require a replacement consent upon the expiry date of this consent, any new application should be lodged at least 6 months prior to the expiry date of this consent. Applying at least 6 months before the expiry date may enable you to continue to exercise this consent under section 124 of the Resource Management Act 1991 until a decision is made on the replacement application (and any appeals are determined).*
2. *The Consent Holder is responsible for obtaining all other necessary consents, permits, and licences, including those under the Building Act 2004, the Biosecurity Act 1993, the Conservation Act 1987, and the Heritage New Zealand Pouhere Taonga Act 2014. This consent does not remove the need to comply with all other applicable Acts (including the Property Law Act 2007 and the Health and Safety at Work Act 2015), regulations, relevant Bylaws, and rules of law. This consent does not constitute building consent approval. Please check whether a building consent is required under the Building Act 2004.*
3. *Where information is required to be provided to the Consent Authority, this must be provided in writing to compliance@orc.govt.nz. The email heading must reference this consent and the condition/s the information relates to.*

Consent Type: Land Use Consent

Consent Number: LUC-2019-658

Purpose: The construction and maintenance of three rock groynes with a boardwalk over the southernmost groyne, the deposition of sand for the purpose of beach renourishment, and earthworks and vegetation clearance during construction at Te Rauone Beach, Otago Peninsula.

Location of Activity: 935 and 957 Harington Point Road, Otago Peninsula.

Legal Description: Lot 1 Deposited Plan 6468 (Record of Title 99423), Lot 2 Deposited Plan 375006 (Record of Title 307226), Lot 2 Deposited Plan 18598 (Record of Title 40236) and Part Otakou Blk A2 Lot 47 Blk (Record of Title 518540)

Lapse Date: 18 December 2025, unless the consent has been given effect to before this date.

CONDITIONS:

General

1. The activity authorised by this consent must be undertaken in general accordance with the approved plans attached to this certificate as Appendix One and those cross-referred to in Condition 2, and the information provided with the resource consent application received by the Council on 9 December 2019, and updated in further information received on 3 April 2020, except where modified by the following conditions.
2. The activity authorised by this consent must be exercised in conjunction with Otago Regional Council Coastal Permit RM19.441.01 and Coastal Permit RM19.441.02.
3. The activity authorised by this consent must be undertaken in accordance with the following management plans referenced in Otago Regional Council Coastal Permit RM19.441.01 insofar as those management plans address matters within the jurisdiction of the Dunedin City Council:
 - a) Environmental Management Plan
 - b) Construction Management Plan
 - c) Maintenance and Operation Plan
4. The Consent Holder must provide the Dunedin City Council with finalised versions of the management plans listed in Condition 3 for certification at least 15 working days prior to the exercise of this resource consent. The Dunedin City Council's certification is for the purpose of checking consistency with the conditions of this consent.
5. This consent must not be exercised until an Archaeological Authority is in place from Heritage New Zealand Pouhere Taonga.
6. This consent must not be exercised until a Department of Conservation Wildlife Authority is in place for the management of lizards.
7. The Consent Holder must notify the Dunedin City Council in writing of the commencement date of the initial groyne construction and beach renourishment stage, and any subsequent beach renourishment works, no less than 10 working days prior to the commencement of these works.

8. a) The Consent Holder must notify the Dunedin City Council in writing of the completion of the initial groyne construction and beach renourishment stage, and any subsequent beach renourishment works, and provide photographs of the area/s where work has been undertaken, no less than 10 working days following the completion of works.
- b) Photographs must be in JPEG form.

Beach Renourishment

9. a) The volume of sand deposited as part of the initial beach renourishment stage must be in accordance with the application titled "Port Otago Ltd, Te Rauone Beach Rock Groynes and Sand Renourishment Resource Consent Application, dated April 2020. This must be deposited generally as illustrated on drawing number 3331121-CA-103 Rev G prepared by Beca, dated 06.03.20, attached as Appendix 1.
- b) An updated survey prior to construction works must be undertaken to determine the final amount of sand required and that volume provided to the Dunedin City Council no less than 5 working days prior to the start of initial beach renourishment stage.
10. Sand deposited onto Te Rauone Beach must only be derived from dredging material sourced from the Port Otago Harington Bend claim area as authorised by the Regional Plan: Coast for Otago or by Resource Consent 2010.193.
11. Sand with an average grain size of no less than 0.2mm and with less than 2% fines must be used for beach renourishment.
12. Within one month following the completion of the initial beach renourishment stage, a final as-built survey must be completed to determine an estimation of the actual volume of sand imported with this being provided to the Dunedin City Council.

Works Management

13. Disturbance of the beach surface by vehicle tracks and excavation activities must be limited as far as possible.
14. The general public or any person(s) must not be excluded from the area or any part of the area to which this consent applies, unless necessary for the primary purpose of constructing, maintaining and repairing the structures and beaches, and only to the extent necessary to enable the construction, maintenance and repair works to be undertaken.
15. All work must be undertaken between the hours of 7am to 7pm, Monday to Saturday, excluding public holidays.
16. The Consent Holder must maintain a record of any complaints relating to the exercise of this consent. The register must include, but not be limited to:
 - a) The date, time, location and nature of the complaint;
 - b) The name, phone number, and address of the complainant, unless the complainant elects not to supply this information;
 - c) Action taken by Consent Holder to remedy the situation and any policies or methods put in place to avoid or mitigate the problem occurring again.

A record of the complaints must be made available for inspection by the Dunedin City Council upon request.

17. The site must be left in a clean and tidy state on completion of the authorised works. Disestablishment, including removal of temporary accesses, site offices, plant and any surplus materials and reinstatement of the contractor's site area must be completed at the end of the works authorised by this consent. All machinery, fencing, signs, chemicals, rubbish, debris and other materials must be removed upon completion of the works.

Archaeological sites

18. In the event that an unidentified archaeological site is located above the line of mean high water springs during works, the following will apply;
- a) Work must cease immediately at that place and within 20 metres around the site.
 - b) All machinery must be shut down, the area must be secured, and the Heritage New Zealand Pouhere Taonga Regional Archaeologist and the Dunedin City Council must be notified.
 - c) If the site is of Maori origin, the Consent Holder must also notify the appropriate iwi groups or kaitiaki representative of the discovery and ensure site access to enable appropriate cultural procedures and tikanga to be undertaken, as long as all statutory requirements under legislation are met (Heritage New Zealand Pouhere Taonga Act 2014, Protected Objects Act 1975).
 - d) If human remains (koiwi tangata) are uncovered the Consent Holder must advise the Heritage New Zealand Pouhere Taonga Regional Archaeologist, NZ Police, the Dunedin City Council and the appropriate iwi groups or kaitiaki representative and the above process under (c) will apply. Remains are not to be disturbed or moved until such time as iwi and Heritage New Zealand Pouhere Taonga have responded.
 - e) Works affecting the archaeological site and any human remains (koiwi tangata) must not resume until Heritage New Zealand Pouhere Taonga gives written approval for work to continue. Further assessment by an archaeologist may be required.
 - f) Where iwi so request, any information recorded as the result of the find such as a description of location and content, must be provided for their records.

Works on DCC Reserve land

19. The Consent Holder must submit final plans and details of proposed works to be undertaken on the Dunedin City Council Reserve land (935 Harington Point Road) to the Dunedin City Council Parks and Recreation Services Department (DCC PARS) for review before any work is carried out on the reserve land. As part of this review, the following must apply:
- a) Any damage to the reserve as a result of access formation and/or occupation for construction work must be remediated by the Consent Holder.
 - b) Prior approval must be obtained from the DCC PARS Urban Forest Officer for any proposed pruning or removal of trees on the reserve land by the Consent Holder
 - c) Prior approval must be obtained from a DCC PARS Parks Officer for any vegetation clearance in addition to what is shown in drawing number 3331121-CA-103 Rev G prepared by Beca, dated 06.03.20
20. Signage must be erected by the Consent Holder at all reserve entrances advising on work, likely hazards and proposed duration of works.

21. The Consent Holder must adopt all practicable measures to mitigate dust and windblown sand and to control and contain sediment-laden run-off.
22. All activities must be planned and managed in accordance with the provisions contained in New Zealand Standard NZS 6803:1999 "Acoustics-Construction Noise".
23. If, with the agreement of the DCC PARS Parks Officer, any fill material used for the construction site or access that is to remain on the sites, it is to be recorded on a plan showing extent and depth, and provided to the Dunedin City Council with a month of the completion of the construction phase.

Traffic Management

24. The Consent Holder must prepare and submit a comprehensive Traffic Management Plan (TMP) to Dunedin City Council Transport for certification, to ensure that the safety and efficiency of the transport network throughout the duration of the project is maintained to an appropriate standard. The TMP must include, but not be limited to, the following:
 - a) Management of traffic along Harington Point Road adjoining the construction areas;
 - b) Access and parking for contractors; and
 - c) Specification of any additional measures necessary during periods of activities which involve high levels of truck movements and construction vehicles, including portions of Harington Point Road where the carriage is narrow (including communication and any necessary physical management steps).
25. Heavy vehicles associated with the transportation of material as proposed must use the haul route identified in the revised resource consent application (Traffic Impact Assessment, dated 19 November 2019), unless otherwise approved by Dunedin City Council Transport.
26. Any damage to any part of the footpath or road formation as a result of the project works must be reinstated at the Consent Holder's cost.
27. The Consent Holder must prepare and submit detailed engineering plans for the construction vehicle accesses to Dunedin City Council Transport for approval. The plans must include, but shall not be limited to the following matters:
 - a) Suitable construction/engineering details for the vehicle crossings, between the Harington Point Road carriageway and the property boundary
 - b) Suitable construction/engineering details for the vehicle accesses within the site, such that the potential effects relating to migration of loose material from the site onto the footpath/road carriageway are avoided.
28. The construction vehicle accesses must be constructed in accordance with the approved engineering plans required by Condition 27.

Lizard Management Plan

29. A Lizard Management Plan (LMP) must be developed for the Dunedin City Council Te Rauone Recreation Reserve that includes the project footprint, in collaboration with DCC PARS, and submitted to the Dunedin City Council for certification, and to the Department of Conservation (DOC) and Otago Regional Council –

Compliance for their information, 20 working days prior to construction commencing. The Dunedin City Council's certification is for the purpose of checking consistency with the conditions of this consent.

30. The Lizard Management Plan must be developed by a suitably qualified and experienced herpetologist.
31. All work undertaken under this consent must be in accordance with the LMP.
32. The LMP must outline the actions required to minimise adverse effects on lizards and include, as a minimum, the following actions:
 - a) A description of the lizard values of the works footprint and adjacent reserve and the actual and potential effects of the construction activities on these values;
 - b) The Wildlife Permit from the Department of Conservation under the Wildlife Act 1953 required in Condition 6;
 - c) Creation of specific lizard habitat areas at least commensurate to the area of habitat for lizards likely to occur within the works footprint.
 - d) Identification of a 'no go' zones
 - e) Capture and relocation of lizards within the works footprint;
 - f) Protection of lizards in relation to construction activities and predators;
 - g) Monitoring to determine baseline relative abundance of lizards pre-works and survival and population establishment/growth during the works and post-works; and
 - h) Reporting requirements including, salvage report, monitoring reporting and requirements to report lizard sightings.
33. Prior to the commencement of works, any 'no-go' zones identified in the Lizard Management Plan must be conveyed to the contractor and marked on the ground for avoidance. No work shall commence until no-go zones are marked. In addition to any no-go zones requiring marking, laydown areas and construction vehicle tracks/parking must only use the tracks and laydown areas as shown on the Beca plan referenced 3331121-SK-002 to further minimise the potential impact on indigenous lizards.

Review of Conditions

34. The Dunedin City Council may, in accordance with Sections 128 and 129 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions of this consent during the period of three months either side of the date of granting of this consent each year, or within two months of any enforcement action taken by the Dunedin City Council in relation to the exercise of this consent, for the purpose of:
 - a) Determining whether the conditions of this consent are adequate to deal with any adverse effect on the environment that may arise from the exercise of the consent and is appropriate to deal with at a later stage, or which becomes evident after the date of commencement of the consent;
 - b) Ensuring the conditions of this consent are consistent with any National Environmental Standards, relevant regional plans, and/or the Otago Regional Policy Statement;
 - c) Reviewing the frequency of monitoring or reporting required under this consent;
 - d) Amending any monitoring programmes set out in Conditions of this Consent.

Advice Notes:

Reserves Act

1. A license to occupy may be required from DCC PARS prior to works beginning.

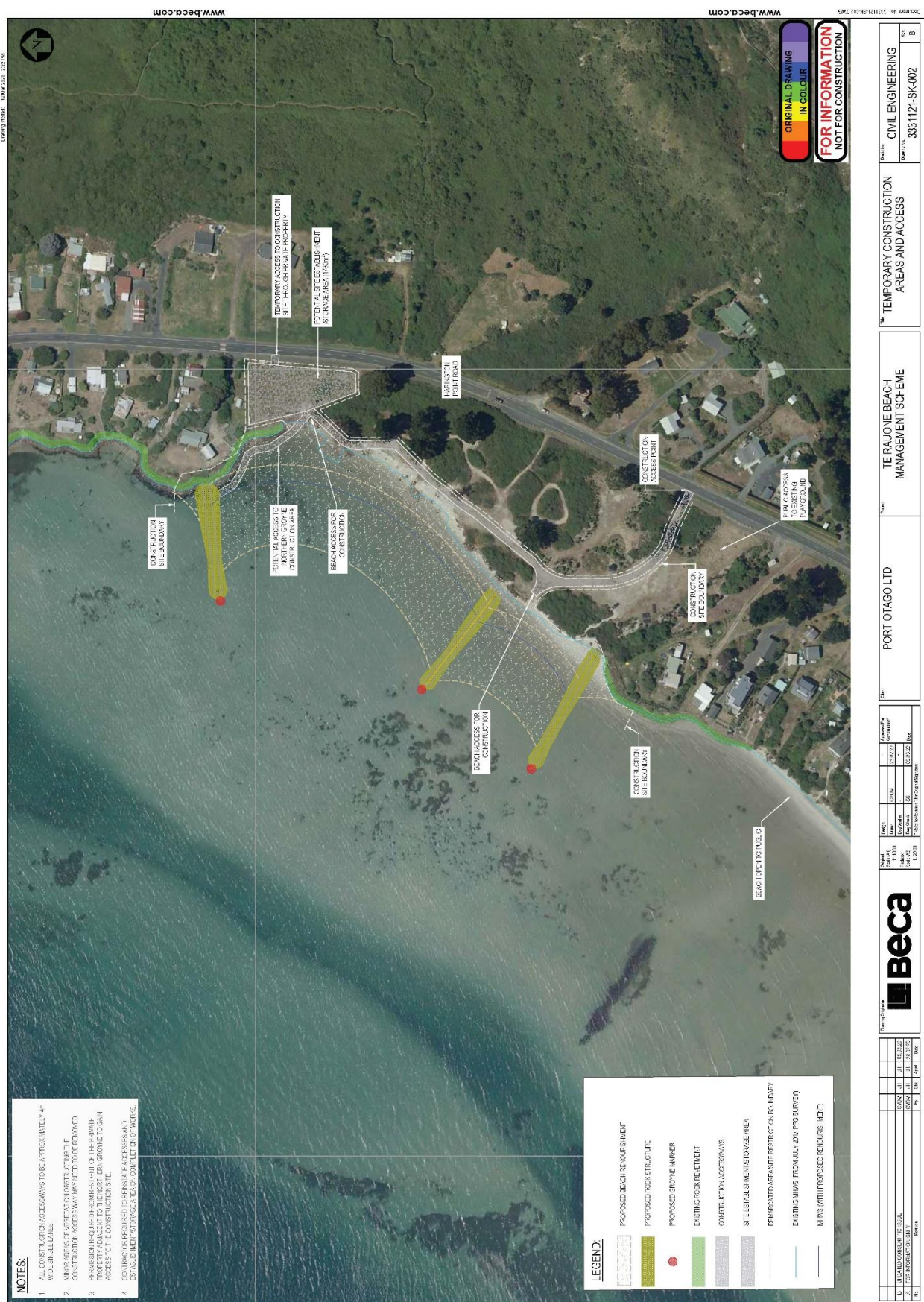
Transportation

2. *It is advised that the vehicle crossing, between the road carriageway and the property boundary, is within legal road and will therefore require a separate Vehicle Entrance Approval from DCC Transport to ensure that the vehicle crossing is constructed/upgraded in accordance with the Dunedin City Council Vehicle Entrance Specification (note: this approval is not included as part of the resource consent process).*
3. *It is advised that due to the roadworks occurring as part of the Dunedin City Council Peninsula Connection Project, that road users (including heavy vehicles associated with this project) are expected to experience an average of 10-minute delays whilst travelling in each direction on Portobello Road. This is dependent on the timing of the proposed activity.*

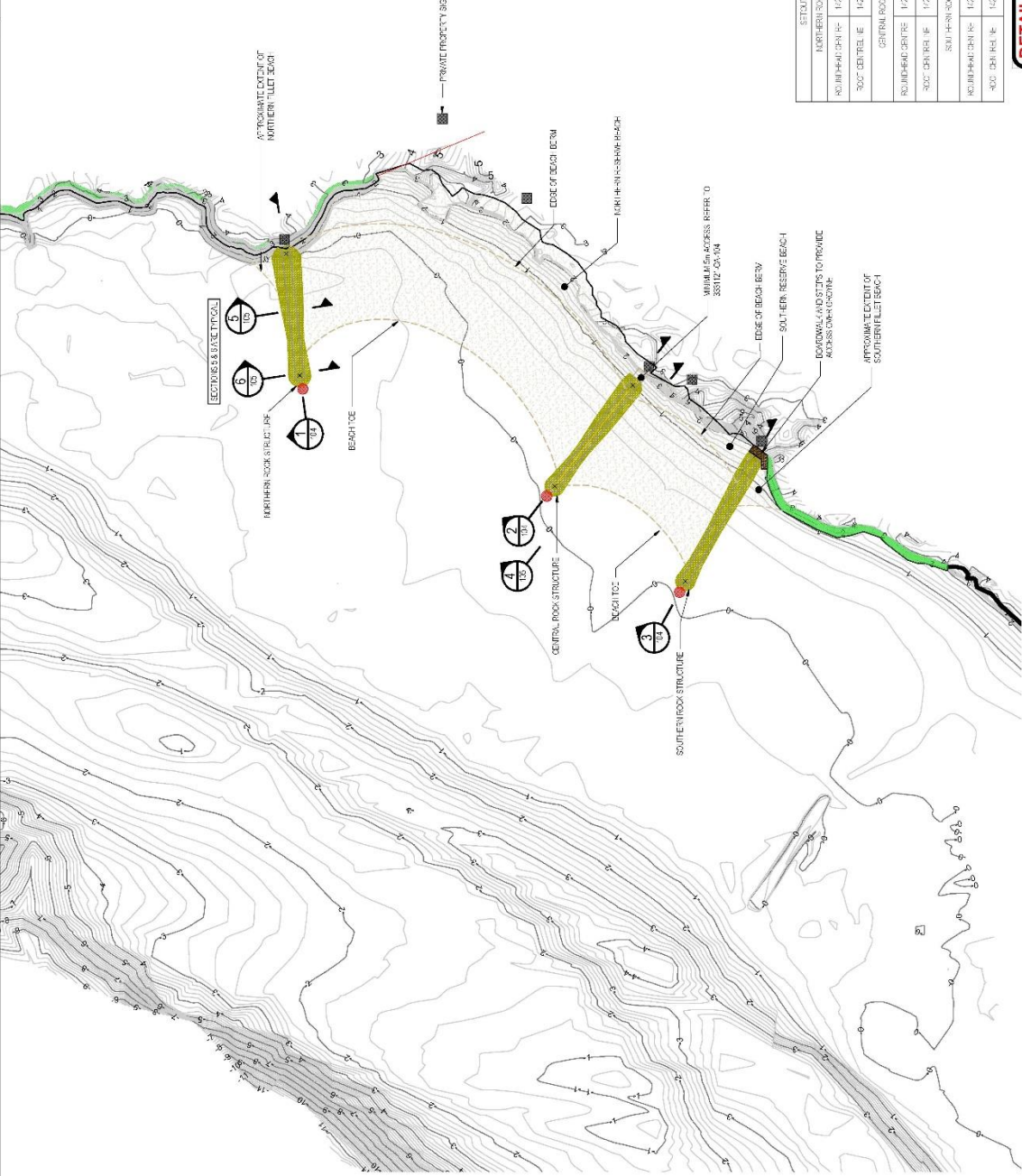
General

4. *In addition to the conditions of a resource consent, the Resource Management Act 1991 establishes through sections 16 and 17 a duty for all persons to avoid unreasonable noise, and to avoid, remedy or mitigate any adverse effect created from an activity they undertake.*
5. *Resource consents are not personal property. The ability to exercise this consent is not restricted to the party who applied and/or paid for the consent application.*
6. *It is the responsibility of any party exercising this consent to comply with any conditions imposed on the resource consent prior to and during (as applicable) exercising the resource consent. Failure to comply with the conditions may result in prosecution, the penalties for which are outlined in section 339 of the Resource Management Act 1991.*
7. *The lapse period specified above may be extended on application to the Council pursuant to section 125 of the Resource Management Act 1991.*
8. *The Consent Holder is responsible for obtaining all other necessary consents, permits, and licences, including those under the Building Act 2004, the Biosecurity Act 1993, the Conservation Act 1987, and the Heritage New Zealand Pouhere Taonga Act 2014. This consent does not remove the need to comply with all other applicable Acts (including the Property Law Act 2007 and the Health and Safety at Work Act 2015), regulations, relevant Bylaws, and rules of law. This consent does not constitute building consent approval. Please contact the Council's Building Services Department, about the building consent requirements for the work.*
9. *Where information is required to be provided to DCC as the Dunedin City Council, this must be provided in writing to rcmonitoring@dcc.govt.nz. The email heading must reference this consent and the condition/s the information relates to.*

Appendix One: Approved Plans for LUC-2019-658 (scanned images, not to scale)



- NOTES:**
1. LEVELS BASED ON LAYERS/PROJECTIONS TO CHART datum, CO-ORDINATES TO NZM 2000
 2. "E" VALUES ARE NOT TO BE USED FOR DESIGN PURPOSES BUT ARE PROVIDED FOR INFORMATION ONLY. THESE VALUES ARE BASED ON CURRENT DATA ON HAND AND ARE SUBJECT TO CHANGE. THE DESIGNER SHALL BE RESPONSIBLE FOR OBTAINING THE LATEST DATA AND FOR OBTAINING THE LATEST DATA FOR THE DESIGN.
 3. "T" VALUES WILL BE MAINTAINED TO ALLOW CONSTRUCTION TO CONFIRM THE FREQUENCY AND VOLUME OF SAND RELOCATION, PROVIDING AN HOUR PER HOUR.
 4. DESIGNER SHALL BE RESPONSIBLE FOR OBTAINING THE LATEST DATA FOR THE DESIGN.
 5. DESIGNER SHALL BE RESPONSIBLE FOR OBTAINING THE LATEST DATA FOR THE DESIGN.
 6. DESIGNER SHALL BE RESPONSIBLE FOR OBTAINING THE LATEST DATA FOR THE DESIGN.
 7. DESIGNER SHALL BE RESPONSIBLE FOR OBTAINING THE LATEST DATA FOR THE DESIGN.



- LEGEND:**
- PROPOSED BEACH REINFORCEMENT
 - PROPOSED ROCK STRUCTURE
 - PROPOSED WALL
 - SETOUT POINT
 - EXISTING ROCK STRUCTURE
 - PROPOSED GRADE
 - PROPERTY BOUNDARY

SETOUT TABLE	
NORTHERN ROCK STRUCTURE	405000.0mN
300° CENTRE	1:2000.0mE
CENTRAL ROCK STRUCTURE	
300° CENTRE	1:2000.0mE
SOUTHERN ROCK STRUCTURE	
300° CENTRE	1:2000.0mE
SOUTHERN ROCK STRUCTURE	
300° CENTRE	1:2000.0mE

DETAILED DESIGN
NOT FOR CONSTRUCTION

GENERAL ARRANGEMENT PLAN	
Project Name	TE RAUONE BEACH MANAGEMENT SCHEME
Client	PORT OTAGO LTD
Scale	1:2000
Drawn By	1:2000
Checked By	1:2000
Approved By	1:2000
Date	1:2000
Drawn By	1:2000
Checked By	1:2000
Approved By	1:2000
Date	1:2000



Project Name	3331121-CA-103
Client	CIVIL ENGINEERING
Scale	1:2000

Project Name	3331121-CA-103
Client	CIVIL ENGINEERING
Scale	1:2000

Project Name	3331121-CA-103
Client	CIVIL ENGINEERING
Scale	1:2000

Project Name	3331121-CA-103
Client	CIVIL ENGINEERING
Scale	1:2000

Project Name	3331121-CA-103
Client	CIVIL ENGINEERING
Scale	1:2000

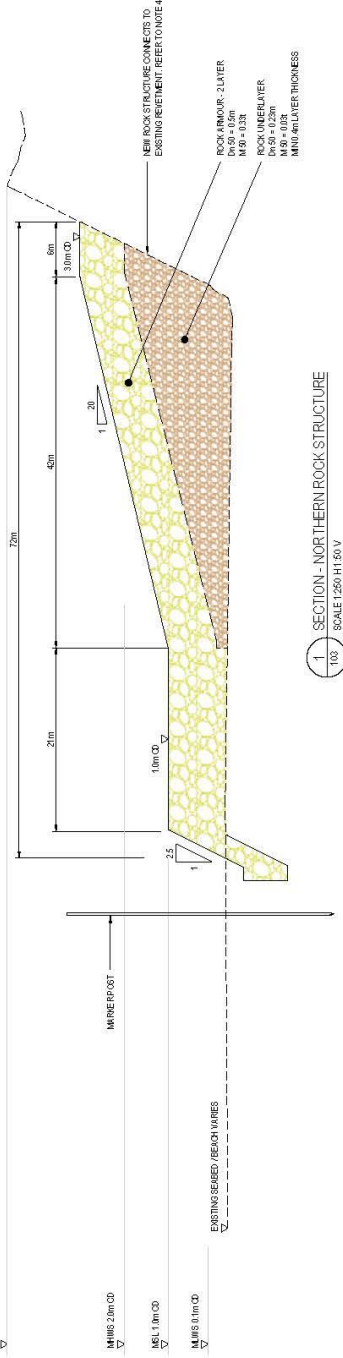
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Client	CIVIL ENGINEERING
Scale	1:2000

Project Name	3331121-CA-103
Client	CIVIL ENGINEERING
Scale	1:2000

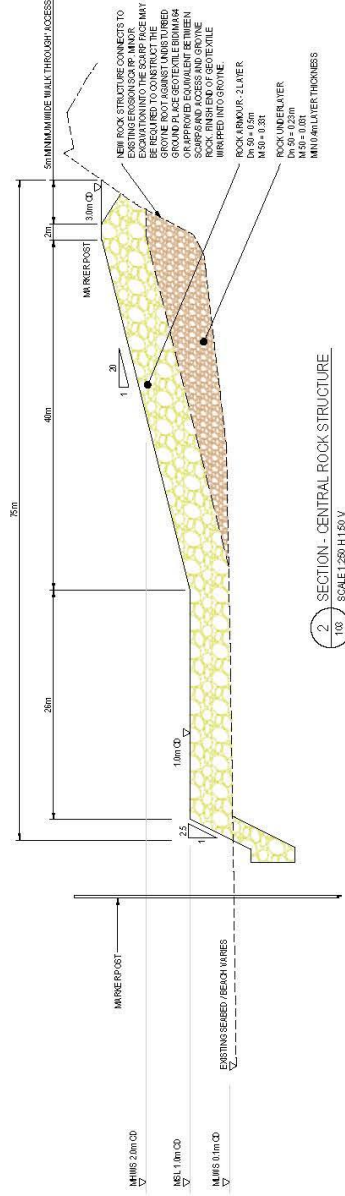
Project Name	3331121-CA-103
Client	CIVIL ENGINEERING
Scale	1:2000

NOTES:

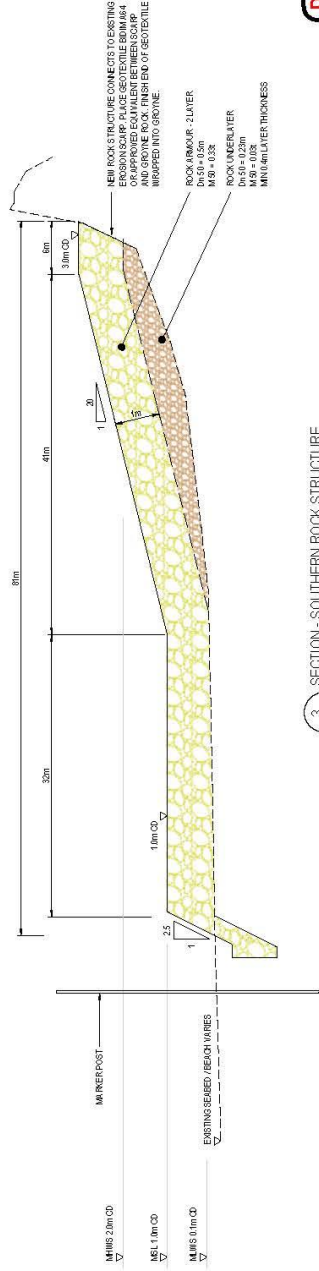
1. SECTIONS BASED ON JULY 2017 PRO SUBMIT.
2. MARKER POSTS TO BE AS PER STANDARD PORT OT160 SHOWN.
3. BATHYMETRY AND TOPOGRAPHY SURVEY TO BE UNDERTAKEN TO DETERMINE EXISTING AND PROPOSED CHANNELS AND BEDROCK PROFILES FOR PRELIMINARY DESIGN AND CONSTRUCTION.
4. CONNECTIONS BETWEEN NEW ROCK STRUCTURE AND EXISTING CONCRETE INCLUDES RECONSTRUCTION OF EXISTING ROCK STRUCTURE. CONNECTION WORKS MAY INCLUDE:
 - a. REMOVAL OF EXISTING LAJES, ROCK FRAMING AND UPPER RETENTION FOR REUSE.
 - b. RESHAPING OF RETENTION LAJES TO 1:2.5 SLOPE WITH ADDITION OF NEW CORE ROCK ALLOWING FOR AN INCREASED TRANSITION INTO EXISTING RETENTION AT NORTH AND SOUTH SIDES.
 - c. PLACEMENT OF CORE ROCK AGAINST RESHAPED EXISTING RETENTION FOR ADOPTING NEW ROCK STRUCTURE.
 - d. PLACEMENT OF NEW ANCHORS AND REUSE LAJES ROCK ON NEW ROCK STRUCTURE AND RESHAPED RETENTION TO GIVE INTERLOCKED FINISH WITH 1:2 SLOPE ON NORTH AND SOUTH SIDES.
 - e. EXISTING RETENTION AT NORTH AND SOUTH SIDES.

VEGETATION LEVEL 4.7m CD
57

1 SECTION - NORTHERN ROCK STRUCTURE
103 SCALE 1:250 H:1:50 V



2 SECTION - CENTRAL ROCK STRUCTURE
100 SCALE 1:250 H 150 V



3 SECTION - SOUTHERN ROCK STRUCTURE
SCALE 1:250 H 150 V

DETAILED DESIGN
NOT FOR CONSTRUCTION

Activity	Activity Code	Activity Description	Activity Duration (Days)	Activity Start Date	Activity End Date
F	UPOVED CONSENTING ISSUE	UPOVED CONSENTING ISSUE	10	10/01/15	10/11/15
E	MESSAGED DETAILED DESIGN	MESSAGED DETAILED DESIGN	10	10/01/15	10/11/15
D	MESSAGED DETAILED DESIGN	MESSAGED DETAILED DESIGN	10	10/01/15	10/11/15
C	ISSUED FOR DETAILED DESIGN	ISSUED FOR DETAILED DESIGN	10	10/01/15	10/11/15
B	PRELIMINARY DESIGN	PRELIMINARY DESIGN	10	10/01/15	10/11/15

[illegible]

Client	PORT OTAGO LTD	Project	TE RAUIONE BEACH MANAGEMENT SCHEME	File	ROCK STRUCTURES LONGITUDINAL SECTIONS	Module	CIVIL ENGINEERING
				File No.	3331121-CA-104	Revision	1