

Regional Council Consent Conditions

Deposition of Material

1. A total volume of approximately 26,500m³ – 34,000m³ of sand shall be deposited generally as illustrated on drawing number 3331121-CA-103 Rev G prepared by Beca, dated 06.03.20 as part of the initial beach renourishment stage. An updated survey prior to construction works shall be undertaken to determine the final amount of sand required and that volume provided to the Otago Regional Council – Compliance Monitoring prior to the start of construction works.
2. Material deposited onto Te Rauone Beach shall 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.
3. Sand with an average grain size of no less than 0.2mm and with less than 2% fines shall be used for beach renourishment.
4. At the completion on of the re-nourishment works, a final as-built survey will be completed to determine an estimation of the actual volume of sand imported with this being provided to Otago Regional Council – Compliance.
5. That all rock placed within the coastal marine area is as far as practicable, free of foreign material prior to placement.

Construction Environmental Management Plan (CEMP)

6. A CEMP shall be prepared by the principal project contractor prior to construction to meet the requirements of the conditions of this consent and shall include details of groyne construction methodology. The final CEMP must be submitted to the consent authority one month prior to construction.

Maintenance and Operation

7. The works shall be in accordance with the *Outline Maintenance and Operation Plan* provided within the BECA Detailed Design Report dated 12 March 2020. A living Maintenance and Operation Plan (MOP) shall be prepared based on the *Outline Maintenance and Operation Plan* and shall be submitted to Otago Regional Council – Compliance two (2) months following the completion of works. The MOP shall include the following:
 - a) Beach and bathymetric surveys, which shall be at the frequency set out in Condition 8, This shall also include the method of survey to enable assessment of changes in vertical level;
 - b) The survey area shall extend 150m north and south of the project site and 50m seaward of the seaward end of the groynes.
 - c) Outline beach nourishment maintenance and actions post significant storm events, and outline methodology associated with these.
 - d) Inspection of rock structures, markers and signs, which shall be at the frequency set out in Condition 8;
 - e) Outline rock structure maintenance and actions post significant storm events, and outline methodology associated with these;
 - f) Mechanisms for gathering community feedback in regard to groyne and beach conditions with reporting of this feedback provided in line with the beach survey frequency outlined in condition 8 below.

8. That post construction monitoring shall be included in the MOP and shall be undertaken at no less than the following frequencies:
- a) Post-storm inspections of the groynes and renourishment following significant storm events.
 - b) Quarterly beach surveys for the first year after construction;
 - c) Annual beach surveys to be undertaken at 2 and 3 years post construction. The need and frequency of any further beach surveys shall be as set out in a report provided to Council by the consent holder to assess and provide recommendations for monitoring frequency going forward.
 - d) Bathymetric survey within one month following completion of the works; and then at six months and twelve months after completion of works. The need and frequency of any further bathymetric survey shall be as set out in a report provided to Council by the consent holder to assess and provide recommendations for monitoring frequency going forward.
 - e) Annual inspections of the rock groynes, markers and signs for the first three years post construction. The need and frequency of any further inspections shall be as set out in a report provided to Council by the consent holder to assess and provide recommendations for inspections frequency going forward.
 - f) Monitoring results shall also be forwarded to Te Rūnanga o Ōtākou and TRBCCC.
9. The MOP shall be updated as required based on the post-construction monitoring for the maintenance requirements, actions and methodologies (including top up and recycling methods). Following any update, a copy of the updated MOP shall be submitted to Otago Regional Council – Compliance for information.

Public Access

10. The consent holder shall minimise the area and duration of access restriction to the public and disturbance to the foreshore, to the extent necessary for public safety and good construction practice, while undertaking the renourishment and groyne construction work.
11. The consent holder shall only exclude the public from the area of the project works during authorised construction work or maintenance work.

General Conditions

12. All work shall be undertaken between the hours of 7am to 7pm, Monday to Saturday, excluding public holidays.
13. The site shall 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 shall be completed at the end of construction.
14. The consent holder shall ensure that any machinery, including fuel storage tanks, in the construction area shall be cleaned and maintained at all times to prevent leakage of contaminants, including oil or fuel, into the coastal marine area.

Archaeological Protocol

15. That construction works shall not proceed until an Archaeological Authority is in place from Heritage NZ and all protocol associated with the Authority shall be followed.

Ecological Effects

Environmental Management Plan (EMP)

16. An Environmental Management Plan (EMP) shall be prepared with input from a suitably qualified ecologist prior to construction to meet the requirements of the conditions of this consent and to provide methodology for adaptive management of benthic species and seagrass. The EMP shall also include measures for the management of sea mammals. The final EMP must be submitted to the consent authority one month prior to construction. The EMP shall include:
- a) Baseline data as presented in the Ecological Impact Assessment written by Ryder Environmental and dated April 2020 for marine benthic communities and cockles including:
 - i. A series of marine benthic core samples from within (impact) and adjacent (control) to the scheme footprint to set up a BACI design (before, after, control impact) for the determination of effects.
 - ii. Visual quadrat surveys from within (impact) and adjacent (control) to the scheme footprint to set up a BACI design (before, after, control impact) for the determination of effects.
 - iii. Baseline seagrass survey data from collating available aerial photographs to show seagrass distribution, extent and relative condition (condition measured by assessing percent coverage of seabed by seagrass).
 - b) The following interim timebound benthic species richness and density thresholds for adaptive management for each tidal height within 6 months of works completion:
 - i. Overall percentage occurrence of cockles in benthic samples of the impact site shall remain within 40% of occurrence in control site samples; and
 - ii. Benthic species richness and density (using relative abundance data) of the impact site shall remain within 25 % of species richness and density in the control sites.
 - c) The following interim reductions in seagrass distribution, extent and relative condition thresholds for adaptive management within 6 months of works completion:
 - i. Seagrass distribution, extent and relative condition shall not deviate by greater than 25% of baseline metrics unless such change can be attributable to other effects beyond the scope of the proposed works.

This condition relates to the seagrass beds located immediately south of the scheme footprint only.
 - d) Remediation methods if the pre-set thresholds are met in relation to benthic communities;
 - e) Remediation and rehabilitation methods if pre-set thresholds are met in relation to seagrass beds.
 - f) Methodology for management of sea mammals encountered during project works, including that:
 - i. No vehicles shall drive within 50m of a sea lion, and contractors shall withdraw to at least 50m (or to a greater distance if 50m allows human/sea lion interaction).
 - ii. Eye-contact with sea lions will be avoided by workers, where practicable.
 - iii. The Department of Conservation (DOC) shall be called for assistance and no attempts shall be made to interact/move/scare any sea lion from the project footprint without DOC guidance.

- iv. If a sea lion is spotted in the ocean, all vehicle and vessel movements and placement of rocks and sand shall be stopped until the location of the sea lion is ascertained and/or the sea lion has been confirmed to have moved away.
17. No works are to be undertaken on Te Rauone beach during mid-December to early February each year to avoid sea lion breeding season.

Benthic Monitoring

- 18.
- (a) Benthic monitoring / surveys shall be undertaken post construction, in accordance with the EMP required by condition 16 above, to determine recolonisation rates and be carried out at 6 months post construction.
 - (b) Benthic monitoring / surveys shall only be undertaken for consequent ‘top ups’ that exceed 20% of the original sand nourishment volume.
19. A report summarising the results of the benthic monitoring required by Condition 18 shall be prepared by suitably qualified ecologist(s) and submitted to the Department of Conservation, Te Rūnanga o Ōtākou and Otago Regional Council – Compliance within three months of sampling. The report must analyse the results, report on the interim adaptive management trigger, discuss any trends and review overall ecological effects. The report should recommend if any further benthic monitoring necessary and advise on any necessary adjustments for future monitoring if considered necessary.
20. Where the EMP threshold for adaptive management is triggered, the adaptive management process outlined in Condition 22 shall be commenced.

Sea Grass Monitoring

21. Monitoring of sea grass beds, which occur south of the project footprint, shall be undertaken while the works are being completed to ensure suspended sediment loads do not exceed the adaptive management threshold. Monitoring requirements shall be included within the EMP required by Condition 16 above and shall comprise:
- i) An aerial survey using a drone shall be undertaken every four weeks during works to determine the distribution and extent of the beds, and the relative sediment-loading of them.
 - ii) Aerial surveys shall continue to be undertaken in Spring and Autumn for three years post-works, to ensure the renourishment works including intermittent “top-ups” of sand/sediment to the beach, does not adversely affect the distribution and extent of the sea grass beds.
 - iii) A report summarising the results of the sea grass aerial surveys shall be prepared by suitably qualified ecologist(s) and submitted to the Department of Conservation, Te Rūnanga o Ōtākou and Otago Regional Council – Compliance within three months of survey. The report must analyse each new set of results. The report may also suggest refinements to the interim trigger for the adaptive management process and advise on any necessary adjustments for future monitoring.
 - iv) Where the EMP threshold for adaptive management is triggered, the adaptive management process outlined in Condition 22 shall be commenced.

Adaptive Management

22. If required by conditions 20 and 21(iv), the consent holder shall commence the adaptive management process. This will include, the project appointed suitably qualified ecologist to evaluate monitoring results and agree actions with the consent holder to remedy effects caused by exceedances in benthic and seagrass adaptive management thresholds. These remediation measures shall be undertaken in accordance with the EMP required within Condition 16 above. Details of any adaptive management to be carried out shall be reported to the Department of Conservation, Te Rūnanga o Ōtākou and Otago Regional Council – Compliance prior to implementation.