

# Technical Report



**TO:** Todd Whittaker

**FROM:** Paul Murphy

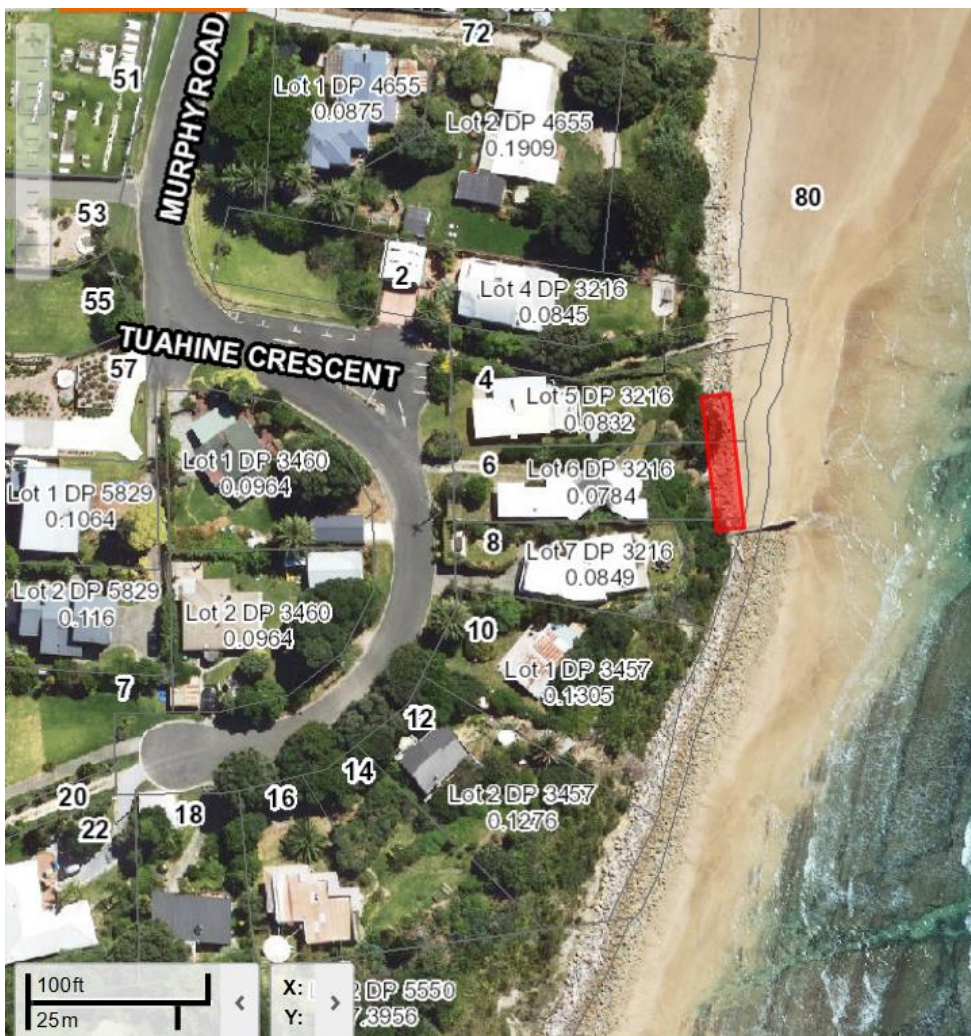
**DATE:** 20 May 2020

**SUBJECT: S CAVE - APPLICATION FOR CONSTRUCTION OF A PRIVATE SEA WALL LU-2019-108876-00 ASSESSMENT OF WAINUI BEACH COASTAL WORKS**

The S Cave and A Reynolds application to undertake coastal erosion protection works at Wainui Beach shall generally be taken as read.

This technical report is limited to providing comments on the proposed removal of the existing rock and rail wall and replacement with a new rock revetment wall near Tuahine Crescent.

Comments relate to avoiding or mitigating potential construction effects on the coastal environment and avoiding the potential for contaminants to enter the coastal environment.



**Figure 1** Tuahine Crescent approximate work area outlined in red.



**Figure 2** Tuahine Crescent work site approximately 400 metres south of Pare Street beach access

1. Rock revetment

Benthic species

Surveys undertaken in the 1990's assessing the impact of existing beach protection structures on benthic and terrestrial macrofauna at Wainui Beach concluded that the available biological evidence indicates that the existing protection structures on southern Wainui Beach are influencing the composition of the macrofauna of the backshore. However overall this effect was concluded to be small since general environmental conditions on Wainui Beach south of the Hamantua Stream are such that the pattern is for there to macrofauna of low species diversity and relatively low abundance.

The proposed rock revetment is proposed to be constructed landward of the coastal marine area over a length of approximately 24 metres and width of approximately 6 metres. The effects on the foreshore from the construction of the rock revetment is likely to be temporary and minor. The ecological effects on benthic species is also likely to be minor.

Birds

The rock revetment is not located within a marine area of significant conservation value in the Proposed Regional Coastal Environment Plan. Potential effects on coastal birds is likely to be less than minor.



### Access

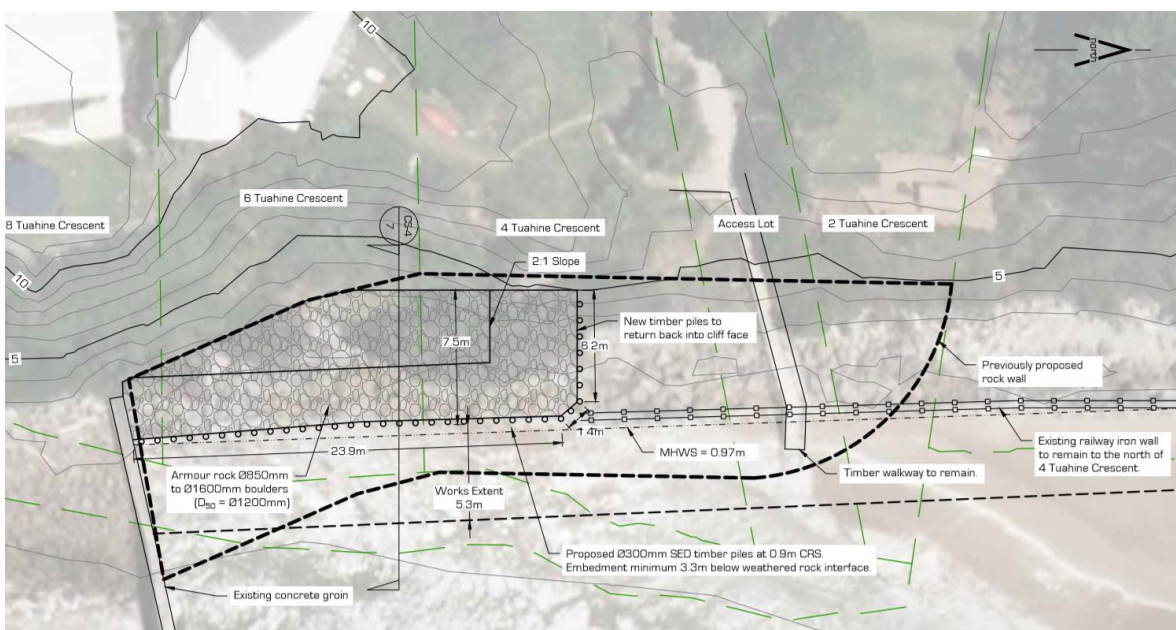
The existing rock and rail iron wall structure reduces beach access at high tides, during large swells and at particular times of the year when there is a reduced volume of sand restricting the width of the beach. Predicted sea level rise is expected to increase the restriction on beach access at this location. The beach is currently accessed via a wooden walkway which is proposed to remain in place during the works.

The proposed design of the rock revetment is aimed to minimise potential long term effects on public access on Wainui beach, improving public safety by removing the existing hazardous and failing rail iron and log wall, whilst generally meeting the objectives and policies relating to access in the New Zealand Coastal Policy Statement 2010.

### Water quality

During the construction works there is the potential for sediment to enter the coastal marine area. The applicant proposes to mitigate potential sediment effects by;

- Working three hours either side of low tide and during favourable weather conditions;
- No imported backfill material will be left unprotected at the end of each working day or when tidal water prevents further work occurring. The fill will be protected by either rock or geotextile fabric;
- No refuelling or machinery maintenance will occur within the coastal marine area or waterbodies or in a position where contaminants could enter a waterbody.
- A hydrocarbon spill kit will be kept on site at all times;
- The specification for imported rock and fill materials used in construction for the rock revetment will ensure these materials are free of organic material or contaminants.



**Figure 3** Plan taken from the application of the proposed wall in relation to the previously proposed rock wall by GDC.



**Figure 4** Tuahine Crescent 26 June 2015



**Figure 5** Tuahine Crescent 26 June 2015

## Recommended consent conditions

### **General Conditions**

1. The design of the structures and construction works shall be undertaken in general in accordance with the following documents and material;
  - The Resource Consent Application and AEE Report prepared by 4sight Consulting dated April 2019 (Ref LU 2019-108876-00),
  - The further Information response dated 21 June 2019,
  - The letter dated 5 September 2019 (provision of a consent term),
  - LDE Drawings 'Seawall Renewal 4-8 Tuahine Crescent' Drw 14608 CO1 Sheet 1 and 2, and 14608 CO2 Sheet 1 and 2 ,
  - [Material from hearing]unless otherwise amended by the following conditions of consent.
2. The consent holder shall pay the Gisborne District Council any administration, inspection or monitoring charges fixed in accordance with S36(1) of the Resource Management Act 1991.
3. Where a conflict arises between any conditions of this consent and the application, the conditions of this consent will prevail.
4. All works and structures relating to this resource consent shall be designed and constructed to conform to the best engineering practices and at all times maintained to a safe and serviceable standard.

### **Term of Consent**

5. The consent shall expire on 31 December 2040.

### **Cultural Protocols Archaeological Site Conditions**

6. In the event of any site, waahi tapu, taonga or koiwi being discovered during the works authorised by this consent, the Consent Holder shall immediately cease work at the affected site and secure the area. The Consent Holder shall contact the Council to obtain contact details of the relevant hapu and /or marae. The consent holder shall then consult with the appropriate tribal entities and Heritage New Zealand Pouhere Taonga, and shall not recommence works in the area of the discovery until the relevant Heritage New Zealand Pouhere Taonga and appropriate tribal entity approvals (including associated affected party approvals) to damage, destroy or modify such sites have been obtained.

### **Final Wall Design and End Effects**

7. At least 1 month prior to the works commencing, the Consent Holder shall submit to the Consents Manager, Gisborne District Council, final design plans for the revetment wall for approval. Council will review the final design to determine whether the design is likely to result in any wall end effects and may request modifications to the design. This review may require specialist external review which will be at the cost of the consent holder.

## Construction Management Plan (CMP)

8. At least 1 month prior to the works commencing, the Consent Holder shall submit to the Consents Manager, Gisborne District Council, for certification, a Construction Management Plan (CMP) prepared by a suitably qualified and experienced person(s). The CMP shall outline the environmental management and monitoring measures to be installed prior to and maintained during construction works and shall address, but not be limited to the following;
- Compliance with all consent conditions, and specifically conditions 11 – 21,
  - Sediment and erosion control measures and water quality management
  - Management and stabilisation of works in relation to tide and weather conditions
  - Machinery and truck refueling and maintenance
  - Contingency plans
  - Stockpile management
  - Waste management and disposal
  - Vehicle and machinery access management within the coastal marine area
  - Public notice information and signage
  - Public health and safety measures
  - Vigilant attention to weather forecasting to prevent commencing work close to the arrival of coastal storms or extreme weather events, and undertaking construction in discrete stages
9. Prior to commencing any works a copy of this consent and the CMP shall be given to all person(s) undertaking activities authorised by this consent.
10. The Consent Holder may amend the CMP provided under condition 8, by submitting the amended plan for approval to the Consents Manager, Gisborne District Council, for certification. Construction activities subject to the amendment shall not commence until the amendment has been certified by the Manager, Gisborne District Council.

## Construction Methodology and Conditions

11. The consent holder shall notify [compliance.admin@gdc.govt.nz](mailto:compliance.admin@gdc.govt.nz) the intention to begin works at least 3 working days prior to the exercise of this consent. Where works are to be undertaken again having been discontinued for more than seven consecutive working days Council shall be re-notified.
12. All noise from construction shall comply with the following criteria for long term construction activities at the boundary of any residential site:

<i>Time period</i>	<i>Average Maximum Noise Level (dBA)</i>		
	<i>L<sub>95</sub></i>	<i>L<sub>10</sub></i>	<i>L<sub>MAX</sub></i>
<i>Monday – Saturday 0600 – 1800 hours</i>	60	75	90
<i>Monday - Saturday at all other times</i>	60	75	90

Sound levels shall be measured in accordance with New Zealand Standard NZS6801:1999 "Acoustics: Measurements of Environmental Sound" and assessed in accordance with NZS6802:1991 "Assessment of Environmental Sound".

13. All vibration from construction shall comply with the following vibration criteria:  
The maximum weighted vibration level (Wb or Wd) arising from construction, when measured at or within the boundary of any site, or the notional boundary of any adjacent dwelling shall not exceed the following limits:

<b>General vibration</b>	<b>Time Ma</b>	<b>Maximum Weighted Vibration Level (Wb or Wd)</b>
	0600- 1800 hours Monday to Saturday	45mm/s <sup>2</sup>
<b>Construction Vibration</b>	<b>Time Ma</b>	<b>Maximum Weighted Vibration Level (Wb or Wd)</b>
	0600-1800 hrs Monday – Saturday	60mm/s <sup>2</sup>
	At all other times	15mm/s <sup>2</sup>

14. All vehicles involved in the exercise of this consent shall be inspected daily prior to entering the coastal marine area for leaks or other sources of contaminants. Evidence of this inspection shall be recorded in a log book and shall be made available to the consenting authority on request.
15. Works shall only occur during low tidal conditions, three hours either side of low tide
16. Works shall not cause erosion of the dune face.
17. No sand shall be removed from Wainui Beach.
18. Sediment may be discharged only in conditions and to a degree that does not visibly alter the turbidity of the sea after reasonable mixing.
19. All waste material shall be removed from the coastal marine area and disposed of appropriately.
20. The consent holder shall arrange a site visit during operations to demonstrate compliance with all consent conditions. The site visit shall be attended by representatives of the Compliance Team, the contractor(s) and consent holder.
21. All maintenance and refuelling activities shall be undertaken outside of the coastal marine area. Refuelling and maintenance to extraction and transport machinery must be carried out off to site to ensure that any contaminants (such as oil, diesel and petrol) used during the exercise of this consent cannot enter any watercourse.

### **Finished Site Works and Planting Plan**



22. At least 1 month prior to the works commencing, the Consent Holder shall submit to the Consents Manager, Gisborne District Council, for certification, a Finished Site Works and Planting Plan which shall;
- (i) Be in general accordance with the 4sight Visual and Landscape Assessment dated April 2019,
  - (ii) Provide details of landscape and stabilisation planting/works to be completed along the dune face and the proposed work areas and the timeframe for when the works shall be completed,
  - (ii) Provide measures to rehabilitate any areas within the CMA which have been affected by the construction works including all access routes to and along the CMA,
  - (ii) Provide details of ongoing maintenance of any landscape and stabilisation planting/works which shall be undertaken during the term of the consent.
23. The Consent Holder shall be responsible for undertaking the approved planting and rehabilitation works within the agreed timeframes and thereafter shall maintain the site and works for the term of the consent.

#### **Recording and Notifications**

24. A daily photographic record of the proposed work sites shall be taken prior to, during the works and at completion showing work progress and control measures. These photos shall be provided regularly to the consent authority throughout the works.

#### **Decommissioning of Works**

25. If no new consent has been granted to retain or modify the proposed rock revetment wall, then at least 6 months prior to the expiry of this consent, the Consent Holder shall submit a plan and methodology for the decommissioning and removal of the revetment wall. This shall include the planting and site works to establish the final profile and vegetation of the dune face. The decommissioning works shall not commence until the plan has been certified by the Consents Manager, Gisborne District Council.
26. The approved decommissioning works shall be completed within 6 months after the expiry of the consent.
27. The conditions associated with the CMP and the construction works as set out in conditions 11 to 21 shall equally apply to any required decommissioning works.



### **Review Condition**

28. The Gisborne District Council may serve notice on the permit holder pursuant to S128 Resource Management Act 1991 of its intention to review the conditions of the consent for the following purposes:

- (i) To review the effectiveness of the conditions of the permit in avoiding or mitigating any adverse effects on the environment from which the consent holders activity and, if considered appropriate by the consent authority, to deal with such effects by way of further or amended conditions;
- (ii) To review the appropriateness of conditions in the light of relevant national standards, regulations and guidelines, and the Council's relevant regional plans;

A review may commence on the first year anniversary of the completion of the works and thereafter on each reoccurring one year anniversary.

Paul Murphy

**Team Leader Environmental Science**