



Proposed reinstatement and additional
armouring of Raumati Beach block wall

Assessment of Environmental Effects

Kapiti Coast District Council

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2/05/2017	5		J Gray & L Coutinho	V Chandra
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1 INTRODUCTION

A concrete block wall (two blocks high) with filter fabric behind it was installed as emergency works between 26 and 28 July 2016 following a large storm event to provide protection of the public sewer that runs parallel to the wall. The work was completed under s330 of the RMA and the need to apply for resource consent was deferred until a longer term solution was found. Recent storm events have liquefied the sand in front of the concrete block wall causing some of the blocks to tilt seaward. Tonkin and Taylor has completed an assessment and recommended actions to repair and extend the serviceability of the block wall. This will involve reinstating the block wall on an incline, armouring its crest and toe, and armouring the crest and toe of the private timber pile retaining wall between 45 Wharemauku Road and 6 Raeburn Lane.

Resource for the longer term solution is to be pursued through the Long Term Plan process so an interim solution is required to increase the serviceability of the existing concrete block wall.

The necessary funds, design and consent(s) required to construct and establish a permanent solution will be sought within the next 7 years.

While it is possible re-instating the block wall and armouring the crest of both the block and timber walls would fall within the scope of 'emergency works' under section 330 of the *Resource Management Act 1991* (RMA), resource consent is required where such an activity is undertaken and the adverse effects of the activity continue. Therefore resource consent applications are being submitted to both KDC and Greater Wellington Regional Council to authorise works to reinstate and stabilise the temporary seawall. A consent duration of 7 years is requested for the temporary seawall.

2 BACKGROUND AND SITE DETAILS

2.1 SITE AND LOCALITY

The site is located approximately 1.5 km east of the Paraparaumu Township. The temporary seawall (block wall) extends approximately 170 m south from the edge of an existing rock revetment that was installed in 2006 to protect the Marine Parade carriageway. The southern extent of the block wall ties into a private timber pile retaining wall that extends a further 60 m to a coastal protection structure made of brush within post and wire fencing that was established by the owners of 5 Raeburn Lane. The brush protection structure protrudes approximately 6 m into the coastal marine area (CMA) from the face of the timber pile retaining wall.



Figure 1 - Location plan

2.2 TENURE

The block wall is located within a strip of land known as 'Old Coach Route' (OCR). The OCR is a privately owned residual parcel of land owned by Charles Mills and his descendants. While the tenure of OCR is currently not clear (as there is no Certificate of Title), the options to ensure control over the assets would probably require the landowner approval, except in the case of Public Works Act acquisition to gain some interest in the land (e.g. an easement).

It is anticipated that legal access to the site will be confirmed well before works commence on a permanent solution for the seawall, but is unlikely prior to completion of the block wall rectification works.

2.3 CURRENT CONDITION OF TEMPORARY BLOCK WALL AND TIMBER PILE RETAINING WALL

The temporary block wall was installed by KCDC as emergency works between 26 and 28 July 2016 and an assessment of the current condition of the block wall and timber pile retaining wall has recently been completed by Tonkin and Taylor. The Tonkin and Taylor findings have been summarised below and their complete memo to KCDC is provided within Appendix B.

2.3.1 BLOCK WALL

Recent storms have resulted in liquefaction and scour of the sand in front of the wall which has caused the blocks to rotate towards the sea along a significant section of the wall. Scour behind the wall has occurred from a combination of (predominantly) overtopping of the wall and also loss of sand through the gaps in the concrete blocks where the filter fabric has subsequently shifted from the interface between the blocks and the sand. Two blocks at the southern end which interface with the private timber wall have toppled over as a result of impact

loading from the high energy waves and scour of the sand dune behind has occurred. These blocks have since been replaced.

2.3.2 PRIVATE TIMBER WALL

The private timber wall, while in reasonable condition, has some weaknesses. The wall was originally intended as a secondary line of defence in a situation where a first line was eroded. The wall has 4.2 m long piles with vertical palings 3 m long. It does not have tie backs or granular drainage back fill, which has allowed internal scour to occur creating voids in behind the wall at 7 Raeburn Lane. The presence of voids allows the wall to 'rock' back and forth, which will gradually cause the structure to fail in a storm event. The timber structure is also likely to be founded too shallowly for a seawall.

Typical images of the condition of the block and timber pile wall are provided below.



Figure 2 Crest of existing block wall



Figure 3 Typical void behind timber wall

2.4 COMMUNITY CONSULTATION

The neighbours adjoining the eastern edge of the block wall have been in discussions with KCDC regarding protection of the subject site from coastal erosion for a number of years. The adjoining neighbours are aware of the works required to reinstate the seawall and are generally supportive of the works.

The subject site is within the rohe of Te Ati Awa. The local Iwi were not notified when the block wall was constructed under emergency works in July 2016. They are aware of the works proposed in this application to protect the wastewater infrastructure. A copy of this application has been provided to Te Ati Awa and the applicant will continue to liaise with Te Ati Awa as appropriate.

3 PROPOSAL

3.1 DESCRIPTION OF WORK

The structure overall will occupy an area of approximately 2,500 m². The toe of the structure will be approximately 5m at its greatest extent in-front of the current concrete block and timber structures. No increase in crest elevation is involved in the proposed works. The total earthworks are estimated to be approximately 2,200 m³.

It is proposed to undertake the following works:

- Tie in the block wall with existing the Marine Parade revetment
- Reinstatement the block wall to the original design, which involves lifting and rotating the blocks to vertical and stepping the top rock back
- Backfill void at top of crest with sand
- Rock armour and filter fabric placed on the crest of the block wall, extending along the adjacent timber walls at 49 Wharemauku Road and 6-7 ~~Raeburn Lane~~; *Raeburn Lane*
- Rock armour and filter fabric placed along the entire toe of the block wall, extending along the toe of the adjacent timber walls at 49 Wharemauku Road and 6-7 ~~Raeburn Lane~~; *Raeburn Lane*.

Plans of the proposed works are attached within Appendix A.

The amount of rock placed at the crest or toe will be finalised prior to construction. The proposed maximum extent of crest protection may extend into private property at some locations along the length of the works (subject to approval from adjoining land owners). The final placement of these will be determined following discussion with property owners prior to works commencing. Budget constraints and the ability to source large enough quantities of rock may also reduce the amount of rock placed both at the toe and/or crest, requiring a staged approach to construction to be undertaken.

A reduction of quantity of toe rock armour protection by reducing the layer thickness would result in a structure requiring more frequent maintenance.

A reduction in the extent of crest rock armour protection would result in a structure more vulnerable to overtopping waves. This can be mitigated by ensuring alternative protection such as erosion control matting and planting is maintained well if the extent of crest rock armour protection is reduced, though it will not be as effective as crest rock armour.

3.2 INTENDED DESIGN LIFE

Tonkin and Taylor have provided a statement regarding the design life of the works (refer section 7 of the memo within Appendix B).

The structure is intended to remain in place for up to 7 years. Rock sizing has been undertaken for storm events with an annual recurrence interval of approximately 20 years.

3.3 ON-GOING MAINTENANCE

Rock armour structures typically require maintenance over their intended design life. This can be due to damage occurred during events exceeding their design parameters, or through gradual damage occurring due to structure settlement or individual rocks rolling out of place.

It is anticipated that the consent will allow for maintenance and repair to be carried out on the structure, including repair and replacement of rock, realigning concrete blocks and repair of timber lagging.

Beach level fluctuation may also expose more of the rock toe. If the beach level degrades to the base of the structure, the rock may need to be bedded in deeper.

3.4 HIGH-LEVEL METHODOLOGY

It is anticipated that works will be completed within a period of approximately two to four weeks, weather and tide dependant. Works will be completed by a contractor engaged by KCDC, who will provide a detailed construction methodology closer to construction.

It is anticipated that the works will be undertaken generally in accordance with the methodology described below:

3.4.1 SITE ESTABLISHMENT

- Before mobilising to site, communicate intentions and Health & Safety requirements with adjacent property owners.
- Establish staging area for machinery and rock on site and implement traffic and pedestrian management.
- Establish a refuelling location off the beach where spills can be isolated.

3.4.2 BLOCK WALL

- Create a stable face for the slope, lay geotextile up the slope
- Remove concrete blocks and reposition sloping back at a 10 degree angle.
- Install a coarse granular drainage layer behind the top block.
- Excavate trench for toe armour.
- Install geotextile and granular filter layer
- Place rock armour
- Cover toe with excavated sand
- Place crest protection armour on top of geotextile.

3.4.3 TIMBER RETAINING WALL

- Excavate trench for toe armour.
- Install geotextile and granular filter layer
- Place rock armour
- Place supporting rock armour around stormwater discharge between 5 & 7 Raeburn Ln.
- Cover toe with excavated sand
- Install drainage backfill behind timber retaining wall
- Place crest protection armour on top of geotextile
- Disestablish from site (replace private access stairs etc as required).

4 GREATER WELLINGTON REGIONAL PLAN ASSESSMENT

The GWRC notified the Proposed Natural Resources Plan (PNRP) on 31 July 2015. When fully operative, the PNRP will supersede the existing regional management plans. As the further submissions process is currently taking place, consideration must be given to the PNRP, the Operative Regional Coastal Plan (RCP) and the Operative Regional Soil Plan (RSP).

An assessment against the relevant permitted activity standards for each of the plans is provided within Appendix C.

4.1 PROPOSED NATURAL RESOURCES PLAN – ACTIVITY STATUS

Rule R166: the controlled activity standards for additions or alterations to seawalls (R165) cannot be met as the works will project further into the CMA than existing and works will span a duration greater than 48 hours – **discretionary activity**

4.2 OPERATIVE REGIONAL COASTAL PLAN – ACTIVITY STATUS

Rule 25 – the proposed works to reinstate the seawall will exceed the 20% increase in plan area required to meet the design requirements for a controlled activity – **discretionary activity**

4.3 OPERATIVE REGIONAL SOIL PLAN – ACTIVITY STATUS

Rule 2 – The subject site is identified as erosion prone land and the volume of earthworks will exceed the permitted 1,000 m³ – **restricted discretionary activity**

4.4 SUMMARY

Overall the proposed activity requires the following consents under the GWRC operative and proposed regional plans:

- Regional land use consent in accordance with s9(2) of the RMA for a **discretionary activity**; and
- Coastal permit in accordance with s12 of the RMA for a **discretionary activity**.

5 KAPITI COAST DISTRICT PLAN ASSESSMENT

The Proposed Kapiti Coast District Plan (PDP) was publicly notified on 29 November 2012, with some amendments made on 24 July 2014 following an independent review of parts of the PDP. As the submissions process is currently taking place, consideration must be given to both the PDP and the Operative District Plan (ODP).

An assessment against the relevant permitted activity standards of both plans is provided within Appendix E.

5.1 PROPOSED KAPITI COAST DISTRICT PLAN – ACTIVITY STATUS

The subject site is located within the Open Space (Conservation and Scenic) Zone and is subject to the following overlays:

- Landscape character area;
- Significant amenity landscapes;
- Coastal environment; and
- Sensitive natural features (miscellaneous).

The only PDP rule that is triggered and is considered to have immediate legal effect under s86B of the RMA relates to earthworks affecting a sensitive natural feature (a restricted discretionary activity under Rule 3A.3.8).

Because the proposed earthworks cannot comply with the relevant standards (exceeding 50m² in area), a **discretionary activity** land use consent is required under Rule 3A.4.1.

5.2 OPERATIVE KAPITI COAST DISTRICT PLAN – ACTIVITY STATUS

The subject site is located within the Residential Zone and is affected by the Outstanding Landscapes overlay.

Rule D1.2.1 allows for earthworks as a permitted activity provided (amongst other things) works are not located on a slope exceeding 28 degrees and/or within 20 m of the CMA. As the proposed works are not provided anywhere else in the ODP, a **discretionary activity** resource consent is required under Rule D1.1.3(B)(i).

5.3 SUMMARY

Overall the proposed works require district land use consent in accordance with s9(3) of the RMA for a **discretionary activity**.

6 ASSESSMENT OF ENVIRONMENTAL EFFECTS

6.1 COASTAL PROCESSES

The coastal process acting on the stretch of coastline have been considered in order to determine if it is necessary to maintain or extend the block wall to protect the public wastewater main.

The southwest coast of the North Island is characterized by predominant north-to-south currents driven by the incidence of the D'Urville Current (DC) between Taranaki (Cape Egmont) and the northern part of the South Island. This north-to-south currents move along the coast and transport sediments from rivers and hills in Cape Egmont and South Taranaki Bight southward towards the northern Kapiti Coast.

The presence of Kapiti Island has an impact on this current acting along the Kapiti Coast. The island creates a protected area on its lee that, combined with wave refraction, results in a cusped foreland formation. This formation deflects the predominant north-to-south coastal currents further offshore and reduces their capacity to suspend and transport sediments further south along the coast.

A local south-to-north current, driven by the occasional southerly swells (See wave rose in Figure 1), also affects the coastline south of the Kapiti Island, transporting sediments from hills south of Paekakariki beach northward along the coast towards the southern end of Paraparaumu Beach. According to available literature (Gibb, 1978), this south-to-north sediment flow has been reduced with the construction of the State Highway 1 along the coastline to the south of Paekakariki in the late 1930's.

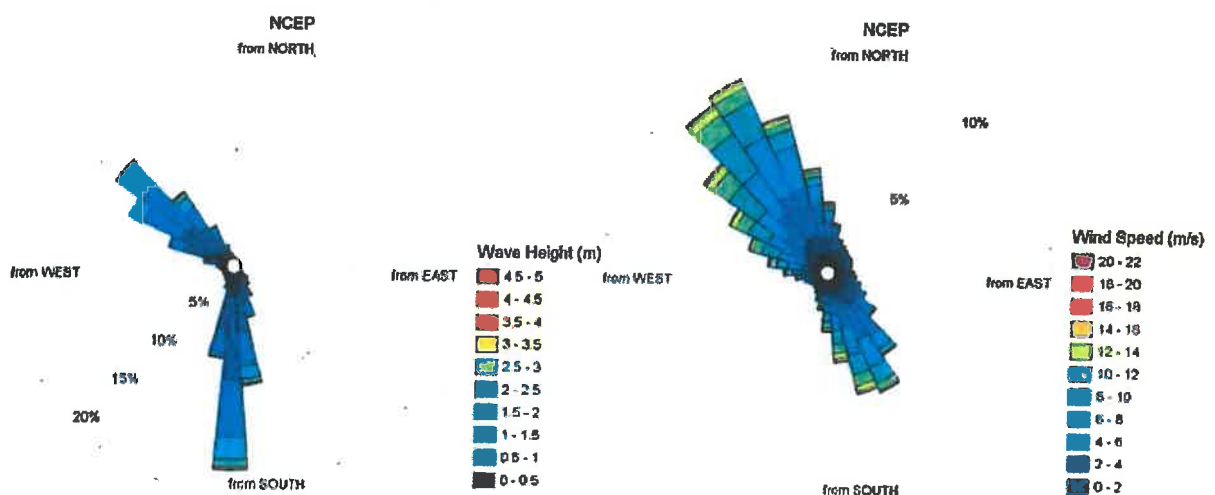


Figure 1: Wave and Wind roses for a grid location offshore of Kapiti Coast, provided by eCoast

With sediment flow from the north being trapped along the northern side of Paraparaumu Beach or deflected offshore, and sediment flow from the south reduced at its source, the resulting scenario is that Raumati Beach becomes starved of sediment and the coastline retreats, narrowing the beach.

eCoast Limited Marine Consulting and Research (eCoast) conducted a historical coastal erosion analysis along the vicinity of the Marine Parade (*Review of Coastal Processes and Revetment Options at Raumati Beach V2, 2016*). The results, evidenced by historical beach measurements and satellite photos, have shown a general erosion trend on the south of Paraparaumu Beach and along Raumati Beach since the mid-1980's.

The current erosion trends support the necessity to continue to protect the wastewater main through reinstatement of the block wall and adjacent timber pile retaining wall. If the structures are not reinstated there is a significant risk that the public wastewater main will be damaged before a permanent solution can be established.

6.2 EFFECTS ON BEACH LEVELS

Beach level is related to larger scale long-shore sediment transport processes as well as local scale structural effects. These effects can be difficult to differentiate when they occur at a single location, though it is acknowledged that 'hard' structures generally have an effect where beach level tends to degrade in front of the toe of the structure.

Based on historic beach profiles the beach near the seawall location has historically fluctuated from 1.1m to 2m Wellington vertical datum (WVD). The current beach level (as of 16/03/2017) at the toe of the temporary block wall is approximately 1.8m WVD.

In terms of structure induced beach lowering due to wave energy reflection, the toe rock armour will provide better performance than the near vertical block and timber walls which reflect more wave energy producing a larger bed lowering effect than a rough energy dissipating rock toe structure.

Locally the structure may cause event based toe scour of 1m to 1.6m. After large storms the beach level tends to recover somewhat with smaller waves, however the overall trend appears to be a gradual beach decline as discussed above in section 6.1.

Beach level degradation will expose more of the rock toe, while less of the structure will be visible while the beach level is higher. Rock armour allows for settlement under toe scour effects, and repair will be necessary if the toe becomes too exposed. This would involve steepening the toe armour protection resulting in the toe being lowered, and this can be achieved without increasing the structural footprint significantly.

Provided the consent will allow for on-going maintenance of the rock armouring (until a permanent solution is established), any effects on beach levels will be less than minor.

6.3 END EFFECTS

There are seawalls to the north and south of this location. This means that the net effects of the work on long-shore sediment transport processes are considered to be no different to the status quo.

The extent of the proposed temporary structure is landward of the structure at either end of it. Thus reflected wave effects are unlikely to impact on these structures. The toe armour protection will be smoothly transitioned into the adjacent structures. Due to this the impact of end effects on adjacent structures will be less than minor.

6.4 VISUAL AND AMENITY EFFECTS

The proposed reinstatement works have the potential to detract from the visual amenity of the beach and potentially reduce the ability of the public to use and access the beach. The proposed works will increase the scale of the proposed structure by introducing rock armouring at the toe of the block wall, and private timber wall, which will extend approximately 5 m into the CMA. Additional rock armouring will also be installed along the crest of the block wall to reduce any impact of wave overtopping.

While the proposed toe armouring will extend further into the CMA, the rock will generally be buried and only a small portion of the toe armour will be visible. Given the minor projection into the CMA it is also considered unlikely that the works will limit the public use and enjoyment of the section of beach.

The rock protection along the crest of the wall will generally not be visible as it will be screened by the top blocks. While this will result in a visible change for residents east of the wall, it is considered a minor effect given that large sections of the crest are currently subject to scour and erosion.

Given the works will only result in minor alterations to an existing structure, any adverse effects on the natural character of the coastline are considered to be minor. Overall it is considered that any potential visual and amenity effects of the proposed works will be less than minor.

6.5 CONSTRUCTION EFFECTS

It is anticipated that the only material that will be disturbed by the works is sand dune, therefore any effects in terms of temporary sedimentation are considered to be less than minor. In the unlikely event that soil is disturbed during works, the contractor will implement an erosion and sediment control plan to ensure any sediment discharges to the CMA are minimised. The worksite will be stabilised and made safe at the end of each day.

A Health and Safety management plan will be prepared and implemented by the contractor to minimise any restrictions to pedestrian access along the beach and ensure public safety. The management measures will include signage, temporary safety fencing and adjoining residents will be updated regularly prior to and during works.

All works will be undertaken during normal working hours and it is anticipated that the works will comply with the permitted noise limits of both the regional and district plans.

Given that the construction period will be limited to approximately 2-4 weeks, any temporary effects associated with construction are considered to be less than minor.

7 NOTIFICATION ASSESSMENT

Section 95 to 95F of the RMA sets out the provisions for public notification and limited notification of applications. In particular, section 95A states that:

95A Public notification of consent application at consent authority's discretion

- 1) A consent authority may, in its discretion, decide whether to publicly notify an application for a resource consent for an activity.*
- 2) Despite subsection (1), a consent authority must publicly notify the application if—*
 - a) it decides (under section 95D) that the activity will have or is likely to have adverse effects on the environment that are more than minor; or*
 - b) the applicant requests public notification of the application; or*
 - c) a rule or national environmental standard requires public notification of the application.*
- 3) Despite subsections (1) and (2)(a), a consent authority must not publicly notify the application if—*
 - a) a rule or national environmental standard precludes public notification of the application; and*
 - b) subsection (2)(b) does not apply.*
- 4) Despite subsection (3), a consent authority may publicly notify an application if it decides that special circumstances exist in relation to the application.*

In determining whether an adverse effect is likely to be more than minor, section 95D states that:

95D Consent authority decides if adverse effects likely to be more than minor

A consent authority that is deciding, for the purpose of section 95A(2)(a), whether an activity will have or is likely to have adverse effects on the environment that are more than minor—

- a) must disregard any effects on persons who own or occupy—*
 - i) the land in, on, or over which the activity will occur; or*
 - ii) any land adjacent to that land; and*
- b) may disregard an adverse effect of the activity if a rule or national environmental standard permits an activity with that effect; and*

- c) in the case of a controlled or restricted discretionary activity, must disregard an adverse effect of the activity that does not relate to a matter for which a rule or national environmental standard reserves control or restricts discretion; and*
- d) must disregard trade competition and the effects of trade competition; and*
- e) must disregard any effect on a person who has given written approval to the relevant application.*

Section 6 above has addressed the actual and potential adverse effects associated with the proposal. The assessment concludes that any adverse effect on the environment will be less than minor. Full public notification under section 95A is therefore not required and is not requested by the applicant.

In determining whether limited notification is required, section 95B of the Act states the following:

95B Limited notification of consent application

- 1) If a consent authority does not publicly notify an application for a resource consent for an activity, it must decide (under sections 95E and 95F) if there are any affected persons or affected order holders in relation to the activity.*
- 2) The consent authority must give limited notification of the application to any affected person unless a rule or national environmental standard precludes limited notification of the application.*
- 3) The consent authority must give limited notification of the application to any affected order holder even if a rule or national environmental standard precludes public or limited notification of the application*

In deciding if a person is an affected person, section 95E states:

95E Consent authority decides if person is affected person

- 1) A consent authority must decide that a person is an affected person, in relation to an activity, if the activity's adverse effects on the person are minor or more than minor (but are not less than minor).*
- 2) The consent authority, in making its decision,-*
 - a) may disregard an adverse effect of the activity on the person if a rule or national environmental standard permits an activity with that effect; and*
 - c) must have regard to every relevant statutory acknowledgement made in accordance with an Act specified in Schedule 11.*
- 3) Despite anything else in this section, the consent authority must decide that a person is not an affected person if-*

a) the person has given written approval to the activity and has not withdrawn the approval in a written notice received by the authority before the authority has decided whether there are any affected persons.

As outlined in Section 6 there are no adjoining parties that are considered to be affected by the proposal. The residents adjacent to the proposed works will be updated regularly prior to and during construction activities.

8 CONSIDERATION OF STATUTORY DOCUMENTS

8.1 NEW ZEALAND COASTAL POLICY STATEMENT

The relevant policies of the New Zealand Coastal Policy Statement are provided below.

Table 1 New Zealand Coastal Policy Statement

Reference	Description	Comment
Objectives		
Objective 5	<p>To ensure that coastal hazard risks taking account of climate change, are managed by:</p> <ul style="list-style-type: none"> • locating new development away from areas prone to such risks; • considering responses, including managed retreat, for existing development in this situation; and • protecting or restoring natural defences to coastal hazards. 	<p>In this instance there is an existing (and damaged) seawall is protecting a significant public wastewater main. It is considered appropriate that the existing seawall is reinstated and upgraded to ensure that it can be effectively maintained until a more permanent solution can be established.</p>
Objective 6	<p>Objective 6</p> <p>To enable people and communities to provide for their social, economic, and cultural wellbeing and their health and safety, through subdivision, use, and development, recognising that:</p> <ul style="list-style-type: none"> • the protection of the values of the coastal environment does not preclude use and development in appropriate places and forms, and within appropriate limits; • some uses and developments which depend upon the use of natural and physical resources in the coastal environment are important to the social, economic and cultural wellbeing of people and communities; • functionally some uses and developments can only be located on the coast or in the coastal marine area; • the coastal environment contains renewable energy resources of significant value; • the protection of habitats of living marine resources contributes to the social, economic and cultural wellbeing of people and communities; • the potential to protect, use, and develop natural and physical resources in the coastal marine area should not be compromised by activities on land; • the proportion of the coastal marine area under any formal protection is small and therefore management under the Act is an important means by which the natural resources of the coastal marine area can be protected; and • historic heritage in the coastal environment is extensive but not fully known, and vulnerable to loss or damage from inappropriate subdivision, use, and development. 	<p>The AEE (section 6) above has demonstrated that any adverse effects in terms of additional scale will be limited, and will not detract from the existing visual amenity and natural coastal character.</p> <p>The proposed work is considered to give effect to the relevant objectives of the New Zealand Coastal Policy Statement.</p>
Policies		

Reference	Description	Comment
<p>Policy 24 Identification of natural hazards</p>	<p>(1) Identify areas in the coastal environment that are potentially affected by coastal hazards (including tsunami), giving priority to the identification of areas at high risk of being affected. Hazard risks, over at least 100 years, are to be assessed having regard to:</p> <ul style="list-style-type: none"> (a) physical drivers and processes that cause coastal change including sea level rise; (b) short-term and long-term natural dynamic fluctuations of erosion and accretion; (c) geomorphological character; (d) the potential for inundation of the coastal environment, taking into account potential sources, inundation pathways and overland extent; (e) cumulative effects of sea level rise, storm surge and wave height under storm conditions; (f) influences that humans have had or are having on the coast; (g) the extent and permanence of built development; and (h) the effects of climate change on: <ul style="list-style-type: none"> (i) matters (a) to (g) above; (ii) storm frequency, intensity and surges; and (iii) coastal sediment dynamics; <p>taking into account national guidance and the best available information on the likely effects of climate change on the region or district.</p>	<p>The stretch of beach is known to be at risk of coast erosion which is putting the integrity of an existing public wastewater main at risk.</p> <p>In this instance it is considered that the most appropriate and pragmatic measure to address the risk is through reinstatement and upgrading of the existing seawall.</p> <p>It is proposed that the consent will allow for ongoing maintenance of the seawall until a permanent solution can be established that protects the public wastewater main.</p> <p>Given that the seawall forms part of the existing coastal character, and there will be no changes in use from what is currently occurring onsite, the proposal is considered to be in line with the relevant policies of the New Zealand Coastal Policy Statement.</p>
<p>Policy P28 Subdivision, use and development in areas of coastal hazard risk</p>	<p>In areas potentially affected by coastal hazards over at least the next 100 years:</p> <ul style="list-style-type: none"> (a) avoid increasing the risk of social, environmental and economic harm from coastal hazards; (b) avoid redevelopment, or change in land use, that would increase the risk of adverse effects from coastal hazards; (c) encourage redevelopment, or change in land use, where that would reduce the risk of adverse effects from coastal hazards, including managed retreat by relocation or removal of existing structures or their abandonment in extreme circumstances, and designing for relocatability or recoverability from hazard events; (d) encourage the location of infrastructure away from areas of hazard risk where practicable; (e) discourage hard protection structures and promote the use of alternatives to them, including natural defences; and (f) consider the potential effects of tsunami and how to avoid or mitigate them. 	

8.2 PROPOSED NATURAL RESOURCES PLAN – RELEVANT OBJECTIVES AND POLICIES

The relevant objectives and policies of the PNRP are provided in below.

Table 1 - PNRP Objectives and Policies

Reference	Description	Comment
Hazard mitigation		
Objective O19	The interference from use and development on natural processes is minimised.	<p>The proposal will minimise interference with natural coastal processes as far as practical.</p> <p>The block wall is existing and the proposed reinstatement works are considered to be the most practicable temporary solution to protect the public wastewater main.</p> <p>The proposed works are considered to give effect to the relevant objectives and policies.</p>
Objective O22	Hard engineering mitigation and protection methods are only used as a last practicable option.	
Policy P26	Use and development will be managed to minimise effects on the integrity and functioning of natural processes.	
Policy P27	<p>Use and development, including hazard mitigation methods, in high hazard areas shall be avoided except where:</p> <p>(a) they have a functional need or operational requirement or there is no practicable alternative to be so located, and</p> <p>(b) the risk to the development and/or residual risk after hazard mitigation measures, assessed using a risk-based approach, is low, and</p> <p>(c) the development does not cause or exacerbate natural hazards in other areas, and</p> <p>(d) interference with natural processes (coastal, fluvial and lacustrine processes) is minimised, and</p> <p>(e) natural cycles of erosion and accretion and the potential for natural features to fluctuate in position over time, including movements due to climate change and sea level rise, are taken into account.</p>	
Policy P28	Hard engineering mitigation and protection methods shall be avoided except where it is necessary to protect existing development from unacceptable risk, assessed using the risk-based approach, and the works either form part of a hazard management strategy or the environmental effects are considered to be no more than minor.	
Use of the coastal marine area		
Objective O53	Use and development in the coastal marine area has a functional need or operational requirement to be located there.	<p>The proposed works will reinstate an existing seawall that has a functional need to protect the existing public wastewater main.</p>
Objective O54	Use and development makes efficient use of any occupied space in the coastal marine area.	
Policy P26	Use and development will be managed to minimise effects on the integrity and functioning of natural processes.	<p>The minor additions to the structure will help ensure the integrity of the</p>

Reference	Description	Comment
Policy P139	The construction of a new seawall is inappropriate except where the seawall is required to protect: (a) existing, or upgrades to, infrastructure, or (b) new regionally significant infrastructure, and in respect of (a) and (b): (c) there is no reasonable or practicable alternative means, and (d) suitably located, designed and certified by a qualified, professional engineer, and (e) designed to incorporate the use of soft engineering options where appropriate.	seawall, and the public wastewater main, until a permanent solution can be established. The proposed works are considered to give effect to the relevant objectives and policies.

8.3 REGIONAL COASTAL PLAN – RELEVANT OBJECTIVES AND POLICIES

The relevant objectives and policies of the RCP are provided in below.

Table 2 - RCP Objectives and Policies

Reference	Description	Comment
Objective 6.1.1	Appropriate structures which enable people and communities to provide for their economic and social well-being are allowed.	The proposed works will reinstate an existing seawall that has a functional need to protect the existing public wastewater main.
Objective 6.1.2	There is no inappropriate use or development of structures in the coastal marine area.	
Policy 6.2.1	To consider the following as appropriate in the coastal marine area: • the use and development of structures in the coastal marine area for; (1) activities which are functionally dependent upon a location in the coastal marine area; or (2) activities which support and service those which must locate in the coastal marine area, and which, because of a lack of a suitable space or operational constraints, cannot be located outside of the coastal marine area.	The minor additions to the structure will help ensure the integrity of the seawall, and the public wastewater main, until a permanent solution can be established. The proposed works are considered to give effect to the relevant objectives and policies.

8.4 GREATER WELLINGTON REGIONAL POLICY STATEMENT

The relevant objectives and policies of the Greater Wellington Regional Policy Statement are provided in Table 4 below.

Table 4 – Greater Wellington Regional Policy Statement

Reference	Description	Comment
Policy 51: Minimising the risks and consequences of natural hazards – consideration	<p>When considering an application for a resource consent, notice of requirement, or a change, variation or review to a district or regional plan, the risk and consequences of natural hazards on people, communities, their property and infrastructure shall be minimised, and/or in determining whether an activity is inappropriate particular regard shall be given to:</p> <p>(a) the frequency and magnitude of the range of natural hazards that may adversely affect the proposal or development, including residual risk;</p> <p>(b) the potential for climate change and sea level rise to increase the frequency or magnitude of a hazard event;</p> <p>(c) whether the location of the development will foreseeably require hazard mitigation works in the future;</p> <p>(d) the potential for injury or loss of life, social disruption and emergency management and civil defence implications – such as access routes to and from the site;</p> <p>(e) any risks and consequences beyond the development site;</p> <p>(f) the impact of the proposed development on any natural features that act as a buffer, and where development should not interfere with their ability to reduce the risks of natural hazards;</p> <p>(h) the potential need for hazard adaptation and mitigation measures in moderate risk areas.</p>	<p>The coastal processes assessment in Section 6 demonstrates that the erosion risk along the stretch of beach is significant, and hard engineering structures warrant the protection of the public wastewater main.</p> <p>It is anticipated that the proposed works is the best practicable alternative to manage the hazard, until a permanent solution can be established.</p> <p>The proposed works will result in minimal additions to the existing structure and are not considered to impact any other natural features that as buffers.</p> <p>The proposed works are considered to give effect to the relevant policies.</p>
Policy 52: Minimising adverse effects of hazard mitigation measures – consideration	<p>When considering an application for a resource consent, notice of requirement, or a change, variation or review of a district or regional plan, for hazard mitigation measures, particular regard shall be given to:</p> <p>(a) the need for structural protection works or hard engineering methods;</p> <p>(b) whether non-structural or soft engineering methods are a more appropriate option;</p> <p>(c) avoiding structural protection works or hard engineering methods unless it is necessary to protect existing development or property from unacceptable risk and the works form part of a long-term hazard management strategy that represents the best practicable option for the future;</p> <p>(d) the cumulative effects of isolated structural protection works; and</p> <p>(e) residual risk remaining after mitigation works are in place, so that they reduce and do not increase the risks of natural hazards.</p>	

8.5 PROPOSED KAPITI COAST DISTRICT PLAN

The relevant objectives and policies of the PDP are provided in Table 5 below.

Table 5 – PDP Objectives and Policies

Reference	Description	Comment
Objective 2.4 – Coastal environment	To have a coastal environment where: a) natural character, natural systems, natural landforms and natural processes, are protected, and restored where degraded; b) appropriate public access to and along the coast is improved; c) development does not result in further loss of coastal dunes	In this instance the proposed engineering measures will be applied to an existing structure. The works are considered the best practicable option to protect the public wastewater main until a permanent solution is established.
Policy 4.6 – Natural coastal processes	Natural shoreline movement will be accommodated and the resilience of coastal communities will be increased by using the best practice coastal management options, including some or a combination of the following: a) dune management; b) inlet management; c) engineering measures.	Given the works will only result in minor alterations to an existing structure, any adverse effects on the natural character of the coastline are considered to be minor.

8.6 OPERATIVE KAPITI COAST DISTRICT PLAN

The relevant objectives and policies of the ODP are provided in Table 6 below.

Table 6 – ODP Objectives and Policies

Reference	Description	Comment
C.9.1.1 Protection of natural coastal values	To protect and enhance the natural character, natural values and associated amenity values of the coastal environment	Given the works will only result in minor alterations to an existing structure, any adverse effects on the natural character of the coastline are considered to be less than minor.
Policy 4	Discourage coastal protection works on the Coastal Marine Area interface where they are not already present and encourage management options such as managed retreat and coastal renourishment rather than hard engineering works when protection works are sought.	

9 THE RESOURCE MANAGEMENT ACT 1991

9.1 SECTION 104 – CONSIDERATION OF APPLICATION

Section 104 sets out the following requirements when assessing an application for resource consent:

(1) When considering an application for a resource consent and any submissions received, the consent authority must, subject to Part 2, have regard to—

(a) any actual and potential effects on the environment of allowing the activity; and

(b) any relevant provisions of—

(i) a national environmental standard:

(ii) other regulations:

(iii) a national policy statement:

(iv) a New Zealand coastal policy statement:

(v) a regional policy statement or proposed regional policy statement:

(vi) a plan or proposed plan; and

(c) any other matter the consent authority considers relevant and reasonably necessary to determine the application.

Section 104(1)(a) is addressed in the Assessment of Environmental Effects in Section 6 of this report. The relevant provisions of the district and regional plans are assessed, the relevant policies of the RPS and the New Zealand Coastal Policy Statement. There are no other documents or provisions that have particular relevance to the proposed development.

9.2 PART 2 – PURPOSE AND PRINCIPLES

Sections 5, 6, 7 and 8 comprise Part 2 of the RMA. These sections provide a common set of principles to be applied to the management of all resources.

9.2.1 SECTION 5 ASSESSMENT

The RMA has a single overarching purpose: to promote the sustainable management of natural and physical resources. Sustainable management is defined in section 5 of the RMA as:

...managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while –

(a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and

- (b) *Safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*
- (c) *Avoiding, remedying, or mitigating any adverse effects of activities on the environment.*

The proposed works are considered to constitute sustainable management as they will ensure the integrity of a public wastewater main, while avoiding and mitigating any potential adverse effects. Any potential effects resulting from the associated earthworks will be minor and short term.

9.2.2 SECTION 6 ASSESSMENT

In achieving the purpose of the RMA, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for matters of national importance.

Section 6(a) provides for the protection of the natural character of the coastal environment. The proposed works will reinstate a block wall and timber retaining wall that that already form part of the existing environment. Given that the visible changes to the wall will generally be buried, any adverse effects on the natural character of the coastal environment are considered to be less than minor.

9.2.3 SECTION 7 ASSESSMENT

Other matters to have particular regard to when managing the use, development and protection of natural and physical resources include:

- The maintenance and enhancement of amenity values; and
- Maintenance and enhancement of the quality of the environment.

There are no adverse effects on these values during establishment or on-going use of the existing land use activity. The proposed works are considered to have particular regard for the matters in section 7 of the RMA, particularly the efficient use and development of natural and physical resources.

9.2.4 SECTION 8 ASSESSMENT

The principles of the Treaty of Waitangi shall be taken into account when managing the use, development, and protection of natural and physical resources.

Any potential effects on the coastal environment needs to be considered when determining whether or not the proposed development will give effect to the principles of the Treaty of Waitangi. The proposed works will reinstate a block wall and timber retaining wall that that already form part of the existing environment. Given that the visible changes to the wall will generally be buried and disturbance activities will be limited to sandy material any adverse effects on the coastal environment are considered to be less than minor.

10 CONCLUSION

It is considered that the proposal is consistent with the relevant objectives and policies, and the potential adverse effects can be effectively mitigated.

It is also considered that the proposal will result in less than minor adverse effects on the environment and on any persons. The application provides a methodology and approach according to the relevant statutory documents to mitigate any potential minor adverse effect to the locality.

No persons are considered to be adversely affected by the proposal.

The proposed work will ensure the integrity of a public wastewater main until a permanent solution to protect the infrastructure can be established. Overall, it is concluded that the proposal satisfies all matters the consent authority is required to assess and that it can be granted.

APPENDIX A PLANS



LEG

Existing

Propose

Propose

Easement

SW Ser

VWV Se



Babbage Consultants Limited
 Level 4, 88 Beach Road, Auckland 1010
 PO Box 2027, 88 Beach Road
 Auckland 1010, New Zealand
 T: 09 273 4000 F: 09 272 1170
 E: enquiries@babbage.co.nz www.babbage.co.nz

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CLIENT / PROJECT

Kapiti Coast District Council

**Raumati block wall reinstatement
 AEE**

MAP TITLE

**Kapiti Coast -
 Sediment Transport**

MAP REVISIONS

31/09/2017 First version by L.C.

Legend

Depth Contours	Contours
2.0 m	20 m
5.0 m	40 m
10.0 m	60 m
20.0 m	80 m
30.0 m	100 m
50.0 m	200.0 m
100.0 m	300 m
200.0 m	400 m
400.0 m	600 m
800.0 m	800 m

Sediment Transport	Deposition	Erosion
Blue arrow	Red arrow	Black arrow

NOTES:
 Based on figures by Gibb, J., G., 1978, The Problem of Coastal Erosion along the "Golden Coast" Western Wellington, New Zealand, Water and Soil Technical Publication No 10, Victoria University of Wellington, 24p

SOURCES:

Contours:
 This layer is a component of the Topo50 map series. The Topo50 map series provides topographic mapping for the New Zealand mainland, Chatham and New Zealand's offshore islands, at 1:50,000 scale.

Depth Contours:

This layer is based on the 5-57 data format used in the New Zealand Bathymetric Chart (NZBC) published and maintained by the New Zealand Hydrographic Authority at Land Information New Zealand (LINZ) and Place Names: LINZ Online Database.

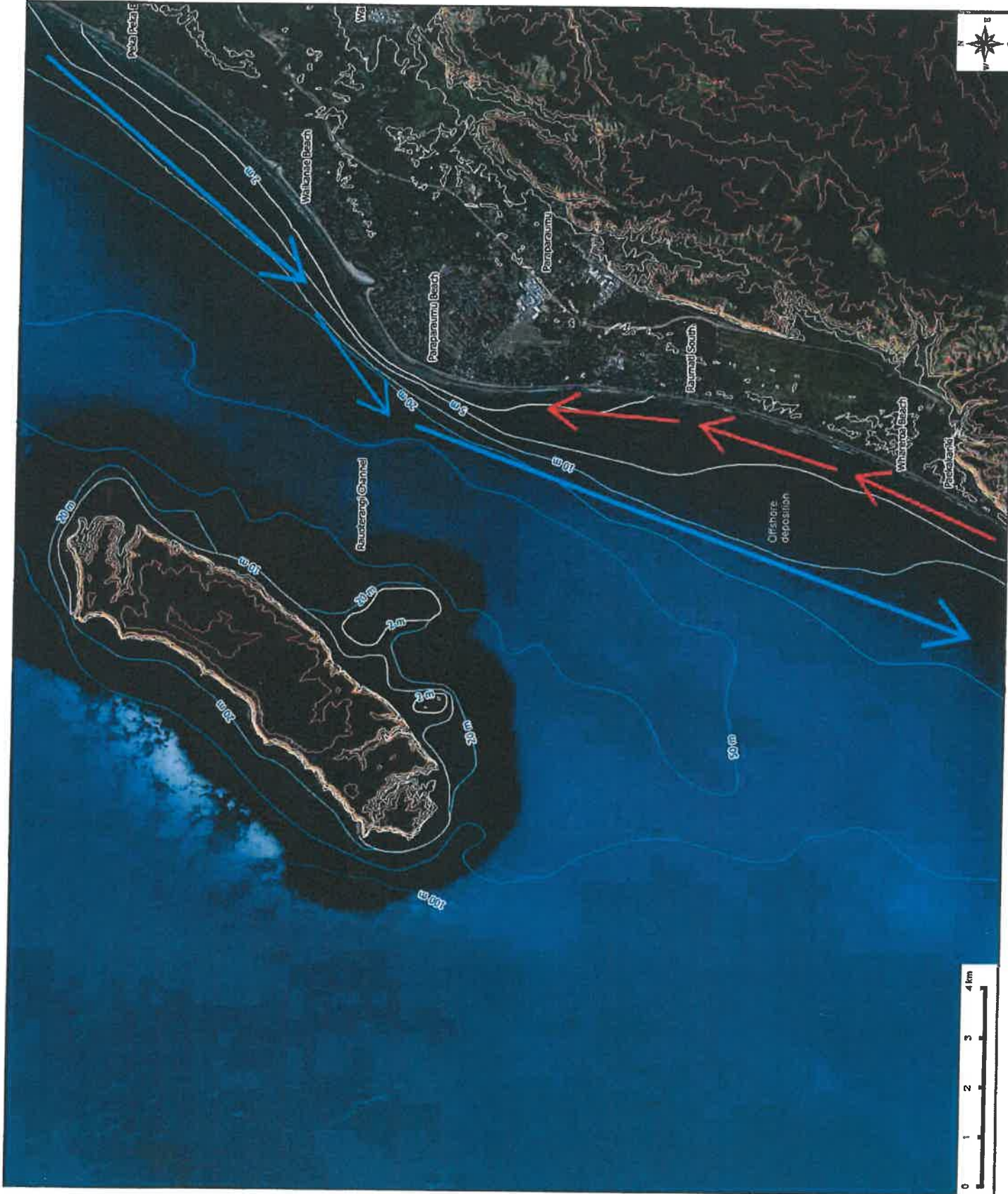
Aerial Image: Google Maps Pro (Georeferenced)

SCALE

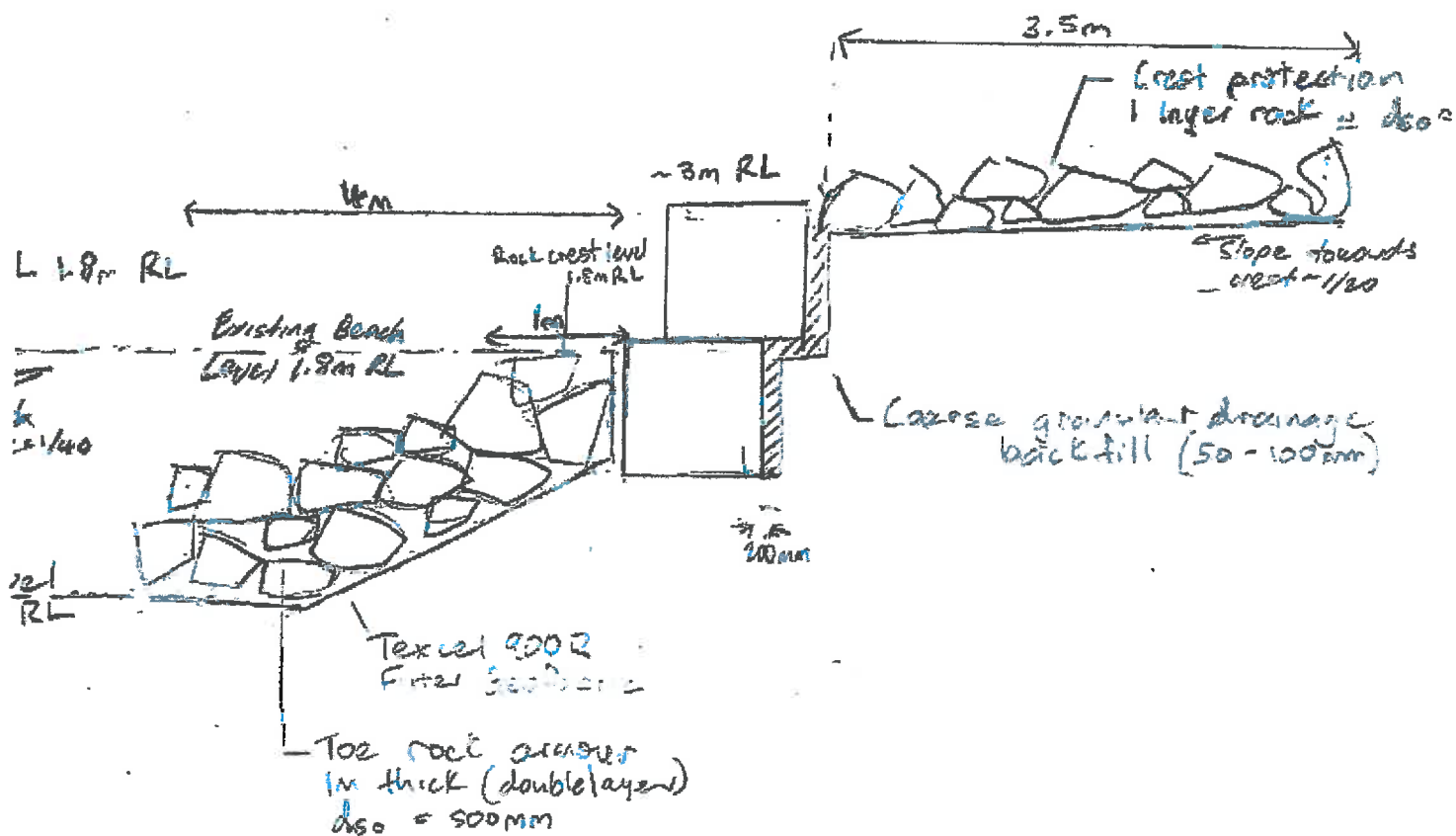
1:70,000 @ A3

MAP NO.

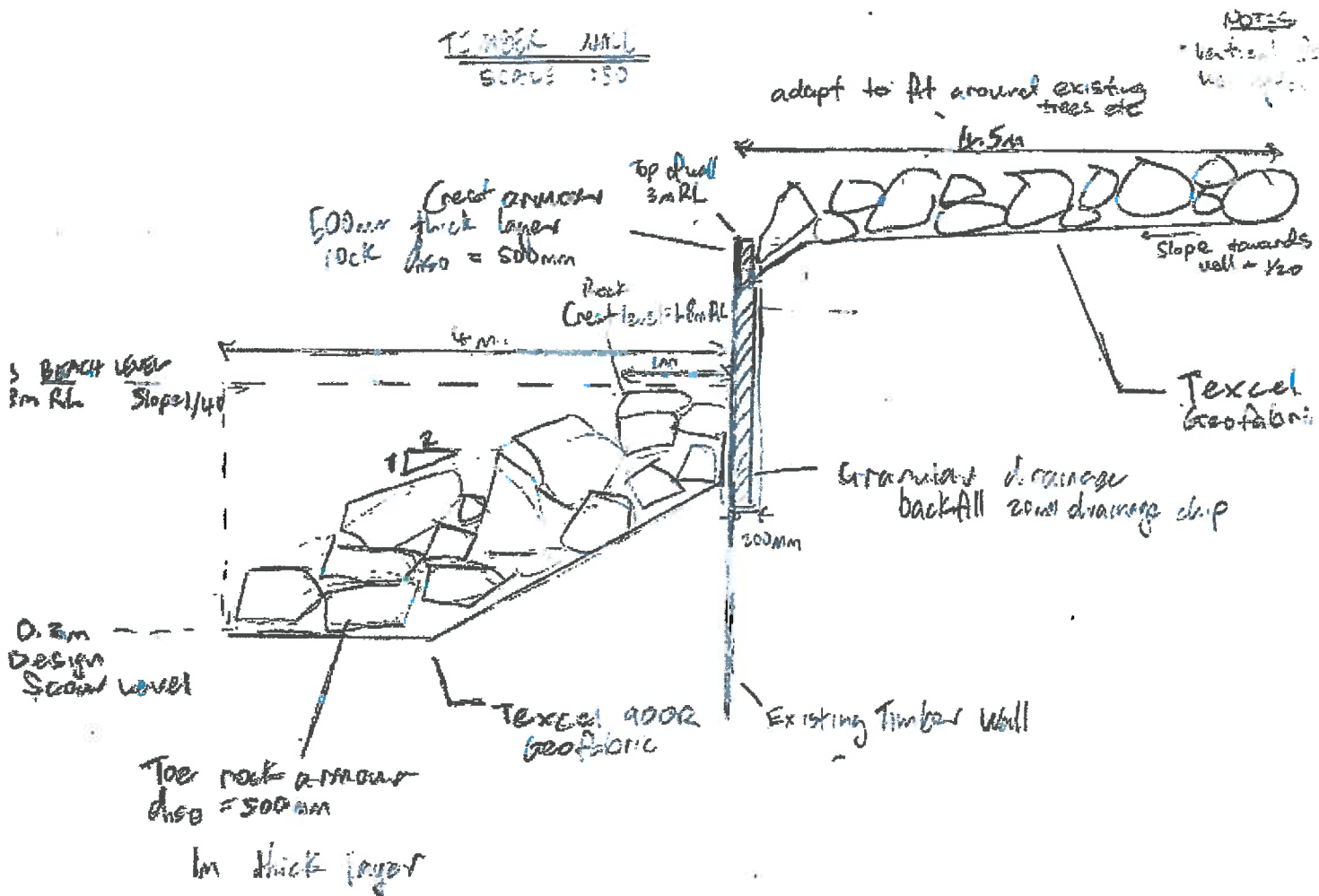
53018 EN101







showing the arrangement of the proposed protection along the concrete blockwall section of the seawall



APPENDIX B TONKIN AND TAYLOR WORKS DESCRIPTION AND DETAILS

Kapiti Coast District Council (KCDC)
175 Rimu Road,
Paraparaumu 5032
Private Bay 60601 Paraparaumu 5254

Attention: Rita O'Brien

Dear Rita

Raumati Seawall Temporary Works Repair

1

2 Introduction

As discussed on 16/03/2017 this letter report contains a works description and sketches for input into the AEE for repair works to the temporary block seawall at Raumati Beach from the coastal frontage of properties 71 Wharemauku Road to 7 Raeburn Lane. These details are considered appropriate for consenting, and final drawings will be issued for construction at a later date.

This letter report is structured as follows, and these are considered the key coastal engineering inputs for the AEE.

- A summary works description
- A layout plan indicating the extent of the works
- Sketches showing the size and arrangement of the works
- Commentary on the potential for end effects and effects on beach levels
- Intended design life
- Provision for maintenance works

3 Current Condition of Temporary Block Wall and Timber Wall

Refer to the letter report from Michelle Knapstein (T+T, 10-04-2017) for a more detailed description of the seawalls from her inspections conducted in February 2017.

The existing block wall structure has relatively shallow embedment depth. Liquefaction resulting from wave breaking on the fine sandy beach is likely to have reduced the bearing capacity of the seabed in front of the structure, resulting in the blocks rotating forward. Along the majority of the structure the blocks have rotated forward by around 4-5 degrees from vertical, and have rotated up to 12 degrees along one 20m section (Figure 1).

The forward rotation has caused a gap between the blocks and the sand dune supported by the blocks to open up. Some overtopping scour has also occurred. The overtopping scour and gap at the crest of the wall increases the risk of bank erosion and movement of the concrete blocks during wave overtopping, and wave rundown.

Improvements of the block wall should ideally address both the issue of toe instability, and lack of protection along the crest.



Figure 1: Photo of block wall taken on 20-03-2017 showing seaward rotation of blocks and gap behind blocks exposing bank

A timber wall protects the frontage of properties between 45 Wharemauku Road and 7 Raebern Lane. The wall was originally intended as a secondary line of defence in a situation where a first line was eroded. The structure was inspected by Tonkin + Taylor Engineer Michelle Knappstein on 20 February 2017, finding that the structure while in reasonable condition, has some weaknesses.

The timber structure does not extend deeply enough to prevent sand evacuation from under the wall. The inclusion of toe protection would provide protection from undermining scour at the toe, dissipate wave energy impacting on the structure, and provide additional buttressing support to the toe of the structure.

The wall does not have a granular drainage back fill. The lack of drainage has allowed internal scour to occur creating voids in behind the wall (Figure 2).

The wall does not have tie backs. Voids created behind the wall decrease the support in wave loading, allowing the structure to 'rock' back and forth which will gradually cause the structure to fail in a storm event.

The crest of the wall is low, allowing wave overtopping. Some crest armour would protect the crest from overtopping waves.



Figure 2: Photo showing voids in behind timber wall at 7 Raebern Lane. The timber wall appears to not have granular drainage backfill or tie-backs.

4 Works Description

The proposed work intends to provide the timber and block wall structure with increased protection against undermining at the toe, additional wave energy dissipation at the toe, and protection at the crest against overtopping waves. The general layout of the works is shown in Figure 3 (Appendix A).

The structure overall will occupy an area of approximately 2500m². The toe of the structure will be approximately 5m at its greatest extent in-front of the current concrete block and timber structures. No increase in crest elevation is involved in the proposed works. The total earthworks is estimated to be approximately 2200m³.

4.1 Crest Protection

Crest protection will be improved by the addition of a crest rock armour apron extending 4.5m behind the crest. Further up slope where required along the block wall, top soil and marram grass

will be planted on top of a biodegradable coconut fibre matting to provide protection while the planting establishes.

Refer to Figures 4 & 5 for crest protection details along the block wall and timber wall section respectively.

4.2 Toe Protection

Toe protection acts to prevent liquefaction at the bedding layer of the concrete blocks and timber retaining wall. Toe protection will consist of a sloping layer of $d_{n50}=500\text{mm}$ graded rock armour.

Refer to Figures 4 & 5 for toe protection details along the block wall and timber wall section respectively.

5 Work Methodology

The works methodology will be finalised once a construction contractor is engaged by KCDC.

A likely methodology is shown below:

1. Before establishing on site, communicate intentions and Health & Safety requirements with adjacent property owners.
2. Establish staging area for machinery and rock on site and implement traffic and pedestrian management.
3. Establish a refuelling location off the beach where spills can be isolated.

Block Wall:

4. Create a stable face for the slope, lay geotextile up the slope
5. Remove concrete blocks and reposition.
6. Install a coarse granular drainage layer behind the top block.
7. Excavate trench for toe armour.
8. Install geotextile and granular filter layer
9. Place rock armour at toe
10. Cover toe with excavated sand
11. Place crest protection armour on top of geotextile
12. Spread planting matt and plant seedlings.

Timber Wall:

1. Excavate trench for toe armour.
2. Install geotextile and granular filter layer
3. Place rock armour
4. Place supporting rock armour around stormwater discharge between 5 & 7 Raebern Ln.
5. Cover toe with excavated sand
6. Install drainage backfill behind timber retaining wall
7. Place crest protection armour on top of geotextile

8. Disestablish from site (replace private access stairs etc as required).

6 Effects on Beach Levels

Beach level is related to larger scale long-shore sediment transport processes as well as local scale structural effects. These effect can be difficult to differentiate when they occur at a single location, though it is acknowledged that 'hard' structures generally have an effect where beach level tends to degrade in front of the toe of the structure.

Based on historic beach profiles the beach near the seawall location has historically fluctuated from 1.1m to 2m WVD. The current beach level (as of 16/03/2017) at the toe of the temporary block wall is approximately 1.8m WVD.

In terms of structure induced beach lowering due to wave energy reflection, the toe rock armour will provide better performance than the near vertical block and timber walls which reflect more wave energy producing a larger bed lowering effect than a rough energy dissipating rock toe structure.

Locally the structure may cause event based toe scour of 1m to 1.6m. After large storms the beach level tends to recover somewhat with smaller waves.

Beach level degradation will expose more of the rock toe, while less of the structure will be visible while the beach level is higher. Rock armour allows for settlement under toe scour effects, and repair will be necessary if the toe becomes too exposed. This would involve the toe being lowered, and this can be achieved without increasing the structural footprint significantly.

7 End Effects

Extensive lengths of seawalls are located directly north and south of the temporary seawall location and have been there for decades. The temporary seawall, by protecting the dune, will prevent the material inland of it from migrating longshore during large storm events. The short 240m length proposed for protection in this section of coast will have a negligible impact on sediment supply. This means that the net effects of the work on long-shore sediment transport processes will not be different to the status quo over the intended 7 year consent period.

The extent of the proposed temporary structure is landward of the structure at either end of it. Thus reflected wave effects are unlikely to impact on these structures. The toe armour protection will be smoothly transitioned into the adjacent structures. Due to this the impact of end effects on adjacent structures will be negligible.

8 Intended Design Life

The structure is intended to remain in place for up to 7 years. Rock sizing has been undertaken for storm events with an annual recurrence interval of approximately 20 years. The likelihood of a storm event exceeding this over a 7 year period is approximately 30% (Table 1). An advantage of rock structures is that damage sustained is often incremental and repairable without total rebuild of the structure.

The 20 year recurrence interval has been selected as a balance between an economical designs for a shorter term structure (7 years) against the risk of significant structural damage. Rock structures tend to provide some protection in events over their intended design parameters and fail incrementally, so some protection will be provided in 'over-design' events.

Table 1: Design life (Sourced from table 2.2 in Bell et al. 2013)

Likelihood of an event with a specified probability of occurrence (AEP / ARI), occurring within planning or design lifetimes for peaks over a threshold. $P = 1 - e^{-L/ARI}$, where L = planning lifetime and P = probability of occurrence within planning lifetime.

AEP (%)	ARI (years)	Planning or Design Lifetime (years)						
		2	5	10	20	50	100	200
30%	2	63%	33%	10%	100%	100%	100%	100%
18%	5	33%	63%	10%	33%	100%	100%	100%
10%	10	10%	39%	63%	10%	100%	100%	100%
5%	20	10%	23%	39%	63%	10%	100%	100%
2%	50	4%	10%	10%	10%	63%	100%	100%
1%	100	1%	5%	10%	10%	39%	63%	100%
0.5%	200	1%	2%	5%	10%	23%	39%	63%

9 Provision for Maintenance Works

Coastal protection structures typically require maintenance over their intended design life. This can be due to damage occurred during events exceeding their design parameters, or through gradual damage occurring due to structure settlement or individual rocks rolling out of place.

Resource consent should allow for maintenance and repair to be carried out on the structure, including repair and replacement of rock, realigning concrete blocks and repair of timber lagging. Beach level fluctuation may also expose more of the rock toe. If the beach level degrades to the base of the structure, the rock may need to be bedded in deeper. This repair will take place within the 5m in front of the block wall and timber walls.

10 Applicability

This report has been prepared for the exclusive use of our client Kapiti Coast District Council (KCDC), with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose, or by any person other than our client, without our prior written agreement.

Tonkin & Taylor Ltd

Environmental and Engineering Consultants

Report prepared by:

Authorised for Tonkin & Taylor Ltd by:



Hamish Smith

Water Resources Engineer



Richard Reinen-Hamill

Business Leader – Natural Hazards Resilience

HSMI

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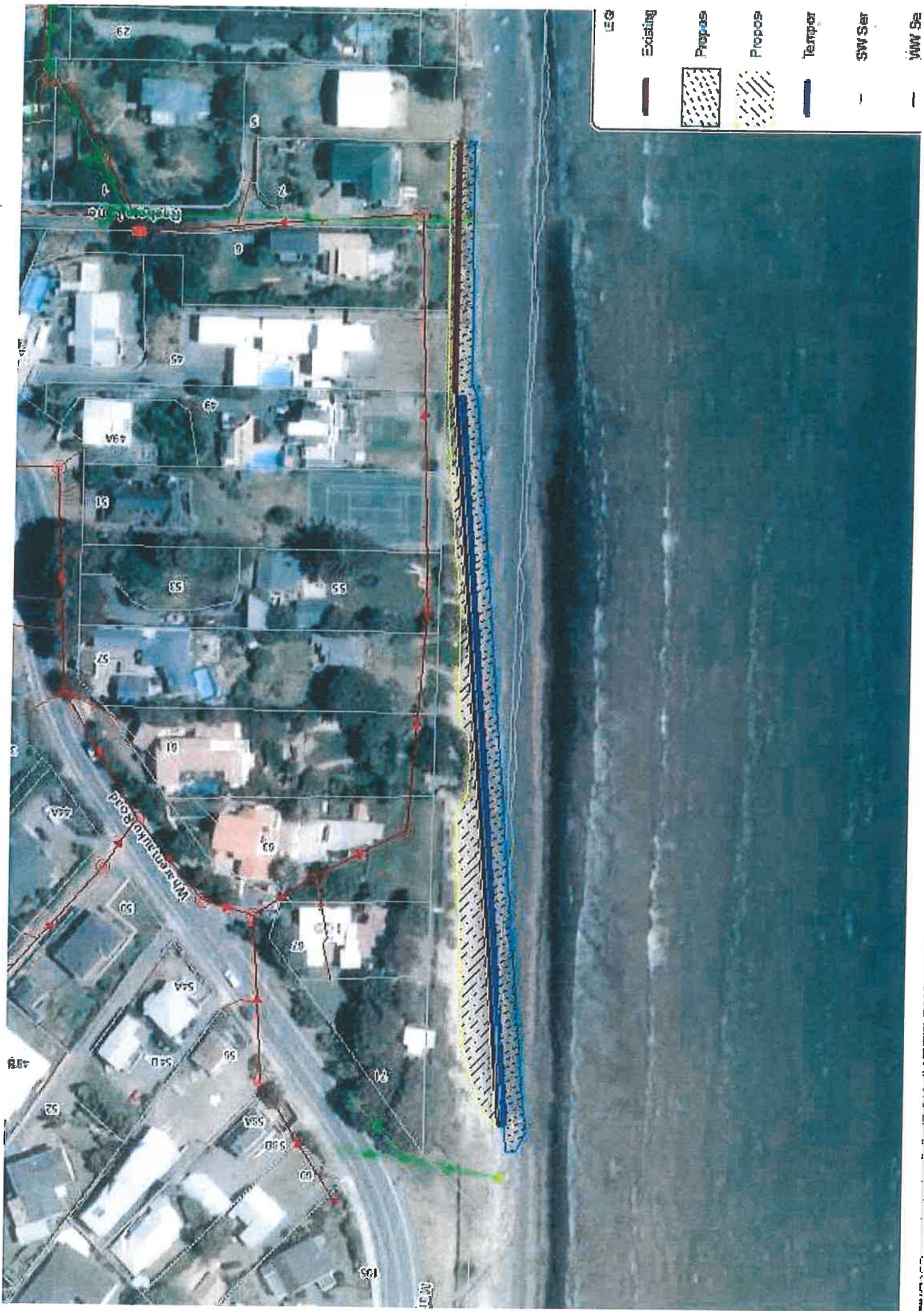
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Concrete Block wall

Scale 1:50

NOTES
Level M 440 R52

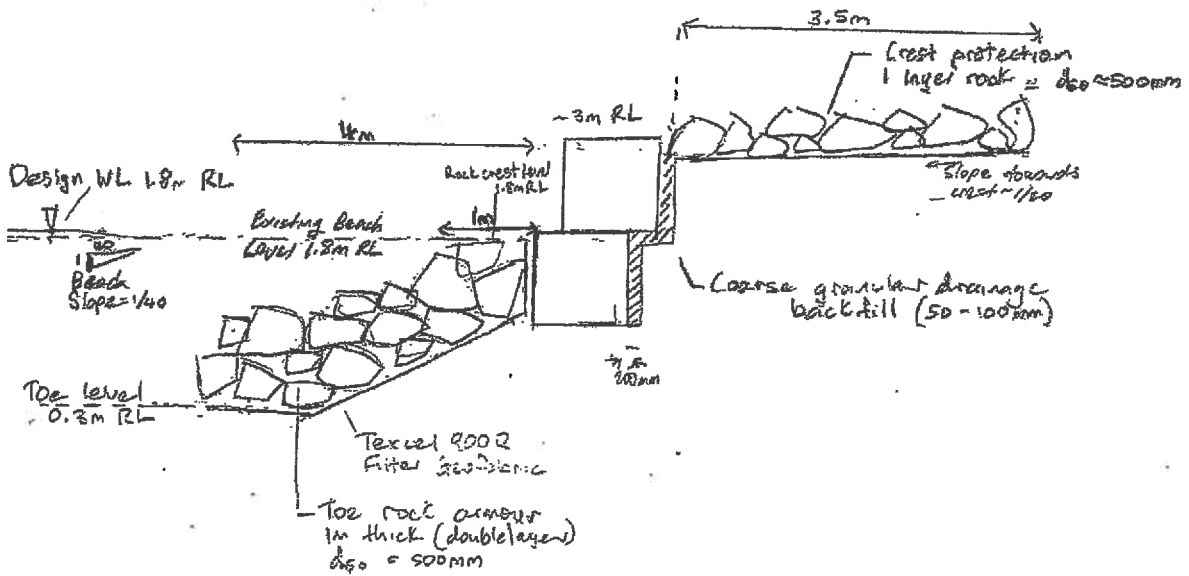


Figure 3: Sketch showing the arrangement of the proposed protection along the concrete block wall section of the seawall

Timber wall
Scale 1:50

NOTES
Vertical Datum
Level M 440 R52

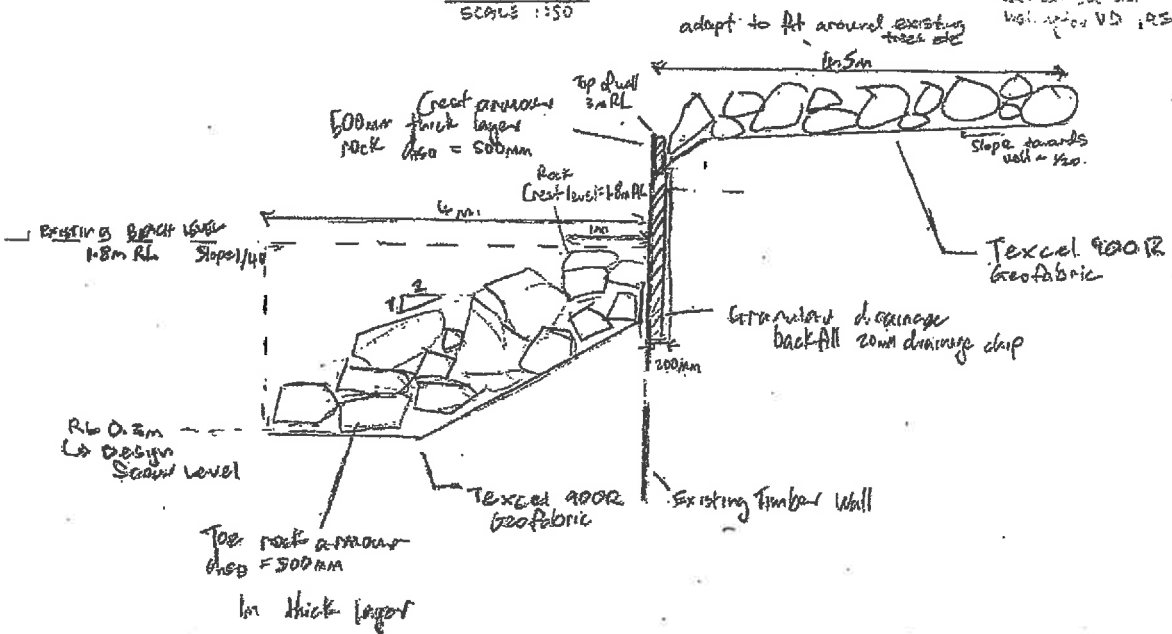
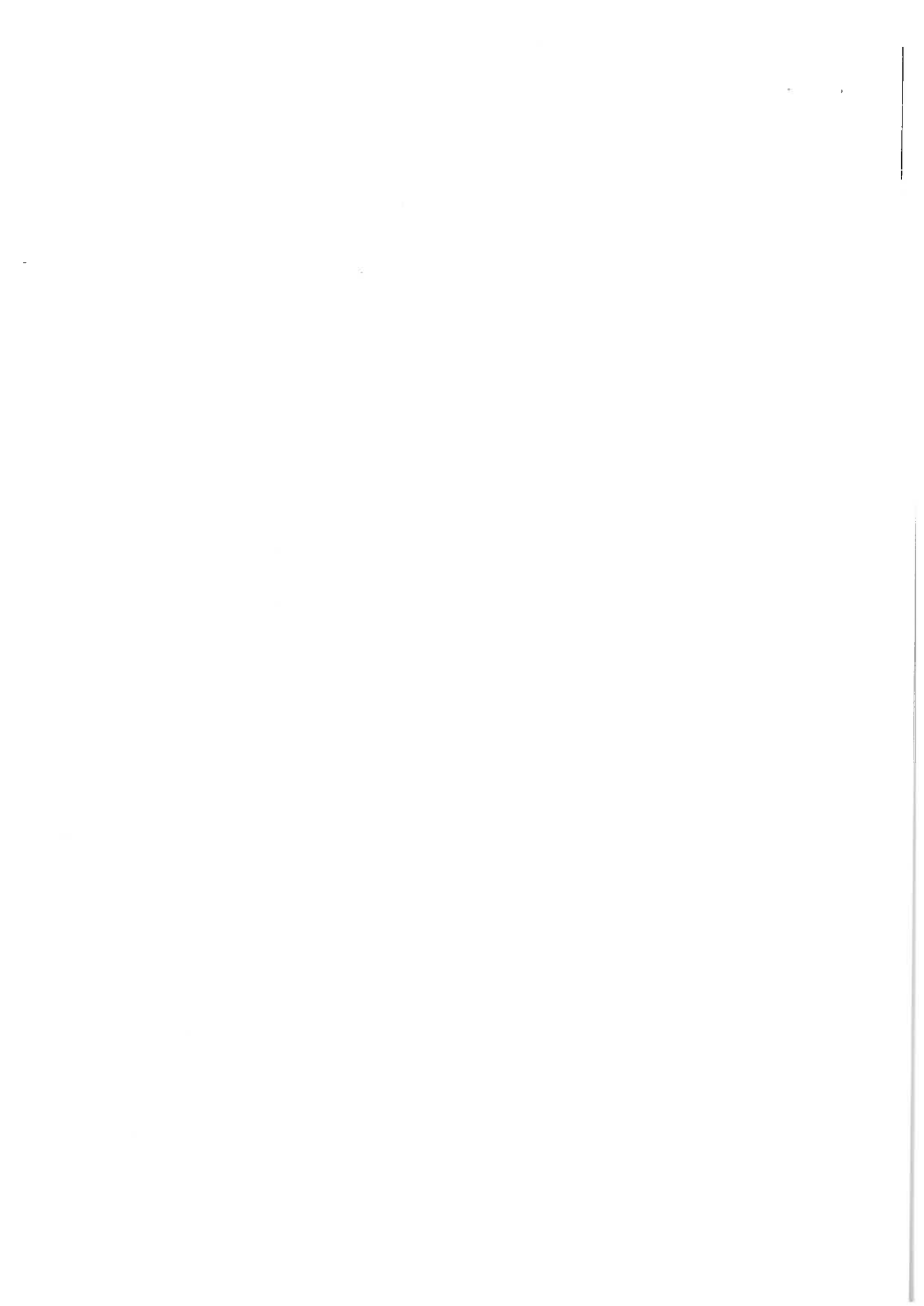


Figure 4: Timber wall proposed protection upgrade including toe armouring, crest armouring and granular backfill behind timber wall.



APPENDIX C ASSESSMENT OF RELEVANT REGIONAL PLAN STANDARDS

PROPOSED NATURAL RESOURCES PLAN

The rules below are considered to have immediate effect in accordance with s86B of the RMA.

Rule	Requirement	Comment on compliance
Discharges (permitted activity standards)		
R69(a)	Discharge of contaminants onto or into land shall not enter water.	Complies – while the works area maybe temporarily inundated at high tide, discharges will not change the physical, chemical, or biological condition of the water.
R69(b)	Discharge of contaminants shall not cause an adverse effect beyond the boundary of the property.	Complies – there will be no effects beyond the boundary of the property.
R69(c)	No discharges of hazardous substances.	Complies – there will be no discharges of hazardous substances.
Earthworks (permitted activity standards)		
R99	Earthworks shall not exceed 3000m ² over a 12 month period.	Complies - the proposed earthworks will cover an extent of approximately 2,500m ²
R99(a)	Earthworks shall not result in discharges to the coastal marine area.	Complies – discharges will not change the physical, chemical, or biological condition of the water.
R99(b)	Earthworks will not contribute to instability on adjoining properties.	Complies – the proposed works will improve the stability of adjoining properties.
R99(c)	Works areas are stabilised within 6 months after completion of the earthworks.	Complies – the works area will be stabilised immediately.
R99(d)	Soil disturbance as a result of vegetation clearance will not affect receiving waters.	Complies – the proposal does not involve vegetation removal.

Additions or alterations to existing seawalls (controlled activity standards)		
R165(f)	Any addition shall not add more than 5m in horizontal projection, and more than 1m in vertical projection.	Complies – the proposed structure will extend approximately 5 m in horizontal projection and will not change in vertical projection.
R165(g)	The addition shall not extend further seaward.	The works will extend the toe of the seawall a further 5 m into the CMA – discretionary activity
R165(h)	The activity shall comply with the costal management general conditions.	See below – discretionary activity
Costal management general conditions (Rule 5.7.2)		
5.7.2(a)	The CMA shall not be disturbed greater than what is practically necessary.	Complies – works will be limited to stabilising the existing seawall.
5.7.2(b)	Any disturbance of the foreshore or seabed is removed in 48 hrs	Works will be stabilised as far as practicable at the end of each day, however the construction period will span approximately 2 weeks – discretionary activity
5.7.2(d)	All machinery and equipment shall be removed from the CMA at the completion of the works.	Complies – all plant and machinery will be removed from the CMA prior to each high tide.
5.7.2(e)	There shall be no discharges of contaminants (excluding sediment allowed by clause (f)).	Complies – the works will not result in contaminants entering the CMA as only sandy material will be disturbed.
5.7.2(f)	Discharges of sediment shall not occur over a period exceeding 5 consecutive days (12 hrs each day) and shall not result in a change in horizontal visibility that is greater than 30%, more than 24 hrs after completion of works.	Complies – the works will not result in sedimentation of the CMA as only sandy material will be disturbed.
5.7.2(g)	Works will not result in erosion and scouring of river banks, or flooding of adjoining properties.	Complies – works will not result in erosion or scouring of any river

		banks, or flooding of neighbouring properties.
5.7.2(j)	Demolition materials shall not be used for any purpose in the CMA.	Complies – no demolition material will be used.
5.7.2(k)	Fish passage (including between fresh water and coastal water) shall be provided at all times, unless a temporary restriction is required for construction activities.	Complies – the works will not alter fish passage.
5.7.2(n)	No refuelling or cleaning of equipment shall take place on the foreshore or seabed in the CMA and fuel storage shall not occur at a location where fuel can enter coastal water.	Complies – any necessary refuelling and/or fuel storage will be undertaken outside of the CMA.
5.7.2(p)	Noise shall not exceed 55dB(A) during the day, 45dB(A) at night and 75dB(A) (Lmax) for single events at adjoining residential properties.	Complies – the proposed construction activities will be managed to ensure that noise limits are met.

OPERATIVE REGIONAL COASTAL PLAN

Rule	Requirement	Comment on compliance
Maintenance, repair, replacement, extensions, additions and alterations to structures (permitted activity standards)		
6(1)(b)	The proposed seawall addition will not result in the smallest of a 5% increase to the plan or cross-sectional area of the structure; or 5m increase in horizontal, or 1m increase in vertical projection.	The proposed works will result in an increase of approximately 500% to the area of the structure, a 5 m increase in horizontal projection and no change in vertical projection. – controlled activity
Maintenance, repair, replacement, extensions, additions and alterations to structures (controlled activity standards)		
13(2)(b)	The proposed seawall addition will not result in the smallest of a 20% increase to the plan or cross-sectional area of the structure; or 10m increase in horizontal, or 3m increase in vertical projection.	The proposed works will result in an increase of approximately 500% to the area of the structure, a 5 m increase in horizontal projection and

		no change in vertical projection. – discretionary activity
13(3)(b)	Does not require any blasting or other destruction of bedrock on the foreshore or seabed.	Complies – there will be no blasting required for the works.
	Must also comply with the general standards in Rule 14.1	An assessment of the general standards is provided below – Complies
General standards (14.1)		
14.1.1	Provision shall be made to ensure works do not compromise public safety	Complies – a construction methodology will be prepared and complied with that sets out measures to address public safety.
14.1.3	Noise shall not exceed 55dB(A) during the day, 45dB(A) at night and 75dB(A) (Lmax) for single events at adjoining residential properties.	Complies – the proposed construction activities will be managed to ensure that noise limits are met.
14.1.5	No hazardous substances shall be stored over water in the CMA.	Complies – any necessary refuelling and/or fuel storage will be undertaken outside of the CMA.
14.1.6	All litter and debris shall be removed from the CMA and disposed of appropriately.	Complies – all litter and debris shall be disposed of as soon as practicable.

OPERATIVE REGIONAL SOIL PLAN

Rule	Requirement	Comment on compliance
Soil disturbance on erosion prone land		
2(1)	Works will result in soil disturbance on erosion prone land that exceeds 1,000m ³ of soil within any area of 10,000m ² within a 12 month period.	The volume of earthworks required is approximately 2,200 m ³ – restricted discretionary activity

OPERATIVE REGIONAL PLAN FOR DISCHARGES TO LAND

Rule	Requirement	Comment on compliance
Discharge of contaminants not entering water (permitted activity standards)		
1(b)	With the exception of Rule 2, the discharge is not regulated by any rule in this plan.	Complies – The proposal meets all of the permitted standards. There are no other rules in the plan that are considered to relate to the proposal.
1(c)(i)	Any discharge will not result in a contaminant entering water in the CMA or any other waterbody.	Complies – the works will not result in contaminants entering the CMA as only sandy material will be disturbed.
1(c)(ii)	Any discharge will not create a contaminated site.	Complies – the works will not create a contaminated site.

APPENDIX D ASSESSMENT OF RELEVANT DISTRICT PLAN STANDARDS

PROPOSED KAPITI COAST DISTRICT PLAN

The rules below are considered to have immediate effect in accordance with s86B of the RMA.

Rule	Requirement	Comment on compliance
Earthworks affecting a sensitive natural feature (restricted discretionary activity standards)		
3A.3.8(1)	Earthworks shall not result in a vertical change that will exceed 1m.	Complies – The proposed works will not result in any change to the vertical projection.
3A.3.8(2)	Volume of earthworks shall not exceed 50m ² in any 1 year period.	The earthworks will affect an extent of 2,500 m ² – discretionary activity

OPERATIVE KAPITI COAST DISTRICT PLAN

Rule	Requirement	Comment on compliance
Earthworks in the Residential Zone (permitted activity standards)		
D1.2.1(i)	Earthworks shall not be undertaken on slopes of more than 28°, within 20m of the CMA; within overflow paths; or within fill control areas.	The proposed works will be on a slope that exceeds 28° and will be within 20m of the CMA – discretionary activity
Noise		
12B.1	Noise emission levels shall not exceed the following limits when measured at a point 1 metre from the most exposed facade of any residential building or building for a noise sensitive activity on another site: a) 75 dB LAeq(15 min) 85dB LAmax during the hours of 10am to 10pm; and	Complies – the proposed works will meet the district noise requirements.

	<p>b) 50dB LAeq(15 min) 75dB LAm_{ax} during the hours of 10pm to 10am.</p> <p>Noise resulting from construction, maintenance or demolition work shall be measured and assessed in accordance with NZS6803: 1999 Acoustics – Construction Noise.</p>	
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Rachael Mora

From: Sonia Baker <Sonia.Baker@gw.govt.nz>
Sent: Tuesday, 28 February 2017 10:05 a.m.
To: Rita O'Brien; Iain Dawe
Cc: Paul Halliday; Disna Pathirage
Subject: RE: Temporary block wall - update

Hi Rita,

Thanks for meeting with us on site yesterday morning and for sending through the below email which details the rock armour and the proposed methodology for the temporary block wall.

As detailed in your email, I can confirm that we are comfortable that the works associated with the first four bullet points are undertaken under emergency works (i.e. immediately with consent following in 20 working days), and that a resource consent will follow for the placement of rock armour at the toe of the walls.

Please keep us updated as to when the emergency works are likely to take place and when we can expect to receive the resource consent application for the overall structure including the rock armour. If you have any questions please don't hesitate to contact me.

Kind regards,
Sonia

Sonia Baker | Team Leader, Environmental Regulation
GREATER WELLINGTON REGIONAL COUNCIL | PO Box 11646 Manners Street Wellington 6142
Shed 39, 2 Fryatt Quay, Pipitea, Wellington 6011

T: 04 830 4144 M: 021 901 955
www.gw.govt.nz | www.metlink.org.nz

From: Rita O'Brien [mailto:rita.o'brien@kapiticoast.govt.nz]
Sent: Monday, 27 February 2017 1:40 p.m.
To: Sonia Baker; Iain Dawe
Cc: Paul Halliday; Disna Pathirage
Subject: RE: Temporary block wall - update

Meant to attached sketches – the rock armour in drawing is what was proposed in front of existing timber walls and hasn't been specifically designed to armour the block wall. A hard copy of the full report was given to Sonia this morning.

Cheers

Rita O'Brien
Stormwater and Coastal Engineer
Kāpiti Coast District Council
Tel 04 296 4673
Mobile 027 5555 673
www.kapiticoast.govt.nz

From: Rita O'Brien
Sent: Monday, 27 February 2017 1:24 p.m.
To: 'Sonia Baker'; Iain Dawe
Cc: Paul Halliday; Disna Pathirage
Subject: RE: Temporary block wall - update

Hi Sonia, Iain

Thank you for meeting with Paul and I this morning.

Tonkin & Taylor is engaged to provide advice to Council regarding the performance of the temporary seawall installed as emergency works between 26 and 28 July 2016. Recent on-shore storm events have impacted the bearing capacity of the wall due to liquefaction and scouring. An estimate to do the bear minimum is in excess of \$30,000.

As discussed on site, Council would like to undertake works to repair the damage and improve the level of protection in the short term (1-5 years). The repairs are necessary. In short, we don't want to spend \$30,000+ now when we will be coming back in 6 months' time to reinstate blocks to their designed profile – it would be good to spend more now to get a more robust temporary solution.

What is proposed?

- Align block wall with existing Marine Parade Revetment
- Reinstate the block wall to its designed profile with blocks rotated back 20 degrees to create a sloped wall.
- Backfill void with sand
- Rock armour and filter fabric placed on the crest of the block wall, extending along the adjacent timber walls at 49 Wharemauku Road and 5-6 Raeburn Lance
- Rock armour and filter fabric place at the toe of the block wall, extending along the adjacent timber walls at 49 Wharemauku Road and 5-6 Raeburn Lance

Works will involve vehicular access along the beach and shallow excavations on the beach.

I appreciate your concern that placing rock armour at the toe of the walls may pre-empt decisions to be made regarding the long term solution and *load the dice* in favour of the rock revetment option. Council is committed to providing a long-term solution and acknowledge Greater Wellington Regional Council's preferred long term solution is the sheet piled wall (of those currently proposed). This will be clearly indicated to Councillors in all conversations relating to the subject.

I think there was a level of comfort, that we could undertake the first four bullet points under emergency works (i.e. immediately with consent following in 20 working days), but the placement of rock armour at the toe of the walls will require resource consent. The consents would be bundled together and be of a shorter term for construction and maintenance, i.e. 7 years – to allow Council time to work through all aspects of the project (i.e. design, land ownership and budget (LTP process)).

Can you please confirm?

Cheers

Rita O'Brien
Stormwater and Coastal Engineer
Kāpiti Coast District Council
Tel 04 296 4673
Mobile 027 5555 673
www.kapiticoast.govt.nz

From: Rita O'Brien
Sent: Friday, 17 February 2017 4:48 p.m.
To: tania@movac.co.nz; Phil McCaw (phil@mccaw.net.nz); Roger Daniell (rdaniellnz@live.com); fleming_bill@hotmail.com; paula@paulas.co.nz; b.patterson@clear.net.nz; abowie@xtra.co.nz; henryfam@paradise.net.nz; jocal101@gmail.com; don@kiwisurfer.co.nz
Cc: notifications@gw.govt.nz
Subject: Temporary block wall - update

Hi All

As some of you will be aware, a reasonable portion of the blocks along the central section of the block wall have recently rotated towards the sea.

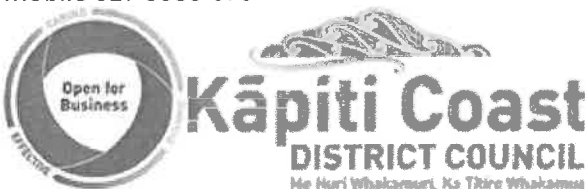
The wall is in no immediate danger of collapsing. Both staff, Tonkin & Taylor and a local contractor have all assessed the situation. We are currently planning on doing a further assessment of Monday to determine the extent of any repairs or remedial works required. In the meantime, we will install barriers and signage alerting the public to the potential instability of the concrete blocks and restrict access along the reserve area behind the wall. Council will continue monitoring the situation over the weekend.

We will keep you informed about what works are proposed next week.

Cheers

Rita O'Brien
Stormwater and Coastal Engineer

Tel 04 296 4673
Mobile 027 5555 673



www.kapiticoast.govt.nz



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Form 1: Application for resource consent

All sections must be completed in full and accompanied by the initial fixed application fee (see section 12) and the relevant activity form (see section 7). Failure to do so may result in your application not being accepted and/or returned. Please note that all information provided in your application is available to the public.

You can lodge your application in any of the following ways:

- By post to PO Box 11646, Wellington or PO Box 41, Masterton
- In person at our Wellington office (Shed 39, 2 Fryatt Quay, Pipitea) or Masterton office (34 Chapel Street)
- By email to info@gw.govt.nz (a signed PDF copy is required)

Office use only:	
FILE REF:	
Doc. No.	
Referred to	Int

1. Applicant's details

Applicant(s) name(s) and address ie, whose name will be on the consent. Note if a private or family trust is the applicant, all the trustees are required to provide contact details and sign the application form (see 4. below)

Name: Kapiti Coast District Council T: Business: 04 296 4673 T: Private:

Address: 175 Rimu Road Fax: T: Mobile: 027 5555673

Address: paraparaumu 5254 Email address: rita.obrien@kapiticoast.govt.nz

The applicant is the:

- Owner Occupier Lessee Prospective Purchaser The Crown
 Network Utility Operator Other Please specify:

2. Agent's details

Agent's name and address Please note that all correspondence will be sent to the Agent as the first point of contact during the application process, unless instructed otherwise

Name: Rita O'Brien T: Business: 04 296 4673 T: Private:

Address: Kapiti Coast District Council Fax: T: Mobile: 027 5555673

Address: 175 Rimu Road Email address: rita.obrien@kapiticoast.govt.nz

3. Property owner's details (if different from above)

Name: T: Business: T: Private:

Address: Fax: T: Mobile:

Address: Email address:

If your proposed activity will take place on land not owned by the applicant, the written approval of the property owner must be provided on a **completed and signed form 1B**.

4. Partnership/unincorporated entity details

For partnerships or unincorporated entities (such as private trusts or unincorporated bodies or societies) you **must** provide details of all authorised partners, trustees or members. Any consent granted will then include these names, and all individuals will be legally responsible for the consent and any associated costs. Should these persons change, then you must notify us.

Full name of person:

Status (eg, partner, trustee):

Address:

Email address:

Phone:

Full name of person:

Status (eg, partner, trustee):

Address:

Email address:

Phone:

Full name of person:

Status (eg, partner, trustee):

Address:

Email address:

Phone:

Include details of any further partners/trustees/members on a separate page if necessary

5. Location of proposed activity

Describe the location of activity and/or property address

refer details included with the

Map reference: NZTM:

AEE

Valuation reference [from rates]:

Include the name of any relevant stream, river or other waterbody to which the application may relate, proximity to any well known landmark, etc. (Note: a location map is required in your activity form.)

Legal description [from rates notice] [eg, Lot 9 DP58809 Block XI]

refer details included with the AEE

6. Description of proposed activity

Tie in block wall with existing Marine Parade revetment - reinstate blocks - backfill voids with sand - place rock armour and filter cloth at crest and toe of blocks, extending along adjacent timber walls at 49 Wharemauku Road and 6-7 Raebern Lane.

7. Consents from the Greater Wellington Regional Council – activity forms you need to fill in

Consent(s) being applied for. You will need to fill in an activity form for each of the following activities: Make sure you attach the forms for your activity

Water:

- Dam/Divert (Form 2a)
- Take and use surface water (Form 2b)
- Take and use groundwater (Form 2c)

Discharge to Land:

- General discharges (Form 3a)
- Agricultural discharge (Form 3b)
- On-site wastewater (Form 3c)

Discharge to Water:

- General discharges (Form 4a)

Discharge to Air:

- Air discharge (Form 5a)

Land Use:

- General river/stream works (Form 6a)
- Bore/well construction (Form 6b)
- Bridge/culvert/pipe (Form 6c)
- Erosion protection structures (Form 6d)
- Land clearing/tracking/logging soil disturbance (Form 6e)

Coastal:

- General coastal (Form 7a)
- Boatshed (Form 7b)
- Swing mooring (Form 7c)

8. Consents from local authorities

Territorial authority in which land is situated:

- | | | | |
|-------------------------|--------------------------|----------------------------------|-------------------------------------|
| Wellington City Council | <input type="checkbox"/> | Kapiti Coast District Council | <input checked="" type="checkbox"/> |
| Hutt City Council | <input type="checkbox"/> | Masterton District Council | <input type="checkbox"/> |
| Upper Hutt City Council | <input type="checkbox"/> | South Wairarapa District Council | <input type="checkbox"/> |
| Porirua City Council | <input type="checkbox"/> | Carterton District Council | <input type="checkbox"/> |

Do you require any other resource consents from your local council? Yes No

If yes, please list: Earthworks within 20m of waterbody

Have these consents been applied for? Yes No

9. Other documentation

Please list any documents in addition to your application forms that form part of your application. Note: if multiple other documents exist, please attach a separate sheet of paper.

No other documents

Reports Title Raumati Seawall Temporary Works Repair (27 April 2017)

Plans Title

Other documents Title

Title

10. Pre-application advice

Please list any pre-application meetings or advice (verbal and/or written) you have had with GWRC below:

- Meeting(s) – with who and when? Sonia Baker, iain Dawe - 27 Feb, site; 16 March, GW
- Verbal advice – from who and when?
- Written advice – from who and when? e-mail from Sonia Baker attached
- Other (eg, submitted draft application/AEE)

11. Consultation and written approval of affected persons

Consultation with all persons potentially affected by your activity prior to lodging your application may result in considerable time and cost savings.

Non-notified applications

Non-notified consents are for activities which have minor effects on the environment. For your activity to be considered on a non-notified basis you must consult and obtain written approval from all persons potentially affected by your activity (eg, neighbours, iwi, Fish and Game Council, Department of Conservation). If you are unsure who may be an affected party, please call us. **Non-notified consents are significantly cheaper and quicker to process.**

Limited notified and fully notified applications

Notified consents (either limited notified or fully notified consents) are for activities which do not meet requirements in the RMA for processing on a non-notified basis.

Please provide any consultation details and written approvals obtained in the space provided below.

Consultation details

Have you consulted with iwi? Yes No

If so, who did you consult? Te Ātawa ki Whakarongotai

Who else have you consulted? on-going discussions with adjacent landowners

on-going discussions with adjacent landowners

What was their response? refer to attached AEE

refer to attached AEE

How have you addressed any concerns they may have had? discussions are on-going

discussions are on-going

Written approval of affected parties

If you have obtained the signature of affected persons please give their details below. Please note that for us to accept the approvals they must each complete and sign form 1B.

Name	Address	Contact details (phone, email etc)

12. Fees and charges

Non-notified initial fixed application fees including GST (please tick one or more)

Discharge permit	<input type="checkbox"/> Land \$2,328.75	<input type="checkbox"/> Water (other) \$3,432.75	<input type="checkbox"/> Land/Water (earthworks) \$3,432.75	<input type="checkbox"/> Air \$1,500.75
Water permit	<input type="checkbox"/> Take (new) \$2,052.75	<input type="checkbox"/> Take (renewal) \$1,224.75	<input type="checkbox"/> Dam/Divert \$1,086.75	
Land use consent	<input type="checkbox"/> Bore \$ 465.75	<input type="checkbox"/> River works \$1,155.75	<input type="checkbox"/> Land clearing/disturbance/logging \$1,776.75	
Coastal permit	<input type="checkbox"/> Mooring \$ 672.75	<input type="checkbox"/> Boatshed \$ 672.75	<input checked="" type="checkbox"/> Other \$1,155.75	

- Notes:
1. Where there is more than one application required for the same proposal, an initial fixed application fee is required for each application
 2. The initial fixed application fee is the average cost of processing an application type. Final processing costs are based on actual and reasonable time and disbursements spent processing your application.
 3. Contact the Greater Wellington Regional Council for information about notified initial fixed application fees

Payment method (please tick one)

Cheque (to be lodged with application documents)

Internet banking to:

Greater Wellington Regional Council – National Bank account 06-0582-0104781-00

Date of payment: 3 May 2017 Reference details used: Consents - KCDC

Note: for reference details please quote "Consents" and the applicant name

Cash/Eftpos (to be made at Wellington or Masterton office)

Future payments

Any additional consent processing charges and consent monitoring charges will be invoiced directly to the applicant, unless instructed otherwise below:

13. Applicant's declaration

I/we hereby certify that, to the best of my/our knowledge and belief, the information given in this application is true and correct.

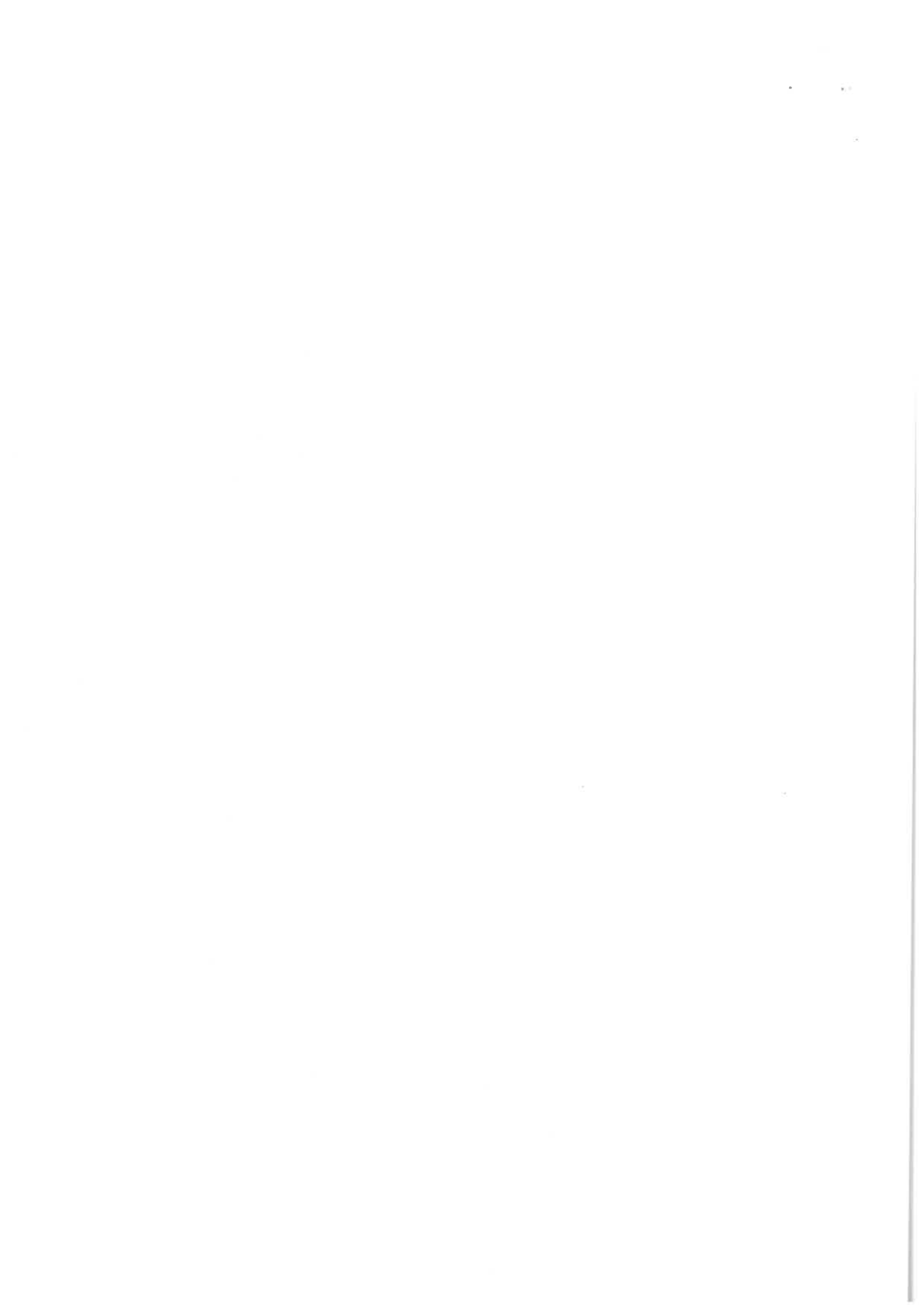
I/we understand that the Council may charge me/us for all costs actually and reasonably incurred in processing this application and, if granted, for any subsequent monitoring charges. Subject to my/our rights under sections 357B and 358 of the RMA to object to any costs, I/we undertake to pay all and future processing costs and monitoring costs incurred by the Council. Without limiting the Council's legal rights, if any steps, including the use of debt collectors, are necessary to recover unpaid costs, I/we agree to pay all costs associated with recovering those costs. If this application is made on behalf of a trust (private or family), a society (incorporated or unincorporated) or a company in signing this application I/we are binding the trust, society or company to pay all the above costs and guaranteeing to pay all the above costs in my/our personal capacity.

Full name: Rita O'Brien

Date: 2 May 2017

Applicant's signature: 

(or person authorised to sign on behalf of the applicant)





7a Coastal permit application

Please answer all questions fully. The questions provide a guide in order to satisfy the minimum information requirements that must be included with your application as prescribed in Schedule 4 of the Resource Management Act 1991 (RMA). Depending on the scale of your proposed activity, more detailed information and an Assessment of Environmental Effects (AEE) will be required to support the resource consent application.

Officers from the Greater Wellington Regional Council's (GWRC) Environmental Regulation department are available to assist with filling out this form or to clarify information to include with your application. Up to 1 hour of free pre application advice is available to you.

This form is required to be filled out in conjunction with Form 1 Resource Consent Application

Separate application forms should be used for any discharge of contaminants or water into coastal marine area (Form 4a). If you are applying to replace an existing consent for a boatshed please fill in application form 7b, or if you are applying for a swing mooring please fill in application form 7c.

Further information is provided at the end of this form on whether your activity falls within the coastal marine area.

Part A: General information on nature and scale of activity

1. Is this application a renewal of an existing consent?

Yes No If Yes, what is the existing consent number? WAR/WGN _____

2. What activity will you be undertaking?

works started under emergency works - see AEE for details

3. Are you:

- | | |
|--|---|
| (1) Reclaiming or draining? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| (2) Erecting, reconstructing, placing, altering, extending, removing or demolishing any structure? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| (3) Disturbing the foreshore or seabed by excavating, drilling or tunnelling? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| (4) Depositing any substance? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| (5) Destroying, damaging or disturbing the foreshore or seabed? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| (6) Introducing or planting any exotic or introduced plant? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| (7) Occupying an area of the foreshore or seabed? (including temporary activities which restricts public use and access) | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| (8) Removing sand, shingle or other material? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| (9) Undertaking any activity that will generate noise? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |

4. Why do you need to undertake this activity?

To protect Council assets (i.e. sewer main located between 63 Wharemauku Road and 7 Raeburn Lane

5. Are there any alternative locations or methods for activity? If yes, where or how and why have you chosen this over others?

n/a

6. What is the area of foreshore and seabed affected by your proposal? Including width, depth, height

see AEE for details

7. Construction/works methodology

Please provide a step by step construction methodology for the works including:

- Details of the works that will be undertaken to prepare the site
- Details of your proposed methodology for the works including the machinery and material to be used, whether the works are a one off or ongoing and if ongoing how frequently, whether the works will be staged etc
- Details of mitigation measures proposed to minimise the adverse effects of the works including ecological effects, sedimentation, and effects on other coastal users
- Details of site rehabilitation and ongoing monitoring once the works are complete

see AEE for details

[Continue on a separate page if necessary]

8. Locality map

Please show the location of you proposed activity. Alternatively you may wish to attach a plan/aerial photograph showing the above information.

see AEE for details

9. Is the activity: permanent or temporary ?

10. What is the proposed commencement date of the activity?
within one month of receiving consent

11. What is the proposed completion date or duration of activity?
see AEE for details

12. Who will be undertaking the activity and supervising the activity?
works to be tendered

13. What are the proposed hours of operation/construction?
see AEE for details

Part B: Assessment of effects on the environment (AEE)

As a general guide the environmental assessment should include as a minimum the following:

- A description of the existing surrounding environment.
- A description of the actual or potential impacts your proposal will have on the surrounding environment (including ecological, coastal processes, water quality, flooding, erosion or scour, landscape or visual, public access, recreational, historical or cultural impacts).
- A description of the mitigation methods to be used to help prevent or reduce any of the impacts identified above.

1. Please describe the environment surrounding the proposed location?

see AEE for details

2. Within a reasonable distance of the activity are there any:

- | | | |
|---|---|--|
| a) Obvious signs of biota (e.g. fish, eels, insect life, aquatic plants)? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| b) Areas where food is gathered (e.g. fish, kaimoana)? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| c) Wetlands (e.g. swamp areas)? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| d) Waste discharges (e.g. from rural sources, industries, sewage plants)? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| e) Recreational activities carried out (e.g. swimming, fishing, canoeing, boating)? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| f) Areas of particular aesthetic or scientific value (e.g. archaeological sites)? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| g) Will hazardous or toxic chemicals be used or stored on site (e.g. fuel)? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| h) Will the water quality be affected? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| i) Will access to the coastal area be affected? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| j) Areas or aspects of significance to iwi that you are aware of? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| k) Will the proposed activity increase the risk of flooding or inundation? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| l) Residential dwellings? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |

3. If you have answered yes to any of the above, describe what impact your proposal will have:

see AEE for details

[Continue on a separate page if necessary]

4. What steps do you propose to take to avoid, remedy, or mitigate these effects?
see AEE for details

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Part C: Assessment against statutory documents

1. Part 2 of Resource Management Act 1991 (RMA)

Have you provided an assessment against Part 2 (Purpose and Principles) of the RMA?
<http://www.legislation.govt.nz/act/public/1991/0069/latest/DLM231904.html>
see AEE for details

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2. Regional Policy Statement (RPS) & Regional Coastal Plan (RCP)

Have you provided an assessment of the proposal against the relevant objectives, policies and rules of the Regional Policy Statement (<http://www.gw.govt.nz/rps/>) and Regional Coastal Plan (<http://www.gw.govt.nz/guide-to-the-regional-rules-and-regulations/>)?
see AEE for details

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3. Proposed Natural Resources Plan (PNRP)

Have you provided an assessment of the proposal against the relevant objectives, policies and rules of the Proposed Natural Resources Plan? <http://www.gw.govt.nz/proposed-natural-resources-plan/>
see AEE for details

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4. Other relevant statutory documents

Have you provided an assessment against all other relevant statutory documents? e.g. New Zealand Coastal Policy Statement (<http://www.doc.govt.nz/about-us/science-publications/conservation-publications/marine-and-coastal/new-zealand-coastal-policy-statement/new-zealand-coastal-policy-statement-2010/>)

see AEE for details

5. Permitted activities

Will you be undertaking any permitted activities as part of the proposed works? (<http://www.gw.govt.nz/regional-plans-policies-and-strategies/>)

see AEE for details

6. Other activities that are part of the proposal

Are there any other activities that are part of the proposed activity which may require consent?

none

7. Value of investment

If you are applying to replace an existing consent, please provide an assessment of the value of the investment to which the activity relates.

n/a

Part D: Monitoring and management of your activity

1. Who is responsible for the maintenance or management of your activity after it has been implemented?

Kapiti Coast District Council

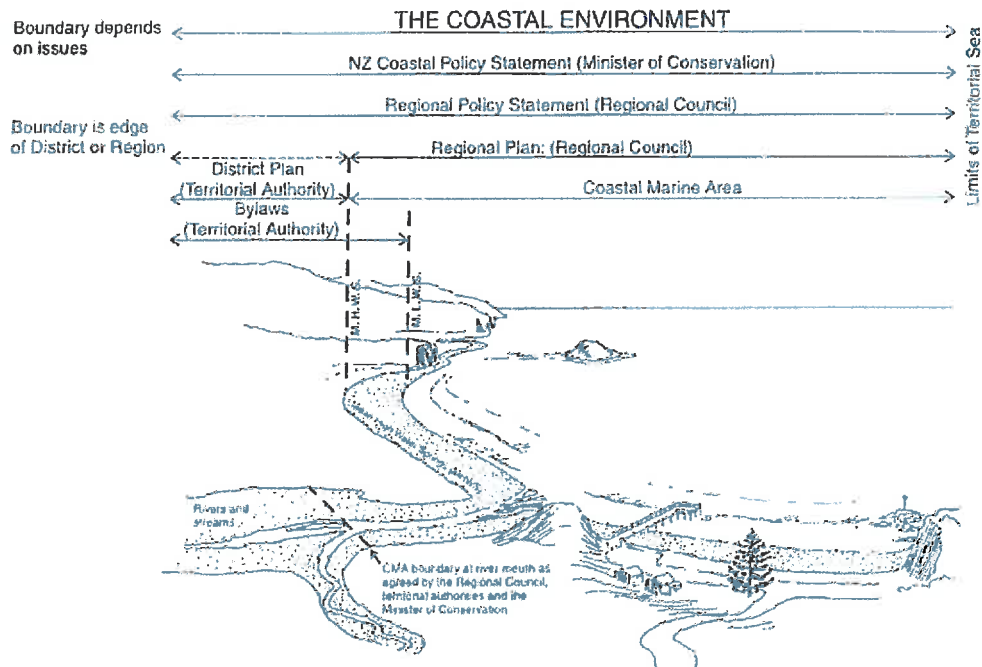
2. Do you propose to monitor during and/or after completion of your activity? If yes, describe the monitoring (include details of what will be monitored, responsible persons, frequency of monitoring)

yes - both Council and adjacent landowners - after storm events and on regular schedule (monthly)

3. How will maintenance be undertaken if required? (include any contingency or management plans prepared or details of potential ways in which maintenance would be undertaken)
see AEE for details
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Do you need to make a coastal permit application?

You may need a coastal permit if your proposed activity will occur within the coastal marine area. The coastal marine Area (CMA) includes the foreshore, the seabed, the sea surface and the air above the sea from the mean high water springs (MHWS) mark to the 12 mile limit as illustrated below:



MHWS means the average of each pair of successive high waters during that period of about 24 hours in each semi-lunation (approximately every 14 days, when the range of tides is the greatest). Visually this level is generally close to being the "high water mark" where debris accumulates on the shore annually.

The CMA can also include river mouths and estuaries. Where the MHWS mark crosses a river, the landward boundary at that point shall be whichever is lesser of 1 kilometer upstream from the mouth of the river or the point upstream that is calculated by multiplying the width of the river mouth by 5.

Such activities in the CMA which require a coastal permit include the following:

- Building or altering any structure on the foreshore or seabed (e.g. seawall, jetty, culvert, stormwater outfall, swing or pile mooring)
- Undertaking works which will alter the foreshore or seabed or adversely affect marine plants or animals or their habitat (e.g. extracting sand, reclamation, dredging, disturbance, deposition of material)
- Occupying land of the Crown in the coastal marine area (with for example structures, moorings, special activities)
- Introducing or planting any exotic or introduced plant in, on, or under the foreshore or seabed
- Noisy activities (e.g. fireworks displays, power boat competitions)
- Any other activity which is not permitted by the Regional Coastal Plan