

AGENDA/KAUPAPA



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MEMBERSHIP: Vanessa Hamm (Commissioner), Alan Watson (Commissioner)

HEARINGS Committee

DATE: Thursday 11 May 2023

TIME: 9:00AM

AT: Te Ruma Komiti (Committee Room), Awarua, Fitzherbert Street, Gisborne

AGENDA – OPEN SECTION

- 1. Apologies2
- 2. Declarations of Interest.....2
- 3. Leave of Absence.....2
- 4. Reports of the Chief Executive and Staff for DECISION3
 - 4.1. **23-45** Tuahine Crescent3

Regulatory Hearing Panel

Reports to: Council

Membership: The Chief Executive and or Directors with relevant delegation may appoint, for the purposes of determining a matter on a case-by-case basis:

- a Hearings Panel comprising a Chairperson and/or Independent Commissioners
- an Independent Commissioner to decide the matter alone.

Meeting frequency: As required

Purpose

To conduct hearings and/or determine under delegated authority applications for consent and all other matters required to be heard and determined by way of hearing under the Resource Management Act 1991.

Terms of Reference

- Conduct hearings and make decisions of a quasi-judicial nature on behalf of the Council on regulatory matters that the Council is legally empowered or obligated to hear and determine under the Resource Management Act; and
- To exercise this function in accordance with:
 - the applicable legislation;
 - the Council's corporate strategies, policies and plans; and
 - the principles of administrative law and natural justice.
- Make recommendations to the Council or a Committee where the matter is one which may only be delegated to a Council Committee (such as approving a proposed plan).
- The Regulatory Hearing Panel is not a committee for the purposes of Schedule 7 of the Local Government Act

Power to Act

To exercise any powers and functions necessary to fulfil the role and purpose for which the Panel or decision-maker are appointed.

For the avoidance of doubt, these delegations do not restrict any other existing delegations to any hearings commissioners and staff relating to decision-making under the Resource Management Act 1991.

Power to Recommend

To Council and/or any Council committee as it deems appropriate.

4. Reports of the Chief Executive and Staff for DECISION



23-45

Title: 23-45 Tuahine Crescent
Section: Environmental Services & Protection
Prepared by: Sonia August - Resource Management Systems Advisor
Meeting Date: Thursday 11 May 2023

Legal: Yes

Financial: No

Significance: **Low**

Report to HEARINGS Committee for decision

PURPOSE - TE TAKE

The purpose of this report is to provide the section 42A Officer's report and an addendum to that report for a consent application to construct a revetment wall at the toe of the dune below 4, 6 and 8 Tuahine Crescent to protect private land holdings from coastal erosion.

SUMMARY - HE WHAKARĀPOPOTOTANGA

The report and addendum for the RMA Hearing – Cave-468-Tuahine Crescent-LU-2019-108876-00, LL-2019-2019-10969600, EU-110398-00 is **attached**.

The decisions or matters in this report are considered to be of **Low** significance in accordance with the Council's Significance and Engagement Policy.

RECOMMENDATIONS - NGĀ TŪTOHUNGA

That the Hearings Committee:

1. **Notes the contents of this report.**

Authorised by:

Joanna Noble - Chief of Strategy & Science

Keywords: resource consent, section 42A officers report, revetment wall, tuahine crescent wainui beach

ATTACHMENTS - NGĀ TĀPIRITANGA

1. Attachment 1 - FINAL & SIGNED s 42 A Hearings Report - Jun 2020 - Cave - 4 6 8 Tuahine Crescent - L U-2019-108876-0 [23-45.1 - 40 pages]
2. Attachment 2 - FINAL & SIGNED Addendum to s 42 A Hearings Report - Sep 2022 - Cave - 4 6 8 Tuahine Crescent - L U-2 [23-45.2 - 39 pages]



Title: **Section 42A Officer's Report**
 Section: **Environmental Services & Protection**
 Prepared by: Todd Whittaker (Consultant Planner)
 Meeting Date: 30 June 2020

Applicant:	Simon Cave
Location:	4,6 and 8 Tuahine Crescent, Wainui Beach
Legal Description:	Lots 5, 6, and 7 DP 3216
District and Regional Plans:	Te Papa Tipu Taunaki o Te Tairāwhiti – Tairāwhiti Resource Management Plan (Tairāwhiti Plan)
Proposal:	To construct a revetment wall at the toe of the dune below 4, 6 and 8 Tuahine Crescent to protect private land holdings from coastal erosion

Report to Hearings Commissioner for decision

Resource consent is sought to construct a revetment wall at the toe of the dune below 4, 6 and 8 Tuahine Crescent to protect private land holdings from coastal erosion.

The following report outlines the proposal and provides an assessment as to the actual and potential effects on the environment. The report also addresses the relevant planning instruments and an assessment against Part 2 of the Act is also included.

My assessment concludes that the environmental effects are no more than minor.

In my opinion, there is limited scope or support for hard protection structures that are designed to protect private property within the relevant planning instruments. This application seeks consent to replace an existing revetment wall and the footprint of the proposed wall will not encroach on to the Coastal Marine Area. I consider that the while the proposed revetment wall falls short of being supported by the planning instruments, it is not inconsistent or contrary to these instruments.

The application in my opinion is finely balanced. Given the specific context of this application and the scale and nature of proposed works, **I have recommended that the application be approved.**

RECOMMENDATION

That the Hearings Commissioner

1. Approves resource consent to the application by Simon Cave to construct a revetment wall at the toe of the dune below 4, 6 and 8 Tuahine Crescent to protect private land holdings from coastal erosion pursuant to Sections 104 and 104D of the Resource Management Act 1991.

Authorised for Distribution:



Ian Petty
Consents Manager (Acting)



Helen Montgomery
Director of Environmental Services and Protection

EXECUTIVE SUMMARY

1. Simon Cave (the applicant) has lodged an application to construct a revetment wall at the toe of the dune below 4, 6 and 8 Tuahine Crescent to protect private land holdings from coastal erosion.
2. It is notable that Gisborne District Council (GDC) applied for a similar proposal in 2017. This application was declined by an Independent Commissioner and it is apparent the current application has sought to amend the design and scale of the revetment wall to address some of the issues that led to the earlier decision to decline consent.
3. The application was publicly notified and this process attracted 87 submissions. The vast majority of submissions are in support of the application being granted. Many of these submissions are from property owners at Wainui Beach who are keen to promote hard protection structures.
4. The resource management issues affecting risk management and coastal hazard processes are complex and given the impacts and repercussions for beach front landowners, the stakes are very high. GDC has recognised this and engaged with the community to develop the Wainui Beach Erosion Management Strategy (WBEMS). While the proposal is consistent with the current WBEMS, GDC is seeking to revisit the strategy.
5. In my opinion, the application has been designed in a manner which will have no more than minor effects on the environment and appropriate conditions can be imposed to mitigate effects. A technical review has queried the design of the wall and whether the assumptions around sea level rise are too conservative. This matter can be addressed by the applicant in pre-circulated evidence and/or at the hearing.
6. The national and regional planning instruments discourage hard protection works and a *managed retreat* approach is favoured. In my opinion, there is some tension with these planning instruments. However, these planning instruments do not exclude the opportunity to construct revetment walls in specific circumstances.
7. In my opinion, the application is finely balanced. Having considered the specific context of this site and application I consider that consent can be granted subject to appropriate conditions.

REPORT STATUS

8. This report is a s42A Report prepared under the Resource Management Act 1991 (RMA). It provides an independent assessment and recommendations on the application by Simon Cave to construct a revetment wall at the toe of the dune below 4, 6 and 8 Tuahine Crescent to protect private land holdings from coastal erosion.
9. This report does not represent any decision on the application and it only provides the professional assessment and opinions of the report author. This report will be considered by the Independent Commissioner in conjunction with all other technical evidence and submissions which have been received to the application. It does not have greater weight

than any other material or submissions that may be presented and considered by the Commissioner.

REPORTING AUTHOR

10. This report has been prepared by Todd Whittaker who works as an independent planning consultant and Director of Planning Works Limited. I have a Bachelor of Resource and Environmental Planning from Massey University, 1994 and I am a full member of New Zealand Planning Institute (NZPI). I have 25 years of professional experience in the resource management field and have previously served on the Board of the NZPI.
11. I have read and complied with the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2014 in preparing this report. I agree to comply with it in presenting this report and any evidence at the hearing. The opinions and assessment within this report are within my area of expertise, except where I have stated my reliance on other identified evidence. I have considered all material facts that are known to me which might alter or detract from the opinions I express in this evidence.
12. In preparing this report I have referred and taken into account the technical reports and advice from the following technical experts:

Dr Willem de Lange Dr de Lange is a research scientist employed by the University of Waikato with his specialist areas including coastal oceanography, coastal processes and climatic hazards; tsunami and storm surge prediction and mitigation.

Paul Murphy Paul Murphy is the Team Leader Environmental Science for the Gisborne District Council. Paul has significant experience in the technical assessment of applications involving coastal and riparian margins.

S.42A REPORT - TABLE OF CONTENTS

S.42A Planning Report.....Pages 1 - 38

APPENDIX 1

Technical Review - Dr Willem de Lange (Coastal Processes)

APPENDIX 2

Technical Memo – Mr Paul Murphy (Coastal Works)

APPENDIX 3

Draft Conditions

1 APPLICATION DETAILS

Applicant:	S Cave
Property Address:	4, 6 and 8 Tuahine Crescent
Legal Description:	Lots 5, 6 and 7 DP 3216
District Plan:	Te Papa Tipu Taunaki o Te Tairāwhiti – Tairāwhiti Resource Management Plan
Zoning:	General Residential
Overlays:	Coastal Management: Significant Values Management Area Coastal Management: Outstanding Landscapes Coastal Management: Coastal Environment Natural Hazards: Stability Alert – Site Caution Natural Hazards: Coastal Hazard Overlays – Extreme Risk Historic and Cultural Heritage: Heritage Alert Overlay Land Management: Land Overlays 2 and 3
Activity Status:	Non-Complying
Proposal:	To construct a revetment wall at the toe of the dune below 4, 6 and 8 Tuahine Crescent to protect private land holdings from coastal erosion

2 PROPOSAL

13. This application seeks land use consent for a private seawall to protect the properties located at 4, 6 and 8 Tuahine Crescent, Wainui Beach. The proposed seawall is located at the bottom of a coastal bluff with residential properties occupying the land above the bluff.
14. It is proposed to replace an existing seawall which is largely dilapidated and in a poor state of repair. The application drawings show the new proposal and its profile in relation to the existing structure (refer **Figure 1** below). The application also includes further details on the footprint of the proposed revetment wall and the earlier proposal which was declined.
15. The applicant has designed the wall to not encroach into the Coastal Marine Area with the toe of the revetment wall being within the footprint of the existing wall. It is noted that the front of the existing wall has been defined as the boundary of the CMA based on the normal sand profile and assessment of MHWS. This is considered to be acceptable with acknowledgment that the CMA boundary may fluctuate over time and be subject to climatic conditions and coastal processes¹.

¹ It is also noted that the planning maps show the CMA on the landward side of the existing revetment wall.

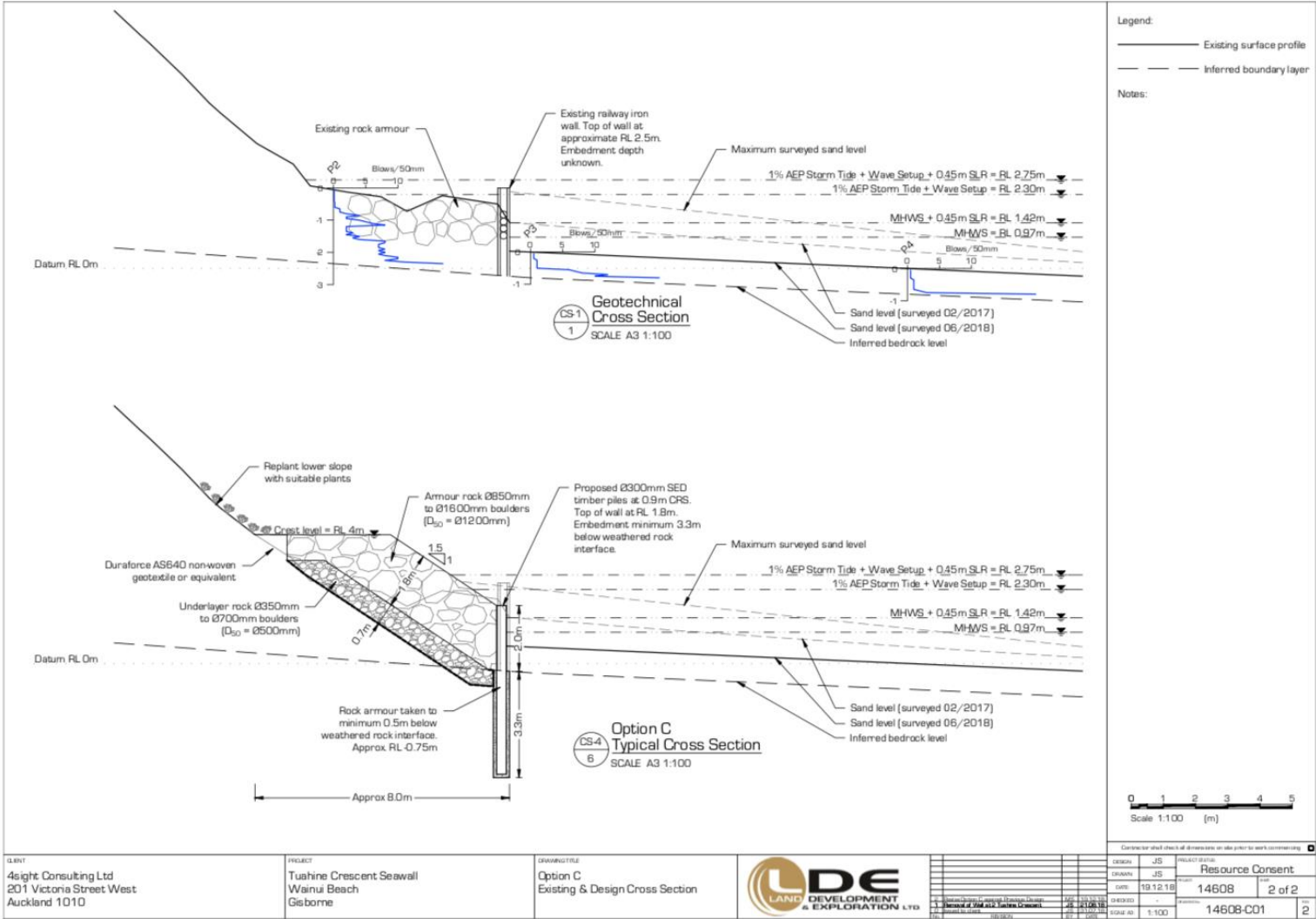


Figure 1: Application drawings of the existing and proposed sea wall.

16. The proposed wall comprises of a wooden timber pile front wall with rock armour built up to a height of RL4m, and is approximately 24m long. Some planting mitigation is proposed along the top of the rock armour.
17. The application includes an assessment of environmental effects, a landscape assessment and coastal engineering details, and assessment of the proposed sea wall design.
18. The application was amended on 14 August 2019 to include a proposal for a term of the consent aligning with the term of the existing revetment wall located to the south of the site. The consent term recorded for this wall is to 31 December 2040. It is also noted that while the original application was in the name of Simon Cave and Annabel Reynolds, this was subsequently amended such that Simon Cave is now the sole applicant.

3 SITE AND LOCALITY

19. The site is located at the southern end of Wainui Beach and below the bluff that extends up to the residential dwellings along Tuahine Crescent. A concrete groyne is located to the south of the existing wall. The existing site and seawall is shown in **Figures 2 and 3**.



Figure 2: Existing sea wall from public access steps



Figure 3: Site from Wainui Beach looking south. (Source – Application Report)

4 PLAN RULES AND ACTIVITY STATUS

20. An assessment of the proposal's compliance with the relevant rules of the Tairāwhiti Resource Management Plan and/or a National Environmental Standard(NES)has been undertaken. It is noted that the previous regional policy statement, regional plans and district plan have been amalgamated to form one plan, *The Tairawhiti Resource Management Plan*² (Tairawhiti Plan).
21. The following rules are relevant to this proposal:
- The construction of a seawall which is not provided for in residential zones. Pursuant to DD1.6.1(32), consent is required as a non-complying activity.
 - The proposal will involve more than 10m³ soil/land disturbance in the Land Overlay 3. Pursuant to C7.1.6(3), consent is required as a restricted discretionary activity.
 - The proposal involves the construction of a seawall to mitigate the effects of coastal hazards in the Coastal Hazard 1 Overlay. Pursuant to C8.5.7(1), consent is required as a discretionary activity.
 - The proposal involves earthworks that will alter natural dune landform in the Coastal Hazard 1 Overlay. Pursuant to C8.5.7(3), consent is required as a discretionary activity.
 - The proposal involves removal of the existing seawall in the Coastal Hazard 1 Overlay. Pursuant to C8.5.7(4), consent is required as a discretionary activity.

² The Tairawhiti Plan replaced and consolidated the previous set of seven district and regional plans and policy statement into one plan which took effect from 30 June 2017. The Tairawhiti Plan was not subject to the Schedule 1 process for plan changes and therefore the statutory provisions regarding the timing and effect of rules do not apply.

- The proposal may involve land disturbance in the Outstanding Landscape Area which will disturb more than 10m³ of soil. Pursuant to C9.1.6(12), consent is required as a restricted discretionary activity

22. Overall, the activity for the proposal is Non-Complying which is the highest activity status mandated under the rules of the Tairāwhiti Plan. It is noted that the non-complying status is a function of the generic rule for any other activity not otherwise listed.

5 SUBMISSIONS

23. Eighty seven submissions were received to the public notification process, including four submissions which were received after the submission period formally closed. The Commissioner will need to make a formal decision on whether these late submissions can be accepted. The applicant has advised that they do not oppose the late submissions being accepted. Late submissions were received from:

Torben Hitchfield	26 Golf Road, Mount Maunganui	Support	17 March 2020
Raymond Smith	59 Murphy Road, Wainui	Support	19 March 2020
Arthur Young	8 Wanganella St, Birkenhead	Support	20 May 2020
Helen Melrose	8 Wanganella St, Birkenhead	Support	20 May 2020

Table 1: Late Submissions for determination.

24. It is noted that the submissions from Arthur Young and Helen Melrose were only received on 20 May 2020, which is a significant time period after the formal close date of 13 March 2020. No explanation has been provided for this lateness, however, these were received in time to be included in this S.42 planning report.

25. The vast majority of submission are supportive of consent being granted with only four submissions opposing or being neutral to the application. It appears that many of the supporting submissions are from landowners with property at Wainui Beach, and who may be seeking to benefit from coastal protection works. A summary of the comments and reasons put forward in the supporting submissions are as follows:

- The scale and profile of the revetment wall is well designed and appropriate for the site,
- Minimal impact on beach users and access,
- The wall is sited and located on an existing revetment wall structure, which has deteriorated and needs replacing,
- Granting consent is in the best interest of the public and property owners,
- The works will remove existing health and safety issues with exposed rail way irons,
- Wainui Beach is a dynamic beach and the sea wall will protect the beach system,
- There has been poor communication from Council regarding the maintenance of existing structures and who should pay for/organise these works,

- The Wainui Beach strategy needs to be updated to provide clear direction and provision for coastal protection structures,
- Council should pay for the works,
- Property owners should have the right to defend and reinforce their property,
- Sea walls are used around the world and New Zealand to protect public and private property and should be allowed at Wainui Beach,
- A continuous sea wall will protect all the beach and banks,
- The proposed wall will provide protection taking into account climate change and sea level rise,
- Planting will provide additional mitigation,
- The proposal has support from Ngati Porou and Ngati Oneone,
- Local rocks should be utilised to reduce costs and rates,
- Granting consent will provide for social and economic well-being,
- Wall end effects needs to be mitigated to ensure no increased risk to the properties to the side of the wall,
- The works will help to maintain the shape of the beach, and
- The works are supported by legal decisions and previous technical reports.

26. The submissions that do not support or are neutral to the application discuss the following matters;

- Granting consent to this application will set a precedent for other applications,
- There are potential issues with how the wall ties into the existing wall and potential effects on other property,
- Have other measures been considered as an alternative to hard protection works?
- Concerns over the construction period and restrictions on public access,
- Managed retreat is the appropriate response to coastal hazard mitigation,
- The application should be declined in accordance with previous decisions,
- Council should only allow property owners to fix (maintain) existing structures and not build new or upgraded walls,
- The existing structure appears to be offering an appropriate degree of protection, is there a need for the new wall?
- The works may compromise the protection offered by existing vegetation up the bank,
- These works may affect the Council provision for the public access and whether this should be retained,
- There does not appear to be evidence of sea level rise in the design,
- The works are only supported should they provide a definite mitigation of the coastal erosion risk including to properties along the beach,

6 STATUTORY PROVISIONS

27. The Resource Management Act 1991 (RMA) sets out the statutory provisions for the assessment and determination of all such applications with Sections 104 and 104B providing the primary assessment and decision-making framework.

Section 104 Consideration of applications

- (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 104B Determination of applications for discretionary or non-complying activities

- After considering an application for a resource consent for a discretionary activity or non-complying activity, a consent authority—*
- (a) *may grant or refuse the application; and*
 - (b) *if it grants the application, may impose conditions under section 108.*

28. For non-complying applications, Section 104D also applies;

Section 104D Particular restrictions for non-complying activities

- (1) *Despite any decision made for the purpose of notification in relation to adverse effects, a consent authority may grant a resource consent for a non-complying activity only if it is satisfied that either—*
- (a) *the adverse effects of the activity on the environment (other than any effect to which section 104(3)(a)(ii) applies) will be minor; or*
 - (b) *the application is for an activity that will not be contrary to the objectives and policies of—*
 - (i) *the relevant plan, if there is a plan but no proposed plan in respect of the activity; or*
 - (ii) *the relevant proposed plan, if there is a proposed plan but no relevant plan in respect of the activity; or*
 - (iii) *both the relevant plan and the relevant proposed plan, if there is both a plan and a proposed plan in respect of the activity.*

29. All sections of the RMA are subject to Part 2, which includes the purpose and principles of the legislation. Traditionally this has allowed for a final and broad assessment of the merits of an application in accordance with the purpose and principles of the RMA before determining whether consent should be granted or refused. This approach is now subject to case law³ which has established that reference to Part 2 is only permissible in specific

³ RJ Davidson Family Trust v Malborough District Council (2017) NZHC52.

circumstances. I discuss this further in Section 10 of this report. For completeness, I quote Section 5 and the purpose and principles of the Act as follows;

Section 5 Purpose

- (1) *The purpose of this Act is to promote the sustainable management of natural and physical resources.*
- (2) *In this Act, sustainable management means 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 well-being 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*

30. Of key significance to the proposal is also Section 6 which identifies matters of national importance;

Section 6 Matters of national importance

In achieving the purpose of this Act, 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 the following matters of national importance:

- (a) *the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development;*
- (b) *the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development;*
- (c) *the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna;*
- (d) *the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers;*
- (e) *the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga;*
- (f) *the protection of historic heritage from inappropriate subdivision, use, and development;*
- (g) *the protection of protected customary rights;*
- (h) *the management of significant risks from natural hazards.*

31. Section 7 identifies 'Other matters' which may also be relevant to the assessment of resource consent applications;

Section 7 Other Matters

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to—

- (a) *kaitiakitanga:*
 - (aa) *the ethic of stewardship;*
 - (b) *the efficient use and development of natural and physical resources;*
 - (ba) *the efficiency of the end use of energy;*

- (c) the maintenance and enhancement of amenity values:
- (d) intrinsic values of ecosystems:
- (e) [Repealed]
- (f) maintenance and enhancement of the quality of the environment:
- (g) any finite characteristics of natural and physical resources:
- (h) the protection of the habitat of trout and salmon:
- (i) the effects of climate change:
- (j) the benefits to be derived from the use and development of renewable energy.

32. Section 8 provides guidance on decision-making in accordance with the principles of the Treaty of Waitangi.

Section 8 Treaty of Waitangi

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).

7 ASSESSMENT OF ENVIRONMENTAL EFFECTS

33. For the purpose of this report, the assessment of effects is presented under eleven topics being:

- Design and Scale of Proposed Revetment Wall
- Natural Character and Coastal Landscape
- Coastal Processes
- Wall End Effects
- Public Amenity, Access and Recreational Space
- Ecological Effects
- Cultural and Heritage Effects
- Construction Effects
- Positive Effects
- Funding of Works
- Assessment Criteria and Performance Standards

7.1 Design and Scale of the Proposed Revetment wall

34. It is clear from the application material, and the design and scale of the revetment wall, that the applicant has taken into account the earlier Commissioner decision and has produced a design which has a smaller footprint and profile. The current proposal therefore is able to demonstrate a reduced scale of adverse effects in terms of its landscape and natural character effects. In addition, the toe of the revetment wall no longer protrudes into the CMA area forward of the existing railway irons.
35. In my view this is a positive response and places the current proposal in a more favourable standing in terms of the physical effects of the revetment wall. I will discuss these physical effects more in detail in the following sections of this report.

36. The applicant has offered a term of consent to clearly incorporate a temporary time horizon for the works that reinforces and recognises the wider strategic response of managed retreat and adaptive management. The applicant has requested that the term be aligned to the expiry date of the revetment wall to the south of the groyne, which is 31 December 2040. This is an important factor in terms of the scale of the application and context of effects.
37. I note that in the technical review on coastal processes, Dr Willem de Lange has expressed a view that there may still be an opportunity to further reduce the height of the wall. The proposed design has factored in a 1m allowance for sea level rise which may not be necessary given the nature of the proposal (ie, not a habitable building), and a 100 year time horizon. The applicant will have the opportunity to present a response to Mr de Lange's assessment as part of their technical evidence. If there is an opportunity to reduce the scale of the wall, then I consider that would be supported by the planning framework and will also further reduce any adverse effects of the proposal.

7.2 Natural Character and Coastal Landscape

38. The site is located at the southern end of Wainui Beach which includes the existing revetment wall and a concrete groyne immediately to the south of the site. The existing revetment wall is in a poor state of repair and at best can be described as having a rustic appearance. In my view the existing rock revetment wall and exposed rail way irons detract from the natural and aesthetic qualities of this section of Wainui Beach, and this therefore provides a baseline from which to assess any landscape and natural character effects of the proposed revetment wall.
39. The profile and design of the revetment wall will increase the crest of the wall to 4m above the inferred bedrock level. The actual height will vary depending on the sand beach profile, and based on the surveyed sand level in June 2018, the wall would be approximately 3m above the sand. The new wall will have a more uniform appearance with a defined outer edge of timber piles with some planting proposed along the top of the wall.
40. I note that the applicant has prepared a landscape and visual assessment of the site and the impacts of the proposed revetment wall⁴. This helpfully provides a visual simulation of the finished wall against the existing situation. The landscape report provides a detailed assessment of the existing site location and context, assessment of the landscape effects from relevant viewpoints and over both short term and medium term time horizons. The report concludes;

Taking into account the mitigation measures proposed specific to retention and enhancement of existing vegetation, use of local and natural materials and the maximum height of the wall, the inclusion of the new sea wall will have negligible impact on the existing landscape character and will not contribute to any significant diminishment in view quality in the medium term⁵.

⁴ 4sight Visual and Landscape Assessment, 6 and 8 Tuahine Crescent, April 2019, dated 21 January 2019: Appendix D of AEE.

⁵ Ibid, page 27.

41. I note that the majority of submissions support the works on the basis that they will not have adverse effects on the landscape values, with particular regard given to the presence and appearance of the existing revetment wall. Those submissions in opposition do not raise specific concerns regarding the landscape effects of the proposal, but are more concerned with, and are opposed to, hard protection works in principle. This includes the potential demand for similar walls to be established along the whole of Wainui Beach and the precedent value of any decision to grant consent to a new seawall.
42. In my opinion, and with due regard to the above matters, I consider that the adverse effects on landscape and natural character values will be minor. The location of the site and presence of an existing seawall are the primary factors supporting my opinion.

7.3 Coastal Processes

43. Works within or adjacent to the CMA may influence coastal processes in terms of sand movement and tidal conditions/cycles.
44. The applicant has prepared a technical report on the proposed works and an assessment of coastal processes⁶. It is important to note that the design of the wall does not propose to extend the toe of the wall into the CMA, which is currently defined by the front face of the existing rock revetment wall.
45. The applicant's technical report has reviewed the available research and technical reports on coastal processes at Wainui Beach, and while it notes some gaps in this body of work, it concludes that there is not a significant erosional or accretionary trend over the period where monitoring data exists⁷. The report goes on to analyse the wave climate, inundation levels, near shore currents and sediment transport regime. The report concludes;

Due to the scale and location of the proposed structure it appears unlikely that there will be any discernible change to the larger coastal processes operating on Wainui Beach. Reflection from the proposed wall is thought to similar to the existing situation to which the beach does not appear to be impacted by⁸.

46. Council as the consenting authority has commissioned a technical review of the applicant's assessment from Dr Willem de Lange⁹, refer **Appendix 1**.
47. Dr de Lange has reviewed the applicant's assessment and broadly agrees with the assessment and findings presented in the applicants report. Dr de Lange concludes that the replacement wall is likely to have the same effect on coastal processes as the existing structure, which is *minimal*¹⁰.

⁶ 4sight Memorandum ' Tuahine Cres. Seawall – Coastal Processes and Impact Assessment dated 21 January 2019: Appendix H of AEE.

⁷ Ibid, page 2.

⁸ Ibid, page 10.

⁹ Dr de Lange, 'Review of coastal process impacts of proposed Tuahine Crescent Seawall' dated 2 June 2020.

¹⁰ Ibid, page 4.

48. I note that there is a nationally significant surf break located to the north of the site. Based on the assessment outlined in the applicant's technical report and the peer review, there is nothing to suggest that any effects on the surf break will occur.

7.4 Wall End Effects

49. The applicant has identified the potential risk associated with hard protection structures in terms of changes in the wave motion and direction around any new structure and how this may potentially impact on the property and structures at either end of a sea wall.
50. The applicant has designed the revetment wall to tie into the existing wall and the design reduces the wall slope along the northern end to reduce wave deflection.
51. It is worthwhile acknowledging the concerns and awareness of submitters to the application about the potential issue of end effects. This includes the submission from Katherine Cave of Number 4 Tuahine Crescent whose property is located above the termination point of the wall. Clearly, any new structure that places additional risk on other property or assets is not tenable.
52. There is no technical evidence to suggest that the applicant's design and measures to avoid wall end effects is deficient or unreliable. However, coastal engineering is a specialist area and even Dr de Lange, while having a good understanding of wall end effects, does not have the expertise to peer review the applicant's design from a coastal engineering perspective.
53. If the Commissioner is mindful to grant consent, and subject to any other evidence that may be produced for the hearing, then it is my opinion that the conditions should specifically require a final design of the wall and any methods/elements to avoid wall end effects for certification from Council. I am advised that Council also does not have the in-house expertise in this field, and as such any condition would need to contemplate an external peer review at the applicant's cost.

7.5 Public Amenity, Access and Recreational Space

54. The design and scale of the wall has been reduced from the earlier proposal such that now the toe of the wall does not extend into the CMA.
55. There will be some effects on public access to the site during the construction period (estimated to be approximately one month). This estimate has been queried in submissions which note that a 20 week construction period was indicated for the construction of the earlier wall. Presumably, the construction timeframe is based on the applicant's coastal engineering knowledge of similar projects and the local and tidal conditions affecting this project. It will be appropriate for the applicant to confirm how they estimated the construction period and how confident they are with that estimate.
56. In my opinion, the loss of public space and access will only be temporary and will not broadly affect beach user's access or enjoyment of Wainui Beach.

57. In terms of the public access and the timber walkway that comes down from Tuahine Crescent, it is apparent that this structure is subject to erosion cycles and changes in the sand beach profile. Ultimately it will be a decision of Gisborne District Council as to any future upgrades or maintenance of this access. In my opinion, this is independent of whether the current proposal is granted or refused.
58. As the site and footprint of the proposed wall is largely already occupied by the remnants of the existing rock revetment wall, it is difficult to identify any impact that will diminish the use or enjoyment of the public space on an ongoing basis.
59. Subject to a robust assessment and design of the revetment wall to ensure that there will not be wall end effects (which could affect the public access steps), then I consider that the proposed revetment wall will not have more than minor effects on public access or enjoyment of the Wainui Beach.

7.6 Ecological Effects

60. The applicant has provided a general assessment of ecological effects and has assessed any effects as less than minor. This assessment is based on the lack of any sites or habitats identified in the vicinity, and that the site is already heavily modified.
61. Council's Team Leader - Environmental Science, Mr Paul Murphy has reviewed the application and provided a technical memo on his assessment of ecological values and effects (refer **Appendix 2**). Mr Murphy concludes that any adverse effects on benthic species, birds, and water quality will be less than minor, and has provided a set of draft conditions to manage the works during the construction phase.
62. Based on the above reports, I am satisfied that any adverse effects on ecological values can be managed and mitigated through appropriate conditions of consent.

7.7 Cultural and heritage effects

63. Ngati Oneone has been statutorily recognised as a customary marine title group under the Ngā Rohe Moana o Ngā Hapū o Ngāti Porou Act 2019. The applicant has consulted with Ngati Oneone and has received an email dated 15 August 2019 supporting the application and this may be accepted as a written approval.
64. There are no other identified specific cultural or heritage sites or values associated with the site and no submissions were received raising cultural concerns.
65. On this basis, it is my opinion that there are no cultural or heritage values or matters of concern that would influence the decision on the application.

7.8 Construction Effects

66. During the construction phase, there will be machinery noise and occupation of the CMA. As identified above, the construction period is estimated to take approximately one month.

67. As with any construction works within a sensitive environment, strict conditions will need to be imposed through a Construction Management Plan. This will include protocols for ensuring that any risk of contaminants from the machinery will be minimised.
68. The machinery and placement of rocks will generate noise and potential vibration effects. These can be managed by standard conditions to ensure that any effects are mitigated.
69. In my opinion, the construction period should be for a short term and the effects will be minor, taking into account the conditions that can be imposed on any consent.

7.9 Positive Effects

70. An assessment of effects under the resource management legislation also requires an assessment of positive effects.
71. The positive environmental effects that I have identified are;
- The works will assist with providing some protection against coastal erosion processes as an interim measure for the three Tuahini Crescent properties,
 - There will be some benefit with remediation of the existing site and revetment wall structure which is in a poor state of repair.

7.10 Funding of Works

72. A number of submitters have commented on the rating/levies that are payable by coastal property owners for coastal protection works.
73. In this case, the application is from a private landowner and they will be responsible for all costs associated with the application process and any construction works.

7.11 Assessment Criteria and Performance Standards

74. The Tairāwhiti Plan prescribes a comprehensive suite of assessment criteria and performance standards for the proposed works. As the overall status of the application is non-complying, there is no restriction on the effects which may be considered, and all relevant effects must be assessed. There is also no restriction on the matters which can be covered by conditions
75. I have reviewed the assessment criteria and performance standards and I am satisfied that all relevant effects have been assessed, including guidance from the assessment criteria, and that the relevant performance standards can be imposed and incorporated into conditions of consent should the Commissioner be mindful to grant consent.

8 TAIRAWHITI PLAN

76. The Tairāwhiti Plan is the primary planning instrument for the Gisborne region and it sets out the planning objectives, policies and rule mechanisms to help guide the management and use of land and works within the region.

77. As discussed earlier, the Tairāwhiti Plan has amalgamated the previous set of planning documents into one single plan, and therefore it includes all the provisions of the regional policy statement, the regional plans and the district plan. There are a range of planning provisions which are relevant to the proposal for coastal protection works, given the various planning overlays which apply to the site and location. This includes the area of the CMA in which the construction works will take place.
78. I have identified the key objectives and policies that I consider are directly relevant to the assessment of the application, and have provided an assessment of these accordingly. The discussion is presented in the order that the Tairāwhiti Plan is structured.
79. It is noted that the coastal section of the Tairāwhiti Plan was prepared before the current version of the New Zealand Coastal Policy Statement. On this basis, any assessment against the coastal provisions of the Tairāwhiti Plan should, in my opinion, be moderated with reference to the NZCPS provisions.

8.1 Tairāwhiti Plan - Regional Policy Statement

80. The policies of key relevance to the application are listed in the following tables.

<p>B4.3.1 Objectives</p> <p>1. The preservation of the natural character of the coastal environment – including by protecting outstanding natural features and landscapes, areas of significant indigenous vegetation and habitats of significant indigenous fauna in the coastal environment.</p> <p>4. Amenity values of the coastal environment arising from the preservation of natural character – including the quality of open space – are maintained and enhanced.</p>	<p>4. To allow subdivision, use or development in the coastal environment, particularly in areas already degraded, which:</p> <p>a) Preserves natural character; and</p> <p>b) Avoids, remedies or mitigates adverse effects.</p>
<p>Section B4.4</p>	<p>Natural Processes</p>
<p>B4.4.1 Objectives</p> <p>2. The protection of the integrity, functioning, resilience and quality of natural coastal processes, natural physical resources and biological communities in the coastal environment.</p>	<p>1. To avoid, remedy or mitigate the effects of activities which have an adverse effect on biological diversity and ecosystem integrity.</p> <p>2. To encourage activities which could rehabilitate or enhance degraded ecosystems, coastal processes and natural physical resources – including water.</p> <p>3. To encourage subdivision, use and development which takes into account the integrity and resilience of natural processes and recognises that natural features provide buffers against natural processes that might damage an activity.</p>

81. In my opinion, the scale and nature of the proposed works will have no more than minor effects in terms of landscape and ecological values/habitats. The works are relatively modest in their physical scale and extent and are located on the footprint of an existing

revetment wall. The applicant has also only sought a defined term for the works, which is consistent with a longer and broader term strategic direction for managed retreat.

Section 5 Environmental Risk including Natural Hazards	
Section B5.1	Effects of natural Hazards
<p>B5.1.2 Objectives</p> <ol style="list-style-type: none"> 1. A pattern of human settlement that: <ul style="list-style-type: none"> • Provides a high level of personal safety from natural hazards for its inhabitants. • Avoids or mitigates the risk to property and infrastructure from natural hazards. • Does not accelerate or worsen the effects of natural hazards upon the natural and physical environment. 2. Rehabilitation, where practicable, of aspects of the environment degraded by natural processes that were induced or accelerated by human activities. 	<p>B5.1.3 Policies</p> <ol style="list-style-type: none"> 1. To encourage and facilitate changes, over time, to patterns of human settlement, development and activities which are not affected by natural hazards and which do not induce or worsen the impacts of natural processes, and which recognise and allow for some natural features to migrate inland as a result of dynamic coastal processes. 2. To recognise the limitations of attempts to control natural processes by physical work and limit such attempts to appropriate situations where they are: <ol style="list-style-type: none"> a) needed to protect existing development, or waahi tapu or new public infrastructure such as ports, roads, bridges; and b) have a favourable benefit to cost ratio; and c) will not have significant adverse effects on the natural character of the coastal environment, or other adverse environmental effects; and d) will not cause or worsen hazards to other lands/waters; and e) can be designed with confidence of long - term effective performance; and f) are the only practical alternative. 5. To recognise the possibility of sea level rise and the likelihood of changes to the frequency and impacts of some natural hazards due to climate change and sea - level rise. 6. To encourage participation by the affected communities in managing the risks of natural hazards.

82. The above planning provisions have some alignment to the NZCPS 2010, although I consider that they are framed in a manner that is more permissive than the NZCPS 2010. The plan provisions encourage strategic management of coastal erosion risk and an acceptance that natural processes will result in changes to the coastal environment over time.
83. Policy B5.1.3.2 specifically addresses hard protection works and seeks to limit these structures to specific situations and circumstances. In my opinion, there is tension with the proposal and this policy as the proposed revetment wall is designed to protect private property. The revetment wall is capable of satisfying some of the other policy criteria including those for natural character.
84. With regards Policy B5.1.3.2(b) and a favourable benefit cost ratio, it is unclear what criteria is contemplated in carrying out such an evaluation and whether environmental costs and

benefits should be assessed alongside any economic cost/benefits. As the application is a private application, then all costs associated with the construction will be payable by the applicant.

85. In my opinion, it is arguable whether the proposed revetment wall is the only *practical alternative*. This would appear to depend on whether hard protection structures are accepted as a short to medium term response to coastal erosion, the degree of risk which landowners are prepared to accept, and whether more weight should be given to the broader and longer term alternatives to manage hazard risk. If a sea wall is to be contemplated, then the proposed design is a practical design, which will not in my opinion, have adverse effects which are more than minor. However, there is a practical alternative of leaving the existing revetment wall in-situ or carrying out some maintenance of the existing wall. This will not provide the same level of improved design and resilience to storm events and therefore has less value in terms of protecting the private land holdings, yet it is a practical alternative.
86. Policy 5.1.3.2 also refers to any structure causing additional risk to other property. This reinforces the need to have any final design peer reviewed prior to construction.
87. In my opinion, the above provisions allow limited scope to consider hard protection structures as a means of managing coastal erosion processes. Importantly however, the provisions do not exclude hard protection works and therefore I consider there is at least some alignment between the proposal and the above policy direction. As discussed earlier, this should be moderated by the weight that can be given the coastal provisions of the Tairāwhiti Plan, and a question arises as to whether these provisions give effect to the NZCPS.

8.2 Regional Plan and District Plan Provisions – Coastal Management

88. Section C3 of the Tairāwhiti Plan addresses Coastal Management and includes provisions from the previous Regional Plan, Regional Coastal Plan and District Plan.

Coastal Management	
<p>Natural Character</p> <p>C3.2.2 Objective</p> <p>1. <i>The natural character of the Gisborne regions Coastal Environment and wetlands, rivers, lakes, and their margins within the Coastal Environment is preserved unless such preservation is inconsistent with the purpose of the RMA.</i></p>	<p>C3.2.3 Policies</p> <p>1. <i>Consent authorities will, when any application for a plan change or resource consent in the Coastal Environment is being considered, recognise that all the coast has some degree of natural character which is required to be preserved.</i></p> <p>2. <i>The Council shall recognise that protecting outstanding natural features and landscapes, areas of significant indigenous vegetation and significant habitats of indigenous fauna also assists in preserving the natural character of the Coastal Environment.</i></p> <p>3. <i>The adverse effects of activities on the integrity, functioning and resilience of natural processes and qualities should be avoided as far as practicable and, where complete avoidance is not practicable, the adverse effects shall be mitigated and provision made for remedying</i></p>

	<p>those effects to the extent practicable. Natural processes and qualities include:</p> <ul style="list-style-type: none"> • Bio - diversity. • Freedom of movement of biota (living organisms). • Intrinsic values. • Natural substrate composition. • Natural air and water quality. • Water quantity. • Dynamic processes and features arising from the natural movement of sediments, water and air. <p>4. Consent authorities will give priority to avoiding the actual or potential adverse effects of activities on the integrity and continued viability of ecological corridors important for maintaining the biodiversity and viable gene pool flow of indigenous flora and fauna.</p> <p>5. Consent authorities will, when any application for a plan change or resource consent in the Coastal Environment is being considered, recognise that all the coast has some degree of natural character which is required to be preserved.</p>
<p>Outstanding Natural Features and Landscapes</p> <p>C3.3.2 Objective</p> <p>2. Outstanding natural features and landscapes/seascapes are protected from the adverse effects of inappropriate activities.</p>	
<p>Public Access</p> <p>C3.5.2 Objective</p> <p>1. Maintenance and enhancement of existing legal public access to and along the CMA and lakes and rivers in the Coastal Environment unless conservation values, cultural values, the rights of private property owners or public safety are significantly compromised.</p>	<p>C3.5.3 Policies</p> <p>1. To ensure that existing legal public access to and along the foreshore and along lakes and rivers in the Coastal Environment for which the Council is responsible is maintained or enhanced.</p>
<p>Coastal Environment Overlay</p> <p>C3.14.1</p> <p>1. Protection of the quality of water, wetlands and aquatic habitats, and the preservation of the natural character associated with lakes, rivers, wetlands and their margins, and the Coastal Environment of the Gisborne District.</p>	

89. The above provisions equate to what was previously the Regional Coastal Plan and provide a comprehensive set of planning provisions for land use and activities within the coastal environment.

90. There are specific policies addressing coastal structures and occupation of space within the CMA. While the revetment wall is designed to be set back from the CMA, there will be construction works within the CMA and so these policies have relevance to the application, at least through the period of construction works. In addition, if the existing wall was left to further deteriorate, then the CMA boundary may well migrate further landward and it is accepted that the CMA boundary can fluctuate over time.
91. There is a very heavy emphasis in the above objectives and policies for the protection of landscape and ecological values, public access and habitats. I have already provided an assessment of these effects in Section 7 above and I am satisfied that the proposed revetment wall and constructions works will not have more than minor adverse effects on the environment.

8.3 Regional and District Plan Provisions – Natural Hazards

92. Section C8 of the Tairāwhiti Plan includes provisions from the previous Regional Plans and District Plan in relation to Natural Hazards.

8.1 Natural Hazards Status: Operative	
C8.1.3 General Objectives <p>1. A pattern of human settlement that:</p> <ul style="list-style-type: none"> • provides a high level of personal safety from natural hazards for its inhabitants; • avoids or mitigates the risk to property and infrastructure from natural hazards; and • does not accelerate or worsen the adverse effects of natural hazards upon the natural and physical environment. 	C8.1.4 General Policies <p>5. To recognise the limits of attempts to control natural processes by physical work and restrict such attempts to appropriate situations where they are:</p> <ul style="list-style-type: none"> • needed to protect existing development, or wahi tapu or new public infrastructure such as ports, roads and bridges; and • have a favourable benefit to cost ratio; and • will have no more than a minor adverse effect on the natural character of the coastal environment, lakes and rivers and their margins, or areas / features of natural or cultural significance, or other adverse environmental effects; and • will not cause or worsen hazards to other lands or waters; and • are the best practical alternative. <p>7. A precautionary approach should be adopted where activities with unknown or little understood effects are proposed, or the effects on natural processes are difficult to assess.</p> <p>8. In carrying out hazard assessments or considering resource consent applications the possibility and implications of climate change are to be recognised. In particular the likelihood of the following matters should be considered:</p> <ul style="list-style-type: none"> • a change in sea level; • altering of coastal processes; • increased inundation of low lying estuarine areas; • higher local temperatures;

	<ul style="list-style-type: none"> • changes in rainfall patterns; • increase in cyclonic storms. <p>9. The integrity of natural systems and features that provide a defence against natural hazards should be recognised and protected. These include:</p> <ul style="list-style-type: none"> • the capacity of foredunes to act as natural protection against inundation and erosion; • wetlands; • margins of estuaries.
<p>C8.5.2 Coastal Hazard Objectives</p> <p>2. New subdivision, use, and development and human settlement patterns in the Coastal Environment which:</p> <ul style="list-style-type: none"> • Maximise personal safety from natural hazards. • Ensures that property and community infrastructure is less at risk of loss or damage from natural hazards. • Does not accelerate or worsen or cause transfer of adverse effects of natural hazards on the environment. • Preserves the natural character of the Coastal Environment and protects the amenity values and quality of the Coastal Environment from any adverse effect arising from activities undertaken in response to natural hazards. 	<p>C8.2.2 Coastal Hazard Policies</p> <p>14. Publicly owned and administered land should generally not be used to construct private property protection devices unless no other alternative is available and the statutory purpose of those community assets is consistent with their use for the construction of private property protection devices.</p> <p>15. Publicly owned and administered land within the Protection Management Area shall not be used to construct property protection devices which may adversely affect the values identified in the Protection Management Area unless such use better meets the purpose of the Resource Management Act 1991 and the statutory purpose of those community assets is consistent with their use for the construction of private property protection devices.</p> <p>18. Where existing subdivision, use or development is threatened by a coastal hazard, coastal protection works should be allowed only where they are the best practicable option for the future. The limitations of attempts to control natural processes by physical works will be recognised in the consideration of future options. The abandonment or relocation of existing structures should be considered among the options.</p> <p>19. Coastal hazard protection works may be considered in relation to existing use or development of areas in the Coastal Environment. Determination of applications for resource consent will include consideration of:</p> <ol style="list-style-type: none"> a) The probability of the works providing effective long - term protection; b) The public benefit from the use or development to be protected, in enabling the regional community to provide for its economic wellbeing, health and safety; c) The regional and national significance of the use or development to be protected; d) The effects of the protection works on the environment, including any change in natural character values or in the occurrence and rate of coastal erosion; e) Measures previously taken, including decisions as to the location of the use and development, to avoid the need for coastal hazard protection works; f) Alternatives to the development of coastal hazard protection works, and the reasons why

	<p><i>those alternatives have not been proceeded with.</i></p>
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93. The planning provisions within Section C8 of the Plan closely parallel the higher-level planning provisions within the Tairāwhiti Plan. Policy C8.1.4 for example uses much of the same wording as the regional policy B5.1.3.
94. Objective C8.1.3 provides a strategic level direction to enable settlement which avoids and/or mitigates natural hazards. The provisions of the coastal hazards and for managed retreat is a mechanism which would support this objective.
95. The policies provide further direction on specific aspects of natural hazard management and again the policy framework provides caution on using physical works to control natural processes (Policy C8.1.4.5). There is reference to *existing development* in the first bullet point which does, in my opinion, provide some scope to consider hard protection works to protect private property. However, this policy is more directed towards supporting physical works in *appropriate situations*, which are necessary to support a public benefit or other community values as opposed to private land owner interests.
96. Policy C8.2.2.14 restates that publicly owned land should not be used to protect private property unless no other alternative is available. The proposed revetment wall is located on private property and above the current MHWS level, and therefore this policy is satisfied.
97. Policy C8.2.2.18 requires any such protection works to be the *best practicable option* and restates the need to accept the limitations of such structures and the need for relocation or abandonment of existing structures.
98. There is recognition that hard protection works can be considered under Policy C8.2.2.19, however importantly, the matters for consideration focus on public benefit and the regional or national significance of the assets to be protected. In the present case, the hard protection works are designed to protect private assets and in my opinion the proposed protection works fall short of meeting this policy.
99. Taken as a whole, it is my opinion that the objectives and policies do not support the construction of hard protection structures to protect private property. At the same time, the policy framework does not prohibit the use of hard protection structures and instead places a high threshold on where and how any hard protections works can be considered.

8.4 Area Based Provisions

100. Section D of the Tairāwhiti Plan includes provisions from the previous Regional and District Plan which are area based. This includes overlay provisions and the land use zones which were previously contained within the District Plan. These provisions are operative and in some areas, overlap with the more general provisions discussed earlier in relation to the RPS provisions and district wide provisions.

<p>DC1.3 Significant Values Management Areas</p> <p>1. <i>The preservation of the natural character of the coastal environment and the protection of the coastal environment from inappropriate subdivision, use and development by protecting sites of significant ecological, cultural, historic, scientific, scenic and amenity value and sites where there is a high degree of natural character.</i></p> <p>2. <i>To allow for subdivision, use and development in Significant Values Management Areas where such subdivision, use and development does not have adverse effects on the values that contribute to the area's special values and natural character.</i></p>	
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101. My assessment of natural character and ecological values has been presented previously. Given the scope of works, and the nature and location of the site, I do not consider that the proposed works will have more than minor effects on landscape, ecological or cultural values.
102. Part of the structure are also located within the Residential Zone, and coastal protection works are not contemplated in such zones, which leads to the non-complying activity status. The objectives and policies associated with residential development are orientated towards maintaining residential amenity values, ensuring that the type and scale of development within residential areas is appropriate and the efficient provision of infrastructure.
103. In my opinion, the proposed works would not cause issues or lead to adverse effects on amenity values, which would be in conflict with the objectives and policies for the Residential Zone. As such, I consider that the proposed structure is largely neutral in terms of the residential plan provisions.

8.5 Conclusions on Tairāwhiti Plan Provisions

104. The Tairāwhiti Plan contains a comprehensive and broad range of objectives and policies that apply to the assessment of the application with specific policies associated with hazard mitigation and hard protection works.
105. My overall assessment of the plan provisions is as follows;
- (i) The provisions of the Tairāwhiti Plan do not broadly support hard protection structures when these are designed to protect private property,
 - (ii) There are a number of provisions that place a heavy emphasis on the protection of landscape, ecological, public access and cultural values. In my opinion, the proposal is consistent with these objectives and policies,
 - (iii) In my opinion, the application is not contrary to the objectives and policies of the Tairāwhiti Plan given that hard protection structures are at least contemplated in specific circumstances. In my opinion, a *contrary* threshold would only be breached if the objectives and policies were unequivocal in that hard protection structures to protect private property were opposed and not contemplated as part of the resource management response to coastal hazard risk.

9 NEW ZEALAND COASTAL POLICY STATEMENT (NZCPS)

106. The NZCPS is a national level policy document which sets direction for the development of planning instruments at the regional and district level and also sets out direction for the assessment and decision making on land use and activities within the coastal environment. As previously discussed, the coastal provisions of the Tairāwhiti Plan predate the 2010 version of the NZCPS, and therefore it is my opinion that the NZCPS should be assessed and taken into account as a relevant higher order planning instrument.

9.1 Specific Provisions for Coastal Hazards

107. I have identified the key provisions within the NZCPS which I consider are directly relevant to the assessment and determination of the application. I have also discussed some of the broader provisions of the NZCPS, which I discuss separately.

Objective 5

To ensure that coastal hazard risks taking account of climate change, are managed by:

- *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.*

Policy 24 Identification of coastal hazards

(1) Identify areas in the coastal environment that are potentially affected by coastal hazards (including tsunamis), 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:

- (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:
 - (i) matters (a) to (g) above;
 - (ii) storm frequency, intensity and surges; and
 - (iii) coastal sediment dynamics;
 taking into account national guidance and the best available information on the likely effects of climate change on the region or district.

Policy 25 Subdivision, use, and development in areas of coastal hazard risk

In areas potentially affected by coastal hazards over at least the next 100 years:

- (a) avoid increasing the risk¹⁰ 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.

¹⁰ Glossary Term from NZCPS

Risk Risk is often expressed in terms of a combination of the consequences of an event (including changes in circumstances) and the associated likelihood of occurrence (AS/NZS ISO 31000:2009 Risk management – Principles and guidelines, November 2009).

Policy 27 Strategies for protecting significant existing development from coastal hazard risk

- (1) In areas of significant existing development likely to be affected by coastal hazards, the range of options for reducing coastal hazard risk that should be assessed includes:
 - (a) promoting and identifying long-term sustainable risk reduction approaches including the relocation or removal of existing development or structures at risk;
 - (b) identifying the consequences of potential strategic options relative to the option of 'do-nothing';
 - (c) recognising that hard protection structures may be the only practical means to protect existing infrastructure of national or regional

importance, to sustain the potential of built physical resources to meet the reasonably foreseeable needs of future generations;

- (d) recognising and considering the environmental and social costs of permitting hard protection structures to protect private property; and*
- (e) identifying and planning for transition mechanisms and timeframes for moving to more sustainable approaches.*

(2) In evaluating options under (1):

- (a) focus on approaches to risk management that reduce the need for hard protection structures and similar engineering interventions;*
- (b) take into account the nature of the coastal hazard risk and how it might change over at least a 100-year timeframe, including the expected effects of climate change; and*
- (c) evaluate the likely costs and benefits of any proposed coastal hazard risk reduction options.*

(3) Where hard protection structures are considered to be necessary, ensure that the form and location of any structures are designed to minimise adverse effects on the coastal environment.

(4) Hard protection structures, where considered necessary to protect private assets, should not be located on public land if there is no significant public or environmental benefit in doing so.

108. The objectives and policies specific to the management of coastal hazards encompass a number of policy directives which are relevant to the current application. In my opinion, these policy directives can be summarised as;

- (a) There is a heavy obligation on local authorities to identify areas subject to coastal hazards and to proactively adopt strategic management provisions for these areas,
- (b) New development should be located away from coastal hazards and the risk of coastal hazard should not be increased,
- (c) Managed retreat and long term strategic options for reducing risk are promoted,
- (d) Hard protections structures are discouraged although there is some acknowledgment that these structures may be necessary to protect significant infrastructure,
- (e) The environmental and social costs of hard protection structures should form part of any assessment process and these structures should not be located on public land if no significant public or environmental benefit is achieved.

109. GDC as a unitary authority has identified areas of coastal hazards and has also developed a comprehensive set of resource management objectives and policies for managing coastal hazards. These are provided in the Tairāwhiti Plan.

110. In reviewing the provisions and planning framework within the Coastal Hazard area, I note that GDC is implementing a managed retreat approach to subdivision and development within the coastal hazard areas. The highest risk area (Coastal Hazard 1) prohibits subdivision and new buildings and alterations are a Discretionary Activity with different controls placed on land use and development within the three other hazards areas.

111. The application seeks consent for a replacement and upgrade of a hard protection structure which will provide for the protection of private property at 4, 6 and 8 Tuahine Crescent. The proposed works will be located on private land title and therefore this is consistent with Policy 27(4).

112. The policy direction for hard protection structures must be assessed in the context of the broad policy direction to manage coastal hazards and risk by means other than hard protection structures. Strategic and long-term methods are promoted to recognise and provide for natural coastal processes and to maintain the natural character and ecological values of coastal environments.
113. It is notable that the NZCPS does not explicitly state that use of hard protection structures for private property is prohibited. The policy direction is that these types of structures have social and environmental costs which need to be considered, and that these structures *should be discouraged*. Therefore, there is no absolute veto on such structures being consented.
114. As with the provisions of the Tairāwhiti Plan, it is my opinion that the provisions of the NZCPS do not generally support the proposed revetment wall given that this is a hard protection structure designed to protect private property. However, the NZCPS does contemplate that hard protection structures for private property may be necessary in some circumstances and there are a number of environmental policies around the design and location of such works to reduce their impacts.
115. I note that there are some competing demands for the design of any hard protection structure, with a drive to reduce adverse effects, while at the same time ensuring that the design is fit for purpose and takes into account long term climate change and sea level rise. Dr de Lange has queried whether the design of the revetment wall could be reduced by adopting a more conservative sea level rise quotient, and I consider this is a matter that the applicant should respond to in their technical evidence.
116. In my opinion, while private revetment walls are not broadly supported by the NZCPS, the current proposal does align with the policies to mitigate or avoid adverse effects on the environment. The proposed revetment wall also replaces an existing wall and the applicant has sought to apply a defined term to the works, which goes some way to recognising that a managed retreat response to coastal hazards is the longer term and appropriate strategic direction.
117. Whether the proposed revetment wall is *necessary* is in my opinion debatable. Clearly, in the view of the applicant and other private beachfront landowners, the works are necessary to protect their property and assets. This view understandable reflects a position of self-interest, but it must be balanced against the provisions that promote managed retreat as the most appropriate strategic response to coastal hazard mitigation.
118. The current proposal also has been designed and is located in such a way that the adverse environmental effects of the proposal will be no more than minor. This in my opinion lends the proposal some favour under the NZCPS and the criteria that apply to hard protection structures.
119. On balance, it is my view that the proposed revetment wall falls short of being consistent with the NZCPS. However, and as with the provisions of the Tairāwhiti Plan, I do not consider that the proposal is contrary to the NZCPS. This is in part due to the manner in which the

NZCPS does recognise that private sea walls may be necessary (Policy 27(4)), and the criteria which are provided in the NZCPS to guide the assessment of any such structure.

9.2 General NZCPS Provisions

120. The NZCPS also contains a comprehensive set of objectives and policies for activities and the management of resources within the coastal environment which cover matters such as coastal systems and processes, landscape values, ecological areas, public access, surf breaks, and cultural and heritage values.
121. In my opinion, these more general provisions are relevant to the current applicant insofar as the proposed works are located within a coastal environment. However, as discussed in Section 6, it is my opinion that the effects in relation to these other matters are minor and can be further mitigated by conditions of consent. I have not therefore provided specific commentary on these more general provisions. It is my opinion that there are no other matters associated with the NZCPS and the application that would influence its determination, and I am satisfied that the application is consistent with the remaining provisions of the NZCPS.

10 SECTION 104D ASSESSMENT

122. Any non-complying application must be assessed in accordance with S.104D of the RMA, which requires the application to pass one of the non-complying threshold tests before it can be further considered and determined under S.104. The first threshold test is whether the effects of the activity on the environment are minor, and the second threshold test is whether the activity is contrary to the objectives and policies of the relevant plan. An application only has to pass one of the threshold tests to meet the requirements of S.104D.
123. For the reasons outlined in this report, I consider that the adverse effects on the environment from the proposed works will be minor and therefore the first threshold test of S.104D is satisfied. I also consider that while the proposed revetment wall is not supported by the objectives and policies of the Tairāwhiti Plan, I do not consider that the scale and nature of the proposal is contrary to the plan provisions.

11 OTHER MATTERS

124. The statutory consideration of a resource consent application anticipates consideration of any other relevant resource management matters which may help inform the determination of the application (S.104(1)c). In my opinion, the following two matters are relevant.

11.1 Wainui Beach Erosion Management Strategy (WBEMS)

125. I have already made mention of the WBEMS in the earlier sections of this report. A number of submitters also make reference to the WBEMS and an expectation that the strategy needs to be revisited to support hard protections structures. GDC has also recently initiated a review of the WBEMS.

126. The WBEMS is not a statutory planning instrument prepared under the resource management legislation and therefore it does not have the same status as the Tairāwhiti Plan or NZCPS. As it is a community document which has included stakeholder input, it warrants specific assessment as an *other matter* pursuant to S.104(1)c.
127. I have reviewed the WBEMS for the purpose of providing this report and recommendation, and also for earlier applications. Section 6.2.2 of the WBEMS specifically addresses the options which have been considered for coastal hazard management for the Tuahine Crescent properties. This section clearly records that the existing rock revetment wall north of the groyne is in a degraded condition, and that it is anticipated that a replacement wall will be constructed. The WBEMS goes on to say that this should be undertaken to provide protection in accordance with the term of the consent for the revetment wall to the south of the groyne, and that the design and footprint of any replacement wall should be as far as practicable similar to the existing revetment wall. Importantly, the WBEMS refers to erosion risk over the medium term, and acknowledges that complete removal of the rock revetment wall may be a future management response.
128. In my opinion, the proposed revetment wall is aligned with the provisions of the WBEMS and this therefore gives weight to a favourable decision on the application.

11.2 Coastal Hazards And Climate Change - Guidance For Local Government (Ministry For The Environment) December 2017 (MfE Guidance)

129. The MfE guidance document is comprehensive and provides guidance to assist local government with the management of coastal hazard risks. In my opinion, much of the work that GDC has already undertaken to identify coastal hazard risks, develop resource management rules and policies for these areas, is very much consistent with the MfE Guidance. This includes the consultation and engagement directly with the Wainui Beach community with the WBEMS. In my view, the review of the WBEMS will need to also revisit the coastal provisions of the Tairāwhiti Plan, with particular regard to the provisions of the NZCPS.

11.3 Precedent and Other Land Owner Expectations

130. The issue of precedent has been raised in submissions opposing the proposed works. There are limitations regarding the statutory assessment of applications based on precedent or the expectations of future consent applicants and/or stakeholders. Essentially case law has established that each application for resource consent should be assessed and determined on its merits and a decision maker is not obliged to adopt a similar decision or approach to resource management issues based on any earlier decision.
131. That said, resource management issues that affect private property and assets generate strong reactions and a reasonable expectation that all stakeholders will be treated in a similar manner. This is particularly the case when public policy is a key mechanism in determining how natural hazards should and can be mitigated.
132. In my opinion it is appropriate to consider what signals and expectations may arise from any consent to hard protection structures that are designed to protect private property. The planning instruments at a national and regional/district level also justify such

consideration given the policy directive to limit the use of such structures to specific circumstances.

133. The precedent and expectation of landowners can in my opinion be addressed by clearly articulating the discrete factors that have been taken into account in determining an application, and also providing commentary on any perceived precedent value that may be associated with the decision.

11.4 Earlier 2018 Decision

134. The decision of the Independent Commissioner from February 2018 on the earlier revetment wall design has been cited in the application material and in this report.
135. This decision was specific to the proposal submitted at that time and the evidence and submission presented at the hearing. In my opinion, and following my comments above, this decision does not have precedent value in determining the current proposal. However, as it involves the same site and the same policy framework, then the Commissioner may find it useful in reviewing the matters and discussion that led to that decision and considering the differences from that application and the current application.

12 PART 2 OF THE RMA

136. Part 2 consists of Sections 5-8 and establishes the purpose and principles of the Resource Management Act 1991. All assessments of land use activities are subject to Part 2 in accordance with Section 104. As discussed earlier, the meaning and interpretation of S.104 is now subject to case law (RJ Davidson – NZHC 52) which has established that reference back to Part 2 is not necessary as the planning instruments which guide the assessment of resource consent applications already give effect to Part 2.
137. The case law does however confirm that reference back to Part 2 may be necessary if there is invalidity, incomplete coverage or uncertainty within the planning documents. In my opinion, the planning framework contained within the Tairāwhiti Plan for coastal hazard management cannot be held as complete, as it predates the 2010 NZCPS.
138. I have provided some commentary on Part 2 to complete my assessment and taking into account that the coastal provisions of the Tairāwhiti Plan require review.

Section 5 – Purpose

139. Section 5 defines sustainable management as *'.... means 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 well-being and for their health and safety while - ...'*
140. Coastal hazard issues and hard protection works directly concern both physical and natural resources and have impacts that affect well-being and health and safety. Property and assets are physical resources and the risk to these structures has economic impacts and can undermine the use and enjoyment of these resources. The coastal environment

comprises largely natural resources which have landscape, ecological values and cultural which contribute to community well-being.

141. Section 5 refers to the use, development and protection of these resources in achieving the principle of sustainable management. The NZCPS and other planning instruments provide guidance on how these sometimes competing and overlapping interests should be considered and determined.
142. Taking into account the planning instruments, and particularly the national policy direction set out in the NZCPS, it is my opinion that granting consent to the proposed rock revetment contributes to the sustainable management purpose when considered along with the other managed retreat and coastal hazard provisions contained within the Tairāwhiti Plan.

Section 6 - Matters of National Importance

143. Section 6 identifies a number of matters of national importance relevant to the proposal.
144. There are a number of matters listed in Section 6 which are directly relevant to the proposal, including protecting natural character and landscapes, maintaining and enhancing public access along the CMA and the management of significant risks from natural hazards.
145. I have already discussed these matters in earlier sections of this report. In summary, I consider that the adverse effects of the proposal are minor and can be mitigated by conditions of consent.
146. The Section 6(h) reference to natural hazards should be viewed in the context of the national, regional and district policies for managing risk by controlling use and development of property within identified risk areas, and the policy direction against the use of hard protection structures. In my opinion, the proposed rock revetment wall with a term of 20 years is an appropriate response to the risk of coastal erosion, when placed alongside the other provisions for managed retreat.

Section 7 - Other Matters

147. Section 7 lists other matters which consent authorities shall have particular regard to in making decisions under the RMA.
148. Sub-Section 7(b) is *'the efficient use and development of natural and physical resources'* and Section 7 also refers to the quality of the environment and the effects of climate change.
149. These matters have been addressed in earlier sections of this report, with the assessment of the application necessarily being informed by the planning instruments and policies for the management of coastal hazards. Council has identified coastal hazard areas and adopted management policies for the use and development of property within the hazard areas. The use of hard protection structures is discouraged with priority given to maintaining natural landscape and recognising the effects of natural processes.

150. Given that this proposal seeks consent to replace an existing revetment wall, the context of the site and the fixed term, I consider that it is consistent with Section 7

Section 8 - Treaty of Waitangi

151. In my opinion, there are no particular issues arising with respect to Section 8. There is no information to suggest that the proposed works will adversely affect heritage or cultural values. Correspondence has been received by Ngati Oneone supporting the application.

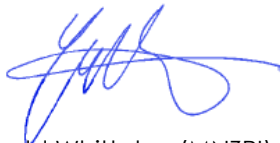
13 CONCLUSIONS AND RECOMMENDATION

152. The current proposal is seeking consent to establish a new rock revetment wall to mitigate the risk and impacts of coastal erosion on the properties located at 4, 6 and 8 Tuahine Crescent, Wainui Beach. This is a private application with a reduced scale and design of the revetment wall that follows an earlier application from Gisborne District Council, which was declined on the same site.
153. It is notable that an existing revetment wall is located on the site and that the proposed revetment wall will be located largely within the footprint of the existing wall and outside the CMA. The existing wall is in a poor state of repair although it is apparent that it is offering some degree of coastal erosion mitigation.
154. The application was publicly notified and the vast majority of submissions support consent being granted. There are two broad themes in the submissions supporting the application. These are, that the revetment wall will not have adverse effects on the environment and secondly, that hard protection structures are needed and supported across this and other properties along Wainui Beach. The submissions in opposition question the need for the works and are opposed in principle to hard protection structures being constructed to protect private property.
155. In my opinion, the adverse environmental effects of the revetment wall will be no more than minor. This is largely due to the presence of the existing wall and context of the site.
156. A technical peer review has queried some of the design parameters and has suggested that there is an opportunity to further reduce the crest height of the wall. The applicant will be able to respond to this in their technical evidence.
157. Wall end effects have been assessed in the application material and there have been concerns and commentary about the design in submissions. In my opinion, if consent is granted, then any final design will need to be subject to a peer review to ensure that any wall end effects are avoided or mitigated.
158. In my view, the application is not supported by the provisions of the Tairāwhiti Plan or the NZCPS. Both these planning instruments discourage hard protection structures where these are designed to protect private property. However, in both cases, the planning instruments do not prohibit such structures and criteria are set out to manage where such works may be contemplated and the effects and scale of these structures. Given the presence of the

existing revetment wall and the scale and environmental effects which I have assessed as no more than minor, then I consider that the proposal does demonstrate some alignment with the criteria set out in the relevant planning instruments.

159. I therefore consider that the proposal does not breach the threshold of being contrary to the planning instruments. In my opinion, if the proposal was contrary to the planning instruments, then this would make granting consent more difficult.

160. In conclusion, I consider the application is finely balanced. In my opinion the effects of the proposal will be no more than minor, however, the proposal is not broadly supported by the planning instruments. The planning instruments do not rule out hard protection structures and therefore I recommend granting of consent subject to the final design of the wall being confirmed with respect to its crest height and subject to appropriate conditions. This includes a peer review of any wall end effects, (refer **Appendix 3**).



Todd Whittaker (MNZPI)
Independent Planning Consultant
03 June 2020

Peer Reviewer



Shane McGhie
Principal Resource Consents Planner
03 June 2020

APPENDIX 1

Technical Review - Dr Willem de Lange (Coastal Processes)

APPENDIX 2

Technical Memo – Mr Paul Murphy (Coastal Works)

APPENDIX 3

Draft Conditions



Title: **Addendum Section 42A Officer's Report**
 Section: Environmental & Regulatory Services
 Prepared by: Todd Whittaker (Consultant Planner)

Applicant:	Simon Cave
Location:	4,6 and 8 Tuahine Crescent, Wainui Beach
Legal Description:	Lots 5, 6, and 7 DP 3216
District and Regional Plans:	Te Papa Tipu Taunaki o Te Tairāwhiti – Tairāwhiti Resource Management Plan (Tairāwhiti Plan)
Proposal:	To construct a revetment wall at the toe of the dune below 4, 6 and 8 Tuahine Crescent

Addendum Report to Commissioner for decision

A S.42A planning report was prepared back in June 2020 for a resource consent to construct a revetment wall at the toe of the dune below 4, 6 and 8 Tuahine Crescent to protect private land holdings from coastal erosion. The 42A planning report recommended the granting of consent subject to conditions including a term of 20 years.

Immediately following the issue of the S.42A planning report, the Applicant requested a deferral of the hearing and application process to allow further consideration of the term issue and whether the works required consent.

In May 2021, the Applicant made application for a certificate confirming Existing Use Rights for the revetment wall. Council issued its decision on 4 March 2022 which was to decline that application. The Applicant subsequently lodged an objection on 6 May 2022 and this objection will be heard as a separate matter by the Commissioner. This current addendum report deals solely with the application for resource consent.

The Applicant is seeking to reactivate the processing and hearing of the original resource consent application alongside the hearing of the objection to the Existing Use Rights decision.

This Addendum has been prepared to provide additional assessment and discussion on matters affecting the assessment of the resource consent application which have arisen since the original s42A Report was prepared in June 2020.

The central issue of contention with the Applicant remains the need for or appropriateness of a consent term. In my opinion, a term is essential to the grant of any consent for the proposal and is supported by the statutory planning instruments and by Council's Wainui Beach Erosion Management Strategy. However, the Applicant's opposition to a term undermines a favourable assessment and decision on the application and in my opinion, the application should be refused unless a term forms part of any consent.

RECOMMENDATION

That the Commissioner

- 1. Subject to conditions including a term of consent, approves resource consent for the application by Simon Cave to construct a revetment wall at the toe of the dune below 4, 6 and 8 Tuahine Crescent to protect private land holdings from coastal erosion pursuant to Sections 104 and 104D of the Resource Management Act 1991.**

Authorised for Distribution:



Cristal Bennet
Regional Consents Team Leader



Helen Montgomery
Director - Environmental Services and Protection

INTRODUCTION

1. A full assessment of the application including the relevant planning instruments was presented in the S.42A planning report dated 20 June 2020. That report and assessment remains relevant subject to the particular updating matters contained in this Addendum. Together they constitute the S.42A report.
2. The Addendum Report provides further information discussion and assessment on matters which have arisen since the original report was issued and include;
 - Potential Blue Penguin Habitat
 - Coastal processes and sea level rise
 - Consent Term
 - Conditions

POTENTIAL BLUE PENGUIN HABITAT

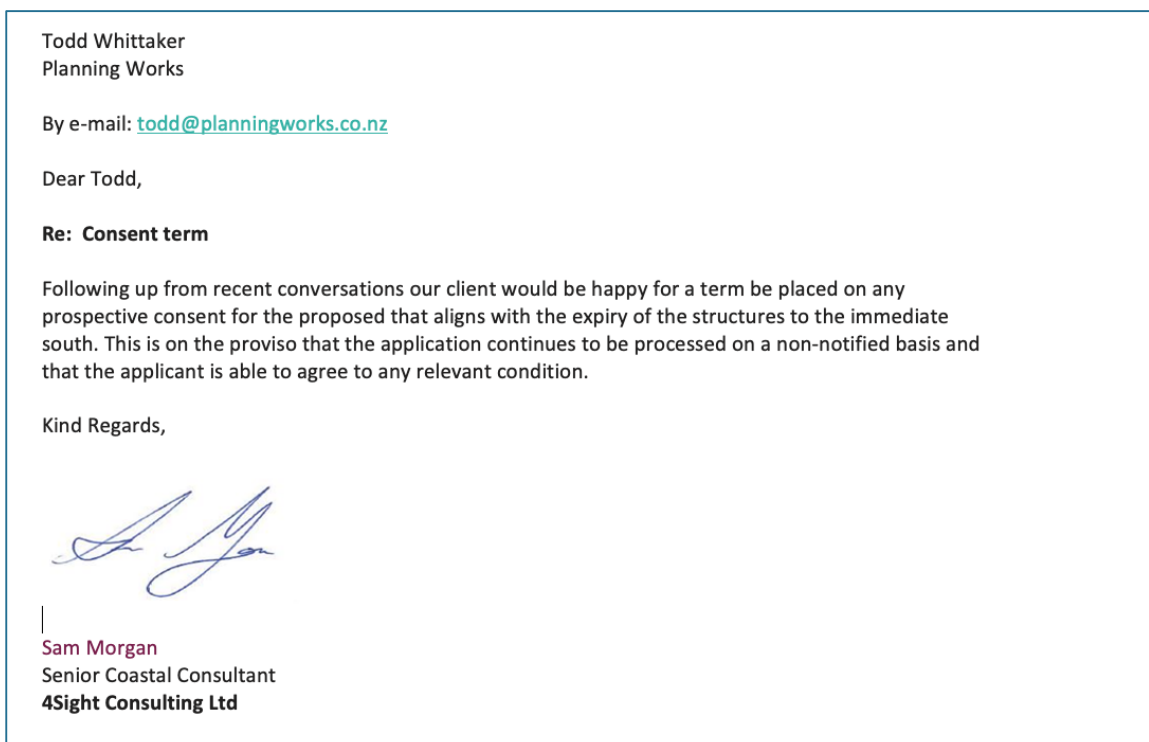
3. Since the original S.42A report was issued, there have been studies and reporting of Blue Penguin habitat around Gisborne Port and the coastal margin to the south of the subject site.
4. Mr Paul Murphy (GDC Team Leader Environmental Science) prepared a technical memo for the earlier S.42A report and has provided a subsequent addendum (**Attachment 1**) on the Blue Penguin which recommends conditions to ensure that any works do not impact on any existing habitat.
5. These conditions have been shared with the Applicant who is not opposed to addressing the potential issue of blue penguin habitat in principle and will be providing further comments on the conditions as part of their evidence.

COASTAL PROCESSES AND SEA LEVEL RISE

6. Dr Willem de Lange (Coastal Processes Expert) provided a technical memo in relation to coastal processes which helped inform the original S.42A report. Dr de Lange has also prepared an addendum (**Attachment 2**) to specifically address new information and models for sea level rise around the New Zealand coastline which have become available since the original report.
7. Dr de Lange has outlined uncertainties around modelling for sea level rise and vertical land movement within coastal areas which may potentially increase or decrease the effects of sea level rise.
8. Overall Dr de Lange has not identified any new information that would affect his earlier assessment of coastal processes. Dr de Lange considers that the proposed revetment wall will have only minimal effects on coastal processes. He also considers that sea level rise may be overestimated and that the scale of the revetment wall could be reduced.

CONSENT TERM

9. The issue of a consent term is central to the current application and was the reason why the Applicant sought a deferral of the original hearings process. Since that time, an application for an Existing Use Certificate (EUC) has been lodged which, if upheld following a successful objection, would effectively allow the proposed wall to remain indefinitely. Council has also received comments back from the Applicant on the original draft conditions provided with the s42A report.
10. It is appropriate to provide some background and context on the term matter and how this was addressed in the original S.42A report. In my original S.42A report, I relied upon a term being part of the application and this was a key part of my overall assessment and recommendation for consent to be granted.
11. It is now clear that the Applicant does not accept that a consent term is appropriate or necessary. It is important to note that the original AEE and application material did not refer to a term and this was subsequently raised as a matter prior to the notification decision. The Applicant submitted a letter on 13 August 2019 as follows:



12. The Applicant also exchanged emails with Ngati Oneone Hapu on 15 August 2019 which referred to a term. This email string is attached as **Attachment 3**.

13. After reviewing the application material and the letter referring to a consent term, I subsequently provided a recommendation to Council for the application to be processed on a non-notified basis. This recommendation was not accepted and instead Council used its discretion to notify the application under special circumstances given other matters with sea walls and community interest with coastal erosion processes at Wainui Beach.
14. In preparing the original S.42A report I relied upon a term being part of the application to align with the expiry of the consent granted for the sea wall to the south as proposed in the Applicant's letter shown above. However, the letter from the Applicant specifically refers to the term being offered as part of a non-notified process. In light of the subsequent notification of the application and the Applicant's advice that it no longer accepts a term of consent, I am advised that this at least raises some legal questions around whether a term can be relied upon as forming part of the application. This is significant in terms of the assessment and determination of the application and will presumably be subject to planning evidence and legal submissions from the Applicant.
15. For the following reasons, it is my view that a consent term is both an appropriate and necessary condition for any consent granted to this proposal;
 - (a) The revetment wall to the south of the site has a term which was set at 35 years and runs through until 2042 (based on the date of the decision). The revetment wall adjoins the concrete groyne and southern edge of the Applicant's proposed revetment wall. Given the spatial and functional relationship of the respective walls, it is logical in my opinion for a term to be imposed to align a renewal process for both walls,
 - (b) My original assessment of the revetment wall in relation to the 2010 NZ Coastal Policy Statement (NZCPS) was that the proposal falls short of being consistent with the NZCPS, however I also considered that it was not *contrary* to the NZCPS. This was on the basis of the works being on private property, that the wall was effectively replacing an existing wall and that there was a defined term to be applied to any consent,
 - (c) Without a consent term (meaning the structure can remain indefinitely), it is my opinion that the proposal is inconsistent with and contrary to the NZCPS, particularly Policies 25 and 27, which discourage the use of hard protection structures and promote consideration of alternatives. A permanently authorised revetment wall would in my opinion secure a hard protection structure as the primary defence or response to coastal erosion and effectively preclude the development of risk management options which reduce or avoid the need for hard protection structures as envisaged by the NZCPS. Providing for a permanent hard protection structure is not, in my opinion, supported by the NZCPS.
 - (d) While the provisions of the Regional Plan have not been reviewed to give effect to the NZCPS, any revetment wall which is consented in perpetuity raises inconsistency with the general policy direction to very much limit the nature and extent of revetment walls as the preferred response to coastal erosion processes.

More specifically, I consider a revetment wall granted consent in perpetuity is not consistent with (refer original S.42A report for policy text):

Policy B5.1.3	The purpose of the seawall is to protect private property with Policy B5.1.3 limiting such works to where these represent the only practical alternative. In this case, other practical alternatives would be to retain the existing seawall or to include a term as part of the conditions on any new consent.
Policy C8.2.2.18	This policy specifically refers to revetment walls proposed to protect existing development and sets a qualification on any such works that they are the <i>best practicable option for the future</i> . In my opinion, options for the future will necessarily include adaptive/managed retreat and a consent which provides for a revetment wall in perpetuity is likely to preclude other options and therefore cannot demonstrate that it is the best practical option for the future.

- (e) As discussed in Section 11 of my original S.42A report, the Wainui Beach Erosion Management Strategy (WBEMS) is a relevant community policy document, and this also sets out direction for any further revetment walls along Tuahine Crescent to be subject to a term in alignment with the sea wall to the south.
- (f) As part of the TRMP review of Natural Hazards provisions, Council has identified coastal hazards risk as a high priority for the whole district and is presently considering whether to initiate a dynamic adaptive planning programme (DAPP) for Wainui Beach in this financial year. It is understood that a decision will be made by Council's Management Team confirming the DAPP process prior to the Cave hearing. I can confirm any decision once this is available.
- (g) In February 2021, the Government announced it would repeal the RMA and enact new legislation based on the recommendations of the Resource Management Review Panel. The three proposed enactments are:
- Natural and Built Environments Act (NBA), as the main replacement for the RMA, to protect and restore the environment while better enabling development;
 - Strategic Planning Act (SPA), requiring the development of long-term regional spatial strategies to help coordinate and integrate decisions made under relevant legislation; and
 - Climate Adaptation Act (CAA), to address complex issues associated with managed retreat.

It is anticipated that there will be stronger national policy direction around managed retreat and the response to coastal erosion that local authorities will need to adopt. The evolving context of legislative review and central government focus on how communities respond to climate change and coastal processes is a matter that can

be considered as part of S.104(1)(c) – *Other matters*. In my opinion this is relevant given that the Applicant is seeking a consent in perpetuity for the revetment wall. While it is acknowledged that the future policy direction remains to some extent speculative, given the current policy direction supports a move away from hard protection structures and the preservation of options including managed retreat, and given the signalled CAA is intended to address managed retreat, it would seem more consistent with the sustainable management of the coastal environment to keep future options open rather than foreclosing them by granting a consent in perpetuity.

16. Taking the above matters into account, it is my opinion that granting consent to the revetment wall without a consent term, effectively allowing it to remain in perpetuity, is not supported by the policy documents nor is it consistent with the sustainable management of the coastal environment. If there are outstanding issues associated with imposing such a condition on the basis it does not form part of the Applicant's proposal, then it is my opinion that the application should be declined.

CONDITIONS

17. Along with the original S.42A report, a set of draft conditions were prepared. I have updated and amended these conditions with the revised set included as **Attachment 4**. These are largely based on the original set of draft conditions with the following amendments;

(a) Blue Penguin

New conditions have been recommended to require monitoring and restrictions on the work site should any habitat for blue penguin be identified,

(b) Decommissioning of Works

The original conditions required a plan for the decommissioning of works should a term be imposed and the consent holder decides not to seek a renewal or fails to obtain a renewal at the expiry of the term. The purpose of the proposed condition was to ensure that if the new revetment wall did not gain a renewal after the prescribed term, then it was clear that the consent holder would be responsible for decommissioning the wall. This is considered consistent with the direction in the NZCPS to promote restoration or rehabilitation of the natural character of the coastal environment, including by removing redundant structures and materials (Policy 14).

I have had some discussions with the Applicant's planning consultants who have advised that the Applicant is opposed to these conditions.

Council's primary concern is to ensure that ratepayers are not left having to fund the cost of decommissioning the wall if a replacement consent is not obtained at the end of the consent term. I therefore remain of the view that it is appropriate to consider decommissioning conditions alongside any conditions for a consent term.

I am advised by Council staff that decommissioning conditions and/or bonds for such works have not generally been imposed on other consents for revetment walls. However, the 2020 decision for approval of a Council application for emergency works at Pare Street included a 3 year term and decommissioning conditions¹.

It occurs to me for the current case, that any decommissioning works would need to take into account that the existing seawall is providing a degree of mitigation from coastal hazards and that to completely remove any new revetment wall may well lead to a future acceleration in erosion at the bottom of the escarpment.

I have therefore proposed to amend the decommissioning condition to only require the consent holder to identify what is proposed with respect to any re-consenting or decommissioning process 1 year prior to the expiry of any consent term. This would allow both the consent holder and Council the opportunity to engage and review what alternative(s) are proposed including any necessary consent processes/requirements and any future effects on coastal erosion.

(c) Review Condition

On reflection, I am now of the view that a review condition is not required if there is a term of consent.

(d) Term of Consent

I have recommended imposing a consent term expiring on 11 April 2042 to align with the wall to the south, consistent with the WBEMS.

(e) Design and Scale of Revetment Wall

In discussing the conditions with the Applicant, a request has been made to amend the plan references for the wall design from those submitted with the original resource consent application with those submitted with the EUC application.

I understand that the design change has been made to better address potential wall end effects with the length of the front face of the wall increasing from 23.9m to 29.4m and a 20 degree taper on the wall return as shown in **Figure 1** and **Figure 2**.

¹ GDC Ref: 109217: Decision granted 15 July 2020 by Commissioner Alan Watson

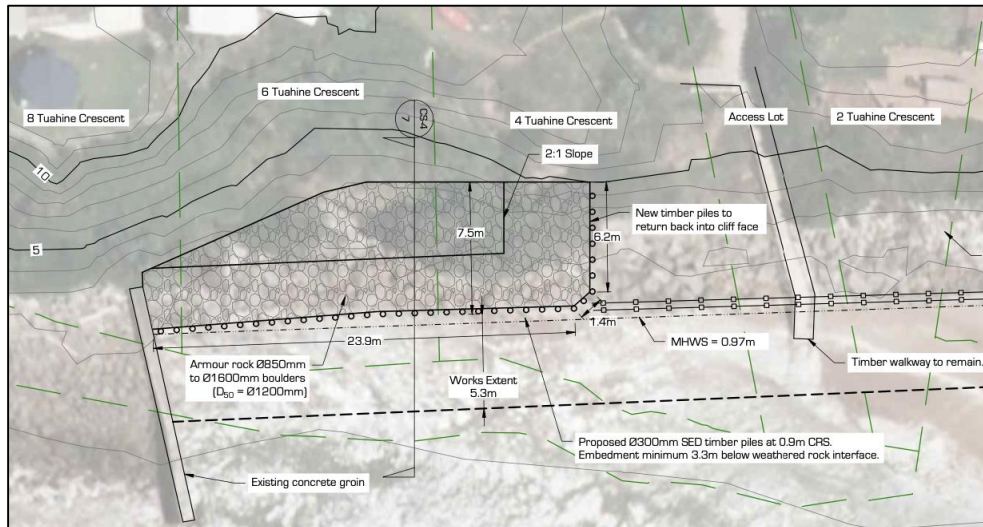


Figure 1: Detail of revetment wall design from original resource consent application.

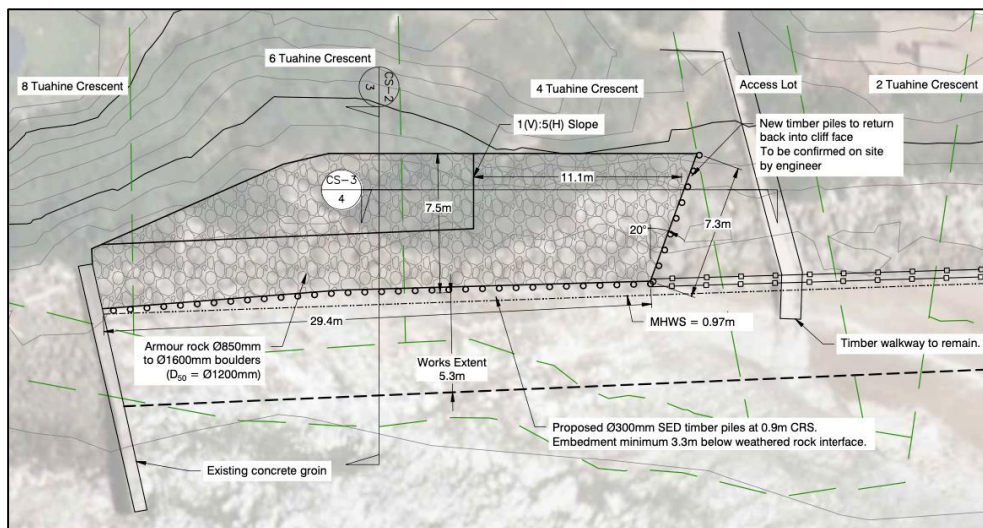


Figure 2: Detail of revetment wall design from EUC application.

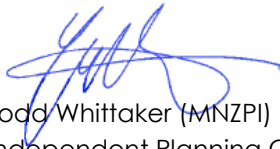
The increase in the length of wall is not large physically, however it does represent a reasonably large proportionate increase of approximately 23%. As such, it is my opinion that the Applicant will need to provide planning and legal submission to enable a proper evaluation of whether it is appropriate to accept the amended design plans should the Commissioner be mindful to grant consent.

CONCLUSION AND RECOMENDATION

18. In my opinion, there is a pathway forward to allow consent for the revetment wall. As discussed in my original S.42A report and in this addendum, the proposed works replace an existing wall and the adverse effects on the environment can be addressed by the design and scale of the wall including measures to manage any construction effects.

19. However, my overall assessment and recommendation supporting the grant of consent was originally, and fully remains, based on a consent term forming part of any consent.

20. I have updated and amended the conditions with the revised set included as **Attachment 4**. These conditions have been issued as draft to the Applicant who has provided some preliminary comments supporting the direction of changes (except around the term condition) and indicated that further assessment and amendments will be proposed as part of their evidence.



Todd Whittaker (MNZPI)
Independent Planning Consultant
28 September 2022

APPENDIX 1

Addendum Memo – Mr Paul Murphy (Coastal Works)

Technical Report Addendum



TO: Todd Whittaker
FROM: Paul Murphy
DATE: 21 September 2022
SUBJECT: **ADDENDUM TO S CAVE - APPLICATION FOR CONSTRUCTION OF A PRIVATE SEA WALL LU-2019-108876-00 ASSESSMENT OF WAINUI BEACH COASTAL WORKS**

This addendum to the technical report of 20 May 2020 specifically addresses Little Blue Penguin (Kororā) which are now known to be present within both the proposed coastal erosion protection works area at Wainui Beach.

This addendum is limited to providing comments on recommended protocols to avoid and or mitigate potential effects on Little Blue Penguin (Kororā) during the before, during and following the proposed physical works.

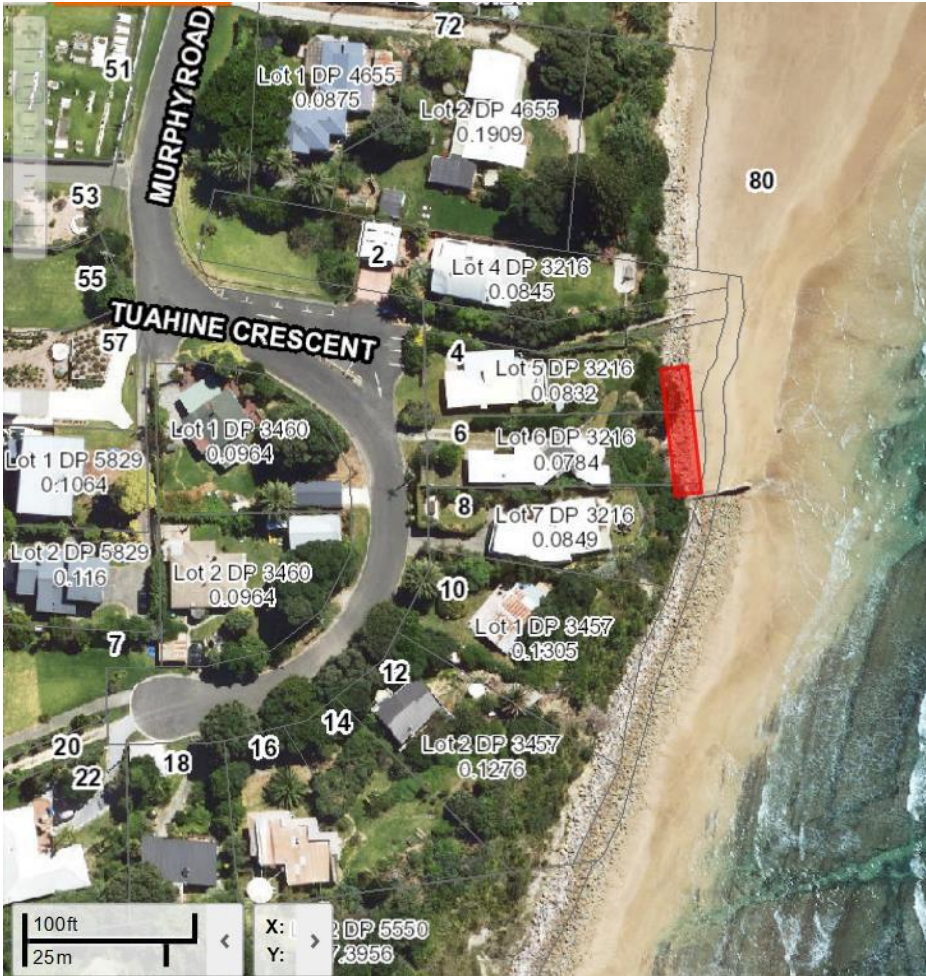


Figure 1 Tuahine Crescent approximate work area outlined in red.



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

Birds

The rock revetment is not located within a marine area of significant conservation value in the Proposed Regional Coastal Environment Plan. However the proposed work and surrounding coastal environment provides habitat for Little Blue Penguin (Kororā).

The recommended consent conditions require a survey of the proposed works area be undertaken by a suitably experienced and qualified expert to ascertain whether there is Blue Penguin habitat within the proposed works area. A survey report is required to be submitted to Gisborne District Council at least two months prior to any construction works for certification.

In addition to the survey report outlined above a management plan is recommended to specifically identify the construction protocols that apply for the period of construction works to ensure that any potential effects on Blue Penguin habitat are mitigated or avoided. These include, but are not limited to;

- Periods of the year when works should be avoided,
- Protocols for works within and outside any restricted construction periods,
- Access pathways to the foreshore for any areas where penguin habitats have been identified within or adjacent to the works area,
- Provision of additional artificial refuge sites where any existing Penguin habitat sites are compromised,

The management plan shall be submitted to the Gisborne District Council at least two months prior to construction for certification and all works shall be thereafter undertaken in accordance with the certified plan.

Providing the survey and management plan is a recommended consent condition and the requirements of both are followed potential effects on Little Blue Penguins (Kororā) is likely to be less than minor.

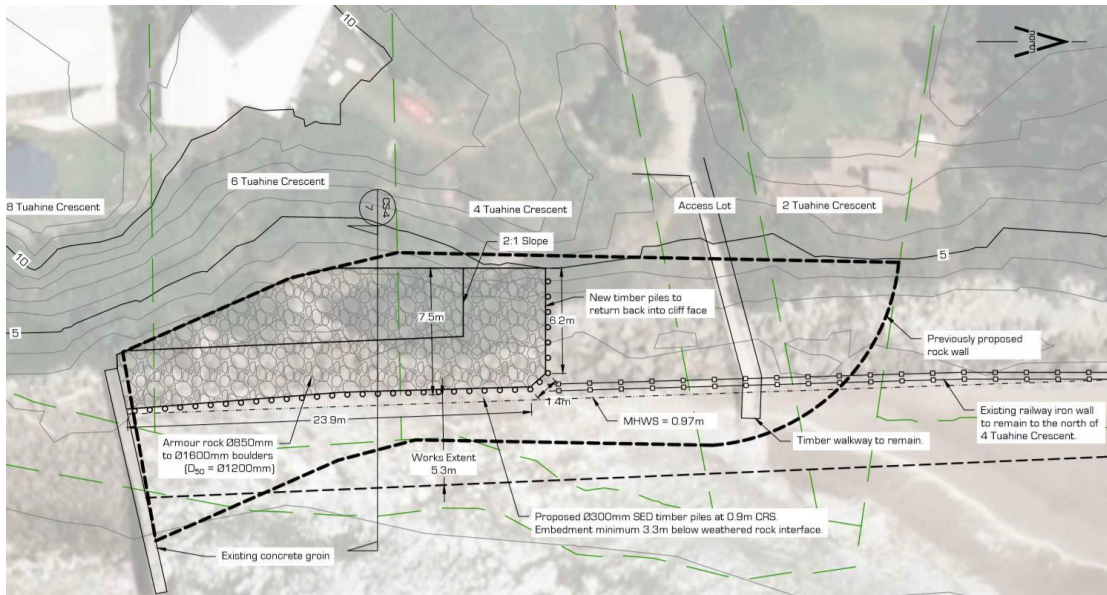


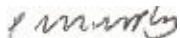
Figure 3 Plan taken from the application of the proposed wall in relation to the previously proposed rock wall by GDC.



Figure 4 Tuahine Crescent 26 June 2015



Figure 5 Tuahine Crescent 26 June 201



Paul Murphy

Team Leader Environmental Science

APPENDIX 2

Addendum Review - Dr Willem de Lange (Coastal Processes)

Review of coastal process impacts of proposed Tuahine Crescent Seawall

Addendum

20 September 2022

Introduction

In the 2 years since I wrote the review included as Appendix 1 of the S.42A report on the Tuahine Crescent (Cave) seawall, there have been several studies and reports on sea level rise that have some relevance to the potential coastal process impacts of, and on, a seawall. This addendum summarises the relevant literature, and the recently released SeaRise online tool for predicting sea level rise.

Sea level rise projections

The IPCC AR6 WGI report released in 2021 reviews available literature on sea level rise, and summarises projections of future sea level derived from the CMIP6 global climate models (IPCC, 2021). Figure 1 and Table 1 summarise the sea level projections from the AR6 assessment report (IPCC, 2021). The most plausible scenario presented is SSP2-4.5, which predicts median *likely* (>66% probability) *medium confidence* sea level rises relative to the 1995-2014 baseline of 0.56 m by AD 2100 and 0.93 m by AD 2150. The SSP5-8.5 scenario was considered to be implausible in the AR6 report. The report also included the even less plausible low-likelihood, high-impact storyline in summary figures and tables, although it was acknowledged as having *low confidence*.

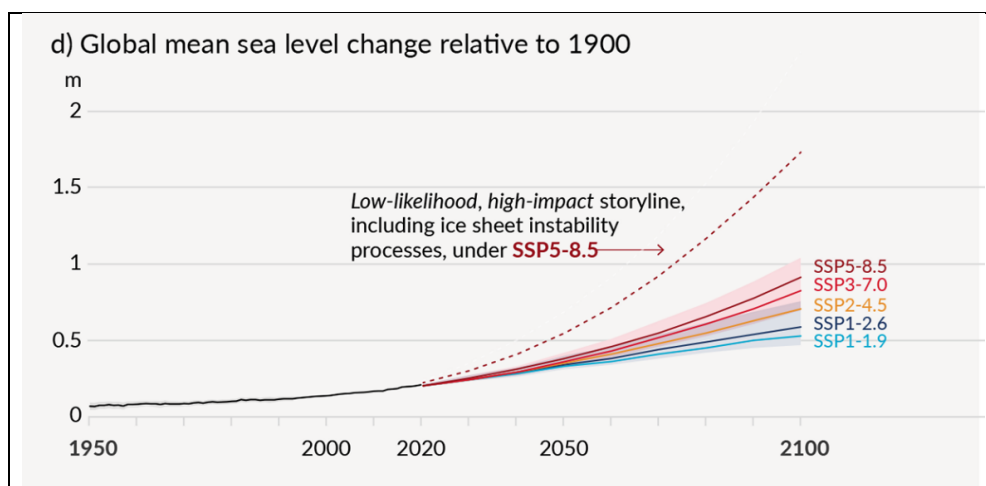


Figure 1 – IPCC AR6 WGI projected eustatic sea level changes relative to AD 1900 for 5 storylines (IPCC, 2021). The corresponding data are summarised in Table 1. The data for 1950-1992 are from tide gauges, satellite altimetry for 1992-2014, and CMIP6 models from 2014. Data are adjusted upwards to allow for 0.158 m sea level rise from 1900 to the 1995-2014 baseline used for simulations.

Table 1 – Eustatic sea level projections (m) relative to a 1995-2014 baseline for 6 storylines summarised from Table 9.9 (IPCC, 2021), and the NZ RCP8.5 H+ projections (MfE, 2017). The projections are from *likely* (>66% probability) ranges with *medium confidence*. Low, median and high values are provided for each scenario. The data up to AD 2100 are plotted in Figure 1.

Scenario	By AD 2100			By AD 2150		
	Low	Median	High	Low	Median	High
SSP1 – 1.9	0.28	0.38	0.55	0.37	0.57	0.86
SSP1 – 2.6	0.32	0.39	0.62	0.46	0.69	0.99
SSP2 – 4.5	0.44	0.56	0.76	0.66	0.93	1.33
SSP3 – 7.0	0.55	0.68	0.90	0.92	1.21	1.89
SSP5 – 8.5	0.63	0.77	1.01	0.98	1.35	1.88
SSP5 – 8.5	0.63	0.88	1.60	1.02	1.99	4.83
<i>Low confidence</i>						
NZ RCP8.5 H+		1.05			1.88	

The AR6 report did not clearly indicate that the underlying methodology for producing the values from model ensembles displayed in summary tables and figures had changed. Subsequent publications by the modellers and authors involved have clarified the situation (*viz.* Hausfather *et al*, 2022). It was recognised that some models either projected to much warming, or warmed too quickly, or both. The results of these models were considered implausible and the models were excluded from further analyses. Figure 2 is from Hausfather *et al* (2022) and indicates the ranges of temperature changes determined by including all model projections, excluding models deemed to be too hot, and the results finally included in the AR6. It is evident that further selection and/or adjustment beyond excluding 'hot models' has occurred, as indicated by the statement on Figure 2 that excluding 'hot models' is a shortcut approximation to the AR6 average. It is not clear what this involved, but the AR6 results reported (as in Table 1), give a range including 66% of the ensemble results between the 17% and 83% percentiles, while the ranges in Figure 2 include 90% of the ensemble results between the 5% and 95% percentiles. Hence, AR6 has less emphasis on the extreme tails of the ensemble distributions.

From Figure 2 and Hausfather *et al* (2022) it is evident that the choice of CMIP6 models affects the results for all future projections based on the CMIP6 models, and this includes sea level projections. As far as can be determined from the AR6 reports, the sea level results in Figure 1 and Table 1 are subjected to the same weighting processes as the temperature projections in Figure 2. Little *et al* (2015) also demonstrated that the ensemble results from 16 CMIP5 AOGCM models used to project future sea levels were distorted by 4 outliers regardless of the scenario and temperature model. It is not known if this is still an issue for CMIP6 AOGCM models.

Included in Table 1 are the NZ RCP8.5 H+ sea level projections that MfE (2017) recommended as being used to assess sea level rise impacts particularly Category A. The NZ RCP8.5 H+ values are based on the RCP 8.5 pathway within the SSP5-8.5 storyline, and represent the median of the 18% highest ensemble values. The IPCC AR6 report indicates that SSP5-8.5 is implausible, while SSP2-4.5 is considered the most plausible. Table 1 shows that the NZ RCP8.5 H+ sea level projections are too high. For the Tuahine Crescent seawall, the proposal initially reviewed was based on the MfE (2017) guideline of 1 m, which is consistent with the 83% levels for the SSP2-4.5 storyline beyond AD 2100, and well beyond the design life of the structure.

In my review, I discussed the influence of vertical land movement on relative sea level at Tuahine Crescent. Geomorphic, sedimentological and continuous GPS (GNSS) evidence indicated that Wainui Beach was rising at rates comparable to the global eustatic sea level rise (1-2 mm/y). I suggested that, as a consequence, the seawall should be designed to the Category D transitional sea level of 0.65 m (MfE, 2017). This value is consistent with the median (50%) projections for the SSP2-4.5 storyline beyond AD 2100, and well beyond the design life of the structure.

Denys *et al* (2020) undertook an analysis of relative sea level and vertical land movement at 5 ports around New Zealand, and used these data to determine the underlying eustatic sea level rise for New Zealand for the period 1900-2013. Their results indicate an average rate of eustatic sea level rise of 1.45 ± 0.36 mm.y⁻¹, and they did not detect any acceleration in the rate over time, which agrees with an earlier assessment by Fadil *et al* (2013) that found an average rate over the period 1900-2011 of 1.46 ± 0.10 mm.y⁻¹. Garrett *et al* (2022) present a re-analysis of proxy measures of

New Zealand relative sea level for the last millennium. Their reconstructed sea level agrees well with the Denys *et al* (2020) analysis of tide gauge data, and shows an acceleration in the rate of sea level rise in the early 20th Century, peaking in the 1940s and slowing since then. There is no evidence of a recent acceleration. As shown in Figure 1, all of the AR6 sea level projections assume sea level rise has accelerated since 2005 and will continue to do so until at least AD 2150.

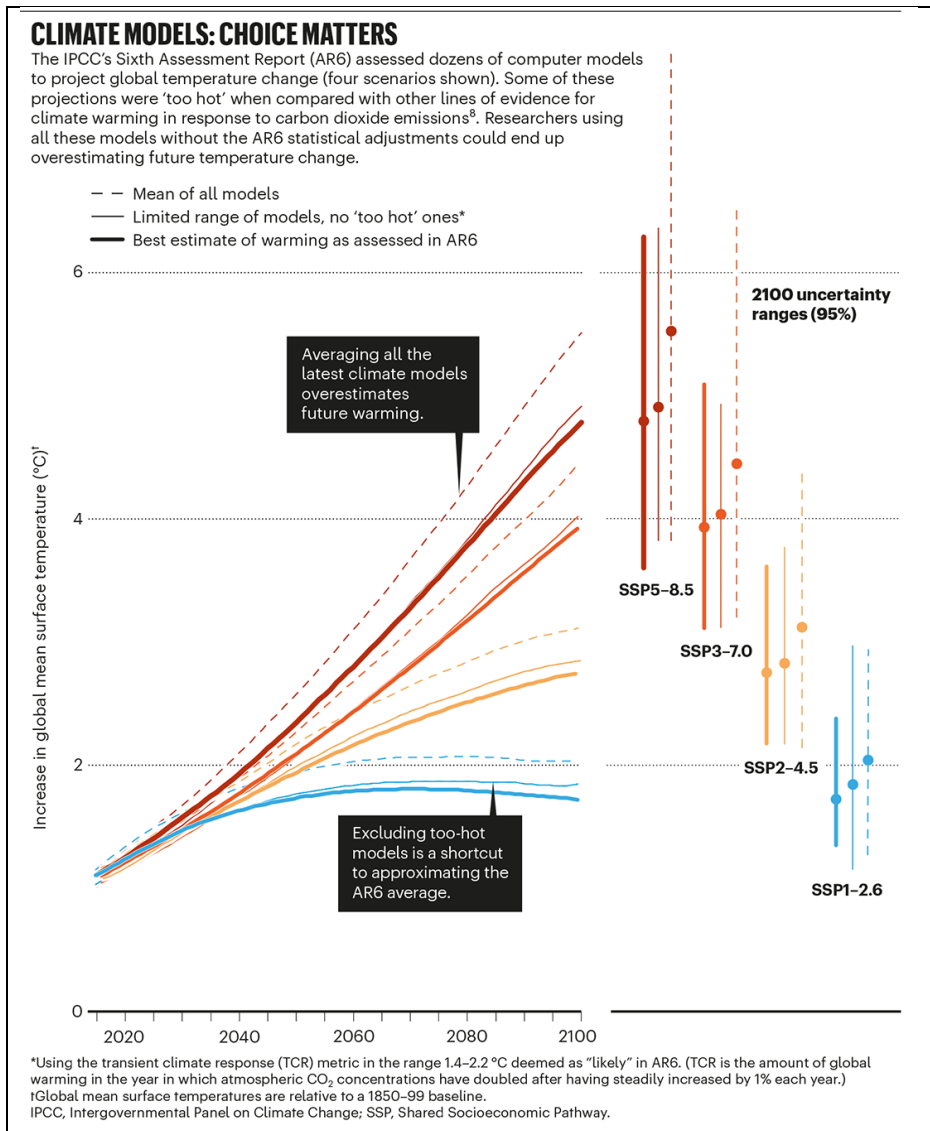


Figure 2 – Comparison of ensemble CMIP6 model medians and ranges for the projected increase in global mean surface temperature: including all models; excluding 'hot models'; and as reported by IPCC AR6 (Hausfather *et al*, 2022).

Recently (May 2022), the SeaRise online tool became available that combines vertical land movement and projections of eustatic sea level rise approximately every 2 km along the New Zealand coastline. The website points to an article written for the New Zealand Coastal Society to explain the methodology used (Levy *et al*, 2020). This article provides little detail about the methodology: particularly about potential errors and uncertainties. There is also no validation of the sea level predictions presented in the article. It is clear, however, that the online tool consists of a database of estimated rates of vertical land movement for all the sites, and a single set of sea level rise projections consisting of decadal estimates of sea level rise from AD 2020 to AD 2300 for 5 storylines. The sea level rise estimates are baselined to zero in AD 2005, and the SeaRise website indicates that the predictions should be offset by the mean observed sea level for the period 1995 to 2014 at the location of interest.

Vertical land movement

Considering the database of vertical land movement estimates, the Levy *et al* (2020) article doesn't provide much detail about the methodology used to derive the estimates. However, Hamling *et al* (2022) do provide a good description of the methodology used to estimate vertical land movement for the New Zealand coastline, and their datasets available online include the 2 km coastal vertical land movement data used by the SeaRise online tool. Hamling *et al* (2022) note that the dataset was restricted to 8 years between 2003 and 2011 with minimal large seismic events causing vertical land movement; data associated with the Fiordland 2009 and Darfield 2010 events were dropped from the analysis. Uplift associated with the Matata earthquake swarm between 2005 and 2011 in the Bay of Plenty was also adjusted to reduce the estimated uplift rate for that area.

The Hamling *et al* (2022) dataset involved combining Interferometric Synthetic Aperture (InSAR) data with continuous GPS measurements (GNSS) collected by GeoNet. The InSAR data measures deformation as result of volcanic, tectonic, and anthropogenic sources: anything that changes the elevation of the dominant radar reflector in an area, so it may not reflect the actual vertical land movement. They also note that the Synthetic Aperture Radar data used to estimate deformation was predominantly derived from ascending satellite tracks, "making it [the InSAR data] largely unusable for deriving a long-term rate". The issues raised by Hamling *et al* (2022) imply that their estimated rates are not suitable for projecting vertical land movement, and hence relative sea level, out to AD 2300. Levy *et al* (2020) also note that "the evolution of coastal vertical land movement will pose an ongoing challenge".

Table 2 summarises the occurrence of earthquakes with magnitudes greater than M_w 4.0 between 1960 and 2021. Given the location of Wainui Beach within the Hikurangi Deformation Front, it is *exceptionally likely* that there will be vertical movement due to at least one earthquake before AD 2300.

Table 2 – Frequency of New Zealand between 1960 and 2021. Data from https://www.geonet.org.nz/earthquake/statistics_long

Magnitude	Annual average	Annual minimum	Annual maximum	"In general"
4.0 - 4.9	360.74	124	1,178	1 per day
5.0 - 5.9	30.05	6	109	2 per month
6.0 - 6.9	1.68	0	9	3 per 2 years
7.0 - 7.9	0.27	0	2	1 per 4 years
8.0 or over	0	0	0	1 per century

Figure 3 shows the estimated rates of vertical land movement for the SeaRise sites between Gisborne and Tapatouri. For Wainui Beach near the proposed seawall, the rates vary from -0.770 mm/y at Tuahine Point to -0.730 mm/y at the beach access near the Pare St and Wairere Road intersection. The maximum subsidence rate is -0.850 mm/y near Sponge Bay. These rates of subsidence contradict the uplift rates determined by previous studies using longer term indicators of vertical land movement as summarised in my initial review. Considering all of the sites in Figure 3, there is no pattern to the estimated rates that is consistent with published studies of the overall tectonic deformation of the region, which are summarised by Clark *et al* (2010) as discussed below. It is possible that the vertical deformation rates determined by InSAR reflect shoreline erosion, landslides and anthropogenic sources; not the actual underlying vertical land movement. Alternatively, the vertical movement is also a consequence of aseismic processes, or slow slip events.

Figure 4 shows an updated plot of the vertical component of ground movement at the Makorori GNSS site (MAKO) that was included in my initial review, and a similar plot for the Gisborne GNSS site (GSIB). The InSAR data for the area around Gisborne would have been adjusted using the GISB GNSS data as it is the only nearby GNSS site that has data for the 2003-2011 period considered. That site lies inland within an area of subsidence under the Poverty Bay flats, and is not representative of the coast around Wainui Beach (Figure 3). Both records show vertical land movement occurring in response to slow slip events.



Figure 3 – Estimated rates of vertical land movement between Gisborne and Tatapouri from the SeaRise online tool. Also shown are the locations of the GISB and MAKO continuous GPS sites, and the location of the proposed seawall.

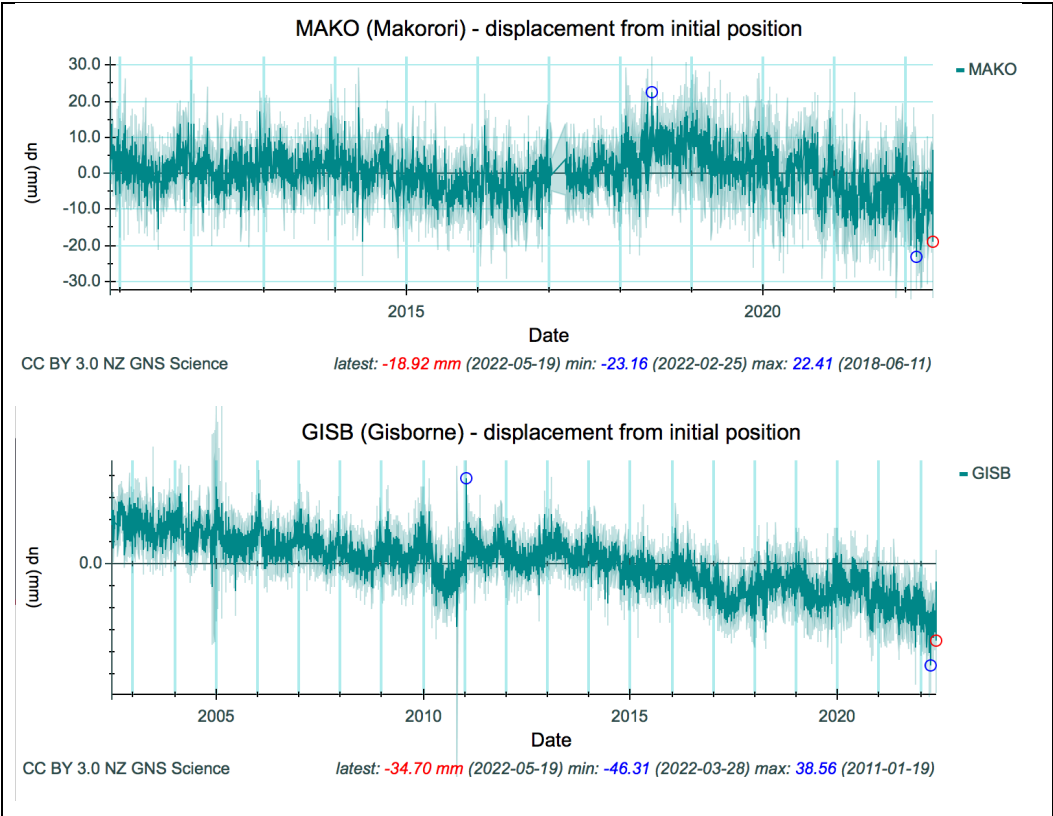


Figure 4 – Continuous GPS (GNSS) records for sites MAKO at Makorori, and GISB in Poverty Bay. The latest, minimum, and maximum values are labelled with coloured circles, and their corresponding values listed below the plot.

Perez-Silva *et al* (2022) analysed slow slip events for the Hikurangi Deformation Front between Anaura Bay and Porangahau for the period from 2004 to 2020. Figure 5 shows the distribution of slow slip events over this period. This shows that Wainui Beach experiences deformation due to slow slip events almost every year, but the frequency during 2003-2011 was lower than subsequently. All of the slow slip events recorded at the GISB station were associated with uplift at the MAKO station; with the strongest response evident for the 2017 event.

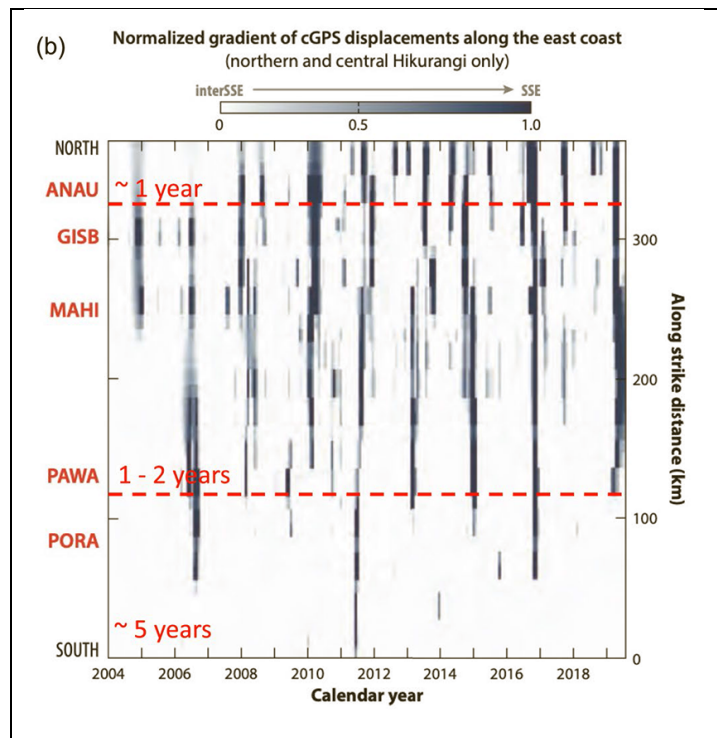


Figure 5 - Change in rate of motion of GeoNet continuous GPS stations as a normalized gradient. Darker colours represent the fastest rate change, which is indicative of slow slip events. The white colour indicates intervals between slow slip events. (Figure 1b from Perez-Silva *et al*, 2022).

Figure 6 is a combination of figures 4 and 6 from Clark *et al* (2010) and shows:

- A. A schematic cross-section through the Raukumara Peninsula to indicate the changing processes at depth that are driving coastal deformation, including uplift and subsidence. Wainui Beach lies in an intermediate zone where deformation is changing from being driven primarily by episodic large earthquakes (intermittent deformation zone) to being driven by gradual uplift due to crustal thickening (gradual uplift zone). Within the intermediate zone, causes of deformation vary and are not well understood. However, for the Wainui Beach region it is considered that slow slip events are a significant contributor to deformation;
- B. A map of the Raukumara Peninsula and Hikurangi Trough showing the location of the 3 deformation zones, major structures contributing to deformation, and coastal rates of vertical land movement. The map highlights a lack of identified faults in the Poverty Bay region, which is still evident in the active fault database for New Zealand released in May 2022 (Seebeck *et al*, 2022); the abrupt transition from uplift at the coast near Wainui Beach (MAKO site), and subsidence in the western Poverty Bay region (GISB site); and the location of subducted seamounts that are considered to contribute to seismic tremor and the formation of slow slip events; and

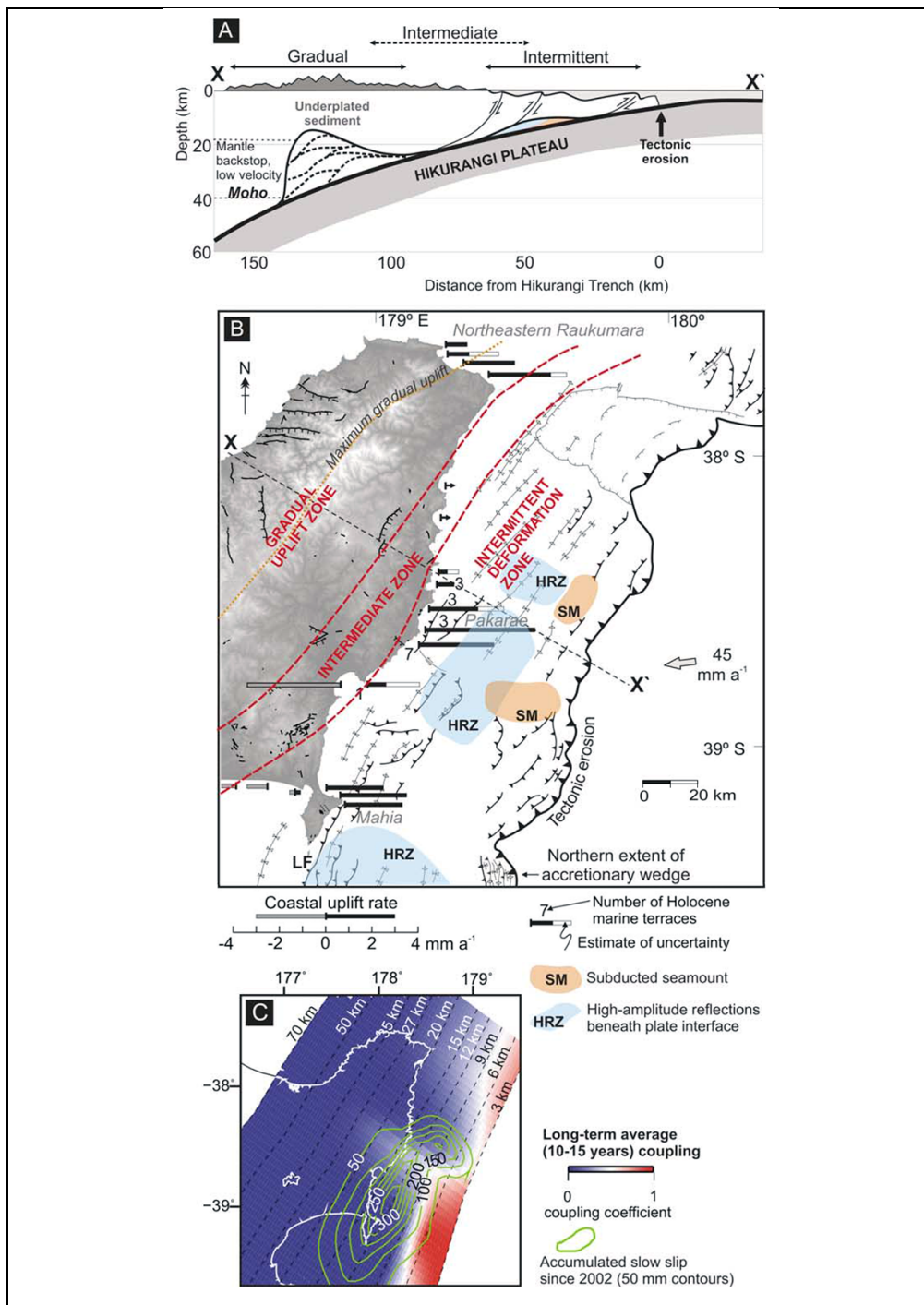


Figure 6 - Summary of the coastal deformation mechanisms of the Raukumara Peninsula. (A) Cross-section across the Raukumara Peninsula showing the tectonic processes responsible for the coastal deformation. (B) Map showing the relationship between the coastal deformation zones of the Raukumara Peninsula, the upper plate structure and topography, and the physical properties of the plate interface. Dotted lines delineate the approximate boundaries of the margin-parallel zones of intermittent and gradual deformation along with the intermediate zone in between. Estimated rates of uplift are shown. (C) Interseismic plate coupling along the northern Hikurangi margin derived from geodetic data, and the distribution of plate interface slow-slip since 2002. Dashed lines represent depth contours on the plate interface. Modified from figure 6 of Clark *et al* (2010) by adding the key for coastal uplift from figure 2 in the same publication below panel B.

- C. A map showing the amount of coupling between the Pacific and Indo-Australia Plates between seismic events, and the total slow slip deformation between 2002 and 2010. This shows the local concentration of slow slip events associated with subducting submarine seamounts. Barker *et al* (2018) examined the deformation occurring offshore from Wainui Beach associated with Ariel Bank and the Tuaheni Basin, and linked the September to October 2014 slow slip event to a 40 km long, 15 km wide, and 2.5 km thick lozenge-shaped buried ridge on the descending plate.

Overall, the published evidence for ongoing uplift of the Wainui Beach area due to slow slip events and episodic large earthquakes is compelling and indicates that the extrapolation of short-term estimates of vertical land movement from the InSAR observations between 2003 and 2011 is not a reliable predictor of future vertical land movement.

SeaRise eustatic sea level projections

Levy *et al* (2020) state that the eustatic projections are the projected rates from the IPCC Special Report on the Ocean and Cryosphere Change (Oppenheimer *et al*, 2019) combined with extra sea level rise due to ice sheet melt determined by expert elicitation. It further indicates that the median and *likely* range (17% to 83% percentiles) values from Oppenheimer *et al* (2019) were used to define the central region of the sea level projection distributions, and expert elicitation was used to define the extreme tails (upper and lower 17%). The source of the expert elicitation was not specified. Therefore, the methodology is based on adjusted CMIP5 model results and it is unclear if the outlier AOGCM models identified by Little *et al* (2015) were included or excluded.

However, the SeaRise website provides projected sea level rise using the median (p50), lower 17% percentile (p17) and upper 83% percentile (p83) values based on the CMIP6 models. This means that the expert elicitations of the extreme tails for the CMIP5 model projections should not be included in the online tool projections. Comparison of the SeaRise sea level rise projections with those from the IPCC AR6 WGI report summarised in Table 1, show that they agree up to AD 2030, but increasingly deviate over time depending on the storyline: SSP1-1.9 is essentially unchanged; while SSP5-8.5 shows the largest change.

Table 2 – Eustatic sea level projections (m) relative to a 1995-2014 baseline for the 5 storylines used in the SeaRise online tool.

Scenario	By AD 2100			By AD 2150		
	Low	Median	High	Low	Median	High
SSP1 – 1.9	0.25	0.38	0.57	0.34	0.58	0.89
SSP1 – 2.6	0.30	0.42	0.62	0.43	0.67	1.00
SSP2 – 4.5	0.44	0.57	0.78	0.68	0.96	1.35
SSP3 – 7.0	0.59	0.73	0.96	0.99	1.31	1.74
SSP5 – 8.5	0.67	0.83	1.10	1.09	1.47	2.02

As mentioned above, Denys *et al* (2020) analysed relative sea levels and vertical land movements for ports around New Zealand with a sufficiently long record; reporting an average rate of eustatic sea level rise of 1.45 ± 0.36 mm/y. This rate is based on observations that overlap with the start of the SeaRise projections between AD 2005 and AD 2030. For this overlap period, SeaRise projections assume a rate of eustatic sea level rise of 3.2 mm/y for p17, 4.4 mm/y for p50, and 5.6-6.0 mm/y for p83 depending on the storyline (lower rates for higher emission storylines). These rates are more than double the observed long-term rate around New Zealand based on coastal tide gauges. The SeaRise p50 and p83 eustatic sea level rise rates are also higher than the global eustatic sea level rise rate determined by satellite altimetry of 3.0 ± 0.4 mm/y for the period AD 1992 to AD 2022 (this rate excludes the estimated glacial isostatic adjustment for the increasing depth of the ocean basins of 0.2-0.5 mm/y) reported by the NOAA/NESDIS/STAR Laboratory for Satellite Altimetry (<https://www.star.nesdis.noaa.gov/socd/lsa/>).

The SeaRise projections, therefore, start with a higher rate of eustatic sea level rise than observed for New Zealand, or globally, and assume continual acceleration of the rate of rise until AD 2300. As discussed above, there is currently no evidence for long-term acceleration of the rate of sea level rise for New Zealand. There is evidence that the rate of sea level rise varies at annual to decadal time scales, so it is necessary to analyse time series of sufficient length to average out these

variations. The minimum time period required is considered to be 60-70 years, which means that satellite altimetry data are too short to provide a reliable estimate of long-term rates. Therefore, the global eustatic sea level rise rates should be reduced by at least 50% to match the observed rates for the New Zealand coast.

Levy *et al* (2020) also point out that there are latitudinal differences in the rate of eustatic sea level rise, which they illustrate with an extreme example of a large release of water from the Greenland and Antarctic ice caps. Table 3 summarises the results from Denys *et al* (2020) for the ports analysed, and they indicate that there is a latitudinal variation in the rate of eustatic sea level rise for the New Zealand coast; although the value for Dunedin appears anomalous. Despite the differences being small, they are the same magnitude as the glacial isostatic adjustment the Local Government Guidance Note (MfE, 2017) added to eustatic sea level rise projections, and therefore should be considered for 100-year projections (and longer).

Table 3– Summary of the results from Denys *et al* (2020) of rates of relative sea level rise (RSL), vertical land movement (VLM), and eustatic sea level rise (ASL) for 5 New Zealand ports.

Port	RSL (mm.y ⁻¹)	VLM (mm.y ⁻¹)	ASL (mm.y ⁻¹)
Auckland	1.57 ± 0.15	-0.16 ± 0.10	1.41 ± 0.18
New Plymouth	1.46 ± 0.54	-0.04	1.42 ± 0.54
Wellington	2.18 ± 0.17	-0.62 ± 0.31	1.56 ± 0.36
Lyttelton	1.91 ± 0.13	-0.27 ± 0.23	1.64 ± 0.26
Dunedin	1.35 ± 0.15	-0.14 ± 0.31	1.21 ± 0.35
mean	1.69 ± 0.28		1.45 ± 0.36

Figure 7 shows the measured monthly and annual relative mean sea level at Gisborne (station 1613) as provided by the Permanent Service for Mean Sea Level (PSMSL) website (<https://www.psmsl.org/>), and the SeaRise relative sea level predictions for site 2130 located within Eastland Port with a vertical land movement of -0.020 mm/y (Figure 3). Sea level data for Gisborne before 2010 are sparse and unreliable, so they have not been plotted. The SeaRise predictions have been baselined using the procedure given by SeaRise. This has the effect of forcing the SeaRise projections to overlap the observed sea level for the period 1995-2014. In this case data were not available for the full period, so the mean was based on data for 2007, 2008, and 2010-2014). As plotted, Figure 7 indicates sea level rose faster than predicted until 2016, and then has gradually fallen until the observed mean relative sea level is in close agreement with the predicted sea level in 2020.

Figure 4 shows the vertical land movements at the GISB and MAKO sites approximately equidistant from site 2130, and a comparison with Figure 7 indicates that vertical land movement has had a minor impact on the measured sea level (~10%). The influence of vertical land movement does vary over time, with the largest impact occurring during 2010-2011 period when there was strong slow slip event deformation (Figure 5). Overall, the observed rise and then fall of relative sea level cannot be attributed solely to vertical land movement at site 2130.

Figure 8 shows the measured monthly relative mean sea level at Gisborne and the eustatic sea level measured by satellite altimetry at 38.75°S 178.08°E, which is approximately 10 km south-southeast of the Gisborne tide gauge at 38.68°S 178.02°E. The satellite altimetry data were obtained from the Sea Level Explorer website (<https://ccar.colorado.edu/altimetry/index.html>). Despite not correcting the Gisborne relative sea level data for vertical land movements, it is generally a good match with the satellite eustatic sea level data. This suggests that sea level at Gisborne (and therefore Wainui Beach) predominantly responded to changes in eustatic sea level offshore from the coast over the period plotted. The main deviations between the two data sets occurs for 2010-2011 when there were larger vertical land movements.

Figure 8 also shows that the rate of sea level rise at Gisborne varies over time, with intervals of acceleration and deceleration. There is no obvious evidence of an overall acceleration or deceleration in the rate of sea level rise in the available data, but the record duration is too short to undertake

a reliable analysis. The pattern of sea level variations in Figure 8 also suggest that sea level at Gisborne will soon drop below the SeaRise predicted sea levels (Figure 7).

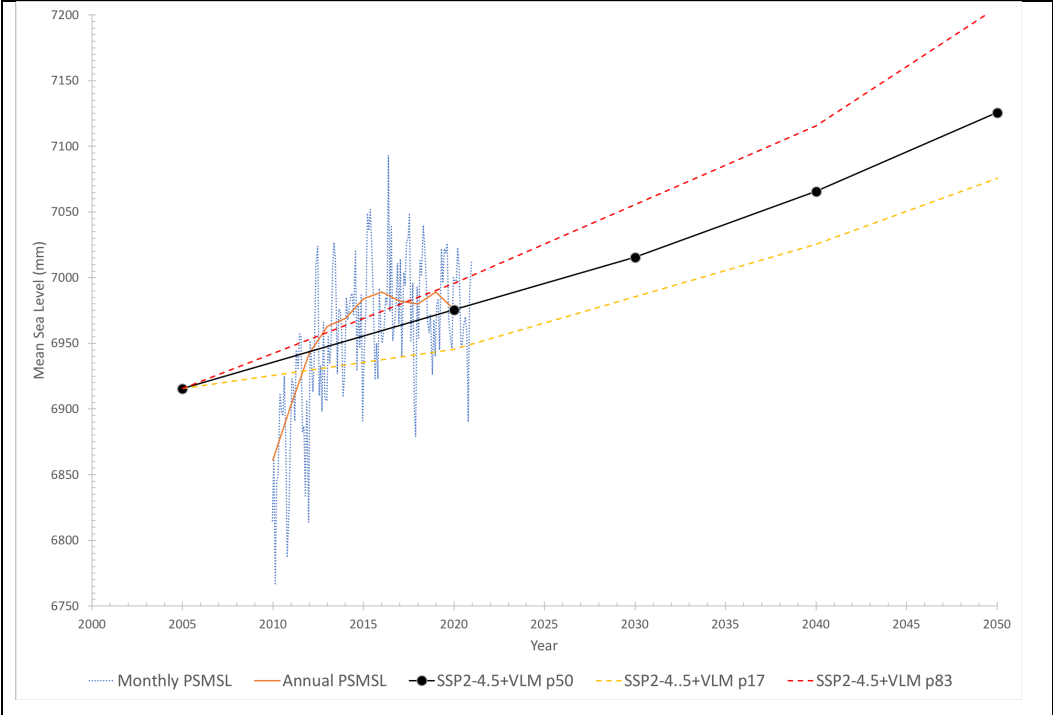


Figure 7 – Measured mean annual and monthly relative sea level at Gisborne for 2010-2020 as reported by PSMSL, and the SeaRise predicted sea level from 2005 to 2050 at site 2130. The SeaRise data have been baselined to the mean of the annual observations for 1995-2014 (6915.6 mm).

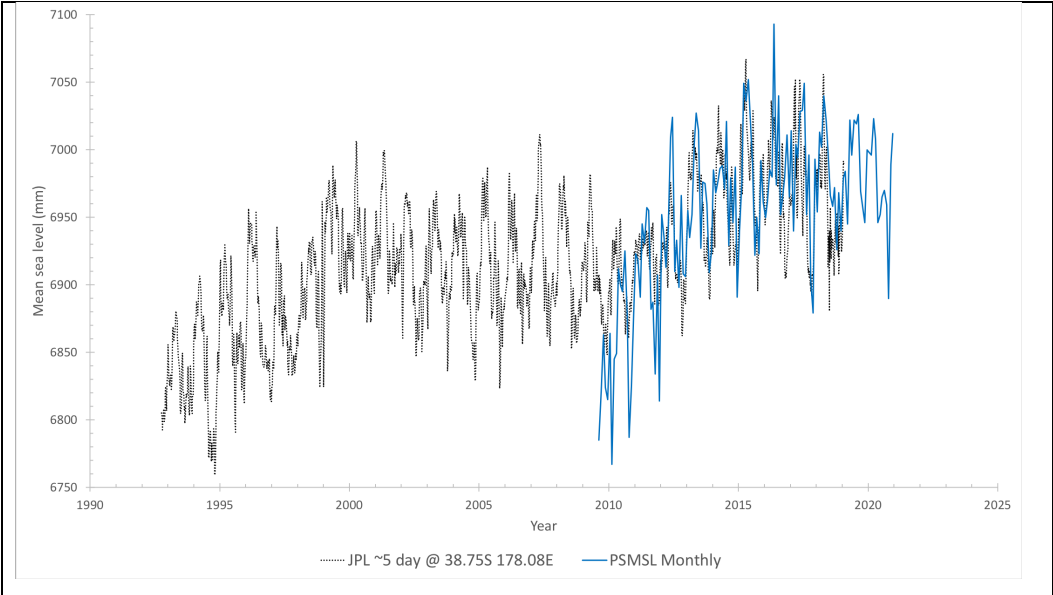


Figure 8 – Measured monthly relative sea level at Gisborne for 2010-2020 as reported by PSMSL, and the satellite altimetry measured eustatic sea level offshore at 5-day intervals as provided by the Sea Level Explorer Website.

Normally La Niña conditions tend to result in an elevated mean sea level around New Zealand, particularly on the east coast of the North Island (areas affected by the East Auckland Current transporting warm tropical water towards polar regions). In contrast El Niño conditions tend to

result in lowered mean sea levels. Since 2016, La Niña conditions have dominated, including a prolonged event underway at present (<https://www.cpc.ncep.noaa.gov/data/indices/soi>). Even though the ocean surface temperatures have increased during the La Niña events, Figure 8 shows that sea level has fallen. When the next El Niño event occurs, it is *likely* that sea level will fall faster.

Overall, the limited sea level data for the Gisborne region indicates that the SeaRise predictions, while currently matching observations after baselining, are *very likely* to overestimate future sea levels at Wainui Beach, particularly over longer time periods (after 2030-2050).

Summary

The additional information on historic sea level changes and new future sea level projections/predictions has not significantly changed my original review. The key findings are:

- Since the predicted sea level is *very likely* to be less than assumed for the initial review, the proposed replacement seawall is still *likely* to have the same effect on coastal processes as the existing structure, which is minimal.
- Sea level rise is *very likely* to be less than assumed for the initial proposal reviewed. The RCP 8.5 H+ sea level projections applied then, which were *exceptionally unlikely* at the time, are recognised as not plausible. The new sea level predictions from the SeaRise online tool are not reliable, and a *very likely* to overestimate future sea level, particularly after 2030-2050 depending on the storyline used. Hence, I would still suggest that there is scope to reduce the size of the proposed replacement seawall, and hence the impact, if it is treated as a Category D development following the Ministry for the Environment (2017) guidance with a lower assumed future sea level.

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APPENDIX 3

Email String between Applicant and Ngati OneOne

Subject: RE: Cave/Reynolds Seawall at Tuahine
Date: Friday, 16 August 2019 at 10:40:21 AM New Zealand Standard Time
From: Sam Morgan
To: Nikki Searancke
CC: Todd Whittaker
Attachments: image001.png

Kia ora Nikki,

Thank you for the support.

I will keep you informed of progress.

Nga mihi

Sam Morgan
Senior Coastal Consultant
Mobile: 022 126 2514
[4Sight Consulting](#)

From: Nikki Searancke <searanckenikki@yahoo.com>
Sent: Thursday, 15 August 2019 2:00 PM
To: Sam Morgan <samm@4sight.co.nz>
Cc: Todd Whittaker <todd@planningworks.co.nz>
Subject: Re: Cave/Reynolds Seawall at Tuahine

Kia ora Sam

Thank you for the update. I can state that Ngati Oneone Hapu support the consent application by your client. Once again the reasons for supporting is twofold, both protecting our hapu ancestral history of whare wananga at this general location, including your clients property and the need to protect the Maungaroa Headland and beyond to the Tuaheni Point.

I look forward to observing the project and works as it proceeds.

Nga mihi
Nikki Searancke
027 8617704

On Thursday, 15 August 2019, 01:23:10 pm NZST, Sam Morgan <samm@4sight.co.nz> wrote:

Kia ora Nikki,

I just wanted to give you an update about where things are at with the consent application.

We have been working through a couple of issues with GDC. We have settled on a consent term that aligns with the structures to the south. This will allow for some continuity in managing the beach.

If you could please let me know if you are still supportive of the proposal that would be appreciated.

It would be good to get this through as confirmation from Ngati Oneone is the last remaining matter to address.

Nga mihi,

Sam Morgan
Senior Coastal Consultant

Mobile: 022 126 2514



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APPENDIX 4

Revised Conditions

General Conditions

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

Term of Consent

5. The consent shall expire on **11 April 2042**.

Cultural Protocols Archaeological Site Conditions

6. In the event of any archaeological site, waahi tapu, taonga or koiwi being discovered during the works authorised by this consent, the Consent Holder shall immediately cease work in the immediate vicinity (at least 20m from the site of the discovery) and secure the area. The Consent Holder shall contact the Council to obtain contact details of the relevant hapu and /or marae. The consent holder shall then consult with the appropriate tribal entities and Heritage New Zealand Pouhere Taonga, and appropriate protocols (tikanga) must be observed. If the discovery is of human remains, the New Zealand Police shall also be informed. Works in the area of the discovery shall not recommence until the steps set out above have been followed and commencement of works approved by Council.

Final Wall Design and End Effects

7. At least 1 month prior to the works commencing, final design plans for the revetment wall shall be certified in writing by a suitably qualified and experienced coastal engineer, as being able to appropriately avoid or mitigate potential end effects from the revetment wall on adjoining properties. The final design plans shall be in general accordance with the LDE Drawings 'Seawall Renewal 4-8 Tuahine Crescent' Drw 14608 CO1 Sheet 1 and 2, and 14608 CO2 Sheet 1 and 2 . A copy of the certification shall be submitted to the Consents Manager, Gisborne District Council prior to commencement of construction of the revetment wall.

Little Blue Penguin (Kororā) management protocols and plan

8. A survey of the proposed works area shall be undertaken by a suitably experienced and qualified expert to ascertain whether there is any blue penguin habitat within the proposed works area. A survey report shall be submitted to Gisborne District Council at least 2 months prior to construction for certification.
9. In addition to the survey report required by condition 8, the consent holder shall submit a management plan to specifically identify the construction protocols that shall apply for the period of construction works to ensure that any effects on blue penguin habitat are mitigated or avoided. These shall include, but not be limited to;
 - Periods of the year when works should be avoided,
 - Protocols for works within and outside any restricted construction periods,
 - Access pathways to the foreshore for any areas where penguin habitats have been identified within or adjacent to the works area,
 - Provision of additional artificial refuge sites where any existing penguin habitat sites are compromised,

The management plan shall be submitted to Gisborne District Council at least 2 months prior to construction for certification and all works shall be thereafter undertaken in accordance with the certified plan.

Construction Management Plan (CMP)

10. At least 1 month prior to the works commencing, the Consent Holder shall submit to the Consents Manager, Gisborne District Council, for certification, a Construction Management Plan (CMP) prepared by a suitably qualified and experienced person(s). The purpose of the CMP shall be to outline the environmental management and monitoring measures to be installed prior to and maintained during construction works to maintain compliance with the conditions of this consent and to ensure that any potential adverse environmental effects are

minimised over the period of works. The finalised CMP shall include, but not be limited to the following;

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

Construction Methodology and Conditions

13. The consent holder shall notify the Gisborne District Council Monitoring and Compliance Team of the intention to begin works at least 3 working days prior to the exercise of this consent. Where works are to be undertaken again having been discontinued for more than seven consecutive working days Council shall be re-notified.

Note: Reporting, notification and submission of records required by conditions of this consent should be directed to **Compliance.Admin@gdc.govt.nz** or (in writing) to the Monitoring, Compliance and Enforcement Manager, Gisborne District Council, PO Box 747, Gisborne 4040, this notification shall include the consent number LU-2019-108876-00.

14. All noise from construction shall comply with the following criteria for long term construction activities at the boundary of any residential site:

Time period	Average Maximum Noise Level (dBA)		
	<i>L₉₅</i>	<i>L₁₀</i>	<i>L_{MAX}</i>
Monday – Saturday 0600 – 1800 hours	60	75	90
Monday - Saturday at all other times	60	75	90

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

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

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

16. All vehicles involved in the exercise of this consent shall be inspected daily prior to entering the coastal marine area for leaks or other sources of contaminants. Evidence of this inspection shall be recorded in a log book and shall be made available to the consenting authority on request.
17. Works shall only occur during low tidal conditions, three hours either side of low tide. This time restriction does not apply to planting works landward of the upper extent of the revetment wall.
18. Works shall not cause erosion of the dune face.
19. Sediment may be discharged only in conditions and to a degree that does not visibly alter the turbidity of the sea after reasonable mixing.
20. All waste material shall be removed from the coastal marine area as well as the works area above MHWs and disposed of appropriately.

21. The consent holder shall arrange a site visit during operations to demonstrate compliance with all consent conditions. The site visit shall be attended by representatives of the Gisborne District Council Monitoring and Compliance Team the contractor(s) and consent holder.
22. All maintenance and refuelling activities shall be undertaken outside of the coastal marine area. Refuelling and maintenance to extraction and transport machinery must be carried out off site to ensure that any contaminants (such as oil, diesel and petrol) used during the exercise of this consent cannot enter any watercourse.

Finished Site Works and Planting Plan

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

Recording and Notifications

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

Expiry of Consent/Decommissioning of Works

26. At least 1 year prior to the expiry of the consent, the consent holder shall provide details to the Consents Manager, Gisborne District Council that set out the consent holder's intention with regards to;
 - Whether a re consenting process will be commenced to provide for the retention of the revetment wall,

- If a re consenting process is not proposed, the consenting process and proposed works which will be undertaken to decommission the works approved under this consent,
- If a re consenting process is not proposed, what structures or final escarpment profile is proposed with an assessment of how this will respond to on-going coastal erosion processes.

