

Submission to Variation 2 Te Tai o Poutini Plan

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Summary

- Initial submission opposes the emotive terms Coastal Severe, Alert and Setback and asks for these to be reviewed and amended.
- Clear Definition of “Managed Retreat” is requested.
- Commitment to the legal obligation on the part of Government, NZTA, Regional and Local Councils as per the TTPP to mitigate identified hazards where no alternative options are readily available or practical.
- Viz. In particular, the area denoted ‘G5’ Ngakawau SH67 between 165 Torea St and Merritts’ Wall, - published and gazetted for boulder wall to protect SH67 from likely wave action budgeted at \$3.8 million and notified to residents by West Coast Regional Council 2020/21.
- This project should not be subject to recent Whaka Kotahi NLTP definition as a “possible” activity only. It is now an obligation under the legal definition of the TTPP.

See detail pages below.

Objective: To show that the current TTPP Varn 2 is fundamentally flawed and not fit for purpose.

This submission is related to the section of coast adjacent/abounding to SH67 between No 165 Torea St at Granity and No 11 Main Rd Ngakawau. Viz Section G5 as specified in TTPP Varn 2, p12, Table 3-1, Fig 3-1.

This submission does not dispute the basic assumptions of sea level rise, storm surge, wave heights, and high water marks as suggested. In fact it would suggest that these hazards have likely been under-estimated in many areas.

However it’s primary objection is that the plan is fundamentally HYPOTHETICAL AND SPECULATIVE.

It takes what it concedes is a ‘BATHTUB MODEL’ and applies it in a broad-brush manner across many different areas and scenarios without carrying the mandatory measurement and research that would normally be required to make such sweeping and ultimately costly judgements and decisions. It makes no pretense in excusing itself on the basis of cost and ease of accomplishment.

Whilst this broad-brush averaging “Bathtub” method may be an acceptable approach to Government and Local Authorities it is most certainly NOT acceptable to ratepaying property owners who have had millions wiped off the value of their properties nor the

communities affected who now have to question where and how they are supposed to relocate to.

As such this approach to hazard identification which pretends to call itself a plan, is fundamentally flawed and not fit for purpose at a local level as it is not based on local research and specific measurements of the sea floor topography, wave inducement and exit channels, measurements and testing of wave heights and directions, frequency and tidal current variations over a statistically valid period of time. It can therefore be discredited as an invalid non-scientific document on this basis alone and could be seriously challenged in court by individual or a collective of landowners on a case by case basis - especially if they are able to present potential mitigation plans.

The TTPP is blatantly NOT a PLAN as it does not provide identifiable or even suggestive remedial proposals for action.

As it stands it does not present or provide the necessary guidance and potential mitigation advice for local bodies and government, And more importantly communities and individuals to know HOW they should respond and attempt to mitigate these hazards.

Instead of providing a map to safety it simply points to 3 very emotive categories

- Coastal Severe!
- Coastal Alert!
- Coastal Setback

This terminology is both intimidating and confusing, leaving landowners and residents in situ in their houses until The Wave cometh and then allowing them to rebuild if they are still alive!

The fourth category, "Managed Retreat" is nefarious and ill-defined failing to give clear indication of what it means to individuals and what they are expected to do now.

"Managed Retreat"

- what does it mean?
- is it funded or subsidized?
- what can we do now?

The TTPP is certainly not proactive and comes nowhere near what is really needed in providing pre-emptive proposals and potential remedies.

Our properties have already been massively devalued by the misguided discussions around this so called plan. We are now unable to sell and manage our retreat as we no longer have the capital value to do so.

Our communities lie in fear of entrapment and inundation and all we get is red and purple lines drawn through our properties.

We need real and sensible remedies and mitigation plans we can start working on now. But we cannot be expected to do this on our own without guidance and subsidies from government and local bodies. We all need to work together on this.

The Government cannot be allowed to walk away on this enormous national hazard.

Ngakawau Straight SH67 - A Case in Point.

Refer to Section G5 TTPP Varn2 p12, Fig 3-1.

In 2020/21 NZTA gazetted and newspapers published a mitigation plan to protect SH67 between 165 Torea St Granity and Merriots' Wall (no 11 Main Rd Ngakawau).

This plan involved a 3-4m high boulder wall above the high water mark and was to be erected 2022 at a budgeted cost of \$3.8million. This was approved by government and the Minister at the time Shane Jones. Unfortunately it seems the money has vanished and the stones were used on the Ngakawau bridge abutments.

However according to recent news articles the project is still legally "on the books" but has been described only as a "possible" project by James Caygill, Director Regional Relationships at NZTA although it is still included in its State Highway Investment Proposal 2024-2034 "to be funded in the 2024-2027 National Land Transport Programme. This proposal is NOT a proposal. It is already an approved and funded scheduled project by government in 2021! As such it should proceed post haste!

It is the most vulnerable sea encroachment attack point between Westport and Karamea and a such holds the key to all the dairy farms north of Granity, the potential contingency plan for the continuation of Stockton should the railway fail again which is considerably more likely than inundation here, the livelihoods of the Mokihinui, Seddonville, Little Wanganui and Karamea communities and the burgeoning tourist trade that is now showing its momentum.

It is quite possibly an auditable crime that this has not proceeded already.

It should now be considered as an absolute necessity by the TTPP.

The Sandhill that is currently in place is a psychological barrier only and would be lucky to last 3 serious waves.

The TTPP actually notes and recognizes the government and local authorities are legally bound to mitigate identified hazards to protect national assets (such as critical highways) and adjacent communities and property where no alternative physically exists and where managed retreat is not possible/available.

State Highway 67 between Granity and Ngakawau is one of these critical situations and needs to be recognized and addressed formally as such by the TTPP.

This mitigation work would alter the status of the housing and sections along SH67 in G5 and at least buy 10-15 years for alternative plans and managed retreat to be pursued.

Even so the author acknowledges that the current hazard identification and categorization in Varn2 to TTPP likely underestimates the likely severity and damage and danger to life and property posed by significant/extreme weather events combined with likely sea level rise in the not so distant future.

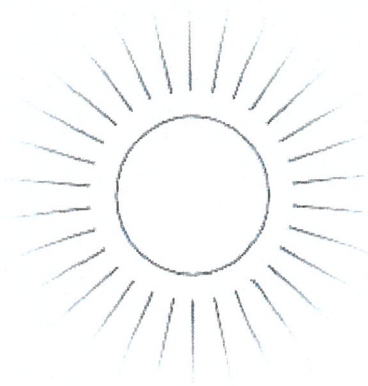
Sea level rise could be much faster than currently assumed.

Storm action may be more severe and frequent.

Inundation could be more widespread.

The need for mitigation and managed retreat options is CRITICAL NOW.

Bathtub model



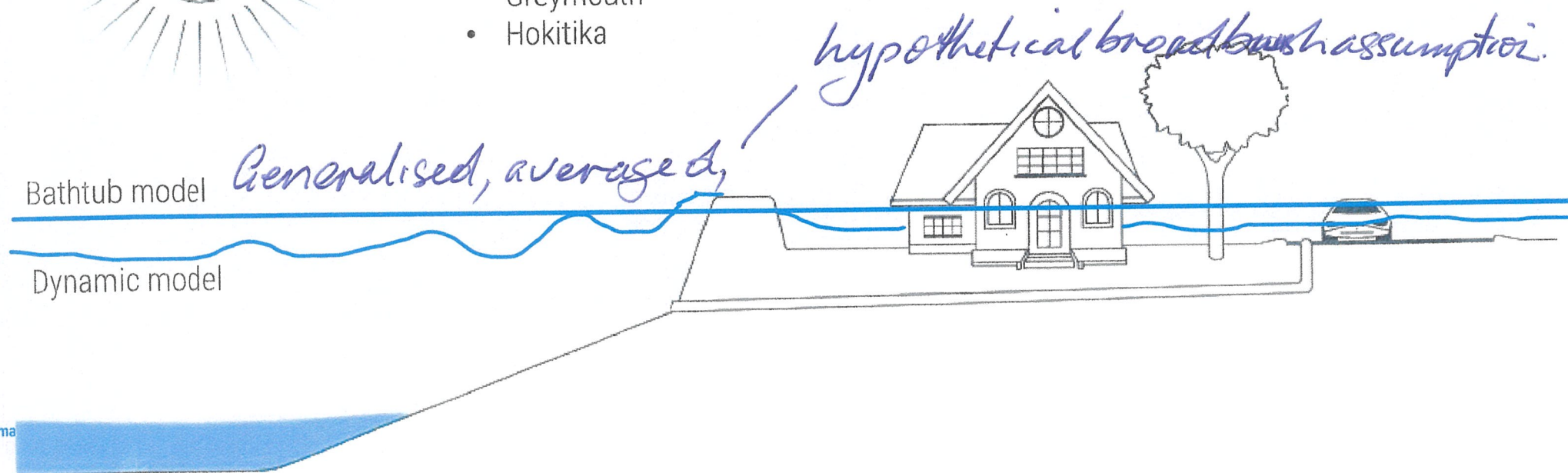
Bathtub model very fast/cheap to apply

- Applied everywhere where the LiDAR exist

Dynamic model take a lot of computer power and time to setup

- Orowaiti
- Greymouth
- Hokitika

Current Sea Level



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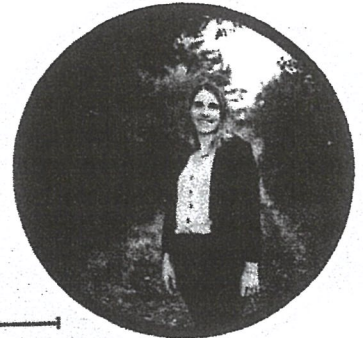
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NGAKAWAU SEAWALL UPDATE

Back in early May ²⁰²⁴ many locals noticed people in high-viz with satchels and clipboards taking a lot of interest in the foreshore between North Granity and the Ngakawau River. Turned out they were ecologists working on an assessment of flora and fauna for the proposed seawall along this stretch of coastline. NZTA said at the time that the seawall project was listed in its State Highway Investment Proposal 2024-2034 to be funded in the 2024-2027 National Land Transport Programme. It said the outcome of that proposal would be confirmed later in the year. We checked back in with NZTA last month and this is what they now advise.

James Caygill, Director Regional Relationships at NZ Transport Agency Waka Kotahi:
While design work and site investigations at Granity are continuing, construction of the project has been included in the National Land Transport Plan (NLTP) as a "possible" activity only.

The project's "possible" status means it can only be considered for funding if higher priority projects are delayed and/or cost-savings occur or there is an increase in National Land Transport Fund revenue.

Let's hope for an increase in NLTF revenue :)

ALREADY
APPROVE

147

Ngakawau-Hector

Scale: 1:8,500

0 0.15 0.3
Kilometers



Legend

Coastal Hazard Variation
Updated Mapping

- Coastal Hazard Severe
- Coastal Hazard Alert
- Coastal Hazard Setback



Te Tai o Poutini
PLAN
A combined district plan for the West Coast

Proposed District Plan - Coastal Hazards Variation June 2024

NOTE

Roads carry the same zoning as the adjoining land. If a boundary between zones follows a road, the zone boundary is located on the centreline of the formed road, or where unformed, the centreline of the legal road.

DISCLAIMER

Considerable care has been taken to avoid errors and omissions, and the latest information has been included in these District Plan maps. However, even with the greatest care inaccuracies may occur and therefore the West Coast Regional Council cannot accept any responsibility for such errors and omissions.



Figure 4-8: 1% AEP storm-tide+wave setup for present sea level in Granity Hector and Ngakawau . Blue shading shows areas at risk of inundation. The dash red line show the area of coastal erosion hazard for a 100-year outlook.

It should be noted that the multiple river/lagoon/beach systems can experience complex interactions between hazards. The interaction of river and coastal flooding and erosion are not covered in the static inundation assessment.

4.1.4 References

Allis, M. (2016a). *Adapting to coastal change at Granity, Ngakawau and Hector*. NIWA Client Report HAM2016-012, prepared for West Coast Regional Council.

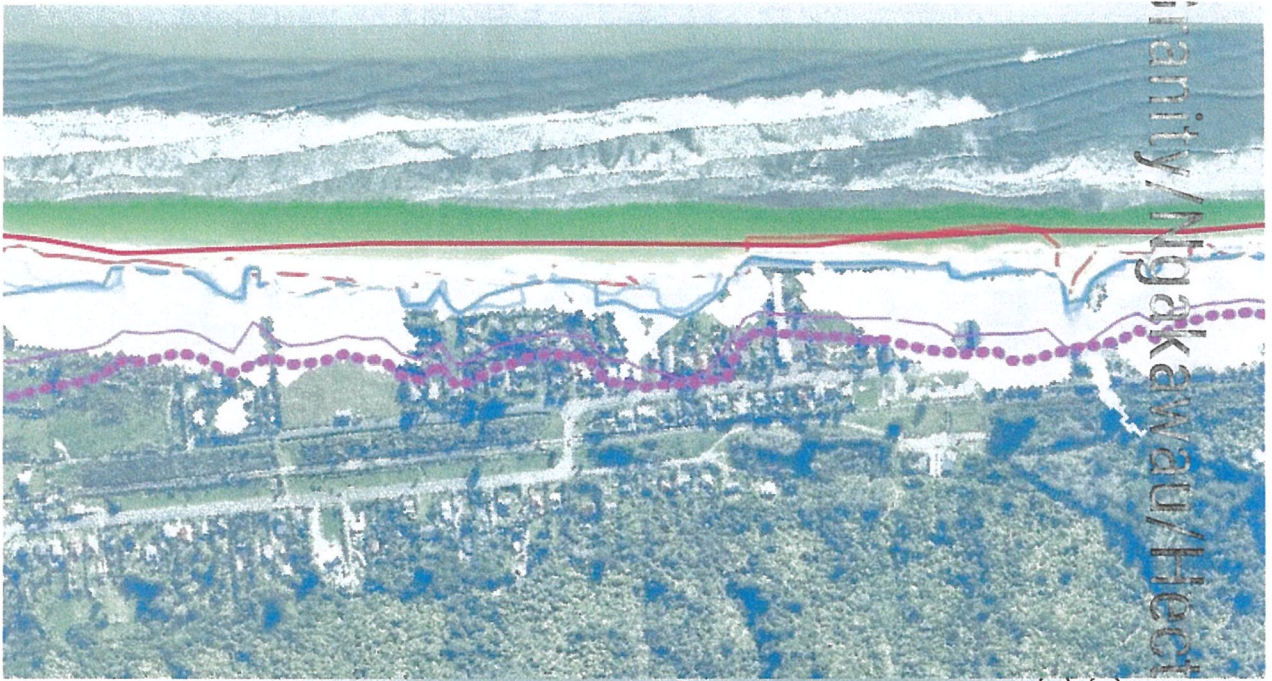
3 Observations along the Granity, Ngakawau and Hector frontage

For this study, observations were made of the coastal environment along the village frontages with comments on current level of protection, defence suitability, setback distances and future coastal adaptation needs. Whilst there is no property presently at critical risk of being significantly damaged due coastal erosion, such risk will increase over the foreseeable future as the coastline continues to retreat.

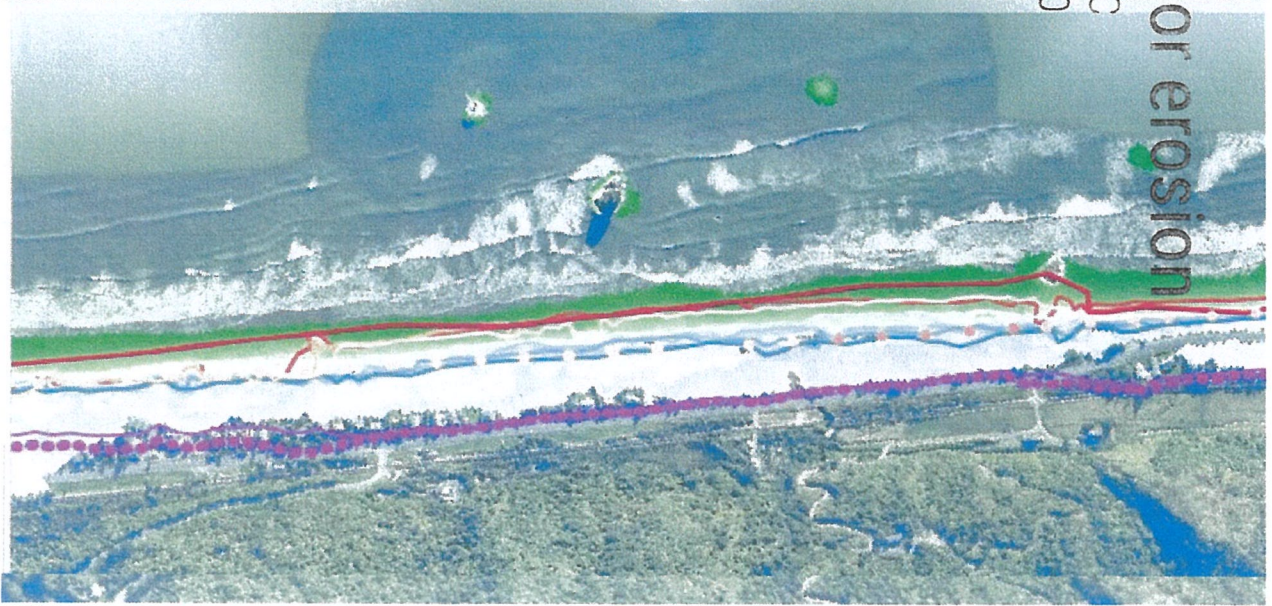
The observations are separated into twelve frontage sections (Table 3-1, Figure 3-1) and arranged sequentially from southern Granity to northern Hector. Each section is defined by particular changes in coastal protection from existing defences, river/stream mouths or distinct features which influence the coastal dynamics.

Table 3-1: Coastal frontage section boundaries. See Figure 3-1 for schematic map.

Village	ID	Section boundaries	Length (m)
Granity	G1	50 Domain Road to southern boundary of Granity School	320
	G2	Southern boundary of Granity School to south bank of Granity Stream (100 Torea St)	350
	G3	North bank of Granity Stream (101 Torea St) to Chair Rock (141 Torea St, Granity)	500
	G4	Chair Rock (141 Torea St, Granity) to Lovers Rock (165 Torea St, Granity)	850
	G5	Lovers Rock (165 Torea St, Granity) to southern limit of Merrett's wall (14 Main Rd, Ngakawau)	780
Ngakawau	N1	Southern limit of Merrett's wall (11 Main Rd, Ngakawau) to south bank of Morris Creek (14 Main Rd, Ngakawau)	180
	N2	North bank of Morris Creek (14 Main Rd, Ngakawau) to 19 Main Rd, Ngakawau	100
	N3	19 to 26 Main Rd, Ngakawau	200
	N4	26 Main Rd – south bank Ngakawau River mouth	300
Hector	H1	North bank Ngakawau River mouth to Corbett St, Hector	320
	H2	Corbett St to 25 Main Rd, Hector	550
	H3	25 to 37 Main Rd, Hector	350

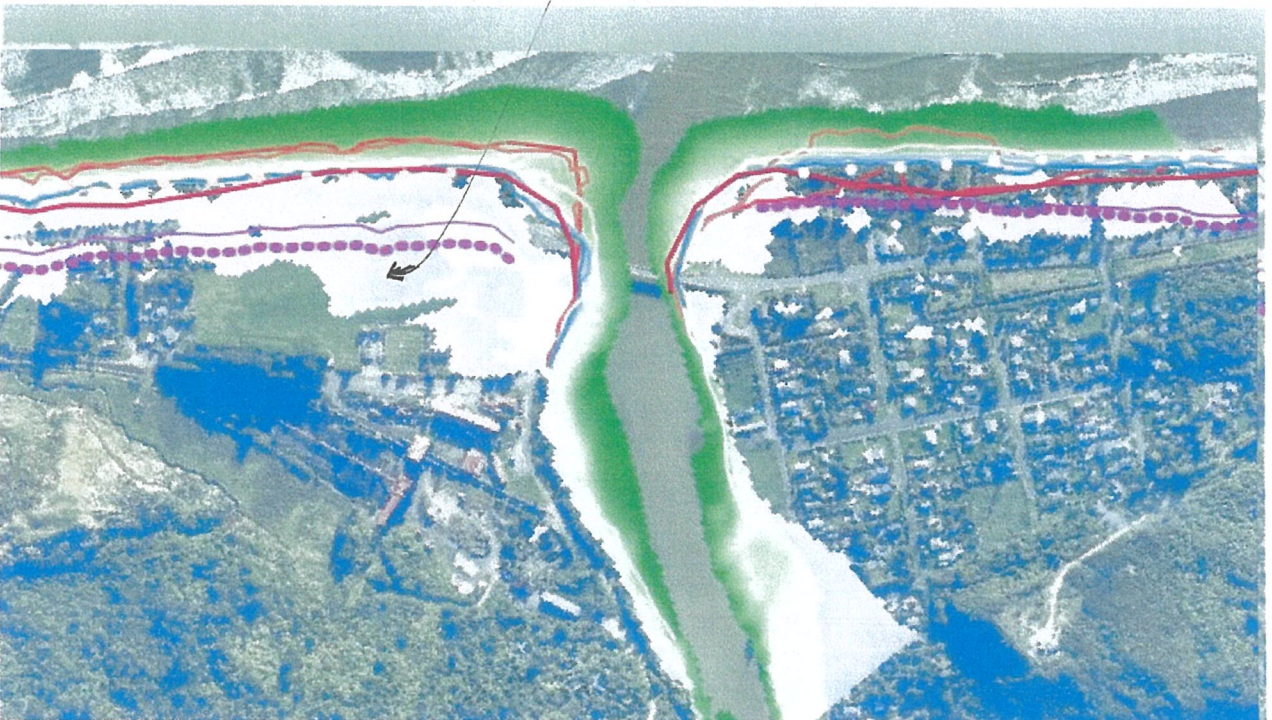


ianity/Ngakawau/Hector erosion



?

Full Inundation Projected ?



⊗
↑
No 8
Main Rd

3.2 Ngakawau

Along the coastal frontage at Ngakawau there are several examples of coastal defences, both successful and unsuccessful, along with an undefended section. This stretch of coastline has minimal setbacks to buildings, and properties are constrained on their rear boundaries by the adjacent SH67.

N1 - The privately built rock and gabion structure from 11 - 14 Main Rd (referred to as Merrett's wall, Figure 3-8, see also DTEC 2007) is an example of cooperative defence construction which has so far been successful in defending the properties and has a small gravel fillet beach at present. Merrett's wall also wraps around the south side of Morris Creek exit. The revetment size (rock diameter, crest height) is adequate for moderate storms, but is likely to be damaged by large coastal storms. The combination of rock and gabions is not good practice for revetment design/construction due to lack of gabions-rock interlocking when compared to rock-rock interlocking, along with the eventual corrosion and slumping of gabion baskets. There is evidence that the storms experienced have caused some undermining, outflanking and occasional overtopping. At the creek mouth, the streambed is infilling with sand and erosion of the upper foreshore has caused the shoreline to retreat on its northern side where several protection attempts have been made (Figure 3-9). This erosion and infilling will continue to cycle between streambed flushing by strong runoff events or large waves on a high tide and sediment accumulation by wind and wave coastal processes during lower wave conditions. Dwellings are within 5-10 m of the active beach face, behind the revetment and a narrow vegetation buffer.



Figure 3-8: Coastal defence "Merrett's wall" along 11-14 Main Rd, Ngakawau. Privately funded structure built in 2007. Photograph looking north east along Ngakawau frontage from 11 Main Rd, Ngakawau. [22 September 2015].

G3 - Along the stretch of coastline north from Granity Stream to Chair Rock, the beach is presently in a healthier state with a larger volume of gravel on the upper beach compared to adjacent beach sections. The gravel berm is regularly topped-up by BDC drain clearance (approx. 2.5 m above beach level at time of inspection) and there is a 40-60 m wide vegetation/swamp buffer to the dwellings (Figure 3-5). Barrier washover will still occur, particularly along sections where residents have cleared the natural vegetation up to the back of the beach crest.



Figure 3-5: Example gravel barrier and wide vegetation/swamp buffer between beach and houses between Granity Stream to south (left, not visible) and Chair Rock (right, visible at centre). Photographs looking south (left) and north (right) at about 138 Torea St. [22 September 2015].

G4 - North along the Granity frontage from Chair Rock to Lover's Rock, including the northward diverted Bradley Stream, there is a gravel stopbank/bund composed of material cleared from drains by BDC (typically 1 m above beach elevation) with evidence of recent overwash deposits and vegetation die-back within the private property fences (Figure 3-6). These properties were most effected by the overwash and erosion during the 2006 storms (NIWA, 2007). Dwellings are typically set back 30-50 m from the beach face, with the buffer zone comprising flax swamp and fenced backyards (Figure 3-7). At various points along this stretch (notably 154 Torea St) vegetation removal and private vehicle access have lowered the berm height, increasing overwash and erosion. The beach is slightly wider, flatter and with a gravel component in the lee of Lover's Rock at the drain outlet, probably due to the wave sheltering from the nearshore rocks and to stream sediment supply.

Given the low-lying nature of the land behind and the lowering of the beach crest that has occurred, overwashing and inundation of the land behind will become a more regular feature in the future. With this susceptibility, the diversion of Bradley Stream to an outlet behind Lover's Rock exacerbates this risk, and it will become increasingly difficult to maintain an open channel immediately behind the beach. However, simply opening up a direct outlet to the sea further south for Bradley Stream would result in lowering of the beach and the potential for considerable erosion adjacent to the outlet.