



Te Tai o Poutini PLAN

A combined district plan for the West Coast

**Te Tai o Poutini Plan Committee Meeting
Westland District Council Chambers
Weld St, Hokitika
18 April 2023
AGENDA**

| | | |
|--------------|---|--------------------------|
| 9.30 | Welcome and Apologies | Chair |
| | Confirm previous minutes | Chair |
| | Matters arising from previous meeting | Chair |
| 9.35 | Request to approve contract variation | Project Manager |
| 9.40 | Report – Te Tai o Poutini Plan – Notification of Summary of Submissions | Principal Planner |
| 9.55 | Report – Proposed Plan Timing Update | Project Manager |
| 10.00 | Report – Te Tai o Poutini Plan - Buller District Designation Amendments | Principal Planner |
| 10.10 | Report – Te Tai o Poutini Plan – Updates to Coastal Hazards Mapping | Principal Planner |
| 10.40 | Project Manager’s Reports | Project Manager |
| 10.50 | Meeting Ends | |

Meeting Dates for 2023

No further Committee meetings have been scheduled for 2023. In person and/or Zoom meetings will be arranged as required.



Te Tai o Poutini PLAN

A combined district plan for the West Coast

MINUTES OF MEETING OF TE TAI O POUTINI PLAN COMMITTEE HELD AT THE OFFICES OF THE GREY DISTRICT COUNCIL AT 9.30AM ON TUESDAY 21ST MARCH 2023

PRESENT:

R. Williams (Chairman), J. Cleine (BDC), G Neylon (BDC), P. Madgwick (Chair Ngāti Mahaki ki Makaawhio), A. Cassin (WDC), H. Lash (WDC), T. Gibson (GDC), A. Gibson (GDC), P. Haddock (WCRC Acting Chair)

IN ATTENDANCE:

J. Armstrong (Project Manager), H. Mabin (WCRC, via Zoom), P. Morris (GDC), S. Bastion (WDC), F. Thomson (WCRC), L. Easton (Consultant), R. Townrow (BDC, via Zoom), S. Kilkelly (minute taker WCRC).

WELCOME

Chair Williams opened the meeting and called for apologies.

APOLOGIES:

F. Tumahai, A. Birchfield, B. Cummings, F. Dooley

Moved (T. Gibson/A. Gibson) *that the apologies be accepted*

Carried

Confirmation of Minutes

Chair Williams asked for any corrections or amendments to the minutes of 28 February. Mayor Lash wanted clarification on the resolution of the hearing panel nominations and approval, she felt there was no discussion on the nominations as they had a new nomination to put forward. Cr Cassin added that any nomination should have the body nominating them highlighted.

Moved (Lash/Cassin) *that the minutes of the meeting 28 February 2023 are a true and correct record.*

Carried

Matters Arising

The nominations of the Hearing Panel will be addressed later in the meeting and there were no other matters arising.

Financial Reports

J Armstrong presented the financial report from February and took it as read. The main variance would be interest which will come through when calculated by the WCRC. The forecast figures had

been changed as previously noted and Ms Armstrong asked for approval to make a variation to a GIS contract.

Ms Armstrong said there would not be a financial report tabled at next months meeting as it would be too early in the month.

S. Bastion asked if it would be brought to the Committees attention if there was anything significant and Chair Williams said April's financial report would be circulated once it was available.

Mayor Cleine asked if the variation for the GIS was included in the current financials, and Ms Armstrong had included the extra \$30,000, and it was under Research.

Moved (Cleine/Lash) *that the Committee receive the February 2023 financial report; and*

The Committee approve a variation to the current hourly rate GIS contract with The Property Group, and delegates the Chief Executive West Coast Regional Council authority to sign the variation.

Carried

Report – TTPP Draft Budget 2024

Chair Williams said there had been some confusion around the timing of the budget, but they were now at a stage where they could consider the information in time for the WCRC to, in turn, consider it before the end of the month.

Ms Armstrong spoke to her paper.

There were three Options for the Committee to consider to present to the Regional Council. Ms Armstrong also said there were going to be hearings included in this financial year, depending on Commissioner availability, and enough planners for report writing. Ms Armstrong said it was an involved process as the report writers had to write a report on every single topic that goes to the hearings.

There had been submissions on every part of the plan from a number of submitters.

S. Bastion asked for clarification from Ms Armstrong re the "worst case scenario" budget and it was confirmed as Option 2. Option 1 was best case scenario, Option 2, worst case scenario and Option 3 sat between them both.

Cr Haddock said that it was a large amount of money to be rating for and he thought to save some money the pre-hearings should be starting especially with submitters who are just asking for clarification, and not a full hearing, and asked when these are likely to occur.

Ms Easton (Principal Planner) was brought in to talk about the process as she was the Principal Planner and involved from the outset. She had been looking at the pre-hearing meetings and said they had summarised every submission but one and explained to the Committee about the pre-hearings and what they involved. She said it was a very good way of clarifying the submissions, and it would help submitters to be clearer on the Plan.

Cr A Gibson said the cost has always been a worry and felt the Committee needed to lobby the Government for more money, but he wanted to make sure that everyone got their say from the Mum and Dad submitter to the big company submitter.

Chair Williams said the point around funding was made at the last meeting, and Ms Easton agreed with Cr Gibson about making sure that everyone got to have their say.

Mayor Cleine wanted to know the implications of approving the higher budget so cost would not hold up the process, but if the process was slow and the money had not been spent what would be the effect of that on the WCRC as they would be funding the loan. Could that excess be carried over or offset the loan.

Ms Armstrong replied that any excess would be carried over, in the past also the loan was not drawn on until it was required.

Mayor Cleine felt that by approving the higher budget (\$2,133,000) it would remove constraints on the hearing process and would effectively put the Committee on the front foot without having to delay or suspend hearings purely because of cost.

S. Bastion questioned the number of consultant planners required and stated that the region is struggling finding planners to fill normal planning roles and had there been an approach to any other companies to supply planners for these roles. Ms Armstrong said that she had started talking to other companies, but re-enforced what an asset Ms Easton will be to the Committee as she had been in the role from the start as the Principal Planner.

Ms Mabin replied to Mayor Cleine around his budget preference and said that Council hadn't decided on how they would be funding this proposed budget. The LTP that was adopted in 2021 only had the scenario of \$1million in borrowings which was already done in July, and there is a suggestion that it would be "rates funded", but Council had yet to pull together all of the budget to do the rating modelling. Ms Mabin also stated that a 1% increase of the general rate is \$30,000 so the Committee could understand the magnitude of the rate increase to fund over and above the \$500,000 budgeted spend. This will be significant decision making from the WCRC.

Mayor Gibson sympathised with Ms Mabin's position and said they had lobbied Government before for extra funding, and also to Development West Coast, they can keep trying, but the indications were that it would not happen. She also said that the process should not be held up.

Cr Neylon asked if the Committee would have any say in how the budget is funded, rated or a loan. Chair Williams understood it was just sent to the WCRC and they would run it from there. Cr Haddock stated that he understood the extra money had to be rated for as that is how it was initially set up, and hoped that money would be saved in pre-hearings versus full hearings.

Mayor Lash endorsed Cr Haddocks comments and added that there should be more pressure put on Central Government for more funding for this. There was discussion around how the budget funding would happen.

Moved (Lash/A. Gibson)

1.that the Committee receive the report;

2.that the Committee approves a draft TTPP budget (Option 2) to inform West Coast Regional Council budget 2024 development

3.that the Committee recognise the challenge for the WCRC and encourage them to consider all financial tools available to ease the burden on the West Coast ratepayers

Delegation for TTPP Hearings Commissioners

Chair Williams bought up Cr Cassin's suggestion that the nominating Council's be noted next to their nominations.

Ms Armstrong provided background on the resolution for the appointment of the commissioners.

Chair Williams asked Ms Armstrong if the Committee would have an opportunity to meet with the Chairperson at an early stage, to which Ms Armstrong said she would be happy to set that up. Mr Williams also asked what would happen if any commissioner pulled out or could not complete their duties. Ms Easton replied that 3 of the commissioners have their Chair certification so there is a lot of back-up, and there are some topics that only 1 commissioner would need to hear.

Moved (Cleine/Haddock) *that the Committee appoints Dean Chrystal as chairperson, and Anton Becker (GDC), Paul Rogers (WDC), Sharon McGarry (BDC) and Veronica Baldwin(Poutini Ngai Tahu) as hearing commissioners, to hear submissions and evidence on the proposed Te Tai o Poutini Plan, and to make recommendations to the Committee in respect of those submissions; and*

Acting under section 34A of the Resource Management Act 1991, and clause 10 of the Local Government Reorganisation Scheme (West Coast Region) Order 2019, delegates to Dean Chrystal, Anton Becker, Paul Rogers, Sharon McGarry and Veronica Baldwin, all functions, powers and duties necessary to undertake the tasks in 1, including the exercise of any powers conferred by sections 41 to 42 of the RMA.

Carried

Summary of Submissions (verbal report)

Ms Easton provided the Committee with an update on the 534 submissions she had received. From those 534 submissions there were 15,000 submission points, there are some submitters that have submitted on every point of the plan.

Ms Easton also said there were a lot of submissions in support of the Plan, and in essence the large number of points were not all negative and a lot were in support of individual provisions.

Now all the big submissions were in, the largest topic was Natural Hazards and second biggest one was Sub-divisions followed by Coastal Environment, Ecosystems and Biodiversity and the 5th one was the General Rural Zone. The other big topic was Mineral extraction.

S. Bastion asked out of the 15,000 submission points, how many would make it to the pre-hearings. Ms Easton outlined that pre-hearing meetings are held to clarify positions and hopefully streamline the hearings process. In some cases, there is no point in having a pre-hearing meeting with those submitters who have clear and well understood submissions and positions as they would not achieve anything. At this stage she is working her way through the topics to identify where there is a benefit from pre-hearing meetings.

J. Cleine pointed to the 10 working days for further submissions in Ms Armstrong's report and he thought it was a very tight timeframe especially if they wanted to make a further submission. Ms Easton said that it was up to the Committee to specify the time frame of the further submissions period and stated it wasn't uncommon for it to be a month. Two weeks was the statutory minimum.

Cr Neylon asked what the legal status of the Plan was, to which Ms Easton replied that if there were parts of the Plan that no-one had submitted on then they would become fully operative, but because

all parts of the Plan were submitted on, the status is the same as it was at notification until decisions are made.

Cr Neylon said their Planners were working on sub-divisions at the moment and asked what weighting they should be applying to this process.

Ms Easton said they had taken legal advice on this subject and provided training to the district council staff, and it was complicated, because it depended on what other directions it would take and put weight on that specified direction.

For most of the plan the weight is greater on the operative plans so for something like sub-divisions they are not operative so the weight should be mostly on the existing Plan.

Ms Armstrong added the legal help they had been given was excellent. There is legal effect on – Historic Heritage, Sites of Significance to Māori, Eco-Systems and Biodiversity and Activities on the Surface of Rivers and Lakes. Mr Williams asked for Ms Easton’s comments to be accurately recorded in the minutes.

Next steps will be the summary of submissions brought back to the next meeting on 18 April to be approved for notification and seeking further submissions. There was a submission summary tool used and it will filter the submissions by topic and submitter. S. Bastion asked if the tool could filter by region and Ms Easton would check this out for him.

In terms of further submissions, they can be made by anyone who has submitted OR by anyone who “has an interest greater than the general public”.

All the further submissions have to be entered into the data base and tagged against the original submission.

Mayor Cleine asked if the hearings could be held in the relevant districts, to which the answer was yes in certain respects. There was discussion around the possible locations.

Moved (Cassin/T. Gibson) *that Ms Easton’s verbal report be accepted*

Carried

Project Manager Update

Ms Armstrong took her report as read and stated that the search for a senior planner was still in progress, and asked Ms Easton to update the Committee on the Coastal inundation research.

Ms Easton stated for those new to the Committee there were parts of the West Coast that did not have LIDAR data and so in order to progress the Natural Hazards particularly the Coastal Natural Hazards they had used space shuttle data, but since that time LIDAR has flown and processed and updated their work, and she would have a lot more detail for the next meeting.

This affected small parts of the West Coast such as Punakaiki, Karamea and some areas north of Greymouth.

Moved (Cleine/Madgwick) *that the Project Managers report be received*

Carried

There being no further business the meeting concluded at 11.05am.



Te Tai o Poutini PLAN

A combined district plan for the West Coast

Prepared for: Te Tai o Poutini Plan Committee
Prepared by: Jo Armstrong, Project Manager
Date: 18 April 2022
Subject: **Te Tai o Poutini Plan – Contract Variation**

Background

1. Over the past four years we have contracted our Principal Planner at an hourly rate up to a maximum spend.
2. Once the plan was notified, it was considered that Principal Planner input would reduce, and the current contract set the maximum spend for Principal Planner services at \$30,000 less than in previous years.
3. Following the resignation of the TTPP Senior Planner the Principal Planner has taken on unanticipated additional work. The loss of the Project Manager will also add further pressure to the role.
4. It is recommended that a variation be made to the 2022/23 contract with Kereru Consultants increasing the maximum spend by \$30,000.

RECOMMENDATIONS

1. That the Committee approve a variation to the Kereru Consultants 2022/23 contract increasing the maximum spend by \$30,000, and delegates the Chief Executive West Coast Regional Council authority to sign the variation.

Jo Armstrong
Project Manager



Te Tai o Poutini

PLAN

A combined district plan for the West Coast

Prepared for: Te Tai o Poutini Plan Committee

Prepared by: Lois Easton, Principal Planner

Date: 18 April 2022

Subject: **Te Tai o Poutini Plan – Notification of Summary of Submissions**

OVERVIEW

1. Te Tai o Poutini Plan was publicly notified as a Proposed Plan on 14 July 2022. Submissions closed 11 November 2022.
2. A total of 534 submissions were provided on the plan with over 15,000 submission points.
3. These submissions have now been summarised. The Summary of Submissions has been provided to the Committee electronically to review.
4. Schedule One, Clause 7 of the Resource Management Act (RMA) requires that the Committee must give public notice of the availability and location of the Summary of Submissions. Anyone who made a submission must also be notified.
5. Further Submissions are able to be made by original submitters, or by other persons who meet the following criteria as outlined in Clause 8.
 - any person representing a relevant aspect of the public interest; and
 - any person that has an interest in the proposed policy statement or plan greater than the interest that the general public has; and
 - the local authority itself.
6. The RMA restricts the content of further submissions to essentially either support or oppose the original submissions.
7. Schedule One of the RMA specifies a period of 10 working days for further submissions. However under Clause 37 of the RMA the Committee has the discretion to extend this. Given the large number of submission points, staff consider that it would be reasonable to extend the further submission period to 20 working days.

NEXT STEPS

8. Once the further submissions are received, these need to be uploaded into the Council submissions system against each original submission.
9. Following that the planning team will commence the drafting of the Hearing Reports. Both further submitters and original submitters are able to speak at hearings.
10. Where there is an identified opportunity to clarify submissions, pre-hearing meetings are proposed to be held.

RECOMMENDATIONS

1. That the Committee receive the report.
2. That the Summary of Submissions to Te Tai o Poutini Plan is publicly notified for further submissions in accordance with Schedule One of the Resource Management Act on 28 April 2023.
3. That the further submission closing date is 26 May 2023.

Lois Easton

Principal Planner



Te Tai o Poutini

PLAN

A combined district plan for the West Coast

Prepared for: Te Tai o Poutini Plan Committee
Prepared by: Jo Armstrong, Project Manager
Date: 18 April 2022
Subject: **Te Tai o Poutini Plan – Proposed Plan Timing Update**

Overview

1. As per the previous paper, the further submission period is due to close on 26 May 2023.
2. The submissions and further submissions are then grouped into hearing topics. The Principal Planner and Acting Project Manager will then identify the topics to have pre-hearing discussions with submitters on. This will be determined by whether clarification on matters will assist the submitters and whether resolution or agreement on a matter can be facilitated between parties.
3. Pre-hearing discussions will not all occur at the start of the process, as hearings on some topics will not happen for more than a year, so discussions will be scheduled close to the topic hearing.
4. Pre-hearing meetings differ from mediation, which occurs following decisions. TTPP staff can enter mediation with parties who do not agree with a decision and have appealed it to the Environment Court. The mediation is overseen by a mediator who is appointed by the Environment Court. A good mediation process is where parties can agree on changes that the Committee is comfortable with approving, thereby limiting the number of appeals that are decided by the Court.
5. The Project Manager, Principal Planner and Rachel Vaughan as Acting Project Manager met with the hearing commissioners to discuss how the hearings will be run, consider a draft hearings schedule, assess commissioner availability and any conflicts, and consider hearings locations and the need for any site visits.
6. A draft hearings schedule has been developed, with a final version due once further submissions have been considered, and the number of submitters wishing to be heard on each topic is established.
7. A meeting to approve a variation to the plan may also be called in August or soon after depending on the Committee decisions in relation to another paper on the agenda. An update on the hearing schedule will be provided then.

RECOMMENDATIONS

1. That the Committee accepts this paper.

Jo Armstrong
Project Manager



Te Tai o Poutini PLAN

A combined district plan for the West Coast

Prepared for: Te Tai o Poutini Plan Committee
 Prepared by: Lois Easton, Principal Planner
 Date: 18 April 2022
 Subject: **Te Tai o Poutini Plan – Buller District Designations Amendments**

OVERVIEW

1. Te Tai o Poutini Plan (TTPP) was publicly notified as a Proposed Plan on 14 July 2022. Submissions closed 11 November 2022.
2. The Buller District Council (BDC) prepared a submission, but their submission points in relation to the Designations chapter were accidentally excluded.
3. BDC staff have asked whether it is possible that the Designation matters can be addressed, either through a minor amendment or alongside any planned Variation to the TTPP.

MATTERS OMITTED IN THE BULLER DISTRICT COUNCIL SUBMISSION

4. The following table sets out the matters that were omitted from the BDC submission and whether they are considered minor – and could be included under the provisions to rectify minor errors or whether they are significant and could only be amended through a public notification process.

| Matter | Minor Significant or |
|---|----------------------------|
| BDC 20 Amend 'Karamea Refuse Tip' to 'Karamea Landfill and Resource Recovery Centre'. | Minor |
| BDC1-BDC35 Amend all references to "refuse tips" to "landfill" | Minor |
| BDC22 Westport Refuse Tip - Amend the Plan Map to include the whole site as per the Operative District Plan designation boundary. | Significant |
| BDC24 update the wording to reflect the proposed Plan, amend a typo and amend the site name as follows: Reefton Transfer Station and Recycling Centre <i>Designation unique identifier</i> BDC24 <i>Designation purpose</i> Collection, Storage and Transfer of Solid Waste <i>Site identifier</i> Part Section 135 Square 131, Section 264 Square 131, Section 12 Block XIV SO 7456 <i>Lapse date</i> Given effect to <i>Designation hierarchy under section 177 of the Resource Management Act</i> N/A | Minor |

| | |
|--|--------------------|
| <p><i>Conditions</i></p> <ol style="list-style-type: none"> 1. <i>The access to the site from Willowbank Road shall be formed and sealed as a two lane road, to NZS 44004:2010 prior to the opening of the Resource Recovery Park.</i> 2. <i>All buildings shall comply with the relevant standards in the Rural one of the Buller District Plan, Rural Zone Chapter of the <u>Te Tai o Poutini Plan</u>.</i> 3. <i>Screen planting, of native species such as Flax, Toitoi, Manuka, shall be provided around the entire perimeter of the Operational Area.</i> 4. <i>A section security fence shall be erected and lined with wind cloth.</i> | |
| <p>BDC 33 correct an error in the designation title <u>Westport Water Supply Catchment Wastewater Treatment Plant</u></p> | <p>Minor</p> |
| <p>Additional Designation Designation 38: Addisons Cemetery from the operative Buller District Plan be rolled over into the Proposed Plan.</p> <p><u>Addisons Cemetery</u></p> <p><i><u>Designation unique identifier</u></i> <u>BDCXX</u></p> <p><i><u>Designation purpose</u></i> <u>Cemetery</u></p> <p><i><u>Site identifier</u></i> <u>Section 33 Block II</u> <u>Waitakere Survey District</u></p> <p><i><u>Lapse date</u></i> <u>Given effect to</u></p> <p><i><u>Designation hierarchy under section 177 of the Resource Management Act</u></i> <u>N/A</u></p> <p><i><u>Conditions</u></i> <u>No</u></p> <p><i><u>Additional information</u></i> <u>N/A</u></p> | <p>Significant</p> |

DEALING WITH ERRORS

5. The matters identified as "Minor" in the table above are considered to be able to be addressed in TTPP using the minor errors process under Schedule 1 of the RMA. The two matters identified as "Significant" are considered to not meet the scope of minor errors and will need to be amended through public notification and seeking of submissions on the changes.
6. Because Buller District Council is a Requiring Authority for the Designations it could publicly notify the changes itself entirely separately from TTPP processes, or they can be included alongside any Variation to the TTPP that might occur over the next year.
7. The preference of BDC is that the amendments are included with a Variation, to minimise the public notification costs and to enable alignment of submission and hearing processes with the submissions made on other Designations and the hearing planned for that.

NEXT STEPS

8. The minor matters can be included in the next tranche of minor error fixing in TTPP.
9. As discussed in a separate paper on this agenda, an Omnibus Variation to address some more substantive errors in the TTPP mapping is proposed. Should this Variation progress it is recommended that the changes to the BDC Designations also be included.

RECOMMENDATIONS

1. That corrections to address the minor Buller District Council Designation errors as identified in this report be made under the Minor Errors provisions in Schedule 1, Section 16 of the Resource Management Act.
2. That the amendments to the Buller District Council Designations that do not meet the Minor Errors threshold be considered for inclusion as part of any Variation 1 to the Te Tai o Poutini Plan, should such a Variation be developed.

Lois Easton

Principal Planner



Prepared for: Te Tai o Poutini Plan Committee

Prepared by: Lois Easton, Principal Planner

Date: 18 April 2022

Subject: **Te Tai o Poutini Plan – Update to Coastal Natural Hazards Mapping and Proposal to Prepare a Variation to the Plan**

BACKGROUND

1. There are four coastal hazard overlays in Te Tai o Poutini Plan (TTPP) – the Coastal Tsunami Overlay, the Coastal Hazard Severe Overlay, the Coastal Hazard Alert Overlay and the Coastal Setback Overlay. Good information on the extent of Tsunami hazard was available and this was used to inform the Coastal Tsunami Hazard Overlay in TTPP. However, for the main other types of coastal hazards – erosion and coastal inundation, additional research was required to support the overlays in TTPP.
2. The starting point for this research was areas that were identified as a high priority by the West Coast Regional Council (WCRC) in its work on coastal hazards. These are the areas where the amount of people, property and environment at risk is the highest.
3. Expert opinion was sought from NIWA to understand the risk from coastal inundation and coastal erosion. High resolution data is required for such assessment, and where possible LIDAR was used.
4. In parallel with this process, LIDAR was being flown for the whole of the West Coast. Timing issues meant this full LIDAR was not available and for most of the West Coast outside of Westport, satellite STRM was used to determine the coastal inundation risk.
5. The proposed TTPP was notified using this mix of LIDAR and satellite derived data, although the preference would have been to use the most accurate information.

SATELLITE STRM vs LIDAR

6. Satellite STRM data was used to develop the proposed TTPP coastal hazard layers where LIDAR and recent aerial photography was unavailable. While the data was recent, and provides better accuracy than the regional scale aerial photography that was available, the accuracy is considerably poorer than LIDAR.
7. LIDAR uses light from a laser and is very high resolution and is generally accurate to within a 10cm range. It is the most accurate information now available for the West Coast, and its use is considered best practice in identifying natural hazard overlays.

UPDATED COASTAL HAZARD MODELLING

8. The completed LIDAR is now available from Hector to Jackson Bay and NIWA have re-run the coastal inundation modelling using this more accurate data.
9. Example maps are included in Appendix One. The report on the updated coastal inundation modelling is included in Appendix Two.
10. The updated modelling shows significant differences in the extent of coastal inundation across the West Coast. This is perhaps not surprising, given the LIDAR gives accuracy to levels of 10cm, whereas the satellite data has considerably lower resolution.

IMPLICATIONS FOR TTPP COASTAL HAZARD OVERLAYS

11. The TTPP Coastal Severe, Coastal Alert and Coastal Setback overlays do not reflect the updated understanding of risk provided by the LIDAR derived modelling. This is most evident in locations such as Granity, Carters Beach, Punakaiki, Cobden, South Beach and across Westland.
12. The degree of change varies – in some locations it is minimal, in others there are properties that should be identified as at risk not currently included in the overlays, in other locations there are properties identified within the overlays, where the new information would suggest that they are not subject to significant risk from coastal hazards.
13. The Coastal Severe and Coastal Alert layers are made up of a combination of coastal inundation and coastal

erosion. However the inland extent of the hazard is generally that of coastal inundation. As a consequence this new information means that the inland extent of the Coastal Severe and Coastal Alert hazard layers is inaccurate at many locations. There may also be implications for the Coastal Setback and Hokitika Hazard Overlays.

14. Because of the extensive difference between the proposed TTPP and the updated information, staff recommend that the best approach to deal with this issue would be to prepare and publicly notify a Variation to the TTPP.

IMPLICATIONS OF A VARIATION

15. A Variation to the TTPP would involve the replacement of the existing Coastal Alert, Coastal Severe, Coastal Setback and potentially Hokitika Hazard overlay maps with updated maps. A Variation would need to be accompanied by an updated Section 32 analysis and appropriate technical reports.
16. In order to avoid confusion with the public, any Variation should be notified after the Further Submission period. All those submitters on the coastal hazard provisions would then be advised of the new provisions and be able to decide whether they wanted to transfer their submission to the Variation, or put a new submission in.
17. It should be possible to develop and propose a Variation and its supporting s32 report and allow for it to "catch up" with the rest of the TTPP hearings process, by having the hearing towards the end of the hearing process.

POTENTIAL TO ALSO ADDRESS SITES AND AREAS OF SIGNIFICANCE TO MĀORI MAPS

18. Should the Committee support the development of a Variation to update the Coastal Hazard mapping, then it would be possible (and efficient) to take the opportunity to address another significant mapping issue with TTPP – some of the maps for the Sites and Areas of Significance to Māori (SASM).
19. Poutini Ngāi Tahu did provide a detailed update to the SASM maps as part of their submission. Where possible these changes have been made under the minor error provisions. However some changes were so substantial that they did not meet the minor error criteria. It would be a relatively simple matter to include the more substantive amendments to SASM maps within the Variation.
20. Similarly the amendments to the Buller District Council Designations discussed in another report on this agenda could also be included – enabling several matters to be addressed efficiently in what would effectively be an omnibus Variation to TTPP.

NEXT STEPS

21. If the Committee approves the preparation of a Variation, staff will work on this and bring a draft Proposal back to the Committee for approval. This could be expected around August of this year.
22. Prior to the preparation of the Variation, information that the Committee intends to prepare a Variation (a "heads up") could also be provided on the TTPP website, and those submitters who submitted on the Coastal Hazard mapping could also be provided with the information that a Variation is being developed in order to update the mapping.
23. Similarly submitters to the SASM maps could be advised of the Committee's intentions.

RECOMMENDATIONS

1. That the information be received.
2. That staff prepare a draft Variation to the proposed Te Tai o Poutini Plan that:
 - a. Updates the coastal hazard mapping and associated natural hazard overlays in light of the updated coastal inundation modelling from NIWA;
 - b. Updates the Sites and Areas of Significance to Māori mapping to reflect the amendments provided by Poutini Ngāi Tahu; and
 - c. Includes the amendments to the Buller District Council Designations, as sought by the Buller District Council.

Lois Easton

Principal Planner

APPENDIX ONE: COMPARISONS BETWEEN TTPP COASTAL HAZARD OVERLAYS AND UPDATED NIWA INUNDATION MODELLING

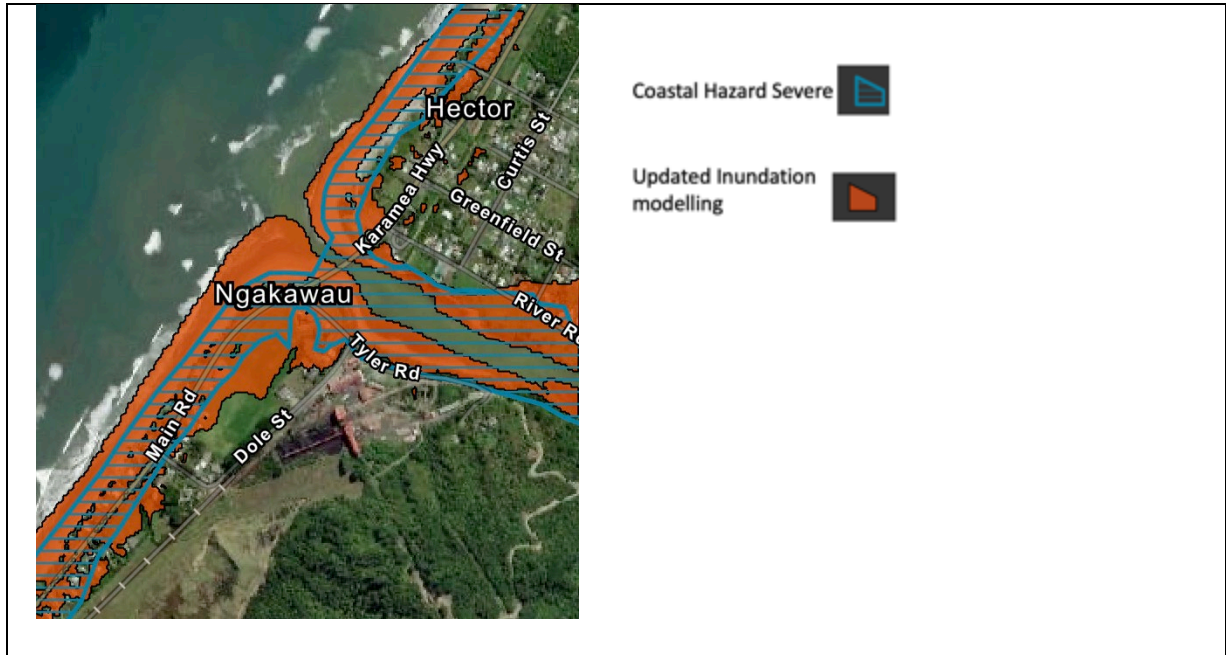


Figure 1: Comparison of TTPP Coastal Hazard Overlays and Updated NIWA Inundation Modelling Hector -Ngakawau

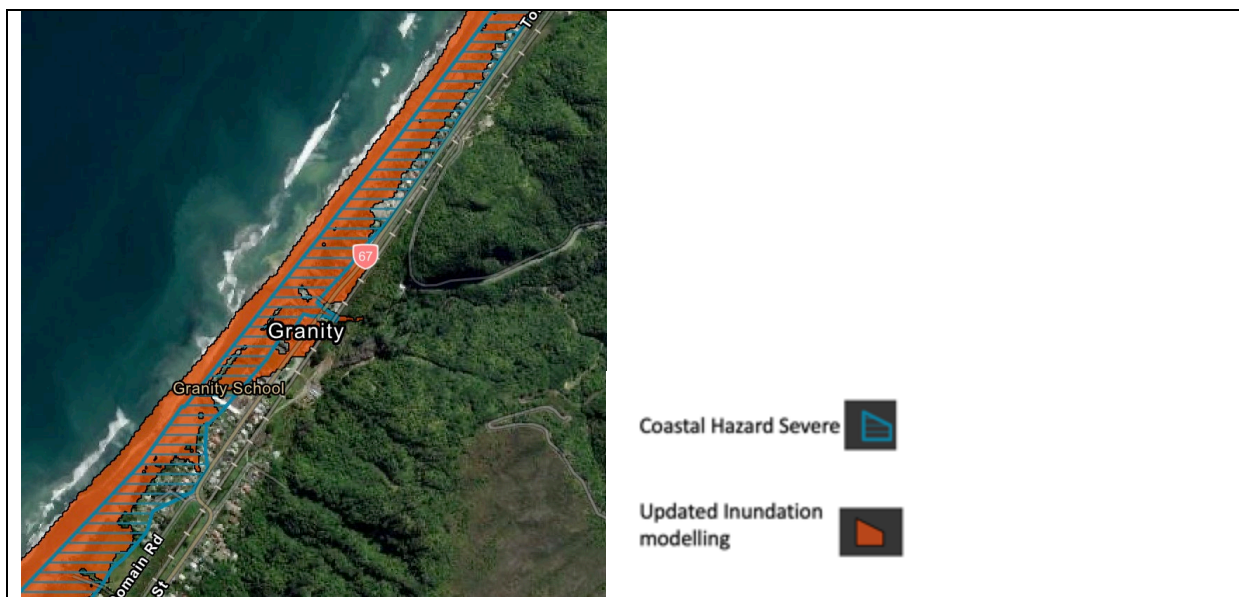


Figure 2: Comparison of TTPP Coastal Hazard Overlays and Updated NIWA Inundation Modelling Granity

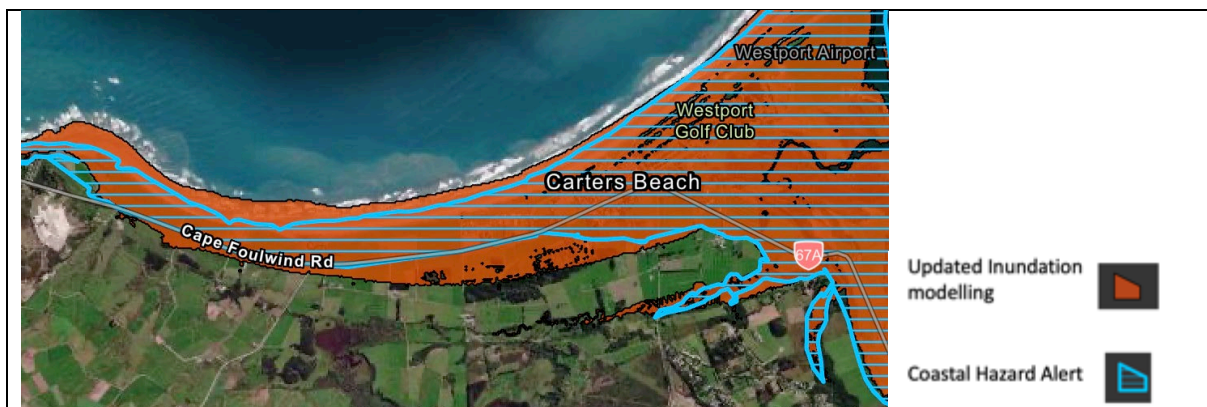


Figure 3: Comparison of TTPP Coastal Hazard Overlays and Updated NIWA Inundation Modelling Carters Beach – Cape Foulwind

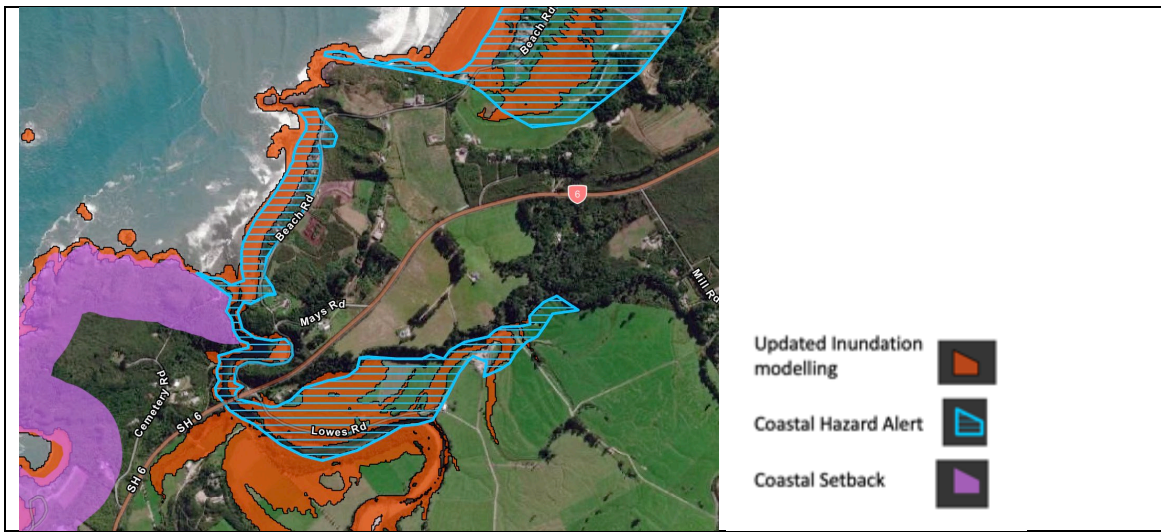


Figure 4: Comparison of TTPP Coastal Hazard Overlays and Updated NIWA Inundation Modelling Charleston

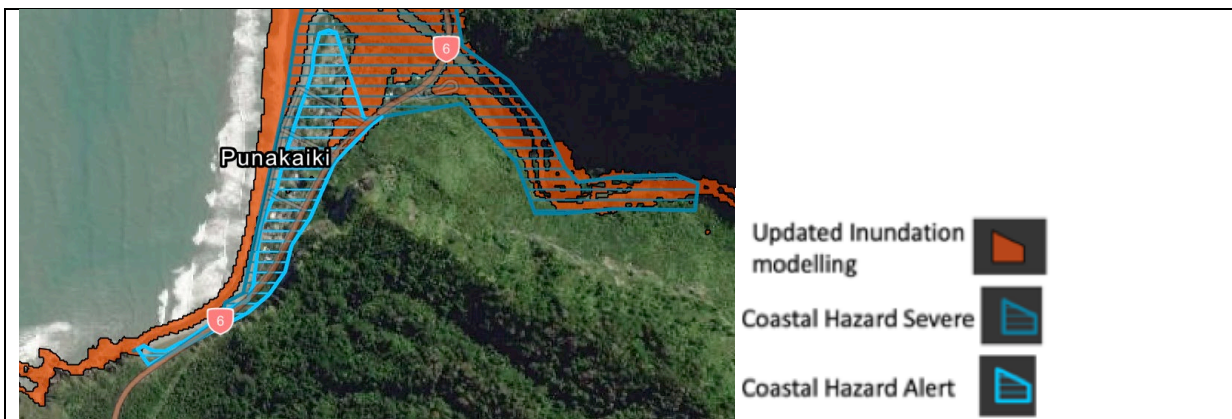


Figure 5: Comparison of TTPP Coastal Hazard Overlays and Updated NIWA Inundation Modelling Punakaiki (note landward extend of coastal hazard is driven by erosion rather than inundation)

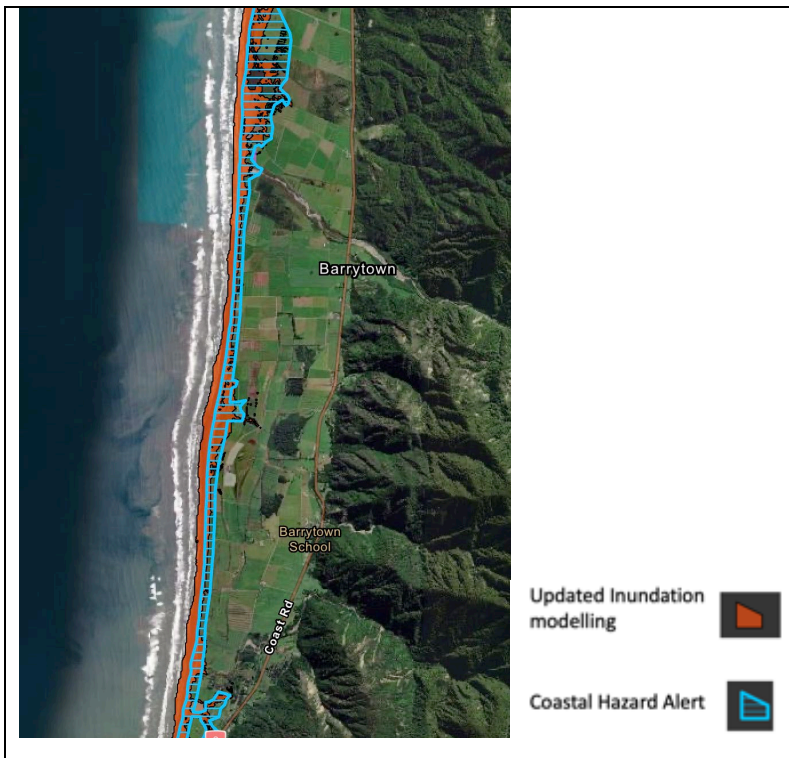


Figure 6: Comparison of TTPP Coastal Hazard Overlays and Updated NIWA Inundation Modelling Barrytown Flats

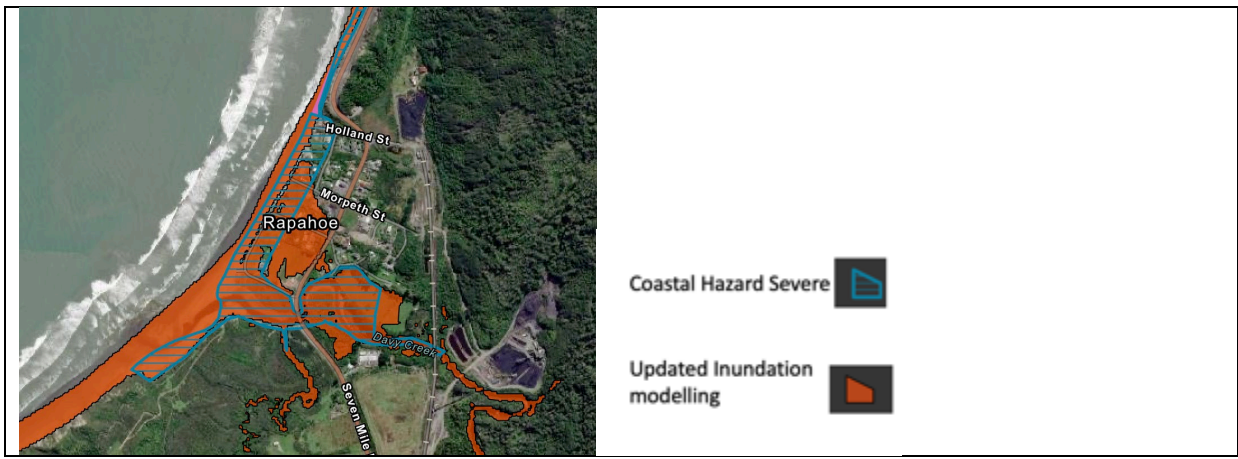


Figure 7: Comparison of TTPP Coastal Hazard Overlays and Updated NIWA Inundation Modelling Rapahoe

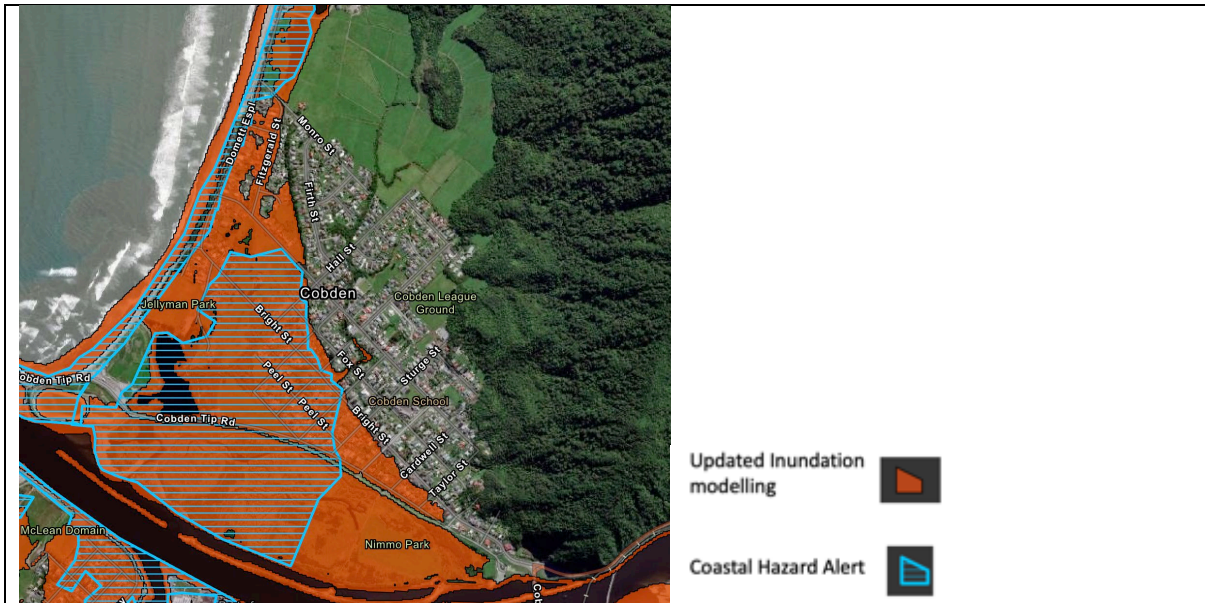


Figure 8: Comparison of TTPP Coastal Hazard Overlays and Updated NIWA Inundation Modelling Cobden

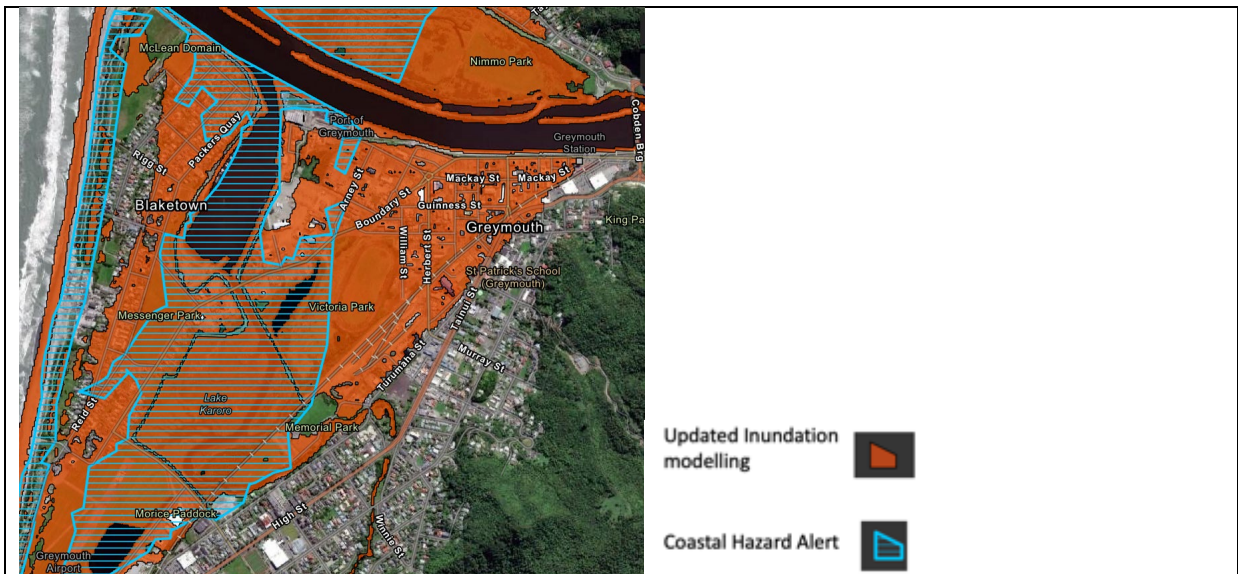


Figure 8: Comparison of TTPP Coastal Hazard Overlays and Updated NIWA Inundation Modelling Greymouth



Figure 9: Comparison of TPP Coastal Hazard Overlays and Updated NIWA Inundation Modelling Karoro

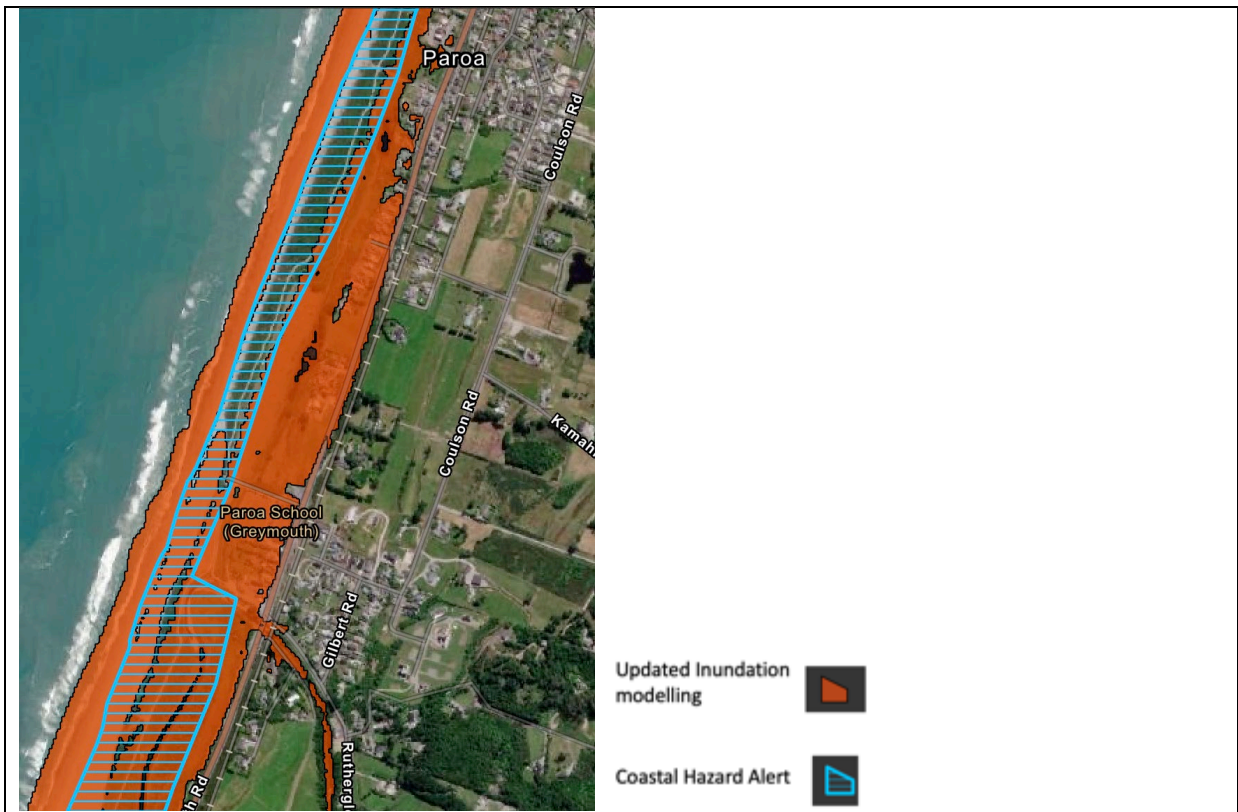


Figure 10: Comparison of TPP Coastal Hazard Overlays and Updated NIWA Inundation Modelling Paroa

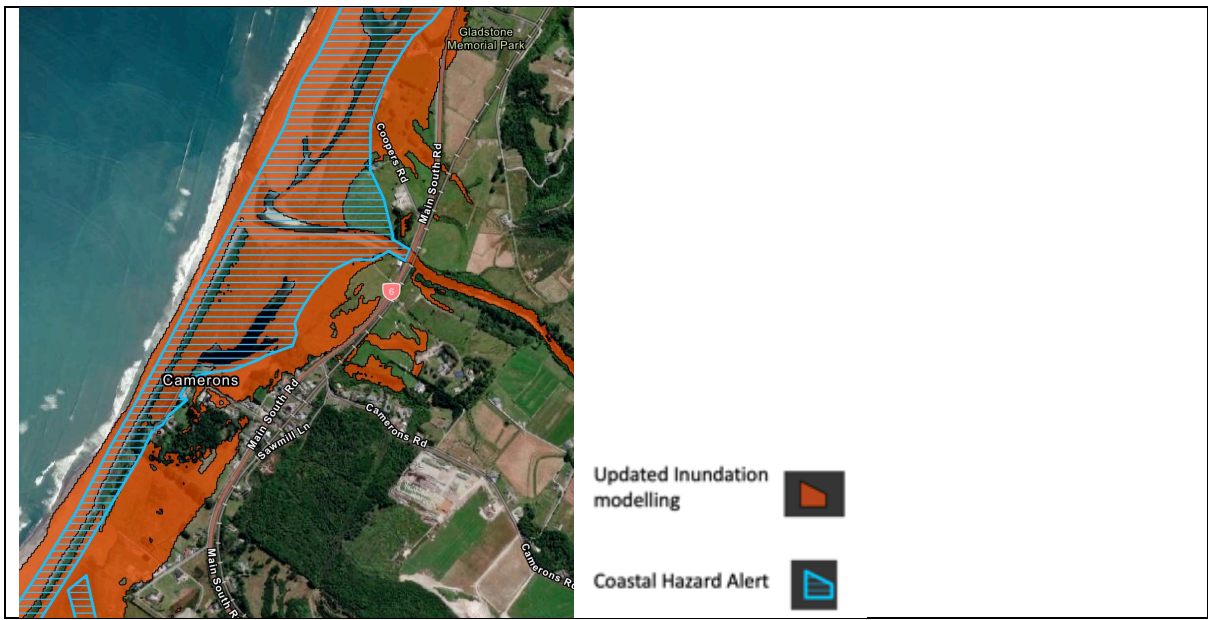


Figure 11: Comparison of TPP Coastal Hazard Overlays and Updated NIWA Inundation Modelling Camerons

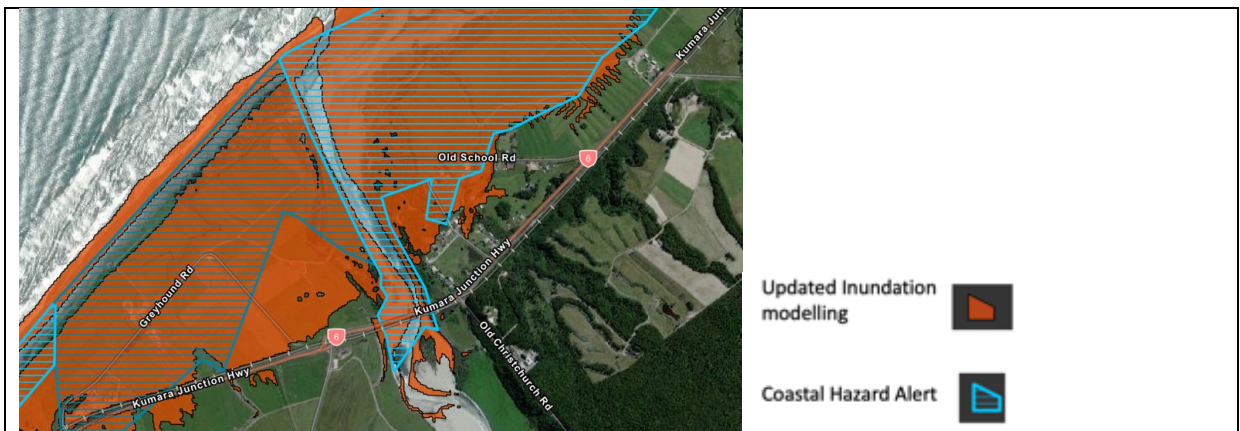


Figure 12: Comparison of TPP Coastal Hazard Overlays and Updated NIWA Inundation Modelling Arahura



Figure 13: Comparison of TPP Coastal Hazard Overlays and Updated NIWA Inundation Modelling Hokitika

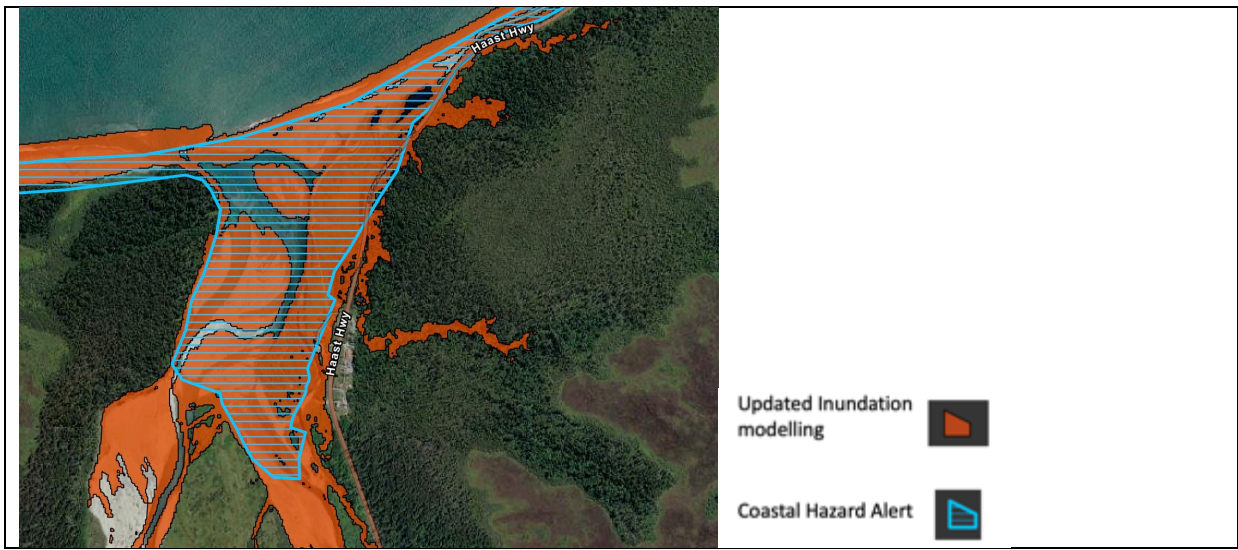


Figure 14: Comparison of TTPP Coastal Hazard Overlays and Updated NIWA Inundation Modelling Bruce Bay

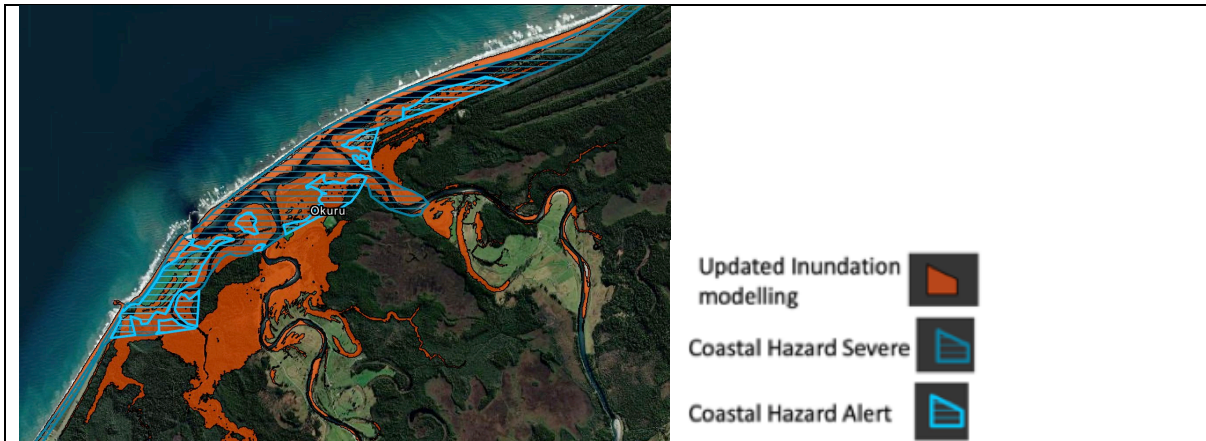


Figure 15: Comparison of TTPP Coastal Hazard Overlays and Updated NIWA Inundation Modelling Okuru

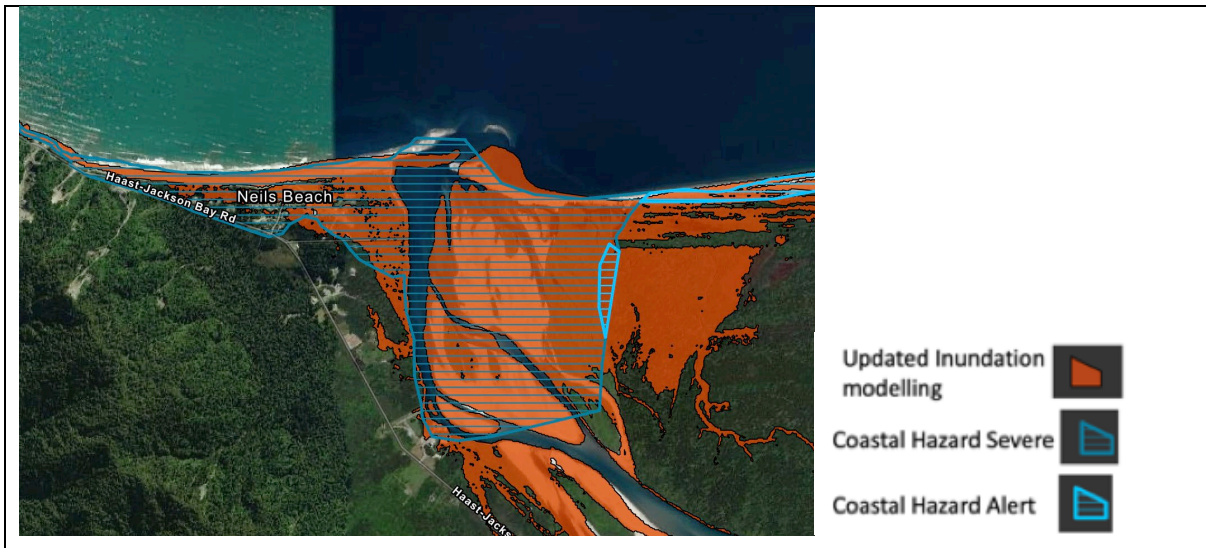


Figure 16: Comparison of TTPP Coastal Hazard Overlays and Updated NIWA Inundation Modelling Neil's Beach – note in this location the Coastal Erosion Risk is very significant and that is the main driver of inland boundary of the Coastal Hazard Severe line.

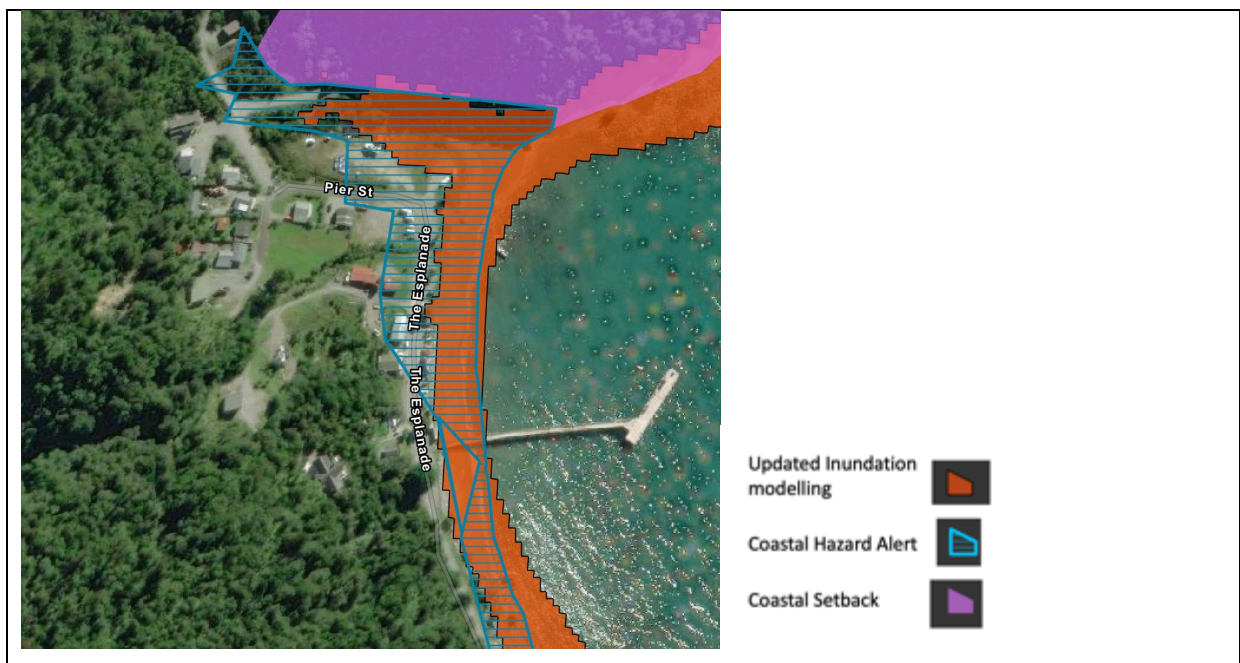


Figure 17: Comparison of TTPP Coastal Hazard Overlays and Updated NIWA Inundation Modelling Jackson Bay – note in this location the Coastal Erosion Risk is very significant and that is the main driver of inland boundary of the Coastal Hazard Severe line.

Mapping for priority coastal hazard areas in the West Coast Region

Coastal inundation hazard update using 2022 LiDAR

Prepared for West Coast Regional Council

March 2023

Prepared by:
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|-------------|------------------------------|---------------|
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|  | Reviewed by: | Richard Measures |
|  | Formatting checked by: | Rachel Wright |
|  | Approved for release by: | Phillip Jellyman |

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Mapping for priority coastal hazard areas in the West Coast Region

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Executive summary

This report describes the methodology used to update the coastal inundation hazard maps from the 2022 NIWA study using the newly released 2022 LiDAR data. The design extreme storm-tide elevations are identical to the previous work, but water depth and extent are different because of the updated topography data.

The LiDAR topography data overcomes the flaws of the Shuttle Radar Topography Mission (SRTM) data and hence produces a more accurate inundation extent.

The analysis supersedes coastal inundation hazard information where:

- No inundation analysis was done before (most non-priority coastal hazard areas).
- Only SRTM was available (e.g., Haast, Neils Beach, Jackson Bay, Punakaiki).
- LiDAR was previously available but dynamical modelling was not carried out (e.g., Hector, Granity, Ngakawau, Rapahoe, West of Westport).

However, the results presented here use a relatively simplistic “bathtub” inundation mapping that tend to overestimate flood extent when compared with a dynamical model. Therefore, these results do not replace the coastal inundation hazard layers for Westport/Orowaiti (north of Buller River only).

1 Introduction

In 2022, a report was completed by NIWA to assess coastal inundation and erosion hazard for priority area of the West Coast Region (Bosselle and Allis 2022). This previous work was completed before the result of the latest LiDAR (Light Detection and Ranging) topographic survey (WCRC-LINZ 2022) was made available, but a contingency was put in place to update the result of the analysis once the LiDAR data were available. This report describes the methodology used to produce coastal inundation hazards maps based on the storm-tide and wave inundation levels calculated by Bosselle and Allis (2022) and the latest LiDAR dataset.

This analysis intends to replace coastal inundation hazard information where:

- No inundation analysis was done before (most non-priority coastal hazard area).
- Only Shuttle Radar Topography Mission (SRTM) data were available (e.g., Haast, Neils Beach, Jackson Bay, Punakaiki).
- LiDAR was previously available but dynamical modelling was not carried out (e.g., Hector, Granity, Ngakawau, Rapahoe, West of Westport).

The analysis does not intend to replace the hazard layers previously created with a dynamical inundation model in Westport/Orowaiti (north of Buller River only).

2 Methods

The analysis presented here is an update of the NIWA work initially described by Bosserelle and Allis (2022). The analysis is repeated here using a new topography dataset. The design extreme storm-tide elevations are identical to the NIWA report, but water depth and extent are different because of the updated topography data. Some table and figures are repeated from the 2022 NIWA report for consistency.

Bosserelle and Allis (2022) highlighted that the bias-corrected SRTM topography had significant flaws and may lead to a poor assessment of inundation depth and extent. The primary issues with these data were the coarse resolution of the topography (30 m) and the lack of distinction between ground and vegetation. The LiDAR topography data does not have such flaws and hence produces a more accurate inundation extent.

The analysis used to assess the inundation hazard in priority coastal hazard areas is a static “bathtub” inundation assessment where flow pathways and inundation momentum are ignored. This is not as accurate as dynamical numerical model that solves hydrodynamic equations to predict inundation area.

Therefore, the update static inundation hazard assessment with the LiDAR topography presented here supersedes the analysis previously undertaken with SRTM topography but does not supersede existing dynamic inundation hazard assessment that uses hydrodynamics modelling (i.e., Westport and Orowaiti).

2.1 Storm-tide + wave design values

The design event calculated by Bosserelle and Allis (2022) for the 1% AEP storm-tide (the storm tide water elevation with a 1% chance of exceedance in any given year), $Z_{1\%AEP}$, is based on the original work of Stephens et al. (2020) with an added allowance for wave setup (0.8 m for the region). The elevation calculated for priority sites across the region is repeated in Table 2-1. The inundation elevation is thus calculated as:

$$Z_{1\%AEP} = MHWS_7 * 1.32 + 0.28 + Z_{DATUM} + W_{setup} + SLR$$

where $MHWS_7$ is the Mean High Water Spring relative to mean sea level defined as the 7th percentile of all predicted tides; Z_{DATUM} is the adjustment of Mean Sea Level (MSL) to the vertical datum (NZVD16); W_{setup} is the wave setup allowance; and SLR is the Sea-Level Rise allowance. The linear relationship between $MHWS_7$ and the 1% AEP storm-tide (i.e., the 1.32 and 0.28 values) was originally calculated by Stephens et al. (2020).

Because $MHWS_7$, and Z_{DATUM} vary across the region, the $Z_{1\%AEP}$ values are different between different priority coastal areas.

Table 2-1: Extreme storm-tide + wave setup elevations on the open coast as mapped for priority coastal hazard area assessment. Elevations in NZVD2016 including uniform 0.14 m MSL offset. Coordinates in NZ Transverse Mercator (NZTM).

| Site name | Priority coastal hazard area index | Easting | Northing | 1% AEP Storm-tide + wave setup elevation (m NZVD2016) |
|-------------|------------------------------------|---------|----------|---|
| Westport | 3, 4 | 1499608 | 5390870 | 3.085 |
| Punakaiki | 12, 13 | 1464850 | 5336372 | 2.9578 |
| Rapahoe | 16 | 1455269 | 5307735 | 2.887 |
| Greymouth | 17, 18 | 1446107 | 5293434 | 2.8232 |
| Hokitika | 21 | 1432634 | 5268459 | 2.770 |
| Okuru | 25 | 1270468 | 5130759 | 2.4872 |
| Jackson Bay | 26 | 1255444 | 5123506 | 2.5872 |

Because the new LiDAR dataset covers a significant part of the West Coast region (Figure 2-1) the inundation mapping was extended outside of priority areas to the full LiDAR extent. In order to extend the analysis beyond the priority area, values of $MHWS_7$ and Z_{DATUM} were linearly interpolated to create a smooth surface of $Z_{1\%AEP}$ from Hector to Jackson Bay.

2.2 [Sea-level rise](#)

Maps of the coastal inundation hazard correspond to the 1% AEP storm-tide and waves and varying amounts of relative sea-level rise. As in Bosserelle and Allis (2022), 0.2 m increments of sea-level rise were applied from present to 2.0 m above present day mean sea level. Refer to Bosserelle and Allis (2022) for project timing for each increment under different greenhouse gas representative concentration pathways.

2.3 [2022 LiDAR](#)

A 5 m resolution DEM grid for the coastal area of the West Coast was constructed. The extent of the DEM covers all the priority coastal hazard area between Jackson Bay and Granity (i.e., as far north as LiDAR data coverage) and from the shoreline to the 10.0 m elevation contour (NZVD16). The DEM was constructed using the classified LiDAR point-cloud by averaging all the points classified as 'ground' within a radius of 7.5 m from each grid cell centre. This is sufficient to fill small gaps in the LiDAR coverage (Figure 2-1). LiDAR points classified as water surfaces, buildings or vegetation were ignored, leaving "no-data holes" in the DEM. The inundation analysis is not significantly affected by the "no-data holes" since most of the larger "holes" (larger than 1–2 pixels) corresponds to water bodies.

3 Discussion

Many of the limitations to static “bathtub” analysis presented in Bosserelle and Allis (2022) are also valid for this report, but the quality of the inundation assessment is greatly improved by using the high-resolution LiDAR.

It should be noted that the LiDAR dataset only represents the topography of the coast at a ‘point-in-time’ and cannot account for gradual and seasonal changes caused by wave action or sudden changes in the topography caused by natural disaster (storms, floods, earthquakes and landslides). This is particularly relevant because the LiDAR was surveyed mostly during summer months, where beaches are at their widest. Hence, the coastal inundation hazard zone may appear further offshore than the beach in winter (e.g., Figure 3-1). Similarly, some beaches that cyclically fill with sediment may appear seaward the coastal inundation hazard zone but would be inundated when that sediment is eroded away.



Figure 3-1: Coastal inundation hazard zone (hashed) can appear inconsistent with aerial photography (background) in areas where sediment has recently accreted/eroded. Note: in the situation presented above, for an area north of Whataroa River, the sediment accretion is likely the result of a multi-year process. In contrast, other locations may show a more seasonal cycle of accretion and erosion that may affect the quality of the hazard assessment.

The static “bathtub” analysis also highlights low-lying land that may initially appear far from the coast. However, large storm surge and waves can cause groundwater to rise and either directly flood low-lying backshore area or prevent the infiltration of rainwater thus causing flooding.

3.1 [Comparison with previous results](#)

Overall, the recent LiDAR dataset is expected to greatly improve the coastal hazards maps in the coastal hazard priority area where only a SRTM-derived DEM was previously available. Most of the improvement is because the LiDAR better captures the ground elevation and is relatively unaffected by vegetation canopy. For example, the inundation extent in Neils Beach for the 0.0 m SLR increment with LiDAR topography is more realistic than with SRTM topography. This is because, inundation with

LiDAR topography shows the beach and backshore wetlands clearly inundated whereas most of these features are not well captured in the SRTM-derived inundation map (Figure 3-2).



Figure 3-2: Inundation extent in Neils Beach based on SRTM and LiDAR DEM. The inundation extent based on SRTM (pink) does not see the smaller ponds or even the beach itself. The LiDAR-derived inundation extent (hashed) accurately sees ground level below the tree canopy and small inundation pathways.

Static “bathtub” coastal inundation mapping is conservative. Bosserelle and Allis (2022) presented an example using the coastline around Napier. For a local example, the difference between static and dynamic inundation mapping can be highlighted by comparing the result of the “bathtub” methodology with the results of the dynamical model for Westport. Figure 3-3 shows the difference in inundation extent between the dynamical and static models. In area with strong topographical control (i.e., steep topography), both analyses are very consistent. However, in flood plains and flat urban landscapes where the flood water loses momentum because of ground roughness, vegetation and buildings, the static inundation overestimates the inundation extent (e.g., Figure 3-3).

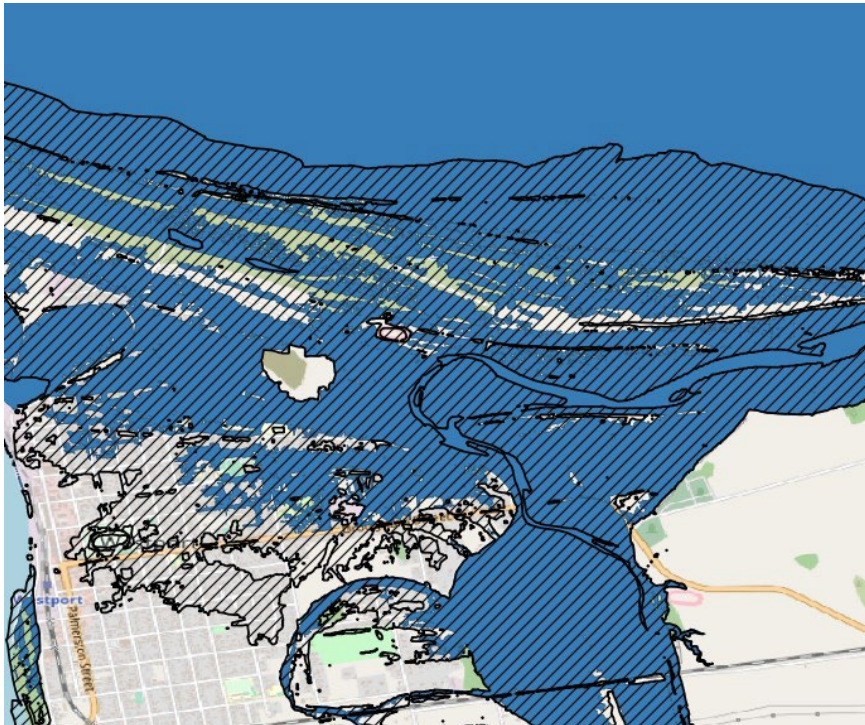


Figure 3-3: Comparison of Westport inundation from the same design event based on a dynamical model (blue) compared to a static "bathtub" model (hashed). Note that in the provided GIS layer, the area covered by the Westport dynamical model is clipped from the static "bathtub" results to avoid confusion between the two methods.

4 Conclusion

The analysis presented here is an update of the NIWA work initially described by Bosserelle and Allis (2022) by replacing the bias-corrected SRTM topographic data with the recently captured LiDAR topography. The LiDAR topography data overcomes the flaws of the SRTM data and hence produces more accurate inundation extent. Therefore, this update supersedes the coastal inundation hazard layers previously produced where:

- No inundation analysis was done before (most non-priority coastal hazard area).
- Only SRTM was available (e.g., Haast, Neils Beach, Jackson Bay, Punakaiki).
- LiDAR was previously available but dynamical modelling was not carried out (e.g., Hector, Granity, Ngakawau, Rapahoe, West of Westport).

However, the results presented here use a relatively simplistic “bathtub” inundation mapping that tend to overestimate flood extent when compared with a dynamical model. Therefore, these results do not replace the hazard layers for Westport/Orowaiti (north of Buller River only). In other locations the results may be superseded by dynamical modelling of the coastal inundation hazard in the future.

5 References

- Bosserelle, C., Allis, M. (2022) Mapping for priority coastal hazard areas in the West Coast Region, Supporting Te Tai o Poutini. Prepared for West Coast Regional Council. NIWA client report no: 2022036HN.
- Stephens, S.A., Bell, R.G., Haigh, I.D. (2020) Spatial and temporal analysis of extreme storm- tide and skew-surge events around the coastline of New Zealand. *Nat. Hazards Earth Syst. Sci.*, 20(3): 783-796. 10.5194/nhess-20-783-2020 <https://www.nat-hazards-earth-syst-sci.net/20/783/2020/>
- West Coast Regional Council, Toitū Te Whenua Land Information New Zealand (LINZ) (2022) West Coast, New Zealand 2020-2022. Collected by Aerial Surveys, distributed by OpenTopography and LINZ. <https://doi.org/10.5069/G9Z31WV0>. Accessed: 2023-02-02



Project Manager Update

1 March 2023 – 31 March 2023

Prepared By: Jo Armstrong
Date Prepared: 31 March 2023

Accomplishments this Period

- The planning staff and contractors have completed the summary of submissions and will bring it to your 18 April meeting for approval.
- 534 submissions have been received containing 15205 submission points.
- The top numbers of submission points are on:
 - Natural Hazards
 - Subdivision
 - Coastal Environment
 - Ecosystems and Biodiversity
 - General Rural Zone
- Mineral Extraction is also a large topic submitted on under several chapters in the Plan. There are also a lot of submission points supporting different parts of the Plan, as well as those seeking amendments to or opposing provisions.
- The search for a new senior planner continues. We have received four job applications to date.
- There has been a major focus on the 2023/24 budget preparation, and WCRC continue to work on the council-wide budget.
- Research to assess the coastal inundation impact on properties using updated Lidar information was delivered to staff in February. Staff are working with NIWA on the analysis and will report to the Committee at the 18 April meeting.
- Contracting Hearing Panel members is underway.
- A Request for Proposals for planning contract services to undertake report writing and provide support at hearings is out for responses by 17 April.
- The TTPP website is being updated to accommodate submissions, further submissions and all the hearings information. The new look is designed to make navigation easy for users. Please take a look at the site at www.tpp.nz
- The next TTPP Committee meeting is scheduled for 18 April 2023 at Westland District Council.

Plans for Next Period





- Respond to queries
- Notify summary of submissions and further submissions period
- Complete Contracts with hearing panel members

- Update WCRC Resource Management Committee
- TTPPC meeting 18 April 2023 at Westland District Council

Key Issues, Risks & Concerns

| Item | Action/Resolution | Responsible | Completion Date |
|--|---|--|---------------------|
| Decision makers can't agree | Get agreement on pieces of work prior to plan completion | Chairman | Ongoing |
| Budget insufficient for timely plan delivery | Work with TTPPC to recommend budget, and with WCRC to raise rate to achieve deliverables | Project Manager TTPP Committee CE WCRC | Annually Jan/Feb |
| Changes to national legislation | Planning team keep selves, Committee and Community updated on changes to legislation and the implications for TTPP | Project Manager Planning Team | Ongoing |
| Staff safety at public consultation | Committee members to proactively address & redirect aggressive behavior towards staff | TTPP Committee | Ongoing |
| National emergencies such as Covid-19 lock down and weather events | Staff and Committee ensure personal safety and continue to work remotely as able. Work with contractors to expedite work. | Project Manager TTPP Committee | Ongoing |
| Time and Cost of Appeals Process | Realistic budget set for best case costs. Awareness that contentious issues such as SNAs, natural hazards, mineral extraction and landscape provisions could see an extended appeals process, increasing costs to reach operative plan status | TTPP Committee TTPP Steering Group Project Manager | Ongoing |
| Community concerns over proposed Plan content | Respond to queries by phone, email and public meetings. Update information. | TTPP Committee Project Manager | Ongoing |

Status

| | | |
|----------------|---|---|
| Overall |  | |
| Schedule |  | Summary of submissions slightly delayed. |
| Resources |  | Future budgets required to cover hearings and mediation |
| Scope |  | Schedule 1 processes leading to updates to Plan to achieve operative status |

Schedule

| Stage | Target for Completion | Comments |
|----------------------------------|-----------------------|--|
| Te Tai o Poutini Plan Notified | 14 July 2022 | This will be the “Proposed” Plan |
| Summary of Submissions | April 2023 | |
| Further Submissions | May 2023 | Submissions must be summarised and published and then there are 10 working days for further submissions |
| Pre-hearing meetings /Mediation | June 2023 onwards | Indicative time only |
| Hearings Te Tai o Poutini Plan | From August 2023 | Indicative time only. |
| Decisions Te Tai o Poutini Plan | 2025 | Indicative time only |
| Ongoing Decision Making for TTPP | 2025 onward | TTPPC is a permanent Committee. Once the Plan is adopted the ongoing Committee role includes monitoring implementation and the need for any amendments, undertaking amendments and reviews, or ensuring these are undertaken, as required. |
| Appeals and Mediation Te Tai | From late 2024 | Indicative time only. Any parts of the Plan not |

| Stage | Target for Completion | Comments |
|---------------------------|-----------------------|---|
| o Poutini Plan | | appealed are operative from the end of the Appeal Period. |
| Environment or High Court | 2025 | Indicative time only. |



Te Tai o Poutini PLAN

A combined district plan for the West Coast