

# **SECTION 42A REPORT**

Rebuttal evidence in response to expert evidence filed

## **Topics:**

**Natural Hazards**

**Coastal Environment**

**Earthworks**

**Tourism Zone**

**Report prepared by: Alex Bell**

**Dated: 5 July 2024**

# TABLE OF CONTENTS

<b>1.</b>	<b>Introduction</b> .....	<b>3</b>
<b>2.</b>	<b>Purpose of the Report</b> .....	<b>3</b>
<b>3.</b>	<b>Natural Hazards Chapter</b> .....	<b>4</b>
3.1	Matters addressed in submitter evidence.....	4
3.2	Fire and Emergency New Zealand – Fire risk.....	4
3.3	Waikato Regional Council - Natural Hazard Terminology.....	5
3.4	Waikato Regional Council - Natural Hazard Mapping.....	7
3.5	Waikato Regional Council - Natural Hazards outside of mapped areas	8
3.6	Waikato Regional Council - Building Platform Suitability Area C.....	9
3.7	Waikato Regional Council - ARI v AEP.....	9
3.8	Waikato Regional Council - Determination of Minimum Floor Levels .	10
<b>4.</b>	<b>Coastal Hazards</b> .....	<b>11</b>
4.1	Matters addressed in submitter evidence.....	11
4.2	Federated Farmers – Farming activities in the coastal environment..	12
4.3	Waikato Regional Council - Intent and definitions for Coastal Hazard Areas .....	17
4.4	Waikato Regional Council - Coastal flood hazard area Awakino.....	17
4.5	Waikato Regional Council - Extreme coastal inundation.....	18
<b>5.</b>	<b>Earthworks</b> .....	<b>19</b>
5.1	Matters addressed in submitter evidence.....	19
5.2	Waikato Regional Council - Environmental standards for permitted earthworks.....	19
5.3	The Fuel Companies - Rule EW-R7 .....	20
<b>6.</b>	<b>Tourism Zone</b> .....	<b>21</b>
6.1	Fire and Emergency New Zealand - TOUZ-R41 Servicing.....	21
<b>7.</b>	<b>Conclusion</b> .....	<b>22</b>

# 1. Introduction

1. My name is Alex Bell. I am the writer of the original section 42A reports for Hearing Tranche 1 for the following matters:
  - a. Hazards and Risks (Chapters 21-23).
  - b. District wide matters – Activities on the Surface of Water, Amateur Radio, Coastal Environment, Earthworks, Financial Contributions and Harpori Whānui.
  - c. Tourism zone.
  - d. Amenity Precinct.
  - e. Te Maika Precinct.
  - f. Appendices and Maps - Schedules 10-13
2. My qualifications and experience are set out in the section 42A reports in section 1, along with my agreement to comply with the Code of Conduct for Expert Witnesses in the Environment Court Practice Note 2023 as set out in section 1.1.
3. The recommended text changes as a result of this rebuttal evidence are set out in Appendix 1 to this report. Changes that are a result of the original section 42A report are shown in purple, with changes arising from this rebuttal evidence shown in red.

# 2. Purpose of the Report

4. The purpose of this report is to consider primary expert evidence filed by submitters. The evidence that was filed by the following submitters I will respond to below:

Submission number	Submitter	Chapters
46.62, 46.63, 46.64, 46.65, 46.66	Federated Farmers	32. Coastal Environment
16.18, 16.83	Fire and Emergency New Zealand	23. Natural Hazards 52. Tourism zone
56.11	The Fuel Companies	33. Earthworks
10.60, 10.61, 10.63, 10.121	Waikato Regional Council	23. Natural Hazards 32. Coastal Environment

5. It should be noted that I have not provided rebuttal commentary on all evidence, particularly where either the submitter agrees with my recommendation in the section 42A report, or where we simply have a

difference in view and there is little more to add.

6. I have therefore focused primarily on evidence that has caused me to change my recommendation, or where there is value in further discussion on the matters raised in evidence.

### **3. Natural Hazards Chapter**

#### **3.1 Matters addressed in submitter evidence**

7. The main topics addressed in evidence from submitters for the Natural Hazards chapter include:
  - a. Fire risk
  - b. Natural hazard terminology
  - c. Natural hazard mapping
  - d. Natural hazards outside of mapped areas
  - e. Building Platform Suitability Area C
  - f. ARI v AEP
  - g. Determination of minimum floor levels

#### **3.2 Fire and Emergency New Zealand – Fire risk**

##### **Matters raised in evidence**

8. Ms Alec Duncan provided evidence for Fire and Emergency New Zealand (FENZ). In the original submission point (16.18), FENZ sought new policies to manage wildfire risk. Mr Duncan has provided further information regarding this matter. The section 42A report indicated no objection in principle to considering a policy provision addressing fire risk. In order to at least elevate this matter in the minds of developers, a draft policy was proposed in the Section 42A Report as set out below:

**NH-PX** When locating building platforms on a site, manage wildfire risk by considering:

1. New vegetation with regard to slope, aspect, management regimes and planting less flammable vegetation and;
  2. The maintenance of appropriate buffers between new building platforms and existing forest and bush areas.
9. Ms Duncan has suggested alternative policy wording which incorporates the above example and would also meet the requested relief sought by Fire and Emergency:

**NH-PX** To ensure that subdivision, use and development:

1. Has regard to the risk of wildfire, including consideration of:
  - (a) Topographical features within the site and surrounding area; and
  - (b) The maintenance of appropriate buffers between new building platforms and existing forest and bush areas; and
  - (c) New vegetation with regard to slope, aspect, management regimes and planting less flammable vegetation.
2. Incorporates measures to avoid or reduce the risk of wildfire where appropriate.

### **Analysis and recommendations**

10. It is agreed that the amended policy would result in a more robust policy framework for fire risk management, would alert developers to fire risk considerations and enable Council to better take into account fire risk measures as part of the resource consent process.

## **3.3 Waikato Regional Council - Natural Hazard Terminology**

### **Matters raised in evidence**

11. Ms Sarah Knott, Mr Luis Alejandro Cifuentes and Mr Rick Liefing provided evidence on behalf of the Waikato Regional Council (WRC). WRC provided additional information relating to submission point 10.60. This submission point requested a review of the terminology throughout the natural hazards chapter for consistency. The section 42A report invited WRC to provide some suggested definitions ahead of the hearing and noted that it was not clear what terminology WRC considered was inconsistent. The section 42A report agreed with the submission point that a definition could be provided for 'flood management and protection works' and invited WRC to suggest the content.

### **Analysis and recommendations**

12. WRC has proposed that the following terminology and definitions from the WRC RAMP and Infrastructure Strategy 2024-74 are included in the plan:
  - Annual Exceedance Probability (AEP) - The probability of a storm event being exceeded in any one year
  - Embankment - In the Waikato Regional Council context, the term 'Embankment' is used to refer to earth structures used to control flood waters. This includes the following asset types: Stopbanks, Spillways and Detention Dams
  - Flood - A flood is when a water level, flow or extent exceeds an agreed threshold causing an adverse effect to people, property or the environment requiring flood risk management.
  - Flood Risk Management - Managing the risk of flood impacts on

people and property using a variety of mechanisms such as infrastructure, planning, modelling, emergency management and education.

- Flood Infrastructure - Built (e.g., stopbanks, floodgates and pumpstations) or natural assets (e.g., wetlands) used to manage agreed risk thresholds (level of service) from flood waters on private and public property or the environment.
- Level of Service - Outputs a customer or community receives from the organisation. They should describe what the organisation is agreed to deliver, including attributes relating to risk threshold, quality, reliability, responsiveness, sustainability, timeliness, accessibility, and cost.
- Risk threshold - The point at which a community can no longer tolerate the impacts of a natural hazard event. Adaptation actions or pathways should be implemented prior to a community risk threshold being reached.
- Stopbank - An embankment adjacent to a river or watercourse, which retains floodwaters from flowing onto a floodplain.
- Structural measures - Structures or physical works constructed to keep floodwaters away from existing development e.g. stopbanks

And

- Average Return Interval (ARI) - The average time period between an event of a certain size. An ARI and AEP are both terms to describe the probability of a certain size of event occurring. The table below provides the probability of certain size events and relationship between ARI and AEP (includes a table)

13. Most of the terms are not used in the plan (which is likely the point of the submission) and some are not applicable. No definition was provided for 'flood management and protection works'.
14. On balance, the following definitions are considered helpful:
  - Annual Exceedance Probability (AEP)
  - Stopbank
  - Average Return Interval (ARI)
15. The definition of 'embankment' is not used in the Plan, and it is considered preferable to rely on the definition of 'stopbank' rather than add in 'embankment' which includes a 'stopbank' and could be confusing. Similarly, the term 'structural measures' is not used in the plan and also embodies 'stopbanks'. It is not considered that a definition of 'flood' is required. The term 'level of service' is more applicable to the delivery of infrastructure than a district plan. If the district had flood management schemes this term would be applicable, particularly in the consideration of residual risk areas. But it doesn't.

16. 'Flood infrastructure' could be used to replace the plan's term 'flood management/protection works'. The first part of the definition refers to built (e.g., stopbanks, floodgates and pumpstations) assets which is applicable to the plan's use of 'flood management/protection works' in NH-P8 and NH-R3<sup>1</sup>. However, the second part of the definition includes natural assets (e.g., wetlands) which were not necessarily anticipated in the drafting of the provisions but could be encompassed by these. The final part of the definition 'used to manage agreed risk thresholds (level of service) from flood waters on private and public property or the environment' could be problematic if an agreed risk threshold is not in place. This needs to be considered further by WRC. If 'flood infrastructure' replaces the plan's term 'flood management/protection works', would this inadvertently require WRC to gain consent from WDC to maintain stopbanks under NH-R3. It may also affect exemptions in other chapters. This highlights the difficulty of retrofitting definitions.
17. The terms 'flood risk management and 'risk threshold' are not considered to be necessary although 'risk threshold' may need to be revisited dependent on whether the definition of 'flood infrastructure' is used (as discussed above). Ultimately the lack of nationally consistent natural hazard definitions and methodology is frustrating. It is particularly frustrating for territorial authorities which sit at the bottom of the planning hierarchy and can do little to influence this issue.

### **3.4 Waikato Regional Council - Natural Hazard Mapping**

#### **Matters raised in evidence**

18. In his evidence Mr Liefting states that the base data and best practice guidance used by the natural hazard assessments to inform the plan is now outdated and considers that new information will soon be available that should be reflected in the plan's provisions. Mr Liefting requests that for each natural hazard dataset, the following options are available to address inconsistencies and superseded data including (but not limited to):
  - Retaining natural hazard data, but acknowledging data is superseded and ensuring a clear process for using new/updated information.
  - Remapping and amending natural hazard data.
  - Removing mapped natural hazard data from the plan and referring to mapped data outside of district plan.

#### **Analysis and recommendations**

19. This request was not originally provided for within the WRC submission, and therefore was not considered in the section 42A Report. No amendment is recommended, as it is not clear from the evidence provided what aspects of the data are now outdated, or the extent to which the new

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<sup>1</sup> The term is also used in the Natural Character Chapter, Network Utilities and Activities on the Surface of Water.

data will affect the current natural hazard overlays displayed on the planning maps. The plan has been drafted based on the best available data and expert advice as outlined in the section 42A report. It is considered that the plan should proceed on the basis of the natural hazards dataset that is currently available, and that any future improvements to the dataset should be provided for by way of a future plan change.

### **3.5 Waikato Regional Council - Natural Hazards outside of mapped areas**

#### **Matters raised in evidence**

20. In submission point 10.60, WRC requested that the plan be amended to include provisions that consider and address flooding in areas that are not mapped. This change was rejected in the section 42A report on the basis that the plan cannot impose rules relating to flooding for areas that are not mapped, as there would be no trigger for a land use consent and no clarity for landowners regarding consenting requirements.
21. In his evidence Mr Liefting states that development (additions or new building housing a sensitive activity) could occur on existing, appropriately zoned land subject to natural hazards that is outside of a mapped hazard zone and does not require a subdivision consent. Mr Liefting has requested that the plan is amended to ensure additions to an existing building, or construction of a new building housing a sensitive activity is constructed to manage risk from natural hazards.

#### **Analysis and recommendations**

22. It is not clear from the evidence provided what changes WRC are requesting to the provisions in the natural hazards chapter, as they have not provided specific amendments. However, the subdivision process requires that site suitability and hazard assessments that are undertaken for all subdivisions, which includes reference to section 106 of the RMA. The policy framework in each zone provides that new development is designed and located to manage significant risks from natural hazards. In the residential zone RESZ-P21 requires adequate assessment of the natural hazard risk to be undertaken prior to the establishment of new development, noting some areas may not be appropriate for development if the natural hazard risk, particularly flooding and land instability issues, cannot be appropriately managed. Similarly, this provision is contained in RLZ-P6, RLZ-P7, SETZ-P18, COMZ-P8, TOUR-P10 and INZ-P8. Appendix 1 also identifies the hazard information requirements for resource consent applications.
23. On balance it is considered that adequate provision has been made to assess natural hazards outside of the mapped areas.

### **3.6 Waikato Regional Council - Building Platform Suitability Area C**

#### **Matters raised in evidence**

24. Submission point 10.61 requested the explanation for Building Platform Suitability Area C be amended on the grounds that the wording in the plan did not clarify whether the modelling is for the current climate or for an RCP 8.5 climate. Additionally, the submission point stated that more clarity was needed regarding the Waitomo Valley flood modelling to specify that the floodplain was identified using a qualitative assessment.
25. This amendment was accepted in part, and the following wording was proposed in the section 42A Report.

Building Platform Suitability Area C which is the floodplain area in Te Kūiti and Piopio identified on the planning maps for 100 year ARI events (current climatic conditions) with rainfall projected to a 2120 future time horizon based on RCP 8.5. It is also the floodplain area identified in Waitomo Valley Road [by a qualitative assessment](#).

26. Mr Liefing considers that the amended wording is confusing as the Building Platform Suitability Area C uses two different assessment types for Te Kūiti/Piopio and Waitomo Valley Road, and that the wording should be amended as follows:

Building Platform Suitability Area C is comprised of:

1. The floodplain area in Te Kūiti and Piopio identified on the planning maps for 1% AEP events with rainfall projected to a 2120 future time horizon based on RCP 8.5.
2. The floodplain area identified in Waitomo Valley Road, estimated by a qualitative assessment.

#### **Analysis and recommendations**

27. It is agreed that this amendment is appropriate and provides clarity to plan users regarding the definition of Building Platform Suitability C in both Te Kūiti/Piopio and Waitomo Valley Road.

### **3.7 Waikato Regional Council - ARI v AEP**

#### **Matters raised in evidence**

28. Submission point 10.63 requested that all references to "100-year ARI" were amended to 1% AEP (Annual Exceedance Probability). This submission was rejected in the section 42A report, as it was considered that this terminology has specifically been used to align with the analysis and the terms used in the Tonkin and Taylor report. Mr Liefing in his evidence has requested that all references to ARI be amended to AEP for consistency with the Waikato Regional Policy Statement as a regulatory

document guiding the plan.

### **Analysis and recommendations**

29. This amendment is considered to be acceptable to enable consistency with the Waikato Regional Policy Statement. It will involve changes across the plan to ensure consistent terminology is applied. If the Commissioners are of a mind to accept this recommendation, the definition of 'ARI' proposed above may not be required.

## **3.8 Waikato Regional Council - Determination of Minimum Floor Levels**

### **Matters raised in evidence**

30. The WRC submission at 10.65 requested that rule NH-R5.3(i) and (ii) be amended to state 500mm instead of 0.5m. This submission was accepted, and the change was made as outlined in the section 42A report at paragraph 63.
31. In his evidence, Mr Liefing has outlined that he considers there are inconsistencies in determining fixed floor levels under rule NH-R5.3(i) and (ii) between piled foundations and concrete foundations. This was not part of the original submission, so was not considered in the section 42A report. Mr Liefing has requested the following amendments to rule NH-R5.3(i) and (ii).
3. Any new building housing a sensitive activity must achieve:
- i. A **building platform level** ~~finished floor level~~ located 500 mm above the 1% AEP flood level, where this level taken from the bottom of the floor joists; or
  - ii. Where concrete, the ~~top~~ **bottom** of the **building platform level** ~~finished floor level~~ must be at least 500 mm above the 1% AEP flood level;
32. Mr Liefing considers that NH-R5.3(ii) is not consistent with the requirements of NZS 4404:2010 Land development and Subdivision, which takes the measurement from the bottom of the concrete foundations.

### **Analysis and recommendations**

33. Although, this matter was not raised in the WRC submission, I have reviewed NZS 4404:2010 Land development and Subdivision and consider that this amendment can be accepted in part, as the request to amend rule NH-R5.3(ii) to change the measurement from the top to the bottom of the concrete foundations is acceptable. However, the request to change the finished floor level to building platform level is rejected, as finished floor level is a well known and utilised term in the building and development industry. As submission 10.65 was already accepted, and there were no further submissions, there is no change to the

recommendation in the section 42A Report required. The proposed amended provision is set out below.

<b>The following rules apply to Building Platform Suitability Area C in all zones</b>	
<b>Additions to an existing <a href="#">building</a>, or construction of a new <a href="#">building</a> housing a <a href="#">sensitive activity</a></b>	
<p><b>Activity Status: PER</b></p> <p><b>Where:</b></p> <ol style="list-style-type: none"> <li>1. Accessory buildings no more than 30 m<sup>2</sup> and shipping containers used for non-habitable purposes are permitted subject to zone requirements; and</li> <li>2. Subject to zone requirements, additions to an existing building housing a sensitive activity must not increase the ground floor area of the building by more than 15 m<sup>2</sup> in total over the lifetime of this plan commencing from (the operative date); and</li> <li>3. Any new building housing a sensitive activity must achieve:               <ol style="list-style-type: none"> <li>(i) A finished floor level located <del>0-5</del> <a href="#">500mm</a> above the 1% AEP flood level, where this level taken from the bottom of the floor joists; or</li> <li>(ii) Where concrete, the <del>top</del> <a href="#">bottom</a> of the finished floor level must be at least <del>0-5</del> <a href="#">500mm</a> above the 1% AEP flood level;</li> </ol> </li> </ol> <p>AND</p> <ol style="list-style-type: none"> <li>4. NH-R5.3 also applies to the establishment of shipping containers used for residential purposes. It does not apply to shopkeeper's dwellings in Te Kūiti CBD precinct (PREC5); and</li> <li>5. Compliance with the finished floor level specified in NH-R5.3 must be demonstrated by a suitably qualified and experienced engineer.</li> </ol> <p><i>Note: Also see <a href="#">SUB-R19</a>.</i></p>	<p><b>Activity status where compliance is not achieved: RDIS</b></p> <ol style="list-style-type: none"> <li>(a) Effects on existing overland flow paths, surface drainage patterns, flood storage capacity and runoff volumes; and</li> <li>(b) Effects on adjoining properties and infrastructure, including cumulative effects and the potential for the activity to create, transfer or intensify hazard risks on adjoining sites; and</li> <li>(c) Consideration of alternative locations; and</li> <li>(d) Consideration of the projected effects of climate change; and</li> <li>(e) Whether flood risk can be managed through appropriate building materials, foundation and building design, site layout, geotechnical setbacks, minimum floor levels, structural or engineering solutions; and</li> <li>(f) The ability to set an appropriate floor level for the addition; and</li> <li>(g) Any mitigation measures to reduce the risk to people's safety, well-being and property.</li> </ol>

## 4. Coastal Hazards

### 4.1 Matters addressed in submitter evidence

34. The main topics raised in evidence from submitters that are in disagreement with the recommendations of the original s42A report for

Coastal Hazard chapter include:

- a. Farming activities in the coastal environment.
- b. Intent and definitions for coastal hazard areas.
- c. Coastal flood hazard area in Awakino
- d. Extreme coastal inundation

## **4.2 Federated Farmers – Farming activities in the coastal environment**

### **Matters raised in evidence**

35. In their submission points 46.62, 46.63, 46.64, 46.65 and 46.66, Federated Farmers' sought relief to provide for existing use rights for farming operations within the coastal environment and coastal hazard areas. The submission points addressed issues of access across private property and requested greater flexibility for building sizes, earthwork volumes etc for existing and lawfully established activities at a level of operation that the submitter considered were more realistic for farming operations.

### **Amendments to CE-P1.3 and CE-P13.5**

36. In his evidence, Mr Peter Matich considers that relying on section 10 of the RMA for lawful existing farming activity to continue to function, may put farmers, whose farms are situated within coastal environment areas, at a disadvantage in situations where they need to maintain existing farm infrastructure or replace/modernise farm buildings and structures. He considers this scenario presents potential for an unwarranted degree of scrutiny of proposals to replace old buildings with structurally safe and compliant new buildings if the process in section 10 of the RMA is to be followed to the letter. Mr Matich has provided the following amendments to Policy CE-P1.13 to give effect to the relief sought in his evidence:

CE-P1. When considering the appropriateness of subdivision, land use or development activities, ensure the natural character qualities of the coastal environment are preserved by:

13. Providing for the continued operation of lawfully established farming activities, including maintenance, upgrading and replacement of fences, water storage dams, farm access tracks, agricultural aircraft landing areas, and buildings and structures that support farming operations; and

37. Mr Matich has also requested consequential amendments to the Activities Rules tables to ensure that such activities are permitted in the general rural zone (as well as the Rural Production Zone) where there is a coastal environment overlay.

## Analysis and recommendations

38. In the first instance it is worth noting that the rural production zone rules prevail over the coastal environment provisions. In respect of providing for lawfully established farming activities, this matter is enshrined in section 10 of the RMA. A policy amendment is not considered to be necessary.
39. The coastal environment chapter manages three environments:
- The coastal environment overlay broadly demarks the area where coastal processes influence the terrestrial environment. This was identified in accordance with the provisions of the New Zealand Coastal Policy Statement 2010 and the Waikato Regional Policy Statement.
  - Areas of high/very high natural character which have been evaluated on the basis of their natural elements, patterns and processes and the nature and extent of modification to ecosystems and the landscape. These areas were identified in accordance with the provisions of the New Zealand Coastal Policy Statement 2010, the criteria in the Waikato Regional Policy Statement and the Waikato Regional Natural Character of the Coastal Environment Study. These areas comprise a total of 0.8% of the district or just over 3000 hectares. 740 ha or 25% of these areas are protected. The remaining area is in private ownership although 70% of the area that is privately owned is significant natural area. It is estimated that only 22% of the landscape is likely to be farmed.
  - There is one area of outstanding natural character which contains a combination of elements, patterns and processes that are exceptional in their intactness, integrity and lack of built structures. This single area was identified in accordance with the provisions of the New Zealand Coastal Policy Statement 2010, the criteria in the Waikato Regional Policy Statement and the Waikato Regional Natural Character of the Coastal Environment Study. It is situated on the south-western side of Kawhia harbour, comprising approximately 0.3% of the district or 1,200 hectares. 98% of the area is a nationally significant natural area. The remainder is more likely to be vegetation clearance around small baches.
40. Mr Matich is concerned about the restrictions on farming in the coastal environment. There seems to be some confusion in the evidence about what is permitted in the coastal environment overlay, particularly in respect of buildings. To be clear in the coastal environment overlay:
- Buildings are permitted. They only require a restricted discretionary consent where they are greater than 8 m in height and/or greater than 300 m<sup>2</sup> in size.
  - Tanks and silos are permitted. They only require a restricted discretionary consent where they are greater than 3.2 m in height and/or have a capacity greater than 50,000 litres.

- Earthworks are not restricted in the coastal environment – the general rural zone rules apply.
- Farm quarrying is not restricted in the coastal environment – the general rural zone rules apply.
- Plantation forestry is permitted – the NES for plantation forestry applies.
- Removal of indigenous vegetation outside of a significant natural area is permitted up to 1 hectare per calendar year. Beyond that amount a restricted discretionary consent is required.

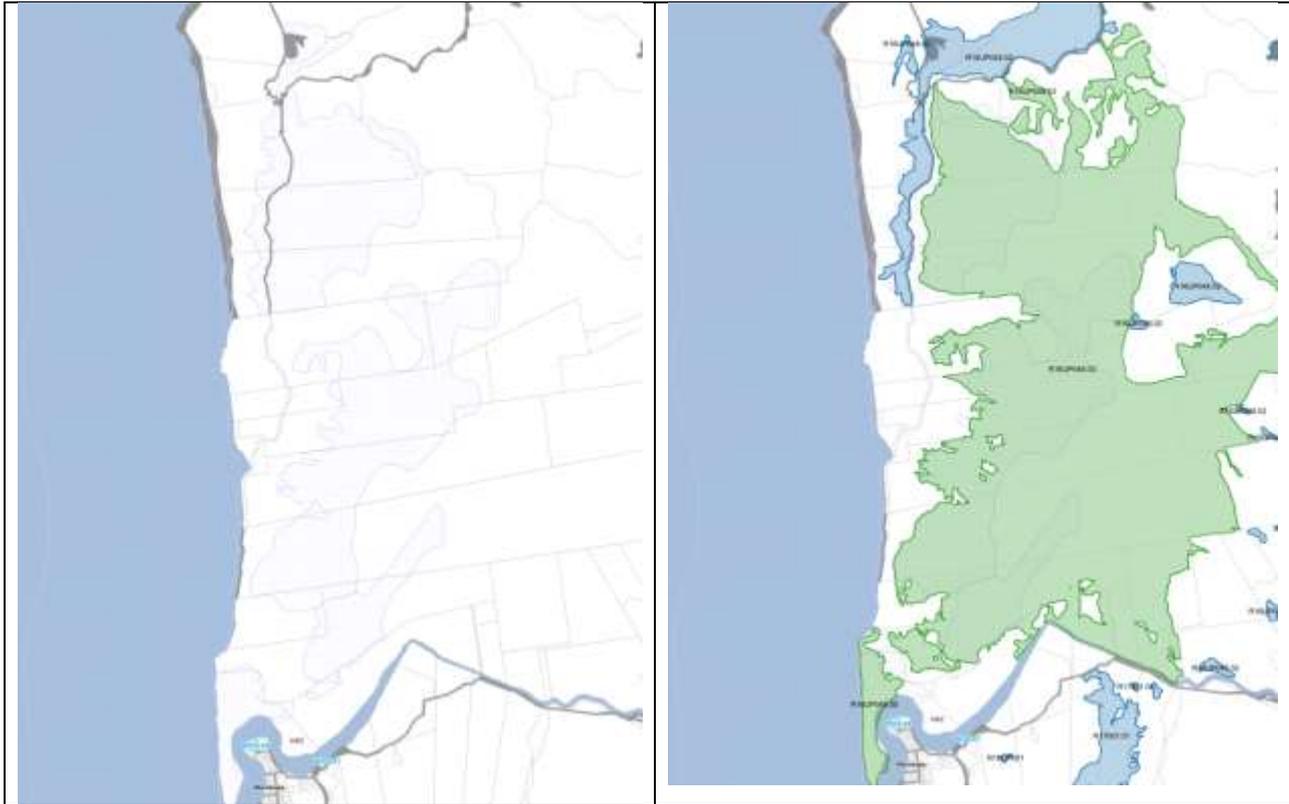
41. Given it is unlikely that any farming occurs in the single area of outstanding natural character, the rules are not applicable. However, approximately 670 hectares of land is likely to be farmed in the areas of high/very high natural character. These are pockets of land along the coastline as identified on the planning maps and below. The maps indicate that the area north of Taharoa around Albatross Point is the area most likely to be farmed and located in an area of high/very high natural character.



**Figure 1: Taharoa North:**

Left - Areas of high/very high natural character.

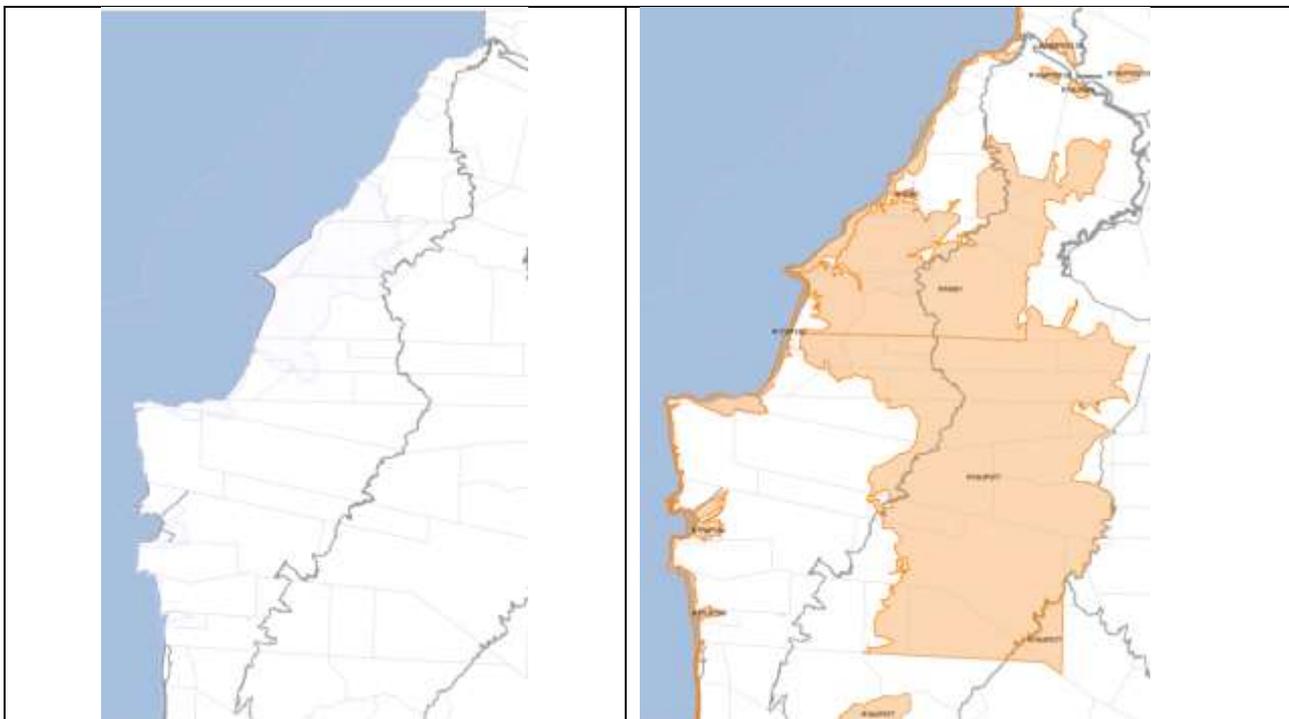
Right - Areas of high/very high natural character with significant natural areas overlaid.



**Figure 2: Marakopa North:**

Left - Areas of high/very high natural character.

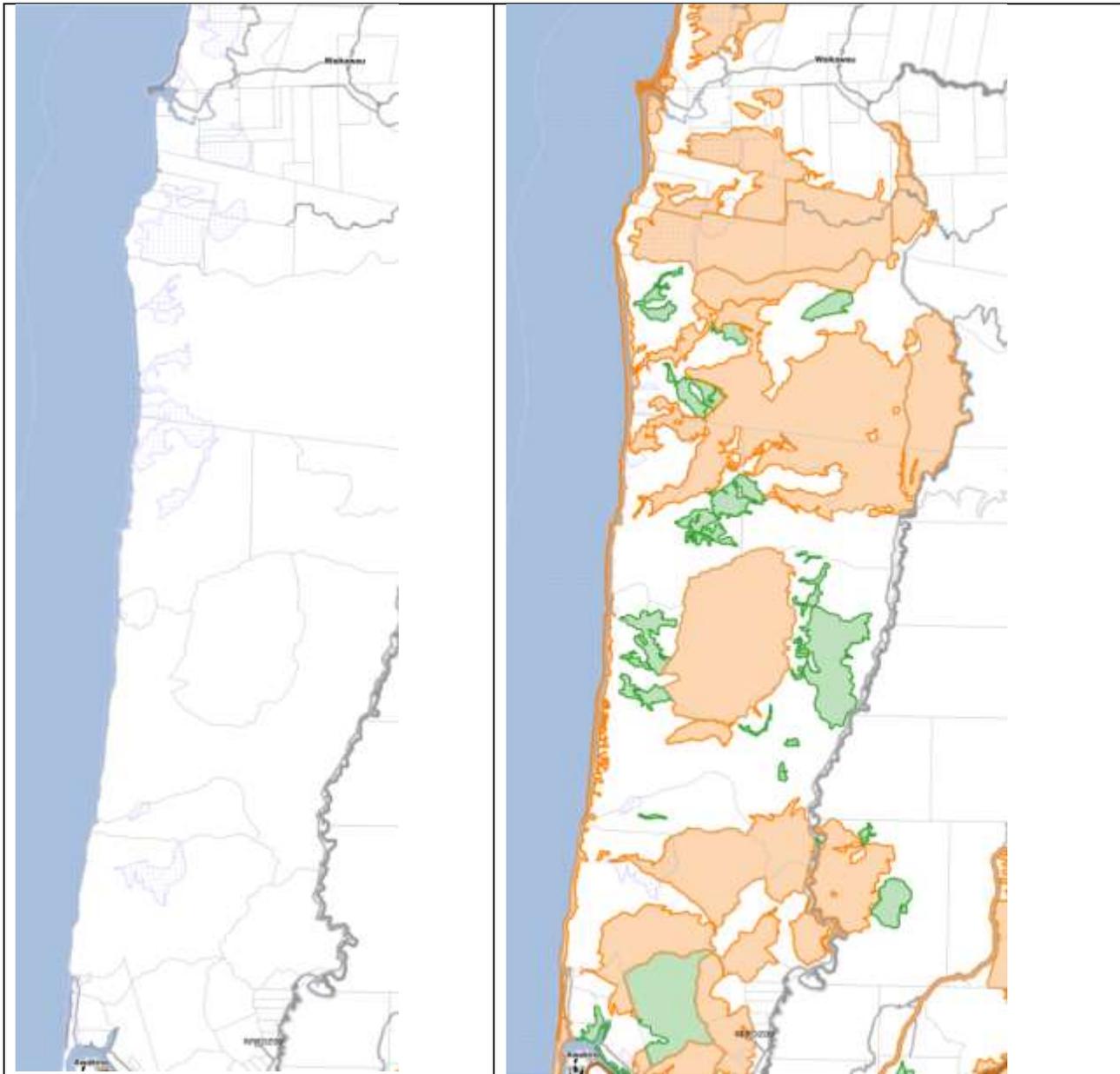
Right - Areas of high/very high natural character with significant natural areas overlaid.



**Figure 3: Tirua Point North:**

Left - Areas of high/very high natural character.

Right - Areas of high/very high natural character with significant natural areas overlaid.



**Figure 4: Awakino North:**

Left - Areas of high/very high natural character.

Right - Areas of high/very high natural character with significant natural areas overlaid.

42. In the areas of high/very high natural character provision has been made for smaller structures/activities associated with farming. Generally, activities are permitted up to a certain size or volume, but these restrictions are considered to be appropriate given the nature and rarity of these landscapes. The section 32 evaluation provides more detail on these areas. No further changes are recommended to the policy or rule framework in respect of this matter.

### **4.3 Waikato Regional Council - Intent and definitions for Coastal Hazard Areas**

#### **Matters raised in evidence**

43. The Waikato Regional Council at 10.110 and 10.111 sought amendment to the definitions of the coastal erosion hazard areas, and the coastal flood hazard area.
44. In his evidence, Mr Liefing considers that there is inconsistency in the application and intent of the coastal hazards areas in terms regards to terminology and approach. Mr Liefing has requested the following amendments in his evidence:
45. That the following inconsistencies between CE-P14.4 and NH-R5.3 be resolved:
  - Use of a defined AEP in NH-R5.3, no AEP defined in CE-P14.4.
  - No inclusion of climate change in NH-R5.3 whereas climate change is included in CE-P14.4.
  - No defined freeboard or clear methodology to inform a finished floor level in CE-P14.4.

#### **Analysis and recommendations**

46. It is considered that the Plan has been drafted to give effect to the New Zealand Coastal Policy Statement and the Waikato Regional Policy Statement, so the terminology that is used is consistent with those documents. We do not have discretion in the Plan to use terminology that is inconsistent with higher order policy documents, and until such time as the NZCPS, or other such national direction is provided, or an amendment to the WRPS is made, the Plan is required to use terminology that is consistent with those documents.
47. In regard to the request to have a defined AEP that is used in NH-R5.3 in CE-P14.4, this would not be appropriate for use in a policy. It is considered that the coastal environment is a dynamic environment, and as such APP1.3 specifies the level of assessment required for a resource consent application that is within a coastal hazard area. It would be useful if WRC could advise if they have reviewed the information requirements in APP-1.3 and whether they consider it has sufficient detail to satisfy their concerns regarding avoiding, remedying or mitigating the adverse effects of coastal hazards on activities in the coastal environment.

### **4.4 Waikato Regional Council - Coastal flood hazard area Awakino**

48. The WRC submission at 10.111 sought an explanation for why only a part of the coastal hazard area is considered and included for Awakino. This submission point was rejected, as only the lower part of the area of interest

was covered by high resolution DEM, as specified in the Tonkin and Taylor report:

<https://www.waitomo.govt.nz/media/55xdsdmf/te-kuiti-and-piopio-flood-modelling-report-december-2019.pdf>

49. WRC have requested the following amendment in their evidence:

*In Kiritihere and Marokopa, a simplified 2D model is employed to identify these areas and in Awakino the area is estimated ~~in part~~, by referencing to the downstream floodplain extent and extending this upstream.*

### **Analysis and recommendations**

50. It is considered that this amendment is acceptable. This amendment has the effect of amending 10.111 to accept in part. There were no further submissions on this submission. The amended provision is as follows:

**The Coastal Flood Hazard Area (CFHA)** which is the extent of land likely to be vulnerable in a rare extreme storm surge event, including the effect of a projected sea level rise (1.0 m to 2120). In Awakino, Marokopa and Kiritihere, the upstream area is also the 1% AEP floodplain. In Kiritihere and Marokopa, a simplified 2D model is employed to identify these areas and in Awakino the area is estimated ~~in part~~, by referencing to the downstream floodplain extent and extending this upstream.

## **4.5 Waikato Regional Council - Extreme coastal inundation**

### **Matters raised in evidence**

51. The WRC submission at 10.118 sought a definition for an 'extreme coastal inundation event' or removing the word 'extreme' from CE-P14.4.
4. *Requiring minimum floor levels and a freeboard suitable to the setting that will provide protection from flooding during an extreme coastal inundation event, including 1.0 m of sea level rise".*
52. This submission point was rejected on the basis that this term has been used in the expert evidence that has been provided to Council in the preparation of the Plan, and as such it would not be appropriate to amend this wording.
53. In their evidence Ms Knott and Mr Cifuentes request that the word 'extreme' is removed from the CE-P14.4, or our experts provide a suitable definition.

### **Analysis and recommendations**

54. It is considered that it is not necessary to provide a specific definition for what is considered extreme coastal inundation, as it is considered that use of the word extreme does not change the intent of the policy, and that our experts were comfortable at the time of drafting their advice that no definition was required.

## **5. Earthworks**

### **5.1 Matters addressed in submitter evidence**

55. The main topics raised in evidence from submitters that are in disagreement with the recommendations of the original s42A report for earthworks chapter include:
- a. Environmental standards for permitted earthworks.
  - b. Exemptions under EW-R7.

### **5.2 Waikato Regional Council - Environmental standards for permitted earthworks**

#### **Matters raised in evidence**

56. The WRC submission at 10.121 sought the inclusion of environmental standards for permitted earthworks activities.
57. This submission was rejected in the section 42A Report on the basis that environmental standards are found in the performance standards that are associated with the rule. Also, the plan does not address matters specifically relating to slope and gradient as these are dealt with in both regional plans.
58. In the evidence prepared by Ms Knott and Mr Cifuentes, they have set out that they consider that the rule does not provide a clear enough reference to the performance standards, and the current rule framework does not set any criteria/environmental standards to measure non-compliance and that this approach fails to account for the nuances of managing earthworks in different zones.

#### **Analysis and recommendations**

59. It is considered that the matters that Ms Knott and Mr Cifuentes are requesting be included as environmental standards in their evidence are largely already provided for in either the earthworks provisions themselves or by NATC-R4. NATC-R4 provides standards on earthworks in proximity to a water body. The provisions as notified effectively cover the matters (a)-(e) in the Waikato District Council rule EW-R7 that WRC have provided as an example. However, we consider that an additional cross reference could be provided to NATC-R4 to make this clearer to users of the plan. Also, it is considered that the matters (f)-(i) in the Waikato District Council example could be added as a new performance standard. Clause (j) in the Waikato District Council example applies to Kauri and is not required in Waitomo District.

## 5.3 The Fuel Companies - Rule EW-R7

### Matters raised in evidence

60. The Fuel Companies in their submission at 56.11 sought that rule EW-R7 be amended as follows:

1. *The cut depth or fill height (measured vertically) must not exceed:*
  - i. *Outside the minimum building setback for the underlying zone - 1.5 m; and*
  - ii. *Inside the minimum building setback for the underlying zone - 0.5 m; and*
  - iii. *Where no minimum building setback applies (e.g. in the road reserve), the cut depth or fill height shall not exceed 1.5 m vertically.*

*This rule does not apply to:*

- (a) *Lawfully established underground tanks (excluding underground fuel storage systems) and septic systems where the replacement is 'like for like'. That is a cut or fill that is in the same location and the effects are the same or similar in character, intensity and scale to those that previously existed; and*
- (b) *Land disturbance associated with the replacement and/or removal of underground fuel storage systems and drainage devices.*

61. This submission was rejected on the basis that the amendment to exempt underground fuel storage systems from this rule would not be appropriate, as it provides too much discretion in terms of location (i.e. ability to locate outside of the existing location on-site and relocate elsewhere on-site), and would mean Council would have no control in zones where it would need to control effects associated with tank removal, or tank location i.e. commercial and industrial zones. The purpose of the rule is to allow for 'like to like' replacement.

62. In his evidence, Mr Thomas Trevilla has outlined that the requested amendment was that underground fuel storage systems and drainage devices should have their own exclusion as the tanks or devices may need to be in a different location than the existing due to operational or site requirements and may therefore not necessarily fall to be considered as 'like for like'.

63. Mr Trevilla is seeking confirmation from the Council that the 'like for like' replacement of drainage devices / systems is also exempt. This is because the purpose of the rule is to manage the adverse effects of earthworks on stability, hydrology and natural hazard risks, and there is no fundamental difference in earthworks effects from the replacement of drainage devices / systems versus the replacement of underground tanks and septic systems.

## Analysis and recommendations

64. It is not agreed that underground fuel storage systems and drainage devices should have their own exclusion as the tanks or devices may need to be in a different location than the existing due to operational or site requirements for the reasons that are specified in paragraph 81 of the section 42A Report.

## 6. Tourism Zone

### 6.1 Fire and Emergency New Zealand - TOUZ-R41 Servicing

#### Matters raised in evidence

65. FENZ submission at 16.83 sought that rule TOUZ-R41(4) be replaced with the following wording.

Where a connection to Council's reticulated water supply system compliant with the SNZ PAS 4509:2008 New Zealand Fire Service Firefighting Water Supplies Code of Practice is not available, or additional level of service is required, water supply and access to water supplies for firefighting shall be in accordance with the alternative firefighting water source provisions of SNZ PAS 4509:2008.

66. This submission was supported in part in the section 42A report. In evidence submitted by Ms Duncan, she considers that the TOUZ-R41.4 is inconsistent relief sought elsewhere in the plan. Ms Duncan also states that SNZ PAS 4509:2008 should be applied to all new structures (i.e. buildings) within the TOUZ or where a change of building use occurs. In these events, the existing water supply should be evaluated against the requirements of the new or changed use and if there is a difference in requirements, this should be addressed through this performance standard.

## Analysis and recommendations

67. It is considered that the amendment proposed by FENZ is acceptable, and the amended provision is set out below.

TOUZ-R41.	Servicing
<ol style="list-style-type: none"><li>1. Where a connection to the Council's reticulated water supply system is not available, all developments must have an independent potable water supply for activities on the site; and</li><li>2. Where a connection to the Council's reticulated wastewater system is not available, all developments must be on a site of sufficient size to contain the treatment and disposal of</li></ol>	<b>Activity status where compliance is not achieved: DIS</b>

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wastewater resulting from any development within the site boundaries; and

3. All developments must be on a site of sufficient size to enable on site detention and disposal of stormwater (as measured in a 10% AEP); and
4. ~~Where a connection to the Council's reticulated water supply system compliant with the SNZ PAS 4509:2008 New Zealand Fire Service Firefighting Water Supplies Code of Practice is not available, or additional level of service is required, water supply and access to water supplies for firefighting shall be in accordance with the alternative firefighting water source provisions of SNZ PAS 4509:2008;~~  
~~Where water is not supplied by Council or a private community supply, each site must provide access to a water supply for firefighting purposes that is:~~
  - ~~(i) Accessible to firefighting equipment; and~~
  - ~~(ii) Between 6 and 90 metres from any building housing a residential activity on the site; and~~
  - ~~(iii) Located on the site except where the specified volume or flow of water is in a water body that is within the required distances; and~~
  - ~~(iv) Either stores at least 45,000 litres of water or provides at least 25 litres of water per second for 30 minutes.~~

*Note: See SNZ PAS 4509:2008 New Zealand Fire Service Firefighting Water Supplies Code of Practice for further information about managing fire risk and storage of water for firefighting purposes.*

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## 7. Conclusion

68. I would like to thank the submitters and experts for taking the time to provide their evidence and I look forward to further discussion through the course of the hearing. Where amendments have been agreed, as a result of submitter evidence, these have been set out in the analysis and recommendations sections above.