

Before the Independent Hearings Panel at Gore District Council

Under Schedule 1 of the Resource Management Act 1991

In the matter of Hearing Submissions and Further submissions on the Proposed
Gore District Plan.

Hearing Panel Minute 43 – Response of Mishka Banhidi on behalf of Gore District Council

Date: 3 April 2025

Introduction:

1. My full name is Mishka Banhidi. My Hearing Stream 9 Natural Features and Landscapes Section 42A report sets out my qualifications and experience as an expert in planning.
2. I confirm that I am continuing to abide by the Code of Conduct for Expert Witnesses set out in the Environment Court's practice Note 2023, as applicable to this independent hearing panel.
3. The Panel advised in Minute 43 that it wishes to further explore the role of the Natural Hazards (NH) chapter in giving effect to the Southland Regional Policy Statement (RPS) policies and methods, and in particular, Policy NH.2, Policy NH.4, Policy NH.5, Policy NH.6, Method NH.5 and Method NH.6, following the introduction of new hazard mapping presented by Environment Southland (ES) during the hearing. The new hazard mapping provides greater detail in terms of levels of hazard risk but does not cover the entire flood prone catchment in the Gore district.
4. I have prepared this report to provide a response to the request by the Hearing Panel Minute 43 (14 March 2025), attached within **Appendix A**. The minute directs the expert planning witnesses to confer and prepare a joint witness statement regarding matters (a) – (e) below. It is acknowledged that Minute 43 directed Brett Osbourne to undertake this work, unfortunately Brett Osbourne has been unavailable throughout the minute process. As such, I have undertaken this work given my knowledge of the NH chapter: I am the author of the Section 32 report; I have reviewed the submissions and the Section 42a; and I have further consulted with ES throughout this district plan review process.
 - (a) *the addition of a new definition of "significant risk" that corresponds with best practice understanding of flood hazard risk;*
 - (b) *the relationship between the new definition of "significant risk" and the notified planning maps, which show extent of potential inundation without depths and velocities;*
 - (c) *the relationship between the new definition of "significant risk" and "sensitive activities" and "non-sensitive activities", with reference to best practice, best available information and RPS provisions;*
 - (d) *amendments to the objectives, policies and rules of the Natural Hazards chapter to reflect the new definition of "significant risk" and its relationship with RPS policy, notified planning maps, best practice and best available information. The Panel considers it desirable there be separate rules for "sensitive activities" and "non-sensitive activities" and that may also require separate objectives and policies differentiating these activities. The output expected is a revised "Appendix A" to the supplementary evidence of Mr Osborne; and*
 - (e) *the potential to improve access to best available information for plan users wishing to understand areas of "significant risk", including through an information layer on a publicly available council GIS system or some other means.*

Initial response:

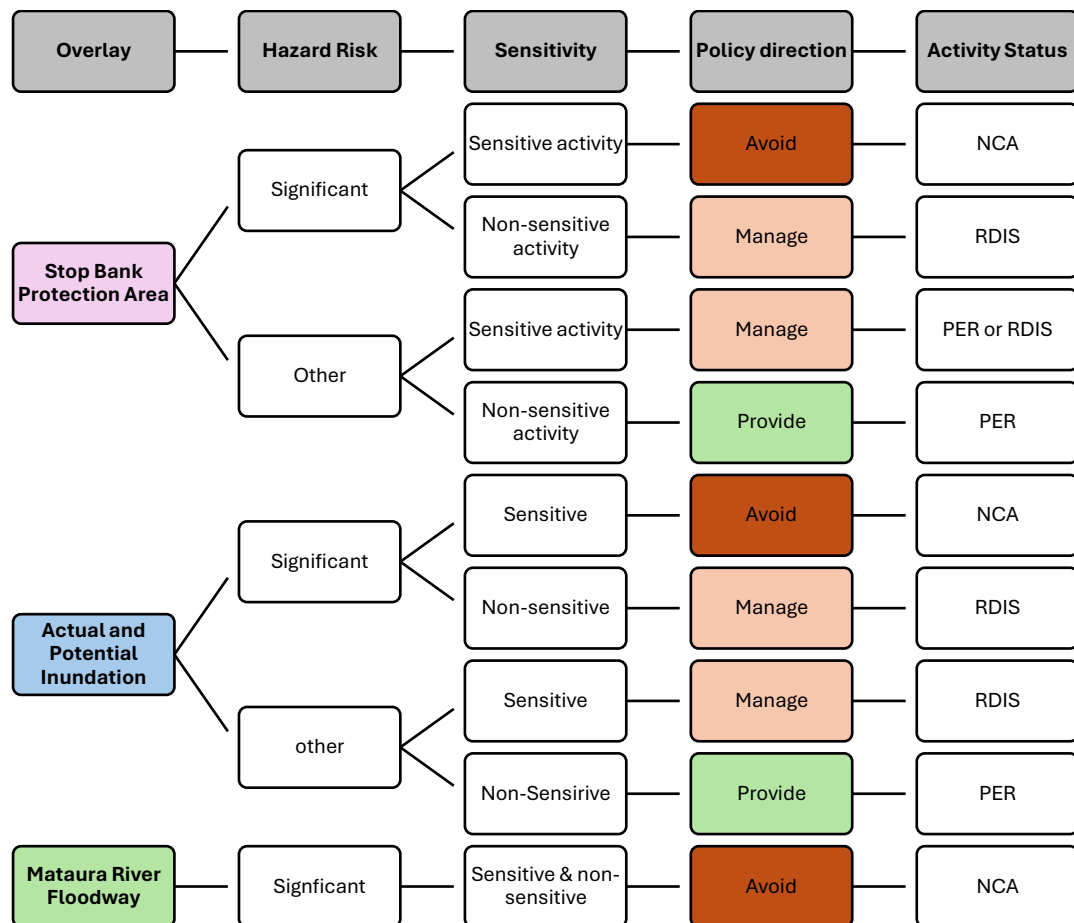
5. It is acknowledged the Panel wish to explore the potential to incorporate the recent ES Model information as far as possible within the Natural Hazard Chapter. However, there are a number of technical issues and challenges associated with the direction, including:
- Potential that submitters and affected landowners would not be aware of the expanded scope of regulatory provisions and thus excluded from involvement in the amendments. This is particularly so in instances where a notable change in regulation occurs (this is detailed further below) compared to what could be reasonably expected through a response to submissions.
 - The significant risk definition would require the hazard categories from the ES model to be identified. The hazard map based on the ES model does not fully cover the known flood prone areas. This means the balance of flood prone land within the notified Actual and Potential Inundation (API) area overlay could not clearly identify the hazard risk.
 - A definition based on the ES model hazard categories could result in confusion or undermine the provisions for flood prone areas outside the ES model.
 - While the new definition will assist plan users to identify hazard risk within the area covered by the ES model, it will be difficult for plan users to determine this on flood prone areas outside the extent of the ES model (i.e. within the API overlay).
 - The scope and scale of the requested amendments are substantial and cannot be effectively completed within the short period of time provided, especially given the expert witnesses other pre-existing commitments.
 - The implications of the requested amendments to the chapter provisions cannot be fully tested nor can a s32AA evaluation be completed within the short time available.
6. The concept of using a 'significant risk' definition to guide the policy direction of the NH chapter and in turn determine the status of activities is supported in principle as it aligns with current best practice. Recent examples of this approach by other South Island district councils include the Selwyn and Timaru proposed district plans.
7. However, the approach should rely on a completed flood model so that plan users can easily determine the activity status from the PDP with council being able to certify the hazard risk to the property. In this case the model is not complete and so a large number¹ of landowners would not be able to readily determine whether the risk was significant or not. Nor could the council confirm the degree of hazard risk. That does not meet the test

¹ Approximately 1700 parcels.

of certainty or transparency for plan users of the district plan². Where uncertainty is present, a precautionary approach could be taken. That would effectively mean an avoidance policy direction and NCA activity status for 1700 parcels of land outside the ES model until such time as the model is completed.

8. Diagram 1 below illustrates the implication of adding 'significant risk' as a determinant within the chapter framework in order to show the necessary amendments to address the requested policy and rule changes.

DIAGRAM 1: Overview of amendments required to incorporate direction (d) of Minute 43.



² Where complete modelling information is still emerging then a certification process can be taken. Examples of this have been included within natural hazard chapters for Christchurch, Waimakariri, Selwyn and Timaru.

9. This highlights the necessary expansion of the provisions to capture the significant risk direction. It involves adding new rules and policies. These represent a shift from that recommended within the s42A report and introduces further regulatory provisions that affected landowners and submitters have not had the opportunity to consider or respond to.
10. As such, for the reasons outlined within the section 42A report, Mr Osbournes supplementary evidence and the legal submission from councils solicitor, I recommend the ES model be completed for the Mataura River floodplain as an urgent priority to inform a Variation or Plan Change in accordance with schedule 1 of the RMA.
11. The purpose of this report is to evaluate the directions above and where relevant provide an assessment as required under Section 32AA of the Resource Management Act 1991 (RMA) and to keep all potentially interested submitters informed as to the rationale and process involved in any amendments to the chapter(s).

The addition of a new definition of “significant risk” that corresponds with best practice understanding of flood hazard risk;

12. In response to direction (a), a proposed definition has been created that uses the Australian Institute for Disaster Resilience (AIDR) hazard risk categories³ to determine the degree of hazard risk from flooding. This relies on modelled depth and velocity information being available. The ES model provides partial coverage of the Mataura River floodplain. See **Appendix B** for a map identifying the areas covered by the ES model and the remaining areas outside the model identified as “Actual and Potential Inundation” area. The limitations of the model are further identified in the Natural Hazards supplementary evidence⁴.
13. The threshold for “significant risk” comprises categories H4, H5 and H6, and uses depth and velocity to clarify the definition. This group of hazard risk categories are based on the responses provided by Mr Roy and Mr Tim Morris during the hearing. I have also sought advice from the council’s experts Tonkin & Taylor to confirm the correct depth and velocity thresholds for the category. The definition is similar to that used within the recent PDP for Selwyn and Timaru. The new definition reads:

³ Australian Institute for Disaster Resilience (AIDR) 2017, Guideline 7-3 Flood Hazard.

⁴ Paragraph 20, Statement of supplementary planning evidence of Brett Osborne on behalf of Gore District Council for Hearing Stream 11.

Significant Risk means flood hazard areas subject to inundation during a 0.5% AEP flood event where:

- *The water depth (metres) x velocity (metres per second) is greater than 0.6, or*
- *The water depth (meters) is greater than 1.2, or*
- *The velocity (meters per second) is greater than 2.0.*

Note: Flood depth and velocity (hazard risk) information can be obtained from Environment Southland Flood Modelling.

14. Overall, the definition is an example of best practice by using established hazard categories (AIDR) to define hazard risk through depth and velocity. This would support the overall approach to align with the RPS (policies NH.2, NH.5 and Method NH.5) to avoid significant risk areas using the best available information and distinguish sensitive activities from those that are not sensitive.
15. However, while the definition provides a clear and unambiguous definition for plan users if a site is located within the ES modelled area (such as townships of Gore and Mataura), it is likely to create confusion when applying the rule framework for the areas located outside the ES model extent. The reason for that is assessed further below in response to direction (d) of Minute 43.
16. The expert witnesses conferred as directed, with the outcome recorded within the JWS, attached as **Appendix C**.
17. The areas of agreement include:
 - Setting the standard for 'significant' to include any area identified as subject to category H4 to H6 of the AIDR hazard risk categories.
18. Areas of disagreement include:
 - In Marcus Roy's view a 1% AEP return period may reduce issues of scope
 - In Mishka Banhidi's view a 0.5% AEP return period is current best practice and supported by expert evidence. Issues of scope remain with either return period.

The relationship between the new definition of "significant risk" and the notified planning maps, which show extent of potential inundation without depths and velocities;

19. The notified overlays 'Stop bank Protection area' (SBP) and 'Mataura River Floodway' (MRF) would be covered by the spatial extent of the ES model as demonstrated within **Appendix B**. This will provide greater clarity on the hazard risk for properties within those notified overlays. This includes the townships of Gore and Mataura.
20. The definition means 'significant risk' areas can be readily identified for properties inside the ES model area, representing 24% of the total extent of the notified flood overlays. However, properties within the API area outside the ES modelled area will not be able to identify "significant risk". These represent approximately 76% of the notified flood overlays. This would result in approximately 1,700 parcels within the notified flood hazard

overlay as being unable to clearly determine the activity status based on the significant risk definition within the proposed district plan provisions.

21. The ES model extent is not identified spatially on the notified PDP maps. As such, there would be uncertainty by landowners whether ES held the information that would determine whether they meet 'significant risk' or not. This could mean determining activity status could not be established by the District Plan alone and would require further technical work⁵.
22. The policy and rule framework for the 42a and supplementary evidence Appendix A - NH chapter, links directly to the notified overlays. As such, inserting 'significant risk' would have implications for the NH chapter;
 - The rules would need to be amended to recognise 'significant risk' as a determining matter or trigger for subdivision and development. This means providing a consenting pathway for properties defined as at 'significant risk' and conversely for those not meeting the definition. That would be largely aligned with the existing framework for the SBP and MFW overlays.
 - However, the API overlay would need to provide the same for the areas located outside the ES model. However this isn't possible, due to the limited coverage of the ES model.
 - This would result in a precautionary approach in the absence of modelling information, meaning in the absence for any site specific information demonstrating a property is outside of a "significant risk" area, these properties would need to be considered "significant risk", raising the regulatory requirement for properties within this area.
23. The ability for plan users to determine the relevant overlay and corresponding activity status may be unclear for properties located outside the ES model extent and likely require flood engineering input on a site by site basis.

⁵ To address this potential uncertainty, recent natural hazard chapters within proposed district plans have incorporated a certificate approach, whereby property owners within a broad flood overlay can apply for a certificate to confirm the hazard risk based on the most up to date modelling information available. Examples include Christchurch District Plan, Timaru District Plan, Waimakariri District Plan and Selwyn District Plan. This relies on a flood model for the entire catchment being available.

The relationship between the new definition of “significant risk” and “sensitive activities” and “non-sensitive activities”, with reference to best practice, best available information and RPS provisions;

24. Diagram 1 (included again below for ease of reference) illustrates the implication of the new definition to distinguish between sensitive activities and non-sensitive activities within the chapter framework. It includes the relevant policies and rules as they would naturally flow from the hazard risk and sensitivities (and relate to the subsequent direction from the panel to amend the objectives, policies and rules to incorporate the definition and distinction of sensitive and non-sensitive).

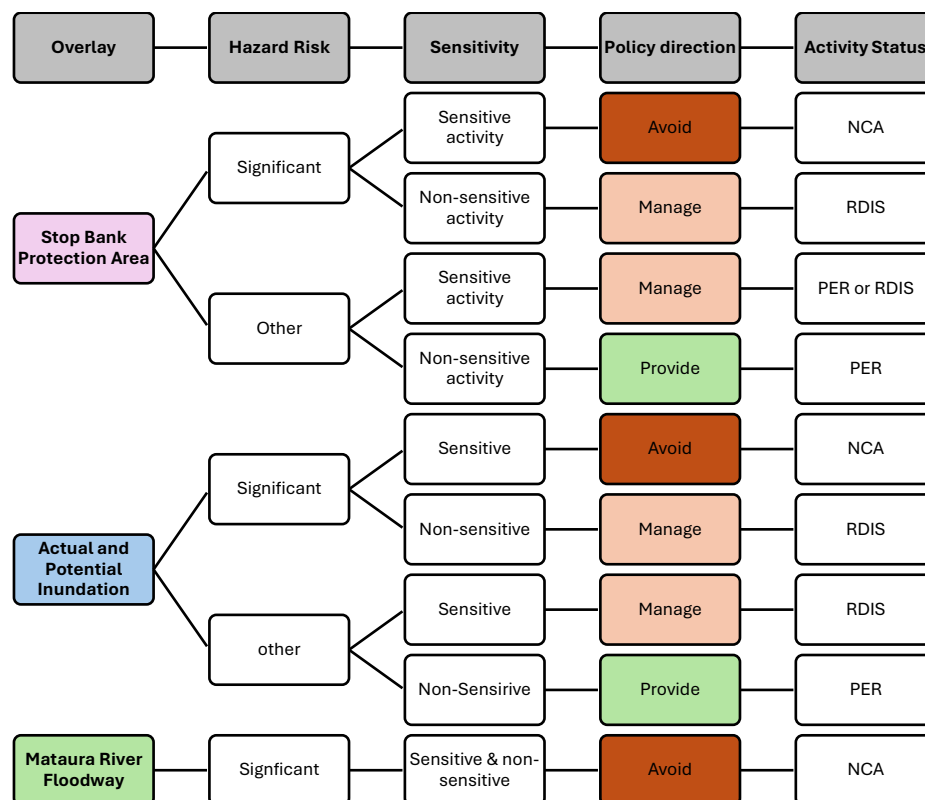


Diagram 1: NH chapter incorporating requested amendments.

25. Within the notified overlays ‘Stop Bank Protection area’ and ‘Matura River Floodway’ overlays, sensitive activities within significant risk areas are able to be identified and avoided, while sensitive activities on properties not identified as at significant risk can be developed. subject to appropriate mitigation.
26. The supplementary evidence assesses the approach to sensitive activities, which is defined in the PDP and more recently amended via the UFD hearing response to specifically include “Hazard Sensitive Activities”. Best practice is to identify residential development and buildings where vulnerable people (children and elderly) and groups of people congregate as more sensitive to hazard risk than other activities, which more typically include commercial or industrial activities and non-residential activities.
27. This is consistent with RPS policies NH.2, NH.5 and NH.6.

28. However, as the majority of the API area is outside the spatial extent of the ES model, significant risk cannot be easily determined by plan users using the NH chapter.
29. There are two key issues with inserting the Significant Risk definition:
1. The definition needs to be clear and unambiguous which is challenging due to the lack of the ES model coverage. (i.e. the areas within the model can be easily defined, but outside they cannot). That has implications for plan users where it is uncertain if the hazard is significant or not. That in turn frustrates application of identifying the rule and activity status. If the ES model provided full coverage, then that would not be an issue.
 2. The rules are linked to the spatial overlays. There is no spatial overlay to link to the ES model. For this definition to be appropriately incorporated into the PDP, it would be recommended that a new spatial overlay be added to enable plan users to easily identify whether the additional information was available, or not.

Amendments to the objectives, policies and rules of the Natural Hazards chapter to reflect the new definition of “significant risk” and its relationship with RPS policy, notified planning maps, best practice and best available information. The Panel considers it desirable there be separate rules for “sensitive activities” and “non-sensitive activities” and that may also require separate objectives and policies differentiating these activities. The output expected is a revised “Appendix A” to the supplementary evidence of Mr Osborne; and

30. The request seeks substantial amendments to the NH chapter to incorporate the new definition. I am concerned this request:
- Provides a very limited time for such scale of change to the regulatory provisions and severely constrains, if not avoids, an appropriate level of plan making rigour through the schedule 1 process for such amendments;
 - Involves amendments outside the scope of submissions and further submissions;
 - Potentially excludes submitters and affected property owners from being involved in the amendments including the resultant changes to the regulatory settings;
 - Severely constrains the timing for providing such amendments and does not allow full testing of the policy and rule framework or ability to complete a s32AA evaluation.
31. The Panel states it is desirable to separate out the rules for sensitive activities and non-sensitive activities (that may also require separate objectives and policies). This would result in significant amendments to the chapter and would also expand the regulatory provisions further. An example, is provided below.
32. A key challenge is maintaining a clear and transparent chapter enabling plan users to identify the relevant activity and corresponding activity status within the PDP, while also attempting to more directly incorporate the ES model hazard risk (other than the approach as recommended within the S42A report, Appendix A). Putting aside issues of scope, there is an obvious gap in the areas outside the ES model that are known flood prone areas and the need to recognise and provide for appropriate flood management.

Plan users within the API, but outside of the ES flood model, would be required to undertake site specific assessment to determine whether or not they met the “significant risk” definition, or alternatively undertake a precautionary approach and assume inclusion within the definition, which could result in over regulation.

An example of the amendment implication on the notified NH chapter:

33. Rule NH-R5 as recommended within the s42A report is provided below. The rule regulates sensitive activities within the stopbank protection area and comprises only two activity statuses.

<u>NH-R5</u>	<u>The construction of new buildings, including conversion of existing buildings, for Sensitive Activities within the Stop Bank Protection area.</u>	
<u>All Zones</u>	<u>Activity status: Restricted Discretionary</u> <u>Where:</u> <u>1. The finished floor level for the new building must be above the 0.5% AEP flood design level or in the case of converting an existing building, must ensure the finished floor level of all areas accommodating sensitive activities are above the 0.5% AEP design flood level; and</u> <u>Matters of Discretion:</u> <u>1. The flood effect from a 0.5% AEP event is low due to the mitigation or</u> <u>2. The design does not increase the flood effects on people and property or displacement of flood waters onto adjacent sites;</u> <u>3. That people can safely evacuate properties during a 0.5% Annual Exceedance Probability flood event.</u> <u>Note: Technical advice on the finished floor level required to comply with this rule can be sought and obtained from Environment Southland.</u>	<u>Activity status where compliance is not achieved:</u> <u>Non-Complying</u>

34. The requested amendments to incorporate the new definition of significant risk into NH-R5 together with the request to distinguish sensitive and non-sensitive would result in the change as summarised in the table below;

Existing NH-R5 rule:	Requested Amendment in Minute 43:
- Two activity statuses. - RDIS for sensitive activities - NCA where the FFL standard is not met. - Non-sensitive activities are not captured (therefore subject to zone provisions).	- Four activity statuses. - Non-sensitive activities are now captured: - RDIS in significant risk areas - PER in other hazard risk areas - Sensitive activities change: - NCA in significant risk areas

	○ RDIS in other areas
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35. The key change involves expanding the rule to now regulate non-sensitive activities in significant risk areas as a RDIS activity and elevating sensitive activities within significant risk areas to a NCA activity status. This is a significant shift and expansion to the proposed chapter that submitters and affected landowners have not had an opportunity to comment on. Furthermore, the expansion of the rules also require matters of discretionary and standards which again fall outside the scope of submissions.

The potential to improve access to best available information for plan users wishing to understand areas of “significant risk”, including through an information layer on a publicly available council GIS system or some other means.

36. The 42a and associated Appendix A in my view enables plan users to refer to the best available information, within the bounds of the current process. I recognise the desire to incorporate the ES model, however, extending the degree of incorporation further than that already recommended creates implications for the chapter, a discussed above.
37. The below table demonstrates the linkages between relevant RPS policies and the required shift within the PDP objectives, policies and rules, with the final column demonstrating the required change in activity status.
38. While we have demonstrated how this could be incorporated into the PDP it also shows how further incorporation of the ES flood modelling will have a direct impact on the regulation of activities within the Gore District, with the elevating of activity statuses within large areas of the district.

RPS	Objective	Policy	Policy Direction	Overlay area	Rule	Activity Status
NH.6	NH-O2	NH-P2	Manage	Stop Bank Protection	NH-R3 NH-R5 Zone rules	PER to RDIS RDIS to NCA PER
NH.5(b)	NH-O3	NH-P3	Avoid, unless	Actual & Potential Inundation	NH-R3 NH-R6	PER to RDIS RDIS to NCA
NH.5	NH-O3	NH-P9	Avoid	Mataura River Floodway	NH-R4	NCA
NH.5	NH-O4	NH-P4	Avoid, unless	Mataura River Floodway	NH-R8 NH-R9	NCA
NH.5	NH-O4	NH-P6	Avoid, unless	All overlays	INFR-R9	DIS

39. Further to this, the incorporation of a separate flood layer, may result in confusion for plan users, over what flood hazards do and do not apply to a property, particularly if the ES Flood Hazard layer sits as information only rather than being fully integrated into the PDP.

Conclusion

40. As addressed within the 42a Assessment, legal submissions, throughout the hearings process and within this minute response, the incorporation of the ES flood Modelling directly into the PDP raises natural justice issues. The recommended approach enables plan users access the best available information through ES.
41. In conclusion, my recommendation is not to integrate the updated ES flood modelling into the Natural Hazard Chapter at this stage, due to significant concerns regarding natural justice, scope, and timing. Key issues include the exclusion of affected landowners and submitters from the amendment process, incomplete hazard coverage in the ES model, and the potential for confusion in identifying hazard risks. Furthermore, the proposed amendments are extensive and cannot be completed within the constrained timeframe, nor can their implications be fully evaluated. Without a completed model, plan users and the council lack the certainty and transparency required to determine hazard risks, which does not meet best practice standards. Thus, proceeding with this integration in the current process is not advisable.
42. The recommended amendments within the scope of the submissions and which all parties have had the opportunity to review were provided as Appendix A to the s42A report and Appendix A of Brett Osbourne's supplementary evidence. That is the recommended option.
43. In addition to the above assessment, during Hearing Stream 11, the panel expressed an interest in a revised plan for the South Gore Industrial area showing the updated ES flood modelling, along with a comparison map highlighting the differences between the Tonkin and Talor flood modelling and the notified flood maps. These can be found within **Appendix D** and **Appendix E** of this response.

Signed:



Mishka Banhidi
Consultant Planner

3 April 2025

Appendix A: Minute 43

Appendix B: Map Comparison

Appendix C: Joint Witness Statement of Marcus Roy and Mishka Banhidi

Appendix D: ES Flood Modelling overlayed over the Proposed Industrial Zone

Appendix E: Tonkin and Taylor Model vs Notified Flood overlays