

**BEFORE THE HEARINGS PANEL  
FOR THE PROPOSED TIMARU DISTRICT PLAN**

**UNDER** the Resource Management Act 1991 (RMA)

**AND**

**IN THE MATTER** of the Proposed Timaru District Plan

**AND**

**IN THE MATTER** of Hearing F: Hazards and Risks (Natural Hazards only) and Other District-wide Matters

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**STATEMENT OF EVIDENCE OF NICHOLAS DAVID ROBERT GRIFFITHS  
ON BEHALF OF THE CANTERBURY REGIONAL COUNCIL**

**PROPOSED TIMARU DISTRICT PLAN**

**09 April 2025**

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## SUMMARY STATEMENT

- 1 The Section 42A report recommendations address many of the points raised in the Canterbury Regional Council (**Regional Council**) submission, however I consider there is scope for further refinement and simplification of the provisions relating to natural hazards.
- 2 I consider that the approach to managing diversion and displacement of floodwater can be simplified by removing reference to overland flow paths.
- 3 I consider that the Flood Assessment Certificate wording can be simplified and improved, especially if reference to overland flow paths is removed.
- 4 I consider that the Flood Assessment Area Overlay should be amended to encompass a wider area potentially subject to flooding.

## INTRODUCTION

- 5 My full name is Nicholas David Robert Griffiths.
- 6 I hold a Bachelor of Science with Honours degree in Geography and Geology. I have been employed by the Regional Council as a natural hazard scientist since September 2011. This role involves assessing and providing advice on natural hazards and associated planning provisions.
- 7 I can confirm that I have read and am familiar with the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023. I have complied with the Code of Conduct in preparing this evidence and I agree to comply with it while giving any oral evidence during this hearing. Except where I state that I am relying on the evidence of another person, my evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.
- 8 Although I am employed by the Regional Council, I am conscious that in giving evidence in an expert capacity that my overriding duty is to the Hearings Panel.

## SCOPE OF EVIDENCE

- 9 I have prepared my evidence on behalf of the Regional Council.
- 10 My evidence relates to the diversion and displacement of floodwater, Flood Assessment Certificate, and Flood Assessment Area Overlay.
- 11 I have reviewed the following documents and evidence in preparing my evidence:
- a. The notified provisions of the Natural Hazards and Coastal Environment chapters of the proposed Timaru District Plan;
  - b. The Section 32 report prepared and notified by Timaru District Council (**TDC**);
  - c. The Section 42A report prepared by TDC;
  - d. The Canterbury Regional Policy Statement (**CRPS**);
  - e. The evidence of Ms Deidre Francis on behalf of the Regional Council;
  - f. The evidence of Mr Kevin Kemp on behalf of TDC;
  - g. The evidence of Mr Cyprien Bosserelle on behalf of TDC; and
  - h. The evidence of Mr Derek Todd on behalf of TDC.

## DIVERSION AND DISPLACEMENT OF FLOODWATER

- 12 I broadly support the revised wording of NH-R1 recommended in the Section 42A report. The recommended wording largely addresses concerns raised in the Regional Council submission, however I consider there is scope to further improve and simplify the recommended provisions with respect to diversion and displacement of floodwater.
- 13 Matters of discretion 1. and 2. refer specifically to effects on the functioning of overland flow paths, but these are effectively rendered redundant by the third matter of discretion, which addresses potential effects in all areas.
- 14 I consider matters of discretion 1. and 2. could lead to the rule being misconstrued as specifically relating to diversion and displacement within overland flow paths, when it relates to all areas within the Flood

Assessment Area Overlay, and that there would be no downside to removing these matters of discretion.

- 15 I also consider that Note 1. could be incorrectly interpreted to mean that a Flood Assessment Certificate is required to demonstrate compliance with this rule, or that effects can be quantified by obtaining a Flood Assessment Certificate.
- 16 I consider that Note 1. should be removed to avoid potential confusion.
- 17 As highlighted by Note 3. NH-R1 would apply 'in addition to all the remaining chapter rules' (and all other district plan rules relating to buildings, structures and earthworks). It is therefore unnecessary to include reference to potential diversion and displacement effects as a matter for discretion for other rules, as these activities would all be captured by NH-R1.
- 18 I consider that the matters of discretion relating to diversion and displacement effects can therefore be removed from all other rules relating to buildings, structures and earthworks. I note that diversion and displacement effects could only be managed via these rules when the PA standards were not met anyway, which would be a minority of cases.
- 19 Refining the matters of discretion as suggested above would render the definition of 'Overland Flowpath' obsolete, and this could also be removed (unless it is utilised elsewhere in the proposed plan).

## **FLOOD ASSESSMENT CERTIFICATE**

- 20 Changes to the Flood Assessment Certificate wording recommended in the Section 42A report are an improvement on the notified wording, but I consider that further improvements should be made for better clarity and consistency with the relevant rules.
- 21 Removing reference to overland flow paths from the relevant matters of discretion (as discussed above) would aid in simplifying the Flood Assessment Certificate. It would also simplify the site specific flood hazard assessment process, as no (somewhat subjective) assessment of whether the site is within an overland flow path would be required to inform issuing of the certificate.

22 I consider that the Flood Assessment Certificate wording recommended in the Section 42A report could be revised as outlined below (or similar). This wording assumes there is no requirement for the certificate to identify if a site is within an overland flow path.

1. A Flood Assessment Certificate is issued by the Council (that is valid for 3 years from the date of issue) which specifies:
  - a. if the site(s) is within a high hazard area; and the flood event risk level for specific land, being:
    - i. ~~land not subject to flooding in a 0.5% AEP flood event, or~~
    - ii. ~~land subject to flooding in a 0.5% AEP flood event, or~~
    - iii. ~~land within a high hazard area~~
    - iv. ~~or for sea water inundation, land subject to flooding in a 1% AEP storm surge event, coupled with sea level rise based on an Representative Concentration Pathway 8.5 climate change scenario; and~~
  - b. where the site is not within a high hazard area, or where the site is within an urban zoned area, where 1(a)(ii) above identifies that the specific land is subject to flooding in a 0.5% AEP flood event, the a minimum finished floor level for any new building or structure (or part thereof) on the specific land to provide that is at least 300mm freeboard above the flood level in a 0.5% AEP flood event; and
  - c. as required for NH-R6, if the site is located on land that is subject to flooding in a 0.5% AEP flood event whether the specific land is located within an overland flow path.
2. ~~The AEP flood event risk level, minimum floor levels and overland flow path locations are to~~ above will be determined by reference to:
  - a. The most up to date models, maps and data held by Timaru District Council and Canterbury Regional Council; and
  - b. Any information held by, or provided to, Timaru District Council or Canterbury Regional Council that relates to flood risk for the specific land; and
  - c. Will account for the cumulative effects of climate change over the next 100 years (based on latest national guidance) and all sources of flooding (including fluvial, pluvial, and coastal).

**Note:** ~~A minimum finished floor level will not be provided in the certificate for sites located within a High Hazard Area outside of urban zoned areas. Rather, these will need to be determined through a resource consent process.~~

*An application form and guidance on how to obtain a Flood Hazard Assessment Certificate are available on the District Council's website.*

## FLOOD ASSESSMENT OVERLAY

- 23 The Regional Council submission raised concern that areas identified as potentially subject to flooding in the proposed plan were too narrow, and sought that the mapping be amended to encompass a wider area potentially subject to flood hazards.
- 24 I have produced mapping that is more comprehensive and extensive than the notified Flood Assessment Area Overlay. The methodology used to produce this mapping is outlined in a memorandum contained in Appendix 8 of the Section 42A report. This mapping has been combined with mapping provided by TDC for the Timaru and Geraldine urban areas, as described in the evidence of Mr Kemp.
- 25 The revised mapping considers potential for flooding from all sources, including river flooding, surface flooding, and coastal flooding.
- 26 I consider that using the mapping presented in my memorandum to redefine the extent of the Flood Assessment Area Overlay will reduce the likelihood of buildings being constructed with an insufficient standard of flood mitigation, and will broadly address the concern raised in the Regional Council submission.
- 27 Defining the extent of any flood overlay used to trigger associated district plan provisions is a balancing act between capturing as many areas as possible that are potentially susceptible to flooding, whilst avoiding as many areas as possible that are not.
- 28 The nature and scale of the mapping means it is inevitable that some areas of the district that are susceptible to flooding will not be included in the overlay, while other areas that are not susceptible to flooding will be. For example, a site adjacent to a small stream in the foothills may be subject to flooding, but not included in the overlay. Conversely, a site located on a slight ridge of relatively high ground on the plains may not be subject to flooding, but would be included in the overlay.
- 29 Attempting to avoid these situations from arising would either require adoption of a more conservative overlay (to ensure no sites are 'missed') or significant further investment in highly detailed modelling and mapping (to ensure no sites are unnecessarily 'caught').
- 30 The extent of the overlay requires a trade-off between ensuring that new buildings are not inadvertently built in high hazard areas, or with floor

levels below design flood levels (which could happen if the overlay is not extensive enough), and ensuring that the building process is not unnecessarily onerous for people building in areas that are not susceptible to flooding.

- 31 Considering the potential costs associated with both 'over-capture' and 'under-capture' (and potential costs of avoiding any over-capture through detailed modelling and mapping) I consider that the revised overlay strikes a reasonable balance between these competing values. Of note is the use of detailed modelling as the basis for mapping in the Timaru and Geraldine urban areas where the impact of over-capture would be more pronounced than in most other parts of the district.
- 32 I consider that the likelihood of buildings being proposed in areas subject to flooding outside of the revised mapping to be low, as these areas will generally be obvious (i.e., within well-defined stream channels or localised depressions). However, based on current information, the only way to ensure that appropriate standards of flood mitigation are achieved throughout the district would be to apply the provisions everywhere.
- 33 Utilising the revised mapping (which considers all sources of flooding, including coastal flooding) to define the extent of the Flood Assessment Area Overlay, in conjunction with the revised high hazard area definition recommended in the Section 42A report, would allow for further simplification of the provisions, especially between the NH and CE chapters.

**Nicholas David Robert Griffiths**

**09 April 2025**