

**BEFORE AN INDEPENDENT HEARINGS PANEL
OF THE AUCKLAND COUNCIL AND WAIKATO DISTRICT COUNCIL**

I MUA NGĀ KAIKŌMIHANA MOTUHAKE O TĀMAKI MAKĀURAU

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

AND

IN THE MATTER OF Notices of Requirement for designations by **NZ TRANSPORT AGENCY WAKA KOTAHI** and **AUCKLAND TRANSPORT** collectively known as the Pukekohe Transport Network

**MEMORANDUM OF COUNSEL ON BEHALF OF WAKA KOTAHI NZ TRANSPORT AGENCY
AND AUCKLAND TRANSPORT**

RESPONSE TO PANEL'S REQUEST FOR CLARIFICATION THROUGH DIRECTION #4

Dated: 10 May 2024

1. INTRODUCTION

1.1 We refer to the Hearing Panel's request for clarification received in Direction #4 on 18 April 2024 (included as **Attachment 1** of this memorandum). The Hearing Panel has requested that Auckland Transport (**AT**) and NZ Transport Agency Waka Kotahi (**NZTA**) provide a response on three flood hazard matters as summarised below:

- (a) How specific mitigation measures of flood hazard risk during construction that are recommended in the Pukekohe Transport Network Assessment of Effects on the Environment (**AEE**) are included in the Construction Environmental Management Plan (**CEMP**) condition;
- (b) How "high flood hazard risk areas" are addressed in the CEMP; and
- (c) Clarification on the parameters in the Flood Hazard condition – specifically relating to the main access to authorised habitable dwellings (in clause (a)(v)).

1.2 These three matters are addressed below.

2. FLOOD MITIGATION RECOMMENDATIONS DURING CONSTRUCTION

2.1 The Panel notes that para 11.7.2 of the AEE identifies the following key matters for consideration through the CEMP:

- (a) Siting construction yards and stockpiles with minimal effects on flood flows;
- (b) Methods to reduce the conveyance of materials and plant that is considered necessary to be stored or sited within the flood plain (e.g., actions to take in response to the warning of heavy rainfall events);
- (c) Staging and programming to carry out work when there is less risk of high flow events;
- (d) Diverting overland flow paths away or through areas of work; and
- (e) Minimizing the physical obstruction to flood flows at the road sag point.

2.2 In its direction, the Panel queried why not all of the matters are addressed in the CEMP conditions as drafted.

2.3 The CEMP is not an exhaustive list of matters that should be addressed. As set out in the Pukekohe Transport Network Assessment Flood Hazard Effects (section 5.2), the CEMP will be developed prior to construction in conjunction with an experienced Stormwater Engineer and will consider the effects of temporary works, earthworks,

storage of materials, temporary diversion and drainage on flow paths, flow levels and velocities.

- 2.4 Clause (a)(viii) of the CEMP condition includes flood hazard mitigation measures as follows (bold and underlined added for emphasis):

*(a)(viii) measures to mitigate flood hazard effects **such as** siting stockpiles out of floodplains, minimising obstruction to flood flows, actions to respond to warnings of heavy rain;*

- 2.5 That clause does not include every measure to manage flood hazard effects during construction because specific measures will be developed in the CEMP to reflect the type of flood hazard risk, stage and scale of work proposed to be undertaken at the time the CEMP is prepared. The specifics of those measures will also be developed in greater detail when earthworks and stormwater regional consents are obtained before construction.
- 2.6 Staging and programming considerations are also set out in the CEMP in clause (a)(iii) – acknowledging this is not specifically covering flood hazard matters. However, it will reflect the earthworks season and other programme considerations.
- 2.7 We therefore consider that clause (a)(viii) appropriately covers the recommendations in the AEE.

3. HIGH FLOOD HAZARD RISK AREAS – CEMP

- 3.1 The Panel notes that paragraph 11.7.6 of the AEE states that “*flood hazard risks during construction can be adequately managed. Proposed works will be located outside of flood plains and overland flow paths as far as practicable. Where this is not possible, potential flooding effects will be managed through the flood risk mitigation measures set out in the CEMP for existing high flood hazard areas*”.
- 3.2 The Panel seeks clarification on why “high flood hazard risk areas” do not appear to be addressed in the CEMP.
- 3.3 As explained in the AEE, the Project has been designed to avoid works in flood plains and overland flow paths (i.e., high flood hazard risk areas) as far as practicable. Where avoidance is not practicable, the CEMP is required to include measures to mitigate flood hazard effects and includes reference to high flood hazard areas such as flood plains and minimising obstruction to flood flows (i.e., overland flow paths).

3.4 The CEMP will also have input from a stormwater expert who will identify higher risk flood areas once the detailed design and construction methodologies are determined, so that appropriate management measures are provided for.

4. FLOOD HAZARD CONDITION – ACCESS TO DWELLINGS

4.1 The Panel has requested clarification on the use of the parameters in the flood hazard condition clause (a)(v) and in particular (B) which references depth. The Panel notes that the parameters proposed in this clause are less onerous than other standards relating to flood hazard for small cars. The Panel also notes the reference to NZTA's national approach in closing submissions on behalf of the Requiring Authorities, and seeks clarity as to what that approach is.

Vehicle Access Parameters

4.2 The flood hazard condition does not explicitly address the hazard associated with small cars. The focus of the condition is rather the use of controls to limit changes in water level. In most cases, the maximum depth change component of the flood hazard condition will be controlled by the freeboard to habitable floor level conditions. Under the proposed flood hazard conditions, if the freeboard to a house is less than 500mm, no change in flood depth is allowed. Additionally, the maximum level increase of 50mm at the designation boundary caps any depth increase over the main accessway to dwellings, preventing any significant changes in flood hazard class. For example, where the existing depth of water on a site is 300mm (and a small car may float), the 50mm change limit allows a maximum new depth of 350mm (assuming that it is not otherwise controlled by the house freeboard).

4.3 An alternative and potentially simpler approach to the vehicle and pedestrian access route to habitable floors clause of the flood hazard condition is to remove the numerical threshold values and reference a “no increase of flood hazard classification” approach. This approach was suggested in the s42A assessment by Mr Sunich (stormwater specialist on behalf of the Councils) and would achieve a similar outcome. The Requiring Authorities are taking time to consider it further, and may adopt condition wording that reflects this in their respective decisions.

NZTA's national approach to flood hazard

4.4 NZTA follows the Z/19 Taumata Taiao – Environmental and Sustainability Standard for the infrastructure delivery process.¹ Information on NZTA's national approach to

¹ See: <https://www.nzta.govt.nz/roads-and-rail/highways-information-portal/technical-disciplines/environment-and-sustainability-in-our-operations/z19-taumata-taiao/>.

stormwater management is located on its website,² and roading infrastructure flood hazard assessments are guided by the NZTA P46 State Highway Stormwater Specification (P46).³ Key elements of this approach include:

- (a) Design to address regional/catchment scale flood issues, consent requirements, and avoid unacceptable adverse effects on property outside the designation or land owned by the Crown for events up to the 100-year Annual Recurrence Interval (**ARI**) flood;
- (b) Assessments to consider land-use types and expected flooding nature as part of a risk-based approach;
- (c) Detailed stormwater assessment, including flood modelling, considering existing and maximum probable land use development scenarios;
- (d) Evaluation of hydraulic hazard from floodwater to pedestrians and vehicles in public areas, assessing velocity and depth in accordance with 2019 Australian Rainfall and Runoff, Book 6 – Flood Hydraulics Figure 6.7.9;
- (e) Evaluation of risks associated with identified flood hazards and development of design and mitigation strategies to address them; and
- (f) Consideration of alternative flood management schemes planned by regional councils or local authorities, ensuring proposed works do not compromise their function.

4.5 Any proposal to depart from the NZTA design standards and specifications (e.g., a lower level of service concerning flooding) is considered through the Office of the Chief Engineer (**OCE**). The OCE oversees a technical panel of Lead Advisors and Subject Matter Experts from a range of disciplines. Considerations are potential future risks, safety, value for money, and life cycle costs of the infrastructure.

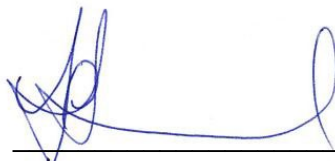
² See <https://www.nzta.govt.nz/roads-and-rail/highways-information-portal/technical-disciplines/environment-and-sustainability-in-our-operations/environmental-technical-areas/stormwater-management/>.

³ See <https://www.nzta.govt.nz/resources/stormwater-specification/>.

DATED: 10 May 2024



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ATTACHMENT 1 – HEARING PANEL’S REQUEST FOR CLARIFICATION, DATED 18 APRIL 2024)

IN THE MATTER OF the Resource Management Act 1991 (the 'RMA')

AND

IN THE MATTER OF Nine Notices of Requirement (NoR) for the Pukekohe Transport Network project by Te Tupu Ngātahi – Supporting Growth Alliance (Te Tupu Ngātahi)

**DIRECTION OF THE HEARING PANEL
DIRECTION #4**

1. Pursuant to sections 34 and 34A of the RMA, Auckland Council and Waikato District Council (the Councils) have both appointed a Hearing Panel consisting of three independent hearing commissioners – Dave Serjeant (Chair), Nigel Mark-Brown and Basil Morrison. The Hearing Panel's function is to hear the applications and submissions and make recommendations to the Requiring Authority on the nine Notices of Requirement (NoR). It is also to deal with any procedural matters.
2. A summary of the 9 NoRs was included in the Hearing Panel's Direction #1 dated 30 November 2023.
3. The hearing is currently adjourned, pending the Hearing Panel's determination it has all information necessary to make the recommendations.
4. The purpose of this direction is to seek clarification on three matters relating to flooding.
5. Firstly, with reference to Pukekohe Transport Network Assessment of Effects on the Environment September 2023 (AEE), para 11.7.2 identifies key matters for inclusion in the CEMP:
 - Siting construction yards and stockpiles with minimal effects on flood flows
 - Methods to reduce the conveyance of materials and plant that is considered necessary to be stored or sited within the flood plain (e.g. actions to take in response to the warning of heavy rainfall events) and
 - Staging and programming to carry out work when there is less risk of high flow events,
 - Diverting overland flow paths away or through areas of work
 - Minimizing the physical obstruction to flood flows at the road sag point
6. It appears that not all of these matters are required to be addressed in the CEMP as drafted.
7. Secondly, at AEE para. 11.7.6 we note SGA consider that *"flood hazard risks during construction can be adequately managed. Proposed works will be located outside of flood plains and overland flow paths as far as practicable. Where this is not possible, potential flooding effects will be managed through the flood risk mitigation measures set out in the*

CEMP for existing high flood hazard areas". However, high flood hazard risk areas do not appear to be addressed in the CEMP.

8. Thirdly, noting the reply on flooding hazards in the closing submissions we have further queries on this. Mr Kirkman's advice varies from the interpretation of the graph titled *Figure 1 General flood hazard vulnerability curve* in his evidence. The graph area under H2 is unsafe for small vehicles, which make the parameters of condition 15 a. v. incorrect. The closing submissions at para. 13.9 refer to "NZTA's *national approach*" however we are unsure as to what this reference is. We are also aware of other guidelines on flood hazard such as Auckland Council's Stormwater Code of Practice which contains relevant parameters of 0.2m depth and 0.6m/s velocity (where there is no obvious danger). These parameters are much more onerous than what is being suggested in the final conditions.
9. We request that Te Tupu Ngātahi – Supporting Growth Alliance provide clarification on these matters as soon as possible.
10. This Direction is to be circulated to all the parties to the hearing by the Hearings Advisor, Mr Bevan Donovan.
11. The correspondence relating to this Direction and related matters should be sent to the Hearings Advisor, Mr Donovan via bevan.donovan@aucklandcouncil.govt.nz.

Dave Serjeant (Chair)
for the Hearing Panel

A handwritten signature in blue ink, appearing to read 'D Serjeant', written in a cursive style.

18 April 2024