MCKENZIE & CO.

RESPONSE TO SECTION 70 COMMENTS

Project	Delmore Residential Development, FTAA-2512-1164
Subject	Westlake Trustee Limited section 70 comments, section 4.1: flood hazard, plant platform and access levels
Prepared by	Haka Subagio CMEngNZ, CPEng, McKenzie & Co. (flood modelling)
Reviewed by	James Kitchen CMEngNZ, CPEng, Project Director; Clayton McKenzie, Managing Director
Date	4 August 2026

1. PLANT PLATFORM AND ACCESS FLOOD LEVELS

The comments do not identify a material deficiency: the plant platform and its all-weather access are not below the applicable design flood level.

This is the professional conclusion of the applicant's flood modelling engineer, Haka Subagio CMEngNZ, CPEng, McKenzie & Co., whose flood assessment is before the Panel (Flood Assessment Report, Revision H, 26/05/26, Appendix 11e to the s55 Response to Comments; originally lodged as Revision D, Appendix 35).

The higher level relied upon in the comments derives from a sensitivity test in which the NZTA motorway culvert is fully blocked. That is not the design scenario required by the Auckland Code of Practice which we have undertaken and which Auckland Council and NZTA have reviewed and had input. The blockage risk is mitigated by the relief inlet riser already secured through Condition 28 of the subdivision consent, and the current Flood Assessment Report (Rev H) confirms the riser deals with egress and hazard risks during that scenario. The approach was confirmed by Auckland Council Healthy Waters (19 to 20 May 2026, closing the Flood Risk Assessment, Habitable Floors query with no further hydraulic modelling required) and endorsed by NZTA (19 May 2026); that correspondence is before the Panel in Appendix 8 of the Response to Comments letter. On the applicable Auckland Code of Practice design scenario (1% AEP maximum probable development, Code of Practice culvert blockages, climate change) the flood level adjacent to the plant sites is RL 18.83, requiring a minimum level of RL 19.33 with 500 mm freeboard. The platform (approximately RL 21.5) and access (approximately RL 20.0) exceed that level with margin.

Condition consequence: we consider it assists with clarity and certainty to include a condition that aligns with and confirms this design outcome as follows:

> *The WWTP and WWFS plant platform and their all-weather access and egress must be constructed at or above RL 19.33 (NZVD 2016). Compliance with this condition shall be demonstrated by an as-built survey prepared by a Licensed Cadastral Surveyor or Registered Professional Surveyor and provided to the Council prior to the commencement of operation of the WWTP and WWFS.*
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> *Advice note: RL 19.33 comprises the 1% AEP maximum probable development flood level of RL 18.83 adjacent to the plant sites, plus 500 mm freeboard. RL 18.83 is derived from the Flood Assessment Report (Rev H) flood model adopting the 1% AEP 24-hour rainfall of 309.2 mm including the 3.8 degree climate change allowance, the culvert blockage factors documented in that report, and the NZTA culvert relief inlet riser secured by Condition 28. The level stated in this condition is not altered by subsequent amendments to the flood model, the Stormwater Code of Practice, TP108 or related guidance.*

The RL 22.14 figure sought by Mr Gardiner is not considered technically appropriate as it is built on the sensitivity scenario rather than the scenario outlined in the advice note above.

The as-designed levels already comply with the offered condition, and the blockage mitigation the comments seek to address is already secured by a condition agreed with Council's flood specialists. The matter accordingly does not alter any of our existing analyses or opinions.

2. PLATFORM FILL AND COMPENSATORY STORAGE

The matter is already appropriately addressed by the lodged flood model: the platform fill is represented in the lodged model and does not create a material adverse flood effect.

The lodged post-development model represents the completed fill condition of the floodplain, including the platform fill and the final fill levels of the adjacent Ara Hills development. Storage is provided through attenuation at the proposed upstream culverts: the Healthy Waters flood model review process recorded the resulting decrease in flood level upstream of the motorway, changes adjacent to the plant sites are negligible, and residual upstream increases of up to approximately 30 mm are assessed as inconsequential (Flood Assessment Report, Section 12). Flood risk to the existing downstream pump station reduces with the provision of attenuation upstream.

Condition consequence: we consider no additional condition is required.

The modelling before the Panel already accounts for the matters raised.

3. EMERGENCY STORAGE AND TANKERING CONTINUITY

The additional on-site emergency storage sought is not required because all-weather access and egress remain available in the design flood event.

The modelled plant access and egress remain above the applicable design flood level plus freeboard, so the local access interruption assumed by the proposed emergency-storage requirement put forward by Mr Gardiner does not arise.

The current Flood Assessment Report (Rev H) (prepared post Healthy Waters review of and input into the flood modelling) further confirms the relief inlet riser that is proposed to be installed deals with egress and hazard risks during the fully blocked culvert scenario relied on to support the changes sought by Mr Gardiner. As a result, those changes sought by Mr Gardiner are not considered necessary.

Condition consequence: the emergency storage limb of the condition sought is unnecessary. The recommended flood level condition proposed above, secures the outcome.

The matter does not require the Panel to revisit its existing position on the servicing or flood design.