

MEMO

Project Number	FTAA-2603-1194
To	Fast-track Panel – Waikanae North Development
Subject	Response to Minute 11 – Ngārara Stream flow control structure
Date	2 October 2026

Purpose

1. This memorandum is provided following publication of the advice to the Panel from Brookfields dated 3 September 2026 (the **Brookfields advice**), and relates to Section H, which addresses the proposed twin box culvert, stormwater attenuation and overflow structure in the Ngārara Stream (the **flow control structure**).
2. It responds to Minute 11 of the Panel dated 22 September 2026 by:
 - a) providing a brief explanation as to how the Applicant has considered the flow control structure;
 - b) identifying the consents that are or may be required under the Natural Resources Plan (NRP) and the National Environmental Standards for Freshwater (NES-F) if the structure is considered to be, or potentially operates as, a dam or a weir;
 - c) addressing the Panel's jurisdiction to grant those consents; and
 - d) confirming that, if the Panel considers consent is required, the effects of the flow control structure have been assessed.

The structure

3. The flow control structure comprises two box culverts, each 2.0m wide by 1.2m high, embedded by 0.4m for fish passage, with a high-level overflow crest 6m wide at RL 6.65 and a raised bund either side at RL 7.0 tying into the adjoining dune ridge. It is located within the stormwater easement area at 55 End Farm Road and is described in the Engineering and Infrastructure Report (Appendix 14, Figure 25 and drawing 2911-ALL-SW-482) and the Flood Hazard Assessment of Effects (Appendix 20, section 3.2.1).
4. All low and normal stream flows pass through the culverts unimpeded. The culverts are designed to throttle the outflow from the site so that flood water is temporarily detained in the storage and attenuation areas upstream, offsetting the flood storage displaced by filling the low-lying parts of the site to create development platforms and achieving hydraulic neutrality in all events. The throttling effect increases as the flow increases. For example, the culverts throttle the flow in a 2-year return period rainfall event (50% AEP) sufficient to raise the water level upstream of the culverts by approximately 0.3m. In a 10-year return period event (10% AEP) the water level would be raised 0.4 – 0.5m. A rainfall event of between a 25 year and 35 year return period would generate sufficient flow to result in the culverts running full (i.e. 0.8m deep) but the water level would still be below the crest of the overflow structure. At a 50-year return period event (2% AEP) the culvert would be running full, but the water level would still be approximately 0.9m below the crest of the overflow structure. It is only in events approaching the 100-year return period event (1% AEP) (including allowance for climate change) that enough flow rate would be generated to trigger flow across the overflow crest, which is expected to flow for approximately 12 hours. In the next few decades, before full

allowance for climate change is likely to occur, the overflow crest is not expected to operate, even in a 1% AEP event because there would not be sufficient flow rate to raise the water level to the crest height needed to reach the overflow structure.

5. The overflow crest is a designed secondary flow path set at a fixed level, so that the maximum upstream water level in an extreme event (or in the unlikely event of partial culvert blockage) is controlled. Detained water drains back through the culverts as the flood recedes. There is no permanent impoundment of water and no change to normal water levels.
6. The Applicant's assessment, based on the twin-culvert design of the structure, has accordingly been that the structure is a stormwater detention device that only operates for short periods in extreme events and otherwise maintains ordinary flows. It has not been thought of as a dam or a weir in the ordinary sense of a barrier that holds back water or raises the water level behind it. The word "weir" was used in the engineering reports and drawings in its hydraulic sense - as a formed overflow surface of known width, level and roughness whose behaviour can be modelled as a broad-crested weir for the purpose of confirming flood levels - rather than to describe a structure that permanently holds water and raises upstream water levels.
7. Relevantly, at no point during pre-lodgement discussions with Greater Wellington Regional Council, did the Council query WNDL's classification of the structure. Nor was it suggested by GWRC that the structure is a dam, weir, or both – or that resource consent is required.
8. As the Brookfields advice notes at paragraph 68, neither the RMA nor the NRP defines "dam", "weir" or "culvert". Following receipt and review of that advice the Applicant acknowledges that there is an interpretation upon which the structure could be considered to be a dam or a weir, and that it could be said that it operates functionally to 'dam' water *in flood conditions* (Brookfields advice at paragraph 74).
9. Should the Panel consider the flow control structure is or could be a dam and / or weir that requires resource consents, then WNDL seeks such consents.
10. The balance of this memorandum sets out the consents that would be required for a dam, outlines the scope that enables the Panel to grant those consents and confirms that all effects of the flood control structure have been identified and assessed in the application materials and can be managed via conditions of consent.

Consents sought/required under the NRP

11. In respect of this structure, the application identified Rule R145 (discretionary activity), on the basis that the culverts do not meet the permitted activity conditions of Rule R126, and Rule R147 (discretionary activity) for the diversion of water within or from the Ngārara Stream.
12. The Brookfields advice concludes (at paragraphs 65, 71 and 73 - 76) that whichever permitted activity rule is the starting point, non-compliance with its conditions leads to Rule R145 for the structure and to Rule R147 (or R148) for any damming or diverting of water, with Rule R151 potentially applying to flood water detained outside the bed. The Applicant agrees with that analysis. If the structure is determined to be a dam for the purposes of Rule R127, it would not meet conditions (j) (impounded volume), (k) (water depth) and (l) (catchment area). Condition (m) relating to not encroaching onto adjoining properties relates to the location of the structure on the property at 55 End Farm Road through the agreed easement.
13. Accordingly, should the Panel consider the structure to be a dam, then the following consents would be required:

- (a) consent under **Rule R145** (discretionary activity) for the placement and use of the structure in the bed of the Ngārara Stream, including associated disturbance of and deposition on the bed and discharge of sediment, whether the structure is characterised as a culvert, a weir or a dam - noting that consent has already expressly been sought under this rule for the culverts;
 - (b) consent under **Rule R147** (discretionary activity) for the damming of water within or from the Ngārara Stream associated with the operation of the structure in flood events, in addition to the diversion of water already identified in the application as requiring consent under this rule; and
 - (c) to the extent that flood water is temporarily detained outside the bed of the river, consent under **Rule R151** (discretionary activity).
14. As to the conditions of Rule R147, which the Brookfields advice recommends be confirmed, the structure does not take any water. Low and normal flows pass through it unimpeded, detention occurs (only relatively briefly) in flood events - when flows are far in excess of any minimum flow, and detained water is returned to the same watercourse as the flood recedes. The damming and diverting therefore does not and cannot result in river flows falling below the minimum flows in chapter 10 of the NRP (condition (a)). The Ngārara Stream is not identified in Schedule A1 as an outstanding river (condition (b)), so Rule R148 is not relevant.
15. The Brookfields advice notes (at paragraphs 72(c) and 77) that it had not identified information on the maximum impoundment during extreme events. The Flood Hazard Assessment models the existing and design situations for the 2, 10, 50 and 100-year (2130) events and presents peak depth and depth difference mapping for each, which is where the detention function of the structure is reflected. The maximum volume temporarily detained upstream of the structure in the 100-year 2130 event is [approximately 210,000 m³], with a maximum water depth at the structure of approximately [2.25 m] to the overflow crest relative to natural ground at the downstream toe.

Consents sought/required under the NES-F

16. Regulation 3 of the NES-F defines “dam” and “weir” for the purposes of the fish passage subpart only, and defines a dam so as to exclude a weir. That subpart assigns activity status to culverts (regulations 70 and 71) and weirs (regulations 72 and 73) but not to dams, which attract only the information requirements in regs 62 and 66 and, where consent is otherwise required, the monitoring and maintenance condition required by reg 69. The Applicant confirms that it has already sought consent under regulation 71 (discretionary activity) for the culverts and, if the overflow crest is considered to be a weir within the regulation 3 definition (and the Applicant does not consider that it is), seeks consent under regulation 73 (discretionary activity). The damming or diversion of water within 100 m of a natural inland wetland (regulation 54(c)) falls within the NES-F wetland consents already sought: the application expressly seeks consent under regulation 54 as a non-complying activity for “the taking, use, damming or diversion of water within, or within a 100m setback from, a natural inland wetland” (section 5.4, page 56).

Scope of the listed project and application

17. Section 5 of the application, at page 49, identifies that the applicant applies for *all necessary resource consents to give effect to the application*, based on the supporting documents and assessments. Section 5.7 (Resource Consent Summary, page 58) goes further by recording that *all resource consents required to implement the proposal* [as described in the application and

the associated technical reports] *are sought*, and that “[i]f it transpires that resource consents are required for aspects that have not been identified, and that is picked up during the application review process, consent for those aspects is also sought - subject to the issues associated with any such consents having been addressed in the application and supporting technical documentation”. The same position is stated at sections 2 (page 4) and 5.1.1 (page 50). To the best of the applicant's knowledge all issues associated with the flood control structure have been identified and addressed. WNDL therefore considers that there is clearly scope within the application to grant resource consents - should the panel determine that consent is or may be required .

18. The consents identified above fall within the scope of the listed project and of the application, and the Panel has jurisdiction to grant them:
 - (a) The stormwater easement area at 55 End Farm Road forms part of the project under limb (b) of the definition of “project” in s 4(1) of the Act. The works support and are subsidiary to the Waikanae North development and serve no purpose independent of it. The Brookfields advice agrees (at paragraphs 51–53) and recommends that the Panel make an express finding to that effect. The Applicant supports that conclusion.
 - (b) The consents are resource consents within s42(4)(a) - the category of approval the application seeks. The application applies for all necessary resource consents, describes the structure and its detention function, assesses its effects, and identifies Rules R145 and R147 as engaged. Recording that Rule R147 is relied on for the damming as well as the diversion of water, and adding Rule R151, does not change the activity for which approval is sought, its scale, its location or the effects assessed.
 - (c) No party is prejudiced. The structure and its detention function were described in the application and its appendices and were addressed in the section 53 comments received.

Effects

19. The effects of the structure have been identified and assessed. Its flood detention function, being the exact function that raises the damming question, is the subject of the Flood Hazard Assessment, which models existing and design conditions, presents depth difference mapping for four design events, and tests a 50 per cent culvert blockage scenario against the 300 mm building platform freeboard. Fish passage is addressed through the culvert embedment and the Assessment of Ecological Effects and wetland hydrology through the same assessment, which identifies the raised water table upstream of the structure as a benefit to Wetland Clusters 2 and 3. Construction effects are assessed and managed through the staged flow diversion, works in the dry and fish salvage described in the CEMP framework. Characterising the structure as a dam does not alter those effects or introduce new ones.
20. The structure will be subject to additional safeguards at detailed design, which the Applicant is happy to secure through conditions. Conditions would relate to certification of the final design by a suitably qualified and experienced chartered professional engineer, covering the overflow crest level, culvert capacity and embedment, and debris and blockage management; confirmation of the maximum detention level against the building platform freeboard; and fish passage meeting NES-F requirements.
21. Separately, and outside of this process, if the structure is a dam the Applicant will need to obtain any building consent required for the structure from GWRC as the regional authority

responsible for dams under s14 of the Building Act 2004. This provides the panel with additional assurance that it need not have concerns about potential structural issues related to the dam.

Conclusion

22. The Applicant has always considered the flow control structure to be a stormwater detention device that operates for short periods in extreme events, and it does not consider it to be a dam or weir in the ordinary sense.
23. It accepts that a contrary interpretation is available. Out of an abundance of caution, the Applicant confirms that it seeks consent under NRP Rules R145, R147 (for damming as well as diversion) and R151, and under regulations 71 and 73 of the NES-F, on the basis that the structure could be a dam or weir (for the purposes of those provisions).
24. The consents that are sought are within the scope of the application, the activity status of the application remains unchanged, and the effects of the structure have been fully assessed.

On behalf of Waikanae North Developments Limited



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