

Comments on FTAA-2603-1181 - Mt Welcome, Pukerua Bay, Porirua

**Comments on Applicant’s response to Minute 21 under
section 53 of the Fast-track Approvals Act 2024**

**Alternative Stormwater Strategy,

Updated Flood Modelling,

Updated Wastewater Modelling.**

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Document

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Executive Summary

1. With the exception of water conservation which is included to respond to the applicant's introduction of on-lot tanks, these comments are limited to the impact of the relevant information contained in the Applicant's response to Minute 18 on Tiaki Wai's initial fundamental consent level matters. In our initial comments, Tiaki Wai identified these to be matters that should be resolved before consent is granted because they may require structural changes to the stormwater management approach, wastewater strategy, water servicing arrangements, staging, or scheme plan.
2. Due to the number of fundamental issues that have not been addressed, Tiaki Wai (TW) is unable to comment on the applicant's proposed conditions at this time. These will be reviewed once the fundamental matters identified in this report have been resolved.
3. Tiaki Wai has reviewed the applicant's alternative stormwater strategy and considers that material issues remain unresolved. Although the proposed 3,000 litre rainwater tanks are an improvement, the strategy largely retains the original layout, removes the ecological function previously attributed to the wetlands, but introduces a ponded water body which will still have an environmental designation and require consent to work within, has not demonstrated a water sensitive design response or compliant hydrological control.
4. The proposed tanks do not meet the GWRC Hydrological Control Guidance Note: they are not plumbed for internal non-potable use, do not provide year-round drawdown, provide insufficient retention and supplementary mitigation, and discharge too quickly to function as extended detention. The detention ponds provide peak-flow attenuation only, leaving increased runoff volume and frequency unresolved. The alternative also introduces approximately 5,000 m² of permanent water no more than 100 mm deep in the detention ponds. This will warm discharges to Taupō Stream and Kākaho Stream, which has not been assessed, and is a worse outcome than the vegetated wetlands previously proposed.
5. Tiaki Wai also does not accept the raingarden treatment approach, including the exclusion of roof areas from the contributing impervious area and the use of an unfactored 175 mm/hr filter media infiltration rate. The applicant has not resolved impervious-area assumptions, erosion and sediment-mobilisation risks, cumulative stormwater effects, or the need for an accepted Schedule 29 Stormwater Impact Assessment. Tiaki Wai's position is that the application should be revised before conditions or asset vesting are settled, and that the proposed raingardens, detention ponds, and claimed retention or extended-detention devices should not be vested as public stormwater assets until these matters are addressed.
6. Whilst Tiaki Wai accepts the extended Taupō Swamp flood modelling demonstrates hydraulic neutrality within accepted modelling tolerances; the flood modelling is dependent on the acceptance of the alternative stormwater strategy and appropriate stormwater management – neither of which are currently accepted.
7. Tiaki Wai does not consider that the alternative stormwater strategy demonstrates an optimised whole-of-site stormwater management strategy or one that it is supported by the applicant's own options assessment which seeks to minimise earthworks and mana whenua impacts on land and streams. The proposal still does not clearly separate stormwater management and ecological areas and Tiaki Wai concerns regarding the location of Rain Garden 01 and the design of detention pond D remain unresolved. The approach continues to rely on substantial embankments and now additionally includes

earthworks to fill the gullies to create the proposed 100 mm deep permanent ponded areas, increasing the system sensitivity to sedimentation without providing meaningful pre-treatment, access for sediment management or addressing the earthworks impacts. The primary purpose of the proposed 100 mm deep permanent pond is not clearly articulated, and the primary purpose of the stormwater management area, as required to support ownership discussions, remains unresolved.

8. The alternative stormwater strategy has not resolved concerns relating to stormwater reticulation or scheme staging. Limited hydrological control means concentrated discharges would continue to be introduced to sensitive receiving environments, and further amendments to the scheme plan are likely to be required to secure outfalls and supporting infrastructure. Tiaki Wai would not support vesting of the public stormwater network unless the outstanding matters identified in this report are satisfactorily addressed
9. Wastewater servicing remains a fundamental consent-level matter. While additional modelling has been undertaken, Tiaki Wai does not consider that the updated assessment resolves concerns regarding increased wastewater overflows, cumulative development effects, or the extent of the modelling undertaken. Important assumptions relating to Muri Road Stage 1, Plimmerton Farm, model parameters and the downstream assessment extent remain disputed. Tiaki Wai's position is that the first 200 lots will result in increased wastewater spills to the receiving environment and mitigation will be required. Whilst Lot 1300 has been extended, this still may not be large enough, and additional land may be required.
10. Whilst Tiaki Wai supports the introduction of on lot tanks, the use of the proposed outdoor-use-only arrangement provided limited and behaviour dependent water savings. The applicant's own assessment demonstrates substantially greater water conservations benefits associated with rainwater harvesting for non-potable indoor use. Tiaki Wai's position remains that application does not demonstrate sustainable water use and that conditions and consent notices should be imposed requiring rainwater harvesting for both non-potable indoor (toilets flushing and laundry cold water use) and outdoor use.
11. Tiaki Wai position remains therefore that before consent is granted, the applicant should provide revised stormwater, wastewater and water servicing strategies developed in consultation with Porirua City Council, Greater Wellington Regional Council, Te Rūnanga o Toa Rangatira and Tiaki Wai.

1 Fundamental Consent Level Matters

1.1 Stormwater Management (Treatment and Hydrological Control)

1.1.1 Water Sensitive Design

12. In response to paragraphs 63 and 64 of our July 2026 comments, the alternative stormwater strategy includes an options assessment (SMP Section 10.1, Table 13)¹ and introduces 3,000 L rainwater tanks on all residential lots. Tiaki Wai acknowledges this as an improvement on the lodged application. However, the options assessment considers rainwater reuse for outdoor use only. It does not assess rainwater harvesting for non-potable use within dwellings (toilet flushing and cold laundry supply). The GWRC Hydrological Control Guidance Note identifies rainwater harvesting for internal non-potable use as the priority for hydrological control.
13. Following a meeting with the applicant's team (mid-September 2026) regarding ownership of stormwater management areas, Tiaki Wai emphasised that, as discussed during conferencing and post-conferencing meetings, stormwater management for this site is complex, with the components closely interlinked. Therefore, Tiaki Wai cannot confirm ownership of individual components in isolation. Ownership can only be confirmed once the purpose of each area is clear within an optimised whole-of-site stormwater management solution.
14. In an email of 21 September 2026 following the meeting, Tiaki Wai asked the applicant to:
 - i. complete the optimisation of the site's overall stormwater management strategy
 - ii. confirm the optimised strategy with Tiaki Wai
 - iii. provide a concept design for the agreed strategy.
15. The applicant's response states that the alternative "does equate to an optimised whole-of-site stormwater management solution" (Applicant's response to Minute 18, paragraph 26). Tiaki Wai does not agree, for three reasons:
 - iv. **It was proposed as a like-for-like change.** The applicant put the alternative forward on the basis that "device footprints, storage volumes and bund heights would remain generally unchanged."
 - v. **The layout is confirmed as unchanged.** The alternative strategy memo confirms that the detention pond footprint and bund design "remains substantially unchanged from the previous design."²
 - vi. **The strategy has not been confirmed with Tiaki Wai.** The updated information was provided to Tiaki Wai on 2 October 2026, with comments sought by the morning of 5 October 2026. Tiaki Wai advised (05 October 2026) that it was unable to confirm the acceptability of the changes.

¹ Envelope Engineering, R003v5-1753-02 Stormwater Management Plan, 30 September 2026 (Appendix A2 to the Applicant's Response to Minute 18).

² Envelope Engineering, Alternative Stormwater Strategy memo, 30 September 2026, Section 2 and footnote 1 (Appendix A1).

16. The alternative is the original layout with the ecological function removed, and on-lot tanks added. It is not the outcome of a water sensitive design process in which stormwater management informs the location, layout, scale, and form of development (paragraph 62 of our July 2026 comments).
17. The applicant's response to Minute 18 (paragraph 33) and the PDP hydrology memo (Option 2a) ³ describe indoor reuse as "greywater reuse". This is incorrect. Tiaki Wai has requested rainwater harvested from roofs and plumbed for non-potable use within dwellings. Greywater reuse is the reuse of household wastewater. For clarity, Tiaki Wai has not requested greywater reuse.
18. PDP does not prefer indoor reuse (Option 2a) because it would further reduce flows in the Kākaho West catchment. PDP attributes the reduction in Kākaho West flows to part of that catchment being diverted west into the Taupō catchment post-development. That diversion is a design choice. It is not a constraint that justifies dismissing rainwater harvesting. Tiaki Wai considers that the options assessment should test indoor non-potable use together with the catchment boundary arrangement, rather than treating the diversion as fixed.
19. Tiaki Wai accepts that the identified geotechnical constraints, including low-permeability soils, shallow groundwater and slope stability, are likely to preclude infiltration across most of the site. However, no infiltration testing has been undertaken.
20. The alternative stormwater strategy has not addressed paragraph 65 of our July 2026 comments on securing impervious-area assumptions through consent notices. Only the rainwater tanks are proposed to be secured by consent notice. The design inputs are also inconsistent between the applicant's documents:
 - i. the SMP adopts an average lot of 523 m², 75% lot imperviousness and approximately 200 m² of roof per lot
 - ii. the PDP modelling adopts an average lot of 350 m², 175 m² of roof per lot, and 75% of roof area draining to the tanks
21. The Engineering Caucus recorded two related matters:
 - i. the per-lot impervious allowance to be used in design (the applicant's 236 m² per lot, against 75% site imperviousness) as a matter of disagreement
 - ii. the legal or consenting mechanism to constrain future lot imperviousness to the design assumptions as an agreed uncertainty.
22. The alternative strategy adds further inconsistent figures and does not resolve either matter.
23. Tiaki Wai's position remains that the application should:
 - i. demonstrate why rainwater harvesting for non-potable use within dwellings has not been adopted
 - ii. secure the impervious-area and roof-area assumptions on which the stormwater design relies through consent notices

³ PDP, Mount Welcome – Wetland Hydrology Model for Alternative Stormwater Design, 2 October 2026 (Appendix C2).

1.1.2 Stormwater Treatment and Raingardens

24. In response to paragraphs 66 to 69 of our July 2026 comments, the alternative stormwater strategy retains the raingardens without increasing their size. It argues that, because roof runoff is directed to the on-lot tanks, roof areas can be excluded from the contributing impervious area. On that basis, it states that the existing filter media area is approximately 3% of the remaining impervious area.
25. The applicant appears to rely on the Engineering Caucus agreement that, “if roof runoff were diverted to appropriately sized rainwater tanks, designed to fully meet hydrological control objectives, the resulting rain garden sizing would come close to meeting the Tiaki Wai 2% criterion applied to the full contributing catchment”. The alternative strategy does not meet the agreement criteria, for two reasons:
 - iii. The agreement was conditional on the tanks fully meeting hydrological control objectives. As set out in section 1.1.3, the proposed tanks do not.
 - i. It applied the 2% criterion to the full contributing catchment, not to the catchment with roofs removed.
26. Tiaki Wai does not accept the tank design allows removal of the roof areas from the rain garden sizing. The tank overflows and the extended detention outlets discharge to the piped network that conveys runoff to the raingardens, so roof runoff still reaches the raingardens. The Guideline excludes from the contributing area only areas treated by an upstream treatment device. The rainwater tanks are not treatment devices and therefore the area upstream of them (the roofs) is not excluded.
27. The applicant’s interpretation that the 2% criterion applies only to non-roof surfaces was recorded as not agreed at caucus. Tiaki Wai and GWRC both recorded that the criterion applies to the total impervious area contributing flow to the raingarden. The alternative strategy adopts the applicant’s interpretation without new justification.
28. The applicant proposes to confirm each device at detailed design. This is inconsistent with the Engineering Caucus agreement that “the current rain garden design has very limited flexibility to be increased in size later; sizing decisions need to be locked in now given site constraints”. For this reason and those set out in paragraph 69 of our July 2026 comments, Tiaki Wai does not consider this an appropriate matter to defer.
29. The updated SMP also adopts a filter media infiltration rate of 175 mm/hr for raingarden sizing and the 24-hour drawdown check (SMP Table 7). At the Engineering Caucus:
 - i. the experts agreed that Darcy’s Law is an acceptable design approach
 - ii. the applicant proposed a design infiltration rate of 87.5 mm/hr, being 175 mm/hr reduced by a clogging factor of 0.5
 - iii. Tiaki Wai and GWRC considered 30 mm/hr appropriate, to allow for long-term deterioration in media performance.
30. The updated SMP reverts to the unfactored 175 mm/hr. That is twice the applicant’s own caucus position and almost six times the rate supported by Tiaki Wai and GWRC. The raingarden sizing and drawdown checks in the SMP therefore cannot be relied upon.
31. Tiaki Wai’s position remains that:
 - i. the raingardens should be resized to meet the 2% sizing requirement, or the applicant should provide a site-specific, evidence-based assessment demonstrating equivalent contaminant-removal performance

- ii. until this is resolved, Tiaki Wai would not support vesting of the raingardens as public stormwater assets

1.1.3 Stormwater Retention and Extended Detention (Hydrological Control)

32. In response to paragraphs 70 to 73 of our July 2026 comments, the alternative stormwater strategy describes the former retention wetlands as stormwater detention ponds providing peak-flow attenuation only. It states that on-lot rainwater tanks provide hydrological control. Tiaki Wai agrees that the 'ponds' are detention devices. It does not consider that the tanks, as proposed, provide hydrological control.
33. The Engineering Caucus agreed on three relevant facts:
 - i. Appropriately designed rainwater tanks can, in principle, fully achieve hydrological control objectives by providing rainwater harvesting (retention) and/or extended detention.
 - ii. The raingardens are treatment devices only.
 - iii. The "retention" wetlands (now detention ponds) "provide peak-flow attenuation only. Neither of these devices reduce runoff volume or provide a hydrological-control function."
34. The caucus also agreed that the development will generate increased runoff volume, leaving the site. The question is therefore whether the proposed tanks are appropriately designed to achieve hydrological control.
35. The site's pervious curve number (CN 68)⁴ places it in the 55–72 band of the GWRC Hydrological Control Guidance Note. That band sets:
 - i. a total hydrological control design runoff depth of 23 mm
 - ii. comprising 15 mm of retention and 8 mm of supplementary mitigation.
36. The tank proposal is compared against the Guidance Note in the table below.

GWRC Hydrological Control Guidance Note	Applicant's proposal	Tiaki Wai assessment
Retention of the first 15 mm of runoff through rainwater reuse or infiltration.	2,000 litres for outdoor use. This equates to approximately 10 mm over a 200 m ² roof.	Less than 15 mm retention is provided.
Rainwater reuse must service demand throughout the year, typically through toilet flushing and laundry. Tanks should be plumbed to internal toilets and cold-water laundry.	Outdoor use only. The PDP model assumes 100 L/day of garden use only when the 10-day average rainfall is less than 0.1 mm/day.	Tanks are not plumbed to internal toilets and cold-water laundry. Under the applicant's own modelling, the retention volume is drawn down only in extended dry periods. The tank is therefore effectively full during the rainfall events that hydrological control is intended to manage. Outdoor-

⁴ Updated SMP, Section 6.8

GWRC Hydrological Control Guidance Note	Applicant's proposal	Tiaki Wai assessment
		only use does not provide effective retention.
Supplementary mitigation of 8 mm, using extended detention only where retention via reuse or infiltration is not viable.	1,000 litres of detention through a 20 mm orifice. This equates to approximately 5 mm over a 200 m ² roof.	Less than the 8 mm required. Retention via reuse has not been shown to be unviable.
Extended detention releases runoff over an extended period, typically 24 hours.	PDP models tank discharge at 0.9 L/s.	At 0.9 L/s, the 1,000 litre volume empties in about 20 minutes. This is not extended detention.
Hydrological control applies to runoff from impervious surfaces.	Roofs only.	Roads, driveways and paved areas receive no hydrological control: the raingardens are lined, and the ponds provide detention only.

37. The SMP describes the 20 mm orifice as “the Tiaki Wai minimum orifice size”. This is not correct:
- Tiaki Wai’s guidance on approved solutions does not set a general minimum orifice size, and Approved Solution #1 (rainwater tanks) specifies a 15 mm orifice.
 - That guidance addresses hydraulic neutrality (peak-flow attenuation). The Guidance Note states that extended detention is separate from peak-flow detention for hydraulic neutrality purposes.
38. The applicant’s updated hydrology modelling confirms that the tanks make no material difference to runoff volume:
- Average discharge to the Taupō catchment increases from 8 L/s at baseline to 25 L/s under the alternative design, compared with 26 L/s under the applicant’s preferred design without tanks.
 - The applicant’s extended flood modelling reports an increase in 72-hour runoff volume of 12.5% to the west and 4% to the east, “because the ponds attenuate peak flows rather than remove volume”.
 - The water savings set out in section 1.5.4 of this document show that outdoor-only tanks save approximately 43 m³ per lot per year. Combined indoor and outdoor use saves approximately 451 m³ per lot per year.
39. The SMP still describes the detention ponds as providing retention in several places, including “retention within the detention ponds via evaporation and plant uptake”, “Retention is provided by rainwater tanks and the detention wetlands”, and the treatment-train figure, still labels the ponds “Retention Wetlands”. A permanent water depth of no more than 100 mm provides negligible retention. These statements should be removed.

40. The 100 mm permanent water in the detention ponds also introduces a new contaminant: heat. Approximately 5,000 m² of shallow, sun-exposed water will sit on flow paths that carry baseflow. It will warm rapidly in summer, and the perched outlets will discharge the warmest water to the Taupō Stream and Kākaho Stream catchments at low flow, when those streams are most sensitive. The WSD Guideline notes that densely vegetated wetlands buffer such temperature increases and recommends shading vegetation and submerged outlets to limit them. The proposed ponds have only low-maintenance ground cover and perched outlets. This is a worse outcome than the vegetated retention wetlands previously proposed, and none of the updated reports assesses it. Tiaki Wai considers that the thermal effects of the pond discharge should be assessed, and that either the permanent water should be removed or mitigation consistent with the Guideline provided.
41. Tiaki Wai's position remains that:
- the application should be revised to provide retention through rainwater harvesting for non-potable use within dwellings, consistent with the GWRC Hydrological Control Guidance Note,
 - the application has not acknowledged its reliance on peak-flow detention, nor assessed the residual effects of increased runoff volume and frequency, as requested in paragraph 73 of our July 2026 comments, and that
 - until a compliant hydrological control approach is demonstrated, Tiaki Wai will not support the vesting of any claimed retention or extended-detention devices as public stormwater assets.

1.1.4 Sediment Transport Methodology

42. The alternative stormwater strategy has not addressed paragraphs 74 and 75 of our July 2026 comments. The Engineering Caucus agreed that:
- i. the outfalls discharging partway down steep gully slopes are “a real and currently unresolved risk”
 - ii. flows could reconcentrate over the length of the gully and trigger erosion downstream
 - iii. “no hydrological control is proposed in the developed catchment upstream of these outlets”.
43. The caucus also agreed that the existing water balance model “is not suitable for an assessment of short-term micro-scale scour effects on site to quantify sediment movement”. It identified the need to determine whether a supplementary hydrological or geomorphological model is required.
44. The updated PDP hydrology memo presents flows into wetland T3W6 and Pond E (wetland K1W4) for the three post-development options. However, it does not compare those flows with pre-development flows and therefore does not assess whether the risk of stream erosion and sediment mobilisation changes as a result of the development. PDP itself notes that its model “was not designed” to assess scour, and that the results indicate relative change rather than actual flow rates. The updated assessment relies on the same water balance model that the caucus agreed was unsuitable. No supplementary assessment has been provided, and the proposed tanks do not provide hydrological control (section 1.1.3).

45. The memo also dismisses the risk of sediment from the upstream catchment entering Pond E. It does so on the basis that an existing upstream pond “will continue to act as a natural sediment retention device”, but no supporting evidence is provided. Farming will continue on the retained land upstream of Pond E. The Engineering Caucus recorded that stream banks in that catchment are already slumping under current deer farming. It also recorded as an uncertainty whether the ongoing farming at Lot 5003 is consistent with the sediment assumptions relied on elsewhere in the application.
46. Tiaki Wai’s position remains as set out in paragraphs 74 and 75 of our July 2026 comments.

1.1.5 Stormwater Cumulative Effects

47. The alternative stormwater strategy has not addressed paragraphs 76 and 77 of our July 2026 comments. The updated information reports runoff-volume changes for Mt Welcome alone. It does not assess runoff volume for Mt Welcome together with the Muri Road block and Plimmerton Farm Stage 1. The Engineering Caucus recorded that the applicant’s PDP assessment “does not consider the issue of cumulative effects i.e. if every development in the catchment were to follow the same approach, then unacceptable adverse effects may result”. The updated PDP memo does not address this.
48. Tiaki Wai’s position remains that the application should quantify the cumulative stormwater effects of Mt Welcome together with the adjacent Muri Road block, Plimmerton Farm Stage 1 and the wider Northern Growth Area development anticipated by the Structure Plan, particularly because these developments discharge to the same sensitive receiving environments.

1.1.6 Schedule 29 Stormwater Impact Assessment

49. The alternative stormwater strategy does not address paragraphs 78 and 79 of our July 2026 comments. Section 11 of the updated Stormwater Management Plan is substantively unchanged from the lodged version. It remains a self-assessment against the Schedule 29 headings rather than an accepted Stormwater Impact Assessment. Tiaki Wai’s position remains that an accepted Schedule 29 Stormwater Impact Assessment must form the basis of the revised Stormwater Management Plan.

1.2 Stormwater Management (Flood Hazard – Hydraulic Neutrality)

1.2.1 Flood Modelling – Taupō Swamp

50. The alternative strategy presents extended flood modelling for the Taupō catchment demonstrating the effect on the existing known flooding of the SH59 / James Street / St Theresa’s Church area.
51. The extended flood modelling was completed by the applicant in response to the Engineering Caucus and in discussion with Tiaki Wai’s Senior Flood Modeller.
52. The flood modelling results have been reviewed by Tiaki Wai, with an independent verification exercise completed using modelling outputs provided by the applicant.
53. The review and independent verification exercise are accepted as demonstrating post development ranging from decreases to flood depth increases of less than 0.05m. Given the size and complexity of the catchment and location of the discharge the increases are accepted as being within modelling tolerances.

54. There is one location on the south side of the Palmers Garden Centre where an increase of greater than 0.05m is reported. Review of the model confirms that this is an isolated increase.
55. Tiaki Wai position is that extended flood modelling addresses paragraphs 80 to 82 and 89 and 90 of our July 2026 comments, however it is noted that:
- changes to the stormwater strategy will require additional modelling to be undertaken,
 - The impact of sedimentation on the detention ponds remains and consequence effect for long term hydraulic neutrality remain unresolved (1.1.4 and 1.2.3).
56. Tiaki Wai modelling review and results are included as **Attachment A**.

1.2.2 Flood Modelling – On Site

57. The comments set out in paragraphs 83 and 84 of our July 2026 comments are not addressed by the alternative stormwater strategy and Tiaki Wai's position remains that these fundamental matters should be resolved prior to granting of the consent.

1.2.3 Flood Modelling – Sedimentation

58. The application now states that 'stormwater detention ponds will not require ongoing removal of sediment once operational'⁵ and has quoted this as being evidenced by the 35 – 85-year sediment removal timeframe presented in the PDP memo dated 6th August 2026. The statement
- incorrectly extrapolates 35 – 85 years as 'will not require',
 - incorrectly applies the evidence – the applicants' caucus position was that 'a literature-based assessment (with caveats) indicates a minimum of 35 years, and more realistically 3 – 8 decades, before sediment meaningfully affects storage below the outlet',⁶ and,
 - contradicts the applicants' own caucus position that the stormwater system (previously retention wetlands) was designed to accommodate sediment inflow.
59. For context regarding bullet point 2, the applicant's response to Minute 18, paragraph 13 quoted 770 m³, 480 m³, 720 m³, 50 m³ and 1090 m³ of storage available within the ponded wetland areas below the outlets. These volumes are still presented in Table 6 of the Stormwater Management Plan, but are reduced to 100 m³, 115 m³, 85 m³, 20 m³ and 180 m³ reflecting that alternative stormwater strategy will fill the gullies and remove storage below the outfall. Removing the 'wetland' ponding volume will increase the frequency of sediment removal beyond that quoted by the applicant.
60. The application further sets out a contradictory position within the stormwater management strategy which states:
- That the shallow planted permanent water level will 'promote sediment settlement' (Section 6.8)

⁵ Alternative Stormwater Strategy, Envelope Memo, 30 September 2026, Section 2.0, 2nd bullet point.

⁶ Engineering JWS, Issue 2, Facts not agreed, bullet point 1

- Sediment will be removed when accumulation reaches the trigger set in the O&M Plan (Section 8.3)
61. The contradictory positions and incorrect application of the PDP literature review do not demonstrate an optimized whole-of-site stormwater management strategy with due consideration or applied best practice to address the potential effects of sediment accumulation on the long-term operation and maintenance, rather the design appears to achieve poorer outcome through:
- Significantly reducing the buffer volume previously provided.
 - Not creating a best practice sediment management area / device (forebay)
 - Creating a large flat area over which sedimentation could potentially occur with access only provided to one point. The size of the proposed ponded are reported in Table 6 of the Stormwater Management Strategy as being 1,020 m², 1,050 m², 880 m², 200 m², and 1,840 m² respectively for detention ponds A to E. A 20-tonne digger with an approximately 10 m reach positioned near the inlet to the outlet culvert would be able to excavate sediment from approximately 157 m², excluding detention pond D this equates to access to between 8.5% and 17.8% of the area over which sedimentation may occur.
62. Tiaki Wai do not therefore consider that the alternative stormwater strategy has addressed paragraph 85 of our July 2026 comments, or the matters raised in the Engineering Caucus, or Minute 18, Paragraph 13, rather it would appear a poorer outcome has been achieved.
63. Tiaki Wai position remains therefore a design which appropriately allows for sediment management is required to ensure appropriate long-term management of stormwater discharges from the proposed development.

1.3 Stormwater Management (Retention Wetlands for Hydraulic Neutrality)

1.3.1 Detention Ponds – Stormwater Options Assessment

64. In response to paragraphs 91 to 92 of our July 2026 comments the tabulated options assessment provided in Table 13 of the Stormwater Management Plan has been extended, however the optioneering is still based on limited statements, with no or little supporting evidence, and limited safety in design review. Tiaki Wai's position remains that the application documents do not demonstrate how alternative stormwater management approaches were considered.
65. Whilst dry detention basins, on-lot tanks, and oversized pipes are now included within the Table conclusions are not considered to be substantiated and the application does not appear to test alternative stormwater detention at different scales, locations or configurations, or catchment-scale trade-offs between source control, distributed devices and centralised stormwater management areas.
66. The approach continues to rely on significant earthwork embankments. During the mid-September 2026 meeting with the application and in subsequent correspondence Tiaki Wai emphasised that there did not appear to be a clear reason as to why, if the wetlands were removed, a permanent water body was required upstream of the proposed embankments. Tiaki Wai noted that retaining a permanent water body impacted the size

footprint and height of the embankments, size and footprint of the detention areas, extent of stream loss and offsetting required.

67. The only statements provided by the applicant in support of filling the gullies and creation of 100 mm ponded volume appear to be those found within the Alternative Stormwater Strategy memo, being:

- The design 'reflects that the detention ponds sit in existing wet gullies that would stay damp under the alternative proposal', and
- 'The stormwater detention pond footprint and bund design other remains substantially unchanged from the previous design. This is because hydraulic modelling confirms the ponds provide adequate storage for events up to the 1% AEP event and mitigate downstream flooding'.

68. Tiaki Wai do not accept either of these statements as being justification for the retention of the existing detention pond footprint and bund design or the creation of a 100 mm ponded volume. With regards to the first statement whilst the areas upstream of the embankments may not be naturally dry areas in full or in part it is not clear why the natural ground form of these areas could not be retained with enhancement planting. This statement is also not applicable to detention pond D which is being created within an area of fill and does not require a ponded volume (as per Tiaki Wai's comments in paragraph 117 to 120 of our July 2026 comments). There are numerous examples of detention 'dams' created in natural gullies retaining natural flow paths and upstream landform, in fact Tiaki Wai would suggest that this is by far the more common approach. With regards to the second statement, the site constraints do not preclude alternative designs that would also achieve hydraulic neutrality if modelled.

69. Tiaki Wai cannot therefore identify a clear reason within the documentation provided that supports filling of the natural gullies to create the proposed 100 mm deep ponded areas. Tiaki Wai does not support the alternative stormwater strategy for the following reasons:

- Filling of the gullies increases:
 - 69..1 the footprint, size and height of the proposed embankments.
 - 69..2 length of stream / ephemeral watercourse impacted by the proposed embankments.
 - 69..3 the length and gradient of the culverts required with potential impacts for fish passage.
- The 100 mm ponded depth achieves a worse water quality outcome (1.1.3),
- The 100 mm ponded depth with no forebay for sediment management and access only to the outlet achieves a worse outcome for sediment management (1.2.23)
- It is not clear that it meets the applicant's own preferred option outcomes as presented in Section 10.2 of Stormwater Management Plan, minimising earthworks, balancing constructability, cost and long term maintenance, and supporting mana whenua outcomes by minimise land and stream disturbance.

70. Tiaki Wai note additionally that the information provided to support the alternative stormwater strategy:

- Does not address the additional earthworks required to fill the gullies,

- Does not appear to address the effects on fish passage associated with filling of the stream upstream of detention pond E.

71. Tiaki Wai's position remains therefore that in the absence of a detailed options assessment, it is unclear to Tiaki Wai that the option presented, which relies on significant earthwork bunds, presents the best practicable solution for stormwater management, giving consideration to long-term management and safety in design. Tiaki Wai considers that the application should provide a detailed options assessment to support the site Stormwater Management Plan.

1.3.2 Detention 'Ponds' – Co-location of Ecological Mitigation and Stormwater Management

72. The alternative stormwater strategy has separated ecological mitigation and stormwater management, and this is supported by Tiaki Wai.
73. The removal of ecological mitigation does not however resolve the ownership issue. As per paragraph 97 of our July 2026 comments, and as stated during conferencing and repeated in our Mid-September meeting with the applicant, Tiaki Wai will only vest structures, areas whose primary purpose is the conveyance and management of stormwater.
74. Ownership can only be confirmed, therefore once the purpose of each area is clear within an optimized whole-of-site stormwater management solution.
75. Whilst Section 8 of the Stormwater Management Strategy has been updated, the premise is based on filling of the gullies which is not supported by Tiaki Wai. Additionally, the applicant's position that Tiaki Wai will own all of the land up to the 1% AEP water level, including bunds, inlets and outlet structures contradicts the information on the updated scheme plans which show the bunds as being within land vested to PCC Parks and Reserves team.
76. Finally, Tiaki Wai have been advised by GWRC that as detention ponds B, C and E are located on existing permanent or intermittent streams the proposed permanent water bodies (ponded volume) are likely to continue to be defined as 'rivers - modified watercourse' under Section 2 of the RMA and as such consents would likely still be required to undertake future maintenance (including sediment removal and vegetation clearance). The requirement for consent would restrict Tiaki Wai's ability to undertake maintenance work necessary to achieve stormwater management. As stated in 1.3.1, the purpose of the permanent water body is not clearly articulated within the application, and its purpose is not clear to Tiaki Wai, and it is considered that further development of the stormwater management strategy is required.
77. Giving consideration to the comments made in response to the alternative stormwater strategy as outlined in this document Tiaki Wai's position remains that an optimized whole-of-site stormwater management solution that clearly outlines the purpose of each area and supports long term operation and maintenance activity has not been demonstrated such as would support vesting of the areas proposed

1.3.3 Detention Pond - Maintenance Requirements

78. The applicant's proposal was revised in response to Tiaki Wai's comments of July 2026 to include a 4m wide all-weather access track to the detention pond inlets to the outlet culverts. The tracks do not appear to include for turning or working areas and only provide limited access to the stormwater management area.

79. Tiaki Wai position remains that the assessment should confirm safe operating conditions for each stormwater management system, including that working areas are not immediately adjacent to steep fill or cut slopes, and that vehicle access is provided to all inlets, outlets, pretreatment devices and for the retention wetlands to allow desilting and plant maintenance that meet the required standards and are within the reach of standard construction and maintenance equipment.
80. The updated Stormwater Management Plan should include an access assessment for each stormwater device. Tiaki Wai will not support vesting of stormwater devices where adequate access cannot be demonstrated.

1.3.4 Detention Pond – Pre-treatment

81. The Alternative Stormwater Strategy memo states that ‘if a forebay is preferred by Tiaki Wai, this can be detailed during detailed design and could be located within the base of the pond without affecting storage or operation’.
82. As per 1.1.4 and 1.2.3 the alternative strategy is not considered to mitigate for sediment transport within the catchment and in only providing 100 mm between the pond base and outfall will increase the frequency at which sediment removal will be required. There is therefore an even greater need for pre-treatment in the form of a gross pollutant trap and/or sediment forebay. Tiaki Wai’s position remains that this represents best practice and is considered necessary to protect the detention ponds and receiving environment from sediment, gross pollutants (litter, debris) and coarse material that may be included in the bypass flows.
83. Tiaki Wai consider that the location, sizing and access to appropriate sediment forebays is an essential element of an optimised whole-of-site stormwater strategy at will clear designate areas whose primary purpose is stormwater management from areas with a parks and recreation focus and as such Tiaki Wai’s position remains that this is a fundamental consent level matter that should be addressed before granting of a consent, i.e cannot be deferred until detailed design.

1.3.5 Detention Pond – Staging

84. The alternative stormwater strategy does not address the Tiaki Wai comments in paragraphs 108 to 112 of our July 2026 comments. Tiaki Wai’s position remains that the Stormwater Management Plan must demonstrate how stormwater management will be secured at each stage of the development.

1.3.6 Co-location of Rain Garden 01 and Retention Wetland B inundation zone

85. The alternative stormwater strategy does not address the Tiaki Wai comments in paragraphs 113 to 116 of our July 2026 comments. Tiaki Wai’s position remains that the design does not support vesting of Rain Garden 01.

1.3.7 Retention Wetland D

86. As outlined in 1.3.1, the alternative stormwater strategy does not address the Tiaki Wai comments in paragraphs 117 to 120 of our July 2026 comments. Tiaki Wai’s position remains that the design does not support vesting of Wetland D.

1.4 Stormwater Management (Reticulation)

1.4.1 Stormwater Reticulation - Outfalls

87. Whilst the application now includes on-lot tanks for the collection of rainwater for outdoor use this will only achieve limited hydrological control and it is still considered that the stormwater outfalls will introduce concentrated stormwater in locations other than existing ephemeral channels, i.e. in places where stormwater would not typically be concentrated (Sections 1.1.4 and 1.2.3)
88. It is not considered that the alternative stormwater strategy has addressed the Tiaki Wai comments in paragraphs 121 to 126 of our July 2026 comments. Tiaki Wai's position remains that Tiaki Wai would not support vesting of the public stormwater network unless the matters identified in this section were resolved to Tiaki Wai's satisfaction.

1.4.2 Stormwater Reticulation - Scheme Staging

89. The alternative stormwater strategy has not addressed the Tiaki Wai comments in paragraphs 127 to 129 of our July 2026 comments. Tiaki Wai's position remains that a change to the scheme plan and staging will be required to secure the outfalls within Lot 5003.

1.5 Wastewater

1.5.1 Wastewater Modelling

90. Additional wastewater modelling was completed by both the applicant and Tiaki Wai in response to the Engineering Caucus to investigate if the first 200 lots of the development could be completed without requiring wastewater mitigation.
91. The updated wastewater hydraulic modelling report – R004v2-1753-02 Wastewater Hydraulic Model Report, dated 30 September 2026 presents a more detailed description of the updated flood modelling completed by the applicant. For clarity the differences between the modelling completed by the applicant and by Tiaki Wai are summarised in the table below:

R004v2-1753-02	Applicant's Modelling	Tiaki Wai Response
Section 7.4, Table 15	The 83 Muri Rd Stage 1 lots are outside of the current horizon (will not be delivered until 2036).	The Muri Rd Stage 1 lots have been consented (Jan 2025), with EA granted (early 2025), and construction commenced on site. It is highly likely therefore that these lots will be delivered before the Mt Welcome lots.
Section 7.4, 2 nd to last paragraph	The 83 Muri Rd Stage 1 lots will discharge through PS30 at 8 L/s, being less than a gravity connection would be.	This response considers only the peak flow and ignores the impact of the increased volume and subsequent increase in pump duration on the receiving catchment.

Section 7.5, Table 16	The applicant has modelled the 2027 – 2036 (CUR-MED) Greenfield wet-weather parameters	Tiaki Wai model is based on the M2L-LNG parameters. It is considered that these: 92. Already recognize the system is new, 93. Are already conservatively low when compared to the PWWF⁷ that would be applied if assessed in accordance with the requirements of the RSWS. • Reflect the infiltration scenario agreed with the applicant during the pre-application discussions (reported in R004v1-1753-02, Section 3.3, Table 3 – proposed parameters).
Section 7.5, Table 16	Assessment Extent – Between Mt Welcome and PS13	This response considers only the peak flow and ignores the impact of the increased volume and subsequent increase in pump duration on the receiving catchment. Tiaki Wai considers that the model should be extended to the overflow upstream of PS07.
Section 7.7, 1 st paragraph	SPA's wet weather parameters – as per comments above	As per comments above
Section 7.7, 1 st paragraph	The Tiaki Wai modelling runs include 83 lots at Muri Road Stage 1 and 880 Lots at Plimmerton Farms and reports larger overflow increases at PS13.	Tiaki Wai modelled a number of runs including runs. Model Runs MWA to MWD include allowance for Muri Road Stage 1 and Plimmerton Farms. Model Runs MWE and MWF excluded 83 Muri Road and only allowed 220 lots for Plimmerton Farms – reflecting the applicants proposed initial stage. The applicant's response may be read to imply that the increases are a result of the additional lots (Muri Road Stage 1 and Plimmerton

⁷ Peak Wet Weather Flow

Farms). As above model runs MWE and MWF do not include additional lots. The increases in modelled discharges are a result of the model parameters and not lot numbers.

94. The updated modelling does not change Tiaki Wai's position as presented in the Memo – Additional Tiaki Wai Wastewater Modelling. For clarity Tiaki Wai's position remains that:
- Neither Envelope nor Tiaki Wai has tested the impact of adding 82 Lots at Muri Road via PS30 – this requires testing.
 - Connection of 200 Lots within Mt Welcome will result in increased wastewater spills to the receiving environment in the 6 mth, 1 year and 2 – year events.
95. Tiaki Wai's position therefore is that:
- wastewater mitigation strategy must be confirmed ahead of any works commencing on site and reviewed as development progresses.
 - the assessment may require changes to the scheme and potentially a section 127 application to change the consent.

1.5.2 Wastewater - Cumulative Effects

96. Whilst short term modelling of the full catchment has now been completed, the long-term modelling has not been updated and Tiaki Wai's position in relation to comments in paragraphs 138 and 139 of our July 2026 comments has not changed.

1.5.3 Wastewater – Mitigation Lot 1300

97. The Engineering Caucus agreed that the scale of the required mitigation could not be determined until an extended modelling exercise was completed,⁸ but agreed that reserving additional, flexible land area would be appropriate pending completion of further modelling.
98. As stated in the conferencing the concept design presented following the Engineering Caucus was not accepted by Tiaki Wai as demonstrating sufficient space for the required mitigation storage and it is noted that the updated scheme plan has amended the Lot 3 boundary and further encroached on the proposed tank.
99. In response to the conference with the panel Thursday 03rd September Tiaki Wai confirmed wastewater mitigation will be able to be achieved – however this may not be able to be accommodated within Lot 1300 and additional land may be required with impacts on the consented scheme plan.

⁸ Engineering JWS, Issue 8, Facts, Bullet Point 5.

1.6 Consent Level Matters

1.6.1 Water Supply – Sustainable Water Use

100. The sustainable management of water (water conservation) was identified within our July 2026 comments as a consent level matter, i.e. one that could be addressed through conditions and consent notices.
101. As the applicant's alternative stormwater strategy now presents on-lot tanks for rainwater collection and use a review against paragraphs 169 to 172 of our July 2026, comments is provided.
102. The applicant's proposal has been amended to provide 3,000 litre tanks on all residential lots, with 2,000 litres retained for outdoor use and 1,000 litres for on lot detention.
103. The applicant's updated PDP Wetland Hydrology Model for Alternative Stormwater Design, prepared by Katy Grant, PDP, dated 02 October 2026, confirms 100 L / day will be removed for garden use when the average rainfall is less than 0.1 mm/day.
104. The water savings associated with the proposed rainwater tanks are presented in the PDP Letter dated 04 August 2026, titled Mount Welcome – Roof Run-Off Tanks Additional Assessment and are summarized below:

Tanks for:	Taupō Catchment	Saving per Lot	Full Catchment
Outdoor Use Only	17,700 m ³ /year	43 m ³ / lot	40,800 m ³ /year
Combined Indoor* and outdoor use.	185,000 m ³ /year	451 m ³ / lot	428,000 m ³ /year
Indoor only**		408 m ³ /lot	387,200 m ³ /year

*rainwater harvesting for non-potable use (toilets and laundry) within the dwellings.

** savings independent of weather and behaviour.

105. It is considered that the savings associated with implementing tanks for outdoor use are not guaranteed, being dependent on weather and lot owner behaviour.
106. Given the clear guidance in the WIP, Plan Change 1, the GWRC Hydrological Control Guidance Note v2 and the previous work in this catchment, Tiaki Wai considers that the application should be revised to include on-lot rainwater harvesting for indoor (non-potable) use.
107. Tiaki Wai's position remains therefore that the application does not incorporate water conservation measures to preserve water resources and their mauri and consequently our position as outlined in paragraphs 169 to 172 of our July 2026 comments has not changed.

