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

Comments on a substantive application under section 53 of the Fast-track Approvals Act 2024

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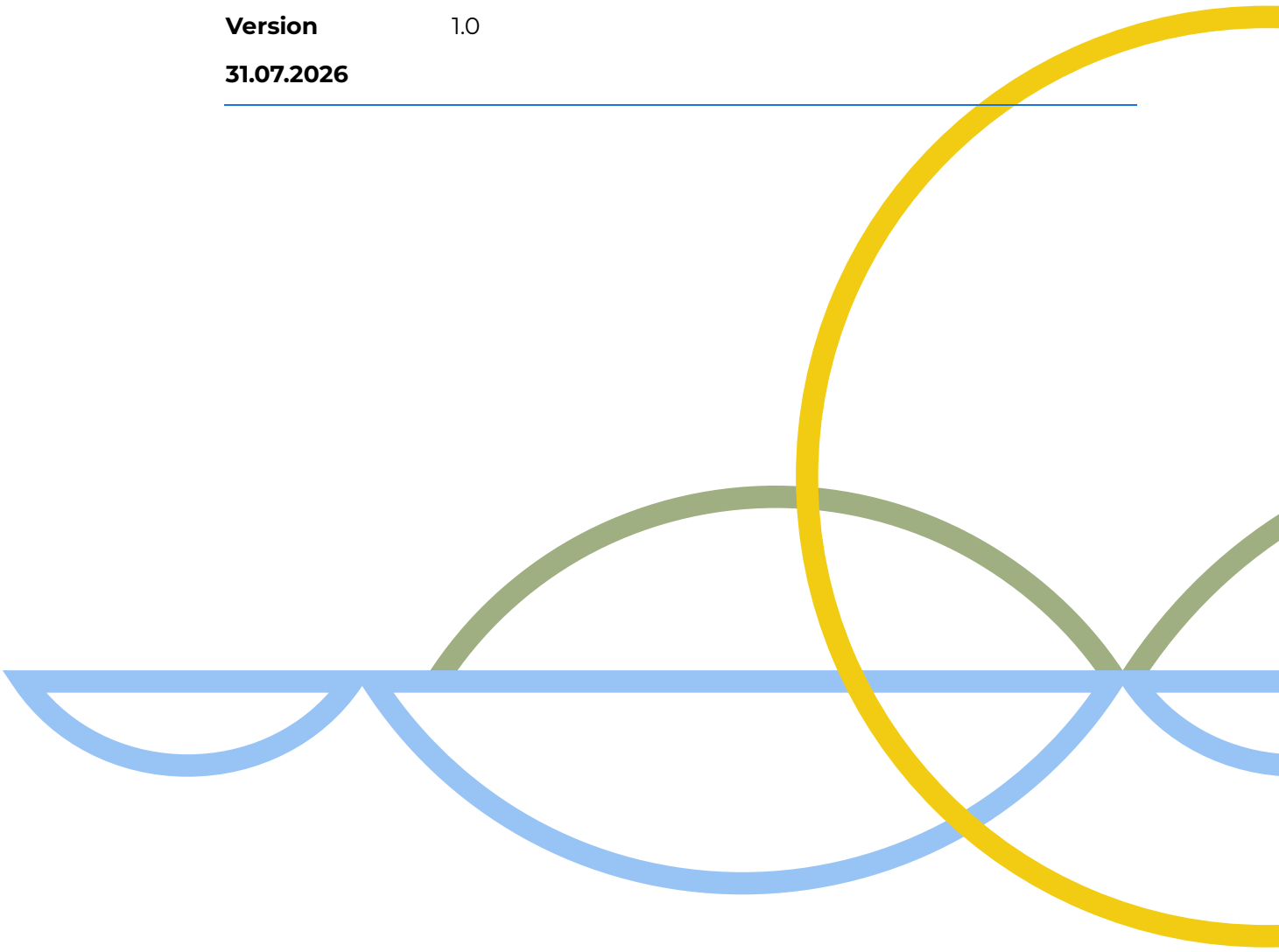

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Approver	Role	Date	Signature
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Executive Summary

1. Tiaki Wai has reviewed the substantive application by Pukerua Property Group LP for the proposed Mt Welcome development at Pukerua Bay, comprising 949 residential lots and a commercial lot within the Porirua Northern Growth Area. Tiaki Wai's review is provided in its capacity as regional water services provider, potential future owner and operator of three waters assets, potential holder of any operational stormwater discharge consent, and signatory to Te Wai Ora o Pārirua — the Porirua Harbour Accord.
2. Overall, Tiaki Wai does not consider that the current application demonstrates acceptable stormwater, wastewater or water supply outcomes at a consent level. Several matters are considered fundamental and 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.
3. The principal stormwater concerns relate to treatment, hydrological control, flood hazard, retention wetlands and reticulation. Tiaki Wai considers that the proposed raingardens appear undersized for the claimed pollutant-removal performance, that true runoff retention has not been demonstrated, and that cumulative effects on Te Awarua-o-Porirua Harbour, Taupō Stream and Kakaho Stream have not been adequately quantified. Tiaki Wai also considers that an accepted Schedule 29 Stormwater Impact Assessment should form the basis of any revised Stormwater Management Plan.
4. For flood hazard and hydraulic neutrality, Tiaki Wai does not consider that the current modelling demonstrates that the development will avoid increased flooding in the wider receiving catchment, including downstream areas influenced by Taupō Swamp. Tiaki Wai recommends that the flood modelling be extended and updated to address increased runoff volume, staging effects, technical modelling queries, sedimentation assumptions, and cumulative development across the Northern Growth Area.
5. Tiaki Wai does not support the current approach of combining ecological mitigation with stormwater management through proposed retention wetlands. Key concerns include the absence of a clear options and safety-in-design assessment, staging risks, maintenance access, pre-treatment requirements, co-location of Rain Garden 01 within a flood management area, and the proposed retention wetland D arrangement. If consent were granted on the current design, Tiaki Wai would not support vesting of these assets or transfer of associated operational stormwater responsibilities unless the identified matters were resolved to its satisfaction.
6. Wastewater servicing is also considered a fundamental consent-level matter. Tiaki Wai does not consider that the current wastewater modelling demonstrates that the development will avoid increased wastewater overflows to sensitive receiving environments. The modelling should be extended downstream of Pump Station 13, include cumulative development such as Muri Road and Plimmerton Farm Stage 1, and be supported by a concept design for any required wastewater mitigation before consent is granted.
7. For water supply, Tiaki Wai considers that further information is required before consent is granted to demonstrate that the Gray Street connection can be secured and that the development can be appropriately serviced. Additional controls are recommended for

water conservation, rainwater harvesting, network pressure constraints, staging limits, Pukerua Bay reservoir capacity, reliance on the future Northern Growth Area 3.7 ML reservoir, and bulk water supply constraints.

8. Tiaki Wai recommends that consent not be granted on the basis of the current three waters strategies. Before consent is granted, the applicant should provide revised stormwater, flood, 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 Introduction

9. Tiaki Wai has reviewed the Application from Pukerua Property Group LP for Mt Welcome, a proposed 949 residential-subdivision and commercial lot within the Porirua Northern Growth Area at Pukerua.

10. Tiaki Wai's comments have been split into four broad categories representing their position based on the information provided to date.

    i. Fundamental consent-level matters — matters that Tiaki Wai considers must be addressed before consent is granted, as they may require structural changes to the application as presented.

    ii. Consent-level matters — matters that may require changes and are recommended to be resolved before consent is granted.

    iii. Engineering Approval matters — matters that should be secured through conditions on the consent.

    iv. Consent notice controls — matters that should be secured through consent notices or equivalent conditions on the consent.

11. Our comments are split over the following sections:

    i. Section 4 provides a summary of Tiaki Wai's position on each of the three waters (stormwater, wastewater and water supply)

    ii. Section 5 identifies the fundamental consent-level matters across stormwater, wastewater and water supply that Tiaki Wai considers must be addressed before consent is granted.

    iii. Section 6 covers Consent-level matters, Engineering Approval matters and Consent Notice controls for the three waters infrastructure, specifically:

        (1) Sections 6.1 to 6.4 provide comments on the stormwater management, split into Treatment and Hydrological Control (Section 6.1), Flood Hazard – Hydraulic Neutrality (Section 6.2), 'Retention Wetlands' (Section 6.3), and Stormwater Reticulation (Section 6.4).

        (2) Sections 6.5 and 6.6 provide comments on wastewater and water supply respectively.

        (3) Section 6.7 provides comments on easements and related scheme-plan matters.

    iv. Section 7 sets out Tiaki Wai's conclusions and the revisions required before consent is granted

12. A summary table overview of the matters raised in the Tiaki Wai comments is provided in Appendix A.

2 Assessment Context

13. Tiaki Wai is providing comments as the regional water services provider responsible for water, wastewater and stormwater services within Porirua and as the future infrastructure asset owner responsible for the ongoing operation and management of the proposed three waters assets.

14. Tiaki Wai's responsibilities include ensuring adequate water supply capacity, storage, pressure and firefighting provision; managing wastewater collection and conveyance while reducing the risk of overflows and protecting public health; and managing stormwater networks and devices to ensure collection and conveyance of stormwater to mitigate the effects (water quality, quantity and flooding) on the downstream environment and communities.

15. Tiaki Wai considers that three waters infrastructure servicing the community is best owned, operated and maintained by a public entity rather than by private individuals or entities, as public ownership provides greater security that ongoing operation and maintenance will be funded and carried out to the required standard, and that the outcomes required under the consent will be achieved over the long term. It is not clear from the application that the infrastructure proposed would be able to be vested, in full or in part, and Tiaki Wai considers that this requires resolution before consent is granted.

16. Tiaki Wai is additionally a signatory to Te Wai Ora o Pārirua — the Porirua Harbour Accord (6 February 2025) — alongside Te Rūnanga o Toa Rangatira, Greater Wellington Regional Council, Porirua City Council and Wellington City Council. Objective 7 commits the partner organisations to ensure that "current and future development and growth must contribute to the protection and restoration of harbour health".

17. Finally, for stormwater, Tiaki Wai is providing comments as the potential future holder of any Greater Wellington Regional operational stormwater discharge consent.

18. In assessing the application, Tiaki Wai has considered the requirements of:

    i. Te Awarua-o-Porirua Whaitua Implementation Programme (WIP) (2019);

    ii. Te Wai Ora o Pārirua — the Porirua Harbour Accord;

    iii. Northern Growth Area (NGA) Structure Plan;

    iv. Operative DEV-NG chapter of the Porirua District Plan;

    v. Plan Change 1 to the Natural Resources Plan for the Wellington Region;

    vi. The Regional Standard for Water Services (RSWS) (v3.1, December 2024);

    vii. The Regional Specification for Water Services (v3.1, December 2024);

    viii. The Water Sensitive Design for Stormwater: Treatment Device Design Guideline (December 2019);

    ix. The Greater Wellington Hydrological Control Guidance Note (September 2025);

19. Tiaki Wai met with the applicant and Porirua City Council (PCC) on 16 and 17 June 2026 to discuss three waters matters. The meetings aired Tiaki Wai's initial concerns regarding the proposal, including but not limited to the lack of water conservation, requirements for upgraded wastewater modelling, detailed stormwater optioneering assessment, co-location of the retention wetlands and ecological mitigation, and sizing of the rain gardens and impervious surface restrictions. The applicant did not provide any further information in response to the meetings, and no revised conditions were agreed.

3 Receiving Environment

20. The Mt Welcome site is within the Porirua Northern Growth Area and drains to Te Awarua-o-Porirua Harbour through the Taupō Stream and Swamp, and Kakaho Stream. These are the same receiving environments as Plimmerton Farm Stage 1 (FTC109), which was granted under the COVID-19 Recovery (Fast-track Consenting) Act 2020 by an EPA Expert Consenting Panel in 2024/2025.

21. Tiaki Wai considers that the outcomes accepted as appropriate by the EPA Expert Consenting Panel for Plimmerton Farm Stage 1 represent the minimum acceptable standard for stormwater management in these catchments. Where the NGA designation contemplates significant cumulative greenfield development across approximately 1,036 hectares (the wider NGA Structure Plan), Tiaki Wai's view is that the individual applications should demonstrate how they contribute to the catchment-wide reduction trajectory established by the WIP and the Porirua Harbour Accord.

3.1 Stormwater

3.1.1 Treatment and Hydrological Control

22. Ecological and cultural values of the harbour set the harbour's sensitivity to sediment, zinc and copper. The catchment-wide reduction targets in the Te Awarua-o-Porirua Whaitua Implementation Programme (WIP Section 5.5) (40% by 2040 for sediment, total zinc and total copper), Greater Wellington Regional Council (GWRC) Natural Resources Plan - Plan Change 1 (Plan Change 1) and the Porirua Harbour Accord apply to Mt Welcome as it drains to the harbour.

3.1.2 Flood Hazard – Hydraulic Neutrality

23. The receiving catchment for stormwater discharge is the Te Awarua-o-Porirua Harbour via the Taupō and Kakaho Streams and the Taupō Swamp with known flooding of the low-lying transport corridors, SH59 / James Street / St Theresa's Church and School (2016 and 2026 flooding).

24. The *Wellington Water Taupō Stream Stormwater Catchment Model Build Report (2019)* identifies that the Taupō Swamp functions as a large natural storage system, temporarily retaining stormwater runoff and slowly releasing it as elevated baseflows over an extended period following rainfall events. As a result, the catchment is sensitive not only to peak stormwater discharges but the volume and timing of stormwater discharges to and from the Taupō Swamp.

3.1.3 Retention Wetlands and Outfalls

25. The Mt Welcome site itself comprises a series of streams, gullies, existing natural inland wetlands and areas of indigenous vegetation that drain to the Taupō and Kakaho Stream catchments and ultimately to the Te Awarua-o-Porirua Harbour.

26. Geologically, the site is identified as loess, alluvium and colluvium soils, with evidence of multiple shallow soil landslides on slopes greater than 25 deg and liquefaction-prone soils identified within the low-lying gullies and valleys.

3.2 Wastewater

27. Pukerua Bay is currently serviced by a network of gravity mains and pumping stations discharging to a trunk main along SH59 past Mt Welcome through Plimmerton, Mana, Aotea, Central Porirua to the Porirua Treatment works southwest of Titahi Bay. Mt Welcome will connect to the Trunk Main, which will also service the wider Northern Growth Area, including Muri Stage 1, Muri Block, and Plimmerton Farm Stage 1.

28. The existing trunk wastewater network is at capacity with significant overflows in Plimmerton and Mana. Significant development over the past two decades in Aotea and Whitby has used all the spare capacity in this trunk network.

29. The Te Awarua-o-Porirua Whaitua Implementation Programme, Plan Change 1 and Te Wai Ora o Pārirua – Porirua Harbour Accord collectively recognise wastewater overflows as a significant contributor to degradation of freshwater and harbour ecosystems and the common direction of these documents is to progressively reduce the frequency, volume and adverse effects of wastewater overflows with the ultimate objective of improving water quality, ecological health and mauri of Te Awarua-o-Porirua Harbour.

4 Infrastructure Servicing Summaries

4.1 Water Supply

30. Water supply for the NGA is sourced from the Hutt River and conveyed to NGA via the existing Bulk Water (supply) Mains.

31. Mt Welcome is currently not serviced for water, with the nearest point of connection being Gray Street within Pukerua Bay approximately 850 m north of Mt Welcome. The Pukerua Bay network is supplied via the Pukerua Bay reservoir.

32. Further to the general comments made earlier, Te Awarua-o-Porirua Whaitua Implementation Programme and Plan Change 1 recognise the importance of managing future growth in a manner that does not compromise the health of freshwater systems or the performance of existing water infrastructure. Accordingly, developments should incorporate water-efficiency measures to reduce unnecessary potable water demand, and, where practicable, include water conservation measures such as rainwater harvesting for non-potable use. These measures assist in supporting the long-term sustainability and resilience of the region's water resources.

4.2 Stormwater Management

4.2.1 Treatment and Hydrological Control

33. Tiaki Wai has reviewed the stormwater management aspects of the Mt Welcome application relevant to stormwater treatment and Hydrological Control and considers that the proposed approach does not demonstrate that adverse effects on the sensitive receiving environments of Te Awarua-o-Porirua Harbour, Taupō Stream and Kakaho Stream will be appropriately avoided, remedied or mitigated.

34. Tiaki Wai is a signatory to Te Wai Ora o Pārirua — the Porirua Harbour Accord and considers that the Mt Welcome application as proposed is not consistent with this commitment.

35. Tiaki Wai further notes that Te Rūnanga o Toa Rangatira has formally opposed three specific elements of the proposed stormwater design (the use of waterways for retention; the proposed offset approach; and the piping of Taupō Stream) and that the applicant has acknowledged these positions but has not changed their proposal to address them.

36. Tiaki Wai has identified the following fundamental consent-level matters that must be resolved before consent is granted: raingarden treatment sizing, the absence of true stormwater retention, the adequacy of the sediment mobilisation methodology, the absence of quantified cumulative receiving-environment assessment, and the need for an accepted Schedule 29 Stormwater Impact Assessment to inform the stormwater management approach. Secondly, there are design matters that must be resolved before Engineering Approval and before any stormwater assets are vested, including raingarden access, public/private drainage boundaries, maintenance requirements and constructability. Thirdly, consent notice controls are required to protect the assumptions on which the stormwater design relies, including impervious-area limits and source-control restrictions on zinc, galvanised steel, and copper building materials.

37. Tiaki Wai does not consider that the fundamental matters can be resolved through minor wording changes or deferred entirely to Engineering Approval. They require structural revisions to the stormwater management approach, including confirmation of treatment sizing, provision of retention through rainwater harvesting and/or infiltration where practicable, and a quantified assessment of cumulative effects on the receiving environment.

38. If consent were granted based on the current stormwater management approach, Tiaki Wai would not support vesting of the proposed public stormwater treatment or Hydrological Control devices, or transfer of any associated operational stormwater discharge consent, unless the matters identified in this section were resolved to Tiaki Wai's satisfaction.

39. For clarity, Tiaki Wai's position is that the current Stormwater Management Plan should not be accepted as the basis for consent. A revised Stormwater Management Plan is required before consent is granted, with subsequent Engineering Approval conditions addressing detailed design, construction, operation, maintenance, vesting and handover matters only after the consent-level stormwater effects have been resolved.

4.2.2 Flood Hazard – Hydraulic Neutrality

40. The NGA Structure Plan identifies flood hazards, stormwater management, and the protection of natural hydrological systems as key considerations for future urban development. It requires that growth be supported by appropriately designed infrastructure and environmental management measures.

41. Tiaki Wai has reviewed the Stormwater Management Plan and Flood Assessment and model build and does not consider that the proposed approach demonstrates that the development will not adversely affect the wider area flood hazard, in particular existing flooding downstream of the Taupō Swamp, as required under the Northern Growth Area Structure Plan.

42. It is not clear to Tiaki Wai that a consent based on the current flood modelling and stormwater strategy would achieve hydraulic neutrality and not exacerbate known flooding within the receiving catchment as such Tiaki Wai considers that this is a fundamental consent-level matter that must be resolved before consent is granted.

43. For clarity, Tiaki Wai's position is that the current flood modelling and Stormwater Management Plan should not be accepted as the basis for consent. A revised flood model and Stormwater Management Plan is considered to be required before consent is granted, with subsequent Engineering Approval conditions addressing detailed design, construction, operation, maintenance, vesting and handover matters only after the consent-level stormwater effects have been resolved.

4.2.3 Retention Wetlands

44. Tiaki Wai has reviewed the retention wetlands proposed for hydraulic neutrality. Further to the comments made regarding the flood modelling, the current Stormwater Management Plan which seeks to combine 'natural inland wetlands' achieving ecological mitigation with stormwater management devices is not supported by Tiaki Wai.

45. Tiaki Wai has identified the following fundamental consent-level matters that Tiaki Wai considers must be resolved before consent is granted: separation of stormwater management and ecological mitigation, a detailed stormwater optioneering assessment and an updated Stormwater Management Plan. Secondly, there are design matters that must be resolved before Engineering Approval and before any stormwater assets are vested, including access, public/private drainage boundaries, maintenance requirements and constructability.

46. If consent were granted based on the current Stormwater Management Plan, Tiaki Wai would not support vesting of the retention wetlands, or transfer of any associated operational stormwater discharge consent to Tiaki Wai.

47. Tiaki Wai further notes that Te Rūnanga o Toa Rangatira has formally opposed three specific elements of the proposed stormwater design (the use of waterways for retention; the proposed offset approach; and the piping of Taupō Stream) and that the applicant has acknowledged these positions but has not changed their proposal to address them.

48. For clarity, Tiaki Wai's position is that the current Stormwater Management Plan should not be accepted as the basis for consent. A revised Stormwater Management Plan is required before consent is granted, with subsequent Engineering Approval conditions addressing detailed design, construction, operation, maintenance, vesting and handover matters only after the consent-level stormwater effects have been resolved.

4.2.4 Stormwater Reticulation

49. Tiaki Wai has reviewed the stormwater management aspects of the Mt Welcome application relevant to stormwater reticulation.

50. Tiaki Wai considers that there are two fundamental consent-level matters that must be resolved before consent is granted: stormwater outfalls and staging. Secondly, there are design matters that must be resolved before Engineering Approval and before any stormwater assets are vested, including access, public/private drainage boundaries, maintenance requirements and constructability.

51. If consent were granted based on the current stormwater design, Tiaki Wai would not support vesting of the proposed public stormwater outfalls, until the consent-level stormwater matters have been resolved.

4.3 Wastewater

52. Tiaki Wai considers that the wastewater strategy does not demonstrate that the development will not adversely affect wastewater overflows to the sensitive receiving environments of Te Awarua-o-Porirua Harbour and Taupō Stream and Swamp.

53. Tiaki Wai is a signatory to Te Wai Ora o Pārirua — the Porirua Harbour Accord and does not consider that the information provided within Mt Welcome application is sufficient to demonstrate compliance with this commitment.

54. Tiaki Wai also notes that Te Rūnanga o Toa Rangatira has also formally raised concerns regarding the significant environmental effects of wastewater discharges and overflows on receiving waterways and ecosystems and has stated that any proposal must clearly demonstrate how these risks will be effectively addressed to safeguard the mauri of the waterways over the long term.

55. Tiaki Wai considers that the wastewater strategy is a fundamental consent-level matter that cannot be resolved through minor wording changes or deferred entirely to Engineering Approval, as Engineering Approval is expected to require structural revisions to the wastewater strategy to demonstrate the timing and delivery of any required mitigation.

56. Tiaki Wai has identified design matters that can be resolved through an Engineering Approval process and detailed design of the wastewater reticulation as well as consent notices to advise future lot owners where on-lot wastewater management (pumping stations) is required.

57. If consent were granted based on the current wastewater strategy, Tiaki Wai would not support connection to the wider public wastewater network until the matters identified in this section were resolved to Tiaki Wai's satisfaction.

58. For clarity, Tiaki Wai's position is that the current wastewater strategy should not be accepted as the basis for consent. A revised wastewater strategy supported by updated wastewater modelling is considered to be required before consent is granted, with subsequent Engineering Approval conditions addressing detailed design, construction, operation, maintenance, vesting and handover matters only after the consent-level wastewater effects have been resolved.

4.4 Water Supply

59. Tiaki Wai does not consider that the application demonstrates that a connection to Gray Street can be secured without impacting on the SNA and that this is a Fundamental Consent-Level Matter that should be addressed before consent is granted.

60. Tiaki Wai considers that the consent level matters water conservation, network pressures and network constraints can be resolved through conditions; however, these may impact on the development scheme plan and staging currently proposed and subsequently may require a s127.

61. Finally, Tiaki Wai considers that the water reticulation design and consent notice controls required to secure the environmental outcomes (sustainable water use), and to advise future lot owners where network performance requirements are not met, can be conditioned.

5 Fundamental Consent Level Matters

5.1 Stormwater Management (Treatment and Hydrological Control)

5.1.1 Water Sensitive Design

62. Water Sensitive Design is not simply the selection of stormwater management devices. It is a design process that should influence the location, layout, scale, and form of development to avoid or minimise stormwater impacts, with residual effects mitigated through treatment and Hydrological Control devices.

63. Tiaki Wai has not identified a clear options assessment in the application documents demonstrating how alternative stormwater management approaches were considered. In particular, the application does not appear to test alternative treatment configurations, rainwater harvesting at different scales, infiltration opportunities where geotechnically feasible, or catchment-scale trade-offs between source control, distributed devices and centralised stormwater management areas.

64. The dismissal of rainwater harvesting as “ineffective for a single catchment” is not supported by sufficient engineering analysis. Given previous work in this receiving environment indicating that rainwater harvesting with non-potable reuse can materially reduce post-development runoff volume, Tiaki Wai considers that the application should provide an options assessment demonstrating why rainwater harvesting, infiltration, or other source-control measures have not been adopted.

65. Tiaki Wai also considers that the final stormwater design must be tied to enforceable impervious-area assumptions. If the stormwater management system is designed based on assumed lot imperviousness, those assumptions should be secured through consent notices so that subsequent private development does not undermine the performance of the public stormwater system.

5.1.2 Stormwater Treatment and Raingardens

66. The application proposes stormwater treatment primarily through raingardens. The Stormwater Management Plan relies on pollutant removal rates associated with the Water Sensitive Design for Stormwater: Treatment Device Design Guideline, including high removal rates for total suspended solids, zinc, and copper.

67. Tiaki Wai does not accept that those pollutant-removal rates can be relied upon unless the raingardens are sized, configured and maintained in accordance with the guideline on which those performance assumptions are based. The current rain garden sizing appears to provide a filter media footprint of approximately 1.3% of contributing impervious area. In

contrast, the guideline requires bioretention filter media areas to be sized at 2% of contributing untreated impervious area[1].

68. Tiaki Wai considers that the raingardens should be resized to meet the 2% sizing requirement, or the applicant should provide a site-specific, evidence-based assessment demonstrating equivalent or better contaminant-removal performance. In the absence of that assessment, the claimed removal rates should not be relied upon for assessing effects on Te Awarua-o-Porirua Harbour, Taupō Stream or Kakaho Stream. Until these matters are resolved to Tiaki Wai's satisfaction, Tiaki Wai would not support vesting of the raingardens as public stormwater assets or the transfer of any associated operational stormwater discharge consent.

69. Any resizing of raingardens may affect the earthworks design, road layout, and scheme plan. Changes of that nature could not be accommodated through a consent condition alone — they would require modifications to the scheme plan and potentially a section 127 application to change the consent. Tiaki Wai therefore considers this to be a fundamental design matter that should be resolved before consent is granted, rather than deferred to detailed design.

5.1.3 Stormwater Retention and Extended Detention (Hydrological Control)

70. Hydrological control addresses changes in runoff volume, runoff frequency and stream erosion potential arising from increased imperviousness. It is distinct from hydraulic neutrality, which addresses peak-flow attenuation for specified design events. Achieving peak-flow hydraulic neutrality does not, by itself, demonstrate that hydrological effects have been mitigated.

71. The Greater Wellington Hydrological Control Guidance Note (September 2025) establishes a hierarchy that prioritises rainwater harvesting and non-potable reuse, followed by land disposal or infiltration where practicable, with extended detention providing supplementary mitigation. As a supplementary mitigation measure, extended detention cannot be treated as the retention component when runoff volume is neither retained nor reused.

72. The application does not currently demonstrate provision of the required retention component. The features described as retention wetlands temporarily store and release runoff and are therefore more accurately characterised as stormwater management areas providing attenuation and extended detention. The applicant's own modelling indicates increased runoff volume post-development, including a 40% increase in mean daily discharge to the Taupō Stream[2] and a significant increase in total runoff volume[3].

73. Tiaki Wai considers that the application should be revised to include retention through rainwater harvesting for non-potable use and/or infiltration where practicable, sufficient to meet the relevant Hydrological Control requirements. If the applicant continues to rely on

[1] Water Sensitive Design for Stormwater Treatment Device Design Guideline, December 2019, section 4.3.2.1

[2] Section 8.1.1 Appendix 18 — Hydrology Assessment, Pattle Delamore Partners, 17 November 2025

[3] Tables B1 and B2 Appendix 18 — Hydrology Assessment, Pattle Delamore Partners, 17 November 2025

extended detention alone, the application should clearly acknowledge that this does not provide retention and should assess the residual effects of increased runoff volume and frequency on downstream stream bank stability (sediment mobilisation), ecological values and cultural values. Until a compliant Hydrological Control approach is demonstrated to Tiaki Wai's satisfaction, Tiaki Wai will not support the vesting of any claimed retention or extended-detention devices as public stormwater assets.

5.1.4 Sediment Transport Methodology

74. Tiaki Wai does not consider that the sediment-transport assessment adequately supports the conclusion that sediment movement risk is reduced post-development. The assessment appears to rely on limited flow simulation, generic channel assumptions, and downstream assessment points that may dilute site-specific effects with off-site catchment flows. To support a conclusion that sediment mobilisation risk is reduced, the assessment would need to identify the range of flow events simulated and the stream reaches assessed, test the sensitivity of its conclusions to the assumed channel geometry and sediment supply, and validate those assumptions against observed conditions in the Taupō and Kakaho Streams.

75. Instead of focusing on complex sediment mobilisation assessments, Tiaki Wai considers that a conservative best practicable option Hydrological Control approach should be adopted, including on-lot rainwater harvesting for non-potable reuse, distributed retention or infiltration where feasible, and extended detention to the maximum practicable extent.

5.1.5 Stormwater Cumulative Effects

76. 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. This is particularly important because these developments discharge to the same sensitive receiving environments.

77. Tiaki Wai considers that the application should include runoff-volume assessments for Mt Welcome alone, Mt Welcome with the Muri Road block, and the combined development context including Plimmerton Farm Stage 1. Without this information, Tiaki Wai cannot be satisfied that the proposal appropriately addresses cumulative effects on Te Awarua-o-Porirua Harbour, Taupō Stream and Kakaho Stream.

5.1.6 Schedule 29 Stormwater Impact Assessment

78. Under the Greater Wellington Natural Resources Plan, a Stormwater Impact Assessment prepared in accordance with Schedule 29 is the mechanism through which stormwater treatment performance, Hydrological Control and receiving-environment outcomes are assessed together against the objectives of the Plan and the catchment-wide reduction targets of the Te Awarua-o-Porirua Whaitua Implementation Programme. Tiaki Wai has not identified an accepted Schedule 29 Stormwater Impact Assessment in the application documents, and the Stormwater Management Plan does not appear to have been developed from one.

79. Tiaki Wai considers that an accepted Schedule 29 Stormwater Impact Assessment must form the basis of the revised Stormwater Management Plan, developed in consultation

with PCC, Greater Wellington Regional Council, Te Rūnanga o Toa Rangatira and Tiaki Wai. Until an accepted Stormwater Impact Assessment is in place, the treatment, Hydrological Control and cumulative-effects conclusions relied upon in the application cannot be verified against the outcomes sought for Te Awarua-o-Porirua Harbour, Taupō Stream and Kakaho Stream.

5.2 Stormwater Management (Flood Hazard – Hydraulic Neutrality)

5.2.1 Flood Modelling

80. The flood modelling results provided within the application are limited to the site and immediate surrounds on the understanding that neutrality for peak flow stormwater discharge is sufficient to manage the flood risk within the receiving catchment.

81. As previously stated, volume control is not provided, and the applicant's modelling indicates increased post-development runoff volumes, including a 40% increase in mean daily discharge to the Taupō Stream, as well as increases of 14,761 m^3 and 28,129 m^3 (12.9% to 13.7%) in the 10% AEP and 1% AEP plus 20 % climate change events, respectively[4].

82. The applicant's approach ignores the potential impact of increased volume on the Taupō Swamp and downstream flooding. Tiaki Wai consider that the modelling should be extended to demonstrate the effect of the increased volume on the Taupō Swamp, discharges from the swamp and wider area flood hazard.

83. The Tiaki Wai Flood Modelling team have additionally raised a number of technical concerns regarding the flood modelling presented: how the difference in vertical datum was managed, how the 21 sub-catchments were changed to drain to a 2D point source, the basis for selecting the curve numbers, the initial losses and calculating the time of concentration, and how the hydrological parameters were established for the 586 sub-catchments added to the model. They additionally requested that a legend/key be added to Figure 19 to show the 50% and 100% impervious zones.

84. In addition, it is noted that:

    i. Catchments which discharge to the Kakaho East Stream are not discussed in the assessment.

    ii. Stormwater discharge from Lots 733 to 744, part Lot 2020 and Lots 767 to 772 are not included in the post development catchment areas and are not provided with any stormwater management.

    iii. Lots 783 to 792 and part Lot 2021 are incorrectly included within the post development catchment areas. These lots should be fully excluded as they discharge to the Kakaho East Stream. Again, these lots are not provided with any stormwater management.

85. Finally, it is not clear to Tiaki Wai how sedimentation of the proposed retention wetlands has been allowed for within the flood modelling. Greater Wellington Regional Council has confirmed that historical flooding in similar local catchments has generated high

[4] Appendix 4, Infodrainage Control Summary, Appendix 11 – Part A Stormwater Management Plan, Envelope Engineering, 11 March 2026

sediment loads, and that ongoing sediment deposition within the proposed retention wetlands should be expected. It is understood the applicant expects sedimentation to occur; however it is unclear how this has been allowed for in the flood modelling and retention wetland sizing.

86. It is not clear to Tiaki Wai that a consent granted based on the current flood modelling will not result in an increase in stormwater flooding in the receiving environment. Tiaki Wai considers that the flood modelling should be updated to address the comments above and extended to cover downstream of the Taupō Swamp to demonstrate no increase in flooding in the SH59, James Street and St Theresa's Church and School catchments.

87. Tiaki Wai does not consider that this fundamental matter can be resolved through minor wording changes or deferred entirely until Engineering Approval.

88. Tiaki Wai advises that granting consent ahead of updated flood modelling and a stormwater strategy may require changes to the scheme and potentially a section 127 application to change the consent.

5.2.2 Flood Hazard Cumulative Effects

89. 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. This is particularly important because these developments discharge to the same sensitive receiving environments, with the existing flooding experienced downstream of the Northern Growth Area.

90. Tiaki Wai considers that the flood modelling should include assessments for Mt Welcome, Mt Welcome with the Muri Road block, and the combined development context including Plimmerton Farm Stage 1. Without this information, Tiaki Wai cannot be satisfied that the proposal appropriately addresses cumulative effects on the receiving catchment.

5.3 Stormwater Management (Retention Wetlands for Hydraulic Neutrality)

5.3.1 Retention Wetlands – Stormwater Options Assessment

91. Tiaki Wai has not identified a clear options assessment or a safety in design assessment in the application documents demonstrating how alternative stormwater management approaches were considered. In particular, the application does not appear to test alternative stormwater detention at different scales, locations or configurations (on-lot devices, oversized pipes, dry basins in isolation or combined), or catchment-scale trade-offs between source control, distributed devices and centralised stormwater management areas.

92. The approach relies on significant earthwork embankments and whilst the application states that the consequence of embankment failure is negligible this does not appear to consider the ecological, environmental and operational costs associated with system failure. Tiaki Wai has sought advice from GWRC as managers of similar structures. GWRC advises that it is industry best practice to consider failure modes when designing flood protection structures. Breach and over-design event scenarios should be provided to

identify the potential consequences of these structures under extreme conditions. Given the elevation and location of the wetlands upstream of known flood-prone areas, including the Plimmerton roundabout, any adverse downstream or consequential effects of dam failure should be assessed an presented in a stormwater options assessment to support emergency management planning and decision-making.

93. In the absence of a detailed options assessment, it is unclear to Tiaki Wai that the option presented, which co-locates ecological mitigation and stormwater management and 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.

5.3.2 Retention Wetlands – Co-location of Ecological Mitigation and Retention Wetlands

94. The application proposes to create retention wetlands to achieve both ecological mitigation and stormwater management. These areas are proposed as a 'natural inland wetland's'.

95. Greater Wellington Regional Council has advised Tiaki Wai that if these wetlands are accepted as providing ecological mitigation, then they will be subject to adaptive management conditions under a GWRC operational stormwater discharge consent to ensure all ecological outcomes are met.

96. The applicant has presented these areas a 'all-purpose drainage reserves' subject to conservation covenants.

97. Tiaki Wai's role is to manage public stormwater infrastructure as it relates to conveyance and management of stormwater. Tiaki Wai is not the primary agency responsible for management of ecological systems, environmental/ecological mitigation or restoration programmes. The ecological management requirements and conservation covenants would restrict Tiaki Wai's ability to undertake maintenance work necessary to achieve stormwater management and, as such, the proposed stormwater strategy does not support vesting of the retention wetlands areas to Tiaki Wai.

98. Tiaki Wai considers that a updated Stormwater Management Plan is required to separate stormwater management and ecological mitigation.

5.3.3 Retention Wetland Maintenance Requirements

99. The proposal does not appear to account for the ongoing maintenance requirements of the proposed retention wetlands.

100. Tiaki Wai has sought advice from GWRC as managers of a number of retention/detention dams for flood protection purposes. GWRC has advised that, in its experience as owner of these types of assets, they require ongoing maintenance, including the clearance of post-flood debris and sediment. The applicant stated during the meeting held on 16 June that these areas will not require desilting; however, this does not appear to be supported within the flood modelling, retention wetland sizing or by management experience.

101. The Stormwater Management Plan advises that maintenance access of 3.0 metres width will be provided to and across the proposed retention wetland embankments to allow for desilting, maintenance and periodic inspection.

102. Tiaki Wai considers that 3 metres and access to the top of the embankments, which are elevated between 0.9 m and 3.7 m above the top water level in the wetlands and up to around 7 m above the outlet structures, is not sufficient. A minimum 4-metre-wide access corridor is required under the Water Sensitive Design for Stormwater: Treatment Device Design Guideline to accommodate maintenance vehicles and excavators used for inspection, sediment removal, vegetation management and maintenance.

103. Tiaki Wai requires that the access 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.

104. 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.

5.3.4 Retention Wetlands – Pre-treatment

105. The application appears to assume that all pollutants will be removed by the rain gardens and has not discussed the need for pre-treatment upstream of the retention wetlands. It is considered that the rain garden and retention wetlands serve different roles within the stormwater treatment train and that diversion and treatment of the water quality flows does not negate the need for pre-treatment upstream of the retention wetlands.

106. Pre-treatment in the form of a gross pollutant trap and/or sediment forebay is considered best practice upstream of the retention wetlands and is considered necessary to protect the retention wetlands and receiving environment from sediment, gross pollutants (litter, debris) and coarse material that may be included in the bypass flows.

107. Tiaki Wai does not consider that this fundamental matter can be resolved through minor wording changes or deferred entirely until Engineering Approval and recommends that pre-treatment, including associated access is addressed before consent is granted.

5.3.5 Retention Wetlands – Staging

108. The developer proposes the staged subdivision of the super lots to:

    i. deliver the development in Stages 1 to 21, where Stages 2, 3, 4, 5 and 16 are split into 2 stages each (2A, 2B, 3A, 3B, 4A, 4B, 5A, 5B, 16A and 16B).

    ii. establish retention wetlands A to E in Stages 4B, 5A, 21, 10 and 20 respectively:

109. With the exception of retention wetlands B and D (Stages 5A and 10), the proposal will see retention wetlands A, C and E delivered after the completion of significant upstream residential stages (Wetland A) and all upstream residential stages (Wetlands C and E). Stages 20 and 21 are the last two stages of the development and do not include any residential/commercial lots or associated infrastructure/roading — these stages are solely for establishment of the retention wetlands.

110. There is a delivery risk that the staging could result in the proposed retention wetlands not being established if the developer's financial capacity is reduced or exhausted.

111. It is not considered that the Stormwater Management Plan appropriately addresses the effects of a staged stormwater delivery - in particular one where retention wetlands are not established until after the catchment has been fully developed.

112. Tiaki Wai considers that the Stormwater Management Plan must demonstrate how stormwater management will be secured at each stage of the development. It is considered that this will require a change to the scheme plan and staging.

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

113. The stormwater management approach proposed within the application places Rain Garden 01 within the stormwater storage associated with Wetland B, meaning that the rain garden has a 1% chance of inundation in every given year. Whilst the Water Sensitive Design for Stormwater: Treatment Device Design Guidelines does not prohibit the location of rain gardens within inundation areas; it is not clear why separation cannot be achieved given that this is a greenfield development.

114. Tiaki Wai considers that co-location of the rain garden and stormwater storage is not best practice and will compromise the rain garden performance in large events and increase the long-term operation and costs associated with potential erosion of the rain garden (scour, displacement of surface mulch and filter media), inundation stress on the planting and clogging of the filter media and stormwater structures. In the absence of a clear stormwater options assessment, it is unclear to Tiaki Wai why Rain Garden 01 has to be located within the stormwater storage area and as such the design as presented is not supported by Tiaki Wai.

115. Tiaki Wai does not consider that this fundamental matter can be resolved through minor wording changes or deferred entirely until Engineering Approval and recommends that this is addressed through an updated Stormwater Management Plan before granting consent.

116. If consent were granted based on the current stormwater design, Tiaki Wai would not support vesting of the rain garden in its current location.

5.3.7 Retention Wetland D

117. The stormwater management approach proposed within the application places Wetland Area D above the Muri Road Development.

118. Tiaki Wai considers that Wetland D should be classified as a 'constructed wetland' rather than a natural inland wetland: this area does not receive any natural flows. As the wetland is not required for treatment purposes, is elevated above residential lots and is not a natural wetland it is not considered that it presents a best practice stormwater management device considering the location and outcomes required. As such the design as presented is not supported by Tiaki Wai.

119. Tiaki Wai does not consider that this fundamental matter can be resolved through minor wording changes or deferred entirely until Engineering Approval and recommends that

this is addressed through an updated Stormwater Management Plan before granting consent.

120. If consent were granted based on the current stormwater design, Tiaki Wai would not support vesting of Wetland D.

5.4 Stormwater Management (Reticulation)

5.4.1 Stormwater Reticulation - Outfalls

121. The proposal relies on stormwater discharges via overland flows below the housing development. Whilst the geotechnical report and Stormwater Management Plan have been updated to state that stormwater discharge will be managed by appropriate sediment and erosion control measures, the information provided is generic only, is not specific to the outfall locations, stormwater discharge velocities, or the receiving environment (slope and soil conditions). In a number of locations concentrated stormwater will be introduced in locations other than existing ephemeral channels, i.e. in places where stormwater would not typically be concentrated.

122. The Geotechnical report makes the following comments with regard to the site soils:

    i. The surficial soils include loess, alluvium, colluvium and residual soils ranging from 1 m to 5 m, and in some places up to 16 m below ground level.

    ii. There is evidence for multiple shallow soil landslides on slopes greater than 25 deg.

    iii. Overland flow should be directed away from existing slopes to reduce the risk of ponding and erosion leading to slope stability concerns.

    iv. Loess soils may be present and will require specific design.

123. In addition, Tiaki Wai notes that:

    i. The stormwater outfalls below Lots 1311 and 1321 create point discharges at the property boundary, with concentrated flows directed onto land outside of the development.

    ii. The stormwater outfall associated with Lot 1311 will discharge stormwater uphill of residential lots created on the Muri Road Block.

    iii. The stormwater outfall below Lot 1310 results in increased flood depths and velocities on property outside of the subdivision.

    iv. The stormwater outfalls from Stages 8, 11 to 15, 16A and 16B, and 17 to 19 all discharge to Lot 5003, which is understood to remain private operational farmland.

    v. The proposal only allows for pedestrian access along the pipe route to all of the outfall locations.

124. Tiaki Wai has sought advice from Porirua City Council as current owners of similar assets. Porirua City Council has stated their concerns about the long-term effects of stormwater outfalls that discharge flows overland. Council's experience has shown that even relatively small stormwater catchments can cause significant erosion, sediment generation, slope instability, infrastructure damage, and ongoing maintenance liabilities and that these issues can occur despite engineered erosion protection measures. Such issues may not become apparent until years after construction.

125. Tiaki Wai considers that the Stormwater Management Plan must be updated to demonstrate appropriate stormwater outfalls that minimise the potential for scour and erosion within the receiving catchment and risk to downhill property, in particular:

    i. Concentrated stormwater discharge cannot occur at the development boundary,

    ii. Stormwater cannot be discharged to land uphill of any current/future residential development.

    iii. Stormwater discharges cannot increase the off-site flood hazard,

    iv. All outlets must be extended to the bottom of the gully or to an ephemeral watercourse.

    v. Appropriate access for ongoing inspection, operation and maintenance must be achieved.

126. If consent were granted based on the current stormwater design, 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.

5.4.2 Stormwater Reticulation - Scheme Staging

127. The applicant proposes to undertake an initial subdivision of the site to create superlots 5000, 5001, 5002 and 5003, with Lots 5000, 5001 and 5002 subject of further subdivision, whilst Lot 5003 will be a balance farm lot of 105.5476 ha.

128. The applicant's proposed stormwater management system will require a number of stormwater outfalls to be constructed within Balance Lot 5003. Subdivision of Balance Lot 5003 will create issues for the delivery of the stormwater outlets, which will require negotiation with the owner of Lot 5003 to secure the outfalls and associated accesses and easements. Securing the stormwater outfalls, accesses and/or easements after subdivision of Lot 5003 represents a risk.

129. Tiaki Wai considers that a change to the scheme plan and staging will be required to secure the outfalls within Lot 5003.

5.5 Wastewater

5.5.1 Wastewater Modelling

130. The application is presented on the basis that the development does not increase wastewater overflows to the receiving environment and that mitigation (trunk main upgrades and on-site storage) is not required until the Muri Road Block is brought forward. The infrastructure report recommends further review of the modelling at Stage 10, after completion of the first 541 residential lots and commercial lot.

131. Tiaki Wai does not consider that the wastewater modelling provided to support the application can be relied upon to demonstrate that the development does not result in increased wastewater overflows and that further review can be deferred until Stage 10. In particular, the model:

    i. only considers the trunk network as far as Pump Station 13 (just south of the SH59 / James Street roundabout) on the basis that, as the pump rate does not change, there will be no changes downstream. This approach ignores the fact that the wastewater

volume and therefore pump duration will be increased, with potential impacts on the downstream overflows.

ii. does not include either the Muri Road Stage 1 or Plimmerton Farm Stage 1 developments and therefore the cumulative effects across the NGA Structure Plan area are not assessed.

132. Tiaki Wai additionally notes that, in presenting the modelling results, the application has assumed that:

i. surcharge of the trunk main is acceptable without providing a review of the as-built data to confirm the actual overflow risk; and

ii. surcharging of the trunk main will not impact on the Ulric Street or Plimmerton Farm Stage 1 trunk main connections (refer to the Wastewater Assessment Context Section below).

133. The wastewater model has been used to support the mitigation concept proposed within the application, being trunk main upgrades and on-site wastewater storage located within Stage 1, Lot 1300. The on-site storage is identified as being between 380 m^3 and 1,940 m^3, subject to confirmation of the development wastewater discharge. A concept design has not been provided to demonstrate how the storage volume would be achieved on Lot 1300.

134. As above, Tiaki Wai does not consider that the wastewater modelling provided to support the application can be relied upon and therefore does not consider that the application has demonstrated the volume of mitigation required, and in the absence of a concept design, has demonstrated that the volume can be achieved within the land area allocated.

135. Therefore, it is not clear to Tiaki Wai that a consent granted based on the current wastewater strategy will not result in an increase in wastewater overflows to the receiving environment. Given the cultural values associated with Te Awarua-o-Porirua Harbour and Taupō Swamp and Stream, Tiaki Wai considers that the wastewater modelling should be updated before granting consent, with an updated wastewater strategy and concept design provided to demonstrate that any wastewater mitigation can be achieved, subject to Tiaki Wai approval.

136. Tiaki Wai does not consider that this fundamental matter can be resolved through minor wording changes or deferred entirely until Engineering Approval.

137. Tiaki Wai advises that granting of the consent would require an updated wastewater strategy ahead of any works commencing on site and that the assessment may require changes to the scheme and potentially a section 127 application to change the consent.

5.5.2 Wastewater Cumulative Effects

138. The application should quantify the cumulative wastewater 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. This is particularly important because these developments discharge to the same sensitive receiving environments.

139. Tiaki Wai considers that the application should include wastewater assessments for Mt Welcome, Mt Welcome with the Muri Road Block, and the combined development

context including Plimmerton Farm Stage 1. Without this information, Tiaki Wai cannot be satisfied that the proposal appropriately addresses cumulative effects on Te Awarua-o-Porirua Harbour and the Taupō Swamp and Stream.

5.6 Water Supply

5.6.1 Water Reticulation – Gray Street Connection

140. As well as being required in the short term to allow development ahead of the NGA 3.7 ML reservoir, a connection to the existing water supply reticulation in Gray Street is required in the long term to provide resilience to the lower stages of the development (Stages 1 to 5A).

141. Whilst the updated information provided on 02 July 2026 includes a proposed alignment for the water connection, this does not take into consideration the public wastewater main located within the highway berm and the required clearances between the wastewater, water main and Significant Natural Area (SNA).

142. Tiaki Wai does not consider that the application provides sufficient information to demonstrate that the required water connection can be secured within the State Highway corridor, given the presence of the existing wastewater main and SNA. It is not considered that this can be resolved through minor wording changes or deferred entirely to Engineering Approval.

143. If consent were granted, a s127 may be required if the water service from Gray Street cannot be secured without impact on the SNA.

144. For clarity, Tiaki Wai's position is that the further information should be provided before granting consent to demonstrate appropriate water servicing can be secured to service the development.

6 Infrastructure Servicing Other Matters

6.1 Stormwater Management (Treatment and Hydrological Control)

6.1.1 Engineering Approval and Vesting Matters

6.1.1.1 Raingarden Maintenance Access

145. The Stormwater Management Plan advises that maintenance access of 3.0 metres width at a maximum gradient of 1V:6H will be provided to all centralised bioretention devices. Tiaki Wai considers that 3 metres is insufficient. A minimum 4-metre-wide access corridor is required to accommodate maintenance vehicles and excavators used for media replacement and inspection of vested bioretention devices[5].

146. In addition to width, the access assessment should confirm safe operating conditions for each raingarden, including that working areas are not immediately adjacent to steep fill or cut slopes, and that raingarden plan dimensions are achievable within the reach of

standard construction and maintenance equipment. The updated Stormwater Management Plan should include an access assessment for each raingarden concept design, confirming that the earthworked platforms provide acceptable construction and maintenance access. Tiaki Wai will not support vesting of raingardens where adequate access cannot be demonstrated.

6.1.1.2 Joint Access Lot Classification

147. The concept servicing drawings show raingardens and stormwater infrastructure that treats runoff from Jointly Owned Access Lots (JOALs) as part of the public stormwater network. JOALs are private access ways serving multiple lots; drainage from JOALs is typically classified as private drainage and does not form part of the public network. Whilst Tiaki Wai supports the use of private infrastructure to manage stormwater from JOALs, private systems cannot form part of the public stormwater network without a formal agreement, and Tiaki Wai may not accept operational responsibility for the treatment of private drainage within a public asset.

148. The application should clearly delineate the boundary between public and private stormwater infrastructure, confirm the drainage classification of all JOALs, and demonstrate that any device proposed for vesting as a public asset treats only public-catchment runoff. Where a private drainage component is unavoidable, an appropriate servicing arrangement acceptable to Tiaki Wai must be agreed before Engineering Approval. Tiaki Wai considers that the current servicing arrangement, as shown, may not be acceptable and will require amendment in the updated Stormwater Management Plan.

6.1.2 Title and Condition Controls — Imperviousness Assumptions

149. Tiaki Wai has identified an internal inconsistency in the imperviousness assumptions used across the application documents. The hydrological model adopts impervious fractions of 75% for residential lots, 85% for roads and 90% for the commercial area. The raingarden sizing calculations use materially lower effective impervious fractions, giving average values of approximately 47% for residential lots and 68% for roads.

150. The practical effect is that the raingarden device areas are sized on a smaller impervious base than the assumptions that govern the hydrology model. The undersizing identified as a fundamental issue is therefore more significant than it first appears. No landscaping plans have been provided with the application to verify the pervious area assumptions or to confirm that Water Sensitive Urban Design outcomes will be achieved on individual lots. Tiaki Wai considers that a single, enforceable impervious-area assumption must underpin all elements of the stormwater management design, and that consent notices on individual lot titles must secure this.

6.1.3 Title and Consent Notice Controls — Zinc and Copper Building Materials

151. Tiaki Wai considers that source-control measures are necessary to protect the receiving environment and to ensure the long-term performance of the stormwater management system. These should include restrictions on exposed zinc, galvanised steel and copper roofing, cladding and spouting materials, consistent with the direction of Plan Change 1 to the Natural Resources Plan.

152. Tiaki Wai also considers that consent notices should secure maximum impervious-area assumptions, rainwater-harvesting requirements, non-potable reuse connections, and restrictions on contaminant-generating building materials. This implements the source-control intent of Proposed Plan Change 1 at the individual lot level and provides durable protection for the receiving environment that cannot be achieved through applicant-level stormwater devices alone.

6.2 Stormwater Management (Flood Hazard – Hydraulic Neutrality)

6.2.1 Engineering Approval – Flood Management During Staging

153. The application provides an overarching flood management strategy demonstrating hydraulic neutrality for peak flow will be achieved upon completion of the development, stating that the retention wetlands will come forward during the earthwork's stages (as functional structures but not established with planting etc) to ensure neutrality is achieved at each stage.

154. There is, however, some discrepancy between the earthwork staging (Table 5 of the ECMP), the earthworks plans and staging plans; for example, Wetland E will not be delivered until Stage 6B; however, under Table 1 of the ECMP, earthworks Stage 6A (scheme plan Stages 11, 13 and 14) will be delivered ahead of the wetland. The Stage 3 earthworks include part of scheme plan Stage 12 and a potential change of stormwater runoff catchment, even though Stage 12 will not be delivered until Stage 6B.

155. Tiaki Wai has not been able to identify how neutrality will be achieved as each stage of the development comes forward, with potential implications for the scheme layout, earthworks and earthworks management plan.

156. Tiaki Wai considers that further detail/co-ordination of the scheme plan, earthworks plan and earthworks construction management plan is required to demonstrate appropriate stormwater management at each stage of the development.

157. Tiaki Wai considers that the changes are largely related to co-ordination and timing of the works proposed and therefore that this can be resolved through appropriate conditions on the consent which require detailed earthworks plans, an updated and co-ordinated earthworks construction management plan andstaging plan to be provided for the entire development at the time of Engineering Approval and before construction of any works on site.

6.2.2 Title and Condition Controls — Imperviousness Assumptions

158. No landscaping plans have been provided with the application to verify the pervious area assumptions or to confirm that Flood Modelling outcomes will be achieved on individual lots. Tiaki Wai considers that a single, enforceable impervious-area assumption must underpin all elements of the stormwater management design, and that consent notices on individual lot titles must secure this.

6.3 Stormwater Management (Retention Wetlands)

6.3.1 Retention Wetland – Cultural Matters and Monitoring

159. Tiaki Wai notes that Te Rūnanga o Toa Rangatira has identified concerns with the use of waterways for stormwater management, the proposed offset approach, and the piping of Taupō Stream. The application acknowledges these matters but does not appear to modify the proposal in response.

160. Given the cultural values associated with Te Awarua-o-Porirua Harbour, Taupō Stream and Kakaho Stream, Tiaki Wai considers that the Stormwater Management Plan should be revisited with mana whenua input. This should include consideration of a mātauranga Māori-informed monitoring framework aligned with the Porirua Harbour Accord, as well as any iwi-led mauri-ora monitoring approach being developed for the harbour catchment.

6.4 Stormwater Management (Reticulation)

6.4.1 Engineering Approval and Vesting – Stormwater Reticulation

161. The proposed layout appears to be generally consistent with the RSWS. Tiaki Wai considers that the stormwater reticulation details, other than the matters raised in this section, can be addressed through Engineering Approval with appropriate conditions for design, implementation and post-construction testing of the network to demonstrate appropriate stormwater servicing to each lot.

6.5 Wastewater

6.5.1 Consent-Level Matters - Wastewater Gravity vs Pumped Connections

162. The application states that there will be six public pump stations, including Pump Station 1 (PS1), which will provide primary storage for wastewater mitigation, and the remaining five servicing local low points where gravity discharge is not feasible. There will be a further 63 lots to be serviced by private low-pressure sewer pumps connected to public low-pressure sewer mains in preference to multiple small-public pumping stations. Low-pressure wastewater mains will be vested with Tiaki Wai, with private pump stations on each lot.

163. The application does not appear to include on-lot wastewater modelling or an optioneering report that justifies the design and demonstrates the opportunities and constraints to minimise the lots where pumped systems are required.

164. If consent were granted based on the current wastewater design, Tiaki Wai would not support vesting of the public wastewater network unless supported by a wastewater servicing assessment demonstrating that the number of lots requiring pumping has been minimised. The assessment would need to address constraints and opportunities, be supported by modelling and be approved in writing by Tiaki Wai prior to earthworks commencing for any of the development stages.

165. Tiaki Wai considers that the wastewater network design can be secured by conditions requiring a wastewater servicing strategy supported by modelling to be provided for the entire development at the time of Engineering Approval and prior to any earthworks commencing.

6.5.2 Engineering Approval and Vesting – Wastewater Reticulation

166. The proposed layout appears to be consistent with the RSWS. Tiaki Wai considers that the wastewater reticulation details can be addressed through the Engineering Approval with appropriate conditions for the design, implementation (including connections) and post-construction testing of the network to demonstrate appropriate wastewater servicing to each lot.

6.5.3 Consent Notices — Wastewater Development Constraints

167. Tiaki Wai considers that consent notices should secure any development restrictions associated with the wastewater mitigation design (one dwelling per lot).

168. Tiaki Wai supports granting of consent subject to conditions advising future lot owners of the need for on-lot pumping (where required).

6.6 Water Supply

6.6.1 Consent-Level Matters

6.6.1.1 Sustainable Water Use

169. Tiaki Wai has not been able to identify how the application incorporates water conservation measures to preserve water resources and their mauri.

170. Given the clear guidance in the WIP and Plan Change 1, and the previous work in this catchment, Tiaki Wai considers that the application should be revised to include on-lot rainwater harvesting for non-potable reuse.

171. Tiaki Wai considers that on-lot rainwater harvesting and water metering should be conditioned, with the conditions requiring a preliminary design to be provided at the time of Engineering Approval to demonstrate the principles of the system for the future lot owners. In addition, a consent notice should be placed on the land title to ensure implementation of an approved solution at the time of building construction.

172. If consent were granted based on the current application (without water conservation), then Tiaki Wai would not support connection of Mt Welcome to the public water supply network.

6.6.1.2 Non-Compliant Water Pressures

173. The application states that there will be 29 lots (Lucas Block – southern end) with a modelled pressure of 24 m (just below the 25 m required by the RSWS[5]) and 3 lots with modelled pressures of 90 – 96 m (slightly above the 90 m maximum required in the RSWS[6]).

[5] Regional Standard for Water Services v3.1, Table 6-1

[6] Regional Standard for Water Services v3.1, section 6.2.8.1 and Table 6-1. Also refer to the Water Sensitive Design for Stormwater: Treatment Device Design Guideline for stormwater device maintenance access requirements.

174. The application does not appear to include water modelling that justifies the design presented or a water services strategy that demonstrates opportunities and constraints to minimise the lots where non-compliant pressures are achieved.

175. If consent were granted based on the current water supply design, Tiaki Wai would not support vesting of the public water supply network unless supported by a water servicing assessment demonstrating that the number of lots where compliant pressures are not achieved has been minimised. The assessment would need to address constraints and opportunities, be supported by modelling, and be approved in writing by Tiaki Wai prior to earthworks commencing for any of the development stages.

176. Tiaki Wai considers that the water network design can be secured by conditions which require a water supply strategy supported by modelling to be provided for the entire development, at the time of Engineering Approval and before earthworks on any stage, along with consent notices requiring on-lot mitigation on land titles where compliant pressures cannot be met.

6.6.1.3 Connection Limitations – Water Network Resilience

177. Tiaki Wai advises that the application has correctly identified the network resilience constraints limiting the number of properties serviced via a single water connection to 50[6] and supports an interim secondary connection for the initial stages (up to 200 lots) via a connection from the Bulk Water Main extension, to be installed before delivery of the 51st Lot.

178. Tiaki Wai supports a consent which conditions an appropriate secondary water supply connection to be installed and commissioned before delivery of the 51st lot, and every 50 lots thereafter.

179. Tiaki Wai advises that the updated staging presented on 02 July 2026 has 54 Lots within Stage 1 and therefore granting consent based on the current staging will require either the interim secondary connection ahead of s224 for Stage 1, or a s127 application to change the consent.

6.6.1.4 Connection Limitations – Pukerua Bay Water Reservoir

180. In the short term, before delivery of the proposed 3.7 ML Mt Welcome / Muri Block, the development will be supplied solely from the Pukerua Bay reservoir.

181. The updated documentation provided on 02 July 2026 revised the number of lots able to be serviced via the Pukerua Bay reservoir to between 200 and 237. It revised the scheme plan to reflect these numbers.

182. Tiaki Wai advises that only 200 lots will be able to be serviced via the Pukerua Bay Reservoir. There is 0.8 ML spare capacity within the Pukerua Bay reservoir which will allow connection of an additional 326 residential lots without reducing the level of service for domestic and firefighting water storage. The spare allocation available for Mt Welcome is therefore 326 minus 44 infill lots minus 82 lots accepted under Muri Stage 1, leaving only 200 connections available for Mt Welcome. The application identifies connections for 46 Lots within Muri Road Stage 1 (those below RL100) and 44 infill lots, but ignores the dispensation provided for a further 36 of the Muri Road Stage 1 to be supplied from the Pukerua Bay reservoir (RC8763 conditions (51), (52) and (53)).

183. Tiaki Wai retains full discretion over where and how connections are made to the public network and recommends that the consent be subject to conditions which:

    a. Limit connection to the Pukerua Bay reservoir to 200 residential lots,

    b. Require installation and commissioning of the NGA 3.7 ML reservoir before connection of the 201st Lot.

184. The application does not provide any comment on the water demand for the commercial lot and Tiaki Wai will not accept connection of the commercial lot until the NGA 3.7 ML reservoir and supporting infrastructure has been installed.

185. Tiaki Wai advises that the staging presented within the current application only supports development of Stages 1 to 3B (190 lots) ahead of the NGA 3.7 ML reservoir. Tiaki Wai considers that connecting additional lots (up to the 200 allowed) will require a revised scheme plan/staging and potentially a section 127 application to change the consent.

6.6.1.5 Connection Limitations – Bulk Water Supply Main

186. The application does not appear to include consideration of the existing Bulk Water Supply Main capacity constraints.

187. The Zone Management Plan confirms that the existing bulk water main does not have sufficient capacity to service full Northern Growth Area build-out under peak demand conditions, even where interim storage is provided. Tiaki Wai's water modelling team has confirmed that connection of 152 lots (82 lots supplied via the Pukerua Bay reservoir with a further 70 lots supplied via the new NGA 3.7 ML reservoir when installed), 500–870 lots (Plimmerton Farm Stage 1) and 200 lots (Mt Welcome) will cause the Pukerua Bay reservoir to drop to 60–70%, below the acceptable operating range of 80–100%.

188. Tiaki Wai advises that the reduced level of service can be accepted in the short term (as initial stages of the development come forward) and, in the long term, will be addressed by upgrades to the bulk network (installation of the Belmont Booster Pump). However, the rate at which connections are brought forward requires management to ensure water is available when required. Tiaki Wai advises that connections brought forward ahead of the bulk main upgrades would not be accepted.

189. To ensure appropriate timing of the upgrade requirements, Tiaki Wai supports a consent which conditions that the consent holder provide Tiaki Wai with a 5-year development programme before commencement of the 201st lot and every subsequent block of 200 thereafter, with the development programme identifying the anticipated rate and timing of the development water supply connections.

190. The development programme will be used to manage the Bulk Water Main Supply upgrades to ensure appropriate water supply to the Northern Growth Area as development comes forward.

6.6.2 Engineering Approval and Vesting – Water Reticulation

191. The proposed layout appears to be consistent with the RSWS and SNZ PAS 4509-2008 Fire Fighting Water Supplies. Tiaki Wai considers that the water reticulation details can be addressed through the Engineering Approval with appropriate conditions for the design, implementation (including metered connections) and post-construction testing of the network to demonstrate appropriate water servicing to each lot.

192. Tiaki Wai notes that portions of the key water infrastructure (new NGA 3.7 ML reservoir, bulk mains extension through Muri Block, gravity water supply mains through Muri Block) are being delivered by the Muri Block developer under RCA24215. These services are fundamental to the water servicing for Mt Welcome. Tiaki Wai supports a consent which explicitly conditions these requirements with advice notes clarifying the delivery expectations (that delivery will require co-ordination with the Muri Block developer) and outlining the requirement for Bulk Water Services to comply with the Tiaki Wai Asset Owner Requirements (as separate to the Regional Standard for Water Services).

6.6.3 Consent Notices — Water Development Constraints

193. The application correctly identifies that the new NGA 3.7 ML reservoir has been sized to cater for 1500 new dwellings at 3.5 residents per dwelling (1500 dwellings @ 3.5 people/dwelling @ 700 L/person/day = 3.7 ML). Tiaki Wai considers that consent notices should secure 1 dwelling per lot in accordance with the reservoir design limitations.

194. Tiaki Wai supports a consent which is subject to conditions advising future lot owners of the need for water conservation measures and on-lot mitigation measures (booster pumps or pressure-reducing valves) where required.

6.7 Easements

195. Tiaki Wai has reviewed the proposed scheme and, further to the comments raised above, makes the following additional comments in relation to the scheme plan presented in support of the application. These comments are provided to support Porirua City Council's comments:

196. It is not likely that Tiaki Wai will accept ownership of land parcels other than those whose primary purpose is to provide for three waters infrastructure.

197. Easements in Gross over public water, wastewater and stormwater within private lots, including JOALs – whilst easements are shown on the scheme plan, the locations/widths of these need to be confirmed post construction.

198. Easements in Gross will be required to secure all access requirements where these are separate from the public drainage routes – these appear to be missing from the current scheme plan.

199. Easements in Gross will be required to secure all secondary overland flow paths, in particular all flow paths across open land/hill slopes between stormwater outfalls and natural water bodies – these appear to be missing from the current scheme plan.

200. Review and update of the scheme plan is recommended before granting consent to ensure all future landowner expectations are clearly understood and to demonstrate that all appropriate easements/accesses can be obtained.

7 Infrastructure Servicing Conclusion and Required Revisions

7.1 Stormwater Management

7.1.1 Treatment and Hydrological Control

201. Tiaki Wai considers that the current stormwater management approach does not yet demonstrate acceptable stormwater treatment or Hydrological Control outcomes for the receiving environment. In particular, the proposal relies on raingardens that appear undersized for the claimed pollutant-removal rates, does not provide a legitimate retention component, and does not quantify cumulative effects in the context of the wider Northern Growth Area and other developments discharging to the same receiving environments.

202. Tiaki Wai recommends that the Stormwater Management Plan be revised before consent is granted. The revised plan should be supported by an accepted GWRC Schedule 29 Stormwater Impact Assessment that includes a thorough options assessment and developed through engagement with PCC, Greater Wellington Regional Council, Te Rūnanga o Toa Rangatira, and Tiaki Wai.

203. At a minimum, the revised stormwater management approach must demonstrate the following before consent is granted:

    i. Treatment: raingardens sized at not less than 2% of contributing untreated impervious area in accordance with the Water Sensitive Design for Stormwater: Treatment Device Design Guideline, with any alternative sizing supported by a site-specific, evidence-based assessment demonstrating equivalent or better contaminant-removal performance;

    ii. Hydrological Control: provision of the required retention depth through rainwater harvesting and non-potable reuse and/or infiltration where practicable, in accordance with the Greater Wellington Hydrological Control Guidance Note (September 2025), with extended detention as supplementary mitigation only;

    iii. Cumulative effects: runoff-volume assessments for Mt Welcome alone, Mt Welcome with the Muri Road block, and the combined development context including Plimmerton Farm Stage 1;

    iv. Impervious area: enforceable consent notices on individual lot titles securing the maximum impervious area assumptions used in the stormwater management design;

    v. Source control: consent notices on individual lot titles restricting exposed zinc, galvanised steel and copper building materials;

    vi. Stormwater Impact Assessment: an accepted GWRC NRP Schedule 29 SIA forming the basis of the revised Stormwater Management Plan, developed in consultation with PCC, GWRC, Te Rūnanga o Toa Rangatira and Tiaki Wai; and

    vii. Cultural matters: demonstration of how the concerns raised by Te Rūnanga o Toa Rangatira (the use of waterways for stormwater management, the proposed offset

approach and the piping of Taupō Stream) have been addressed, together with a mātauranga Māori-informed monitoring framework developed with mana whenua and aligned with the Porirua Harbour Accord.

7.1.2 Flood Hazard - Hydraulic Neutrality

204. Tiaki Wai considers that the flood modelling used to support the stormwater management approach presented within the application does not demonstrate that the development will achieve hydraulic neutrality and not increase flooding within the wider catchment.

205. Tiaki Wai recommends that the flood modelling and stormwater management approach be revised before consent is granted, with the flood modelling developed through engagement with PCC, Greater Wellington Regional Council, Te Rūnanga o Toa Rangatira, and Tiaki Wai.

206. At a minimum, the flood modelling and stormwater management should:

    i. Extend the flood model so that the effects of the retention wetlands and increased volume released over a longer duration on flooding downstream of Taupō Swamp are demonstrated,

    ii. Address the technical queries Tiaki Wai has regarding the existing model.

    iii. Consider the cumulative effect of all development in the Northern Growth Area.

207. In addition, Tiaki Wai recommends that any consent granted include conditions requiring that the earthworks and earthworks construction management plan be revised and supported by a staging plan which clearly demonstrates appropriate stormwater management at all stages of the development.

7.1.3 Retention Wetlands

208. Tiaki Wai considers that the current stormwater management approach does not yet demonstrate acceptable stormwater management that can be vested to Tiaki Wai for long term operation and maintenance. In particular, the proposal relies on co-location of ecological and stormwater management by creating large earthwork embankments with upstream ponded water levels.

209. Tiaki Wai recommends that the Stormwater Management Plan be revised before consent is granted. The revised plan should be supported by an accepted GWRC Schedule 29 Stormwater Impact Assessment and developed through engagement with PCC, Greater Wellington Regional Council, Te Rūnanga o Toa Rangatira, and Tiaki Wai.

210. At a minimum, the revised stormwater management approach must demonstrate the following before consent is granted:

    i. A detailed optioneering assessment, in particular separating ecological and stormwater management.

    ii. Pre-Treatment.

    iii. Impervious area: enforceable consent notices on individual lot titles securing the maximum impervious area assumptions used in the stormwater management design;

iv. Impact Assessment: an accepted GWRC NRP Schedule 29 SIA forming the basis of the revised Stormwater Management Plan, developed in consultation with PCC, GWRC, Te Rūnanga o Toa Rangatira and Tiaki Wai; and

v. Cultural matters: demonstration of how the concerns raised by Te Rūnanga o Toa Rangatira (the use of waterways for stormwater management, the proposed offset approach and the piping of Taupō Stream) have been addressed, together with a mātauranga Māori-informed monitoring framework developed with mana whenua and aligned with the Porirua Harbour Accord.

7.2 Wastewater

211. Tiaki Wai considers that the wastewater strategy presented within the application does not demonstrate that the development will not result in increased wastewater overflows to the receiving environment.

212. Tiaki Wai recommends that the wastewater strategy be revised before consent is granted, with the wastewater strategy developed through engagement with PCC, Greater Wellington Regional Council, Te Rūnanga o Toa Rangatira, and Tiaki Wai.

213. At a minimum, the wastewater servicing strategy should:

i. Extend the wastewater model so that the effects of the increase in volume downstream of PS13 are demonstrated,

ii. Include Muri Rd Stage 1 and Plimmerton Farm Stage 1,

iii. Include a concept design for any wastewater mitigation,

214. Further, Tiaki Wai recommends:

i. conditions on the consent which require a wastewater servicing strategy for the entire site supported by modelling at the time of Engineering Approval and before any works, including earthworks, commencing on site and development in accordance with the catchment constraints.

ii. Consent Notices on the Land Titles limiting development to 1 dwelling per lot, and on-lot wastewater management (pumping) where required.

7.3 Water Supply

215. Tiaki Wai considers that the water servicing presented within the application is not supported by an assessment demonstrating how water conservation will be achieved, appropriate staging, how the water service from Gray Street will be secured, and opportunities and constraints for minimising non-compliant pressures.

216. Tiaki Wai considers that the majority of these can be achieved through:

i. conditions on the consent which require on-lot rainwater harvesting for re-use, a water servicing strategy for the entire site supported by modelling at the time of Engineering Approval and before any works, including earthworks, commencing on site and development in accordance with the catchment constraints.

ii. Consent notices on land titles limiting development to one dwelling per lot, requiring rainwater harvesting on all lots, and on-lot mitigation measures where compliant pressures are not met.

217. Whilst most items can be conditioned, Tiaki Wai considers that further information should be provided before granting consent to demonstrate appropriate water servicing can be secured to service the development, and that the applicant may want to review the scheme and staging plan to avoid the need for a s127 post-issue of the consent

8 Appendices

A. Summary table of the matters raised in the Tiaki Wai comments

Issue #	Issue	Applicant's Proposal	Tiaki Wai Comments	Required Outcome	Analysis / Redesign Requirements
SUMMARY TABLE OF MATTERS RAISED IN TIAKI WAI COMMENTS - FUNDAMENTAL CONSENT LEVEL MATTERS					
F1	**Stormwater Management - Water Sensitive Design**		No clear options assessment; the dismissal of rainwater harvesting as "ineffective for a single catchment" is not supported by analysis.		Provide an options assessment testing alternative treatment configurations, rainwater harvesting at different scales, infiltration and catchment-scale trade-offs; tie the design to enforceable impervious-area assumptions.
F2	**Stormwater Management - Treatment and Rain Gardens**	Raingardens undersized at ~1.3% instead of required 2% of contributing impervious area.	Design calculations are not supported by any national treatment guidance. All raingardens for treatment to be sized in accordance with Wellington Water's Water Sensitive Design for Stormwater: Treatment Device Design Guideline.	Treatment to be provided in accordance with Wellington Water's Water Sensitive Design for Stormwater: Treatment Device Design Guideline	TW considers that stormwater treatment can be achieved via raingardens designed in accordance with Wellington Water's Water Sensitive Design for Stormwater: Treatment Device Design Guideline. Significant redesigns are required, so the required Stormwater Management Plan will need to be updated and approved by Tiaki Wai and ideally developed with combined workshops with PCC, Ngāti Toa and Tiaki Wai prior to granting consent. Once acceptable concept designs have been developed, they will still require a detailed design consent condition requiring timing to state prior to lodgement of the plan for Engineering approval.
F3	**Stormwater Management - Retention and Extended Detention (Hydrological Control)**	Not retention provided - wetlands are described as providing retention, but this is mislabelling.	The proposal relies solely on extended detention; there is no genuine retention through reuse or infiltration. Applicant's modelling shows a 40% increase in post-development daily discharge and a significant increase in total runoff volume	Sitewide Hydrological Control in accordance with Greater Wellington Hydrological Control Guidance Note to be achieved via On-lot retention via rainwater harvesting tanks plumbed for internal non-potable use and lined raingardens with internal water storage (unlined raingardens where practical). Remaining Hydrological Control depth to be achieved via centralised extended detention devices (raingardens sized to provide extended detention, oversized pipes or basin sized for extended detention).	An accepted PC1 Schedule 29 Stormwater Impact Assessment (updated item 7) — informed by engagement with PCC Parks, Roading, Ngāti Toa and Tiaki Wai — should form the basis of a revised Stormwater Management Plan demonstrating the sitewide hydrological control set out under Required Outcome. As this may alter raingarden sizing, scheme layout and earthworks, it cannot be secured through Engineering Approval alone.
F4	**Stormwater Management - Transport Methodology**		Sediment transport analysis is inadequate - based on insufficient data, ignores fine particle mobilisation, introduces runoff from adjacent undeveloped catchment and generic channel assumption		Either substantiate (flow events, reaches, sensitivity, validation against Taupo/Kakaho) or adopt a conservative best-practicable-option hydrological control approach.
F5	**Stormwater Management - Cumulative effects**	Not considered	No cumulative assessment with Muri Road, NGA or Plimmerton Farm Stage 1.	Consideration of increased runoff volumes from upstream developed catchments for inline stormwater management solutions.	Provide runoff-volume assessments for Mt Welcome alone, with Muri Road block, and combined with Plimmerton Farm Stage 1.
F6	**Stormwater Management - schedule 29 SIA**		No accepted Schedule 29 SIA; the SMP does not appear to have been developed from one.	An accepted GWRC NRP Schedule 29 SIA must form the basis of the revised SMP, developed with PCC, GWRC, Te Runanga o Toa Rangatira and Tiaki Wai.	

Issue #	Issue	Applicant's Proposal	Tiaki Wai Comments	Required Outcome	Analysis / Redesign Requirements
SUMMARY TABLE OF MATTERS RAISED IN TIAKI WAI COMMENTS - FUNDAMENTAL CONSENT LEVEL MATTERS					
F7	**Stormwater Management - Flood Modelling**	Flood Model provided for the site demonstrating neutrality for peak flow in the immediate vicinity of the site.	The flood modelling does not consider the effects of the increase in stormwater volume, in particular downstream of the Taupo Swamp. In addition the Tiaki Wai Flood modelling team have identified a number of technical concerns regarding the modelling. Additionally a number of the catchment boundaries appear incorrect and a number of the discharges are not discussed. And finally, sedimentation of the wetlands does not appear to be accounted for in the modelling.	Updated flood modelling to address the comments raised and extended to include the Taupo Swamp and associated discharges.	Conditions requiring an updated and extended flood modelling prior to the commencement of any works / earthworks on site.
F8	**Stormwater Management - Flood Hazard Cumulative Effects**	Not Assessed	The flood modelling only considers the site and does not address the cumulative effects. Without this information TW cannot be satisfied that the proposal appropriately addresses the cumulative effects on the receiving catchment	Updated flood modelling to include assessments of the Mt Welcome, Mt Welcome + Muri Block, Plimmerton Farms and fully developed NGA.	Conditions requiring an updated and extended flood modelling prior to the commencement of any works / earthworks on site.
F9	**Retention Wetlands - Stormwater Options Assessment**	5 retention wetlands have been proposed within the catchment gullies and in a purposely created stormwater management area for stormwater detention and ecological mitigation. The retention wetland do not serve a treatment function.	It is not clear that a detailed options assessment or SID assessment has been provided that supports the design proposed. In the absence of a detailed options assessment it is unclear to TW that the option presented which co-located ecological mitigation and stormwater management and is reliant on earthworks bunds presents the best practical long term solution.	Detailed optioneering report to support the design strategy.	Conditions which require a detailed stormwater optioneering report,
F10	**Retention Wetland - Co-location of Ecological Mitigation and Retention Wetlands**	The applicant proposes to co-locate ecological mitigation and stormwater management with a conservation covenant over these areas.	GWRC have advised TW that, if accepted, the ecological mitigation will be subject to adaptive conditions. Tiaki Wai's role is to manage public stormwater infrastructure but not ecological systems and as such the proposed strategy is not supported by Tiaki Wai.	Appropriate long term ownership of the stormwater assets	Stormwater management structure that supports long term operation and maintenance.

Issue #	Issue	Applicant's Proposal	Tiaki Wai Comments	Required Outcome	Analysis / Redesign Requirements
SUMMARY TABLE OF MATTERS RAISED IN TIAKI WAI COMMENTS - FUNDAMENTAL CONSENT LEVEL MATTERS					
F11	**Retention Wetland Maintenance Requirements**	The applicant confirmed during meeting 16 June 2026 that the areas would not require desilting and 3 m access is only provided to the embankments	It is not clear that the flood modelling / sizing allows for sedimentation within the retention wetlands and based on advice from GWRC Tiaki Wai consider that appropriate access should be provided to these areas.	Appropriate access to ensure maintenance required to meet long term environmental outcomes are achieved.	Updated stormwater management plan that addresses safe operation and maintenance of the stormwater management devices.
F12	**Retention Wetlands - Pre Treatment**	None provided	TW consider that SW management to achieve the required stormwater outcomes will require pre treatment.	Updated Stormwater Management Strategy to include best practice pre-treatment upstream of all stormwater management devices / areas with appropriate access.	Conditions which require an updated stormwater management strategy which incorporates pre-treatment
F13	**Rain Garden 01 and Retention Wetland B**	The proposal places Rain Garden 01 within the 1% AEP + CC Flood Extent for Wetland B.	Tiaki Wai consider that this will increase the long term operation and maintenance costs associated with the rain garden and do not consider that this is an acceptable outcome for a greenfield development.	Stormwater management devices that can be vested with Tiaki Wai, with appropriate whole life costs.	An updated design which locates Rain Garden 01 clear of the 1% AEP flood hazard.
F14	**Retention Wetland D**	The proposal places retention wetland D above the future Muri Block Residential Development	Tiaki Wai do not consider that retention wetland D can be considered a 'natural' wetland in that it does not receive any 'natural flows'. The wetland is not needed for treatment purposes and the creation of a wet storage area uphill of the future Muri Road residential lots is not supported by Tiaki Wai.	Stormwater management devices that can be vested with Tiaki Wai, with appropriate whole life costs.	An updated design which changes 'retention wetland' D from a ponded water body to a dry detention basin.
F15	**Retention Wetland - Staging**	Flood Modelling is presented for the fully developed site.	There are discrepancies between the earthworks staging, development staging and wetland delivery. It is not clear therefore that neutrality will be achieved as each stage progresses.	Stormwater neutrality at every stage of the development.	Conditions requiring detailed earthworks plans, updated ECMP, and co-ordinated staging plan be provided to demonstrate neutrality as each stage comes forward.

Issue #	Issue	Applicant's Proposal	Tiaki Wai Comments	Required Outcome	Analysis / Redesign Requirements
SUMMARY TABLE OF MATTERS RAISED IN TIAKI WAI COMMENTS - FUNDAMENTAL CONSENT LEVEL MATTERS					
F16	**Stormwater Reticulation - Outlets**	The application relies on discharges via overland flows below the housing development.	TW and PCC have concerns regarding the long term stability of the stormwater outfalls and consider that the design requires amending to remove the concentrated stormwater discharges from the development boundary, remove the stormwater outfall uphill of the Muri Road Block residential lots, extend all outlets to the bottom of the gully or ephemeral watercourse with appropriate access for ongoing operation and maintenance.	Appropriate management of stormwater to ensure the long term stability of the site	An updated design which addresses the items raised by Tiaki Wai.
F17	**Stormwater Reticulation - Scheme Staging**	The applicant proposes to undertake an initial subdivision of the site to create superlots 5000, 5001, 5002 and 5003, with Lots 5000, 5001 and 5002 subject of further subdivision, whilst Lot 5003 will be a balance farm lot of 105.5476 ha	The stormwater proposal requires stormwater mains and outfalls within Lot 5003, which if delivered after the creation of Lot 5003 will require negotiation with the owner of Lot 5003 to secure stormwater outfalls / accesses / easements etc.	Securing appropriate stormwater outfalls / accesses / easements as the staging progresses.	An updated scheme plan / staging proposal that retains the outfalls / accesses / easements within the 'subdivision' to secure the stormwater reticulation.
F18	**Wastewater - Modelling**	The applicant has provided Wastewater modelling which they state supports: No constraints on the Mt Welcome development, an updated review at Stage 10 (infrastructure report 10.3.4) - condition 80.	Tiaki Wai does not consider that the wastewater modelling can be relied upon to demonstrate no overflows, or the proposed wastewater mitigation.	Updated wastewater modelling to demonstrate the impact of the development on the Porirua Harbour, Taupo Swamp and Stream, with an updated wastewater strategy and concept to demonstrate that any wastewater mitigation required can be achieved.	Conditions requiring an updated wastewater strategy ahead of any works commencing on site.
F19	**Wastewater - Cumulative Effects**	The wastewater modelling does not include the wider NGA developments.	The applicant should quantify the cumulative wastewater effects of Mt Welcome with the adjacent Muri Road Block, Plimmerton Farm Stage 1 and the wider NGA.	Updated wastewater modelling inclusive of the wider NGA developments	Conditions requiring an updated wastewater strategy ahead of any works commencing on site.

Issue #	Issue	Applicant's Proposal	Tiaki Wai Comments	Required Outcome	Analysis / Redesign Requirements
SUMMARY TABLE OF MATTERS RAISED IN TIAKI WAI COMMENTS - FUNDAMENTAL CONSENT LEVEL MATTERS					
F20	**Water Reticulation - Gray Street Connection**	A water supply connection will be laid from Gray Street to service the development.	The connection is required to service and provide resiliency to Stages 1 to 5A. The alignment proposed does not take into consideration the presence of the public wastewater main within the highway berm and the required clearances between the wastewater main and SNA.	Installation of the main to achieve clearance to the public wastewater main, State Highway and no impact on the SNA.	Further information is required before consent is granted to demonstrate that the water connection can be secured within the State Highway corridor, giving consideration to the existing public wastewater main clearances and the SNA. This cannot be deferred entirely to Engineering Approval.

Issue #	Issue	Applicant's Proposal	Tiaki Wai Comments	Required Outcome	Analysis / Redesign Requirements
SUMMARY TABLE OF MATTERS RAISED IN TIAKI WAI COMMENTS - CONSENT LEVEL, ENGINEERING APPROVAL AND CONSENT NOTICE MATTERS					
1	Stormwater - Raingarden Maintenance Access	The application provides a 3 m access at a max gradient of 1V:6H	Tiaki Wai considers that 3 m is insufficient and that in addition to width the access should confirm safe operating conditions - not working near steep fill or cut slopes,	Stormwater assets that can be vested to Tiaki Wai with appropriate access for long term operation and maintenance.	Updated Design
2	Joint Access Lot Classification	The application has stated that the drainage within the access lots may be private or public.	Concept drawings treat JOAL (private) drainage as part of the public network; Tiaki Wai may not accept operational responsibility for private drainage.	Clear delineation of the boundary between public and private stormwater infrastructure.	Appropriate servicing arrangements for private infrastructure prior to granting Engineering Approval
3	Stormwater Management - Imperviousness Assumptions	No landscaping plans	TW considers that a single enforceable impervious-area assumption must underpin all elements of the stormwater management design.	Controls on imperviousness areas	Consent Notice on individual lots to secure the impervious - area requirements.
4	Stormwater Management - Zinc and Copper Building Materials	Proposes GWRC consent condition	No restrictions on exposed zinc or copper building materials proposed. Also this matter is not addressed in PCC District Plan	Consent notice on titles - standard condition.	Condition exists in GWRC - check applicants condition set. Consent notice condition imposing PC1 requirement
5	Stormwater Management - Cultural Matters and Monitoring	Acknowledged	Ngāti Toa concerns are acknowledged but not addressed. No mātauranga Māori or mauri-ora monitoring framework proposed.	Mātauranga Māori values incorporated within the design.	Revised stormwater management approach with mana whenua input
6	Stormwater Management - Flood Management during Staging	Delivery of the retention wetlands as development progresses	There appears to be discrepancy between the earthworks staging plans, staging plans and ECMP. It is not clear therefore that neutrality is achieved at all stages.	Stormwater neutrality for each stage of the development as it comes forward.	Conditions which require detailed and co-ordinated earthworks plans, ECMP and sschme plan.
7	Stormwater Reticulation	A stormwater network will be extended to service the development.	The proposed layout appears to be generally consistent with the requirements of the RSWS, but will need to be delivered through an Engineering Approval process.	Servicing of each lot stormwater by installation of public network compliant with the requirements of the RSWS.	Conditions which require Engineering Approval, these should meet Tiaki Wai's Asset Owner Requirements for stormwater management assets.
8	Wastewater - Gravity vs Pumped Systems	The layout requires 6 public pumping stations and 63 lots serviced by local pressure sewer systems.	The application does not appear to include wastewater modelling or optioneering report that supports the strategy proposed - constraints / opportunities to maximise gravity and minimise pumping.	Development supported by a wastewater servicing assessment supported by modelling minimising lots that cannot achieve a gravity solution.	Outcome achieved through conditions which require a wastewater servicing strategy supported by modelling for the full development at the time of Engineering Approval and prior to earthworks on any stage, along with consent notices requiring on lot wastewater pumping
9	Wastewater Network - Reticulation	Wastewater design	The design requires confirmation through the Engineering Approval process.	Servicing of each lot with a compliant wastewater connection.	Conditions which require Engineering Approval, these should meet Tiaki Wai's Asset Owner Requirements for public pumping stations.

Issue #	Issue	Applicant's Proposal	Tiaki Wai Comments	Required Outcome	Analysis / Redesign Requirements
SUMMARY TABLE OF MATTERS RAISED IN TIAKI WAI COMMENTS - CONSENT LEVEL, ENGINEERING APPROVAL AND CONSENT NOTICE MATTERS					
10	Wastewater - Development Constraints	Consent notices proposed for lots with on lot pumping.	Consent notices to secure the design limitations - one dwelling per lot, and require on lot mitigation (wastewater pumping) where required.	Delivery of development and housing (post s224) that reflects the wastewater design limitations.	Consent notice limiting development to 1 dwelling per lot (as proposed by the developer). Consent notices requiring the installation and management of on lot wastewater pump stations on lots as required subject to the outcome of the wastewater strategy
11	Sustainable Water Use	No measures appear to be proposed.	Tiaki Wai has not been able to identify how the application incorporates water conservation measures to preserve water resources and their mauri.	Given the clear guidance in the WIP and Plan Change 1 and previous work in the catchment TW consider that best practice water conservation measures (on lot rainwater harvesting) should be conditioned,	Outcome can be achieved through conditions requiring on lot rainwater harvesting design principles demonstrated through Engineering Approval and water metering, in conjunction with consent notices requiring rainwater harvesting to be provided on all new residential / commercial lots in accordance with the principles of the concept design approved under the Fast Track Consent.
12	Non Compliant Water Pressures	29 lots with a modelled pressure of 24m, just below the RSWS 25m requirement and 3 lots where the pressures are slightly above the RSWS maximum.	Consent Level Matter. The application does not appear to include water modelling that demonstrates the design or a water services strategy that identifies constraints / opportunities to minimise non compliant pressures.	Development supported by a water servicing assessment supported by modelling minimising lots that cannot achieve compliant pressures.	Outcome achieved through conditions which require a water servicing strategy supported by modelling for the full development at the time of Engineering Approval and prior to earthworks on any stage, along with consent notices requiring on lot mitigation on land titles where compliant pressures cannot be met.
13	Water Supply - Network Resiliency	A 2nd resiliency connection is required for every 50 lots. In the short term (before the NGA 3.7 ML reservoir and associated reticulation is implemented) the applicant proposes to provide resiliency via a secondary connection via the new bulk water main.	The application correctly identifies the network resiliency requirements and the initial proposed secondary connection is acceptable to Tiaki Wai.	Network resiliency to be achieved prior to delivery of the 51st lot and every 50 lots thereafter.	Conditions which require a secondary water supply connection to be installed and commissioned prior to delivery of the 51st lot and every 50 lots thereafter.
14	Water Supply - Pukerua Bay Connection Restrictions	The applicant proposes 237 houses (Stage 1 - 4B) to be fed from the Pukerua Bay Reservoir.	The Pukerua Bay reservoir only has capacity for an additional 200 lots.	Installation and commissioning of the new 3.7ML reservoir prior to delivery of the 201st Lot.	Conditions which limit connection to the Pukerua Bay reservoir to 200 and require installation and commissioning of the 3.7 ML reservoir prior to delivery of the 201st Lot.

Issue #	Issue	Applicant's Proposal	Tiaki Wai Comments	Required Outcome	Analysis / Redesign Requirements
SUMMARY TABLE OF MATTERS RAISED IN TIAKI WAI COMMENTS - CONSENT LEVEL, ENGINEERING APPROVAL AND CONSENT NOTICE MATTERS					
15	Water Supply - GWRC Off Site Bulk Water Main Restrictions	Not Addressed	The ZMP confirms the existing GWRC Off site Bulk Water Main (managed by Tiaki Wai) does not have sufficient capacity to service the full Northern Growth Area build - out. Whilst upgrades are planned to be delivered (by Tiaki Wai) the timing of these must be managed. Tiaki Wai advises that connections brought forward ahead of the BWM upgrades will not be accepted.	Management of the rate at which connections come forward to ensure water is available when required. Development programme to be provided to Tiaki Wai to be used to manage the water upgrades.	Conditions which requires the consent holder to provide a 5 year development programme prior to commencement of the 201st lot and every subsequent block of 200 thereafter, with the development programme identifying the anticipated rate and timing of the development water supply connections.
16	Water Reticulation	A water network will be extended to service the development.	Tiaki Wai note that portions of the key water infrastructure are being delivered by the Muri Block Developer. This represents a risk that must be managed by the developer.	Servicing of each lot for domestic and fire fighting water by installation of public water network compliant with the requirements of the RSWS.	Conditions which require Engineering Approval, these should meet Tiaki Wai's Asset Owner Requirements for the Bulk Mains and Booster Pump Station and advice notes that delivery will require co-ordination with the Muri Block.
17	Water Supply - Design Limitations	The NGA 3.7 ML is based on a total development of 1500 dwellings @ 3.5 people / dwelling @ 700 L/day.	To ensure appropriate water allocation across all new development all development is limited to one dwelling per lot.	Delivery of development and housing (post s224) that reflects the water supply design limitations.	Consent notice limiting development to 1 dwelling per lot (as proposed by the developer).
18	Easements and Land	The application proposes to create all purpose drainage reserves	Tiaki Wai advise that it is not likely TW will accept ownership of land parcels other than those required to be secured for operational purposes - reservoirs / pump stations. In addition EIG are required to be secured over all assets and over any overland flow path - in particular below outlets	Scheme Plan will require amending to remove the All Purpose Drainage Reserves currently shown.	Updated scheme plan that reflects all easements and appropriate ownership of land parcels.

B. Section 53 Comments Authors Statement of Expertise

Tiaki Wai Comments - Authors

David Wilson and Zeean Brydon have produced Tiaki Wai's comments on behalf of Tiaki Wai. Zeean and David are both engaged as Consultant Peer Reviewers for Tiaki Wai's Land Development Consenting Team. David Wilson has provided comments on Stormwater Management (Treatment and Hydrological Control) matters. Zeean Brydon has provided comments on Water, Wastewater, Stormwater Management (Flood Hazard – Hydraulic Neutrality), Stormwater Management ('Retention Wetlands'), and Stormwater Reticulation matters. Their respective qualifications, experience, code of conduct confirmation, the scope of their comments, and the documentation they have relied on are outlined in the following Qualifications and Experience and Documentation sections.

Qualifications and Experience: David Wilson

My full name is David Patrick Wilson.

I am a Natural Resources Engineer with over 30 years of experience in stormwater management. My academic and professional qualifications include:

1. Bachelor of Natural Resources Engineering (Hons);
2. Chartered Professional Engineer in Civil and Environmental Engineering;
3. Chartered Member of Engineering New Zealand;
4. Member of the New Zealand Water and Wastes Association.

I have been a Principal Engineer and Director at 'The Urban Engineers Limited' for the last nine years. My expertise is in water infrastructure, particularly stormwater treatment, disposal, and management. For the last eleven years, I have been engaged by Wellington Water Limited (now Tiaki Wai) as a technical expert to assess resource consent applications. Over the last six years, I have also been engaged by Greater Wellington Regional Council (GWRC) to undertake Operational Stormwater Discharges Consent reviews against the requirements of Plan Change 1 (PC1) of their Natural Resources Plan (NRP). I am also an author and the technical reviewer of the Water Sensitive Design for Stormwater: Treatment Device Design Guideline.

Code of Conduct

I confirm that I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023 and confirm that I have complied with it in preparing these comments. I confirm that the issues addressed in these comments are within my area of expertise, except where I have indicated that I am relying on others' opinions. I have not omitted material facts known to me that might alter or detract from my evidence.

Scope

The scope of my comments is about the treatment and Hydrological Control aspects of the stormwater management of the application. My comments have been prepared on behalf of Tiaki Wai as both a possible future infrastructure owner, holder of any GWRC operational stormwater discharge consent, and also as signatory to Te Wai Ora o Pārirua – Porirua Harbour Accord.

Involvement in the Proposal

Tiaki Wai engaged me to provide stormwater treatment and Hydrological Control advice, including proffered Porirua City Council (PCC) conditions, on the Mt Welcome Second Substantive Application. This has involved taking part in stormwater management meetings with Tiaki Wai, PCC, GWRC, Ngāti Toa and the Applicant, as well as providing draft feedback on draft stormwater management documents to the Applicant's team post lodgement of the Application with EPA.

Before this, I was engaged by Porirua City Council (PCC) to provide technical support for the stormwater management aspects of the Northern Growth Area Proposed District Plan Variation that resulted in the rezoning of much of this site from Future Urban Zone to Medium Density Residential Zone. As part of that engagement, I undertook site visits and prepared the Stormwater Management Site Assessment Report attached to the Section 32 report for the variation. I also provided stormwater management expert advice to inform the provisions that relate to stormwater management, including the development of Freshwater Management Areas.

The reports I have relied upon in preparing my comments are listed in the documentation section.

Qualifications and Experience: Zeean Brydon

My full name is Zeean Brydon.

I am a Civil Engineer with over 30 years of experience in three waters engineering and flood management. My academic and professional qualifications include:

1. Bachelor of Civil Engineering (Hons);
2. Member of Engineering New Zealand;
3. Member of the New Zealand Water and Wastes Association.

I have been a Principal Engineer at 'e2Environmental' for the last 12 years. My expertise is in three waters infrastructure, particularly water reticulation, wastewater reticulation and pumping, flood mitigation, and stormwater collection and conveyance. For the last eleven years I have been engaged by Wellington Water Limited (now Tiaki Wai) as a technical expert to assess resource consent applications.

Code of Conduct

I confirm that I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023 and confirm that I have complied with it in preparing these comments. I confirm that the issues addressed in these comments are within my area of expertise, except where I have indicated that I am relying on others' opinions. I have not omitted material facts known to me that might alter or detract from my evidence.

Scope

The scope of my comments is about the water, wastewater and stormwater servicing, flood hazards, and stormwater management to achieve hydraulic neutrality. My comments have been prepared on behalf of Tiaki Wai as both a possible future infrastructure owner, holder of

any GWRC operational stormwater discharge consent, and also as signatory to Te Wai Ora o Pārirua – Porirua Harbour Accord.

Involvement in the Proposal

Tiaki Wai engaged me to provide advice regarding the three waters servicing, flood management and hydraulic neutrality devices, including proffered Porirua City Council (PCC) conditions, on the Mt Welcome Second Substantive Application. This has involved taking part in three waters servicing meetings with Tiaki Wai, PCC, GWRC, Ngāti Toa and the Applicant, as well as providing draft feedback on infrastructure management and stormwater management documents to the Applicant's team post-lodgement of the Application with EPA.

The reports I have relied upon in preparing my comments are listed in the following documentation section.

Documentation

We (David Patrick Wilson and Zeean Brydon) have reviewed the Application from Pukerua Property Group LP for Mt Welcome, a proposed 949-residential-subdivision and commercial-lot development within the Porirua Northern Growth Area at Pukerua Bay and rely on the following documents in preparing our comments.

1. Response to Panel Minute 2, 02 July 2026, including
    a. Appendix A: Updated Proposed Conditions of Consent,
    b. Appendix B: Detailed breakdown of Complex Freshwater Fisheries Activities,
    c. Appendix C: Concept plan for wetland bund design,
    d. Appendix D: Updated drawing 1753-02-5001,
    e. Appendix E: Updated scheme plans 1753-02-1010,
    f. Appendix F: Additional information on Stream Ecological Valuation for Kakaho West Mainstream,
    g. Appendix G: Geotechnical review comments register
    h. Appendix H: Stantec memorandum
    i. Appendix I: SLR memorandum on behalf of PCC
    j. Appendix J: Wildlands ecological review and BlueGreen response.
2. Response to Panel Convener Minute 3, 04 June 2026, including
    a. Envelope Engineering, Memo Response to Panel Convener Minute 3, dated 04 June 2026
    b. Envelope Engineering, Stormwater Management Plan, dated 04 June 2026
    c. Envelope Engineering, Civil Infrastructure Report, dated 04 June 2026
    d. Engeo, Site Memorandum, RFI Response, dated 04 June 2026.
3. Substantive Application and Assessment of Environmental Effects (16 March 2026);
4. Appendix 02 — Pre-lodgement and Affected Persons Consultation.

5. Appendix 07 – Proposed Conditions of Consent
6. Appendix 08 – Structure Plan Options Assessment
7. Appendix 15 — Ecological Assessment (BlueGreen Ecology, 20 November 2025);
8. Appendix 18 — Hydrology Assessment (Pattle Delamore Partners, 17 November 2025);
9. Appendix 19 — Water Quality Assessment (Pattle Delamore Partners, 17 November 2025);
10. Appendix 20 — Water Quality Assessment for Roundabout on SH59 (Pattle Delamore Partners, 14 November 2025);
11. Appendix 21 – Landscape and Visual Effects Assessment
12. Appendix 23 – Landscape and Ecology Plans Part A and B
13. Appendix 26 – Geotechnical Investigation Part A to D
14. Appendix 27 – Preliminary Site Investigation
15. Appendix 30 – Plans

I (Zeean Brydon) have relied on the following additional documents in preparing my comments.

16. Appendix 10 – Earthworks Construction Management Plan
17. Appendix 11 – Part B – Flood Assessment & Model Build
18. Appendix 11 – Part C – Flood Maps Afflux ARR
19. Appendix 11 – Part D – Flood Maps Afflux Depth
20. Appendix 11 – Part E – Flood Maps Afflux Velocity
21. Appendix 11 – Part F – Flood Maps Afflux
22. Appendix 11 – Part G – Flood Maps Post Dev ARR Hazard
23. Appendix 11 – Part H – Flood Maps Post Dev Blocked
24. Appendix 11 – Part I – Flood Maps Post Dev
25. Appendix 11 – Part J – Flood Maps Pre Dev
26. Appendix 12 – Wastewater Hydraulic Modelling Report