



RESPONSE TO SECTION 53 COMMENTS

MT WELCOME, PUKERUA BAY

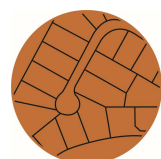
TO	Pukerua Property Group LP	DATE	7 August 2026
PROJECT NAME	Mt Welcome, Pukerua Bay	ENVELOPE REF	1753-02
ATTENTION	William Dorset	FROM	Kyle Dirse
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1.0 INTRODUCTION

This memorandum responds to the comments relevant to Envelope Engineering's assessments: earthworks and erosion and sediment control, stormwater management and treatment, flood risk, culvert and outlet design, wastewater servicing, water supply and the civil aspects of the scheme plan. Each section states what was raised and Envelope's response.

The following table sets out the document changes and additional information provided in response the Section 53 comments.

Appendix	Document	Change
1	Greater Wellington section 53 comments, response schedule	New document
2	Tiaki Wai section 53 comments, response schedule	New document
3	Porirua City Council section 53 comments, response schedule	New document
4	Stormwater Access Response Table	New document
5	Stormwater Options Assessment Response Table	New document
6	Culvert Response Table	New document
7	Raingarden Design Memorandum	New document
8	Infrastructure Report	Updated staging for the 200-lot water supply limit · Updated to Tiaki Wai as vesting entity · Skaife Block zoning corrected · Earthworks staging table reconciled
9	Stormwater Management Plan	Updated raingarden numbers and sizing basis · Expanded treatment and options assessment · Updated maintenance access · Updated to Tiaki Wai as vesting entity · Figure 8 label corrected to operative District Plan overlay
10	Draft Earthworks Construction Management Plan	Management plan hierarchy restructured · Table 1 stage areas corrected · 170 NTU discharge trigger adopted · Monitoring locations shown on plan · Buffer and setback framework added · Progressive stabilisation requirements added · Geotechnical recommendations incorporated
11	Flood Risk Assessment and Model Build	Datum conversion documented · Sub-catchment conversion to 2D point sources explained · Curve numbers, losses and times of concentration set out · Imperviousness legend updated · Catchment allocation and labelling corrected



12	Civil Engineering Plans (updated sheets only)	1753-02-4100-R2 Drainage – Detailed: updated access widths · updated raingarden numbers · contour labels added 1753-02-4300-R3 Drainage – Wetlands: updated wetland contouring and depth · updated access widths 1753-02-5001-R3 Water & Services: updated offset widths · SNA 028 offset shown · new typical trench detail
13	Scheme Plans	Drainage easements added to balance Lot 5003 · Schedules updated to Tiaki Wai as grantee for all three waters easements in gross · Legend updated to show lots owned by Tiaki Wai as fee simple and recreation reserves vesting in PCC · OFP easements added · Pedestrian rights of way added for PCC access to covenant areas

2.0 SUMMARY OF POSITION

This memorandum explains why the Applicant's proposed approach towards infrastructure and earthworks/construction management remains appropriate at a consenting stage. It distinguishes between matters that genuinely affect the viability or environmental acceptability of the project and matters that are appropriately addressed through detailed design, certification processes, engineering approval requirements, and consent conditions.

Matter	Raised by	Envelope's position
Raingarden sizing against the Wellington Water stormwater treatment device guideline	GW 39(b), 51; TW F2; PCC 6.5.1.4.1	The 2% sizing criterion in the Wellington Water guideline applies to the contributing untreated impervious area draining to each device, not to the entire impervious catchment, while hydraulic capacity is checked against the full catchment. The hydraulic capacity check governs and has been adopted as the sizing basis. The Applicant has undertaken additional design verification confirming the devices achieve the stormwater quality outcomes assumed in the assessment. The sizing basis and verification are set out in Appendix 7, and further detail added to the SMP. Accordingly, redesign of the stormwater network is not required
No water sensitive design options assessment	GW 39(a), 60-61; TW F1, F9; PCC 6.5.1.4.1	An expanded options assessment has now been provided in Appendix 5 to better demonstrate the wide range of water sensitive design approaches that were considered and discounted. The site's steep topography, erosion susceptibility, low-permeability soils, engineered fill constraints, shallow groundwater conditions and dispersed catchment characteristics substantially limit the effectiveness and practicability of infiltration-based devices, permeable pavement systems and distributed treatment approaches. The proposed treatment train therefore represents the best practicable option while still delivering the required stormwater treatment and flow attenuation outcomes. Therefore, redesign of the stormwater network is not required.
No genuine retention or hydrological control	GW App 2 comment 26; TW F3;	The proposal incorporates hydrological control that has been specifically designed for the site's physical constraints and receiving environment. While infiltration-based retention is not feasible due to site geology and geotechnical limitations, the gully-bottom wetland system provides permanent storage, extended detention, and replicates key elements of the existing hydrological regime. The hydrological controls have been modelled and integrated into the overall stormwater management strategy.



Retention wetland depths, maintenance and Wetland D	GW 64; TW F11 to F15; PCC 6.5.1.4.2	The applicant has accepted a number of practical design refinements including regrading wetland bases to reduce max depths and increasing maintenance access widths. However, these refinements do not alter the fundamental suitability of the wetland strategy. Access has been increased from 3m to 4m. Wetland D keeps a permanent water level but is accepted as a constructed wetland.
Flood model extent and cumulative effects	GW App 3; TW F7, F8; PCC 6.9.1	The flood assessment and attenuation modelling demonstrate that post-development peak discharges are attenuated to pre-development levels, achieving hydraulic neutrality. Given the site's location near the head of the catchment, attenuation reduces and delays stormwater peaks before flows reach downstream receiving environments. While additional catchment-wide modelling has been requested, the proposal already contains sufficient information to demonstrate that Mt Welcome does not materially increase downstream flood risk. The requested expansion would require assumptions regarding future development outside the applicant's control and is not necessary to determine the effects of this application.
Wastewater modelling cannot be relied on	TW F18, F19; PCC 6.5.1.3	The wastewater assessment is based on the network owner's own calibrated modelling platform and operational constraints rather than assumptions generated solely by the applicant. The modelling therefore represents the most authoritative assessment currently available of network performance. The proposal also provides an adaptive framework through progressive modelling and infrastructure triggers as development proceeds. The evidence demonstrates that future servicing requirements can be identified and managed as development progresses in the Northern Growth Area.
Mandatory rainwater tanks on every lot	TW item 11; PCC 6.5.1.2; Toa Rangatira	Rainwater harvesting may provide water resilience benefits in some circumstances, but neither the applicable planning provisions, servicing standards nor engineering design requirements establish mandatory private rainwater systems as a prerequisite for urban development. The proposal has been assessed against the relevant regulatory and engineering framework and is capable of achieving those standards through a reticulated public water supply system.
Culvert feasibility to be resolved before the decision	GW 195-206, App 6 Table 1	The information provided demonstrates that the proposed culvert network is feasible and capable of being constructed within the available corridors. The attached Appendix 6 responds to and provides additional information including indicative details, hydraulic calculations and location-specific responses to the issues identified by GWRC. Remaining matters such as scour protection sizing, construction details and final outlet treatment are typical detailed-design matters that are routinely addressed through engineering approval processes, with designs in accordance with the SMP



Assets shown vesting in Porirua City	PCC 6.4.4; TW item 18	The applicant accepts and has corrected the vesting arrangements to reflect the current institutional and ownership framework. The amendments ensure that all future public three waters assets vest in the appropriate entity, with associated easements, access arrangements and ownership structures clearly identified. The issue is therefore administrative in nature and does not affect the functionality, environmental performance or deliverability of the proposed infrastructure network.
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GREATER WELLINGTON REGIONAL COUNCIL

3.0 GREATER WELLINGTON REGIONAL COUNCIL

Greater Wellington's comments of 28 July 2026 raise eighteen substantive issues, supported by technical appendices on stormwater management (A Roa), hydrology (J Blyth), water resilience and culverts (K Duff and T Lewis) and erosion and sediment control (G McLean), together with draft regional consent conditions. Six issues fall within Envelope's scope and are answered below. Issues 3 to 10 and 15 to 18, covering financial contributions, stream and wetland effects, fish passage and transport, sit with the Applicant's planning, ecology and transport advisers; the civil interfaces are at section 3.5.

4.0 ISSUE 1 - STORMWATER TREATMENT AND WATER SENSITIVE DESIGN

Raised. Greater Wellington considers the proposal relies on centralised raingardens without testing water sensitive design alternatives or source control; that the raingardens are undersized, with nearly all thirty devices below the 2% surface area figure in the Wellington Water treatment device guideline and most at 1.0 to 1.4%; and that the raingarden table in the Stormwater Management Plan does not reconcile with the drawings. It seeks an amended plan and network design demonstrated to be the best practicable option.

Response. Envelope has reviewed Greater Wellington's comments and maintains that both the stormwater treatment strategy and the underlying sizing methodology are appropriate. While a number of presentation, documentation and reconciliation matters have been identified, these do not affect the validity of the design approach or the conclusions reached in the Stormwater Management Plan. Further information is provided to clarify the design basis and address the specific matters raised:

The proposed stormwater treatment strategy was not selected by default. Alternative water sensitive design approaches were considered as part of the stormwater management planning process, including infiltration devices, permeable paving, distributed roadside treatment systems, rainwater harvesting, and alternative attenuation configurations. The site's steep terrain, extensive cut and fill requirements, low-permeability soils, shallow groundwater constraints and geotechnical limitations significantly reduce the effectiveness and reliability of many conventional water sensitive design measures. Infiltration devices, permeable paving and bioswales are not viable, and roadside raingardens do not perform on the road grades across most of the site. Envelope considers that centralised treatment at the natural flow paths, with hydrological control in the gully-bottom wetlands, is the best practicable option here. The options assessment within the Stormwater Management Plan has now been expanded that better demonstrates the wide range of water sensitive design approaches that were considered, a separate table response to Tiaki Wai's comments is attached separately within Appendix 5. The arrangement is considered the best practicable option; therefore, redesign of the stormwater network is not required.

The Tiaki Wai Water Sensitive Urban Design Guide applies the sizing criterion to the untreated impervious area contributing directly to each treatment device. The 2% treatment footprint is applied to the untreated road and trafficable catchment, while hydraulic capacity is checked against the full catchment. The hydraulic and capacity check governs and has been adopted, which comprise with the guidance. The supporting design memorandum in Appendix 7 and updated SMP demonstrates that the devices are appropriately sized and capable of achieving the water quality performance assumptions adopted in the assessment. Refer to the Envelope Raingarden Design memo in Appendix 7 for sizing calculation that informs the raingarden design, and which is still compliant within WSUD guidelines and GWRC water quality capture.

- Envelope accepts that some aspects of the documentation can be improved for clarity and consistency. These include raingarden numbering, labelling and contributing lot counts updates and contour labels added to the drainage plans. The raingarden details, including the drainage layer and detailed per-device catchment plans are appropriate at detailed design. These amendments do not alter the sizing, operation or performance of the proposed stormwater management system and do not change the conclusions of the assessment.



- Mandatory forebays upstream of the retention wetlands are not necessary given the treatment train already incorporates source controls, catchpit interception and bioretention treatment that achieves high suspended sediment removal rates (raingardens remove approximately 90% of suspended solids first).
- The preparation of a detailed operation and maintenance plan is also more appropriately addressed through pre-certification requirements prior to operation, rather than at the consenting stage.
- On State Highway 59, the swale treatment was developed in consultation with NZTA and reflects the practical constraints associated with infrastructure within the highway corridor. It treats approximately 2,660 square metres of new impervious surface plus part of the existing highway catchment. Standalone roadside raingardens are not preferred by NZTA due to the constrained corridor and challenges with maintenance. This is considered the best practical option and has been consulted with NZTA. Accordingly, the proposal delivers an environmental improvement relative to the existing environment while remaining consistent with NZTA's operational and maintenance requirements.

Overall, Greater Wellington, Tiaki Wai and Porirua City Council comments regarding stormwater treatment and water sensitive design largely relate to differing views regarding device sizing methodologies, the extent of optioneering required, and the level of design detail appropriate for a fast-track consent application. Envelope considers that the information provided demonstrates that the proposed stormwater treatment strategy is feasible, consistent with local water sensitive urban design guidelines, and is capable of achieving the intended treatment outcomes.

5.0 ISSUE 2 - RETENTION WETLANDS

Raised. Greater Wellington questions whether the wetlands deliver meaningful retention, noting that wetlands are not suited to a retention function. It considers the permanent water too deep for wetland planting to establish, with 20 to 30% of the offset area deeper than 0.5 m. It considers the maintenance requirements understated, queries why Wetland D holds permanent water rather than being a dry basin and asks for failure and overtopping modes and a breach and over-design event scenario to be assessed given the dams sit upstream of known flood-prone areas including the Plimmerton roundabout.

Response. The proposed wetland system is a fundamental component of the site's integrated stormwater management strategy. The design has been developed by an inter-disciplinary team in response to the natural topography, drainage patterns and geotechnical constraints of the site and has been assessed through the hydrological and hydraulic modelling supporting the application. While Greater Wellington and Tiaki Wai have suggested alternative approaches, the evidence does not demonstrate that the proposed system is inappropriate, incapable of achieving its intended performance outcomes, or requires fundamental redesign. Further information is provided to clarify the design basis and address the specific matters raised:

- Envelope does not agree that stormwater management and ecological enhancement functions must be physically separated. Multi-functional wetlands are widely used in stormwater design because they can simultaneously provide hydraulic attenuation, water quality benefits, ecological enhancement and landscape outcomes. The relevant assessment question is whether the hydrological performance objectives are achieved. The fact that a system also delivers ecological benefits does not diminish its stormwater management function.
- The applicant has reviewed the matters raised and accepted a number of refinements that improve maintenance access, and documentation clarity. The wetland bases have been regraded to reduce the isolated deep areas and maintenance access has been increased from 3m to 4m, with those updates now reflected in the plans. Envelope considers that the fundamental retention wetland concept, including the attenuation function of the wetland system remains appropriate and does not require redesign.

Retention by infiltration is not available on this site. Site investigations found insufficient infiltration capacity for standalone infiltration devices or infiltration-based raingardens, and the geotechnical constraints rule them out on engineered fill. As a result, the design necessarily relies on retention and storage solutions that are compatible with the site's landform and ground conditions. The proposed wetlands have been specifically configured to provide hydrological control by the permanent water level and the perched outlets, which provided retention and extended detention. These functions have been accounted for in the supporting modelling.

- Maintenance access to all raingardens and to the wetlands has been increased from 3m to 4m. Access is not being extended to 4m at the minor gully-head outlets, as they do not accumulate sediment and cannot practicably take a vehicle corridor in that terrain. A separate memo and response has been prepared assessing access to outlets in Appendix 4. The revised access arrangements reflect a practical balance between long-term maintenance requirements and the site's environmental and topographical constraints. The proposed access widths are sufficient to allow maintenance activities to occur safely and efficiently without introducing unnecessary earthworks or disturbance.



- Envelope maintains the proposed design of Wetland D. The permanent water level is not an incidental design feature but a deliberate component of the hydraulic mitigation. Converting Wetland D to a dry basin would materially alter the way runoff is stored and released from this catchment and would reduce the system's ability to replicate existing discharge characteristics. Accordingly, the proposal continues to rely on Wetland D functioning as a constructed wetland with permanent storage.
- Envelope acknowledges the importance of considering public safety and long-term operational performance. However, the proposed wetland embankments are not comparable to large flood protection or water storage structures that would typically warrant complex breach-failure assessments. The structures are relatively modest in scale and form part of a broader drainage system rather than functioning as stand-alone dams. Detailed design will nevertheless confirm embankment stability, spillway performance and operational resilience in conjunction with the geotechnical engineer.

Overall, the matters raised by Greater Wellington and Tiaki Wai do not demonstrate that the retention wetland strategy is unsuitable or incapable of achieving the required stormwater outcomes. The proposed refinements improve functionality and maintainability, but the evidence continues to support the fundamental design approach. Envelope therefore considers that the retention wetland system remains an appropriate and effective means of delivering stormwater management, hydraulic attenuation and environmental enhancement outcomes for the development.

6.0 ISSUE 11 - CULVERT DESIGN FEASIBILITY

Raised. The information on the eleven proposed culverts is conceptual, with no typical inlet detail. Greater Wellington raises feasibility concerns on culverts 32 to 38 and 40 covering wingwall spacing and angle, culvert length and alignment affecting maintenance access and blockage risk, outlet velocities and scour, effects on the drainage of Retention Wetland B, potential overtopping of an existing DN750, and overall arrangement complexity where discharges pass through the working farm area.

Response. Envelope agrees that sufficient information must be provided to demonstrate the proposed culvert network is feasible and capable of construction. However, the purpose of the consent application is to establish the appropriateness of the proposed infrastructure framework rather than to complete the final engineering design that will ultimately be certified through the Engineering Approval process. None of GWRC's concerns demonstrate that any of the proposed culverts are infeasible.

Envelope has reviewed the concerns raised by Greater Wellington and accepts that additional information assists in demonstrating the feasibility of the proposed culvert network. The applicant has therefore provided supplementary calculations, layout information and typical design details. Envelope considers that this material confirms the culvert network can be practically constructed and operated as proposed. While certain aspects of the design will continue to be refined during the detail design, the issues identified do not indicate any fundamental constraint requiring redesign of the subdivision or stormwater management system.

- Typical details and calculations covering sizes, shapes, grades, flows and velocities have been added, and each of the seven Table 1 concerns is answered at Appendix 6. The detailed design requirements are accepted. Potential blockage, overtopping and flood effects have already been evaluated as part of the wider flood risk assessment supporting the application. The assessment demonstrates that the proposed infrastructure can operate without creating unacceptable flood hazards. Accordingly, the matters raised regarding individual culverts do not alter the overall conclusions regarding flood risk.
- Several of the matters identified by Greater Wellington concern optimisation of inlet configurations, wingwall geometry, maintenance provisions and outlet treatment. While these are important engineering considerations, they are matters typically resolved through detailed design once the overall infrastructure framework has been approved. Their existence does not indicate that the culvert network is infeasible or that the environmental effects have been incorrectly assessed.

The concerns relating to culverts 32 to 38 and 40 principally involve design optimisation and direction to information, rather than fundamental feasibility. The proposed culverts remain capable of achieving the required hydraulic function, and none of the issues raised identify a situation where the proposed conveyance system cannot be constructed, maintained or operated effectively. Further details, such as specific outlet scour design, can be incorporated during detailed design without altering the overall stormwater management approach.

7.0 ISSUE 12, 13, 14 - EARTHWORKS MANAGEMENT PLANS, MONITORING AND MITIGATION

Raised. Greater Wellington seeks a restructured plan hierarchy, with a project-wide earthworks construction management plan above stage-specific control plans rather than the flat structure proposed; a reconsidered Stage 1 erosion and sediment control plan; a 170 NTU discharge quality trigger at the device outlet; monitoring locations identified on plan; an explanation of how wetland and stream buffers and upstream sediment controls will be implemented;



correction of the stage areas in Table 1 of the earthworks plan, which totals 81.46 ha against individual areas summing to 96.2 ha; exposed area limits with only one stage undertaken at a time; and progressive stabilisation throughout the works.

Response. Envelope agrees that earthworks associated with a project of this scale require a robust management framework and considers that the application already includes a comprehensive erosion and sediment control regime supported by staged management plans, performance standards and certification processes. The matters raised by Greater Wellington primarily relate to plan hierarchy, monitoring detail and implementation mechanisms rather than any identified deficiency in the proposed environmental management approach. Envelope has reviewed and amending the management plan hierarchy, with detailed plans being delivered at a staged basis for certification

The application already includes an overarching Draft Earthworks Construction Management Plan establishing the principles, methodologies and performance standards for the project. A consent condition is proposed requiring that Council certify stage-specific plans that provide the detailed controls required for each work area. This approach ensures that environmental management measures remain adaptive while maintaining a consistent level of environmental protection throughout the project. The Draft Earthworks Construction Management Plan as part of this application will be certified and act as the overarching guidance for the stage specific plans.

- Envelope accepts that a numerical inconsistency exists within Table 1 and that the stage area has been reconciled. The discrepancy does not affect the proposed staging methodology, erosion and sediment control measures or the assessment of environmental effects. The Stage 2C area is a decimal place error and should read 1.6 ha rather than 15.9 ha and has now been corrected. Other recommendations including geotechnical input, and further details on stabilisation and surface water management has now be incorporated.
- Buffer distances, setback requirements and the location of sediment controls are appropriately developed with reference to the environmental characteristics of each catchment as detailed design progresses. This framework has been added to the DCEMP and will provide the framework for the stage specific plans. This enables controls to be tailored to the specific receiving environment and construction methodology applicable to each stage, while remaining consistent with the overarching environmental management framework. Preparation of these details through certified stage-specific plans is standard practice for projects of this scale.
- Envelope does not agree that only one stage can be undertaken at any given time to achieve acceptable environmental outcomes. The effectiveness of erosion and sediment controls depends on the extent of exposed ground, installation and maintenance of controls, monitoring and compliance with approved methodologies, rather than on the number of active stages alone. The proposed framework manages each stage as a discrete work area with its own controls, staging requirements and compliance obligations. Provided these controls are implemented and maintained, concurrent construction activities do not inherently create greater environmental effects.
- The proposed earthworks management approach incorporates multiple layers of oversight, including certified management plans, monitoring requirements, progressive stabilisation measures and regulatory supervision. These mechanisms provide an adaptive management framework that enables issues to be identified and addressed as works proceed, ensuring that environmental performance can be maintained throughout the construction period.

Overall, the matters raised by Greater Wellington relate to refinements of implementation, monitoring and plan structure rather than the appropriateness of the proposed earthworks methodology itself. The application already incorporates a comprehensive erosion and sediment control framework consistent with recognised regional practice. The accepted amendments improve clarity and implementation but do not alter the conclusion that earthworks can be undertaken while appropriately avoiding, remedying or mitigating adverse environmental effects.

A primary objective of the earthworks management framework is minimisation of sediment discharge to downstream receiving environments, including Taupō Stream, Kakaho Stream and Te Awarua-o-Porirua Harbour. The combination of staged earthworks, erosion and sediment controls, progressive stabilisation requirements and compliance monitoring has been specifically designed to achieve this outcome.

TIAKI WAI

8.0 STORMWATER TREATMENT AND HYDROLOGICAL CONTROL (F1 TO F6)

Raised. Tiaki Wai does not accept that the guideline pollutant removal rates can be relied on unless the raingardens are sized to 2% of contributing untreated impervious area and calculates the current footprint at approximately 1.3%. It says no options assessment has been provided. It also says an accepted Schedule 29 (of Plan Change 1 to the Wellington Regional Plan) Stormwater Impact Assessment must form the basis of a revised plan, developed with the councils and mana whenua. It would not support vesting of the raingardens or transfer of the operational discharge consent until the sizing is resolved.



Response. Envelope has carefully reviewed the concerns raised regarding stormwater treatment, hydrological control, water sensitive design and the Schedule 29 assessment framework. While Tiaki Wai has expressed a different view regarding the preferred stormwater management approach, Envelope considers that the application already demonstrates that stormwater effects can be appropriately managed through the proposed treatment train, hydrological controls and consent framework. The issues raised primarily reflect differences in engineering interpretation rather than evidence of unacceptable environmental effects.

- Tiaki Wai's assessment assumes that the stormwater treatment guideline requires every raingarden to occupy an area equivalent to 2% of the total impervious catchment served by the development. Envelope does not agree with that interpretation. The guideline applies the sizing requirement to the untreated impervious area contributing directly to each treatment device. When assessed using that methodology, the proposed devices exceed the required sizing threshold. Stormwater runoff is combined before it reaches the raingardens, so each device receives the full impervious catchment. The 2% treatment footprint is applied to the untreated road and trafficable catchment, while hydraulic capacity is checked against the full catchment. The hydraulic and capacity check governs and has been adopted.
- The supporting Raingarden Design Memorandum demonstrates that the proposed treatment system is capable of achieving the contaminant removal performance adopted within the Stormwater Management Plan. The 1.3% figure referred to by Taiki Wai is measured against the total impervious catchment rather than the untreated catchment the guideline refers to, with 3.64% against the actual untreated catchment. This is further detailed in the attached Appendix 7.
- Similarly, Envelope does not agree that an adequate stormwater options assessment has not been undertaken. Alternative stormwater management approaches were considered during development of the Stormwater Management Plan, including dry basins, infiltration devices, permeable surfaces, and rainwater harvesting approaches. The selected solution reflects the site's steep terrain, geotechnical constraints, low permeability soils, and catchment characteristics. In Envelope's opinion, the proposed treatment train represents the best practicable stormwater management solution within those constraints.
- Section 11 of the Stormwater Management Plan already contains a Stormwater Impact Assessment prepared to the Schedule 29 information requirements, with Table 14 cross-referring the catchment assessments, modelling, treatment and hydrological controls, receiving environment effects, maintenance and cultural considerations. Envelope does not agree that a separate or replacement Schedule 29 Stormwater Impact Assessment is required before the application can be determined. Section 11 of the Stormwater Management Plan already includes an assessment structured around the information requirements of Schedule 29, including descriptions of receiving environments, treatment systems, hydrological controls, environmental effects, maintenance considerations and cultural matters. While Tiaki Wai has suggested that the assessment should be jointly developed or endorsed by interested agencies, no such requirement exists within Schedule 29 itself.
- Envelope acknowledges the importance of cumulative effects within the wider Northern Growth Area. However, the stormwater assessment demonstrates that the proposed development incorporates treatment and attenuation measures that reduce and manage runoff generated by Mt Welcome itself. The purpose of the current application is to assess the effects of this development rather than to predict the final configuration and timing of all future growth anticipated by the Northern Growth Area Structure Plan.

For these reasons, Envelope remains satisfied that the proposed stormwater treatment and hydrological control strategy is technically sound, appropriately supported by the information accompanying the application and capable of being implemented through the proposed consent framework. While further clarification and refinement of documentation has been provided, the matters raised by Tiaki Wai do not identify any issue that would justify a fundamental redesign of the stormwater management approach.

Importantly, the comments received largely focus on differences in preferred methodology, treatment hierarchy and assessment approach. The more relevant question for the Expert Panel is whether the proposed stormwater system is capable of achieving appropriate environmental outcomes. Envelope considers that the evidence demonstrates it is. The treatment devices have been designed to improve water quality, the hydrological controls have been modelled, and the system has been integrated into the site's overall landform and stormwater treatment train approach.

9.0 FLOOD MODELLING (F7 AND F8)

Raised. Tiaki Wai does not accept that peak flow neutrality is sufficient, noting the Applicant's own modelling shows a 40% increase in mean daily discharge to the Taupō Stream and volume increases of 14,761 and 28,129 cubic metres in the 10% and 1% AEP events. It queries how the difference in vertical datum was managed, how 21 sub-catchments were converted to 2D point sources, and how curve numbers, losses and times of concentration were derived. It identifies



catchments incorrectly included or excluded, and seeks modelling extended downstream of the Taupō Swamp together with a cumulative Northern Growth Area assessment.

Response. Envelope does not agree with Tiaki Wai's conclusion that the current flood assessment is insufficient to assess flood effects. The modelling undertaken for the application demonstrates that runoff generated by the development is attenuated to pre-development peak discharge rates at the relevant compliance points, and flood effects are less than minor. A number of technical queries have been raised regarding model inputs and presentation, which have been updated in the Model Build and Flood Risk Assessment Report. Those matters do not alter the fundamental conclusion that the proposed stormwater system is capable of managing development-generated flood effects. Extending the model to cover the entirety of the NGA catchment is not proposed. Stormwater and flooding effects can be assessed using boundary conditions applied at the catchment edge, and extending the model extent would not change the assessed effects

- The 2023 LiDAR and the proposed surface were converted to WGN1953 using the LINZ datum conversion raster. The 21 sub-catchments were redirected to two-dimensional point sources because the original river reaches were built on superseded 2013 LiDAR and no longer reflected the current overland flow paths. Curve numbers, losses and times of concentration were derived from the Wellington Water hydrology guidance using land use, slope and flow path length, and applied consistently. The imperviousness legend and the model build report have been updated.
- A number of minor catchment allocation and labelling matters have been identified and have been corrected.
- Mt Welcome sits near the head of the catchment, so the attenuation delays and reduces peak discharge and assists downstream conditions rather than worsening them. This is the opposite of attenuation low in a catchment, such as at Plimmerton, where delayed discharge can coincide with the downstream peak. The cut-off model demonstrates that development effects are mitigated at the model boundaries. This supported independently by the attenuation design returning post-development peaks to pre-development levels and achieving hydraulic neutrality.
- Envelope acknowledges that future Northern Growth Area development will influence the receiving catchment over time. However, a catchment-wide assessment extending to all future development scenarios would rely on assumptions regarding developments that have not yet been designed, consented or constructed. The relevant assessment should focus on whether Mt Welcome appropriately manages the flood effects generated by this proposal. Envelope considers that the modelling demonstrates that it does.
- Envelope does not consider that rebuilding or extending the model is necessary to determine the application. The present modelling framework already demonstrates that the proposal achieves hydraulic neutrality and appropriately manages development-generated flood effects. While additional modelling could be undertaken, Envelope does not consider it would materially alter the conclusions reached. Therefore, Envelope does not agree with
- Rebuilding and extending the model downstream of the Taupō Swamp, a catchment-wide Northern Growth Area model, or separate modelling of the Kakaho East lots, whose contribution is a very small proportion of that catchment and would not materially change modelled flood depths.

Overall, the matters raised by Tiaki Wai concern model construction, input derivation and presentation rather than the adequacy of the assessed flood effects. The clarifications and corrections set out above have been incorporated into the updated Model Build and Flood Risk Assessment Report and improve the transparency and traceability of the assessment, but they do not alter the modelled outcomes. Envelope therefore remains satisfied that the modelling undertaken is appropriate for the proposal, and that the stormwater management approach adopted appropriately manages the flood and stormwater effects generated by the development.

10.0 RETENTION WETLANDS (F9 TO F15)

Raised. Tiaki Wai seeks an optioneering and safety in design assessment; does not support the wetlands carrying both ecological mitigation and stormwater functions, since it manages public stormwater infrastructure but not ecological systems; considers 3m maintenance access insufficient; seeks pre-treatment in the form of a gross pollutant trap or sediment forebay upstream of every wetland; seeks Rain Garden 01 relocated clear of the Wetland B inundation area; seeks Wetland D converted to a dry basin.

Response. Envelope has reviewed the matters raised regarding the proposed retention wetlands and considers that the comments primarily relate to differing views on design preferences, asset management responsibilities and the level of engineering detail required at the consent stage. Envelope remains satisfied that the proposed wetland system is capable of delivering the required hydraulic attenuation outcomes.



The proposed wetlands are not isolated stormwater devices but form part of an integrated catchment management approach. Their location, storage volume and discharge controls have been deliberately designed to work with the site's natural drainage patterns, landform and receiving environments. The wetlands therefore perform a key role in achieving attenuation and hydrological control outcomes across the development. Multi-functional wetlands are widely used throughout New Zealand because they can provide hydraulic attenuation, water quality management, ecological enhancement and landscape integration within a single system.

Envelope accepts a number of refinements that improve maintenance access, operational functionality and documentation.

although a safety in design assessment is not considered necessary. Other changes such as pre-treatment, Rain Garden 01 relocation are not accepted as:

- Envelope does not consider that gross pollutant traps or sediment forebays are required upstream of every wetland. The raingardens remove approximately 90% of suspended solids before flows reach the wetlands, and gross pollutants and coarse sediment are intercepted in the road drainage network, catchpits and inlet structures. The wetlands are not relied on as treatment devices, so traps or forebays upstream of every wetland are not necessary.
- Rain Garden 01's level is set by the minimum cover required on the stormwater main between manholes 2-2 and 3-1. The alternative of a bubble-up outlet would create permanent water within the pipe network, with hydraulic and maintenance consequences worse than the matter it would solve. Envelope therefore considers that the current arrangement remains the most effective and practical engineering solution and relocation is not proposed.
- Staging: the wetlands will be constructed and operational as required to maintain hydraulic neutrality at each stage, and will remain the consent holder's responsibility until the contributing catchments are substantially developed.
- The revised 4m access corridors provide practical long-term access for maintenance vehicles while minimising unnecessary disturbance to landforms. The proposed access arrangements are therefore considered appropriate for the scale and maintenance requirements of the wetland system.
- Envelope maintains the proposed design of Wetland D is appropriate as outlined in section 5.0 above.

Overall, the matters raised by Tiaki Wai largely concern design preferences and operational considerations rather than the feasibility of the proposed wetland system. The accepted refinements improve maintenance, functionality and documentation, but do not alter the fundamental design approach. Envelope therefore remains satisfied that the proposed retention wetlands provide an effective means of delivering stormwater attenuation and hydrological control outcomes while also supporting broader environmental objectives across the development.

11.0 STORMWATER OUTFALLS AND EASEMENTS (F16 AND F17)

Raised. Tiaki Wai considers the outfall information generic rather than specific to location, discharge velocity and receiving slope and soil conditions, and that in a number of places concentrated stormwater is introduced where it would not naturally concentrate rather than into existing ephemeral channels. Porirua City Council, as owner of similar assets, warns that even small catchments can cause significant erosion, instability and maintenance liabilities that may not appear for years. Tiaki Wai seeks outlets extended to the gully bottom, no concentrated discharge at the development boundary, no increase in off-site flood hazard, and access secured for inspection and maintenance.

Response. Envelope has reviewed the concerns raised regarding outfall location, erosion risk, maintenance access and easement arrangements. Envelope considers that the proposed outfall strategy is fundamentally sound and responds appropriately to the site's natural drainage patterns. While additional location-specific information has been prepared in response to the comments received, the issues raised do not identify any fundamental flaw in the stormwater network layout or demonstrate that the proposed outfalls will create unacceptable downstream effects.

The proposed outlet locations are considered appropriate. Typical details have been provided with the application, and device-specific design will be prepared at detailed design stage. Envelope does not consider that the matters raised demonstrate a need to relocate or fundamentally redesign the proposed discharge strategy

- All outfalls discharge to existing gullies. This is deliberate: it keeps the discharge in the flow paths the catchment already uses and maintains the existing hydrology, rather than creating new discharge locations. All outlets will be designed to prevent scour and erosion of the banks, to the requirements in the SMP and on drawing 1753-02-4904.
- Outlets from the stormwater network discharging into the retention wetlands are releasing treated water. debris is expected to have already been captured by the upstream raingarden. These outlets sit at the base of the



embankments, with very little risk of blockage or of flooding adjoining property. A 4m access is not practicable given the terrain and the low risk these outlets present. Envelope does not consider that vehicle access is required to every outfall location. The maintenance requirements associated with a number of these structures are limited, and the nature of the surrounding terrain would make construction of vehicle corridors unnecessarily intrusive.

- Easements in gross over stormwater assets in favour of Tiaki Wai have been added to the subdivision staging scheme plan to ensure appropriate easements are in place on Lot 5003 for the overall stormwater strategy.

Overall, the information available demonstrates that the proposed outfall strategy is feasible, environmentally appropriate and capable of long-term operation and maintenance. The additional location-specific information provides further confidence regarding individual outfall performance, but the matters raised by Tiaki Wai and PCC do not identify any issue that would require redesign of the stormwater network. Appropriate maintenance access and legal arrangements can be secured through easements, vesting requirements and detailed design processes.

12.0 WASTEWATER (F18 AND F19)

Raised. Tiaki Wai does not accept that the wastewater modelling can be relied on, or that further review can be deferred. The model extends only to Pump Station 13 on the basis that the pump rate does not change, which Tiaki Wai says ignores increased pump duration; the model excludes the Muri Road block and Plimmerton Farm Stage 1, so cumulative effects across the Northern Growth Area are not assessed; it assumes trunk main surcharge is acceptable without checking as-built records; and no concept design has been provided to show how the 380 to 1,940 cubic metres of storage proposed on Lot 1300 can be achieved. Taiki Wai seeks updated modelling before consent is granted.

Response. Envelope acknowledges the importance of ensuring that development within the Northern Growth Area does not create unacceptable wastewater effects, including increased overflow risks within downstream receiving environments. However, Envelope considers that the information accompanying the application provides a sufficient basis to conclude that the development can be appropriately serviced and that any future infrastructure requirements can be identified and managed through staged delivery mechanisms.

The model limitations are the network owner's own, not Envelope's assumptions. Progressive modelling by condition is offered in proposed conditions. While future reassessment may be appropriate as development progresses, the existing modelling provides a sound basis for evaluating the effects of the proposal at the present time.

The key issue before the Panel is not whether every future wastewater upgrade across the Northern Growth Area has been fully designed and costed. Rather, the relevant question is whether a feasible servicing pathway exists, whether likely constraints have been identified, and whether conditions can ensure that any required upgrades occur before unacceptable effects arise. Envelope considers that these tests have been met as follows:

- The pump rates are a network limitation set by the network owner. Wellington Water, now Tiaki Wai, confirmed reduced peak rates at Pump Stations 13 and 8 and advised that the Pump Station 13 reduction was deliberate, to reduce public health risk from a known uncontrolled overflow at Mana Esplanade, and this would be the catchment limitation. Working to those reduced rates has already removed a substantial part of the available bulk capacity from this development. The correspondence is provided within Appendix 5 of the Wastewater Report.
- The model is Tiaki Wai/Wellington Water's own calibrated model, provided for this assessment. There are known inconsistencies between the model and the GIS as-built records; the calibrated model has governed the design because it is calibrated against monitored flows.
- Envelope does not agree that cumulative development has been ignored. The Muri Road block has been included within the assessment. In relation to Plimmerton Farm Stage 1, the modelling incorporates the storage and pumping configuration currently proposed for that development. While the ultimate timing and sequencing of future developments cannot be known with certainty, the assessment includes the best information presently available regarding anticipated wastewater demands within the wider catchment.
- Plimmerton Farm Stage 1 is allowed for on its proposed storage and pumping configuration, but its build-out and timing are outside the Applicant's control. Wastewater networks evolve over time as growth occurs. Its discharge rates are allowed for via a RTC control to PS8 that only turns on at specified depth/flow trigger, as per the provided calibrated model. This is a flow-based trigger within the bulk main downstream of Pump Station 13, where flows will change as development in the NGA progresses.
- The modelling allows for Plimmerton Farm Stage 1 based on its proposed storage and pumping configuration. Its build-out and timing are outside the Applicant's control, and wastewater networks evolve as growth occurs. Discharge rates are managed by real-time control (RTC) at PS8, which operates on a depth and flow trigger measured in the bulk main rather than on the state of the developed site. The control therefore responds to actual



conditions in the bulk main, and will continue to do so as development within the NGA progresses and those conditions change

- For this reason, a staged and adaptive management approach is often more reliable than attempting to predict the final configuration of an entire growth area many years in advance. Envelope considers that progressive reassessment at defined development thresholds provides a robust and practical mechanism for ensuring network performance continues to be monitored and managed as growth occurs.
- Envelope does not consider that extending the model to a theoretical full Northern Growth Area build-out scenario is necessary for determination of the present application. Such modelling would require assumptions regarding future land use, staging, infrastructure solutions and growth patterns that remain uncertain. The current assessment appropriately focuses on the effects generated by Mt Welcome while incorporating the best available information regarding adjacent growth areas.
- Extending the model to a theoretical full Northern Growth Area build-out, or beyond that catchment, is not considered necessary for determination of this application. It would require assumptions about future land use, staging, infrastructure solutions and growth patterns that remain uncertain, and the assessment appropriately focuses on the effects generated by Mt Welcome using the best available information on adjacent growth areas.
- Further modelling should sit with Tiaki Wai as the network operator, which sets the downstream network parameters this development has been designed to and is responsible for configuring the wider network to accommodate planned growth.
- The purpose of the wastewater strategy is to identify potential constraints before they become environmental effects. The modelling undertaken demonstrates that network limitations can be identified and addressed through storage, pumping and staged infrastructure upgrades before unacceptable effects arise.

Overall, Envelope considers that the wastewater assessment demonstrates a feasible and appropriate servicing strategy for the development. The modelling has been undertaken using the network owner's own calibrated tools, incorporates known network constraints and includes adjacent development information where available. While further reassessment may appropriately occur as development proceeds, the matters raised by Tiaki Wai do not demonstrate that the proposal cannot be serviced or that unacceptable wastewater effects will occur.

13.0 WATER SUPPLY (F20 AND ITEMS 11 TO 17)

Raised. Tiaki Wai requires the Gray Street connection demonstrated within the State Highway corridor with clearance to the public wastewater main and no effect on the adjoining Significant Natural Area and considers this cannot be deferred to Engineering Approval. It limits connection to the existing Pukerua Bay reservoir to 200 residential lots rather than the 237 proposed and will not accept the commercial lot connection until the new reservoir is installed. It identifies 29 lots at 24 m modelled pressure against the 25 m minimum and 3 lots at 90 to 96 m against the 90 m maximum. It seeks on-lot rainwater harvesting for non-potable reuse, without which it would not support connection to the public supply.

Response. Envelope has reviewed the matters raised by Tiaki Wai regarding water supply servicing and remains satisfied that the proposed development can be serviced by the public water network. The issues identified relate primarily to staging, reservoir capacity, pressure management and operational controls rather than any inability to provide potable water to the development.

- Drawing 1753-02-5001 R3 shows the connection within the corridor with the required clearance from the existing wastewater main and no effect on SNA 028. This matter is resolved.
- The 200 residential lot equivalent limit is accepted, with an updated scheme plan and infrastructure report reflecting the staging changes. The conditions should retain flexibility for actual uptake in the wider catchment and should allow commercial demand to be offset against the residential allocation where the commercial lot is developed first.
- The pressure departures are minor, localised and driven by site topography and proximity to the proposed reservoir. They are limited to a small number of lots situated adjacent to the proposed reservoir infrastructure. Envelope considers that these matters are appropriately resolved through final pressure modelling and detailed design. No change to the network is proposed, and consent notices for on-lot pressure boosting are not considered necessary for a marginal shortfall on lots immediately adjacent to a reservoir.
- Rainwater harvesting is not accepted as a mandatory servicing requirement. Neither the planning framework nor the applicable engineering standards identify private rainwater harvesting systems as a prerequisite to residential development. The development has been designed around a public reticulated water supply system that is capable of meeting servicing standards. While rainwater harvesting may be encouraged as a sustainability measure, Envelope does not consider it necessary to demonstrate the acceptability of the proposed servicing



strategy. Water conservation objectives can be achieved through a range of mechanisms, including efficient fixture standards, metering, leak reduction, consumer behaviour and network management practices. Envelope does not consider that mandatory rainwater tanks for outdoor use on every allotment are the sole or necessary means of achieving sustainable water use outcomes.

- Envelope agrees that matters such as secondary connections, bulk supply programming, metering, testing, commissioning and vesting are appropriately addressed through conditions and engineering approval processes. These are standard implementation matters that occur following consent and do not affect the fundamental feasibility of the proposed water supply strategy

Overall, Envelope considers that the proposed water supply strategy provides a viable and robust servicing solution for the Mt Welcome development. The Gray Street connection has been demonstrated, network constraints have been identified, and development can be staged to align with infrastructure capacity. While operational and staging matters remain to be managed through conditions and engineering approval processes, none of the issues raised by Tiaki Wai demonstrate that the development cannot be appropriately serviced.

PORIRUA CITY COUNCIL

14.0 SUBDIVISION STAGING, SERVICING AND VESTING (SECTION 6.4)

Raised. Porirua City Council seeks servicing information for the initial superlot stage, including the existing dwellings within Lots 5000 and 5001 and a building platform and servicing strategy for vacant Lot 5002. It considers the wetland staging leaves stormwater infrastructure delivered after the allotments it serves, which would prevent section 224 certification. It disputes the basis on which the Civil Infrastructure Report excludes two of the three structure plan transport connections to the southern boundary and identifies a zoning error in that report. It notes stormwater assets are shown vesting in Porirua City when they now vest in Tiaki Wai, that drainage reserve allotments therefore need to be freehold titles, and questions whether Lot 1300 is large enough for the wastewater storage and whether Lot 1400 meets the 2 m boundary setback.

Response. Envelope has reviewed PCC's comments regarding subdivision staging, servicing information, infrastructure ownership and vesting arrangements. While further clarification and several administrative corrections have been made, Envelope does not consider that any of the matters raised identify a fundamental servicing constraint or demonstrate that the development cannot be appropriately staged and delivered.

- Envelope agrees that references to asset ownership will be corrected from Porirua City to Tiaki Wai. Drainage reserve allotments and utility reserve lot for the water pump station will now be freehold titles to Tiaki Wai. Additional drainage lots have been created over rain gardens, easements in gross have been added for three waters assets within recreation reserves, and pedestrian rights of way have been added over Tiaki Wai's drainage lots where PCC need to access the conservation covenant areas. The Scheme Plan, Infrastructure Report and Stormwater Management Plan have been corrected with the new entity.
- Land covenant wording, prepared by the appropriate solicitor, will have sufficient clauses to allow for access over the covenant areas for any activity required. Creating another easement parcel over this area and registering an easement document in relation to the covenant area is not necessary for legal access.
- Overland flow path (OFP) easements have been provided as requested there is a defined structure or channel. No OFP easements have been added to fee simple lots already owned by Tiaki Wai Limited as their use rights exist through ownership of the land. OFP easements have not been created where there is no defined spatial extent of where water travels generally underground.
- Envelope confirms that easement extents cover the infrastructure route or area only, which is all that is legally required. Rights of entry for inspection, maintenance, repair and renewal are implied by Schedule 4 of the Land Transfer Regulations 2002 and are exercisable over the servient land generally, not confined to the easement area itself. Easement extents have therefore not been amended for access, and right of way easements have not been added to access any easements. Final easement widths will be shown on the title plan following final asbuilt survey of the infrastructure to be protected by the easement.
- No consent notices or registered interests are proposed over road reserve. Any SNA overlay shown on the scheme plans is to depict existing SNA extents only and does not correlate to a registered interest on a record of title unless covered in the easement schedules. Given comment that these areas do not have any recreational value and reserves are not required we will leave these in road reserve which is vested in Council.
- The existing dwellings on Lots 5000 and 5001 are serviced by effluent disposal fields and on-site roofwater disposal. The same servicing strategy applies to Lot 5002.



- Access within the State Highway 59 limited access road has been discussed with NZTA, who are aware of the proposal.
- Infrastructure triggers in the proposed conditions are expressed by cumulative allotment numbers rather than stage numbers, so infrastructure follows the lot count whatever order the stages are built in. A fixed sequenced order of development is not considered necessary.
- Lot 1300 is being confirmed against the storage volume, with tank configuration options and the possibility of distributing storage across other pump station sites. Lot 1400 can be adjusted to achieve the 2 m setback at detailed design. Water and wastewater connections sized to the draft Code of Development Standards will be added to the reserve allotments.

Overall, Envelope considers that PCC's comments identify a number of documentations, staging and implementation matters that can be addressed through revised plans, conditions, detailed design and construction phase processes.

15.0 INFRASTRUCTURE & UTILITY SERVICING (SECTIONS 6.5 AND 6.6)

Raised. Porirua City Council does not consider the discharge of stormwater within reserves appropriate, since the erosion and instability it can cause would be managed by the Council. It notes the southern boundary outlet discharges without passing through a retention wetland, with hydraulic neutrality at that point unclear, and that no assessment has been provided of the cut and fill faces within reserves or the remedial treatment of earth-worked areas. It also considers the application does not demonstrate compliance with the electricity and telecommunications servicing standard, with no servicing plans, no trench cross-sections and no land identified for transformers and ancillary infrastructure.

Response. Envelope maintains that the proposed servicing strategy is appropriate and that sufficient information has been provided to demonstrate utility servicing feasibility.

- Envelope acknowledges PCC's concern regarding the long-term management of stormwater infrastructure within reserve environments. However, the proposed stormwater system has been designed to discharge into established drainage pathways and incorporates attenuation and erosion protection measures intended to minimise adverse effects on reserve land. The possibility that future maintenance may be required does not indicate that the infrastructure is inappropriate or that unacceptable reserve effects will occur.
- The application already contains the information necessary to demonstrate that utility servicing can be provided to all proposed allotments. Road cross-sections and standard trench details already demonstrate that there is space within the road corridor for utility trenches and connections to every allotment. This isn't a design gap, it's information that hasn't yet been consolidated into a single servicing plan, and excessive information for this scale.

The Applicant is working with Wellington Electricity on a high-level network assessment and servicing strategy for the development; that work is ongoing and will be resolved through detailed design, consistent with how electricity and telecommunications servicing is normally sequenced at this stage of a project.

Overall, Envelope considers that the infrastructure and utility servicing requirements of the development can be appropriately accommodated within the proposed subdivision framework. The matters raised by PCC primarily concern the presentation of servicing information and the progression of detailed utility design rather than the feasibility of servicing itself. The evidence available demonstrates that electricity, telecommunications, water, wastewater and stormwater services can be provided to support the development, with final network design and utility coordination appropriately addressed through detailed design and engineering approval processes.

16.0 FLOOD MAPPING AND EMBANKMENT STABILITY (SECTION 6.9)

Raised. Porirua City Council notes that Figure 8 of the Stormwater Management Plan is described as draft flood mapping but appears to reproduce the operative District Plan mapping, and supports Tiaki Wai's position that the plan does not demonstrate the development's effect on the wider flood hazard area, particularly existing flooding downstream of the Taupō Swamp.

Response. The flood modelling position is outlined in detail in response to Tiaki Wai's comments in Section 4.2 above.

17.0 CONSTRUCTION MANAGEMENT (SECTION 6.14)

Raised. Porirua City Council seeks certification of the overarching earthworks construction management plan as well as the stage-specific plans; an overarching construction traffic management plan with stage or site-specific plans and a complaints procedure, given the 10 to 15 year build-out alongside occupied lots; Greater Wellington to lead certification of the erosion and sediment control plans with Council review beforehand; a construction management plan specific to the Lot 1300 wastewater storage; and stage-specific plans addressing the State Highway 59 corridor works with continuous public access maintained along the Ara Harakeke pathway. It also seeks conditions enabling medium density development within the walkable catchment of the neighbourhood centre.



Response. Envelope agrees that a project of this scale requires a robust construction management framework capable of managing environmental effects over an extended delivery period. However, Envelope considers that the proposed consent conditions, management plans and certification requirements already establish an appropriate framework for achieving that outcome.

- Envelope agrees that an overarching construction traffic management plan is required setting out principles and procedures including a complaints procedure, with stage or site-specific plans providing the construction detail. The reference to a final plan in the proposed conditions can be deleted.
- Envelope agrees that the CTMP condition should be amended to ensure that the Ara Harakeke pathway remains open, as practical, during the bulk wastewater main works.
- Envelope acknowledges PCC's request for a construction methodology associated with the proposed wastewater storage infrastructure. The issue relates primarily to construction sequencing and implementation rather than servicing feasibility. Suitable construction methodologies can be developed as part of detailed design and integrated into the wider construction management framework. A construction methodology specific to the Lot 1300 storage will accompany the concept layout, addressing sequencing relative to adjacent occupation and the co-located Stage 1 wastewater pipe and Stage 5A stormwater pipe. Storage is proposed to be delivered progressively as demand triggers it rather than as a single Stage 1 structure.
- Envelope agrees with the objective of avoiding duplicate certification, but Greater Wellington is the consent authority for overseeing erosion and sediment control and should be the sole certifier, with plans provided to Porirua City Council for input prior to certification.

Overall, Envelope considers that PCC's comments identify refinements to management plan structure, certification pathways and implementation processes rather than deficiencies in the proposed construction management framework. The application already incorporates a comprehensive suite of management plans, monitoring requirements and certification mechanisms capable of managing construction-related effects throughout the development programme. The additional refinements proposed improve clarity and coordination but do not alter the conclusion that construction effects can be appropriately managed through the proposed consent framework.

18.0 CONCLUSIONS

Envelope has reviewed the comments relevant to its assessments and does not consider that they identify any fundamental engineering constraint that would prevent the Mt Welcome development from proceeding. The clarifications, refinements and corrections set out above respond to the matters raised and confirm that the proposed infrastructure network can be delivered, operated and maintained.

The matters that remain open are ones of design refinement and implementation, properly resolved through detailed design, the Engineering Approval process and consent conditions, rather than matters affecting the acceptability of the proposal at the consenting stage.



APPENDIX 1

GREATER WELLINGTON SECTION 53 COMMENTS, RESPONSE SCHEDULE



APPENDIX 2

TIAKI WAI SECTION 53 COMMENTS, RESPONSE SCHEDULE



APPENDIX 3

PORIRUA CITY COUNCIL SECTION 53 COMMENTS, RESPONSE SCHEDULE



APPENDIX 4
STORMWATER ACCESS RESPONSE TABLE



APPENDIX 5
STORMWATER OPTIONS ASSESSMENT RESPONSE TABLE



APPENDIX 6
CULVERT RESPONSE TABLE



APPENDIX 7
RAINGARDEN DESIGN MEMO



APPENDIX 8
INFRASTRUCTURE REPORT



APPENDIX 9
STORMWATER MANAGEMENET PLAN



APPENDIX 10

DRAFT EARTHWORKS AND CONSTRUCTION MANAGEMENT PLAN



APPENDIX 11
FLOOD RISK ASSESSMENT & MODEL BUILD



APPENDIX 12
ENGINEERING PLANS, UPDATED SHEETS ONLY



APPENDIX 13
SCHEME PLAN

