Mt Welcome Project – FTAA-2603-1181 – Follow through of commitments and recommendations into volunteered conditions

The contents of the first and second columns of the Table below are drawn from the relevant technical reports provided at lodgement of the second substantive application or in response to RFIs and peer reviews.

REFERENCE	***DETAILED TECHNICAL RECOMMENDATION(S)***	**REVIEWER COMMENTS**		
		Where in conditions or Management Plans is technical recommendation delivered?	**Do conditions and/or Management Plans accurately capture recommendation?**	**Additional comments**
Civil Infrastructure Report[1] ***Envelope, 4 June 2026***	***4.5 DEVELOPMENT STAGING*** *Staging of the development will be undertaken to enable a progressive delivery of housing. Indicative staging is shown on the scheme plans in Appendix 1 and summarised in Table 1 below. A total of 24 stages are proposed. It is recommended that conditions provide for flexible staging to occur, provided that appropriate infrastructure is in place for each stage.*			
	6.0 SAFETY IN DESIGN ***6.3 MITIGATION MEASURES*** *The design seeks to eliminate or reduce risks through the design process in consultation with the wider team. Measures include minimising excavation depths where practicable, maintaining clear sightlines for vehicles and pedestrians, providing adequate edge protection around open structures and stormwater devices, and ensuring utilities and crossings are located to avoid conflicts with traffic and pedestrians. Residual risks identified during later design stages will be documented in the SiD register and communicated to the contractor for inclusion in construction safety planning.*			
	7.6 EARTHWORKS AND CONSTRUCTION MANAGEMENT *Envelope have prepared a draft Earthworks and Construction Management Plan (ECMP) for works at the site, which should be read in conjunction with this report.* *This plan is intended to provide the information required to establish a framework for the safe and environmentally conscious completion of earthworks and civil construction proposed to be undertaken for the project.* *The intention of this document is to set out the key parameters and likely site conditions that are required to be considered to assist the contractor in preparing their site-specific ECMP, for which they will be contractually responsible. It is not intended to be prescriptive, and the contractor will be free to propose alternative measures if they meet the minimum performance standards as outlined in this document and in accordance with the GWRC document "Erosion and Sediment Control Guide for Land Disturbing Activities in the Wellington Region – Issued Feb 2021" and if compliance is still achieved with the relevant conditions of consent.* *It is our view that the erosion and sediment control design can be adequately addressed to ensure that potential adverse effects are managed and mitigated to an acceptable level. We consider that subject to employing the measures outlined above, there will be no significant adverse effects relating to the proposed earthworks. We propose finalising the ECMP as a condition of consent prior to the commencement of earthworks for each relevant stage.*			
	7.7 FLOCCULATION MANAGEMENT PLAN (FMP) *It is likely that control of sediment on this site will require the use of a flocculant and the use of this would be controlled a Flocculation Management Plan (FMP). We propose developing this as a condition of consent, to be certified by GWRC prior to commencing earthworks for each relevant stage.*			
	7.8 WATER QUALITY *As large-scale earthworks progress, careful management of erosion and sediment generation will be essential, reinforcing the need for robust erosion and sediment control measures to maintain water quality standards during and after construction.* *Baseline water-quality monitoring is currently underway to establish existing conditions across the site. This provides a reliable pre-development benchmark against which future changes can be measured. While this dataset is still being finalised, baseline water-quality conditions will be confirmed prior to construction commencing for each stage. Testing locations are described in the PDP Hydrological Assessment.*			
	10.6 LOW PRESSURE WASTEWATER SYSTEMS (LPS)			

[1] Updated version as supplied by the Applicant on 4 June 2026 ('Appendix C1').

REFERENCE	*DETAILED TECHNICAL RECOMMENDATION(S)*	REVIEWER COMMENTS		
		Where in conditions or Management Plans is technical recommendation delivered?	**Do conditions and/or Management Plans accurately capture recommendation?**	**Additional comments**
	Wellington Water has advised that, while its policy on pressure sewers is currently under review, these systems have been accepted in areas where direct wastewater flow mitigation is not required. For this development, mitigation will be provided further downstream of the low-pressure outlets rather than at the immediate connection to the gravity network.			
	10.8 WASTEWATER PUMPSTATION 1 (PS1) ***Scenario 4*** *This scenario tests network performance under a constrained discharge condition of 20 L/s, assuming no bulk main upgrades are implemented.* *When the Muri Road development is included, both on-site storage and bulk network upgrades become essential to accommodate additional flows. Under this combined, fully developed NGA scenario, substantial storage capacity is required to manage peak wet-weather discharges.* *The final storage requirements for PS1 will depend on development timing across the wider Northern Growth Area (NGA). It is recommended that consent conditions require confirmation of storage sizing when future civil stages trigger the need for PS1 construction.*			
Mt Welcome Residential Subdivision – Integrated Transport Assessment ***Stantec, 18 December 2025[2]***	***Executive Summary*** ***District Plan Compliance*** *Where non-compliance occurs, mitigations such as additional active mode connections and consent conditions to control design outcomes are proposed to ensure safety and accessibility.* ***Access Arrangements*** *Consent conditions will dictate timing of upgrades along with the preparation of a suitably detailed Construction Traffic Management Plan.*			
	8.2 Design Layout *Under TR-S5 'Vehicle Crossings', the District Plan sets out a number of criteria that the Site's individual residential lot driveways need will be designed to. At this stage individual vehicle crossings have not been defined for all the 949 lots, and whilst the majority will be able to satisfy the relevant standards, it is likely that some driveways won't be able to fully comply, for example in terms of access separation. In such instances a consent condition has been recommended requiring the design of the driveway to be developed, for later certification, to a suitable standard in keeping with the suburban setting and frontage street environment, including in relation to maximising access separation as far as practicable. In this manner, the positioning of driveways will form part of PCC's certification process.* *TR-S6 sets out specific standards for onsite parking spaces. In a similar manner to above, the specific design details of individual lot parking driveways and garages is not currently known and, whilst most will be designed to satisfy these standards where practicable, in some instances actual gradients may deviate from the maximums described due to Site topography. A consent condition is therefore recommended requiring the design of a driveways to be developed, for later certification by PCC, to a suitable standard in keeping with the suburban setting and frontage street environment.*			
	11.1 Capacity Analysis *The IP period has been included to capture some construction truck movements to/from the Site (which would be timed to avoid the peak hours) that are anticipated for day-to-day operations.*			
	13 Construction Traffic Activity *As part of the CMP, a Construction Traffic Management Plan (CTMP) will be prepared and provided to PCC for certification prior to works commencing on the Site. A condition of consent is offered that requires the preparation of a CTMP for certification by PCC and approval by NZTA, in advance of any Site works commencing. The CTMP will set out details of the work phases, associated forecast construction traffic volumes for each phase, and related management.*			
	14 Conclusion *A number of consent conditions (that where necessary will be secured through a consent notice) are proposed to ensure further design of certain Site components align with the intent of the District Plan provisions, as follows:* *Consent Conditions that require the following:*			

[2] 'Appendix 14' in the second substantive application package.

REFERENCE	*DETAILED TECHNICAL RECOMMENDATION(S)*	REVIEWER COMMENTS		
		Where in conditions or Management Plans is technical recommendation delivered?	**Do conditions and/or Management Plans accurately capture recommendation?**	**Additional comments**
	• preparation of a Construction Traffic Management Plan to be submitted to the road controlling authorities for certification and approval, prior to works on Site commencing;			
	• following occupation of 110 dwellings on the Site, the connecting intersection to SH59 shall be upgraded from the 'interim' design to the 'full' development Site intersection, to the satisfaction of NZTA. This intersection would take the form of a roundabout in general accordance with the concept plan included in Appendix B, unless changes to the road corridor occur in the interim and an alternative arrangement becomes acceptable to NZTA;			
	• on-street parking spaces within road reserves to be designed in accordance with the standards under INF-S24;			
	• individual lot vehicle crossings to be designed in accordance with the standards included under TR-S5. Where vehicle crossings cannot fully meet the specific standards, for example in relation to minimum separation distances, these should be located so as to maximise separation as far as practicable; and			
	• parking within individual lots to be designed in accordance with the standards under TR-S6.			
	In addition to the above, it is recommended that the intersection of Road 14 with Road 13 be marked and signed as a stop control tee-intersection.			
Mt Welcome Station Ecology – Ecological values, effects and effects management[3] ***BlueGreen, 20 November 2025***	***1.3 Structure Plan Surveys*** *The open pasture and rank grass areas on the Site may provide habitat for one At-Risk species; the New Zealand pipit (At Risk-Declining). Pipits commonly forage in grazed pasture and can breed in rank grass areas like those at the native and exotic forest margins on the site. The potential for effect on this species is best managed by way of pre earthworks site management (i.e. not leaving pastures to go rank before clearing them).*			
	5.5 Birds *Effects on indigenous birds are unlikely. On the property this might only be of note where the pastures were not managed until earthworks and NZ pipit had started to nest in the rank grasses. The simple avoidance of that effect is to ensure the pastures remain grazed (or mown) such that pipit are not enabled to breed there.* *While the loss of some 0.1ha of that vegetation is a very minor amount form the wider catchment (and ED) and the magnitude of change therefore negligible, reduction in harm to individual native birds should be considered and achieved by way of a condition that manages the SNA 027 vegetation clearance time (i.e. outside of the common breeding season) and if not then a pre clearance vegetation trimming protocol that is outside of the breeding season and sufficiently managed as to not cause arboreal lizard issues, but reduce nesting probabilities in the season to come. This is then followed by a pre clearance avian survey to ensure there are no native active nests in any clearance area of the SNA.*			
	6.1 SNA/Indigenous Vegetation Removal *A full and complete restoration programme for the offsetting areas should be required by conditions with monitoring of success focused on the correct species richness panted in the correct patterns and established to an 80% canopy cover.*			
	6.4 Wetland Offset *The total package is surplus to the offset requirement (based on a 1:1 ratio) and when conditioning, the requirement should reflect the ratio not the total area.*			
	7.0 Wildlife Authorities and Salvage *The purpose of the MPI permits and authorities is primarily in relation to fisheries and related to harvest. For the capture of possibly less than 10 fish in total I consider that a condition of consent and adherence to the draft fish management plan (Appendix 3) is sufficient to ensure proper treatment of native fish on site during construction.*			
	10.0 Effects Management Summary *The following (Table 6) summarises and clarifies the areas of the three feature types adversely affected, how much in total is affected, what proportion is remedied what must be offset and what those offset ratios are and so the minimum required to for fill the offset.* *Table 6. Summary statistics of effects areas and type and the remedies and offsets.*			

[3] 'Appendix 15' in the second substantive application package.

REFERENCE	DETAILED TECHNICAL RECOMMENDATION(S)	REVIEWER COMMENTS		
		Where in conditions or Management Plans is technical recommendation delivered?	Do conditions and/or Management Plans accurately capture recommendation?	Additional comments

Feature	Total effect area	Area remedied	Remedy area	Area requiring offset	Offset ratio	Offset area required
Natural inland wetland	22,211 m^2	6,900m^2	12,000m^2	15,311m^2	1:1	15,311m^2
Stream	560m (655m^2)	450m (600m^2)	12,000 m^2 (>450m)	110m (55m^2)	1:1.75	193m
Terrestrial SNA	1,400m^2			1,400m^2	1:3	4,200m^2

While the terrestrial offset requirement is 4200m2 the actual indigenous revegetation of viable habitats will be in the order of 6000m2, where the PDP requirements in regard to buffering SNA and contribution to corridor functional enhancements are also considered.

Importantly the stormwater discharging to the wetlands is treated and the wetlands are not a treatment devices. The water retention areas will also replace 450m of stream (300m2) (on the property) and this will be an increase in area and quality of the aquatic habitat (12,000m2) with a change from a narrow riverine system to a larger palustrine system. Gradients in the current system means the fauna will not be disadvantaged at all by this change in flow pattern.

Off property, the new roundabout requires the culverting of 110m of the Taupo stream and 1400m2 of SNA vegetation clearance within SNA027 (and SNA029 and road eastern edge. At a 3:1 ratio 4200m2 is required to be restored and this is to be undertaken in a way and place that also meets PDP rules and objectives related to the North Growth Development area (i.e. SNA buffering and corridor enhancements).

It is assessed that the earthworks component is sufficiently managed that adverse effects are less than minor. It is acknowledged that the current wetland and stream systems are so poor due to the historic land uses that even large amounts of sediment deposition in these systems would not diminish their current values and recovery would be rapid.

It is assumed that discharges related to other contaminants are managed through accepted typical setbacks, fuel bunded areas etc such that the risk of any discharge form the works in very low.

The waterways and wetland post development are protected by stormwater devices and paths and systems that will minimise contamination and are likely to cause a better than current contaminant loading downstream. Noting that to some degree nutrients, bacteria, E. coli, sediments, etc. are replaced by common metals, oils, and other urban contaminants that escape the treatments.

A small residual effect (loss of natural inland albethey exotic) on wetlands persists post remediation and (at 1.5ha) is a less than minor residual effect when compared to a local catchment wetland extent level. Nevertheless, taking a conservative approach that wetland extent lost, largely upper gully systems, will be offset at a 1: 1 offset ratio.

Two areas are identified for this offset and give the 1.0 ha area required (the other 0.5 ha attained as the surplus wetland created in the retention areas) and are sensible areas from both a landscape and ecology perspective to do in total. The areas use the existing hydrology, and exotic wetland features to enable rehabilitation of indigenous representative wetland gullies and so there is overall a loss in extent of wetland on the property (approximately 25%) but a significant gain in the quality and values and function.

In addition, it is likely that other gains will be made through other requirements of the land not developed. I.e. wider non riparian catchment retirement and plantings, removal of stock, and weed management.

The development process, especially earthworks for the retention wetlands, will be subject to standard fish salvage requirements including the proposed Fish Management Plan (Appendix 3). The damming for retention process must also enable fish passage in the Kakaho West and north-western retention systems.

REFERENCE	*DETAILED TECHNICAL RECOMMENDATION(S)*	REVIEWER COMMENTS		
		Where in conditions or Management Plans is technical recommendation delivered?	**Do conditions and/or Management Plans accurately capture recommendation?**	**Additional comments**
	Monitoring of the earthworks extent should be required to establish if the areas predicted are the actual areas affected. I do not consider monitoring wetland health or hydrology of non-affected wetlands should be a requirement of a consent given the current seasonal and annual variance in wetland extent and condition and because the wetlands are virtually all exotic pastural affected areas now. Experience in such monitoring has proven how wetland monitoring is of little value where there is only low value exotic systems. However, the consent should require a full remedy and offset wetland spatial and temporal plan with monitoring of that process to ensure appropriate creation and success occurs.			
Mt Welcome PCC Terrestrial Ecology Review Response ***BlueGreen, 8 June 2026[4]***	*The management approaches then recommended by the reviewer (e.g. nest checks etc) are what has been recommended and proposed by the Applicant through conditions of consent (refer condition 43 in Appendix 7).* *Nest checks should be included as a consent condition for rank grassland and indigenous scrub and indigenous forest habitats across the entire construction footprint. Relocation of indigenous bird nests should not be undertaken at any time - We agree and suggest that that is our direction / recommendation and forms part of the proposal as outlined above.*			
Mount Welcome – Hydrology Assessment[5] ***PDP, 17 November 2025***	***7.0 Assessment of Effects – Wetlands*** Whilst some of the changes are considered significant, the modelling suggests that the wetlands will be similar or wetter post-development. Given the proposed enhanced planting proposed for the lower wetlands (BlueGreen Ecology Limited, 2025), it is considered unlikely that there will be negative impact on the wetland health in the T1 catchment post-development and any risks can be managed through monitoring and mitigation strategies. Given the proposed enhanced planting proposed for the lower wetlands (BlueGreen Ecology Limited, 2025), it is considered unlikely that there will be negative impact on the wetland health in the T3 catchment post-development and any risks can be managed through monitoring and mitigation strategies.			
	8.0 Stream Discharge Assessment of Effects The results have been compared with the outputs from the stormwater design modelling to check for accuracy and the results show a similar order of magnitude in the percentage flow reduction. However, the flow rates estimated within this model (both pre- and post-development) are higher than estimated for the stormwater modelling. Further calibration of this model will be required once sufficient baseline data is available. However, it considered that the higher flows estimated are potentially more conservative for the assessment of effects. Based on the results of the assessment it is considered likely that the effects of the development of discharge into the Kakaho Stream will be less than minor, but as noted, further calibration is recommended when data becomes available to confirm that the assumptions are realistic. Whilst it is not anticipated that significant changes to the model will be required, it will be important for setting effective trigger values for monitoring during construction.			
	11.0 Conclusions and Recommendations The results of the modelling indicate that there will be additional run-off into the majority of the wetlands post-development due to the increase in impervious surfaces. This will result in generally wetter wetlands, although some seasonal			

[4] 'Appendix J' in the package of additional documents supplied by the Applicant on 2 July 2026.
[5] 'Appendix 18' in the second substantive application package.

REFERENCE	DETAILED TECHNICAL RECOMMENDATION(S)	REVIEWER COMMENTS		
		Where in conditions or Management Plans is technical recommendation delivered?	Do conditions and/or Management Plans accurately capture recommendation?	Additional comments
	variation will still occur. In areas where the wetlands will be significantly wetter, particularly the retention wetlands, BlueGreen Ecology has developed an appropriate planting plan to cope with these conditions. Given that the current wetlands are predominantly exotic species, the planting of appropriate native species will enhance the wetland environments and allow them to cope with any changes in hydrology. This additional run-off means that the on-site streams will flow more regularly, but will mostly remain ephemeral in nature. Overall, the total discharge from the site into the downstream catchments will increase, but the use of retention wetlands will ensure that peak flows are lower during large rainfall events. This means that periods with no flow are likely to be reduced, but also periods of high intensity flow will also be fewer post-development. This indicates that there should not be a negative effect on the downstream hydrology. However, it is noted that the modelling is based on a number of assumptions and a limited amount of baseline data. It is therefore recommended that baseline monitoring continues until construction and the model is reviewed against this data to ensure the results are representative. Whilst significant changes to the model are not anticipated, it will be important for setting effective trigger values for monitoring during the construction.			
Mount Welcome – Water Quality Assessment ***PDP, 17 November 2025***	***Executive Summary*** The following key mitigation and control measures will be implemented during and post development: ⁘ During construction. – Minimising the open area of the earthworks as per best practice, – A comprehensive erosion and sediment control plan which will be implemented in a staged manner, – Maintenance of buffer zones around streams and wetlands as described in the Erosion and Sediment Control Plan, – Continuous turbidity monitoring of flows leaving site during construction, ⁘ Post construction. – Part of the slopes will be planted with native vegetation to increase stability as outlined in the Erosion and Sediment Control Plan, ecology and landscaping plans, – Stormwater treatment and management measures will be installed upstream of any discharge into the on-site streams or natural and retention wetlands, – Retention wetlands will reduce the peak flow rates leaving the site, reducing scour and sediment mobilisation, – Buffer zones with native planting will be established around retained streams and natural wetland areas, – Treated stormwater will discharge through natural wetlands and the proposed retention wetlands before leaving site, providing an additional level of protection.			

REFERENCE	*DETAILED TECHNICAL RECOMMENDATION(S)*	REVIEWER COMMENTS		
		Where in conditions or Management Plans is technical recommendation delivered?	**Do conditions and/or Management Plans accurately capture recommendation?**	**Additional comments**
	Provided that the above-mentioned mitigation measures are implemented, it is considered that the development will have less than minor effects on the water quality of downstream receptors—Taupō Stream, Kakaho Stream, and Porirua Harbour. However, to more accurately characterise existing conditions prior to construction, continued baseline water quality monitoring is recommended. This monitoring is already underway and will continue throughout the 2025/2026 season with the last sampling currently scheduled for June 2026. This will provide basis for comparison of the water quality during and post construction.			
	7.0 Assessment of Effects During Construction In accordance with conditions in the GWRC NRP, oil and fuel need to be stored clear of wetlands and watercourses. Further, any oil, fuel or chemical spills will be cleaned up immediately, and measures will be instigated to ensure the risk of contaminants entering waterways is minimised. The most likely risk to water quality for on-site and off-site receptors during construction is the release of sediment into the waterways. This will be managed on site via an Erosion and Sediment Control Plan (ESCP) prepared by Envelope Engineering. Detailed controls, monitoring, mitigation measures and remediation requirements are presented in the ESCP, which should be read in conjunction with this report. In summary these will include but are not limited to: ⁘ Buffer zones around wetlands and streams where earthworks will be avoided, outside of consented works within wetland areas. ⁘ Limiting the open area of the earthworks in alignment with best practice and Council guidance documents. to reduce the risk of sediment release. ⁘ Installation of sediment retention devices, such as decanting earth bunds, silt fences, and sediment retention ponds. ⁘ Placement of sediment retention devices upstream of wetland areas to capture and divert sediment away from on-site wetlands. ⁘ Continuous monitoring of the turbidity in the main streams leaving site throughout the construction program (SW01, SW02 and SW03). This monitoring is currently in place to obtain baseline information. With these control measures in place, the impact of construction on the water quality at the onsite and offsite receptors is likely to be less than minor.			
	8.3 Mitigation and Control Measures ***8.3.1 Stormwater Design***			

REFERENCE	*DETAILED TECHNICAL RECOMMENDATION(S)*	REVIEWER COMMENTS		
		Where in conditions or Management Plans is technical recommendation delivered?	**Do conditions and/or Management Plans accurately capture recommendation?**	**Additional comments**
	The proposed stormwater design and management is detailed in the Operational Stormwater Management Plan and Infrastructure Report provided by Envelope Engineering, which in combination, details the infrastructure and treatment measures. A high-level summary of the key stormwater run-off controls include: ⁘ Stormwater runoff from roads and other impervious surfaces will be collected and treated in raingardens prior to discharge into the natural wetlands on site. ⁘ Once treated, stormwater runoff will discharge into existing natural wetlands, some of which will be converted into natural retention wetlands, where further treatment will occur via natural and chemical biological processes resulting in further nutrient and sediment absorption and uptake. As wetlands are valuable onsite receptors themselves, no untreated stormwater will be discharged into these sensitive ecosystems. According to the calculations provided by Envelope, the stormwater management system has been designed to ensure an appropriate level of treatment before the water is discharged into the natural environment. The presence of the natural wetlands on site will mean that the water will be further filtered before being discharged to downstream receptors. It is therefore considered that the potential negative effects on the Taupō Stream, Kakaho Stream and Te Awarua-o-Porirua Harbour will be less than minor.			
	8.3.2 Ecological and Planting The proposed development involves substantial earthworks, which are expected to affect approximately 15,626 m² of natural inland wetland. To mitigate this impact, 0.69 ha will be restored as ecologically valuable retention wetlands, with additional offsetting and restoration efforts resulting in a net gain of over 50,000 m². Details of the proposed offsets and ecological enhancements are outlined in the Mt Wellington Station Ecology 2025 report by BlueGreen Ecology Limited. Additionally, as mentioned above, most of the fill areas will be replanted with native species, while the remainder will be re-grassed. Cut areas will be predominately re-grassed using hydroseeding. The nature of the development means that grazing will occur on a much smaller area, with livestock excluded from the Taupo and Muri Road catchments and parts of the Kakaho West catchment. This will allow gorse and native bush to naturally colonise these areas over time, thereby enhancing sediment retention and ecological value (refer to Landscape Urban Design Strategy Report, along with the landscape and ecology plans). Buffer planting is also proposed around the retained and retention wetlands. The vegetation selected has been chosen to enhance the natural environment, provide diversity and to stabilise slopes where appropriate. These plants will reduce run-off and erosion from the hillslopes following rainfall events. This will lead to a reduction of suspended sediment in the surface water leaving the site, reducing the impact on downstream receptors.			
	9.0 Conclusions and Recommendations			

REFERENCE	*DETAILED TECHNICAL RECOMMENDATION(S)*	REVIEWER COMMENTS		
		Where in conditions or Management Plans is technical recommendation delivered?	**Do conditions and/or Management Plans accurately capture recommendation?**	**Additional comments**
	A review of the available data for the site and surrounding catchments and receiving environments has been completed. There is limited data for the site at this stage as only the first quarterly monitoring round is available. As a result, the baseline dataset is limited and does not allow for a comprehensive characterisation of water quality at the site. There is data available for the Taupo Stream, albeit significantly downstream of the site, Taupo Swamp, and the industrial estate at Plimmerton. There is no baseline water quality data available for the Kakaho Stream catchment. GWRC does test the harbour for key parameters, and this information has been reviewed. The results indicate that under current conditions nitrate concentrations at all three on site monitoring stations are significantly higher than the mean value recorded at Taupō Stream, though they do not exceed the default freshwater guideline values for 95% species protection as outlined in the Australia and New Zealand Guidelines for Fresh and Marine Water Quality. This may be attributed to the site's land use as a deer farm. Measured concentrations of copper and zinc on-site slightly exceeded the default freshwater guideline values for 99% species protection, according to the ANZ Guidelines (2018), while complying with the 95% threshold. The limited available turbidity data at SW02 and SW03 showed a baseline of 5–10 NTU, slightly higher than Taupō Stream's baseline (<5 NTU), with higher peaks during rainfall events. More elevated turbidity at the site is expected due to steep, erodible pasture slopes, while Taupō Stream benefits from sediment filtration by Taupō Swamp upstream of the monitoring point. The proposed development is expected to improve downstream water quality due to the following changes: ⁘ Removal of livestock from the majority of the site, reducing the nutrient loading and erosion of slopes. ⁘ Treatment of runoff from impervious surfaces within the lots and along the road via raingardens to remove/reduce sediment, metals and nutrients in run-off. ⁘ Replanting of slopes with native species and riparian buffers to increase filtration and decrease erosion. ⁘ On-site retention wetlands reduce peak flows from the site and therefore the sediment mobilisation during large scale rainfall events. ⁘ Natural wetlands at the site (both retention and in gully systems) offer additional filtration and retardation of contaminants, although no untreated stormwater run-off from impervious surfaces will be discharged into these systems. It is therefore considered that the effects of the development on the water quality of the downstream receptors—Taupō Stream, Kakaho Stream, and Porirua Harbour—will be less than minor. However, it is recommended that further baseline water quality monitoring at the site is undertaken to more effectively characterise the existing water quality prior to construction. This is underway and will be continue to at least June 2026 and will provide a basis for comparison during and post construction.			
Geotechnical Investigation – Mt Welcome Development	***9 Recommendations*** ***8.1 Earthworks*** *Detailed earthworks recommendations will be outlined in the project Earthworks Specification. In this section are key considerations regarding the proposed earthworks.*			

REFERENCE	DETAILED TECHNICAL RECOMMENDATION(S)	REVIEWER COMMENTS		
		Where in conditions or Management Plans is technical recommendation delivered?	Do conditions and/or Management Plans accurately capture recommendation?	Additional comments
ENGCO Limited, 6 November 2025	***8.1.1 Vegetation*** *Within the earthwork areas, any permanent unsealed slopes shall be re-vegetated to reduce the likelihood of future erosion. All new unsealed slopes shall be protected from overland water flow by the addition of bunds or other suitable measures.* *Beyond the earthwork areas, de-vegetation shall be minimised to reduce the likelihood of future slope instability or erosion.*			
	8.1.2 Placement of Structures *All structures should be located a safe distance back from the crest of steeply sloping areas (steeper than 25 degrees) or have specific engineer designed foundations. A safe distance is likely to be in the order of 5 m. This distance will be assessed during detailed design and confirmed during the construction stage.* *Structures at the base of slopes may require catch fences or appropriate set back distances to mitigate against slope instability or rockfall as discussed in Section 8.3.*			
	8.1.3 Groundwater *Although unlikely, if groundwater is encountered during excavation, specific measures to control groundwater (such as a sump and pump, plus bridging fill) may be required. The presence of water may impact fill compaction quality, as such groundwater controls should be implemented. This will be detailed in the earthworks management plan.*			
	8.2 Permanent Fill Batters *The modelled fill batters as shown on the development plans do not meet the ULS seismic FOS. Specific design of the fill batters will be required during detailed design stage. Mitigation options for fill batters include geogrid reinforcement, reducing the batter slope angle, or designing foundations and services specifically for structures within the fill material at the top of batters if appropriate. In addition, site specific triaxial testing should be conducted to confirm the soil parameters of the fill material. If the soil parameters differ significantly from those used in the analyses in this report, the slope stability modelling should be updated.*			
	8.2.1 Filling *All filling works should be completed in accordance with NZS 4431:2022 and the site-specific earthworks specification.* *Free flowing water must be kept away from all fill slopes.* *It is recommended that hydro-seeding take place shortly after completion of the fill slopes.*			
	8.2.2 Use of Existing Soils as Engineered Fill *Rock, clean sand, and sand / silt / gravel mixtures were encountered across the site. Four Particle Size Distribution (PSD) and seven Standard Compaction tests were undertaken on a selection of these soils, as well as three hand-mixed samples with different variations of rock and silt / sand. Based on the results and ENGEO's experience working with similar material on nearby sites, we consider that the majority of the soils and rock likely to be encountered on the site will be re-usable as fill, provided they are processed to remove any organic material, debris, and over-sized particles.* *Some surficial soils encountered on the site, including topsoil and the alluvial / lacustrine deposits, contain silts with varying amounts of organic material, and generally a high moisture content. These materials are unlikely to be suitable for re-use as fill.* *It is likely that additional compaction testing will be required during the construction phase to obtain accurate maximum dry density estimates of site-won material as this material is expected to vary across the site, spatially and well as with depth.*			
	8.2.3 Fill Batter Gradients *Permanent fill batter angles will be confirmed in the Project Earthworks Specification after all required laboratory testing has been completed, and batter specific slope stability analyses have been carried out. All fill batters greater than 8 m in vertical height will require site specific design to mitigate seismic displacements as highlighted in Section 4.* *For unreinforced fill batters lower than 8 m in height, a safe long term batter angle should be established through slope modelling using the specific parameters obtained through the laboratory testing and used in the final designs.*			
	8.3 Permanent Cut Batters *Our slope stability and displacement analysis indicate that the proposed cut slopes do not meet the required FOS under ULS conditions. In the case of Section F, as unmodified, the factor of safety is below the required amount in all scenarios modelled.*			

REFERENCE	DETAILED TECHNICAL RECOMMENDATION(S)	REVIEWER COMMENTS		
		Where in conditions or Management Plans is technical recommendation delivered?	Do conditions and/or Management Plans accurately capture recommendation?	Additional comments
	Potential mitigation options for cut batters that may be prone to instability include reduction of batter slope angles, setback zones at the toe and crest of batters, benching, or construction of a catch fence / barrier at the base of cut batters. We recommend that a suitably qualified Ground Engineering professional assess the stability of all cut batters during construction.			
	8.3.1 General *Cut batters should be formed during the summer months where possible and vegetated promptly after construction. Stormwater from the ground above the proposed cuts should be picked up and discharged around the face in a controlled manner to minimise erosion of the cut faces. All permanent cut batters should be protected by planting and / or hydroseeding. Cut batters (generally those greater than 8 m depth) that have loess soils present will require a site-specific erosion design to mitigate against tunnel gullies occurring.* *Cut batters above 1.5 m depth and / or cut batters near existing / proposed structures should be inspected by a geotechnical professional during construction to confirm (or modify) safe batter angles.* *All excavated soil should be removed from site, reused immediately or placed in a stockpile such that it does not cause slope instability.* *In the unlikely event that seeps are encountered in exposed cut faces, this may lead to slumping and possibly small muddy flows. Such seeps may need treating by surface and / or subsurface drains, or other site-specific measures. If encountered, advice from a geotechnical professional should be obtained.* *Catch fences / barriers may be required at the bottom of cuts to protect structures or roads from rock fall loosened by fretting or erosion.*			
	8.3.2 Cut Batter Angles *Preliminary cut batter angles are presented in Table 17. These have been developed from site observations and experience with other similar materials. This table provides preliminary estimates of suitable slope angles for cuts up to 8 m in height. The conceptual plans provided to ENGEO indicate cuts significantly higher than this, and as such, specific slope stability analysis has been carried out for several representative large cuts as detailed in Section 7.3.* *If the recommended cut batter angles are not achievable, the slope should be retained by an engineer designed structure and / or detailed slope stability analysis should be undertaken. Further investigations would be needed for the design of any retaining structures.*			

REFERENCE	DETAILED TECHNICAL RECOMMENDATION(S)	REVIEWER COMMENTS		
		Where in conditions or Management Plans is technical recommendation delivered?	Do conditions and/or Management Plans accurately capture recommendation?	Additional comments
	Table 17: Proposed Cut Batter Angles **Unit** / **Permanent Cut Batter Angle (degrees above horizontal)** / **Temporary Cut Batter Angle (degrees above horizontal)** / **Comments** Topsoil or old uncontrolled fill — 1V:3H (18°) — 1V:2H (26°) — Natural silts and clays — 1V:3H (18°) — 1V:2H (26°) — Natural sands and gravels — 1V:2H (26°) — 1V:1.5H (34°) — Greywacke — 1V:1H (45°) — 1V:0.35H (70°) — Appropriate cut batter angles in Greywacke rock are likely to be governed by the rock structure and defect orientation. Permanent slopes at 1V:0.8H (55°) may be acceptable for cuts under 1.5 m high which are more than 1.5 m from structures.			
	8.3.3 Cut / Fill Transitions *Buildings whose subgrade contains both cut and filled ground could experience differential soil movements. Structures proposed on such sites should be designed to accommodate differential settlements.* *Alternatively, such building sites can be reconstructed to create uniform subgrade conditions. This can be accomplished by excavating the soil across the entire building pad to a minimum depth of 0.6 m below founding level and replacing the excavated material with uniformly compacted fill.*			
	8.4 Stormwater Retention Wetlands *Based on the proposed stormwater attenuation plans (Envelope Engineering ref: 1753-02 Rev P1, Drawn September 2025), we understand that five stormwater retention wetlands will be constructed for the development. These conceptual design plans show that the wetlands will be formed by constructing earthen embankments to retain stormwater discharges from the development, with embankment slopes varying between 1V:2H to 1V:3.5H. The wetlands will all maintain a permanent water level.* *Each of the stormwater retention wetlands appear to collect runoff from different catchments and are not hydraulically linked. A cascading dam failure has therefore not been considered plausible for this development.* *Soils won from the development are anticipated to be used to form the embankments and will comprise sandy silt / silty sand or excavated Greywacke sandstone. Based on our experience of similar soils, we believe that the site won materials can be reused to form stable earthen embankments with performance that meets the requirements of the New Zealand Dam Safety Guidelines (NZSOLD, 2024). This assumption will be validated during detailed design of the stormwater retention wetland embankments.* *A summary of the proposed stormwater retention wetland characteristics is provided in Table 18 [not reproduced here for brevity]. These characteristics are based on the provided conceptual design plans (ref: 1753-02 Rev P1, Drawn September 2025) and will be refined during detailed design of the development. Based on discussions with Envelope, we understand that the reduced levels are based on the NZVD2016 for vertical datum.* *Under the Building (Dam Safety) Regulations (MBIE, 2022), each of the proposed stormwater retention wetlands are not considered to be 'classifiable' as their maximum possible stored volume is less than the regulations specify (storage of <20,000 m3). Therefore, a Potential Impact Classification assessment is not required for the wetlands.*			

REFERENCE	*DETAILED TECHNICAL RECOMMENDATION(S)*	REVIEWER COMMENTS		
		Where in conditions or Management Plans is technical recommendation delivered?	**Do conditions and/or Management Plans accurately capture recommendation?**	**Additional comments**
	A comprehensive earthworks specification including an inspection and testing plan will be provided to the earthworks contractor prior to starting excavations, along with a robust erosion and sediment control plan.			
	8.5 Surface Water Management *During construction, appropriate measures shall be undertaken to control and treat stormwater runoff, with silt and erosion controls complying with local body guidelines for erosion and sediment control.* *Overland flows should be directed away from existing slopes to reduce the risk of ponding and erosion leading to slope instability concerns.*			
	8.6 Erosion and Sediment Control *Higher fill and cut slopes could be vulnerable to erosion if concentrated flows develop. Mitigation solutions should be implemented for all large fills (greater than 3 m in height) to control runoff from the fill batters and scouring of the surficial fill. Mitigation options may include benching of the face of the fill, addition of geogrid within the fill (and wrapping of the face), a site-specific hydroseeding plan (to reduce the likelihood of erosion), and bunds at the top of batters during construction. It should be noted that the addition of geogrid to fill batters will require specific detailed design.*			
Geotechnical Review Comments Register ***ENGCO Limited, undated***[6]	*All structures and earthworks (i.e. wetlands) in gullies will be founded in rock. This could be set as a consent condition.* *Due to the high density of fractures within Greywacke rock, it is not practical to assess continuous rock defects until the cuts are excavated. An engineering geologist will be onsite regularly during construction to identify any unfavourable or persistent defects. Slopes will be either modified if possible or suitable engineering solutions will be installed, such as, rock bolting or anchored mesh, or catch fences where suitable. The Applicant will discuss condition drafting with PCC.* *Slope specific subsoil drainage for fill slopes will be designed in consultation with the civil engineer. Typically, a subsoil drain will be placed up the centre of the gully at the beginning of the project. After this, lateral subsoil drains will be placed at the rear of the fill embankments at 1/3rd increments up the slope which tie into the central gully drainage trench. Additionally, during earthworks, if seepage is encountered during excavation of fill benches, this will be captured with drainage (wrapped novocoils) tied into the centre gully drainage trench. The Applicant will discuss condition drafting with PCC.* *The 10-year event is contained within the piped network, with erosion protection detailed at each outlet and discharge locations shown on the stormwater design plans. Scour and erosion for stormwater outlets will be designed in accordance with the SMP (Section 6.14) and detailed at detailed design. Given the steep network, 100-year flows are largely contained within the network; where overland flow occurs, it runs down the batters at shallow depths and low velocities, with batters to be planted. The 100-year flow paths are shown in the Envelope Flood Risk Assessment and Flood Maps. The Applicant will discuss condition drafting with PCC.* *If this occurs, drainage will be installed/drilled into the slopes to discharge to the base of slope. The Applicant will discuss condition drafting with PCC.* *Surface water is managed in accordance with the stormwater plans and SMP, with flows directed through the network to the designated management areas and devices. The Applicant will discuss condition drafting with PCC.* *All existing flow paths have been designed with outlets to match the pre-development discharge. This has been informed by ecology and hydrology input to ensure existing hydrology and flow paths are respected. The Applicant will discuss condition drafting with PCC.* *Scour and erosion for stormwater outlets will be designed in accordance with the SMP (Section 6.14) and detailed at detailed design. The Applicant will discuss condition drafting with PCC.*			

[6] 'Appendix G' in the package of additional documents supplied by the Applicant on 2 July 2026.

REFERENCE	*DETAILED TECHNICAL RECOMMENDATION(S)*	REVIEWER COMMENTS		
		Where in conditions or Management Plans is technical recommendation delivered?	**Do conditions and/or Management Plans accurately capture recommendation?**	**Additional comments**
	Erosion controls will need to be slope-specific and will be completed at detailed design stage. Surface water will be directed away from the cut slopes with the use of cut-off drains at the crest of slopes and slopes will be planted to minimise erosion. SED zones will be detailed in the completion report if loess is present on building platforms. The Applicant will discuss condition drafting with PCC. *Where there is loess soil beneath structures, the majority of the this will be removed therefore the risk is low. Where loess remains, drainage will be installed to direct water away. SED zones will be detailed in the completion report if loess is present on building platforms. The Applicant will discuss condition drafting with PCC.* *Where stormwater flows over loess soil, erosion is possible. Overall sediment loss will be reduced with retirement from grazing, planting and stormwater diversion. Rain gardens have been designed in accordance with Wellington Water standards and will capture 90% of sediment from the reticulated stormwater system. The project ecologist has confirmed that there will be some natural load from undeveloped areas of the site into retention wetlands, but this will be less than is occurring at present and wetlands will be able to receive the sediment without needing to be cleaned out. Stormwater flow will not be concentrated within loess cuts or embankments. The Applicant will discuss condition drafting with PCC.* *Where this occurs, this will be clearly stated in the completion report as a specific engineer design zone and will need to be considered during house design - by a notice on the title if required. The Applicant will discuss condition drafting with PCC.* *The Lot 1311 covenant area does not currently exist and will be created through a conservation covenant being placed on the title when created through the subdivision process following the completion of earthworks, refer to proposed conditions of consent 101, 102 and 114 in Appendix 7 of the Substantive Application. The Applicant will discuss condition drafting with PCC.*			
Preliminary Site Investigation – Mount Welcome Pukerua Bay ***PDP, 17 November 2025***[7]	***10.0 Recommendations*** *The recommendations have considered the whole development area for completeness.* *It is understood that the site and the wider area is going to be redeveloped for residential housing. Parts of the site where actual or potential HAIL activities have been identified will require further investigation to assess the potential contamination risk of residual contamination to the relevant human health guidelines or landfill waste acceptance criteria depending on soil fate.* *Given the age of the structures within Lot 1 DP 534864 it is likely that an asbestos survey will be required prior to demolition. These buildings may also require shallow soil testing to identify potential lead and asbestos within the halo of the buildings.* *A detailed site investigation is recommended within the identified potential HAIL/source areas to determine the presence of potential contamination and to determine whether the NESCS will be triggered for soil disturbance and/or subdivision.* *A contaminated site management plan (CSMP) will also be required for the duration of the development works to address the risk of accidental discovery of contamination within the area of. Any soils which are to be removed and disposed of during the development will require testing prior to disposal against the relevant facilities soil disposal acceptance criteria.*			
Mt Welcome Development - Construction Noise and Vibration Assessment[8] ***Marshall Day Acoustics, 29 May 2026***	***8.0 Mitigation and Management*** ***8.1 High-level Recommendations*** *Given that compliance with the NZS 6803:1999 noise limits has been predicted at all receivers throughout the proposed works, we expect equipment selection and communication with neighbours to be the most effective measures to reduce the risk of any potential construction noise effects. We recommend such management is implemented as even when compliance with noise limits is achieved, noise complaints may still arise.* *Selection of equipment suitably sized for the work would help to ensure construction noise is no louder than necessary, and prior notification to neighbours that construction noise may at times be audible generally eases undesirable responses.*			

[7] 'Appendix 27' in the second substantive application package.
[8] 'Appendix G' as supplied by the Applicant on 4 June 2026.

REFERENCE	*DETAILED TECHNICAL RECOMMENDATION(S)*	REVIEWER COMMENTS		
		Where in conditions or Management Plans is technical recommendation delivered?	**Do conditions and/or Management Plans accurately capture recommendation?**	**Additional comments**
	The same measures can be adopted for construction vibration, but with strict avoidance for risk of cosmetic building damage. This is readily achievable with selecting appropriately sized equipment.			
	8.2 Construction Noise and Vibration Management Plan *The most effective way of managing noise and vibration from the site would be to prepare and implement a Construction Noise and Vibration Management Plan (CNVMP) once methodologies have been confirmed.* *The CNVMP can be targeted to address only those dwellings where the construction noise guideline limits or the vibration damage/amenity limits are predicted to be exceeded which can change/be verified with monitoring.* *The overarching intent of such a CNVMP should be s16 of the RMA which, in summary, states that an activity shall adopt the BPO to ensure that the emission of noise does not exceed a reasonable level. Within the RMA, the definition of noise includes vibration. Section 17 of the RMA also states that there is a duty to avoid, remedy or mitigate any adverse effect on the environment.* *The emphasis of the CNVMP should be on managing noise and vibration effects on occupants of surrounding buildings. A CNVMP would provide project-specific mitigation, management, and contingency measures to enable the minimisation of any potential noise effects to the greatest possible extent.* *In respect of construction vibration, the CNVMP could provide guidance on pre-condition building surveys if risk of cosmetic building damage is expected, and establish vibration amenity trigger levels as complaints may still arise despite compliance with building damage limits.* *The CNVMP could also provide guidance on monitoring, complaints response, and staff training procedures.* *We recommend a CNVMP is prepared by a suitable qualified person and submitted to Porirua City Council for certification, prior to the commencement of any works.* *Appendix G shows general descriptions of items that should be included in the CNVMP.*			