

Compiled 1 September 2026

Hunua Quarry Development [FTAA-2603 -1185]

Topics for ecology workshop to be held on 3 September 2026

Issue	Status	Applicant position	DOC Position	AC Position
1: Wildlife permit				
Gecko translocation	The release site location of the questioned by DOC in s51 report. Updated information provided by Applicant in Response to Comments.	The applicant considers that both the Hunua Ranges and Tiritiri Matangi Island are appropriate release sites.	Resolved following discussion with applicant on 28.08.26, subject to refinement of conditions.	No AC position. Lizard salvage and relocation are addressed through the Lizard Management Plan, which AC accepts in general subject to certification (AC s53 memo, s6.3.1). Release site selection is a Wildlife Act matter for DOC.
Adaptive Management (Additional matter raised at 28 August meeting between DOC and Applicant)	Condition 38: Adaptive Management is unresolved. This matter centres on the ability to vary implementation of the LMP to optimise salvage / welfare outcomes whilst ensuring DOC is informed of these changes. The discussion with DOC related to matters should be included as conditions and what matters should be in the LMP.	The Applicant has proposed criteria around what constitutes “minor adaptations”, and suggests the following text is added to Section 6.4.6 of the LMP: “Minor adaptations to the implementation of the LMP will only apply to lizard salvage effort and extent, and only where changes will increase the likelihood of capturing lizards. Specifically:		

- Changes to effort can only increase the level of effort (i.e., increased trap density, increased number of checks, additional trap / salvage methods)
- Changes to extent can only respond to the extent and types of habitats available at the time of salvage (i.e., mapped grassland becomes shrubland and different methods are required, a slip on the quarry face removes habitat). Any changes to extent will be <10% of total clearance area.

Any changes implemented under the Adaptive Management criteria will be notified within 24 hours and will be included in permit reporting.

For any changes required outside of these criteria, the Project herpetologist will seek advice from the Auckland Regional Operations Manager (auckland@doc.govt.nz) in the first instance.

		Condition 37 of the Wildlife permit would be deleted. For reference we note that the LMP for Taharoa Ironsands Central and Southern Block Mining included the following text: <i>“Minor flexibility or adaptations to the current methods proposed in this LMP may be made at the discretion of the Project Herpetologist. This will enable the appropriate management of lizard populations that are encountered during the lizard salvage within the site, habitat quality and type of species encountered.”</i> This text was not identified as an issue in the 51(2)(c) wildlife approval report for that project. This text (or similar) has also been used for other projects under the Wildlife Act Authorisation process (i.e., non-FTAA applications).		
2: Complex Freshwater Fisheries				
2.1: Streamworks in Tributaries 3 & 4	Proposal for these tributaries unclear in application materials.	The proposal for tributaries 3 and 4 is set out in the memorandum Response to s53 comments dated 18	Resolved following discussion with applicant on 28.08.26	Resolved Removal of the Stage 7 losses of Tributaries 3 and 4

	Scope of proposed activity questioned by DOC in s51 report and s53 comments. Updated information provided by Applicant in Response to Comments.	August 2026. Here we clarify: • Activity in the Tributary 3 and 4 catchments occur in Stages 2 and 7 of the proposed expansion. • During Stage 2 and the construction of the haul road, two culverts will be constructed: a 40 m culvert in Trib 4 and a 75 m culvert in Trib 3. • Provision has been made in the aquatic ecological compensation calculations for 115 m of stream length for the loss of stream habitat resulting from the construction of the two culverts. • Recognising the prevention of fish access upstream in Trib 4, 151 of the upstream intermittent stream, this length of stream has been included in the aquatic ecological compensation		from Tranche 1 (Response p. 20) is accepted. The effects of an activity not currently sought should not be offset now. Unresolved • Blocking of fish passage at the Tributary 4 culvert is not supported by a completed feasibility assessment. PDP (email, 18 August 2026) identify in-culvert grouted rock, constructed baffles, flow channelling, a debris screen and culvert upsizing as options, and state that these are conceptual and require further development and analysis to confirm practicality. Infeasibility is asserted rather than demonstrated. AC seeks provision for climbing fish passage, or a completed options assessment before
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		calculations. This means that the benefit of offset for the upstream Trib 4 occurs some 40 years before it is reclaimed in Stage 7 of the quarry expansion, noting that approvals and assessment associated with the Stage 7 reclamation are not part of this current application (these actions sit outside of 35 year duration for which consents can be granted). • Provision is made for fish passage upstream of the culvert in Trib 3 • Fish passage upstream through the culvert in Trib 4 will be blocked. • At Stage 2 fish salvage will occur at the locations of the culverts prior to insertion. • At Stage 2, no fish salvage will occur upstream or downstream of		culvert design is fixed. • The Tributary 4 upstream reach is given as 191 m (Response p. 20 bullet; Table 1 p. 21; draft condition 158) and as 151 m (Response p. 20 text; Attachment 1 p. 4). The offset quantum depends on which figure is correct. • Draft conditions 157(a) and (b) require an ecologist to confirm pre-set figures of 2,840 lineal metres lost and 10,224 lineal metres to be restored. The derivation of those figures is not provided. AC seeks either the calculation or condition wording that requires the figures to be derived at the time rather than confirmed. • Additionality of barrier remediation relied on as
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		either of culverts in Tribs 3 or 4. The outcome of the above means that the Complex Fisheries Application: • No longer includes consideration of fish passage or culverting of Trib 3. • Retains consideration of Trib 4 culvert due to blocking of upstream fish passage. • Retains consideration of fish salvage for the construction of culverts at Tribs 3 and 4.		compensation. See 3.3 below.
2.2: Values of Tributaries 3 & 4	Ecological values of tributaries poorly described. Fish species in Tributaries 3 & 4 questioned by DOC in s51 and s53 comments. Additional surveying completed by Applicant and appended to Response to Comments Ecology Memorandum.	The ecological values of Tribs 3 and 4 are described in s7.5 of Appendix B12.4.5b Ecological Assessment, Attachment 1 Response to Panel Minute 4 of Response to s53 comments (dated 18 August 2026), and additional information provided here. Environmental DNA samples collected from Trib 3 (on 4 August 2026)	Resolved following discussion with applicant on 28.08.26	Agreed • On the evidence available, AC accepts that shortjaw kōkopu are unlikely to be present in either tributary. Unresolved • Attachment 1 (UPDATED 24 August 2026, p. 3) records banded kōkopu detected by

		and Trib 4 (on 28 July 2026) detected Zephlebia Pirongia (At Risk Naturally Uncommon), and long fin eel (At Risk Declining) was detected in both Tribs 3 and 4. No other threatened aquatic fish or invertebrates were detected. For the avoidance of doubt we clarify that shortjaw kokopu were not observed or detected in either of Tribs 3 or 4. For other metrics we relied on data collected from earlier surveys of Trib 3; the question of the timing and use of the data is set out in para 8.003 of Response to s53 comments. The ecological values of Tribs 3 and 4 were assessed as high and the additional observations and information collected from Tribs 3 and 4 does not change our position on the ecological values of these watercourses.		eDNA in Tributary 3. Banded kōkopu is a climbing species, is currently classified At Risk - Naturally Uncommon (Dunn et al. 2025) and is regionally significant (Bloxxham et al. 2023, Auckland Council TR2023/13). The application assessed it as Not Threatened. AC supports DOC on this point. The Applicant response (p. 17, comment 9.048) that SEV and ECR do not use threat status is correct as to those calculators, but does not answer the ecological value assessment or the Tributary 4 passage decision. • Attachment 1 describes cobbles and boulders in the lower reaches of both tributaries while concluding that habitat is unfavourable on the
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				basis of minimal cobble habitat. AC does not dispute the conclusion but records that the habitat argument is weaker than stated.
3: Mangapū Stream Diversion				
3.1: Certainty of outcomes	High value stream to be realigned. The ability to achieve anticipated outcomes in realigned channel questioned by DOC and AC in s53 comments. Additional context provided by Applicant in Response to Comments.	Our position on the ability to achieve the anticipated outcomes in the realigned channel is set out in s.10 of Appendix B12.4.5b Ecological Assessment and Appendix 12.8.7 Stream Realignment Management Plan. In summary we consider that the realignment is achievable due to: • The channel will retain a natural flow regime. • The source environments for colonisation of the rehabilitated channel are retained upstream in the Mangapū tributary, as well as from Tributary 2. • Instream habitat will be created to reflect the habitat	DOC position (relating to 3.1 and 3.2 of this table) is that the performance targets for the constructed reach at s10.6.5 of ACIA should reflect the reclaimed reach (not an average formed from various parts of the catchment) in order to provide ecological equivalence. Additional context has not resolved issue.	Agreed • Colonisation sources are retained upstream in the Mangapū Tributary and in Tributary 2. • Staged livening is an appropriate mechanism and materially reduces temporal loss. • The channel design attributes set out in the SRMP (Appendix 16 characteristics) are appropriate in principle. Unresolved • Value equivalence is not demonstrated. The Applicant states the realigned riparian margin will necessarily be

		of the Mangapū tributary. • Staged livening of the realigned tributary provides a means for testing the durability and acceptance of the habitat and other attributes. • A timeframe for adaptive actions if needed. • Performance monitoring (Condition 67 (b) and s6 of Appendix B12.8.7 Stream Realignment Management Plan). The ecological values are not expected to be exactly the same in composition and abundance as the Mangapū tributary, but are expected to reflect the natural processes, habitat, aquatic biodiversity, food web structures, temporal changes, assimilation that occur in high ecological value watercourses.		narrower than the existing riparian forest and will vary in width (Response p. 6), and DOC records the Applicant acknowledging that riparian vegetation will be managed to maintain haul road access and is not expected to achieve the same density or diversity (DOC s3.11). The existing riparian extent exceeds 20 m of mature woody vegetation; the realigned margin is 1 to 5 m on a shallow soil layer over rock. AC considers a residual loss of stream ecological value remains and is unaccounted for. • The realignment is to remediate the loss of existing stream. This remediation must achieve a no net loss of potential. This cannot be achieved with
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				reduced riparian margins and use of the industry standard SEV tool to demonstrate ecological equivalence would likely demonstrate this. • The SRMP specifies an impermeable liner beneath the stream bed to prevent seepage into the cut rock, formed from compacted site-won clay fill, and elsewhere describes a low permeability stream liner. A lined bed cannot develop hyporheic exchange. The two specifications are not reconciled and the ecological consequence has not been assessed. • Large woody debris, a defining structural component of these watercourses, is not provided for in the design or the
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				performance targets.
3.2: Monitoring conditions	Scope of monitoring indicators and target values. AC and DOC question the selection of monitoring indicators and target values in s53 comments. Additional rationale provided by Applicant in Response to Comments.	The proposed monitoring indicators and target values are set out in S10.6 of Appendix B12.4.5b Ecological Assessment, paras 8.014a&b of Response to s53 comments (dated 18 August 2026) and in Appendix 12.8.7 Stream Realignment Management Plan. The proposed monitoring attributes include habitat, settled sediment, algal cover, macroinvertebrates and riparian vegetation, each component using a recognised standard sampling and laboratory protocol (s6 of Appendix B12.8.7 Stream Realignment Management Plan). We do not explicitly state eDNA but recognise this as an additional and complementary monitoring tool. The monitoring data aids in informing the 'natural condition and function' of the watercourse.	DOC position as 3.1 above	Agreed - Draft condition 68(j) now provides for baseline monitoring, turbidity and sediment deposition, water quality including dissolved oxygen and temperature, ecological monitoring, frequency, and timeframes and measures of success. Condition 68(k) requires management actions where measures of success are not met. AC supports this structure. Unresolved - MCI target. The reach to be replaced records MCI 115 (Band B) and QMCI 6.81 (Band A) at Site 3. Draft condition 67(a)(iii) sets a target of Band C or

		The frequency of the proposed aquatic ecological monitoring of the stream channel is recommended as annually for five years post-livening, and again at Year 10 to confirm the realigned channel is meeting ecological objectives and function (s6 of Appendix B12.8.7 Stream Realignment Management Plan). Where the objectives and function are satisfied, we do not consider that monitoring needs to continue. Complementary to these monitoring attributes are targets or thresholds (set out in s10.6.5 of Appendix B12.4.5b Ecological Assessment). We consider the thresholds to be meaningful and focused ecological attributes (Condition 67 (b) and s6 of Appendix B12.8.7 Stream Realignment Management Plan). We set out in para 8.014a&b of Response to Panel Minute 4 (dated 18 August 2026) our reasons for not including the SEV as		better. NPS-FM Table 14 Band C extends down to 90. The target therefore permits a substantial decline against the reach being replaced, and is inconsistent with the Applicant position that values will be maintained. The Applicant justifies it by reference to a catchment range of 105 to 125 (Response p. 8), while the SRMP reports a range of 113 to 125 for the same reaches. AC seeks a target of Band B or better, or a target expressed relative to a defined pre-works baseline with a specified sampling regime. • SEV. The Applicant states at Response p. 7 that design phase SEV is included in the proposed conditions. AC cannot locate it in draft conditions 67
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a monitoring indicator or as a performance target.

The SEV is a valuation tool that we have used to inform the management and quantum of residual aquatic effects of the application and is not a target 'score' in itself. More effective indicators are those that reflect the natural processes, habitat, aquatic biodiversity, food web structures etc. that we have set out above.

or 68 of the 18 August set. AC seeks SEV at design and again post-livening, not as a compliance threshold but as the trigger for adaptive response, on the basis that SEV potential scores were the instrument used to size the aquatic offset.

- No fish or kōura monitoring is specified for the realigned channel.
- Ecological monitoring ceases at Year 10 if objectives are met (SRMP section 6.0), which is before riparian canopy development. AC seeks monitoring aligned to canopy development.
- Draft condition 67 requires verification on the phrase *achieves no net loss of value* in the 18 August text.

3.3: Stream Effects Management	Clarity of Offset and compensation activities. AC and DOC raise questions about the proposed offsetting and compensation activities related to stream effects, with inconsistencies in the Ecological Assessment (e.g. stream length estimates provided in Table 28, Table 22 and text on page 124). Additional analysis and information provided by Applicant in Response to Comments (in particular Table 1 of Ecology Memorandum).	We set out amended effects management outcomes in Table 1 of Response to s53 comments (dated 18 August 2026). The provision of fish passage for the culvert in Trib 3 has amended the application. The proposed offset for the future Stage 7 loss of Tribs 3 and 4 (except for 191 m upstream of the Trib 4 culvert – see para 2.1 above) is no longer a component of the current application. The loss of Tribs 3 and 4 is to be considered at or prior to Stage 7 (Resource consent conditions 157 and 158, dated 18 August 2026). Accordingly, this substantially reduces the calculated offset requirement for the loss of ecological values for Stages 1-6 of the Hunua Quarry expansion. The required offset for ecological values is met. We hold our position that the proposed aquatic	1. DOC requested clarification regarding what effects are being offset. Applicant clarified (in 28.08.26 meeting) that they are no longer offering offsetting for loss of stream extent and value in relation to future potential entire loss of Tribs 3 & 4 due to quarrying – that offsetting offered here is only in relation to loss of value and extent in both Tribs due to culvert installation (75m and 40m respectively) and partial loss of value in Trib 4 due to loss of fish passage. DOC considers this concern resolved but notes that parts of the ecology memorandum and some of the other project documentation need updating to reflect this. 2. DOC requested clarification regarding extent of fish salvage in Tribs 3 & 4 – noting that there was no need to salvage fish from areas other than culvert installation sites. Discussed with applicant on 28.08.26 – respective positions understood. DOC	Resolved in part - AC accepts the corrections in Table 1 of the Response (pp. 21 to 22). On the revised Tranche 1 scope the offset requirement falls to approximately 3,427 square metres and 3,560 m, against a stated provision of 3,938 square metres and 3,590 m. - AC records that the shortfall closes because the extent of the impact assessed has been reduced, not because the offset has been increased. Unresolved - The provision offset value is unverified. No SEV has been undertaken at Meremere or Mangatawhiri. Offset widths and available extents are proxy derived. Table 28 of the Ecological Assessment reports
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		mitigation, and the proposed aquatic offset and aquatic compensation satisfies the requirements of the effects management hierarchy.	requests consistency throughout the documents, noting Ecology memorandum will need updating as P24 has contradictory information. 3. DOC position on culvert remediation as compensation In relation to culvert remediation being included in the offsetting/compensation package, DOC noted that the owners of some of the culverts may have an existing obligation to remediate them under S42 FFR 1983. If so, then including this activity in as effects management could risk additionality. DOC position is that – as per regulation 42(2): “The occupier of any land shall maintain any culvert or ford in any natural river, stream, or water (including the bed of any such natural river, stream, or water in the vicinity of the culvert or ford) in such a way as to allow the free passage of fish”. And that, as per the NZFPGs: “regulation 42(2)	only 1,610 m of offset stream available, at a mean width of 1.0 m, against a requirement that now stands at approximately 3,560 m. • Appendix 15 is internally inconsistent. The text reports an ECR of 4.8 and the table 4.13. The measured SEV at the offset site (0.41, minus fauna) is stated in the text but 0.39 is used in the table. The text uses a potential score of 0.66 and the table 0.719. DOC records the same conflict (DOC Appendix 1, p. 20, footnote 10). AC seeks a single reconciled calculation. Wetland offset. Table 37 of the Ecological Assessment provides 2.51 ha, including 2 ha of wetland restoration on alluvial terraces
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			(i.e., the requirement for culverts and fords to be maintained to prevent the development of fish passage barriers) applies to all culverts or fords built before and after 1984.” DOC concern not resolved. 4. DOC position on realignment effects management: DOC’s position is that stream realignments are (compared to being treated as an effect able to be remedied) more appropriately managed by considering the reclaimed reach as an immediate and certain loss at the point of impact that requires offsetting with an ECR to reflect time lag and uncertainty of equivalence achieved by the constructed reach.	in Hunua Regional Park. Table 1 of the Response lists approximately 0.15 ha at Meremere, approximately 0.5 ha at Hunua and 0.5 ha of farm pond removal at Hunua, totalling approximately 1.15 ha against an unchanged requirement of 2.4 ha. AC seeks confirmation of which package is proposed. • Additionality of barrier remediation. Regulation 42(2) of the Freshwater Fisheries Regulations 1983 requires the occupier of land to maintain culverts so as to allow the free passage of fish. The Applicant states that it understands the barriers relied on carry no such duty (Response p. 17). AC seeks the basis for that conclusion for each barrier
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				relied on as compensation. • Extent traded for value. 1,157 m of stream extent is permanently lost. Reconnection restores access to existing habitat; it does not create extent. NPS-FM Appendix 7 requires positive effects that outweigh the adverse effects, and that comparison has not been quantified. • Stream classification. The Applicant has reassessed Tributaries 3 and 4 and found the extent to be substantially greater than originally estimated (Response p. 8). The same reassessment has not been applied to other ephemeral to intermittent transitions within the footprint. • The application of an offset calculator
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				is just one tool and doesn't determine if the offset is appropriate. Offsets need to consider the limits to offsetting (and question offsetting very high value ecosystems); how the offset will be delivered and will it actually work (governance, monitoring, adaptive management). The latter is critical where performance targets must have attributes that relate to no net loss of biodiversity and ecological function. • The applicant does not determine a good outcome for the realigned stream due to its reliance on riparian vegetation, however, is reliant on this feature for riparian planting for offsets in focus area 1.
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4. Meremere Focus Area				
Proximity to impact site	Questioned by AC in s53 comments in relation to AUP Appendix 8. Further explanation provided by Applicant in Response to Comments.	We explain our position on the proximity of the Meremere Focus Area to the impact site in Para 8.008a of Response to s53 comments (dated 18 August 2026). In summary, a considerable effort was made to secure ecological enhancement opportunities close to the Project Site. We sought out prospective offset locations that adjoin, connect or enhance the condition of existing ecological features, and have the potential to improve the viability of local fauna populations through pest management and habitat expansion. The Meremere offset site is in Hapuakohe Ecological District, which adjoins the southern boundary of Hunua Ecological District. The forest composition of Hunua and Hapuakohe EDs is similar, with representative forest types comprising podocarp-	N/A	Unresolved - The AUP appendix 8 statement: <i>Offset actions should be undertaken close to the location of development, where this will result in the best ecological outcome.</i> The second part of the sentence provides additional explanation to the initial statement. It is that offset must be close to the impact to achieve the best ecological outcome. - There is no demonstration that offsets could not be achieved closer to the impact. There is no direction that offsets should occur on land owned by the applicant. Meremere is a convenience, not an optimal offset site.

		broadleaf forest with kauri-hard beech forest on upper slopes and ridges. Forest areas are likely to support similar fauna assemblages, and there is probably overlap in populations of species such as long-tailed bats, kaka, kereru, whose large home ranges could encompass forest areas in both EDs. Therefore, we consider that the Meremere site has sufficiently similar ecological characteristics to the Project Site to be considered “like-for-like”. Although modified in parts, the Meremere Quarry watercourse is represented by a similar hard-bottom stream with similar attributes to the Mangapū tributary. We consider that the Meremere Focus Area is a suitable and acceptable location for implementing offset and compensation requirements for the residual effects of the Hunua Quarry expansion.		• The 2014 Good Practice Guidance factors quoted by the Applicant include ecosystem function, local importance and future proofing. The Response addresses connectivity and proximity only. Meremere lies in a different ecological district, catchment, region and consenting jurisdiction. • Like-for-like is asserted at the level of regional forest type. No target ecosystem type, reference vegetation type or Singers classification is assigned to Focus Area 2, while the impacted communities are classified WF9 and WF11. AC seeks an express target ecosystem for the Focus Area 2 planting.
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				• Durability. Meremere is within a Quarry Zone under the Waikato District Plan. AC supports draft condition 154 requiring conservation covenants under section 106 RMA and section 77 Reserves Act 1977. AC nevertheless records that this application itself proposes to relocate offset areas covenanted under the 2009 Symonds Hill consent, which demonstrates that covenants over quarry zoned land remain subject to later variation. AC concern is with the in perpetuity outcomes principle, not with the covenant mechanism. • No assessment against the Waikato regional planning documents has been provided for
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				the proposed wetland and streamworks at Meremere.
5. Terrestrial effects management				
5.1: Application of BOAM	Selected attributes and effect on offset estimate. Questioned by AC in s53 comments. Rationale described by Applicant in Response to Comments.	We explain our position on BOAM attribute selection in Paras 8.007 and 8.018 of Response to s53 comments (dated 18 August 2026). It is our position that BOAM models can be helpful in breaking down impact and offset evaluations into component parts and highlighting assumptions about what will be achieved through offset interventions. However, they are essentially simple calculators with inbuilt assumptions (e.g., interchangeability of area and condition) that cannot handle complex data (ie the currency metric reduces each attribute to a single number). Increasing the complexity of the model through the addition of attributes does not improve accuracy or reliability as BOAM does not differentiate between	Due to staff availability, DOC has been unable to provide a response in the timeframe available.	Agreed - BOAM is the appropriate tool and the user manual permits indirect structural measures as surrogates. Unresolved - Offset site data. The Applicant confirms that plot sampling was not replicated at offset sites and that comprehensive wetland delineations were not undertaken for the Focus Areas (Response p. 10). The BOAM manual, as quoted by the Applicant at p. 3, instructs that parameters and values be empirically informed wherever possible and that unverifiable values

		the importance of attributes, and more attributes increases the likelihood of “double counting” factors and increases variability and assumptions. Accordingly, our approach has been to make clear that we do not treat the BOAM analysis as a complete picture of biodiversity losses and gains. We have used attributes in BOAM models where we are able to obtain measured data (i.e., structural measurements in forest plots), or can make informed assessments of condition based on index criteria (for wetland assessments). We also deliberately selected attributes that had (or acted as surrogates for) distinct ecological functions to as far as possible minimise “double-counting”, and limit the likelihood of driving perverse outcomes. For example, native dominance was not used in the forest BOAM because these		be avoided. The gain side of the ledger is not empirically informed. This is the principal AC concern with the model. • Attributes AC considers would potentially increase rather than reduce the modelled requirement. In the least it would provide greater transparency and robustness in te assessment • Wetland type-for-type. Forest seepages are proposed to be offset by planted farm pond and alluvial terrace wetlands. The Response addresses area exchanged for condition but not ecosystem type. NPS-FM Appendix 6 requires like-for-like. Water table regime and hydric soil condition determine whether
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		factors are already captured in canopy cover and stem density (existing vegetation is largely native dominated, and all restored vegetation would be native-dominated). Species assemblage was not used as it would incentivise planting for species richness rather than appropriateness in a revegetation context. BOAM scores for offset sites are not based on plots because (in the case of future forest restoration) pasture sites do not have forest attributes and so we do not need plots to determine the scores. With respect to wetlands, due to their inherent natural variability all wetland sites will need delineation prior to development and implementation of a site specific restoration plan. Wetland condition index evaluation could be implemented at this point to ensure features will benefit from restoration and ensure that the restoration plan targets		an offset can support seepage biota and are not in the model. This comment is also applicable to the terrestrial offset planting where the applicant acknowledges in the response that planting is not to achieve a like for like (section 8.008b). • Aggregation of seven impacted vegetation communities into two successional classes. The Applicant states the 95th percentile approach is conservative. AC cannot test that because the Appendix 13 workings are not legible in the version supplied. • The acknowledged 11.08 ha revegetation shortfall is to be met by compensation. AC accepts
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		interventions that will achieve the best restoration outcome.		compensation is available for that purpose, but its adequacy depends on resolution of the points above. The applicant response to AC technical memo states that <i>Only attributes that occur at both the impact and offset sites can be used in a BOAM</i>. However, for forest offset into pasture the applicant has used canopy height, leaf litter depth in the BOAM assessment – neither of which would likely score in pasture. These are rated zero in pasture. Canopy cover and basal area are also scored zero. Any existing values in the receiving environment are lost.
5.2: Timing of revegetation	Timing and sequencing of vegetation clearance and mitigation planting.	s.9.8.2 of Appendix B12.4.5b Ecological Assessment provides a high level indication of the	Due to staff availability, DOC has been unable to provide a response in the timeframe available.	The Applicant has accepted the DOC amendment. Draft condition 59(h)

	Questioned by DOC in s53 comments, with request for planting to occur before clearance. Ecological Assessment refers to high level sequencing on page 112 (e.g., Tranche 1 plantings (59.82ha) will commence with granting of consent). Is further information required?	sequencing of the expansion activity set out as Tranche 1 (Stages 1-4) and Tranche 2 (Stages 5-8). Arrangements for the revegetation will commence on granting of consents and planting is expected to commence in the first planting season post-consent (subject to availability of plants etc.). Planting is expected to occur consistently over the ensuing planting season of each consecutive year until completion (of Tranche 1). This means that initial planting may occur at the time of vegetation clearance but as the stages progress, planting is expected to occur in advance of vegetation clearance. The requirements for revegetation planting is set out in conditions 58 and 59, and in s3.7 of Appendix B12.8.10 Ecological Management Plan. Figure 33 (page 76) of Appendix B12.4.5b Ecological Assessment shows the vegetation types		requires timeframes for the implementation of Site Specific Planting Plans before construction works occur in the staged area. Tranche 1 of 59.82 ha commencing on grant, against 17.07 ha of clearance in Stages 1 to 4, provides real advance planting. AC supports this.
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		and stages of quarry expansion. We note that at each stage of quarry expansion the vegetation clearance may be sequenced over a number of years and thus revegetation planting is likely to occur ahead of vegetation loss.		
6. Additional issues (to be added by Applicant, DOC or AC)				
6.1 : Dewatering Effects Management (Added by DOC)	Questioned by DOC in S53 comments – consider augmenting flows to MALF not sufficient to manage effects of dewatering		DOC position: Agree with applicant that augmenting flows to MALF will avoid the effect of increased frequency/duration of critically low flows. But consider that other potential dewatering effects have not been adequately examined - specifically loss of habitat and declines in Water Quality that could result from flow reduction before reaching MALF. Applicant response in Appendix 3 does not address concern. Discussed with applicant on 28.08.26. Clarified respective technical positions. Applicant acknowledges that this information (i.e. how	

			estimated baseflow reductions will translate to ecological effects in affected streams) is missing and they will look further into this.	
6.2: Cumulative Effects (Added by DOC)			DOC noted that the cumulative effects of stream removal and the cumulative effects of stream dewatering should be considered given the context of the application. Discussed with applicant on 28.08.26 – applicant clarified that offsetting packing includes addressing cumulative stream loss and agreed to update application materials to explain how cumulative loss is proposed to be managed. DOC maintains its position that cumulative effects of dewatering (i.e. baseflow reductions and resultant ecological effects caused by quarrying activities) should be considered	
6.3: Threatened and at risk flora (Added by AC)	Raised by AC in s53 comments and by DOC at s2.3. Applicant agreed at Response p. 5 that the Ecological Management Plan should be updated.			The Applicant has agreed that the Ecological Management Plan for Focus Areas 1 and 2 should include recovery and

				propagation of regionally at risk and threatened flora. Unresolved Draft condition 59 of the 18 August set does not contain that provision. AC seeks it as an express Ecological Management Plan content requirement, together with pre-clearance survey, salvage or propagule collection, and inclusion of the relevant species in planting schedules.
6.2: Dewatering effects above MALF (Added by AC)	Raised by DOC and Dr McEwan in s53 comments. Applicant response at pp. 11 to 12 and 17 to 18.			AC accepts that maintenance of flows at or above MALF is appropriate for maintaining stream habitat extent, and does not seek a different augmentation trigger.
6.3: Water quality of augmentation flows (Added by AC)	Raised by AC in s53 comments. Applicant response at pp. 5 to 6.			Resolved. Draft conditions 228(c) and (d) now require pH below the discharge point to be within one whole unit of the upstream value and

				turbidity change not to exceed 20 per cent between upstream and downstream points. AC accepts these amendments.
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