

BEFORE THE MT WELCOME EXPERT CONSENTING PANEL

IN THE MATTER of an application for approvals under section 42 of the Fast Track Approvals Act 2024 (the Act)

AND

IN THE MATTER of the Application for approvals by Pukerua Property Group Partnership for Mt Welcome, Pukerua Bay, Porirua Project including resource consents, a wildlife permit, an archaeological authority and a complex freshwater fisheries approval to develop residential allotments, an allotment and preparatory works to enable a future commercial centre and associated infrastructure in Pukerua Bay, Porirua. Application FTAA-2603-1181

JOINT STATEMENT OF EXPERTS IN THE FIELD OF AQUATIC ECOLOGY AND WETLANDS

Dated 15 October 2026

INTRODUCTION

1. Expert conferencing of the topic of aquatic ecology and wetlands took place by videoconference on 18 August 2026.
2. On 4 September 2026 the Panel issued Minute 18 which included a request for further information in relation to (amongst other matters) stormwater management and wetland offsetting.
3. Subsequently the applicant suspended the application to allow time to respond to the matters raised in Minute 18.
4. The additional information requested, including an alternative proposal for stormwater management and wetland offsetting, was provided and processing resumed effective midnight 5 October 2026.
5. On 6 October 2026 the panel issued Minute 21 which noted that the applicant's alternative proposal involves a proposed change to the arrangements for mitigation/ offsetting of adverse effects on wetlands and streams. The panel therefore requested that the experts who contributed to the Freshwater JWS dated 18 August 2026 conference on the alternative, with a specific focus on the extent to which it addresses (or does not address) the concerns previously expressed by experts that were reflected in the JWS.
6. In addition, the Freshwater JWS dated 18 August noted that certain issues were not addressed at that conference. The panel requested that the outstanding issues be addressed in this further conferencing.
7. The conference was attended by:
 - a. Vaughan Keesing (VK) on behalf of the applicant;
 - b. Katy Grant (KG) on behalf of the applicant;
 - c. Katie Collins (KC) on behalf of the Director General of Conservation;
 - d. Melanie Dixon (MD) on behalf of Greater Wellington Regional Council;
 - e. Gareth Taylor (GT) on behalf of Greater Wellington Regional Council; and
 - f. James Blyth (JB) on behalf of Greater Wellington Regional Council.

- g. Tayla Hooker (on behalf of the Director General of Conservation) and Ella Jaspers and Rawiri Faulkner (on behalf of Te Rūnanga o Toa Rangatira) were unavailable to attend the conferencing.
- 8. Gary Bramley acted as facilitator and assisted the experts to draft the Joint Witness Statement

CODE OF CONDUCT

- 9. The experts confirm that they have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023 and agree to comply with it. The experts confirm that the issues addressed in this Joint Witness Statement are within their area of expertise, unless stated otherwise.

SCOPE OF STATEMENT

- 10. In our conference we discussed the issues relevant to the Application which arise within our field of expertise. Prior to attending the conference, we each read the relevant parts of the Application, the evidence and independent reports prepared by the other expert(s) and circulated and the Applicant's response to Minute 18.
- 11. The matters identified in relation to the revised proposal are:
 - a. Consistency of documentation for alternative proposal;
 - b. Level of detail for the alternative proposal;
 - c. Fish passage requirements and expectations;
 - d. Adequacy of the fish management plan/need for a fish salvage plan;
 - e. Freshwater fisheries regulation approvals;
 - f. Application of SEV method;
 - g. Aquatic habitat quality;
 - h. Establishment of plants in stormwater detention ponds;
 - i. Downstream effects of the stormwater detention ponds on stream ecology and offsite wetlands;
 - j. Effects of changes in hydrological regime;
 - k. Linking effects with staging and avoidance/minimisation/remediation/offsetting;

- l. Need for an integrated water quality/ecological/hydrological management plan;
 - m. Wetland offsetting (18 August JWS Issue 14);
 - n. Adequacy of conditions relating to offsetting (18 August JWS Issue 15); and
 - o. Delivery and maintenance of ecological outcomes with respect to wetland offsetting (18 August JWS Issue 18).
12. In relation to each issue, we discussed points of agreement and disagreement in relation to:
- a. Facts;
 - b. Assumptions;
 - c. Areas of uncertainty or lack of information; and
 - d. Expert opinions / conclusions.
13. In this Joint Statement we report the outcome of our discussions in relation to each issue by reference to points of agreement and disagreement relating to facts, assumptions, uncertainties and expert opinions / conclusions. We have noted where each of us is relying on the opinion or advice of other experts. Where we are not agreed in relation to any issue, we have set out the nature and basis of that disagreement.
14. The matter of the adequacy of conditions has not been explicitly addressed. We are aware that the current conditions offered by the applicant do not capture what has been discussed and agreed in this forum and may need to be amended.

STRUCTURE OF THIS STATEMENT AND CROSS-REFERENCES

15. Many of the matters listed in paragraph 11 were discussed together because they are closely related (in particular, the planting and form of the stormwater treatment ponds effects on fish passage, aquatic habitat quality and downstream water quality). For clarity, each statement is recorded once under the matter to which it most directly relates, and cross-references are provided to the other matters where it is relevant. Table 1 summarises the matters that were discussed together.

16. Matters A to L below correspond to the matters listed in paragraph 11. Matters M to O are issues carried over from the Freshwater JWS dated 18 August 2026 that were also discussed. Where a matter corresponds to an issue in the 18 August JWS, the issue number is noted in the heading.

Table 1: Matters discussed together

Matter	Paragraphs	Discussed together with / related to
A – Consistency of documentation	17–23	Matters H, I
B – Level of detail	24–30	Matters C, E, F, J
C – Fish passage	31–38	Matters D, E, G, I
D – Fish management/salvage plan	39–45	Matters C, I
E – Freshwater fisheries regulation approvals	46–51	Matters B, C
F – Application of the SEV method	52–67	Matters B, K, N
G – Aquatic habitat quality	68–74	Matters C, H, I
H – Establishment of plants in stormwater detention ponds	75–82	Matters A, G, I
I – Downstream effects	83–95	Matters A, C, D, G, H, L
J – Hydrological regime	96–106	Matters B, L, M, O
K – Staging and time lag	108–114	Matters F, L, O
L – Integrated management plan	118–120	Matters I, J, K
M – Wetland offsetting	121–128	Matters J, N, O
N – Conditions relating to offsetting	129–130	Matters F, J, K, M, O
O – Delivery of wetland offsetting	131–137	Matters J, K, M, N

MATTER A – CONSISTENCY OF DOCUMENTATION FOR THE ALTERNATIVE PROPOSAL

FACTS

17. MD noted that there are inconsistencies between documents submitted in support of the alternative proposal, including:

- The detention ponds in the Appendix A2 Alternative Stormwater Management Plan are described as being planted. In Appendix D1-D2 Landscape and Ecology Plans, the detention ponds are shown as hydroseeded (so presumably dry ponds?).
- The Landscape and Ecology Plans show planting on the face of the stormwater detention ponds. (These are not shown as planted in Appendix 8 Alternate Stormwater Detention Pond Plan set).

18. VK confirmed that planting of the pond faces does not form part of the terrestrial vegetation offsetting.

ASSUMPTIONS

19. VK's understanding is that there is no revegetation of the basins proposed, except outside the flooded area and that required for maintenance. The basin itself would have c. 100mm of water across it and vegetation would develop naturally and be periodically disturbed when maintenance is required.
20. VK expects that planting of the pond faces is not proposed for geotechnical stability reasons.

AREAS OF UNCERTAINTY

21. No areas of uncertainty were noted with respect to this matter.

EXPERT OPINIONS

22. No expert opinions were recorded that are specific to the consistency of the documentation. Opinions on whether the stormwater treatment ponds should be planted are recorded under Matter H (paragraphs 79–81).

CROSS-REFERENCES

23. This matter was discussed together with Matter H (establishment of plants in detention wetlands) and Matter I (downstream effects). The potential downstream water quality effects of unplanted, shallow ponds raised during this discussion are recorded at paragraph 86.

MATTER B – LEVEL OF DETAIL FOR THE ALTERNATIVE PROPOSAL

FACTS

24. GT noted that the revised proposal involves quite a lot of revision of numbers with respect to extents/quantities. One example is that the revised application refers to the loss of 450m of stream, but that figure is not broken down into locations.

ASSUMPTIONS

25. VK's understanding is that riprap is proposed downstream of the pond outlets but that the 450m of stream loss does not include any riprap.

AREAS OF UNCERTAINTY

26. GT noted that, without a breakdown of stream loss by location, it is hard to interpret/validate the revised proposal.
27. GT noted that it is not clear how much rock riprap is proposed, as is a typical detail, below the stormwater detention ponds, and that riprap has the potential to create effects on, or loss of, streams.
28. Whether the 450m of stream loss is correct remains an outstanding question (see paragraph 62).

EXPERT OPINIONS

29. All agree that a consolidated reference set of parameters, i.e. a table and a map of stream extents, would be very helpful in interpreting the nature and magnitude of effects of the revised proposal. This should identify the stream modification at each location (including culverts, riprap, aprons, infilling and submergence) that makes up the cumulative total, and indicate whether fish passage is to be provided at each location. This would assist in developing SEVs and in ensuring that sufficient offsetting is provided.

CROSS-REFERENCES

30. This matter is related to Matter C (fish passage – paragraph 31), Matter E (freshwater fisheries regulation approvals) and Matter F (application of the SEV method – paragraphs 61–62). The use of the GoldSim model, which was raised during this discussion, is recorded under Matter J (paragraph 102).

MATTER C – FISH PASSAGE REQUIREMENTS AND EXPECTATIONS

FACTS

31. The revised proposal provides fish passage to stormwater detention pond E. The other three stormwater detention ponds (A, B and C) are proposed to not have fish passage (noting the agreed preference for the basins to retain their streams and so then require again fish passage).

ASSUMPTIONS

32. No assumptions were recorded in relation to this matter.

AREAS OF UNCERTAINTY

33. Refer to paragraph 41 regarding the potential for fish to reach the stormwater treatment ponds where passage is not provided.

EXPERT OPINIONS

34. VK, GT and KC agree that the alternative (current) proposal, with an unvegetated, shallow pond, limits the potential value of habitat for fish, and that the proposal to remove passage to those areas is a suitable way to limit the risk to fish.
35. VK, GT and KC agree that if the proposal was a functional deeper water wetland or a stream (i.e. favourable fish habitat), then provision of fish passage would be required.
36. VK noted that if the stormwater treatment ponds were to be dry basins, then fish passage would not be required for three of the ponds.
37. All agree that for Wetland E, the wetland and stream still needs to provide fish habitat and fish passage (see paragraph 71).

CROSS-REFERENCES

38. This matter was discussed together with Matter D (fish management and salvage), Matter G (aquatic habitat quality, in particular Wetland E – paragraph 71) and Matter I (downstream effects – the alternative of a stream and dry basin at paragraph 91). Fish passage at the Kakaho offset stream is recorded at paragraph 57. The statement regarding the importance of fish passage throughout the catchment is at paragraph 50.

MATTER D – ADEQUACY OF THE FISH MANAGEMENT PLAN/NEED FOR A FISH SALVAGE PLAN (18 AUGUST JWS ISSUE 9)

FACTS

39. VK noted that no eels were found during spotlighting, and KG noted that none have been detected during routine water quality monitoring.

ASSUMPTIONS

40. No assumptions were recorded in relation to this matter.

AREAS OF UNCERTAINTY

41. Fish (particularly eels) may still get into the stormwater treatment ponds even if no passage is provided, and could potentially be stranded in summer drying.

EXPERT OPINIONS

42. GT stated that fish management may need to be provided for in the stormwater treatment ponds even if no passage is provided. The risk of fish becoming stranded during dry periods could be eliminated/minimised by providing a deep-water refuge at or near the culvert mouth, and by actively preventing passage (or by the joint basin solution raised later (stream plus dry basin)).
43. GT's view is that management of fish given the revised proposal needs to be considered, either by design or by management, because fish stranding is a real risk of the revised design.

IMPORTANCE

44. The fish management plan (including fish salvage) provides the basis for effects management with respect to fish and needs to be fit for purpose.

CROSS-REFERENCES

45. This matter was discussed together with Matter C (fish passage – paragraphs 31–35). The risk of stranding is linked to the low dissolved oxygen/high temperature conditions discussed under Matter I (paragraphs 86–89).

MATTER E – FRESHWATER FISHERIES REGULATION APPROVALS (18 AUGUST JWS ISSUE 10)

FACTS

46. The revised proposal was not accompanied by a revised freshwater fisheries approval application.

ASSUMPTIONS

47. No assumptions were recorded in relation to this matter.

AREAS OF UNCERTAINTY

48. VK does not know the status of any revised application for complex freshwater fisheries activities. If the agreed proposed solution raised later (maintenance of stream in dry basin see paragraphs 91–92) is accepted, then fish passage to all streams remains a requirement and a complex fishery authorisation may or may not be required. KC noted that whether an authorisation is required depends on whether any dam or diversion structures are required to create the dry basins, and whether any other culverts on the site permanently block fish passage.

EXPERT OPINIONS

49. All agree that a new/revised complex freshwater fisheries regulation application is required (unless as above – the new agreed proposed solution is accepted). The applicant needs to confirm whether it intends to resubmit that application as part of this process or apply for it separately later.

IMPORTANCE

50. Failure to provide for fish passage at any structure requires complex freshwater fisheries approval.

CROSS-REFERENCES

51. This matter is related to Matter B (a consolidated table/map indicating whether fish passage is to be provided at each location – paragraph 29) and Matter C (fish passage – paragraphs 31 and 36).

MATTER F – APPLICATION OF THE SEV METHOD (18 AUGUST JWS ISSUE 11)

52. Only the alternative proposal was considered in relation to this matter.

FACTS

53. Taupo Stream: VK has provided an SEV for Taupo Stream (with and within culvert). The final ECR is 1.75 with a multiplier of 1, resulting in 193m of stream restoration.

54. VK confirmed that an ECR of 1.75 was initially proposed. Actual data reduced it to 1.55, but VK has retained 1.75.

55. Updated information has been provided (response to Minute 3), but that information was not incorporated into a revised ECR.

56. On-site streams and Kakaho offset stream: VK noted that SEVs have not been undertaken for the streams on the property or for the Kakaho east offset stream.

57. VK noted that the Kakaho east restoration area is the best stream available on the wider site and is connected upstream to an SNA and downstream to Pāuatahanui Inlet, and there are no barriers to fish passage that he is aware of. The fish community is representative.

ASSUMPTIONS

58. VK expects the SEV scores for the streams on the property to be 0.3–0.35 (<0.4), and the SEV score for the Kakaho offset stream to be c. 0.45.

59. VK notes that the proposal is to undertake the restoration immediately (prior to stream removal), and that a multiplier of 1 is appropriate on that basis.

AREAS OF UNCERTAINTY

60. There is a need to reconcile the final numbers in relation to Taupo Stream. VK is to provide the finalised loss of stream extent and the calculation that informs the offset ratio. VK is informed that the Taupo culvert is 110m and that there is 10m additional headwall and riprap (thus at the 1:1.75 the offset rises from the 193m to 210m).

61. Because SEVs for the on-site streams and the offset stream have not been undertaken, there is no way to quantify/validate the 1:1 offsetting proposed, and the multiplier used to account for the lag between removal and replacement is not clear. SEV and ECR would give comfort that what is proposed sits in the net positive/no net loss zone rather than a net loss that needs to be offset.

62. Two questions remain outstanding: whether the 450m of stream loss is correct; and whether a 1:1 ratio is appropriate to account for the values of impacted and compensation streams, time lag between loss and replacement (noting VK is assuming an immediate offset undertaking in the Kakaho east).

63. Nothing is known about the fish community upstream of the Kakaho restoration area.

EXPERT OPINIONS

64. GT's view is that the Taupo Stream ECR does not allow a multiplier for lag between removal and restoration. VK's view is that conditions can address this matter by requiring offsetting to occur in advance of removal.
65. VK noted that he had tested the ECR by applying different post-restoration SEVs and different multipliers, and the outcome was still c. 1:1. One approach is to have a condition requiring the SEV to be completed and the resulting ECR to be applied. That requires sufficient stream to be available for restoration in the event that more is required. VK confirmed that, in his view, there is sufficient stream available in the east Kakaho even if more than 450m is removed and the ratio is greater than 1:1.
66. KC and GT noted that they would prefer this information to be provided upfront but, recognising the constraints at play, a condition approach requiring certification would resolve this matter. The applicant would need to provide surety that it has access to additional stream if it is required.

CROSS-REFERENCES

67. The 450m of stream loss is also discussed under Matter B (paragraphs 24–29). The time lag between stream loss and offsetting is also discussed under Matter K (paragraphs 108–112). The conditions-based approach at paragraphs 64–66 is relevant to Matter N (adequacy of conditions).

MATTER G – AQUATIC HABITAT QUALITY (18 AUGUST JWS ISSUE 13)

FACTS

68. The current plans (Appendix A8, Drawing 4351) show Detention Pond E (also referred to as Wetland E, below) infilled with a shallow pond and associated stream loss.

ASSUMPTIONS

69. No assumptions were recorded in relation to this matter.

AREAS OF UNCERTAINTY

70. VK is to discuss with the applicant and confirm what can be achieved in relation to Wetland E (see paragraph 71). That discussion was had with the applicant and engineer post conferencing and there is an acceptance by

the applicant and an ability (it is feasible) to undertake the joint ecological solution (with respect to basins A, B, C and E) of a dry basin with a retained (basins A, B, C) stream or realigned stream (basin E).

EXPERT OPINIONS

71. All agree that for Wetland E the wetland and stream still need to provide fish habitat and fish passage. All agree that the outcome shown on the current plans (paragraph 68) is not desirable, and recommend that retaining the stream channel and a flood plain (or a two-stage channel) that acts as a detention basin would provide better fish habitat and fish passage. Planting of the gully bottom/basin could include low growing sedges and rushes to accommodate flooding.
72. GT, JB and KC are of the opinion that aquatic habitat quality remains an issue. Because fish passage is no longer provided to Wetlands A, B and C, the quality of water leaving the site/downstream becomes more important under the revised proposal, because of the nature of the stormwater treatment ponds and the potential for warming, stagnation and dissolved oxygen issues.
73. GT noted, KC agrees that there is a philosophical question about whether the stormwater treatment ponds would or could still have ecological value, or whether they are purely an engineering/treatment solution. The revised proposal seems to treat them as purely an engineering solution, but his view is that there is still value in maintaining a level of ecological function between the episodic maintenance events. He noted that if the ponds are solely an engineering solution, then potential effects on downstream water quality need to be addressed somehow.

CROSS-REFERENCES

74. This matter was discussed together with Matter C (fish passage), Matter H (planting of the ponds – paragraph 80) and Matter I (downstream water quality – paragraphs 86–94).

MATTER H – ESTABLISHMENT OF PLANTS IN STORMWATER RETENTION PONDS

FACTS

75. VK confirmed that no planting is proposed in the stormwater retention ponds. Rather, they would be left to revegetate naturally as they were no longer a remedy to stream and wetland effects (noting still a role in water quality mitigation downstream).

ASSUMPTIONS

76. VK expects that *Isolepis prolifera* would come to dominate the stormwater treatment ponds over time.
77. KG's understanding is that Tiaki Wai's preferred option is as proposed in the revised proposal, not a dry basin with a stream, based on comments from the stormwater engineers.

AREAS OF UNCERTAINTY

78. It would be helpful to understand whether Tiaki Wai's opposition to planting relates to planting per se, or whether it was the offsetting nature of the previous proposal that created the issue.

EXPERT OPINIONS

79. MD questioned whether more deeply rooting plants might be more useful/effective for water treatment. Her view is that there are risks, with respect to the likelihood and magnitude of downstream effects, in leaving regeneration to occur naturally.
80. All agree that planting of the stormwater treatment ponds would be appropriate to reduce the impacts of the shallow, stagnant waterbodies on downstream water quality, reduce the potential nuisance of midges/mosquitoes for adjoining residents (unless it was a dry basin), and maintain some ecological function. Appropriate planting would be similar to that proposed originally.
81. All agree that if the stormwater treatment ponds are not to be planted, it would be preferable from an ecological perspective for them to be maintained as streams in a dry basin rather than standing water.

CROSS-REFERENCES

82. This matter was discussed together with Matter A (inconsistency in planting between the documents – paragraphs 17–21), Matter G (ecological value of the ponds – paragraph 73) and Matter I (downstream effects and the stream/dry basin alternative – paragraphs 91–94). Planting of the Wetland E basin is addressed at paragraph 71.

MATTER I – DOWNSTREAM EFFECTS OF THE RETENTION WETLANDS ON STREAM ECOLOGY AND OFFSITE WETLANDS (18 AUGUST JWS ISSUE 19)

FACTS

83. KG confirmed that discharges from the stormwater treatment ponds are primarily rain driven (except for Wetland E).

ASSUMPTIONS

84. No assumptions were recorded in relation to this matter.

AREAS OF UNCERTAINTY

85. The outstanding matter is how the risk of downstream effects is to be addressed.

EXPERT OPINIONS

86. MD, JB and GT stated that there are potential downstream effects on water quality (including warming and decreased dissolved oxygen) due to the stormwater treatment pond arrangements, particularly if the standing water area is 100mm deep and not planted. The pond would be a broad pan of shallow water which could heat up and be subject to considerable temperature fluctuation, with concomitant downstream effects on water quality.

87. KG's view is that, because discharges are primarily rain driven (paragraph 83), the water will not be retained long enough to warm up significantly more than under the current situation.

88. VK's view (KG agrees) is that dissolved oxygen may be the more significant issue because, if water has been sitting, low dissolved oxygen would develop, whilst the temperature of any standing water would be diluted by rainfall.

89. KG noted that the low flow situation is slightly improved compared with the previous option because the ponds are shallower and do not have the same storage capacity.
90. GT's opinion is that temperature and dissolved oxygen are the key issues. Planting/shading would address the risk of downstream effects to some degree. Performance measures, including monitoring to confirm that thermal plumes do not result and measures to address any effects that do occur, will be important.
91. All agree that many of the issues raised in relation to the quality of water discharged could be resolved by having a stream and dry basin, rather than a pond. VK and KG agreed to discuss this with the applicant and confirm whether that approach is viable at all of the stormwater detention ponds.
92. That discussion was had and the applicant and engineer team agree that dry basins with retention of the existing streams in those basins is achievable (and accepted) and that very little bed earth works if any would be required meaning greatly reduced stream effects and less wetland effects and a different exit culvert solution meaning more likely fish passage.
93. All agree that there would be value in the stormwater experts reconvening to discuss this matter, and whether the amendment at paragraph 91 (stream and dry basin) is feasible and practicable given the particular site and future management constraints.
94. Refer also to the agreed opinions at paragraphs 80 and 81 that the ponds should be planted or, if not planted, maintained as streams.

CROSS-REFERENCES

95. This matter was discussed together with Matter A (paragraph 19), Matter C (paragraph 36 – fish passage would not be required to three wetlands if they were dry basins), Matter G (paragraphs 72–73), Matter H (paragraphs 79–81) and Matter L (monitoring and management).

MATTER J – EFFECTS OF CHANGES IN HYDROLOGICAL REGIME (18 AUGUST JWS ISSUE 20)

FACTS

- 96. The revised proposal involves recreating wetland in a new area (Kakaho Stream), so it is a restoration proposal.
- 97. JB and KG note that the detailed design of the offset wetland has not yet been completed.
- 98. JB queried whether the wetland fringes in the Kakaho offset wetland areas, which extend up to 15m up the slope, are current seeps and the areas shown would be viable wetlands. VK confirmed that they are.
- 99. KG confirmed that minor re-grading (300–500mm of topsoil), and perhaps minor diversion of high stream flows, may be required to maintain the wetland areas as proposed.

ASSUMPTIONS

- 100. No assumptions were recorded in relation to this matter.

AREAS OF UNCERTAINTY

- 101. The offset wetland needs to work hydraulically to be maintained, and this cannot be confirmed until detailed design is completed.
- 102. JB and KG agree that the GoldSim model is not designed for determining discharges from raingardens and similar devices, and note that there is an unknown degree of uncertainty associated with using the model in this way. KG noted that this is only relevant for Taupo and Kakaho west catchments, as the model does not currently include the Kakaho east.

EXPERT OPINIONS

- 103. JB and KG consider that there are minor differences in hydrological effects from the previous proposal.
- 104. JB and KG agree that it needs to be confirmed that the conditions are appropriate to ensure that the offset wetland hydrology is created so as to maintain wetland habitat.
- 105. JB and KG agree that additional stream and wetland water level monitoring is required to inform the hydrological design inputs for the restored offset wetlands.

CROSS-REFERENCES

106. This matter is related to Matter M (wetland offsetting), Matter O (delivery of the offset wetland outcomes – paragraphs 133–136) and Matter L (integrated management plan). The GoldSim model was raised during the discussion of Matter B.

MATTER K – LINKING EFFECTS WITH STAGING AND AVOIDANCE/MINIMISATION/REMEDIATION/OFFSETTING, AND TIME LAG BETWEEN WETLAND AND STREAM LOSS AND IMPLEMENTATION OF OFFSETTING (18 AUGUST JWS ISSUE 21)

FACTS

107. No facts were recorded in relation to this matter.

ASSUMPTIONS

108. KG noted that the applicant may want to finish works in the upper catchment before commencing offset actions.

AREAS OF UNCERTAINTY

109. It is still not clear how the staging of the works interacts with effects management, or how staging links to the revised offsetting proposal.

EXPERT OPINIONS

110. All agree that how staging and effects management (including the revised offsetting proposal) integrate should be set out in the conditions.
111. All agree that undertaking offsetting in one tranche prior to works commencing would be the best outcome, because it removes the necessity to consider any time lag and increases certainty of outcome.
112. All agreed that waiting until works in the upper catchment are finished (paragraph 108) before commencing offset actions would not be practicable for offsetting because the lag would be too long and the outcome too uncertain (e.g., if the stage was never completed).

IMPORTANCE

113. Understanding the timing of effects and the proposed offsetting, and any delay between the two, is important in assessing the overall level of effects and quantifying the offset required.

CROSS-REFERENCES

114. The time lag is also discussed under Matter F in relation to the multiplier used in the ECR (paragraphs 59, 61, 62 and 64). This matter is also related to Matter L (an integrated management plan that accommodates staging) and Matter O (delivery of offsetting).

MATTER L – NEED FOR AN INTEGRATED WATER QUALITY/ECOLOGICAL/HYDROLOGICAL MANAGEMENT PLAN (18 AUGUST JWS ISSUE 22)

FACTS

115. No facts were recorded in relation to this matter.

ASSUMPTIONS

116. No assumptions were recorded in relation to this matter.

AREAS OF UNCERTAINTY

117. No areas of uncertainty were recorded in relation to this matter.

EXPERT OPINIONS

118. All agree that the plan is still required, but such a plan may also address other matters, or this could possibly be achieved through two plans.

IMPORTANCE

119. Preparation of an integrated water quality/ecological/hydrological management plan that accommodates project staging will ensure effects are managed appropriately, including with respect to timing.

CROSS-REFERENCES

120. This matter is related to the monitoring and performance measures for downstream effects (paragraph 90), the water level monitoring for the offset wetlands (paragraph 105) and staging (Matter K).

MATTER M – WETLAND OFFSETTING: QUANTUM/COMPLIANCE WITH BEST PRACTICE PRINCIPLES OF OFFSETTING/TRANSPARENCY (18 AUGUST JWS ISSUE 14)

FACTS

121. VK noted that the end result of the revised proposal is more wetland than there was initially.

ASSUMPTIONS

122. No assumptions were recorded in relation to this matter.

AREAS OF UNCERTAINTY

123. Refer to Matter O regarding the delivery of the wetland offset outcomes.

EXPERT OPINIONS

124. Noting that the proposal is completely different, MD's view is that the applicant has pretty much maximised the opportunities to restore/create wetlands on the site.
125. MD, VK and KC agree that the revised proposal addresses the offsetting of wetlands better than the previous proposal, because there is now an offset for the loss of extent.
126. VK, MD and KC agree that any consent conditions for the final plans need to include the wetland targets for success (x ha offset wetland, y ha enhancement wetland, and vegetation cover and species richness targets).

IMPORTANCE

127. Transparency is an important requirement of offsetting in order to understand exactly what is proposed and what (if any) ecological trade-offs are involved.

CROSS-REFERENCES

128. This matter is related to Matter J (hydrology of the Kakaho offset wetland – paragraphs 96–105), Matter N (conditions) and Matter O (delivery).

MATTER N – ADEQUACY OF CONDITIONS RELATING TO OFFSETTING (18 AUGUST JWS ISSUE 15)

129. Although conditions were not discussed as a separate matter, the experts referred to the need for conditions in relation to: SEV/ECR and

access to additional stream (paragraphs 64–66); wetland success targets (paragraph 126); offset wetland hydrology and detailed design (paragraphs 104 and 135); and staging (paragraph 110).

130. VK notes in this regard that stream and wetland effect levels will change if the JWS participants preferred “dry” basin (i.e. the bed left as it is) and retained streams solution is progressed.

MATTER O – DELIVERY AND MAINTENANCE OF ECOLOGICAL OUTCOMES WITH RESPECT TO WETLAND OFFSETTING/RISK THAT OFFSETTING WON’T OCCUR (18 AUGUST JWS ISSUE 18)

FACTS

131. Refer to paragraphs 96–99 regarding the offset wetland at Kakaho.

ASSUMPTIONS

132. No assumptions were recorded in relation to this matter.

AREAS OF UNCERTAINTY

133. This matter remains uncertain.
134. JB queried the ownership of the 3ha of wetland in the Kakaho catchment. It was noted that the earthworks required for wetland construction and restoration might require consents of their own.

EXPERT OPINIONS

135. GT’s opinion is that conditions are required that account for detailed design not being provided at this stage, and adaptive management will be required to achieve the proposed outcome.
136. JB noted that responsibility for achieving the required outcome with respect to wetland creation and enhancement would need to be explicit.

CROSS-REFERENCES

137. This matter is related to Matter J (paragraphs 101–105), Matter K (staging and time lag), Matter M (wetland offsetting) and Matter N (conditions).

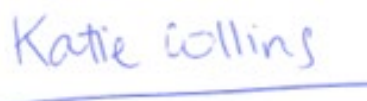
Signed



Vaughan Keesing



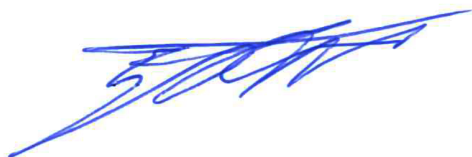
Katy Grant



Katie Collins



Melanie Dixon



Gareth Taylor



James Blyth