

**BEFORE THE PANEL CONVENER**

**IN THE MATTER** of the Fast-track Approvals Act 2024 (**FTAA**)

**AND**

**IN THE MATTER** of an application by New Zealand Transport Authority  
under section 42 of the FTAA for the Alternative to the  
Brynderwyn Hills – Brynderwyn Hills Section

**APPLICATION NO.** FTAA-2603-1178

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**MEMORANDUM FROM THE DIRECTOR-GENERAL OF CONSERVATION  
RESPONDING TO MINUTE 3 OF THE PANEL CONVENER**

19 June 2026

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Department of Conservation Project Lead: Jenny Clafferty – [REDACTED]

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| <div>Pene Williams<br/>Senior Solicitor<br/>Department of Conservation Te Papa<br/>Atawhai<br/>[REDACTED]<br/>[REDACTED]</div> | <div>Barrister instructed:<br/>Jeremy Prebble<br/>Hawkestone Chambers<br/>Wellington 6011<br/>[REDACTED]<br/>[REDACTED]</div> |
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## Introduction

1. This memorandum has been prepared on behalf of the Director-General of Conservation (**D-G**) by the Department of Conservation (**the Department**).
2. The memorandum responds to the Third Minute of the Panel Convener, dated 12 June 2026 in respect of the Alternative to Brynderwyn Hills application – Brynderwyn Hills section (the “Minute”). The Minute requests the Department outline in more detail its concerns as provided in its earlier memorandum dated 5 June 2026.
3. Attached to this memorandum is **Appendix A** that sets out initial comments provided by the Department’s experts on the application material. This is from an initial review in the lead up to the first conference. The Department’s experts cover the following topics:
  - a) Frogs, herpetofauna and avifauna.
  - b) Terrestrial Invertebrates (including snails).
  - c) Bats.
  - d) Vegetation.
  - e) Freshwater Ecology.
  - f) Terrestrial and Freshwater offsetting.
  - g) Freshwater offsetting.
  - h) Wildlife Approvals.
  - i) Planning.
4. This memorandum also addresses the following points, related to the above work:
  - a) The timeframe.
  - b) Role of the Department.
  - c) Panel make up.
  - d) Legal and planning concerns.

### **The timeframe**

5. The Department remains of the view that the maximum time under the Fast Track Approvals Act 2024 (**FTAA**) should be selected for the decision of the Panel given the likely factual, evidential and legal issues this project will need to address. In this respect, the Department expressly disagrees with the proposed 50 days put forward by the Applicant.
6. The focus on urgency under the FTAA is well understood and not taken issue with. However, and importantly, in part because of this urgency, Panels need thorough and robust information right up front more than in the past. Panels are expected to make complex decisions across multiple statutory regimes with an ability to weigh ultimately whether the known impacts to the environment (including potentially being at odds with the purpose of regimes such as the Wildlife Act 1953), are so significant as to outweigh the regional or national benefits (proportion test in s 85(3)). It is crucial in undertaking that weighting that all effects both positive and negative are known, well understood and thoroughly tested. The need for thorough testing jars with the current approach being signalled to such a complex proposal. That is, an envelope approach to the highway, with a lack of baseline data to assess, and then quantify the impacts to the environment. If that is not remedied through this process it will be difficult to determine if this Project meets the various tests in the FTAA.

### **The role of the Department with freshwater values**

7. During the conference it was asserted by Counsel for NZTA that the Department has no regulatory role with regard to freshwater. That is incorrect. Under the Conservation Act 1987 the Department manages freshwater fish. In addition to that the Department is specifically tasked with preserving all indigenous freshwater fisheries and protecting recreational freshwater fisheries and freshwater fish habitats (s 6(ab)). More generally of course the Department is statutorily tasked with advocating for the conservation of natural and historic resources generally under s 6(b) of the Conservation Act.<sup>1</sup>

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<sup>1</sup> Natural resources includes plants and animals and the water in which any plant or animal may live.

8. On this point, the Department reiterates the point that was noted in our assessment of completeness to the EPA, that no freshwater fisheries approvals have been applied for under the Freshwater Fisheries Regulations 1983; and that based on the application these approvals will be required before the project can commence. The applicant's 'consenting strategy' is entirely up to it. However,, should these approvals not be sought, it might impact on the ability to fairly assess the proposal (benefits and negatives) under s 85(3) of the FTAA.

#### **Panel make-up**

9. On the Panel, the Department notes and acknowledges the points made by the Panel Convenor regarding the ability to appoint technical advisors. Given the significant potential impacts to freshwater (as the attached **Appendix A** outlines), we consider a freshwater ecologist on the Panel would be the ideal. However, if that is not possible, then certainly we expect that an independent expert in that area will be of benefit to the Panel.

#### **Legal and planning concerns**

10. The planning concerns, with the conditions and approach to consenting are further addressed in **Appendix A** and were canvassed in our memorandum filed on 5 June 2026. In summary:
  - a) It is acknowledged that the applicant is seeking as much flexibility as possible given the final design of the project might change within an overall envelope (designation corridor). However, the Department has concerns with the extent to which this approach has had an impact on the robustness of the application. The envelope approach to the designation means there is little information on the actual or proposed effects on wildlife and other ecology, and in light of that, measures to mitigate the impacts through conditions. The applicant describes the approach as a 'flexible consenting approach' (see paras [79] – [84] of their legal submissions). In addition to the lack of a condition 1 (that would require the project to be constructed and operated "in general accordance with" specified drawing and documents), the underlying

issue is ensuring there is sufficient information on which to grant the approvals sought.

- b) The applicant's legal submissions confirm management plans are not currently prepared and will be prepared only once the final design is known (para [87]). This means a potential lack of baseline information impacting on the ability to develop management plans with measurable targets or triggers and enforceable thresholds.
- c) It is not clear whether the assessments have adequately accounted for potential cumulative effects, or effects of fragmentation. This issue arises given the fact that the entire alignment is being sought for approval in segments, without consideration of the overall impact of the proposal as a whole. It is also not clear whether the benefit test being sought by the applicant is to consider the regional and national benefits of the entire state highway upgrade. That would be problematic if so, because it would weigh the positive impacts of the entire alignment, against only the negative impacts of a segment of the highway. This is something the Department will continue to test for the benefit of the Panel.
- d) The lack of information being highlighted in **Appendix A** plays into the manner in which the different policies between the relevant national direction can be reconciled. This is noted generally at this point but will also need closer scrutiny in due course given the number of provisions in the NPS-IB and NPS-FM that are relevant.
- e) The general approach to effects management throughout the conditions is not sufficiently clear, with too much discretion left to management plans that are yet to be developed, and an inability define appropriate levels given the factual deficiencies with the application. As noted above, the Department does not agree with the approach to not have a "Condition 1" – that is a condition requiring the proposed works be in general accordance with the application material. For such a wide designation corridor and only an indicative alignment, there are significant works required to execute the project and limited ecological assessment of the corridor. The certification of future management plans will have no, or insufficient, measurable targets/triggers or enforceable thresholds etc, so the applicant could be compliant with conditions,

regardless of the actual outcomes for wildlife and effects on the natural environment.

A handwritten signature in blue ink, appearing to be 'JP' or similar initials, located above a horizontal line.

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Jeremy Prebble  
Counsel for the Director-General of Conservation

## Appendix A: The Department of Conservation's ecology related concerns

1. This Appendix provides further high-level information on the ecology related concerns raised by the Department of Conservation (the Department) on the Alternative to Brynderwyn Hills application FTAA-2603-1178. The information is not exhaustive, but provides examples of the Department's concerns with the assessment of the ecological effects of the Project. The information provided in the 5 June 2026 Memorandum from the Director-General of Conservation in response to Minute 2 of the panel Convenor should be read in conjunction with this Appendix.
2. This Appendix has been informed by contributions from the following experts engaged on the project:
  - a. Frogs, herpetofauna and avifauna – Dr Rhys Burns (in-house)
  - b. Terrestrial Invertebrates (including snails) – Dr Jamie Stavert (in-house)
  - c. Bats – Tertia Thurley (in-house)
  - d. Vegetation – Dr Tim Martin (external consultant)
  - e. Freshwater Ecology – Dr Amber McEwan (external consultant)
  - f. Terrestrial and Wetland offsetting – Nick Goldwater (external consultant)
  - g. Freshwater offsetting – Richard Storey (external consultant)
  - h. Wildlife Approvals – Clara Wilson (in-house)
  - i. Resource Management Planning – Leah McEnhill (in-house)
3. The concern with the quality of the application from an ecological effects perspective is created by the combination of:
  - the broad and unconstrained nature of the approvals sought;
  - the use of a wide potential corridor for the location of the infrastructure;
  - using an unvalidated and fundamentally flawed approach to effects assessment that substantially reduces the perceived need for mitigation;
  - a void of information that leaves an unreasonable amount of assessment of effects until after the Project has been approved, and then (due to the “toothless” nature of the conditions proposed), provides limited ability to ensure that the effects will be appropriately managed.
4. The application is not sufficiently robust to facilitate effective decision-making.

## Use of EIANZ

5. Of significant concern and underpinning much of the concern around the ecological assessments is the way in which the 'Ecological Impact Assessment (ECIA): Guidelines for use in NZ' (EIANZ) have been applied to the assessments. The assessments "cherry pick" parts of the EIANZ framework, modify other parts, and also introduce new parts with inadequate scientific justification for doing so. This distortion of the process results in an 'assessment of effects' so materially distinct that it does not deliver what an assessment of effects is intended to deliver.
6. When assessing effects magnitude in relation to streams and wetlands, the applicant has used the EIANZ framework in a manner that it was not intended to be used. Specifically, the applicant has applied improper scale variation and has substituted standard criteria with unvalidated criteria when determining the magnitude of the effects. This approach has directly resulted in significant underestimation of effects on streams and wetlands, to the extent that the applicant claims that no mitigation of effects is required. More detail is provided below.
7. In addition, the EIANZ framework sets the level of effects threshold for when mitigation is justified as Moderate or above. However, the applicant's terrestrial ecology assessment sets the threshold as High or above, with no corresponding explanation. This is not the correct use of the EIANZ framework.

## Freshwater Ecology Assessment - Streams

8. Approximately 10 kilometres of perennial and intermittent streams will be affected by the Project, including by the deposition of over 6,800,000m<sup>3</sup> of spoil within the site. Additionally natural inland wetlands will be similarly affected. Indicative (only) spoil sites are provided at Volume A, Appendix D, 10722-PTA-2B0-RD-DRG-0201 to 0205 of the Application.
9. The Assessment of Effects on Freshwater Ecology (Freshwater AEE) provides very little information regarding structures that could affect fish passage. An obsolete guidance document ("Fish Passage in the Auckland Region—a synthesis of current research," Auckland Regional Council Technical Report, 84) and statements about the amount of habitat upstream of culverts that seem at odds with map information are used to justify not providing for fish passage at several locations.
10. The information gathering process for the identification of freshwater values is spatially and methodologically deficient, and has likely resulted in many values not

being identified, and thus not accounted for in the subsequent effects management process. In places, the applicant has not adopted standard protocols when assessing biodiversity values, bringing the reliability of the results into question.

11. A variety of observational scales are applied when identifying and assessing ecological values but then **catchment scale** only is used when assessing effects magnitude. EIANZ requires a **reach scale** to be used for this assessment.
12. The Freshwater AEE then goes on to replace the relevant set of EIANZ criteria for describing magnitude of effect (Table 8 EIANZ) with a novel set of criteria, without providing accompanying scientific justification for doing so.
13. The choice to use catchment scale when assessing effect magnitude has resulted in all the various values (e.g. habitat, species, water quality) being lumped together and accounted for as simply 'stream extent as a proportion of total catchment'. Then the bespoke replacement of the EIANZ Table 8 criteria has resulted in all the various effects (e.g. habitat loss, habitat degradation, injury and mortality to native fauna) being lumped together and accounted for as simply 'effects of the activities'.
14. This approach is not scientifically robust. It predetermines underestimation of effects because it applies inappropriate scale (catchment) and unsupported criteria in a way that collapses ecologically distinct values and effects into coarse aggregate metrics that are incapable of reliably characterising ecological effects at the scale at which those effects occur. In short, this method cannot reliably answer the question it purports to answer: "what is the ecologically relevant magnitude of the effects of these activities?".
15. The Department has discussed the applicant's approach of applying the EIANZ 'Ecological Impact Assessment (ECIA): Guidelines for use in NZ' with Dr Ian Boothroyd (Vice President and Board Member of EIANZ). Dr Boothroyd emphasised that:

*"these are 'guidelines' designed to provide a helpful and consistent framework for assessing ecological effects. Of concern to EIANZ is the misrepresentation of the appropriate scale or zone of influence for assessments of effects. The guidelines are clear in that the zone of influence<sup>1</sup> is the scale for consideration and would include all features impacted. Amplifying the assessment of impact to a broader and much larger scale misrepresents and incorrectly minimises the magnitude of impact. EIANZ recognises that the broader landscape or catchment scale can be helpful in contextualising the features being impacted but such broad definitions of the zone of influence does not represent the scale for assessing the level and*

*magnitude of impact. The guidelines are clear that the level and magnitude of effect should be addressed to the scale of values assessment e.g., ecological values at the stream reach(es) level (i.e., zone of influence) and not application at the catchment scale.*

*<sup>1</sup>Zone of Influence = the areas/resources that may be affected by the biophysical changes caused by the proposed project and associated activities. The ZOI refers to all land, water bodies and receiving environments that could be potentially impacted by the project. It includes the Project Site and any environments beyond the Project Site where 'indirect effects' such as discharges may extend."*

Dr Boothroyd has agreed for this statement to be included in this document.

16. Collectively, the assessment departs from accepted ecological assessment practice in several fundamental respects, including:
  - a. Multiple examples of prioritising professional opinion over peer reviewed scientific evidence and established expert consensus, including in ways that have significantly affected outcomes (see below);
  - b. inconsistent application of spatial scale across value identification and effects assessment processes;
  - c. substitution of recognised assessment criteria with novel or obsolete criteria lacking scientific justification;
  - d. introduction of novel methods without explanation, and presentation of results without the information required to assess their validity; and
  - e. interpretation and application of the EIANZ framework in a manner inconsistent with its intended use.
17. These are foundational problems with the assessment framework itself.
18. While ecological assessment necessarily involves professional judgement, professional judgement must still operate within a scientifically defensible methodological framework and be based on relevant peer-reviewed research. As a consequence of the above departures from scientifically defensible practice, the resulting effects determinations are not considered technically reliable or suitable for informing decision-making.
19. The above concerns are important because they significantly affect the environmental outcomes of the project. Following a flawed methodology, the applicant concludes that the level of effects on streams from culverting, realignments or spoil deposition is sufficiently low that little mitigation of effects is required.

## Vegetation, including wetlands

20. EIANZ guidelines are used inappropriately throughout, with similarities to the Freshwater AEE comments.
21. There is no account of how ecological values were assigned for each vegetation type and polygon (i.e. each vegetation unit, its scores for the four criteria (with justification) and overall score).
22. No map is provided of where the affected habitats are located, to the level of the vegetation codes. Without this it is unknown where the losses will occur, the magnitude of those losses, and potential opportunities for avoidance and or mitigation. This also impedes understanding of ecological values.
23. The Assessment of Effects on Terrestrial Ecology (Terrestrial AEE) makes little use of desktop information sources for assessment of ecological values (e.g. no mention of natural areas assessed as significant in the ecological district reports, no use of flora and fauna records in these reports). Vegetation types are also assessed without reference to landforms (e.g. floodplain vs hillslopes), which are a major determinant of habitat rarity and ecological values.
24. The wetland habitat assessments do not adequately consider the presence of woody vegetation. Currently, wetlands seem only to be assessed using ground-tier vegetation, even if a forest canopy is present. This is a highly unorthodox approach and may result in major errors in the values assessment. Where a wetland comprises two or more vegetation types, each of these needs to be assessed separately, as they can have major differences in ecological value and associated level of impacts (e.g. where a wetland comprises forest and rushland, the assessment should include both of these habitats, including photographs, values and project impacts).
25. There is no assessment of the ecological significance of the vegetation and habitats against the relevant criteria of the Northland Regional Policy Statement. This is important as there are habitats within the designation that have previously been assessed as significant, are proposed for removal, and for which no mitigation is proposed.
26. There is no assessment of any fauna in the wetlands despite each wetland being assessed for avifauna habitat values in the Avifauna Assessment (Bull 2026). For example, mātātā/fernbird were confirmed as present at wetlands 11 and 13 in the

Avifauna Assessment, yet the ecological values of these wetlands were assessed as ‘Negligible’ and ‘Low’ respectively in the Wetland Assessment (the presence of mātātā/fernbird was not noted). Based on the EIANZ guidelines, these wetlands should have at least a Moderate ecological value due to the presence of an ‘At Risk – Declining’ bird species.

27. The effects assessment only presents the summary information for terrestrial and wetland habitats. Detailed justification of level of impacts for each affected habitat type is not provided. This should also include the proportion of habitat affected for each vegetation type. The methods and results for wetland fauna surveys are not provided, and neither is the dominance and prevalence data for wetland delineation. Without this information, conclusions regarding absence of Threatened or At Risk species, or wetland extents, cannot be relied upon.
28. The three proposed mitigation sites are all on hillslopes, meaning there are currently no opportunities to address project impacts on high value, rare floodplain habitats.
29. Because of the deficiencies outlined above, there is little confidence that ecological values, impacts, and mitigation options have been adequately described or addressed.

### **Wildlife Authority Application**

30. The application does not meet the requirements of sections 42, 43, and 44 of the Fast-track Approvals Act 2024 (the Act). The Department raised this with the EPA when considering completeness for the application on 21 April 2026.
31. With specific reference to Schedule 7 of the Act, and the information required in an application for a wildlife approval, the following information is not in sufficient detail:
  - a. Methods to avoid, remedy, or mitigate adverse effects (including offsetting or compensation). The application does not adequately describe the specific methods that will be used to avoid and minimise adverse effects on protected wildlife, or any proposed offsetting or compensation to address unmitigated adverse effects. Only high-level mitigation measures are included and no draft Ecological Management Plan (EMP) or detailed methodologies are provided. Instead, the application relies on the future development of management plans post-approval. This information is necessary to assess the application against the purpose of the Wildlife Act 1953.

- b. Activity locations: Not all locations where wildlife handling, relocation, and release may occur are identified; proposed conditions allow for additional, unspecified release sites to be determined post-approval.
  - c. Numbers of wildlife likely to be impacted: Expected numbers of individuals affected are not clearly stated.
  - d. Impacts on threatened, at-risk, and data-deficient species: Avoidance, minimisation, and mitigation measures are insufficiently described to determine likely net effects.
  - e. Best-practice wildlife methods: No draft EMP or detailed methodologies are provided to demonstrate how best-practice standards will be met for handling, salvage, and relocation.
  - f. Actual and potential wildlife effects: Proposed pest management measures are not sufficiently described to enable assessment of potential benefits to wildlife.
32. Additionally, the proposed conditions of the Wildlife Approval provide insufficient ability for effects to be appropriately managed post approval. For example, the Department's certification role of the EMP is simply to certify that certain processes have occurred; there is no ability to refuse to certify the EMP if effects are not going to be appropriately managed.
33. Effects on wildlife are not sufficiently understood or controlled.

### **Hochstetter's Frogs**

34. Hochstetter's frogs will be significantly adversely affected by the proposal.
35. The project as designed will form a permanent barrier through the northern population of this Hochstetter's frog ESU (Evolutionarily Significant Unit), permanently fragmenting it.
36. In addition to causing direct habitat loss, this permanent fragmentation of their habitat would decrease the effective population size of the fragmented ESU and could, over time, cause genetic drift in the remaining fragmented sites and reduce genetic robustness of the population. It is unlikely most frogs will be salvaged, as the cost would be very expensive and time-consuming.
37. There has been no robust study on the success rate of Hochstetter's frog when translocated to another site, so there is high uncertainty whether this method is effective. In addition, no long-term study has been undertaken on the impact of moving Hochstetter's frogs on the resident population, and at what density Hochstetter's frogs can be maintained.

38. There is also uncertainty regarding which critical habitat factors are required to sustain Hochstetter's frogs, such as underlying geology. If Hochstetter's frogs are moved into nearby sites that are not known to contain frogs, these sites may have limitations that do not support Hochstetter's frogs over time. Therefore, releasing Hochstetter's frogs to sites that are known to already contain Hochstetter's frogs is currently considered the preferred option.
39. Cumulative effects are also potentially significant. This project is one of several large developments that, if all proceed, will have large-scale impacts on this ESU. Much of their current habitat is pine forest, which causes high casualties of Hochstetter's frogs when it is harvested, approximately every 25 years. The Waste Management landfill at Dome Valley, which may proceed in the next few years, is in the southern population of this ESU, and will permanently remove habitat for an estimated 500-2000 Hochstetter's frogs. Frogs are proposed to be translocated from this site of permanent loss to adjacent habitat containing frogs, but this has not yet happened, so there are no available results to rely upon. Additionally, another part of the Northland Corridor Project that runs through Dome Valley will also reduce habitat to frogs and are also likely to result in killing of Hochstetter's frogs as vegetation is felled and the road constructed over frog habitat.
40. In addition to these cumulative effects, climate change is also likely to affect these Hochstetter's frogs in this ESU more than any other ESU. This is because they are the most northerly ESU and so likely reside in the warmest habitat of any New Zealand frog. These frogs cannot be moved to any new habitat, as the geology is unlikely to be suitable, and so there will be inadequate habitat available in the streams and seeps they rely upon.
41. Based on the information provided, and extrapolating directly from the density of frogs found in various streams in different habitat types, the Department estimates that the habitat of up to 40,000 Hochstetter's frogs could be directly affected (i.e. destroyed) by the Brynderwyn Hills application. Additionally, there will potentially be further effects on the Hochstetter's frogs over time due to the downstream effects of both construction of the road and deposition of spoil into a wide area surrounding the road.
42. Some of the waterways where monitoring has occurred and are proposed to be destroyed in the development contain very high densities of frogs, and so this habitat is likely to be irreplaceable. It is uncertain whether the mitigation site proposed to relocate frogs will be suitable, and if the forest will be mature enough to provide sufficient shade to support Hochstetter's frog populations.

43. Table 26 of the Terrestrial AEE shows the applicant acknowledges there will be a permanent, high residual level of effect on Hochstetter's frogs, due to habitat loss and population fragmentation. No offset or compensation is proposed to address this.
44. Table 26 also indicates that during the road construction phase, death and injury on Hochstetter's frog will be sufficiently mediated (from a Very High to Low overall impact) by salvage and relocation. This is unlikely. Solely relying on the intensive salvage and relocation process (with uncertain outcomes) to appropriately address direct impacts on Hochstetter's frogs is overly optimistic. The large scale of this project will mean many thousands of frogs will need to be successfully salvaged, released, monitored and reported on over decades to ensure suitable outcomes are reached. As the applicant notes, about 8-fold more frogs are deeply embedded within a stream compared to those in the easily accessible surface of a stream, so extracting all frogs to protect them before a stream is destroyed requires significant, sustained resourcing, including heavy machinery. This raises the issue of whether it is in fact feasible to successfully undertake this work over such a large scale in the complex and steep terrain found at this site.

### Kauri snails

45. The applicant rates habitat loss, fragmentation and edge effects on the At Risk - Declining snail grouping, comprising kauri snail (*Paryphanta busbyi*) and *Amborhytida dunni*, as High, before concluding that mitigation will reduce them to Low. That conclusion has not been demonstrated for kauri snail. Salvage and relocation may reduce direct mortality during clearance but cannot remedy permanent habitat loss or fragmentation. Although the proposed mitigation includes planting and enhancement of existing native vegetation at the Northern and Southern Mitigation and Release Sites, the application does not demonstrate that any proposed release site provides suitable receiving habitat for relocated kauri snails, or that it can receive additional animals without increasing density, pressure on available refugia and prey, or predation risk. Planting cannot replace, at the time of clearance, the established, moist forest-floor conditions that will be lost. The assessment also relies on pest control to reduce predation risk in fragmented snail habitat, but the proposed condition does not identify the pests to be controlled or the control standard required to manage that risk.

## Bats

46. There is no certainty about the mitigation sites and therefore they cannot easily be assessed. It is possible that there will be no mitigation sites in the areas where most of the bat activity occurred. The potential mitigation sites are small and aimed at mitigating effects on vegetation and frogs. How does the area of bat roosting habitat lost compare with that proposed to be planted? The time lag between newly planted trees and mature trees suitable for roosting is not addressed.
47. The suggested mitigation for habitat fragmentation and mortality through vehicle collision includes ‘bat hop-overs’, defined in the Glossary of Defined Terms as “*Tall vegetation planted on both sides of a road/railway with overhanging branches that create a continuous canopy over the gap*”. It is not feasible that a canopy can be continuous over a four-lane road. There is also no evidence that ‘hop-overs’ work and their effectiveness is likely to be heavily context-dependent (i.e. gap width, vegetation height, bat flight behaviour). The applicant references no design specifications, no effectiveness studies from the New Zealand context, and no monitoring framework for hop-over performance. Overall, the effects of habitat fragmentation and mortality by vehicle collision on bats have not been adequately addressed.
48. Lighting and noise disturbance from operation of the road has not been adequately addressed. Lighting restrictions are only recommended in proximity to roosting habitat, but foraging and commuting bats are also affected by light. Noise has not been addressed at all.

## Freshwater offsetting

49. The Freshwater AEE’s assessment of the ecological value of streams and magnitude of effects is based on an unconventional methodology and is highly debateable.
50. The conclusion of the report (that little mitigation of effects is required) is in conflict with Section 3.24 of the National Policy Statement for Freshwater Management 2020 (NPS-FM), which states that any loss of stream extent or values requires management through the effects management hierarchy. The NPS-FM gives no threshold of stream value or magnitude of effects below which effects management is not required.
51. According to the NPS-FM, any adverse effects on streams that cannot be avoided, minimised or remediated must be offset. However, no offsetting is offered at the outset of this project.

52. The approach of determining offsetting after the results of monitoring are known is not adequate for these reasons –
- a. the low probability that the realignments will succeed in creating functioning streams;
  - b. the delay between the impact and management of that impact;
  - c. because this approach requires the consenting authority to ensure that the approval holder complies with a complex process of monitoring, calculating offsetting and implementing the offsetting that will extend over a period of years; and
  - d. the risk that the consenting authority and the approval holder will disagree about the amount of offsetting required. Instead, offsetting for stream infilling should be established at the consenting stage (assuming that realignments will fail to recreate stream habitat, as this is the most likely outcome), along with performance standards for the offsets to ensure anticipated ecological benefits are achieved.
53. The reasons given for modifying the SEV and ECR formulae represent the personal opinions of the author and are not based on evidence. Offsetting should follow the standard procedure unless valid reasons can be given for doing otherwise.
54. Effects of groundwater drawdown are likely to be significant and should be managed via the effects management hierarchy. Offsetting is required if avoidance, minimisation or remediation are not possible.

### Terrestrial offsetting

55. The terrestrial assessment proposes mitigation planting of pasture (up to 39.5 hectares at the Northern and Southern sites) and replacement of pine forestry with native planting (up to 103.6 hectares at the Central site). These are more akin to compensatory habitat enhancement actions — not offsets in any technically defensible sense. Even though the amount of planting appears to be generous, this has not been substantiated using a Biodiversity Offsets and Accounting Model (BOAM) or similar model.
56. Without a BOAM, ecological equivalency and no net loss cannot be demonstrated. Converting pasture to young native planting is not ecologically equivalent to the mature kauri-podocarp forest or kohekohe-taraire forest that will be lost — the ecological value differential is orders of magnitude, and the applicant does not attempt to quantify or account for it.

57. The only apparent offset offered in the report is the 50:1 kauri offset planting individual trees over 50 cm DBH (diameter at breast height). This ratio, however, does not address the loss of kauri-podocarp forest *communities* and their associated understorey, invertebrate assemblages, and structural complexity. The ratio is also presented without any ecological basis for why 50:1 is sufficient at this scale.
58. Section 6 of the Terrestrial AEE specifically states that offsetting or compensation will be required to address post-mitigation residual effects of moderate or greater (and refers to the relevant page in the EIANZ Guidelines). Moreover, the tables in Section 6 state that “effects in bold warrant further measures to offset or compensate these effects”. Given that none of the residual effects have been listed in bold in the tables (presumably an error), it is assumed that residual effects of moderate or greater need to be addressed (for example, loss of kauri-podocarp forest, which is assessed as having Very High ecological value).
59. No Ecological Management Plan/Fauna Management Plans have been provided by the applicant to guide the mitigation measures outlined in the terrestrial assessment.

### Wetland offsetting

60. The applicant recommends no mitigation at all for the majority of natural inland wetlands that will be directly lost. The applicant argues that because these wetlands are of low or negligible ecological value, they do not warrant protection of their extent and therefore no avoidance, remedy, mitigation, or offset is needed. This is a values-based perspective that is not provided for in the NPS-FM. Policy 6 of the NPS-FM states unambiguously: “*There is no further loss of extent of natural inland wetlands.*” It does not condition that obligation on ecological value, notwithstanding that the values of some wetlands within the Project area would be higher if they were assessed correctly (based on vegetation and fauna values). Importantly, the no-further-loss directive applies to all natural inland wetlands that meet the definition, noting that the applicant confirms that 24 identified wetland features do meet the NPS-FM definition.
61. The applicant also argues that the NPS-FM offset principles require a “like for like” response, and recreating exotic pasture wetlands is “not consistent with the intention of the policies and objectives in the NPS-FM.” This statement is misleading. I refer to offsetting principle 3 in Appendix 6 of the NPS-FM (Principles for aquatic offsetting) below:

***No net loss and preferably a net gain:*** This is demonstrated by a like-for-like quantitative loss/gain calculation, and is achieved when the extent or values gained at the offset site (measured by type, amount and condition) are equivalent to or exceed those being lost at the impact site.

62. It is implied in the wetland assessment that like-for-like trades must be **equivalent** to the values being lost at the impact site, whereas the principle specifically allows for offsets to **exceed** those values. In reality, it is highly unlikely somebody would offset a degraded exotic-dominant wetland by revegetating another wetland with exotic plants. As such, there is no justification for not offsetting the residual loss of all natural inland wetlands.
63. The applicant proposes two potential wetland offset sites; however, neither of them have been subject to ground-truthing surveys and there is no indication that these sites would be available for offsetting purposes. It also appears that parts of the wetland identified as Q08/086 have already been fenced and planted (based on Google Earth imagery), hence any offsetting activity undertaken at this site may not meet the principle of additionality.
64. No Ecological Management Plan has been provided by the applicant to guide the wetland mitigation and offsetting measures outlined in the wetland assessment.
65. Overall, there is considerable uncertainty as to whether the loss of wetlands can be appropriately addressed.

### **General Comments on Conditions**

66. In addition to the comments on conditions on the Wildlife Approvals, the Department is concerned that the proposed conditions on the wider approvals do not sufficiently manage effects.
67. The assessment of effects is based on the indicative alignment and additionally no “condition 1” is proposed. Rather, the applicant’s intention is that the outcome-focused proposed conditions will ensure effects are appropriately addressed regardless of the final carriageway location.
68. It appears unlikely that the conditions will achieve this. For example:

- a. The proposed “avoid areas” have not been identified in the conditions. Requirements for specific wetlands and watercourses are also unclear as conditions currently state requirements for “watercourse [x]” and “existing wetlands [x] and [x]” etc.
- b. The various assessments refer to *mitigation sites/proposed mitigation sites/indicative mitigation sites*; however, the exact number, extent and location of the sites is to be confirmed following detailed design, with conceptual maps included for informative purposes only. Conditions include requirements to undertake mitigation planting *in suitable locations, at appropriate spacing for the relevant plant species*, but do not identify the general location of mitigation sites or include any requirement to consider how effects such as fragmentation or loss of ecological corridors could be addressed through location of mitigation sites.
- c. Certification conditions, like with the proposed Wildlife Approvals, have little in the way of “teeth” to ensure effects are appropriately managed (in a situation where the application that would have been approved also provides no assurance that effects will be appropriately managed).