
Under	the Fast-track Approvals Act 2024 ('FTAA')
In the matter of	a substantive application under the FTAA for an alteration to an existing designation, resource consents, a wildlife approval, archaeological authorities and a complex freshwater fisheries activity, to construct, maintain and operate the Belfast to Pegasus Project
By	New Zealand Transport Agency Waka Kotahi Applicant

Statement of Evidence of Fiona McIntosh (wetland ecology)

Dated 15 May 2026

DENTONS
40 Bowen Street
PO Box 10246
Wellington 6011

P [REDACTED]
F [REDACTED]
DX SP26517

Solicitors:
E
14016359.1

Nicky McIndoe/Liam Bullen

Statement of evidence of Fiona McIntosh

1 Introduction

- 1.1 My full name is Fiona Joyce McIntosh.
- 1.2 I am a Senior Ecologist at Tonkin & Taylor Ltd (T+T).
- 1.3 I hold a Bachelor of Science in Ecology degree and a Masters in Terrestrial Ecology degree from the University of Waikato (BSc 2007, MSc 2010). I am a member of the New Zealand Ecological Society and the National Wetland Trust.
- 1.4 I have been practising as an ecological consultant for 17 years. Prior to working at T+T, I was employed at Wildland Consultants.
- 1.5 My relevant experience includes a variety of ecological investigations throughout Aotearoa New Zealand in a wide variety of ecosystems including terrestrial, wetland, geothermal, and coastal ecosystems. My work and specialist areas are largely in the field of terrestrial and wetland ecology. I am particularly experienced in significant natural area and wetland assessments and providing ecological advice and planning for restoration and enhancement of degraded riparian and wetland ecosystems. My work has also included inputs into preparing effects assessments for a wide range of development types. I have acted as an expert witness at both Regional and District Council-level hearings and one Environment Court hearing.
- 1.6 I was a co-author of the Ecological Impact Assessment ('**Ecia**'), which is Volume 3I lodged in support of the fast-track application for the Belfast to Pegasus Project ('**Project**').
- 1.7 I have been asked by NZTA to provide a response to the specific matters contained in the written comments on the application from persons invited by the Panel to comment under section 53 of the Act:
 - a Canterbury Regional Council ('**CRC**'); and
 - b Department of Conservation ('**DOC**').
- 1.8 I have prepared this statement within the limited time available to me. Consequently, it is necessarily at a high level. I am able to provide a more fulsome response on the issues covered in this statement if the Panel requires further assistance.

2 Code of Conduct

- 2.1 I confirm that I have read the Code of Conduct for Expert Witnesses as contained in section 9 of the Environment Court Practice Note (2023) and have complied with it in preparing this evidence. I confirm the issues addressed in this evidence are within my area of expertise, and I have not omitted material facts known to me that might alter or detract from my evidence.

3 Scope of evidence

- 3.1 This evidence addresses the following:
- a Relative weighting of elements that are used to determine rarity and distinctiveness as part of my ecological values assessment.
 - b Consideration of Canterbury mudfish, including potential habitat value, in my overall wetland values conclusion.

4 Executive summary

- 4.1 It is my opinion that CRC's position that all wetlands should be elevated to higher ecological value is driven by an over-weighting of habitat scarcity and applying multiple policy criteria that effectively reflect the same underlying factor within the "rarity/distinctiveness" criterion within the EIANZ guidelines¹.
- 4.2 While wetlands are regionally scarce, the Project wetlands are small, degraded, and dominated by exotic species with low indigenous biodiversity. Therefore, in my opinion a Moderate rating for rarity and distinctiveness remains appropriate.
- 4.3 Elevation of the "rarity/distinctiveness" criterion for the habitat scarcity factors would be justified only where wetlands are of uncommon type or are high-quality native-dominated systems. This is not a characteristic of any wetland sites within the Project area.
- 4.4 The assessment of Canterbury mudfish, likelihood of them being present within wetlands impacted by the Project, and consideration of suitable management actions for mudfish impacts (if any) stepping through the effects management hierarchy is covered in detail in the evidence of Mr Patrick Lees.
- 4.5 If Canterbury mudfish are confirmed in any wetlands impacted by the Project, I agree with the CRC and DOC wetland and terrestrial experts that ecological values and associated offset requirements for those wetlands should be

¹ Roper-Lindsay, J., Fuller, S. A., Hooson, S., Sanders, M. D., and Ussher, G. T. (2018). Ecological Impact Assessment. EIANZ guidelines for use in New Zealand: terrestrial and freshwater ecosystems. 2nd edition.

reassessed to reflect a higher value in accordance with best practice. I do not agree that the habitat value of all Project wetlands should be elevated on the basis that some wetlands could conceivably provide potential future mudfish translocation habitat.

5 Application of EIANZ criteria for assigning value

- 5.1 CRC disagrees with the Applicant in relation to the weighting applied to aspects of the ecological values assessment matrix as outlined in the EIANZ guidelines and used in the EclA.
- 5.2 The disagreement mainly stems from:
 - a The weighting applied to scarcity of remaining wetland habitat and inclusion of wetland habitat as a National and regional priority for protection;
 - b The interpretation of habitat values for areas where Threatened and/or At Risk species could potentially be present, and;
 - c How these factors should be incorporated into the overall ecological values assessment.
- 5.3 In the view of CRC's technical specialist, the overall ecological value of all wetlands have been undervalued and should range from Moderate to High, rather than Low to Moderate as presented in the EclA.
- 5.4 CRC contends that, because the Project wetlands meet the following points (5.4 a-d), then all wetlands assessed for the Project, and which contain some native/indigenous species, should automatically be elevated to a Very High rating for the "rarity/ distinctiveness" criterion of the ecological values assessment:
 - a Nationally reduced in extent (c.10% remaining);
 - b Located within land environments with $\leq 20\%$ indigenous vegetation remaining (National Priority 1 and CRPS Section 9.3.2);
 - c Contain indigenous vegetation within wetlands (National Priority 2 and CRPS Section 9.3.2), and;
 - d May conceivably contain habitat for Threatened and At Risk species.

Nationally accepted assessment of ecological values considerations

- 5.5 The four broad criteria – Representativeness, Rarity/Distinctiveness, Diversity/Pattern, and Ecological Context – listed within the EIANZ guidelines for determining ecological values in impact assessments are a continuation of broad criteria first developed c.1983 as part of the Protected Natural Area Programme assessment framework for identifying the best remaining examples of indigenous ecosystems for protection.
- 5.6 The EIANZ Ecological Impact Assessment Guidelines adapted these legacy criteria to fit the broader requirements of the Resource Management Act 1991. This transition involved a shift in scope so that the importance of any site could be evaluated and development of a four-tiered relative ranking system ranging from Low to Very High rather than just focussing on the highest levels of habitat quality (Priority 1 and Priority 2 for protection).
- 5.7 The objective of the “Representativeness” criterion is to identify typical examples of indigenous ecosystems and assess how well an area represents the original (pre-human) biological character of an ecological district. It prioritizes the protection of healthy, functioning examples of common habitats that are becoming increasingly fragmented.
- 5.8 The objective of the “Rarity/Distinctiveness” criterion is to identify features that are rare (natural or human induced), at their distributional limits, or “Threatened” or “At Risk” according to the New Zealand Threat Classification System.
- 5.9 The objective of the “Diversity and Pattern” criterion is to evaluate the richness of species and the variety of habitat types present. It considers “patterns” such as natural gradients (e.g., from mature forest through to regenerating shrubland on the margins, or across ecotones such as transitions between forest, wetland, and grassland habitats). High diversity of species and multiple transitional habitat types are important for long-term ecological resilience of a site.
- 5.10 The objective of the “Ecological Context” criterion is to determine the role of a site in the wider environment. It assesses if the area acts as a “buffer” for other sensitive sites, a “stepping stone” for migratory species, or provides critical “ecosystem services” like water filtration.

Considerations concerning rarity of habitat type

- 5.11 In relation to points 5.4 a, b, and c above: when undertaking the values assessments I considered the scarcity of wetlands within the Canterbury region

(and nationally) as an important factor in the overall ecological value for all sites assessed.

- 5.12 However, when weighing up how to 'score' "rarity/distinctiveness" for a site, I consider all of the relevant reduced vegetation/habitat extent attributes together (rather than scoring each attribute individually and then totalling the individual scores). This is because there is a lot of overlap between the attributes that relate to naturally and/or induced vegetation and/or habitat extent reduction, and thereby fall under the same single umbrella of habitat scarcity as an overarching theme.
- 5.13 I do not consider that, for a small wetland area containing no other habitat types or transitional vegetation, meeting both national scarcity and national priority 1 and national priority 2 warrants an elevated weighting applied to this aspect of this criterion.
- 5.14 Whilst habitat scarcity is one of the factors considered under the "rarity/distinctiveness" umbrella, it is not the only factor to be considered. Other important factors include whether the habitat type is naturally uncommon or is a particularly unusual habitat type, is located on an unusual landform/soil/bedrock type, whether there is local endemism, type localities, or special features of scientific interest. The Project wetlands do not contain any of these features.
- 5.15 In respect to a specific part of this aspect raised by CRC, I note that the CRC expert has highlighted the use of the first row in Appendix B Table 1 of the EclA as rationale for suggesting that a Very High habitat value should be assigned to wetland habitats on the basis that more than one national priority type is present. That is, CRC's interpretation of this Appendix table suggests that, when determining Ecological Value relative ratings, a site should be considered for a Very High ranking if it supports more than one national priority type.
- 5.16 As discussed in Paragraph 5.135.13 above, for wetlands I consider National Priority 1 and National Priority 2 to reflect the same overarching concept of habitat scarcity. Therefore, they should not be assigned two separate 'points' when calculating relative rarity ratings. Furthermore, I interpret the purpose of this Appendix table, as pairing species threat rankings with habitat type considerations. Where both considerations are met (e.g. a nationally critical species occurring within a national priority habitat) a "Very High" rating would be appropriate. While this Appendix table is included in the EclA report, uncertainties in its interpretation meant that I did not rely on it when assessing criteria. Instead,

I used Appendix B Tables 2 through 4, which are verbatim reflections of guidance within the EIANZ guidelines.

- 5.17 While wetland habitat as a very broad class is regionally scarce, and remaining remnants are small within the Low Plains Ecological District, a large proportion of the wetland habitat that does remain is the same/similar to the habitat types found within the Project area. That is, they are riparian margin wetland habitat dominated by facultative wetland species, primarily crack and/or grey willow with minor native plant species cover.
- 5.18 While this form of wetland does provide ecosystem services and habitat provision value, contributes to a network of remnant wetland habitat through the district, and should not therefore be discounted simply because of the current degraded state, the quality of the vegetation and the low native biodiversity is an important consideration of relative value. Although these matters are assessed under the “representativeness” and “diversity and pattern” criteria, they are still important to consider within the “rarity/distinctiveness” criterion.
- 5.19 For example, if one of the Project wetlands comprised a wetland habitat type that was particularly rare within the Low Plains Ecological District, such as bogs or fens, then I would consider this to elevate the rarity considerations. Or if it were riverine wetland vegetation that was dominated by native species (which is a rare thing in Canterbury) and was a good quality example of that type, then this would also elevate the rarity considerations (because there are very few good quality examples). However, as outlined in Paragraph 5.17 above, these riparian margin wetlands are degraded examples of a common wetland habitat type in the Canterbury Region and therefore, in my opinion do not warrant a higher than Moderate rating.
- 5.20 While wetland extent is significantly reduced within the Canterbury Region, this is only one of many factors to be considered and is not sufficient, in my opinion to elevate the “rarity/distinctiveness” aspect beyond Moderate. While I recognise that my assessment did not take into account all of the appended table examples within the EclA, I nevertheless stand by my assessment as appropriately assessing wetland ecological value.

Interpretation of habitat type values for Threatened/At Risk species

- 5.21 The terrestrial and wetland expert for CRC refers to the views of other CRC experts, and experts from DOC, that wetland site ratings should be elevated

based on the presence, or likely presence, of Canterbury mudfish as well as the potential for wetlands to provide suitable habitat for mudfish translocation.

- 5.22 I agree that, if Canterbury mudfish were present within any of the wetlands assessed, then this would necessitate an increase in overall wetland ecological value from Moderate to High for the wetland sites where mudfish were found. This would occur for both the “rarity/distinctiveness” criterion being elevated to High due to mudfish being a Nationally Critical species, and the “Ecological Context” criterion also being elevated to High due to the site(s) providing critical local/regional habitat to a threatened species.
- 5.23 Based on the freshwater investigations and habitat assessments undertaken to date, the NZTA freshwater ecologist does not consider it likely that Canterbury mudfish are present within Project wetlands (see separate Statement of Evidence of Patrick Lees).
- 5.24 However, noting that no mudfish-specific surveys were undertaken, Mr Lees accepts that reassessment of the northernmost Waihora Creek wetland (WC_W6_NPSFM, hereafter ‘WC_W6’) should be undertaken. He makes recommendations on the process to provide more certainty around mudfish presence/absence within this site and options to account for mudfish-specific habitat loss and impacts to individual mudfish/the site-specific mudfish population.
- 5.25 Should the measures recommended by Mr Lees be adopted by the Panel, and Canterbury mudfish are confirmed at WC_W6, the overall ecological value of that wetland site will be reassessed as part of the final quantum of offset mechanism recalculation outlined in proposed consent condition EM4.
- 5.26 Should the final quantum of wetland offset required be increased through this process due to an elevation in the overall ecological value of WC_W6, the South Lake remnant is large enough to accommodate an increase in the area of constructed wetland established and planted as part of the overall wetland values and extent offset plan.
- 5.27 Offsetting of overall wetland extent and values will be considered complete when the wetland offset and accounting model metrics used for the Project, and outlined in Appendix G of the EclA, achieve the objectives of proposed consent condition EM.6.
- 5.28 For clarity, any increase in wetland offset area at the South Lake remnant is solely to accommodate the uplift in overall ecological value of any impacted

wetland that has been confirmed to contain mudfish as discussed in Paragraph 5.22 above. It also does not account for the related, but separate offsetting, compensation, and/or recreation of mudfish-specific habitat or impacts to individual mudfish mortality. These items are not addressed by proposed consent condition EM.6 but will be included in a Canterbury Mudfish Management Plan (if the reassessment of WC_W6 confirms that mudfish are present).

6 Potential of wetlands to provide future translocation habitat for Canterbury mudfish

- 6.1 In addition to uncertainty around the actual presence of Canterbury mudfish within impacted Project wetlands, Ms McEwan (DOC freshwater ecologist) considers that the potential of the impacted wetlands to provide habitat for Canterbury mudfish in the future should be incorporated into the ecological values assessment for the Project wetlands.
- 6.2 While I understand the rationale behind this argument, particularly for such a highly threatened and habitat suitability restricted species, I do not consider that it is a valid approach for modifying values assessments for the purpose of an impact assessment.
- 6.3 The purpose of ecological impact assessments is to provide comment and assessment on the current known, and likely present but not measured, habitat, species values, and ecological services of a site/sites actually, or likely to be, impacted by an activity. The statement of evidence of Patrick Lees provides detailed assessment of the likelihood of Project wetlands for providing habitat for mudfish. This information is not repeated here.
- 6.4 In my view, impact assessments should not comment on the potential of a site to provide future habitat for Threatened or At Risk taxa if they are not considered likely to be present at the time of impact. If this lens were applied to all habitats assessed under an impact assessment, then it is possible that any habitat could conceivably be rated more highly for any number of Threatened or At Risk species, which would artificially elevate the actual current value.
- 6.5 I therefore do not consider that increasing the ecological value of impacted Project wetland sites for potential future mudfish habitat translocation capacity to be appropriate.

7 Conclusion

- 7.1 I do not agree with the CRC terrestrial and wetland expert that any of the Project wetlands should have their values elevated to 'High'. While some of the wetlands

do have multiple attributes relating to scarcity, these should not be 'summed' to result in the "rarity/ distinctiveness" criterion for all wetlands being elevated to High.

- 7.2 In my opinion, while wetlands are indeed rare within the region, the examples present within the Project alignment are of only low to moderate quality and low indigenous diversity and therefore do not warrant a higher than Moderate overall ecological value conclusion.
- 7.3 I do not consider that the potential future habitat capacity of any wetland site for mudfish translocation site protection is an appropriate mechanism to further elevate any of the Project wetland values. However, should Canterbury mudfish be found in any of the Project wetlands surveyed for this species prior to construction occurring, I agree that this would result in a change in ecological ranking to the sites where mudfish are found (if any).
- 7.4 If that scenario is realised in the future, then I agree that the quantum of offset will need to be recalculated to reflect the higher overall wetland ecological value rating, so that it aligns with NPS-FM guidance on good offsetting principles and practices. Proposed condition EM.4 already provides for the recalculation of offset and compensation measures.
- 7.5 However, the South Lake remnant offset site cannot be used to offset or compensate for impacts on the mudfish themselves or provide a site for mudfish relocation. Separate mechanisms are proposed to account for the loss of mudfish-specific values if required.

Fiona Joyce McIntosh
15 May 2026