



APPENDIX 5

FAST TRACK APPROVALS Act 2024 (FTAA 2024) TECHNICAL ADVICE ON TERRESTRIAL ECOLOGY

State Highway 1 North Canterbury – Woodend Bypass Project
(Belfast to Pegasus) Substantive Application
[FTAA-2512-1157]

File No	RC255399 / FTAA-2512-1157
Date	24/04/2026
Memo To	Nirosha Seelaratne
From	Hazel Holmes, Ecologist and Dr. Bex Dollery, Biodiversity Team Leader
Subject	Terrestrial Ecology

1. QUALIFICATIONS

The full name of the author of this response is Hazel Holmes. Hazel is an Ecologist at the Waimakariri District Council. Hazel's qualifications and experience include:

- Bachelor of Science and Master of Science in Zoology from the University of Otago.
- 7 years of experience working with New Zealand terrestrial ecology in both the public and the private sector having extensive experience in ecological assessment, species monitoring and conservation management in Canterbury through the Department of Conservation.

The full name of the reviewer for this piece of work is Rebecca Dollery. Rebecca has been employed by Waimakariri District Council for over 4 years in the position of Ecologist and Biodiversity Team Leader. Rebecca has the following relevant qualifications and experience:

- BSc (Hons) in Wildlife Conservation (Liverpool John Moores University, UK), a PGCert in Soil Science (University of Sussex, UK), PhD in Ecology (Lincoln University, NZ).
- Over 20 years' experience as an ecologist working in the private, public and academic sectors in UK, Europe and Aotearoa New Zealand.
- A former full member of the Chartered Institute of Ecology and Environmental Management (UK) and an applicant for Ecologist Specialist under the Certified Environmental Practitioner Scheme offered by Environment Institute of Australia and New Zealand.

2. INTRODUCTION

2.1 Purpose of the Memo

The purpose of this memo is to provide comment on the effects of the proposed changes to the designation on terrestrial ecological values.

The information provided by NZTA and their consultants has been collected and compiled following best practice to an appropriate standard for the majority of the terrestrial ecological

impacts. However, there is a lack of assessment of the operational effects relating to the creation of the wetland adjacent to a state highway and a paucity of information provided in the ecological management plans.

2.2 Documents reviewed

In preparing this response, the following documents have been reviewed:

- a) 2A Substantive Application Report
- b) 2B Existing Designation Conditions
- c) 2C Proposed Alterations to Designation Conditions
- d) 2D Proposed Resource Consent Conditions
- e) 2E Proposed Wildlife Approval Conditions
- f) 3I Ecological Impact Assessment
- g) 3I Ecological Impact Assessment Appendix A
- h) 3I Ecological Impact Assessment Appendices B to I
- i) 3J Wildlife Approval Report
- j) 4D Designation Alteration Plans
- k) 4E Ecological Offset Plan
- l) Tonkin & Taylor (2025). *Belfast to Pegasus Motorway and Woodend Bypass Early Works Ecological Impact Assessment*. NZ Transport Agency Waka Kotahi
- m) MWH (2013). *Woodend Corridor Investigation Short Eastern Alignment Terrestrial Ecology Assessment*. NZ Transport Agency, paragraph 4.2.

3 KEY ISSUES

3.1 Operational Impacts due to Designation Alteration

The Substantive Application provided by NZ Transport Agency Waka Kotahi includes designation alteration which incorporates the creation of a wetland area as offsetting and ecological habitat provision^{1,2,3}. The Ecological Impact Assessment competently assesses the impacts of the project due to construction works for terrestrial ecology within 10 m of wetlands and streams. Whilst operational impacts for the original designation were assessed under previous surveys⁴, there appears to be a lack of assessment for the complete suite of operational impacts relating to the causeway and additional wetland creation, most poignantly, a lack of bird strike risk associated with the wetlands.

3.2 Bird Strike Risk

The Substantive Application Report states that effects on the terrestrial ecology (outside of water bodies and their margins) is already authorised under the existing designation. However, there remains concern that the construction of the newly proposed offset wetland will provide positive net biodiversity gain for the area (attracting species listed as Threatened) and increase the risk of indigenous avifauna collision along the causeway when the new highway is operational.

¹ Document 2A – NZ Transport Agency Waka Kotahi (2026). *SH1 North Canterbury – Woodend Bypass Project (Belfast to Pegasus): Volume 2A Substantive Application Report*. NZ Transport Agency Waka Kotahi, Page 19, Paragraph 3.3.4.

² Document 4A – Aurecon (2026). *Designation Alteration Plans*. NZ Transport Agency Waka Kotahi.

³ Document 4E – Tonkin&Taylor (2025). *Ecological Offset Plan*. NZ Transport Agency Waka Kotahi.

⁴ Document 3I – Tonkin&Taylor (2025). *State Highway 1 North Canterbury—Woodend Bypass Project (Belfast to Pegasus) – Substantive Application - Ecological Impact Assessment*. NZ Transport Agency Waka Kotahi, Pg 86, paragraph 6.1.2.

Existing Avifauna Community

The terrestrial ecology assessment undertaken in 2013 as part of the original designation application found no 'Threatened' or 'At risk' avifauna species in the proposed area of works⁵.

There have been changes in the habitat around the quarry lakes since 2013, with indigenous vegetation establishing along the South lake margins. The Ecological Impact Assessment undertaken for the Early Works package⁶ in 2025 detailed bird species ranging from "low ('Not Threatened' species) to very high (pūteketeke)" and a total of 8 indigenous bird species were recorded using the South Lake, 4 of these species had a conservation status of 'At risk' or 'Threatened'. Furthermore, the desktop survey noted 17 wetland and waterway birds with a conservation status of 'At risk' or higher present within 10 km of the site and the Waimakariri District Council have undertaken annual bird surveys of the lakes along with ornithologists from Christchurch City Council confirming presence of some species (Table 1). Nine of these are listed as specified highly mobile species under the NPS-IB.

Table 1. Birds recorded using the quarry lakes by Waimakariri District Council field surveys or identified within 10 km of the quarry lakes by desktop survey (iNaturalist, eBird) reported by Tonkin & Taylor (2025)⁶. Birds with * are classed as specified highly mobile species in the NPS-IB.

Common Name	Latin Name	Threat Classification	WDC Surveys	Desktop Survey
Australasian coot	<i>Fulica atra</i>	At Risk: Naturally Uncommon	✓	✓
Australasian crested grebe / Pūteketeke*	<i>Podiceps cristatus</i>	Threatened: Nationally Vulnerable	✓	✓
Black Cormorant / Māpunga	<i>Phalacrocorax carbo</i>	At Risk: Relict	✓	✓
Pied Cormorant / Kāruhiruhi*	<i>Phalacrocorax varius</i>	At Risk: Recovering	✓	✓
Little Cormorant / Kawaupaka	<i>Microcarbo melanoleucos</i>	At Risk: Relict	✓	✓
Australasian bittern*	<i>Botaurus poiciloptillus</i>	Threatened: Nationally Critical		✓
Banded dotterel*	<i>Anarhynchus bicinctus</i>	At Risk: Declining		✓
Black-billed gull*	<i>Larus bulleri</i>	At Risk: Declining		✓
Grey duck*	<i>Anas superciliosa</i>	Threatened – Nationally Vulnerable		✓
Little black shag	<i>Phalacrocorax sulcirostris</i>	At Risk: Naturally Uncommon		✓
Marsh crake*	<i>Zapornia pusilla</i>	At Risk - Declining		✓
New Zealand dabchick*	<i>Poliocephalus rufopectus</i>	Threatened – Nationally Increasing		✓
Red-billed gull*	<i>Chroicocephalus novaehollandiae</i>	At Risk - Declining		✓
Spotless crake*	<i>Zapornia tabuensis</i>	At Risk - Declining		✓
Spotted shag	<i>Strickocorbo punctatus</i>	Threatened – Nationally Vulnerable		✓
Variable oystercatcher*	<i>Haematopus unicolor</i>	At Risk - Recovering		✓

⁵ MWH (2013). *Woodend Corridor Investigation Short Eastern Alignment Terrestrial Ecology Assessment*. NZ Transport Agency, paragraph 4.2.

⁶ Tonkin & Taylor (2025). *Belfast to Pegasus Motorway and Woodend Bypass Early Works Ecological Impact Assessment*. NZ Transport Agency Waka Kotahi, Appendix B, Table 2.

White heron*	<i>Ardea modesta</i>	Threatened – Nationally Critical		✓
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Considering this information and following the Ecological Impact Assessment guidelines⁷, it can be assessed that the bird community in the area is of high ecological value.

Operational Impact on Avifauna

The proposed alterations to the designation include the road carriageway bisecting the quarry lakes with additional wetland creation and enhancement as compensation⁸. The Ecological Assessment has calculated that these works will result in net gain for the project and could include establishment of:

- Raupō (*Typha orientalis*) reedland.
- Harakeke (*Phorium tenax*) and tī kōuka (*Cordyline australis*) flaxland.
- Kāpūngāwhā (*Schoenoplectus tabernaemontani*) sedgeland.
- *Juncus pallidus* rushland.
- *Carex virgata* / *Carex secta* sedgeland.

This enhancement is supported and will provide habitat to assist with the increase in rare bird populations such as marsh crake, spotless crake and bittern. Therefore, it has the potential to attract rare birds into the area adjacent to an operational carriageway which could result in bird strike.

The 2013 ecology assessment did not find high value bird populations or communities but did consider the possibility of common indigenous birds, such as pūkeko, Australasian harrier and Southern black-backed gull, traversing the carriageway in search of suitable foraging ground and suffering injury or mortality. The magnitude of this impact was not assessed and there was no mitigation or compensation proposed.

The new causeway bisects the currently existing lake, sitting directly between the constructed habitat provided by the proposed offset wetland to the east and the open water habitat of the remaining quarry lakes to the west. This poses an increased vehicle strike risk to avifauna moving between these two areas of habitat, but this has not been assessed in the ecological reports.

As part of the proposed Ecological Offset plan³, there will be a 20 m planted buffer on the land either side of the lake. There are no details surrounding the height of vegetation and whether this is to be used as mitigation for bird strike or mitigation for disturbance from the operational impacts such as noise and dust creation. There is also no specified mitigation for avifauna along the highway within the lake area, presenting no barrier to guide birds away from the highway when moving between the two areas of habitat.

As ecological offset is part of the altered designation, further assessment for avifauna (both those currently present, and those that may use the enhanced habitat in future) needs to be undertaken to fully understand operational impacts and potential mitigation and compensation.

3.3 Provision of the Ecological Management plan/plans

The contents of the Ecological Management Plan⁹ do not specify any deterrents specifically

⁷ Roper-Lindsay, J., Fuller S.A., Hooson, S., Sanders, M.D., Ussher, G.T. 2018. *Ecological impact assessment. EIANZ guidelines for use in New Zealand: terrestrial and freshwater ecosystems*. 2nd edition.

⁸ Document 3I – Tonkin&Taylor (2025). *State Highway 1 North Canterbury—Woodend Bypass Project (Belfast to Pegasus) – Substantive Application - Ecological Impact Assessment*. NZ Transport Agency Waka Kotahi, Ecological Impact Assessment Appendices B - I

for bird strike and operational effects nor is this effect listed as a residual effect in the Ecological Impact Assessment⁴. It is recommended that this is considered in the recalculation of the ecology offset plan with mitigations or compensations outlined in the Ecological Management Plan.

Proposed resource consent condition MP.8⁹ states that six-monthly monitoring results will be provided to Whitiara under the Ecological Management Plan. However, what will be monitored and why is unclear. Monitoring is an essential part of the restoration continuum and clearly stated for the establishment of wetland in Aotearoa New Zealand^{10,11}. To ensure that the objectives set out in the offset and compensation measures are realised, monitoring will be required. Furthermore, the Ecological Management Plan and Offset Plan are not offered in sufficient detail to certify as part of the Fast Track process. It is recommended that the monitoring protocols and schedules are provided with defined objectives included in the appropriate plans.

The Ecological Management Plan has been signalled to be offered to the Regional Council for review, amendment and certification but this has not been extended to the District Council. The Ecological Management Plan details mitigations for indigenous biodiversity within 10 m of waterways and wetlands including vegetation clearance to safeguard protected terrestrial species, such as breeding birds. It is acknowledged that there are overlapping responsibilities for Regional and District councils for terrestrial ecology (outside of those requiring Wildlife Act Authority from the Department of Conservation), specifically in this case pertaining to indigenous vegetation clearance or clearance of habitats used by indigenous species and creation of habitat for indigenous terrestrial species such as birds. As such, it is agreed that the plans are to be certified by the Regional Council only, allowing for their jurisdiction for regional biodiversity and highly mobile fauna.

4 OVERALL POSITION /CONCLUSIONS

It is considered that the ecological assessments and resulting impact assessments completed by NZ Transport Agency have been undertaken following best practice. The assessments are appropriate for the majority of impacts to terrestrial ecology aside from the operational impacts arising from the wetland enhancements and causeway creation. Further assessment into the impact on birds is required with suitable mitigation and/or compensation inserted into the Ecological Management Plan for review and certification by the Regional Council.

⁹ Document 2D – Tonkin&Taylor (2025). *State Highway 1 North Canterbury—Woodend Bypass Project (Belfast to Pegasus) – Substantive Application – Proposed Resource Consent Conditions*. NZ Transport Agency Waka Kotahi, pg 21

¹⁰ Clarkson, B. R., Sorrell, B. K., Reeves, P. N., Champion, P. D., Partridge, T. R., & Clarkson, B. D. (2003). *Handbook for monitoring wetland condition. Coordinated monitoring of New Zealand wetlands*. A Ministry for the Environment SMF funded project. Ministry for the Environment, Wellington.

¹¹ Tongway D J and Ludwig J A (2011). *Restoring disturbed landscapes: putting principles into practice*. Island Press.