



Report pursuant to s42A Resource Management Act 1991

In the matter of:	A Notice of Requirement to construct and operate a new intermodal rail and freight hub on land between Palmerston North and Bunnythorpe
And:	A hearing by Palmerston North City Council pursuant to s100A
Requiring Authority:	KiwiRail Holdings Ltd
Hearing date:	9 August 2021

S42A Technical Evidence Addendum: Ecology

By: Justine Louisa Quinn

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1 Introduction

1. My full name is Justine Louisa Quinn and I hold the position of Technical Director – Freshwater Science & Ecology at Tonkin & Taylor Limited, Environmental and Engineering Consultants.
2. I prepared evidence on ecological aspects of the Freight Hub on behalf of the s 42A reporting team. I refer to that document as my Evidence in Chief (“**EIC**”).
3. I reiterate that I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note 2014 and that I agree to comply with it.

2 Scope of this addendum

4. In this addendum I provide comment on the following:
 - a) Matters arising since preparation of the s 42A report, including from the submission of expert evidence specifically in respect of the recently completed Wetland Identification Surveys (“**Wetland Report**”).
 - b) The draft conditions, including any differences between the revised conditions proposed by KiwiRail and the s 42A reporting team.
5. Aside from the above matters, the information presented by the Requiring Authority in their evidence does not materially change conclusions I have previously drawn in my EIC.

3 Matters arising since preparation of the s42A report

6. Due to access constraints, KiwiRail was not able to confidently ascertain if wetlands were present within the designation at time of lodgement, relying instead on some observations from the road. Since the preparation of my technical assessment, KiwiRail have completed site assessments of wetlands in June 2021. The results of this were presented as an addendum to the evidence of Mr Jeremy Garrett-Walker (KiwiRail's ecologist).¹

¹ ‘Kiwirail Hub Wetland Identification Surveys: Assessment of potential wetland status’ Prepared for Kiwirail 7 July 2021.

7. I have reviewed this report (and Mr Garrett-Walker's evidence) and note the overarching conclusion within Mr Garrett-Walker's evidence that 'to date no natural inland wetlands' were identified within the site.² Mr Garrett-Walker's conclusion pertains to areas that submitters had identified as being wetlands within their own properties and that mana whenua had taken an active interest in restoring.³
8. Despite Mr Garrett-Walker's addendum evidence, I consider there remains some uncertainty regarding the presence of wetlands. I briefly explain a few points that I consider pertinent to determining the likelihood of wetlands being within the designation, including:
 - a. Application of the policy within the National Policy Statement for Freshwater Management 2020 ("**NPS-FM**");
 - b. Application of the "natural wetland" definition and the Wetland Delineation Protocols ("**WDP**")⁴; and
 - c. Confidence in the assessment of natural wetlands undertaken.

NPS FM Policy

9. The NPS-FM sets out some clear policies relevant to wetlands, including Policy 6 which states "*There is no further loss of extent of natural inland wetlands, their values are protected, and their restoration is promoted.*"⁵ The Wetland Report notes that there is some debate as to how to interpret 'loss of extent' and suggests that this policy does not apply to 'specified infrastructure'.⁶ It is my understanding that this policy applies to all potential loss of wetland, including specified infrastructure, as required by Clause 3.22 of the NPS-FM.

Application of the natural wetland definition

10. The Wetland Report correctly identifies the NPS-FM definition of a natural wetland.⁷ It also identifies the stepped process of wetland identification,

² At paragraph 5.13 and 6.13 of Mr Garrett-Walker's evidence.

³ At paragraph 5.8 of Mr Garrett-Walker's evidence and paragraph 133 of my EIC.

⁴ Where there is uncertainty or dispute about the existence or extent of a natural inland wetland, a regional council must 'have regard to' the wetland delineation protocols (WDP) as stated at 3.23(3) of the NPS FM.

⁵ Policy 6 of the NPS FM 2020.

⁶ Second paragraph on page 3 of the Wetland Report.

⁷ At section 3.1, page 2 of the Wetland Report.

requiring consideration of wetland vegetation, hydric soils and hydrology.⁸ From my reading of the methods employed, it appears that the Requiring Authority has skipped a key step in applying exception (c) of the natural wetland definition.⁹

11. For completeness, the relevant clause of the definition is as follows:

Natural wetland means a wetland (as defined in the [Resource Management] Act) that is not:

(c) any area of improved pasture that, at the commencement date, is dominated by (that is more than 50% of) exotic pasture species and is subject to temporary rain-derived water pooling.

12. The first part of this clause requires that the area otherwise identified as wetland under the Resource Management Act (RMA) is also defined as 'improved pasture'. The definition of 'improved pasture' is provided at Section 3.21 of the NPS-FM:

Improved pasture means an area of land where exotic pasture species have been deliberately sown or maintained for the purpose of pasture production, and species composition and growth has been modified and is being managed for livestock grazing.¹⁰

13. It appears that KiwiRail, when completing its wetland classification process, has not considered whether a particular area of wetland is 'improved pasture' or not. I consider this is a gap in the stepped process of determining the presence of natural wetlands.

14. The classification of natural wetlands is difficult, and the Ministry for the Environment ("**MfE**") has recognised this with the provision of draft guidance released in April 2020 ("**Draft Interpretation Guidance**").¹¹ I did not see any reference to the Draft Interpretation Guidance within the Wetland Report and it is not clear on the written record whether it has been referred to. I acknowledge that while it is not a statutory requirement, the Draft

⁸ As outlined in the Wetland Delineation Protocols 2020.

⁹ At Section 3.21 of the NPS FM 2020. The further definition of 'natural inland wetland' is also provided, which is 'a natural wetland that is not in the coastal marine area'.

¹⁰ Further guidance as to the interpretation of this is included in the Ministry for the Environment 2021, Essential Freshwater Interpretation Guidance: Wetlands Definitions. Exposure Draft circulated 7 April 2021 – not final guidance.

¹¹ Ministry for the Environment 2021, Essential Freshwater Interpretation Guidance: Wetlands Definitions. Exposure Draft circulated 7 April 2021 – not final guidance.

Interpretation Guidance is used by many ecologists to provide a consistent approach to interpretation.¹²

Assessment of wetlands

15. I understand that the assessment of whether potential wetland areas are “natural wetlands” or not will be completed prior to regional consenting and will likely be subject to newer guidance from MfE as to how to interpret the NPS-FM definitions. Further, I have not been to these sites and have not completed my own assessment. However, it is my opinion that some of the features shown in the Wetland Report are more likely than not to be natural wetlands (based on current definitions and guidance).
16. It is my opinion that some of the features described as being ‘constructed wetlands’¹³ are more likely ‘induced’ having formed unintentionally, rather than being constructed for a specific purpose.¹⁴ In this regard, the Wetland Report is inconsistent with the Draft Interpretation Guidance, in that the definition of ‘natural wetlands’ in the Draft Interpretation Guidance includes ‘induced wetlands’.¹⁵
17. As above, I do not consider that the ‘improved pasture’ exclusion has been proven for many of the sites considered. While the wetland vegetation tool (part of the Wetland Delineation Protocols) has been applied within the Wetland Report, the report considers many of these species to be ‘pasture’ species and therefore subject to exclusion under clause (c). Clause (c) is based on the presence of >50% exotic pasture species within an area classified as a wetland under the RMA. The exclusion in clause (c) is intended to only apply to areas defined as being ‘improved pasture’. However, for some of the sites, the Wetland Report specifically identifies that ‘stock or grazing animals have not been present for some time’ and therefore I am not certain this constitutes ‘improved pasture’.¹⁶ Further, there needs to be demonstration of ‘temporary rain derived pooling’, as specified within clause (c) and discussed in more detail within the Draft Interpretation Guidance.

¹² I do acknowledge that more guidance is expected soon and likely to be in place prior to regional consenting commencing.

¹³ And therefore excluded from the natural wetland definition under clause a.

¹⁴ As described at sections 5 and 6 of the Draft Exposure Guidance Document at 12 above.

¹⁵ See for example, pages 10, 21, 24 of the Wetland Report for reference to ‘induced’ areas discounted as being natural wetlands.

¹⁶ See for example site 9, at section 4.3 of the Wetland Report.

18. Overall, some of the conclusions drawn appear to be at odds with the direction within the Wetland Delineation Protocols and the methods which the Wetland Report indicates it has followed. See, for example, the commentary at section 4.2.1.1 of the Wetland Report in relation to Site 3 at the Gore and O'Reilly properties. It appears that the vegetation and hydric soil methods in the Wetland Delineation Protocols have been followed and there is evidence that these results indicate a natural wetland. Further to this, aerial images have been reviewed in the report, which identify areas of water and a clear difference in vegetation types, which is typically used to identify potential wetlands. In this instance, even where the vegetation tool has been applied AND concludes a natural wetland, this is discounted in the conclusions where it states *'while a small area meets the wetland test for natural wetland.....ecologically we do not consider the features as a whole to be a wetland'*.¹⁷ Until such time that alternative methods are put forward by MfE or other learned organisations, it is my understanding that we (practicing ecologists) should follow the guidance available when undertaking ecological assessments or reviews under a statutory process.
19. For the reasons outlined in the above, I do not agree with the conclusions within the Wetland Report and evidence of Mr Garrett-Walker that there are no natural wetlands within the designation. I understand that this will be addressed in more detail at regional consenting stage, however it is pertinent to the understanding of ecological values affected by the designation at this time. For clarity, following my review of the Wetland Report and my understanding of the definition of a 'natural wetland' under the NPS FM and guidance document, I consider it highly likely that natural wetlands are present.

4 Draft Conditions

20. I have input to the development of the ecological conditions within the s 42A Officers Recommended Conditions. I provide justification for these within my EIC and the additional information provided within the evidence of the Requiring Authority has not changed my opinion in recommending these conditions.¹⁸

¹⁷ See for example, the discussion on page 9 of the Wetland Report and comments at section 4.2.1.2 of the Wetland Report.

¹⁸ See paragraphs 149 – 158 of my EIC.

5 Conclusions

21. For the reasons outlined in the above, I maintain that it is highly likely that there will be some natural inland wetlands present within the designation.

A handwritten signature in blue ink, appearing to be 'Justine Quinn', with a long horizontal stroke extending to the right.

Justine Quinn

9 August 2021