Peer review – Rolleston Access Improvements, Ecological Impact Assessment, Dunns Crossing

Contract Report No. 7425

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Wildlands

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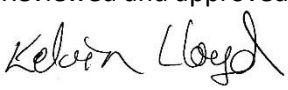

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1.0 Introduction

NZ Transport Agency Waka Kotahi (NZTA) is undertaking a roading upgrade project to improve roading safety and access to the township of Selwyn in Canterbury. This project known as 'Rolleston Access Improvements Project' and includes a roundabout and pedestrian and cycle underpass (subway) at the Dunns Crossing and Walkers Road intersection with State Highway 1 (Dunns Crossing).

A notice of requirement (NOR) for this work was lodged by NZTA at the end of November 2024, that included an ecological report prepared by BECA. Selwyn District Council (SDC), has asked Wildlands Consultants Ltd (Wildlands) to provide an independent peer review of these reports.

2.0 Project Scope

2.1 Initial scope

The scope for the peer review is as follows:

Provide comment on the Ecological Impact Assessment report produced by BECA to help SDC determine the effects of the NOR and the pathway it will be processed under (i.e. to be determined if processed under s168 RMA and potentially notified/hearing or a minor alteration under s181(3)) RMA (non-notified).

Prepare a draft review of the relevant technical reports, commenting on the suitability of the methods used, any assumptions made, any information gaps, the robustness of conclusions and an evaluation of the assessment potential adverse effects. The review will provide recommendations as to additional mitigation measures or consent conditions if required.

2.2 Request for Further Information (RFI)

Further information was requested after the initial review, which included concerns regarding lizard habitat extent, the absence of lizard surveys, and lizard management before and during works. The RFI and RFI response are discussed further in section 4.2.3 of this report.

3.0 Methods

The supporting resource consent applications documents addressing the assessments for avifauna, lizard, and terrestrial ecology were reviewed by experts from each discipline. Additionally, the RFI response, Paparua Water Race Scheme: 2022 Ecological Surveys[1] and Environment Court at Christchurch Decision No [2024] NZEnvC 269[2] were also reviewed to inform suggestions. A review has been provided addressing the conclusions of the assessments in terms of effects, and further guidance and advice are provided where appropriate. Suggestions regarding effects management, in addition to potential suggestions on conditions, have been provided where appropriate. Where applicable, the

[1] Demchick, E., McMurtrie, S., and James, A. (2022) Paparua Water Race Scheme: 2022 Ecological Surveys. EOS Ecology, report No. CHR01-21052-01, pg 54.

[2] Environment Court at Christchurch Decision No. [2024] NZEnvC 269. CSI Property Ltd and Rolleston West Residential Ltd vs Selwyn District Council, pg 23.

review will include reference to the BECA (2024) application for resource consent and assessment of environmental effects which was prepared for SDC.

4.0 Peer review

4.1 Methodology

The methods used are reasonably and standard and considered adequate for the site. The notable exception been the lack of formal lizard survey (as noted above). The other notable absence no mention of the desktop fish survey.

Additionally, there was no invertebrate desktop survey. However, given the low habitat values at the site, this is considered acceptable.

BECA utilised the Values and Effects Assessment Ecological Impact Assessment (EcIA) EIANZ guidelines for use in New Zealand: terrestrial and freshwater ecosystems (Roper Lindsay et al., 2018) in addition to the NZTA Ecological Impact Assessment Guidelines (2023). Professional opinion and expertise have been applied throughout their assessment. This is standard practice and acceptable.

4.2 Ecological Values

4.2.1 Vegetation and habitats

Section '3.1 Ecological Context' correctly identifies the project site is within Low Plains Ecological District. Section '3.2 Indigenous vegetation' correctly identifies and that that no indigenous vegetation (as defined in the partially operative Selwyn District Plan (SDP), is present and no [known] Significant Natural Areas (SNAs) are present in or directly adjacent to the site. Although, no assessment criteria or reference information is provided to back this up.

Section '3.3 Exotic vegetation' correctly identifies that remainder of the site is covered with exotic vegetation, although provides a brief list and description of the habitats present. BECA then incorrectly states that:

"No plant pests (POSDP ECO-SCHEDI and the Canterbury Regional Pest Management Plan (2018)) or environmental weeds (Mcalpine & Howell, 2024) are present."

However, Figure 3 and Table 2 of the BECA report contain photographs showing broom (*Cytisus scoparius*) and gorse (*Ulex europaeus*), both listed as 'Pest' (Sustained Control) in the Canterbury Regional Pest Management Plan (CRPMP). The exotic grass cocksfoot (*Dactylis glomerata*), which is listed as an environmental weed in Mcalpine & Howell (2024[3]) is also visible in these images. During a brief site walk over several other species listed in CRPMP and Mcalpine & Howell were also observed including tree species sycamore (*Acer pseudoplatanus*), hawthorn (*Crataegus monogyna*) and blackwood (*Acacia melanoxylon*). Blackwood has been a major canopy component in northern forest/treeland parts of the site.

4.2.2 Avifauna

Section '3.4 Avifauna' of the BECA report limits the avifauna results to indigenous species found in the desktop (ebird) survey within 5 km of the site and suited to habitat present. However, there no detailed

[3] McAlpine, Kate & Howell, Clayson. (2024). List of environmental weeds in New Zealand 2024. Science for Conservation. 340. 1-37.

habitat descriptions are included, making this assessment completely opaque. Furthermore, the report appears to limit the suitable habitat to the woody vegetation along the road corridor, yet a large part of the site is irrigated grassland and pasture, which many indigenous birds will forage and sometimes nest in (and around). This includes At Risk tōrea/South Island pied oystercatcher (*Haematopus finschi* At Risk – Declining), observed on iNaturalist foraging in mown grass on the edge of Rolleston Prison grounds very close to the site. A number of other Not Threatened indigenous birds will also forage and nest in grassland including spur-winged plover (*Vanellus miles*) and pūtangitangi/paradise shelduck (*Tadorna variegata*). Most indigenous and some introduced birds are protected under the Wildlife Act and need to be considered in the effects assessment. As a recent arrival in Aotearoa, spur-winged plover is not listed in the Wildlife Act.

4.2.3 Lizards

BECA have made good use of existing herpetofauna knowledge of other projects in the surrounding area (e.g. Christchurch Southern Motorway Stage 2) and we agree with their assessment that the lizard values are likely to be High. We can also confirm the presence of southern grass skink (*Oligosoma* aff. *polychroma* Clade 5, At Risk-Declining) in the area based on a recent salvage at a nearby residential subdivision in Faringdon, Rolleston which captured and transferred over 200 southern grass skinks.

The threat status for Canterbury spotted skink is incorrect in the report. However, this is not well known/publicised and the revised threat classification for lizards can be found through accessing the NZCTS website or DOC website (Hitchmough et al. 2021[4]). Canterbury spotted skink has recently been re-classified as Threatened – Nationally Critical due to taxonomic revisions which have resulted in contractions of its range, in addition to extreme recent declines of known populations.

Following the RFI, BECA indicated that they conducted a lizard survey in December 2024, will prepare a lizard management plan (LMP) in accordance with their findings and applied for a Wildlife Act Authority (WAA). In addition, BECA clarified their meaning of 'staged vegetation management' as it pertains to herpetofauna. The response regarding staged habitat clearance provides a clear methodology for staged vegetation removal, but does not consider that this still causes disturbance to lizards, and is an experimental management technique. Any staged vegetation removal protocols should be incorporated into the LMP and WAA.

Section 3.5.1 Herpetofauna habitat including, Table 2 and Table 3 need to be reassessed in relation to lizard and avifauna habitat.

4.2.4 Bats

There is no bat habitat or nearby bat records, as such indigenous bats are not considered further in this review.

4.2.5 Invertebrates

There is no mention of potential invertebrate values or invertebrate habitat within the site. No invertebrate surveys have been undertaken. This is considered acceptable due to the low quality habitat present at the site.

[4] Hitchmough, Rod & Barr, Ben & Knox, Carey & Lettink, Marieke & Monks, Joanne & Patterson, Geoff & Reardon, James & van Winkel, Dylan & Rolfe, Jeremy & Michel, Pascale. (2021). Conservation status of New Zealand reptiles, 2021.

4.2.6 Native Fish

The proposed work site is a part of the greater Waimakariri River catchment and contains a single artificial watercourse along the eastern boundary that is a part of the Paparua Water Race Scheme. Alterations of the site include to 3-Waters infrastructure. Additions include construction of stormwater infrastructure including soakage devices.

While the project is not located near any natural waterbodies (e.g., rivers, lakes, or wetlands) it is close to native fish habitat (e.g., the race) that may contain and/or be a throughway for At Risk species such as torrent fish, bluegill bullies, and/or longfin eel (Demchick et al. 2022[5]; Graham et al. 2024[6]). The ecological effects on these species should be assessed.

It is unclear where construction phase stormwater will be discharged prior to stormwater pond construction.

Stormwater pond and stormwater basin plans should clarify any potential or actual connectivity with the race and any ecological effects that may result from these additions.

5.0 Ecological effects

The proposal will result in the clearance of exotic vegetation that provides habitat to indigenous fauna. While we agree with the assessed potential construction phase adverse effects which are:

- Permanent loss of southern grass skink habitat
- Temporary disturbance of indigenous avifauna and herpetofauna
- Injury/mortality of indigenous fauna

The assessment of the level of effect cannot be confirmed as no lizard survey has been undertaken, results of the avifauna desktop survey and assessment have been limited to three species (swamp harrier, silvereye and fantail), and no invertebrate assessment has been undertaken.

Section 4.5.1 states that amenity and stormwater plantings will increase the extent of vegetation types within the project corridor, which will provide habitat for native fauna. This could be possible, but as the avifauna desktop survey and assessment was so limited, it is not possible to determine if this will have an overall positive effect. In addition, for this to have any positive effect, the planting plan will need to be reviewed by a suitably qualified ecologist.

6.0 Effects Management

The report correctly identifies that the following adverse effects require effects management:

- Permanent loss of at-risk declining indigenous fauna habitat.
- Temporary disturbance of at risk declining indigenous fauna.
- Injury/mortality of at risk declining indigenous fauna.

[5] Demchick, E., McMurtrie, S., and James, A. (2022) Paparua Water Race Scheme: 2022 Ecological Surveys. EOS Ecology, report No. CHR01-21052-01, pg 54.

[6] Graham, K., Williams, D., Julyan, B., Aldridge, D., and Pearson, S. (2024) Assessment of Effects on the Environment, NZ Transport Agency Waka Kotahi, SH1 Rolleston Access Improvements | Package 1. BECA, pg 93

The report should have included all indigenous avifauna and herpetofauna (as opposed to just At-Risk Declining species) as most indigenous avifauna and all indigenous herpetofauna are protected under the Wildlife Act (1953).

The report states that adverse effects will be managed by utilising the effects management hierarchy, however section 5.1 starts with minimisation measures (although 5.1.1 mentions avoidance of southern grass skink). Justification for why certain effects could not have been avoided should be considered and discussed prior to minimisation measures, if following the effects management hierarchy.

Section 5.1.1 and 5.1.2 both discuss minimising vegetation clearance for southern grass skink habitat; however, section 5.1.1 is labelled as avoidance measures.

We agree with the suggestion to spray down machinery before it enters the site to reduce the risk of weed spread, as outlined in section 5.2. As broom (and likely other weedy species) is present at the site, we recommend spraying machinery as they leave the site as well, to further reduce the risk of spread.

The ecological benefits of amenity planting (section 5.3) will be dependent on the scale and species selected. With the limited survey data provided and a lack of landscape plan, it is impossible to assess how (if at all) beneficial the amenity planting will be. The report correctly identifies that amenity planting is not considered suitable mitigation.

The report fails to discuss any remedy or offsetting that may be required, or why these measures would not be required. While the minimisation measures are likely to be sufficient, this should be outlined more clearly in the discussion.

Table 5 (Section 6) clearly outlines the level of ecological effects before and following management measures. Most of the level of effects pre and post management have been identified, however it is unlikely that the effects on herpetofauna in the cases of temporary disturbance and injury/mortality will be negligible. A more appropriate level of effect post-management would likely be Low/Very Low. Despite this, the levels of effects are impossible to determine without additional survey data, as the surveys used in this report are highly limited with respect to lizards.

7.0 Summary

Overall, the report and RFI response provided by BECA provides a sufficient assessment of the habitats and potential effects of the proposed works. We are satisfied with BECAs response to the RFI as it pertains to herpetofauna habitat extent, surveys, a lizard management plan and the need for a Wildlife Act Authority. Staged vegetation removal and any protocols should be incorporated into a Lizard Management Plan and WAA. Staged vegetation removal alone will not reduce effects to negligible as it is likely that lizards will remain following vegetation removal.

However, the report incorrectly states that there are no pest plants or environmental weeds present at the works site, lacks sufficient assessment of potentially impacted avifauna, and incorrectly concludes that the work will produce a positive outcome due to the creation of stormwater detention ponds. Very little discussion was focused on the creation of stormwater ponds in the report, and the only discussion relating to positive ecological effects was around indigenous amenity plantings, which are insufficent mitigation measures. Furthermore, this claim is not supported by any peer reviewed papers demonstrating an increase in vegetation diversity following the creation of stormwater ponds in a works site. Additional evidence should be provided to support this claim, alongside a more

developed landscape plan (with input from a suitably qualified ecologist) to show how stormwater ponds could potentially benefit the local environment.

Therefore, Wildlands has suggested a number of consent conditions to address these concerns (Table 1).

More consideration (and additional surveys) should be undertaken to better demonstrate the potential effects on indigenous avifauna prior to works commencing.

Following the collection of additional data, the levels of effects should be reassessed, and the mitigation measures reevaluated to ensure appropriate management measures are established prior to works commencing.

Should the suggested consent conditions be implemented, then we consider that any potential adverse effects from the proposed works will be appropriately minimised.

Table 1 – Suggested consent conditions

Concern	Justification	Suggested Consent Condition
Lizard management	An LMP is required due to the presence of lizards on the site, and all indigenous lizards are protected under the Wildlife Act (1953).	A LMP will be prepared by a suitably qualified and approved herpetologist. .
	A vegetation removal protocol does not preclude the requirement for a WAA. Staged vegetation removal still causes disturbance to indigenous lizards and is experimental.	If a vegetation removal protocol is used, this will be included in the LMP and WAA.
Impacts on avifauna	The avifauna desktop survey was limited to only three species, when in actuality, many indigenous species are likely to utilise the site for foraging and breeding.	An avifauna management plan that includes a requirement for avifauna surveys to be conducted no more than 7 days prior to works commencing if works are to occur during the breeding season.
Weed spread	Pest plants and ecological weedy species are present at the works site.	Machinery should be sprayed down prior to entering and exiting the site to minimise the risk of spread of pest and ecological weed species.
Stormwater discharge	It is unclear where stormwater will be discharged during the construction phase, and if the proposed stormwater basins have any potential or actual connectivity to the Race.	Stormwater pond and stormwater basin plans should clarify construction phase discharge and any potential or actual connectivity with the Race and any ecological effects that may result from these additions.
Impacts on freshwater fish	Impacts on freshwater fish were not considered.	Potential ecological effects on At Risk indigenous fish species should be assessed prior to works commencing.
Positive ecological impacts of amenity	Little discussion has been provided on the planting plans for these additions, yet the	The planting plans need to be developed further, with input from

Concern	Justification	Suggested Consent Condition
planting and stormwater basins	report claims they will result in positive ecological outcomes.	suitably qualified and experienced vegetation and fauna ecologists.

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