

14 December 2023

Nick Boyes
Consultant Planner
c/- Ashburton District Council

Dear Nick,

Response to s92 LUC23/0109 s92 report to:

Land use consent at 279 Stranges Rd, to establish an equine stud, with associated built and outdoor facilities, parking and earthworks, zoned Rural B

This memorandum is in response to your Request for Further Information under Sec. 92 of the Act (dated 29/11/2023), and addresses your Point 2, specifically...

“... Please provide an assessment of the application against the provisions included in the NPS-IB, including Clauses 3.10 or 3.16 in relation to the remaining indigenous vegetation on the site.”

It is our understanding that a lizard survey, also referred to in Point 2, is no longer required at this site.

The following represents an ecological significance assessment as outlined in App. I of the NPS-IB for the flax/scrubland remnant located on the ephemeral tributary of Lagmhor Creek (map in App. I, Fig. i) adopting a procedure described by Lloyd *et al.* (2013). This is required to assess if the flax remnant represents a Significant Natural Area (SNA). The greater development area was subject to a full Canterbury Regional Policy Statement (CRPS) assessment in the main ecological report.

An area qualifies as an SNA if it meets any one of the attributes of the following four criteria:

- a. Representativeness
- b. Diversity and pattern
- c. Rarity and distinctiveness
- d. Ecological context

Native flora species were only identified in one assessment area within the proposed boundary, in the dry swale known as “Tributary (dry)” (App. I, Fig. i). The Applicant intends to retain the native plant remnant, or possibly, enhance it further. It is unlikely to be affected by the proposal.

The majority of flora in the assessment area were exotic species, with only four native or endemic species identified (Table 1). Of the native and endemic flora species, only one species, *Phormium tenax*, was considered abundant in the assessment area, relative to other observed plant species.

Table 1. All plant species observed within the assessment area, and their relative abundances.

Scientific name	Common name	Origin	Conservation status	Abundance in assessment area
<i>Achillea millefolium</i>	Yarrow	Exotic	N/A	Rare
<i>Carex geminata</i>	Rautahi/cutty grass	Endemic	Not Threatened	Rare
<i>Cirsium arvense</i>	Californian thistle	Exotic	N/A	Abundant
<i>Cordyline australis</i>	Cabbage tree	Endemic	Not Threatened	Rare
<i>Galium aparine</i>	Cleavers	Exotic	N/A	Rare
<i>Lolium arundinaceum</i>	Tall fescue	Exotic	N/A	Abundant
<i>Ranunculus repens</i>	Creeping buttercup	Exotic	N/A	Common
<i>Rumex obtusifolius</i>	Broadleaf dock	Exotic	N/A	Abundant
<i>Persicaria maculosa</i>	Willow weed	Exotic	N/A	Abundant
<i>Phormium tenax</i>	Harake/NZ flax	Endemic	Not Threatened	Abundant
<i>Poa trivialis</i>	Rough meadow grass	Exotic	N/A	Abundant
<i>Populus sp.</i>	Poplar	Exotic	N/A	Rare
<i>Pteridium esculentum</i>	Bracken	Native	Not Threatened	Rare
<i>Rubus fruticosus</i>	Blackberry	Exotic	N/A	Abundant
<i>Sambucus nigra</i>	Elderberry	Exotic	N/A	Common
<i>Solanum dulcamara</i>	Bittersweet nightshade	Exotic	N/A	Common

Representativeness

Photographs of the site are presented in App. II, Site photographs.

We would expect that the habitat, in pre-European times, in addition to the 4 native species, would have been represented by low-elevation shrubland or tussocks. The four species, *Carex geminata*, *Cordyline australis*, *Phormium tenax*, and *Pteridium esculentum* are represented elsewhere in the Lower Plains Ecological District, both individually and as a commonly encountered species community. However, in a natural setting, the indigenous plant community would be more diverse than these four species and not dominated by introduced grasses and exotic weeds (App. II, Fig. i-iii). Absent shrubland species would have potentially include tussock sedge (*C. secta*), Coprosmas (e.g. *Coprosma propinqua*), lemonwood (*Pittosporum eugenioides*), manuka (*Leptospermum sp.*), matagouri).

The cabbage tree was represented by two mature specimens. This example does not represent the natural diversity that could be expected at the date baseline of 1840.

Diversity and pattern

Diversity was low, with 4 native/endemic species identified, and invaded with introduced grasses and weeds, we consider that the sparse low-diversity native plant community does not meet threshold in respect to diversity compared to the base in 1840. This is certainly because of the dominance of exotics.

Rarity and distinctiveness

The land environment, viz. the Canterbury Plains, is highly modified, and has a small proportion of its significant area which has remnants of indigenous vegetation, and this is likely to be less than 20% of the original area, as pointed out in the Boffa Miskell report. Lloyd *et al.* (2013), states that “any indigenous vegetation” on the Canterbury Plains would meet this threshold, given that the extensive Canterbury Plains area is heavily modified for agriculture, with relatively small areas of indigenous vegetation. However, we consider that this small area of a mixed indigenous/exotic plant community, with few indigenous plants, is a poor example of the original Plains indigenous flora (highlighted above), and is so ingrown with weeds and grasses, that its value is heavily compromised. There are many other remnant native dryland areas, which, while small relative to the area of the Canterbury Plains, remain in superior biodiverse state that the example here.

We note that the area does not meet the threshold for other aspects of the rarity and distinctiveness criteria outlined in Lloyd *et al.* (2013) (Criteria 4, 5, 6), in that vegetation does not constitute rare species, regionally, or nationally, nor are the indigenous plants at their distributional limit, nor a known association within a rare ecosystem

Ecological context

The short-stature indigenous vegetation remnant is not considered to support an important habitat linkage to avifauna (i.e. feeding, nesting, roosting) utilising the Ashburton River (closest approach=1.32 km) or the constructed Lake Hood. This is considered to be largely due to the small stature of the vegetation remnant, and its dispersed nature.

There is an ephemeral water path through the remnant, but the fragmented nature of the vegetation and the water surface flow, means ecological pathways for fish and birds do not occur (Criteria 8, 9, 10). In short, the remnant is ecologically isolated, and is likely to remain so due to intensive pastoralisation of the surrounding land.

Conclusion

Given the assessment above, AEL is of the view that the remnant flaxland is not of a sufficient ecological significance to warrant as an SNA, nor, as outlined in the main ecological report, the greater development area. It is also worthy to note, it is our understanding that the flax remnant will remain in its present form, or possibly be naturalised further.

This assessment means that the NPS-IB Sec. 3.16 applies, which is the application of the effects management hierarchy (NPS-FM aka Ministry for the Environment 2020).

The definition of effects management hierarchy, as per the NPS, is below:

- (a) adverse effects are avoided where practicable; and
- (b) where adverse effects cannot be avoided, they are minimised where practicable; and
- (c) where adverse effects cannot be minimised, they are remedied where practicable; and
- (d) where more than minor residual adverse effects cannot be avoided, minimised, or remedied, aquatic offsetting is provided where possible; and
- (e) if aquatic offsetting of more than minor residual adverse effects is not possible, aquatic compensation is provided; and
- (f) if aquatic compensation is not appropriate, the activity itself is avoided

The location of the remnant flaxland habitat is in the Tributary (dry) extends between Huntingdon Ave to the north downstream to a point approximately 90 m upstream of the Lagmhor Creek confluence (App. Fig. i). The 4 identified native species are sparsely scattered through a sward of pasture grass, black berry thickets and other weeds.

This distribution extends over the location of Bridges 4 & 5, but the sparse distribution means that few native plants are likely to coincide with bridge works (e.g. flax, bracken fern, cabbage tree, rautahi/cutty grass). The only tall native trees were two mature cabbage trees, and these may be able to be retained, with smaller native plants transplanted if their current location coincides with proposed bridging locations.

Aquatic offsetting is not required as effects of bridging works are not considered to be more than minor. However, there may be an opportunity to enhance the gully vegetation.

Yours sincerely,



Riley Payne, Lucy Bartrop, Mark Taylor

References

Lloyd, K.; McClellan, R.; Hutchison, M.; Patrick, B.; Shaw, W. 2013. Guidelines for the application of ecological significance criteria for indigenous vegetation and habitats of indigenous fauna in Canterbury Region. *Wildlands*, No. 2289i.p.

Ministry for the Environment 2020. National Policy Statement for Freshwater Management, pp. 70 (Issue): 70.

Appendix I. Site Map

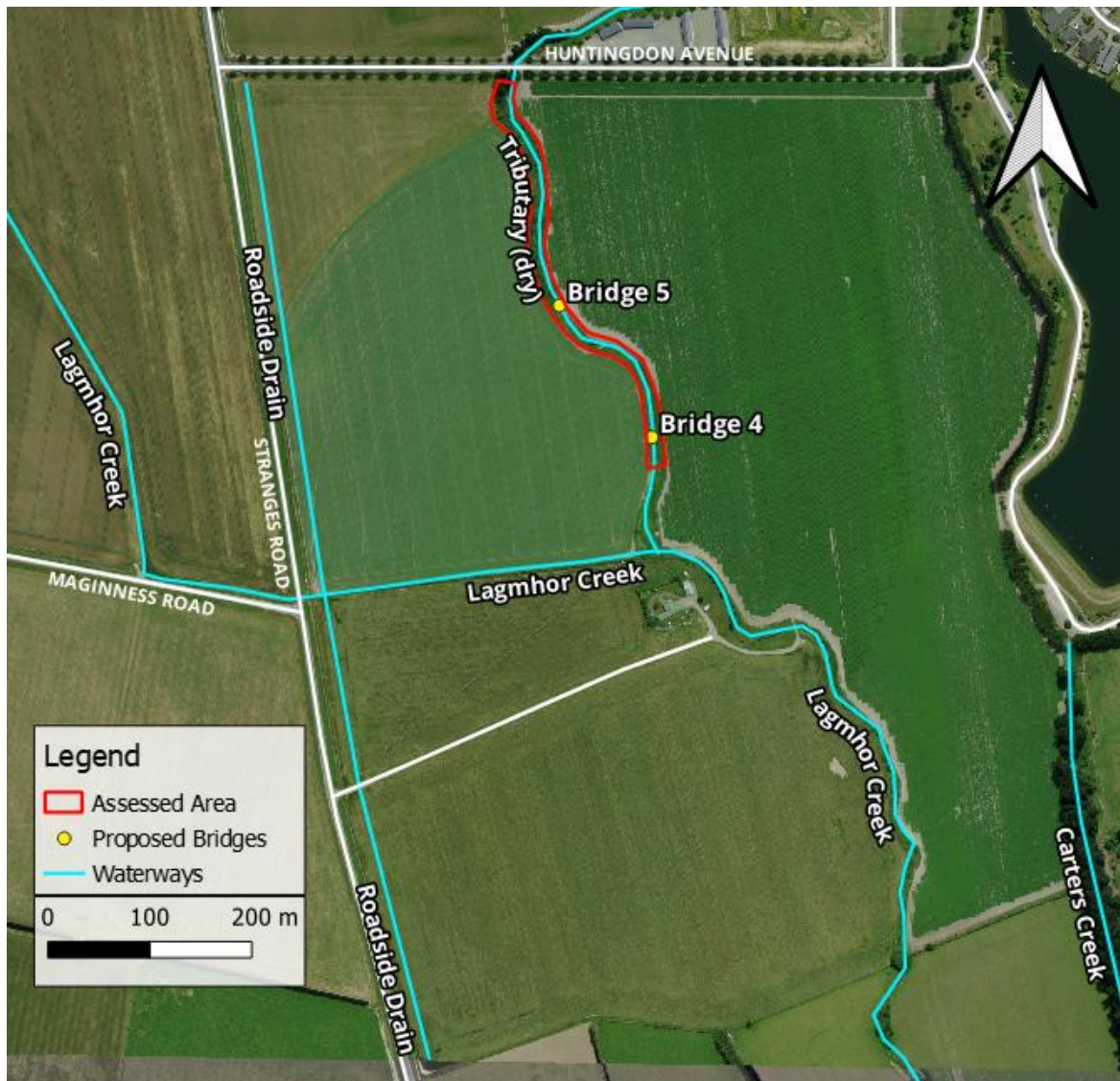


Figure i. Map showing area assessed against the NPS-IB 2023.

Appendix II. Site Photographs, taken during field survey on 01/12/2023.



Figure i. Looking North from the southern limit of the native plant community. Remnant flax monoculture scattered amongst introduced pasture grass.



Figure ii. Stands of native flax in the northern half of the assessment area were embedded in dense exotic flora, including elderberry and blackberry.



Figure iii. Native vegetation was sparse in the southern half of the assessment area.