Christchurch District Plan
Site of Ecological Significance

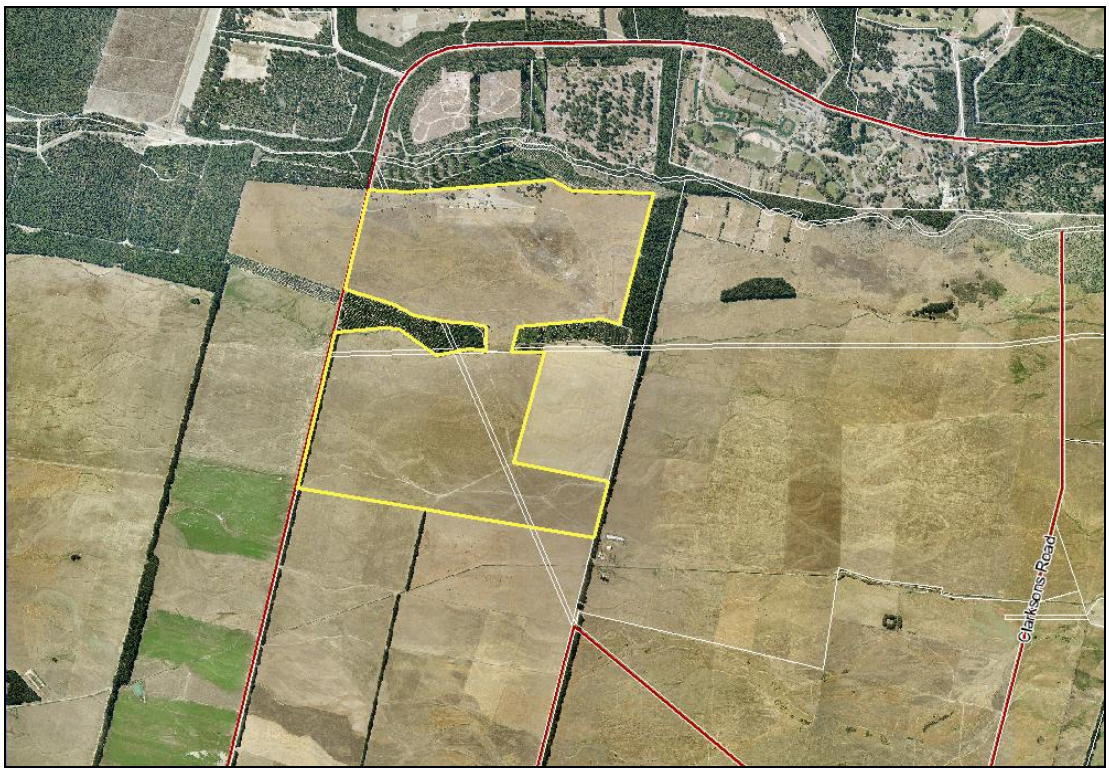
Site Significance Statement

Site name:	Christchurch Gun Club Dry Plains Grassland
Site number:	SES/LP/33
Physical address of site:	290 & 580 Chattertons Road Harewood Christchurch

Summary of Significance:

The Christchurch Gun Club Dry Grasslands site is significant because it contains a relatively large area of vegetation that is representative of the Low Plains Ecological District including threatened plant, lizard and invertebrate species.

Site Map



Additional Site Information

Central Point NZTM: N5186110, E1554899

Area of SES (ha): 147.90 ha

Site Description

A relatively large area of dryland occupies the Gun Club lease east of Chattertons Road. It is dominated by exotic grassland but with significant areas of open stony ground, long abandoned stream channels and terraces that are home to some semi-natural communities. Scattered kowhai dot the grassland landscape. Surprisingly even the gun club carpark supports significant plant and insect communities because the short turf and bare ground mimics natural communities nearby.

Extent of Site of Ecological Significance

The SES covers the area leased by the Christchurch Gun Club east of Chattertons Road, and the large area to the south, excluding the wide areas of shelter belts and cultivated land as shown on the location map.

Assessment Summary

The Christchurch Gun Club Dry Plains Grassland site has been evaluated against the criteria for determining significant indigenous vegetation and significant habitat of indigenous fauna listed in Appendix 3 of the Canterbury Regional Policy Statement (Environment Canterbury, 2013a) (see below) referring also to the Wildland Consultants (2013) Guidelines and advice from the relevant Specialist Ecologist Groups.. Under these criteria the site is ecologically significant because it meets the representativeness (criterion 1 & 2), and rarity/distinctiveness criteria (criteria 3 & 4).

Assessment against Significance Criteria

Representativeness

1. ***Indigenous vegetation or habitat of indigenous fauna that is representative, typical or characteristic of the natural diversity of the relevant ecological district. This can include degraded examples where they are some of the best remaining examples of their type, or represent all that remains of indigenous biodiversity in some areas.***

   The site is significant under this criterion.

   Despite being degraded, this site contains vegetation that is representative of the natural diversity of the Low Plains Ecological District, and combined with

landforms comprises an area that is most similar in composition and structure to those communities that existed in 1840.

Vascular plant species recorded at the site by Patrick (2014) include the following (See also Environment Canterbury 2013b; Jensen 2012):

- *Carex breviculmis* sedge
- *Carex resectans* sedge
- *Carmichaelia corrugate* prostrate broom
- *Cheilanthes sieberi*
- *Colobanthus brevisepalus*
- *Crassula colligate* crassula
- *Dichondra brevispalis*
- *Dichondra repens*
- *Hypoxis spp*
- *Leucopogon fraseri*
- *Microtis unifolia* orchid
- *Muehlenbeckia axillaris* pohuehue
- *Muehlenbeckia axilaris x ephedroides* pohuehue
- *Muehlenbeckia ephedroides*
- *Oxalis exilis*
- *Olearia adenocarpa*
- *Poa maniototo*
- *Raoulia australis* raoulia
- *Raoulia monroi* raoulia
- *Rytidosperma exiguum*
- *Rytidosperma maculatum*
- *Scleranthus uniflorus*
- *Sophora microphylla* South Island Kowhai
- *Thelymitra longifolia*
- *Zoysia minima*

At least three species of indigenous moss were recorded at this site by Environment Canterbury (2013b), including:

- *Hypnum cupressiforme*
- *Polytrichum juniperinum*
- *Racomitrium spp*

In addition, many lichen species are found at this site and in some communities they dominate the indigenous cover and are usually associated with bare and open ground (Patrick 2014).

Indigenous invertebrates typical of dry grasslands and river terraces are significant at this site with relatively large populations of the undescribed boulder copper butterfly (Canterbury boulder copper of Patrick & Patrick, 2012). Other indigenous invertebrate species typical of these dry grassland habitats recorded by Patrick (2014) at the site include:

- *Monomorium antarcticum* (native ant)
- *Prepalla austrina* (day-flying moth)
- *Phaulacridium marginale* (grasshopper)

- *Pteronemobius bigelowi* (field cricket)
- *Conocephalius semivittatus* (katydid)
- *Pterophorus innotatalis* (plume moth)
- *Orocrambus flexuosellus* (crambid moth)
- *Orocrambus vittellus* (crambid moth)
- *Eudonia manganeutis* (crambid moth)
- *Scoparia exilis* (crambid moth)
- *Scoparia chalicodes* (crambid moth)
- *Capua semiferana* (tortricid moth)
- *Scopula rubraria* (geometrid moth)
- *Helastia corcularia* (geometrid moth)
- *Neocicindella latecincta* (tiger beetle)
- *Nysius huttoni* (tiny bug)

The scattered kowhai trees support a range of insects including the typical moths that depend solely on this host (Patrick 2014). These are:

- *Stathmopoda aposema*
- *Meterana decorata*
- *Pseudocoremia ochrea*
- *Uresiphita maorialis* (kowhai moth)
- *Stigmella sophorae*

Other insects found here are much less common in these savannah grasslands with some only known from this site in this landscape. These rare species include the tiny jumping moth *Kiwaia nsp*. “plains jumper” (Nationally Endangered – only known site in Christchurch’s savannah grasslands), hopping moth *Eurythecta robusta* and the tiny moth *Kiwaia thyraula*. The un-named Kiwaia species (plains jumper) is only known elsewhere on Rakaia Island and several sites on Kaitorete Spit, but is not common anywhere. Some large moths breed on various herbs and grasses. These noctuids include dryland specialists such as *Aletia sistens*, *A. moderata* and *Tmetolophota propria* (Patrick 2014).

2. Indigenous vegetation or habitat of indigenous fauna that is a relatively large example of its type within the relevant ecological district.

The site is significant under this criterion.

Indigenous dryland vegetation on the Canterbury Plains comprises only fragments of what was previously present, and although there are other tiny dryland fragments nearby to the site, none still contain native plants (Partridge 2007). At 147.90 hectares, this site is considered to comprise a relatively large example of this type of vegetation in the Low Plains Ecological District.

Rarity/Distinctiveness

3. Indigenous vegetation or habitat of indigenous fauna that has been reduced to less than 20% of its former extent in the Region, or relevant land environment, ecological district, or freshwater environment.

The site is significant under this criterion.

This site contains vegetation that has been reduced to less than 20% of its former area in the Low Plains Ecological District. The Threatened Environment Classification reports that less that 10% of indigenous cover remains in the Low Plains Ecological District (See Walker *et al.* 2007; Lloyd *et al.* 2013).

4. Indigenous vegetation or habitat of indigenous fauna that supports an indigenous species that is threatened, at risk, or uncommon, nationally or within the relevant ecological district.

The site is significant under this criterion.

The site contains populations of threatened plant species listed in de Lange *et al.* (2013), including:

- *Carmichaelia corrugata* — At Risk/Declining
- *Colobanthus brevisepalus* — At Risk/Naturally Uncommon
- *Muehlenbeckia ephedroides* — At Risk/Declining
- *Olearia adenocarpa* — Threatened/Nationally Critical
- *Raoulia monroi* — At Risk/Declining

This may be the largest population of the generally uncommon *Raoulia monroi* in Canterbury and perhaps further afield, making it especially important. Here *R. monroi* is the most abundant indigenous plant (Patrick 2014).

Furthermore, populations of *Melicytus alpinus, Zoysia minima, Carex breviculmis, C. resectans, Rytidosperma exiguum, R. maculatum, Carmichaelia australis*, and *Poa maniototo* within this site are also significant under this criterion as they are considered locally rare, with very few populations remaining in the savannah grasslands (Patrick 2014; Environment Canterbury 2013b).

The site hosts populations of the At Risk/Naturally Uncommon tortricid moth (*Eurythecta robusta),* and the Nationally Endangered flightless 'plains jumper' (Kiwaia nsp.) which is only known from this site in Christchurch's savannah grasslands. The tiny moth *Kiwaia thyraula* which also occurs at the site is considered locally uncommon (Patrick 2014).

Common skinks *(Oligosoma polychroma)* are also found at this site (Patrick 2014), and are described as Taxonomically Indeterminate, At Risk/Declining (Hitchmough *et al.* 2013).

5. ***The site contains indigenous vegetation or an indigenous species at its distribution limit within Canterbury Region or nationally.***

   Site not assessed under this criterion

6. ***Indigenous vegetation or an association of indigenous species that is distinctive, of restricted occurrence, occurs within an originally rare ecosystem, or has developed as a result of an unusual environmental factor or combinations of factors.***

   Does not meet criterion

Diversity and Pattern

7. ***Indigenous vegetation or habitat of indigenous fauna that contains a high diversity of indigenous ecosystem or habitat types, indigenous taxa, or has changes in species composition reflecting the existence of diverse natural features or ecological gradients.***

   Does not meet criterion

Ecological Context

8. ***Vegetation or habitat of indigenous fauna that provides or contributes to an important ecological linkage or network, or provides an important buffering function.***

   Does not meet criterion

9. ***A wetland which plays an important hydrological, biological or ecological role in the natural functioning of a river or coastal system.***

   Does not meet criterion

10. ***Indigenous vegetation or habitat of indigenous fauna that provides important habitat (including refuges from predation, or key habitat for feeding, breeding, or resting) for indigenous species, either seasonally or permanently.***

    Site not assessed under this criterion

Site Management

Existing Protection Status

Land in public ownership (ECan)

Threats and risks	Management recommendations	Support package options N/A
• Pest plant incursion	• Monitor pest plant infestations and implement weed control as required. • Assess new pest plant incursions and implement control as required	•
• Further species loss	• Identify and mark existing native plant populations • Re-introduce recently locally extinct species	•
• Changes to soil structure & fertility as a result of changes in land management that threaten existing ecosystem function	• Implement a land management change process so that inappropriate actions do not occur • Assess any attempts to change the irrigation or fertiliser application regime as part of the land management change process.	•
• Undesirable impacts of grazing	• Develop a stock grazing programme that will allow continued use of the land for grazing purposes whilst preserving the existing ecological values. • Promote research and monitoring to determine most appropriate stock management regime(s).	•
• Browsing damage to plants	• Consider installation of rabbit proof fencing where appropriate within the SES (including individual plant patches) and eradicate pest animals from within fenced area(s)	•
• Fire damage through excessive grass growth	• Ensure that fire risk is kept low without compromising existing ecological values	•
• Inappropriate planting	• Ensure any planting (e.g. farm shelter, restoration plantings) do not compromise existing ecological values.	•
• Inappropriate impacts of land use by gun club	• Consult with gun club management on a regular basis to ensure that they understand the ecological values and significance of plant and animal communities on the site.	•

References

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Environment Canterbury (2013a) *Canterbury Regional Policy Statement 2013*. Environment Canterbury.

Environment Canterbury (2013b) *Ecological inspection of conservation areas on the West Melton Reserves, March – September 2012.* Unpublished Report. Environment Canterbury (TRIM 14/1404370).

Hitchmough, R., Anderson, P., Barr, B., Monks, J., Lettink, M., Reardon, J., Tocher, M., and Whitaker, T. (2013) *Conservation status of New Zealand reptiles, 2012.* Department of Conservation, Wellington, New Zealand.

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Patrick, B. H. (2014) *Christchurch's savannah grasslands (Draft 27th August 2014)*. Unpublished Report for Christchurch City Council (TRIM 14/1419474).

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Walker, S., Cieraad, E., Grove, P., Lloyd, K., Myers, S., and Porteous, T. (2007*) Guide to users of the threatened environment classification.* Landcare Research, Lincoln, New Zealand.

Assessment completed by: Dr Antony Shadbolt
Date: 26th November 2014

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Statement updated by: XXX
Date: XXX

PLEASE NOTE THIS STATEMENT IS BASED ON INFORMATION AVAILABLE AT THE TIME OF WRITING. DUE TO THE DYNAMIC NATURE OF ECOSYSTEMS, FUTURE REASSESSMENT OF THE SITE MAY BE NECESSARY TO REFLECT ANY CHANGES IN KNOWLEDGE OF ITS ECOLOGICAL SIGNIFICANCE.