

BROADCAST AUSTRALIA, SYDENHAM
LAND MANAGEMENT PLAN

Prepared for Broadcast Australia

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1. INTRODUCTION

Broadcast Australia engaged Brett Lane & Associates Pty Ltd (BL&A) to prepare a Land Management Plan for a 95-hectare area of land in Delahey. The subject land is bounded by Sydenham Road to the east, Kings Road and McNicholl Way to the west and Taylors Road to the south.

This Plan has been prepared in accordance with the *Environmental Significance Overlay – Schedule 1 - Sydenham radio transmission environmental significance area (ES01)* in the Brimbank Planning Scheme to accompany a Planning Permit Application for subdivision of the subject land.

This Plan is divided into the following sections:

Section 2 provides the legislative and policy background including details of all relevant Commonwealth, State and local legislation and policies.

Section 3 describes the natural features of the subject land.

Section 4 details the management actions to be implemented.

This Plan was prepared by a team from BL&A, comprising Verity Fyfe (Botanist), Elinor Ebsworth (Senior Ecologist) and Inga Kulik (Senior Ecologist & Project Manager).

2. LEGISLATIVE AND POLICY BACKGROUND

This Plan has been prepared to accompany a Planning Permit Application for subdivision of the Subject Land. Under *Environmental Significance Overlay – Schedule 1 - Sydenham radio transmission environmental significance area* (ES01) in the Brimbank Planning Scheme, any application to subdivide land must be accompanied by a Land Management Plan, prepared in accordance with the guidelines contained in the Brimbank Natural Heritage Strategy which presents details of proposed arrangements for the effective and ongoing management of the land consistent with the environmental objectives to ES01.

The goal of the Brimbank Natural Heritage Strategy is to conserve and protect Brimbank's significant natural heritage. The Brimbank Natural Heritage Strategy contains the following Actions for landholders:

- Protect significant sites from inappropriate activities by fencing and siting facilities away from important natural features.
- Require that developers (including the Council) carry out a survey to identify and verify natural heritage values on land identified with significant features before development works begin or a permit is issued.
- Ensure that development plans are sympathetic with natural heritage values and do not pose a risk of loss or damage to significant sites.
- Work with developers and other stakeholders to transfer to public ownership significant remnant sites as part of development contributions. Where opportunity permits, land swaps and the trading of development rights should also be considered.

This Strategy identifies the following land degradation processes, which pose a risk to the natural heritage values of Brimbank:

- Weed Invasion
- Overgrazing
- Inappropriate Fire Regimes
- Pest Animals
- Degrading Water Quality

The flora and fauna component of the Brimbank Natural Heritage Strategy has been superseded by the Brimbank Biodiversity Strategy 2012-2022. The objectives of the Brimbank Biodiversity Strategy 2012-2022 are to protect, manage, connect and engage with Biodiversity. This strategy identifies the following key threats to Biodiversity relevant to this plan:

- Clearing for development
- The absence of appropriate grazing regimes
- Inappropriate fire regimes
- Invasive plants and animals
- Machinery hygiene practices
- Fragmentation of remnant vegetation
- Creation of genetic bottlenecks (inbreeding depression)

This Plan has been prepared in accordance with both the Brimbank Natural Heritage Strategy and the Brimbank Biodiversity Strategy 2012-2022.

Natural features within the subject land are also protected by the following legislative instruments:

- EPBC Act

The EPBC Act protects a number of threatened species and ecological communities that are considered to be of national conservation significance. Any significant impacts on these species require the approval of the Australian Minister for the Environment.

- FFG Act

The Victorian *Flora and Fauna Guarantee Act 1988* (FFG Act) lists threatened and protected species and ecological communities (DELWP 2016a, DELWP 2016b).

- CaLP Act

The *Catchment and Land Protection Act 1994* (CaLP Act) requires that land owners (or a third party to whom responsibilities have been legally transferred) must prevent the growth and spread of regionally controlled weeds.

3. NATURAL FEATURES OF THE SITE

3.1. Site description

The subject land comprises approximately 95 hectares located at Delahey approximately 20 kilometres north-west of Melbourne's CBD. It is bordered by Sydenham Road to the east, Kings Road to the west and Taylors Road to the south.

The subject land supports heavy basalt clay on a gently undulating landscape. Small wet depressions are found across the site, and a drainage line runs from the central point to the south-east corner of the subject land. The area to the south-west supports a rocky rise, with large basalt boulders. The remaining area was relatively flat and lacking rocks.

The central part of the subject land currently supports Broadcast Australia's broadcasting station which comprises a compound and parking spaces, as well as planted trees and three large transmitting towers. The rest of the subject land has been used for grazing and other agricultural use in the past. The subject land has been regularly slashed to reduce fire hazard. Surrounding land predominantly supported residential development with scattered parks and reserves.

The subject land lies within the Victorian Volcanic Plain bioregion and falls within the Port Phillip and Westernport Catchment Management Authority region.

3.2. Native vegetation

Native Vegetation in the subject land consisted of 65.884 hectares of *Heavier-soils* Plains Grassland (EVC 132_61) dominated by Kangaroo Grass, wallaby and spear grasses, and 1.551 hectares of Plains Grassy Wetland (EVC 125) in drainage lines and small wet depressions.

All patches of *Heavier-soils* Plains Grassland qualify as the EPBC Act listed ecological community *Natural Temperate Grassland of the Victorian Volcanic Plain* (NTGVVP).

3.3. Listed flora species

The following three listed flora species have been recorded at the subject land:

- Small Scurf Pea (*Cullen parvum*) – listed under the State FFG Act;
- Spiny Rice-flower (*Pimelea spinescens* subsp. *Spinescens*) – listed under the Commonwealth EPBC Act and the State FFG Act; and
- Tough Scurf Pea (*Cullen tenax*) – listed under the State FFG Act.

3.4. Listed fauna species

The following listed fauna species have been recorded at the subject land:

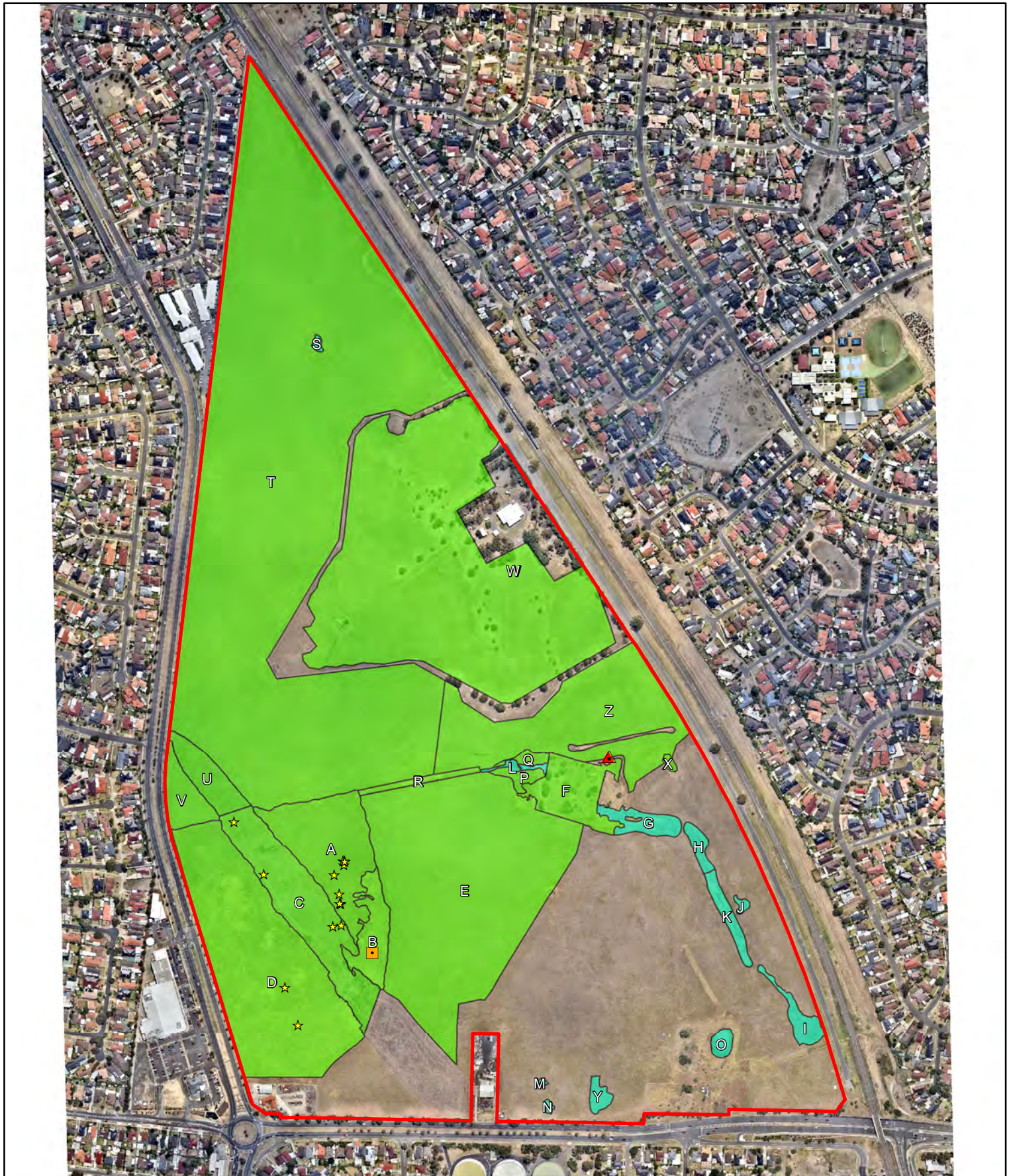
- Golden Sun Moth (*Synemon plana*) – listed under the Commonwealth EPBC Act and the State FFG Act; and
- Striped Legless Lizard (*Delma impar*) – listed under the Commonwealth EPBC Act and the State FFG Act.

3.5. Weed infestations

The noxious weed species listed below, have been recorded at the subject land.

- Artichoke Thistle;

- African Boxthorn;
- Chilean Needle-grass;
- Prickly Pear; and
- Serrated Tussock.



Study area

Native vegetation

Heavier-soils Plains Grassland (EVC 132_61)/NTGVVP

Plains Grassy Wetland (EVC 125)

★ Spiny Rice-flower

▲ Small Scurf-pea

■ Tough Scurf-pea

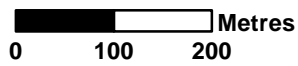


Figure 1: Study area and native vegetation

Project: Broadcast Australia, Delahey

Client: Broadcast Australia/Digital 4 Pty Ltd

Project No.: 6142

Date: 17/07/2017

Created By: I. Kullik / M. Ghasemi



4. MANAGEMENT ACTIONS

4.1. Weed Control

A weed survey was conducted by Brett Lane and Associates (BL&A) on 30th August 2018, during which the presence of weeds throughout the subject land was recorded. Particular emphasis was placed on recording the presence of ‘high-threat’ weeds and weeds listed as regionally controlled (C) under the Catchment and Land Protection Act 1994 (CaLP Act). Collectively these weeds can be referred to as ‘weeds of concern’. The locations of these weeds were mapped with a GPS to an accuracy of approximately 5 metres. Where relevant, the density of weed infestations was also recorded.

The survey found weeds to be widespread throughout subject land and an overall high cover of weeds. Serrated Tussock contributed to the majority of this cover – approximately 80% of all weeds. Other common weeds included Onion Grass, Artichoke Thistle, Chilean Needle-grass, African Box-thorn, Ox-tongue, Galenia, Twiggy Turnip and Ribwort. Less common weeds included Common Prickly-pear, Toowoomba Canary-grass, Cocksfoot, Kikuyu, Paspalum, Pepper Tree, Soursob and Common Sow-thistle.

Weed control in the study area is necessary for the protection of natural heritage values within the study area and to prevent the spread of weeds from within the subject land into the surrounding landscape. In addition, land managers are required to meet their obligations under the Catchment and Land Protection Act 1994 (CaLP Act) with respect to preventing the growth and spread of regionally controlled weeds. Land managers are committed to reduce the cover of regionally controlled weeds to negligible levels (<1 % cover). Every weed control action must be undertaken by a bushland contractor with experience controlling weeds in the Brimbank municipality.

The following weeds listed as regionally controlled (C) under the CaLP Act were recorded at the subject land:

- Serrated Tussock;
- African Box-thorn; and
- Common Prickly-pear.

The following weeds considered to be of ‘high-threat’ (to natural heritage values) were recorded at the subject land:

- Chilean Needle-grass;
- Galenia;
- Paspalum; and
- Pepper Tree.

The distribution of weeds of concern at the subject land is shown in Figure 2.

We have been advised by Broadcast Australia that spot spraying has been undertaken at the site recently.

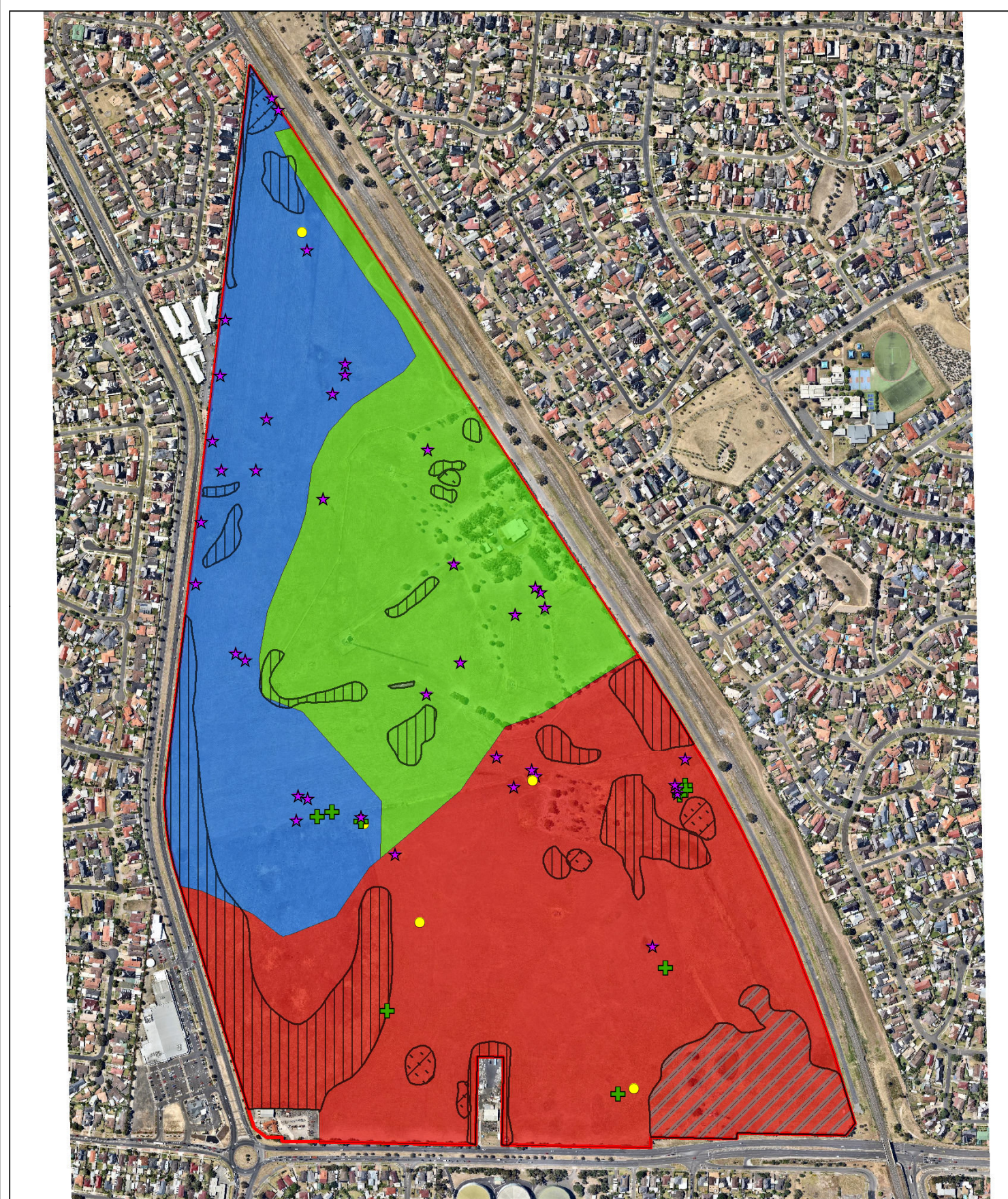


Figure 2: Distribution of weeds of concern in the study area

Project: 250 Taylors Rd, Delahey **Client:** BA / Digital 4 Pty Ltd **Date:** 11/09/2018

- | | |
|---|--|
| Study area | Weed species |
| + African Box-thorn | Paspalum |
| ★ Artichoke Thistle | Artichoke Thistle |
| ● Chilean Needle-grass | African Box-thorn, Artichoke Thistle, Chilean Needle-grass,
Common Prickly Pear, Pepper Tree, Galenia |
| Serrated Tussock cover | Chilean Needle-grass |
| Very High | |
| High | |
| Moderate | |



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4.1.1. Grassy and herbaceous weeds

Spraying of a non-selective and non-systemic herbicide (such as Roundup Power Max) is recommended for controlling grassy and herbaceous weeds at the subject land. Spot-spraying is recommended around existing native vegetation and particular care must be taken to avoid off-target damage to indigenous plants. Roundup Biactive herbicide is registered for use in aquatic areas and is recommended for spraying within close proximity to the drainage channel and in low-lying areas. **Herbicide application should not be conducted between December and January when Golden Sun Moth are active** (i.e. in their larval or emergent stage) and it is recommended that spraying of Serrated Tussock is conducted between late July and early August.

Slashing prior to seed formation is recommended in order to disrupt the seeding process of herbaceous and grassy weeds. Slashing of Serrated Tussock should occur in late autumn/early winter when growth is minimal. **Slashing should not be conducted between December and January when Golden Sun Moth are active. Note that contractor vehicles should be restricted from areas of Golden Sun Moth habitat during this time.**

Weed control methods are provided in Table 1.

4.1.2. Woody weeds

The ‘cut and paint’ method is the most effective means of controlling woody weeds at the subject land. This entails a clean cut to the main stem/s of the plant followed by immediate application of a non-selective herbicide (i.e. Roundup Power Max) to the entire surface of each cut stem. The dead left over branches should be piled up in a clear area and eventually burnt. Where practical, seedlings may be sprayed with a non-selective herbicide during the growth period or dug out by hand when the soil is moist. **Herbicide application should not be conducted between December and January when Golden Sun Moth are active.**

Slashing may be used to improve access to large infestations, however **slashing should not be conducted between December and January when Golden Sun Moth are active.**

Weed control methods are provided in Table 1.

4.1.3. Specific control methods

The following table provides a list of weeds of concern recently recorded at the subject land and their methods of control.

Table 1: Weeds of concern at the subject land and their control methods

Weed Type	Common Name	Scientific name	CaLP Act (C)	Control Method	Timing
Woody	African Box-thorn	<i>Lycium ferocissimum</i>	Yes	Cut and paint with an appropriate herbicide. Spray seedlings with non-selective and non-systemic herbicide or dig out by hand	Early to mid-Spring or when actively growing. Do not spray between December and January when GSM are active. Dig out when soil is moist

Weed Type	Common Name	Scientific name	CaLP Act (C)	Control Method	Timing
Non-woody (robust herb)	Artichoke Thistle	<i>Calendula arctotheca</i>	Yes	Spray with an appropriate herbicide	Spring (prior to flowering)
Non-woody	Chilean Needle-grass	<i>Nassella neesiana</i>	No	Spray with an appropriate herbicide	Autumn and Spring
Woody	Common Prickly Pear	<i>Opuntia stricta</i>	Yes	Thoroughly spray plant with an appropriate herbicide	Spring to early Summer
Non-woody (robust herb)	Galenia	<i>Galenia pubescens</i>	No	Thoroughly spray plant with an appropriate herbicide	Autumn and Spring
Non-woody	Paspalum	<i>Paspalum dilatatum</i>	No	Spray with an appropriate herbicide	Spring to early Summer
Woody	Pepper Tree	<i>Schinus molle</i>	No	Cut and paint mature plants with an appropriate herbicide. Spray or dig out seedlings by hand	Autumn and Spring
Non-woody	Serrated Tussock	<i>Nassella trichotoma</i>	Yes	Thoroughly spray with an appropriate herbicide. Slash during minimal growth period	Spray during Autumn and Spring Slash during late Autumn and early Winter

4.2. Pest Animal Control

The following pest animals have been recorded at the subject site:

- Red Fox
- European Rabbit
- European Hare

European Rabbit and European Hare pose a grazing threat to native vegetation at the subject land, while Red Fox pose a threat to native fauna, particularly Striped Legless Lizard.

Pest animal activity (warrens, diggings, latrines, dens and scats) should be continually monitored to determine the necessity and timing of management actions and adapted accordingly.

Every pest animal control action must be undertaken by an experienced and licensed pest animal control contractor.

The following management actions are recommended for pest animal control:

- Baiting – This is likely to be the most cost-effective means of controlling rabbits, hares and foxes at the subject land. Baiting for rabbits and hares should be conducted outside of the breeding season and when food is scarce – generally late summer/early autumn. The same principle applies for foxes, though this window generally tends to be late winter/early spring. Follow-up baiting is also recommended during autumn when foxes are generally most mobile.
- Fumigation – Fumigation of rabbit warrens may be used as a supplementary technique to baiting for controlling rabbits. Fumigation can be conducted any time of year but is recommended just before the breeding season, generally autumn.

4.3. Biomass management

Biomass management is considered necessary for maintaining the floristic diversity and fauna values of native grasslands. It is especially important for ensuring the persistence of Golden Sun Moth (GSM) at the subject land, as GSM requires open tussock grassland with sufficient patches of bare ground between the tussocks.

Prescribed ecological burning is not recommended due to the close proximity of the site to residential areas. For this reason, slashing of the site should be continued on a regular basis. The blanket recommendation for the frequency of slashing in native grassland in Victoria is 3–5 years, however every site is unique and the optimum frequency, seasonality and intensity of slashing is dependent on the species present and their requirements as well as local climatic conditions. Slashing should be conducted in a mosaic fashion to offer variability in habitat for fauna. Biomass density and organic litter should be monitored throughout the year to determine the applicability and timing of slashing.

Slashing should not be carried out between December and January when Golden Sun Moth are active (i.e. in their larval or emergent stage).

Table 2: Implementation schedule

Threat	Action	Relevant Section	Timing	Responsibility
Weed control	Control grassy and herbaceous weeds of concern	Section 4.1.1	Refer to Table 1 Do not spray between December and January when GSM are active	Broadcast Australia/ Digital 4
	Control woody weeds of concern	Section 4.1.2	Refer to Table 1 Do not spray or slash between December and January when GSM are active	Broadcast Australia/ Digital 4
	Slash Serrated Tussock	Section 4.1.1	Late Autumn/early Winter Do not slash between December and January when GSM are active	Broadcast Australia/ Digital 4
Pest Animal Control	Baiting rabbits	Section 4.2	Late Summer/early Autumn	Broadcast Australia/ Digital 4
	Baiting foxes	Section 4.2	Late Winter/early Spring Follow up in Autumn	Broadcast Australia/ Digital 4
	Fumigation	Section 4.2	Autumn	Broadcast Australia/ Digital 4
Slashing of native grassland	Mosaic slashing	Section 4.3	Autumn/when appropriate, every 3-4 years	Broadcast Australia/ Digital 4

5. REFERENCES

- Brett Lane & Associates (BL&A) 2010a, *Broadcast Australia – Sydenham Site, Matters of National Environmental Significance – Report No. 6142 (9.3)*, Brett Lane & Associates Pty Ltd, Hawthorn East, consultant report prepared for Broadcast Australia.
- Brett Lane & Associates (BL&A) 2010b, *Broadcast Australia, Integrated Ecological Assessment – Report No. 6142 (10.4)*, Brett Lane & Associates Pty Ltd, Hawthorn East, consultant report prepared for Broadcast Australia.
- Brimbank City Council 2012, *Brimbank Biodiversity Strategy 2012-2022*, Brimbank City Council, City Operations – Environment.
- Brimbank City Council 1997, *Planning and Management Guidelines for Protecting, Enhancing and Managing significant natural assets*, Prepared by AM Muir, MH Collinson, BA Lane, N Rosengren, M Tansley, PF Breen, M Evans and GW Carr. Ecology Australia Flora and Fauna Consultants 272-276 Heidelberg Road Fairfield Victoria 3078, Brimbank City Council, March 1997.
- Carter, O. and Walsh, N. 2006. National Recovery Plan for the Spiny Rice-flower *Pimelea spinescens* subsp. *spinescens*. Department of Sustainability and Environment, Melbourne.
- Department of the Environment and Energy (DoEE) 2018, *EPBC Act Protected Matters Search Tool*, Department of the Environment, Canberra, viewed 8th May, 2017.
- Department of Environment, Land, Water and Planning (DELWP) 2016a, *Flora and Fauna Guarantee Threatened List December 2016*, Department of Environment, Land, Water and Planning, East Melbourne, Victoria.
- Department of Environment, Land, Water and Planning (DELWP) 2016b, *Flora and Fauna Guarantee Act 1988 - Protected Flora List December 2016*, Department of Environment, Land, Water and Planning, East Melbourne, Victoria.
- Department of Environment, Land, Water and Planning (DELWP) 2017a, *Guidelines for the removal, destruction or lopping of native vegetation* (dated December 2017), Department of Environment, Land, Water and Planning, East Melbourne, Victoria.
- Department of Environment, Land, Water and Planning (DELWP) 2017b, *Assessor's Handbook – Applications to remove, destroy or lop native vegetation* (dated December 2017), Department of Environment, Land, Water and Planning, East Melbourne, Victoria.
- Department of Environment, Land, Water and Planning (DELWP) 2017c, *Flora and Fauna Guarantee Act 1988 – Threatened List May 2017*, Department of Environment, Land, Water and Planning, East Melbourne, Victoria.
- Department of Environment, Land, Water and Planning (DELWP) 2017d, *Flora and Fauna Guarantee Act 1988 - Protected Flora List June 2017*, Department of Environment, Land, Water and Planning, East Melbourne, Victoria.
- Department of Environment, Land, Water and Planning (DELWP) 2018a, *NatureKit*, Department of Environment, Land, Water and Planning, East Melbourne, Victoria, viewed 18th May, 2018, <http://maps.biodiversity.vic.gov.au>.

- Department of Environment, Land, Water and Planning (DELWP) 2018b, *Victorian Biodiversity Atlas 3.2.5*, Department of Environment, Land, Water and Planning, East Melbourne, Victoria, viewed 29th August, 2018, < <https://vba.dse.vic.gov.au>>.
- Department of Environment and Primary Industries (DEPI) 2014, *Advisory List of Rare or Threatened Plants in Victoria*, Department of Environment and Primary Industries, now Department of Environment, Land, Water and Planning (DELWP), East Melbourne, Victoria.
- Department of the Environment, Water, Heritage and the Arts (DEWHA) 2009, *EPBC Act Policy Statement 3.11 - Significant Impact Guidelines for the Critically Endangered Spiny Rice-flower (Pimelea spinescens subsp. spinescens)*, Department of the Environment, Water, Heritage and the Arts, Canberra, ACT.
- Department of Sustainability and Environment (DSE) 2004a, *Ecological Vegetation Class (EVC) Benchmarks by Bioregion*, Department of Environment, Land, Water and Planning, East Melbourne, Victoria.
- Department of Sustainability and Environment (DSE) 2004b, *Native Vegetation: sustaining a living landscape, Vegetation Quality Assessment Manual – guidelines for applying the Habitat Hectare scoring method (Version 1.3)*, Department of Sustainability and Environment, now Department of Environment, Land, Water and Planning, East Melbourne, Victoria.
- Department of Sustainability and Environment (DSE) 2009, *Advisory List of Threatened Invertebrate Fauna*, Department of Sustainability and Environment, now Department of Environment, Land, Water and Planning, East Melbourne, Victoria.
- Department of Sustainability and Environment (DSE) 2013, *Advisory List of Threatened Vertebrate Fauna in Victoria*, Department of Sustainability and Environment, now Department of Environment, Land, Water and Planning, East Melbourne, Victoria.
- Parkes D, Newell G, & Cheal D 2003, 'Assessing the Quality of Native Vegetation: The 'habitat hectares' approach'. *Ecological Management and Restoration*, 4:29–38.
- Phytoclean 2018, Phytoclean Product Information, viewed 29th August 2018, <http://www.phytoclean.com.au/>
- Scientific Advisory Committee (SAC) 2015, *Flora and Fauna Guarantee Act 1988 – Threatened List: Characteristics of Threatened Communities*, Department of Sustainability and Environment, now Department of Environment, Land, Water and Planning, East Melbourne, Victoria, viewed 29th August, 2018.
- THL Australia 2006, *Sydenham MF – Site No 3047 Vegetation Management Plan May 2006*, THL Australia.

Appendix 1: Photographs taken at the subject land



Artichoke Thistle infestation in the south-east quarter of the subject land



Serrated Tussock infestation in the south-west corner of the subject land



Chilean Needle-grass infestation in the south-east quarter of the subject land



African Box-thorn infestation at the southern extent of the subject land



Galenia and Serrated Tussock infestation at the southern extent of the subject land



Red Fox at the southern extent of the subject land