

Final Report

Conservation Area Concept Plan and Supporting Information

Conservation Area 7, Mount Atkinson Grassland: Mount Atkinson
Precinct Structure Plan (PSP 1082)

Prepared for

Metropolitan Planning Authority

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GLOSSARY

Acronym	Description
AVW	Atlas of Victorian Wildlife
BCS	<i>Biodiversity Conservation Strategy for Melbourne's Growth Areas</i>
CACP	Conservation Area Concept Plan
CA7	Conservation Area 7
CMP	Conservation Management Plan
DEPI	Victorian Department of Environment and Primary Industries (now DELWP)
DELWP	Victorian Department of Environment, Land, Water and Planning
DoE	Federal Department of the Environment (former Department of Sustainability, Environment, Water, Population and Communities)
DTPLI	(the former) Victorian Department of Transport, Planning and Local Infrastructure
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EVC	Ecological Vegetation Class
ESO	Environmental Significance Overlay
FFG Act	<i>Flora and Fauna Guarantee Act 1988</i>
FIS	Flora Information System
MPA	Victorian Metropolitan Planning Authority
NES	National Environmental Significance
PMST	Protected Matters Search Tool (DoE)
PSP	Precinct Structure Plan
RAP	Registered Aboriginal Party
RCZ	Rural Conservation Zone
VBA	Victorian Biodiversity Atlas (DELWP)

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1 INTRODUCTION

1.1 Project Context

Ecology and Heritage Partners were commissioned by the Metropolitan Planning Authority (MPA) to prepare a Concept Plan for Conservation Area 7 (CA7), located within the Mount Atkinson Precinct Structure Plan (PSP 1082) and Western Growth Corridor (Inset 1). The Conservation Area is one of 36 reserves designated under the *Biodiversity Conservation Strategy for Melbourne's Growth Corridors* (BCS) (DEPI 2013), and one of four areas for which a management category has not been assigned.

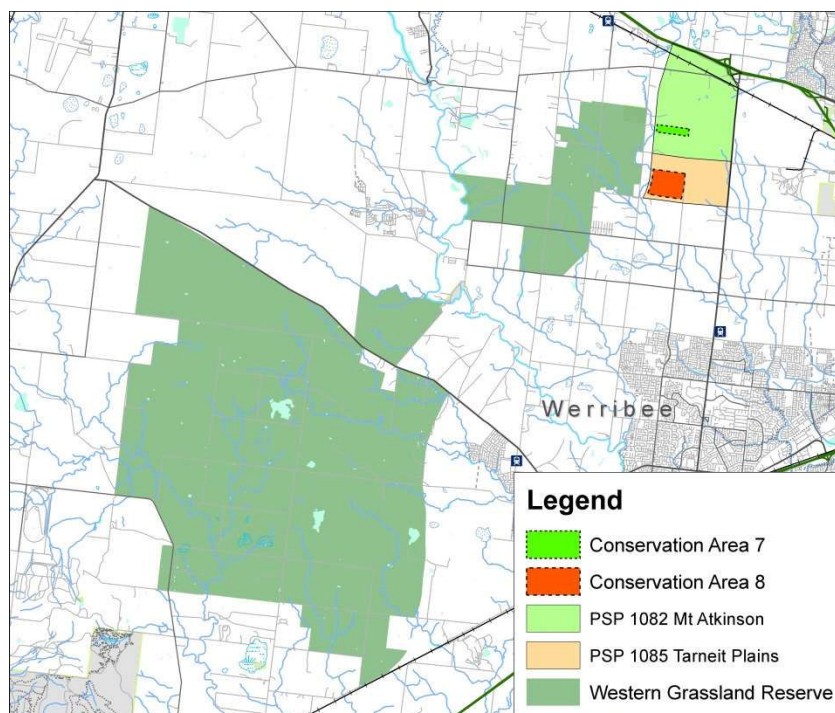
The objective of the Conservation Area Concept Plan (CACP) is to identify ecological values within the subject site, determine the applicable management category (Nature Conservation or Open Space) and assist the Victorian Department of Environmental, Land, Water and Planning (DELWP) in developing a Conservation Management Plan (CMP).

The CACP is presented as Figure 1 and the following sections summarise the information referenced in its development. This document is structured as follows:

Section 2: Methods - Details the desk-based methods used in surveying the existing environment and developing the CACP;

Section 3: Results - Describes the ecological values known or predicted to occur in CA7 including vegetation communities, fauna habitats, ecological communities and significant flora and fauna species;

Section 4: Conservation Area Concept Plan - Provides context to the CACP, including recommendations regarding the applicable management category, a review of Aboriginal cultural heritage, and a discussion regarding the Conservation Interface Plan and Land-use/infrastructure planning.



Inset 1 Project Context

2 METHODS

The CACP references the findings of a detailed desktop review, with property access not obtained at the time of assessment. The desktop review process is further detailed in the following section.

2.1 Desktop Review

Relevant literature, online-resources and numerous databases were reviewed to provide an up to date assessment of ecological values associated with CA7 and its immediate surrounds, including:

- The DELWP Biodiversity Interactive Map (DEPI 2014a) for:
 - Modelled data for remnant vegetation patches and habitat for rare or threatened species;
 - The extent of historic and current Ecological Vegetation Classes (EVC)s; and,
 - The location of sites of biological significance within the region.
- The Victorian Biodiversity Atlas (VBA) (DEPI 2014b), Flora Information System (FIS) (Viridans 2013a) and Atlas of Victorian Wildlife (AVW) (Viridans 2013b) for previously documented flora and fauna records within the project locality (within 10 kilometres of CA7);
- The Commonwealth Department of the Environment (DoE) Protected Matters Search Tool (PMST) for matters of National Environmental Significance (NES) protected under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (DoE 2014);
- The DELWP Planning Maps Online to ascertain current zoning and environmental overlays (DTPLI 2014);
- Aerial photography of the subject site; and,
- Relevant reports, documents and literature, including the following key resources:
 - *Draft Mt Atkinson Precinct Structure Plan (PSP1082), Victoria: Aboriginal Heritage Impact Assessment* (Ecology and Heritage Partners Pty Ltd 2014);
 - *Targeted Significant Species Surveys of Potential Conservation Areas within Melbourne's Revised Growth Corridor* (Ecology and Heritage Partners Pty Ltd 2012);
 - *Biodiversity Assessment Report (Native Vegetation), Melton - Wyndham Investigation Area: Section E* (Growth Areas Authority 2010);
 - *Biodiversity Conservation Strategy for Melbourne's Growth Corridors* (BCS) (DEPI 2013); and,
 - *Working Draft - Matters to show on Conservation Area Concept Plans* (MPA 2014).

2.2 Assessment Qualifications and Limitations

This study aims to provide an overview of key ecological values within CA7 and facilitate the completion of a CMP and the broader PSP process. It is acknowledged that the findings of this assessment are based solely on a desktop review and that detailed field surveys across the entire Conservation Area boundary are required to accurately confirm the ecological values on ground.

Notwithstanding the above, information obtained from relevant sources (e.g. biological databases and relevant literature) are considered adequate to provide an overview of the ecological values within the subject site and inform preparation of the CACP and CMP.

3 RESULTS

3.1 Subject Site

Conservation Area 7 is approximately 31.56 hectares in size and is located between Troups Road South and Mount Atkinson Road, within the Mount Cottrell locality (Figure 1). Under the Melton City Council Planning Scheme the site is classified as Urban Growth Zone (UGZ) and no planning overlays relating to biodiversity values apply (e.g. Environmental Significance Overlays).

Based on a review of aerial photography, CA7 is predominately grassland; with a north-south line of trees located approximately 300 metres east of the western boundary (Figure 1). An established oval track is present in the western area and is most likely used for harness racing training. According to historical aerial photography contained on Google Earth, the track has been used for at least ten years. The subject site is generally consistent with surrounding land uses, which include agriculture and rural residential developments.

3.2 Vegetation Communities and Fauna Habitats

A review of the DELWP Biodiversity Interactive Map (DEPI 2014a) indicates that prior to European settlement CA7 is likely to have supported Plains Grassland (EVC 132). Time-stamped vegetation mapping for CA7 indicates that Plains Grassland remains across the entire Conservation Area; however, it is noted that this coverage is based on estimated data rather than field surveys, as no surveys have been completed on-site.

The Conservation Area is included in the study areas of two previous vegetation assessments, including the *Biodiversity Assessment for Section E of the Wyndham Investigation Area* (Growth Areas Authority 2010) and the *Targeted Significant Species Surveys of Potential Conservation Areas within Melbourne's Revised Growth Corridor* (Ecology and Heritage Partners Pty Ltd 2012). Access to CA7 was not possible during the two assessments; however the site was surveyed from adjoining land and both reports note the high likelihood of Plains Grassland occurring on-site. The 2012 targeted survey report notes the following with respect to CA7:

'This area appeared to contain a high percentage cover of Kangaroo Grass and extensive areas of embedded rock (i.e. no evidence of past cultivation of the land)'

Based on a review of aerial photography, previous assessments and the current field survey, one broad fauna habitat type is considered to be represented within CA7 - native grassland. The Conservation Area is likely to be covered predominately by Plains Grassland, and may support a diversity of native fauna, including the nationally significant Striped Legless Lizard *Delma impar* and Golden Sun Moth *Synemon plana* (Section 3.3). During recent field surveys within the nearby CA8 (located approximately 1.4 km south of CA7), a range of open-country bird species were observed using this habitat type, including Stubble Quail *Coturnix pectoralis*, Willie Wagtail *Rhipidura leucophrys*, Australian Raven *Corvus coronoides*, Magpie-lark *Grallina cyanoleuca* and Australian Magpie *Gymnorhina tibicen*.



Plate 1: Plains Grassland within the nearby CA8 (EHP 12/09/14)

3.3 Threatened Biodiversity and Other Matters of Significance

This section provides a preliminary summary of biodiversity matters of national, State and regional significance known to, or predicted to occur within 10 kilometres of CA7 (the locality). Table 1 outlines the significance criteria adopted for this study.

Table 1 Criteria for defining ecological significance

National Significance
Flora and Fauna: National conservation status is based on the EPBC Act list of taxa considered threatened in Australia (i.e. Extinct, Critically Endangered, Endangered and Vulnerable).
State Significance
Flora: Species listed as threatened under the FFG Act. Species listed on the DSE Advisory List (DSE 2005) as Endangered, Vulnerable, Rare or Poorly Known. Fauna: Species listed as threatened under the FFG Act. Species listed on the DSE Advisory List (DSE 2013) as Critically Endangered, Endangered or Vulnerable.
Regional Significance
Fauna: Species listed on the DSE Advisory List (DSE 2013) as Near Threatened or Data Deficient.

3.3.1 National Significance Assessment

Matters of NES are listed and protected under the EPBC Act. Those relating to biodiversity are discussed below in relation to CA7 and the broader locality based on the findings of the desktop review and recent field surveys within the nearby CA8.

Based on a review of the VBA (DEPI 2014b), FIS and AVW (Viridians 2013a; 2013b), seven flora species and 13 fauna species listed under EPBC Act have been recorded in the locality. The PMST (DoE 2014) nominated an additional two nationally significant flora species and four fauna species which have not been recorded in the locality but have the potential to occur (Appendices A and B).

Of the 26 EPBC Act listed species known or predicted to occur in the locality, three are considered to have a moderate likelihood of occurrence within CA7:

- Striped Legless Lizard *Delma impar* - Striped Legless Lizard inhabits lowland native grasslands, typically dominated by native tussock forming grass species such as Kangaroo Grass *Themeda triandra* and spear grasses (*Stipa* spp.). Before European settlement the species was probably quite common across the Victorian Volcanic Plains, although subsequent loss and modification of native grassland areas have reduced the available habitat for this species. In Victoria, the species primarily occurs around the basalt plains to the west of Melbourne, and areas around Ballarat and Bendigo (DEPI 2014b, Hadden 1995).

The VBA contains 101 records of the Striped Legless Lizard in the locality, including within 2.4 kilometres of CA7. Within the Conservation Area, the Striped Legless Lizard is most likely to occur in high quality remnant indigenous grassland dominated by Kangaroo Grass, with scattered basalt rocks.

- Golden Sun Moth *Synemon plana* - Golden Sun Moth generally occurs in native grassland dominated by greater than 40% cover of wallaby grass, in particular Short Wallaby-grass *Rytidosperma carphoides* (DSE 2004b) but may also inhabit areas dominated by Kangaroo Grass (Endersby and Koehler 2006) and introduced grassland (A. Organ, pers obs.). Prior to European settlement, the Golden Sun Moth was widespread and relatively continuous throughout its range, inhabiting grassy open woodlands and grassland, although it currently inhabits small isolated sites (DSE 2004b).

The VBA contains 30 records of the Golden Sun Moth in the locality, including within 1.1 kilometres of CA7. This species is considered likely to occur within the Conservation Area based on the extent of previous records in the surrounding landscape and the presence of suitable habitat. Within CA7, the Golden Sun Moth is most likely to utilise interconnected patches of indigenous grassland.

- Spiny Rice-flower *Pimelea spinescens* subsp. *spinescens* - This species is considered likely to occur within CA7, based on the inferred extent and condition of suitable habitat (Growth Areas Authority 2010, Ecology and Heritage Partners Pty Ltd 2012) and presence of nearby records in the locality.

Recent (2014) targeted surveys for Spiny Rice-flower within the nearby CA8 recorded one individual, located approximately 1.5 kilometres from CA7. It is considered that there is a moderate likelihood of additional Spiny Rice-flower individuals occurring throughout CA7, particularly within high quality patches of Plains Grassland.

All other nominated EPBC Act listed species are unlikely to occur as there is unlikely to be suitable habitat in CA7 or they are presumed to be extinct in the locality (e.g. Regent Honeyeater *Anthochaera phrygia*).

Five significant ecological communities listed under the EPBC Act are known or predicted to occur in the project locality (DoE 2014). Inferred areas of Plains Grassland within CA7 are likely to correspond with the *Natural Temperate Grassland of the Victorian Volcanic Plain* (NTGVVP) community.

3.3.2 State Significance Assessment

Biodiversity matters present or likely to occur within CA7 and the broader locality that are considered of significance to the State of Victoria are outlined below.

No State significant species of flora or fauna have been recorded within CA7. Based on a review of the VBA (DEPI 2014b), FIS and AVW (Viridians 2013a; 2013b), 31 flora species and 31 fauna species of State significance have been recorded in the locality (Appendices A and B). Of the 62 State significant species nominated, five flora species and three fauna species are considered to have a moderate likelihood of occurrence within CA7:

- Small Scurf-pea *Cullen parvum*
- Tough Scurf-pea *Cullen tenax*
- Heath Spear-grass *Austrostipa exilis*
- Plains Joyweed *Alternanthera* sp. 1 (Plains)
- Slender Bindweed *Convolvulus angustissimus* subsp. *omnigracilis*
- Eastern Great Egret *Ardea modesta*
- Diamond Firetail *Stagonopleura guttata*
- Tussock Skink *Pseudemoia pagenstecheri*

In addition to providing potential habitat for threatened and rare species, any patches of Plains Grassland present within CA7 would correspond with the State significant (FFG Act listed) ecological community *Western (Basalt) Plains Grassland*. It is noted that the State listings for ecological communities do not specify condition thresholds and therefore can include low quality patches that are excluded from the EPBC Act-listed ecological communities.

3.3.3 Regional Significance Assessment

Based on a review of the VBA (DEPI 2014b) and AVW (Viridians 2013b), 15 regionally significant fauna species have been recorded in the locality. Of the 15 nominated species, only the Royal Spoonbill *Platalea regia* is considered to have a moderate likelihood of occurrence within CA7 (Appendix B).

4 CONSERVATION AREA CONCEPT PLAN

4.1 Conservation Area Category

Based on the information presented in Section 3, it is recommended that CA7 is designated and managed in accordance with the Nature Conservation Category (DEPI 2013). This endorsement is based on the potential for the site to contain:

- High quality native grassland (Section 3.2);
- Large areas of the EPBC Act listed ecological community Natural Temperate Grassland of the Victorian Volcanic Plain (Section 3.3.1);
- Potential habitat for three species listed under the EPBC Act, including Spiny Rice-flower, Golden Sun Moth and Striped Legless Lizard (Section 3.3.1); and,
- Potential habitat for State and regionally significant flora and fauna species (Sections 3.3.2 and 3.3.3).

Consistent with the BCS (DEPI 2013), this area should be protected and managed primarily for nature conservation, including the Matters of NES and State significant values noted above. Following further land access arrangements and prior to the CMP, it is recommended that detailed vegetation assessments are completed throughout the site to confirm the extent and condition of ecological values.

4.2 Preliminary Review of Aboriginal Cultural Heritage

The extent of known and potential Aboriginal heritage values within the Mount Atkinson Precinct is currently under investigation, with draft findings presented in the document *Draft Mt Atkinson Precinct Structure Plan (PSP1082)*, *Victoria: Aboriginal Heritage Impact Assessment* (Ecology and Heritage Partners Pty Ltd 2014). Within the cultural heritage report, CA7 is represented as Property Identification Number 42 (Map 9, Ecology and Heritage Partners Pty Ltd 2014).

The draft cultural heritage report presents the following key points relevant to CA7:

- There was no Registered Aboriginal Party (RAP) in place for CA7 at the time of preparation. The Boon Wurrung Foundation Limited (BWFL) has an application for RAP status over land inclusive of the Conservation Area currently before the Aboriginal Heritage Council, and therefore should be consulted in relation to cultural heritage values within the site.
- There are no Native Title claims or determinations over CA7, as the site comprises private land.
- Areas of Cultural Heritage Sensitivity associated with Dry Creek and an archaeological site are present within the western and eastern extents of the site (Figure 1).
- One archaeological site (VAHR 7822-1550) has been previously recorded immediately adjacent to the eastern reserve boundary (Figure 1). This site originally comprised one silcrete blade and two silcrete debris flakes. The site was reinspected as part of the recent assessment and no artefacts were identified.

- The draft report identified that CA7 has the potential to support sensitive cultural heritage values and that development activities within the site would trigger the mandatory requirement to prepare a Cultural Heritage Management Plan (CHMP).

Areas of Cultural Heritage Significance are included in the CACP (Figure 1). It is noted that the findings above have been extracted from the draft report and have not been finalised.

4.3 Conservation Interface Plan and Future Land Use Considerations

Careful consideration should be given to the interface between CA7 and future urban development during the precinct planning process. The CACP (Figure 1) nominates a minimum buffer zone of 20 metres, with 10 metres proposed within the reserve as a Fuel Management Zone and 10 metres proposed outside the reserve as passive recreation (Figure 1). This buffer zone has been developed in order to address the following principles (DEPI 2013):

- Manage edge effects from weeds, the abundance of which are likely to increase with future activity in the precinct;
- Manage run-off and nutrient absorption associated with future developments;
- Maintain a fire break, allowing the opportunity to safely implement an ecological burning program; and,
- Provide complimentary public space and the potential for integration with future urban environments.

The following standards specified in the BCS should be referenced during preparation of the CMP and the ongoing design of the Mount Atkinson Precinct.

- Fences of urban or industrial properties should not abut the Conservation Area;
- Natural hydrological patterns of Dry Creek should be maintained where practicable;
- The buffer zone should not be planted with species which could behave as environmental weeds (including vigorous rhizomatous grasses such as Buffalo, Kikuyu and Couch). The planting of trees within the buffer zone should be avoided; and,
- The buffer zone should be managed in accordance with the CMP, including ongoing weed management activities (e.g. mowing or spraying).

If consistent with the PSP, public access within CA7 may be encouraged assuming that the reserve is transferred to public ownership or public access is granted under private ownership agreements. Given the lack of existing linkages and information regarding low/high constraint areas, the specific siting of pedestrian access features, such as shared paths, has not been incorporated into the CACP.

A Passive Recreation Zone has been delineated in the western section of CA7, as it is considered likely that this area is of least ecological constraint. The ongoing design of the reserve should be confirmed with reference to detailed vegetation surveys, and potentially targeted surveys for Matters of NES. It is recommended that as development of the PSP progresses, the appropriateness of public access and siting of associated infrastructure within CA7 is further investigated.

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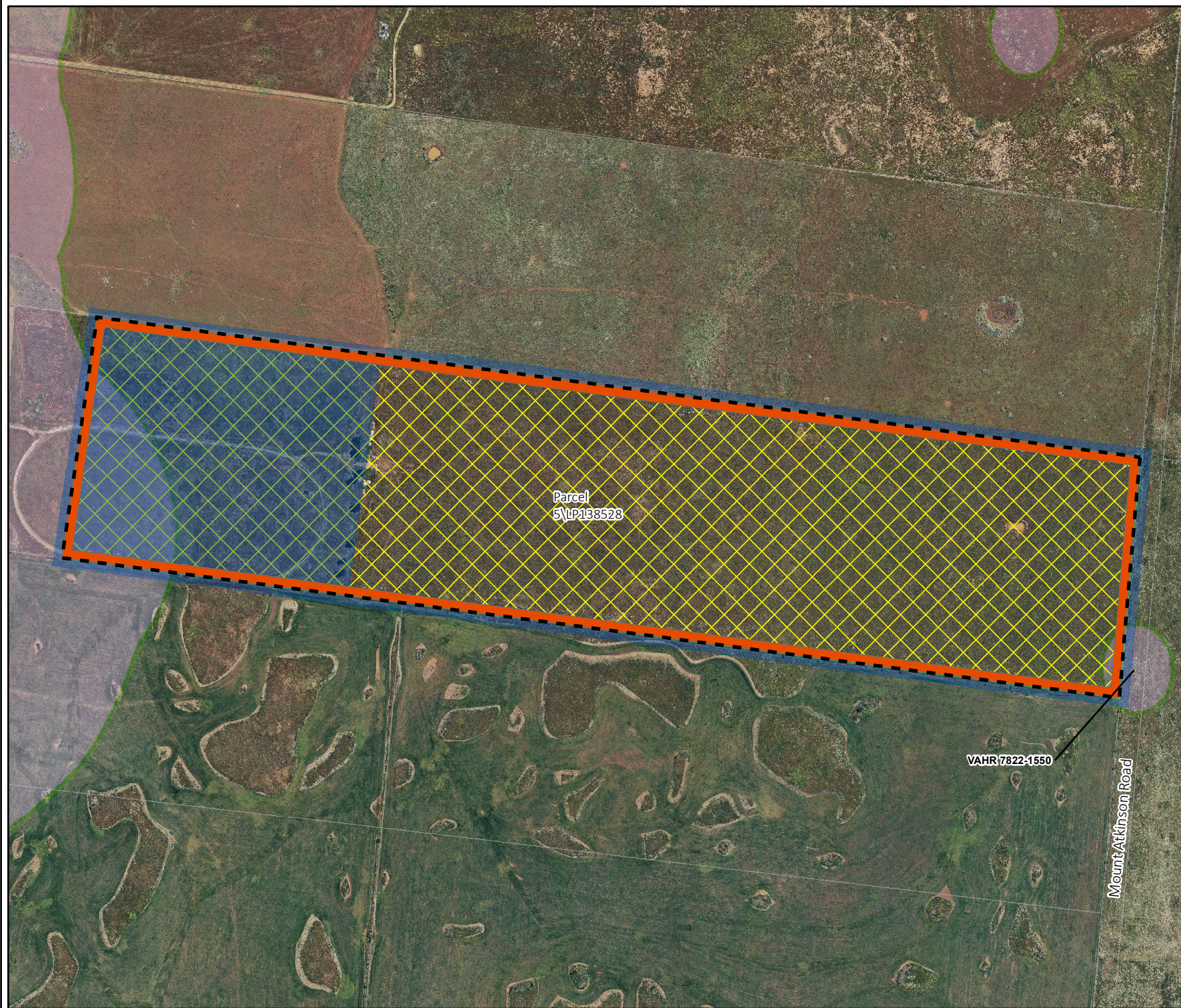
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Figure 1 – **CONSERVATION AREA CONCEPT PLAN (CACP)**



Legend

-  Conservation Area Boundary (Steel cable fencing)
-  Fuel Management Zone
-  Passive Recreation Zone (subject to native vegetation extent and condition)
-  Cultural Heritage Sensitivity
-  Unconfirmed Plains Grassland

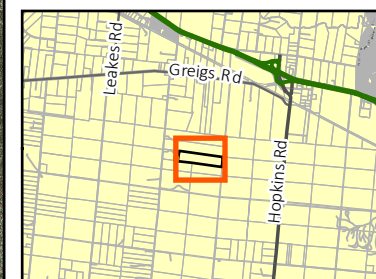
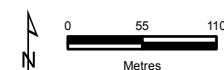


Figure 1
Conservation Area Concept Plan (CACP)
 CA7, Mt Atkinson PSP



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APPENDICES

Appendix A – Significant Flora Species

Table A1 Significant flora recorded or predicted to occur within 10 kilometres of CA7 (VBA [DEPI 2014b], FIS [Viridans 2013a] and EPBC PMST [DoE 2014] records)

Scientific name	Common name	Total number of documented records	Last documented record	EPBC Act ¹	FFG Act ²	VIC ³	Likelihood of Occurrence ⁴
NATIONAL SIGNIFICANCE							
<i>Amphibromus fluitans</i>	River Swamp Wallaby-grass	3	2008	VU	-	-	4
<i>Glycine latrobeana</i>	Clover Glycine	3	2006	VU	L	vu	4
<i>Senecio macrocarpus</i>	Large-headed Fireweed	11	2009	VU	L	en	4
<i>Dianella amoena</i>	Matted Flax-lily	6	2010	EN	L	en	4
<i>Diuris basaltica</i>	Small Golden Moths	10	2009	EN	L	vu	4
<i>Rutidosia leptorhynchoides</i>	Button Wrinklewort	11	2009	EN	L	en	4
<i>Pimelea spinescens</i> subsp. <i>spinescens</i>	Spiny Rice-flower	241	2012	CR	L	en	2
<i>#Carex tasmanica</i>	Curly Sedge	-	-	VU	L	vu	4
<i>#Prasophyllum frenchii</i>	Maroon Leek-orchid	-	-	EN	L	en	4
STATE SIGNIFICANCE							
<i>Allocasuarina luehmannii</i>	Buloke	115	2010	-	L	-	5
<i>Amphibromus pithogastrus</i>	Plump Swamp Wallaby-grass	2	2004	-	L	en	4
<i>Comesperma polygaloides</i>	Small Milkwort	1	1988	-	L	vu	4
<i>Cullen parvum</i>	Small Scurf-pea	64	2010	-	L	en	3
<i>Cullen tenax</i>	Tough Scurf-pea	24	2010	-	L	en	3
<i>Eucalyptus baueriana</i> subsp. <i>thalassina</i>	Werribee Blue-box	6	2010	-	-	en	5
<i>Podolepis</i> sp. 1	Basalt Podolepis	1	1991	-	-	en	4
<i>Acacia rostriformis</i>	Bacchus Marsh Wattle	1	2010	-	-	vu	5
<i>Amyema linophylla</i> subsp. <i>orientale</i>	Buloke Mistletoe	10	2010	-	-	vu	5
<i>Coronidium scorpioides</i> 'aff. <i>rutidolepis</i> (Lowland Swamps)' v	Pale Swamp Everlasting	8	2008	-	-	vu	4
<i>Dianella</i> sp. aff. <i>longifolia</i> (Benambra)	Arching Flax-lily	271	2010	-	-	vu	4
<i>Eleocharis plana</i>	Flat Spike-sedge	1	2011	-	-	vu	4

Scientific name	Common name	Total number of documented records	Last documented record	EPBC Act ¹	FFG Act ²	VIC ³	Likelihood of Occurrence ⁴
<i>Geranium solanderi</i> var. <i>solanderi</i> s.s.	Austral Crane's-bill	8	2009	-	-	vu	4
<i>Lasiopetalum ferrugineum</i>	Rusty Velvet-bush	1	2010	-	-	vu	4
<i>Austrostipa exilis</i>	Heath Spear-grass	6	1995	-	-	r	3
<i>Austrostipa hemipogon</i>	Half-bearded Spear-grass	2	2006	-	-	r	4
<i>Geranium</i> sp. 3	Pale-flower Crane's-bill	11	2010	-	-	r	4
<i>Melaleuca armillaris</i> subsp. <i>armillaris</i>	Giant Honey-myrtle	4	2009	-	-	r	5
<i>Nicotiana suaveolens</i>	Austral Tobacco	5	2005	-	-	r	4
<i>Ranunculus diminutus</i>	Brackish Plains Buttercup	1	1990	-	-	r	4
<i>Rhagodia parabolica</i>	Fragrant Saltbush	18	2010	-	-	r	4
<i>Tripogon loliiformis</i>	Rye Beetle-grass	25	2012	-	-	r	4
<i>Alternanthera</i> sp. 1 (Plains)	Plains Joyweed	35	2010	-	-	k	3
<i>Ceratophyllum demersum</i>	Hornwort	1	1962	-	-	k	4
<i>Clematis leptophylla</i>	Skeleton Vine	1	2010	-	-	k	4
<i>Convolvulus angustissimus</i> subsp. <i>omnigracilis</i>	Slender Bindweed	38	2010	-	-	k	3
<i>Desmodium varians</i>	Slender Tick-trefoil	18	2010	-	-	k	4
<i>Eleocharis macbarronii</i>	Grey Spike-sedge	2	1993	-	-	k	4
<i>Eleocharis pallens</i>	Pale Spike-sedge	21	2010	-	-	k	4
<i>Lepidium pseudohyssopifolium</i>	Native Peppergrass	1	2009	-	-	k	4
<i>Sclerolaena muricata</i> var. <i>muricata</i>	Black Roly-poly	3	2010	-	-	k	4

Notes: 1) Listed as Critically Endangered (CR), Endangered (E) or Vulnerable (V) under the EPBC Act

2) Listed (L) under the FFG Act

3) Listed as Endangered (en), Vulnerable (vu), Rare (r) or Status Poorly Known (k) on the Victoria Advisory List (DEPI 2014c)

4) Likelihood of occurrence: 1 Known Occurrence - Recorded within the study area recently (i.e. within ten years), 2 High Likelihood - Previous records of the species in the local vicinity; and/or, the study area contains areas of high quality habitat, 3 Moderate Likelihood - Limited previous records of the species in the local vicinity; and/or, the study area contains poor or limited habitat, 4 Low Likelihood - Poor or limited habitat for the species however other evidence (such as a lack of records or environmental factors) indicates there is a very low likelihood of presence, 5 Unlikely - No suitable habitat and/or outside the species range.

- Records only identified from the EPBC Act Protected Matters Search Tool

Appendix B – Significant Fauna Species

Table B1 Significant fauna recorded or predicted to occur within 10 kilometres of CA7 (VBA [DEPI 2014b], AVW [Viridans 2013b] and EPBC PMST [DoE 2014] records)

Scientific name	Common name	Total number of documented records	Last documented record	EPBC Act ¹	FFG Act ²	VIC ³	Likelihood of Occurrence ⁴
NATIONAL SIGNIFICANCE							
<u>Birds</u>							
<i>Pedionomus torquatus</i>	Plains-wanderer	9	1979	VU	L	cr	3
<i>Polytelis swainsonii</i>	Superb Parrot	1	1870	VU	L	en	4
<i>Rostratula australis</i>	Australian Painted Snipe	1	1977	VU, M	L	cr	3
<i>Anthochaera phrygia</i>	Regent Honeyeater	2	1905	EN	L	cr	4
<i>Botaurus poiciloptilus</i>	Australasian Bittern	1	1973	EN	L	en	3
<i>Lathamus discolor</i>	Swift Parrot	4	1990	EN	L	en	4
<i>Neophema chrysogaster</i>	Orange-bellied Parrot	1	1977	CR	L	cr	4
<i>#Sternula nereis nereis</i>	Australian Fairy Tern	-	-	VU	L	en	4
<u>Mammals</u>							
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	4	2010	VU	L	vu	3
<i>#Pseudomys novaehollandiae</i>	New Holland Mouse	-	-	VU	L	en	4
<u>Reptiles</u>							
<i>Delma impar</i>	Striped Legless Lizard	101	2010	VU	L	en	2
<i>Tympanocryptis pinguicolla</i>	Grassland Earless Dragon	1	1960	EN	L	cr	3
<u>Frogs</u>							
<i>Litoria raniformis</i>	Growling Grass Frog	229	2011	VU	L	en	3
<u>Fish</u>							
<i>Macquaria australasica</i>	Macquarie Perch	4	1930	EN	L	en	3
<i>#Galaxiella pusilla</i>	Eastern Dwarf Galaxias	-	-	VU	L	en	3
<i>#Prototroctes maraena</i>	Australian Grayling	-	-	VU	L	vu	3

Scientific name	Common name	Total number of documented records	Last documented record	EPBC Act ¹	FFG Act ²	VIC ³	Likelihood of Occurrence ⁴
<u>Invertebrates</u>							
<i>Synemon plana</i>	Golden Sun Moth	30	2011	CE	L	cr	2
STATE SIGNIFICANCE							
<u>Birds</u>							
<i>Accipiter novaehollandiae novaehollandiae</i>	Grey Goshawk	1	2006	-	L	vu	3
<i>Ardea intermedia</i>	Intermediate Egret	3	1980	-	L	en	3
<i>Ardea modesta</i>	Eastern Great Egret	17	2001	M	L	vu	2
<i>Burhinus grallarius</i>	Bush Stone-curlew	1	1889	-	L	en	4
<i>Chthonicola sagittatus</i>	Speckled Warbler	10	2011	-	L	vu	4
<i>Grus rubicunda</i>	Brolga	2	1989	-	L	vu	3
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	1	1999	M	L	vu	3
<i>Lewinia pectoralis pectoralis</i>	Lewin's Rail	1	1889	-	L	vu	4
<i>Lophocroa leadbeateri</i>	Major Mitchell's Cockatoo	1	2004	-	L	vu	4
<i>Melanodryas cucullata cucullata</i>	Hooded Robin	4	1988	-	L	nt	4
<i>Ninox connivens connivens</i>	Barking Owl	2	1986	-	L	en	4
<i>Ninox strenua</i>	Powerful Owl	2	1972	-	L	vu	4
<i>Oreoica gutturalis gutturalis</i>	Crested Bellbird	3	1988	-	L	nt	4
<i>Oxyura australis</i>	Blue-billed Duck	14	2006	-	L	en	3
<i>Pomatostomus temporalis temporalis</i>	Grey-crowned Babbler	4	1987	-	L	en	4
<i>Porzana pusilla palustris</i>	Baillon's Crane	3	2003	-	L	vu	4
<i>Stagonopleura guttata</i>	Diamond Firetail	28	2011	-	L	nt	3
<i>Stictonetta naevosa</i>	Freckled Duck	3	1991	-	L	en	3
<i>Turnix pyrrhorthorax</i>	Red-chested Button-quail	4	1990	-	L	vu	3
<i>Tyto novaehollandiae novaehollandiae</i>	Masked Owl	1	1989	-	L	en	4
<i>Calidris ferruginea</i>	Curlew Sandpiper	2	1990	M	-	en	4
<i>Actitis hypoleucos</i>	Common Sandpiper	1	1990	M	-	vu	4

Scientific name	Common name	Total number of documented records	Last documented record	EPBC Act ¹	FFG Act ²	VIC ³	Likelihood of Occurrence ⁴
<i>Anas rhynchotis</i>	Australasian Shoveler	27	2010	-	-	vu	4
<i>Aythya australis</i>	Hardhead	26	2006	-	-	vu	3
<i>Biziura lobata</i>	Musk Duck	22	2010	-	-	vu	3
<i>Falco subniger</i>	Black Falcon	5	2009	-	-	vu	3
<i>Hirundapus caudacutus</i>	White-throated Needletail	1	1971	M	-	vu	3
<i>Tringa nebularia</i>	Common Greenshank	3	1990	M	-	vu	4
<i>Tringa stagnatilis</i>	Marsh Sandpiper	2	1988	M	-	vu	4
<u>Reptiles</u>							
<i>Pseudemoia pagenstecheri</i>	Tussock Skink	33	2011	-	-	vu	2
<u>Frogs</u>							
<i>Pseudophryne bibronii</i>	Brown Toadlet	4	2010	-	L	en	3
REGIONAL SIGNIFICANCE							
<u>Birds</u>							
<i>Calidris melanotos</i>	Pectoral Sandpiper	1	1990	M	-	nt	4
<i>Chlidonias hybridus javanicus</i>	Whiskered Tern	4	1990	M	-	nt	4
<i>Chrysococcyx osculans</i>	Black-eared Cuckoo	3	1908	-	-	nt	4
<i>Circus assimilis</i>	Spotted Harrier	5	2007	-	-	nt	3
<i>Climacteris picumnus victoriae</i>	Brown Treecreeper (south-eastern ssp.)	36	2011	-	-	nt	4
<i>Dromaius novaehollandiae</i>	Emu	1	2004	-	-	nt	4
<i>Gallinago hardwickii</i>	Latham's Snipe	8	2004	M	-	nt	3
<i>Nycticorax caledonicus hillii</i>	Nankeen Night Heron	8	1999	-	-	nt	3
<i>Phalacrocorax varius</i>	Pied Cormorant	3	2006	-	-	nt	4
<i>Platalea regia</i>	Royal Spoonbill	10	2006	-	-	nt	2
<i>Stiltia isabella</i>	Australian Pratincole	1	1990	-	-	nt	4
<i>Turnix velox</i>	Little Button-quail	1	1974	-	-	nt	3
<u>Mammals</u>							

Scientific name	Common name	Total number of documented records	Last documented record	EPBC Act ¹	FFG Act ²	VIC ³	Likelihood of Occurrence ⁴
<i>Sminthopsis crassicaudata</i>	Fat-tailed Dunnart	11	2004	-	-	nt	3
<i>Cercartetus nanus</i>	Eastern Pygmy-possum	1	1933	-	-	nt	4
<u>Reptiles</u>							
<i>Chelodina longicollis</i>	Common Long-necked Turtle	5	2011	-	-	dd	4

Notes: 1) Listed as Critically Endangered (CR), Endangered (E), Vulnerable (V) or Migratory (M) under the EPBC Act

2) Listed (L) under the FFG Act

3) Listed as Critically Endangered (cr), Endangered (en), Vulnerable (vu), Near Threatened (nt) or Data Deficient (dd) on the Victoria Advisory List (DSE 2009a, DSE 2013)

4) Likelihood of occurrence:

1	High Likelihood	<ul style="list-style-type: none"> Known resident in the Study area based on site observations, database records, or expert advice; and/or, Recent records (i.e. within five years) of the species in the local area (VBA 2011); and/or, The Study area contains the species' preferred habitat. 	2	Moderate Likelihood	<ul style="list-style-type: none"> The species is likely to visit the Study area regularly (i.e. at least seasonally); and/or, Previous records of the species in the local area (DSE 2011b); and/or, The Study area contains some characteristics of the species' preferred habitat.
3	Low Likelihood	<ul style="list-style-type: none"> The species is likely to visit the Study area occasionally or opportunistically whilst en route to more suitable sites; and/or, There are only limited or historical records of the species in the local area (i.e. more than 20 years old); and/or, The Study area contains few or no characteristics of the species' preferred habitat. 	4	Unlikely	<ul style="list-style-type: none"> No previous records of the species in the local area; and/or, The species may fly over the Study area when moving between areas of more suitable habitat; and/or, Out of the species' range; and/or, No suitable habitat present.

- Records only identified from the EPBC Act Protected Matters Search Tool