

## Site 57. Wakley Reserve, Wantirna South

Small Council park with some patchy native vegetation. Melway ref. 63 E11.

### Site Significance Level: *Local*

- The native vegetation belongs to the endangered Ecological Vegetation Class, Valley Heathy Forest, but it is in poor condition and covers only a tiny area;
- There is one plant of a plant species (*Acacia aculeatissima*) that is Vulnerable in Knox.



### Boundaries

The site occupies the whole of this 4,402 m<sup>2</sup> reserve, but the untreed western section is not of biological significance.

**Land use & tenure:** Council park, managed partly for conservation of the bushland section.

### Site description

This site lies halfway up the eastern flank of the low ridge between Dandenong Creek and Blind Creek. Elevations are 79-81 m and the shallow slope (4% gradient) has a southeasterly aspect. The soil is shallow, poorly draining, light grey loam over clay subsoil, derived from decomposition of the underlying Lower Devonian sedimentary rocks of the Humevale formation.

The western third of the reserve has effectively no native vegetation, and nearly 2,000 m<sup>2</sup> in the west and south has practically no native understorey. The remainder of the reserve has patchy native vegetation, revegetation plots and a playground. The native understorey was evidently substantially damaged many years ago, and this was exacerbated in the past few years during residential development of the surroundings and development of the park (particularly the installation of the playground).

The highest quality native understorey is in the northeastern corner of the reserve. Past mowing has been too frequent for the welfare of the native vegetation, and probably at the wrong times of the year. The highest concentration of indigenous understorey plants is where they abut tree trunks, helping to escape mowing.

### Relationship to other land

Birds and insects would generally be able to fly easily between this reserve and either the Timmothy Drive Bushland (0, 250 m southeast) or Flamingo Reserve (Site 56, 430 m northeast), but Wakley Crescent Reserve's small size and poor ecological condition greatly diminish its attractiveness to native fauna.

**Bioregion:** Gippsland Plain

### Habitat types

Valley Heathy Forest (EVC 127, **Endangered**): Estimated as 1,200 m<sup>2</sup> (excluding trees with no native understorey beneath), comprising 20 m<sup>2</sup> in fair ecological condition (rating C) and the remainder in poor ecological condition (rating D).

**Canopy trees:** *Eucalyptus macrorhyncha* has the greatest cover. The next most abundant eucalypts are *E. cephalocarpa*, *E. goniocalyx* and *E. melliodora*. *E. ovata* and *E. obliqua* have the lowest coverage of the eucalypts. The canopy is typically 12 m tall.

**Lower trees:** *Acacia melanoxyton* and fewer *Acacia mearnsii*.

**Shrubs:** *Bursaria spinosa* is overwhelmingly dominant in the shrub layer, followed by *Cassinia aculeata*.

**Vines:** There are two or three of the scrambler, *Hardenbergia violacea*.

**Ferns:** None.

**Ground flora:** Weeds dominate. Of the indigenous species, the dominants are *Gahnia radula*, *Lomandra longifolia*, *Poa morrisii* and (seasonally) *Arthropodium strictum*. *Microlaena stipoides* and *Rytidosperma* species are also abundant. There are small numbers of the following species typically found in Valley Heathy Forest: *Cassinia aculeata*, *Dianella admixta*, *Dillwynia cinerascens* and *Lomandra filiformis* (both subspecies).

## Plant species

The following plant species were observed by the author on 15/5/02 and 26/6/03. The column headed 'Risk' indicates the indigenous species' risk of extinction in Knox with 'E'=Endangered and 'V'=Vulnerable. Additional species would no doubt be detectable in other seasons.

Risk	Indigenous Species	Risk	Indigenous Species
E	<i>Acacia aculeatissima</i> (one plant only)	V	<i>Eucalyptus melliodora</i>
V	<i>Acacia mearnsii</i>	V	<i>Eucalyptus obliqua</i>
V	<i>Acacia melanoxyton</i>	V	<i>Eucalyptus ovata</i>
E	<i>Acacia pycnantha</i> (perhaps planted)		<i>Gahnia radula</i>
	<i>Arthropodium strictum</i>	V	<i>Hardenbergia violacea</i>
	<i>Bursaria spinosa</i>		<i>Kunzea ericoides</i> spp. agg.
	<i>Cassinia aculeata</i>		<i>Lomandra filiformis</i> subsp. <i>coriacea</i>
	<i>Cassinia arcuata</i>		<i>Lomandra filiformis</i> subsp. <i>filiformis</i>
	<i>Dianella admixta</i>		<i>Lomandra longifolia</i>
V	<i>Dillwynia cinerascens</i>		<i>Microlaena stipoides</i>
V	<i>Eucalyptus cephalocarpa</i>		<i>Poa morrisii</i>
	<i>Eucalyptus goniocalyx</i>		<i>Rytidosperma</i> ? <i>linkii</i> var. <i>fulvum</i>
E	<i>Eucalyptus macrorhyncha</i>		<i>Rytidosperma racemosum</i>
<b>Introduced Species</b>			
	<i>Acacia podalyriifolia</i>		<i>Galium aparine</i>
	<i>Briza maxima</i>		<i>Hakea salicifolia</i>
	<i>Coprosma repens</i>		<i>Oxalis pes-caprae</i>
	<i>Cotoneaster glaucophyllus</i>		<i>Pinus radiata</i>
	<i>Echium plantagineum</i>		<i>Pittosporum undulatum</i>
	<i>Ehrharta erecta</i>		<i>Plantago lanceolata</i>
			<i>Romulea rosea</i>
			<i>Rubus anglocandicans</i>
			<i>Vicia</i> sp.
			<i>Watsonia meriana</i> var. <i>bulbillifera</i>

## Fauna of special significance

None found.

## Fauna habitat features

- Approximately five of the eucalypts are large enough and old enough to have hollows that could be inhabited by birds, bats, possums or insects;
- The prickly shrub layer provides protection for small native birds, and three nests were found among them.

## Significance ratings

The following is an assessment of the site's significance against the Department of Sustainability & Environment's standard criteria (Amos 2004).

### Endangered Vegetation Types

Valley Heathy Forest is endangered. It follows from Appendix 3 of *Victoria's Native Vegetation Management - a Framework for Action* (NRE 2002a) that Wakley Reserve's native vegetation is necessarily of at least High conservation significance. Criterion 3.2.3 of Amos (2004) assigns State significance to any site with a remnant patch of such vegetation.

The native vegetation at Wakley Reserve meets the Department of Sustainability & Environment's current definition of a remnant patch, but at the time Amos (2004) prepared the significance criteria, the unpublished convention was that

native vegetation only qualified as a remnant patch if it occupied at least 2,500 m<sup>2</sup>. Because this threshold is so much larger than the area of native vegetation at Wakley Reserve, the author has reduced the significance level of the site to **Local**.

#### *Rare or Threatened Plants*

Some of the locally threatened plant species listed above have viable populations, thereby meeting criterion 3.1.5 for a site of **Local** significance.

#### **Threats**

- Excessive mowing;
- Invasion by environmental weeds, of which the following species are rated as ‘Serious’: Large Quaking-grass (*Briza maxima*), Panic Veldt-grass (*Ehrharta erecta*), Cleavers (*Galium aparine*), Soursob (*Oxalis pes-caprae*), Common Onion-grass (*Romulea rosea*), a vetch (*Vicia* species) and Bulbil Watsonia (*Watsonia meriana*);
- Eucalypt dieback, currently of moderate severity;
- Fragmentation of habitat, leading to reduced visitation by small insect-eating birds and hence a risk of worsening plant pests and diseases;
- Critically small population sizes of several plant species, including *Acacia aculeatissima*.

#### **Management issues**

- It would be possible to encourage some natural regeneration of the native understorey if mowing were to be conducted more sensitively and if several species of environmental weeds were to be controlled. Specialised techniques can be used for some of the weed species: The grass weeds could be controlled by spot-spraying with grass-specific herbicide, the Soursobs can be controlled by application of glyphosate at bulb exhaustion stage (typically in August) and the Watsonias can be controlled by wiping the foliage with herbicide during active growth. However, it should be recognised that Council may have insufficient resources to do all of these things as well as properly look after its other, more important bushland reserves;
- Any future revegetation should take care not to smother or otherwise destroy the remnant native understorey.
- The plight of the locally Vulnerable species, *Acacia aculeatissima*, should be improved by planting more individuals after propagating them from seeds collected from nearby (e.g. W.G. Morris Reserve and Flamingo Reserve);
- All propagations and plantings should be documented in Council’s files about the reserve.

#### **Administration matters**

- This site is worthy of inclusion within the proposed Environmental Significance Overlay, ESO2, because of the endangered EVC which is heavily fragmented and occurs predominantly in urban surroundings;
- The Planning Scheme zoning is Public Use Zone - Service and Utility (PUZ1);
- The site and adjoining parts of two properties to the south are included under the existing Vegetation Protection Overlay Schedule 1 of the Knox Planning Scheme, based on the description of Site 71 of the report by Water Ecoscience (1998). The site described here is limited to the reserve because there is no native vegetation on the adjoining properties.

#### **Information sources used in this assessment**

- A site survey by Rik Brown on 15th May 2002 using this study’s standard approach described in Section 2.4 of Vol.1. This included:
  - Compilation of lists of indigenous and introduced plant species;
  - A description of the vegetation’s structural and floristic composition;
  - Incidental fauna observations; and
  - Checks for fauna habitat, ecological threats and management issues;
- An independent repeat of the above inspection by Dr Lorimer on 26th June 2003, for quality assurance;
- Aerial photography from February 2001 and April 2003;
- Satellite imagery of the district;
- The Department of Sustainability & Environment’s BioMaps of the area;
- Maps of geology and topography produced by agencies of the Victorian government.