

## Site 39. Kent Park, Ferntree Gully

A small Council reserve with remnant large trees and ground flora. Melway ref. 73 E4.

### Site Significance Level: *Regional*

- Contains some large old trees and very rudimentary understorey that are remnants of a regionally endangered Ecological Vegetation Class (Valley Heathy Forest);
- The ecological condition is poor due to previous clearing and mowing but there is good potential for restoration;
- The trees provide good habitat for forest birds in conjunction with adjoining residential areas, including substantial populations of lorikeets.



Aerial photograph taken April 2003



Scale 1:2,000  
10 0 20 40 60 80 100m

### Boundaries

The site boundaries coincide with the cadastral boundaries of the Council reserve. The area is 1.67 ha. There is a gradation from almost no biological significance in the northeastern corner to maximum significance in the southwestern corner.

**Land use & tenure:** Council reserve with playground facilities, zoned 'Public Park and Recreation Zone'.

### Site description

The site is located on almost flat land at an elevation of 90 m, on the divide between the catchments of Ferny Ck and the minor drainage line that passes through Lakewood Nature Reserve. The slope is less than 3% for a radius of 1 km around the site. 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 ground is uneven in the west of the reserve, suggesting past excavation. Many trees and practically all indigenous shrubs must have been cleared from the reserve long ago.

Thirty-seven mature remnant eucalypts remain, some of them very large and over a century old. There are also some planted specimens of indigenous species in the northeast and several planted trees from elsewhere in Australia in the west (particularly Bracelet Honey-myrtle, *Melaleuca armillaris*).

The root systems of the large remnant trees are efficient at extracting nutrients and moisture from the soil around them, showing up as paler areas of grass visible on the aerial photograph. Introduced grasses dominate the greener areas but they do not thrive beneath the trees, allowing some of the hardier indigenous ground flora species to survive there.

Council recognised the persistence of the indigenous ground flora and reduced the amount of mowing in some areas over the past few years. Any changes that may have occurred due to the reduction in mowing could not be discerned in this study. At the time of the survey, in May 2002, there were still very few indigenous understorey plants other than grass species, and some of the area showed no signs of natural regeneration. The species other than grasses that had regenerated were *Oxalis perennans*, two plants of *Juncus subsecundus* and single specimens of *Lomandra filiformis*, *Bursaria spinosa*, *Senecio minimus* and *Solanum ?laciniatum*. More species may be detectable in spring (including a *Glycine* that has been reported), but it is clear that the understorey is quite rudimentary.

A fire might stimulate natural regeneration, but this would be hard to achieve. A more feasible alternative would be replanting with species that are indigenous to the site's original Valley Heathy Forest community. This is an excellent site for such revegetation because of its size and the base provided by the large remnant trees.

### Relationship to other land

There are several small patches of remnant trees in the neighbourhood generally to the east, including Kent Park Primary School and nearby parks and roadsides (Site 105, p. 520), as well as Site 40 on Ferntree Gully Rd. These treed areas apparently serve as habitat for some native birds, as evidenced by the large numbers of parrots seen during the fieldwork for this study (Musk Lorikeets, Rainbow Lorikeets, rosellas). The large old trees in Kent Park no doubt play an important role in keeping the birds (and perhaps bats) in the area, particularly because of the hollows that can serve as sites for nesting and roosting. However, the treed areas in this neighbourhood have very few indigenous shrubs or wildflowers.

The closest remnant forest with more than minimal understorey is at Lakewood Nature Reserve (Site 43, 700 m west) and Egan-Lee Reserve (Site 41, 1.3 km west). These distances are quite large for transmission of pollen or seeds by insects or birds, so Kent Park's understorey plants are vulnerable to inbreeding.

Because of its large trees, Kent Park may function like a stepping-stone for movement of birds between Blind Creek and the Ferny Creek - Monbulk Creek valley, perhaps via Lakewood Nature Reserve. However this is rather speculative.

**Bioregion:** Gippsland Plain

### Habitat type

Valley Heathy Forest (EVC 127, **regionally Endangered**): Estimated to occupy 0.55 ha, all of which is in ecological condition D (poor).

Canopy trees: Dominated by *Eucalyptus cephalocarpa*, *E. goniocalyx* and *E. radiata* to 25m tall, mostly 50-80 years old but with some much larger specimens.

Lower trees: There are two *Acacia melanoxylon* saplings that may have been planted.

Shrubs: Single specimens of *Bursaria spinosa*, *Senecio minimus* and *Solanum ?laciniatum*.

Vines and ferns: None.

Ground flora: A fair cover of indigenous grasses beneath remnant eucalypts, including three *Rytidosperma* species, *Microlaena stipoides* and *Poa morrisii*. There are also scattered *Oxalis perennans*, two *Juncus subsecundus* and a single specimen of *Lomandra filiformis*.

### Plant species

The following plant species were observed by the author on 8th May 2002. The column headed 'Risk' indicates the indigenous species' risk of extinction in Knox as follows: 'C'=Critically Endangered; 'E'=Endangered; and 'V'=Vulnerable. Additional species would no doubt be detectable in other seasons.

<u>Risk</u>	<u>Indigenous Species</u>	<u>Risk</u>	<u>Indigenous Species</u>
V	<i>Acacia melanoxylon</i>		<i>Oxalis exilis/perennans</i>
	<i>Bursaria spinosa</i>		<i>Poa morrisii</i>
V	<i>Eucalyptus cephalocarpa</i>		<i>Rytidosperma geniculatum</i>
	<i>Eucalyptus goniocalyx</i>		<i>Rytidosperma penicillatum</i>
E	<i>Eucalyptus radiata</i>		<i>Rytidosperma racemosum</i>
C	<i>Eucalyptus rubida</i>		<i>Rytidosperma</i> sp.
E	<i>Juncus subsecundus</i>	E	<i>Senecio minimus</i>
	<i>Lomandra filiformis</i> subsp. <i>coriacea</i>	V	<i>Solanum laciniatum</i>
	<i>Microlaena stipoides</i>		

A single *Eucalyptus rubida* (Candlebark) grows on the nature strip of Cambden Park Pde – perhaps planted, in which case it is not significant.

### **Fauna of special significance**

None recorded during field surveys.

### **Fauna habitat features**

The crowns and tree hollows of the large old trees appear to be well used by forest birds, and the hollows may be used by bats. Substantial populations of Musk and Rainbow Lorikeets were apparent during field surveys. Unmown native grasses may serve as habitat for native butterflies, particularly Common Browns.

### **Significance ratings**

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

#### *Regionally Endangered Ecological Vegetation Class*

According to 'Victoria's Native Vegetation Management – A Framework for Action' (NRE 2002a), remnant patches of native vegetation belonging to an endangered EVC (including Valley Heathy Forest) have a conservation significance rating of either High or Very High, depending on their ecological condition. In either case, any site containing a remnant patch of such vegetation is of State significance under the Department of Sustainability & Environment's standard criteria (Amos 2004 – criterion 3.2.3).

The native vegetation at Kent Park 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 contained at least 2,500 m<sup>2</sup> with native understorey. Because this threshold is not met (or at best, scarcely met) at Kent Park, the author has reduced the significance level of the site to **Regional**.

#### *Rare or Threatened Flora*

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

### **Threats**

- Invasion by environmental weeds, particularly introduced grasses, preventing re-establishment of native species;
- Loss or decline of plant species whose populations are so small that they are vulnerable to inbreeding, poor reproductive success or elimination by incidents such as cubby house construction or digging by dogs;
- Reduced visitation of the site by small insect-eating birds due to its isolation from other areas with indigenous understorey, possibly leading to a worsening of plant pests and diseases.

### **Management issues**

- The efficacy of the reduced mowing in recent years should be assessed to see if it is succeeding in allowing indigenous species to regenerate. If not, resume heavier mowing or revegetate;
- The site has good potential for restoration of Valley Heathy Forest vegetation by planting of suitable species, even if reduced mowing does not bring about much regeneration;
- Control of introduced grasses would be very important for the success of any restoration efforts.

### **Administration matters**

- This site is suited to inclusion under the proposed ESO2 overlay because it contains a viable (if degraded) remnant of an endangered EVC, with good potential for restoration;
- The site is presently covered by Vegetation Protection Overlay 1. This is partly because of the study by Water Ecoscience (1998), in which this is Site 293 (but which the authors apparently did not inspect).

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

- A site survey undertaken during this study by Dr Lorimer for 50 minutes on 8/5/02, following this study's standard procedures discussed in Section 2.4 of Volume 1. This included descriptions of the composition and condition of the vegetation, compilation of a list of indigenous and introduced plant species, incidental fauna observations, and checks for fauna habitat, ecological threats, management issues and populations of scarce or threatened plant species;
- A similar, independent survey by Rik Brown earlier the same day (duplicated for quality control purposes);
- 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.