

Site 63. Redcourt Reserve, Scoresby

Small, Council bushland park. Melway ref. 72 F6.

Site Significance Level: *State*

- The native vegetation is of the endangered type, Valley Heathy Forest, partly in good ecological condition;
- There are five plant species that are locally threatened.



Scale 1:2,000

0 20 40 60 80 100m

Aerial photograph taken April 2003

Boundaries

This 1.74 ha site is outlined in red above, being all parts of the reserve other than the fenced kindergarten area, the associated car park and the small lot that provides a walkway to Taunton Crescent.

Land use & tenure: Part of a Council reserve, managed for conservation of bushland and for public enjoyment.

Site description

This site lies on a gentle, south-facing slope in lightly undulating terrain, at an elevation of approximately 75 m. 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 site once had two intersecting roads through it, as evidenced by the 1969 Geological Survey map and vestiges that remain today. The road routes have been returned to soil, now covered with a mixture of introduced lawn species and hardy indigenous ground flora species.

Apart from the former roads, the quality of the native vegetation generally deteriorates from the centre of the reserve to the perimeter.

Relationship to other land

The Cathies Lane road reservation (Site 62) passes 150m to the southwest of Redcourt Reserve, and may serve to some small degree as a corridor for movement of birds and insects in the neighbourhood. Planted eucalypts in neighbourhood gardens are probably also part of the habitat for native fauna found in the reserve.

The nearest substantial area of bushland is one kilometre away at Jells Park, far enough away that most native birds and insects would not find it worthwhile to fly from there to the small patch of habitat at Redcourt Reserve.

This makes Redcourt Reserve quite ecologically isolated. In particular, there would be very little infusion of pollen or seeds of indigenous understorey plants, leaving the less abundant species vulnerable to inbreeding or misadventure.

Another consequence is that birds in the area are over-dominated by the aggressive species, Red Wattlebird and Noisy Miner. This situation often leads to eucalypt dieback due to suppression of small birds that would otherwise eat insect pests.

Bioregion: Gippsland Plain

Habitat types

Valley Heathy Forest (EVC 127, Endangered): Estimated to cover 1.3 ha, comprising 0.30 ha in good ecological condition (rating B), 0.32 ha in fair ecological condition (rating C) and 0.68 ha in poor ecological condition (rating D).

Canopy trees: Dominated by *Eucalyptus radiata* and *E. melliodora*, mixed with *E. goniocalyx* toward the north and *E. cephalocarpa* toward the south.

Lower trees: Dominated by *Exocarpos cupressiformis*; also with *Acacia mearnsii*, *A. melanoxylon* and *Allocasuarina littoralis*.

Shrubs: The shrub layer is prickly and is dense in patches, with thirteen species of widely varying stature and density. The most abundant species by far is *Bursaria spinosa*. *Leptospermum continentale* and *Leptospermum scoparium* are also present and may have been more abundant once.

Vines: The light twiner, *Billardiera mutabilis*, is abundant, but there are no other climbers.

Ferns: Only represented by *Lindsaea linearis*. *Pteridium esculentum* is unexpectedly absent.

Ground flora: Densely grassy and dominated by *Poa morrisii*. Lilies and geophytes (i.e. plants that die back to underground storage organs during the unfavourable season of the year) are particularly well represented.

Plant species

The following plant species were observed by the author on 10th September 2001. Additional species would no doubt be detectable in summer. The column headed 'Risk' indicates the indigenous species' risk of extinction in Knox as follows: 'C'=Critically Endangered; 'E'=Endangered; and 'V'=Vulnerable. In addition, *Allittia cardiocarpa* is rare throughout the Melbourne region.

Risk	Indigenous Species	Risk	Indigenous Species
	<i>Acacia ?leprosa</i> × <i>paradoxa</i>	V	<i>Dianella longifolia</i> s.l.
V	<i>Acacia mearnsii</i>		<i>Dichondra repens</i>
V	<i>Acacia melanoxylon</i>	V	<i>Dillwynia cinerascens</i>
	<i>Acacia paradoxa</i>	V	<i>Drosera peltata</i> subsp. <i>auriculata</i>
V	<i>Acacia verticillata</i>	E	<i>Drosera peltata</i> subsp. <i>peltata</i>
	<i>Acrotriche serrulata</i>	V	<i>Drosera whittakeri</i>
C	<i>Allittia cardiocarpa</i>	V	<i>Epacris impressa</i>
V	<i>Allocasuarina littoralis</i>		<i>Eragrostis brownii</i>
C	<i>Amyema pendula</i>	V	<i>Eucalyptus cephalocarpa</i>
	<i>Arthropodium strictum</i>		<i>Eucalyptus goniocalyx</i>
	<i>Austrostipa rudis</i> subsp. <i>rudis</i>	V	<i>Eucalyptus melliodora</i>
	<i>Billardiera mutabilis</i>	E	<i>Eucalyptus radiata</i>
	<i>Bossiaea prostrata</i>	V	<i>Exocarpos cupressiformis</i>
	<i>Burchardia umbellata</i>	C	<i>Gastrodia sesamoides</i>
	<i>Bursaria spinosa</i>		<i>Gonocarpus tetragynus</i>
	<i>Carex breviculmis</i>	E	<i>Hydrocotyle foveolata</i>
	<i>Cassinia aculeata</i>	E	<i>Hypericum gramineum</i>
	<i>Cassinia arcuata</i>	E	<i>Hypoxis vaginata</i>
V	<i>Coprosma quadrifida</i>		<i>Juncus gregiflorus</i>
E	<i>Daviesia latifolia</i>	E	<i>Juncus subsecundus</i>
	<i>Deyeuxia quadriseta</i>	V	<i>Lagenophora gracilis</i>
	<i>Dianella admixta</i>		<i>Lepidosperma gunnii</i>

Risk	Indigenous Species	Risk	Indigenous Species
V	<i>Leptorhynchos tenuifolius</i>		<i>Poranthera microphylla</i>
	<i>Leptospermum continentale</i>		<i>Rytidosperma laeve</i>
E	<i>Leptospermum scoparium</i>		<i>Rytidosperma pallidum</i>
V	<i>Lindsaea linearis</i>		<i>Rytidosperma penicillatum</i>
	<i>Lomandra filiformis</i> subsp. <i>coriacea</i>	V	<i>Solanum ?laciniatum</i>
	<i>Lomandra filiformis</i> subsp. <i>filiformis</i>	V	<i>Solenogyne dominii</i>
	<i>Lomandra longifolia</i>	E	<i>Stackhousia monogyna</i>
V	<i>Luzula meridionalis</i>	V	<i>Thelymitra</i> sp.
	<i>Microlaena stipoides</i>		<i>Themeda triandra</i>
	<i>Microtis ?parviflora</i>		<i>Tricoryne elatior</i>
V	<i>Opercularia ovata</i>	V	<i>Veronica gracilis</i>
V	<i>Opercularia varia</i>	E	<i>Viola hederacea</i>
	<i>Oxalis exilis/perennans</i>	E	<i>Wahlenbergia gracilis</i>
C	<i>Patersonia occidentalis</i> (planted)	E	<i>Wurmbea dioica</i>
V	<i>Platylobium obtusangulum</i>	E	<i>Xanthosia dissecta</i>
	<i>Poa morrisii</i>		
Introduced Species			
	<i>Acacia floribunda</i>	<i>Centaurium erythraea</i>	<i>Oxalis incarnata</i>
	<i>Acacia longifolia</i> subsp. <i>longifolia</i>	<i>Cynodon dactylon</i>	<i>Plantago lanceolata</i>
	<i>Agrostis capillaris</i>	<i>Dactylis glomerata</i>	<i>Romulea rosea</i>
	<i>Allium triquetrum</i>	<i>Ehrharta erecta</i>	<i>Sonchus oleraceus</i>
	<i>Anthoxanthum odoratum</i>	<i>Ehrharta longiflora</i>	<i>Ulex europaeus</i>
	<i>Briza maxima</i>	<i>Galium aparine</i>	<i>Viola odorata</i>
	<i>Briza minor</i>	<i>Hypochoeris radicata</i>	<i>Vulpia bromoides</i>

Notes concerning some of the locally threatened plant species

Allittia cardiocarpa (Swamp Daisy). Two individuals were found.

Drosera peltata subsp. *peltata* (Pale Sundew). Approximately 100 were found.

Gastrodia sesamoides (Cinnamon Bells). Several stems were reported by Mr John Erwin of Knox City Council.

Hydrocotyle foveolata (Yellow Pennywort). Four were found, and numbers would vary greatly from year to year.

Hypoxis vaginata (Sheath Star). Six individuals were flowering among the *Drosera peltata* subsp. *peltata*.

Luzula meridionalis (Common Woodrush). Numbers not recorded.

Microtis ?parviflora (Slender Onion-orchid). Numbers not recorded.

Wurmbea dioica subsp. *dioica* (Common Early Nancy). 16 were seen flowering, and others are probably present.

Fauna of special significance

None detected.

Fauna habitat features

- A substantial number of logs and branches on the ground which, combined with dense shrubs and ground flora, provides good habitat for reptiles and invertebrates;
- The high density and diversity of shrubs significantly improves the habitat for native insects and birds. The prickliness of many of the shrubs helps protect birds from cats;
- Some of the larger eucalypts have hollows that may be usable for habitation by birds, bats, possums or insects;
- The dense ground flora may provide fodder for butterflies and their relatives;
- Fragmentation of the site's native vegetation is to some degree offset by the diversity of habitat (dense to open, damp to dry), which is beneficial to some native fauna.

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 Redcourt Reserve's native vegetation is necessarily of at least High conservation significance. This, in turn, gives the site **State** significance under criterion 3.2.3 of Amos (2004).

Rare or Threatened Flora

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

Threats

- Invasion by environmental weeds, particularly Veldt-grasses (*Ehrharta erecta* and *E. longiflora*) beneath Cherry Ballarts and Common Onion-grass (*Romulea rosea*) – medium-level threat;
- Critically small population sizes of several plant species, including the rare *Allittia cardiocarpa*;
- Possible future progression of moderately severe dieback disease that affects eucalypts and sheoaks. However, the symptoms appeared to be improving when the site was last inspected by the author in October 2001;
- Fragmentation of habitat, leading to reduced visitation by small insect-eating birds and hence a risk of worsening plant pests and diseases.

Management issues

- A strategy for burning parts of the reserve, initially as a trial, was developed by Dr Lorimer in consultation with Council and the Scoresby Fire Brigade, as described in the report, '*Fire in Knox Bushland Reserves 2001*';
- Grass weeds beneath Cherry Ballarts (*Exocarpos cupressiformis*) should be controlled using grass-specific herbicide;
- The plight of the locally Vulnerable species, *Allittia cardiocarpa*, should be improved by planting more individuals after propagating them from seeds collected elsewhere (e.g. Egan-Lee Reserve). Conversely, seed from Redcourt Reserve could be used to build up numbers of this species in the other reserves in Knox where it occurs;
- 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 its State significance, the locally rare and threatened plants and the endangered EVC;
- The site and the adjoining kindergarten and car park are included under the existing Vegetation Protection Overlay Schedule 1 of the Knox Planning Scheme, based on the description of Site 16 of the report by Water Ecoscience (1998). The site described here differs in its exclusion of the kindergarten and car park so as not to needlessly encumber possible future developments at the kindergarten;
- The Planning Scheme zoning is mostly Public Park and Recreation Zone (PPRZ), but the car park and the area to its west are zoned Public Use Zone - Local Government (PUZ6).

Information sources used in this assessment

- Site surveys by Dr Lorimer on 10/9/01 and 3/10/01 for the report, '*Fire in Knox Bushland Reserves 2001*' by Lorimer (2001). This included:
 - Compilation of a list of indigenous and introduced plants;
 - Detailed mapping of rare species populations and the ecological condition of the vegetation;
 - A description of the vegetation's structural and floristic composition;
 - Incidental fauna observations;
 - Checks for fauna habitat, ecological threats and management issues; and
 - Development of a strategy for ecological burning of the reserve, in consultation with Council and the Scoresby Fire Brigade;
- A list of grasses seen incidentally by Dr Lorimer during a brief visit to the reserve on 2/3/00;
- 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.