

Site 25. George Grumont Reserve, The Basin

Council bushland reserve, with native vegetation recovering from years of slashing. Melway ref. 65 F7.

Site Significance Level: *State*

- Contains an example of vegetation intermediate between two regionally Endangered Ecological Vegetation Classes. Grassy Forest and Valley Heathy Forest;
- The tree cover and grassy ground layer represent good habitat for some native fauna.



Aerial photograph taken April 2003

Boundaries

The site is the whole of George Grumont Reserve, measuring 1.03 ha.

Land use & tenure: Bushland reserve with playground, zoned Public Park and Recreation Zone (PPRZ).

Site description

This bushland reserve includes gentle slopes with natural tree cover and understorey, and a westward-flowing drainage line that has been cleared. Some of the cleared drainage line has been revegetated in recent years with indigenous species that now provide worthwhile augmentation of the naturally occurring habitat. There is also a small playground.

The whole site has a long history of slashing, but most of the native understorey has been relieved from slashing in recent years. This has brought about excellent recent regeneration of indigenous grasses and many wildflowers, but the fieldwork failed to detect some species that one would expect to find if the vegetation had not had a history of slashing, such as *Hardenbergia violacea* and *Hovea linearis*.

The site is within a narrow transition zone between the Gippsland Plain bioregion and the Highlands - Southern Fall bioregion. The vegetation is mainly intermediate between the Valley Heathy Forest that is associated with the Gippsland Plain and Grassy Forest that is associated with the Highlands - Southern Fall. There are also traces of the Swampy Woodland that would once have occurred along the drainage line.

Relationship to other land

The site abuts Site 24 and there would no doubt be substantial traffic of fauna, seeds and pollen between the two sites. There are also about a dozen mature eucalypts immediately to the west of the reserve, providing some additional habitat for arboreal fauna, but grazing in that property has destroyed the understorey. Other treed properties in the neighbourhood help to keep native birds in the area.

Bioregion: Gippsland Plain, close to the edge where it abuts the Highlands Southern Fall.

Habitat types

Intermediate Valley Heathy Forest / Grassy Forest (EVCs 127 and 128, both regionally **Endangered**): Estimated to cover 7,300 m², comprising 2,000 m² in good ecological condition (rating B), 3,100 m² in fair ecological condition (rating C) and 2,200 m² in poor ecological condition (rating D).

Dominant canopy trees: *Eucalyptus obliqua*, *E. macrorhyncha* and *E. radiata*; 20 m tall. There is also one *E. cephalocarpa*.

Dominant lower trees: *Exocarpos cupressiformis* and *Acacia melanoxylon* dominate, and *Acacia mearnsii* is also present.

Shrubs: Sparse due to past slashing. Dominated by *Bursaria spinosa* (typical of Valley Heathy Forest) along with *Acacia myrtifolia*, *Coprosma quadrifida*, *Pultenaea gunnii* and smaller numbers of other species such as *Cassinia aculeata*, *Epacris impressa* and *Leptospermum continentale*.

Vines: The light twiner, *Billardiera mutabilis*, is abundant.

Ferns: *Pteridium esculentum* is present but only in a few small patches.

Ground flora: Grassy, with 80% ground coverage. Dominated by *Poa morrisii* and *Rytidosperma pallidum* with somewhat less coverage of *Rytidosperma penicillatum* and *Platylobium formosum*. Species that are abundant but not dominant in foliage cover include *Acrotriche prostrata*, *Goodenia lanata*, *Olearia myrsinoides*, *Austrostipa pubinodis*, *Austrostipa rudis*, *Tetrarrhena juncea*, *Gahnia radula*, *Microlaena stipoides* and *Viola hederacea*. Smaller numbers of *Caesia parviflora*, *Dianella admixta*, *Dipodium roseum*, *Pimelea humilis* and *Deyeuxia quadriseta* are present. The presence of *Centella cordifolia* and *Eragrostis brownii* in lower-lying areas are pointers to what would once have been Swampy Woodland along the drainage line.

Plant species

The following plant species were observed by Dr Lorimer on the site on 3/4/02. The column headed 'Risk' indicates the indigenous species' risk of extinction in Knox with 'E'=Endangered and 'V'=Vulnerable. Additional wild indigenous species would no doubt be found in other seasons.

Risk	Indigenous Species	Risk	Indigenous Species
V	<i>Acacia mearnsii</i>	E	<i>Eucalyptus radiata</i>
V	<i>Acacia melanoxylon</i>	V	<i>Euchiton collinus</i>
E	<i>Acacia myrtifolia</i>	V	<i>Exocarpos cupressiformis</i>
V	<i>Acacia verticillata</i>		<i>Gahnia radula</i>
	<i>Acaena novae-zelandiae</i>		<i>Gonocarpus tetragynus</i>
V	<i>Acrotriche prostrata</i>		<i>Goodenia lanata</i>
	<i>Austrostipa pubinodis</i>		<i>Goodenia ovata</i>
	<i>Austrostipa rudis</i> subsp. <i>rudis</i>		<i>Leptospermum continentale</i>
	<i>Billardiera mutabilis</i>		<i>Lomandra filiformis</i> subsp. <i>coriacea</i>
	<i>Bursaria spinosa</i>		<i>Lomandra filiformis</i> subsp. <i>filiformis</i>
V	<i>Caesia parviflora</i>		<i>Lomandra longifolia</i>
	<i>Carex breviculmis</i>		<i>Microlaena stipoides</i>
	<i>Cassinia arcuata</i>	E	<i>Olearia myrsinoides</i>
E	<i>Centella cordifolia</i>		<i>Oxalis exilis/perennans</i>
V	<i>Coprosma quadrifida</i>	V	<i>Platylobium formosum</i>
	<i>Deyeuxia quadriseta</i>		<i>Poa morrisii</i>
	<i>Dianella admixta</i>	E	<i>Poa tenera</i>
	<i>Dichelachne rara</i>		<i>Poranthera microphylla</i>
E	<i>Dipodium roseum</i>		<i>Pteridium esculentum</i>
V	<i>Epacris impressa</i>	V	<i>Pultenaea gunnii</i>
	<i>Eragrostis brownii</i>		<i>Rytidosperma ?laeve</i>
V	<i>Eucalyptus cephalocarpa</i>		<i>Rytidosperma pallidum</i>
E	<i>Eucalyptus macrorhyncha</i>		<i>Rytidosperma penicillatum</i>
V	<i>Eucalyptus obliqua</i>	V	<i>Rytidosperma pilosum</i>

Risk Indigenous Species

E	<i>Rytidosperma semiannulare</i>
	<i>Rytidosperma setaceum</i>
	<i>Schoenus apogon</i>

Risk Indigenous Species

	<i>Tetrarrhena juncea</i>
	<i>Themeda triandra</i>
E	<i>Viola hederacea</i>

Introduced Species

<i>Agrostis capillaris</i>	<i>Cytisus scoparius</i>	<i>Hedera helix</i>	<i>Pittosporum undulatum</i>
<i>Aira</i> sp.	<i>Dactylis glomerata</i>	<i>Hypochoeris radicata</i>	<i>Plantago lanceolata</i>
<i>Anthoxanthum odoratum</i>	<i>Ehrharta erecta</i>	<i>Ilex aquifolium</i>	<i>Prunella vulgaris</i>
<i>Centaureum erythraea</i>	<i>Hakea salicifolia</i>	<i>Paspalum dilatatum</i>	<i>Trifolium repens</i>

Fauna habitat features

- Birds nests were observed during the site inspection;
- The many mature trees would attract a reasonable diversity of forest birds, as well as the Southern Brown Tree Frog and probably bats;
- The ground layer of dense grasses in most of the site is excellent habitat for grass-reliant butterflies and darts (some of which were observed during the site inspection);
- The planted *Gahnia sieberiana* would provide good habitat for the locally uncommon Swordgrass Brown butterfly, whose conservation has been made a priority by Knox City Council and the Knox Environment Society.

Significance ratings*Vegetation Type and Condition*

This site contains a 'remnant patch' of an endangered EVC. The Department of Sustainability & Environment's significance criterion 3.2.3 (Amos 2004) assigns **State** significance to any site containing a remnant patch of an Endangered EVC, which applies to the patch extending from this site into St Bernadette's Primary School.

Locally Threatened Plant Species

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 the environmental weeds listed below:
 - Serious: Brown-top Bent (*Agrostis capillaris*), Sweet Vernal-grass (*Anthoxanthum odoratum*), Cocksfoot (*Dactylis glomerata*), Cat's Ear (*Hypochoeris radicata*);
 - Moderate: English Broom (*Cytisus scoparius*), Panic Veldt-grass (*Ehrharta erecta*), Willow Hakea (*Hakea salicifolia*), Ivy (*Hedera helix*), Yorkshire Fog (*Holcus lanatus*), Sweet Pittosporum (*Pittosporum undulatum*) and Ribwort (*Plantago lanceolata*);
- Dumping of garden waste into the reserve from over the fences of houses to the southwest.
- Loss or decline of plant species that are present in dangerously small numbers, due to inbreeding, poor reproductive success or vulnerability to localised chance events.

Management issues

- Cessation of slashing of native ground flora has been very successful. The resources previously put into slashing are better invested in weed control;
- The reserve's ecology could be improved and the reserve's management costs reduced if certain neighbours could be persuaded not to dump garden waste there;
- If the density of indigenous shrubs does not increase naturally, it would be desirable to plant some shrub species appropriate for the site. This could improve the wildflower display and the habitat for native birds and insects.

Administration matters

- This site is worthy of inclusion within the proposed Environmental Significance Overlay, ESO2, because of the endangered EVC and the consequent State significance;
- The site is included under the existing Vegetation Protection Overlay Schedule 1 of the Knox Planning Scheme. This is partly on the basis of the investigation by Water Ecoscience (1998), in which this is part of their Site 34;
- The reserve is zoned Public Park and Recreation Zone (PPRZ).

Information sources used in this assessment

- A site survey undertaken during this study by Dr Lorimer for 1 hour 35 minutes on 3/4/02 using this study's standard procedures discussed in Section 2.4 of Volume 1. This included a description of the vegetation composition, compilation of a list of indigenous and introduced plant species, incidental fauna observations (birds, frog, butterflies, darts), and checks for fauna habitat, ecological threats and management issues;
- 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.