

Site 79. Whitecliffe Reserve, Rowville

Small Council reserve with areas of native vegetation.

Summary of significant features:

- State significance: a patch of the regionally-endangered vegetation type, Valley Heathy Forest;
- State significance: a large population of the spear-grass, *Austrostipa rudis* subspecies *australis*, which is listed as Endangered in Victoria;
- Locally significant: viable populations of five plant species that are threatened with dying out in Knox.

Aerial photograph and plan: See page 514, which covers this site, Site 78 and part of the Waverley Golf Club (Site 77).

Boundaries

The site is the whole reserve, as outlined with cyan dashes on the aerial photograph.

Land use & tenure: Council reserve, managed for nature conservation, public enjoyment and pedestrian traffic via an east-west path. There is also a small sewage pump (or similar).

Site description

This 0.48-hectare reserve lies on a very gentle, west-facing slope at the foot of the Lysterfield Hills, at an elevation of approximately 67 m. According to geological survey maps, the bedrock is Lysterfield Hills hornfels, covered in the northern half of the reserve by a deposit of colluvium, i.e. soil that has gravitated from uphill.

The topsoil is poorly drained, rather infertile loam.

A 1946 aerial photograph shows the site to have been part of a sparsely-treed grazing paddock without shrubs. Aerial photographs from the 1970s show a continuation of grazing and fewer trees, some of which may have been the planted Bracelet Honey-myrtles (*Melaleuca armillaris*) that were removed this century. The reserve's vegetation today is typical of the local form of Valley Heathy Forest after it has regenerated following clearing and grazing. (Valley Heathy Forest that has never been cleared appears not to exist anywhere.)

Despite the clearing, grazing and associated displacement of indigenous flora and fauna, there has been good regeneration of understorey where the ground has been scraped during the construction of the residential estate that led to the creation of this reserve, early this century. Species that germinated in the scalped ground included (among others) *Bossiaea prostrata*, *Dianella longifolia*, *Drosera hookeri*, *Gonocarpus tetragynus*, *Lomandra filiformis*, *Poranthera microphylla* and (most importantly) over 100 of the spear-grass, *Austrostipa rudis* subspecies *australis*, which is Endangered in Victoria. This level of regeneration indicates a good bank of indigenous plant seeds in the soil. However, the seeds are not germinating on some of the reserve because of an unnaturally dense cover of the indigenous Weeping Grass (*Microlaena stipoides*). There would be good prospects of regeneration if the groundcover were to be burned but there are many obstacles to burning in such urbanised surroundings.

Natural regeneration of indigenous plants has been supplemented by limited amounts of planting.

Relationship to other land

The reserve is only 115 m from more extensive native vegetation at the Waverley Golf Course (Site 77), 140 m from Site 78, 300 m from Churchill National Park and 500 m from the Lysterfield Hills (including Sites 80 and 81). Although the reserve's area is very small, some birds, bats and flying insects would be expected to occasionally stop at the reserve as they move around the neighbourhood. Echidnas and kangaroos are also likely to be seen on occasions. Pollen and seeds carried by some of these animals should help protect some of the plants in the reserve from inbreeding.

The surrounding residential estate is hostile to most native flora and fauna.

Bioregion: Gippsland Plain

Habitat type

Valley Heathy Forest (EVC 127, **Endangered**): Estimated to cover 0.28 ha, comprising 0.25 ha in fair ecological condition (rating C) and 0.03 ha in poor ecological condition (rating D).

Canopy trees: Dominated by *Eucalyptus cephalocarpa* and *E. radiata*.

Sub-canopy trees: Dominated by *Acacia mearnsii*, with three *Exocarpos cupressiformis*.

Shrubs: The shrub layer has been decimated by past clearing and grazing. The dominant shrub species is *Acacia paradoxa*. Other species are *Cassinia aculeata* and (formerly) *Ozothamnus ferrugineus*.

Vines: Absent. *Billardiera mutabilis* would probably germinate after a fire in the reserve. *Pandorea pandorana* is present but not indigenous to this area.

Ferns: Absent.

Groundcover: Densely grassy (95% cover) and dominated variously by *Microlaena stipoides* or *Austrostipa rudis* subsp. *australis*. *Dichondra repens* is also dense in patches. Other species that are typical of Valley Heathy Forest include *Dianella longifolia*, *D. revoluta*, *Poa morrisii*, *Tricoryne elatior*, *Veronica gracilis* and *Xanthosia dissecta*.

Plant species

The following wild, indigenous plant species were observed by the author in September 2024 or July 2002. Asterisks indicate the species not seen in 2024, which was only a brief inspection. Additional species would no doubt be detectable in summer. The column headed 'Risk' indicates the indigenous species' risk of dying out in Knox, with 'E'=Endangered, 'V'=Vulnerable and 'N'=Near threatened. In addition, *Austrostipa rudis* subsp. *australis* is listed as Endangered under Victorian law.

Risk	Wild indigenous vascular species	Risk	Wild indigenous vascular species
V	<i>Acacia mearnsii</i> , Black Wattle <i>Acacia paradoxa</i> , Hedge Wattle	E	<i>Hypericum gramineum</i> , Small St John's Wort*
C	<i>Amyema pendula</i> , Drooping Mistletoe <i>Anthosachne scabra</i> , Common Wheat-grass <i>Arthropodium strictum</i> , Chocolate Lily	E	<i>Juncus subsecundus</i> , Finger Rush <i>Lomandra filiformis</i> subsp. <i>coriacea</i> , Wattle Mat-rush
V	<i>Austrostipa rudis</i> subsp. <i>australis</i> , Veined Spear-grass <i>Austrostipa rudis</i> subsp. <i>rudis</i> , Veined Spear-grass		<i>Lomandra filiformis</i> subsp. <i>filiformis</i> , Wattle Mat-rush <i>Microlaena stipoides</i> , Weeping Grass
N	<i>Bossiaea prostrata</i> , Creeping Bossiaea (2019) <i>Cassinia aculeata</i> , Common Cassinia <i>Dianella longifolia</i> var. <i>longifolia</i> , Pale Flax-lily <i>Dianella revoluta</i> , Black-anther Flax-lily <i>Dichondra repens</i> , Kidney-weed	V	<i>Opercularia ovata</i> , Broad-leaf Stinkweed* <i>Oxalis exilis/perennans</i> , Wood-sorrel
N	<i>Drosera hookeri</i> , Branched Sundew* <i>Eragrostis brownii</i> , Common Love-grass*	V	<i>Ozothamnus ferrugineus</i> , Tree Everlasting* <i>Poa morrisii</i> , Soft Tussock-grass <i>Poranthera microphylla</i> , Small Poranthera <i>Rytidosperma pilosum</i> , Velvet Wallaby-grass <i>Rytidosperma racemosum</i> , Clustered Wallaby-grass
E	<i>Eucalyptus cephalocarpa</i> , Mealy Stringybark		<i>Schoenus apogon</i> , Common Bog-rush* <i>Senecio quadridentatus</i> , Cotton Fireweed
E	<i>Eucalyptus radiata</i> , Narrow-leaved Peppermint <i>Euchiton japonicus</i> , Creeping Cudweed*		<i>Themeda triandra</i> , Kangaroo Grass <i>Tricoryne elatior</i> , Yellow Rush-lily
V	<i>Exocarpos cupressiformis</i> , Cherry Ballart <i>Gonocarpus tetragynus</i> , Common Raspwort	V	<i>Veronica gracilis</i> , Slender Speedwell
		V	<i>Xanthosia dissecta</i> , Cut-leaf Xanthosia*

Fauna of special significance

None detected.

Fauna habitat features

The reserve provides the most basic habitat attributes of grassy woodland vegetation but its value for habitat is diminished by the small size, the small number of mature trees and the small number of plant species that are present in substantial numbers.

Significance rating

Regionally-endangered Vegetation Type

Most of the reserve's Valley Heathy Forest meets the definition of a 'remnant patch' adopted by the standard criteria, i.e. a continuous area of at least 0.25 ha in which the cover of native understorey is at least 10% throughout. (The footpath is ignored in this assessment.) Valley Heathy Forest is a regionally-endangered EVC. Under Appendix 3 of *Victoria's Native Vegetation Management – a Framework for Action* (NRE 2002a), any remnant patch of a regionally-endangered EVC has a conservation significance rating of at least High. This translates to **State** significance under criterion 3.2.3 of Amos (2004).

Threatened Plants

The spear-grass, *Austrostipa rudis* subsp. *australis*, is listed as Endangered under Victorian law. It also occurs outside Victoria. Its population in this site is quite sizeable and viable – the dominant groundcover species over hundreds of square metres. Any known habitat for such a species meets criterion 3.1.2 for **State** significance.

All the locally-threatened plant species seen in 2024 have viable populations, thereby meeting criterion 3.1.5 for **Local** significance.

Threats

- Human-induced climate change, which is predicted to cause more severe droughts, heatwaves and storms, as well as substantially lower rainfall (particularly in winter);
- Decline of tree health, partly due to the abovementioned droughts and storms;
- Loss or decline of plant species that have such small populations that they are vulnerable to inbreeding, poor reproductive success or chance events such as being struck by a falling tree limb or scratched out by a dog;
- Displacement of indigenous flora and fauna by environmental weeds, except that they are being kept well under control.

Strategic planning

- The previous (2010) edition of this report led to this site being covered by Schedule 2 of the Environmental Significance Overlay (ESO2) on the basis of the presence of the regionally-endangered Valley Heathy Forest. That rationale remains undiminished, and there is now the additional consideration that the reserve contains a sizeable population of a spear-grass species that was listed as Endangered in 2020. The current application of ESO2 to the site does not need to change;
- The reserve is zoned Neighbourhood Residential Zone – Schedule 4 (NRZ4). It is inside the Urban Growth Boundary.

Information sources used in this assessment

- An ecological survey by Dr Lorimer for approximately one hour on 31/7/02 for the first edition of this report, including:
 - Compilation of lists of indigenous and introduced plant species in the reserve;
 - Description of the structural and floristic composition of each type of native vegetation;
 - Incidental fauna observations (but only common urban birds were detected); and
 - Checks for fauna habitat, ecological threats and management issues;
- A briefer site inspection by Dr Lorimer on 18th September 2024, compiling a list of wild indigenous plant species and checking for changes in features relevant to this report compared with pre-existing information;
- Records of flora and fauna observations stored in Knox City Council's biodiversity database;
- Flora and fauna observations stored in the Atlas of Living Australia;
- Aerial and satellite imagery from between 1946 and 2025;
- The Victorian Government's 'NatureKit' website;
- Maps of geology, topography and strategic planning information produced by agencies of the Victorian Government.