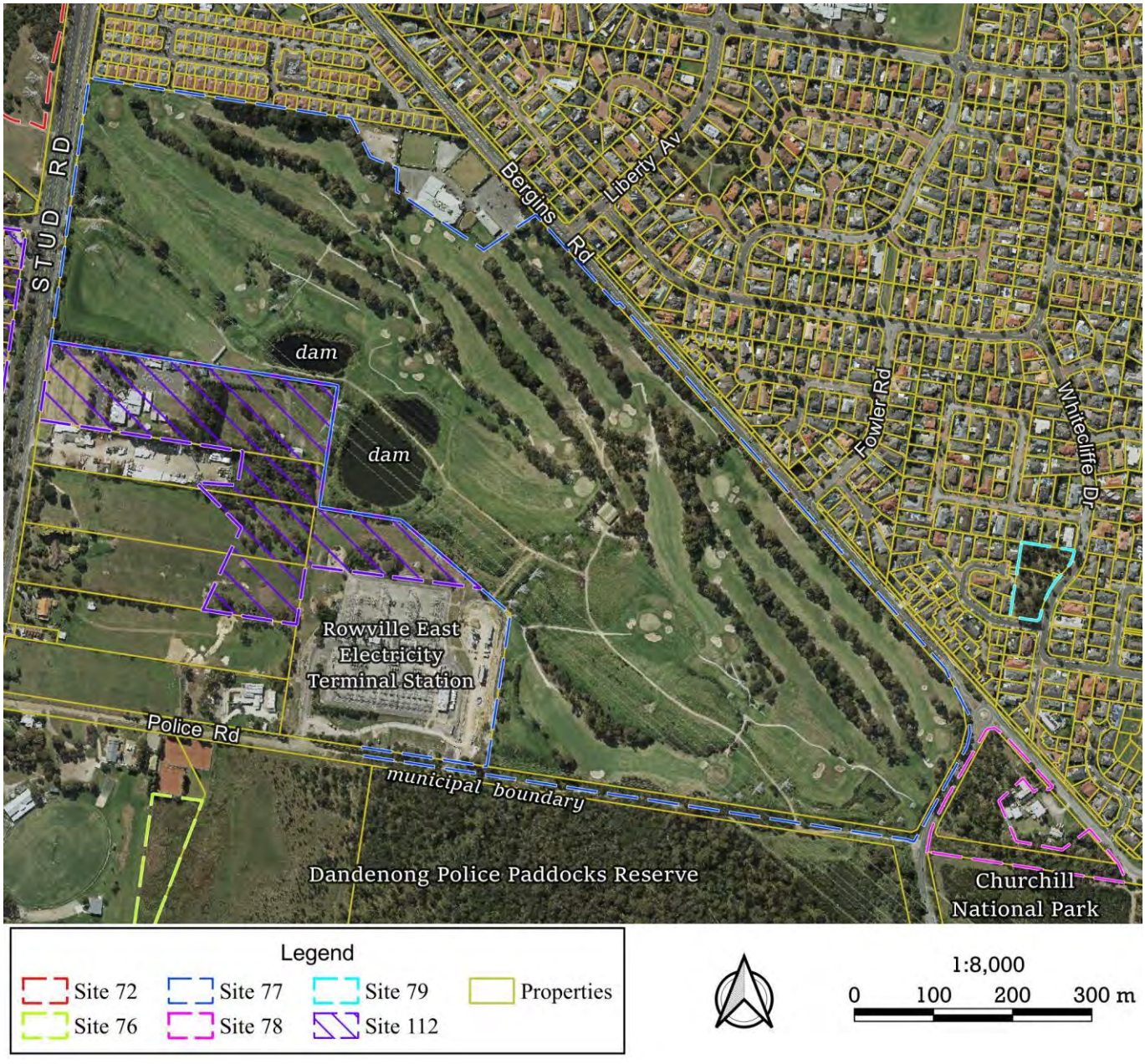
Site 77. Waverley Golf Club, Rowville

The 50 ha golf course contains patches of remnant vegetation in some of the roughs, interlinked by corridors of remnant trees and planted 'native' trees with no understorey. The abutting road reservations also have native vegetation. Five dams provide complementary habitat.

Summary of significant features:

- State significance: a large population of the spear-grass, *Austrostipa rudis* subspecies *australis*, which is listed as Endangered in Victoria;
- State significance: patches of the regionally-endangered vegetation type, Valley Heathy Forest;
- Locally significant: viable populations of scores of plant species that are threatened with dying out in Knox;
- Locally significant: the site is part of habitat corridors along the Lysterfield Hills and Dandenong Creek, which explains the site's rich wildlife;
- An arborist has identified fourteen large remnant eucalypts as significant to the site, with dimensions to 20 m tall and 22 m spread.



Boundaries

The site comprises the golf course and adjacent road verges along Bergins Rd, Churchill Park Drive and the extension of Police Rd, as outlined with blue dashes on the aerial photograph above. The site's southern boundary follows the municipal boundary, which is the limit of this report's coverage. Compared with the previous (2010) edition of this report, the boundary has been changed to exclude the area containing the clubrooms, car park, bowling greens and associated facilities.

Land use and tenure: Private golf course and road reserves.

Note

Permission was not obtained to enter the golf course, so the inspection was done from the fence and aerial photographs. This assessment relies partly on consultants' reports written for the golf club in its consideration of residential development of the site.

Site description

A ridge with elevations of approximately 70 m runs along the site's northern boundary and then to the southeast. The slopes each side of the ridgetop are gentle. There are two shallow gullies flowing southwest. One of the gullies has a dam on it just north of the Rowville East Electricity Terminal Station, visible on the aerial photograph. The other gully descends to the site's lowest point, at an elevation of 47 m, near the southeast corner of the terminal station.

The soils of the western and central parts of the site are derived from weathering of the Lower Devonian 'Humevale' siltstone, except for some alluvium in the gully. The southeastern end of the site is within the metamorphic zone between the Humevale formation and the Upper Devonian 'Lysterfield' granodiorite.

As with most of lowland Victoria, the whole site has been cleared at least once. A 1946 aerial photograph shows the site divided into paddocks with tree cover varying from absent to moderate. None of the trees were fully-grown eucalypts. The roadsides of Bergins Rd and Police Rd had no plants big enough to be called trees. (Churchill Park Drive did not exist.) Less than half the site appears to have had shrub cover.

Aerial photographs from the 1970s show the young golf course with some retained, mature trees and some saplings. There was also very dense undergrowth east of the terminal station, consistent with blackberries and/or Gorse (*Ulex europaea*).

Today, the 50-hectare golf course contains patches of remnant vegetation with native understorey in some of the roughs, interlinked by corridors of remnant trees and planted 'Australian native' trees with no understorey. An area around the maintenance shed appears to have the greatest density and diversity of indigenous understorey plants in the golf course. The road verges around the site support remnant tree cover with varying amounts of native understorey, ranging from moderately natural along part of Police Rd to absent along much of Bergins Rd. All the remnant native vegetation belongs to endangered Ecological Vegetation Classes, mainly Valley Heathy Forest.

A 2002 arboricultural report by Waters (see 'Information sources' below) examined over 2,200 trees on the golf course (not the roadsides). Over 550 of the trees were remnant indigenous trees and most of the remainder are planted specimens from other parts of Australia. Waters mentions fourteen large remnant eucalypts as being particularly significant, with dimensions to 20 m high and 22 m crown diameter. Such large trees are very likely to have some hollows used by wildlife, although few were detected.

The burgan, '*Kunzea* sp. (Upright form)', is abundant around the site, peaking in a very dense thicket along the eastern third of the site's southern periphery.

The tree cover generally – both indigenous and otherwise – provides significant habitat for birds. The dams and areas with understorey provide habitat for other species of birds, including waterbirds and scrub birds like White-browed Scrubwrens.

The forty-five native bird species that were recorded by Timewell and Costello on one September day at the site, plus two additional species observed by the present author, indicate quite rich bird life. This can be attributed to the presence of the trees, understorey and dams, and the proximity to other land with very high habitat value.

Relationship to other land

The site is contiguous with the Dandenong Police Paddocks reserve and the Dandenong Creek habitat corridor (through Site 76). It is across the road from Churchill National Park and native vegetation that extends from there to Lysterfield Lake Park and into the Dandenong Ranges. The Rowville Electricity Terminal Station (Site 72) provides further habitat just over the other side of Stud Rd. The site is therefore well connected to a major habitat corridor between the Dandenong Ck and the southern Dandenong Ranges.

Bioregion: Gippsland Plain.

Habitat types derived from brief inspections for this report and referral to Waters (2002) and Timewell & Costello (2002)

Wetland (EVC 74): Approximately 2 ha of water surface in five dams partly fringed with indigenous vegetation, apparently in poor ecological condition (rating D), based on the comments of Timewell and Costello (2002).

Swampy Woodland (EVC 937, **regionally Endangered**): roughly 0.5 ha, nearly all badly degraded (ecological condition rating D) and largely represented by weedy regrowth scrub around the dam north of the Rowville East Electricity Terminal Station.

Canopy trees: *Eucalyptus ovata, Eucalyptus cephalocarpa, Acacia melanoxylon* and *Acacia mearnsii*.

Sub-canopy trees: Dominated by *Melaleuca ericifolia*; accompanied by *Acacia melanoxylon*.

Shrubs: Very depleted by past clearing and infested with dense Gorse (*Ulex europaeus*), but the characteristic species *Leptospermum scoparium* and *Ozothamnus ferrugineus* are present, along with the weedy, questionably-indigenous *Kunzea* sp. (Upright form).

Vines: Only *Pandorea pandorana*, which is not indigenous to this part of Knox.

Ferns: Small amounts of *Pteridium esculentum*.

Groundcover: *Lomandra longifolia* subsp. *longifolia*, *Juncus amabilis, J. pallidus, J. sarophorus, Schoenus apogon*.

Valley Heathy Forest (EVC 127, **regionally Endangered**): roughly 5 ha. 55 indigenous plant species were recorded on the Police Rd extension by the author on 28/11/02, plus some extras on 18/9/24.

Canopy trees: Dominated by *Eucalyptus cephalocarpa* (c. 300 trees), accompanied by *E. radiata* (over 200 trees), *E. goniocalyx* (at least 66 trees) and smaller numbers of *E. macrorhyncha* and *E. melliodora* on the highest ground.

Sub-canopy trees: Dominated by *Acacia mearnsii, A. implexa* and *Exocarpos cupressiformis*, with some *Acacia melanoxylon* and *Allocasuarina littoralis*.

Shrubs: Severely depleted in the golf course except for patches of *Kunzea* regrowth. Other species that remain dominant in more natural areas (particularly the Police Rd extension) are *Acacia paradoxa* and *Leptospermum scoparium*.

Vines: The light twiners *Billardiera mutabilis* and *Comesperma volubile* are present (but not abundant) in the more natural areas.

Ferns: The only ferns detected are thinly scattered patches of bracken.

Groundcover: Densely grassy with *Austrostipa rudis, Dichondra repens, Microlaena stipoides, Rytidosperma racemosum* and *R. setaceum* dominant. *Lomandra filiformis* subsp. *coriacea* and *Lomandra longifolia* are both abundant, but not dominant. Lilies represent a significant fraction of the number of indigenous groundcover species.

Plant species

The following species have been recorded as growing wild in the site. Those not seen by the author from the periphery in 2024 (or in a few cases, 2002) are indicated by superscripts showing the year of the most recent record. A few clearly erroneous records by people other than the author have been excluded. The column headed 'Risk' indicates the indigenous species' risk of dying out in Knox as follows: 'C'=Critically Endangered; 'E'=Endangered; 'V'=Vulnerable; and 'N'=Near threatened. In addition, *Austrostipa rudis* subsp. *australis* is listed as Endangered in Victoria and *Wahlenbergia multicaulis* is rare in metro Melbourne.

Indigenous mosses

Campylopus introflexus, Heath Star Moss
Hypnum cupressiforme, Common Hypnum

Risk Wild indigenous vascular species

V *Acacia implexa*, Lightwood
V *Acacia mearnsii*, Black Wattle
V *Acacia melanoxylon*, Blackwood
Acacia paradoxa, Hedge Wattle
Acaena novae-zelandiae, Bidgee-widgee
E *Acrotriche serrulata*, Honey-pots
V *Allocasuarina littoralis*, Black Sheoak
C *Amyema pendula*, Drooping Mistletoe
E *Amyema quandang*, Grey Mistletoe
Arthropodium strictum, Chocolate Lily
Austrostipa pubinodis, Tall Spear-grass
V *Austrostipa rudis* subsp. *australis*, Veined Spear-grass
Austrostipa rudis subsp. *rudis*, Veined Spear-grass
Billardiera mutabilis, Common Apple-berry
N *Bossiaea prostrata*, Creeping Bossiaea [2002]
Bursaria spinosa, Sweet Bursaria
V *Caesia parviflora*, Pale Grass-lily
Carex breviculmis, Short-stem Sedge
Carex inversa, Knob Sedge [2002]
Cassinia aculeata, Common Cassinia [2016]
Cassinia longifolia, Shiny Cassinia
E *Centella cordifolia*, Centella [2016]
Clematis decipiens, a small-leafed clematis (probably not indigenous to Knox) [2016]
E *Comesperma volubile*, Love Creeper
V *Coprosma quadrifida*, Prickly Currant-bush [2002]
Crassula ?*sieberiana*, Australian Stonecrop
V *Crassula helmsii*, Swamp Crassula [2002]
Deyeuxia quadriseta, Reed Bent-grass
Dianella longifolia var. *longifolia*, Pale Flax-lily
Dianella revoluta, Black-anther Flax-lily
Dianella tasmanica, Tasman Flax-lily [2016]
Dichelachne rara, Common Plume-grass [2002]
Dichondra repens, Kidney-weed
V *Dillwynia cinerascens*, Grey Parrot-pea
V *Drosera aberrans*, Scented Sundew [2002]
V *Drosera auriculata*, Tall Sundew
N *Drosera hookeri*, Branched Sundew [2002]
Eleocharis sphacelata, Tall Spike-rush [2016]
V *Epilobium billardiereanum* subsp. *cinereum*, Variable Willow-herb [2002]
Eragrostis brownii, Common Love-grass [2002]
E *Eucalyptus cephalocarpa*, Mealy Stringybark
V *Eucalyptus goniocalyx*, Bundy [2016]
C *Eucalyptus macrorhyncha*, Red Stringybark [2016]
E *Eucalyptus melliodora*, Yellow Box
V *Eucalyptus ovata*, Swamp Gum

Risk Wild indigenous vascular species

E *Eucalyptus radiata*, Narrow-leaved Peppermint
Euchiton japonicus, Creeping Cudweed
V *Exocarpos cupressiformis*, Cherry Ballart
C *Gahnia radula*, Thatch Saw-sedge [2002]
V *Geranium* sp. 2, Variable Crane's-bill [2002]
Gonocarpus tetragynus, Common Raspwort
C *Goodenia humilis*, Swamp Goodenia [2016]
V *Hydrocotyle hirta*, Hairy Pennywort [2016]
E *Hypericum gramineum*, Small St John's Wort
Isolepis inundata, Swamp Club-rush [2016]
Juncus amabilis, Hollow Rush
Juncus gregiflorus, Green Rush [2016]
Juncus pallidus, Pale Rush
E *Juncus procerus*, Tall Rush [2002]
Juncus sarophorus, Broom Rush
E *Juncus subsecundus*, Finger Rush
Kunzea sp. (Upright form), Forest Burgan
Lachnagrostis filiformis, Common Blown-grass [2016]
E *Lagenophora adenosa/stipitata*, a bottle-daisy [2016]
Lepidosperma gunnii, Slender Sword-sedge
V *Lepidosperma laterale*, Variable Sword-sedge
C *Leptorhynchos tenuifolius*, Wiry Buttons [2002]
C *Leptospermum continentale*, Prickly Tea-tree [2016]
Leptospermum scoparium, Manuka
Lomandra filiformis subsp. *coriacea*, Wattle Mat-rush
Lomandra filiformis subsp. *filiformis*, Wattle Mat-rush [2016]
Lomandra longifolia subsp. *longifolia*, Spiny-headed Mat-rush
Lythrum hyssopifolia, Lesser Loosestrife [2002]
E *Melaleuca ericifolia*, Swamp Paperbark
Microlaena stipoides, Weeping Grass
V *Opercularia ovata*, Broad-leaf Stinkweed
V *Opercularia varia*, Variable Stinkweed [2002]
Oxalis exilis/perennans, Wood-sorrel
V *Ozothamnus ferrugineus*, Tree Everlasting
Pandorea pandorana, Wonga Vine
Persicaria decipiens, Slender Knotweed [2016]
E *Platylobium obtusangulum*, Common Flat-pea
E *Poa labillardierei*, Common Tussock-grass [2016]
Poa morrisii, Soft Tussock-grass
Poranthera microphylla, Small Poranthera
Pteridium esculentum, Austral Bracken
Pterostylis nutans, Nodding Greenhood [2002]
E *Rytidosperma caespitosum*, Common Wallaby-grass [2016]
Rytidosperma geniculatum, Kneed Wallaby-grass [2002]
E *Rytidosperma pallidum*, Red-anther (or Silvertop) Wallaby-grass

Risk	Wild indigenous vascular species
	Rytidosperma penicillatum, Slender Wallaby-grass [2002]
	Rytidosperma pilosum, Velvet Wallaby-grass
	Rytidosperma racemosum, Clustered Wallaby-grass
	Rytidosperma setaceum, Bristly Wallaby-grass
	Rytidosperma tenuius, Purplish Wallaby-grass
	Schoenus apogon, Common Bog-rush
V	*Senecio glomeratus*, Annual Fireweed [2002]
	Senecio minimus, Shrubby Fireweed
	Senecio quadridentatus, Cotton Fireweed [2016]
V	*Solanum laciniatum*, Large Kangaroo Apple [2016]
V	*Solenogyne dominii*, Smooth Solenogyne [2002]
	Themeda triandra, Kangaroo Grass
E	*Thysanotus patersonii*, Twining Fringe-lily [2002]
	Tricoryne elatior, Yellow Rush-lily
	Typha sp., a cumbungi [2002]
V	*Veronica gracilis*, Slender Speedwell [2002]
E	*Viola hederacea*, Ivy-leaf Violet [2002]
C	*Wahlenbergia multicaulis*, Tadgell's Bluebell [2002]

Introduced species
Acacia longifolia subsp. *longifolia*, Sallow Wattle [2002]
Acetosella vulgaris, Sheep Sorrel [2016]
Agapanthus praecox, Agapanthus [2016]
Agrostis capillaris, Brown-top Bent
Anthoxanthum odoratum, Sweet Vernal-grass
Briza maxima, Large Quaking-grass
Cassinia sifton, Sifton Bush
Cenchrus clandestinus, Kikuyu Grass
Centaurium erythraea, Common Centaury

Introduced species
Chrysanthemoides monilifera subsp. *monilifera*, Boneseed [2002]
Cirsium vulgare, Spear Thistle [2016]
Cynodon dactylon, Couch
Cyperus eragrostis, Drain Flat-sedge
Dactylis glomerata, Cocksfoot
Delairea odorata, Cape Ivy [2016]
Dipogon lignosus, Common Dipogon [2016]
Ehrharta erecta, Panic Veldt-grass
Erica lusitanica, Spanish Heath [2002]
Erigeron bonariensis, Flaxleaf Fleabane [2002]
Erigeron sumatrensis, Fleabane [2016]
Genista linifolia, Flax-leafed Broom [2016]
Genista monspessulana, Montpellier Broom [2016]
Holcus lanatus, Yorkshire Fog
Hypochaeris radicata, Cat's Ear
Leontodon saxatilis, Lesser Hawkbit [2002]
Melaleuca armillaris, Bracelet Honey-myrtle
Nassella neesiana, Chilean Needle-grass [2019]
Paspalum dilatatum, Paspalum
Phalaris aquatica, Toowoomba Canary-grass [2016]
Pinus radiata, Monterey Pine [2016]
Pittosporum undulatum, Sweet Pittosporum
Plantago lanceolata, Ribwort [2016]
Quercus robur, English Oak [2016]
Rubus anglocandicans, Blackberry
Schoenoplectus tabernaemontani, River Club-rush [2016]
Setaria parviflora, Slender Pigeon Grass [2016]
Solanum nigrum, Black Nightshade [2016]
Sonchus oleraceus, Sow-thistle
Sporobolus africanus, Rat-tail Grass
Trifolium repens, White Clover [2016]
Ulex europaeus, Gorse (Furze)
Zantedeschia aethiopica, White Arum Lily [2016]

Notes concerning a threatened plant species

Austrostipa rudis subsp. *australis* (a subspecies of Veined Spear-grass) is listed as Endangered under Victorian law. There is a large population of it along the Police Rd extension. It may also be in the golf course, out of sight of the author. Other people's records of *A. rudis* from the site were not identified to subspecific level.

Fauna of special significance

The following species were observed by Timewell and Costello (2002):

Listed as Vulnerable under Commonwealth and Victorian law

Grey-headed Flying-fox – the observation at the Waverley Golf Club is possibly no more significant than the nightly visits of this species to gardens all around Melbourne.

Rare in Knox

Krefft's Glider (Sugar Glider)

Brush Bronzewing

Verraux's Tree Frog

Timewell and Costello (2002, p. 14) expect that the golf course provides habitat for wallabies and antechinus. These animals are rare in Knox.

The reliable naturalist, Darren Wallace, reports that Grey-crowned Babblers were once seen on this site, but there is no significant chance that this will be repeated in the foreseeable future.

Fauna habitat features

- Large remnant eucalypts that probably have hollows used by wildlife;
- Indigenous understorey that supports small birds and possums (including Krefft's/Sugar Gliders);
- Dense patches of Burgan (*Kunzea* sp. (Upright form)) that are favoured by wrens;
- Dams for waterbirds.

Significance ratings

The following is an assessment of the site's biological significance against the Department of Energy, Environment & Climate Action's standard criteria (Amos 2004).

Ecological Integrity and Viability

The site is part of a habitat corridor connecting the southern Dandenong Ranges with the Dandenong Creek habitat corridor and the Rowville Electricity Terminal Station. The corridor is taken here to be locally important. This represents **Local** significance under criterion 1.2.6 of Amos (2004).

Regionally-endangered Ecological Vegetation Class

The Valley Heathy Forest that grows on elevated ground along the Police Rd reservation and far into the Dandenong Police Paddocks 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. 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).

The 2002 report by Timewell and Costello mapped additional 'remnant patches' of Valley Heathy Forest within the golf course. It seems likely that they remain, and are therefore also of **State** significance.

Threatened Plants

Austrostipa rudis subsp. *australis* is listed as Endangered under Victorian law. It also occurs outside Victoria. Its population in this site is large and quite viable. Any known habitat for such a species meets criterion 3.1.2 for **State** significance.

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

Threatened Fauna

Too little is known about the site's fauna to determine whether the site contributes to a material extent to the habitat of any significant fauna species.

Threats

- Possible future residential development;
- Possible road construction along the Police Rd reservation;
- 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;
- Displacement of indigenous flora and fauna by environmental weeds (particularly Gorse, blackberry and Kikuyu Grass), exacerbated by debilitation of the native vegetation by the impacts of climate change;
- 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.

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 its biological significance that was known at the time and the subdivision potential. Since 2010, the only change that has any material effect on the reasons for applying ESO2 to the site is that the spear-grass, *Austrostipa rudis* subsp. *australis*, has been listed as Endangered under

Victorian law, making the site's large population more demonstrably significant. The argument for applying ESO2 to the site has strengthened as a result. No recommendation is made for amending ESO2 regarding this site other than the option of excising the clubrooms, car park, bowling greens and associated facilities, as done here. Note that ESO2 exempts maintenance of a golf course and associated assets;

- The whole site is zoned 'Special Use – Schedule 1'. It is outside the Urban Growth Boundary.

Information sources used in this assessment

- An arborist's assessment of over 2,200 trees on the golf course north of the transmission lines, including species, size, health, structural soundness and retention value: see Waters G. (2002). *"Arboricultural Assessment and Report for Waverley Golf Club – 'Bergins Green'"*. Report on behalf of Treelogic (4/21 Eugene Tce, Ringwood) for the golf club, dated September 2002. 62 pp.;
- A single list of indigenous and introduced plant species on the golf course (not the roadsides), compiled during August and September 2002, corrected and supplemented by the present author: see Timewell C. and Costello C. (2002). *'Ecological Assessment of the Proposed Bergins Green Development, Rowville, Victoria'*. Report on behalf of Biosis Research, 322 Bay St, Port Melbourne for Waverley Golf Club, dated September 2002;
- Additional lists of flora for the golf course, the neighbouring Police Rd extension, the 'Syrena' Polish House (Swampy Woodland and Valley Heathy Forest separately) and the Stud Rd nursery abutting the course's largest dam, compiled by Dr Lorimer on 28th November 2002;
- Incidental bird observations by Dr Lorimer on the same day;
- A site inspection from around the periphery 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.