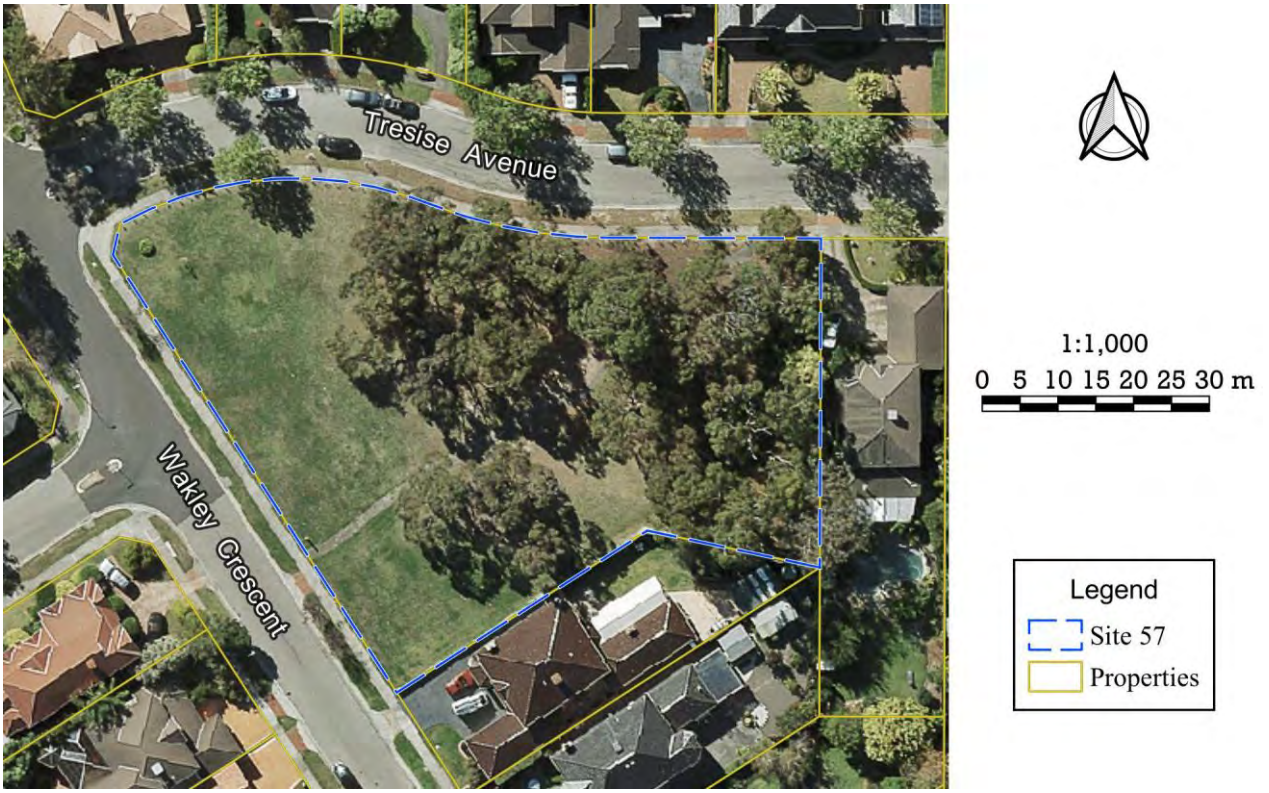
Site 57. Wakley Reserve, Wantirna South

Small Council park with some skeletal native vegetation.

Summary of significant features:

- Locally significant: viable populations of some eucalypt species that are threatened with dying out in Knox.



Boundaries

The site occupies the whole of this 4,402 m² reserve, as outlined with blue dashes above, but the untreed western section is not of biological significance.

Land use & tenure: Council park, managed partly for conservation of the bushland section.

Site description

This site lies halfway up the eastern flank of the low ridge between Dandenong Creek and Blind Creek. Elevations are 79–81 m and the shallow slope (4% gradient) has a southeasterly aspect. The soil is shallow, poorly draining, pale silty loam over clay subsoil, derived from weathering of the underlying Lower Devonian siltstone of the Humevale formation.

The western third of the reserve has almost no native vegetation other than mosses and liverworts, most of which appear after ground is laid bare by herbicide spraying next to the footpaths. While inspecting that ground in 2024, the author was surprised to find only the second known occurrence of each of the liverworts *Fossombronia* ?*wondraczekii* and *Riccia crystallina* in Knox's history. Because such habitats are not systematically surveyed for flora, it is not possible to be confident about how rare those species are in the suburban landscape.

The rest of the reserve has a variable cover of remnant eucalypts, most of which are in better health than usual in Knox. Nestled among the eucalypts are a playground, some mulched beds with planted indigenous species, a small number of remnant understorey plants and some frequently-mown lawn. At the time of the previous botanical survey in 2003, there were patches of indigenous groundcover, including species such as Thin-leaf Wattle (*Acacia aculeatissima* – a creeper), Purple Coral-pea (*Hardenbergia violacea*) and an abundance of Soft Tussock-grass (*Poa morrisii*). The first edition of this report identified the threat that frequent mowing posed to

such species and that warning has come to fruition. The situation has been worsened greatly by the mulch and Agapanthus of a neighbour's garden being extended into what was the reserve's most significant native understorey, in the northeast corner. The only remaining native understorey there now is some Sweet Bursaria (*Bursaria spinosa*).

The outcome of the loss of most native understorey is that the reserve's only remaining biologically-significant features are the remnant eucalypts.

Relationship to other land

Flying fauna would generally be able to fly easily between this reserve and either the Timmothy Drive Bushland (Site 59, 250 m southeast) or Flamingo Reserve (Site 56, 430 m northeast) but Wakley Crescent Reserve's small size and poor ecological condition greatly diminish its attractiveness to native fauna.

Bioregion: Gippsland Plain

Habitat types

Valley Heathy Forest (EVC 127, **Endangered**) reduced to trees with scant native understorey beneath.

Canopy trees: *Eucalyptus macrorhyncha* and *E. goniocalyx* have the greatest cover, followed by *E. melliodora*. The other eucalypts are *E. cephalocarpa, E. ovata* and *E. obliqua*.

Sub-canopy trees: *Acacia melanoxylon* is scarce but was much less so in 2003. *Acacia mearnsii* was also present in 2003 but no longer. There are some *Acacia pycnantha*, which may well have been planted.

Shrubs: *Bursaria spinosa* was abundant in 2003 but now scarce. *Cassinia aculeata* was scarce and has since died out.

Vines: There were two or three of the scrambler, *Hardenbergia violacea*, in 2003 but none remain.

Ferns: None.

Groundcover: The most abundant remaining species are *Gahnia radula* and *Lomandra longifolia* subsp. *longifolia*. In 2003, *Poa morrisii* was a dominant groundcover species and *Arthropodium strictum* was subdominant but neither species was found in 2024. Other species that appear to have died out include *Acacia aculeatissima, Dillwynia cinerascens* and *Lomandra filiformis* (both subspecies). *Microlaena stipoides* and *Rytidosperma racemosum* remain in the lawn and there is a trace of *Dianella revoluta*.

Plant species

The author observed the following species of wild plant in the reserve on either 16th June 2003 or 24th August 2024. Asterisks indicate indigenous species seen only in 2003. Additional species would probably be detectable if not for the frequent mowing. The column headed 'Risk' indicates the indigenous species' risk of dying out in Knox as follows: 'C'=Critically Endangered; 'E'=Endangered; and 'V'=Vulnerable.

Indigenous mosses and liverworts
Campylopus introflexus, Heath Star Moss
Chiloscyphus semiteres, Green Worms
Fossombronia ?*wondraczekii*, a liverwort
Riccia crystallina, a liverwort

Risk	Wild indigenous vascular species
E	*Acacia aculeatissima*, Thin-leaf Wattle*
V	*Acacia mearnsii*, Black Wattle*
V	*Acacia melanoxylon*, Blackwood
V	*Acacia pycnantha*, Golden Wattle (planted?)
	Arthropodium strictum, Chocolate Lily*
	Bursaria spinosa, Sweet Bursaria
	Cassinia aculeata, Common Cassinia*
	Cotula australis, Common Cotula
	Crassula decumbens, Spreading Crassula
	Dianella revoluta, Black-anther Flax-lily
V	*Dillwynia cinerascens*, Grey Parrot-pea*
	Epilobium cf. *billardiereanum* subsp. *intermedium*, a willow-herb
E	*Eucalyptus cephalocarpa*, Mealy Stringybark
V	*Eucalyptus goniocalyx*, Bundy
C	*Eucalyptus macrorhyncha*, Red Stringybark
E	*Eucalyptus melliodora*, Yellow Box
E	*Eucalyptus obliqua*, Messmate Stringybark
V	*Eucalyptus ovata*, Swamp Gum
C	*Gahnia radula*, Thatch Saw-sedge
E	*Hardenbergia violacea*, Purple Coral-pea*
	Kunzea leptospermoides, Yarra Burgan*
	Lomandra filiformis subsp. *coriacea*, Wattle Mat-rush*
	Lomandra filiformis subsp. *filiformis*, Wattle Mat-rush*
	Lomandra longifolia, Spiny-headed Mat-rush*

Risk Wild indigenous vascular species

Lomandra longifolia subsp. *longifolia*, Spiny-headed Mat-rush
Microlaena stipoides, Weeping Grass
Poa morrisii, Soft Tussock-grass*
Rytidosperma ?*fulvum*, Leafy Wallaby-grass*
Rytidosperma racemosum, Clustered Wallaby-grass

Introduced species

Briza maxima, Large Quaking-grass
Cassinia sifton, Sifton Bush
Coprosma repens, Mirror-bush
Cotoneaster glaucophyllus, Cotoneaster

Introduced species

Crassula alata, Three-part Crassula
Echium plantagineum, Paterson's Curse
Ehrharta erecta, Panic Veldt-grass
Galium aparine, Cleavers
Hakea salicifolia, Willow-leaf Hakea
Oxalis pes-caprae, Soursob
Pittosporum undulatum, Sweet Pittosporum
Plantago lanceolata, Ribwort
Romulea rosea, Common Onion-grass
Rubus anglocandicans, Blackberry
Vicia sp., a Vetch
Watsonia meriana var. *bulbillifera*, Bulbil Watsonia

Fauna of special significance

None found or expected.

Fauna habitat features

Approximately five of the eucalypts are large enough and old enough to have hollows that could be inhabited by birds, bats, possums or invertebrates.

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).

Endangered Vegetation Types

The site's vegetation derives from a regionally-endangered EVC (Valley Heathy Forest) but it does not meet the definition of a 'remnant patch' adopted by the standard criteria, i.e. a continuous area of at least 0.25 ha with at least 10% native understorey cover throughout. As such, the presence of the regionally-endangered EVC is not treated as being significant under the standard criteria.

Threatened Plants

Eucalyptus goniocalyx, E. macrorhyncha and *E. melliodora* have viable populations as long as their seedlings are allowed to escape mowing sometime over the lifetimes of the current generation. This assessment of viability takes into account the trees' above-average health and the likelihood of pollen exchange with nearby stands of these species. Viable populations of any locally-threatened species such as these qualify for **Local** significance under criterion 3.1.5.

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 in the health of eucalypts, which are sensitive to the abovementioned droughts and storms;
- Prevention of eucalypt recruitment or any recovery of native understorey, due to mowing and the extension of a neighbour's garden into the reserve;
- Loss or decline of plant species that are present in such small numbers that they are vulnerable to inbreeding, poor reproductive success or chance events such as being scratched out by a dog.

Strategic planning

- The previous (2010) edition of this report led to Wakley Reserve being covered by Schedule 2 of the Environmental Significance Overlay (ESO2). The reason given for applying the overlay was the endangered EVC. So many indigenous understorey plants have been destroyed that the only remaining biologically-significant feature is the presence of locally-threatened eucalypt species. The strength of the justification for applying ESO2 has weakened as a result but there remains some biological significance and ESO2 does not

seem to impose unreasonable encumbrances on the land. No recommendation is made to change the application of ESO2 to the reserve

- If ESO2 were to be removed from the reserve, the property is just large enough to avoid the size-based exemption from the state-wide baseline planning controls over removal of native vegetation (clause 52.17).

Information sources used in this assessment

- An ecological survey by Rik Brown on 15th May 2002 for the first edition of this report. This included:
  - Compilation of lists of indigenous and introduced plant species;
  - A description of the vegetation's structural and floristic composition;
  - Incidental fauna observations; and
  - Checks for fauna habitat, ecological threats and management issues;
- An independent repeat of the above survey by Dr Lorimer on 26th June 2003, for quality assurance;
- An inspection of the site by Dr Lorimer on 24th August 2024, compiling a list of wild, indigenous plant species and checking for changes in features relevant to this report since his 2003 survey;
- A search for records of flora and fauna observations stored in the Atlas of Living Australia (of which there were none);
- 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.