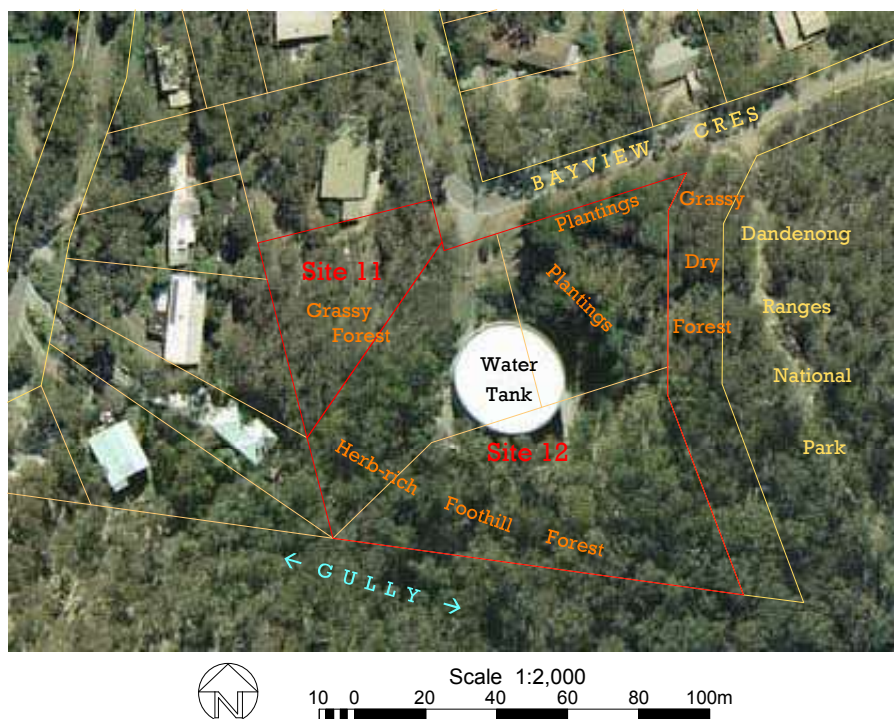


## Site 11. Bayview Crescent Reserve, The Basin

Small Council bushland reserve in a bushland neighbourhood on Chandlers Hill. Melway ref. 65 G9.

### Site Significance Level: *State*

- The native vegetation grades between three Ecological Vegetation Classes, one of which (Grassy Forest) is regionally Vulnerable;
- There are six plant species that are Vulnerable in Knox and one that is very likely to be Critically Endangered in Knox;
- The site represents a small extension to the flora and fauna habitat of the neighbouring Chandlers Hill block of the Dandenong Ranges National Park;
- A range of fauna found in the national park, including rare species, are likely to periodically use the reserve;
- The reserve has rich birdlife.



### Boundaries

This 1,722 m<sup>2</sup> site comprises the whole lot outlined in red and marked 'Site 11' on the aerial photograph above.

**Land use & tenure:** Council reserve, zoned 'Low Density Residential Zone' (LDRZ).

### Site description

This site and the abutting Site 12 are on the northern flank of a gully that drains westward from the northern slopes of Chandlers Hill. It has a steep southwesterly slope of typically 30% and an elevation range of approximately 247-267 m. The soil is stony clay derived from the Kalorama rhyodacite formation. On the upper slope (near Bayview Crescent), the steepness and the soil composition result in rapid drainage, and the soil becomes very dry during the first quarter of each year. The lowest parts of the site receive runoff water from uphill as well as topographic shade from the late afternoon sun in summer, thereby retaining higher soil moisture.

The resulting native vegetation communities grade indistinctly from Grassy Dry Forest near the road, through Grassy Forest to Herb-rich Foothill Forest in the southern corner.

Overall, the native vegetation's ecological condition is approximately equally divided between rating B (good) and C (fair).

Council only discovered that it owned the reserve in the past three years, and a major weed control effort has been under way since. No fewer than three declared noxious species of broom were rampant, creating a persistent problem.

Council has designated the reserve Significant Vegetation Site KN83.

Some neighbours have been using the reserve as an effective extension of their garden for many years, including planting of ornamentals and cutting of native vegetation. Other neighbours use a path through the reserve to access the Dandenong Ranges National Park from Bayview Crescent.

### Relationship to other land

The Dandenong Ranges National Park, just 27 m from this site, is of high National significance for its native vegetation and wildlife. Its presence greatly increases the security of the flora in the reserve, because seeds and pollen from the park no doubt enter the reserve and hence prevent inbreeding of flora. Extensive movement of fauna was observed between the reserve and the park. Indeed, birdwatching in the reserve seemed to be as good as in the adjacent part of the national park, making it one of the best spots for birdwatching in Knox.

The adjoining South East Water land (Site 12) provides continuity of habitat between the national park and the reserve. Together, the two sites effectively represent a small extension to the habitat in the national park. The South East Water land contains some serious weeds, comparable to the reserve, and the landowners of both properties are conducting a joint effort to correct this.

The residential neighbourhood around the reserve presents a mild risk to the site's natural values due to spread of garden weeds and damaging activities by people and pets entering the property.

**Bioregion:** Highlands Southern Fall

### Habitat types

**Grassy Dry Forest** (EVC 22, conservation status rated 'Least Concern' in the bioregion): estimated as 300 m<sup>2</sup> in fair ecological condition (rating C).

Dominant canopy trees: *Eucalyptus goniocalyx* and *E. macrorhyncha*, with an out-of-character *E. cypellocarpa*.

Dominant lower trees: *Exocarpos cupressiformis*.

Shrubs: Depleted by clearing, and comprising *Bursaria spinosa*, *Cassinia aculeata* and *Pultenaea scabra*.

Vines: *Pandorea pandorana*.

Ground flora: Dominated by *Themeda triandra* and *Rytidosperma pallidum*. The following species are abundant but not dominant: *Dianella admixta*, *Lomandra filiformis*, *Rytidosperma* species, *Poa morrisii*, *Plantago varia*, *Bossiaea prostrata*, *Burchardia umbellata*, *Drosera peltata* subsp. *auriculata*. *Lepidosperma laterale* is characteristically present, but it is not abundant.

**Grassy Forest** (EVC 128, **regionally Vulnerable**): estimated as 1,000 m<sup>2</sup> in area (but imprecise due to intergradation with the other EVCs), approximately equal proportions in ecological condition ratings B and C (good and fair).

Dominant canopy trees: *Eucalyptus goniocalyx*, *E. macrorhyncha* and *E. radiata*.

Dominant lower trees: *Exocarpos cupressiformis* and *Acacia melanoxylon* are rather abundant.

Shrubs: Dominated by *Bursaria spinosa*, *Cassinia aculeata* and *Pultenaea scabra*. Other species include *Acacia stricta*, *Bursaria spinosa*, *Epacris impressa*, *Exocarpos strictus*, *Goodenia ovata*, *Indigofera australis* and *Senecio* species.

Vines: *Billardiera mutabilis*, *Clematis aristata*, *Glycine clandestina* and *Rubus parvifolius*, as well as *Pandorea pandorana* where the soil has been recently disturbed.

Ferns: *Adiantum aethiopicum* forms large patches and *Pteridium esculentum* forms small patches.

Ground flora: The indigenous ground flora has reduced in density and depth and is recovering following weed control. Dominated by *Themeda triandra* and *Rytidosperma pallidum*, with abundant *Gonocarpus tetragynus* and *Lomandra filiformis* subsp. *coriacea*. Other species include *Acrotriche prostrata*, *A. serrulata*, *Asperula conferta*, *Burchardia umbellata*, *Carex breviculmis*, *Deyeuxia quadriseta*, three species of *Dianella longifolia*, *Drosera peltata auriculata*, *Geranium potentilloides*, *Goodenia ovata*, *Hydrocotyle hirta*, *Lepidosperma laterale*, *Lomandra longifolia*, *Microlaena stipoides*, *Olearia myrsinoides*, *Opercularia varia*, *Oxalis perennans*, *Pimelea humilis*, *Plantago varia*, *Platylobium formosum*, *Poranthera microphylla*, *Ranunculus lappaceus*, *Stackhousia monogyna*, *Stylidium armeria*, *Tetradlea ciliata*, *Veronica calycina*, *Viola hederacea* and *Wahlenbergia stricta*.

**Herb-rich Foothill Forest** (EVC 23, conservation status rated 'Least Concern' in the bioregion): estimated as 400 m<sup>2</sup> in area (but imprecise due to intergradation with the Grassy Forest), approximately equal proportions in ecological condition ratings B and C (good and fair). The composition of the Herb-rich Foothill Forest is best indicated by the description for Site 12 (p. 58), where this EVC is more expansive and the understorey not as modified.

## Plant species

As listed below, the author observed 59 indigenous plant species on 6th November 2002 plus *Cynoglossum suaveolens* on 16th July 2004. The column headed 'Risk' indicates the indigenous species' risk of extinction in Knox as follows: 'C'=Critically Endangered; 'E'=Endangered; and 'V'=Vulnerable.

Risk	Indigenous Species	Risk	Indigenous Species
V	<i>Acacia melanoxylon</i>		<i>Goodenia ovata</i>
E	<i>Acacia stricta</i>	V	<i>Hydrocotyle hirta</i>
V	<i>Acrotriche prostrata</i>	E	<i>Indigofera australis</i>
	<i>Acrotriche serrulata</i>	V	<i>Lepidosperma laterale</i>
V	<i>Adiantum aethiopicum</i>		<i>Lomandra filiformis</i> subsp. <i>coriacea</i>
C	<i>Arthropodium ?milleflorum</i>		<i>Lomandra longifolia</i>
	<i>Arthropodium strictum</i>		<i>Microlaena stipoides</i>
C	<i>Asperula conferta</i>	E	<i>Olearia myrsinoides</i>
	<i>Billardiera mutabilis</i>	V	<i>Opercularia varia</i>
	<i>Burchardia umbellata</i>		<i>Oxalis exilis/perennans</i>
	<i>Bursaria spinosa</i>		<i>Pandorea pandorana</i>
	<i>Carex breviculmis</i>	V	<i>Pimelea humilis</i>
	<i>Cassinia aculeata</i>	V	<i>Plantago varia</i>
V	<i>Clematis aristata</i>	V	<i>Platylobium formosum</i>
E	<i>Cynoglossum suaveolens</i>		<i>Poa ensiformis</i>
E	<i>Desmodium gunnii</i>		<i>Poranthera microphylla</i>
	<i>Deyeuxia quadriseta</i>		<i>Pteridium esculentum</i>
	<i>Dianella admixta</i>	C	<i>Pultenaea scabra</i>
V	<i>Dianella longifolia</i> s.l.	E	<i>Ranunculus lappaceus</i>
V	<i>Dianella tasmanica</i>	E	<i>Rubus parvifolius</i>
V	<i>Drosera peltata</i> subsp. <i>auriculata</i>		<i>Rytidosperma pallidum</i>
V	<i>Epacris impressa</i>		<i>Senecio hispidulus</i>
V	<i>Eucalyptus cypellocarpa</i>	E	<i>Senecio prenanthoides</i>
	<i>Eucalyptus goniocalyx</i>	E	<i>Stackhousia monogyna</i>
E	<i>Eucalyptus macrorhyncha</i>	E	<i>Stylidium armeria/graminifolium</i>
V	<i>Exocarpos cupressiformis</i>	E	<i>Tetradthea ciliata</i>
E	<i>Exocarpos strictus</i>		<i>Themeda triandra</i>
V	<i>Geranium potentilloides</i>	E	<i>Veronica calycina</i>
V	<i>Glycine clandestina</i>	E	<i>Viola hederacea</i>
	<i>Gonocarpus tetragynus</i>	E	<i>Wahlenbergia stricta</i>
Introduced Species			
	<i>Acacia longifolia</i> subsp. <i>longifolia</i>		<i>Plantago lanceolata</i>
	<i>Agapanthus praecox</i>		<i>Prunus cerasifera</i>
	<i>Anthoxanthum odoratum</i>		<i>Rubus anglocandicans</i>
	<i>Asparagus scandens</i>		<i>Vicia disperma</i>
	<i>Billardiera heterophylla</i>		<i>Vicia sativa</i>
	<i>Briza maxima</i>		<i>Watsonia borbonica</i>
	<i>Cotoneaster glaucophyllus</i>		
	<i>Cytisus scoparius</i>		
	<i>Ehrharta erecta</i>		
	<i>Erica lusitanica</i>		
	<i>Genista linifolia</i>		
	<i>Genista monspessulana</i>		
	<i>Hypochoeris radicata</i>		
	<i>Ixia polystachya</i>		
	<i>Oxalis pes-caprae</i>		
	<i>Pittosporum undulatum</i>		

### Notes about some of the locally threatened plant species

*Arthropodium ?milleflorum* (a vanilla-lily) – There are few individuals in the reserve, but many more in the adjoining Site 12.

*Asperula conferta* (Common Woodruff). Only one plant found.

*Cynoglossum suaveolens* (Sweet Hound's-tongue). A small group.

*Desmodium gunnii* (Southern Tick-trefoil). Secure; numbers not recorded.

*Pultenaea scabra* (Rough Bush-pea). A dominant species in the shrub layer.

*Ranunculus lappaceus* (Australian Buttercup). Two plants found.

*Tetradthea ciliata* (Pink-bells). Secure; numbers not recorded.

*Veronica calycina* (Hairy Speedwell). Recorded as scant, but no numbers recorded.

*Wahlenbergia stricta* (Tall Bluebell). Numbers not recorded.

## Fauna of special significance

A Restless Flycatcher was observed during the fieldwork. This species is listed by the Land Conservation Council (1991) as uncommon in the 'Melbourne Area District 2', which extends eastwards slightly beyond Walhalla.

Local resident, Mr Don Hartland, reports having seen Koalas, Short-beaked Echidnas and Tawny Frogmouths periodically until shortly before he spoke to the author in November 2002. He also reported having seen a White-lipped Snake (a regionally uncommon species) around 1995.

Because of the proximity to the Dandenong Ranges National Park, the site is bound to be regularly visited by various rare or threatened fauna from the park; e.g. Powerful Owl. The site provides a small extension to the native habitat available for such species.

## Fauna habitat features

- Native vegetation as intact as on this site provides habitat for a variety of native fauna;
- There are tree hollows that provide suitable roosting or nesting sites for certain fauna.

## Significance ratings

The following is an assessment of the site's significance against the Department of Sustainability & Environment's standard criteria (Amos 2004).

### *Vegetation Type and Condition*

Grassy Forest is a regionally vulnerable EVC and the representation of it in the reserve is in fair to good ecological condition. No habitat score has been determined, but it is extremely likely that a score of at least 0.3 would be obtained. It would then follow from Appendix 3 of *Victoria's Native Vegetation Management - a Framework for Action* (NRE 2002a) that the Grassy Forest vegetation is 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.

### *Rare or Threatened Fauna*

The Powerful Owl is a vulnerable species in Victoria. It is known to frequent the local neighbourhood and nearby parts of the Dandenong ranges National Park, and the vegetation in the site seems suitable as habitat for Powerful Owls. Criterion 3.1.3 confers **Regional** significance upon sites such as this.

## Threats

- Invasion by environmental weeds as listed below, with asterisks marking those that are controlled under the *Catchment and Land Protection Act 1994*:
  - Very serious: Sweet Vernal-grass (*Anthoxanthum odoratum*), English Broom\* (*Cytisus scoparius*);
  - Serious: Bridal Creeper\* (*Asparagus scandens*), Large Quaking-grass (*Briza maxima*), Montpellier Broom\* (*Genista monspessulana*); and
  - Moderate: Cotoneaster (*Cotoneaster glaucophyllus*), Panic Veldt-grass (*Ehrharta erecta*), Spanish Heath\* (*Erica lusitanica*), Flax-leafed Broom\* (*Genista linifolia*), Cat's Ear (*Hypochoeris radicata*), Variable Ixia (*Ixia polystachya*), Soursob (*Oxalis pes-caprae*), Sweet Pittosporum (*Pittosporum undulatum*), Ribwort (*Plantago lanceolata*), Blackberry\* (*Rubus discolor*), Bluebell Creeper (*Sollya heterophylla*), vetches (*Vicia disperma* and *V. sativa*) and Rosy Watsonia (*Watsonia borbonica*).
- Damage to the native vegetation by use of parts of the reserve for domestic purposes such as a woodheap, parking, composting and gardening.

## Management issues

- A persistent effort over several years will be required to get the weeds under control and prevent reinfestation. Brooms, in particular, are expected to keep germinating from a large bank of soil-stored seed. Grass weeds may require spraying with grass-specific herbicide.
- Knox City Council has been liaising with South East Water about complementary weed control work on the reserve and the adjoining water tank land (Site 12);
- The site's fire risk needs to be managed, and this can be done harmoniously with proper care of the native vegetation. Burning is not recommended because it would stimulate broom seeds to germinate and because the fire would pose unnecessary risk and nuisance to neighbours. A preferable alternative would be annual cutting and removal of fine ground fuel each year, around Christmas or New Year. No firewood should be kept on the reserve;

- The assistance of neighbours will be needed to prevent Council's good management efforts being overridden by activities such as gardening in the reserve.

**Administration matters**

- This site is worthy of inclusion within the proposed Environmental Significance Overlay, ESO2, because of the threatened EVC, the significant plant species and the quality of much of the site's native vegetation;
- The reserve is zoned 'Low Density Residential Zone', despite it being a Council reserve;
- The site is protected under the existing Vegetation Protection Overlay Schedule 1 and Significant Landscape Overlay Schedule 2 of the Knox Planning Scheme;
- The site was included in 'Composite Area A' by Water Ecoscience (1998) without any substantial assessment;
- The adjoining private property to the north has just been sold, offering an opportunity for Council to approach the new owners and foster greater respect for the reserve than previous owners have shown.

**Information sources used in this assessment**

- A site survey undertaken during this study by Dr Lorimer on 6/11/02 using this study's standard procedures discussed in Section 2.4 of Volume 1. This included a description of the vegetation composition, compilation of lists of indigenous and introduced plant species, incidental fauna observations, and checks for fauna habitat, ecological threats and management issues;
- A brief re-inspection of the site by Dr Lorimer on 16/7/04, primarily to see if EVCs could be better delineated (but in vain);
- 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.