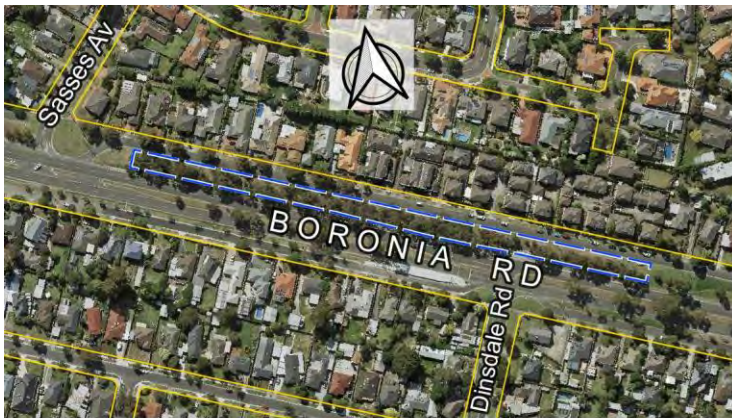


Site 90. Boronia Rd Roadside, Boronia

Three sections of road verge, of lengths 350 m, 230 m and 800 m.

Summary of significant features:

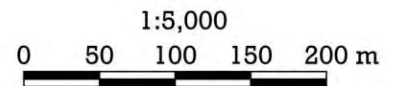
- **Nationally significant:** a substantial population of the flat-pea, *Platylobium infecundum*, which is Critically Endangered globally;
- **State significance:** a sizeable population of the endangered spear-grass, *Austrostipa rudis* subsp. *australis*;
- **State significance:** a patch of the regionally-endangered vegetation type, Valley Heathy Forest;
- **Locally significant:** viable populations of plant species threatened with dying out in Knox.



The panel at left lies 520 m west of the panel below.

Legend

- Site 90
- Site 103
- Roads



Boundaries

Site 90 is outlined with blue dashes on the aerial photographs. The section on the upper aerial photograph extends between the gutter of Boronia Rd and the kerb of the adjacent service road (but not enclosing the part of the gutter that is subject to periodic grading). The sections on the lower aerial photograph extend between the property boundary and the kerb of Boronia Rd.

The site has been significantly reduced in extent compared with the previous (2010) edition of this report due to vegetation loss.

Land use & tenure: Verges of a secondary road.

Site description

This site is situated in undulating terrain at elevations from 90 m in the west to 124 m in the east. The natural slope is typically 8% but the site includes some very steep road cuttings. The soil is shallow, poorly draining, pale loam over clay subsoil, derived from weathering of the underlying Lower Devonian siltstone of the Humevale formation.

There are remnant indigenous trees scattered at intervals along the full length of Boronia Rd from Sasses Av to the Boronia shopping centre but this site is confined to the sections with native understorey and better habitat for a wider range of species.

Three sections of the site can be identified with noticeably different topography, vegetation composition and ecological condition:

- a) West of Dinsdale Rd: the lowest section with the shallowest slope and with a tree canopy dominated by Mealy Stringybark (*Eucalyptus cephalocarpa*) and Narrow-leafed Peppermint (*Eucalyptus radiata*). There is a central strip typically 5m wide that is in fair ecological condition (rating C) and the rest is almost all in poor ecological condition;
- b) The remaining 85m stretch of the same polygon as above: a rise with a steep, vegetated cutting and native vegetation above it, dominated by Bundy (*Eucalyptus goniocalyx*) and mostly in good ecological condition (rating B) with many of the critically-endangered flat-pea, *Platylobium infecundum*;
- c) East of Scoresby Rd, which is similar to (b) but with a gentler topography, patchier understorey and *E. obliqua* co-dominant with *E. goniocalyx*.

Knox City Council has been very active over the past decade or so in enriching the vegetation by planting and minimising opportunities for parking of vehicles on significant vegetation. However, redevelopment of residential land east of Scoresby Rd has inevitably led to additional driveway crossovers through the vegetation and greater demand for car parking on the verge.

Relationship to other land

As seen on the aerial photographs above, parts of this site are separated from Site 103 only by the width of Boronia Rd. Many birds and flying insects are likely to cross between these sites, representing a strong ecological connection. These fauna probably also include the Blind Creek corridor (Site 33) in their home ranges.

Bioregion: Gippsland Plain

Habitat types

Valley Heathy Forest (EVC 127, **Endangered**)

Canopy trees: Dominated by *Eucalyptus cephalocarpa* and *E. radiata* west of Dinsdale Rd, *E. goniocalyx* in the rest of that polygon, and a mixture of *E. goniocalyx* and *E. obliqua* east of Scoresby Rd.

Sub-canopy trees: Dominated by *Acacia mearnsii* and *Acacia melanoxylon*, with scarce *Exocarpos cupressiformis*.

Shrubs: Dominated by abundant *Bursaria spinosa*. Other species include *Ozothamnus ferrugineus*, *Cassinia aculeata*, *Goodenia ovata*, *Olearia lirata*, *Leptospermum continentale*, *Daviesia latifolia*, *Daviesia leptophylla*, *Dillwynia cinerascens* and *Epacris impressa*.

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

Ferns: None.

Groundcover: Densely grassy, dominated variously by *Microlaena stipoides*, *Austrostipa rudis*, *Poa morrisii*, *Rytidosperma racemosum* or *Gahnia radula*. There are also substantial patches dominated by *Rytidosperma pallidum*, *Platylobium infecundum* or *Dianella revoluta*. Other species that are abundant in numbers but not dominant in foliage cover include *Arthropodium strictum*, *Gonocarpus tetragynus*, *Lomandra filiformis* and *Poranthera microphylla*. *Acacia aculeatissima*, *Goodenia lanata* and *Xanthorrhoea minor* are very scarce but good ecological indicators.

Plant species

The following plant species were observed by the author on 15/8/02, 27/3/08 or 5/6/24. Asterisks indicate indigenous species not seen since 2002 and daggers (†) indicate indigenous species seen in 2008 and not 2024. No additional species have been reported by people other than the author but some would undoubtedly be detectable in spring and summer. The column headed 'Risk' indicates the indigenous species' risk of dying out in Knox, with 'C'=Critically endangered, 'E'=Endangered, 'V'=Vulnerable and 'N'=Near threatened. In addition, under Victorian law, *Austrostipa rudis* subsp. *australis* is Endangered and *Platylobium infecundum* is Critically Endangered.

Indigenous mosses and liverworts

Campylopus clavatus, Broody Swan-neck Moss
Campylopus introflexus, Heath Star Moss
Chiloscyphus semiteres, Green Worms
Hypnum cupressiforme, Common Hypnum

Risk Wild indigenous vascular species

E *Acacia aculeatissima*, Thin-leaf Wattle
V *Acacia implexa*, Lightwood*
V *Acacia mearnsii*, Black Wattle
V *Acacia melanoxylon*, Blackwood
E *Acacia myrtifolia*, Myrtle Wattle
V *Acacia pycnantha*, Golden Wattle
E *Acrotriche serrulata*, Honey-pots*
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
Bursaria spinosa, Sweet Bursaria
Carex breviculmis, Short-stem Sedge†
Cassinia aculeata, Common Cassinia*
Cassinia longifolia, Shiny Cassinia
Clematis decipiens, a small-leafed clematis
E *Comesperma volubile*, Love Creeper*
C *Daviesia latifolia*, Hop Bitter-pea
C *Daviesia leptophylla*, Narrow-leaf Bitter-pea*
Dianella longifolia var. *longifolia*, Pale Flax-lily
Dianella revoluta, Black-anther Flax-lily
V *Dillwynia cinerascens*, Grey Parrot-pea
C *Epacris impressa*, Common Heath*
Epilobium hirtigerum, Hairy Willow-herb
E *Eucalyptus cephalocarpa*, Mealy Stringybark
V *Eucalyptus goniocalyx*, Bundy
C *Eucalyptus macrorhyncha*, Red Stringybark†
E *Eucalyptus obliqua*, Messmate Stringybark
V *Eucalyptus ovata*, Swamp Gum
E *Eucalyptus radiata*, Narrow-leaved Peppermint
V *Exocarpos cupressiformis*, Cherry Ballart
C *Gahnia radula*, Thatch Saw-sedge
Gonocarpus tetragynus, Common Raspwort
N *Goodenia lanata*, Trailing Goodenia†
Goodenia ovata, Hop Goodenia
E *Hardenbergia violacea*, Purple Coral-pea
Juncus pallidus, Pale Rush*
Lachnagrostis filiformis, Common Blown-grass
Laphangium luteoalbum, Jersey cudweed
C *Leptorhynchus tenuifolius*, Wiry Buttons*
C *Leptospermum continentale*, Prickly Tea-tree
Lomandra filiformis subsp. *coriacea*, Wattle Mat-rush

Risk Wild indigenous vascular species

Lomandra filiformis subsp. *filiformis*, Wattle Mat-rush
Lomandra longifolia subsp. *longifolia*, Spiny-headed Mat-rush
Lythrum hyssopifolia, Lesser Loosestrife*
Microlaena stipoides, Weeping Grass
E *Olearia lirata*, Snowy Daisy-bush*
V *Opercularia varia*, Variable Stinkweed
Oxalis exilis/perennans, Wood-sorrel
V *Ozothamnus ferrugineus*, Tree Everlasting*
Pandorea pandorana, Wonga Vine
E *Platylobium infecundum*, a flat-pea
Poa morrisii, Soft Tussock-grass
Poranthera microphylla, Small Poranthera
Pterostylis nutans, Nodding Greenhood
Rytidosperma fulvum, Leafy Wallaby-grass
C *Rytidosperma lepidopodum*, Scaly-foot Wallaby-grass
E *Rytidosperma pallidum*, Red-anther (or Silvertop) Wallaby-grass
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*
Senecio hispidulus, Rough Fireweed†
Senecio quadridentatus, Cotton Fireweed
E *Thelymitra ?peniculata*, Trim Sun-orchid
Themeda triandra, Kangaroo Grass
V *Veronica gracilis*, Slender Speedwell
E *Viola hederacea*, Ivy-leaf Violet*
E *Xanthorrhoea minor*, Small Grass-tree

Risk Planted species

V *Acacia melanoxylon*, Blackwood
E *Acacia myrtifolia*, Myrtle Wattle
Acacia paradoxa, Hedge Wattle
E *Acacia stricta*, Hop Wattle
V *Allocasuarina littoralis*, Black Sheoak
C *Chrysocephalum semipapposum*, Clustered Everlasting
C *Correa reflexa* var. *reflexa*, Common Correa
C *Daviesia latifolia*, Hop Bitter-pea
Dianella longifolia var. *longifolia*, Pale Flax-lily
Dianella revoluta, Black-anther Flax-lily
Goodenia ovata, Hop Goodenia
C *Hakea ulicina*, Furze Hakea
Lomandra longifolia subsp. *longifolia*, Spiny-headed Mat-rush
V *Spyridium parvifolium*, Australian Dusty Miller
Themeda triandra, Kangaroo Grass

Introduced species

Agapanthus praecox, Agapanthus
Agrostis capillaris, Brown-top Bent
Anthoxanthum odoratum, Sweet Vernal-grass
Briza maxima, Large Quaking-grass
Cassinia sifton, Sifton Bush
Centaureum erythraea, Common Centaury
Dactylis glomerata, Cocksfoot
Ehrharta erecta, Panic Veldt-grass

Introduced species

Hypochaeris radicata, Cat's Ear
Linum trigynum, French Flax
Oxalis pes-caprae, Soursob
Paspalum dilatatum, Paspalum
Plantago lanceolata, Ribwort
Romulea rosea, Common Onion-grass
Sporobolus africanus, Rat-tail Grass

Notes concerning some of the significant plant species

Listed as Critically Endangered under Victorian law

Platylobium infecundum (a flat-pea): Absent in the westernmost 130 m of the site; otherwise fairly abundant and often forming dense patches of 2–20 m².

Listed as Endangered under Victorian law

Austrostipa rudis subsp. *australis* (a subspecies of Veined Spear-grass): Fairly abundant in the general vicinity of Dinsdale Drive in December 2024, e.g. immediately west of the pedestrian crossing.

Regionally threatened

Rytidosperma lepidopodum (Scaly-foot Wallaby-grass): One patch grows on the nature strip of 209 Boronia Rd (the Boronia Uniting Church).

Locally threatened

Acacia aculeatissima (Thin-leaf Wattle): Three plants were seen in 2002: One beside the kerb, 5 m west of the pedestrian crossing near Dinsdale Rd and two on the nature strip of 249–251 Boronia Rd. The first of those plants is no longer present, perhaps because there has been extensive use of herbicide there; At the other location, the 2024 survey found one plant or perhaps two entwined plants. No others were found in 2024.

Fauna of special significance

None detected.

Fauna habitat features

- Some trees have hollows that would suit habitation by native birds, bats, possums or invertebrates. Crimson Rosellas were observed emerging from one hollow near the pedestrian crossing close to Dinsdale Rd;
- The grassy groundcover probably provides food for many 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).

Regionally Endangered Ecological Vegetation Class

Valley Heathy Forest is regionally endangered but the standard criteria only regard such a status as significant if the vegetation meets the definition of a 'remnant patch' adopted for the criteria, i.e. a continuous area of at least 0.25 ha in which the cover of native understorey is at least 10% throughout. Native understorey in the part of Site 90 east of Scoresby Rd is fragmented by driveways into areas smaller than 0.25 ha. As a consequence, the standard criteria do not recognise any significance of the presence of Valley Heathy Forest east of Scoresby Rd. However, the western part of the site includes an area that just meets the size threshold to qualify as a 'remnant patch'. Any 'remnant patch' of a regionally-endangered EVC has a conservation significance rating of at least 'High' under Appendix 3 of *Victoria's Native Vegetation Management – a Framework for Action* (NRE 2002a). That translates to **State** significance under criterion 3.2.3 of Amos (2004).

Threatened Plants

The flat-pea, *Platylobium infecundum*, has a quite viable population in Site 90. That species is listed under the *Flora and Fauna Guarantee Act* as Critically Endangered and it does not occur outside Victoria. As a result, the habitat provided for *Platylobium infecundum* is of **National** significance under criterion 3.1.2.

Platylobium infecundum had not been scientifically described in 2010 when the previous edition of this report was written. As a result, the site's significance level has risen from State to National.

The spear-grass, *Austrostipa rudis* subsp. *australis* is listed as Endangered under Victorian law. Its distribution is not confined to Victoria. Its population in this site is quite sizeable and viable. Any known habitat for such a species meets criterion 3.1.2 for **State** significance.

The locally-threatened tree species seen in 2024 and some of the locally-threatened understorey species 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 eucalypt health, partly due to the abovementioned droughts and storms;
- Continued subdivision of properties east of Scoresby Rd, potentially resulting in additional driveway crossovers and casual parking on native vegetation (including by construction vehicles during the development phase);
- Overly frequent mowing of native groundcover and seedlings;
- Dumping of garden waste;
- Neighbours replacing native vegetation with gardens;
- Loss or decline of plant species whose populations are so small and isolated that they are vulnerable to inbreeding, poor reproductive success or elimination by incidents such as digging by dogs or being struck by a falling tree limb;
- Displacement of indigenous flora and fauna by environmental weeds, but that problem is being kept well under control at present.

Strategic planning

The previous (2010) edition of this report led to its larger version of this site being covered by Schedule 2 of the Environmental Significance Overlay (ESO2), based on the presence of the endangered EVC. Since 2010, the main changes affecting the original basis for applying ESO2 have been that: (a) the site's significance rating has risen to National as a result of *Platylobium infecundum* being scientifically described and then listed as Critically Endangered under Victorian law; and (b) the extent of the site delineated here has significantly reduced due to vegetation loss. The only recommendation regarding ESO2 in response to these changes is to amend its boundary to match that delineated here.

Information sources used in this assessment

- Site surveys by Dr Lorimer on 15/8/02 (west of Scoresby Rd) and 27/3/08 (east of Scoresby Rd) for the previous editions of this report. The fieldwork included:
 - Compilation of lists of indigenous and introduced plants for each of six parts of the site;
 - A description of the vegetation's structural and floristic composition;
 - Determination of the vegetation's ecological condition in each part of the site;
 - Documentation of rare species populations;
 - Incidental observations of fauna; and
 - Checks for fauna habitat, ecological threats and management issues.
- A botanical survey by Dr Lorimer on 5th June 2024 for this report;
- A follow-up survey in the vicinity of Dinsdale Dr by Dr Lorimer on 20th December 2024 to check for seasonal species such as *Austrostipa rudis* subsp. *australis*;
- Records of flora and fauna observations stored in Knox City Council's biodiversity database;
- Records of 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.