

## Site 88. Belgrave Railway Line Corridor

5 lineal kilometres of rail reservation and adjacent land, from Dandenong Creek almost to Upper Ferntree Gully Station.

Summary of significant features:

- **Nationally significant:** a substantial population of the flat-pea, *Platylobium infecundum*, which is Critically Endangered globally;
- **Locally significant:** viable populations of plant species threatened with dying out in Knox;
- **Locally significant:** a habitat corridor and/or ecological stepping-stones for local-scale movements of birds and flying insects.

### Boundaries

The site is in seven segments, defined by the areas mapped with blue outlines on the next page. Where the rail reserve's native vegetation extends into abutting road verges, the road verges are included (e.g. along Burwood Hwy, Underwood Rd and Power Rd). Compared with the previous (2010) edition of this report, the boundaries have been revised to excise some areas where native vegetation no longer remains.

**Land use & tenure:** Rail reservation, abutting road verges, four vacant residential lots totalling 8,274 m<sup>2</sup> (1151-1167 Burwood Hwy, Upper Ferntree Gully) and vegetation fringing the commercial property at 3 William St, Boronia (next to the Boronia Station car park).

### Site Description

This site comprises strips of native vegetation along the Belgrave Railway Line from the Dandenong Ck bridge in Bayswater to just west of the Upper Ferntree Gully Railway Station. The total area is 19.5 ha, of which a large proportion is railway tracks and ballast, of no environmental significance.

The level of biological significance of the native vegetation within this site is higher than native vegetation further east along the railway line, which falls within Site 99 (the Dandenong Ranges Buffer site). Site 99 has a lower level of protection under the Planning Scheme than this site (namely, Schedule 3 of the Environmental Significance Overlay instead of Schedule 2).

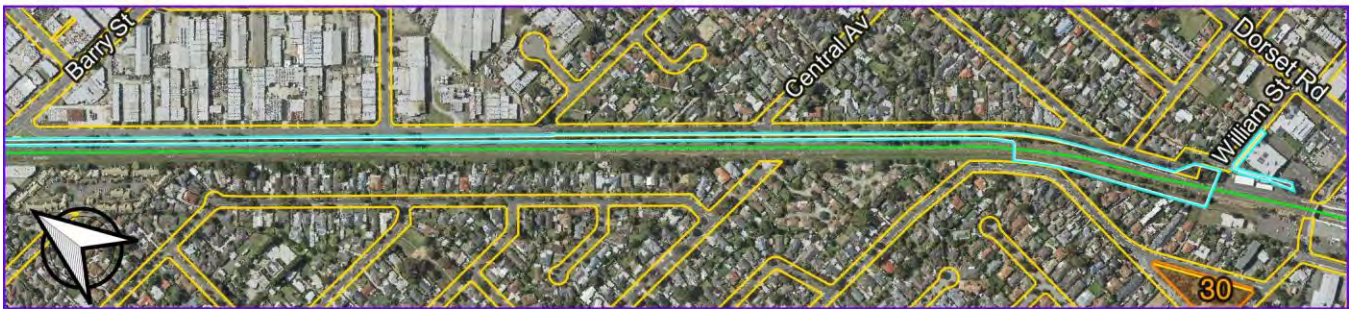
Most segments of the Belgrave Railway Line Corridor have a fragmented indigenous tree canopy, some indigenous lower trees such as Blackwood and Cherry Ballart, some indigenous shrubs and patchy indigenous groundcover. The density of introduced plants is highly variable, from low to very high, and the ecological condition of the native vegetation varies from good (rating B) to poor (rating D). Three regionally threatened Ecological Vegetation Classes are represented: Swampy Woodland in low-lying areas, Grassy Forest adjacent to Quarry Reserve in Ferntree Gully, and Valley Heathy Forest elsewhere.

There is a tendency for the more natural vegetation to be where the tracks are below the natural ground level, within cuttings. Conversely, the Swampy Woodland occupies the lower-lying areas where the tracks are raised on fill placed on top of the natural soil, and the only instance that is not in poor ecological condition is the patch next to Burwood Hwy, remote from the tracks and associated embankment.

A highlight of this site is that there are several plant species that are surviving quite well in the railway reservation but have died out (or almost so) in the rest of Knox. The most extreme example is Matted Bush-pea (*Pultenaea pedunculata*), of which there are no known surviving wild plants anywhere else in Knox. There are also other species, such as Silver Banksia (*Banksia marginata*) and Hop Bitter-pea (*Daviesia latifolia*), that have larger, more stable populations along the railway line than elsewhere in Knox. The phenomenon of a railway corridor serving as a stronghold for certain plant species was also observed on the Lilydale line and the Belgrave line in Maroonah (Lorimer 2020). However, herbicide spraying poses a risk to all these species.

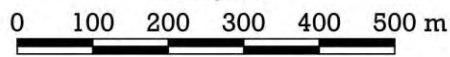
### Relationship to other land

There are several other sites in proximity to the railway corridor, as seen on the map on the next page. It is safe to assume that there is some movement of birds and flying insects along the railway corridor and between it and the nearby sites. Trees in residential gardens neighbouring the corridor are expected to assist such movements, sometimes making up for gaps in the native vegetation within the railway reservation.



Maps for Site 88

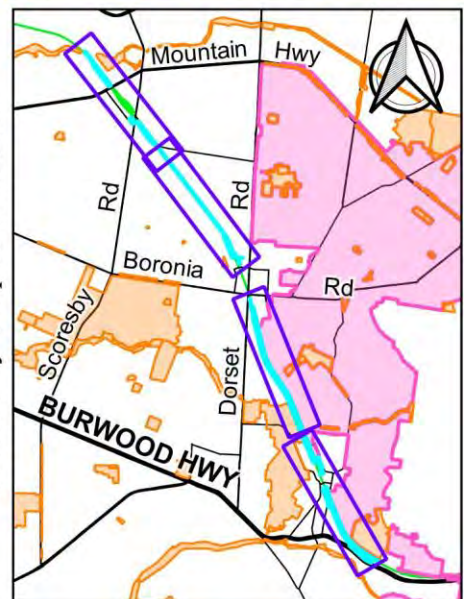
Scale for the maps above  
1:10,000



Legend

- Site 88
- Site 99
- Other sites
- 46 Site numbers
- Roads
- Train tracks

Overview map (1:90,000) with indigo rectangles showing areas covered by the panels above.



**Bioregion:** An area of Grassy Forest at the site's southerly end lies within the Highlands Southern Fall bioregion. The remainder of the site lies in the Gippsland Plain bioregion.

### Habitat types

**Valley Heathy Forest (EVC 127, regionally Endangered):** Estimated in 2002 to occupy 5 ha in total, comprising 0.1 ha in good ecological condition (rating B), 0.5 ha in fair ecological condition (rating C) and 4.4 ha in poor ecological condition (rating D). 111 indigenous plant species were found.

**Canopy trees:** Several eucalypts co-dominate, but the particular combination of species varies. *Eucalyptus cephalocarpa* is present throughout and is typically the dominant species. *Eucalyptus obliqua* is next most common, followed by *E. radiata*, *E. goniocalyx* and *E. macrorhyncha*. *Eucalyptus melliodora* is very scarce and localised to an area roughly 300 m north of Ferntree Gully Station.

**Sub-canopy trees:** Fairly dense, dominated by *A. melanoxylon*, often sharing dominance with *Exocarpos cupressiformis*.

**Shrubs:** Rich in species, considering the treatment that railway vegetation receives. The most common species is *Bursaria spinosa*, which is typically dominant. *Acacia myrtifolia*, *Daviesia latifolia* and *Leptospermum continentale* are the next most common species. *Viminaria juncea* is notably present near the Boronia war memorial, reflecting the poor drainage properties of the soil there.

**Vines:** *Billardiera mutabilis* is scattered thinly.

**Ferns:** Patches of *Pteridium esculentum* are common.

**Groundcover:** Dense with grasses or *Gahnia radula*. Rich in indigenous species (under the circumstances), including thirty-one species of graminoids, twenty-one forbs, seven shrublets, eleven creepers and four scramblers. The dominant indigenous grasses are *Themeda triandra*, *Austrostipa rudis* and *Poa morrisii*. *Rytidosperma racemosum* is often dominant in mown areas. Other species that are abundant in numbers but not dominant in coverage include *Lomandra filiformis*, *Carex breviculmis*, *Dianella revoluta*, *Dillwynia cinerascens*, *Gonocarpus tetragynus*, *Opercularia varia*, *Platylobium infecundum* and *Senecio quadridentatus*. The characteristic species *Dianella longifolia*, *Hibbertia australis*, *Olearia myrsinoides*, *Opercularia ovata*, *Platylobium obtusangulum*, *Tricoryne elatior* and *Xanthorrhoea minor* are present but more localised than the other species just listed.

**Grassy Forest (EVC 128, regionally Vulnerable),** adjacent to Quarry Reserve: Not distinguishable from Valley Heathy Forest except for the soil type and landscape context. Estimated in 2002 to occupy 0.9 ha in total, comprising 0.02 ha in fair ecological condition (rating C) and the rest in poor ecological condition (rating D).

**Canopy trees:** Dominated by *Eucalyptus goniocalyx*, *E. macrorhyncha* and *E. obliqua*, with some *E. radiata* and very few *E. cephalocarpa* and *E. melliodora*.

**Sub-canopy trees:** *Acacia melanoxylon* and *Exocarpos cupressiformis* are rather abundant.

**Shrubs:** *Bursaria spinosa* is fairly abundant. *Acacia stricta*, *Cassinia aculeata* and *Goodenia ovata* are scattered thinly.

**Vines:** Very scarce, notably including *Clematis aristata*.

**Ferns:** There are sparsely-distributed patches of *Pteridium esculentum*.

**Groundcover:** The dominant indigenous species in most of the Grassy Forest are *Themeda triandra*, *Gahnia radula* and (in mown areas) *Rytidosperma racemosum*. Other species that are abundant in numbers but not dominant in coverage include *Poa morrisii*, *Gonocarpus tetragynus* and *Lomandra filiformis* subsp. *coriacea*. In 2002, at the highest part of the rail cutting below the quarry, there were also rather abundant *Pimelea curviflora* and *Chrysocephalum semipapposum* but they appear to have died out.

**Swampy Woodland (EVC 937, regionally Endangered):** Estimated in 2002 to occupy 1½ ha in total, comprising 1 ha in fair ecological condition (rating C) and ½ ha in poor ecological condition (rating D).

**Canopy trees:** Strongly dominated by *Eucalyptus ovata* in general but joined by *E. obliqua* in the area adjoining Burwood Hwy (due to the proximity of Grassy Forest and Herb-rich Foothill Forest).

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

**Dominant Shrubs:** *Coprosma quadrifida*, *Ozothamnus ferrugineus* and *Goodenia ovata*.

**Vines:** *Pandorea pandorana* is the only vine species present; it is scarce.

**Ferns:** *Pteridium esculentum* is moderately common. *Adiantum aethiopicum* and *Cyathea australis* were present in 2002 but have not been seen since the Millennium Drought.

**Groundcover and small shrubs:** The indigenous groundcover is mostly sparse and appears to have been strongly affected by drainage works and pollution in runoff water. *Gahnia radula*, *Microlaena stipoides* and *Juncus* species are the most consistently present remnants of the original ground flora, and there are occasional individuals of characteristic species such as *Senecio minimus* and *Epilobium hirtigerum*.

## Plant species

The following plant species have been recorded as growing wild within the site. Those not seen by the author during the present study (2023–2025) are indicated by superscripts showing the year of the most recent record. Additional species would no doubt be detectable in a more thorough survey. 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, *Platylobium infecundum* is Critically Endangered globally and *Acacia stictophylla* is Endangered globally.

Risk	Wild indigenous vascular species	Risk	Wild indigenous vascular species
	<u>Wild fern species</u>	C	<i>Chrysocephalum semipapposum</i> , Clustered Everlasting <sup>2002</sup>
V	<i>Adiantum aethiopicum</i> , Common Maidenhair <sup>2002</sup>	V	<i>Clematis aristata</i> , Mountain Clematis
C	<i>Cyathea australis</i> , Rough Tree-fern <sup>2002</sup>	V	<i>Clematis decipiens</i> , a small-leaved clematis
	<i>Pteridium esculentum</i> , Austral Bracken	V	<i>Coprosma quadrifida</i> , Prickly Currant-bush
	<u>Wild flowering species</u>	C	<i>Coronidium scorpioides</i> , Button Everlasting
	<i>Acacia dealbata</i> , Silver Wattle <sup>2002</sup>	C	<i>Daviesia latifolia</i> , Hop Bitter-pea
V	<i>Acacia mearnsii</i> , Black Wattle <sup>2002</sup>	C	<i>Daviesia leptophylla</i> , Narrow-leaf Bitter-pea
V	<i>Acacia melanoxylon</i> , Blackwood		<i>Deyeuxia quadriseta</i> , Reed Bent-grass
E	<i>Acacia myrtifolia</i> , Myrtle Wattle		<i>Dianella longifolia</i> var. <i>longifolia</i> , Pale Flax-lily
V	<i>Acacia pycnantha</i> , Golden Wattle		<i>Dianella revoluta</i> , Black-anther Flax-lily
V	<i>Acacia stictophylla</i> , Dandenong Range Cinnamon Wattle <sup>2002</sup>		<i>Dichondra repens</i> , Kidney-weed
E	<i>Acacia stricta</i> , Hop Wattle	V	<i>Dillwynia cinerascens</i> , Grey Parrot-pea
V	<i>Acaena echinata</i> , Sheep’s Burr	E	<i>Dipodium roseum</i> , Rosy Hyacinth-orchid <sup>2018</sup>
	<i>Acaena novae-zelandiae</i> , Bidgee-widgee <sup>2002</sup>	C	<i>Diuris chryseopsis</i> , Golden Moths <sup>2018</sup>
V	<i>Acrotriche prostrata</i> , Trailing Ground-berry	V	<i>Drosera aberrans</i> , Scented Sundew <sup>2002</sup>
E	<i>Acrotriche serrulata</i> , Honey-pots	V	<i>Drosera auriculata</i> , Tall Sundew <sup>2002</sup>
N	<i>Alisma plantago-aquatica</i> , Water Plantain	V	<i>Eleocharis acuta</i> , Common Spike-rush
V	<i>Allocasuarina littoralis</i> , Black Sheoak (planted?) <sup>2002</sup>	C	<i>Epacris impressa</i> , Common Heath
E	<i>Amyema quandang</i> , Grey Mistletoe <sup>2002</sup>	V	<i>Epilobium billardioreanum</i> subsp. <i>cinereum</i> , Variable Willow-herb <sup>2002</sup>
	<i>Anthosachne scabra</i> , Common Wheat-grass		<i>Epilobium hirtigerum</i> , Hairy Willow-herb
	<i>Austrostipa pubinodis</i> , Tall Spear-grass		<i>Eragrostis brownii</i> , Common Love-grass
	<i>Austrostipa rudis</i> subsp. <i>rudis</i> , Veined Spear-grass	E	<i>Eucalyptus × brevirostris</i> , a hybrid stringybark
C	<i>Banksia marginata</i> , Silver Banksia	V	<i>Eucalyptus cephalocarpa</i> , Mealy Stringybark
	<i>Billardiera mutabilis</i> , Common Apple-berry		<i>Eucalyptus goniocalyx</i> , Bundy
N	<i>Bossiaea prostrata</i> , Creeping Bossiaea	C	<i>Eucalyptus macrorhyncha</i> , Red Stringybark
V	<i>Brunonia australis</i> , Blue Pincushion <sup>2002</sup>	E	<i>Eucalyptus melliodora</i> , Yellow Box
E	<i>Bulbine bulbosa</i> , Yellow Bulbine-lily (planted?)	E	<i>Eucalyptus obliqua</i> , Messmate Stringybark
	<i>Burchardia umbellata</i> , Milkmaids <sup>2019</sup>	V	<i>Eucalyptus ovata</i> , Swamp Gum
	<i>Bursaria spinosa</i> , Sweet Bursaria	E	<i>Eucalyptus radiata</i> , Narrow-leaved Peppermint
V	<i>Caesia parviflora</i> , Pale Grass-lily <sup>2016</sup>	E	<i>Euchiton involucratus</i> , Common Cudweed <sup>2002</sup>
	<i>Carex appressa</i> , Tall Sedge		<i>Euchiton japonicus</i> , Creeping Cudweed
	<i>Carex breviculmis</i> , Short-stem Sedge	V	<i>Exocarpos cupressiformis</i> , Cherry Ballart
	<i>Cassinia aculeata</i> , Common Cassinia	C	<i>Gahnia radula</i> , Thatch Saw-sedge
	<i>Cassinia longifolia</i> , Shiny Cassinia	E	<i>Geranium ?potentilloides</i> , Soft Crane’s-bill <sup>2002</sup>
E	<i>Cassytha melanantha</i> , Coarse Dodder-laurel <sup>2002</sup>	V	<i>Geranium ?sp. 2</i> , Variable Crane’s-bill <sup>2002</sup>
E	<i>Centella cordifolia</i> , Centella <sup>2002</sup>	C	<i>Geranium sp. 5</i> , Naked Crane’s-bill <sup>2002</sup>
			<i>Gonocarpus tetragynus</i> , Common Raspwort
			<i>Goodenia ovata</i> , Hop Goodenia
		C	<i>Hackelia suaveolens</i> , Sweet Hound’s-tongue

Risk Wild indigenous vascular species

- E *Hardenbergia violacea*, Purple Coral-pea<sup>2018</sup>  
 V *Hemarthria uncinata*, Mat Grass<sup>2002</sup>  
 C *Hibbertia australis*, Upright Guinea-flower  
 C *Hovea heterophylla*, Common Hovea<sup>2002</sup>  
 E *Hypericum gramineum*, Small St John's Wort  
 C *Imperata cylindrica*, Blady Grass<sup>2004</sup>  
*Isolepis inundata*, Swamp Club-rush  
*Juncus amabilis*, Hollow Rush<sup>2002</sup>  
*Juncus bufonius*, Toad Rush  
*Juncus gregiflorus*, Green Rush<sup>2002</sup>  
*Juncus pallidus*, Pale Rush  
 E *Juncus planifolius*, Broad-leaf Rush  
*Juncus sarophorus*, Broom Rush  
*Kunzea ericoides* group, Burgan<sup>1997</sup>  
*Lachnagrostis filiformis*, Common Blown-grass  
*Laphangium luteoalbum*, Jersey cudweed<sup>2002</sup>  
*Lepidosperma elatius*, Tall Sword-sedge<sup>1997</sup>  
*Lepidosperma gunnii*, Slender Sword-sedge<sup>2002</sup>  
 V *Lepidosperma laterale*, Variable Sword-sedge  
 C *Leptorhynchus tenuifolius*, Wiry Buttons  
 C *Leptospermum continentale*, Prickly Tea-tree  
*Leptospermum scoparium*, Manuka  
*Lomandra filiformis* subsp. *coriacea*, Wattle Mat-rush  
*Lomandra filiformis* subsp. *filiformis*, Wattle Mat-rush  
*Lomandra longifolia* subsp. *exilis*, Cluster-headed Mat-rush  
*Lomandra longifolia* subsp. *longifolia*, Spiny-headed Mat-rush  
 C *Lomandra multiflora*, Many-flowered Mat-rush<sup>2002</sup>  
*Lythrum hyssopifolia*, Lesser Loosestrife<sup>2002</sup>  
 C *Machaerina acuta*, Pale Twig-rush<sup>1986</sup>  
 E *Melaleuca ericifolia*, Swamp Paperbark  
*Microlaena stipoides*, Weeping Grass  
 C *Muellerina eucalyptoides*, Creeping Mistletoe<sup>2002</sup>  
 C *Olearia myrsinoides*, Silky Daisy-bush (planted?)  
 V *Opercularia ovata*, Broad-leaf Stinkweed  
 V *Opercularia varia*, Variable Stinkweed  
*Oxalis exilis/perennans*, Wood-sorrel  
 V *Ozothamnus ferrugineus*, Tree Everlasting  
*Pandorea pandorana*, Wonga Vine<sup>2002</sup>  
*Persicaria decipiens*, Slender Knotweed  
 C *Persoonia juniperina*, Prickly Geebung<sup>2002</sup>  
 E *Phragmites australis*, Common Reed  
*Pimelea curviflora*, Curved Rice-flower<sup>2002</sup>  
 E *Pimelea humilis*, Common Rice-flower  
 E *Plantago varia*, Variable Plantain<sup>2002</sup>  
 E *Platylobium infecundum*, a flat-pea  
 E *Platylobium obtusangulum*, Common Flat-pea  
*Poa ensiformis*, Sword Tussock-grass

Risk Wild indigenous vascular species

- E *Poa labillardierei*, Common Tussock-grass<sup>2002</sup>  
*Poa morrisii*, Soft Tussock-grass  
 E *Poa tenera*, Slender Tussock-grass<sup>1997</sup>  
*Poranthera microphylla*, Small Poranthera  
 V *Pultenaea gunnii*, Golden Bush-pea  
 C *Pultenaea pedunculata*, Matted Bush-pea  
 E *Rubus parvifolius*, Small-leaf Bramble<sup>2002</sup>  
 E *Rytidosperma caespitosum*, Common Wallaby-grass  
*Rytidosperma fulvum*, Leafy Wallaby-grass  
*Rytidosperma laeve*, Smooth Wallaby-grass  
 E *Rytidosperma pallidum*, Red-anther (or Silvertop) Wallaby-grass  
*Rytidosperma penicillatum*, Slender Wallaby-grass<sup>2002</sup>  
*Rytidosperma pilosum*, Velvet Wallaby-grass  
*Rytidosperma racemosum*, Clustered Wallaby-grass  
 E *Rytidosperma semiannulare*, Tasmanian Wallaby-grass  
*Rytidosperma setaceum*, Bristly Wallaby-grass  
*Rytidosperma tenuius*, Purplish Wallaby-grass  
*Schoenus apogon*, Common Bog-rush  
 V *Senecio glomeratus*, Annual Fireweed<sup>1997</sup>  
*Senecio hispidulus*, Rough Fireweed<sup>2002</sup>  
*Senecio minimus*, Shrubby Fireweed<sup>2002</sup>  
*Senecio quadridentatus*, Cotton Fireweed  
 E *Stylidium armeria*, Common Triggerplant  
*Tetrarrhena juncea*, Forest Wire-grass<sup>2002</sup>  
*Thelymitra* sp., a Sun-orchid<sup>2002</sup>  
*Themeda triandra*, Kangaroo Grass  
*Tricoryne elatior*, Yellow Rush-lily  
*Typha ?orientalis*, Cumbungi<sup>2002</sup>  
 C *Viminaria juncea*, Golden Spray  
 E *Viola hederacea*, Ivy-leaf Violet<sup>2002</sup>  
*Wahlenbergia gracilis*, Sprawling Bluebell  
 C *Wahlenbergia multicaulis*, Tadgell's Bluebell  
 E *Wahlenbergia stricta*, Tall Bluebell<sup>2002</sup>  
 E *Xanthorrhoea minor*, Small Grass-tree<sup>2002</sup>

Introduced species

- Acacia baileyana*, Cootamundra Wattle  
*Acacia decurrens*, Green Wattle  
*Acacia longifolia* subsp. *longifolia*, Sallow Wattle  
*Agapanthus praecox*, Agapanthus  
*Agrostis capillaris*, Brown-top Bent  
*Allium triquetrum*, Angled Onion  
*Anthoxanthum odoratum*, Sweet Vernal-grass  
*Asparagus asparagoides*, Bridal Creeper  
*Asparagus scandens*, Asparagus Fern  
*Briza maxima*, Large Quaking-grass  
*Cassinia sifton*, Sifton Bush  
*Cenchrus clandestinus*, Kikuyu Grass  
*Centaurium erythraea*, Common Centaury  
*Chamaecytisus palmensis*, Tree Lucerne

Introduced species

*Chrysanthemoides monilifera* subsp. *monilifera*,  
Boneseed  
*Cirsium vulgare*, Spear Thistle  
*Coprosma repens*, Mirror-bush  
*Cortaderia selloana*, Pampas Grass  
*Cotoneaster glaucophyllus*, Cotoneaster  
*Cotoneaster pannosus*, Cotoneaster  
*Crataegus monogyna*, Hawthorn  
*Crocsmia* × *crocsmiiflora*, Montbretia  
*Cytisus scoparius*, English Broom  
*Dactylis glomerata*, Cocksfoot  
*Delairea odorata*, Cape Ivy  
*Ehrharta erecta*, Panic Veldt-grass  
*Eragrostis curvula*, African Love-grass  
*Erica lusitanica*, Spanish Heath  
*Foeniculum vulgare*, Fennel  
*Fraxinus angustifolia*, Desert Ash  
*Galium aparine*, Cleavers  
*Genista monspessulana*, Montpellier Broom  
*Gladiolus undulatus*, Wild Gladiolus  
*Grevillea* hybrid or cultivar  
*Hakea salicifolia*, Willow-leaf Hakea  
*Hedera helix/hibernica*, Ivy  
*Holcus lanatus*, Yorkshire Fog  
*Hypochaeris radicata*, Cat's Ear

Introduced species

*Linum trigynum*, French Flax  
*Lonicera japonica*, Japanese Honeysuckle  
*Nephrolepis cordifolia*, Fishbone Fern  
*Oxalis incarnata*, Pale Wood-sorrel  
*Oxalis pes-caprae*, Soursob  
*Oxalis purpurea*, Large-flower Wood-sorrel  
*Pinus radiata*, Monterey Pine  
*Pittosporum undulatum*, Sweet Pittosporum  
*Plantago lanceolata*, Ribwort  
*Prunus cerasifera*, Cherry-plum  
*Romulea rosea*, Common Onion-grass  
*Rubus anglocandicans*, Blackberry  
*Salix* ?× *reichardtii*, Pussy Willow  
*Senecio angulatus*, Groundsel  
*Sporobolus africanus*, Rat-tail Grass  
*Tradescantia fluminensis*, Wandering Trad  
*Tragopogon porrifolius*, Salsify  
*Trifolium repens*, White Clover  
*Ulex europaeus*, Gorse (Furze)  
*Verbena bonariensis* s.l., Purple-top Verbena  
*Vicia sativa*, Common Vetch  
*Vicia* sp., a Vetch  
*Watsonia meriana* var. *bulbillifera*, Bulbil Watsonia  
*Zantedeschia aethiopica*, White Arum Lily

Notes concerning some of the locally-threatened plant species

Listed as Critically Endangered under Victorian law

*Platylobium infecundum* (a flat-pea) – fairly abundant near the Boronia and Ferntree Gully Stations, and scattered between those stations.

Listed as Endangered under Victorian law

*Acacia stictophylla* (Dandenong Range Cinnamon Wattle), Dandenong Range variant – A solitary plant was found opposite 75 Underwood Rd, Boronia in 2002 but that plant has gone and no others have been recorded.

Locally threatened

*Banksia marginata* (Silver Banksia) – approximately 90% of all Knox's surviving wild plants of this once-common species are on the brow of the railway cutting 210 m north of Boronia Station platforms, to the rear of 24 Iris Cres. There are approximately 30 stems, some of which may arise from a common rootstock. They are at risk from herbicide spraying. The occurrence of the species in the 'sanctuary' south of Ferntree Gully Station appears to be due to planting, as it was not present in the author's prior surveys of that site. The only other remaining wild occurrences in Knox are at nature sanctuaries of the Boronia K-12 College and the former Boronia Heights College.

*Chrysocephalum semipapposum* (Clustered Everlasting) – 25 were found on the railway cutting below Quarry Rd, Ferntree Gully in 2002 but none could be found in 2024 or for some years prior.

*Geranium* ?sp. 2 (Variable Cranesbill) – At least several were found southeast of the Forest Rd bridge in 2002, numbers not recorded. This study did not find any but nor did it closely inspect that area.

*Geranium* sp. 5 (Naked Cranesbill) – A very small amount was found not far from Daffodil Rd, Boronia in 2002. This study looked but failed to find any.

*Imperata cylindrica* (Blady Grass) – Four patches were found between Boronia Rd and Ferntree Gully Station in 2002 but none in 2024. An additional patch was found northwest of Mountain Hwy (northeast side of the tracks) in 2002 and 2004 but was destroyed during level crossing removal excavations.

*Lomandra multiflora* (Many-flowered Mat-rush) – A solitary individual was found near Bowen St, Ferntree Gully in 2002.

*Olearia myrsinoides* (Silky Daisy-bush) – A solitary individual grows in the ‘sanctuary’ south of Ferntree Gully Station. It may have been planted, as the species was not recorded in surveys of the sanctuary prior to this study.

*Persoonia juniperina* (Prickly Geebung) – A single plant was found on the railway cutting opposite 65 Underwood Rd, Boronia but it has since died.

*Pimelea curviflora* (Curved Rice-flower) – None could be found in 2024 despite the species having been abundant in the ‘sanctuary’ south of Ferntree Gully Station in 2002 and more than thirty individuals having grown opposite Quarry Reserve in the same year. The author noted in 2002 that the latter colony was subject to heavy competition from the introduced species, *Watsonia meriana*, *Genista monspessulana*, *Ehrharta erecta* and *Oxalis incarnata*. The first two of these are declared noxious weeds.

*Poa labillardierei* (Common Tussock-grass) – In 2002, at least several grew on the cutting just north of Boronia Station on the western side of the tracks. None could be found in 2024.

*Pultenaea pedunculata* (Matted Bush-pea) – Several patches grow on the railway embankment between Lording St and Doysal Av, and dozens of patches between Alpine St and the Forest Rd bridge.

*Viminaria juncea* (Golden Spray) – Roughly a dozen grow near the Boronia war memorial, having germinated there in soil disturbed by the construction of the railway underpass. There was also one at Ferntree Gully Station on the northeastern side of the tracks in 2002 but none remain in 2024.

*Wahlenbergia multicaulis* (Tadgell's Bluebell) – In 2024, several individuals grew where Iris Cr, Boronia, abuts the railway reserve; however, they were sprayed with herbicide late in 2024.

*Wahlenbergia stricta* (Tall Bluebell) – Many were found in 2002 on the railway cutting below Quarry Rd, Ferntree Gully.

### Fauna of special significance

None detected.

### Fauna habitat features

- Many trees have hollows that may provide nesting or roosting sites for native bats, birds, possums or invertebrates;
- The site's native trees provide habitat for some native birds and invertebrates. Although they do not form a continuous canopy, they may nevertheless facilitate movement of some fauna;
- The dense cover of native grasses in some of the site represents good habitat for invertebrates and perhaps lizards;
- Indigenous shrubs are fairly abundant in much of the site (particularly due to planting beside Underwood Rd), providing habitat for invertebrates and perhaps small native birds.

### 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).

#### Threatened Plants

The flat-pea, *Platylobium infecundum*, has a quite viable population in much Site 88. 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 to National.

Many of the locally-threatened plant species listed above have viable populations within the site, thereby meeting criterion 3.1.5 for **Local** significance.

#### Ecological Integrity and Viability

As noted above under the heading, ‘Relationship to other land’, much of this site is suspected to function as either a habitat corridor or an ecological stepping-stone for native birds and flying insects. Such movements would be only locally important. This represents **Local** significance under criterion 1.2.6.

### Regionally Threatened Ecological Vegetation Classes

Valley Heathy Forest and Swampy Woodland are regionally endangered and Grassy Forest is regionally vulnerable. However, the standard criteria only regard such statuses 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. The native understorey in Site 88 is fragmented into areas smaller than the threshold of 0.25 ha, so the standard criteria do not attribute any significance to the presence of the threatened Ecological Vegetation Classes.

### 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;
- Herbicides applied to indigenous plants. This usually occurs as collateral damage while targeting weeds but sometimes areas with few if any introduced plants are sprayed, presumably through ignorance. While herbicide has to be used for maintenance of the rail corridor and to comply with noxious weed regulations, poor execution is sometimes leaving Blackberry and other serious weeds as the main species to recolonise where native vegetation has been killed;
- Loss or decline of plant species whose populations are so small that they are vulnerable to inbreeding, poor reproductive success or elimination by random incidents;
- Displacement of indigenous flora and fauna by environmental weeds, exacerbated by debilitation of the native vegetation by the impacts of climate change. Some of the most impactful species are Monterey Pine (*Pinus radiata*), Blackberry (*Rubus anglocandicans*), Bulbil Watsonia (*Watsonia meriana* var. *bulbillifera*), Kikuyu (*Pennisetum clandestinum*), Sweet Pittosporum (*Pittosporum undulatum*), Cotoneaster (*Cotoneaster glaucophyllus*), Willow-leaf Hakea (*Hakea salicifolia*), Cocksfoot (*Dactylis glomerata*) and (more recently) Carrot (*Daucus carota*);
- Dumping of garden waste by neighbours, which is spreading environmental weeds;
- Loss or decline of plant species whose populations are so small that they are vulnerable to inbreeding, poor reproductive success or chance events.

### 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), principally because of the presence of the threatened EVCs. That remains a valid reason despite the fragmentation of those EVCs into smaller areas than the threshold of 0.25 ha employed by the standard criteria. The main changes since 2010 that affect the reasons 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) some areas have been excised from the site due to vegetation loss. The only recommendation regarding ESO2 in response to these changes is to amend the site boundary to match that delineated here.

### Information sources used in this assessment

- An ecological survey of the strip of vegetation between Burwood Hwy and the railway line by Dr Lorimer on 22nd December 1997 for the report, '*A Survey and Management Plan for Significant Vegetation of Roadsides in Knox*' by G.S. Lorimer for Knox City Council (May 1998, 137 pp.). This included a list of plant species (indigenous and introduced), incidental fauna records and a map of vegetation types and condition;
- Surveys of the whole site Dr Lorimer on 20/8/02, 22/8/02 and 27–28/8/02 for a total of approximately thirteen hours for the first edition of this report. This included:
  - Compilation of sixteen lists of indigenous and introduced plant species for different vegetation types and sections of the site;
  - Description of the structural and floristic composition of the native vegetation;
  - Documentation and mapping of rare species populations and the ecological condition of the vegetation;
  - Incidental fauna observations;
  - Checks for fauna habitat, ecological threats and management issues;
- A vegetation survey of nearly all the site by Dr Lorimer for this edition between October 2023 and January 2025 – the most natural areas surveyed in both spring and summer to detect highly seasonal species;

- Incidental observations by Dr Lorimer during many trips along the shared path beside the trainline;
- A search (in vain) for 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.