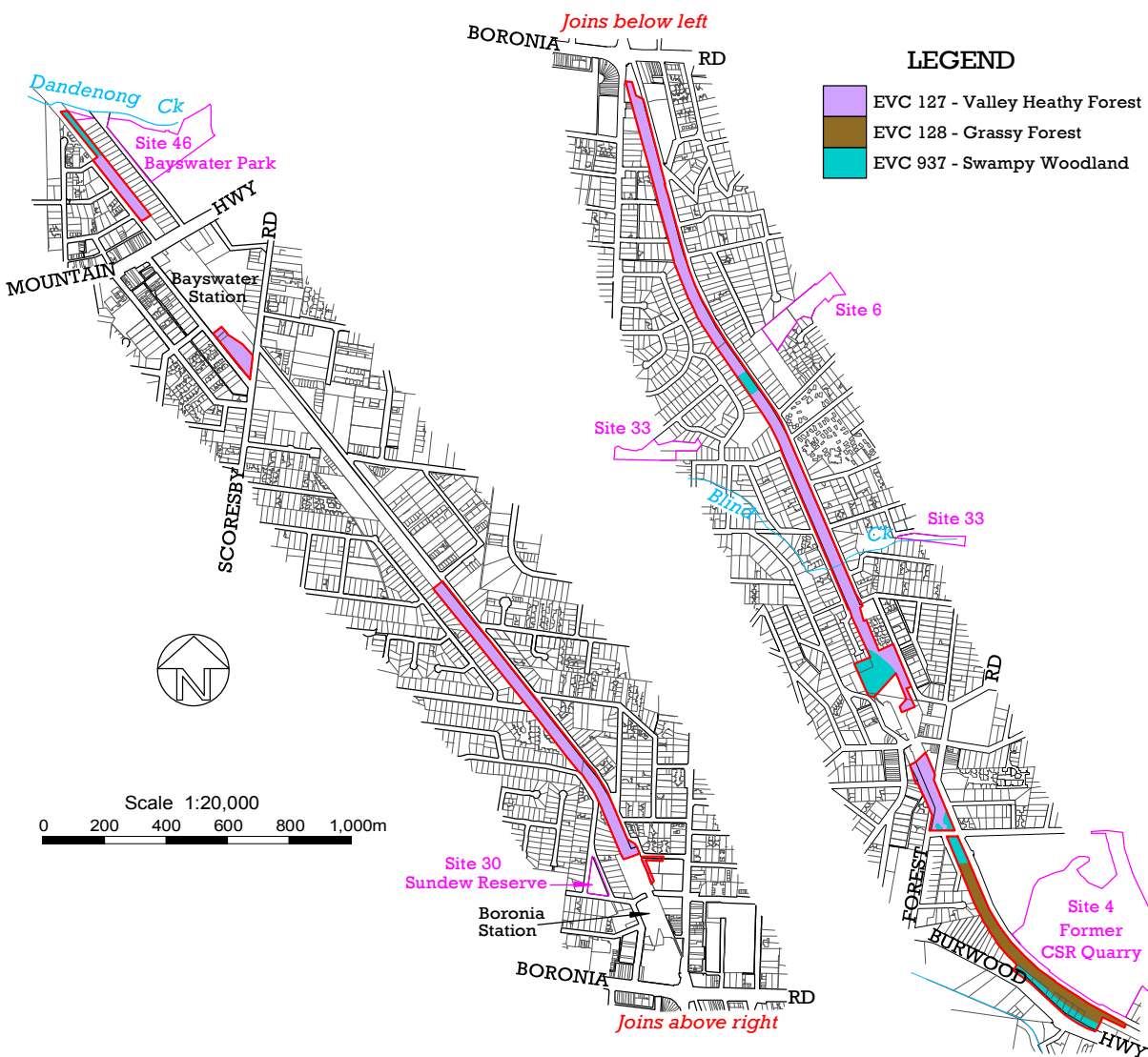


Site 88. Belgrave Railway Line Corridor

5.1 lineal kilometres of rail reserve and associated railway property, from Dandenong Creek almost to the Upper Ferntree Gully Station. Melway maps 64, 65 and 74.

Site Significance Level: State

- Most of the native vegetation belongs to the endangered EVC, Valley Heathy Forest (mauve on the map below) and the remainder belongs to regionally threatened EVCs (Swampy Woodland and Grassy Forest);
- The ecological condition of the native vegetation is highly variable, between good and poor;
- The site supports a large number of indigenous plant species (130);
- Fourteen plant species are threatened in Knox or the Melbourne area generally. Some of these are present in large numbers and some in critically small numbers, even single plants.



Boundaries

The site is in seven segments, defined by the areas on the map with red outlines and colour shading. Where the rail reserve's native vegetation extends into abutting road verges, the road verges are included (e.g. along Burwood Hwy and Underwood Rd).

Land use & tenure: Rail reservation, abutting road verges, and five vacant residential lots totalling 4,016 m² between the railway line and Burwood Hwy (opposite Acacia Rd).

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 24.7 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 is proposed to be given a lower level of protection under the Planning Scheme than is proposed for the site considered here.

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 ground flora. The density of weeds 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 the former CSR Ferntree Gully quarry, and Valley Heathy Forest elsewhere.

There is a tendency for the more intact 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 patch 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 rare or threatened in Knox generally but are surviving quite well in the railway reservation. Examples include Matted Bush-pea (*Pultenaea pedunculata*) and Clustered Everlasting (*Chrysocephalum semipapposum*). There are also other species, such as 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 Maroondah (Lorimer *et al.* 1997).

Relationship to other land

There are several other sites in proximity to the railway corridor, as seen on the map. There is undoubtedly some movement of birds and insects between the railway corridor and these other sites, but it seems unlikely that such movements have much ecological importance.

Trees in residential gardens neighbouring the corridor are probably at least as important. They are expected to encourage birds and insects to move along the corridor, sometimes making up for gaps in the native vegetation within the site itself.

Bioregion: The Grassy Forest 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 to occupy 4.9 ha in total, comprising 0.08 ha in good ecological condition (rating B), 0.49 ha in fair ecological condition (rating C) and 4.33 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. *E. obliqua* is next most common, followed by *E. radiata*, *E. goniocalyx* and *E. macrorhyncha*. *E. melliodora* is very scarce and localised.

Lower 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 in two locations, reflecting the poor drainage properties of the soil.

Vines: *Billardiera mutabilis* is present but sparse.

Ferns: Patches of *Pteridium esculentum* are common.

Ground flora: 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 admixta*, *Dillwynia cinerascens*, *Gonocarpus tetragynus*, *Opercularia varia*, *Platylobium formosum* and *Senecio quadridentatus*. The characteristic species *Dianella longifolia*, *Hibbertia riparia*,

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): Not distinguishable from Valley Heathy Forest except for the soil type and landscape context. Estimated to occupy 0.94 ha in total, comprising 0.02 ha in fair ecological condition (rating C) and 0.92 ha in poor ecological condition (rating D). 50 indigenous plant species were found.

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

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

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

Vines: Sparse, including *Cassytha melantha* and very scarce *Clematis aristata*.

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

Ground flora: The dominant indigenous species in most of the site are *Themeda triandra*. *Gahnia radula* is dense in patches and *Rytidosperma racemosum* dominates mown areas. Other species that are abundant in numbers but not dominant in coverage include *Poa morrisii*, *Gonocarpus tetragynus* and *Lomandra filiformis* subsp. *coriacea*. At the highest part of the rail cutting below the quarry, there are also rather abundant *Pimelea curviflora* and *Chrysocephalum semipapposum*.

Swampy Woodland (EVC 937, regionally Endangered): Estimated to occupy 1.5 ha in total, comprising 0.9 ha in fair ecological condition (rating C) and 0.6 ha in poor ecological condition (rating D). 46 indigenous plant species were found.

Dominant canopy trees: *Eucalyptus ovata*, combined with *E. obliqua* in the area adjoining Burwood Hwy (due to the proximity of Grassy Forest and Herb-rich Foothill Forest).

Dominant lower trees: *Acacia melanoxylon* and *Melaleuca ericifolia*.

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

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

Ferns: *Pteridium esculentum* is moderately common. *Adiantum aethiopicum* and *Cyathea australis* are fairly scarce.

Ground flora and small shrubs: The indigenous ground flora have been decimated by grass weeds and the effects of road runoff. *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 were observed by the author on the dates indicated. Additional species would no doubt be detectable in a more thorough survey. The column headed 'Risk' indicates the indigenous species' risk of extinction in Knox as follows: 'C'=Critically Endangered; 'E'=Endangered; and 'V'=Vulnerable. In addition, *Acacia leprosa* (Dandenong Range variant) is rare nationally and species with names in bold are rare throughout the Melbourne region.

| Risk | Indigenous Species | Year | Risk | Indigenous Species | Year |
|------|---|------|------|---|------|
| | <i>Acacia dealbata</i> | 2002 | | <i>Carex breviculmis</i> | 2002 |
| V | <i>Acacia leprosa</i> (Dandenong Range variant) | 2002 | | <i>Cassinia aculeata</i> | 2002 |
| V | <i>Acacia mearnsii</i> | 2002 | | <i>Cassinia arcuata</i> | 2002 |
| V | <i>Acacia melanoxylon</i> | 2004 | E | <i>Cassytha melantha</i> | 2002 |
| E | <i>Acacia myrtifolia</i> | 2002 | E | <i>Centella cordifolia</i> | 2002 |
| E | <i>Acacia pycnantha</i> | 2002 | C | <i>Chrysocephalum semipapposum</i> | 2002 |
| E | <i>Acacia stricta</i> | 2002 | V | <i>Clematis aristata</i> | 2002 |
| V | <i>Acaena echinata</i> | 2004 | V | <i>Coprosma quadrifida</i> | 2002 |
| | <i>Acaena novae-zelandiae</i> | 2002 | E | <i>Cyathea australis</i> | 2002 |
| V | <i>Acrotriche prostrata</i> | 2002 | E | <i>Daviesia latifolia</i> | 2004 |
| | <i>Acrotriche serrulata</i> | 2002 | E | <i>Daviesia leptophylla</i> | 2002 |
| V | <i>Adiantum aethiopicum</i> | 2002 | | <i>Deyeuxia quadriseta</i> | 2002 |
| V | <i>Allocasuarina littoralis</i> | 2002 | | <i>Dianella admixta</i> | 2004 |
| V | <i>Amyema quandang</i> | 2002 | V | <i>Dianella longifolia</i> s.l. | 2002 |
| | <i>Austrostipa pubinodis</i> | 2002 | | <i>Dichondra repens</i> | 2002 |
| | <i>Austrostipa rudis</i> subsp. <i>rudis</i> | 2004 | V | <i>Dillwynia cinerascens</i> | 2002 |
| | <i>Billardiera mutabilis</i> | 2002 | V | <i>Drosera peltata</i> subsp. <i>auriculata</i> | 2002 |
| | <i>Bossiaea prostrata</i> | 2002 | V | <i>Drosera whittakeri</i> | 2002 |
| V | <i>Brunonia australis</i> | 2002 | | <i>Elymus scaber</i> | 2002 |
| | <i>Bursaria spinosa</i> | 2004 | V | <i>Epacris impressa</i> | 2004 |
| V | <i>Caesia parviflora</i> | 2002 | V | <i>Epilobium billardierianum</i> ssp. <i>cinereum</i> | 2002 |

| Risk | Indigenous Species | Year | Risk | Indigenous Species | Year |
|------|---|------|------|--|------|
| | <i>Epilobium hirtigerum</i> | 2002 | V | <i>Opercularia ovata</i> | 2002 |
| | <i>Eragrostis brownii</i> | 2002 | V | <i>Opercularia varia</i> | 2004 |
| V | <i>Eucalyptus cephalocarpa</i> | 2004 | | <i>Oxalis exilis/perennans</i> | 2002 |
| | <i>Eucalyptus goniocalyx</i> | 2002 | E | <i>Ozothamnus ferrugineus</i> | 2002 |
| E | <i>Eucalyptus macrorhyncha</i> | 2002 | | <i>Pandorea pandorana</i> | 2002 |
| V | <i>Eucalyptus melliodora</i> | 2002 | C | <i>Persoonia juniperina</i> | 2002 |
| V | <i>Eucalyptus obliqua</i> | 2004 | E | <i>Phragmites australis</i> | 2002 |
| V | <i>Eucalyptus ovata</i> | 2004 | E | <i>Pimelea curviflora</i> | 2002 |
| E | <i>Eucalyptus radiata</i> | 2004 | V | <i>Pimelea humilis</i> | 2002 |
| E | <i>Euchiton involucratus</i> | 2002 | V | <i>Plantago varia</i> | 2002 |
| V | <i>Exocarpos cupressiformis</i> | 2004 | V | <i>Platylobium formosum</i> | 2002 |
| | <i>Gahnia radula</i> | 2004 | V | <i>Platylobium obtusangulum</i> | 2004 |
| C | <i>Geranium</i> sp. 5 | 2002 | E | <i>Poa labillardierei</i> var. <i>labillardierei</i> | 2002 |
| | <i>Gonocarpus tetragynus</i> | 2004 | | <i>Poa morrisii</i> | 2004 |
| | <i>Goodenia ovata</i> | 2002 | E | <i>Poa tenera</i> | 1997 |
| V | <i>Hardenbergia violacea</i> | 2002 | | <i>Poranthera microphylla</i> | 2002 |
| V | <i>Helichrysum luteoalbum</i> | 2002 | | <i>Pteridium esculentum</i> | 2004 |
| V | <i>Helichrysum scorpioides</i> | 2002 | V | <i>Pultenaea gunnii</i> | 2002 |
| V | <i>Hemarthria uncinata</i> | 2002 | C | <i>Pultenaea pedunculata</i> | 2002 |
| E | <i>Hibbertia riparia</i> | 2002 | E | <i>Rubus parvifolius</i> | 2002 |
| V | <i>Hovea heterophylla</i> | 2002 | | <i>Rytidosperma linkii</i> var. <i>fulvum</i> | 2004 |
| E | <i>Hypericum gramineum</i> | 2002 | | <i>Rytidosperma pallidum</i> | 2002 |
| E | <i>Imperata cylindrica</i> | 2004 | | <i>Rytidosperma penicillatum</i> | 2002 |
| | <i>Juncus amabilis</i> | 2002 | V | <i>Rytidosperma pilosum</i> | 2002 |
| | <i>Juncus gregiflorus</i> | 2002 | | <i>Rytidosperma racemosum</i> | 2004 |
| | <i>Juncus pallidus</i> | 2002 | E | <i>Rytidosperma semiannulare</i> | 2002 |
| | <i>Juncus sarophorus</i> | 2002 | | <i>Rytidosperma setaceum</i> | 2004 |
| | <i>Kunzea ericoides</i> spp. agg. | 2002 | | <i>Rytidosperma tenuius</i> | 2002 |
| | <i>Lachnagrostis filiformis</i> | 2002 | | <i>Schoenus apogon</i> | 2004 |
| | <i>Lepidosperma elatius</i> | 1997 | | <i>Senecio glomeratus</i> | 1997 |
| | <i>Lepidosperma gunnii</i> | 2002 | | <i>Senecio hispidulus</i> | 2002 |
| V | <i>Lepidosperma laterale</i> | 2002 | E | <i>Senecio minimus</i> | 2002 |
| V | <i>Leptorhynchos tenuifolius</i> | 2002 | | <i>Senecio quadridentatus</i> | 2004 |
| | <i>Leptospermum continentale</i> | 2002 | E | <i>Stylidium armeria/graminifolium</i> | 2002 |
| E | <i>Leptospermum scoparium</i> | 2002 | | <i>Tetrarrhena juncea</i> | 2002 |
| | <i>Lomandra filiformis</i> subsp. <i>coriacea</i> | 2004 | V+ | <i>Thelymitra</i> sp. | 2002 |
| | <i>Lomandra filiformis</i> subsp. <i>filiformis</i> | 2002 | | <i>Themeda triandra</i> | 2004 |
| | <i>Lomandra longifolia</i> | 2004 | | <i>Tricoryne elatior</i> | 2004 |
| C | <i>Lomandra multiflora</i> | 2002 | C | <i>Viminaria juncea</i> | 2002 |
| V | <i>Lythrum hyssopifolia</i> | 2002 | E | <i>Viola hederacea</i> | 2002 |
| E | <i>Melaleuca ericifolia</i> | 2002 | C | <i>Wahlenbergia multicaulis</i> | 2002 |
| | <i>Microlaena stipoides</i> | 2004 | E | <i>Wahlenbergia stricta</i> | 2002 |
| C | <i>Muellerina eucalyptoides</i> | 2002 | V | <i>Xanthorrhoea minor</i> | 2002 |
| E | <i>Olearia myrsinoides</i> | 2002 | | | |

Introduced Species

| | | | |
|-------------------------------------|--|--------------------------------|-------------------------------------|
| <i>Acacia baileyana</i> | <i>Coprosma repens</i> | <i>Genista monspessulana</i> | <i>Pittosporum undulatum</i> |
| <i>Acacia decurrens</i> | <i>Cortaderia selloana</i> | <i>Gladiolus undulatus</i> | <i>Plantago lanceolata</i> |
| <i>Acacia longifolia longifolia</i> | <i>Cotoneaster glaucophyllus</i> | <i>Grevillea hybrids</i> | <i>Prunus cerasifera</i> |
| <i>Agapanthus praecox</i> | <i>Cotoneaster pannosus</i> | <i>Hedera helix</i> | <i>Romulea rosea</i> |
| <i>Agrostis capillaris</i> | <i>Crataegus monogyna</i> | <i>Holcus lanatus</i> | <i>Rubus anglocandicans</i> |
| <i>Allium triquetrum</i> | <i>Crococsmia</i> × <i>crococsmiiflora</i> | <i>Hypochoeris radicata</i> | <i>Salix</i> ? × <i>reichardtii</i> |
| <i>Anthoxanthum odoratum</i> | <i>Cytisus scoparius</i> | <i>Linum trigynum</i> | <i>Sporobolus africanus</i> |
| <i>Asparagus asparagoides</i> | <i>Dactylis glomerata</i> | <i>Lonicera japonica</i> | <i>Tradescantia fluminensis</i> |
| <i>Asparagus scandens</i> | <i>Delairea odorata</i> | <i>Nephrolepis cordifolia</i> | <i>Trifolium repens</i> |
| <i>Briza maxima</i> | <i>Ehrharta erecta</i> | <i>Oxalis incarnata</i> | <i>Ulex europaeus</i> |
| <i>Centaurium erythraea</i> | <i>Erica lusitanica</i> | <i>Oxalis pes-caprae</i> | <i>Verbena bonariensis</i> s.l. |
| <i>Chamaecytisus palmensis</i> | <i>Foeniculum vulgare</i> | <i>Oxalis purpurea</i> | <i>Vicia sativa</i> |
| <i>Chrysanthemoides monilifera</i> | <i>Fraxinus angustifolia</i> | <i>Pennisetum clandestinum</i> | <i>Watsonia meriana</i> |
| <i>Cirsium vulgare</i> | <i>Galium aparine</i> | <i>Pinus radiata</i> | <i>Zantedeschia aethiopica</i> |

Notes concerning some of the locally threatened plant species

Acacia leprosa (Cinnamon Wattle), Dandenong Range variant. A solitary plant was found opposite 75 Underwood Rd, Boronia.

Chrysocephalum semipapposum (Clustered Everlasting). 25 were found on the railway cutting below Quarry Rd, Ferntree Gully.

Daviesia leptophylla (Narrow-leaf Bitter-pea). Found between Alpine St, Ferntree Gully and the pedestrian crossing to the southeast, numbers not recorded.

Geranium ?sp. 2 (Variable Cranesbill). At least several were found southeast of the Forest Rd bridge, numbers not recorded.

Geranium sp. 5 (Naked Cranesbill). A very small amount was found not far from Daffodil Rd, Boronia.

Imperata cylindrica (Blady Grass). Four patches were found between Boronia Rd and Ferntree Gully Station and one northwest of Mountain Hwy (northeast side of the tracks).

Linum marginale (Native Flax). A small population was found in the bushland between Burwood Hwy and the railway line in Upper Ferntree Gully.

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

Persoonia juniperina (Prickly Geebung). A single plant was found on the railway cutting opposite 65 Underwood Rd, Boronia.

Pimelea curviflora (Curved Rice-flower). More than thirty individuals were found in the railway reservation opposite the former CSR quarry. They are being overrun by the weeds, *Watsonia meriana*, *Genista monspessulana*, *Ehrharta erecta* and *Oxalis incarnata*. Note that the first two of these are declared noxious weeds.

Poa labillardierei (Common Tussock-grass). There are at least several on the cutting just north of Boronia Station on the western side of the tracks.

Pseudognaphalium luteoalbum (Jersey cudweed). One seen just northwest of Boronia Station. Likely to appear and disappear from time to time at many locations in the site.

Pultenaea pedunculata (Matted Bush-pea). Patches of 5 m² and 7 m² were found on the railway embankment between Lording St and Doysal Av, and approximately sixty patches between Alpine St and the Forest Rd bridge.

Viminaria juncea (Golden Spray). Several germinated near Boronia Rd in soil disturbed by the construction of the railway underpass. There is also one at Ferntree Gully Station on the northeastern side of the tracks.

Wahlenbergia multicaulis (Tadgell's Bluebell). A solitary individual was found where Iris Cr, Boronia, abuts the railway reserve.

Wahlenbergia stricta (Tall Bluebell). Many were found 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 sites for native bats, birds or possums;
- The densely grassy ground layer is bound to provide food for larvae of various butterflies (particularly in the Valley Grassy Forest);
- Dense patches of shrubs provide protection for small native birds.

Significance ratings

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

Regionally Threatened Ecological Vegetation Classes

According to the criteria of 'Victoria's Native Vegetation Management – A Framework for Action' (NRE 2002a), any example of a regionally endangered EVC (including the Valley Heathy Forest and Swampy Woodland along the railway line) has a conservation significance rating of at least 'High'. It follows from criterion 3.2.3 of Amos (2004) that the site's patches of these EVCs are of **State** significance. On a similar basis, remnants of the regionally vulnerable EVC, Grassy Forest, are of **Regional** significance.

Rare or Threatened Flora

The single specimen of *Acacia leprosa* that occurs within this site is of a form that is listed as rare (but not threatened) in Victoria. It is clearly not a viable population in its own right, but it could easily share pollen with the larger numbers of the species in nearby Vaughan Road Reserve (Site 6) and Koolunga Native Reserve (Site 5). This is of **State** significance under criterion 3.1.2.

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

Plants of Exceptional Size

The three *Bursaria spinosa* trees measuring 8 m, 10 m and 11 m tall and with trunk diameters up to 30 cm, situated opposite 73 Power St, Bayswater, are of exceptional age and size when considered on a bioregional scale. Nevil Amos (pers. comm.) has stated that it was unintentional that the latest version of the significance criteria (Amos 2004) omitted the criterion that, in previous versions, recognised 'plants of exceptional size or age'. If not for this oversight, the *Bursaria spinosa* plants in question would qualify as Regionally significant.

Threats

- Invasion by environmental weeds. The worst species are as follows:
 - Very serious: Boneseed (*Chrysanthemoides monilifera* ssp. *monilifera*), Panic Veldt-grass (*Ehrharta erecta*), Montpellier Broom (*Genista monspessulana*), Japanese Honeysuckle (*Lonicera japonica*), Pale Wood-sorrel (*Oxalis incarnata*), Kikuyu (*Pennisetum clandestinum*), Sweet Pittosporum (*Pittosporum undulatum*), Blackberry (*Rubus discolor*), Bulbil Watsonia (*Watsonia meriana* var. *bulbillifera*);
 - Serious: Brown-top Bent (*Agrostis capillaris*), Angled Onion (*Allium triquetrum*), Sweet Vernal-grass (*Anthoxanthum odoratum*), Bridal Creeper (*Asparagus asparagoides*), Cotoneaster (*Cotoneaster glaucophyllus* forma *serotinus*), Hawthorn (*Crataegus monogyna*), English Broom (*Cytisus scoparius*), Cocksfoot (*Dactylis glomerata*), Spanish Heath (*Erica lusitanica*), Ivy (*Hedera helix*), Cat's Ear (*Hypochoeris radicata*), French Flax (*Linum trigynum*), Soursob (*Oxalis pes-caprae*), Monterey Pine (*Pinus radiata*), Pussy Willow (*Salix* ?× *reichardtii*), Wandering Jew (*Tradescantia albiflora*);
- Dumping of garden waste, which is spreading weeds;
- Herbicides applied to indigenous plants, usually as collateral damage while targeting weeds;
- Loss or decline of plant species whose populations are so small that they are vulnerable to inbreeding, poor reproductive success or elimination by incidents such as track works, disease or slasher damage. This particularly applies to *Wahlenbergia multicaulis*, *Lomandra multiflora* and *Persoonia juniperina*.

Management issues

- Mowing of the fairly intact area of native vegetation south of the Ferntree Gully service station (near Alpine St) should be reduced in area and frequency, and it should not occur during September to December;
- Propagating material should be collected from plant species with critically small numbers. Plants propagated from this material should be planted in nearby, secure locations, and ideally at more secure locations within the site. Some seed should be kept in a seed bank in case the existing populations are destroyed.

Administration matters

- This site is suited to an Environmental Significance Overlay because of its biological significance documented above, particularly because the vegetation belongs to threatened Ecological Vegetation Classes. Such an overlay should exempt works (including vegetation removal) to the minimum extent needed for maintenance of railway assets;
- A little over half of this site is covered by Vegetation Protection Overlay Schedule 1 of the Knox Planning Scheme, with boundaries derived from Sites 33, 40 and 61 of Water Ecoscience (1998). The site described and mapped here should replace the Water Ecoscience sites because of the more detailed, recent and accurate treatment. Note that Water Ecoscience did not visit their site 61 at all and only listed some of the dominant indigenous plant species in Sites 33 and 40;
- The planning scheme zoning is predominantly Public Use Zone - Transport (PUZ4). Abutting road verges are in various zones according to the adjacent land use, and the five small lots fronting Burwood Hwy are zoned Residential 1 Zone (R1Z);
- Some signs could be erected along the shared path to draw attention to some of the more significant sections of vegetation, such as just north of Ferntree Gully Station.

Information sources used in this assessment

- Surveys of all of the site except Bayswater Railway Station by Dr Lorimer on 20/8/02, 22/8/02 and 27-28/8/02 for a total of approximately thirteen hours, following this study's standard procedures discussed in Section 2.4 of Volume 1. 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;
- An equivalent survey of Bayswater Railway Station by Mr Rik Brown on 20/5/02;

- A site 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 vegetation map showing EVCs and vegetation quality;
- 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.