

Site 99. Dandenong Ranges Buffer

The treed, mainly residential area at the foot of the Dandenong Ranges.

Summary of significant features:

- Nationally significant: scattered individuals of the flat-pea, *Platylobium infecundum*, which is Critically Endangered globally, and small numbers of the Dandenong Ranges Cinnamon Wattle (*Acacia stictophylla*), which is Endangered globally;
- Nationally significant: populations (size unknown) of the Tubercle Burrowing Cray (*Engaeus tuberculatus*) and Foothill Burrowing Cray (*Engaeus victoriensis*), both of which are Endangered globally;
- State significance: known habitat of the Yellow-bellied Glider (*Petaurus australis*), which is listed as Vulnerable under Commonwealth and Victorian law;
- Regionally significant: known habitat of the Powerful Owl (*Ninox strenua*), which is listed as Vulnerable under Victorian law;
- Locally significant: viable populations of many plant species threatened with dying out in Knox, particularly on roadsides;
- Locally significant: facilitation of movement of wildlife, seeds and pollen around the landscape.

Map – see next page

Boundaries

The 998 ha site is the magenta area on the map and does not include the other coloured and numbered sites shown within its outline. The outline follows property boundaries and the municipal boundary except where it crosses roads. Compared with the second edition of this report in 2010:

- Parts of central Boronia and some land along Burwood Hwy have been excised due to loss of habitat;
- Some sites that were previously surrounded by Site 99 have become absorbed into Site 99, in whole or in part, because the habitat no longer stands out as superior;
- Where the state government's mapping of the municipal boundary in 2010 has been updated, Site 99 has been updated accordingly; and
- There are many tiny adjustments to conform with the current state cadastre.

Land use & tenure: Mainly residential land, parks and road reserves.

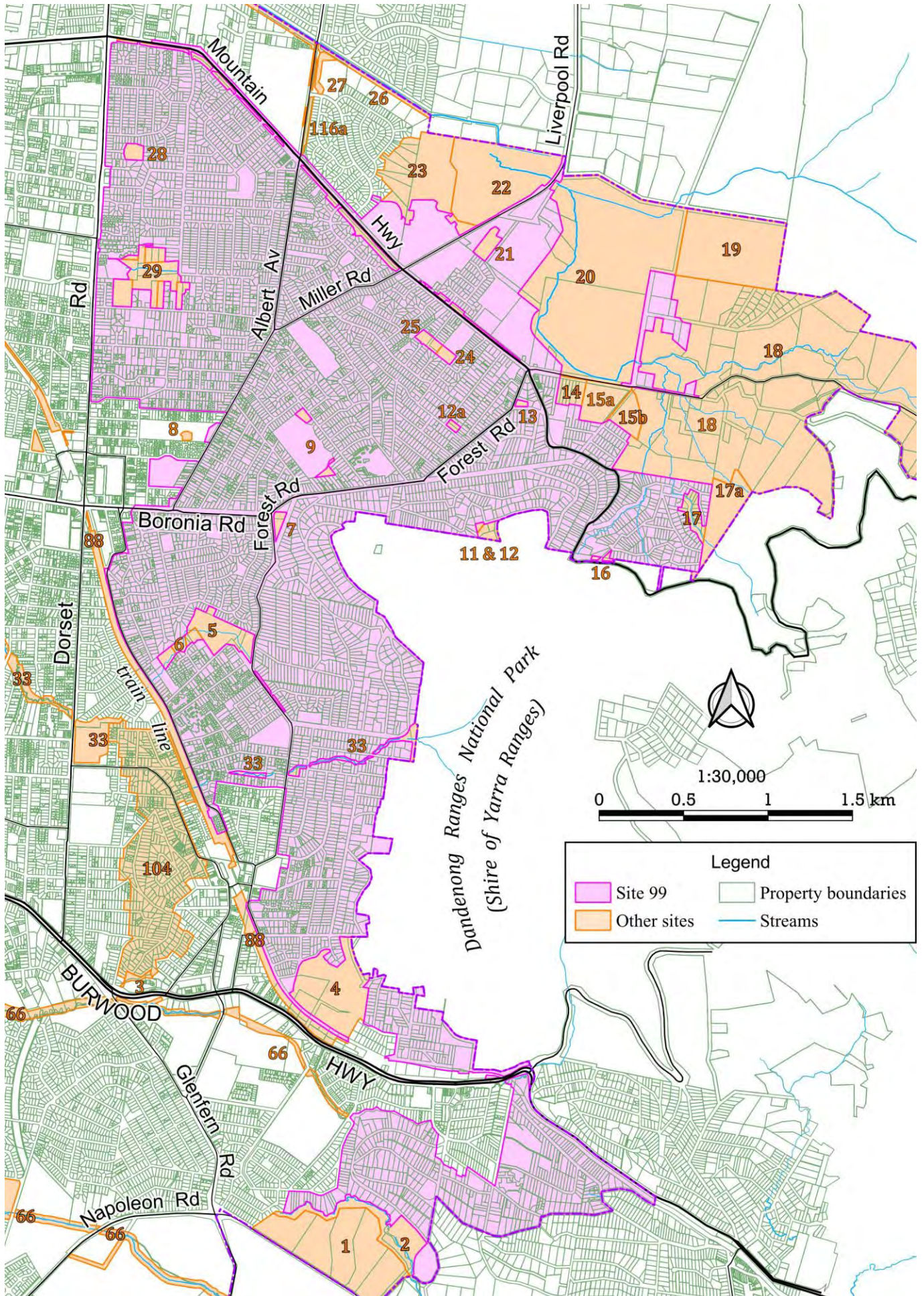
Site Description

This site abuts the Dandenong Ranges National Park and many other identified sites of biological significance, and it has many other sites of biological significance embedded within it. It also has a higher density of large trees than most of Knox, including remnant indigenous trees. These characteristics result in extensive dispersal of birds, bats, invertebrates, frogs, echidnas, pollen and seeds through the area. This dispersal is important for bringing nature into the lives of people living in the area. It is also important for the landscape-scale maintenance of biodiversity, e.g. by:

- Facilitating exchange of species and genetic material of native flora and fauna between the embedded and neighbouring sites; and
- Allowing fauna to migrate around the landscape to fulfil their various habitat needs, such as to search for water or seasonal food sources in different parts of the landscape or for young animals to find home ranges once they are ejected from their parents' ranges.

The tree canopy and shrubs that occur along the creeks and drainage lines flowing through the area are important for maintaining the aquatic ecosystems and water quality.

In these ways, this site plays an important role as an ecological buffer zone and for providing ecosystem services, even though the site is not very natural.



Scattered within the site are small areas of native understorey, particularly on roadsides. Most of the remnant native vegetation belongs to, or is derived from, Ecological Vegetation Classes (EVCs) that are regionally Endangered or Vulnerable. There are localised, mostly very small populations of numerous plant species that are rare or threatened in Knox, as well as two plant species that are threatened globally (the flat-pea, *Platylobium infecundum*, and the Dandenong Range Cinnamon Wattle, *Acacia stictophylla*). There are also significant fauna species such as the Foothills Burrowing Crayfish, Powerful Owl and Yellow-bellied Glider.

The area is overwhelmingly residential and there may be undetected significant habitat or species among the many hundreds of properties.

However, many properties internal to the site have few if any features of biological significance. These properties are included within the site because the site's significance can be increased or decreased by actions even on properties with no current significance, e.g. through off-site impacts of subdivision.

Relationship to other land

As explained in the previous section, this site is significant partly because of its role in facilitating movement of fauna, seeds and pollen between other, more natural sites. As an example, Powerful Owls that breed in the national park are frequently observed around Koolunga Native Reserve (Site 5) and are likely to hunt in treed areas anywhere within the Dandenong Ranges Buffer. Similarly, echidnas can appear almost anywhere within the site as they move to fulfil their seasonal needs or when they are forced to find new habitat.

Without such a treed landscape, most of the more ecologically sensitive wildlife would cease to move through the area. As a result, pollen would not be as well dispersed, exacerbating plant inbreeding, reproductive failure and steady loss of native vegetation and habitat, even in the neighbouring core areas such as Koolunga Native Reserve. The rich birdlife enjoyed by residents would be reduced to just hardy urban birds such as Common Mynas, Spotted Doves, Little Ravens and Red Wattlebirds.

Bioregion: Gippsland Plain and Highlands Southern Fall, as mapped at the start of Chapter 4 of Volume 1.

Habitat types

The following is a list of the Ecological Vegetation Classes represented in the site, but some of them may be only represented by vestiges of the pre-colonial vegetation (typically just remnant trees and hardy ground flora in parks and residential gardens). For this reason, and because most private properties could not be inspected, no figures are quoted for the size of area within each EVC and in each ecological condition rating.

Riparian Forest (EVC 18, **Vulnerable** in the Gippsland Plain bioregion) along Ferny Ck in Upper Ferntree Gully, identifiable by the canopy of Manna Gums (*Eucalyptus viminalis*).

Grassy Dry Forest (EVC 22, conservation status rated 'Least Concern' in the Highlands Southern Fall bioregion) in the most elevated parts of The Basin, Boronia and Ferntree Gully.

Herb-rich Foothill Forest (EVC 23, conservation status rated 'Least Concern' in the Highlands Southern Fall bioregion) in the Claremont Av estate of The Basin and on the slopes of Upper Ferntree Gully that face approximately southward.

Swampy Riparian Woodland (EVC 83, **regionally Endangered**) along Upwey Ck and Ferny Ck.

Valley Heathy Forest (EVC 127, **regionally Endangered**) on the undulating terrain to the west of the Dandenong Ranges geological formation, including most parts of the site in Boronia and the lower slopes of Ferntree Gully.

Grassy Forest (EVC 128, **regionally Vulnerable**) along the mid-slope of the western face of the Dandenong Ranges and on slopes and hills in Upper Ferntree Gully that do not support Herb-rich Foothill Forest.

Swampy Woodland (EVC 937, **regionally Endangered**) on alluvial deposits across the site, usually identifiable by pure stands of *Eucalyptus ovata*.

Plant species

The following plant species have been credibly recorded as growing wild within the site since 1985 (the past forty years). Care has been taken to exclude as many as possible of the large number of records that have been mapped within the site but either: (a) the location is described as being somewhere outside the site (e.g. 'Fern

Gully, Otway Ranges' and some of Andrew Paget's 1985 quadrats); or (b) the stated positional uncertainty is over 500 m. Indigenous species that were not seen during the surveys for this report are indicated by superscripts showing the year of the most recent observation. The column headed 'Risk' indicates the indigenous, vascular species' risk of dying out in Knox as follows: '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.

Indigenous mosses and liverworts

Bryum argenteum, Silver Moss
Campylopus introflexus, Heath Star Moss
Ceratodon purpureus subsp. *convolutus*, a moss
Cyathophorum bulbosum, Caterpillar Moss ¹⁹⁹⁰
Fissidens sp., a pocket-moss
Funaria hygrometrica, Common Fire-moss
Gemmabryum dichotomum, Broody Bryum
Hypnum cupressiforme, Common Hypnum ²⁰²¹
Lunularia cruciata, Moonwort
Polytrichum juniperinum, Common Juniper-moss
Ptychostomum angustifolium, Tufted Thread-moss ²⁰²¹
Rosulabryum capillare, Capillary Thread-moss ²⁰²²
Tortula truncata, a moss

Risk Wild indigenous vascular species

Wild fern species

V *Adiantum aethiopicum*, Common Maidenhair ²⁰²¹
E *Blechnum cartilagineum*, Gristle Fern ¹⁹⁹⁷
V *Calochlaena dubia*, Common Ground-fern
C *Cheilanthes austrotenuifolia*, Green Rock Fern ¹⁹⁹⁷
C *Cyathea australis*, Rough Tree-fern
C *Histiopteris incisa*, Bat's Wing Fern
E *Polystichum proliferum*, Mother Shield-fern
Pteridium esculentum, Austral Bracken
Pteris tremula, Tender Brake

Wild flowering species

Acacia dealbata, Silver Wattle ²⁰⁰³
V *Acacia implexa*, Lightwood ²⁰¹⁹
V *Acacia mearnsii*, Black Wattle ²⁰²¹
V *Acacia melanoxylon*, Blackwood
E *Acacia mucronata*, Variable Sallow Wattle ¹⁹⁹⁷
E *Acacia myrtifolia*, Myrtle Wattle ²⁰⁰²
Acacia paradoxa, Hedge Wattle ²⁰²¹
V *Acacia pycnantha*, Golden Wattle
V *Acacia stictophylla*, Dandenong Range
Cinnamon Wattle
E *Acacia stricta*, Hop Wattle
V *Acacia verticillata*, Prickly Moses ²⁰²²
V *Acaena echinata*, Sheep's Burr
Acaena novae-zelandiae, Bidgee-widgee ²⁰⁰³
V *Acrotriche prostrata*, Trailing Ground-berry ²⁰⁰²
E *Acrotriche serrulata*, Honey-pots
V *Alternanthera denticulata*, Lesser Joyweed ²⁰²¹
C *Amyema pendula*, Drooping Mistletoe ²⁰¹⁶

Risk Wild indigenous vascular species

E *Amyema quandang*, Grey Mistletoe ²⁰¹⁷
Anthosachne scabra, Common Wheat-grass ¹⁹⁹⁷
C *Arthropodium milleflorum* s.l., Pale Vanilla-lily ¹⁹⁹⁷
Arthropodium strictum, Chocolate Lily ²⁰²²
C *Asperula conferta*, Common Woodruff ¹⁹⁹⁷
Austrostipa pubinodis, Tall Spear-grass ¹⁹⁹⁷
Austrostipa rudis subsp. *rudis*, Veined Spear-grass
C *Bedfordia arborescens*, Blanket-leaf ¹⁹⁹⁷
Billardiera mutabilis, Common Apple-berry ²⁰²¹
N *Bossiaea prostrata*, Creeping Bossiaea ²⁰²²
V *Brunonia australis*, Blue Pincushion ¹⁹⁹⁷
E *Bulbine bulbosa*, Yellow Bulbine-lily ²⁰⁰²
Burchardia umbellata, Milkmaids ²⁰²²
Bursaria spinosa, Sweet Bursaria ²⁰²²
V *Caesia parviflora*, Pale Grass-lily ²⁰¹⁸
Carex appressa, Tall Sedge ²⁰²³
Carex breviculmis, Short-stem Sedge
Carex inversa, Knob Sedge
Cassinia aculeata, Common Cassinia ²⁰⁰²
Cassinia longifolia, Shiny Cassinia ²⁰²¹
C *Cassinia trinerva*, Three-nerved Cassinia
E *Cassytha melantha*, Coarse Dodder-laurel ¹⁹⁹⁷
E *Cassytha pubescens*, Downy Dodder-laurel ¹⁹⁹⁷
E *Centella cordifolia*, Centella ¹⁹⁹⁷
V *Chiloglottis valida*, Common Bird-orchid
V *Clematis aristata*, Mountain Clematis
E *Comesperma volubile*, Love Creeper ²⁰²³
V *Coprosma quadrifida*, Prickly Currant-bush
C *Coronidium scorpioides*, Button Everlasting ²⁰²²
C *Correa reflexa* var. *reflexa*, Common Correa
Cotula australis, Common Cotula ²⁰²²
V *Crassula ?colligata* subsp. *colligata*,
Crassula decumbens, Spreading Crassula
C *Cymbonotus preissianus*, Austral Bear's-ear
E *Cryptostylis leptochila*, Small Tongue-orchid ²⁰²⁴
C *Daviesia latifolia*, Hop Bitter-pea ²⁰²³
C *Daviesia leptophylla*, Narrow-leaf Bitter-pea ¹⁹⁹⁷
E *Desmodium gunnii*, Southern Tick-trefoil ¹⁹⁹⁷
Deyeuxia quadriseta, Reed Bent-grass ²⁰⁰²
Dianella longifolia var. *longifolia*, Pale Flax-lily ²⁰⁰³

Risk Wild indigenous vascular species

- Dianella revoluta*, Black-anther Flax-lily
Dianella tasmanica, Tasman Flax-lily
 C *Dichelachne crinita*, Long-hair Plume-grass¹⁹⁹⁷
Dichelachne rara, Common Plume-grass¹⁹⁹⁷
Dichondra repens, Kidney-weed
 V *Dillwynia cinerascens*, Grey Parrot-pea¹⁹⁹⁷
 E *Dipodium roseum*, Rosy Hyacinth-orchid¹⁹⁹⁷
 C *Diuris orientis*, Wallflower Orchid²⁰²¹
 V *Drosera auriculata*, Tall Sundew²⁰²⁰
Drosera hookeri, Forked Sundew²⁰²⁰
 C *Epacris impressa*, Common Heath
 V *Epilobium billardioreanum* subsp. *cinereum*,
 Variable Willow-herb
Epilobium billardioreanum subsp.
intermedium, Robust Willow-herb
Epilobium hirtigerum, Hairy Willow-herb
Eragrostis brownii, Common Love-grass¹⁹⁸⁷
 E *Eucalyptus cephalocarpa*, Mealy Stringybark²⁰²⁰
 V *Eucalyptus cypellocarpa*, Mountain Grey Gum²⁰⁰³
 V *Eucalyptus goniocalyx*, Bundy
 C *Eucalyptus macrorhyncha*, Red Stringybark²⁰¹⁰
 E *Eucalyptus melliodora*, Yellow Box²⁰²²
 E *Eucalyptus obliqua*, Messmate Stringybark²⁰²¹
 V *Eucalyptus ovata*, Swamp Gum²⁰²¹
 E *Eucalyptus polyanthemus*, Red Box
 E *Eucalyptus radiata*, Narrow-leaved
 Peppermint²⁰²⁰
 C *Eucalyptus viminalis* subsp. *viminalis*, Manna
 Gum²⁰⁰³
 E *Euchiton involucratus*, Common Cudweed¹⁹⁹⁷
Euchiton japonicus, Creeping Cudweed
 E *Euchiton sphaericus*, Star Cudweed
 V *Exocarpos cupressiformis*, Cherry Ballart
 E *Exocarpos strictus*, Pale-fruit Ballart¹⁹⁹⁷
 C *Gahnia radula*, Thatch Saw-sedge²⁰²¹
 C *Gastrodia sesamoides*, Cinnamon Bells
Geranium homeanum, Rainforest Crane's-bill²⁰²³
 E *Geranium potentilloides*, Soft Crane's-bill²⁰⁰³
 E *Glycine clandestina*, Twining Glycine²⁰²¹
Gonocarpus tetragynus, Common Raspwort²⁰⁰²
 N *Goodenia lanata*, Trailing Goodenia²⁰¹⁹
Goodenia ovata, Hop Goodenia
 C *Hackelia suaveolens*, Sweet Hound's-tongue¹⁹⁹⁷
 C *Hakea ulicina*, Furze Hakea¹⁹⁹⁷
 E *Hardenbergia violacea*, Purple Coral-pea²⁰²²
 V *Hemarthria uncinata*, Mat Grass¹⁹⁹²
 C *Hibbertia australis*, Upright Guinea-flower¹⁹⁹⁷
 C *Hovea heterophylla*, Common Hovea¹⁹⁹²

Risk Wild indigenous vascular species

- E *Hydrocotyle foveolata*, Yellow Pennywort
 V *Hydrocotyle hirta*, Hairy Pennywort
Hydrocotyle sibthorpioides, Shining
 Pennywort
 E *Hypericum gramineum*, Small St John's Wort²⁰⁰²
 C *Indigofera australis*, Austral Indigo
Isolepis inundata, Swamp Club-rush
 C *Isolepis marginata*, Little Club-rush
 V *Isolepis platycarpa*, a club-rush
Juncus amabilis, Hollow Rush
 C *Juncus australis*, Austral Rush²⁰²²
Juncus bufonius, Toad Rush
Juncus gregiflorus, Green Rush
Juncus pallidus, Pale Rush
 E *Juncus pauciflorus*, Loose-flower Rush
 E *Juncus planifolius*, Broad-leaf Rush²⁰²¹
 E *Juncus procerus*, Tall Rush²⁰⁰²
Juncus sarophorus, Broom Rush
 E *Juncus subsecundus*, Finger Rush
 C *Juncus vaginatus*, Clustered Rush¹⁹⁹⁸
 C *Kennedia prostrata*, Running Postman²⁰²¹
Kunzea ericoides group, a burgan
 C *Lachnagrostis aemula*, Purplish Blown-grass¹⁹⁹⁷
Lachnagrostis filiformis, Common Blown-
 grass
Laphangium luteoalbum, Jersey cudweed
Lepidosperma elatius, Tall Sword-sedge¹⁹⁹⁷
 V *Lepidosperma laterale*, Variable Sword-sedge¹⁹⁹⁷
 C *Leptospermum continentale*, Prickly Tea-tree²⁰²¹
Leptospermum scoparium, Manuka
 E *Linum marginale*, Native Flax¹⁹⁹⁷
Lomandra filiformis subsp. *coriacea*, Wattle
 Mat-rush²⁰²¹
Lomandra filiformis subsp. *filiformis*, Wattle
 Mat-rush²⁰⁰²
Lomandra longifolia subsp. *longifolia*, Spiny-
 headed Mat-rush²⁰²¹
 V *Luzula meridionalis*, Common Woodrush
 V *Luzula meridionalis*, Common Woodrush¹⁹⁹²
Lythrum hyssopifolia, Lesser Loosestrife
 E *Melaleuca ericifolia*, Swamp Paperbark¹⁹⁹⁷
Microlaena stipoides, Weeping Grass
 V *Microtis parviflora*, Slender Onion-orchid¹⁹⁹²
 E *Microtis unifolia*, Common Onion-orchid
 C *Muellerina eucalyptoides*, Creeping Mistletoe²⁰⁰²
 E *Olearia argophylla*, Musk Daisy-bush¹⁹⁹⁷
 E *Olearia lirata*, Snowy Daisy-bush
 C *Olearia myrsinoides*, Silky Daisy-bush²⁰⁰²
 V *Opercularia ovata*, Broad-leaf Stinkweed¹⁹⁸⁶
 V *Opercularia varia*, Variable Stinkweed²⁰⁰²
Oxalis exilis/perennans, Wood-sorrel

Risk Wild indigenous vascular species

- V *Ozothamnus ferrugineus*, Tree Everlasting²⁰⁰³
Pandorea pandorana, Wonga Vine²⁰²²
Persicaria decipiens, Slender Knotweed
E *Persicaria lapathifolia*, Pale Knotweed
E *Phragmites australis*, Common Reed²⁰⁰²
C *Pimelea axiflora*, Bootlace Bush
Pimelea curviflora, Curved Rice-flower¹⁹⁹⁷
E *Pimelea humilis*, Common Rice-flower²⁰¹⁹
E *Plantago varia*, Variable Plantain²⁰¹⁹
E *Platylobium infecundum*, a flat-pea
E *Platylobium obtusangulum*, Common Flat-pea²⁰⁰²
Poa ensiformis, Sword Tussock-grass²⁰⁰³
Poa morrisii, Soft Tussock-grass²⁰⁰²
E *Poa tenera*, Slender Tussock-grass¹⁹⁹⁷
V *Polyscias sambucifolia*, Elderberry Panax²⁰²¹
V *Pomaderris aspera*, Hazel Pomaderris¹⁹⁹⁷
Poranthera microphylla, Small Poranthera¹⁹⁹⁷
V *Prostanthera lasianthos*, Victorian Christmas-bush¹⁹⁹⁷
Pterostylis nutans, Nodding Greenhood²⁰¹⁹
V *Pultenaea gunnii*, Golden Bush-pea²⁰²⁰
C *Pultenaea scabra*, Rough Bush-pea²⁰²²
E *Rubus parvifolius*, Small-leaf Bramble
V *Rytidosperma erianthum*, Hill Wallaby-grass¹⁹⁹⁷
Rytidosperma fulvum, Leafy Wallaby-grass
Rytidosperma laeve, Smooth Wallaby-grass¹⁹⁹⁷
E *Rytidosperma pallidum*, Red-anther (or Silvertop) Wallaby-grass
Rytidosperma penicillatum, Slender Wallaby-grass²⁰⁰²
Rytidosperma pilosum, Velvet Wallaby-grass¹⁹⁹⁷
Rytidosperma racemosum, Clustered Wallaby-grass
E *Rytidosperma semiannulare*, Tasmanian Wallaby-grass¹⁹⁹⁷
Rytidosperma setaceum, Bristly Wallaby-grass¹⁹⁹⁷
Rytidosperma tenuius, Purplish Wallaby-grass
Schoenus apogon, Common Bog-rush²⁰⁰²
C *Senecio bathurstianus*, a fireweed¹⁹⁹⁷
V *Senecio glomeratus*, Annual Fireweed
Senecio hispidulus, Rough Fireweed
Senecio minimus, Shrubby Fireweed
V *Senecio prenanthoides*, Common Fireweed
Senecio quadridentatus, Cotton Fireweed
V *Sigesbeckia orientalis*, Indian Weed²⁰²¹
V *Solanum laciniatum*, Large Kangaroo Apple²⁰²¹
V *Spyridium parvifolium*, Australian Dusty Miller²⁰²²
E *Stackhousia monogyna/subterranea*, Candles²⁰²⁰

Risk Wild indigenous vascular species

- C *Stellaria pungens*, Prickly Starwort¹⁹⁹⁷
E *Stylidium armeria*, Common Triggerplant²⁰¹⁹
Tetrarrhena juncea, Forest Wire-grass¹⁹⁹⁷
C *Tetradlea ciliata*, Pink-bells²⁰²¹
E *Thelymitra ?peniculata*, Trim Sun-orchid
Themeda triandra, Kangaroo Grass²⁰²¹
E *Thysanotus patersonii*, Twining Fringe-lily
C *Thysanotus tuberosus*, Common Fringe-lily¹⁹⁹⁷
Tricoryne elatior, Yellow Rush-lily²⁰⁰²
E *Viola hederacea*, Ivy-leaf Violet¹⁹⁹⁷
Wahlenbergia gracilis, Sprawling Bluebell²⁰¹⁹
E *Wahlenbergia stricta*, Tall Bluebell¹⁹⁹⁷
E *Wurmbea dioica*, Common Early Nancy
E *Xanthorrhoea minor*, Small Grass-tree

Introduced species

- Acacia baileyana*, Cootamundra Wattle
Acacia decurrens, Green Wattle
Acacia floribunda, White Sallow-wattle
Acacia longifolia subsp. *longifolia*, Sallow Wattle
Acer pseudoplatanus, Sycamore Maple
Acetosella vulgaris, Sheep Sorrel
Agapanthus praecox, Agapanthus
Agonis flexuosa, Willow Myrtle
Agrostis capillaris, Brown-top Bent
Aira caryophyllea, Silvery Hair-grass
Aira elegantissima, Delicate Hair-grass
Allium triquetrum, Angled Onion
Alstroemeria aurea, Yellow Alstroemeria
Anredera cordifolia, Madeira Vine
Anthoxanthum odoratum, Sweet Vernal-grass
Arbutus unedo, Irish Strawberry Tree
Arctotheca calendula, Cape Weed
Aristea ecklonii, Blue Stars
Arrhenatherum elatius var. *bulbosum*, Onion Twitch
Asparagus asparagoides, Bridal Creeper
Asparagus scandens, Asparagus Fern
Atriplex prostrata, Hastate Orache
Avena barbata, Bearded Oat
Bellis perennis, English Daisy
Billardiera fusiformis, Bluebell Creeper
Briza maxima, Large Quaking-grass
Briza minor, Lesser Quaking-grass
Bromus catharticus, Prairie Grass
Bromus diandrus, Great Brome
Bromus hordeaceus, Soft Brome
Bromus lithobius, Chilean Brome
Buddleja davidii, Butterfly-bush
Callitriche stagnalis, Pond Water-starwort
Cardamine hirsuta, Common Bitter-cress
Cassinia sifton, Sifton Bush
Cenchrus clandestinus, Kikuyu Grass
Centaurium erythraea, Common Centaury
Centaurium tenuiflorum, Branched Centaury
Centranthus ruber, Red Valerian

Introduced species

Cerastium glomeratum s.l., Common Mouse-ear
 Chickweed
Chamaecytisus palmensis, Tree Lucerne
Chrysanthemoides monilifera subsp. *monilifera*,
 Boneseed
Cichorium intybus, Chicory
Cirsium vulgare, Spear Thistle
Coleonema pulchellum, Pink Diosma
Coprosma repens, Mirror-bush
Coprosma robusta, Karamu
Cortaderia selloana, Pampas Grass
Cotoneaster glaucophyllus, Cotoneaster
Cotoneaster pannosus, Cotoneaster
Cotoneaster simonsii, Himalayan Cotoneaster
Crassula multicava, Shade Crassula
Crataegus monogyna, Hawthorn
Crepis capillaris, Smooth Hawksbeard
Crocsmia × *crocsmiiflora*, Montbretia
Cymbalaria muralis, Ivy-leaf Toad-flax
Cynodon dactylon, Couch
Cynosurus echinatus, Rough Dog's-tail
Cyperus eragrostis, Drain Flat-sedge
Cytisus scoparius, English Broom
Dactylis glomerata, Cocksfoot
Daucus carota, Carrot
Delairea odorata, Cape Ivy
Digitaria sanguinalis, Summer-grass
Dipogon lignosus, Common Dipogon
Dittrichia graveolens, Stinkweed
Dysphania pumilio, Clammy Goosefoot
Echinochloa crus-galli, Common Barnyard Grass
Ehrharta erecta, Panic Veldt-grass
Ehrharta longiflora, Annual Veldt-grass
Eleusine tristachya, American Crow's-foot Grass
Epilobium ciliatum, Glandular Willow-herb
Erica lusitanica, Spanish Heath
Eragrostis mexicana, Mexican Love-grass
Erigeron bonariensis, Flaxleaf Fleabane
Erigeron karvinskianus, Seaside Daisy
Erigeron sumatrensis, Fleabane
Euphorbia maculata, Eyebane
Euphorbia peplus, Petty Spurge
Foeniculum vulgare, Fennel
Fraxinus angustifolia, Desert Ash
Freesia laxa subsp. *laxa*, Anomatheca
Freesia leichtlinii, Freesia
Fumaria ?bastardii, Bastard's Fumitory
Fumaria muralis subsp. *muralis*, Wall Fumitory
Galium aparine, Cleavers
Gamochaeta calviceps, Grey Cudweed
Gamochaeta purpurea, Spiked Cudweed
Genista linifolia, Flax-leafed Broom
Genista monspessulana, Montpellier Broom
Geranium dissectum, Cut-leaf Crane's-bill
Geranium molle, Dovesfoot
Geranium yeoi, Geranium

Introduced species

Gladiolus undulatus, Wild Gladiolus
Grevillea robusta, Southern Silky Oak
Hakea laurina, Pincushion Hakea
Hakea salicifolia, Willow-leaf Hakea
Hedera helix/hibernica, Ivy
Helminthotheca echioides, Ox-tongue
Holcus lanatus, Yorkshire Fog
Homalanthus populifolius, Bleeding Heart
Hypericum tetrapterum, Square-stem St John's Wort
Hypochaeris radicata, Cat's Ear
Ilex aquifolium, Holly
Ipomoea indica, Lear's Morning-glory
Isolepis levynsiana, Tiny Flat-sedge
Jasminum polyanthum, Pink (or Winter) Jasmine
Juncus articulatus, Jointed Rush
Juncus capitatus, Dwarf Rush
Juncus pallescens, a rush
Lactuca serriola, Prickly Lettuce
Lagurus ovatus, Hare's Tail
Leontodon saxatilis, Lesser Hawkbit
Lepidium didymum, Lesser Swine's-cress
Ligustrum lucidum, Large-leafed Privet
Lilium formosanum, Lily
Linum trigynum, French Flax
Lobularia maritima, Sweet Alyssum
Lolium perenne, Perennial Rye-grass
Lolium rigidum, Wimmera Rye-grass
Lonicera japonica, Japanese Honeysuckle
Lotus corniculatus, Bird's-foot Trefoil
Lotus subbiflorus, Hairy Bird's-foot Trefoil
Lotus uliginosus, Greater Bird's-foot Trefoil
Lysimachia arvensis, Pimpernel
Lythrum junceum, Mediterranean Loosestrife
Malus pumila, Domestic Apple
Malva nicaeensis, Mallow of Nice
Medicago arabica, Spotted Medic
Medicago polymorpha, Burr Medic
Melaleuca armillaris, Bracelet Honey-myrtle
Modiola caroliniana, Carolina Mallow
Muscari armeniacum, Grape Hyacinth
Nassella neesiana, Chilean Needle-grass
Nasturtium officinale, Watercress
Oxalis corniculata, Creeping Wood-sorrel
Oxalis incarnata, Pale Wood-sorrel
Oxalis pes-caprae, Soursob
Oxalis purpurea, Large-flower Wood-sorrel
Paraserianthes lophantha, Cape Wattle
Paspalum dilatatum, Paspalum
Passiflora tarminiana, Banana Passionfruit
Phalaris aquatica, Toowoomba Canary-grass
Phyllanthus hirtellus, Thyme Spurge
Pinus radiata, Monterey Pine
Pittosporum undulatum, Sweet Pittosporum
Plantago coronopus, Buck's-horn Plantain
Plantago lanceolata, Ribwort
Plantago major, Greater Plantain

Introduced species

Poa annua (non *P. infirma*), Annual Meadow-grass
Poa infirma, Early Meadow-grass
Poa pratensis, English Meadow-grass
Poa trivialis, Rough Meadow-grass
Polycarpon tetraphyllum, Four-leafed Allseed
Polygala myrtifolia, Myrtle-leaf Milkwort
Polygonum aviculare, Hogweed
Portulaca oleracea, Pigweed (Common Purslane)
Potentilla indica, Indian Strawberry
Prunella vulgaris, Self-heal
Prunus cerasifera, Cherry-plum
Ranunculus repens, Creeping Buttercup
Raphanus raphanistrum, Wild Radish
Romulea rosea, Common Onion-grass
Rubus anglocandicans, Blackberry
Rumex conglomeratus, Clustered Dock
Rumex crispus, Curled Dock
Rumex obtusifolius, Broad-leaf Dock
Sagina apetala, Common Pearlwort
Salix sp., unidentified willow
Senecio vulgaris, Common Groundsel
Setaria parviflora, Slender Pigeon Grass
Sisyrinchium micranthum, Blue Pigroot
Solanum furcatum, Broad Nightshade
Solanum laxum, Jasmine Nightshade
Solanum mauritianum, Tobacco-bush
Solanum nigrum, Black Nightshade
Soliva sessilis, Jo Jo
Sonchus asper, Rough Sow-thistle
Sonchus oleraceus, Sow-thistle
Sporobolus africanus, Rat-tail Grass

Introduced species

Stachys arvensis, Stagger Weed
Stellaria media, Chickweed
Symphotrichum subulatum, Aster-weed
Taraxacum sect. *Taraxacum*, Garden Dandelion
Tradescantia fluminensis, Wandering Trad
Trifolium angustifolium, Narrow-leaved Clover
Trifolium arvense var. *arvense*, Hare's foot Clover
Trifolium dubium, Suckling Clover
Trifolium glomeratum, Cluster Clover
Trifolium pratense, Red Clover
Trifolium repens, White Clover
Trifolium striatum, Knotted Clover
Trifolium subterraneum, Subterranean Clover
Tropaeolum majus, Nasturtium
Ulex europaeus, Gorse (Furze)
Urtica urens, Small Nettle
Verbascum thapsus subsp. *thapsus*, Great Mullein
Verbena bonariensis, Purple-top Verbena
Veronica arvensis, Wall Speedwell
Veronica persica, Persian Speedwell
Vicia disperma, French Tiny Vetch
Vicia hirsuta, Tiny Vetch
Vicia sativa subsp. *cordata*, Common Vetch
Vicia sativa subsp. *nigra*, Narrow-leaf Vetch
Vicia tetrasperma, Slender Vetch
Vinca major, Blue Periwinkle
Viola odorata, Common Violet
Vulpia bromoides, Squirrel-tail Fescue
Watsonia borbonica, Rosy Watsonia
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) – scattered across the site, particularly in Boronia and The Basin, e.g. several domestic gardens on Marie St, Boronia.

Listed as Endangered under Victorian law

Acacia stictophylla (Dandenong Range Cinnamon Wattle) – scattered thinly across the site.

Locally threatened

Acacia mucronata (Variable Sallow Wattle) – In 1997, a copse was observed growing beside Arbor Av, Ferntree Gully, next to the national park. A brief inspection in 2024 failed to find any there.

Agrostis aemula (Purplish Blown Grass) – Found sporadically in 1997 but the species has since become rare throughout its range.

Arthropodium milleflorum (Pale Vanilla-lily) – Very small numbers were found in 1997 near Government Rd in The Basin and near Walbundry Av and Barclay Av in Ferntree Gully.

Asperula conferta (Common Woodruff) – Found in 1997 beside Bayview Cr, The Basin, at its eastern end. Numbers not recorded.

Bedfordia arborescens (Blanket-leaf) – Found in 1997 near the national park boundary below Government Rd in The Basin, in small numbers.

Blechnum cartilagineum (Gristle Fern) – Found in 1997 on the east-facing slope near Government Rd, The Basin.

- Bulbine bulbosa* (Yellow Bulbine-lily) – Photographed by Reiner Richter at the northern end of Philippa Rd, Boronia in 2002. I found several plants in 1997 beside Walbundry Av in Ferntree Gully.
- Cassinia trinerva* (Three-nerved Cassinia) – A single individual grows in a front yard on Marie St, Boronia.
- Cheilanthes austrotenuifolia* (Green Rock Fern) – One patch was found in 1997 beside Hansen Rd in Boronia.
- Chiloglottis valida* (Common Bird-orchid) – Scattered thinly.
- Cymbonotus preissianus* (Austral Bear's-ear) – This study found two individuals at the junction of Heath Av & Mont Albert Rd, Boronia.
- Daviesia leptophylla* (Narrow-leaf Bitter-pea) – Small numbers were found in 1997 on Chandlers Hill and the west face of the Dandenong Ranges.
- Desmodium gunnii* (Southern Tick-trefoil) – Found beside Bayview Cr, The Basin, at its eastern end. Numbers not recorded.
- Gastrodia sesamoides* (Cinnamon Bells) – Appears sporadically in shady, bare ground, e.g. in the author's garden in 2024.
- Hackelia suaveolens* (Sweet Hound's-tongue) – Found in 1997 beside Barclay Av, Upper Ferntree Gully. Numbers not recorded.
- Hakea ulicina* (Furze Hakea) – Found in 1997 beside Inverness Av, The Basin. Numbers not recorded.
- Histiopteris incisa* (Bat's Wing Fern) – Appears sporadically in shady, bare ground, e.g. in the author's garden in 2024.
- Indigofera australis* (Austral Indigo) – Two grow on the roadside opposite 6 Phillipa Rd, Boronia.
- Juncus australis* (Austral Rush) – A single plant volunteered on the nature strip of 18 Marie St, Boronia in 2021 and remains there in 2025.
- Juncus vaginatus* (Clustered Rush) – In 1997–1998, one plant was found beside Government Rd, The Basin and another at the intersection of Heath Av and Arbor Av in Ferntree Gully. There are now none in the latter vicinity; the former was not checked for this study.
- Linum marginale* (Native Flax) – Small populations were found in 1997 beside Mountain Hwy and Mercia Av in The Basin and beside Burwood Hwy in Upper Ferntree Gully.
- Olearia argophylla* (Musk Daisy-bush) – Very small numbers were found in 1997 beside Toorak Av and Claremont Av in The Basin.
- Pimelea axiflora* (Bootlace Bush) – Found in 1997 in small numbers on the east-facing slope near Government Rd, The Basin, and near Arbor Av in Ferntree Gully.
- Pimelea curviflora* (Curved Rice-flower) – Found in 1997 in small numbers beside Hansen Rd, Boronia and beside Birdwood Av and Walbundry Av in Ferntree Gully.
- Polystichum proliferum* (Mother Shield-fern) – One plant was found during this study at the junction of Heath Av & Mont Albert Rd, Boronia. Another one or two were found beside Arbor Av, Ferntree Gully in 1997.
- Pterostylis melagramma* (Tall Greenhood) – Recorded by Andrew Paget on the north side of Lucas Ct, Boronia in 1985.
- Pultenaea scabra* (Rough Bush-pea) – Scattered on the northeastern slopes of Chandlers Hill in The Basin.
- Rytidosperma erianthum* (Hill Wallaby-grass) – A small but probably viable population was found in 1997 on the northern nature strip of Olivebank Rd, Ferntree Gully; not checked in this study.
- Senecio bathurstianus* (Rough Fireweed) – One plant was found in 1997 beside Mercia Av, The Basin, as well as another nearby, beside Old Forest Rd.
- Spyridium parvifolium* (Australian Dusty Miller) – Scattered in small numbers around The Basin.
- Stellaria pungens* (Prickly Starwort) – One plant was found in 1997 beside Arbor Av, Ferntree Gully.
- Tetraloche ciliata* (Pink-bells) – Found in 1997 beside Arbor Av, Ferntree Gully. Numbers of plants were not recorded, but were very small and possibly just one.
- Thysanotus tuberosus* (Common Fringe-lily) – Found in 1997 beside Hansen Rd, Boronia. Numbers not recorded.
- Wahlenbergia stricta* (Tall Bluebell) – Scattered on the west face of the Dandenong Ranges close to the national park.

Fauna of special significance

The following list includes only species that are resident or regular users of Site 99. It is probably very incomplete because various significant species would be expected near the Dandenong Ranges National Park but no serious investigation has been done.

Listed as Endangered under Victorian law

Engaeus tuberculatus (Tubercle Burrowing Cray) – Only reported once – near the bus terminus on Mountain Hwy – but probably greatly overlooked due to detection difficulty and lack of any survey.

Engaeus victoriensis (Foothill Burrowing Cray) – The only reports in recent years are from a few locations (including the author's home in Boronia) but probably greatly overlooked due to detection difficulty and lack of any survey.

Listed as Vulnerable under Victorian law

Ninox strenua (Powerful Owl) – Observed regularly (except nesting season) in much of the site, particularly around Koolunga Native Reserve in Ferntree Gully (Site 5).

Petaurus australis (Yellow-bellied Glider) – Recorded in 2021 in the Claremont Avenue / Inverness Av area of The Basin.

Pteropus poliocephalus (Grey-headed Flying-fox) – roosts in inner Melbourne and disperses nightly throughout the Melbourne area, particularly settling in planted flowering or fruiting trees. This species is more frequent in inner and middle suburbs than Knox. Its vulnerable status belies its abundance and its increasing spread and population.

Locally threatened

Tachyglossus aculeatus (Short-beaked Echidna) – Wanders almost anywhere in the site during dispersal.

Cryptophis nigrescens (Eastern Small-eyed Snake) – Three records in 2022–2025 from Ferntree Gully residences opposite the Dandenong Ranges National Park. This mainly nocturnal species had only been recorded once before in Knox or the Dandenong Ranges – a museum specimen collected in Ferntree Gully in 1919 (i.e. over a century earlier).

Fauna habitat features

- The tree canopy, fragmented though it is, supports such forest fauna as tree frogs, invertebrates, insectivorous bats, pardalotes, thornbills and other forest birds;
- Many trees have hollows suitable for habitation by native birds, bats or invertebrates;
- Many residential gardens support high densities of possums, which represent prey for Powerful Owls and a threat to eucalypt health;
- Areas with dense shrubs (particularly prickly, indigenous species) provide protection and nest sites for small native birds such as wrens;
- The sites' streams and ponds provide habitat for fish, aquatic invertebrates and other aquatic life.

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).

Ecological Integrity and Viability

The role that this site plays in linking other sites of greater biological importance fits the description of an ecological linkage that is 'Important at Local Scale - Link between individual remnant habitat blocks', which criterion 1.2.6 of Amos (2004) recognises to be of **Local** conservation significance.

Regionally Threatened Ecological Vegetation Class

The EVCs represented within the site are predominantly regionally threatened, but this study found no examples that would qualify as a 'remnant patch' in the sense intended by criterion 3.2.3 of Amos (2004), i.e. a continuous area of at least 0.25 ha with at least 10% cover of native understorey throughout. As a result, no significance can be formally assigned to recognise the threatened EVCs. Any areas which may be discovered in the future to qualify as remnant patches would be of Regional or State significance.

Threatened Plants

The flat-pea, *Platylobium infecundum*, is scattered through most of Site 99, particularly around Boronia and The Basin, e.g. several domestic gardens on Marie St, Boronia. 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* qualifies for **National** significance under criterion 3.1.2.

The site contains a small number of the Dandenong Range Cinnamon Wattle (*Acacia stictophylla*). That species is listed as ‘Endangered’ in Victoria and it does not occur outside Victoria. As a result, the habitat provided for the species qualifies for **National** significance under criterion 3.1.2.

Neither *Platylobium infecundum* or *Acacia stictophylla* had 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 other locally-threatened plant species listed above have viable populations, thereby meeting criterion 3.1.5 for **Local** significance.

Threatened Fauna

Tubercle Burrowing Cray (*Engaeus tuberculatus*) and Foothill Burrowing Cray (*Engaeus victoriensis*) are resident in Site 99 and may well be found to be fairly common, if a survey were to be done. Both species are listed under the *Flora and Fauna Guarantee Act* as Endangered and neither occurs outside Victoria. As a result, the habitat provided for each species qualifies for **National** significance under criterion 3.1.2.

There are compelling records of Yellow-bellied Glider (*Petaurus australis*) in Site 99 close to the Dandenong Ranges National Park, in both Ferntree Gully (2022) and The Basin (2021). While Site 99 is providing habitat, it could not be regarded as an ‘important site’ in the terms of the standard criteria. The species is listed as Vulnerable under both Commonwealth and state legislation. For such a species, criterion 3.1.1 treats habitat other than ‘important sites’ as **State** significance.

Powerful Owls (*Ninox strenua*) are observed regularly in the site except during nesting season, though the habitat is a tiny fraction of the total habitat across the species’ entire range (which extends interstate). The species is listed under the *Flora and Fauna Guarantee Act* as Vulnerable. As a result, the habitat provided for the species qualifies for **Regional** significance under criterion 3.1.2.

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 the health of the site’s eucalypts, partly due to the abovementioned droughts and storms;
- Killing of mature remnant trees by root severance or soil compaction in residential gardens and on road verges;
- Urban development;
- Loss or decline of plant species whose populations are so small that they are vulnerable to inbreeding, poor reproductive success or elimination by misadventure;
- Prevention of natural establishment or replacement of indigenous plants by suburban gardening and mowing;
- Displacement of indigenous flora by environmental weeds;
- Potential increased fire prevention measures due to climate change and consequent increases in climatic fire risk.

Strategic planning

The previous (2010) edition of this report led to this site (with different boundaries) being covered by Schedule 3 of the Environmental Significance Overlay (ESO3). That edition cited the potential impacts of future subdivision and the matters of biological significance known at the time. Subdivision still has the same potential for adverse impacts and additional matters of biological significance have arisen, e.g. the National significance of habitat for the two burrowing crayfish species, the Dandenong Range Cinnamon Wattle and the flat-pea, *Platylobium infecundum*. There are therefore increased motivations for planning protection of the kind provided by the Environmental Significance Overlay. It could be argued that the level of planning protection should be raised from Schedule 3 to the tighter controls of Schedule 2; however, the former is better suited to the suburban nature of Site 99 and it seems to remain satisfactory.

However, the boundaries of the areas to which Schedule 3 applies need to be amended. As discussed on p. 641 under the heading, 'Boundaries', the areas covered by Site 99 have been changed in this edition in various ways and for various reasons. It is recommended that the same changes be made to ESO3. However, there is considerable tension between the planning objectives of nature conservation and urban densification around Chandler Park and the area around Rubida Ct in Boronia. For those areas, it is beyond the scope of the present report to seek an ESO3 boundary that provides the optimum balance between urban growth and nature conservation. Further strategic planning is required.

Information sources used in this assessment

- Twelve quadrat records from what are now residential properties on the north side of Lucas Close, Boronia prior to the site's development, all recorded by Andrew Paget in his 1985 unpublished RMIT thesis for B.App.Sci.;
- Ecological surveys by Dr Lorimer during 1997–2003 in various areas scattered across the site. These were prepared partly for the first edition of this report and partly 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.). The sites surveyed were Chandler Park, Batterham Park, the railway corridor through Upper Ferntree Gully and numerous roadsides and front yards. The data gathered included:
 - Compilation of lists of indigenous and introduced plants for each of fifty-nine parts of the site;
 - Mapping of vegetation communities, ecological condition and uncommon plant species;
 - Descriptions of the vegetation's structural and floristic composition;
 - Incidental observations of fauna; and
 - Checks for fauna habitat, ecological threats and management issues.
- Equivalent surveys of the Upwey Ck corridor, Talaskia Reserve and the roadside of Boronia Rd by Rik Brown in 2004 for the first edition of this report;
- General visual inspection of the area's vegetation by the author in 2004 for the purposes of detecting significant vegetation and determining site boundaries;
- A 'windscreen survey' and aerial photography interpretation by Dr Lorimer in May 2010 to adjust the boundary around the Boronia activity centre in response to recent land development and planning scheme amendment C062, which implemented the Boronia Structure Plan;
- Follow-up site inspections and botanical surveys across much of the site by Dr Lorimer in 2024 and 2025 as an update for this edition;
- Dr Lorimer's day-to-day observations of nature in the area, where he lives and works;
- 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.