

Site 96. Wellington Rd Roadside, Rowville & Lysterfield

8.4 hectares of road reserve in seventeen segments. Melway maps 81-83.

Site Significance Level: *State* in parts; other parts Regional or Local

- Some segments of the site are contiguous with larger sites (particularly the Lysterfield Hills) and are hence effectively part of a larger area of State significance;
- The site contains remnants and regrowth of the threatened EVCs, Valley Heathy Forest, Valley Grassy Forest and Swampy Woodland, a small part of which is in good ecological condition;
- There are small or modest populations of six plant species that are threatened in Knox (or in one case, throughout metropolitan Melbourne).

Aerial Photographs – see next page

The photographs on the next page were taken in April 2003. The second and third photographs adjoin each other (approximately) and are at the same scale. The first photograph is shown at a different scale from the other two and it depicts an area that lies 1.7 km further to the west, near Stud Rd. The red lines on the photographs are outlines of the various segments of road verge that make up this site. The magenta lines are outlines of neighbouring sites treated elsewhere in this report; and white lines are boundaries between areas of different Ecological Vegetation Classes (with their titles written in white text).

Boundaries

The site is in seventeen segments, defined by the red outlines on the three aerial photographs. The gutter of Wellington Rd forms one edge of each segment, and most segments extend to the fences of adjoining properties.

Land use & tenure: Road reservation.

Site Description

This site comprises the larger strips of native vegetation along Wellington Rd. Most segments have both native overstorey and understorey, but some patches are missing one or the other. There are other, smaller patches of native vegetation scattered along the roadside that are not deemed suitable for including within a Site of Biological Significance. All native vegetation west of Kelletts Rd was surveyed, mapped, analysed and documented by Lorimer (1998). The remaining vegetation was surveyed by Dr Lorimer in October 2002 and April 2003.

The width of the segments is typically 12 metres and the total area is 8.4 ha. Adjacent land use varies from urban residential at the western end to grazing and quarrying. There is little correlation between the native vegetation's ecological condition and the adjacent land use, probably because most of the degradation occurred when the whole area had similar, rural land use.

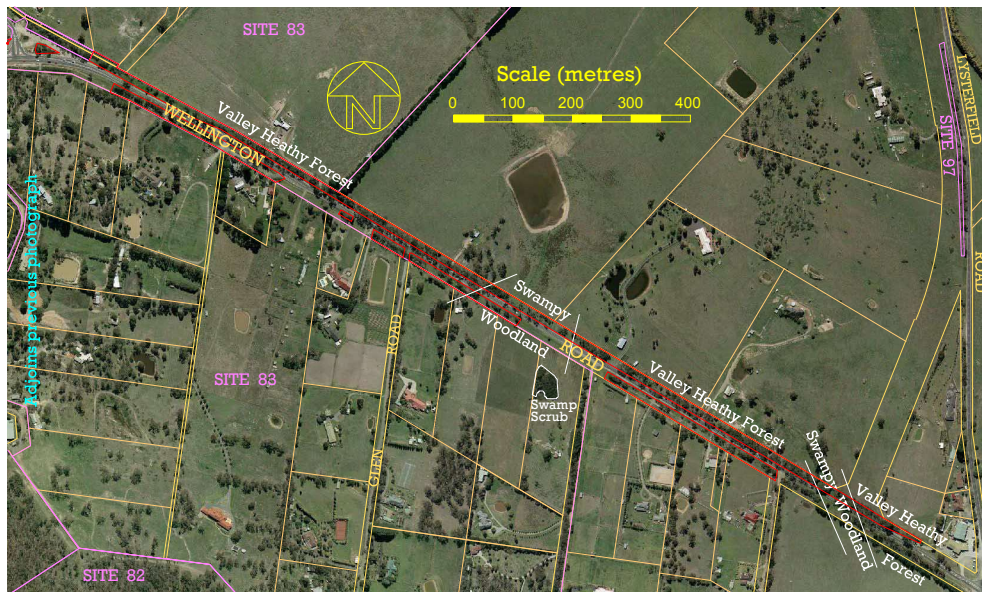
There is a tendency for the more intact vegetation to be where the road is below-grade, so that runoff from the road does not enter the vegetation.

The most intact part of the site is the western half of the segment on the first of the three aerial photographs. It is in good ecological condition (rating B). There is a small area in similar condition at the intersection of Kelletts Rd. Eastward from there, the condition rapidly deteriorates to rating D (poor) all the way to Lysterfield Rd. The areas west of Kelletts Rd on the second aerial photograph are divided roughly equally between condition ratings C (fair) and D.

Some of the site is signposted as significant roadside vegetation, with slashing to be conducted less frequently and with more ecological sensitivity than would otherwise be the case. The most significant of these is 'Significant Roadside KN5', the westernmost (and most intact) part of this site.

The segments just west of Kelletts Rd no doubt assist the movement of native birds and insects between the large area of native tree canopy to the south and the twin Sites 83 and 84 on the other side of the road. Other segments of the roadside do not represent a habitat corridor because they do not join larger areas of natural tree canopy or other habitat.

The Ecological Vegetation Classes present are predominantly Valley Heathy Forest and Valley Grassy Forest, with three smaller stretches of Swampy Woodland. The former pair of EVCs are hard to distinguish, partly because of the degree of human modification of the vegetation, and partly because soil conditions and climate apparently cause a tendency for these EVCs to merge into each other in this area. This is further complicated by the likely presence of an interface, or 'ecotone', between Valley Grassy Forest and Lysterfield Grassy Dry Forest running along the southern roadside at or near the cutting west of Kelletts Rd. *Eucalyptus cephalocarpa* is a good indicator of the Valley Heathy Forest.



Aerial photographs taken April 2003.

Relationship to other land

The segment of this site in the uppermost aerial photograph, west of Taylors Lane, is 400m from the substantial area of native vegetation at the Rowville Electricity Terminal Station (Site 72). There are smaller, less diverse patches of native vegetation at Delta Court Reserve (Site 71, 200m northwest) and Rowville Secondary School (Site 70, 250m north). This represents a high level of fragmentation and isolation of habitat, with greatly impeded migration of wildlife, pollen and seeds between the sites.

The segments of the site that appear in the central aerial photograph can be regarded as an extension of the Lysterfield Hills site (Site 81). It is likely that there is a high degree of movement of fauna, pollen and seed between the roadside vegetation and the large contiguous area of native vegetation across the Lysterfield Hills, into Lysterfield Park (Site 82) and beyond.

The roadside east of Kelletts Rd can be regarded as an extension to the abutting Site 83, with its rural landscape of lightly treed grazing country.

Bioregion: On the middle aerial photograph, the area between the two white, oblique lines across the road (with Valley Grassy Forest) lies within the Highlands Southern Fall bioregion. The remainder of the site lies in the Gippsland Plain bioregion.

Habitat types

Valley Grassy Forest (EVC 47, regionally Vulnerable): 3.0 ha in total, of which approximately 0.05 ha is in good ecological condition (rating B) and the remainder is approximately equally divided between ecological condition ratings C (fair) and D (poor). 64 indigenous plant species were found.

Canopy trees: Dominated by *Eucalyptus melliodora* (except near Allamanda Blvd), *E. radiata* and *E. goniocalyx*. *E. cephalocarpa* is absent, as opposed to its dominance in the adjoining Valley Heathy Forest. The presence of *E. rubida* on adjoining private land near Cornish Rd helps to confirm the identification of Valley Grassy Forest.

Lower trees: Rich and rather abundant, comprising *Acacia implexa*, *A. mearnsii*, *A. melanoxylon*, *A. pycnantha*, *Allocasuarina littoralis* and *Exocarpos cupressiformis*. The weeds *Pittosporum undulatum*, *Chrysanthemoides monilifera* and *Genista* species are dense in patches near the Boral quarry.

Shrubs: *Kunzea ericoides* is dense in patches. *Acacia paradoxa*, *Bursaria spinosa* and *Cassinias* are sparser. *Goodenia ovata* is thinly scattered. *Hibbertia riparia* is present in proximity to Valley Heathy Forest. *Platylobium obtusangulum* and *Leptospermum continentale* are conspicuously absent.

Ferns: None.

Ground flora: Densely grassy with few small shrubs. The dominant indigenous species in most of the site are *Themeda triandra* and *Rytidosperma* species. *Poa morrisii* and *Austrostipa pubinodis* are abundant but not dominant, whereas *Austrostipa rudis* and *Microlaena stipoides* (species more associated with Valley Heathy Forest) are much less abundant. There are some patches of *Gahnia radula*. *Lomandra longifolia* and *Lomandra filiformis* subsp. *coriacea* are both present. *Xanthorrhoea minor* and *Tricoryne elatior* are scarce. The locally rare species *Dichelachne crinita* is very scarce, but its presence helps to confirm the identification of Valley Grassy Forest.

Valley Heathy Forest (EVC 127, regionally Endangered): 5.1 ha in total, of which approximately 0.4 ha is in good ecological condition (rating B), 0.3 ha is in fair ecological condition (rating C) and 4.4 ha is in poor ecological condition (rating D). 69 indigenous plant species were found (one of them with two distinct subspecies).

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

Dominant lower trees: *Acacia mearnsii*, *A. melanoxylon*, *Allocasuarina littoralis* and *Exocarpos cupressiformis*.

Shrubs: Apparently thinned below the natural density, except for regrowth patches of *Acacia paradoxa*, *Bursaria spinosa* and *Kunzea ericoides*. *Leptospermum continentale*, *Daviesia latifolia* and *Platylobium obtusangulum* are notably present.

Ferns: None.

Ground flora: Dense with grasses or *Gahnia radula*. The dominant indigenous grasses are *Microlaena stipoides*, various *Rytidosperma* species, *Poa morrisii*, *Austrostipa pubinodis* and *Austrostipa rudis*. *Dianella longifolia*, *Dianella admixta*, *Lomandra longifolia*, *Lomandra filiformis* and *Xanthorrhoea minor* are all abundant in the more intact areas. The characteristic species *Tricoryne elatior* is present but scarce.

Swampy Woodland (EVC 937, regionally Endangered): 0.3-0.4 ha in two sections, all in poor ecological condition (rating D). 22 indigenous plant species were found.

Dominant canopy trees: *Eucalyptus ovata* and fewer *E. cephalocarpa*, fairly sparse.

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

Shrubs: Effectively eliminated by clearing, slashing and competition from weeds.

Vines: None.

Ferns: None.

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 25/11/97, 11/10/02 and/or 25/4/03, as indicated in the 'Year' column. Additional species would probably be detectable in other seasons. 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, *Eleocharis gracilis* is rare in the Melbourne area.

Risk	Indigenous Species	Year	Risk	Indigenous Species	Year
	<i>Acacia dealbata</i>	1997		<i>Juncus bufonius</i>	2002
V	<i>Acacia implexa</i>	1997		<i>Juncus gregiflorus</i>	2002
V	<i>Acacia mearnsii</i>	2003		<i>Juncus pallidus</i>	2002
V	<i>Acacia melanoxylon</i>	2003		<i>Juncus sarophorus</i>	2002
	<i>Acacia paradoxa</i>	2002	E	<i>Juncus subsecundus</i>	2003
E	<i>Acacia pycnantha</i>	1997		<i>Kunzea ericoides</i> spp. agg.	2003
E	<i>Acacia stricta</i>	1997		<i>Lachnagrostis filiformis</i>	1997
V	<i>Acaena echinata</i>	2003		<i>Lepidosperma gunnii</i>	1997
	<i>Acrotriche serrulata</i>	2003	V	<i>Lepidosperma laterale</i>	1997
V	<i>Allocasuarina littoralis</i>	2003		<i>Leptospermum continentale</i>	2002
C	<i>Amyema pendula</i>	2002		<i>Lomandra filiformis</i> subsp. <i>coriacea</i>	2003
V	<i>Amyema quandang</i>	1997		<i>Lomandra filiformis</i> subsp. <i>filiformis</i>	2002
	<i>Arthropodium strictum</i>	2002		<i>Lomandra longifolia</i>	2003
	<i>Austrostipa pubinodis</i>	2003	V	<i>Lythrum hyssopifolia</i>	1997
	<i>Austrostipa rudis</i> subsp. <i>rudis</i>	2003	E	<i>Melaleuca ericifolia</i>	2002
	<i>Billardiera mutabilis</i>	2002		<i>Microlaena stipoides</i>	2003
	<i>Bossiaea prostrata</i>	2002	C	<i>Muellerina eucalyptoides</i>	2002
	<i>Bursaria spinosa</i>	2003		<i>Oxalis exilis/perennans</i>	2003
	<i>Carex breviculmis</i>	2003	E	<i>Ozothamnus ferrugineus</i>	2002
	<i>Cassinia aculeata</i>	2003	E	<i>Pimelea curviflora</i>	1997
	<i>Cassinia arcuata</i>	1997	V	<i>Pimelea humilis</i>	1997
V	<i>Cassinia longifolia</i>	1997	V	<i>Platylobium obtusangulum</i>	1997
	<i>Clematis decipiens</i>	2003		<i>Poa morrisii</i>	2003
E	<i>Daviesia latifolia</i>	2002	E	<i>Poa tenera</i>	2002
	<i>Dianella admixta</i>	2003		<i>Poranthera microphylla</i>	2002
V	<i>Dianella longifolia</i> s.l.	2003	E	<i>Rubus parvifolius</i>	2003
C	<i>Dichelachne crinita</i>	1997	E	<i>Rytidosperma caespitosum</i>	1997
	<i>Dichelachne rara</i>	1997		<i>Rytidosperma geniculatum</i>	1997
	<i>Dichondra repens</i>	2003		<i>Rytidosperma laeve</i>	1997
V	<i>Dillwynia cinerascens</i>	2003		<i>Rytidosperma linkii</i> var. <i>fulvum</i>	2003
C	<i>Eleocharis gracilis</i>	2003		<i>Rytidosperma pallidum</i>	2003
	<i>Elymus scaber</i>	2002		<i>Rytidosperma penicillatum</i>	1997
	<i>Epilobium hirtigerum</i>	2002		<i>Rytidosperma racemosum</i>	2003
V	<i>Eucalyptus cephalocarpa</i>	2003		<i>Rytidosperma setaceum</i>	2003
	<i>Eucalyptus goniocalyx</i>	2003		<i>Rytidosperma tenuius</i>	1997
V	<i>Eucalyptus melliodora</i>	2002		<i>Schoenus apogon</i>	2002
V	<i>Eucalyptus obliqua</i>	2003	E	<i>Senecio minimus</i>	2002
V	<i>Eucalyptus ovata</i>	2003		<i>Senecio quadridentatus</i>	2003
E	<i>Eucalyptus radiata</i>	2003	V	<i>Thelymitra peniculata</i>	1997
V	<i>Exocarpos cupressiformis</i>	2003		<i>Themeda triandra</i>	2003
	<i>Gahnia radula</i>	2003		<i>Tricoryne elatior</i>	2003
	<i>Gonocarpus tetragynus</i>	2003	V	<i>Veronica gracilis</i>	1997
	<i>Goodenia ovata</i>	1997	E	<i>Wahlenbergia gracilis</i>	1997
E	<i>Hibbertia riparia</i>	1997	V	<i>Xanthorrhoea minor</i>	2003

Introduced Species

<i>Acacia longifolia longifolia</i>	<i>Bromus diandrus</i>	<i>Dactylis glomerata</i>	<i>Genista linifolia</i>
<i>Agapanthus praecox</i>	<i>Centaurium erythraea</i>	<i>Ehrharta erecta</i>	<i>Genista monspessulana</i>
<i>Agrostis capillaris</i>	<i>Chrysanthemoides monilifera</i>	<i>Ehrharta longiflora</i>	<i>Glyceria declinata</i>
<i>Allium triquetrum</i>	subsp. <i>monilifera</i>	<i>Foeniculum vulgare</i>	<i>Hedera helix</i>
<i>Anthoxanthum odoratum</i>	<i>Cirsium vulgare</i>	<i>Fraxinus angustifolia</i>	<i>Holcus lanatus</i>
<i>Asparagus asparagoides</i>	<i>Crataegus monogyna</i>	<i>Freesia alba</i> × <i>leichtlinii</i>	<i>Hypochoeris radicata</i>
<i>Avena ?barbata</i>	<i>Cynodon dactylon</i>	<i>Fumaria</i> sp.	<i>Lolium perenne</i>
<i>Briza maxima</i>	<i>Cytisus scoparius</i>	<i>Galium aparine</i>	<i>Lonicera japonica</i>

<i>Myoporum insulare</i>	<i>Prunella vulgaris</i>	<i>Solanum nigrum</i>	<i>Vicia ?hirsuta</i>
<i>Oxalis incarnata</i>	<i>Prunus cerasifera</i>	<i>Sonchus oleraceus</i>	<i>Vicia sativa</i>
<i>Paspalum dilatatum</i>	<i>Rosa rubiginosa</i>	<i>Sporobolus africanus</i>	<i>Vulpia bromoides</i>
<i>Plantago lanceolata</i>	<i>Rubus anglocandicans</i>	<i>Ulex europaeus</i>	<i>Watsonia meriana</i>

Notes concerning some of the locally threatened plant species

Dichelachne crinita (Long-hair Plume-grass). One plant found on the south side near Kelletts Rd; others probably overlooked due to the season in which the inspection occurred.

Eleocharis gracilis (Slender Spike-rush). A small patch next to Site 84, where it is abundant. Presence confirmed 2003.

Pimelea curviflora (Curved Rice-flower). One colony, probably comprising several plants, outside the Boral quarry.

Rytidosperma caespitosum (Common Wallaby-grass). As above, and also scattered in the vicinity of Summit Rd.

Rytidosperma geniculatum (Knead Wallaby-grass). Many plants between Summit Rd and Cornish Rd.

Fauna of special significance

Rare or Threatened in Knox (but not all of Melbourne)

Sugar Glider. Found in a tree hollow between Tirhatuan Drive and Taylors Lane in 2004.

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

Valley Heathy Forest and Swampy Woodland are both listed by the Department of Sustainability & Environment as regionally Endangered, and Valley Grassy Forest is listed as regionally Vulnerable. Any vegetation belonging to an Endangered EVC is of at least High conservation significance according to Appendix 3 of *Victoria's Native Vegetation Management - a Framework for Action* (NRE 2002a). The same is also true of moderately intact vegetation of any Vulnerable EVC. Criterion 3.2.3 awards State significance to any site that includes a 'remnant patch' of any such vegetation.

The vegetation between Tirhatuan Drive and Taylors Lane clearly qualifies as a remnant patch and hence achieves a State significance rating. Segments of the site that abut the larger sites 81, 83 and 84 are given the same significance as the abutting sites. The remaining segments are classified as **Local** significance (the lowest rank) because they are more ecologically isolated and unlikely to qualify as remnant patches in the sense intended by Amos (2004).

Rare or Threatened Flora

Eleocharis gracilis is quite uncommon in the Melbourne area. A large and demonstrably stable population extends into this site from the Fruitful Vine Melbourne Church property (Site 84), where most of the population is located. It makes the roadside **Locally** significant under criterion 3.1.5 of Amos (2004) – as do the other listed locally threatened species that have viable populations.

Threats

- 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 digging by dogs. This particularly applies to *Dichelachne crinita*, *Pimelea curviflora* and *Clematis microphylla*;
- Invasion by environmental weeds, particularly grasses. The worst species are as follows:
 - Very serious: Sweet Vernal-grass (*Anthoxanthum odoratum*);
 - Serious: Large Quaking-grass (*Briza maxima*), Cocksfoot (*Dactylis glomerata*), Panic Veldt-grass (*Ehrharta erecta*), Sweet Pittosporum (*Pittosporum undulatum*), Boneseed (*Chrysanthemoides monilifera*), Brooms (*Genista linifolia* and *G. monspessulana*), Sweet Briar (*Rosa rubiginosa*) and Bridal Creeper (*Asparagus asparagoides*);
- Reduced visitation of the roadside vegetation by small insect-eating birds due to its isolation from other areas with indigenous understorey, possibly leading to a worsening of plant pests and diseases.

Management issues

- The most intact segments of this site, near Tirhatuan Drive and Kelletts Rd, are signposted as sites of significance, not to be slashed except by special arrangement with Council. The vegetation near Tirhatuan Drive is being very well managed for its conservation significance.
- Outside the Boral quarry, there are serious outbreaks of weeds that are 'controlled' under the *Catchment Protection and Land Management Act 1994*, such as Boneseed and Brooms. Sweet Pittosporums are also a serious problem there. These should be brought under effective control in a program that spans the roadside and the quarry land.
- Any revegetation or use of herbicide in this site, and particularly in the Valley Grassy Forest, should only be done by someone with a good eye for small significant plants such as the *Pimelea curviflora* and *Eleocharis gracilis*.

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.
- The sections between Cornish Rd and the unused road reservation for Lysterfield Rd are covered by the Significant Landscape Overlay Schedule 2 under the Knox Planning Scheme. The absence from the overlay of the section to the east of there appears to be an oversight, since the planning map does not even recognise it as being within Knox.
- Sites 67, 86 and 273 of Water Ecoscience (1998) overlap to some degree with the site described here and they are included in Schedule 1 of the Vegetation Protection Overlay (VPO1) in the Knox Planning Scheme. The site described and mapped here should replace the Water Ecoscience sites because of the more detailed, recent and accurate treatment.

Information sources used in this assessment

- Vegetation mapping showing vegetation communities and vegetation quality, and twelve lists of plant species (indigenous and introduced) for all native vegetation west of Kelletts Rd, observed by Dr Lorimer on 25th November 1997, as described in 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.);
- Vegetation data collected east of Kelletts Rd in October 2002 and on 25/4/03 by Lorimer according to the standard procedures described in Section 2.4 of Volume 1, including six lists of indigenous and introduced plant species for different segments of the site;
- Lists of fauna observed incidentally during the above studies;
- Revisitation of the area around the Boral Quarry in 2003 to further clarify the EVC identification;
- 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.