Site 97. Lysterfield Rd Roadside, Lysterfield

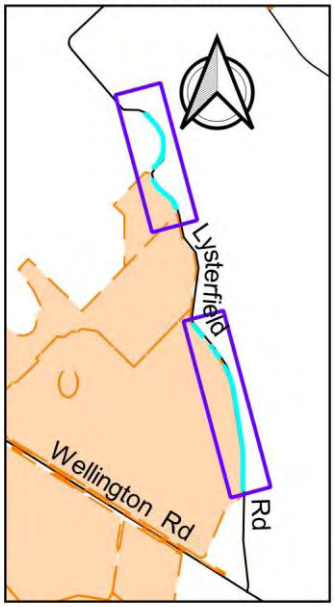
A total of 1,350 lineal metres of road verge on one side of the road, in six sections.

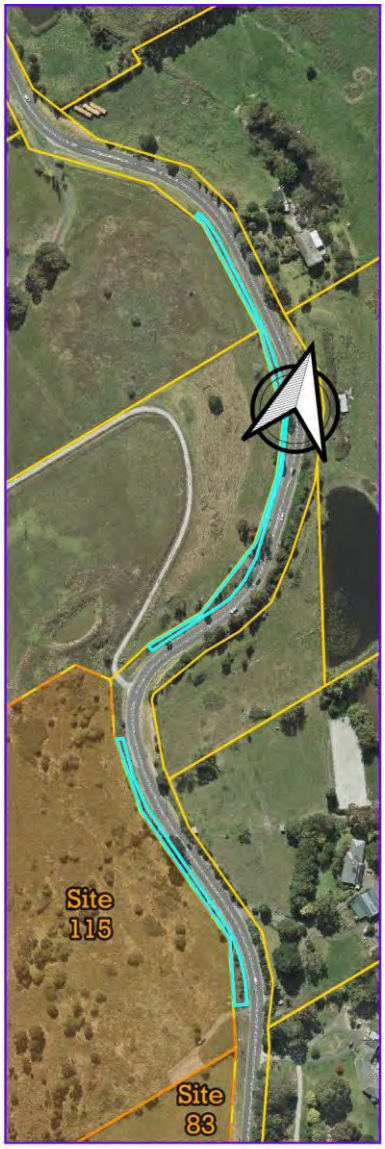
Summary of significant features:

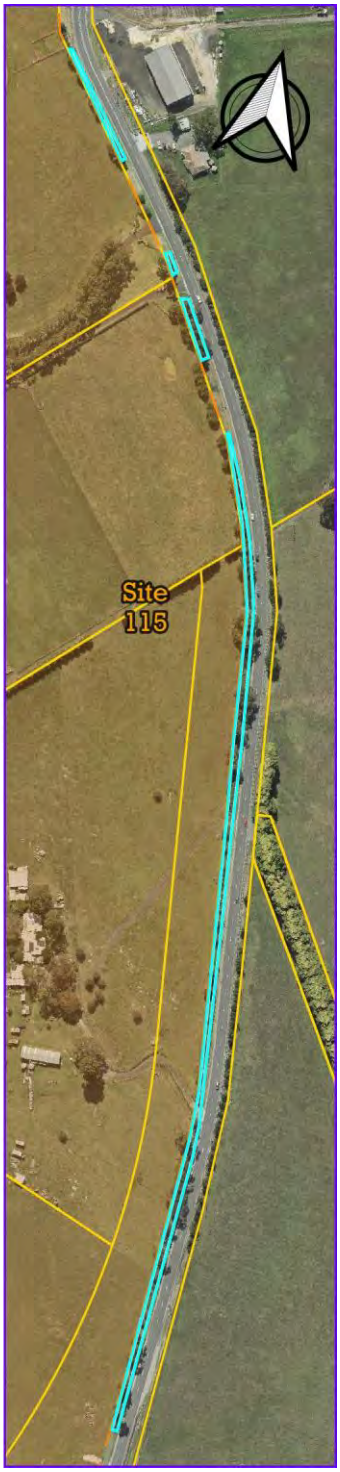
- Locally significant: viable populations of locally-threatened plant species (mostly trees);
- Small remnants of the regionally-endangered vegetation type, Valley Heathy Forest (and probably also remnants of the vulnerable type, Valley Grassy Forest) in fair to poor ecological condition.

Maps for Site 97

Overview map (1:40,000) with indigo rectangles showing areas covered by the panels at right.







Legend

Site 97
Properties
Other sites

Scale for the maps above and right

1:5,000

0 50 100 150 200 m

Boundaries

The site is in six segments, defined by the cyan outlines on the maps above. For more detail, see the Knox Biodiversity Atlas that accompanies this report. One edge of each segment coincides with a post-and-wire fence (or where the fence should be). The total area is 0.8 ha.

The site was slightly larger (0.97 ha) in the previous (2010) edition of this report. The boundaries have been refined partly because better aerial imagery and satellite positioning have become available and partly to reflect changes in the extent of native vegetation.

Land use & tenure: Road reservation.

Site Description

This site comprises six sections of road verge with indigenous vegetation. Much of it has remnant trees and groundcover and some of it has remnant shrubs. There has also been extensive planting of indigenous woody species over the past two decades.

The width of the verge is typically 4–5 metres and the total length of all segments is 1,350 metres. There is pasture on the other side of the fences, uphill from the roadside. There is only one short strip of native vegetation on the eastern side of the road, which is in the Shire of Yarra Ranges.

Much of the site is signposted as significant roadside vegetation (labelled KN16, KN17 and KN18 on the signs), with slashing to be conducted less frequently and with more ecological sensitivity than would otherwise be the case.

The roadside does not represent an important habitat corridor because of the fragmentation of the native vegetation and the size of the separation from the nearest large area of natural tree canopy (Lysterfield Park – Site 82).

Pasture grasses and pasture weeds have extensively spread into the native vegetation from adjacent properties, displacing many of the indigenous plant species that would once have occurred in the site. The site's large, old trees have been dying over many years from unknown causes. The vegetation's ecological condition varies between ratings D (poor) and C (fair) on the scale explained in Section 2.4 of Volume 1.

The road winds along the side of a moderately steep slope, with the floodplain of Monbulk Ck roughly 200 m to the northeast. Close to the middle of the site, there is a geological transition between Kalorama rhyodacite to the north and the less fertile Lysterfield granodiorite to the south.

The patches of vegetation on the granodiorite show strong characteristics of Valley Heathy Forest, particularly the overstorey composition and the presence of characteristic species such as *Dianella longifolia*. On the rhyodacite, the vegetation type is harder to discern because there are few eucalypts or shrubs remaining and the groundcover composition has been greatly influenced by a history of slashing. There is some indication of a tendency toward Valley Grassy Forest in the northernmost section (e.g. an increase in the Common Wheat-grass, *Anthosachne scabra*), consistent with the Victorian Government's mapping of pre-colonial EVCs in this area.

The presence of a solitary plant of the locally rare *Allocasuarina paludosa* (Scrub Sheoak) in the southernmost section indicates rather low fertility in that part of the site. This species has a local stronghold at Baluk Willam Flora Reserve, 3 km to the east, in rather heathier vegetation (particularly Damp Heathy Woodland).

Relationship to other land

The vegetation remnants in this site are so small that most of the flora and fauna must rely on nearby native vegetation for their long-term survival. With the exception of some invertebrates and lizards, wildlife would have to move between the site and other vegetation to provide enough habitat and avoid inbreeding. Some plants would also be at risk from inbreeding or complete disappearance if not for infusion of pollen or seeds from other remnants, often carried by fauna. The rather weak ecological connections between this site and other native vegetation are therefore important for the site's long-term viability.

There is a short strip of native roadside vegetation on the eastern side of the road (in the Shire of Yarra Ranges) and there are scattered trees (mostly young) in some of the adjoining pasture. There is a larger area of tree cover 250 m away in Site 83 and much larger areas slightly further away in the Lysterfield Hills (Site 81) and Lysterfield Park (Site 82). There is also substantial habitat in Upwey, just over 1 km to the northeast. Fauna may move through the Lysterfield Rd site *en route* between these sites, but no observations have been made to verify this.

Bioregion: Gippsland Plain, arguably extending into the Highlands Southern Fall bioregion at the southern end.

Habitat types

Valley Heathy Forest (EVC 127, **regionally Endangered**), tending toward Valley Grassy Forest (EVC 47, **regionally Vulnerable**) north of the middle of the site. Total area with native vegetation approximately 0.6 ha, of which roughly equal amounts are in ecological condition rating C (fair) and D (poor).

Dominant canopy trees: *Eucalyptus radiata* in the southern third, *E. cephalocarpa* and *E. goniocalyx* in the central third, and reduced in the northern third to one *E. radiata* and a dead *E. obliqua*.

Dominant sub-canopy trees: *Acacia melanoxylon* is dominant overall. *A. implexa* and *A. mearnsii* are also present in the south, and *Melaleuca ericifolia* is rather abundant in the central third. *Exocarpos cupressiformis* is scattered throughout.

Shrubs: *Kunzea* and fewer *Leptospermum continentale*.

Groundcover: Densely grassy with few subshrubs and with ferns limited to a few patches of bracken. The dominant indigenous species in most of the site is *Themeda triandra*, joined by *Gahnia radula* in the southern third. Various *Rytidosperma* species are collectively abundant. *Veronica gracilis*, *Lomandra longifolia* and *Dianella longifolia* are abundant in the northern third of the site. The characteristic species *Xanthorrhoea minor* is scattered sparsely along the road verge, and *Tricoryne elatior* is present but scarce.

Plant species

The following is a list of wild plant species observed by the author on either 17th March 2024 or 23rd January 2004. Additional species would no doubt be detectable in other seasons. It is possible that some species that were presumed in 2024 to have been planted are actually wild. The column headed 'Risk' indicates the indigenous species' risk of dying out in Knox as follows: 'C'=Critically Endangered; 'E'=Endangered; 'V'=Vulnerable and 'N'=Near threatened. In addition, *Allocasuarina paludosa* is rare throughout the Melbourne region.

Risk	Wild indigenous vascular species
V	*Acacia implexa*, Lightwood
V	*Acacia mearnsii*, Black Wattle
V	*Acacia melanoxylon*, Blackwood
	Acacia paradoxa, Hedge Wattle
E	*Acrotriche serrulata*, Honey-pots
V	*Allocasuarina littoralis*, Black Sheoak
C	*Allocasuarina paludosa*, Scrub Sheoak
C	*Amyema pendula*, Drooping Mistletoe
E	*Amyema quandang*, Grey Mistletoe
	Anthosachne scabra, Common Wheat-grass
	Austrostipa rudis subsp. *rudis*, Veined Spear-grass
N	*Bossiaea prostrata*, Creeping Bossiaea
	Dianella longifolia var. *longifolia*, Pale Flax-lily
	Dianella revoluta, Black-anther Flax-lily
	Epilobium hirtigerum, Hairy Willow-herb
E	*Eucalyptus cephalocarpa*, Mealy Stringybark
V	*Eucalyptus goniocalyx*, Bundy
E	*Eucalyptus obliqua*, Messmate Stringybark
V	*Eucalyptus ovata*, Swamp Gum
E	*Eucalyptus radiata*, Narrow-leaved Peppermint
C	*Eucalyptus rubida*, Candlebark
V	*Exocarpos cupressiformis*, Cherry Ballart
C	*Gahnia radula*, Thatch Saw-sedge
C	*Imperata cylindrica*, Blady Grass
	Kunzea ericoides group, Burgan
C	*Leptospermum continentale*, Prickly Tea-tree
	Lomandra filiformis subsp. *coriacea*, Wattle Mat-rush
	Lomandra filiformis subsp. *filiformis*, Wattle Mat-rush
	Lomandra longifolia, Spiny-headed Mat-rush
E	*Melaleuca ericifolia*, Swamp Paperbark
	Microlaena stipoides, Weeping Grass
	Pteridium esculentum, Austral Bracken
	Rytidosperma penicillatum, Slender Wallaby-grass
	Rytidosperma racemosum, Clustered Wallaby-grass
	Rytidosperma setaceum, Bristly Wallaby-grass
	Rytidosperma tenuius, Purplish Wallaby-grass
	Themeda triandra, Kangaroo Grass
	Tricoryne elatior, Yellow Rush-lily
V	*Veronica gracilis*, Slender Speedwell
E	*Xanthorrhoea minor*, Small Grass-tree

Introduced species
Acacia baileyana, Cootamundra Wattle
Agrostis capillaris, Brown-top Bent
Anthoxanthum odoratum, Sweet Vernal-grass
Brassica ?fruticulosa, Twiggy Turnip
Briza maxima, Large Quaking-grass
Bromus catharticus, Prairie Grass
Bromus diandrus, Great Brome
Chrysanthemoides monilifera subsp. *monilifera*, Boneseed

Introduced species	Introduced species
Cirsium vulgare, Spear Thistle	*Hypochaeris radicata*, Cat's Ear
Crataegus monogyna, Hawthorn	*Linum trigynum*, French Flax
Dactylis glomerata, Cocksfoot	*Lythrum junceum*, Mediterranean Loosestrife
Ehrharta erecta, Panic Veldt-grass	*Paspalum dilatatum*, Paspalum
Ehrharta longiflora, Annual Veldt-grass	*Phalaris aquatica*, Toowoomba Canary-grass
Eragrostis curvula, African Love-grass	*Plantago lanceolata*, Ribwort
Festuca arundinacea, Tall Fescue	*Rubus anglocandicans*, Blackberry
Holcus lanatus, Yorkshire Fog	*Sporobolus africanus*, Rat-tail Grass

Notes concerning some of the locally-threatened plant species

Allocasuarina paludosa (Scrub Sheoak). A single plant was found in 2004 in the vicinity of the driveway of 486 Lysterfield Rd. It was not detected in the 2024 survey, which did not look thoroughly in that vicinity.

Imperata cylindrica (Blady Grass). Two patches grow in the vicinity of 350 Lysterfield Rd.

Fauna habitat features

This study detected no fauna habitat worthy of note.

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).

Locally-threatened plant species

The site's locally-threatened tree species and the Thatch Saw-sedge have viable populations, thereby meeting criterion 3.1.5 for **Local** significance.

Regionally Threatened Ecological Vegetation Class

Valley Heathy Forest is regionally endangered. However, the standard criteria only regard the occurrence of an endangered vegetation type as significant if it 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 97 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 endangered EVC.

Threats

- Road widening, which is planned for the long-term. The longest (most southerly) segment of the site approximately follows the centreline of land that has been set aside for the widening – see the map on p. 631;
- Human-induced climate change, which is predicted to cause more severe droughts, heatwaves and storms, as well as substantially lower rainfall (particularly in winter);
- Continuing decline of tree health, partly due to the abovementioned droughts and storms;
- Displacement of indigenous flora and fauna by environmental weeds, particularly introduced grasses such as Toowoomba Canary-grass (*Phalaris aquatica*);
- Loss or decline of plant species whose populations are so small and isolated that they are vulnerable to inbreeding, poor reproductive success or elimination by chance events.

Management

Much of this site is signposted as a significant roadside, not to be slashed except by special arrangement with Council. It is important that this level of oversight and control be continued, otherwise the adverse effects of indiscriminate slashing would represent a serious additional threat to the site's ecological values.

On the other hand, carefully timed and sensitively executed slashing of the site would cause no harm. Fire hazard reduction may be directed largely or wholly to the abutting private properties. Any slashing that does need to occur on the roadside should be done in the months of October or November. In no circumstances should it occur in autumn, which would favour opportunistic, introduced plant species.

Strategic planning

- The previous (2010) edition of this report led to this site being placed under Schedule 2 of the Environmental Significance Overlay (ESO2), mainly because of the regionally-threatened Ecological Vegetation Classes (EVCs). Those EVCs remain and have benefited from revegetation in the interim. The rationale for applying ESO2 to the site therefore remains current. However, it is recommended to amend ESO2 to the new site boundaries, particularly as mapping errors were made when the site boundaries were transferred to ESO2. In particular, the largest (most southerly) segment of the site was misrepresented by a slender wedge of only 54 m^2;
- The site and abutting pastoral properties are covered by Schedule 1 of the Significant Landscape Overlay under the Knox Planning Scheme.

Information sources used in this assessment

- A vegetation survey by Dr Lorimer on 23rd January 2004 for the first edition of this report, producing three lists of indigenous and introduced plant species for different parts of the site, as well as mapping of vegetation types and ecological condition;
- A follow-up botanical survey by Dr Lorimer on 23rd March 2024 as an update for this edition;
- 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.