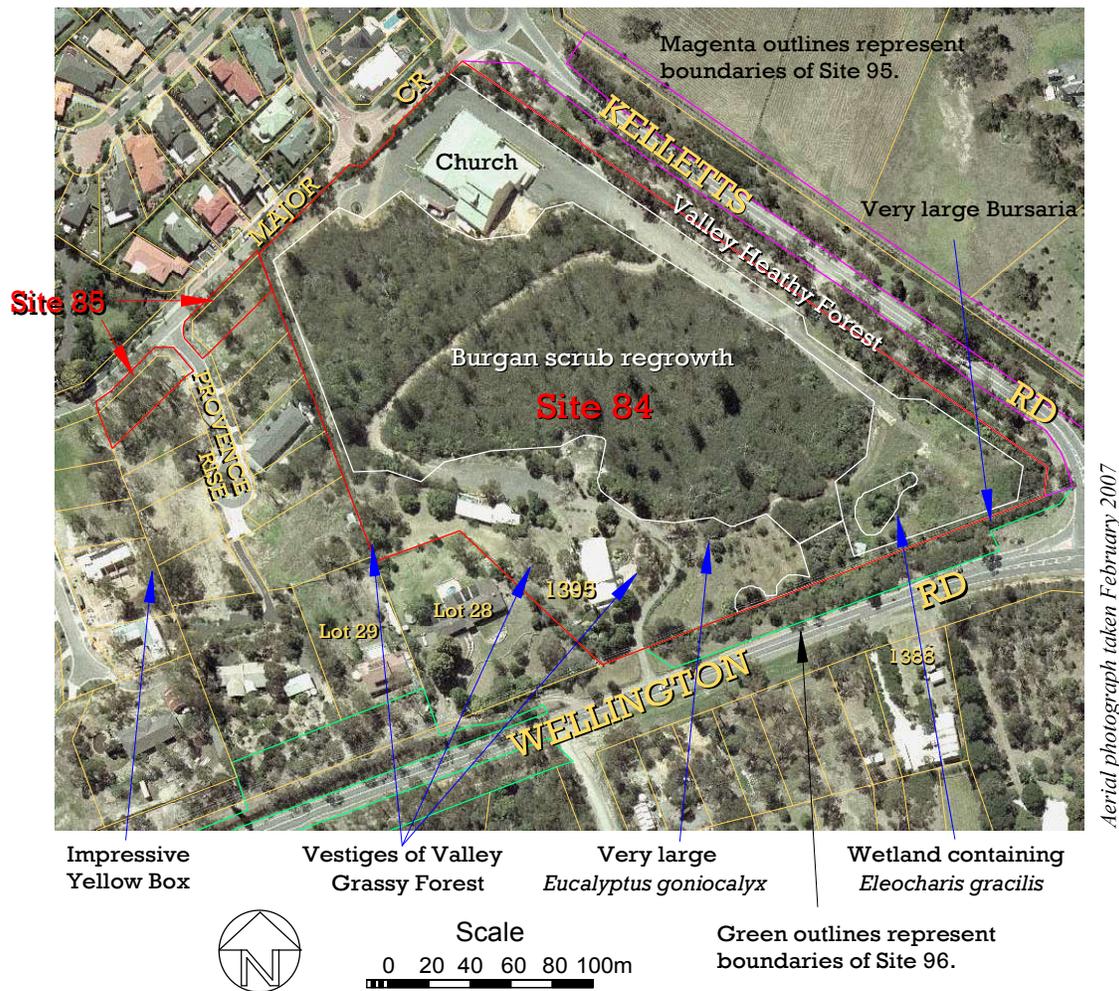


Site 84. Fruitful Vine Melbourne Church, Lysterfield

A 5.9 ha private lot used for worship, related purposes and a house, with approximately ½ ha of mature remnant trees and understorey and 3 ha of regrowth. Melway ref. 82 K2.

Site Significance Level: State

- The Ecological Vegetation Classes present are regionally Endangered or Vulnerable;
- There is an extremely large Sweet Bursaria (*Bursaria spinosa*) overhanging the boundary, 30 cm trunk diameter and approximately 10 m from base to tip – perhaps the largest of the species in existence;
- There are some large trees of *Eucalyptus goniocalyx*, up to 0.92 m diameter at breast height;
- There is a patch of the uncommon wetland plant, Slender Spike-rush (*Eleocharis gracilis*), measuring 15-25 m²;
- The vegetation has moderately high diversity and is ecologically stable or improving.



Boundaries

The site is the property on the western corner of Wellington Rd and Kelletts Rd, shown above with a red boundary and the label ‘Fruitful Vine Church’. It includes all vegetation growing in or over the property. The adjoining property outlined in red, labelled ‘Lot 2’, is Site 85.

Land use & tenure: A single, 5.9 ha private lot used partly for worship and related purposes, and also with a house and 3½ ha of native vegetation.

Site description

Kelletts Rd perimeter

There is a strip of Valley Heathy Forest along the Kelletts Rd perimeter with mature remnant eucalypts and partly natural understorey of Valley Heathy Forest, contiguous with the roadside verge (Site 95). Twenty-seven indigenous plant species were found, including one plant of the locally uncommon Creeping Mistletoe (*Muellerina eucalyptoides*). Eucalypt dieback is serious toward the Wellington Rd intersection, and the rest of the strip has been moderately degraded by clearing, excavation and consequent weed invasion. The weeds, Bridal Creeper (*Asparagus asparagoides*), Boneseed (*Chrysanthemoides monilifera monilifera*) and Panic Veldt-grass (*Ehrharta erecta*) are serious but fairly localised. The additional weeds, Brown-top Bent (*Agrostis capillaris*), Sweet Vernal-grass (*Anthoxanthum odoratum*) and the blackberry *Rubus discolor* could also become serious in future, depending on how the vegetation is managed.

Wellington Rd perimeter

The perimeter along Wellington Rd has only patches of indigenous vegetation and little understorey except for the ubiquitous Thatch Saw-sedge (*Gahnia radula*). However there is one Sweet Bursaria (*Bursaria spinosa*), marked on the plan above, which far exceeds the accepted maximum size of this species. It is rooted in the roadside reservation and it leans very low over the fence into the site in question here. Its trunk diameter is 30 cm and it measures approximately 10 m from base to tip, making it one of the largest and oldest specimens of this common species anywhere (comparable with the trio beside the Belgrave Railway line, opposite 73 Power St, Bayswater. The standard text *Flora of Melbourne* indicates a maximum height of 6 m for this species, and *Flora of Victoria* indicates approximately 8 m. This specimen demonstrates the capacity of the species to form a substantial tree on those rare occasions when it is allowed to reach maturity.

Seasonal Wetland

The aerial photograph above shows a wetland in which there is a large and thriving population of the regionally-rare grass-like species, Slender Spike-rush or *Eleocharis gracilis*. There are patches and tussocks of the plant among weeds beneath willows and in adjacent boggy lawn, the foliage covering an aggregate of between 15 and 25 m². (The uncertainty in the area is due to difficulty in detecting the species within lawn.) This species is also present in smaller amounts in the adjacent roadside verge, as well as in substantial quantities in Lysterfield Park (Site 82) and at the Rowville Electricity Terminal Station (Site 72). *Flora of Melbourne* records only three or four other occurrences in the Melbourne region.

Valley Grassy Forest

Within 50 m of the house and retreat in the south or southwest of the site, there are some mature remnant eucalypts with mown understorey, vestiges of Valley Grassy Forest. Some of the trees are quite large. The biggest is a Bundy (*Eucalyptus gonicalyx*) with a diameter of 0.92 m measured at breast height, which is exceptional for Knox. It is marked on the plan above.

Beneath this tree and surrounding ones, the ground layer comprises overwhelmingly indigenous species (but few of them). There are several square metres of Slender Speedwell (*Veronica gracilis*), which is a characteristic species of Valley Grassy Forest.

Regrowth

The Valley Grassy Forest appears to have once extended over much of the property, but has been largely cleared and allowed to regenerate in recent years. The resulting scrub of Burgan (*Kunzea ericoides*) covers more than half the site, probably extending over some of the area that was once Valley Heathy Forest. Within this scrub, one can see on the aerial photograph scattered dark blobs measuring several metres across, which are trees that were left when the surrounding vegetation was cleared. They comprise Monterey Pine (*Pinus radiata*), Yellow Box (*Eucalyptus melliodora*), Narrow-leaved Peppermint (*E. radiata*) and Bundy. The surrounding Burgan allows only about 20% of sunlight to penetrate beneath, so the ground layer contains plenty of moss and lichen but only sparse cover of higher plants, except at the edges and where tracks allow sunlight in. Despite the dense shade, 47 indigenous plant species were recorded altogether in the scrub, including at least dozens of Creeping Bossiaea (*Bossiaea prostrata*) and over 100 plants of the uncommon Slender Sword-sedge, *Lepidosperma gunnii* – probably one of the largest populations in the region. Unfortunately, there were also enough Sweet Pittosporum (*Pittosporum undulatum*) to present a serious risk to the vegetation's natural ecology, and there are potentially serious threats from the weeds Sallow Wattle (*Acacia longifolia*), Sweet Vernal-grass (*Anthoxanthum odoratum*), Bridal Creeper (*Asparagus asparagoides*), Monterey Pine and blackberry.

Relationship to other land

This site is at the junction of two habitat corridors (Kelletts Rd and Wellington Rd – Sites 95 and 96 respectively) and there is an almost continuous tree canopy to the large expanse of native vegetation on the Lysterfield Hills, including Churchill National Park and Lysterfield Lake Park. There are also large patches of remnant eucalypts on the other side of Kelletts Rd, being progressively diminished by residential development.

Bioregion: Highlands Southern Fall (on the rather diffuse boundary with the Gippsland Plain bioregion).

Habitat types

Seasonal wetland (part of EVC 74, which is **regionally Endangered**): 500 m², all in ecological condition D (poor). 5 indigenous plant species, with a canopy of willows (*Salix ?fragilis*) above and dominated at ground level by *Eleocharis gracilis*, *Carex appressa* and the weeds *Allium triquetrum* and *Holcus lanatus*.

Burgan scrub regrowth of Valley Grassy Forest (EVC 47, see below) and probably some Valley Heathy Forest (EVC 127, **regionally Endangered**): Total area 30,000 m². Ecological condition approximating to rating C (fair) but difficult to ascribe due to the changeable nature of the regrowth; 47 indigenous plant species found.

Emergent tall trees: *Eucalyptus melliodora*, *E. goniocalyx*, *E. radiata* and *Pinus radiata*;

Emergent lower trees: *Acacia pycnantha*, *Exocarpos cupressiformis* and occasional *Allocasuarina littoralis*;

Shrubs: *Kunzea ericoides* 80% cover.

Ground flora: Moss and lichen dense; higher plants sparse except near edges and tracks. *Lepidosperma gunnii* and patches of *Gahnia radula* dominate the vascular ground-flora. *Bossiaea prostrata* is also abundant.

Valley Grassy Forest (EVC 47, **regionally Vulnerable**): 1,500 m², all in poor ecological condition (rating D). 16 indigenous plant species found.

Dominant canopy trees: *Eucalyptus goniocalyx* with fewer *E. melliodora* and *E. radiata*;

Dominant lower trees: *Acacia mearnsii*, *A. melanoxylon*, *Exocarpos cupressiformis*;

Shrubs: scant.

Ground flora: Mown, grassy; *Rytidosperma racemosum* and *Dichondra repens* are both abundant, also a large patch of the characteristic species, *Veronica gracilis*.

Valley Heathy Forest (EVC 127, **regionally Endangered**): 4,000 m², 50% in fair ecological condition (rating C) and 50% in poor ecological condition (rating D). 27 indigenous plant species found, the dominant ones as follows:

Canopy trees: *Eucalyptus goniocalyx*, *E. cephalocarpa*, *E. melliodora*;

Lower trees: *Allocasuarina littoralis*, *Acacia melanoxylon*, *Exocarpos cupressiformis*;

Shrubs: *Kunzea ericoides*, *Acacia pycnantha*.

Ground flora: *Gahnia radula* dominant, with rather fewer *Austrostipa rudis*.

Plant species

The following plant species were observed by the author on 23rd May 2002. Additional species would no doubt 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	Risk	Indigenous Species
V	<i>Acacia implexa</i>	V	<i>Drosera whittakeri</i>
V	<i>Acacia mearnsii</i>	C	<i>Eleocharis gracilis</i>
V	<i>Acacia melanoxylon</i>	V	<i>Epacris impressa</i>
E	<i>Acacia pycnantha</i>	V	<i>Epilobium billardierianum</i> ssp. <i>cinereum</i>
	<i>Acaena novae-zelandiae</i>	V	<i>Eucalyptus cephalocarpa</i>
	<i>Acrotriche serrulata</i>		<i>Eucalyptus goniocalyx</i>
V	<i>Allocasuarina littoralis</i>	V	<i>Eucalyptus melliodora</i>
C	<i>Amyema pendula</i>	E	<i>Eucalyptus radiata</i>
	<i>Arthropodium strictum</i>	V	<i>Exocarpos cupressiformis</i>
	<i>Austrostipa rudis</i> subsp. <i>rudis</i>		<i>Gahnia radula</i>
	<i>Billardiera mutabilis</i>		<i>Gonocarpus tetragynus</i>
	<i>Bossiaea prostrata</i>	E	<i>Hibbertia riparia</i>
	<i>Carex appressa</i>	E	<i>Hypericum gramineum</i>
	<i>Carex breviculmis</i>		<i>Juncus sarophorus</i>
	<i>Carex inversa</i>		<i>Kunzea ericoides</i> spp. agg.
	<i>Cassinia arcuata</i>		<i>Lachnagrostis filiformis</i>
V	<i>Cassinia longifolia</i>		<i>Lepidosperma gunnii</i>
	<i>Deyeuxia quadriseta</i>	V	<i>Lepidosperma laterale</i>
	<i>Dianella admixta</i>		<i>Leptospermum continentale</i>
V	<i>Dianella longifolia</i> s.l.	E	<i>Leptospermum scoparium</i>
	<i>Dichondra repens</i>		<i>Lomandra filiformis</i> subsp. <i>coriacea</i>
V	<i>Dillwynia cinerascens</i>		<i>Microlaena stipoides</i>

Risk	Indigenous Species	Risk	Indigenous Species
C	<i>Muellerina eucalyptoides</i>		<i>Rytidosperma racemosum</i>
V	<i>Opercularia ovata</i>		<i>Rytidosperma setaceum</i>
V	<i>Opercularia varia</i>		<i>Rytidosperma tenuius</i>
E	<i>Ozothamnus ferrugineus</i>		<i>Schoenus apogon</i>
	<i>Poa morrisii</i>		<i>Senecio quadridentatus</i>
	<i>Poranthera microphylla</i>	E	<i>Stackhousia monogyna</i>
	<i>Rytidosperma linkii</i> var. <i>fulvum</i>		<i>Themeda triandra</i>
	<i>Rytidosperma pallidum</i>	V	<i>Veronica gracilis</i>
Introduced Species			
	<i>Acacia longifolia</i> subsp. <i>longifolia</i>		<i>Asparagus asparagoides</i>
	<i>Agrostis capillaris</i>		<i>Chrysanthemoides monilifera monilifera</i>
	<i>Allium triquetrum</i>		<i>Ehrharta erecta</i>
	<i>Anthoxanthum odoratum</i>		<i>Holcus lanatus</i>
			<i>Pinus radiata</i>
			<i>Pittosporum undulatum</i>
			<i>Rubus anglocandicans</i>
			<i>Ulex europaeus</i>

Notes concerning significant plants

Eleocharis gracilis (Slender Spike-rush) is represented by 15-25 m² foliage cover, amid weedy vegetation.

One *Bursaria spinosa* (Sweet Bursaria) has an exceptionally large trunk diameter of 30 cm and measures 10 m from base to tip.

Fauna habitat features

A small number of mature eucalypts have hollows that may provide habitat for the more common species of possums and bats. The bird life was rather limited on the day this site was inspected, although a Goshawk was seen, probably investigating smaller birds.

Significance ratings

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

Ecological Integrity and Viability

The site meets the standard criteria for **Local** significance as a part of the much larger contiguous area of bushland extending over the Lysterfield Hills and along Kelletts Rd (criterion 1.2.6), with potential to develop into more significant vegetation (criterion 1.3.2).

Regionally Threatened Ecological Vegetation Classes

Valley Heathy Forest and wetlands are listed by the Department of Sustainability & Environment as Endangered. According to Appendix 3 of *Victoria's Native Vegetation Management - a Framework for Action* (NRE 2002a), any occurrence of an Endangered community is of High or Very High conservation significance. This gives the Fruitful Vine Melbourne Church property **State** significance under criterion 3.2.3 of Amos (2004).

Valley Grassy Forest is listed by the Department of Sustainability & Environment as regionally Vulnerable. According to Appendix 3 of *Victoria's Native Vegetation Management - a Framework for Action* (NRE 2002a), any occurrence of a regionally Vulnerable community is of at least Medium conservation significance. This would translate to at least **Regional** significance under criterion 3.2.3.

Note that the site is at the edge of the geographic range of both Valley Grassy Forest and Valley Heathy Forest.

Richness of Flora

The number of recorded indigenous species is a moderately high number for such a site in Knox. This stands out at the local scale, but it would have to stand out at the regional scale to qualify for recognition under the standard criteria.

Rare or Threatened Plants

The site is of some significance for the presence of the huge *Bursaria spinosa* and the large *Eucalyptus goniocalyx* trees, which stand out within the bioregion. 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 plants in question would qualify as Regionally significant. The trunk of the largest *Eucalyptus goniocalyx* measures 0.92 m diameter at breast height.

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

Threats

- Site development: The biological significance of this site could be adversely affected by removal of, or damage to, any native vegetation on the property. This includes (but is not limited to) trees in the vicinity of the buildings and understorey beside the vehicle tracks and parking areas. The orchard, tracks, parking areas and the stockpiles of clay in the eastern corner are of no significance in themselves but developments there could affect significant vegetation through root severance, changed drainage, promotion of weeds or similar indirect effects;
- Invasion by environmental weeds as described above;
- Eucalypt dieback in the eastern corner;
- The *Eleocharis gracilis* is threatened by weed invasion and possible renewed excavation for drainage;
- Burgan has become over-dominant and is suppressing the growth and reproduction of other flora;
- Some species are present in dangerously small numbers (*Acrotriche serrulata*, *Cassinia longifolia*, *Muellerina eucalyptoides*, *Ozothamnus ferrugineus*, *Stackhousia monogyna*), making them vulnerable to inbreeding, poor reproductive success or elimination by incidents such as cubby house construction or digging by dogs;
- The huge *Bursaria spinosa* in the eastern corner is leaning over the fence and may become uprooted or be unwittingly cut down.

Management issues

Burgan is an indigenous species but it commonly gets out of control in regrowth, such as on this site. If it were thinned, it should be possible for the ground layer to flourish and become rather dense with wildflowers. This may require suppression of weeds such as Sweet Pittosporum (*Pittosporum undulatum*), which could also thrive if the Burgan were to be thinned.

Because of the rarity of *Eleocharis gracilis* and the insecure habitat at this site, it would be very desirable for seed and cutting material to be collected, propagated and established at more secure wetlands nearby.

Administration matters

- This site is suited to an Environmental Significance Overlay because of its State significance and the presence of regionally endangered EVCs;
- It is recommended that consideration of any development proposal on the site should take into account a survey of birds and reptiles, preferably conducted over at least two days in late spring. The vegetation may well be important as habitat for significant fauna not noticed during the present study.
- Any biological survey data submitted in support of a development or subdivision proposal should be no older than one year or so, because the regrowth which covers over half the site has the potential to change in character.
- Removal of pines and other environmental weed species would help to improve the ecological quality of the vegetation and hence support the state government policy of 'Net Gain'.
- The vegetation and the habitat that it forms should be considered not just in its present state but also for its potential. The regrowth, in particular, is returning to Valley Grassy Forest, which is localised and generally in poor ecological condition in Knox (see Volume 1) as well as being listed as regionally Vulnerable by the Department of Sustainability & Environment.

Information sources used in this assessment

- Detailed vegetation data and mapping in accord with this study's standard approach described in Section 2.4 of Vol.1, including lists of indigenous and introduced plant species within each of four different parts of the site, compiled by Dr Lorimer during this study on 23/5/02;
- A list of fauna observed incidentally on the same day;
- A list of species from the Department of Sustainability & Environment's Flora Information System database (Water Ecoscience 1998, Appendix 4);
- Data concerning presence of tree hollows, collected by Michael Harper on 27/6/02;
- Aerial photography from February 2001, April 2003 and February 2007;
- 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.

Acknowledgment

Thanks to the Lysterfield Christian Fellowship for granting permission to inspect the land.