

## Site 48. Healesville Freeway Reservation, Wantirna

A section of grazed VicRoads land on the proposed route of the Healesville Freeway, between Wantirna Rd and J.W. Manson Reserve. Melway ref. 63 G4-J4.

### Site Significance Level: *State*

- Contains remnants of three regionally endangered Ecological Vegetation Classes, although only vestiges remain of one of these;
- Provides a habitat refuge for forest and woodland birds;
- Provides floodplain and wetland habitat for waterbirds and frogs, even on cleared land;
- Contributes to a wildlife corridor with other vegetation along the proposed route of the freeway, effectively augmenting the Dandenong Creek wildlife corridor;
- Grazing and uncontrolled weeds are degrading the significant vegetation.



Scale 1:4,000  
0 50 100 150 200m



*Aerial photograph taken April 2003*

### Boundaries

The site is outlined in red above. The western boundary includes native vegetation on the nature strip of Wantirna Rd. The eastern boundary follows a fence beside the pathway south from J.W. Manson Reserve. The remainder of the site boundary follows property boundaries, except for an oblique section along the edge of the Swampy Woodland that is shown to the southeast of St Davids Drive. The total area is 5.50 ha.

Native vegetation is almost all within the three areas marked as Valley Heathy Forest, Swampy Woodland and Wetland. The areas without native vegetation are included within the site because they are used by waterbirds and frogs, they include a drainage line and because it is generally preferable to apply overlays to whole lots or parcels of land.

**Note:** Some sections of the site could not be inspected closely.

**Land use & tenure:** VicRoads land reserved for the Healesville Freeway, zoned 'Road Zone - Category 1' but presently used for agistment of horses.

### Site description

There is a shallow drainage line flowing generally northeastward through the site, meeting the alluvial floodplain of Dandenong Creek near the northeast corner of the site, at an elevation of 85 m. The slope varies from extremely shallow in the northeast to an east-facing slope of 10% at the highest part of the site, beside Wantirna Rd, where the elevation is 105 m.

The soil on the slopes is light grey loam over clay subsoil, derived from Upper Silurian sediments of the Dargile Formation. There is alluvium on the flats and in the drainage line.

Native vegetation within the site falls into three sections, shown with white outlines on the aerial photograph above.

Between these sections, the photograph shows that much of the site is cleared, and there appear to be furrows consistent with a former orchard and market garden. These areas are used by waterbirds for foraging and the drainage line that passes through them is well populated with frogs.

Large Monterey Pines up to 40 m tall stand out on the aerial photograph as the more intense green trees with longer shadows. There are remnants of a pine windbreak along the northern boundary, which has produced subsequent generations of pines that have invaded the native vegetation.

The area of Valley Heathy Forest adjacent to the Wantirna Rd fence supports a relatively intact cover of remnant trees. Indigenous understorey vegetation appears not to have been previously cleared, but has recently been degraded by the grazing of horses throughout the area. There is a good cover of Sweet Bursaria in most of this area, along with some other indigenous shrubs and patches of remnant ground flora in areas less accessible to horses. Moderate to severe weed infestations occur in most of the area. The worst weeds are exotic creepers, Boneseed, Blackberry and a range of other woody weeds. Higher quality remnant ground layer vegetation occurs within the Wantirna Rd nature strip.

The area of Swampy Woodland at the southern end of St Davids Drive contains a stand of approximately thirty remnant Swamp Gums, including some larger trees likely to be over 100 years old. Indigenous understorey vegetation is scarce because of previous clearing and ongoing grazing.

The small seasonal wetland near J.W. Manson Reserve supports a fair cover of native Cumbungi, along with several indigenous rushes and semi-aquatic herbs. The size and location of the wetland are likely to have been modified by previous drainage works in the area.

### Relationship to other land

The much larger area of native vegetation in the Bateman Street Bush (Site 49) is about 100 m away, on the other side of Wantirna Rd. It is also on the proposed freeway route. There is a line of trees on the far side of the Bateman Street Bush (Site 49) extending to Koomba Park on Dandenong Creek. Many birds and insects are likely to move between these sites, helping to spread pollen and seeds through the sites and beyond – e.g. to Manson Reserve (Site 47), which is on Dandenong Ck, 150 m north of the freeway reservation site.

These sites form a less fragmented corridor of treed vegetation between Koomba Park and Manson Reserve than along Dandenong Creek. It is therefore possible that some fauna migrating along the creek may detour through the freeway reservation rather than follow the creek via Winton Wetlands. In any case, the corridor through the freeway reservation site and the Bateman Street Bush is likely to serve an important role in the ecological functioning of the Dandenong Creek corridor.

There is also regenerating native vegetation on the batter of the cutting on the western side of Wantirna Rd. This is too small to warrant inclusion within one of the sites in this report, but it does have a small degree of biological significance because of its position on the habitat corridor along the proposed route of the Healesville Freeway.

There is little habitat in the surrounding residential and commercial areas, even allowing for mature planted eucalypts that are not locally indigenous.

**Bioregion:** Gippsland Plain

### Habitat types

**Valley Heathy Forest (EVC 127, regionally Endangered):** 1.6 ha in total, of which approximately 0.65 ha is in fair ecological condition (rating C) and 0.95 ha is in poor ecological condition (rating D). 24 indigenous plant species were recorded on 15th May 2002.

Canopy trees: A fair cover of remnant *Eucalyptus cephalocarpa* and *E. radiata* trees up to 25 m tall.

Lower trees: Scattered specimens of *Acacia dealbata* and *Exocarpos cupressiformis*.

Shrubs: A good cover of *Bursaria spinosa* shrubs towards Wantirna Rd, with some *Acacia paradoxa*, *Coprosma quadrifida*, *Cassinia* spp. and *Kunzea ericoides*. Moderate infestations of woody weeds.

Vines: Some *Cassytha pubescens*. Extensive occurrence of introduced creepers.

Ferns: Absent.

Ground flora: *Lomandra longifolia*, *Viola hederacea*, *Dianella admixta* and the scattered occurrence of other indigenous grasses, sedges and ground layer herbs. Patches of indigenous ground layer vegetation are generally confined to the Wantirna Rd nature strip and in areas that are shrubby enough to discourage grazing. There may be

seasonal ground flora species in the least-disturbed areas, and these would not have been detected at the time of year of the site inspection.

**Swampy Woodland (EVC 937, regionally Endangered):** 2,200 m<sup>2</sup>, all in poor ecological condition (rating D). 2 indigenous plant species were recorded on 15th May 2002.

Canopy trees: A stand of approximately thirty *Eucalyptus ovata* trees up to 30 m tall, with some *E. cephalocarpa*. Includes some older trees. Moderate foliage dieback is apparent and there is no regeneration.

Understorey vegetation: Grazed pasture.

**Seasonal Wetland (part of EVC 74, regionally Endangered):** 1,000 m<sup>2</sup>, all in fair ecological condition (rating C). 6 indigenous plant species were recorded on 15th May 2002.

Trees, shrubs, vines and ferns: Absent.

Aquatic and semi-aquatic flora: Dominated by a fair cover of *Typha domingensis*. Scattered rushes and herbs, including *Juncus* spp., *Pericaria* spp. and *Alisma plantago-aquatica*. Substantially affected by grazing and the trampling of horses.

### Plant species

The following plant species were observed by Mr Rik Brown on 15th May 2002. The column headed 'Risk' indicates the indigenous species' risk of extinction in Knox with 'E'=Endangered and 'V'=Vulnerable. Additional species would no doubt be detectable in other seasons.

Risk	Indigenous Species	Risk	Indigenous Species
	<i>Acacia dealbata</i>	E	<i>Eucalyptus radiata</i>
V	<i>Acacia melanoxylon</i>	V	<i>Exocarpos cupressiformis</i>
	<i>Acacia paradoxa</i>		<i>Gahnia radula</i>
	<i>Alisma plantago-aquatica</i>	V	<i>Hydrocotyle hirta</i>
	<i>Bursaria spinosa</i>	E	<i>Imperata cylindrica</i>
	<i>Cassinia arcuata</i>	E	<i>Juncus procerus</i>
V	<i>Cassinia longifolia</i>		<i>Juncus</i> sp.
E	<i>Cassitya pubescens</i>		<i>Kunzea ericoides</i> spp. agg.
V	<i>Coprosma quadrifida</i>	E	<i>Lagenophora stipitata</i>
E	<i>Daviesia latifolia</i>		<i>Lomandra longifolia</i>
	<i>Dianella admixta</i>		<i>Microlaena stipoides</i>
	<i>Dichondra repens</i>		<i>Pericaria decipiens</i>
V	<i>Epacris impressa</i>	E	<i>Pericaria hydropiper</i>
V	<i>Eucalyptus cephalocarpa</i>	E	<i>Typha domingensis</i>
	<i>Eucalyptus goniocalyx</i>	E	<i>Viola hederacea</i>
V	<i>Eucalyptus ovata</i>		
Introduced Species			
	<i>Acacia baileyana</i>		<i>Ranunculus repens</i>
	<i>Agapanthus praecox</i>		<i>Rubus anglocandicans</i>
	<i>Allium triquetrum</i>		<i>Rumex crispus</i>
	<i>Chrysanthemoides monilifera monilifera</i>		<i>Ulex europaeus</i>
	<i>Conyza sumatrensis</i>		<i>Vinca major</i>
	<i>Cotoneaster pannosus</i>		<i>Viola odorata</i>
	<i>Cytisus scoparius</i>		<i>Watsonia meriana</i> var. <i>bulbillifera</i>
	<i>Delairea odorata</i>		
	<i>Genista monspessulana</i>		
	<i>Hedera helix</i>		
	<i>Ligustrum vulgare</i>		
	<i>Lonicera japonica</i>		
	<i>Pinus radiata</i>		
	<i>Pittosporum undulatum</i>		
	<i>Prunus cerasifera</i>		
	<i>Prunus laurocerasus</i>		

Notes concerning some of the locally threatened plant species

*Imperata cylindrica* (Blady Grass). A small patch grows in the Wantirna Rd nature strip.

*Lagenophora stipitata* (Common Lagenophora). There are patches within more intact ground layer vegetation near Wantirna Rd.

### Fauna of special significance

None recorded during field surveys, but significant birds and frogs associated with the nearby Dandenong Creek and its floodplain are likely to be frequent visitors.

### Fauna habitat features

Remnant trees and understorey vegetation within the site provide habitat for forest and woodland birds occurring in the area, including potential nesting sites for small birds within shrub layer vegetation. The site provides a habitat refuge for

birds in an area where other remnant vegetation is scarce. It would inevitably contribute to their daily and seasonal movements along the Dandenong Creek wildlife corridor, as discussed above.

A few of the older remnant Swamp Gums contain natural hollows suitable as shelter and breeding locations for birds, possums and bats.

Waterbirds forage in cleared areas adjacent to the drainage line, with the Straw-necked Ibis and White-faced Heron observed during field surveys. The drainage line and wetland area support substantial populations of frogs. Smaller birds of prey, particularly Black-shouldered Kites, are seen frequently along cleared parts of the freeway reservation.

### 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 & Viability*

The site is a component or ecological 'stepping stone' of a habitat corridor, as explained above under the heading, 'Relationship to other land'. The link that it provides is no doubt important for fauna movement at the local scale (or perhaps more widely). This represents **Local** significance under criterion 1.2.6.

#### *Regionally Endangered Ecological Vegetation Classes*

The Valley Heathy Forest represents a remnant patch of a regionally Endangered EVC. It follows from Appendix 3 of *Victoria's Native Vegetation Management - a Framework for Action* (NRE 2002a) that the site's native vegetation is of at least High conservation significance. This, in turn, gives the site **State** significance under criterion 3.2.3.

#### *Locally Threatened Plant Species*

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

### Threats

- Potential future freeway construction, which would inevitably destroy most of the site's environmental significance;
- Grazing horses, causing pugging, trampling, altered nutrient cycling, eating of indigenous plants, prevention of establishment of new generations of indigenous plants, and exacerbation of weed infestations due to selective feeding;
- Dieback of remnant trees, particularly as a result of the effects of grazing;
- Invasion by environmental weeds:
  - Very Serious: Ivy (*Hedera helix*) and Cape Ivy (*Delairea odorata*);
  - Serious: Boneseed (*Chrysanthemoides monilifera*), Sweet Pittosporum (*Pittosporum undulatum*) and Blackberry (*Rubus discolor*);
  - Moderate: Montpellier Broom (*Genista monspessulana*), Japanese Honeysuckle (*Lonicera japonica*), Monterey Pine (*Pinus radiata*), Creeping Buttercup (*Ranunculus repens*), Blue Periwinkle (*Vinca major*);
  - possibly grass weeds, whose effects could not be reliably determined due to the time of year of the inspection;
- Loss or decline of plant species that have such small populations that they are vulnerable to inbreeding, poor reproductive success or random events such as trampling.

### Management issues

- VicRoads should cease agisting livestock in the Valley Heathy Forest or the wetland, to be consistent with the Victorian government's policy of placing maximum importance on conserving regionally endangered EVCs in its quest for increases in the quality and extent of native vegetation;
- The weeds listed above should be controlled. Note that some are listed as regionally controlled under the *Catchment and Land Protection Act 1994*.

### Administration matters

- This site is suited to the proposed Environmental Significance Overlay (ESO2) because of its State significance and the presence of endangered EVCs;
- The western half of the site is presently covered by Vegetation Protection Overlay Schedule 1. The placing of the overlay was partly on the basis of the study by Water Ecoscience (1998), in which this is Site 69;
- Council might consider discussing with VicRoads the damaging impacts of horses and uncontrolled weeds on the site.

### Information sources used in this assessment

- A site survey undertaken during this study by Rik Brown on 15/5/02, following this study's standard procedures discussed in Section 2.4 of Volume 1. This included descriptions of the composition and condition of the vegetation

types, compilation of lists of indigenous and introduced plant species for each type, incidental fauna observations, and checks for fauna habitat, ecological threats, management issues and populations of scarce or threatened plant species;

- Aerial photography from February 2001 and April 2003;
- Satellite images of the area;
- The Department of Sustainability & Environment's BioMaps of the area;
- Maps of geology and topography produced by agencies of the Victorian government.