

19 February 2018

Katanya Barlow  
Principal Strategic Planner  
Bayside City Council  
Sandringham 3191  
Email: KBarlow@bayside.vic.gov.au

Dear Ms Barlow (Katanya)

## **Vegetation assessment of Southland – Pennydale Structure Plan Area**

**Our Ref: Project 26722**

In response to Council's request, my assessment of the above area is contained in this letter.

The study area is shown in Attachment 1.

### **Vegetation**

The vegetation of the study area is predominantly introduced due to the long history of agricultural and then urban development. It consists almost entirely of planted garden species, weeds of gardens and weeds of disturbed sites. All remaining indigenous species are rare within the study area.

Five site-indigenous flora species were recorded during site inspection on 22 January as follows. One more species is recorded in the Victorian Biodiversity Atlas (DELWP 2018b):

**Table 1 Site-indigenous flora**

<b>Species</b>	<b>Common name</b>	<b>Occurrence</b>
<i>Eucalyptus viminalis</i> subsp. <i>pryoriana</i>	Coast Manna Gum	Lyle Anderson Reserve (1 tree) adjacent rail reserve (2 trees) adjacent private property (1 tree) Pennydale Park (2 trees) adjacent pre-school (1 tree) 7 Churchill Ave, private property (1 tree)
<i>Microlaena stipoides</i>	Weeping Grass	Rail reserve, one private property
<i>Lachnagrostis filiformis</i>	Common Blown-grass	Rail reserve (VBA record)
<i>Portulaca oleracea</i>	Common Purslane	Scattered in disturbed sites
<i>Pteridium esculentum</i>	Austral Bracken	Lyle Anderson Reserve, adjacent rail reserve, Pennydale Park
<i>Rytidosperma geniculatum</i>	Knead Wallaby-grass	Lyle Anderson Reserve, adjacent rail reserve, Park Road road reserve

Two more species are not strictly (site) indigenous but are locally indigenous to Bayside, having colonised inland from the coast since European settlement:

**Table 2. Locally indigenous flora**

Species	Common name	Occurrence
<i>Banksia integrifolia</i>	Coast Banksia	Self-sown plants are scattered in south of area particularly on private land on Park Road adjacent to Cheltenham Park from where the species may have escaped from plantings, planted elsewhere, total 5 trees
<i>Leptospermum laevigatum</i>	Coast Tea-tree	Road reserve (9 trees on Heather Grove, including 2 beside rail line), private property ( 2 trees on 24 Tulip Grove), total 11 trees

A small range of planted locally indigenous species occur in some gardens and parks notably Lyle Anderson Reserve and Pennydale Park. Where they are not strictly site-indigenous they constitute horticulture rather than revegetation. Of note are several Yellow Box *Eucalyptus melliodora* in Lyle Anderson Reserve.

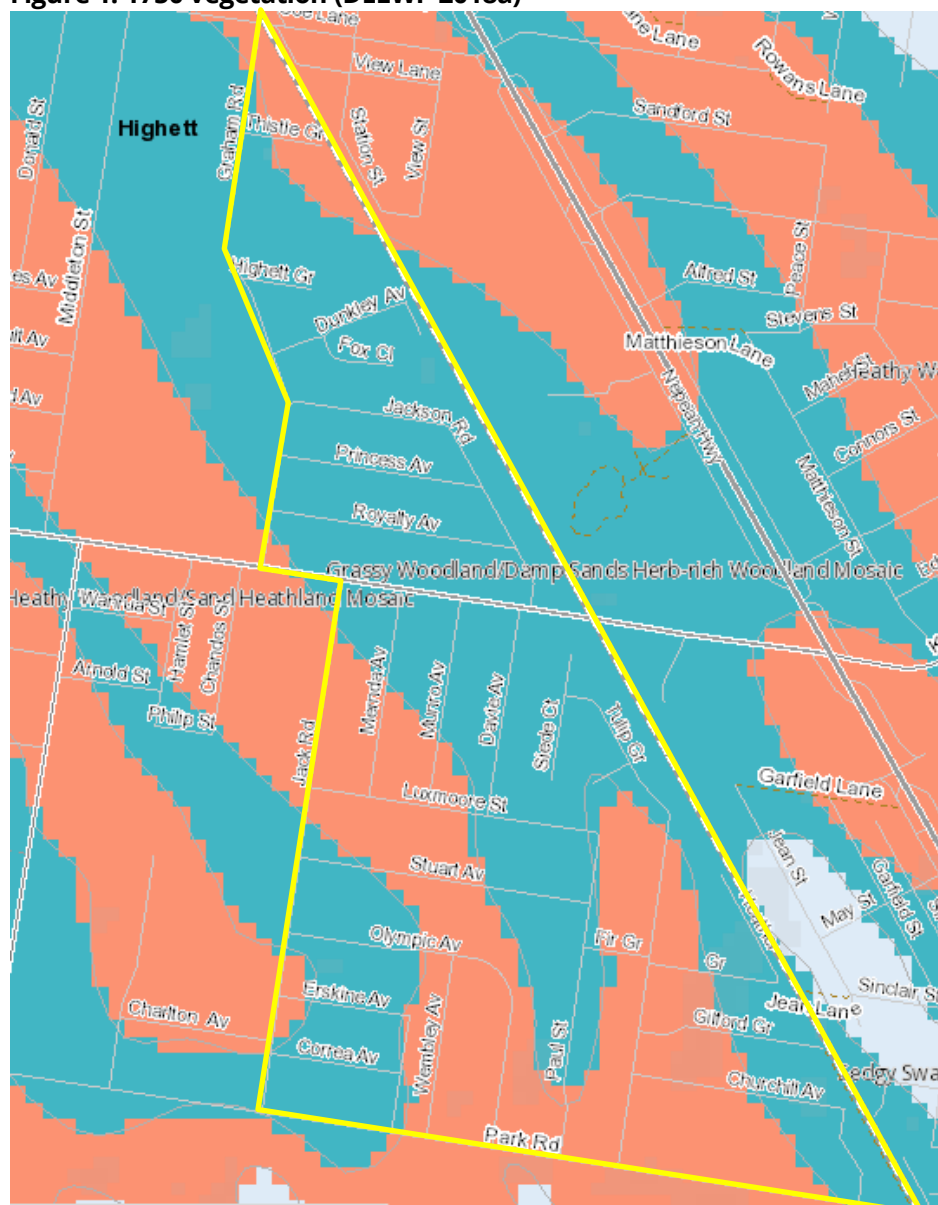
The original pre-European vegetation comprised four ecological vegetation classes (EVCs):

**Table 3. Original vegetation**

EVC	Occurrence
Grassy Woodland	Sandringham Sandstone
Damp Sands Herb-rich Woodland	Sandringham Sandstone with thin Quaternary sand sheet cover
Heathy Woodland	Quaternary sand dunes
Sand Heathland	High Quaternary sand dunes

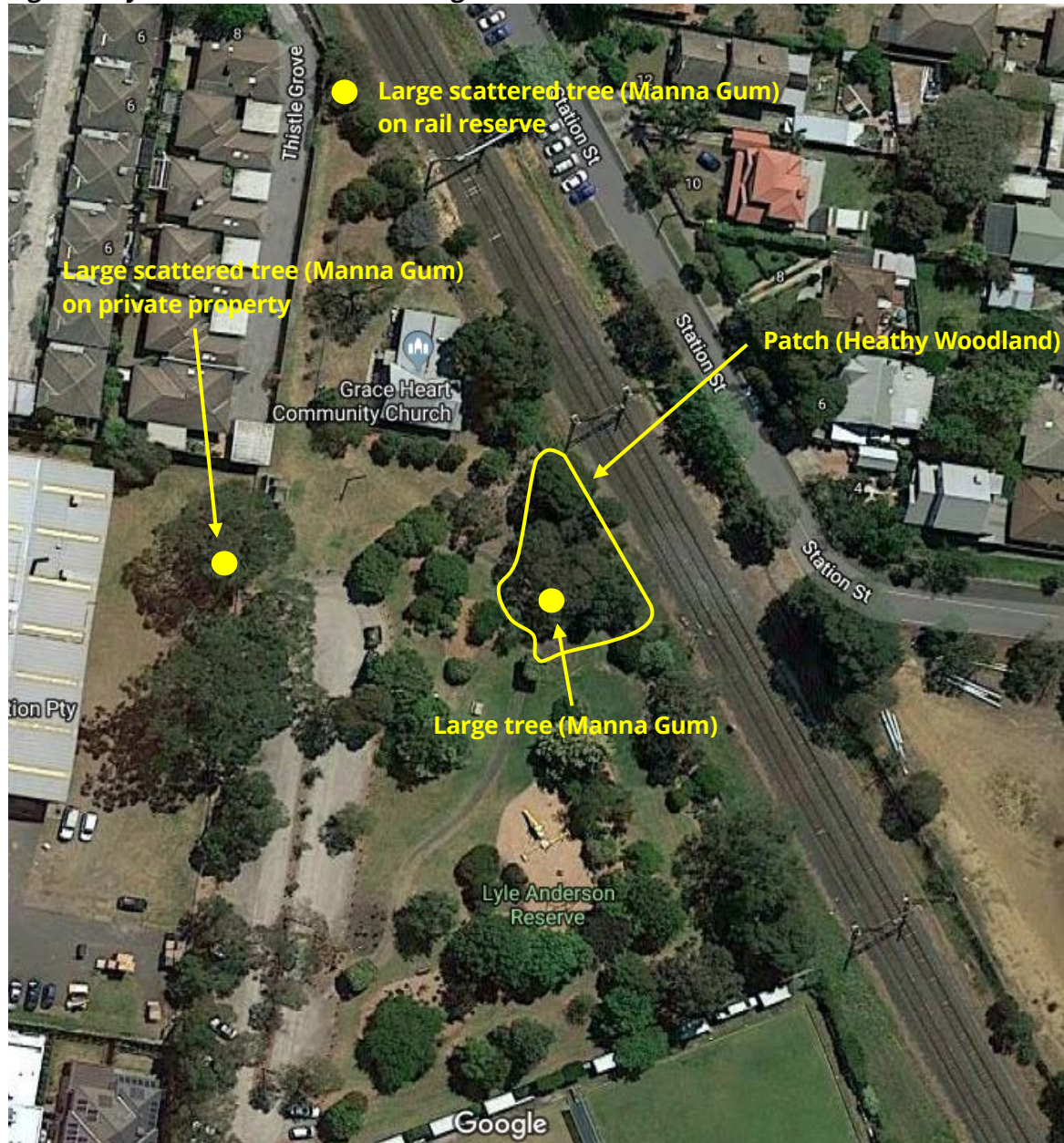
The vegetation was strongly controlled by geology, and in particular by the linear Quaternary sand dunes.

**Figure 1. 1750 vegetation (DELWP 2018a)**



One area of native patch vegetation as defined by the Department of Environment, Land, Water and Planning (DELWP 2017) was recorded, straddling the Lyle Anderson Reserve and the adjacent rail reserve:

**Figure 2. Lyle Anderson Reserve: ecological features**



**Figure 3. Patch native vegetation including large Manna Gum, Lyle Anderson Reserve**



The patch is classified as the ecological vegetation class (EVC) Healthy Woodland, consistent with the NatureKit vegetation map (DELWP 2018a). It is characterised by a large Manna Gum in the reserve and an immature Manna Gum on the adjacent rail reserve over a ground layer dominated by Austral Bracken *Pteridium esculentum* on both sides of the fence and some Weeping Grass *Microlaena stipoides* on the rail reserve. It has lost almost all of its original component species. Exotic trees have high cover in the patch. Using the DELWP vegetation quality assessment method (DSE 2004) the patch has a condition score of 0.34.

Six of the eight recorded Manna Gums in the study area are scattered trees as per the DELWP (2017) definition. These trees occur outside patches. One is at 7 Churchill Avenue (private property), two are in the Lyle Anderson Reserve (Figures 2, 3) and three are in Pennydale Park and the adjacent kindergarten:

**Figure 4. Pennydale Park, ecological features**



**Figure 5. Large Manna Gum in Pennydale Park**



## Vegetation significance

Large parts of the study area have substantial gardens and street trees that provide local character and amenity. The species composition is almost entirely exotic and non-indigenous Australian native. This widespread habitat supports a small range of generally common resident and transient native fauna.

It is likely that the Moreton Bay Fig *Ficus macrophylla* on 109–111 Park Road is a food resource for the vulnerable Grey-headed Flying-fox *Pteropus poliocephalus*.

The remnant site and locally indigenous trees contribute especially to local character and amenity.

All indigenous plant species particularly the large Manna Gums have local significance (in the context of Bayside) except for Common Blown-grass and Common Purslane which are species of highly disturbed sites. The remnant of Heathy Woodland in Lyle Anderson Reserve has local significance.

No flora or vegetation within the study area is significant at the state or national level. The Victorian Biodiversity Atlas (DELWP 2018b) has old records of 3 flora species of national significance and 12 flora species of state significance from within 5 km of the study area (Attachment 2). None of these species occur in the area. Two are strictly coastal and the others are locally extinct.

The two locally but not site-indigenous species (Coast Tea-tree, Coast Banksia) have historical significance as they represent remnants of the post-European modified native vegetation that is now largely removed for housing. Coast Tea-tree scrub may have occupied considerable areas. The remaining nine tea-trees on Heather Grove road reserve and two on adjacent private property are picturesque:

**Figure 6. Remnant Coast Tea-trees, Heather Grove**



The several scattered remnant Coast Banksias also have historical significance:

**Figure 7. Remnant Coast Banksias, Park Road**



The remnant native vegetation is of very limited extent and is fragmented by housing and factories. Consequently there are no functional wildlife corridors and the suburban area itself with its many gardens supports and facilitates the widespread movement of common aerial fauna such as bats and birds.

There appear to be no opportunities to link the significant Highett Grassy Woodland which is immediately west of the study area with remnants in the study area particularly the Heathy Woodland in Lyle Anderson Reserve. Bats and birds will continue to fly between these remnants but a ground link is not feasible and in any case there are no surviving native vertebrate ground fauna that would use such a corridor.

The remnant vegetation is likely to support common native birds such as Red Wattlebird and Musk Lorikeet, however it is of very limited extent so other planted non-indigenous trees and shrubs provide more important resources for these species. Coast Manna Gum is resistant to browsing by ringtail possums which are common in the area, which is one of the reasons it survives in the study area.

## Recommended actions

The protection and management of the 'leafy green' parts of the area with their predominantly exotic and Australian native vegetation is a matter of statutory planning largely beyond the scope of this report.

Given the very limited extent of remnant indigenous vegetation and that it occurs mainly on public land a vegetation protection overlay may not be strongly supported on biodiversity grounds alone. However a VPO would be highly appropriate on landscape amenity and local character grounds. This would include any remnant indigenous trees that are present.

Consideration should be given to placing the remnant trees, especially the Manna Gums, on the Bayside significant tree register.

The Manna Gums should be regularly monitored for their health and competing introduced vegetation especially trees and shrubs should be controlled or removed. More Manna Gums should be searched for.

Natural recruitment of the Manna Gums should be facilitated. Planting of Manna Gum around these trees is not appropriate as the aim should be to maintain authentic natural Highett and Cheltenham native vegetation that has undergone natural selection and not to produce an anthropogenic plantation. Extremely little of Highett's natural vegetation remains in particular. Natural recruitment may be readily obtained by making open space available next to the existing trees by removing existing introduced trees, shrubs and ground layer vegetation using physical or chemical means. Natural regeneration areas could be thus established either within existing gardens beds or by designating existing areas of mown lawn for regeneration. This would be most easily achieved at Lyle Anderson Reserve. Manna Gums produce abundant seedlings in open spaces created by management, making planting unnecessary. Detailed site-specific advice and management prescriptions are required to obtain the best results.

The Heathy Woodland remnant in Lyle Anderson Reserve should be restored and extended. In particular the exotic trees have high cover, compete with the Manna Gum, and should be removed.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Jeff Yugovic'.

**Dr Jeff Yugovic**  
**Senior Consultant, Biosis Pty Ltd**

## References

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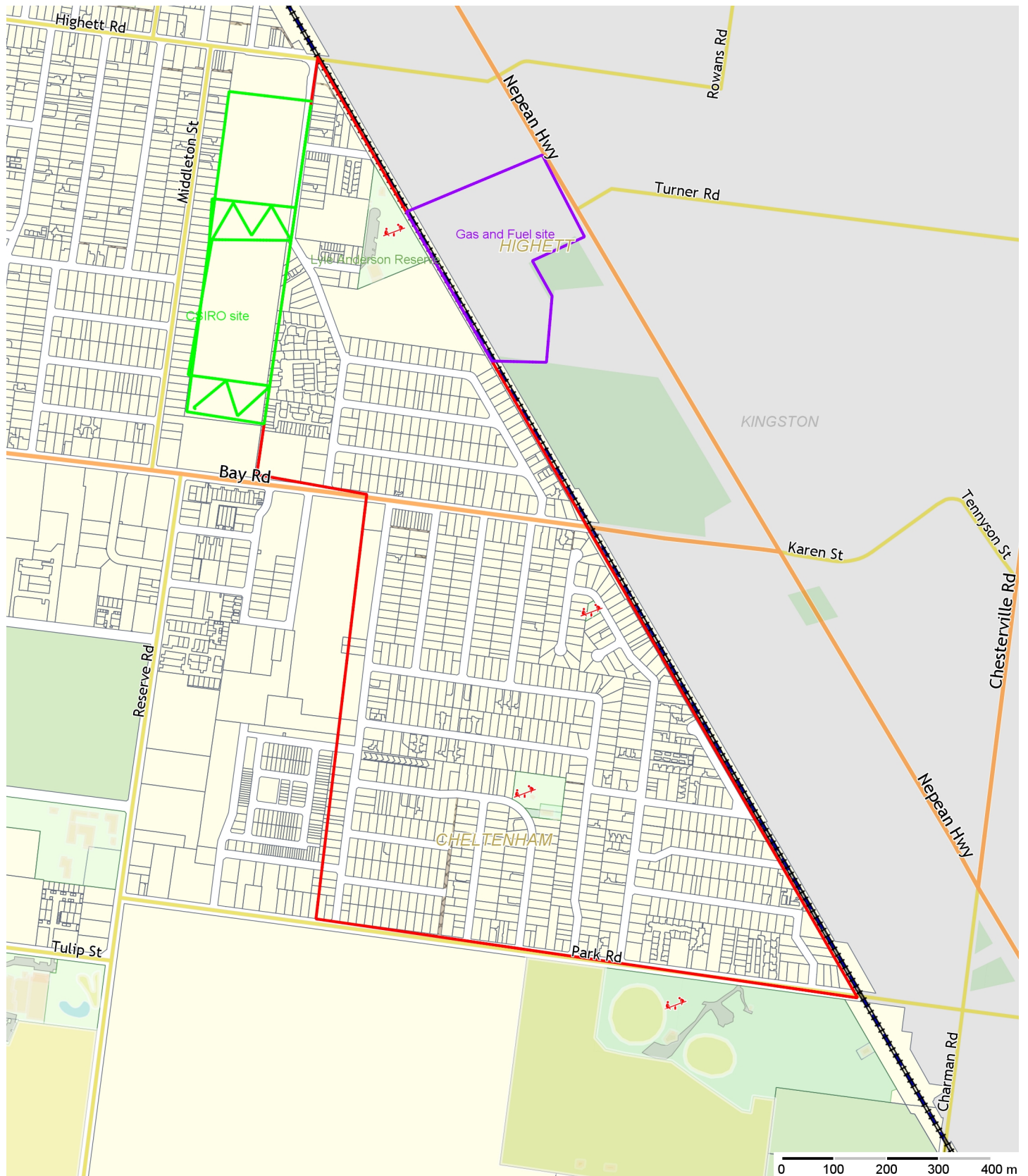
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## **Attachment 1. Southland Pennydale Structure Plan Area**



This map contains VicMap information. The State of Victoria, Department of Environment, Land, Water & Planning 2017.  
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20/12/2017

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## Attachment 2. Significant flora recorded from within 5 km (DELWP 2018b)

Scientific name	Common name	Conservation status			Most recent database record	Other records	Habitat description	Likely occurrence in study area	Rationale for likelihood ranking
		EPBC	VIC	FFG					
National significance									
<i>Caladenia robinsonii</i>	Frankston Spider-orchid	EN	e	L	1929		Coastal heathy woodland; only confirmed population is near Rosebud.	Nil	No habitat
<i>Euphrasia collina</i> subsp. <i>muelleri</i>	Purple Eyebright	EN	e	L	1900		Grasslands and grassy woodlands; few populations are known to still exist.	Nil	No habitat
<i>Thelymitra epipactoides</i>	Metallic Sun-orchid	EN	e	L	1933		Moist or dry sandy loams or loamy sands, primarily in coastal heaths, grasslands and woodlands, but also in similar communities at drier inland sites.	Nil	No habitat
State significance									
<i>Caladenia venusta</i>	Large White Spider-orchid		r		1901		Heath and heathy woodlands primarily in coastal areas, extending inland in western Victoria.	Nil	No habitat
<i>Callitriche umbonata</i>	Winged Water-starwort		r		1908		Damp, periodically waterlogged sites; swamps and shallow freshwater ponds.	Nil	No habitat

Scientific name	Common name	Conservation status			Most recent database record	Other records	Habitat description	Likely occurrence in study area	Rationale for likelihood ranking
		EPBC	VIC	FFG					
<i>Corybas fimbriatus</i>	Fringed Helmet-orchid		r		1900		Damp, shady locations within coastal scrub, heath, heathy woodland and lowland forest.	Nil	No habitat
<i>Diuris behrii</i>	Golden Cowslips		v		1887		Grasslands, open grassy woodlands and Box Ironbark Forests.	Nil	No habitat
<i>Diuris punctata</i> var. <i>punctata</i>	Purple Diuris		v	L	1910		Fertile, loamy soils and periodically wet areas in lowland grasslands, grassy woodlands, heathy woodlands and open heathlands.	Nil	No habitat
<i>Diuris X palachila</i>	Broad-lip Diuris		r		1920		Heathlands, grasslands, open woodlands and dry open forests.	Nil	No habitat
<i>Heterozostera nigricaulis</i>	Australian Grass-wrack		r		2007		Forms large meadows in shallow coastal waters to a depth of c. 15m	Nil	No habitat
<i>Philydrum lanuginosum</i>	Woolly Waterlily		v		1907		Shallow, freshwater swamps; likely to be extinct in the areas recorded for Melbourne pre-1900.	Nil	No habitat
<i>Pterostylis pedoglossa</i>	Prawn Greenhood		v		1934		Heath and heathy woodland near the coast.	Nil	No habitat

Scientific name	Common name	Conservation status			Most recent database record	Other records	Habitat description	Likely occurrence in study area	Rationale for likelihood ranking
		EPBC	VIC	FFG					
<i>Pterostylis X toveyana</i>	Mentone Greenhood		v		1916		Coastal scrub and moist areas of open-forest.	Nil	No habitat
<i>Salsola tragus</i> subsp. <i>pontica</i>	Coast Saltwort		r		1963		Saline, coastal environments.	Nil	No habitat
<i>Xanthosia tasmanica</i>	Southern Xanthosia		r		1942			Nil	No habitat