

M01 Targeted Flora Survey - CPS 8586-1 (Rev A)

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Targeted Flora Survey – CPS 8586-1

1. Background

The Shire of Manjimup has referred a Clearing Permit application (CPS 8586-1) to the Department of Water and Environmental Regulation (DWER) in order to undertake road improvement activities.

A preliminary assessment of the application by DWER has identified the potential for *Caladenia christineae*, *Commersonia apella*; *Thomasia brachystachys* and two *Amanita* species to occur within the application area. As a consequence of this, DWER requested flora surveys to be undertaken within the application area to determine the presence or absence of these species.

2. Scope

The scope of work to be undertaken is as follows:

- Undertake a targeted flora survey within the CPOS 8586-1 application area to identify the presence or absence of *Caladenia christineae*, *Commersonia apella*, *Thomasia brachystachys*, and two *Amanita* species
- Prepare a biological survey report containing details on methods and results
- Submit survey data in accordance with IBSA standards.

3. Methods

The field survey of the application area was conducted by Tristan Sleigh (Senior Ecologist; (FB62000128; TFL 28-1920) from Strategen JBS&G on 29 June 2020. The survey was conducted in accordance with guidelines provided in Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA 2016) and is suitable to support native vegetation clearing permits.

A targeted flora survey within areas across the entire application area was undertaken, searching for habitat and occurrences of the following conservation significant taxa:

- *Caladenia christineae* (T)
- *Commersonia apella* (T)
- *Thomasia brachystachys* (P2)
- *Amanita kalamundae*(P3)
- *Amanita fibrilloses* (P3).

Any conservation species identified were recorded population density and extent mapped. Tracks recorded during the survey are shown in Figure 2.

Vegetation within the application area was also described and mapped to NVIS Level III (Broad Floristic Formation).

4. Results and Discussion

4.1 Flora

No flora of conservation significance were recorded during the survey. The vegetation present within the application areas, provides potential habitat for the target species, however no individuals were recorded.

The survey was conducted during June, which is within the optimal period for detection for two of the target species, *Amanita kalamundae* and *Amanita fibrillopes*, due to the fruiting period. The survey time is also appropriate for the detection of *Commersonia apella* and *Thomasia brachystachys*. While outside of the known flowering period, these species are present and visible all year round. As no individuals resembling these two species were recorded, their absence within the application area can be confirmed, without the need for further survey.

One species, *Caladenia christinae*, is unlikely to have been detectable during the time of survey. *Caladenia christinae* is known to occur within the local area, within the nearest known location, 5 km east. Based on the absence of suitable habitat within the application area, it is unlikely that this species would occur.

4.2 Vegetation

Within the Survey area, one broad floristic formation was recorded and mapped, *Eucalyptus diversicolor* tall forest (0.20 ha, 26%)(Figure 2). The vegetation present was recorded as Degraded to Good (EPA 2016) based on evidence of localised disturbance and presence of introduced species. The remaining area (0.58 ha, 74%) within the application area consisted of road or road verge, which was absent of any vegetation. Representative photographs are presented in Plate 1 to Plate 3.

5. Discussion and Conclusion

The targeted survey conducted is considered adequate based on effort and seasonal timing to confirm the absence of the following conservation significant species:

- *Caladenia christinae* (T)
 - This species is a white spider orchid with small odourless flowers. The flowers have short labellum fringes, and stiffly-held relatively short sepals and petals. Each plant has up to four flowers, each 6–8 cm across, and can grow to about 40 cm high. The orchid grows on winter-wet flats (on the margins as well as in standing water) in heath and tall scrub communities, within *Eucalyptus marginata* (Jarrah)–*Eucalyptus calophylla* (Marri) forest and sometimes under *Melaleuca* sp. (Paperbarks) (Brown et al., 1998). This targeted survey was undertaken outside of this species known flowering period and therefore no flowering parts would not have been visible. However, the habitat present within the application area is inconsistent with the known habitat as described above, specifically winter-wet flats. Given the absence of habitat for this species it is highly unlikely that this species occurs within the application area.
- *Commersonia apella* (T)

- This species is a shrub growing to 2 metres. While its flowering time is October, November or December, specimens of this species would have been visible and identifiable to at least genus level during the survey. All records within the local area (within 10 kilometres) were last recorded 100 years ago with the next closest approximately 95 kilometres south east of the application area (Parks and Wildlife 2007-). Given the absence of any *Commersonia* species recorded during the survey, and the lack of recent records within the local area, it is highly unlikely that this species occurs within the application area.
- *Thomasia brachystachys* (P2)
 - This species is a shrub growing to 1.5 metres. While its flowering time is October, November or December, specimens of this species would have been visible and identifiable to at least genus level during the survey. Given the absence of any *Thomasia* species recorded during the survey, it is highly unlikely that this species occurs within the application area.
- *Amanita kalamundae* (P3)
 - This species has very small to medium-sized fruiting bodies with a buff to milky coffee pileus with a pale margin, and a universal veil of small thin patches and scales that is white or pale buff. The gills are white to cream or pale clay pink; the stipe is white to cream with a superior partial veil that is initially white and becomes cream to pale saffron with age. Its fruiting period is between May and June. While fungus fruiting bodies were recorded during the survey, these lacked the diagnostic features of *Amanita kalamundae*, in particular the and a universal veil of small thin patches and scales that is white or pale buff. Given the survey was conducted during the optimal time for detection and identification, it is highly unlikely that this species occurs within the application area.
- *Amanita fibrilloses* (P3).
 - This species has small to large fruiting bodies with a pileus that is initially pale peach to pale salmon that rapidly ages cream, and a thick universal veil that is initially crustose, and which breaks up into straight-sided, polygonal flat-topped warts and scales, initially white but becomes buff to clay-pink or vinaceous-buff or milky coffee with age (E.M. Davison et al 2013). Its fruiting period is between April and July. While fungus fruiting bodies were recorded during the survey, these lacked the diagnostic features of *Amanita fibrilloses*, in particular the crustose, and which breaks up into straight-sided, polygonal flat-topped warts and scales. Given the survey was conducted during the optimal time for detection and identification, it is highly unlikely that this species occurs within the application area.

Based on these results, it is highly unlikely that any of the above five conservation significant species occur within the application area, and no further survey are considered to be required.

6. References

- Brown, A, Thomson-Dans, C & Marchant, N (Eds), 1998, Western Australia's Threatened Flora, Department of Conservation and Land Management, Western Australia, p. 132
- Department of Parks and Wildlife (Parks and Wildlife), 2007-, NatureMap, Mapping Western Australia's Biodiversity, [Online], Government of Western Australia, Available from: <http://naturemap.dec.wa.gov.au/> [08 June 2020].

Environmental Protection Authority (EPA), 2016, Technical Guidance (in accordance with the Environmental Protection Act 1986) – Terrestrial flora and vegetation surveys for environmental impact assessment in Western Australia. Government of Western Australia, Perth.



Legend Survey area Cadastral boundary Roads (MRWA)	Scale 1:10,000 at A4			CPOS 8586-1 Application Area Shire of Manjimup, WA	
	Coord. Sys. GDA 1994 MGA Zone 50				SURVEY AREA
	Job No: 58677				
	Client: Shire of Manjimup		FIGURE 1		
	Version: A	Date: 28-Jul-2020			
Drawn By: cthatcher	Checked By: HS				



- Legend**
- Survey area
 - Cadastral boundary
- Vegetation type
- Eucalyptus diversicolor* tall forest
 - Road
 - Cleared - road verge
 - Survey tracks
 - Roads (MRWA)



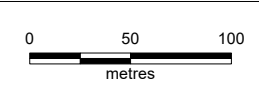
Job No: 58677

Client: Shire of Manjimup

Version: A	Date 28/07/2020
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Drawn By: cthatcher	Checked By: HS
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Scale 1:3,750 at A4



**CPOS 8586-1 Application Area
Shire of Manjimup, WA**

VEGETATION AND SURVEY TRACKS

FIGURE 2

File Name: W:\Projects\1\Open\Shire of Manjimup\GIS\Maps\M01_Rev_A\58677_02_Veg_Survey.mxd
 Image Reference: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Plate 1: Representative photograph (dashed orange line represents boundary of application area)



Plate 2: Representative photograph (dashed orange line represents boundary of application area)



Plate 3: Representative photograph (dashed orange line represents boundary of application area)