

# TECHNICAL MEMORANDUM

## Reconnaissance Flora and Fauna Survey

### Lot 359 Murray Road Brabham

<b>PROJECT NUMBER</b>	EP17-131(17)	<b>DOC. NUMBER</b>	EP17-131(17)--029
<b>PROJECT NAME</b>	Brabham Planning Support – LSP3	<b>CLIENT</b>	Peet and Department of Communities
<b>AUTHOR</b>	SKP	<b>REVIEWER</b>	TAA
<b>VERSION</b>	1	<b>DATE</b>	6/11/2018

#### 1. FLORA AND VEGETATION SURVEY

A botanist and an ecologist from Emerge visited the site and undertook a reconnaissance flora and vegetation survey on 23 October 2018. The site was traversed on foot and the vegetation was assessed.

No threatened or priority flora species were recorded within the site or are considered likely to occur based on the level of disturbance.

Four native plant communities (as well as cleared areas) were recorded in the site, as described in **Table 1** and shown on **Figure 1**.

*Table 1: Native plant communities recorded in the site*

Code	Description
<b>Cleared</b>	Cleared or parkland cleared areas consisting of scattered native trees and shrubs, bare ground or planted/non-native vegetation.
<b>Wetland</b>	
<b>Mr</b>	Tall closed shrubland <i>M. raphiophylla</i> over forb/sedgeland of <i>*Rumex crispus</i> , <i>*Cotula coronopifolia</i> , <i>Juncus pallidus</i> , <i>Alternanthera nodiflora</i> and <i>Isolepis cernua</i> .
<b>Dryland</b>	
<b>BaBm</b>	Open woodland of <i>Banksia</i> spp. over grassland of weeds.
<b>CcEm</b>	Open forest of <i>Corymbia calophylla</i> and <i>Eucalyptus marginata</i> over grassland of weeds.
<b>Transitional</b>	
<b>CcMp</b>	Open forest of <i>Corymbia calophylla</i> and <i>Melaleuca preissiana</i> over grassland of weeds.

The plant communities were determined to be in ‘degraded’ and ‘degraded – completely degraded’ condition (as shown on **Figure 2**). Much of the vegetation in the site is in ‘completely degraded’ condition and is dominated by non-native flora species (especially the southern portion).

The plant communities present within the site were considered too degraded to assign ‘floristic community types’ (FCTs) with any degree of certainty due to the low number of native species remaining. Plant community **BaBm** is likely to have once represented a *Banksia* woodland FCT, such as FCT 21a-c or 23a (**Table 2**). All of these FCTs are included within the Commonwealth listed ‘banksia woodlands of the Swan Coastal Plain’ threatened ecological community (TEC) and the State listed ‘banksia dominated woodlands of the Swan Coastal Plain IBRA region’ priority ecological

community (PEC). However, given the degree of disturbance and its current condition, plant community **BaBm** is not considered to represent any TEC or PEC.

Table 2: Inferred FCTs for plant communities recorded in the site

Community	FCT	WA status	Commonwealth status
<b>CcEm</b>	Too degraded	-	-
<b>CcMp</b>	Too degraded	-	-
<b>Mr</b>	Too degraded	-	-
<b>BaBm</b>	Too degraded - likely to have once represented 21a-c or 23a	PEC (but not likely to represent in current condition)	Vegetation is in 'degraded-completely degraded' condition and not connected to more intact Banksia woodland, so would not qualify as 'Banksia woodlands of the SCP' TEC.
<b>Cleared</b>	N/A	N/A	N/A

Four species, *\*Zantedeschia aethiopica* (arum lily), *\*Asparagus asparagoides* (bridal creeper), *\*Moraea flaccida* (one-leaf cape tulip) and *\*Gomphocarpus fruticosus* (cotton bush) listed as declared pests pursuant to the BAM Act were recorded within the site. Bridal creeper is also listed as a weed of national significance (WoNS).

The southern portion of the site that is proposed for use as a drainage reserve currently comprises cleared vegetation and a patch of plant community **Mr** in degraded condition (**Plate 1**). This community runs along a number of drainage lines which contained some areas of standing water at the time of the survey, particularly to the south (**Plate 2**). The level of water is likely to have been considerably higher in winter. The dominant species present within this community was *Melaleuca raphiophylla*, a wetland species that can tolerate inundation for up to 9 months of the year, but prefers waterlogged sites (WRC 1997). Other native species present underneath *M. raphiophylla* included *Juncus pallidus*, *Alternanthera nodiflora* and *Isolepis cernua* in low densities. *J. pallidus* and *I. cernua* tended to occur on the banks of the drainage line, whilst *A. nodiflora* was present within the drainage line itself. Given the presence of native wetland species, the **Mr** vegetation should tolerate inundation as a result of the proposed changes to the hydrology. However, a review of the proposed changes to the hydrology of the area would be required to determine the effects on increased inundation on the wetland vegetation.

*\*denotes species not native to Western Australia*



*Plate 1: Plant community **Mr** and drainage line.*



*Plate 2: Southern extent of plant community **Mr** with standing water in the drainage line.*



## 2. FAUNA

### 2.1. General fauna habitat

The site likely provides habitat for a range of common and widespread native species. *Isoodon fusciventer* (quenda, priority 4) are known within the wider area and it is possible that they may also occur within the site, particularly where dense native and non-native understorey vegetation is present.

### 2.2. Black cockatoo habitat

Emerge undertook a survey of trees within the site to assess their suitability for use by species of threatened black cockatoos for nesting. Potential habitat trees (trees >50 cm diameter at breast height (DBH)) and potential nesting trees (those habitat trees potentially containing hollows of a suitable size) are detailed in **Table 3** and shown on **Figure 3**. All of these trees were tagged with a unique ID number. Those identified potential nesting hollows would need to be assessed by a zoologist to confirm suitability.

Table 3: Potential habitat trees for black cockatoos

Species	Total no. of habitat trees (>50 cm DBH)	No. with potentially suitable hollows	Potential foraging species? (Y/N)
<i>Corymbia calophylla</i>	7	0	Y
Stag	5	1	N
<i>Eucalyptus marginata</i>	2	0	Y
<b>TOTAL</b>	<b>14</b>	<b>1</b>	-

With regard to potential foraging habitat for black cockatoo, in addition to the species listed in **Table 3**, the site also contains a small number of *Banksia* sp. that may be used for foraging by black cockatoos.

## 3. SUMMARY

- No threatened or priority flora species were recorded or are considered likely to occur.
- The site contains four native plant communities, as well as cleared areas vegetated with non-native species.
- Vegetation within the site ranged from ‘completely degraded’ to ‘degraded’ condition. The most intact vegetation is located in the south eastern portion of the site.
- The vegetation within the proposed drainage reserve comprises wetland species and is likely to be tolerant to increased inundation but a review of the hydrological changes proposed would be required to fully understand the potential impacts.
- A total of 14 trees were identified as potential habitat trees for species of black cockatoo. Of these trees, one contains hollows potentially suitable for nesting. The site may also provide a small area of habitat for quenda.

## **FIGURES**

Figure 1: Plant Communities

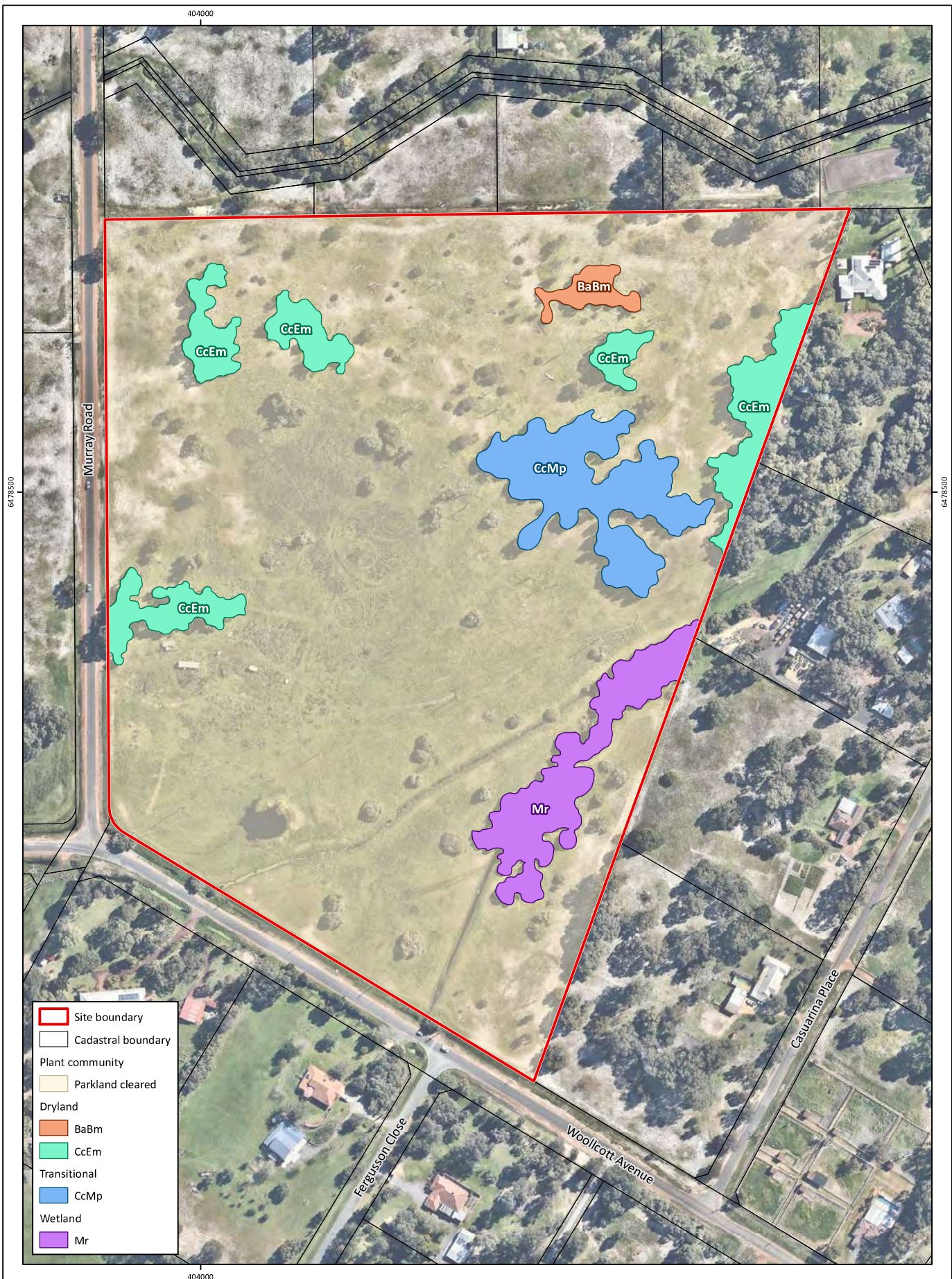
Figure 2: Vegetation Condition

Figure 3: Black Cockatoo Habitat Trees

## **REFERENCES**

Water and Rivers Commission (WRC) 1997, *Native vegetation of estuaries and saline waterways in south Western Australia*, Perth.





**Figure 1: Plant Communities**

**Project:** Lot 359 Murray Road Reconnaissance Flora and Fauna Survey  
**Client:** Brabham Planning Support  
 Peet and the Department of Communities

**Plan Number:** EP17-131(17)-F50  
**Drawn:** RAO  
**Date:** 05/11/2018  
**Checked:** SKP  
**Approved:** TAA  
**Date:** 06/11/2018

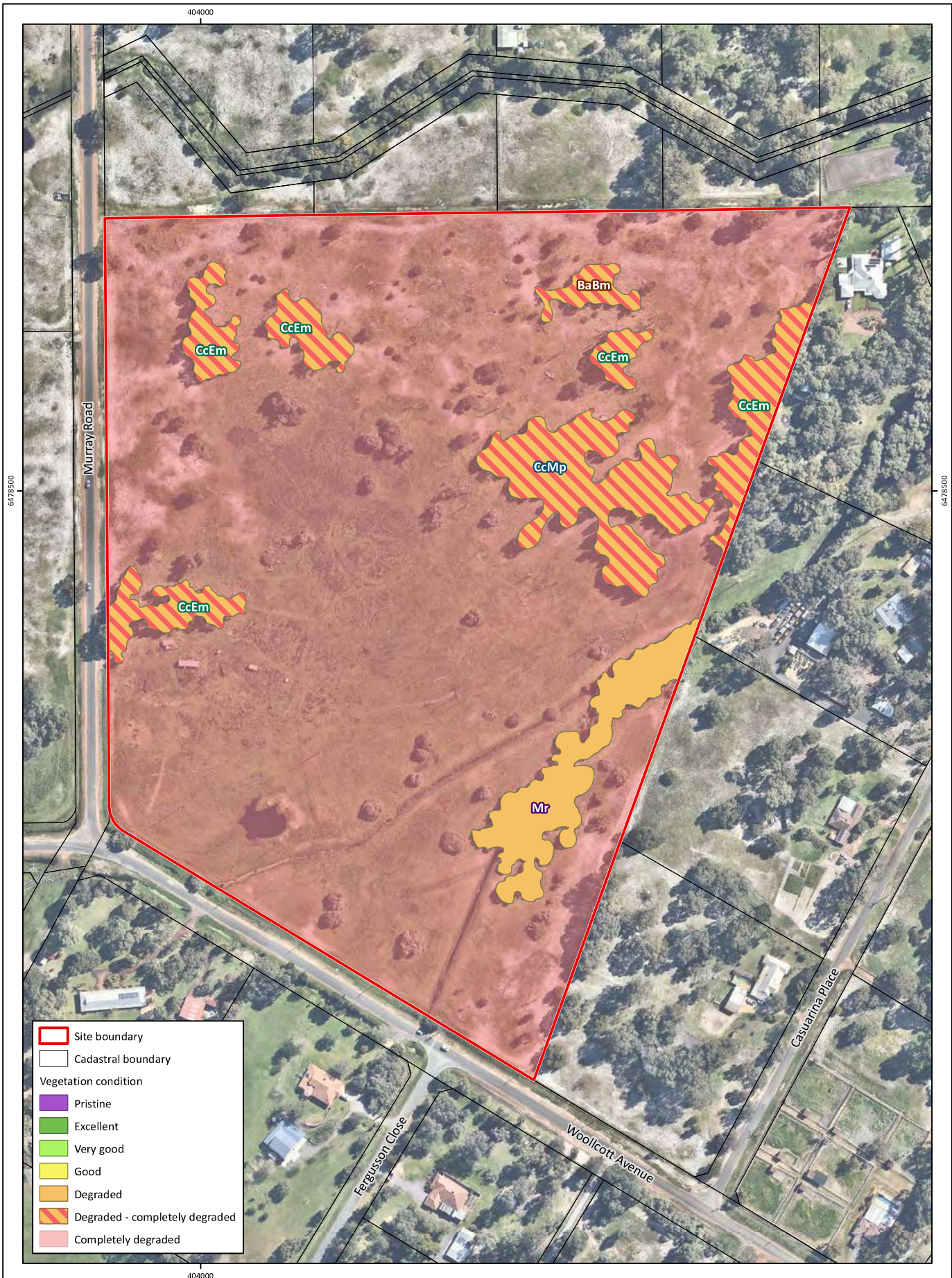


0 40 80  
 Metres  
**Scale: 1:3,000@A4**  
 GDA 1994 MGA Zone 50



While Emerge Associates makes every attempt to ensure the accuracy and completeness of data, Emerge accepts no responsibility for externally sourced data used





**Figure 2: Vegetation Condition**

**Project:** Lot 359 Murray Road Reconnaissance Flora and Fauna Survey  
 Brabham Planning Support  
**Client:** Peet and the Department of Communities

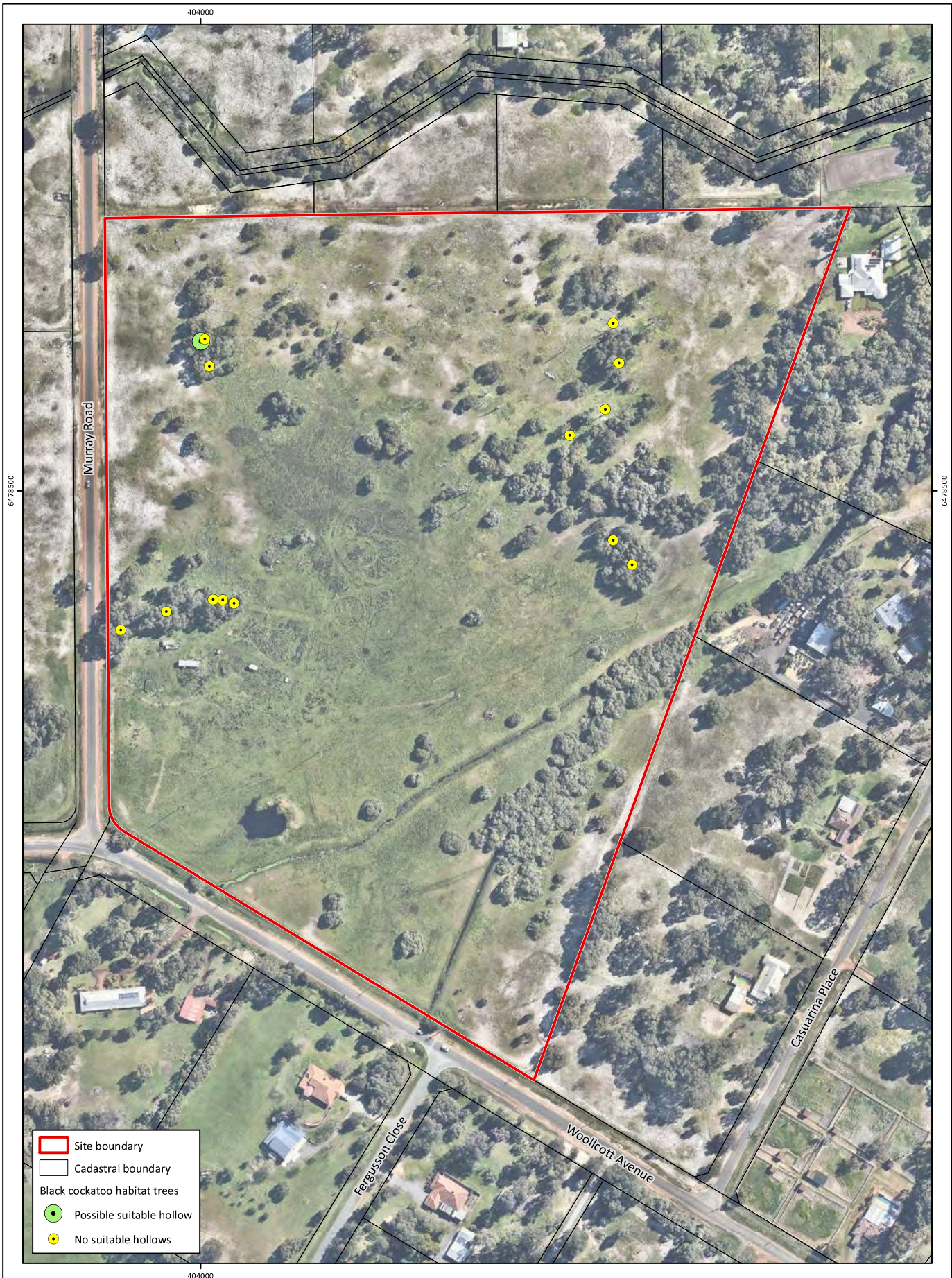
**Plan Number:** EP17-131(17)-F51  
 Drawn: KNM  
 Date: 05/11/2018  
 Checked: SKP  
 Approved: TAA  
 Date: 06/11/2018

**Scale:** 1:3,000@A4  
 GDA 1994 MGA Zone 50



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	Site boundary
	Cadastral boundary
Black cockatoo habitat trees	
	Possible suitable hollow
	No suitable hollows

**Figure 3: Black Cockatoo Habitat Trees**

**Project:** Lot 359 Murray Road Reconnaissance Flora and Fauna Survey  
 Brabham Planning Support

**Client:** Peet and the Department of Communities

**Plan Number:** EP17-131(17)-F52  
**Drawn:** KNM  
**Date:** 05/11/2018  
**Checked:** SKP  
**Approved:** TAA  
**Date:** 06/11/2018

**0 40 80**  
 Metres  
**Scale: 1:3,000@A4**  
 GDA 1994 MGA Zone 50



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