

Attachment 5- vegetation description of Bungendore Park & analysis of impact

Vegetation

Bungendore Park's vegetation is typical of the western edge of the Northern Jarrah forest, as described in previous studies (Bell & Heddle 1989, Heddle & Marchant 1983, Heddle *et al.* 1980, and Havel 1975b).

The vegetation complexes at the edge of the scarp are unique and limited in their range, forming a linear, north south strip less than 3 kilometres wide along the Darling Plateau. Vegetation is closely related to the topography and soils of the Park, as well as introduced factors such as dieback, gravel and timber extraction, and increased recreational use.

Bungendore Park is also a Perth Region plant biodiversity project Jarrah Forest reference site (JF5). These sites are areas of vegetation which existed prior to clearing to assist in improving local knowledge and guide species selection for revegetation sites (Del Marco *et al.* 2004).

Vegetation communities

The vegetation within the Park generally consists of open Jarrah-Marri forest with smaller areas of Wandoo-Marri woodland on the shallower solids of the western slopes. The Park also contains outcrops of granite which are surrounded by heath. Rock Sheoak occurs in the south west corner of the Park (J Lewis 1999 and 2007).

A botanical survey carried out in November 1993 by J Lewis identified the following five major vegetation communities. Photos of these typical vegetation communities follow (Plates 1- 5).

- Open Jarrah-Marri forest – mixed forest containing *Banksia grandis*, *Allocasuarina*, *Xanthorrhoea*, *Persoonia longifolia*.
- Wandoo-Marri woodland – with an understorey of *Grevillea*, *Dryandra*, *Acacia*, *Hakea*, *Xanthorrhoea* and *Macrozamia*.
- Upland heath – around the granite outcrops with an upperstorey of Wandoo and Marri, *Allocasuarina* and an understorey of *Acacia*, *Calothamnus*, *Conostylis*, *Acacia*, *Petrophile*, *Verticordia* and *Xanthorrhoea*.
- Herbland – on granite outcrops including *Stylidium*, *Hibbertia*, *Borya*, mosses and lichens.
- Sheoak woodland – includes *Allocasuarina*, Marri and Christmas Tree with some Jarrah as an upperstorey. The understorey is dominated by *Acacia*, *Calothamnus*, *Drosera*, *Dryandra*, *Grevillea*, *Calytrix*, *Darwinia*, *Hovea* and *Hibbertia*.

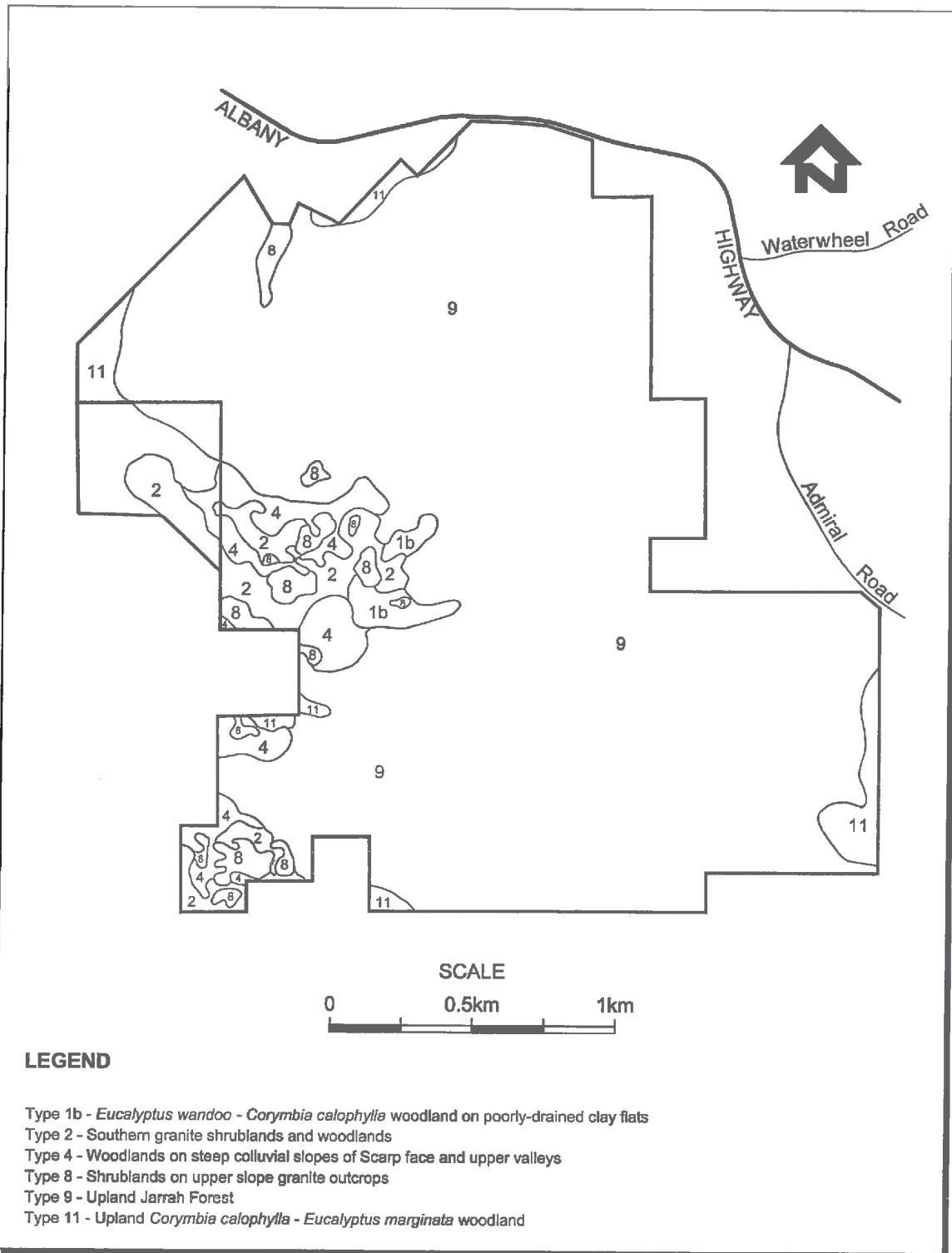
In addition, six floristically distinct units (known as floristic community types – hereafter referred to as FCT's) were identified in the Park (Markey 1997) including the following (Figure 7).

- Upland Jarrah Forest (shown as Type 9 on Figure 7)
- Upland *Corymbia calophylla* – *Eucalyptus marginata* woodland (shown as type 11 on Figure 7).
- *Eucalyptus wandoo* – *Corymbia calophylla* woodland on poorly drained clay flats (shown as Type 1b on Figure 7).
- Southern granite shrublands and woodlands (shown as Type 2 on Figure 7).

- Woodlands on steep colluvial slopes of Scarp face and upper valleys (shown as Type 4 on Figure 7)
- Shrublands on upper slope granite outcrops (shown as Type 8 on Figure 7).

Of the FCTs identified above, Type 9 or the Upland Jarrah Forest is by far the most abundant across the Park. However, each of the FCT's is represented in the Landscape Protection Area. To the least extent, FCT 11 (Upland *Corymbia calophylla* – *Eucalyptus marginata* woodland) is represented within the Landscape Protection Area.

The most diverse area of vegetation within Bungendore Park falls within the Coolliabbera Spring area, which is a winter wet depression. The most extensively represented vegetation community is the Open Jarrah-Marri forest. The four other vegetation communities are represented to a lesser extent.



LEGEND

- Type 1b - *Eucalyptus wandoo* - *Corymbia calophylla* woodland on poorly-drained clay flats
- Type 2 - Southern granite shrublands and woodlands
- Type 4 - Woodlands on steep colluvial slopes of Scarp face and upper valleys
- Type 8 - Shrublands on upper slope granite outcrops
- Type 9 - Upland Jarrah Forest
- Type 11 - Upland *Corymbia calophylla* - *Eucalyptus marginata* woodland

FIGURE 7 - FLORISTIC COMMUNITY TYPES
 ((Adapted from Markey, 1997 In Lewis, 2007)
 BUNGENDORE PARK

Flora

This section of the application has been included in Attachment 1 of the clearing permit application from as it contains sensitive information.

Attachment 6: Supporting images



Figure 1: examples of fire access tracks in which the signage/ phyto-fighters will be installed on the shoulder.



Figure 2: Example of area of more open vegetation where signage/ phytofighter footings can be installed with minimal clearing.



Figure 3: Example of signage installation location for P015. Old infrastructure is being removed but the position of new infrastructure can utilise open areas in order to minimise clearing impacts. The stake with white cap shows the proposed location of P015.