
MEMORANDUM

From	Martin Bowman	Date	3 April 2020
To	File: Allarding and Associates: Lot 156 Pinjarra Road Furnissdale		
Subject	Clearing Permit Application: Vegetation Survey Report		

1.0 Introduction

A vegetation survey of Lot 156 Pinjarra Road North Furnissdale was conducted by Bowman and Partners Environmental in support of a Clearing Permit application for the land. Clearing of the remnant vegetation within the land is required to enable development of a group housing development, in accordance with its zoning under the City of Mandurah Town Planning Scheme.

This document presents the findings of the survey and vegetation assessment.

2.0 Survey Method

The vegetation survey was conducted in several stages

- (i) Review of recent colour aerial photography of the site followed by a site view on Tuesday 28th January 2020
- (ii) Detailed review of the findings of the report entitled Environmental Assessment -Lots 181, 185, 197, 198,1186 & 1187 Ronlyn Road, 179&180 Riverside Drive North Furnissdale, ENV 2007. This report was prepared in support of the North Furnissdale Structure Plan which was endorsed by Council.
- (iii) Site survey by experienced environmental scientist on Tuesday 3rd March 2020.

3.0 Description of the Site and Findings of Survey

The site is located on the south west side of Pinjarra Road approximately 65 km south of Perth.

Figure 1 depicts the location of the site.

The site and its surrounds comprise flat sandy land associated with the ancestral flood plain and fringe of the Serpentine River.

The modern flow channel of the Serpentine River is located approximately 500 m to the west of the site and the intervening land is a combination of low-lying pastures and patches of remnant vegetation and is mapped as wetland. The site is situated outside the mapped Serpentine River flood fringe and is mapped as upland.

A detailed environmental investigation was conducted by ENV in support of the West Furnissdale Structure Plan which was endorsed by government. The following sections provide extracts from this district scale investigation as they are relevant to Lot 156, supplemented by site specific information for this land based on site inspection during February and March 2020.

3.1 Environmental Geology

3.1.1 Topography and Soils

The site is flat and lies at an elevation of approximately 4m AHD and at district scale slopes gently towards the south west.

The Environmental Geology 1:50,000 series map for the area shows the land is mapped as Pinjarra Plain landform with a surface layer of Bassendean Sand up to several meters depth but variable and underlain by the heavier sediments of the Guildford formation.

Bassendean sands are well drained, and both the types of remnant vegetation and the mapping of the site as upland (ie, not a wetland) indicate that rainfall infiltration occurs readily within the land.

3.2 Groundwater and Surface Water

(i) Surface Water

There are no surface water features within the site. Rainfall infiltration to the surficial sediments then recharge to the unconfined aquifer is the primary hydrological process within the site.

A naturally low depression exists along Riverside Drive. The structure plan reports indicate that during winter, water is present within the depressions and that road runoff from the local road system is collected by this depression, with any flow from high intensity long duration rainfall events being conveyed to the Serpentine River.

(ii) Groundwater

There is an unconfined aquifer developed in the surficial sands supported by rainfall recharge, as well as an inferred regional aquifer at depth within the Guildford formation sediments.

The structure plan reports indicate that the results of ground water monitoring undertaken by the Department of Water indicated the base average annual maximum groundwater levels (AAMGL) ranged from 1.0 m AHD to 1.5m AHD within the Furnissdale West area.

The structure plan report indicate that a bore installed by ENV during 2006 and located immediately to the south of the southern corner of Lot 156 showed a water table at 1.9 m below ground level in September 2007. Peak groundwater levels are expected around this time of the year and this suggests that the highest groundwater is at about this level.

Groundwater flow direction is inferred to be in a west to south west direction, towards the Serpentine River.

3.3 Flora and Vegetation

A comprehensive Flora and Vegetation survey was undertaken by ENV across the Structure Plan area in 2010.

The remaining vegetation was found to be a woodland of *Allocasuarina fraseriana*, *Banksia attenuata*, *Corymbia calophylla*, *Kunzea glabrescens*, *Macrozamia riedlei*, *Hibbertia hypericoides*, *Iridasceae sp.* and the weed *Briza maxima*.

A total of 46 families, 97 genera and 144 taxa were recorded within the survey area (113 native flora taxa and 31 introduced) with the survey concluding that none of the taxa found were of significance. The vast majority of these species were found on sites other than Lot 156.

It is noted that no Endangered or Vulnerable species pursuant to the EPBC Act were located during the ENV survey.

Further, no Priority Flora or Declared Rare Flora were located within the Structure Plan area during the survey.

The vegetation within Lot 156 is consistent with this description but is in degraded to completely degraded condition with effectively no native ground flora remaining, and therefore there are only a few native species remaining.

Whereas the site is approximately 80% cleared the remaining tree vegetation can be described as an open woodland of jarrah and casuarina, with some copses of peppermint and ti-tree shrubland. The canopy cover of the remnant tree vegetation has an area of 1.5 ha.

Figure 2 depicts the canopy coverage of the remnant vegetation as at March 2020, whilst figure 3 presents a vegetation map for the land.

Species recorded during site inspection during March 2020 included, *Eucalyptus marginata*, *Allocasuarina fraseriana*, *Banksia attenuata*, *Agonis flexuosa*, *Macrozamia reidleyi* and *Kunzea glabrescens*.

Given the almost complete absence of ground level vegetation, the generally degraded condition of the land, and the findings of the ENV survey in 2007, it is considered there is negligible potential for the site to presently support any flora of conservation significance.

Plates 1 to 6 present a fair representation of the condition of the vegetation as at March 2020.

3.3.1 Threatened Ecological Communities

The structure plan reports that a search of DBC's Threatened Ecological Community (TEC) database (2015) indicates there are no TEC's known to exist within the structure plan area.

3.4 Wetlands

There are no wetlands located within the site. There is a conservation category wetland located to the west of Lot 156 with its outer mapped edge located approximately 50 m beyond the far western corner of Lot 156

3.5 Fauna

A Fauna Survey was carried out as part of the Environmental Report prepared by ENV in 2007 for the entire Structure Plan area. The survey generally concluded that no Declared Rare, Endangered, Vulnerable or Priority Fauna species were located within the area.

The results of the survey however, suggest that a number of species of fauna which have conservation significance may utilise the site for feeding purposes or as part of a larger home range. These species include:

- Numbat;
- Brush-tailed Phascogale;
- Western False Pipistrelle;
- Greater Long-eared Bat;
- Muir's Corella;
- Forest Red-tailed Black Cockatoo;
- Baudin's Cockatoo; and
- Carnaby's Cockatoo.

The report stated however, that the species listed above are only likely to utilise the area for feeding purposes and more suitable habitat for these species to utilise exists in

abundance in the Pinjarra area. As such, the taxa are not expected to be specifically dependant on the habitats found within the structure plan area.

Site inspection and vegetation condition mapping during March 2020 found that there is a general absence of usable habitat for native fauna within the site. There is no ground level vegetation to provide cover for ground dwelling fauna, and a very sparse tree canopy mainly consisting of mature trees but with an absence of very old trees which could provide hollows for nesting. There are a few Banksia trees however these would provide only very limited foraging resource for Black Cockatoos and it is unlikely that the habitat is of any significant value to these species.

Site survey in March 2020 found an almost complete absence of any native fauna, with only several common bird species including magpies and red wattle birds being observed in very low numbers.

4.0 Conclusions

The vegetation at Lot 156 is in degraded to completely degraded condition with sand, pasture grasses and weeds comprising approximately half the site, and with remnant tree vegetation with effectively no native understory present forming the balance of the site.

There are no known species of native flora or fauna with any special conservation values likely to utilise the site.

As such there are no apparent grounds in relation to conservation values upon which a clearing permit could be reasonably refused.

References

Environmental Assessment -Lots 181, 185, 197, 198,1186 & 1187 Ronlyn Road, 179&180 Riverside Drive North Furnissdale, ENV 2007: Unpublished report to Greg Rowe and Associates.



B&PE
BOWMAN & PARTNERS
ENVIRONMENTAL

0 25 50 100
Scale: 1:3,000 @ A4
GDA 1994 MGA Zone 50

Job: AA-002-2020
Doc: 001
Date: 10/03/2020
Created: Environmaps
Checked: MB
E: bpe@westnet.com.au

FIGURE 1
LOCATION





LEGEND


 Site Boundary


 Cadastre

Vegetation

 *Agonis flexuosa*

 *Eucalyptus marginata* and *Allocasuarina fraseriana*

 *Kunzea glabrescens*

 Non indigenous Eucalypts

Date of photography: 23.11.2019



LOT 6209

Riverside Dr

Webster Wy

Pinjara



Plate 1 South East Corner looking west



Plate 2 South east corner looking north



Plate 3 South east corner looking south



Plate 4 South west corner looking north

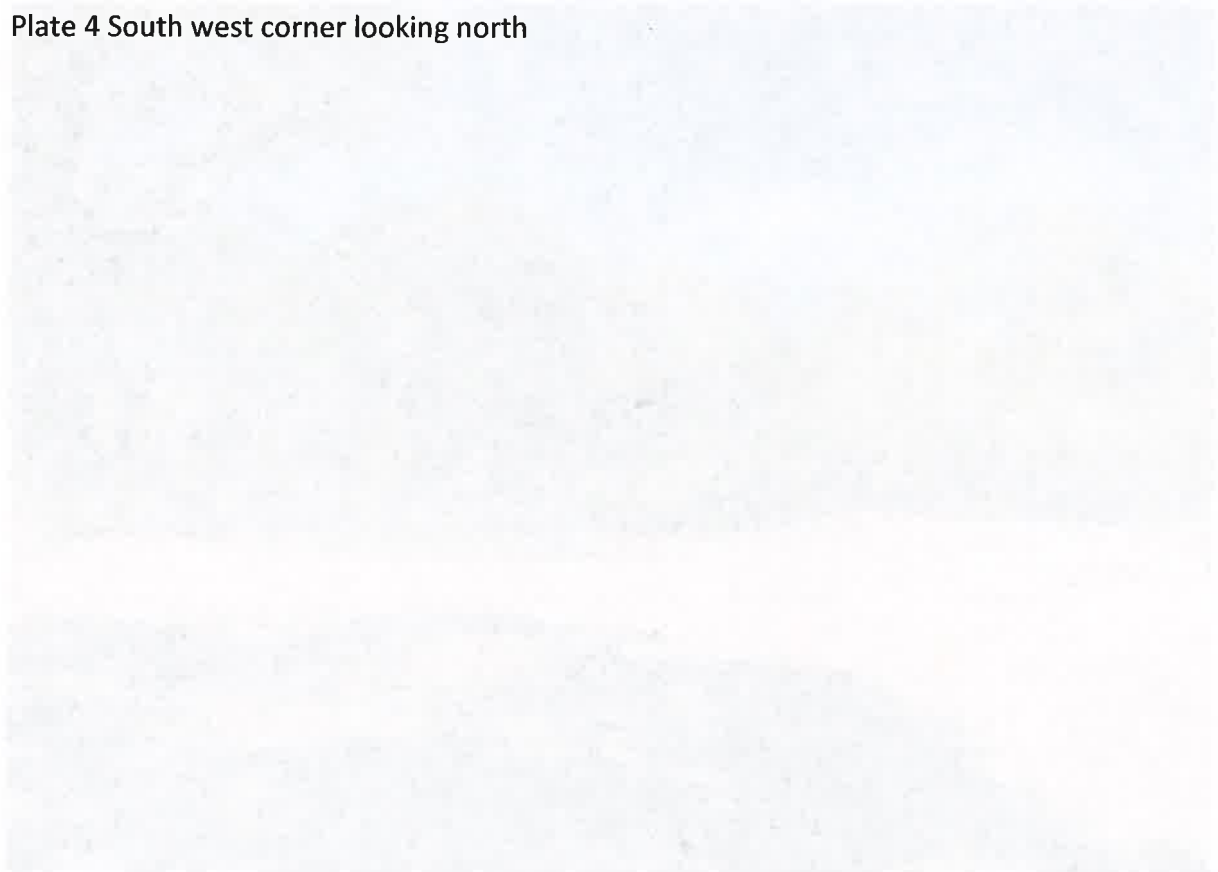




Plate 5 North east corner looking south west



Plate 6 North east corner looking west