

Name: Native Vegetation Clearing Branch Date: 28 August 2019
Company: Department of Water and Environmental Regulation Document No: 57369-124047
Address: Locked Bag 10
Joondalup DC WA 6919

Midland Road and Leeuwin Boulevard Intersection Upgrade: Clearing Permit Supporting Documentation

1. Introduction

1.1 Purpose and Scope

This document provides supporting information for a Native Vegetation Clearing Permit (NVCP) application for a "Purpose Permit" to clear native vegetation.

Dunland Property Pty Ltd (Dunland; a wholly owned subsidiary of Cedar Woods Pty Ltd) is proposing to undertake the clearing of two trees (approximately 0.02 ha; Figure 1) which are required to enable the widening of Midland road as part of the Midland road – Leeuwin Boulevard intersection upgrade. This intersection is required to enable access and egress to the proposed Bushmead residential estate. This intersection has been presented as a design element within the approved Local Structure Plan and approved Plan of Subdivision for Stages 4 to 6 (WAPC 157337) for the Bushmead development.

This document has been prepared to support the NVCP application for the area, for assessment under s51E of the *Environmental Protection Act 1986* (EP Act), and includes the following information relating to clearing impacts:

- an overview of the existing environmental conditions and values of the area
- an evaluation of the proposed clearing against the "10 clearing principles" listed under Schedule 5 of the EP Act
- environmental approvals and management requirements.

1.2 Project background and description

Dunland have commenced development of the Bushmead residential estate, within the City of Swan. The approved Local Structure Plan the for development includes the following design elements:

- Approximately 794 residential lots
- 8.83 ha of local public open space
- Internal public road network, including Leeuwin boulevard, which connects to Midland road

2. Existing environment

Environmental values within the clearing boundary are extremely limited, given the small size of the area (approximately 0.02 ha).

Elevation of the site is approximately 31 to 32 m Australian Height Datum (AHD). Soils of the area can be described as Quartz based Bassendean Sand dunes (DWER n.d.). Acid sulphate soil mapping (DWER 2019) indicates that there is a “Moderate to Low” risk of disturbing acid forming material within 3 m of the soil surface.

2.1 Vegetation and Flora

The clearing area occurs within the Forrestfield vegetation complex (Heddl et al. 1980) which can be described as vegetation ranging from open forest of *Corymbia calophylla*, *Eucalyptus wandoo* and *Eucalyptus marginata* to open forest of *Eucalyptus marginata*, *Eucalyptus calophylla*, *Allocasuarina fraseriana* and *Banksia* spp. Fringing woodland of *Eucalyptus rudis* in the gullies dissect this landform. There is approximately 12.9% of this vegetation complex remaining within the state.

At a finer scale, the site is mapped within the Bassendean 1001 vegetation system association by Beard (1990). This association is characterised by medium very sparse woodland of Jarrah, with low woodland of *Banksia* and *Casuarina*. Approximately 21.38% of the pre-European extent of this system association remains within the state.

The current extent for both the Forrestfield vegetation complex and Bassendean 1001 vegetation system association is well above the 10% threshold for constrained areas such as the Swan Coastal Plain.

A reconnaissance flora and vegetation assessment was undertaken by a qualified Strategen-JBS&G ecologist on 23rd August 2019. The area shows signs of having been degraded for a long period of time; weed invasion and historical clearing have removed any native understorey, which is now dominated exclusively by exotic grasses. Native vegetation is now represented by two mature Jarrah (*Eucalyptus marginata*) trees.

2.2 Black Cockatoo habitat assessment

A Black Cockatoo habitat assessment of both trees was conducted by a Strategen-JBS&G Ecologist on 23 August 2019 to determine the Black Cockatoo habitat values of each tree. The assessment was undertaken in accordance with the EPBC Act *Referral guidelines for three black cockatoo species* (DSEWPaC 2012).

Both trees proposed to be cleared (trees 1 and 2) are Jarrah (*Eucalyptus marginata*), which is considered a foraging species for all three species of south-western Black Cockatoo (Carnaby’s Black Cockatoo [*Calyptorhynchus latirostris*], Baudin’s Black Cockatoo [*Calyptorhynchus baudinii*], and Forest Red-tailed Black Cockatoo [*Calyptorhynchus banksia subsp. naso*]).

Trees one and two were identified to have four and three trunks respectively, with Diameters at Breast Height (DBH) ranging from 330 mm to 600 mm (Table 2.1; Figure 1).

Table 2.1: Diameter at Breast Height for trees proposed to be cleared

Tree no.	Trunk no.	DBH (mm)
Tree 1	1	500
	2	600
	3	330
	4	400
Tree 2	1	430
	2	380
	3	500

Neither tree one nor tree two contain hollows.

3. Assessment against the ten clearing principles

An assessment of the proposed clearing against the ten clearing principles, as outlined in Schedule 5 of the EP Act, is provided below in Table 3.1. The assessment has been undertaken in accordance with the guidelines set out by the Department of Water and Environmental Regulation (DWER).

Table 3.1: Assessment of the proposed clearing against the ten clearing principles

Clearing principle	Assessment	Conclusion
(a) Native vegetation should not be cleared if it comprises a high level of biological diversity	<p>A reconnaissance flora and vegetation assessment was conducted by a qualified Strategen-JBS&G ecologist on 23rd August 2019.</p> <p>The only native species present within the area are two mature Jarrah trees (<i>Eucalyptus marginata</i>), which are proposed to be cleared. The complete absence of native plant genera within the understorey reflects the extremely disturbed nature of the site.</p> <p>Based on the low level of biological diversity within the area, the proposed clearing is unlikely to be at variance with this principle.</p>	Unlikely to be at variance
(b) Native vegetation should not be cleared if it comprises the whole or part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia	<p>A field survey was undertaken by a qualified Strategen-JBS&G Ecologist on 23rd August 2019 to determine the value of each tree for breeding by Black Cockatoos.</p> <p>Despite being of sufficient size to enable potential breeding activities, neither tree has any hollows.</p> <p>Substantial Black Cockatoo foraging and breeding habitat is available in the local area; Bush Forever sites 481 and 213 each occur within less than 0.5 km of the site, and cover a combined area of approximately 280.6 ha.</p> <p>Based on the absence of potential breeding hollows and abundance of Black Cockatoo habitat within the local area, the proposed clearing is unlikely to be at variance with this principle.</p>	Unlikely to be at variance
(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora	<p>A reconnaissance flora and vegetation assessment was undertaken by a qualified Strategen-JBS&G ecologist on 23rd August 2019.</p> <p>No Threatened or Priority Flora species listed under the Section 178 of the EPBC Act, or pursuant to the BC Act were recorded within the survey area.</p> <p>Based on the absence of rare flora within the area, the proposed clearing is unlikely to be at variance with this principle.</p>	Unlikely to be at variance
(d) Native vegetation should not be cleared if it comprises the whole or part of, or is necessary for the maintenance of a threatened ecological community	<p>A reconnaissance flora and vegetation assessment was undertaken by a qualified Strategen-JBS&G ecologist on 23rd August 2019.</p> <p>Due to the presence of only one native species (Jarrah), the small area of vegetation (0.02 ha), and the separation distance from other stands of native vegetation, it is considered that the two trees are not representative of any known Threatened Ecological Community or Priority Ecological</p>	Unlikely to be at variance

Clearing principle	Assessment	Conclusion
	Community. Therefore, the proposed clearing is not at variance with this principle.	
(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared	<p>The clearing area is located within the “Bassendean 1001” vegetation association (Beard 1990) and “Forrestfield” vegetation complex (Heddle et al 1980). There is approximately 21.38% and 12.9% remaining for each respectively within the state, which is above the 10 percent retention target for constrained areas such as the Swan Coastal Plain.</p> <p>Based on the already extensively cleared nature and absence of remnant vegetation within the surrounding land, the proposed clearing is unlikely to be at variance with this principle.</p>	Unlikely to be at variance
(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland	<p>The nearest watercourse (a creek running through Bush Forever Site 213) is located approximately 0.7 km east of the proposed clearing area.</p> <p>Given the separation distance to the watercourse and the small extent of the proposed clearing and separation distance to the nearest watercourse or wetland (0.7 km), it is unlikely that the proposed clearing is at variance with this principle.</p>	Unlikely to be at variance
(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation	<p>Based on the small scale of clearing required, the proposed clearing is not expected to increase salinity, waterlogging, nutrient export, water or wind erosion, or soil acidity.</p> <p>There is a moderate to low risk of disturbing acid sulphate soils within 3 m of the soil surface, however it is unlikely that the small scale of the proposed clearing will impact soil acidity. Should dewatering or excavation volumes be sufficient to trigger requirements for further acid sulphate soil testing, the appropriate testing and necessary management measures will be implemented.</p>	Unlikely to be at variance
(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation areas	<p>Bush Forever site 213 occurs within 22 m of the proposed clearing opposite Midland road, and is the closest conservation area to the site. All impacts to this area will be prevented through the clear demarcation of the clearing area, and dust stabilisation controls.</p> <p>Given the small scale of the proposed clearing (approximately 0.02 ha), it is not expected that the nearby conservation area will be impacted and therefore the proposed clearing is unlikely to be considered at variance with this principle.</p>	Unlikely to be at variance
(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water	Based on the small scale of clearing required, the proposed clearing is not expected to result in sediment or nutrient impacts to wetlands, soil acidity or increased salinity. The project area is not located within a Priority Drinking Water Source Area.	Unlikely to be at variance
(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding.	Based on the small scale of clearing required (approximately 0.02 ha), it is not expected that hydrological processes will be substantially affected to the extent that it is likely to cause or exacerbate the incidence of flooding.	Unlikely to be at variance

4. Environmental management

Considering the close proximity of tree two to tree three (Figure 1), there is a risk of impacting the trees Structural Root Zone and therefore viability during clearing (see Australian Standard 4970-2009). Therefore, the clearing of tree 2 is proposed to be undertaken by cutting the stump down to just below existing surface level rather than full removal, to avoid impacting tree three's root zone.

The proposed clearing will also be undertaken in a manner that effectively manages dust and hygiene, and which will avoid impacts to surrounding vegetation and fauna. Management actions will include:

- Ensure a wildlife spotter/handler is on call during clearing works
- Stabilise cleared areas with methods such as wetting, mulching, or other sealing material
- Ensure vehicles and machinery are clean prior to clearing
- Clearly marking the trees required to be cleared

5. Conclusion

The proposed clearing will result in the removal of two trees, covering an area of approximately 0.02 ha. An assessment of the ten clearing principles listed in Schedule 5 of the EP Act indicated that the proposed clearing is unlikely to be at variance with all principles.

6. References

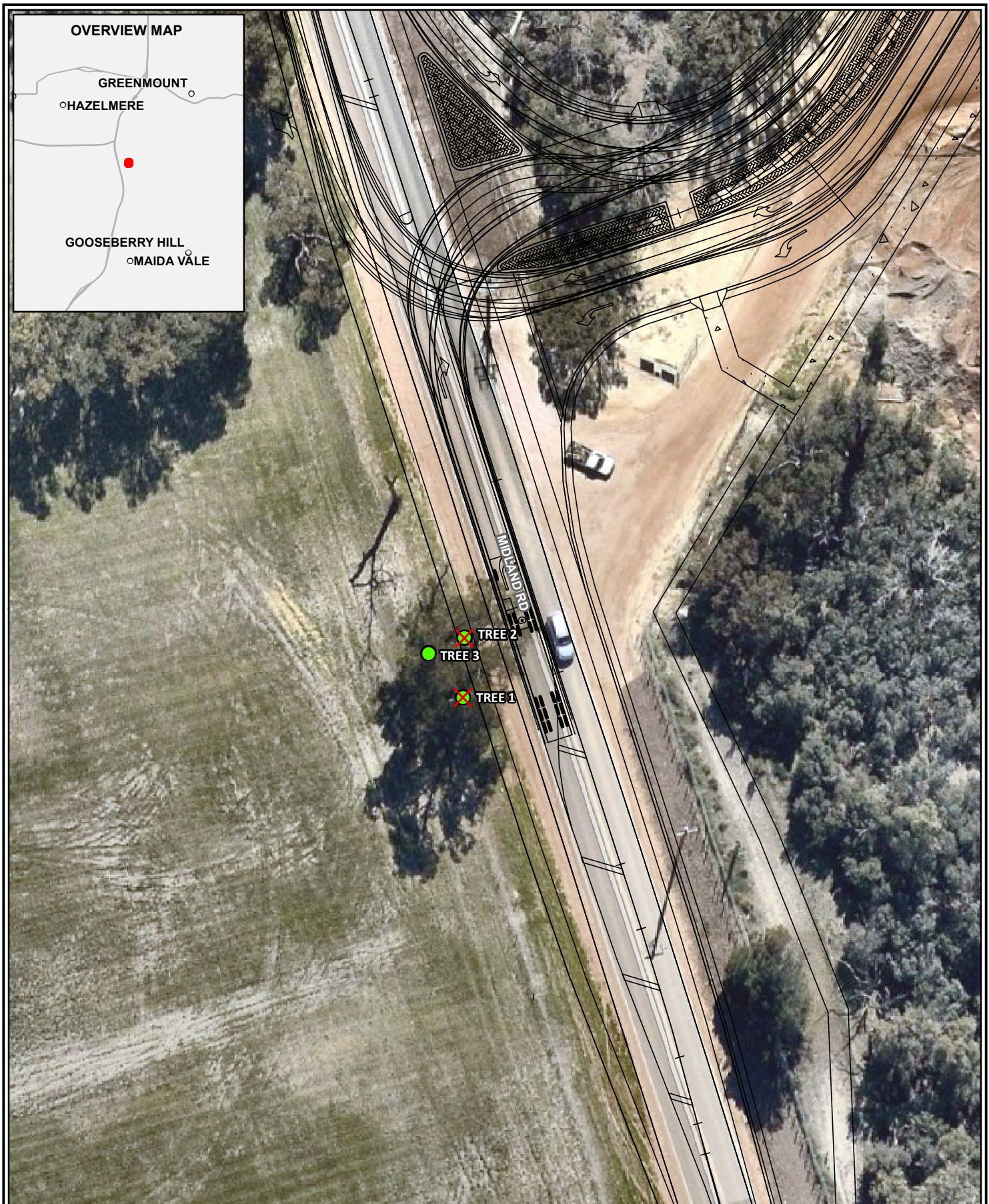
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Hedde EM, Loneragan, OW & Havel, JJ (1980). Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.



Legend: <div><div><div></div></div><div>Trees proposed to be cleared</div></div> <div><div></div><div>Tree to be retained</div></div> <div><div></div><div>Site layout</div></div> <div><div></div><div>Roads</div></div>	Scale 1:500 at A4 <div><div><div>0510</div><div>metres</div></div></div>		Midland Road and Leeuwin Boulevard Intersection Upgrade	
	Coord. Sys. GDA 1994 Perth Coastal Grid 1994 <div><div></div></div>			PROPOSED CLEARING
	Job No: 57369			
	Client: Cedar Woods		FIGURE 1	
	Version: A	Date: 26-Aug-2019		
	Drawn By: cthatcher	Checked By: WO	<div><div><div></div></div><div>strategen</div><div>JBS&G</div></div>	