

Name:	Native Vegetation Clearing Branch	Date:	16 July 2021
Company:	Department of Water and Environmental Regulation	Job/Doc. No.:	60591/139,212
Email:	info@dwer.wa.gov.au	Inquiries:	Darren Walsh

Piara Waters Residential Development Bulk Earthworks: Clearing Permit Supporting Documentation

1. Introduction

1.1 Purpose and scope

This document provides supporting documentation for a Native Vegetation Clearing Permit (NVCP) application for an “Area Permit” to clear native vegetation.

Stockland Developments Pty Ltd (Stockland) are proposing to undertake the clearing of 0.05 ha of native vegetation (Figure 1) to facilitate the undertaking of bulk earthworks for the construction of sewerage and water services corridor for which a Development Application will be submitted. The sewerage and water services corridor form a component of the Piara Waters residential development for which a Local Structure Plan has been prepared.

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 ‘Ten Clearing Principles’ listed under Schedule 5 of the EP Act, and
- Environmental approvals and management requirements.

1.2 Project background and description

Stockland are proposing to develop nine lots for residential purposes within the City of Armadale. A Local Structure Plan has been prepared for the area which includes the following design elements:

- Residential lots,
- Public open space, and
- Internal public road network connecting to Warton Road.



Legend

- Clearing permit application area
- Native vegetation to be retained
- Vegetation type
 - Melaleuca preissiana* over weeds
 - Kunzea glabrescens* thicket with a *Calothamnus* sp. and a conifer
- Proposed development
- Main road



Job No: 60591

Client: Stockland

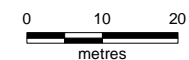
Version: A

Date 15/07/2021

Drawn By: hsullivan

Checked By: CT

Scale 1:1,000 at A4



Coor. Sys. GDA2020 MGA Zone 50

**Warton Rd and Armadale Rd
Piara Waters, WA**

PROPOSED CLEARING

FIGURE 1.1

2. Existing environment

2.1 Physical environment

Environmental values within the clearing boundary are extremely limited, given the small size of the area (approximately 0.05 ha).

Elevation within the site is approximately 28 m Australian Height Datum (mAHD). Soils within the area can be described as Bassendean B1 Phase characterised by low to very low relief dunes, undulating sandplain and discrete sand rises with deep bleached grey sands sometimes with a pale-yellow B horizon or a weak iron-organic hardpan at depths generally greater than 2 m (DPIRD 2017). Acid sulfate soil mapping (DWER 2017) indicates that there is a 'moderate to low' risk of disturbing acid-forming material within 3 m of the soil surface.

2.2 Vegetation and flora

The clearing area occurs within the Bassendean 1001 vegetation system association (Beard 1990). This association can be described as a medium very sparse woodland of Jarrah, with low woodland of *Banksia* and *Casuarina* (Beard 1990). Approximately 22.05% of this association remains at the state, IBRA region, and Local Government Authority (LGA) extents (GoWA 2019a).

The clearing area is mapped within the Southern River Complex (Heddle et al. 1980). This complex can be described as an open woodland of *Corymbia calophylla* (Marri), *Eucalyptus marginata* (Jarrah), *Banksia* species with fringing woodland of *Eucalyptus rudis* (Flooded Gum), *Melaleuca raphiophylla* (Swamp Paperbark) along creek beds. There is approximately 18.43% of this complex remaining at the state and IBRA region extent, and 25.01% at the LGA extents (GoWA 2019b).

Neither the Bassendean 1001 vegetation system association nor the Southern River vegetation complex are considered poorly represented, given the proportion of the pre-European extent remaining is well above the 10% threshold that applies to constrained areas of the Swan Coastal Plain.

The application area was subject to a flora and vegetation assessment in 2011 undertaken by Bennett Environmental Consulting. This survey reported the vegetation within the application area as 'planted or non-native'. This classification was carried through to a subsequent flora and vegetation assessment by Focused Vision Consulting (2021) which did not re-assess the vegetation given the previous classification as non-native. To confirm the classification, a reconnaissance flora and vegetation assessment was undertaken by a qualified Strategen-JBS&G ecologist on the 29th of June 2021. This found that the area shows significant evidence of degradation over a long period of time. Weed invasion and historical clearing have removed any native understorey within both patches. The patches were classified by Strategen-JBS&G as:

- Northern patch: *Melaleuca preissiana* over weeds, and
- Southern patch: small thicket of *Kunzea glabrescens* with a *Calothamnus* sp. and a conifer.

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 in Table xx. The assessment has been undertaken in accordance with the guidelines devised by the Department of Water and Environmental Regulation (DWER 2014).

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 survey was undertaken by an experienced Strategen-JBS&G ecologist on the 29th June 2021.</p> <p>The only native species present within the area are <i>Melaleuca preissiana</i>, <i>Kunzea glabrescens</i> and a <i>Calothamnus</i> sp. both patches lacked native plant genera within the understorey, reflecting 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 a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.	<p>A fauna assessment was undertaken by Harewood in 2019, during which no fauna habitat values were reported within the area. This was confirmed by the reconnaissance survey completed by Strategen-JBS&G (2021).</p> <p>The very small patch size, highly degraded condition, and absence of native understorey in each patch in conjunction with the surrounding land uses (residential properties, storage sheds, and rural land use) mean the vegetation is unlikely to provide habitat for fauna.</p> <p>Based on the above, 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 survey was undertaken by an experienced Strategen-JBS&G ecologist on the 29th June 2021.</p> <p>No Threatened or Priority Flora species listed under Section 17 of the EPBC Act, or pursuant to the BC Act, were recorded within the area. Given the highly degraded nature of the vegetation, and lack of native understorey, the vegetation is considered to lack suitable habitat for rare flora.</p> <p>Based on the absence of rare flora or suitable habitat 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 a part of, or is necessary for the maintenance of a threatened ecological community.	<p>A reconnaissance survey was undertaken by an experienced Strategen-JBS&G ecologist on the 29th June 2021.</p> <p>Due to the presence of only three native species (<i>Melaleuca preissiana</i>, <i>Kunzea glabrescens</i> and <i>Calothamnus</i> sp.), the small area of vegetation (0.05 ha), and the separation distance from other stands of native vegetation, the vegetation is not representative to any known Threatened or Priority Ecological Community.</p>	Unlikely to be at variance.

	Clearing principle	Assessment	Conclusion
		Based on the above, 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 system association (Beard 1990) and Southern River vegetation complex (Heddl et al. 1980).</p> <p>There is approximately 22.05% of the pre-European extent of the Bassendean 1001 vegetation system association remaining within the state, Swan Coastal Plain (SCP) IBRA region, and City of Armadale LGA (GoWA 2019a).</p> <p>There is approximately 18.43% of the pre-European extent of the Southern River complex remaining at within the state and SCP IBRA region, and 25.01% within the City of Armadale LGA (GoWA 2019b).</p> <p>Both the Bassendean 1001 vegetation association and Southern River complex have a current extent well above the 10% retention target for constrained areas within the SCP.</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 (minor tributary) to the clearing area is located 3.6 km southeast of the clearing area.</p> <p>Under 0.02 ha of the vegetation proposed to be cleared (<i>Melaleuca preissiana</i> over weeds) is within a Multiple Use geomorphic wetland (UFI 1631) as mapped by DBCA (2018).</p> <p>Multiple Use wetlands are considered to have few remaining important attributes and functions, with the use, development, and management to be considered in the context of ecologically sustainable development and best management practice catchment planning (DBCA 2017).</p> <p>Given that UFI 1631 has been highly altered through historic clearing, construction of buildings and driveways, and planting of non-native vegetation, the proposed clearing of 0.02 ha of highly degraded vegetation is not considered to substantially alter the wetland. Therefore, the proposed clearing is unlikely to be 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.	Based on the small scale of clearing required, and that the surrounding area has been heavily modified for rural land uses, the proposed clearing is not expected to increase salinity, waterlogging, nutrient export, water erosion, wind erosion, or soil acidity.	Unlikely to be at variance.

	Clearing principle	Assessment	Conclusion
		<p>There is a 'moderate to low' risk of disturbing ASS within 3 m of the natural soil surface, however it is unlikely that the small scale of proposed clearing will impact soil acidity. ASS testing has been scheduled to identify and, if necessary, manage any risk of ASS.</p> <p>Based on the above, the proposed clearing is unlikely to be at variance with this principle.</p>	
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 area.	<p>The nearest conservation area is Bush Forever site 390 which is located approximately 45 m west of the clearing area to the opposite side of Warton Road. Bush Forever site 390 will not be impacted by the proposed clearing through the clear demarcation of the clearing area as well as implementation of dust stabilisation controls.</p> <p>Given site 390 is already separated from the proposed clearing area by Warton Road, and the small scale of clearing, no impacts to nearby conservation areas are anticipated. Therefore, the proposed clearing is unlikely to be 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.	<p>The small scale of required clearing (0.05 ha) is not expected to cause sediment or nutrient impacts to wetlands, soil acidity or increased salinity. ASS testing has been scheduled to identify and, if necessary, manage any risk of ASS.</p> <p>Given the above, the proposed clearing is unlikely to be at variance with this principle.</p>	Unlikely to be at variance.
j	Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.	<p>The small scale of required clearing (0.05 ha) is not expected to alter hydrological processes to the extent that it is likely to cause or exacerbate the incidence of flooding. Therefore, the proposed clearing is unlikely to be at variance with this principle.</p>	Unlikely to be at variance.

4. Environmental management

Given the area of proposed clearing is within a broader area of already cleared land and planted vegetation, incidental impacts to the surrounding environment are not expected. There is a patch of remnant native vegetation between the two proposed to be cleared, which will be retained inside an area of Public Open Space within the residential development. For this reason, the proposed clearing will be undertaken in a manner that effectively manages dust and hygiene, and that will avoid impacts to retained vegetation and fauna that may be within the area. 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, and
- Clearly marking the vegetation required to be cleared.

5. Conclusion

The proposed clearing will result in the removal of 0.05 ha of native vegetation in highly degraded condition. An assessment of the ten clearing principles listed in Schedule 5 of the EP Act has indicated that the proposed clearing is unlikely to be at variance with all principles.

6. References

- Beard, J. S. (1990). *Plant Life of Western Australia*. Kangaroo Press, Kenthurst, New South Wales.
- Department of Biodiversity, Conservation and Attractions. (2017). A methodology for the evaluation of wetlands on the Swan Coastal Plain, Western Australia. December, 2017.
- Department of Biodiversity, Conservation and Attractions. (2018). Geomorphic Wetlands, Swan Coastal Plain (DBCA-019) shapefile. Available from:
https://services.slip.wa.gov.au/public/rest/services/SLIP_Public_Services/Environment/MapServer/10.
- Department of Primary Industries and Regional Development. (2017). Soil Landscape Mapping - Best Available (DPIRD-027) shapefile. Available from:
https://services.slip.wa.gov.au/public/rest/services/SLIP_Public_Services/Soil_Landscape/MapServer/10.
- Department of Water and Environmental Regulation. (2014). A guide to the assessment of applications to clear native vegetation under Part V Division 2 of the Environmental Protection Act 1986. December, 2014.
- Department of Water and Environmental Regulation. (2017). Acid Sulfate Soil Risk Map, Swan Coastal Plain (DWER-055) shapefile. Available from:
https://services.slip.wa.gov.au/public/rest/services/SLIP_Public_Services/Soil_Risk_Map/MapServer/1.
- Focused Vision Consulting. (2021). Flora and Vegetation Assessment West Piara Southern Development Precinct, Piara Waters. Unpublished report prepared for CoTerra Environment, on behalf of M Land Pty Ltd. January, 2021.
- Government of Western Australia. (2019a). 2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019. WA Department of Biodiversity, Conservation and Attractions, Perth. Available from:
<https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics>
- Government of Western Australia. (2019b). Government of Western Australia. (2019). 2018 South West Vegetation Complex Statistics. Current as of March 2019. WA Department of Biodiversity, Conservation and Attractions, Perth. Available from:
<https://catalogue.data.wa.gov.au/dataset/dbca>.
- Harewood, G. (2018). Fauna Assessment West Piara Waters. Unpublished report prepared for CoTerra. June, 2018.
- Heddl, E. M., Loneragan, O. W., & Havel, J. J. (1980). Vegetation Complexes of the Darling Scarp, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling Scarp, Western Australia.