

CLEARING APPLICATION - SUPPORTING DOCUMENTATION



Lot 12378 on Deposited Plan
206991, Boyup Brook-Cranbrook
Road, Frankland River

March 2020

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1 INTRODUCTION

1.1 Background

Mr Michael Hair (the Applicant) is proposing to clear 1.75 hectares (ha) of remnant vegetation within Lot 12378 on Deposited Plan 206991, Boyup Brook-Cranbrook Road, Frankland River (refer to **Appendix A**) (herein referred to as the subject site) (refer to **Figure 1** and **Figure 2**). The subject site is located in the municipality of the Shire of Cranbrook, approximately 26 km north-west of the Frankland township.

The Applicant is seeking to commence clearing when suitable within the next five years. The vegetation clearing is required to enable cropping of the entirety of the paddock. Vegetation clearing will be undertaken with a front-end loader or bulldozer.

The property is used for a variety of agricultural land uses including cropping, livestock grazing and blue gum plantations. Currently the vegetation within the subject site restricts the cropping area within the paddock as the large agricultural machinery is unable to access this area.

1.2 Scope and Purpose

This document has been prepared to support an application for a Clearing Permit (Area Permit) pursuant to Section 51E of the *Environmental Protection Act 1986* (EP Act). This document provides information regarding the current environmental condition of the subject site, including the predicted impacts of clearing and proposed management actions to mitigate predicted impacts. It also demonstrates compliance with the 10 clearing principles and other relevant legislation and policy.

1.3 Planning Context

The subject site is within an area zoned Rural pursuant to the *Shire of Cranbrook Scheme No. 4*.

2 EXISTING ENVIRONMENT

2.1 Geology, Landform and Soils

The subject site is situated within the Warren-Denmark Southland Landscape Zone which consists of rises in a series of broad benches from the Southern Ocean to the Blackwood Valley. Soils in the area consist of deeply weathered granite and gneiss overlain by Tertiary and Quaternary sediments to the south (Raper, *et. al.* 2014).

The Department of Primary Industries and Regional Development's (DPIRD's) Natural Resource Information database (NRInfo) maps the subject site as occurring within the Frankland Hills System consisting of '*Undulating low hills and rises in the north east of the Warren-Denmark Southland. Loamy gravels, duplex sandy gravels, deep sandy gravels and grey deep sandy duplexes are dominant.*'

The soil unit phases associated with this system that occur within the subject site include:

- Frankland Hills 1 Subsystem - Lateritic crests, upper slopes and isolated low gravelly rises with widespread lateritic duricrust. Loamy and duplex sandy gravels are common; and
- Frankland Hills 2 Subsystem - Loamy gravels, Duplex sandy gravels and Deep sandy gravels are widespread with Grey deep sandy duplex and loamy earth soils.

2.2 Hydrology

2.2.1 Surface Water

The subject site is located in the Nornalup Inlet-Frankland River catchment. No surface water features traverse the subject site. A man-made dam, located approximately 115 m south of the subject site, is the closest surface water feature.

2.2.2 Groundwater

The subject site is located within the unproclaimed Karri Groundwater Area. Groundwater in this locality occurs predominately in the permeable zones of weathered rock, which are between 5 m and 30 m below ground level, and above bedrock. Groundwater flow within the weathered rock aquifer is either partly or completely confined by an impermeable clay layer and is characterised by local flow systems. The aquifer recharges through direct rainfall infiltration and discharges to watercourses, wetlands and through evapotranspiration (De Silva 2004).

2.3 Vegetation and Flora

2.3.1 Regional Vegetation

The original vegetation before clearing for agriculture was mapped by Beard (1979) and falls within the Darling Botanical District. The subject site comprises the Jingalup vegetation system described as, jarrah-marri forest on the ironstone hills, and jarrah, marri and wandoo on the gravel slopes. River gum (*E. rudis*) and blackbutt (*E. patens*) woodland occurs on sandy alluvial soils along the river courses.

Regional vegetation has been mapped by Mattiske and Havel (1998) of the South West Region, based on major geomorphic units. One vegetation complex, Frankland Hills FH2, has been mapped as occurring within the subject site and is described as follows, "*woodland of Eucalyptus wandoo and Corymbia calophylla with some Eucalyptus marginata subsp. marginata* (Havel & Mattiske 2002)".

The subject site is also mapped as containing Beard Vegetation Association 3, described as *Medium forest; jarrah-marri*.

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001). There is approximately 40% of the principal vegetation type remaining (Mattiske FH2).

2.3.2 Existing Vegetation

Vegetation within the subject site is unfenced and has been subjected to a history of livestock grazing and cropping. This has resulted in the complete absence of mid and understorey vegetation, with remaining vegetation being restricted to marri (*Corymbia calophylla*) and jarrah (*Eucalyptus marginata*) trees. There are numerous tree deaths within the subject site and many trees are exhibiting signs of stress (refer to **Plates 1 - 5**). This can be attributed to damage to the trees from the livestock (i.e. tree rubbing and erosion/compaction of soil).

The vegetation within the subject site is surrounded by cleared paddocks to the east, south and west, and a juvenile blue gum (*Eucalyptus globulus*) plantation to the north.

Given the limited species diversity, absence of structure and generally poor tree health, the vegetation within the subject site is considered to be in a Completely Degraded condition (Keighery 1994).

2.3.3 Vegetation of Conservation Significance

In consideration of the Completely Degraded (Keighery 1994) condition of the vegetation, ongoing livestock grazing and the lack of direct vegetation corridors between any local declared rare flora (DRF) and Priority Flora populations, it is considered very unlikely for flora or ecological communities of conservation significance to occur within the subject site.

2.4 Fauna

The subject site may comprise suitable habitat for Carnaby's cockatoo (*Calyptorhynchus latirostris*), Baudin's cockatoo (*Calyptorhynchus baudinii*), and forest red-tailed black cockatoo (*Calyptorhynchus banksii* subsp. *naso*) (collectively known as black cockatoos). The subject site is located approximately 350m south of a buffered 'Carnabys Cockatoo Confirmed Breeding Area' (DBCA 2019). There are no known or unconfirmed roost sites located in proximity to the subject site.

Black cockatoos nest in hollows in live or dead trees of karri, marri, wandoo, tuart, salmon gum, jarrah, flooded gum, York gum, powder bark, bullich and blackbutt (Commonwealth of Australia 2012). The Applicant has not observed any tree hollows within the subject site. Considering this and that there are no records of confirmed breeding areas located in proximity to the subject site, it is not likely that the subject site is used by black cockatoos for breeding purposes.

Black cockatoos have a preference for foraging habitat that includes jarrah and marri woodlands, and forest heathland and woodland dominated by proteaceous plant species such as Banksia sp., Hakea sp. and Grevillea sp. (Commonwealth of Australia, 2012). Noting the absence of proteaceous plant species, the subject site is not likely to comprise significant foraging habitat for this species.

Due to the absence of mid, lower and understorey vegetation the habitat value of the area is limited. In addition, the continued impact of livestock on the subject site is likely to significantly compromise the long term survival of the remaining vegetation.

3 ASSESSMENT AGAINST THE TEN CLEARING PRINCIPLES

Any clearing of native vegetation requires a permit in accordance with Part V of the EP Act, except where an exception applies under Schedule 6 of the Act or is prescribed by regulation in the *Environmental Protection (Clearing Native Vegetation) Regulations 2004*. The proposed clearing footprint is not located within an Environmentally Sensitive Area.

The clearing of native vegetation (approximately 1.75 ha) for the purpose of cropping will require an approved clearing permit. Clearing applications are assessed against the Ten Clearing Principles outlined in Schedule 5 of the EP Act. These principles aim to ensure that all potential impacts resulting from the removal of native vegetation can be assessed in an integrated manner.

An examination of the Ten Clearing Principles applied against a desktop investigation is provided below in **Table 1**. This assessment demonstrates that the proposed removal of 1.75 ha of native vegetation is not at variance with the any of the clearing principles.

Table 1. Assessment Against Ten Clearing Principles.

Principle	Assessment	Conclusion
Native vegetation should not be cleared if it comprises a high level of biological diversity.	The biodiversity value of the subject site is limited, as the vegetation is Completely Degraded (Keighery 1994). The area proposed to be cleared consists of parkland cleared Eucalyptus species with no native ground cover, under story or mid story species. The subject site is currently used for pasture/grazing and cropping. It is unlikely that the area proposed to be cleared provides a high level of biological diversity due to the minimal species diversity and lack of vegetation structure.	Proposal is not likely to be at variance to this Principle
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.	The vegetation within the subject site is unlikely to provide suitable breeding habitat for black cockatoos. In addition, with the absence of proteaceous plant species, the vegetation does not provide preferential foraging species. Due to the absence of mid, lower and understorey vegetation, the habitat value of the subject site is limited. In addition, the continued impact of livestock on the proposed area is likely to significantly compromise the long term survival of the remaining vegetation.	Proposal is not likely to be at variance to this Principle
Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.	Due to the Completely Degraded (Keighery 1994) condition of the vegetation and the lack of direct vegetation corridors between any local DRF, Priority Flora populations or TECs and the subject site, it is unlikely the proposed clearing would be at variance to this Principle.	Proposal is not likely to be at variance to this Principle
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.		Proposal is not likely to be at variance to this Principle

Principle	Assessment	Conclusion
Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.	The National Objective and Targets for Biodiversity Conservation 2001-2005 (AGPS 2001) recognises that the retention of 30% or more of the pre-clearing extent of each ecological community is the target. There is 40% of the principal vegetation type remaining (Mattiske FH2).	Proposal is not likely to be at variance to this Principle
Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.	No surface water features traverse the subject site. A man-made dam, located approximately 115 m south of the subject site, is the closest surface water feature. The vegetation subject to clearing is not connected to any riparian zones.	Proposal is not likely to be at variance to this Principle
Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.	Due to the small clearing footprint over a large cleared area, and the Completely Degraded (Keighery 1994) condition of the area, it is unlikely the proposal would cause appreciable land degradation.	Proposal is not likely to be at variance to this Principle
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.	The Cootayerup Conservation Reserve is 4.8 km north-east of the subject site and it is the closest conservation area. There is no direct vegetation link between the subject site and the conservation reserve.	Proposal is not likely to be at variance to this Principle
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.	The area proposed to be cleared is located within the Nornalup Inlet - Frankland River Catchment Area. It is not within a Public Drinking Water Source Area (PDWSA). The small scale clearing proposed is unlikely to significantly degrade water quality within the area.	Proposal is not likely to be at variance to this Principle
Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding.	There are no watercourses or wetlands present within the application area. Noting the absence of watercourses and wetlands within the application area, it is unlikely that the proposed clearing will cause, or exacerbate, the incidence or intensity of flooding	Proposal is not likely to be at variance to this Principle

4 AVOIDANCE AND MITIGATION

In order to mitigate potential impacts associated with the proposed clearing activities, the following site-specific management activities will be implemented.

4.1 Avoidance Measures

The Applicant was previously considering including an additional 1.6 ha area of remnant vegetation immediately to the north of the subject site within the clearing application. However, upon reconsideration of the cropping requirements, the Applicant has elected to avoid and retain this vegetation. Accordingly, the proponent has implemented avoidance measures which has resulted in the retention of 1.6 ha of remnant vegetation.

Clearing of the remaining 1.75 ha, which constitutes the subject site, is required because it is currently impacting cropping yields. It is considered that no other reasonable and practicable avoidance measures can be implemented within the clearing footprint.

4.2 Mitigation Measures

To ensure that the potential impacts associated with the vegetation clearing are managed appropriately within the subject site during construction, mitigation and management measures will be implemented. These measures are discussed below in **Table 2**.

Table 2. Vegetation clearing and construction management plan.

Vegetation Clearing	
Responsibility	
<ul style="list-style-type: none"> Proponent. Contractors. 	
Objectives	
<ul style="list-style-type: none"> To manage clearing and minimise disturbance to flora as much as possible. Minimise soil erosion and sedimentation. 	
Potential Impacts	
<ul style="list-style-type: none"> Clearing native vegetation. Inadvertent additional clearing of vegetation. Impacts on fauna species. Weed and disease invasion. 	
Management Strategies	Timing
<ul style="list-style-type: none"> Contractors will be inducted on the clearing controls for this project. Clearing crew will be provided with a specific pre-start on extent of clearing and required management measures in proximity to sensitive areas and identified areas of native vegetation. During clearing activities vegetation shall be cleared separately and stockpiled adjacent to the cleared area. Vegetation clearing should avoid damage to adjacent existing vegetation. All construction plant and vehicles entering the construction compound and construction work areas to be free of soil, plant and organic material. 	<ul style="list-style-type: none"> Prior to clearing. Prior to clearing. During clearing During clearing.

Performance Indicators

- No unauthorised clearing is undertaken.
- No fauna is directly impacted during clearing.

Monitoring

- Daily checks to ensure that clearing is consistent with the approved clearing boundaries.
- Daily checks to ensure that no fauna have been impacted.

Reporting

- A review of the performance indicators will be undertaken upon completion of clearing to determine the success of the vegetation clearing and construction management measures. Where non-compliances are identified the DWER will be notified accordingly.

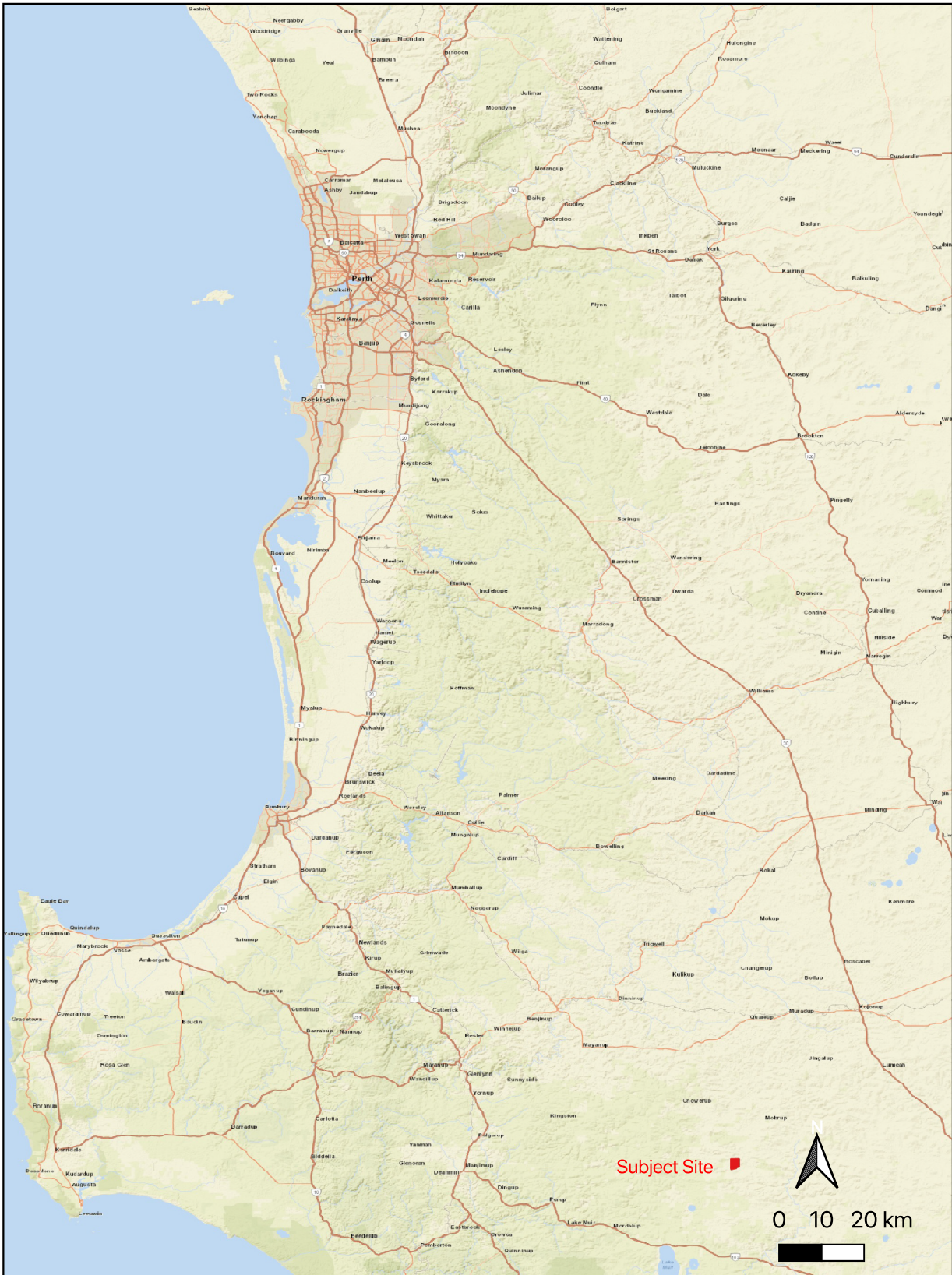
4.3 Residual Impacts

Following an assessment of the proposal against the Ten Clearing Principles, no significant impacts have been identified. Accordingly, there are not expected to be any residual impacts associated with the proposal that require offsetting and therefore, no offsets are proposed.

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FIGURES



PROJECT Lot 12378 Boyup Brook – Cranbrook Road

Project Number 2011
 Drawing Number 1
 Revision A

DRAWING TITLE Figure 1: Site Extent

Designed PN
 Drawn PN
 Checked Approved

CLIENT Michael Hair



Date 19/03/2020
 Local Authority Shire of Cranbrook

Sheet 1 of 1

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Legend

- Lot boundary
- Clearing Boundary

PROJECT Lot 12378 Boyup Brook – Cranbrook Rd, Frankland River

DRAWING TITLE Figure 2: Clearing Area

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Project Number	2011	Designed	PN
Drawing Number	Figure 2	Drawn	PN
Revision	A	Checked	
Date	19/02/2020	Approved	Local Authority
Sheet 1 of 1			Shire of Cranbrook

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PLATES



Plate 1: View of vegetation looking south.



Plate 2: View of vegetation looking north, with property boundary (fence line) to the east.



Plate 3: View of vegetation looking west.



Plate 4: View of vegetation looking east.



Plate 5: View of vegetation looking north with blue gum plantation in the background.