



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 5036/1
File Number: 2012/003030-1
Duration of Permit: From 12 October 2013 to 12 October 2023

PERMIT HOLDER

John Anthony Giumelli

LAND ON WHICH CLEARING IS TO BE DONE

Lot 305 on Deposited Plan 63847, Henty

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 2.8 hectares of native vegetation within the area hatched yellow on attached Plan 5036/1.

CONDITIONS

1. Dieback control

When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of introduction and spread of *dieback*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) shall only move soils in *dry conditions*;
- (c) ensure that no *dieback*-affected soil, *mulch*, *fill* or other material is brought into an area that is not affected by *dieback*; and
- (d) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

2. Fauna management

- (a) Within one week prior to clearing, *habitat tree(s)* located at coordinates (i) E369512, N6304839; (ii) E389535, N6304777; (iii) E389517, N6304695 and (iv) E389456, N6304700, shall be inspected by a *fauna specialist* for the presence of fauna listed in the *Wildlife Conservation (Specially Protected Fauna) Notice*.
- (b) Where fauna are identified under condition 2(a) of this Permit, the Permit Holder shall ensure that no taking of identified fauna occurs unless first approved by the CEO.

3. Management plan and plantings

In relation to the areas hatched red on attached Plan 5036/1, the Permit Holder must implement and adhere to the "Pit Restoration/Offset Area Planting and Maintenance Management Plan, Lot 305 Gravel Pit Road, Henty, Shire of Dardanup, April 2013", attached as Appendix A to this permit.

4. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit:

- (a) In relation to fauna management pursuant to condition 2 of this Permit:
 - (i) the location of each identified fauna species recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees; and
 - (ii) the name of each species identified.
- (b) In relation to management plan and plantings pursuant to condition 3 of this Permit:

- (i) the location of any areas *planted*, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
- (ii) a description of the *planting* activities undertaken;
- (iii) the number of trees *planted*; and
- (iv) the species composition, structure and density of *planting*.

5. Reporting

- (a) The Permit Holder must provide to the CEO on or before 30 June of each year, a written report:
 - (i) of records required under condition 4 of this Permit; and
 - (ii) concerning activities done by the Permit Holder under this Permit between 1 January to 31 December of the preceding calendar year.
- (b) If no clearing authorised under this Permit was undertaken between 1 January to 31 December of the preceding calendar, a written report confirming that no clearing under this permit has been carried out, must be provided to the CEO on or before 30 June of each year.
- (c) Prior to 12 June 2023, the Permit Holder must provide to the CEO a written report of records required under condition 5 of this Permit where these records have not already been provided under condition 6(a) of this Permit.

DEFINITIONS

The following meanings are given to terms used in this Permit:

dieback means the effect of *Phytophthora* species on native vegetation;

dry conditions means when soils (not dust) do not freely adhere to rubber tyres, tracks, vehicle chassis or wheel arches;

habitat tree(s) means trees that have a diameter, measured at 1.5 metres from the base of the tree, of 50 centimetres or greater, that contains or has the potential to develop hollows or roosts suitable for native fauna;

fauna specialist means a person with training and specific work experience in fauna identification or faunal assemblage surveys of Western Australian fauna;

fill means material used to increase the ground level, or fill a hollow;

habitat tree(s) means trees that have a diameter, measured at 1.5 metres from the base of the tree, of 50 centimetres or greater, that contains or has the potential to develop hollows or roosts suitable for native fauna;

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

planting/planted means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species



M Warnock
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

*Officer delegated under Section 20
of the Environmental Protection Act 1986*

12 September 2013

**PIT RESTORATION/OFFSET AREA PLANTING
AND
MAINTENANCE MANAGEMENT PLAN**

**LOT 305
GRAVEL PIT ROAD, HENTY
SHIRE OF DARDANUP**

PREPARED FOR

CARBONE BROS PTY LTD

BY

LUNDSTROM ENVIRONMENTAL
EARTH, WATER AND ENVIRONMENTAL CONSULTANTS
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APRIL 2013

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1. INTRODUCTION

1.1 PURPOSE

The purpose of this document is to describe the measures that will be taken to rehabilitate the area of land impacted by gravel quarrying on Lot 305 Gravel Pit Road, Henty, Shire of Dardanup. Also, this document describes the measures that will be taken in the establishment of the proposed offset site, where 500 native trees will be planted. It also includes the methods to be used for monitoring and maintenance of rehabilitation on the property and the completion criteria to be used.

1.2 BACKGROUND

Prior to the application for an extractive industry licence, an application to the Department of Environment and Conservation (DEC) was made for the clearing of the entire remnant portion of vegetation, which is 4.23ha. The DEC responded with a request to “avoid, minimise or offset” the negative environmental issues associated with this clearing. In response to this, a survey of the trees was undertaken in order to determine the conservation values. As a result of this survey, the following avoidance, minimisation and offset actions were proposed:

- To decrease the clearing footprint from 4.23ha to 2.8ha
- To install 6 artificial nesting boxes
- To plant 500 endemic trees elsewhere on the site as an offset against the clearing.

The DEC accepted the proposals and indicated that it was likely that the clearing permit would be granted on this basis. It should be noted that the DEC were informed (and did acknowledge) that the clearing area was to be used as a pastured catchment area for a dam.

A referral of the proposal was made to the Federal Department of Sustainability, Environment, Water, Population and Community (SEWPaC) and after an investigation; the proposal was declared “Not a controlled action”.

An application for an extractive industries licence (EIL) was then made to the Shire of Dardanup and the rehabilitation proposals within this application described the process summarised above. The application also described the proposed end use for the area as an agricultural dam for livestock watering.

The Dardanup Shire Council conditionally approved the project subject to the submission of a rehabilitation plan for the site.

2. OWNERSHIP AND LOCALITY

Property Description: Lot 305 on Deposited Plan 63847
Gravel Pit Road
Shire of Dardanup

Area: 34.010 hectares

Ownership: J.A Giumelli

Lot 305 is situated at the end of Gravel Pit Road, approximately five kilometres north east of the township of Dardanup. Figure 1 shows the locality.

3. THE PROPOSED DEVELOPMENT

3.1 GRAVEL EXTRACTION

The laterite has an average thickness of one metre and over the 3.1ha site and the total gravel resource is estimated at 31,000 bank cubic meters (50,000 tonnes). Extraction will be conducted using a bulldozer and front-end loader. The approximate annual gravel extraction will be 10,000 tonnes, but this will be dependent on demand. Figure 2 shows the extraction area.

Proposed mining actions are as follows:

- A 2.8ha area will be cleared of vegetation. Cleared trees will be used as fence posts and firewood on the property,
- The area will be stripped of topsoil to be placed in windrows around the edges of the working area. If any additional overburden exists, this will be placed separately where it can be used for storm water management.
- Within the cell, a bulldozer will rip and blade material to a crusher, with crushed materials being stockpiled alongside. Trucks will enter the pit to be loaded from the stockpiles by a front-end loader.
- Excavation will proceed until the laterite has been removed and this will result in a lowering of the ground level by approximately 1m.
- Where possible, topsoil will be replaced and seeded in worked out areas just prior to the wet season.
- The area will be sown to pasture grasses after mining has been completed.
- Batters of 1:6 will be maintained throughout the operation.
- On the western edge of the extraction area a dam will be constructed to hold approximately 2,400kl of water. This will serve a stormwater management and livestock watering function. Construction details of the dam are shown on Figure 3.

4. REHABILITATION OF EXTRACTION AREA AND PLANTING THE OFFSET

4.1 REHABILITATION GOALS

The rehabilitation goals proposed for the site are as follows:

- Within the gravel pit to create a landform that is stable, erosion resistant, aesthetically pleasing and safe for humans and animals both on and surrounding the site.
- To restore the extraction area to pasture grasses and to create a dam for livestock watering at the lowest point to the west of the site.
- To create an offset area where the major endemic tree species that occur in the extraction area are planted so that habitat for Black Cockatoos is replaced as quickly as possible.

Specific strategies to achieve these goals are discussed below.

4.2 SPECIFIC STRATEGIES

The specific strategies that will be implemented to achieve the restoration goals are as follows:

4.2.1 Extraction Site

The proposed extraction area is small (3.1ha) and therefore mining actions (ripping blading and crushing) will be of short duration (approximately 6 weeks). After mining actions a stockpile of gravel will remain on approximately one third of the area and the rehabilitation of the remaining extraction area will take place shortly thereafter. The objective of rehabilitation for this project is to establish a stable land form and a self-sustaining pasture grass cover with little to no weed species.

Rehabilitation will be undertaken as follows:

- All slopes behind the active working face will be contoured to achieve a slope of no more than 1:6 vertical to horizontal. In so doing, care will be taken not to impact fringing vegetation. Proposed final contours are illustrated in Figure 3.
- The quarry floor will be ripped along contour to remove potential compaction and to establish low mounds for stormwater management purposes.
- Stockpiled topsoil/overburden will be re-spread to create a land surface which is aesthetically pleasing and easily trafficable by agricultural machinery.

- A mixture of suitable pasture grass species will be seeded to achieve the desired vegetation cover.
- Rehabilitation work will only be carried out just prior to or during the wet winter season.
- Carbone Bros Pty Ltd will undertake integrated weed management to manage and control weeds during operations and rehabilitation of the site. This will comprise a combination of cultural and chemical controls. A contractor specialised in weed management will be used to conduct the herbicide applications.
- Monitoring and maintenance will be implemented as described in Table 1. procedures will be carried out where necessary and may include:
 - Repair of any erosion damage.
 - Reseeding areas that may not have regenerated.
 - Weed control.

Table 1: Closure Criteria, Objectives and Interim Targets

Criteria	Objective	Interim Targets
1. Safety	The site is safe to humans.	• Site is safe to humans during operations.
2. Sustainability	The site is sustainable in the long term without additional management inputs.	-
3. Suitability	The site is suitable for the agreed land uses.	-
4. Visual amenity and heritage	The rehabilitated extraction area blends into the surrounding environment.	-
5. Off-site impacts	Significant adverse off-site impacts are prevented.	-
6. Hydrology	a. Site hydrology does not prevent the establishment of desired vegetation. b. Site hydrology does not reduce the stability of the landform. c. Stormwater is contained within the site.	• Stormwater is contained within the site during operations. • Identification and mitigation of any hydrology related issues during operations.
7. Soils and stability	a. Soil profiles and structures are sufficient to ensure vegetation establishment. b. The landform is stable.	• Topsoil is respread in all rehabilitation areas. • Identification and mitigation of potential erosion scars and scours during operations.
8. Vegetation	a. Pasture grasses cover the entire extraction area. b. Pasture grass cover is sufficiently resilient to sustain grazing pressure.	-
9. Weeds	a. Declared pest weeds are absent. b. The level of weed species should not be detrimental to the planted seedlings or pasture grasses.	• Declared weed species removed systematically during operations.

4.2.2 Offset Planting Site

- **Ground Preparation and Weed Management.** Appropriate weed management and ground preparation will take place before planting.
- **Seedling planting.** 500 seedlings will be planted at 3 x 4m spacing at the commencement of winter. Species to be used are *Eucalyptus marginata* (200), *Corymbia calophylla* (200) and *Eucalyptus haematoxylon* (100). Tree guards will be used to protect the plants from kangaroos. An experienced tree planting contractor will be used to implement the project.
- **Fencing.** The offset area will be fenced to limit damage by predation from herbivores.
- **Monitoring and maintenance.** Regular monitoring against completion criteria described below will be undertaken and appropriate actions implemented where necessary. Monitoring will continue until the completion criteria have been fulfilled. Maintenance procedures will be carried out where necessary and will include:
 - Repair of any damage.
 - Replanting.
 - Weed control.
- Seedlings will be monitored on a weekly basis within the first 6 weeks after planting and any dead plants will be replaced immediately.
- Weed management will be undertaken by an experienced contractor with appropriate weed management measures being undertaken at least twice a year in spring and autumn.
- Success criteria for these plantings will be a 90% survival rate at the end of winter 2013, with all dead seedlings being replaced the following wet season. In this manner it is planned to achieve a 100% survival rate after 5 years. After this period an attrition process will be allowed to enable the plant density to be determined by natural factors.
- Carbone Bros will maintain and manage the offset area over the full period that they are active on the property, after which the trees will be large enough to be self-maintaining.



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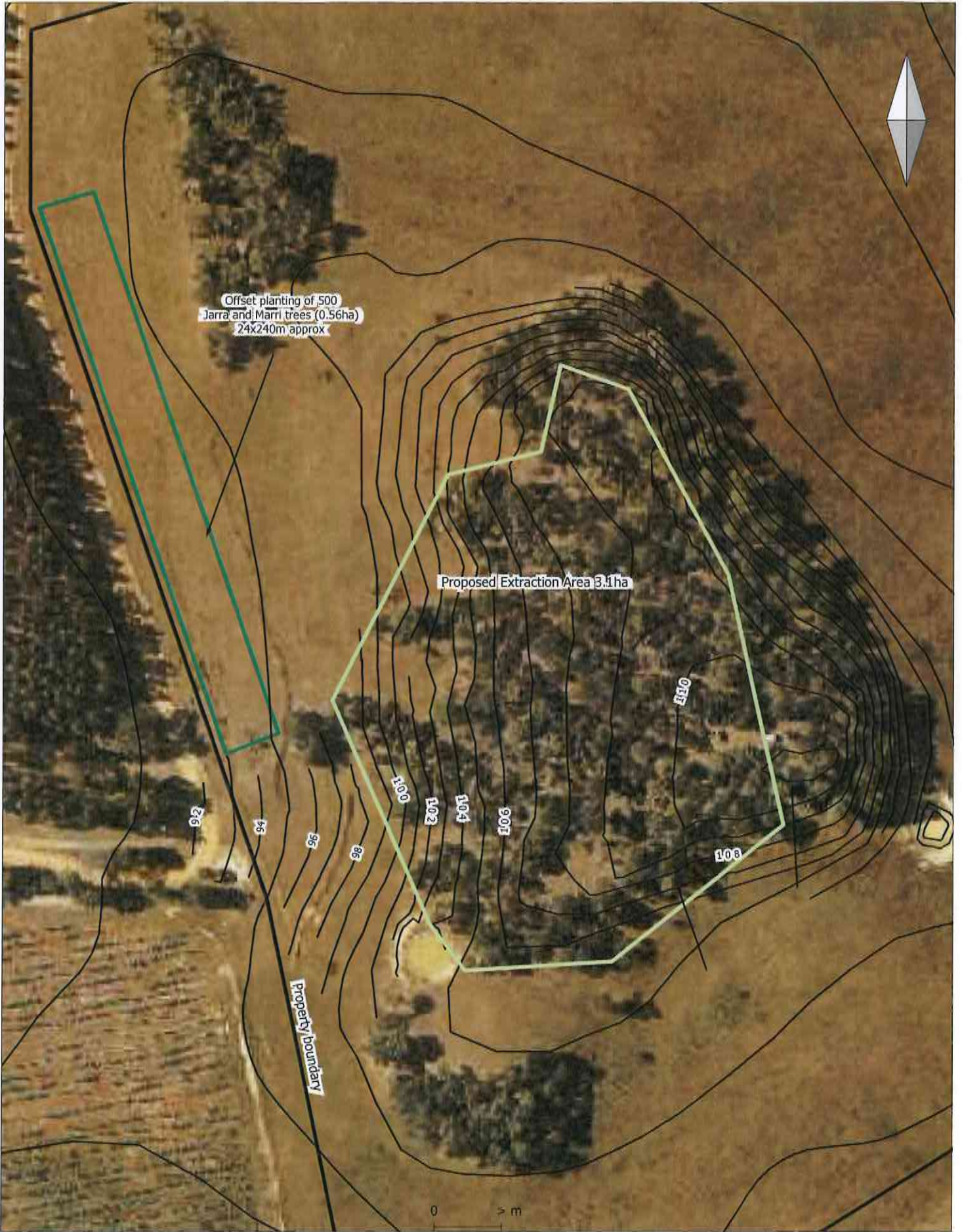
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 Datum: Australian Geocentric 1994 (GDA94)

Carbone Bros Pty Ltd

Lot 305 Henty
 Shire of Dardanup

LOCALITY

Figure 1



LUNDSTROM ENVIRONMENTAL

21 Sellen Ct WA 6149
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Scale: 1:2100
 Original Size: A4
 Air Photo Date Landgate 2012
 Datum: Australian Geocentric 1994 (GDA94)

Carbone Bros Pty Ltd

Lot 305 Henty
 Shire of Dardanup

Proposed Extraction
 & Offset Planting Area

Figure 2



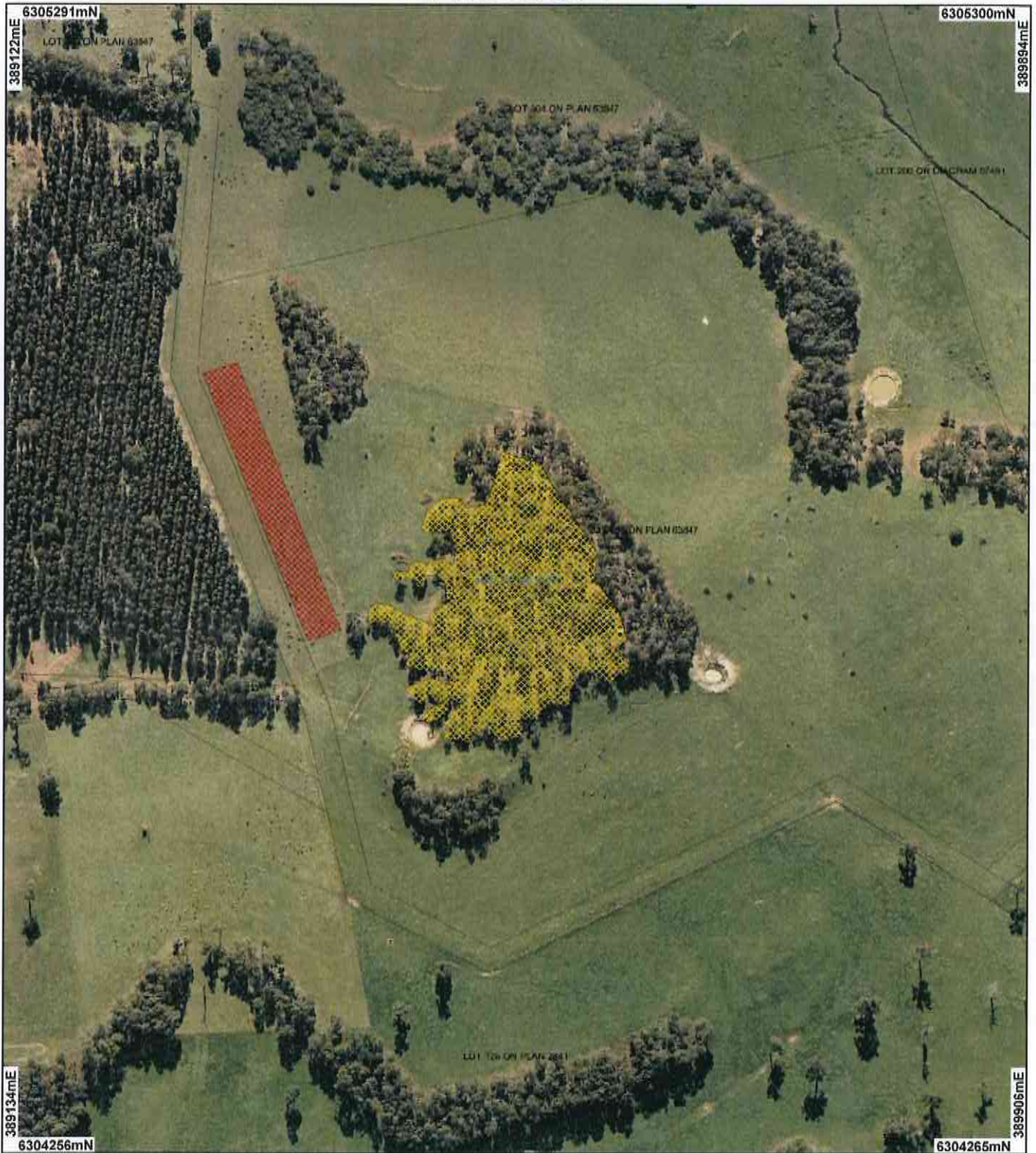
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 Original Size: A4
 Air Photo Date Landgate 2012
 Datum: Australian Geocentric 1994 (GDA94)

Carbone Bros Pty Ltd
 Lot 305 Henty
 Shire of Dardanup

Final Land Surface
 Figure 3

Plan 5036/1



LEGEND

Local Government Authorities

Cadastral for labelling
Bunbury 50cm Orthomosaic -
Landgate 2008

Clearing Instruments

Areas Approved to Clear

Clearing Instruments_1

Areas Subject to Conditions



Scale 1:4565
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

M Warnock Date 12/9/13
M Warnock

Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



Government of Western Australia
Department of Environment Regulation

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Clearing Permit Decision Report

Government of Western Australia
Department of Environment Regulation

1. Application details

1.1. Permit application details

Permit application No.: 5036/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: John Anthony Giumelli

1.3. Property details

Property: LOT 305 ON PLAN 63847 (HENTY 6236)
Local Government Area: Shire of Dardanup
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
2.8		Mechanical Removal	Extractive Industry

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 12 September 2013

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
The vegetation under application is mapped as the following: Beard Vegetation Association - 1017 - Medium open woodland; jarrah & marri, with low woodland; banksia (Shepherd et al, 2001)	The application is to clear 2.8 hectares within Lot 305 on Deposited Plan 63847, Henty, Shire of Dardanup, for the purpose of gravel extraction, with the site to be used post extraction as a dam and pasture for stock grazing.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The application area consists of upper-storey vegetation with a sparse understorey and groundcover and grassy weed invasion, and exhibits signs of disturbance through some grazing and historical gravel extraction (DEC, 2012a).
Mattiske Vegetation Complex - Whicher Scarp - Open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla on escarpment with some Corymbia haematoxylon, 4 Banksia attenuata and Xylomelum occidentale in the humid zone (Mattiske and Havel, 1998)		To Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Remaining vegetation comprises of a Eucalyptus marginata, Corymbia calophylla low forest with a very sparse understorey of Banksia grandis, Persoonia longifolia, Banksia sessilis, Kingia australis and a sparse groundcover of Xanthorrhoea gracilis and other low herb species (DEC, 2012a). The vegetation types and condition were obtained from a former Department of Environment and Conservation site inspection (DEC, 2012a).

3. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments **Proposal is not likely to be at variance to this Principle**
The original application to clear 4.2 hectares of native vegetation for the purpose of gravel extraction, with the site to be used as a dam and pasture post extraction, has been reduced to 2.8 hectares in response to environmental issues identified during the clearing assessment and the applicant's revised clearing proposal (Lundstrom Environmental, 2012).

The vegetation, dominated by medium sized upper-storey trees with a few larger trees and sparse understorey

and groundcover, is in a degraded to good (Keighery, 1994) condition. Some signs of disturbance in the form of grassy weeds and historical gravel extraction and grazing are present (DEC, 2012a).

No priority listed flora or fauna species have been recorded from the application area. Given the degraded (Keighery, 1994) condition of the application area, it is unlikely the remaining vegetation would contain suitable habitat.

As the application area it is not likely to comprise of a high level of biodiversity. The clearing as proposed is not likely to be at variance to this Principle.

Methodology References:
- DEC (2012a)
- Keighery (1994)
- Lundstrom Environmental (2012)

(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.

Comments **Proposal is at variance to this Principle**

The following fauna, listed as rare or likely to become extinct under the Western Australian Wildlife Conservation Act 1950, have been recorded within a 10 kilometre radius of the application area: Carnaby's cockatoo (*Calyptorhynchus latirostris*), Baudin's cockatoo (*Calyptorhynchus baudinii*), Forest Red-tailed black cockatoo (*Calyptorhynchus banksii* subsp. *naso*) and Western Ringtail Possum (WRP) (*Pseudocheirus occidentalis*) (DEC, 2007-).

No *Agonis flexuosa* (Peppermint) trees are within the application area and therefore it is unlikely that the WRP utilises the application area.

Based on aerial imagery (Bunbury 50cm Orthomosaic), the land directly to the west and east appears to be largely cleared. The application area is one of a number of vegetation remnants in a possible flight path for black cockatoos. It also appears to have moderate to high value as cockatoo food resource for birds moving through this landscape from, or to, the state forest and national park to the south. The *Corymbia calophylla* (marri) trees in the application area could provide foraging habitat for the black cockatoos, as the preferred foraging flora species present, *Banksia grandis* is sparse and dead (DEC, 2012a and 2012b).

A survey for black cockatoo habitat trees within the entire remnant, including the application area, identified 127 trees with diameters greater than 50cm at human chest height (Lundstrom, 2012). Of these, 14 trees were identified as having hollows suitable for black cockatoo nesting sites. A modification to application area's boundary, reducing the area applied to be cleared by 1.4 hectares, will see 11 of these habitat trees and approximately 26 potential habitat trees being retained (Lundstrom, 2012).

Given the above, the proposed clearing is at variance to this Principle.

To mitigate the loss of potential black cockatoo habitat trees, the applicant proposes to install six nesting boxes and plant 500 individual endemic *Eucalyptus* and *Corymbia* tree species near the proposed clearing site (Lundstrom Environmental, 2012 and 2013a).

To mitigate potential impacts to individual black cockatoos during clearing activities, fauna management practices will be required.

Methodology References:
- DEC (2007-)
- DEC (201a and 2012b)
- Lundstrom Environmental (2012 and 2013a)

GIS database:
- Bunbury 50cm Orthomosaic - Landgate (2008)

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

Comments **Proposal is not likely to be at variance to this Principle**

There are three species of rare flora recorded in the local area (10 kilometre radius).

The preferred habitat for these rare species is not present within the application area.

Therefore, the clearing as proposed is not likely to be at variance to this Principle.

Methodology GIS database:

- SAC Biodatasets (accessed June 2012)

(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.

Comments Proposal is not likely to be at variance to this Principle

No Threatened Ecological Communities (TEC) are mapped in the local area (10 kilometre radius) of the application area. The closest TEC mapped is SCP3 *Corymbia calophylla* - *Xanthorrhoea preissii* woodlands and shrublands, Swan Coastal Plain (CR) and is located approximately 7.9 kilometres north west of the application area.

Given the degraded condition of the vegetation under application and the distance to the closest TEC, it is not likely that the area under application is part of, or is necessary for, the maintenance of this TEC.

The clearing as proposed is not likely to be at variance to this Principle.

Methodology GIS database:
- SAC Biodatasets (accessed June 2012)

(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.

Comments Proposal may be at variance to this Principle

The area under application is located within the Jarrah Forest Interim Biogeographic Regionalisation of Australia (IBRA) bioregion. This IBRA bioregion has approximately 77 per cent of its Pre European vegetation extent remaining (Government of Western Australia, 2013).

The application area is mapped as Beard Vegetation Association 1017 and Matiske Vegetation Complex WC. These vegetation associations have approximately 67 and 74 per cent of their pre-European extent remaining in the Jarrah Forest bioregion respectively (Government of Western Australia, 2013).

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).

The vegetation types under application retain above the recommended 30 per cent level, however at a local scale, studying aerial imagery (Bunbury 50cm Orthomosaic) the extent of all vegetation remaining within the local area (10 kilometre radius) is less than 30 per cent. Given the low percentage of vegetation remaining in the local area the vegetation under application is a significant remnant (DEC, 2012a and 2012b).

	Pre-European (ha)	Current Extent (ha)	Remaining (%)
IBRA Bioregion			
Jarrah Forest Shire	4,506,567	2,473,560	77
Shire of Dardanup	52,831	25,754	48.7
Beard Vegetation Association in Bioregion 1017	17,528	11,672	67
Matiske Vegetation Complex WC	3,864	2,864	74.1

The original application to clear 4.2 hectares of native vegetation has been reduced to 2.8 hectares. To mitigate the proposed clearing of 2.8 hectares, the applicant proposes to plant 500 individual endemic *Eucalyptus* and *Corymbia* tree species near to the proposed clearing site (Lundstrom Environmental, 2012).

Given the above, the clearing as proposed may be at variance to this Principle.

Methodology References:
- Commonwealth of Australia (2001)
- DEC (2012a and 2012b)
- Government of Western Australia (2013).
- Heddle Vegetation Complexes
- Lundstrom Environmental (2012)
- Matiske Vegetation
- Shepherd et al (2001)

GIS datasets

- Bunbury 50cm Orthomosaic-Landgate (2008)
- Pre-European vegetation

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments Proposal is not at variance to this Principle

No wetlands or watercourses are recorded within the application area. The clearing as proposed is not at variance to this Principle.

- Methodology** GIS datasets:
- ANCA wetlands
 - EPP, Wetlands
 - Environmentally Sensitive Areas
 - Geomorphic Wetlands
 - Hydrography linear
 - Ramsar wetlands

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments Proposal is not likely to be at variance to this Principle

The risk of land degradation is low given the soil type present (sandy gravel with some deep sands) and the generally higher position of the application area in the landscape (Commissioner, Soil and Land Conservation, 2012).

The clearing as proposed is not likely to be at variance to this Principle.

- Methodology** References:
- Commissioner, Soil and Land Conservation (2012)

(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.

Comments Proposal is not likely to be at variance to this Principle

The application area is located approximately 2 kilometres north-east of the Boyanup State Forest and 4 kilometres north-west of the Wellington National Park.

Based on aerial imagery (Bunbury 50cm Orthomosaic), the land to the west and to the east of the application area also appears to be largely cleared. The application area is one of a number of vegetated remnants which can act as a fauna corridor or stepping stone between conservation areas and other local remnants, particularly with regards the movement avian fauna.

To offset the proposed clearing of 2.8 hectares, the applicant will plant a total of 500 endemic Eucalyptus and Corymbia tree species near to the proposed clearing site (Lundstrom Environmental, 2012).

The clearing as proposed is not likely to be at variance to this Principle.

- Methodology** Reference
- Lundstrom (2012)

- GIS datasets:
- DEC tenure

(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.

Comments Proposal is not likely to be at variance to this Principle

There are no water courses or wetlands mapped within close proximity to the application area. Therefore surface water is not likely to be impacted by the proposed clearing.

Groundwater Salinity in the application area is mapped as between 500-1000 and 3000-7000 milligrams per litre of Total Dissolved Solids. This level of groundwater salinity is considered to be marginal to saline. No salinity was observed on the property (Commissioner of Soil and Land Conservation, 2012). The proposed clearing is not likely to increase groundwater salinity.

The clearing as proposed is not likely to be at variance to this Principle.

Methodology References:
- Commissioner, Soil and Land Conservation (2012)

GIS database
- Hydrographic linear

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Comments **Proposal is not at variance to this Principle**
The removal of native vegetation is not expected to contribute to flooding due to the soil types present (sandy gravel with some deep sands) and generally higher position of the application area in the landscape (Commission of Soil and Land Conservation, 2012).

The clearing as proposed is not at variance to this Principle.

Methodology GIS datasets
- Bunbury 50cm Orthomosaic - Landgate 2008
- Hydrography linear
- Topographic Contours, Statewide

Planning instrument, Native Title, Previous EPA decision or other matter.

Comments

Planning approval and an extractive industry licence for gravel extraction has been granted by the Shire of Dardanup. As screening and crushing of the extracted material will occur onsite, the applicant is liaising with Department of Environment Regulation regarding a Works Approval (Lundstrom, 2012 and 2013).

No public submissions have been received in relation to this application.

The area under application is general farming under the Town Planning Scheme Zones and Metropolitan Regional Scheme.

The applicant will undertake planting of 500 individual endemic Eucalyptus and Corymbia tree species near to the proposed clearing site and install six nesting boxes in the vicinity of the proposed clearing site. These plantings will also supplement existing, suitable black cockatoo remnant vegetation on this property (Lundstrom, 2012 and 2013a).

Methodology References
- Lundstrom (2012 and 2013a)

4. References

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5. Glossary

Term	Meaning
BCS	Biodiversity Coordination Section of DEC
CALM	Department of Conservation and Land Management (now BCS)
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DEP	Department of Environmental Protection (now DEC)
DoE	Department of Environment
DoIR	Department of Industry and Resources
DRF	Declared Rare Flora
EPP	Environmental Protection Policy
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
TEC	Threatened Ecological Community
WRC	Water and Rivers Commission (now DEC)