



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 3996/1
File Number: 2010/007747-1
Duration of Permit: From 4 April 2011 to 4 April 2015

PERMIT HOLDER

Cotton Holdings Pty Ltd

LAND ON WHICH CLEARING IS TO BE DONE

LOT 1 ON DIAGRAM 61749 (JALBARRAGUP ROAD, WALSALL 6280)

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 6.4 hectares of native vegetation within the area hatched yellow on attached Plan 3996/1.

CONDITIONS

1. Type of clearing authorised

- (a) Clearing authorised under this Permit must be completed by 28 March 2013, being two years from the date from which this Permit becomes valid.
- (b) The Permit Holder shall not clear native vegetation unless extraction activities are enacted within 3 months of the clearing being undertaken.

2. Dieback and weed control

- (a) When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:
 - (i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
 - (ii) shall only move soils in *dry conditions*;
 - (iii) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
 - (iv) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.
- (b) At least once in each 12 month period for the term of this Permit, the Permit Holder must remove or kill any *weeds* growing within areas cleared under this Permit.

3. Retain vegetative material and topsoil, revegetation and rehabilitation

The Permit Holder shall:

- (a) retain the vegetative material and topsoil removed by clearing authorised under this Permit and stockpile the vegetative material and topsoil in an area that has already been cleared.
- (b) within six months following clearing authorised under this Permit, *revegetate* and *rehabilitate* the areas that are no longer required for the purpose of material extraction by:
 - (i) re-shaping the surface of the land so that it is consistent with the surrounding 5 metres of uncleared land; and
 - (ii) ripping the ground on the contour to remove soil compaction; and
 - (iii) ripping the pit floor and contour batters within the extraction site; and

- (iv) laying the vegetative material and topsoil retained under condition 3(a) on the cleared areas.
- (c) within 24 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 3(b) of this Permit:
 - (i) engage an *environmental specialist* to determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and
 - (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 3(c)(i) of this Permit will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, *revegetate* the area by deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area and ensuring only *local provenance* seeds and propagating material are used.
- (d) Where additional *planting* or *direct seeding* of native vegetation is undertaken in accordance with condition 3(c)(ii) of this permit, the Permit Holder shall repeat condition 3(c)(i) and 3(c)(ii) within 24 months of undertaking the additional *planting* or *direct seeding* of native vegetation.
- (e) Where a determination by an *environmental specialist* that the composition, structure and density within areas *revegetated* and *rehabilitated* will result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, as determined in condition 3(c)(i) and (ii) of this permit, that determination shall be submitted for the CEO's consideration. If the CEO does not agree with the determination made under condition 3(c)(ii), the CEO may require the Permit Holder to undertake additional *planting* and *direct seeding* in accordance with the requirements under condition 3c)(ii).

4. Records must be kept

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

- (a) In relation to the clearing of native vegetation authorised under this Permit:
 - (i) the location where the clearing occurred, 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) the date that the clearing commenced;
 - (iii) the date the **extraction** operations ceased; and
 - (iv) the size of the area cleared (in hectares).
- (b) In relation to the **revegetation and rehabilitation** of areas pursuant to condition 3 of this Permit:
 - (i) the location of any areas *revegetated* and *rehabilitated*, 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 *revegetation* and *rehabilitation* activities undertaken;
 - (iii) the size of the area *revegetated* and *rehabilitated* (in hectares);
 - (iv) the species composition, structure and density of *revegetation* and *rehabilitation*, and
 - (v) a copy of the environmental specialist's report.

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 and 31 December of the preceding year.
- (b) Prior to 4 January 2015, the Permit Holder must provide to the CEO a written report of records required under condition 4 of this Permit where these records have not already been provided under condition 5(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;

direct seeding means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species;

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

environmental specialist means a person who is engaged by the Permit Holder for the purpose of providing environmental advice, who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit;

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

local provenance means native vegetation seeds and propagating material from natural sources within 10 kilometres of the area cleared.

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; and

optimal time means the period from April to June for undertaking *direct seeding*, and the period from May to June for undertaking *planting*;

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

regenerate/ed/ion means re-establishment of vegetation from in situ seed banks and propagating material (such as lignotubers, bulbs, rhizomes) contained either within the topsoil or seed-bearing *mulch*;

rehabilitate/ed/ion means actively managing an area containing native vegetation in order to improve the ecological function of that area;

revegetate/ed/ion means the re-establishment of a cover of *local provenance* native vegetation in an area using methods such as natural *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.

weed/s means a species listed in Appendix 3 of the "Environmental Weed Strategy" published by the Department of Conservation and Land Management (1999), and plants declared under section 37 of the *Agriculture and Related Resources Protection Act 1976*.



Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

10 March 2011

CPS 3996/1, 10 March 2011

Plan 3996/1



LEGEND

- Road Centrelines
- Local Government Authorities
- Clearing Instruments
- Areas Approved to Clear
- Cadastre for labelling
- Busselton 50cm Orthomosaic - Landgate 2007



0 100 m

Scale 1:4075
(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.

Date 10/3/11
K Faulkner

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.



Department of Environment and Conservation

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1. Application details

1.1. Permit application details

Permit application No.: 3996/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Cotton Holdings Pty Ltd

1.3. Property details

Property: LOT 1 ON DIAGRAM 61749 (House No. 3988 JALBARRAGUP WALSALL 6280)
Local Government Area: Shire of Busselton
Colloquial name:

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 10 March 2011

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
Shepherd (2009) describes vegetation association 3 as Medium forest; jarrah-marri. Mattiske 'Treeton' Complex is described as Woodland of Eucalyptus marginata subsp. marginata-Corymbia calophylla with some Allocasuarina fraseriana on mild slopes in the perhumid zone.	The proposal involves clearing 6.4ha of vegetation. Vegetation consists of Jarrah and Marri trees with mostly weeds in the understorey, with scattered Kingia sp	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	Vegetation assessed using site photos provided by the applicant.
As above	As above	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	As above

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 proposal is for the clearing of approximately 6.4 hectares for the purpose of extractive industry. The clearing is to occur on Lot 1 Diagram 61749. The vegetation appears to be in a 'degraded' to 'completely degraded' condition (Keighery 1994).

The local area is approximately 60% vegetated and the area under application lies on the outer limits of the Whicher Range, adjacent to the Millbrook State Forest. There were 48 priority flora and 6 fauna records within the local area (10km radius).

Due to the lack of species diversity and understorey layer, the vegetation proposed to be cleared is not considered to be of a high level of biological diversity and the proposed clearing is not representative of an area of outstanding biodiversity, and is therefore not likely to be at variance to this Principle.

Methodology Keighery (1994);
GIS Databases:
- Sac Bio Datasets - accessed October 2010
- Busselton 50cm ORTHOMOSAIC - Landgate 2007

(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 not likely to be at variance to this Principle

There were 6 records of conservation significant fauna within the local area (10km radius). The local area is approximately 60% vegetated, with the majority being DEC managed State Forest and National Parks.

Therefore, given the degraded condition (Keighery 1994) of the vegetation under application and the percentage of surrounding remnant vegetation, the area under application is not considered significant habitat for fauna indigenous to Western Australia and is therefore not likely at variance to this Principle.

Methodology Keighery (1994)

GIS Databases:

- SAC Bio Datasets - accessed October 2010
- DEC TEnure
- Busselton 50cm ORTHOMOSAIC - Landgate 2007

(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

Several populations of *Banksia mimica* and one population of *Banksia nivea* subsp. *uliginosa* and numerous other rare flora have been recorded within 10 kms of the area under application.

Banksia mimica is a low shrub that flowers in December to February and occurs on grey-white sand in open low *Banksia* woodland; *Banksia nivea* subsp. *uliginosa* grows a mounded shrub that flowers in July to September and occurs on orange clay loam over laterite (Brown et al 1998).

The soils of the area under application are described as block laterite and lateritic (ironstone) gravels on gently undulating to low hilly relief, and may include hard acidic yellow mottled soils (Northcote et al. 1960-68).

Given that the majority of the site is in a 'completely degraded' to 'degraded' (Keighery, 1994) condition with little to no native understorey present, the applied clearing area is deemed unlikely to support flora of conservation significance.

Methodology Brown et al (1998)

Northcote et al (1960-68)

Keighery (1994)

GIS Databases:

- SAC Bio Dataset - accessed October 2010
- Soils, Statewide;
- Pre European Vegetation types

(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

There are several records of the community type SCP10a "Shrublands on dry clay flats", SCP02 "Southern wet shrublands, SCP" and SCP 1b "Eucalyptus calophylla woodlands on heavy soils of the southern Swan Coastal Plain" within 10 kilometres of the area under application, the closest was recorded 8km from the application area.

The applied clearing area does not have any affinities with either of these communities and given the distance and the scale of the proposed clearing, it is not likely to impact upon these communities.

Methodology GIS Databases:

- SAC Bio Datasets - accessed October 2010

(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 is not likely to be at variance to this Principle

The area under application is located in the Shire of Busselton in the Southern Jarrah Forest Bioregion, which retain approximately 42.9% and 55.80% (Shepherd 2009), respectively of the pre-European extent.

The area under application is mapped as the Treeton complex (T), which retains approximately 50.4% of the pre-European extent (Mattiske and Havel 1998). Much of the remaining extent for this complex is protected within large areas of surrounding State Forest.

Given the scale (6.4ha) and the degraded condition of the vegetation under application, the proposed clearing is

not likely to be considered significant remnant vegetation within the Greater Busselton area, and is therefore not likely to be at variance to this Principle.

	Pre-European (ha)	Current extent (ha)	Remaining (%)
IBRA Bioregions*			
Jarrah Forest	4 506 656.99	2 514 549.90	55.80
Shire*			
Busselton	146 478.84	62 783.45	42.86
Beard Vegetation Association*			
3	2 661 088.00	1 862 948.13	70.01
Beard Vegetation Association within Bioregion*			
3	2 390 591.59	1 657 963.50	69.35
Mattiske Vegetation Complex*			
Treeton	27 829.56	14 021.45	50.38

* (Shepherd et al 2009)

** (Mattiske & Havel 1998)

Methodology Shepherd et al (2009)
Mattiske & Havel 1998 (1998)
GIS databases:
- IBRA
- Mattiske Vegetation
- 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 likely to be at variance to this Principle

There are two minor- perennial water courses 300m west and north of the application area which are two of the many tributaries to the Vasse River.

Given the applied clearing area comprises 6.4ha of vegetation consisting of *Corymbia calophylla* and *Eucalyptus marginata*, and the fact that the area is separated from the majority of the local wetlands and watercourses by other remnants of vegetation, it is not considered likely that the proposed clearing is growing in association with a watercourse or wetland. Therefore, the proposal is not likely to be at variance to this principle

Methodology GIS Databases:
- Hydrography, Linear
- Busselton 50cm ORTHOMOSAIC - Landgate 2007

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

Comments Proposal may be at variance to this Principle

The area under application is described as gently undulating to low hilly relief with extensive block laterite and lateritic (ironstone) gravels; chief soils are hard acidic yellow mottled soils containing variable amounts of ironstone gravels (Northcote et al. 1960-68).

The groundwater salinity is less than 500 mg/L and the hydrogeology consists of sedimentary rocks with Fractured extensive and deep aquifers.

Given the soil type there is possibility that the site could be affected by wind erosion once the site has been cleared. Therefore, it is recommended that clearing be restricted to just prior to gravel extraction occurring and that revegetation of the site be undertaken post extraction to reduce this risk.

Methodology Northcote et al. (1960-68);
GIS Databases:
- Hydrogeology, Statewide
- Groundwater Salinity, Statewide

(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 may be at variance to this Principle

The area under application lies adjacent to the Millbrook State Forest.

The proposed clearing may indirectly impact on the environmental values of the adjoining conservation reserves through the spread or introduction of weed species or dieback by machinery. The consequences associated with the spread of such exotic species into areas reserved for conservation, include the significant degradation of the reserve and the potential local extinction of species.

Given the indirect impact through the spread of weeds and dieback; it is considered likely that the clearing as proposed may impact on the environmental values of nearby conservation areas. Therefore, the clearing as proposed may be at variance to this Principle. Weed and dieback conditions will mitigate any impacts to surrounding conservation areas from the proposed clearing

Methodology GIS Databases:

- Register of National Estate
- DEC Tenure
- System 1 to 12

(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

Despite the soils containing gravel the application consists of vegetation in a 'completely degraded' to 'degraded' (Keighery 1994) condition with a medium gradient slope; is not likely that the proposed clearing will cause deterioration in the quality of surface or underground water resources in the local area and is therefore not likely to be at variance to this Principle.

Methodology References

- Keighery (1994)
- GIS Databases:
 - Topographic Contours, Statewide
 - Groundwater Salinity, Statewide
 - Hydrogeology, Statewide

(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 likely to be at variance to this Principle

Given the 'completely degraded' (Keighery 1994) condition of the area under application and the percentage of surrounding vegetation (60% in 10 km radius), the proposed clearing is unlikely to cause or exacerbate the incidence or intensity of flooding and is therefore not likely to be at variance to this clearing principle.

Methodology References

- Keighery 1994
- GIS Databases:
 - Topographic Contours, Statewide

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

Comments

Planning consent for the proposed extractive industry (gravel) has been granted subject to compliance of conditions (Shire of Busselton 2011).

ICMS 3104 over the application area. Area was cleared prior to obtaining development approval - closed 13/04/2006

Methodology Town Planning Scheme Zone: General Farming

- Shire of Busselton (2010)
- GIS Databases:
 - Town Planning Schemes

4. References

- Brown A., Thomson-Dans C. and Marchant N.(1998). Western Australia's Threatened Flora, Department of Conservation and Land Management, Western Australia.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Mattiske, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and

report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.

Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.

Shepherd, D.P. (2009) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.

Shire of Busselton (2011) Proposed Extractive Industry (Gravel) - Lot 1 Jalbarragup road, Walsall DEC ref: A375807

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)

