



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 5660/1
Permit Holder:	Stockland WA Development Pty Ltd
Duration of Permit:	12 October 2013 – 12 October 2018

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I – CLEARING AUTHORISED

1. Purpose for which clearing may be done

Clearing for the purpose of undertaking preliminary earthworks.

2. Land on which clearing is to be done

Lot 132 on Deposited Plan 226040, Banjup
Lot 9004 on Deposited Plan 46398, Banjup

3. Area of Clearing

The Permit Holder must not clear more than 7.5 hectares of native vegetation within the area hatched yellow on attached Plan 5660/1.

4. Application

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

5. Compliance with Assessment Sequence and Management Procedures

Prior to clearing any native vegetation under conditions 1, 2 and 3 of this Permit, the Permit Holder must comply with the Assessment Sequence and the Management Procedures set out in Part II of this Permit.

PART II – ASSESSMENT SEQUENCE AND MANAGEMENT PROCEDURES

6. Dieback and weed 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 the introduction and spread of *weeds* and *dieback*:

- clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- shall only move soils in *dry conditions*;
- ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

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;

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

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;

weed/s means any plant -

- (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
- (b) published in the former Department of Environment and Conservation Regional Weed Assessments, regardless of ranking; or
- (c) not indigenous to the area concerned.



M Warnock
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

12 September 2013

Plan 5660/1



LEGEND

- Road Centrelines
- Cadastre
- Local Government Authorities
- Clearing Instruments
- Areas Approved to Clear



Scale 1:8585
 (Approximate when reproduced at Letter)

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.: 5660/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Stockland WA Development Pty Ltd

1.3. Property details

Property: LOT 132 ON PLAN 226040 (Lot No. 132 FRASER BANJUP 6164)
LOT 9004 ON PLAN 46398 (Lot No. 9004 ARMADALE BANJUP 6164)
Local Government Area: City of Cockburn

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
7.5		Mechanical Removal	Stockpile / Bulk earthworks

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
Mapped Beard Vegetation Association 998 is described as medium woodland consisting primarily of Tuart (Shepherd et al, 2001).	The applicant proposes to clear up to 7.5 hectares of native vegetation within Lot 9004 on Deposited Plan 46398 and Lot 132 on Deposited Plan 226040, Banjup for the purpose of undertaking preliminary earthworks.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	A significant portion of the vegetation on site has been planted as part of revegetation works associated with past extraction activities within Lot 9004. The vegetation under application includes scattered Eucalyptus sp., Callitris preissii, Kunzea micrantha, Adenanthos cygnorum, Banksia sp. and Acacia iteaphylla, over a weed dominated groundcover. The vegetation is in a degraded to completely degraded (Keighery, 1994) condition.
Mapped Heddle Vegetation Yoongarillup Complex consists of woodland to tall woodland of Eucalyptus gomphocephala (Tuart) with Agonis flexuosa. Less consistently an open forest of Eucalyptus gomphocephala (Tuart), Eucalyptus marginata (Jarrah) and Corymbia calophylla (Marri) occurs (Hedde et al, 1980).		To Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	The description and condition of the vegetation under application was established via a site inspection undertaken in July 2013 and a Habitat Survey undertaken in November 2010 (DER, 2013 & RPS, 2010).

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 applicant proposes to clear 7.5 hectares of native vegetation within Lot 9004 on Deposited Plan 46398 and Lot 132 on Deposited Plan 226040, Banjup, for the purpose of undertaking preliminary earthworks. The proposed clearing is to facilitate the first stage of a proposed residential development planned for these lots (RPS, 2013). The vegetation under application ranges from degraded to completely degraded (Keighery, 1994) condition (DER, 2013).

The application area is comprised of a mixture of native regrowth and exotic species planted as part of revegetation works associated with historical extraction activities undertaken within Lot 9004. The vegetation under application includes scattered Eucalyptus sp., Callitris preissii, Kunzea micrantha, Adenanthos cygnorum, Banksia sp. and Acacia iteaphylla, over a weed dominated groundcover (DER, 2013 & RPS, 2010).

Several priority flora species have been recorded in the local area (10 kilometre radius). The closest of these (priority 3) is a rhizomatous, clumped, robust perennial herb (Western Australian Herbarium, 2008-) mapped approximately 700 metres south west of the application area. This species has a preference for swamps, creek edges and sandy clays (Western Australian Herbarium- 1998). These conditions are not found on site, therefore it is unlikely that this species occurs within the application area.

The closest priority ecological community (PEC) is mapped approximately 3.3 kilometres south west of the application area and is known as 'northern spearwood shrublands and woodlands' (priority 3). The vegetation under application is not representative of this PEC.

One species of rare flora, a tuberous perennial herb with a preference for grey sand and clay loam (Western Australian Herbarium, 2008-) has been mapped within 100 metres of the application area. The Western Australian Native Orchid Group undertook an orchid survey of Lot 9004 in 2012, whereby several individuals of this species were identified. The initial application area included some of these individuals, however the proponent has since revised the application area to avoid these occurrences, and a buffer of at least 50 metres is now maintained around the identified rare flora.

Several fauna of conservation significance have been recorded within the local area (10 kilometre radius). Given that the vegetation under application is in a degraded to completely degraded (Keighery, 1994) condition (DER, 2013), and there are no large mature habitat trees within the application area, it is unlikely that the vegetation under application provides significant habitat for fauna indigenous to Western Australia.

The local area surrounding the application (10 kilometre radius) retains approximately 25 per cent pre-European vegetation.

The proposed clearing will increase the likelihood of weeds and dieback spreading into adjacent vegetated areas. Weed and dieback management practices will assist in mitigating the risk of spreading weeds and dieback.

The vegetation under application is in a degraded to completely degraded (Keighery, 1994) condition (DER, 2013), and given that the proponent has revised the application area to avoid rare flora, the proposed clearing is not likely to be at variance to this Principle.

Methodology

References:

- DER (2013)
- Keighery (1994)
- RPS (2010)
- RPS (2012)
- Western Australian Herbarium (2008-)

GIS Databases:

- NLWAR, Extent of Native Vegetation
- SAC Bio Datasets (Accessed August 2013)

(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

Several fauna species of conservation significance have been recorded within the local area (10 kilometre radius) including, *Synemon gratiose* (Graceful Sunmoth), *Isoodonobesulus* subsp. *fusciventer* (Quenda), *Calyptorhynchus banksii* subsp. *naso* (Forest Red-tailed Black-Cockatoo), *Calyptorhynchus latirostris* (Carnaby's Cockatoo), *Dasyurus geoffroii* (Chuditch), *Myrmecobius fasciatus* (Numbat), and *Setonix brachyurus* (Quokka) (DPaW, 2007-).

A Carnaby's cockatoo confirmed breeding area is mapped approximately five kilometres east of the proposed clearing. There are no large trees suitable to be utilised by black cockatoo's for nesting habitat within the application area (RPS, 2010 & DER, 2013).

Black cockatoo's forage on the seeds, nuts and flowers of proteaceous species (*banksia*, *hakea*, *grevillea*), as well as *allocasuarina* and *eucalyptus* species (Valentine and Stock, 2008). The vegetation under application includes scattered occurrences of *Banksia* sp. and juvenile *Eucalypts*, therefore foraging habitat is present on site. Given that the vegetation suitable for foraging habitat consists of scattered individuals, is largely in a degraded (Keighery, 1994) condition (DER, 2013), and shows signs of significant disturbance due to previous extraction activities, it is unlikely that the proposed clearing will impact on significant foraging habitat for this species.

There was no evidence of black cockatoo foraging identified in a fauna habitat survey of the application area (RPS, 2010).

A survey for *Lomandra hermaphrodita* was undertaken to identify Graceful Sun Moth habitat on site.

L. hermaphrodita was found to occur evenly at low density (less than one percent) within a small portion of vegetation in the southern portion of the application area. No Graceful Sun Moths were identified during the survey (RPS, 2010).

The understorey vegetation on site is sparse, and where present consists of non native grasses (DER, 2013), therefore it is unlikely that the application area provides significant habitat for ground dwelling indigenous fauna.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology References:
-DPaW (2007-)
-RPS (2010)
-DER (2013)
-Keighery (1994)
-Valentine & Stock (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**

One species of rare flora, a tuberous perennial herb with a preference for grey sand and clay loam (Western Australian Herbarium, 2008-) has been mapped within 100 metres of the application area. A survey of Lot 9004 undertaken by the Western Australian Native Orchid Group in 2012 identified the presence of several individuals of this species.

The proponent has revised the application area to avoid rare flora identified in the survey, whereby a buffer of at least 50 metres is now maintained around each identified occurrence. The area under application now consists of vegetation in a degraded condition and falls within the contours of a heavily disturbed historical extraction site. Therefore, the vegetation under application is not likely to include, or be necessary for the continued existence of rare flora.

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

Methodology References:
-Western Australian Herbarium (2008-)

GIS Databases:
-SAC Bio Datasets (Accessed August 2013)

(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**

One threatened ecological community (TEC) has been mapped approximately six kilometres east of the application area and is known as 'shrublands on dry clay flats'. This TEC is classified as vulnerable, as endorsed by the Minister for Environment.

The vegetation under application is not representative of that mapped within the TEC and given the distance of this TEC to the application area, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Databases:
-SAC Bio Datasets (Accessed August 2013)

(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 local area surrounding the application (10 kilometre radius) retains approximately 25 per cent pre-European vegetation.

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). However, the application area is located within the 'constrained area' of the Perth Metropolitan Region (EPA 2006). Within this area the EPA (2006) provides for the reduction of vegetation complexes to a minimum of 10 per cent pre-European extent.

Beard Vegetation Association 1001 retains 25 per cent pre-European vegetation within the Swan Coastal Plain and Bassendean Complex central and south retains approximately 27 per cent pre-European vegetation. The City of Cockburn retains approximately 31 per cent pre-European vegetation.

Given that both the City of Cockburn and vegetation types mapped on site retain greater than 10 per cent pre-European native vegetation, it is not likely that the vegetation under application represents a significant remnant in an extensively cleared area.

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

Pre-European	Current Extent (ha)	Remaining Extent (ha)	Extent in DEC Managed Lands (per cent)	Managed Lands (per cent)
IBRA Bioregion*				
Swan Coastal Plain	1,501,209	587,833	39	35
Shire*				
City of Cockburn	17,088	5,339	31.24	17
Beard Vegetation Association in Bioregion*				
1001	57,410	14,152	25	6
Heddle Vegetation**				
Bassendean Complex central and south	87,477	23,624	27	1
Government of Western Australia (2013)* Heddle et al (1980)**				

Methodology References:
 -Commonwealth of Australia (2001)
 -Government of Western Australia (2013)
 -Heddle et al (1980)

GIS Databases:
 -NLWRA, Current Extent of Vegetation Remaining

(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 Resource Enhancement Category sumplands located approximately 130 metres south and 140 metres west of the application area respectively. These wetlands are included in an extensive ANCA wetland system listed within the Directory of Important Wetlands of Australia (Gibbs Road Swamp).

Given the geology, topography and mapped vegetation on site, and the distance to hydrological features, the vegetation under application is not considered to be growing in, or in association with, an environment associated with a watercourse or wetland.

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

Methodology GIS Databases:
 -Geomorphic Wetlands, Swan Coastal Plain
 -Hydrography, linear
 -Hydrography, hierachy

(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 soils within the application area have been mapped by Northcote et al (1960-68) as subdued dune-swale terrain with chief soils of leached sands and associated small areas of other sand soils.

Sandy soils are prone to wind erosion, however given the sparseness and largely degraded (Keighery, 1994) condition of the vegetation on site (DER, 2013), it is not likely that wind erosion causing appreciable land degradation will occur.

Leached sands are highly permeable, and given the distance to hydrological features, moderate average rainfall (800 millimetres) and topography on site it is not likely that the proposed clearing will result in water erosion.

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

Methodology References:
 -Northcote et al (1960-1968)
 -Keighery (1994)
 -DER (2013)

GIS Databases:
 -Geomorphic Wetlands, Swan Coastal Plain
 -Hydrography, linear
 -Hydrography, hierachy

(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 lies within 100 metres of Bush Forever Site 390 known as 'Fraser Road Bushland, Banjup'. The closest conservation reserve to the application area is Thomsons Lake Nature Reserve which occurs approximately 2.8 kilometres west of the proposed clearing.

Fraser Road separates Lot 9004 from this Bush Forever Site, and given that the vegetation on site is in a degraded to completely degraded (Keighery, 1994) condition (DER, 2013) it is not likely that the proposed clearing will have an impact on the environmental values of this conservation area.

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

Methodology References:
-Keighery (1994)
-DER (2013)

GIS Databases:
-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 two Resource Enhancement Category sumplands located approximately 130 metres south and 140 metres west of the application area respectively.

Given the distance to hydrological features, it is unlikely that the proposed clearing will cause deterioration in the quality of surface water.

Groundwater salinity is mapped at 500 to 1000 milligrams per litre (marginal) on site. Given this low salinity level, and the degraded to completely degraded (Keighery, 1994) condition of the vegetation under application (DER, 2013), it is not likely the proposed clearing will lead to a perceptible rise in the watertable and thus an increase in groundwater salinity levels.

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

Methodology References:
-Keighery (1994)
-DER (2013)

GIS Databases:
-Groundwater Salinity, Statewide
-Hydrography, linear
-Hydrography, hierachy
-Geomorphic Wetlands, Swan Coastal Plain

(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 presence of highly permeable soils on site and that no watercourses or wetlands occur within the application area, it is not likely that the removal of 7.5 hectares of native vegetation in a degraded to completely degraded (Keighery, 1994) condition (DER, 2013), will cause or exacerbate the incidence or intensity of flooding.

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

Methodology References:
-Keighery (1994)
-DER (2013)

GIS Databases:
-Hydrography, linear
-Hydrography, hierachy
-Geomorphic Wetlands, Swan Coastal Plain

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

Comments

No submissions from the public have been received for the proposed clearing.

The application area is zoned 'resource' under the City of Cockburn's Town Planning Scheme.

The applicant proposes to clear 7.5 hectares of native vegetation within Lot 9004 on Deposited Plan 46398 and Lot 132 on Deposited Plan 226040, Banjup, for the purpose of undertaking preliminary earthworks. The proponent has advised that the proposed clearing is necessary to facilitate the development of the first stage of the proposed residential development planned for the site (RPS, 2013).

Stockland Development WA Pty Ltd has obtained Development Approval from the City of Cockburn to undertake preliminary earthworks within Lots 9004 and 132 (City of Cockburn, 2013a).

The City of Cockburn has approved a Draft Structure Plan, subject to conditions, for the proposed residential development within Lots 9004 and 132 (City of Cockburn, 2013b).

The application area falls within the Jandakot Groundwater Area and the Jandakot Underground Water Pollution Control Area, a priority 2 listed Public Drinking Water Course Area (PDWSA). The Department of Water (DoW) has advised that Lots 9004 and 132 have been reclassified from a Priority 2 PDWSA to a Priority 3 PDWSA in response to the Metropolitan Regional Scheme amendment to rezone the lots from Rural – Water Protection' to 'Urban' which is now complete. It is advised that impacts to water quality on this site have been evaluated and are considered to be acceptable (DoW, 2013).

The Application area falls within an Aboriginal Site of Significance. It is the proponent's responsibility to comply with the Aboriginal Heritage Act 1972 and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

Methodology

References:

- RPS (2013)
- City of Cockburn (2013a)
- City of Cockburn (2013b)
- DoW (2013)

GIS Databases:

- Aboriginal Sites of Significance
- Town Planning Scheme Zones

4. References

- City of Cockburn (2013a) Additional information for CPS 5660/1. Notice of Determination on Application for Planning Approval. DER Ref A667836
- City of Cockburn (2013b) Additional information for CPS 5660/1. Agenda Papers 9 May 2013. DER Ref A658812.
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- DER (2013) Site Inspection Report for Clearing Permit Application CPS 5660/1. Site inspection undertaken 16/07/2013. Department of Environment and Conservation, Western Australia (DER Ref A664142).
- DoW (2013) Public Drinking Water Source Area advice for CPS 5660/1. Department of Water, Western Australia. DER Ref A662638.
- DPaW (2007 -) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.der.wa.gov.au/>. Accessed August 2013.
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- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
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- RPS (2010) Targeted Habitat Survey. RPS Environment and Planning Pty Ltd. DER Ref A641754
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- Western Australian Herbarium (1998-)FloraBase - The Western Australian Flora. Department of Parks and Wildlife. <http://florabase.dec.wa.gov.au/> (Accessed August 2013).