GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 6491/1
Permit Holder:	Perkins (WA) Pty Ltd
Duration of Permit:	11 July 2015 – 11 July 2017

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 constructing entry/exit ramps from the Kwinana Freeway to service centres.

2. **Land on which clearing is to be done**
   Lot 191 on Deposited Plan 64567, Baldivis
   Lot 192 on Deposited Plan 64567, Baldivis
   Lot 171 on Plan 22762, Baldivis
   Lot 172 on Plan 22762, Baldivis
   Lot 173 on Plan 22762, Baldivis
   Lot 174 on Plan 22763, Baldivis
   Lot 175 on Plan 22763, Baldivis
   Lot 176 on Plan 22763, Baldivis
   Lot 177 on Plan 22763, Baldivis
   Lot 178 on Plan 22763, Baldivis
   Lot 179 on Plan 22763, Baldivis
   Zig Zag Road reserve (PIN: 11752696), Baldivis

3. **Area of Clearing**
   The Permit Holder must not clear more than 4.5 hectares of native vegetation within the area hatched yellow on attached Plan 6491/1.

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.

PART II – MANAGEMENT CONDITIONS

5. **Avoid, minimise etc clearing**
   In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:
   (a) avoid the clearing of native vegetation;
   (b) minimise the amount of native vegetation to be cleared; and
   (c) reduce the impact of clearing on any environmental value.

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*:
(a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
(b) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
(c) 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;
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 a Department of Parks and Wildlife Regional Weed Rankings Summary, regardless of ranking; or
(c) not indigenous to the area concerned.

M Warnock
SENIOR MANAGER
CLEARING REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

11 June 2015

Plan 6491/1

Legend

- Imagery
- Clearing Instruments Activities
- Local Government Authority

N

0 500m

1:11,238

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

Date 11/6/15

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 acknowleged by the agency acronym in the

GOVERNMENT OF WESTERN AUSTRALIA

Government of Western Australia
Department of Environment Regulation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.:	6491/1
Permit type:	Purpose Permit

1.2. Proponent details

Proponent's name:	Perkins (WA) Pty Ltd trading as Perkins Builders

1.3. Property details

Property:	ROAD RESERVE - 11752696, BALDIVIS ROAD RESERVE - 11964296, BALDIVIS LOT 171 ON PLAN 22762, BALDIVIS LOT 172 ON PLAN 22762, BALDIVIS LOT 173 ON PLAN 22762, BALDIVIS LOT 174 ON PLAN 22763, BALDIVIS LOT 175 ON PLAN 22763, BALDIVIS LOT 176 ON PLAN 22763, BALDIVIS LOT 177 ON PLAN 22763, BALDIVIS LOT 178 ON PLAN 22763, BALDIVIS LOT 179 ON PLAN 22763, BALDIVIS LOT 191 ON PLAN 64567, BALDIVIS LOT 192 ON PLAN 64567, BALDIVIS
Local Government Authority:	ROCKINGHAM, CITY OF
DER Region:	Greater Swan
DPaW District:	SWAN COASTAL
Localities:	BALDIVIS

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
4.5		Mechanical Removal	Road construction or upgrades

1.5. Decision on application

Decision on Permit Application:	Granted
Decision Date:	11 June 2015

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 968 is described as medium woodland; jarrah, marri & wandoo (Shepherd et al 2001). Mapped Beard vegetation association 1001 is described as medium very sparse woodland; jarrah, with low woodland; banksia & casuarina (Shepherd et al 2001). Heddle vegetation complex 'Serpentine River Complex' is described as closed scrub of Melaleuca species and fringing woodland of Eucalyptus rudis (Flooded Gum) - Melaleuca rhaphiophylla (Swamp Paperbark) along streams (Heddle et al. 1980).	The clearing of 4.5 hectares of native vegetation within numerous properties and road reserves within the City of Rockingham is for the purpose of constructing entry/exit ramps from the Kwinana Freeway to service centres.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994) To Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994)	The vegetation condition and description has been determined through aerial imagery.

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 application is for the proposed clearing of 4.5 hectares of native vegetation for the purpose of constructing entry/exit ramps from Kwinana Freeway to service centres.

The vegetation proposed to be cleared is comprised of native species planted as part of a revegetation program implemented as part of the Kwinana Freeway extension. The area under application appears to have been planted in approximately 2002-2003 and is in a degraded to good (Keighery 1994) condition.

Numerous rare and priority flora species have been recorded within the local area (10 kilometre radius). The closest record being a Priority 4 flora species recorded approximately 3.3 kilometres north of the area under application. This species is found on sand and outcropping limestone (Western Australian Herbarium 1998-). Suitable habitat for this species is not likely to be located within the area under application. The vegetation proposed to be cleared has been intentionally planted and is unlikely to be necessary for the continued existence of rare flora or contain priority flora.

Numerous fauna species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within the local area (10 kilometre radius) including forest red-tailed black-cockatoo (Calyptorhynchus banksii subsp. naso), Baudin's cockatoo (Calyptorhynchus baudinii), Carnaby's cockatoo (Calyptorhynchus latirostris) and chuditch (Dasyurus geoffroii) (DPaW 2007-). The vegetation under application does not comprise significant breeding or foraging habitat for the black cockatoo species. The area under application may provide habitat for ground dwelling fauna, however given the areas under application are narrow and linear along approximately 1.3 kilometres of the Kwinana Freeway the clearing as proposed is not likely to impact on significant habitat for local fauna species.

The vegetation under application is not likely to comprise a high biological diversity.

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

Methodology

References:
DPaW (2007-)
Keighery (1994)
Western Australian Herbarium (1998-)

GIS Databases:
- SAC Bio Datasets accessed - April 2015

(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

Numerous fauna species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within the local area (10 kilometre radius) including forest red-tailed black-cockatoo, Baudin's cockatoo , Carnaby's cockatoo and chuditch (DPaW 2007-).

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). The vegetation under application does not provide of significant foraging habitat for this species.

The chuditch inhabits most kinds of wooded habitat within its current range including eucalypt forest (especially Jarrah, Eucalyptus marginata), dry woodland and mallee shrublands (Department of the Environment 2015). The area under application may provide habitat for ground dwelling fauna, however given the areas under application are narrow and linear along approximately 1.3 kilometres of the Kwinana Freeway the clearing as proposed is not likely to impact on significant habitat for local fauna species.

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

Methodology

References:
Commonwealth of Australia (2012)
Department of the Environment (2015)
DPaW (2007-)

GIS Databases:
- SAC Bio Datasets - accessed April 2015

(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

Four rare flora species have been recorded within the local area (10 kilometre radius), the closest record being approximately 5.3 kilometres south east of the area under application.

This species grows in deep sandy soil in banksia woodland, in low-lying areas alongside winter-wet swamps (Brown et al 1998). Suitable habitat for this species is not located within the area under application.

In addition, the area under application has been planted as a condition of approval for the extension of the Kwinana Freeway. Given the vegetation proposed to be cleared has been intentionally planted it is unlikely to be necessary for the continued existence of rare flora.

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

Methodology

References:
Brown A., Thomson-Dans C. and Marchant N.(1998)

GIS Databases:
Sac Bio Datasets - accessed April 2015

(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

The closest threatened ecological community (TEC) is 'woodlands over sedgelands in holocence dune swales of the southern Swan Coastal Plain' located approximately 5.3 kilometres north west of the application area.

The vegetation under application is not representative of this TEC. Given the distance to this TEC the clearing as proposed is not likely to be impact upon it.

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

Methodology

GIS Databases:
Sac Bio Datasets - accessed April 2015

(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 vegetation under application is located within the Swan Coastal Plain IBRA Bioregion and has been mapped as comprising of Beard vegetation association 968 and 1001 and Heddle vegetation complex Serpentine River Complex. The mapped Beard and Heddle vegetation complexes under application have approximately 7, 24 and 10 per cent respectively of their pre-European vegetation remaining (Government of Western Australia, 2013).

The local area (10 kilometre radius) surrounding the application has approximately 15 per cent of its pre-European vegetation remaining.

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 Environmental Protection Authority (EPA) recognises the Perth Metropolitan Region as a constrained area, which provides for the reduction of vegetation complexes to a minimum of 10 per cent of the pre-European extent (EPA 2006).

The local area has been extensively cleared and mapped Beard vegetation association 968 retains approximately 10 per cent therefore the area under application may be considered to be located within an extensively cleared area.

However, the vegetation under application has been intentionally planted and is not representative of Beard vegetation association 968, does not comprise a high biological diversity or significant fauna habitat. Therefore the vegetation proposed to be cleared is not likely to be a significant remnant.

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

Methodology

References:
Commonwealth of Australia (2001)
EPA (2006)
Government of Western Australia (2013)
Parks and Wildlife (2015)

GIS Databases:
- Local Government Authorities - Landgate
- 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 at variance to this Principle

A portion of the area under application is mapped within a multiple use wetland. Multiple use wetlands are considered to have few important ecological attributes and functions remaining (Water and Rivers Commission 2001). A major drain is located adjacent the most north eastern area under application.

Given the above the clearing as proposed is considered to be growing in association with a wetland. However given the degraded (Keighery 1994) condition of the wetland the clearing as proposed is not likely to have a significant impact on the conservation status of this wetland.

The clearing as proposed is at variance to this principle.

Methodology

References:
Keighery (1994)
Water and Rivers Commission (2001)

GIS Databases:
- Hydrography, linear
- Geomorphic Wetlands, (Mgt Categories), Swan Coastal Plain

(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 mapped soils type Kf9 is described as 'low-lying, poorly drained flats with some gilgais: chief soils are black and grey cracking clays (Northcote et al 1960 - 1968).

Given the soil types present within the area under application the clearing as proposed is not likely to cause wind erosion.

The clay soil may increase water erosion and waterlogging within the area under application however the clearing as proposed is linear, along a 1.3 kilometre stretch on both sides of the Kwinana Freeway. Therefore the clearing as proposed is not likely cause appreciable land degradation in the form of water erosion and waterlogging.

Given the above the clearing as proposed is not likely to be at variance to this principle.

Methodology

References:
Northcote, K. H. et al. (1960-68)

GIS Databases:
- Soils, 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 southern area under application is located adjacent to Bush Forever Site 418. Leda Nature Reserve is located approximately 2.9 kilometres north of the area under application.

The clearing as proposed may indirectly impact the adjacent Bush Forever Site through the spread of weed and dieback. Weed and dieback management practices will help mitigate this risk.

The area under application is not likely to provide a significant fauna corridor between remnant vegetation and nature reserves located within the local area (10 kilometre radius).

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

Methodology

GIS Databases:
- DPaW 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

A portion of the area under application is mapped within a multiple use wetland. Multiple use wetlands are considered to have few important ecological attributes and functions remaining (Water and Rivers Commission 2001). A major drain is located adjacent the most north eastern area under application.

The clearing as proposed may increase runoff into this wetland, however, the purpose of clearing is for the construction of entry/exit ramps to the Kwinana Freeway and the applicant has advised that a drainage system will be designed to mitigate this impact. Given the above and the degraded to good (Keighery 1994) condition of the wetland the clearing as proposed is not likely to cause deterioration in the quality of surface water.

Ground water salinity is mapped between 500 – 3000 milligrams per litre total dissolved solids which is considered to be marginal to moderately saline. The clearing as proposed is not likely to cause a significant deterioration in the quality of underground water.

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

Methodology

References:
Keighery (1994)
Water and Rivers Commission (2001)

GIS Databases:
- Hydrography, linear
- Geomorphic Wetlands, (Mgt Categories), Swan Coastal Plain
- Groundwater Salinity
- Keighery (1994)

(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

The proposed clearing occurs either side of Kwinana Freeway for the construction of on and off ramps. The clearing as proposed is not likely to cause or exacerbate the incidence or intensity of flooding.

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

Methodology

Planning instruments and other relevant matters.

Comments

The vegetation under application has been planted as an environmental commitment of approval for the extension of the Kwinana Freeway – EPA Assessment 31 and Ministerial Statement No. 69.

The land under application is the property of Main Roads Western Australia (MRWA). MRWA has assessed the proposal and has advised that it agrees in principle for the work within the road reserves of Kwinana Freeway to proceed subject to a number of conditions including a clearing permit being granted by the Department of Environment Regulation. MRWA has advised that formal written permission to enter the road reserves will be provided in a form of a 'Possession of Site' certificate denoting any specific limitations/conditions and the certificate of expiry date upon the receipt of the required information.

No Aboriginal Sites of Significance are located within the areas under application.

No Submissions have been received in relation to this application.

Methodology

4. References

Brown A., Thomson-Dans C. and Marchant N.(1998). Western Australia's Threatened Flora, Department of Conservation and Land Management, Western Australia.

Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.

Commonwealth of Australia (2012) EPBC Act referral guidelines for three threatened black cockatoo species, Canberra.

Department of the Environment (2015). Dasyurus geoffroii in Species Profile and Threats Database, Department of the Environment, Canberra. Available from: http://www.environment.gov.au/sprat.

DPaW (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: http://naturemap.dpaw.wa.gov.au/. Accessed April 2015

EPA (2006) Guidance for the Assessment of Environmental Factors - Level of Assessment for Proposals Affecting Natural Areas Within the System 6 Region and Swan Coastal Plain Portion of the System 1 Region. Guidance Statement No 10. Environmental Protection Authority, Western Australia.

Government of Western Australia (2013) 2013 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2013. WA Department of Parks and Wildlife, Perth.

Heddle, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, 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.

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.

Parks and Wildlife (2015) 2015 South West Forest and Swan Coastal Plain Vegetation Complex Statistics: a report prepared for the Department of Environment Regulation. Current as of March 2015. Department of Parks and Wildlife, Perth, Western Australia.

Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.

Water and Rivers Commission (2001) Position Statement: Wetlands, Water and Rivers Commission, Perth.

Western Australian Herbarium (1998-) FloraBase - The Western Australian Flora. Department of Parks and Wildlife. http://florabase.dpaw.wa.gov.au/ (Accessed April 2015).