GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 6628/1
Permit Holder:	Western Australian Land Authority T/A Landcorp
Duration of Permit:	17 October 2015 – 17 October 2020

ADVICE NOTE:

The funds referred to in condition 7 of this permit are intended for contributing towards the purchase of 1.8 hectares of native vegetation with similar values to the vegetation to be cleared.

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 a beach access track.

2. **Land on which clearing is to be done**
   Lot 9025 on Deposited Plan 405189, Alkimos

3. **Authorised activity**
   The Permit Holder shall not clear more than 1.98 hectares of native vegetation within the area hatched yellow on attached Plan 6628/1.

4. **Application**
   This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation authorised under 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.

7. **Monetary contributions to a fund maintained for the purpose of establishing or maintaining vegetation (offset)**
   Prior to undertaking any clearing authorised under this permit and no later than 17 October 2016, the Permit Holder shall provide documentary evidence to the CEO that funding of $25,862 has been transferred to the Department of Environment Regulation for the purpose of establishing or maintaining vegetation.

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

17 September 2015

Plan 6628/1

Legend

- Roads
- Imagery
- Clearing Instruments Activities
- Local Government Authority

N

0 200m

1:5,838

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

Date 17/9/15

M Warnock

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

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.:	6628/1
Permit type:	Purpose Permit

1.2. Applicant details

Applicant's name:	Western Australian Land Authority T/A Landcorp

1.3. Property details

Property:	Lot 9025 on Deposited Plan 405189 Alkimos
Colloquial name:	
Local Government Authority:	WANNEROO, CITY OF
DER Region:	Greater Swan
DPaW District:	SWAN COASTAL
LCDC:	
Localities:	ALKIMOS

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1.98		Mechanical Removal	Recreation

1.5. Decision on application

Decision on Permit Application:	Granted
Decision Date:	17 September 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
Beard vegetation association 1007: Mosaic: Shrublands; Acacia lasiocarpa & Melaleuca acerosa heath / Shrublands; Acacia rostellifera & Acacia cyclops thicket (Shepherd et al. 2001). Heddle vegetation complex: Quindalup Complex: Coastal dune complex – low closed forest and closed scrub (Heddle et al. 1980).	The proposed clearing of 1.98 hectares within Lot 9025 on Plan 405189 Alkimos is for the purpose of a beach access track.	Very Good; Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).	The vegetation condition was established through supporting documentation provided by the applicant (RPS 2015). The vegetation under application consists of Melaleuca systena, Lomandra maritima low open heath in very good to good (Keighery 1994) condition and Spyridium globulosum, Melaleuca systena, Lomandra maritima low open health in very good (Keighery 1994) condition (RPS 2015).

3. Assessment of application against clearing principles

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

Comments

Proposed clearing is not likely to be at variance to this Principle

The proposed clearing of 1.98 hectares within Lot 9025 on Deposited Plan 405189 Alkimos is for the purpose of a beach access track. Approximately 0.26 hectares of this proposed clearing area is for the access track and 1.72 hectares is for the access track batters.

The vegetation under application forms part of Bush Forever Site No. 397 and is known as 'Coastal strip from Wilbinga to Mindarie'.

A site inspection of the application area undertaken by RPS in May 2015 identified that the majority of vegetation proposed for clearing is in very good (Keighery 1994) condition (RPS 2015).The vegetation under application consists of Melaleuca systena, Lomandra maritima low open heath and Spyridium globulosum, Melaleuca systena, Lomandra maritima low open heath (RPS 2015).

One rare flora species has been recorded within 10 kilometres of the application area. A site inspection of the application area undertaken by RPS (2015) did not identify suitable habitat for this species.

There are numerous records of priority flora species mapped within a 10 kilometre radius of the application area, the closest being Conostylis pauciflora subsp. Euryhipis, a priority 4 species located approximately 1.9 kilometres north of the application area. Priority 4 species are considered to have been adequately surveyed and not in need of special protection but could be if circumstances change (DEC, 2012). The clearing as proposed is unlikely to impact on the conservation status of this species if it were present within the application area.

Several 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). The vegetation under application is not likely to provide significant habitat for these species.

The closest Priority Ecological Community (PEC) and Threatened Ecological Community (TEC) to the application area are, "Northern Spearwood Shrublands and Woodlands" (priority 3), located approximately 4 kilometres east and "Melaleuca huegelii – Melaleuca acerosa shrublands on limestone ridges" (threatened), located 3.9 kilometers east of the application area. The application area consists of Melaleuca systena low heath on white sand and is therefore not likely to represent this PEC or TEC.

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

Methodology

References:
- DEC (2012)
- RPS (2015)
- Keighery (1994)

GIS Datasets:
- SAC Bio Datasets (8 July 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

Proposed clearing is not likely to be at variance to this Principle

A number of fauna species listed as rare or likely to become extinct under the *Wildlife Conservation Act 1950* have been recorded within a 10 kilometre radius including Carnaby's cockatoo (*Calyptorhynchus latirostris*), chuditch (*Dasyurus geoffroii*), and brush-tailed bettong (*Bettongia penicillata* subsp. *ogilbyi*) (Parks and Wildlife 2007-).

The preferred foraging habitat for Carnaby's cockatoo includes jarrah and marri woodlands and forest heathland and woodland dominated by proteaceous plant species such as Banksia sp. Hakea sp. and Grevillea sp (Parks and Wildlife 2013).

The chuditch has a preference for jarrah (*Eucalyptus marginata*) forests, woodlands, mallee shrublands and heaths. They require adequate den resources and large natural areas and home sizes that are not fragmented in order for survival (DEC, 2012a).

The brush-tailed bettong (woylie) has a preference for open forest and woodland with a low understorey of tussock grasses or woody scrub (DEC, 2012b).

The application area contains Melaleuca systena, Lomandra maritima low open heath and Spyridium globulosum, Melaleuca systena, Lomandra maritima low open heath (RPS 2015). Given the different vegetation type of the application area compared to the preferred habitat for the above fauna species, it is not likely the application area will provide significant habitat for these species.

In addition, the proposed clearing of 1.98 hectares occurs within a large remnant of vegetation that is likely to contain similar habitat to the application area. Therefore, it is not likely that the application area contains significant habitat for local fauna species.

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

Methodology

References:
- DEC (2012a)
- DEC (2012b)
- Parks and Wildlife (2007-)
- Parks and Wildlife (2013)
- RPS (2015)

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

Comments

Proposed clearing is not likely to be at variance to this Principle

The closest rare flora species to the application area is recorded from approximately six kilometers south on similar soil and vegetation types as the application area.

This rare flora species is known to occur in white sand over limestone on low coastal cliffs (Parks and Wildlife 2015a).

The application area contains Melaleuca systena, Lomandra maritima low open heath and Spyridium globulosum, Melaleuca systena, Lomandra maritima low open heath on white sand dunes (RPS 2015). As no limestone was observed within the application area (RPS, 2015), it is unlikely for the proposed clearing to impact on habitat for this rare flora species. The proposed clearing is not likely to be at variance to this Principle.

Methodology

References
-RPS (2015)
-Parks and Wildlife (2015a)
GIS Databases
-SAC Bio datasets (8 July 2015)
-Soils, statewide
-Pre-European vegetation

(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

Proposed clearing is not likely to be at variance to this Principle

The closest threatened ecological community (TEC) is located 3.9 kilometers east of the application area and is described as "Melaleuca huegelii – Melaleuca acerosa shrublands on limestone ridges" (endangered).

There are no limestone ridges within the application area and a site inspection carried out by RPS in May 2015 identified Melaleuca systena, Lomandra maritima low open heath in very good to good (Keighery 1994) condition and Spyridium globulosum, Melaleuca systena, Lomandra maritima low open heath in very good (Keighery 1994) condition (RPS 2015) within the application area (RPS 2015).

Given the above and the distance to the nearest TEC, it is not likely for the application area to comprise of, or be necessary for the maintenance of, a TEC. The proposed clearing is not likely to be at variance to this Principle.

Methodology

References
-Keighery (1994)
-RPS (2015)
Databases
-SAC Bio datasets (8 July 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

Proposed clearing is not likely to be at variance to this Principle

The mapped Beard Vegetation Association and Heddle Vegetation Complex within the application area have 71 per cent and 61 per cent of their pre-European vegetation extent remaining, respectively (Government of Western Australia 2014;Parks and Wildlife 2015).

The local area (10 kilometre radius) retains approximately 40 per cent 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).

The Beard vegetation association and Heddle vegetation complex mapped within the application area have more than the threshold of 30 per cent. The proposed clearing is therefore not likely to impact on highly cleared vegetation communities.

The application area is a part of a north-south ecological linkage and falls within the conservation area, Bush Forever Site 397. Therefore it is likely to be part of a significant remnant of native vegetation. However, the proposed clearing does not occur within a highly cleared area and is therefore not likely to be at variance to this Principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in Parks and Wildlife Managed Lands (%)
IBRA Bioregion				
Swan Coastal Plain	1,501,222	586,975	39	36
Shire				
City of Wanneroo	67,517	31,429	46	51
Beard Vegetation Association*				
1007	30,110	21,414	71	11
Heddle vegetation complex**				
Quindalup Complex	49,028	30,129	61	6

Methodology

References
-Commonwealth of Australia (2001)
-Government of Western Australia (2014)
-Parks and Wildlife (2015)
GIS Databases
-Pre-European vegetation
-NLWRA, Current Extent of Native Vegetation
-Bush Forever

(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

Proposed clearing is not likely to be at variance to this Principle

The closest watercourse to the proposed clearing is Chandala Brook occurring 30 kilometres east and the closest mapped wetland to the proposed clearing is Carabooda Lake, a resource enhancement sumpland, occurring 4.5 kilometres east of the application area.

A site inspection conducted by RPS in May 2015 did not identify any wetland or watercourse dependent vegetation within the application area (RPS 2015).

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

Methodology

References
-RPS (2015)
GIS Databases
-Hydrography, linear
-Geomorphic wetland database

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

Comments

Proposed clearing is not likely to be at variance to this Principle

The chief soils within the application area consist of calcareous sands (Northcote et al. 1960-68).

Land degradation mapping on the Department of Agriculture and Food Western Australia's (DAFWA) website indicates that the majority of the area under application falls within the following category for wind erosion risk; '70 per cent of map unit has a high to extreme wind erosion risk'. Given this level of risk and the steeply undulating topography of the application area, it is likely that the proposed clearing will cause land degradation in the form of wind erosion.

The applicant has proposed re-contouring and battering along both sides of the proposed access track which will be revegetated to minimise soil erosion (RPS 2015). Given this and the relatively small area proposed to be cleared, it is not likely for the proposed clearing to cause appreciable land degradation in the form of soil erosion.

The majority of the area under application is mapped as a low risk of salinity. Given this low risk and the highly vegetated local area (10 kilometre radius) the proposed clearing is not likely to contribute to an increase in salinity.

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

Methodology

References
-RPS (2015)
-Northcote et al. (1960-68)

GIS Databases
-Soils, statewide
-Salinity Risk

(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

Proposed clearing is at variance to this Principle

Approximately 1.2 hectares of the proposed clearing occurs within Bush Forever Site 397, Coastal strip from Wilbinga to Mindarie. This portion of the application occurs within a north-south ecological linkage associated with the Bush forever site.

The proposed clearing is likely to contribute to the fragmentation of this ecological linkage by removing a small portion. In addition, the proposed clearing will directly impact this conservation area through the removal of native vegetation and may introduce and spread weeds and dieback within the conservation area. Given the above, the proposed clearing is at variance to this Principle.

To mitigate the environmental harm identified in this assessment, the Department of Environment Regulation has approved the applicant's proposed offset which comprises contributing funds towards the purchase of 1.8 hectares of remnant vegetation to be secured in conservation estate.

Methodology

References
- RPS (2015)
GIS Databases
-Bush Forever

(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

Proposed clearing is not likely to be at variance to this Principle

The closest watercourse to the proposed clearing is Chandala Brook occurring 30 kilometres east and the closest mapped wetland to the proposed clearing is Carabooda Lake, a resource enhancement sumpland, occurring 4.5 kilometres east of the application area.

Given the distance to the nearest wetland and watercourse, the proposed clearing is not likely to cause deterioration in the quality of surface water.

Groundwater salinity mapped within the application area is 500 -1000 milligrams per litre of total dissolved soils which is considered low. Given this, the highly vegetated local area (40 per cent of native vegetation remaining within a 10 kilometre radius) and the small area of clearing proposed (1.98 hectares), it is not considered for the proposed clearing to cause the deterioration of underground water.

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

Methodology

GIS Databases
-Hydrography, linear
-Geomorphic wetland database
-Groundwater salinity

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

Comments

Proposed clearing is not likely to be at variance to this Principle

The closest watercourse to the proposed clearing is Chandala Brook occurring 30 kilometres east and the closest mapped wetland to the proposed clearing is Carabooda Lake, a resource enhancement sumpland, occurring 4.5 kilometres east of the application area.

The local area (10 kilometre radius) is considered highly vegetated with approximately 40 per cent of native vegetation remaining. Given this, the distance to the nearest wetland and watercourse and the small area of clearing proposed (1.98 hectares), it is not considered for the proposed clearing to cause or exacerbate flooding.

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

Methodology

GIS Databases
-Hydrography, linear
-Geomorphic wetland database
-NWLRA, Extent of Native Vegetation

Planning instruments and other relevant matters.

Comments

The proposed clearing of 1.98 hectares within Lot 9025 on Deposited Plan 405189 Alkimos is for the purpose of a beach access track. Approximately 0.26 hectares of this proposed clearing area is for the access track and 1.72 hectares is for the access track batters and a temporary carpark.

The access track is required to provide a formalised access pathway through the foreshore reserve to the beach for the adjacent Alkimos Beach development. Currently there is no access and the applicant seeks to formalise access for current and future residents of the development for the 2015-2016 summer period. The proposed access track within the application area is three metres wide and 500 metres long. Outside of the foreshore reserve area in the Urban zoned land adjacent, a pedestrian pathway and temporary parking area is also required within the application area. The access track also incorporates a turning area for emergency and Surf Life Saving vehicles (RPS 2015).

The Western Australian Planning Commission (WAPC) approved a Development Application on 20 April 2015 for the construction of the access path through the foreshore reserve down to Alkimos Beach.

Planning approval (DA2015/199) from the City of Wanneroo has been granted for the pedestrian pathway and temporary parking area within the Urban zoned portion of the application area adjacent to the foreshore reserve. This was granted on 18 March 2015.

To mitigate the environmental harm identified in this assessment, the Department of Environment Regulation has approved the applicant's proposed offset which comprises contributing funds towards the purchase of 1.8 hectares of remnant vegetation to be secured in conservation estate.

The application area is zoned Urban and Parks and Recreation under the Perth Metropolitan Regional Scheme.

Ministerial Statement No 722 sets out environmental conditions for the Metropolitan Regional Scheme (MRS) amendment no. 1029/33 for Alkimos Ellington area. Condition 2 states that an Environmental Management Plan (EMP) is required to be approved by WAPC or local government prior to approving subdivision or development applications that may impact the foreshore reserve (Bush forever site 397). As a result of the Alkimos Beach subdivision, an EMP has been developed and is currently being considered by the WAPC. Within this EMP, there is a requirement to rehabilitate within the foreshore reserve of Alkimos Beach (RPS 2015). The applicant has developed a revegetation plan to support this EMP which includes the revegetation of the batters associated with the proposed access track within the application area. The revegetation plan also proposes to revegetate old four-wheel drive tracks and blow out areas to a total of 1.9 hectares (Tranen 2015).

One Aboriginal Site of Significance is mapped within the application area. It is the applicant's responsibility to ensure that they comply with their responsibilities under the Aboriginal Heritage Act 1972.

Methodology

References
- Tranen (2015)
- RPS (2015)

GIS Databases
- Metropolitan Regional Scheme
-Aboriginal sites of significance

4. References

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

DEC (2012a) Chuditch (Dasyurus geoffroii). Department of Environment and Conservation, Perth, Western Australia.

DEC (2012b) National Recovery Plan for the Woylie Bettongia penicillata ogilbyi. Department of Environment and Conservation, Perth, Western Australia.

DEC (2012) Threatened and Priority Flora List for Western Australia. WA Department of Environment and Conservation, Perth

Government of Western Australia (2014) 2014 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2014. 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 (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: http://naturemap.dpaw.wa.gov.au/.

Parks and Wildlife (2013). Carnaby's cockatoo (Calyptorhynchus latirostris) Recovery Plan. Department of Parks and Wildlife, Perth, Western Australia.

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.

Parks and Wildlife (2015a) Flora and regional advice for clearing application CPS 6628/1 – Landcorp – Lot 9025 on Deposited Plan 405189, Alkimos. Department of Parks and Wildlife, Perth Western Australia. DER ref A945488

RPS (2015) Supporting documentation for clearing application CPS 6628/1 – Landcorp – Lot 9025 on Deposited Plan 405189, Alkimos. DER ref A926731

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.

Tranen (2015) P521E Alkimos Beach Foreshore Management Plan (FMP) Revegetation Plan. Lend Lease Communities P521E-01-Rev3. August 2015. Tranen revegetation systems. DER ref A957965