



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 5665/1

File Number: 2011/003728-1

Duration of Permit: From 19 October 2013 to 19 October 2015

PERMIT HOLDER

Western Australian Land Authority TA LandCorp

LAND ON WHICH CLEARING IS TO BE DONE

Lot 801 on Deposited Plan 62603, Forrestdale

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 19.5 hectares of native vegetation within the area hatched yellow on attached Plan 5665/1.

CONDITIONS

1. Period in which clearing is authorised

The Permit Holder shall not clear native vegetation unless undertaking construction works within 3 months of the authorised clearing being undertaken.

2. 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.

3. Fauna management

- (a) within one week prior to undertaking any clearing authorised under this Permit, the Permit Holder shall engage a *fauna clearing person* to remove and relocate *Isoodon obesulus subsp. fusciventer* (quenda) to an area containing its *critical habitat*.

DEFINITIONS

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

critical habitat means native vegetation comprising of the habitat of flora or fauna species and its population, that is critical for the health and long term survival of the flora or fauna species and its population;

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

fauna clearing person means a person who has obtained a licence from the Department of Parks and Wildlife, issued pursuant to the *Wildlife Conservation Regulations 1970* authorising them to take fauna;

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*

19 September 2013

Plan 5665/1



LEGEND

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



0 ————— 250 m

Scale 1:8735
(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.

Warnock Date 19/9/13

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.: 5665/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Western Australian Land Authority TA LandCorp

1.3. Property details

Property: LOT 801 ON PLAN 62603 (Lot No. 801 ANSTEY FORRESTDAL 6112)
LOT 801 ON PLAN 62603 (Lot No. 801 ANSTEY FORRESTDAL 6112)
Local Government Area: City of Armadale

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 19 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 1001 is described as medium very sparse woodland consisting of jarrah, with low woodland of banksia & casuarina (Shepherd et al, 2001).	The proposal is for the clearing of 19.5 hectares of native vegetation within Lot 801 on Deposited Plan 62603, Forrestdale, for the purpose of undertaking preliminary earthworks for industrial subdivision.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	Five vegetation communities were identified within the application area in a flora and vegetation survey undertaken by Cardno (2010a). Vegetation community Ec occurs within the northernmost portion of the application area and is comprised of a closed grassland of Eragrostis curvula (exotic). This community is in a completely degraded (Keighery, 1994) condition.
Mapped Hedde Vegetation Southern River Complex consists predominantly of open woodland of Corymbia calophylla (Marri), Eucalyptus marginata (Jarrah), Banksia species with fringing woodland of Eucalyptus rudis (Flooded Gum) and Melaleuca raphiophylla (Swamp Paperbark) along creek beds (Hedde et al, 1980).		To Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	Vegetation community MpMr occurs within the northern portion of the application area and is comprised of occasional Melaleuca preissiana and Melaleuca raphiophylla over scrub of Kunzea glabrescens over Regelia ciliata and Astartea scoparia. This community is in a good to very good (Keighery, 1994) condition. Vegetation community KgJs occurs within the mid and southern portion of the application area and is comprised of open scrub of Kunzea glabrescens over open low shrubland of Jacksonia sternbergiana and Astartea scoparia over a mixed open herbland. This community is in a good (Keighery, 1994) condition.
			Vegetation community EtAf occurs within the mid and southern portion of the application area and is comprised of open woodland of Eucalyptus totidiana and Allocasuarina fraseriana over an open scrub of Kunzea glabrescens and Adenanthos cygnorum over open low shrubland of Conostylis aculeata and Patersonia occidentalis. This community is in very good to excellent (Keighery, 1994) condition.
			Vegetation community Rc occurs within the southernmost portion of the application area and is comprised of heath of Regelia ciliata with emergent Kunzea glabrescens and Melaleuca preissiana. This community is in good to very good (Keighery, 1994) condition.

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 at variance to this Principle

The applicant proposes to clear 19.5 hectares of native vegetation within Lot 801 on Deposited Plan 62603, Forrestdale, for the purpose of undertaking preliminary earthworks for industrial subdivision. The vegetation under application ranges from completely degraded to excellent (Keighery, 1994) condition, with the majority of the vegetation in a very good (Keighery, 1994) condition. The degraded areas are largely associated with the western and northern extents of the application area.

The proposed clearing falls within a conservation category dampland (approximately 3.56 hectares), a resource enhancement category dampland (approximately 9.19 hectares) and a multiple use category dampland (approximately 2.38 hectares), which is indicated by the dominance of riparian vegetation on site. Conservation category wetlands are the highest priority wetlands for protection and conservation as they support a high level of ecological functions and attributes (Water and Rivers Commission, 2001). The conservation category dampland included within the application area is a high value vegetated remnant of a once extensive dampland system (DPaW, 2013).

Five vegetation communities occur within the application area, with the most prevalent species including *Melaleuca preissiana*, *Melaleuca rhapsiophylla*, *Eucalyptus todtiana*, *Allocasuarina fraseriana*, *Kunzea glabrescens* and *Regelia ciliata* (DER, 2013 & Cardno, 2010a). A *Melaleuca* woodland and scrubland of *Kunzea glabrescens* over a dense shrubland of *Regelia ciliata* occurs within the northern portion of the application area, with a transition to an open woodland of *Eucalyptus todtiana* and *Allocasuarina fraseriana* with reduced understorey density in the mid portion of the application area. The density of the vegetation increases within the south eastern portion of the application area with thickets of *Kunzea glabrescens* and *Regelia ciliata* (DER, 2013 and Cardno, 2010a).

Several Priority flora species have been recorded in the local area (10 kilometre radius). The closest of these, a priority 4 species, has been mapped approximately 100 metres north east of the application area. This species is an erect shrub with a preference for winter wet depressions. A flora survey undertaken in October 2010 did not identify the presence of any rare or priority flora species within the application area (Cardno, 2010a).

The closest priority ecological community (PEC) (priority 3) is mapped approximately 570 metres east of the application area and is known as 'low lying *Banksia attenuata* woodlands or shrublands'. The vegetation under application is not representative of this PEC.

The application area is within a confirmed Carnaby's cockatoo breeding area and a roost area has been mapped 1.8 kilometres north west. The application area does not contain any large trees suitable to be utilised as breeding habitat for this species, and foraging habitat on site consists of scattered *Eucalyptus todtiana* and *Banksia illicifolia*. The understorey vegetation on site is very dense (DER, 2013) in parts, and likely to provide suitable habitat for ground-dwelling indigenous fauna such as quenda (*Isododon obesulus* subsp. *fusciventer*).

The local area surrounding the proposed clearing (10 kilometre radius) has approximately 25 per cent pre-European vegetation remaining.

Lot 801 is recognised as part of a 'Regionally significant but not contiguous linkage' by the Western Australian Planning Commission (WAPC, 2000), and a 'Regional Ecological Linkage' under the City of Armadale's (2009) Local Biodiversity Strategy. The linkage passes through the adjacent Bush Forever Site 342 known as 'Anstey/Keane Dampland and Adjacent Bushland, Forrestdale', and links with Forrestdale Lake to the south. The removal of the vegetation under application may decrease the effectiveness of this linkage, contributing towards landscape fragmentation and may limit the movement of organisms within, and across, the landscape.

The disturbance caused by 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 majority of the vegetation under application is in a very good (Keighery, 1994) condition, forms part of an ecological linkage, includes habitat for ground dwelling indigenous fauna, and vegetation associated with a conservation category wetland. Therefore the proposed clearing is at variance to this Principle.

The proponent undertook an agreement ('Negotiated Planning Solution') with the Western Australian Planning Commission (WAPC) which involved approximately 40.38 hectares of land being transferred from the proponent to the vesting authority of the WAPC, whereby all of this land is now included within Bush Forever Site 342. The land transfer was finalised in 2009, and allowed Lot 801 (including the current application area) to be zoned as 'industrial purposes', allowing for future development.

Methodology

References:

- Keighery (1994)
- DER (2013)
- Western Australian Herbarium (1998-)
- Water and Rivers Commission (2001)
- DPaW (2013)

-WAPC (2000)
-City of Armadale (2009)

GIS Databases:
-NLWRA, Current 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 at variance to this Principle

There are several conservation significant fauna species mapped within the local area (10 kilometre radius) including, *Calyptorhynchus baudinii* (Baudin's cockatoo), *Calyptorhynchus latirostris* (Carnaby's cockatoo), *Dasyurus geoffroii* (chuditch), *Phascogale tapoatafa* subsp. *tapoatafa* (southern brush-tailed phascogale), *Morelia spilota* subsp. *imbricata* (carpet python), *Hydromys chrysogaster* (water-rat), *Synemon gratiosa* (graceful sunmoth), *Macropus irma* (western brush wallaby) and *Isoodon obesulus* subsp. *fusciventer* (Quenda) (DPaW, 2007-).

The application area is within a known Carnaby's cockatoo breeding area and within 1.8 kilometres of a known roost area. The application area does not contain any large trees (with a diameter at breast height of greater than 50 centimetres) suitable to be utilised as breeding habitat by this species (Harewood, 2010).

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 application area contains scattered occurrences of *Banksia*, *Allocasuarina* and *Eucalyptus* species, and foraging evidence in the form of chewed *Eucalyptus todtiana* seeds was identified in a fauna habitat survey of the application area (Harewood, 2010). Basic ecological theory, expert opinion and recent evidence, suggests that the remaining native and pine plantation foraging habitat on the Swan Coastal Plain is just sufficient to support the current population of Carnaby's cockatoo. Therefore any reduction in the amount of food source will result in a reduction in the carrying capacity of the region and therefore a decline in the population of Carnaby's cockatoo.

The understorey vegetation on site is very dense in parts (DER, 2013) and provides suitable habitat for ground-dwelling indigenous fauna such as quenda (*Isoodon obesulus* subsp. *fusciventer*). This species is listed as priority 5 under the Wildlife Conservation Act 1950. Diggings of this species were observed on site (Harewood, 2010). Prior to the commencement of clearing, it is recommended that any quenda identified on site be removed and relocated to an area of equally suitable habitat.

There was no evidence of any other fauna species utilising the application area identified in a fauna habitat survey (Harewood, 2010) or site inspection undertaken by DER (2013).

Lot 801 is recognised as part of a 'Regionally significant but not contiguous linkage' by the Western Australian Planning Commission (WAPC, 2000), and a 'Regional Ecological Linkage' under the City of Armadale's (2009) Local Biodiversity Strategy. The linkage passes through the adjacent Bush Forever Site 342 known as 'Anstey/Keane Dampland and Adjacent Bushland, Forrestdale', and links with Forrestdale Lake to the south. The removal of the vegetation under application may decrease the effectiveness of this linkage, contributing towards landscape fragmentation and may limit the movement of organisms within, and across, the landscape.

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

The proponent undertook an agreement ('Negotiated Planning Solution') with the Western Australian Planning Commission (WAPC) which involved approximately 40.38 hectares of land being transferred from the proponent to the vesting authority of the WAPC, whereby all of this land is now included within Bush Forever Site 342. The land transfer was finalised in 2009, and allowed Lot 801 (including the current application area) to be zoned as 'industrial purposes', allowing for future development.

Methodology References:
-DPaW (2007-)
-DER (2013)
-City of Armadale (2009)
-Harewood (2010)
-Valentine and Stock (2008)
-WAPC (2000)

(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

The closest mapped species of rare flora to the application area is a tuberous perennial herb, with a preference for moist grey-black sands and winter-wet swamps (Western Australian Herbarium, 2008-). This species flowers from September to October and has been mapped approximately 1.5 kilometres south west of the application area.

A flora survey of the application area undertaken in October 2010 did not identify the presence of any rare or priority flora species (Cardno, 2010a).

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

Methodology References:
 -Western Australian Herbarium (1998-)
 -Cardno (2010a)
 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**
 The closest threatened ecological communities (TEC's) to the application area are the 'shrublands and woodlands on Muchea Limestone' and 'Shrublands on dry clay flats', both recognised as endangered, as endorsed by the Minister for Environment. These TEC's are located approximately 770 metres north east and one kilometre south west of the application area respectively.
 The flora survey identified that the vegetation on site is most closely associated with Floristic Community Types 6, 11 and 24 (Cardno, 2010a). These community types are not listed as TEC's at a state or federal level.
 The proposed clearing is not likely to be at variance to this Principle.

Methodology References:
 -Cardno (2010b)
 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**
 Aerial imagery indicates that there is approximately 25 per cent pre-European vegetation remaining within the local area (10 kilometre radius).
 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.
 The City of Armadale, Beard Vegetation Association (1001) and Heddle Vegetation Complex (Southern River Complex) retain approximately 77, 25 and 20 per cent of pre-European vegetation respectively.
 The application area contains vegetation predominantly in a very good (Keighery, 1994) condition, provides habitat for conservation significant fauna, contributes towards an ecological corridor, and falls within a conservation category wetland. Therefore, the vegetation under application has environmental value, however the area under application falls within a constrained area.
 Given the vegetation representations outlined above, the proposed clearing is not likely to be at variance to this Principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (per cent)	Extent in DEC Managed Lands (per cent)
IBRA Bioregion*				
Swan Coastal Plain	1,501,209	587,833	39	35
Shire*				
City of Armadale	55,949	43,055	77	76
Beard Vegetation Association in Bioregion*				
1001	57,410	14,152	25	6
Heddle Vegetation**				
Southern River Complex	57,979	11,501	20	2
Government of Western Australia (2013)* Heddle et al (1980) **				

Methodology **References:**
-Commonwealth of Australia (2001)
-Government of Western Australia (2013)
-Mattiske and Havel (1998)
-Hedde et al (1980)
-EPA (2006)

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 at variance to this Principle**
The majority of the proposed clearing lies within areas identified in the Geomorphic Wetlands Swan Coastal Plain dataset. A conservation category dampland (seasonally waterlogged basin) comprises approximately 3.56 hectares of the application area, a resource enhancement category dampland comprises approximately 9.19 hectares of the application area and a multiple use category dampland comprises approximately 2.38 hectares of the application area. Forrestdale Main Drain occurs directly adjacent to the application area.

The proposed clearing is also located approximately 60 to 150 metres north of a Conservation category sumpland (seasonally inundated basin). Conservation category wetlands are the highest priority wetlands for protection and conservation as they support a high level of ecological functions and attributes (Water and Rivers Commission, 2001).

A site inspection undertaken by DER (2013) identified riparian vegetation, including *Melaleuca* sp., *Kunzea glabrescens* and *Regelia ciliata*, as the dominant vegetation within the application area.

The abovementioned dampland areas were originally all part of the same extensive dampland system and are identified within the Bennett Brook consanguineous suite (natural wetland group). Approximately 24 per cent of the wetland area within the Bennett Brook suite is identified as a dampland and of that only 9.6 per cent is identified as conservation category (DPaW, 2013). The conservation category dampland within the application area is therefore considered significant, as it represents a high value vegetated remnant of a once extensive dampland system.

Given the above, the majority of the vegetation on site is growing in an environment associated with a watercourse or wetland, therefore the proposed clearing is at variance to this Principle.

The proponent undertook an agreement ('Negotiated Planning Solution') with the Western Australian Planning Commission (WAPC) which involved approximately 40.38 hectares of land being transferred from the proponent to the vesting authority of the WAPC, whereby all of this land is now included within Bush Forever Site 342. The land transfer was finalised in 2009, and allowed Lot 801 (including the current application area) to be zoned as 'industrial purposes', allowing for future development. The conservation outcome resulting from the above agreement protects a substantial area of conservation category wetland (approximately 15 hectares) within Bush Forever Site 342.

Methodology **References:**
-Water and Rivers Commission (2001)

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 may be at variance to this Principle**
The soils on site have been mapped by Northcote et al (1960-68) as sandy dunes with intervening sandy and clayey swamp flats. Chief soils are leached sands, sometimes with a clay D horizon below 5 ft, on the dunes and sandy swamps.

A wetland classification report (Cardno, 2010b) recorded the soils on site as a mixture of peaty sand, Bassendean sand and thin Bassendean sand over Guildford formation.

Sandy soils are susceptible to wind erosion and given that the majority of the vegetation under application is in a very good (Keighery, 1994) condition, there is the potential for the proposed clearing to result in wind erosion causing appreciable land degradation if the land is left cleared and undeveloped for a substantial period of time.

Sandy soils are highly permeable and thus not typically susceptible to water erosion, however given that a large portion of the application area occurs within mapped wetlands there is the potential for water erosion and waterlogging to occur post clearing. A wetland reclassification report (Cardno, 2010) identified that the depth of groundwater on site ranges from 1.5 metres to 3 metres below the surface, and following winter rainfall groundwater levels may be up to 1.5 metres higher than minimum groundwater levels. The proposed clearing will exacerbate this rise by removing deep rooted perennials which may lead to waterlogging in areas where groundwater is closest to the surface.

The requirement to undertake construction works within three months of clearing will help to mitigate the effects of wind and water erosion on site.

The proposed clearing may be at variance to this Principle.

Methodology

References:

- Northcote et al (1960-1968)
- Cardno (2010b)
- Keighery (1994)

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 at variance to this Principle

A conservation category dampland comprises approximately 3.56 hectares of the application area and Lot 801 is recognised as part of a 'Regionally significant but not contiguous linkage' by the Western Australian Planning Commission (WAPC, 2000), and a 'Regional Ecological Linkage' under the City of Armadale's (2009) Local Biodiversity Strategy. The linkage passes through the adjacent Bush Forever Site 342 known as 'Anstey/Keane Dampland and Adjacent Bushland, Forrestdale', and links with Forrestdale Lake to the south.

The proposed clearing has the potential to impact on the hydrological function of the extensive adjacent wetlands, and result in damage to vegetation within Bush Forever site 342 via sand deposition through wind and water erosion.

The proposed clearing may also contribute towards fragmentation of the regional ecological linkage and increase the likelihood of weeds and dieback spreading into Bush Forever site 342. Weed and dieback management practices will assist in mitigating the risk of spreading weeds and dieback.

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

The proponent undertook an agreement ('Negotiated Planning Solution') with the Western Australian Planning Commission (WAPC) which involved approximately 40.38 hectares of land being transferred from the proponent to the vesting authority of the WAPC, whereby all of this land is now included within Bush Forever Site 342. The land transfer was finalised in 2009, and allowed Lot 801 (including the current application area) to be zoned as 'industrial purposes', allowing for future development.

Methodology

References:

- WAPC (2000)
- City of Armadale (2009)

GIS Databases:

- DEC Tenure
- Bush Forever
- Geomorphic Wetlands, Swan Coastal Plain

(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 at variance to this Principle

The majority of the proposed clearing lies within areas identified in the Geomorphic Wetlands Swan Coastal Plain dataset. A conservation category dampland (seasonally waterlogged basin) comprises approximately 3.56 hectares of the application area, a Resource Enhancement category dampland comprises approximately 9.19 hectares of the application area and a Multiple Use category dampland comprises approximately 2.38 hectares of the application area. Forrestdale Main Drain occurs directly adjacent to the application area.

The clearing will alter the landform of the application area, which may impact the surface and groundwater hydrology, runoff paths and water quality of wetlands within and adjacent to the application area.

The most threatening impact on water quality will be the potential for increased sedimentation, particularly during winter months, as clearing is likely to increase the amount of sediment run off into the adjacent wetland areas.

The requirement to undertake construction works within three months of clearing will help to mitigate the effects of increased sedimentation of nearby wetlands.

Groundwater Salinity is mapped at 500 to 1000 milligrams per litre (marginal) on site. Given this low salinity level, and that the groundwater is only 1.5 to 3 metres below ground level on site, it is not likely the proposed clearing will lead to an increase in groundwater salinity levels.

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

Methodology 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 may be at variance to this Principle

Given that the majority of the application area falls within a mapped wetland, and that groundwater levels on site occur within 3 metres of the ground surface (Cardno, 2010b), the removal of 19.5 hectares of vegetation may lead to an increase in the incidence or intensity of flooding, particularly during winter months.

The requirement to undertake construction works within three months of clearing will help to mitigate the effects of flooding on site.

The proposed clearing may be at variance to this Principle.

Methodology

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

Comments

There were no submissions received from the public for the proposed clearing.

Lot 801 is zoned 'Special Development' under the Armadale Redevelopment Authority Redevelopment Scheme. The proponent plans to use the site for industrial and commercial purposes as part of the Forrestdale Business Park West Precinct 4A and this application is for the purpose of undertaking forward earthworks prior to subdivision. The site is under the jurisdiction of the Metropolitan Redevelopment Authority (MRA).

The proponent has obtained Development Approval for forward earthworks within Lot 801 from the MRA (MRA, 2013).

The proponent undertook an agreement ('Negotiated Planning Solution') with the Western Australian Planning Commission (WAPC) which involved approximately 40.38 hectares of land being transferred from the proponent to the vesting authority of the WAPC, whereby all of this land is now included within Bush Forever Site 342. The land transfer was finalised in 2009, and allowed Lot 801 (including the current application area) to be zoned as 'industrial purposes', allowing for future development.

The EPA has advised that any environmental values that exist within Lot 801 have been adequately offset by LandCorps's transfer of 65 per cent (40.38 hectares) of its landholding to the WAPC for Bush Forever (Site 342). It is advised that while the conservation category dampland within Lot 801 has high environmental value, the conservation outcome resulting from the abovementioned Negotiated Planning Solution protects a substantial area of conservation category wetland in Bush Forever 342 and upland vegetation within a consolidated natural area. It is further advised that the application area is separated from Bush Forever Site 342 by Forrestdale Main Drain, and that this separation is an appropriate boundary between this conservation area and the proposed industrial area (EPA, 2012).

The City of Armadale (2013) has advised that an acid sulphate soil management plan and accompanying dewatering management plan covering all works should be produced to the satisfaction of the Department of Parks and Wildlife. It is advised that a Dieback Management Plan should be requested in accordance with City policy ENG 9 Managing Phytophthora Dieback and that any quenda identified on site should be relocated prior to clearing.

Methodology References:
-EPA (2012)
-City of Armadale (2013)

4. References

- Cardno (2010a) Flora and Vegetation Survey of Forrestdale Business Park West. Additional information for CPS 5665/1, DER Ref A646113.
- Cardno (2010b) Wetland Reclassification Report. Prepared for Armadale Redevelopment Authority. Additional Information for CPS 5665/1, DER Ref A646111.
- City of Armadale (2009) City of Armadale Local Biodiversity Strategy: Complete Report, prepared by Ironbark Environment and Eco Logical Australia.
- City of Armadale (2013) Additional Information for Clearing Application CPS 5665/1, Lot 801 on Deposited Plan 62603, Banjup. DER Ref: A651302
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- DER (2013) Site Inspection Report for Clearing Permit Application CPS 5665/1. Site inspection undertaken 16/07/2013. Department of Environment Regulation, Western Australia (DER Ref A665978)
- DPaW (2007 -) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/>. Accessed August 2013.
- DPaW (2013) Response to request for regional advice for CPS 5346/1. Received 01/08/13. Department of Parks and Wildlife, Western Australia (DEC Ref. A659117).
- EPA (2012) Additional information for CPS 5665/1. Office of the Environmental Protection Authority, Western Australia. DER Ref A642629.
- Government of Western Australia. (2013). 2012 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2012. WA Department of Environment and Conservation, Perth.
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