



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 6749/1
Permit Holder:	Minister for Transport
Duration of Permit:	25 June 2016 – 25 June 2023

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 dredging operations.

2. Land on which clearing is to be done

Lot 15446 on Deposited Plan 40340 (Reserve 47831), Ocean Reef
Lot 10519 on Deposited Plan 216093 (Reserve 39014), Ocean Reef

3. Area of Clearing

The Permit Holder must not clear more than 0.67 hectares of native vegetation within the area cross hatched yellow on attached Plan 6749/1.

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. Type of clearing authorised

The Permit Holder shall not clear native vegetation unless dredging operations commence within one month of the authorised clearing being undertaken.

PART II – MANAGEMENT CONDITIONS

6. 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:

- avoid the clearing of native vegetation;
- minimise the amount of native vegetation to be cleared; and
- reduce the impact of clearing on any environmental value.

7. 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*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no *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:

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.



Simon Weighell
A/MANAGER
CLEARING REGULATION

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

26 May 2016

Plan 6749/1

31.759248°S

31.759248°S

115.725929°E

115.730277°E



115.725929°E

115.730277°E

31.761359°S

31.761359°S

Legend

-  Cadastre
-  Roads
-  Imagery
-  Clearing Instruments Activities



1:2,182

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

S. Weighell
Simon Weighell

Date *26/5/16*

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



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1. Application details

1.1. Permit application details

Permit application No.: 6749/1
Permit type: Purpose Permit

1.2. Applicant details

Applicant's name: Department of Transport

1.3. Property details

Property: LOT 15446 ON PLAN 40340, OCEAN REEF
LOT 10519 ON PLAN 216093, OCEAN REEF
Local Government Authority: JOONDALUP, CITY OF
DER Region: Greater Swan
DPaW District: SWAN COASTAL
Localities: OCEAN REEF

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.67		Mechanical Removal	Dredging operations

1.5. Decision on application

Decision on Permit Application: Granted
Decision Date: 26 May 2016
Reasons for Decision: The clearing application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the *Environmental Protection Act 1986*, and it has been concluded that the proposed clearing may be at variance to clearing principles (g) and (h), and is not likely to be at variance to the remaining clearing principles.

Through assessment it has been determined that the clearing will lead to the loss of 0.12 hectares of native vegetation in very good (Keighery 1994) condition within a Bush Forever site. Given the relatively small size of clearing and weed management conditions placed on the permit, no significant residual impacts to the Bush Forever site are expected.

Through assessment it has also been determined that the clearing may result in wind erosion impacts. A condition has been placed on the permit to require dredging operations to commence within a month after clearing to mitigate potential wind erosion risks.

State policies and other relevant policies have been taken into consideration in the decision to grant a clearing permit.

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 129 is described as Bare areas; dune sand (Shepherd et al. 2001). The mapped Mattiske vegetation complex is Quindalup Complex: Coastal dune complex consisting mainly of two alliances - the strand and fore-dune alliance and the mobile and stable dune alliance. Local variations include the low closed forest of <i>Melaleuca lanceolata</i> (Rottnest Teatree) - <i>Callitris preissii</i> (Rottnest Island Pine) and the closed scrub of <i>Acacia rostellifera</i> (Summer-scented Wattle) (Mattiske and Havel, 1998).	The proposed clearing of 0.67 hectares within Lot 15446 on Plan 40340 and Lot 10519 on Plan 216093, Ocean Reef is for the purpose of dredging operations which includes stockpiling dredge material and removing a sand stockpile.	Completely Degraded; No longer intact, completely/almost completely without native species (Keighery, 1994). To Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994)	The description and condition of the vegetation under application was determined by a site inspection undertaken by Department of Environment Regulation (DER, 2015). The area under application consists of coastal heath comprising <i>Melaleuca cardiophylla</i> , <i>Lomandra maritima</i> and other coastal shrub species in degraded to very good (Keighery 1994) condition. Degraded areas included grassy weeds and the introduced sea spinach (<i>Tetragonia decumbens</i>). Areas of <i>Spinifex longifolius</i> also occur closest to the ocean. Areas in

completely degraded (Keighery 1994) condition consisted of bare white sand (DER, 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 area under application consists of coastal heath comprising *Melaleuca cardiophylla*, *Lomandra maritima* and other coastal shrub species in degraded to very good (Keighery 1994) condition. Degraded areas included grassy weeds and the introduced sea spinach (*Tetragonia decumbens*). Areas of *Spinifex longifolius* also occur closest to the ocean (DER 2015).

Approximately 0.58 hectares of the vegetation under application falls within Bush Forever Site No. 325 which is known as 'Coastal strip from Burns Beach to Hillarys' and is part of a north-south ecological linkage.

Two rare flora species has been recorded within the local area (10 kilometre radius). Suitable habitat for these species does not occur within the application area.

Fourteen records of priority flora species have been mapped within the local area (10 kilometre radius), the closest being *Grevillea* sp. Ocean Reef (D. Pike Joon 4) (Priority 1). A population of approximately 40-60 plants of this species is located 240 metres east of the application area and is separated from the application area by a road. The application area in very good (Keighery 1994) condition (0.12 hectares) may contain habitat for this species. As the majority of the application area is in a degraded to completely degraded (Keighery 1994) condition (0.55 of the 0.67 hectares) and is separated by a road from the population of Priority 1 species, it is not likely for the proposed clearing to significantly impact this population.

The remaining priority flora species have been recorded within different soil and vegetation types as the application area. Given the relatively small clearing size and that the application area is surrounded by similar vegetation, it is not likely for the proposed clearing to significantly impact on priority flora species.

Forty eight fauna species of conservation significance have been recorded within the local area (10 kilometre radius). The proposed clearing is unlikely to impact on significant fauna habitat as the application area is relatively small and is surrounded by vegetation that contains similar habitat in the same or better condition as the area under application.

The closest Priority Ecological Community (PEC) and Threatened Ecological Community (TEC) to the application area are, "Southern *Eucalyptus gomphocephala*-*Agonis flexuosa* woodlands" (priority 3), located approximately 2.2 kilometres north and "Banksia attenuata woodland over species rich dense shrublands" (Endangered), located 9 kilometers from the application area. The application area consists of *Melaleuca cardiophylla*, *Lomandra maritima* and other coastal shrub species in completely degraded to very good (Keighery 1994) condition on sand dunes and is therefore not likely to represent either PEC or TEC.

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

Methodology

References:

- DER (2015)
- Keighery (1994)

GIS Databases:

- Sac Bio datasets (October 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

There are 48 fauna species of conservation significance that have been recorded within the local area (10 kilometre radius) of the proposed clearing with most being migratory sea bird species and sea turtle species. However other species include Carnaby's cockatoo (*Calyptorhynchus latirostris*), Western brush wallaby (*Macropus irma*), Southern brown bandicoot (*Isodon obesulus*) and Carpet python (*Morelia spilota* subsp. *imbricata*) (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 Western brush wallaby has a preference for open forest and woodlands (DEC, 2007). The Southern brown bandicoot has a preference for dense scrubby, often swampy, vegetation with dense cover particularly associated with wetlands on the Swan Coastal Plain (DEC, 2007). The Carpet python has the preference for arid and semi-arid coastal and inland habitats, *Banksia* woodland, eucalypt woodlands, and grasslands (DEC 2007).

The area under application consists of coastal heath comprising *Melaleuca cardiophylla*, *Lomandra maritima* and other coastal shrub species in degraded to very good (Keighery 1994) condition. Degraded (Keighery 1994) condition areas included grassy weeds and the introduced sea spinach (*Tetragonia decumbens*). Areas of *Spinifex longifolius* also occur closest to the ocean (DER 2015).

The proposed clearing of 0.67 hectares occurs within a larger remnant of vegetation that is likely to contain similar habitat in better condition than the application area. Therefore, it is not likely that the application area contains significant habitat for fauna.

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

Methodology

References:

- DER (2015)
- Keighery (1994)
- DEC (2007)
- Parks and Wildlife (2007-)
- Parks and Wildlife (2013)

(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

Two records of rare flora have been mapped within the local area (10 kilometre radius). The first species inhabits slopes or gullies of limestone ridges and outcrops (Western Australian Herbarium, 1998-). The second species prefers white sand over limestone in areas of low coastal cliffs (Western Australian Herbarium, 1998-). No suitable habitat for either species was observed during a site inspection undertaken by DER (2015), therefore it is unlikely either species would be present.

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

Methodology

References:

- DER (2015)
- Western Australia Herbarium (1998-)

GIS Databases:

- Sac Bio Datasets (October 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 Proposed clearing is not likely to be at variance to this Principle

One Threatened Ecological Community (TEC) occurs within the local area (10 kilometre radius) of the application being *Banksia attenuata* woodland over species rich dense shrublands and is recorded 9 kilometres from the application area.

The application area consists of coastal heath vegetation and does not contain *Banksia attenuata* woodland (DER, 2015). Given this and the distance to the nearest TEC, the proposed clearing is not likely to be at variance to this Principle.

Methodology

References:

- DER (2015)

GIS Databases:

- Sac bio datasets (October 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 application area has been mapped as Heddle vegetation complex Quindalup complex (Qw) of which there is 62 per cent pre-European extent remaining within the Swan Coastal Plain bioregion (Parks and Wildlife, 2015).

The application area is located within the City of Joondalup, within which there is approximately 11 per cent pre-European extent remaining (Government of Western Australia, 2014). The local area (10 kilometre radius) has approximately 25 per cent native 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). The Environmental Protection Authority (2006) recognises the Perth Metropolitan Region as a 'constrained area', providing for the variation of the minimum percentage of vegetation complexes remaining to 10 per cent of the pre-European extent. The mapped vegetation complex has more than 10 per cent pre-European vegetation remaining.

Given the above the application area is not considered likely to contain significant remnant vegetation in an extensively cleared area. Therefore, the proposed clearing is not likely to be at variance to this principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DPaW Managed Lands (%)
IBRA Bioregion*				
Swan Coastal Plain	1,501,221	580,697	38	37
Shire*				
City of Joondalup	9,662	1,065	11	8
Heddle vegetation complex in Bioregion**				
Quindalup	52,250	32,885	62	9

Methodology

References:

- Commonwealth of Australia (2001)
- EPA (2006)
- Government of Western Australia (2014)*
- Parks and Wildlife (2015)**

GIS Databases:

- NLWRA, Current Extent of Native 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 Proposed clearing is not likely to be at variance to this Principle

No wetlands or watercourses have been mapped within close proximity to the application area.

No riparian or wetland dependent vegetation was observed within the application area during a site inspection by the Department of Environment Regulation (DER, 2015). Given this, the proposed clearing is not likely to be at variance to this Principle.

Methodology

References:

- DER (2015)

GIS Databases:

- Hydrography, linear

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

Comments Proposed clearing may be at variance to this Principle

The application area is mapped within soil type A13. A13 soils are described as coastal dune formations backed by the low-lying deposits of inlets and estuaries. Chief soils are calcareous sands on the dunes (Northcote et al. 1960 – 1968).

A site inspection undertaken by DER (2015) identified the area under application comprises of soils and a topography that is particularly susceptible to erosion. The proposed clearing extends up to the foreshore dune. Therefore the proposed clearing may cause appreciable land degradation in the form of wind erosion. The proposed clearing may be at variance to this principle.

A condition has been included on the permit to ensure clearing does not take place more than one month before the proposed dredging operations to reduce the potential for significant wind erosion. The applicant has advised that the proposed clearing will be done in stages over five years. In addition, hydro-mulch or mulched vegetation will be spread over the areas no longer required to prevent wind erosion.

Methodology References:
- DER (2015)
- Northcote et al. (1960 – 1968)

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 **Proposed clearing may be at variance to this Principle**
0.58 hectares of the proposed clearing occurs within Bush Forever Site No. 325 known as 'Coastal strip from Burns Beach to Hillarys'. This includes 0.46 hectares in completely degraded to degraded (Keighery, 1994) condition and 0.12 hectares in very good (Keighery, 1994) condition (DER, 2015). Indirect impacts to adjoining areas of the Bush Forever site may also occur due to the potential for the introduction or spread of weeds. Given this the proposed clearing may be at variance to this Principle.

Given the relatively small size of the proposed clearing and that weed management measures will be conditioned on the permit, no significant residual impacts to the Bush Forever site are expected

Methodology References:
-DER (2015)
-Keighery (1994)

GIS Databases:
- Bush Forever
- Parks and Wildlife, 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 **Proposed clearing is not likely to be at variance to this Principle**
No wetlands or watercourses have been mapped within close proximity to the application area.

The groundwater salinity within the application area is mapped between 500-1000 milligrams per litre of Total Dissolved Solids. This level of groundwater salinity is classified as marginal.

The proposed clearing is not likely to significantly impact surface or groundwater quality given the predominantly degraded condition of the vegetation and the relatively small size of the application area.

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

Methodology GIS Databases:
-Hydrography, linear
-Groundwater salinity
-Soils, statewide

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

Comments **Proposed clearing is not likely to be at variance to this Principle**
The chief soils mapped within the application area are calcareous sands on the dunes (Northcote et al. 1960 – 1968).

Given the sandy nature of the soils within the application area, the proposed clearing is not likely to cause or exacerbate the incidence or intensity of flooding. Therefore, the proposed clearing is not likely to be at variance to this principle.

Methodology References:
-Northcote et al. (1960-68)

GIS Databases:
-Soils, statewide

Planning instruments and other relevant matters.

Comments The proposed clearing within Lot 15446 on Plan 40340 and Lot 10519 on Plan 216093, Ocean Reef is for the purpose of conducting maintenance dredging works at the Ocean Reef Boat Harbour to maintain navigable channels. The applicant wishes to dispose clean dredge material within an access gully adjacent to the Ocean Reef Sea Sports Club. In addition, the applicant is planning to remove an approximate quantity of 5000 cubic metres of sand from an existing northern beach stockpile to maintain the beach amenity and to enable a large buffer for future sand stockpiling.

A letter was sent to the applicant dated 8 December 2015 advising that the proposed clearing occurs within a conservation area and may cause appreciable wind erosion. A response was received from the applicant on the 29 April 2016 reducing the proposed clearing area from 0.985 hectares to 0.67 hectares and outlining proposed wind erosion mitigation measures.

The Department of Planning has advised that the subject site is reserved as Parks and Recreation under the Metropolitan Regional Scheme and has the Bush Forever implementation category of Bush Forever (existing or proposed) (Department of Planning, 2015). State Planning Policy 2.8 – Bushland Policy for the Perth Metropolitan Region, section 5.1.2.1 outlines specific policy measures for Bush Forever reserves, namely that there is a general presumption against the clearing of regionally significant bushland, except where the proposal is consistent with the overall purpose... or can be reasonably justified with regard to wider environmental, social, economic or recreation needs,... and reasonable offset strategies are secured to offset any loss of regionally significant bushland, where appropriate and practicable (Department of Planning, 2015).

As the purpose of the proposed clearing is inconsistent with the zoning of the land (Parks and Recreation), under the Perth Metropolitan Regional Scheme, development approval is required from the Western Australian Planning Commission (WAPC). The applicant has advised an application for development approval from the WAPC has been submitted.

No Aboriginal Sites of Significance are mapped within the application area.

No public submissions have been received.

Methodology References:
-Department of Planning (2015)

GIS Databases:
-Aboriginal Sites of Significance
-Perth Metropolitan Regional Scheme

4. References

- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- DEC (2007) DEC Fauna Habitat Notes.xls. February 2007. Department of Environment and Conservation, Western Australia.
- DER (2015) Site Inspection Report for Clearing Permit Application CPS 6749/1 – Department of Transport. Site inspection undertaken 23 November 2015. Department of Environment Regulation, Western Australia (DER ref A1011309).
- Department of Planning (2015) Bush Forever advice for clearing application CPS 6749/1 - Department of Planning. DER ref A1003189
- 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 (2014) 2014 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2014. WA Department of Parks and Wildlife, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Mattiske, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.
- Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.
- 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.
- 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.
- Western Australian Herbarium (1998-) FloraBase - The Western Australian Flora. Department of Parks and Wildlife. <http://florabase.dpaw.wa.gov.au/>