



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 4527/1
Permit Holder:	City of Armadale
Duration of Permit:	5 December 2011 – 5 December 2016

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 road reconstruction and drain realignment.

2. Land on which clearing is to be done

Lot 5000 on Deposited Plan 63040 (Harrisdale 6112)
Skeet Road reserve (Harrisdale 6112)
Reilly Road reserve (Harrisdale 6112)
Balannup Road reserve (Harrisdale 6112)

3. Area of Clearing

The Permit Holder must not clear more than 4.42 hectares of native vegetation within the area cross hatched yellow on attached Plan 4527/1.

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

This Permit authorises the Permit Holder to clear native vegetation for activities to the extent that the Permit Holder has the power to clear native vegetation for those activities under the *Local Government Act 1995* or any other written law.

6. Compliance with Assessment Sequence and Management Procedures

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

PART II – ASSESSMENT SEQUENCE AND MANAGEMENT PROCEDURES

7. **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.

8. **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) shall only move soils in *dry conditions*;
- (c) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (d) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

DEFINITIONS

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

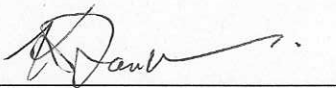
dieback means the effect of *Phytophthora* species on native vegetation;

dry conditions means when soils (not dust) do not freely adhere to rubber tyres, tracks, vehicle chassis or wheel arches;

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

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

weed/s means a species listed in Appendix 3 of the "Environmental Weed Strategy" published by the Department of Conservation and Land Management (1999), and plants declared under section 37 of the *Agriculture and Related Resources Protection Act 1976*.



Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH



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

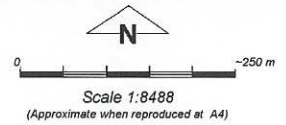
10 November 2011

Plan 4527/1

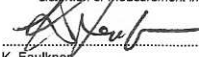


LEGEND

- Clearing Instruments**
-  Areas Approved to Clear
 -  Cadastre
- Swan Coastal Plain Central
20cm Orthomosaic - Landgate
2009



Geocentric Datum Australia 1994
 Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

 Date 10/11/11
 K. Faulkner

Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



* Project Data. This data has not been quality assured. Please contact map author for details.



1. Application details

1.1. Permit application details

Permit application No.: 4527/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: City of Armadale

1.3. Property details

Property: LOT 5000 ON PLAN 63040 (Lot No. 5000 REILLY HARRISDALE 6112)
ROAD RESERVE (HARRISDALE 6112)
ROAD RESERVE (HARRISDALE 6112)
ROAD RESERVE (HARRISDALE 6112)
ROAD RESERVE (HARRISDALE 6112)

Local Government Area: City of Armadale

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
4.42		Mechanical Removal	Infrastructure Maintenance

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 10 November 2011

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 Type 1001: Medium very sparse woodland; jarrah, with low woodland; banksia & casuarina (Shepherd, 2009).	The application is to clear 4.42ha of vegetation within Lot 5000, Skeet Road, Reilly Road and Balannup Road reserves, for the purpose of road reconstruction and drain realignment. The vegetation under application is considered to be in a degraded to good (Keighery, 1994) condition (DEC, 2011). The vegetation in a good (Keighery, 1994) condition (DEC, 2011) comprises of a small section at the northern end of Lot 5000.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The condition and the description of the vegetation under application has been established through a site visit conducted by Department of Environment and Conservation (DEC) officers on the 14 September 2011 (DEC, 2011).
Hedde Vegetation Serpentine River Complex: Closed scrub of Melaleuca species and fringing woodland of Eucalyptus rudis (Flooded Gum) - Melaleuca raphiophylla (Swamp Paperbark) along streams (Mattiske and Havel, 1998).	The vegetation under application consists mainly of Melaleuca species with a ground cover of weeds. There areas under application are subjected to ongoing disturbances from the many vehicle and motorbike tracks within the application area (DEC, 2011).	To Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	

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 to clear up to 4.42 hectares of native vegetation within Lot 5000, Skeet Road reserve, Reilly Road reserve and Balannup Road reserve for the purpose of road reconstruction and drain realignment.

The majority of the vegetation under application is considered to be in a degraded (Keighery, 1994) condition (DEC, 2011) with a small section of vegetation within Lot 5000 considered to be in a good (Keighery, 1994) condition (DEC, 2011). The vegetation under application comprised predominately of *Melaleuca* sp. with a ground cover of weeds. Sections of the application area have tracks running through it, possibly used by motorbikes and vehicles.

Given the large proportion of the application area to be in a degraded (Keighery, 1994) condition and the ongoing disturbance from tracks existing in the application area, the proposed clearing is not likely to be at variance to this clearing principle.

Methodology DEC (2011)
Keighery (1994)
GIS Databases:
- SAC Biodatasets - Accessed 13/9/11

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

Comments **Proposal is not likely to be at variance to this Principle**
Several fauna species of conservation significance have been recorded within the local area (10km radius), this includes *Isoodon obesulus* subsp. *fusciventer* (Southern Brown Bandicoot).

Fauna scratchings, possibly from *Isoodon obesulus* subsp. *fusciventer* (Southern Brown Bandicoot) species were observed during a recent site inspection within and around Lot 5000. Given that the majority of vegetation under application is considered to be in a degraded (Keighery, 1994) condition (DEC, 2011) and that the vegetation adjacent to the application area is of a higher biodiversity value thus more suitable habitat for the Bandicoot, it is unlikely that the vegetation under application comprises of significant habitat for this species.

Given the above the application is not likely to be at variance to this principle.

Methodology DEC (2011)
DEC (2007-)
Keighery (1994)
GIS Databases:
- SAC Biodatasets – Accessed 13/9/11

(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**
There have been 4 species of Declared Rare Flora (DRF) mapped within a 5km radius of the area under application; *Caladenia huegelii*, *Diuris purdiei*, *Drakaea elastica* and *Lepidosperma rostratum*. The most notable was 16 recordings of *Caladenia huegelii*.

The majority of the vegetation under application is considered to be in a degraded (Keighery, 1994) condition (DEC, 2011). The mapped DRF species appear to be in vegetation areas of a higher biodiversity value thus more suitable than the area under application.

Given the condition of the vegetation under application and the historical and ongoing disturbance to the application area (DEC, 2011), it is unlikely DRF species would exist within the proposed clearing area.

The application is not likely to be variance to this principle.

Methodology DEC (2011)
Keighery (1994)
GIS Database:
- SAC Biodatasets – Accessed 13/9/11

(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**
Several threatened ecological communities (TEC's) are known to exist within a 5km radius of the application

area. The closest mapped TEC has been recorded approximately 800metres away within the bush forever site adjacent to Skeet Road. The recorded TEC is Swan Coastal Plain 10a, shrublands on dry clay flats and comprises of an approximate area of 17 hectares. The soil within the application area is considered to be sandy and clayey swamp flats (Nothcoote 1968).

Given the distance from the known TEC to the application area, that majority of the vegetation under application is in a degraded (Keighery, 1994) condition (DEC, 2011) and that the soil within the recorded TEC in different to the application area, it is unlikely the recorded TEC's within the local area will be impacted upon by the application.

Therefore the application is not likely to be at variance to this principle.

Methodology Northcoote (1968)
GIS Database:
- SAC Biodatasets – Accessed 13/9/11

(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 within the Swan Coastal Plain IBRA Bioregion and has been mapped as comprising of Beard vegetation association 1001 and Heddle vegetation complex, Southern River. The mapped Beard and Heddle vegetation complexes under application have approximately 25 per cent and 21 per cent respectively of their pre-European vegetation remaining.

The National Objectives and Targets for Biodiversity Conservation include a target that prevents the clearance of ecological communities with an extent below 30% of that present pre-European settlement (Commonwealth of Australia, 2001). Both of the mapped vegetation complexes associated with the area under application are below the 30 per cent thresh hold. 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 (5km radius) surrounding the application appears to be extensively cleared, with approximately 25 per cent of its pre-European vegetation remaining. However, approximately 85 per cent of this vegetation is within conservation areas (bush forever sites) and likely to be retained. Furthermore, the vegetation under application is not considered to be a part of an ecological linkage which serves as a corridor for flora and fauna movement between the known conservation areas, therefore the vegetation under application is not considered significant as a remnant.

Given the above the application is not likely to be at variance to this principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion				
Swan Coastal Plain	1,501,209	587,889	39.1	33.3
Shire				
City of Armadale	55,918	43,155	77.18	75.78
Beard Vegetation Association in Bioregion*				
1001	57,410	14,111	24.58	5.70
Heddle Vegetation Complex				
Southern River Complex	57,170.63	12,058.97	21.09	1.65

Methodology Commonwealth of Australia (2001)
EPA (2006)
GIS Databases:
- 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

The vegetation under application is within a Multiple Use sumpland and also contains two watercourses referred to as the Balannup and Skeet drains.

Observations during a site inspection (DEC, 2011) confirmed wetland dependant vegetation does occur in the area under application.

Given that the proposed clearing will incorporate water dependant vegetation, the application is at variance to this principle.

Methodology DEC (2011)
GIS Database:
- ANCA, Wetlands

(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 vegetation under application lies within soil unit Cb39 which is described as 'Sandy dunes with intervening sandy and clayey swamp flats: chief soils are leached sands and sometimes with a clay D horizon below 5 ft, on the dunes and sandy swamps. Associated are various soils in the clayey swamps' (Northcote et al 1960 - 1968).

The clearing of the vegetation under application, which includes riparian vegetation, may lead to soil erosion from bank instability and result in sedimentation of the known watercourse and mapped wetland. However, given that the majority of the vegetation under application is in a degraded (Keighery, 1994) condition (DEC, 2011), the risk is considered to be low and short term.

Given the above, the risk of land degradation is considered to be low and short term therefore the clearing as proposed is not likely to be at variance with this principle.

Methodology DEC (2011)
Keighery (1994)
Northcote et al (1960)
GIS Database:
- SAC Biodatasets – Accessed 13/9/11

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Comments Proposal is not likely to be at variance to this Principle

The bush forever site No.342 (Jandakot Regional Park) is directly adjacent to the Skeet Road reserve. The bushforever site No.342 has a high conservation value and is recognised as being the second most floristically diverse area within the Perth Metropolitan region (DEC, 2011a). The bush forever site No.342 also contains extensive areas of Conservation Category Wetlands.

A recent site inspection undertaken by DEC (2011) identified that the vegetation within the known bush forever site and skeet road reserve were interconnecting with no clear boundary between the two areas. However, the vegetation proposed to be cleared within Skeet Road reserve is approximately 0.2ha and the condition of the vegetation is considered to be degraded (Keighery, 1994), therefore the application is not likely to impact on the conservation value of the bush forever site.

The application is not likely to be at variance to this principle.

The disturbance resulting from the proposed clearing may increase the risk of weeds and dieback spreading into the site. Weed and dieback management practices will assist in mitigating this risk.

Methodology DEC (2011)
Keighery (1994)
GIS Database:
- Bush Forever
- DEC Tenure

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

Comments Proposal is not likely to be at variance to this Principle

The area under application is within a multiple use sumpland which is considered to be seasonally waterlogged basin wetland (DEC, 2011a). Adjacent to Skeet Road reserve application area are two Conservation Category Wetlands (CCW's), the multiple use sumpland and two CCW's are considered to be hydrologically linked (DEC, 2011).

The CCW's form one of the largest remaining high conservation value damplands on the Swan Coastal Plan and is an integral part to the high floristic value of the bush forever site 342, for which extensive areas of the CCWs exist in.

A recent site inspection by DEC (2011) identified riparian vegetation within the application area, therefore the proposed clearing may cause sedimentation to the Multiple Use sumpland and subsequently deterioration of

the adjacent Conservation Category Wetlands that are hydrologically linked to the Multiple Use sumpland. However, given that the majority of the vegetation under application is in a degraded (Keighery, 1994) condition (DEC, 2011), the risk is considered to be low and short term.

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

Methodology DEC (2011)
DEC (2011a)
Keighery (1994)
GIS Database:
- ANCA, Wetlands

(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**
Majority of the vegetation under application is considered to be in a degraded (Keighery, 1994) condition (2011) and is within a multiple use sumpland. The local area is considered to be subjected to seasonal water inundation.

A recent site inspection by DEC (2011) conducted in early spring identified large pools of surface water at the northern entrance to Skeet Road reserve, this was outside of the application area.

Given the small amount of vegetation proposed to be cleared within Skeet Road reserve, along with majority of the vegetation under application is considered to be in a degraded (Keighery, 1994) condition (DEC, 2011), it is considered that the proposed clearing will not increase or exacerbate the incidence or intensity of flooding in the local area, therefore the application is not at variance to this principle.

Methodology DEC (2011)
Keighery (1994)
GIS Database:
- ANCA, Wetlands

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

Comments Lot 5000 is zoned General Rural under the City of Armadale Town Planning Scheme and Urban under the Metropolitan Region Scheme (City of Armadale, 2011).

The City of Armadale has been granted development approval, subject to conditions by the Western Australian Planning Commission to subdivide Lots 800 and 54. The combined area of both Lots equates to 105 hectares and is a part of the City of Armadale's, Heron Park Phases 2 - Local Structure Plan (City of Armadale, 2011a). Lots 800 and 54 are situated between the areas under application.

The City of Armadale has amended the application via correspondence to DEC on 31 October 2011 by removing a larger section of Skeet Road reserve (approximately 2.35ha). The removal of the section of Skeet Road reserve was in response to a letter DEC sent to the applicant which raised concerns about the high conservation value of Skeet Road reserve and the areas adjacent to it. The City of Armadale will review the proposal for Skeet Road reserve and may wish to reapply for this section of Skeet Road reserve in the future (City of Armadale, 2011b).

Methodology City of Armadale (2011)
City of Armadale (2011a)
City of Armadale (2011b)

4. References

- City of Armadale (2011). Information within Clearing Permit application CPS 4527/1. City of Armadale. DEC Ref DOC:A416261
City of Armadale (2011b). Submission received from the City of Armadale in relation to Clearing Permit application 4527/1. City of Armadale. DEC Ref DOC:A445270
City of Armadale (2011a). Information obtained on the 13 September 2011 in relation to Clearing Permit application 4527/1. City of Armadale. DEC Ref DOC:A435282
Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
DEC (2007 -) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/>. Accessed 13/9/2011
DEC (2011) Site Inspection Report for Clearing Permit Application CPS 4527/1, Lot 5000 on Deposited Plan 63040, Skeet, Reilly and Balannup roads reserves. Site inspection undertaken 14/9/2011. Department of Environment and Conservation, Western Australia (TRIM Ref. DOCA435285).
DEC (2011a) Advice given within Clearing Permit application CPS 4527/1. DEC Ref DOC:A416261
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.

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.

Shepherd, D.P. (2009) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.

5. Glossary

Term	Meaning
BCS	Biodiversity Coordination Section of DEC
CALM	Department of Conservation and Land Management (now BCS)
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DEP	Department of Environmental Protection (now DEC)
DoE	Department of Environment
DoIR	Department of Industry and Resources
DRF	Declared Rare Flora
EPP	Environmental Protection Policy
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
TEC	Threatened Ecological Community
WRC	Water and Rivers Commission (now DEC)