



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 3865/1
Permit Holder:	Minister for Education
Duration of Permit:	9 October 2010 – 9 October 2015

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 primary school

2. Land on which clearing is to be done

Lot 1317 on Plan 49212 (Meadow Springs 6210)

Lot 1320 on Plan 45446 (Meadow Springs 6210)

3. Area of clearing

The Permit Holder must not clear more than 3.6 hectares of native vegetation within the area hatched yellow on attached Plan 3865.

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 *Land Administration Act 1997* or any other written law.

A handwritten signature in black ink, appearing to read "Kelly Faulkner", written over a horizontal line.

Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

9 September 2010

PLan 3865/1



LEGEND

- Clearing Instruments**
- Areas Approved to Clear
 - Cadastre
 - Local Government Authorities

Swan Coastal Plain South
20cm Orthomosaic - Landgate
2009



0 50 m

Scale 1:2000

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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

K Faulkner Date *2/2/10*

K Faulkner
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.



Department of Environment and Conservation

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1. Application details

1.1. Permit application details

Permit application No.: 3865/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Department of Education

1.3. Property details

Property: LOT 1317 ON PLAN 49212 (MEADOW SPRINGS 6210)
LOT 1320 ON PLAN 45446 (MEADOW SPRINGS 6210)

Local Government Area:

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
3.6		Mechanical Removal	Building or Structure

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: 998: Medium woodland; tuart (Hopkins et al 2001; Shepherd, 2009)	The proposal is to clear a total of 3.6 ha within Lot 1317 (~2.9 ha) and Lot 1320 (~0.7 ha) Oakmont Avenue, Meadow Springs for the purpose of constructing a primary school and associated sports oval.	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	The vegetation description is based on a site visit conducted by DEC officers on 18 August (DEC 2010). The vegetation under application was considered to be in completely degraded to very good (Keighery 1994) condition (DEC 2010).
Hedde complexes: Yoongarillup Complex Woodland to tall woodland of Eucalyptus gomphocephala (Tuart) with Agonis flexuosa in the second storey. Less consistently an open forest of Eucalyptus gomphocephala (Tuart) - Eucalyptus marginata (Jarrah) - Corymbia calophylla (Marri).	The area under application consisted of three main vegetation types with area the comprising scattered mature tuart trees: - Acacia rostellifera shrubland - Hakea trifurcata shrubland with Santalum acuminatum, Allocasuarina humilis and Grevillea preissii; and - Melaleuca huegeliana heathland over Trymalium sp and Templetonia retusa on limestone ridge (and limestone outcropping).		
Cottesloe Complex Central/South Mosaic of woodland of Eucalyptus gomphocephala (Tuart) and open forest of Eucalyptus gomphocephala (Tuart) - Eucalyptus marginata (Jarrah) - Corymbia calophylla (Marri); closed heath on the Limestone outcrops. (Hedde et al, 1980)	Approximately 1.2 ha of the vegetation under application is in completely degraded (Keighery 1994) condition.		
As above	Approximately 1.0 ha of the vegetation under application is in degraded (Keighery 1994) condition.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	As above
As above	Approximately 1.4 ha of the vegetation under application is in good to very good (Keighery 1994) condition.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	As above

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 proposal is to clear a total area of 3.6 ha within Lot 1317 (2.9 ha) and Lot 1320 (0.7 ha) for the purpose of constructing a primary school and associated sports oval.

The area under application comprised scattered mature tuart trees and consisted of three main vegetation types *Acacia rostellifera* shrubland; *Hakea trifurcata* shrubland with *Santalum acuminatum*, *Allocasuarina humilis* and *Grevillea preissii*; and *Melaleuca huegeliana* heathland over *Trymalium* sp and *Templetonia retusa* on a limestone ridge (with limestone outcropping) (DEC 2010). Priority flora, *Jacksonia sericea* (P4) was observed within Lot 1320 (DEC 2010).

The proposed clearing within Lot 1317 comprised approximately 1.2 ha of vegetation in completely degraded (Keighery 1994) condition, 1.0 ha of vegetation in degraded (Keighery 1994) condition and 0.6 ha of vegetation in good to very good (Keighery 1994) condition; a majority of this area has been historically cleared (DEC 2010). The proposed clearing within Lot 1320 comprised approximately 0.8 ha of vegetation in good to very good (Keighery 1994) condition; this area is adjacent to an existing sports oval (DEC 2010).

The scattered mature tuart trees may provide foraging and roosting habitat for specially protected black cockatoo, and the shrubland and heathland in good to very good (Keighery 1994) condition (DEC 2010) may provide habitat for ground dwelling fauna such as quenda.

Given the limited vegetation in good to very good (Keighery 1994) condition and the high level of disturbance within and adjacent to the area under application, it is considered the vegetation under application is not likely to comprise a high level of biological diversity.

Methodology References:
- DEC (2010)
- Keighery (1994)
GIS databases:
- SAC Bio datasets accessed 18/8/2010
- Swan Coastal Plain South 20cm Orthomosaic - Landgate 2009

(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

There are twenty-one records of conservation significant fauna within 5 km radius of area under application with the closest record being the Forest Red-tailed black cockatoo (*Calyptorhynchus banksii naso*), located ~1.7 km south-east of the area under application.

The area under application comprised scattered mature tuart trees and consisted of three main vegetation types *Acacia rostellifera* shrubland; *Hakea trifurcata* shrubland with *Santalum acuminatum*, *Allocasuarina humilis* and *Grevillea preissii*; and *Melaleuca huegeliana* heathland over *Trymalium* sp and *Templetonia retusa* on a limestone ridge (DEC 2010). The scattered mature tuart trees may provide foraging and roosting habitat for specially protected black cockatoos, and the shrubland and heathland in good to very good (Keighery 1994) condition (DEC 2010) may provide habitat for ground dwelling fauna such as quenda.

In addition, the Graceful Sun moth (*Synemon gratiosa*) has been recorded ~5 km south-west of the area under application. This species requires *Lomandra* spp. as host plants and shows some preference for high quality vegetation (Williams 2009). The northern section of Lot 1320, which is part of the applied area, was observed to contain isolated patches of *Lomandra maritima* (DEC 2010). The presence of *Lomandra maritima* indicates that the vegetation may provide habitat for this conservation significant species; however, the likelihood that the Graceful Sun moth is present is very low; also, given the limited extent of *Lomandra maritima* the vegetation is not considered to be significant habitat for this species.

It is acknowledged that the area under application comprises approximately 1.4 ha of vegetation in good to very good (Keighery 1994) condition, mature tuart trees and *Lomandra maritima*; however, given the high level of disturbance within and adjacent to the area under application and the limited presence of tuart and *Lomandra maritima*, the vegetation is not considered to comprise significant habitat for native fauna.

Methodology References:
- DEC (2010)
- Keighery (1994)
- Williams (2009)
GIS database:
- SAC Bio datasets accessed 18/8/2010

(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 are four records of one rare flora species *Drakaea elastica* within 5 km radius of the area under application. This species occurs approximately 2.8 km and 3.5 km east of the area under application. Brown et al (1998) states that the 'orchid grows in deep sandy soil in banksia woodland, in low-lying areas alongside winter-wet swamps'.

A flora survey (Morgan 2005) undertaken in October 2004 for Lot 1320, which includes a section of area under application, did not identify any rare flora.

Given the vegetation under application is unlikely to provide suitable habitat and that a flora survey for Lot 1320 did not identify any rare flora, it is considered the area under application is not likely to comprise rare flora. Therefore the clearing proposal is not likely to be at variance to this Principle.

Methodology References:
 - Brown et al (1998)
 - Morgan (2005)
 GIS database:
 - SAC Bio datasets accessed 18/8/2010

(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

There are no records of threatened ecological communities (TEC) within 5 km radius of the area under application. The closest record is the critically endangered woodlands over sedgeland in Holocene dune swales of the Swan Coastal Plain.

The area under application comprised scattered mature tuart trees and consisted of three main vegetation types *Acacia rostellifera* shrubland; *Hakea trifurcata* shrubland with *Santalum acuminatum*, *Allocasuarina humilis* and *Grevillea preissii*; and *Melaleuca huegeliana* heathland over *Trymalium* sp and *Templetonia retusa* on a limestone ridge (DEC 2010).

A flora survey (Morgan 2005) undertaken in October 2004 for Lot 1320, which includes a section of area under application, did not identify any TECs. The vegetation type *Melaleuca huegeliana* heathland over *Trymalium* sp and *Templetonia retusa* on limestone ridge present on Lot 1317 is similar to vegetation identified on the adjacent Lot 1320 in 2004, which was determined to have an affinity to floristic community type 24: Northern Spearwood shrublands and woodlands, which is not a TEC.

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

Methodology References:
 - DEC (2010)
 - Morgan (2005)
 GIS database:
 - SAC Bio datasets accessed 18/8/2010

(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 Heddle vegetation complexes identified in the area under application are Yoongarillup, and Cottesloe Central and South, have pre-1750 representation levels of 45.0% and 41.1%, respectively (EPA, 2006). The Beard vegetation type 998 identified within the area under application has a 38.5% pre-1750 representation level in the bioregion (Shepherd 2009). In addition, there is 49% of pre-1750 extent of native vegetation remaining within the City of Mandurah.

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). Beard vegetation type and Heddle complexes retain more than the 30% threshold level.

Given the extent of vegetation remaining in the City of Mandurah (49%) and the current representation levels of the Heddle complexes and Beard vegetation type, it is not considered likely that the vegetation under application is significant as a remnant nor is the regional area considered to be extensively cleared.

	Pre-European (ha)	Current extent (ha)	Remaining (%)	In reserves (%)
IBRA Bioregions*:				
Swan Coastal Plain (SCP)	1, 501,209	587,889	39.1	
City of Mandurah*	16,795	8,228	49.0	
Beard Vegetation Type*				

998 (SCP)	50,867	19,595	38.5	40.6
Hedde Vegetation Complexes**				
Yoongarillup	24,767	11,140	45.0	13.9
Cottesloe Central/South	44,995	18,474	41.1	8.8

* (Shepherd, 2009)

** (EPA, 2006)

Methodology References:
 -Commonwealth of Australia (2001)
 -EPA (2006)
 -Shepherd (2009)
 GIS Databases:
 - Hedde Vegetation Complexes
 - Interim Biogeographic Regionalisation of Australia
 - 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 not likely to be at variance to this Principle

The closest waterbodies to the area under application is a resource enhancement wetland located ~1.6 km north-east and a conservation category wetland located ~1.7 km south-east.

The area under application consisted of three main vegetation types *Acacia rostellifera* shrubland; *Hakea trifurcata* shrubland with *Santalum acuminatum*, *Allocasuarina humilis* and *Grevillea preissii*; and *Melaleuca huegeliana* heathland over *Trymalium* sp and *Templetonia retusa* on a limestone ridge (DEC 2010). These vegetation units are not considered to be associated with wetlands or low-lying areas.

Given the distance to the nearest wetlands and the absence of wetland associated vegetation, the proposed clearing is not considered likely to be at variance to this Principle.

Methodology Reference:
 - DEC (2010)
 GIS Database:
 - Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain

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

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

Surface geology mapping identifies the area under application to be over-lying Tamala limestone, predominantly calcarenite. The chief soils are brown sands with associated are siliceous sands and leached sands (Northcote et al 1960-68). Generally, these soils have a high risk of wind erosion and a low risk of water erosion due to the high infiltration rates associated with sands.

The proposed clearing has a high risk of wind erosion given the sandy soils associated with the area under application, and without appropriate management for exposed surfaces the proposal may cause appreciable land degradation.

It is noted that appropriate management practices such as dust suppression would likely limit land degradation caused by wind erosion.

Methodology Reference:
 - Northcote et al (1960-68)
 GIS Database:
 - Soils, Statewide

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

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

The closest DEC managed land is Goegrup Lake Nature Reserve located ~1.7 km south-east of the area under application. Given the distance to the nearest conservation area, and the high level of disturbance within and adjacent to the area under application, the proposed clearing is not considered likely to be at variance to this Principle.

Methodology GIS Database:
- 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 closest waterbodies to the area under application is a resource enhancement wetland located ~1.6 km north-east and a conservation category wetland located ~1.7 km south-east.

The area under application is not mapped within a public drinking water source area and there is a low risk of salinity occurring.

Given the distance to the nearest wetlands and the low salinity risk, the proposed clearing is not considered likely to be at variance to this Principle.

Methodology GIS Databases:
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
- Public Drinking Water Source Areas (PDWSAs)

(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**

Surface geology mapping identifies the area under application to be over-lying Tamala limestone. The chief soils are brown sands with associated siliceous sands and leached sands (Northcote et al 1960-68). Generally, these soils have a low risk of flooding due to the high infiltration rates associated with sands. Therefore, the proposed clearing is not considered likely to be at variance to this Principle.

Methodology Reference:
- Northcote et al. (1960-68)
GIS Database:
- Soils, Statewide

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

Comments

The 4.9 hectares of native vegetation remaining on Lot 1320, in which ~0.7 ha of the area under application occurs, has been retained as part of an offset proposal for the City of Mandurah's clearing permit CPS 394/1. The Department of Environment and Conservation, and the City of Mandurah are currently re-evaluating this offset proposal to ensure a net environmental benefit.

The City of Mandurah (2010) supports the clearing of native vegetation to allow for development of a primary school and associated sports oval; the sports oval will be a shared usage facility between the primary school and the City of Mandurah community.

The Department of Regional Development and Lands (2010) supports the clearing application and grants permission to access Lot 1320 and to clear native vegetation.

The Department of Planning (2010) advised that the proposal does not require approval from WA Planning Commission.

Lot 1317 is freehold land and is zoned urban under the Peel Regional Scheme.

Lot 1320 is Crown Reserve under the Department of Regional Development and Lands; the interest holder is City of Mandurah for use of public recreation; and is zoned urban under the Peel Regional Scheme.

Methodology References:
- City of Mandurah (2010)
- Department of Planning (2010)
- Department of Regional Development and Lands (2010)
GIS Database:
- Peel Regional Scheme

4. References

City of Mandurah (2010) Letter from City of Mandurah In CPS 3865/1 Application for a Purpose Permit and Supporting Information. City of Wanneroo. DEC Ref A323621

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

DEC (2010) Site Inspection Report for Clearing Permit Application CPS 3865/1, Lot 1317 and Lot 1320 Meadow Springs. Site inspection undertaken 18/08/2010. Department of Environment and Conservation, Western Australia. DEC Ref A328131

Department of Planning (2010) Letter from Department of Planning In CPS 3865/1 Application for a Purpose Permit and Supporting Information. City of Wanneroo. DEC Ref A323621

Department of Regional Development and Lands (2010) Letter from Department of Regional Development and Lands In CPS 3865/1 Application for a Purpose Permit and Supporting Information. City of Wanneroo. DEC Ref A323621

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.

Hedde, 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.

Hopkins, A.J.M., Beeston, G.R. and Harvey J.M. (2001) A database on the vegetation of Western Australia. Stage 1. CALMScience after J. S. Beard, late 1960's to early 1980's Vegetation Survey of Western Australia, UWA Press.

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Morgan B. (2005) Flora and Vegetation Values in a Bushland Area at Meadow Springs, Prepared for the City of Mandurah, In Application for a Clearing Permit (Purpose Permit) for Department of Education. DEC Ref A323621

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)