



1. Application details

1.1. Permit application details

Permit application No.: 1260/1
 Permit type: Area Permit

1.2. Proponent details

Proponent's name: Thompson McRobert Edgeloe

1.3. Property details

Property: LOT 3 ON DIAGRAM 50159 (PICTON EAST 6229)
 Local Government Area: Shire Of Dardanup
 Colloquial name: Lot 3 Harris Road. Dardanup

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
6.71		Mechanical Removal	Building or Structure
		Mechanical Removal	Building or Structure
		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
Hedde Guildford Complex: open forest to tall open forest and woodland.	The area under application comprises a largely open canopy dominated by <i>Agonis</i> spp. (Peppermint) with the occasional <i>Corymbia calophylla</i> (Marri) and <i>Eucalyptus marginata</i> (Jarrah). The foreground of Figures 4 and 5 of the Site Photos (2006) indicate the middle storey to be predominantly absent, and understorey to be dominated by invasive weeds and pasture grasses. The condition of the existing vegetation in this area is considered to be degraded (Keighery 1994).	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	Vegetation condition was determined from DEC Site Visit (2006)
Hedde Guildford Complex: open forest to tall open forest and woodland.	Figures 3 and 8, and the background of Figures 4 and 5 of the Site Photos (2006) indicate the proposed clearing includes areas of intact remnant vegetation comprising a largely open canopy dominated by <i>Agonis</i> spp. (Peppermint) with the occasional <i>Corymbia calophylla</i> (Marri) and <i>Eucalyptus marginata</i> (Jarrah). Other noted species sparsely spread throughout include <i>Melaleuca</i> spp., <i>Xylomelum occidentale</i> (Woody Pear), <i>Zamia</i> spp., <i>Connostylis</i> spp., <i>Caladenia flava</i> (Cowslip orchid) and	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Vegetation condition was determined from DEC Site Visit (2006)

Caladenia latifolia (Pink Fairy orchid). The understorey includes vegetative debris and weeds.

The condition of the existing vegetation in this area is considered to be good (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 may be at variance to this Principle**

The area under application is for the extraction of sand and subsequent building construction on land zoned industrial under the Town Planning Scheme Zones. A DEC site inspection undertaken in October 2006 found vegetation within the proposed clearing of 6.71ha to range from degraded to good condition (Keighery, 1994). The area under application comprises a largely open canopy dominated by *Agonis* spp. with the occasional *Corymbia calophylla* (Marri) and *Eucalyptus marginata* (Jarrah) on an elevated sand ridge, with an understorey dominated by weeds and predominantly absent middle storey. This vegetation type, classified by Heddle et al. (1980) as Guildford Complex, has a low representation of just 5% with 0.2% securely tenured in reserves. These figures are well below the 30% National Objectives Targets for Biodiversity Conservation (Department of Natural Resources and Environment, 2002; EPA 2000), beyond which species extinction is believed to occur at an exponential rate and any further clearing may have irreversible consequences for the conservation of biodiversity.

Within a ten kilometre radius of the area under application there are two mapped records of Declared Rare Flora (DRF) and fifty mapped records of Priority flora. Fifteen priority species occur on the same vegetation type as the proposed clearing.

Although it appears that the original biodiversity value of the proposed clearing has been compromised, the basic vegetative structure remaining may be significant for indigenous flora and fauna in an area that has been extensively cleared. Given the low representation of the vegetation to be cleared, the proposal may be at variance to this principle.

Methodology DEC Site Visit Report (2006)
Heddle et al (1980)
Keighery (1994)
Department of Natural Resources and Environment (2002)
GIS Database:
- Declared Rare and Priority Flora List - CALM 01/07/05

(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 may be at variance to this Principle**

The property is located within an industrial area, a section of which has been previously cleared for extractive industry. Although the vegetation under application has been rated between 'good' and 'degraded' (Keighery, 1994) the basic vegetative structure remaining may provide habitat for ringtail possums (DEC 2006). The remnant vegetation in the area under application is located within a suite of ecological linkages identified in the Greater Bunbury Region Scheme as being regionally significant in maintaining ecological processes and natural systems (EPA Bulletin 1108, 2003).

Given that only 26% of the landscape within a 15km radius of the area under application supports native vegetation (EPA Bulletin 1112, 2003), and that only 5% of the vegetation type under application remains, it is considered that the area potentially has value either as habitat for indigenous fauna or in maintaining ecological functions and processes.

The proposal may be at variance to this principle.

Methodology DEC Site Visit Report (2006)
Keighery (1994)
EPA Bulletin 1112 (2003)
EPA Bulletin 1108 (2003)

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

Comments Proposal may be at variance to this Principle

There are two records of Declared Rare Flora (DRF) and fifty records of Priority flora within a ten kilometre radius of the area under application. The closest record is a Priority 3 species, *Verticordia attenuata*, located 1.4kms north of the proposed clearing area. *Verticordia attenuata* occurs within several local vegetation types, including that of the proposed clearing of which there is only 5% remaining. Fifteen priority species occur on the same vegetation type as the proposed clearing. The closest known record of DRF, *Diuris drummondii*, is located 5.3kms north of the area under application and occurs within a different vegetation type to that of the proposed clearing.

Given the number of Priority flora identified within a ten kilometre radius that occur on the same vegetation type as that of the proposed clearing relative to the low representation of this vegetation complex, the area under application may be necessary for the continued existence of rare flora in the local area.

Therefore, the proposal may be at variance to this principle.

Methodology Keighery (1994)
DEC Site Visit Report (2006)
GIS Database:
- Declared Rare and Priority Flora List - CALM 01/07/05

(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 may be at variance to this Principle

Records indicate there are 13 Threatened Ecological Communities (TECs) within a ten kilometre radius of the area under application, the closest being 4.5kms north-east of the proposed clearing area. Two Threatened Plant Communities (TPCs) occur north-east and south-west of the proposed clearing area, the closest being four kilometres from the area under application. All of the identified TECs and Threatened Plant Communities fall within Environmentally Sensitive Areas where clearing restrictions apply. Three TECs and one TPC occur on the same Heddle vegetation type as the proposed clearing, of which only 5% remains.

Given the low vegetation representation of this vegetation type, the vegetation proposed to be cleared may be necessary for the maintenance of threatened ecological communities within the local area.

Given the above, the proposal may be at variance to this principle.

Methodology GIS Database:
- Threatened Ecological communities - CALM 12/04/05
- Threatened Plant Communities - DEP 06/95
- Environmentally Sensitive Areas - DOE 30/5/05
- Heddle Vegetation Complexes - DEP 21/06/95

(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 seriously at variance to this Principle

	Pre-European (ha)*	Current Extent Remaining (ha)*	(%)*	Conservation Status**	% in Secure Tenure
IBRA					
Bioregion: Swan Coastal Plain	1,498,297	626,512	41.8	Depleted	
Shire: Dardanup	53,995	28,182	52.2	Least concern	
Beard Unit 968	200,651	78,150	38.9	Vulnerable	19.6
Heddle: Guildford Complex	92,497	4,662	5.0	Endangered	0.2

* (Shepherd et al. 2001)

** (Department of Natural Resources and Environment 2002)

*** Within the Intensive Landuse Zone

The area under application is located in the Shire of Dardanup and within the Swan Coastal Plain Bioregion. The extent of pre-European vegetation remaining within these areas is 52.2% and 41.8% respectively (Shepherd et al., 2001).

The vegetation proposed to be cleared is a component of Beard Vegetation Association 968 (Hopkins et al., 2001) of which there is 38.9 % of the pre-European extent remaining (Shepherd et al., 2001). This vegetation type is considered as having a 'Vulnerable' conservation status (Department of Natural Resources and Environment, 2002). 19.6% of Beard vegetation type 968 remains in secure tenure.

The proposed clearing area is classified by Heddle et al. (1980) as Guildford Complex, with 5.0% of pre-European vegetation remaining, and 0.2% under secure tenure. This vegetation type has a conservation status of 'Endangered' (Department of Natural Resources and Environment, 2002).

The State Government is committed to the National Objectives Targets for Biodiversity Conservation which includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-1750 (Department of Natural Resources and Environment, 2002; EPA 2000). Beyond this value, species extinction is believed to occur at an exponential rate and any further clearing may have irreversible consequences for the conservation of biodiversity.

Given the low representation levels of the vegetation types identified within the area under application, the proposed clearing is considered to be seriously at variance to this principle.

Methodology EPA (2000)
Shepherd et al (2001)
Hopkins et al., 2001
Department of Natural Resources and Environment (2002)
GIS Database:
- Pre-European Vegetation - DA 10/01
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
- Heddle Vegetation Complexes - DEP 21/06/95

(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

There are no watercourses within the proposed clearing area. The Ferguson River flows approximately 260m to the south-west and is unlikely to be impacted by the proposed clearing due to the low topographical relief and shallow gradients within the region.

The area under application lies adjacent to an EPP Lake assigned a 'Multiple Use' management category wetland in the Waters and Rivers Commission Wetland Atlas (Hill et al, 1996). This wetland is seasonally inundated and classified as a sumpland (Semeniuk & Semeniuk, 1995).

The wetland is contained within Public Open Space (POS) reserved under the Shire of Dardanup Town Planning Scheme No. 7. As a requirement of this Scheme, a Wetland Management Plan has been prepared on behalf of the proponent to comply with Shire conditions that need to be met prior to subdivision or development approval on Lot 3 Harris Rd. A Memorandum by DEC's Wetland Program (2007) found the Wetland Management Plan in its current form to be inadequate, and raised the following issues:

1. the information provided on the wetland values is limited and therefore does not meet the requirements under Section 5.1(d) of the Shire of Dardanup TPS (ie Clause 1 'A description of the wetland including its ecosystem, attributes and values').
2. the width of the wetland buffer does not comply with the recommended 50m minimum as determined in accordance with Water and Rivers Position Statement: Wetlands (WRC 2001) and EPA Draft Guidance Statement No. 33 Environmental Guidance for Planning and Development (EPA 2005). The draft Guideline for the Determination of Wetland Buffer Requirements used by Straten to determine buffer distance in the Wetland Management Plan is still in draft form and has not yet been endorsed by DEC.

The perimeter of the core wetland area appears to be less than ten metres from the northern boundary of the proposed clearing area, as suggested by aerial photography and photos supplied by Straten in the Wetland Management Plan (2006) prepared on behalf of the proponent. Wetland buffers are generally determined from the geomorphic wetland boundary as displayed in the dataset and not the boundary of wetland dependent vegetation (DEC 2007).

The proposed clearing is within 50m of an EPP Lake. Removal of native vegetation associated with the wetland may result in changes to hydrological processes and flow regimes, and vegetation associated with or influencing the values of the wetland.

The proposed clearing is in association with a wetland environment and as such is at variance to this principle.

Methodology Hill et al. (1996)
Semeniuk & Semeniuk (1995).
DEC (2007) Wetlands Program
Strategen (2006)
GIS Database:
- Hydrography, Linear - DOE 1/2/04
- Topographic Contours, Statewide - DOLA 12/09/02
- Bunbury 50cm Orthomosaic - DLI 04

(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 area is of low relief with shallow gradients. Mean annual rainfall is 900mm, and groundwater salinity recorded as 250 - 500mg/L (TDS) in the confined aquifer (Yarragadee).

Mapping indicates a moderate to low risk of acid sulphate soils occurring within 3 m of the natural soil surface that could be disturbed by most land development activities (activities disturbing soils at depths greater than 3m carry a high to moderate risk of disturbing ASS). It is not expected that clearing of native vegetation will increase the risk of acid sulphate soils occurring within the area under application.

Relative to the information above, the proposed clearing of native vegetation is unlikely to cause appreciable land degradation.

Methodology GIS Database:
- Acid Sulphate Soil risk map, SCP - DOE 04/11/04
- Topographic Contours, Statewide - DOLA 12/09/02
- Rainfall, Mean Annual - BOM 30/09/01
- Groundwater Salinity, Confined Aquifers - WRC 10/01

(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

The closest conservation area to the proposed clearing is an unnamed Nature Reserve located 4.1kms north-east of the area under application. This reserve falls within the same vegetation complex as that of the proposed clearing, of which there is only 5% remaining, and is vested with the Conservation Commission for the conservation of flora and fauna.

Morangarel Nature Reserve and a System 6 Conservation Reserve are located 6.2kms north and 4.8kms north respectively of the proposed clearing and are not of the same vegetation type as the proposed clearing.

The remnant vegetation in the area under application is located within a suite of ecological linkages identified in the Greater Bunbury Region Scheme as being regionally significant in maintaining ecological processes and natural systems (EPA Bulletin 1108, 2003).

Relative to the fact that only 5% remains of the vegetation under application, that a nearby conservation reserve is of the same vegetation type as that proposed to be cleared, and the remnant vegetation in the area under application is located within a suite of ecological linkages identified in the Greater Bunbury Region Scheme, the proposal is considered to be at variance to this principle.

Methodology Hopkins et al., 2001
EPA Bulletin 1108 (2003)
GIS Database:
- CALM Managed Lands and Waters - CALM 1/07/05
- Heddl Vegetation Complexes - DEP 21/06/95

(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 may be at variance to this Principle

The proposed clearing site lies within the Leschenault Estuary_Preston River Catchment. The region is of low relief with shallow gradients, and has an annual rainfall of 900mm. Depth to groundwater was measured as 4.48m from TOC (top of casing) at a monitoring bore located 2.16km WNW of the proposed clearing area. The proposed clearing is not expected to interfere with the quality of groundwater.

Mapping suggests that the proposed clearing lies less than ten metres from the perimeter of a multiple use wetland. Given the close proximity of the proposed clearing to the wetland, the removal of associated native vegetation may increase surface water runoff that would compromise the values of the wetland through an increase in sedimentation, nutrient enrichment and/or turbidity.

Given the above, the proposal may be at variance to this principle.

Methodology GIS Database:
- Hydrographic Catchments - Catchments - DOE 23/03/05
- Rainfall, Mean Annual - BOM 30/09/01
- Topographic Contours, Statewide - DOLA 12/09/02
- WIN Groundwater Sites, Monitoring - DEWCP (Current)

(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**
Due to the scale and nature of the proposed clearing relative to the low relief and shallow gradients of the topography, the proposed clearing is unlikely to cause or exacerbate flooding within the local area.

Methodology GIS Database:
- Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

The clearing application is for sand extraction and subsequent subdivision of 6.71 hectares on land zoned industrial and located within the Picton Industrial area. The proponent was granted Development approval by the Shire of Dardanup on 23rd February 2006 for the purpose of removing 40,000 m³ of fill from the proposed clearing site with a condition that appropriate permits be sought for the removal of native vegetation. A concurrent application for the subdivision of the property was lodged with the Department of Planning and Infrastructure (DPI) which was referred to the EPA for assessment. The property has been previously assessed by the EPA, however the land under application has since been rezoned from Light Industrial to General Industry and minor modifications have been made to the Public Open Space. EPA are awaiting advice as to whether the property can be reassessed.

A previous application to clear 22 hectares of native vegetation on adjoining Lot 37 Harris Road, Picton was assessed by the EPA. The vegetation type on this property is the same Hedde Guildford Complex as the area under application, of which only 5% remains. The EPA concluded that the proposal to clear native vegetation on Lot 37 Harris Road, Picton was environmentally unacceptable due to:

- depleted, poorly conserved and inadequately represented plant communities, such that further clearing may have irreversible consequences for the conservation of biodiversity. This is inconsistent with EPA Position Statement No. 2 Environmental Protection of Native Vegetation in Western Australia (EPA, 2000).
- the permanent loss of environmentally significant wetlands. This is inconsistent with the EPA's Preliminary Position Statement No. 4 entitled Environmental Protection of Wetlands (EPA, 2001).

The Minister for the Environment agreed with these recommendations and under section 48(8) of the Environmental Protection Act 1986 (EP Act) advised the proponent the clearing proposal may not be implemented.

On 22 December 2006 the proponent for the current clearing application was issued with a letter advising that the application to clear 6.71ha of native vegetation on Lot 3 Harris Road Picton was likely to be refused on the grounds that

- the vegetation under application is poorly represented with a conservation status of 'endangered';
- the proposed clearing is likely to impact on an Environmental Protection Policy (EPP) Wetland; and
- the area under application is located within a suite of ecological linkages identified in the Greater Bunbury Region Scheme as being regionally significant in maintaining ecological processes and natural systems.

A response to this letter, dated 19 January 2007, was received from a representative of the proponent appealing the pending refusal decision by DEC. Upon review of the issues relevant to this application and following advice from DEC's Nature Conservation Division (Wetlands Program, 2007) the response from the proponent has not altered the previous findings of the assessment undertaken.

DEC believes it would be premature to grant a clearing permit whilst the Western Australian Planning Commission (WAPC) is undertaking structure planning for the Preston Industrial Park including Lot 3 Harris Road. It is considered that this process will address these issues raised, and that clearing in accordance with an approved subdivision is an exemption from the requirement for a clearing permit under clause 9, Schedule 6 of the Environmental Protection Act 1986.

No submissions from the public have been received.
There is no RIWI Act Licence required for the proposed works.

There is a Native Title Claim over the area under application. The Department of Environment and Conservation's advertising of the application in the West Australian Newspaper constitutes legal notification of the Native Title representative body for the purpose of the future act procedures under the Native Title Act 1993. No response was received from the representative body.

Four Aboriginal Sites of Significance, Bunbury 14, 15, 16 and 20, are listed within the area under application. It is the proponent's responsibility to comply with the Aboriginal Heritage Act 1972 and ensure that no sites of Aboriginal significance are damaged through the clearing process.

Methodology

- EPA (2000)
- EPA (2001)
- EPA Bulletin 1112 (2003)
- DEC (2007). Wetlands Program Memorandum
- GIS Database:
 - Native Title Claims - DLI 07/11/05
 - RIWI Act, Areas - WRC 05/04/02

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Building or Structure	Mechanical Removal		
Building or Structure	Mechanical Removal		
Building or Structure	Mechanical Removal	6.71	<p>The assessable criteria have been addressed, and the proposal is not likely to be at variance to Principles (g) and (j); may be at variance to Principles (a), (b), (c), (d) and (i); is at variance to Principles (f), and (h); and is seriously at variance to Principle (e).</p> <p>Principles (a), (b), (c) and (d): Given the low representation of the vegetation type proposed to be cleared, and that the area under application falls within an extensively cleared area, there is the potential for the removal of native vegetation in the area to be at variance to Principles (a), (b), (c) and (d).</p> <p>Principles (f), (h) and (i): The proposal is at variance to Principles (f) and (i) due to the close proximity of the proposed clearing to the boundary of the core wetland.</p> <p>The proposal is at variance to Principle (h) as the vegetation proposed to be cleared is located within an ecological linkage as identified in the Greater Bunbury Region Scheme.</p> <p>Principle (e): The proposed clearing area is classified by Hedde et al. (1980) as Guildford Complex, with 5.0% of pre-European vegetation remaining, and 0.2% under secure tenure. This vegetation type has a conservation status of 'Endangered' (Department of Natural Resources and Environment, 2002). The State Government is committed to the National Objectives Targets for Biodiversity Conservation which includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-1750 (Department of Natural Resources and Environment, 2002; EPA 2000). Beyond this value, species extinction is believed to occur at an exponential rate and any further clearing may have irreversible consequences for the conservation of biodiversity.</p> <p>Further to this, the EPA recommended that a proposal to clear native vegetation classified as Hedde Guildford Complex on adjoining Lot 37 Harris Road, Picton was environmentally unacceptable (EPA Bulletin 1112). The Minister for the Environment agreed with these recommendations and under section 48(8) of the Environmental Protection Act 1986 (EP Act) advised the proponent the clearing proposal may not be implemented.</p> <p>The proposal to clear native vegetation within this vegetation type is therefore considered to be seriously at variance to Principle (e).</p>

5. References

Department of Environment and Conservation (2007). Wetlands Program Memorandum. TRIM Ref DOC15922

Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.

Environmental Protection Authority Bulletin 1108 (2003)

Environmental Protection Authority Bulletin 1112 (2003)

EPA (2000) Environmental protection of native vegetation in Western Australia. Clearing of native vegetation, with particular reference to the agricultural area. Position Statement No. 2. December 2000. Environmental Protection Authority.

EPA (2001) Environmental Protection of Wetlands. Preliminary Position Statement No.4. Perth, 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.

Hill, A.L., Semenuik, C. A, Semenuik, V. Del Marco, A. (1996) Wetlands of the Swan Coastal Plain. Volume 2b, Wetland mapping, classification and evaluation. Wetland Atlas. WRC and DEP. Perth WA.

- 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.
- 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.
- Site Visit Report (2006). Department of Environment and Conservation (DEC). Western Australia. TRIM ref DOC6508
- Strategen (2006). Wetland Management Plan. Lot 3 Harris Road Picton East. TRIM Ref DOC11078
- Water and Rivers Commission 2001. Water and Rivers Commission Policy Statement : Wetlands. Water and Rivers Commission, East Perth.

6. 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)