



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 3363/1

File Number: DEC13393

Duration of Permit: From 14 February 2010 to 14 February 2013

PERMIT HOLDER

Richard Oliphant House

Cindy Joanne House

LAND ON WHICH CLEARING IS TO BE DONE

Lot 3647 on Plan 224141

AUTHORISED ACTIVITY

Clearing of up to 2 hectares of native vegetation within the area shaded yellow on attached Plan 3363/1a.

CONDITIONS

1. Revegetation and rehabilitation

- (a) Within six months of drain construction the Permit Holder must *revegetate* and *rehabilitate* the area shaded red on attached Plan 3363/1b and the spoil area of the drainage channel by:
- (i) deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area; and
 - (ii) ensuring only *local provenance* seeds and propagating material are used to *revegetate* and *rehabilitate* the area.
- (b) Within twelve months of undertaking *revegetation* and *rehabilitation* in accordance with condition 1(a) and 1(b) of this Permit, the Permit Holder must:
- (i) determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and
 - (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 1(c)(i) of this Permit will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, the Permit Holder must undertake additional *planting* or *direct seeding* of native vegetation in accordance with the requirements of condition 1(a)(i) and (ii) of this Permit.

2. Recording

In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 1 of this Permit:

- (a) the location of any areas *revegetated* and *rehabilitated*, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
- (b) a description of the *revegetation* and *rehabilitation* activities undertaken;
- (c) the size of the area *revegetated* and *rehabilitated* (in hectares); and
- (d) the species composition, structure and density of *revegetation* and *rehabilitation*.

3. Reporting

- (a) The Permit Holder must provide to the CEO, on or before 30 June of each year, a written report of records required under condition 2 of this Permit and activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.
- (b) Prior 14 November 2012 the Permit Holder must provide to the CEO a written report of records required under condition 2 of this Permit where these records have not already been provided under condition 3(a) of this Permit.

Definitions

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

direct seeding means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species;

environmental specialist means a person who is engaged by the Permit Holder for the purpose of providing environmental advice, who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit;

local provenance means native vegetation seeds and propagating material from natural sources within 50 kilometres of the area cleared;

planting means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;

rehabilitate/ed/ion means actively managing an area containing native vegetation in order to improve the ecological function of that area;

revegetate/ed/ion means the re-establishment of a cover of *local provenance* native vegetation in an area using methods such as *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area;



Keith Claymore
A/ ASSISTANT DIRECTOR
NATURE CONSERVATION DIVISION

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

14 January 2010

Plan 3363/1a

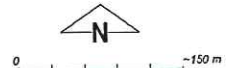


LEGEND

- Cadastre for labelling
- Road Centrelines
- FW
- HY
- LRO (cont)

- LRB
- MR
- N
- TR
- Clearing Instruments
- Areas Approved to Clear

Mount Barker North 1.4m
Orthomosaic - Landgate
2001



Scale 1:6442
(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.

Vin Claymore Date *14/1/10*
K. Claymore

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.

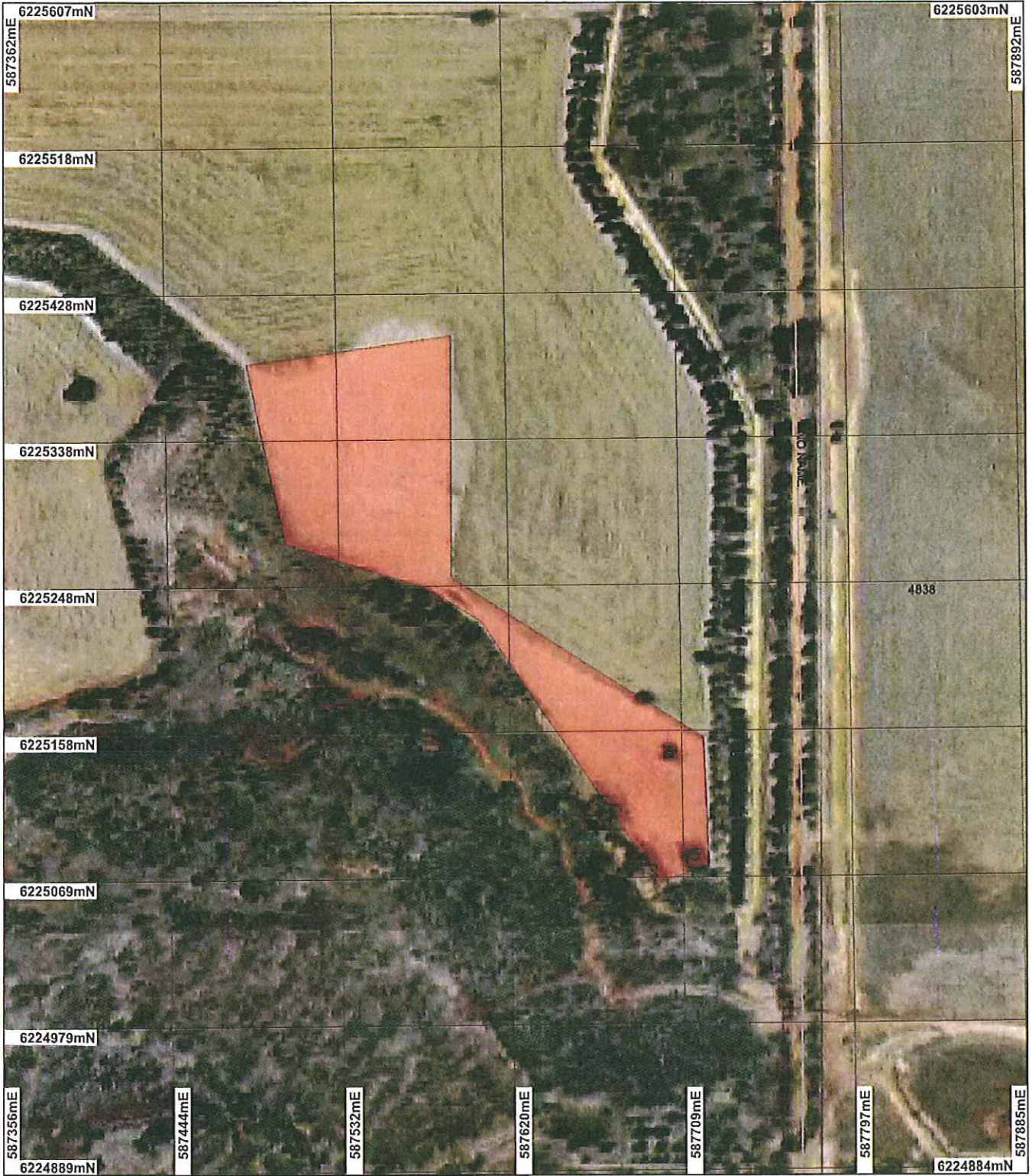


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* Project Data is denoted by asterisk. This data has not been quality assured. Please contact map author for details.

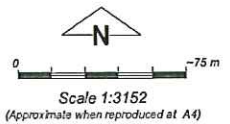
Plan 3363/1b



LEGEND

- Cadastre for labelling
- Road Centrelines
- FW
- HY
- LRO (cont)
- LRB
- MR
- N
- TR
- Clearing Instruments
- Areas Subject to Conditions

Mount Barker North 1.4m
Orthomosaic - Landgate
2001



Geocentric Datum Australia 1994

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

K. Claymore Date 14/1/10
K. Claymore

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.



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1. Application details

1.1. Permit application details

Permit application No.: 3363/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: MR Richard House

1.3. Property details

Property: LOT 3647 ON PLAN 224141 (LAKE TOOLBRUNUP 6320)
LOT 3647 ON PLAN 224141 (LAKE TOOLBRUNUP 6320)

Local Government Area:

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
2		Mechanical Removal	Drainage
		Mechanical Removal	Drainage

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 Complex: 516: Shrublands; mallee scrub, black marlock.	The proposal is to clear 2 ha of a ~25ha remnant for the purpose of constructing a drainage channel to reduce waterlogging and salinity.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	Vegetation clearing description based on site visit conducted by DEC officers on 12 May 2009 (DEC 2009a)

The vegetation under application consists of mixed woodland of York Gum (*Eucalyptus loxophleba*) and Jam (*Acacia acuminata*) and flat topped yate (*Eucalyptus occidentalis*) with mallee and *Melaleuca* shrubs in a good to degraded (Keighery 1994) condition. The majority of the area under application has been affected by waterlogging and salinity and most of the vegetation is dead.

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 vegetation under application consists of mixed woodland of York Gum (*Eucalyptus loxophleba*) and Jam (*Acacia acuminata*) and flat topped yate (*Eucalyptus occidentalis*) with mallee and *Melaleuca* shrubs in a good to degraded (Keighery 1994) condition (DAFWA 2009a).

The majority of the vegetation under application is in degraded (Keighery 1994) condition and affected by salinity and waterlogging. In addition, it is not considered that the area under application contains the preferred habitat for conservation significant fauna species recorded in the local area (DEC 2007) or contains rare or priority flora or a Threatened Ecological Community (DEC 2009a).

However, aerial photography indicates that the vegetation which is proposed to be cleared occurs within a degraded ~25 ha remnant in a landscape that has been extensively cleared for agriculture, with linkages to other areas of remnant vegetation by way of vegetation occurring along watercourses. The proposed clearing is likely to further fragment this remnant from the remaining vegetated linkage along the watercourses. This remnant may be important for movement of fauna and flora across an extensively cleared landscape. Although the area under application is degraded (DEC 2009a), the majority of native vegetation remaining in the local area (10km radius) is in degraded condition. Therefore, the vegetation under application is considered to

comprise a high level of biological diversity.

The area under application is subject to waterlogging and salinity. It could be suggested that in the long-term the vegetation would further deteriorate in the absence of remedial drainage, thus in the long term the proposed clearing is unlikely to have a net detrimental impact on biological diversity (DEC 2009b). A revegetation condition will be placed on the permit to mitigate this impact.

Methodology **References**
- DAFWA (2009a)
- DEC (2007)
-DEC (2009a)
GIS Databases
- Tambellup 50 cm Orthomosaic - Landgate 2006

(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**
Within the local area (~10 km radius) four species of conservation significant fauna have been recorded including the Western Whipbird (*Psophodes nigrogularis* Oberon), the Hooded Plover (*Charadrius rubricollis*), the Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*) and the Tamar Wallaby (*Macropus eugenii* derbianus).

The majority of the vegetation under application is in degraded condition and affected by salinity and waterlogging. In addition, it is not considered for the area under application to contain the preferred habitat for the conservation significant species recorded in the local area (DEC 2009a).

However, given the extensively cleared and highly fragmented nature of native vegetation within the landscape, it can be surmised that all remnant vegetation is of considerable importance as wildlife habitat.

Even though the applied area is mostly in a degraded condition, it does contain dead trees which may have value to fauna as roosting sites and provide cover for terrestrial fauna.

In addition, aerial photography indicates that the vegetation which is proposed to be cleared occurs within a degraded ~25 ha remnant in a landscape that has been extensively cleared for agriculture, with linkages to other areas of remnant vegetation by way of vegetation occurring along watercourses. The proposed clearing for a two metre deep channel is likely to further fragment this remnant by restricting movement north and west along the vegetated watercourses, as mammals and other indigenous terrestrial fauna are unlikely to be able to cross the deep channel. This remnant may be important for movement of fauna across an extensively cleared landscape. Given this, it may be considered likely for the applied area to contain significant habitat for fauna.

Methodology **References**
-DEC (2009a)
GIS Databases
-SAC Bio Databases (28/10/09)
- Tambellup 50 cm Orthomosaic - Landgate 2006

(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**
One rare flora species, *Orthrosanthus muelleri*, has been recorded in the local area (~ 10 km radius).

This species occurs in low scrub in wandoo woodland in soils that are brown to gravelly loam (Brown et al. 1998). The area under application contains similar soils, but does not contain the preferred habitat for *Orthrosanthus muelleri* (DEC 2009a, Western Australian Herbarium 1998-).

In addition, no rare flora was identified opportunistically during a site visit conducted May 2009 (DEC 2009a) though no flora survey was undertaken. Therefore, it is not considered likely for the proposed clearing to be at variance to this Principle.

Methodology **References**
-DEC (2009a)
-Brown et al. (1998)
Western Australian Herbarium (1998-)
GIS Databases
-SAC Bio Databases (28/10/09)
-Soils, statewide

(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**
 No known Threatened Ecological Communities (TEC) occurs within the local area (~10 km radius). The closest recording of a TEC is for Montane thicket of the eastern Stirling Ranges occurring 42 km south east of the area under application. In addition, no TECs were identified during the site visit (DEC 2009a).

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

Methodology References
 -DEC (2009a)
 GIS Databases
 -SAC Bio Databases (28/10/09)

(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 at variance to this Principle**
 The vegetation under application is described as Beard vegetation association 516: Mallee scrub, black marlock, of which there is 41.07% of pre-European extent remaining (Shepherd 2007).

The area under application is located within the Shire of Broomehill - Tambellup, of which there is only 13.4% of pre-European vegetation extent remaining. In addition, there is approximately 11.0% of pre-European vegetation remaining in the local area (~10km radius).

The Beard vegetation association of the vegetation under application retains more than the EPA supported threshold level (30%) recommended in the National Objectives Targets for Biodiversity Conservation within the Mallee Bioregion; below which species loss appears to accelerate exponentially at an ecosystem level (EPA, 2000). However, the local area (~10 km radius) and the Shire of Broomehill - Tambellup has only 11.0% and 13.4% of pre-European vegetation remaining, respectively.

In addition, the area under application is a part of a significant ecological linkage that occurs along the waterways in the local area and allows movement of fauna and flora across an extensively cleared landscape. Given this, the vegetation under application is considered a significant remnant in a cleared landscape and therefore, the proposal is at variance to this Principle. A revegetation condition will be placed on the permit to mitigate this impact.

	Pre-European (ha)	Current extent (ha)	Remaining %
IBRA Bioregion			
Mallee	7,395,897	4,040,546	31.22*
Shire of Broomhill - Tambellup	260,963	34,971	13.4*
Local Area (~10km radius)	15,700	~1,730	11.0
Beard type in Bioregion			
516	288,144	118,328	41.07*

* (Shepherd 2007)

Methodology References
 - EPA (2000)
 - Shepherd (2007)
 GIS Databases
 - SAC Bio Databases (28/10/09)

(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**
 A minor non-perennial watercourse, Waikelongup Creek, runs through the area under application and the whole area is subject to flooding. In addition, two drains run from the eastern end of the area under application and flow into Waikelongup Flat occurring 4.1 km to the southeast.

Waikelongup Creek has been significantly modified from upstream of the proposed clearing to as far as a short distance upstream of Waikelongup Flat (DEC 2009a). At the time of the site visit a small flow was present within the creek (DEC 2009a).

Drainage discharge is expected to be small, confined to the waterway which has already been converted into a drain and is of insignificant volume compared to the storage capacity within Waikelongup Flat in which the drainage discharge will run into (DEC 2009a). This wetland appears to have no natural outlet and overflow is likely to occur only very rarely in extreme flood events so impact will not extend further downstream (DEC 2009a)

Wetland dependent vegetation including *Eucalyptus occidentalis* which occurs in low lying wet area (Western Australian Herbarium 1998-), was observed during the site visit (DEC 2009a).

Given the close proximity of the watercourse and that the area under application occurs within in an area that is subject to flooding it is considered likely for the proposed clearing to be at variance to this Principle. A revegetation condition will be placed on the permit to mitigate this impact.

Methodology References
- DEC (2009a)
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 Proposal may be at variance to this Principle

The area under application comprises of grey shallow soils and brown deep sands (DAFWA 2009a).

There is a high salinity risk within the area under application and the watercourse has visible signs of being affected by salinity (DAFWA 2009a). However, as the clearing if for 2 ha within an already cleared landscape it is not considered likely for the proposed clearing to increase salinity in the local area.

As the proposed clearing of 2 ha occurs within a watercourse and the area contains sandy soils it is likely that the proposed clearing will cause erosion of the watercourse banks and result in sedimentation of the waterway. Therefore, the proposed clearing may be at variance to this Principle.

Methodology References
-DAFWA (2009a)
GIS Databases
-Hydrography, linear
-Salinity Risk
-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 conservation reserve to the area under application is the Anderson Lake Nature Reserve occurring 4.8 km south of the area under application.

The area under application is not connected to this reserve through continuous vegetation, nor does it provide a stepping stone across the landscape between conservation areas.

In addition, the watercourse within the area under application does not occur within the same catchment system as Lake Anderson (DEC 2009b).

Given this and the distance to the nearest conservation reserve, Anderson Lake Nature Reserve, it is not considered likely for the proposed to clearing to be at variance to this Principle

Methodology References
- DEC (2009b)
GIS Databases
- DEC Tenure
- Tambellup 50 cm Orthomosaic - Landgate 2006

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

Comments Proposal is at variance to this Principle

A minor non-perennial watercourse runs through the area under application and the whole area is subject to flooding. In addition, two drains run from the eastern end of the area under application and flow into Waikelongup Flat occurring 4.1 km to the southeast.

The groundwater within the area under application has high salinity (>35000 mg/L). Given the small area to be cleared (2 ha) within an extensively cleared area, it is not expected for the proposed clearing to increase groundwater salinity.

In addition, drainage discharge is expected to be small, confined to the waterway which has already been converted into a drain and is of insignificant volume compared to the storage capacity within Waikelongup Flat in which the drainage discharge will run into (DEC 2009a).

However, it is considered that the proposed clearing will cause deterioration in surface water as a watercourse occurs within the area under application, an area subject to flooding and contains sandy soils. Clearing of vegetation along and within this area will cause erosion of the watercourse banks and result in sedimentation of the surface water.

Therefore, the proposed clearing is at variance to this Principle. The impact on surface water is considered to be short-term as DAFWA has recommended that the drainage channel has batters installed to prevent erosion of banks and a silt/transfer pits to be installed at Tallents Rd to catch sediment (DAFWA 2009a). A revegetation condition will be placed on the permit to mitigate this impact of the proposed clearing.

Methodology **References**
-DAFWA (2009a)
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 **Proposal may be at variance to this Principle**

A minor non-perennial watercourse runs through the area under application and the whole area is subject to flooding. In addition, two drains run from the eastern end of the area under application.

Given the close proximity of the watercourse and that the area under application occurs within in an area that is subject to flooding the proposed clearing is maybe at variance to this Principle. However, it is expected for this impact to be relatively minor due to the small area proposed to be cleared (2ha) in an extensively cleared landscape and the end land use which will reduce flooding in the application area.

Methodology **GIS Databases**
-Hydrography, linear

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

Comments

The Department of Agriculture and Food (DAFWA) has no objection on land degradation grounds of the proposed drain and has given approval for the Notice of Intent To Drain provided that the drains are levied on both sides to prevent surface water from entering the channel and that the batters be constructed at a minimum of 2:1 (1 being the vertical component) to avoid slumping and erosion from occurring (DAFWA 2009b).

The Shire of Broomehill - Tambellup advised that the Council discussed the proposal at its meeting held 18 December 2009 and resolved that it has no objections to the proposal and the granting of a clearing permit (Shire of Broomehill - Tambellup 2009). No further approvals are required from the Shire of Broomehill - Tambellup.

The proposed drainage site is in the middle of the Waikelongup Flat sub catchment, which is mostly cleared with most remnant vegetation located on the waterways. The Waikelongup Lake may provide habitat for the conservation significant Hooded Plover however, based on the Rapid Assessment Protocol for Wheatbelt Wetlands carried out on the lake, it is not expected for water levels to extend into the healthy fringing vegetation due to this proposal and therefore impact on this species (DEC 2009a).

The area under application is zoned Farming under the Shire of Broomehill - Tambellup Town Planning Scheme.

A Bed and Banks permit is not required for this proposal as it doesn't occur within a RIWI area.

The Department of Water (DoW) provided advice to the DAFWA on the Notice of Intent to Drain (Department of Water 2009). DoW stated that, it is unlikely that this double levied drain would have any major detrimental impacts downstream due to the low flows and the distance to the natural watercourse. In addition, DoW stated that the drain is likely to have a positive effect within the immediate area by way of reducing the saline groundwater table which may over time enable some natural regeneration of the surrounding native vegetation. Therefore, the DoW has no objections to this proposal (Department of Water 2009).

Methodology	References
	-DAFWA (2009b)
	-DEC (2009a)
	-Department of Water (2009)
	-Shire of Broomhill - Tambellup (2009)
	GIS Databases
	-Town planning Scheme Zones

4. Assessor's comments

Comment

The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the Environmental Protection Act 1986, and the proposed clearing is at variance to the clearing Principles (e), (f), (i) and (j) and may be at variance to Principle (a), (b) and (g).

5. References

DAFWA (2009a) Department of Agriculture and Food Western Australia, Site Inspection Report for Notice of Intent To Drain, Plantagenet Location 3647 Richard House. TRIM Ref DOC103743.

DAFWA (2009b) Approval for Notice of Intent to Drain - Plantagenet Location 3647, Department of Agriculture and Food Western Australian. TRIM Ref DOC100683.

DEC (2007) DEC Fauna Habitat Notes.xls. February 2007. Department of Environment and Conservation, Western Australia.

DEC (2009a) Wheatbelt Regional Advice on CPS 3363/1 - Lot 3647 Lake Toolbrunup. TRIM Ref DOC105587.

DEC (2009b) Site assessment of Notice of Intent to Drain, Lot 364 Lake Toolbrunup, Department of Environment and Conservation, Wheatbelt Region. TRIM ref DOC106330.

Department of Water (2009) Advice on Notice of Intent to Drain to DAFWA. TRIM Ref DOC106681

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, 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.

Shepherd, D.P. (2007). 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. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.

Shire of Broomhill - Tambellup (2009) Decision on deep drainage proposal, Lot 3647 Lake Toolbrunup. TRIM Ref DOC113454

Western Australian Herbarium (1998-). FloraBase - The Western Australian Flora. Department of Environment and Conservation. <http://florabase.dec.wa.gov.au/> (Accessed 16/11/09)

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 (now DEC)
DMP	Department of Mines and Petroleum (ex DoIR)
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)