



1. Application details

1.1. Permit application details

Permit application No.: 4139/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Joel Thomas Plane

1.3. Property details

Property: LOT 1335 ON PLAN 214488 (HOPETOUN 6348)
Local Government Area: Ravensthorpe
Colloquial name:

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Refuse
Decision Date: 26 May 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
The vegetation under application is mapped as Beard vegetation type 516, which is described as Shrublands; mallee, scrub and black marlock. (Hopkins et al 2001; Shepherd 2009)	The amended area under application is 180 ha within Lot 1335, a 1655 ha property. The purpose of the clearing is to blade plough the land then rake and seed. The vegetation under application is considered to comprise shrublands; mallee, scrub and black marlock, vegetation associated with Beard vegetation type 516 (Shepherd 2009). A DEC site inspection identified the vegetation to be predominantly Open tree mallee community with areas of Mallee over low scrub (DEC 2011).	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The vegetation under application has been historically cleared, but the area has not been cropped or planted to pasture. Therefore, the vegetation has the opportunity to regenerate to its natural state. The vegetation condition was determined through photos taken during a DEC site visits in September 2009 (DEC 2009) and March 2011 (DEC 2011), and via aerial imagery (Ravensthorpe 1.4m Orthomosaic - Landgate 2002; Jerramungup 342 PAN - ALOS 2006/ 2007).

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 at variance to this Principle

On the 1 March 2011 the area under application was amended from 200 ha to 180 ha to exclude three uncleared outcrops. The amended proposal is to clear 180 hectares of native vegetation on Lot 1335, Hopetoun (a 1655 ha property) for the purpose of extending farming operations such as cropping.

The area under application has recently been subject to impacts through clearing (that was the subject of an investigation), but the area has not been cropped or planted to pasture. If the vegetation is left to regenerate, the environmental values of the area under application will recover therefore, the assessment considered the regenerative capacity of the vegetation under application. In order to assess the regenerative capacity of the area under application DEC considered the condition of the remaining native vegetation adjacent to the project area (determined through photos taken during a DEC site visits in September 2009 and March 2011) and the vegetation that has regenerated since the clearing between 2006 and 2008.

The vegetation under application is considered to comprise predominantly Open tree mallee community with areas of Mallee over low scrub (DEC 2011) with the vegetation considered to be in very good (Keighery, 1994) condition (DEC 2011). The vegetation provides habitat for wildlife occurring within and dispersing from nearby conservation areas and provides an ecological linkage with areas of remnant vegetation in the local area.

Within the local area (20 km radius) there are 33 species of priority flora and 12 species of rare flora recorded with nine priority species including *Melaleuca sophisma* (P1), *Xanthoparmelia subimitatrix* (P1) and *Acacia papulosa* (P2) potentially occurring within the area under application. There are also 19 species of threatened and priority fauna recorded within the local area.

Given the large size and very good (Keighery, 1994) condition of the vegetation under application, its contribution to a ecological linkage and the ability of the vegetation to regenerate to its natural state, it is considered that the vegetation under application comprises a high level of biological diversity. The vegetation may also be suitable habitat for a number of priority flora species and fauna species, including small mammals and bird species.

A letter was sent to applicant on 5 April 2011, to inform them of the impacts of the proposed clearing. A response was received on the 29 April 2011, outlining that:

- The vegetation will regenerate, but the mallee will be a lot thinner in the blade plowed sections
- This section [under application] doesn't go anywhere near the reserves and there is a good corridor along the side of it (800 ha on the southern side of the farm)
- Malleefowl have not been seen and there is no evidence except for the one mound in the corner, which is very old and hasn't been used for years.

DEC remains of the view that the vegetation comprises a high level of biological diversity. Therefore, the proposed clearing is at variance with this Principle.

Methodology

References:

- DEC (2009)
- DEC (2011)
- Shepherd (2009)

GIS Databases:

- Jerramungup 342 PAN - ALOS 2006/ 2007
- Ravensthorpe 1.4m Orthomosaic - Landgate 2002
- SAC Bio Databases accessed 9/1/2011
- Soils, Statewide

(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 at variance to this Principle

There have been 19 fauna species recorded within the local area (20 km radius), the closest record is the Western-browed babbler (Priority 4) and Western brush wallaby (Priority 4) located ~5.2 km east of the area under application. Other fauna species located in the local area include malleefowl (*Leipoa ocellata*) (listed as Rare or is likely to become extinct under the State Wildlife Conservation Act 1950 and Vulnerable under the Commonwealth EPBC Act 1999), Baudin's black cockatoo (*Calyptorhynchus baudinii*) (listed as Rare or is likely to become extinct under the State Wildlife Conservation Act 1950 and Vulnerable under the Commonwealth EPBC Act 1999), and Carnaby's black cockatoo (*Calyptorhynchus latirostris*) (listed as Rare or is likely to become extinct under the State Wildlife Conservation Act 1950 and Endangered under the Commonwealth EPBC Act 1999).

The vegetation under application is considered to comprise predominantly Open tree mallee community with areas of Mallee over low scrub (DEC 2011) with the vegetation considered to be in very good (Keighery, 1994) condition (DEC 2011). The vegetation provides habitat for wildlife occurring within and dispersing from nearby conservation areas and provides an ecological linkage with areas of remnant vegetation in the local area. In addition, during a DEC (2011) site inspection a malleefowl mound was observed within the southern section under application.

Malleefowl populations have greatly declined (nearly by half) over the past century as a result of several factors including habitat fragmentation and predation by foxes (Benshemesh 2007). They usually inhabit arid and semi-arid zones in shrublands and low woodlands, particularly those dominated by mallee and/or acacias (Benshemesh 2007). Malleefowl breed annually with an average breeding life of 15 years, mainly nesting in the same general area year after year with breeding pairs having a small home range (Benshemesh 2007). It is considered that the protection of existing nesting mounds is important as well as the maintenance of healthy habitat to allow for the development of future nesting mounds, to ensure the decline of the species is halted or reversed. In addition to the impact to a nesting mound and potential habitat for malleefowl, the clearing proposal will fragment the native vegetation in the local area resulting in the vegetation being susceptible to further disturbances and declining value as part of an ecological linkage.

Given the large size and very good (Keighery, 1994) condition of the vegetation under application, and its contribution to a ecological linkage, it is considered that the vegetation under application comprises significant habitat for fauna species, including small mammals, reptiles and bird species. If the vegetation is left to regenerate the environmental values of the area under application will recover therefore, the assessment considered the regenerative capacity of the vegetation under application.

A letter was sent to applicant on 5 April 2011, to inform them of the impacts of the proposed clearing. A response was received on the 29 April 2011, outlining that:

- The vegetation will regenerate, but the mallee will be a lot thinner in the blade plowed sections
- This section [under application] doesn't go anywhere near the reserves and there is a good corridor along the side of it (800 ha on the southern side of the farm)
- Malleefowl have not been seen and there is no evidence except for the one mound in the corner, which is very old and hasn't been used for years.

DEC remains of the view that the vegetation comprises a significant fauna habitat. Therefore, the proposed clearing is at variance with this Principle.

- Methodology** **References:**
- Benshemesh (2007)
 - DEC (2011)
 - Shepherd (2009)
- GIS Databases:**
- Jerramungup 342 PAN - ALOS 2006/ 2007
 - Ravensthorpe 1.4m Orthomosaic - Landgate 2002
 - SAC Bio Databases accessed 9/1/2011

(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

Within the local area (20 km radius) there have been 57 occurrences of 12 species of rare flora species recorded, the closest record is *Stylidium galioides* located ~11.5 km west of the applied area. Eight rare flora species occur within different beard vegetation complexes and in different soils to that of the area under application. It is not considered likely that these species would be found within the application area as their preferred habitats are not similar to the application area.

Rare flora species *Stylidium galioides*, *Eucalyptus coronata*, *Eremophila denticulata* subsp. *denticulata* and *Eucalyptus burdettiana* occur within different beard vegetation complexes, but on similar soils to that of the area under application.

The suitable habitats for these four flora species are rocky hillslopes, rocky quartzite hillsides, sand over limestone and quartzitic ridges, respectively (WA Herbarium 1998-). *Eremophila denticulata* subsp. *denticulata* occurs on the sand over limestone, which is not present within the area under application. *Stylidium galioides* inhabits granite outcrops on mountain peaks within the Fitzgerald River National Park west of the application area. This species is therefore not likely to exist within the application area. However, *Eucalyptus coronata* and *Eucalyptus burdettiana* may occur within the rocky hillsides that occurred within the area under application. On the 1 March 2011 the area under application was amended from 200 ha to 180 ha to exclude three uncleared outcrops. These outcrops may have provided suitable habitat for *Eucalyptus coronata* and *Eucalyptus burdettiana*. Given that areas of suitable habitat for these rare flora species have been excluded from the application, the proposal is not likely to be at variance to this Principle.

- Methodology** **Reference:**
- WA Herbarium (1998-)
- GIS Database:**
- SAC Bio Databases accessed 9/1/2011
 - 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

There no known occurrences of TEC within the local area (20 km radius). The closest record is the vulnerable *Eucalyptus acies* mallee heath located ~43 km south west of the applied area. Given the distance to the nearest TEC, it is unlikely that the application area comprises or maintains a threatened ecological community. Therefore, the proposed clearing is not likely to be at variance with this Principle.

- Methodology** **GIS Database:**
- SAC Bio Databases accessed 9/1/2011

(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 described as Beard vegetation type 516 of which there is 68.7% of pre-European extent remaining within the bioregion (Shepherd 2009).

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia 2001). The remaining percentage of vegetation is above the minimum of 30%, and there is still a large percentage of vegetation remaining in the local area. Also, a large percentage of the Beard vegetation type mapped within the applied area is well represented within conservation reserves vested with DEC (40.8%).

Given the extent of vegetation remaining in the Shire and bioregion and the high representation of the vegetation types, the local area is not considered to be extensively cleared. Therefore, the proposed clearing is not likely to be at variance with this Principle.

	Pre-European (ha)	Current extent (ha)	Remaining (%)	In secure tenure (%)
IBRA Bioregion*				
Esperance Plains (EP)	2,899,950	1,488,029	51.3	
Shire of Ravensthorpe*	982,191	610,238	62.1	
Local area (20 km radius)	125,600	~86,800	~69	
Beard vegetation type in the Bioregion*				
516	318,746	219,186	68.7	40.8

* (Shepherd 2009)

- Methodology** References:
- Commonwealth of Australia (2001)
 - Shepherd (2009)
- GIS Databases:
- Pre-European Vegetation
 - Matiske Vegetation Complexes
 - NLWRA, Current Extent of Native Vegetation
 - Interim Biogeographic Regionalisation of Australia

(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 minor non-perennial watercourses (tributaries of Steere River) mapped within the applied area. In addition, during a DEC (2011) site inspection regeneration of vegetation along a drainage channel was observed within the area under application.

Impacts from clearing riparian vegetation associated with drainage channels and minor non-perennial watercourses on site are likely to include short term sedimentation and may cause water erosion, these impacts may be able to be managed. It is considered that vegetation associated with minor non-perennial watercourses will be impacted. Therefore, the proposed clearing is at variance with this Principle.

- Methodology** Reference:
- DEC (2011)
- GIS Databases:
- Hydrography, linear
 - WA Coastline

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

Comments Proposal is at variance to this Principle

The area under application is located within the Hammersley 9 soil landscape subsystem, which is comprises alkaline grey shallow sandy duplex soils and grey deep sandy (gravelly) duplex soils with minor pale deep sands and duplex gravel with the vegetation of shrub heath community with Eucalyptus tetragona common (Commissioner of Soil and Land Conservation 2011).

The sandy soils found on site are typically prone to wind erosion. The Commissioner of Soil and Land Conservation (2011) advises that the proposed clearing is unlikely to cause appreciable land degradation in the form of salinity, eutrophication or water erosion. However the sandy soils on upper slopes have a high to very high risk of wind erosion. The Commissioner of Soil and Land Conservation (2011) advises that wind erosion is potentially a serious management problem for sandy surfaced soils of the south coast. Provided

adequate ground cover (50%) is maintained, serious land degradation is unlikely to occur; therefore concluding the proposed clearing may be variance with Principle (g) for wind erosion (Commissioner of Soil and Land Conservation 2011).

Given the high to very high risk of wind and the scale of the area proposed to be cleared, DEC considers the proposed clearing is at variance with this Principle.

A letter was sent to applicant on 5 April 2011, to inform them of the impacts of the proposed clearing. A response was received on the 29 April 2011, outlining that:

-With normal land use land degradation wouldn't happen. If there was wind erosion all you would need is to leave a few windrows of roots.

DEC remains of the view that the proposed clearing is likely to lead to appreciable land degradation. Therefore, the proposed clearing is at variance with this Principle.

Methodology Reference:
- Commissioner of Soil and Land Conservation (2011)

(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 areas are Fitzgerald River National Park located ~4 km west, un-named Nature Reserve located ~4.8 km east and Kundip Nature Reserve located ~11 km north-east of the applied area.

Given the size (180 hectares) and very good (Keighery, 1994) condition of the vegetation under application, it is considered that the area under application provides a substantial wildlife corridor to nearby conservation reserves. The proposed clearing is considered likely to impact on these nearby reserves by limiting the dispersal of flora and fauna.

A letter was sent to applicant on 5 April 2011, to inform them of the impacts of the proposed clearing. A response was received on the 29 April 2011, outlining that:

-The vegetation will regenerate, but the mallee will be a lot thinner in the blade plowed sections

-This section [under application] doesn't go anywhere near the reserves and there is a good corridor along the side of it (800 ha on the southern side of the farm)

DEC remains of the view that the proposed clearing is likely to have an impact on environmental values of nearby conservation areas. Therefore, the proposed clearing is at variance with this Principle.

Methodology Reference:
- Keighery (1994)
GIS Databases:
- DEC Tenure
- Jerramungup 342 PAN - ALOS 2006/ 2007

(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**

There are a few minor non-perennial watercourses (tributaries of Steere River) mapped within the applied area.

The area under application is located within the Hammersley 9 soil landscape subsystem, which comprises alkaline grey shallow sandy duplex soils and grey deep sandy (gravelly) duplex soils with minor pale deep sands and duplex gravel (Commissioner of Soil and Land Conservation 2011).

The Commissioner of Soil and Land Conservation (2011) advises that the proposed clearing is unlikely to cause appreciable land degradation in the form of salinity, eutrophication or water erosion. Therefore, the proposed clearing is not likely to be at variance to this Principle.

Methodology Reference:
- Commissioner of Soil and Land Conservation (2011)
GIS Database:
- Hydrography, linear

(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**

The area under comprises alkaline grey shallow sandy duplex soils and grey deep sandy (gravelly) duplex soils

with minor pale deep sands and duplex gravel (Commissioner of Soil and Land Conservation 2011). These sandy soils have a low risk of flooding due to high infiltration rates. Therefore the proposed clearing is not likely to be at variance to this Principle.

Methodology Reference:
- Commissioner of Soil and Land Conservation (2011)

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

Comments

A letter was sent to applicant on 5 April 2011, to inform them of the impacts of the proposed clearing. A response was received on the 29 April 2011. The correspondence outlined that:

- The vegetation will regenerate, but the mallee will be a lot thinner in the blade plowed sections
- This section [under application] doesn't go anywhere near the reserves and there is a good corridor along the side of it (800 ha on the southern side of the farm)
- Malleefowl have not been seen and there is no evidence except for the one mound in the corner, which is very old and hasn't been used for years.
- With normal land use land degradation wouldn't happen. If there was wind erosion all you would need is to leave a few windrows of roots.

An investigation by the Department of Environment and Conservation identified approximately 170 ha of alleged unauthorised clearing on Lot 1335 Laurina Road. A Vegetation Conservation Notice CPS 3331/1 dated 15 October 2009 was given, requiring that no unlawful clearing or further unlawful clearing takes place. DEC determined that revegetation measures were not required, as photos taken during a site inspection of the area (DEC 2009) indicate the vegetation was regenerating naturally.

A submission (2011) was received in objection to the proposed clearing on Lot 1335 Laurina Road. Concerns were raised in relation to:

- There should no further clearing in Ravensthorpe, as it is a biodiversity treasure area and any further clearing would not be sustainable; this is addressed in the assessment of the application.

The Shire of Ravensthorpe (2011) advised that Council has no objection or comment to the proposed clearing of native vegetation at Lot 1335 Laurina Road.

The area under application falls within the agricultural area defined in EPA Position Statement No. 2 (EPA 2000). EPA Position Statement No. 2 (EPA 2000) states that significant clearing of native vegetation has already occurred on agricultural land, leading to a reduction in biodiversity and increase in land salinisation, and therefore any further reduction in native vegetation through clearing for agriculture cannot be supported. The EPA (2000) recommends that all existing native vegetation be protected from passive clearing through, for example, grazing by stock or clearing by other means.

In exceptional circumstances the EPA would consider supporting clearing for agriculture within this region if:

- (a) There are alternative mechanisms for protecting biodiversity.
- (b) The area to be cleared is relatively small, depending on the scale at which biodiversity changes over the area, including extent of vegetation in the surrounding area and recognising that values will vary for different ecosystems.
- (c) The proponent demonstrates that the elements set out in Section 4.3 of Position Statement No 2 are being met. This will require extensive local and regional biodiversity work.
- (d) Land degradation, including aquatic environments and threatening processes, such as dieback, salinisation or disruption of catchment processes, on-site and off-site would not be exacerbated.

Lot 1335 Laurina Road is leasehold land, zoned rural under the local Town Planning Scheme.

Methodology References:
- DEC (2009)
- EPA (2000)
- Shire of Ravensthorpe (2011)
- Submission (2011)
GIS Databases:
- Cadastre -
- Town Planning Scheme Zones

4. References

- Benshemesh, J. (2007) National Recovery Plan for Malleefowl. Department of Environment and Heritage, South Australia.
<http://www.environment.gov.au/biodiversity/threatened/publications/recovery/malleefowl/index.html> (Accessed 29 March 2011)
- Commissioner of Soil and Land Conservation Land degradation assessment report (17/1/2011). Department of Agriculture and Food Western Australia. DEC Ref A365843.
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.

- DEC (2009) Site Inspection Photos for Lot 1335, Hopetoun. Site inspection undertaken 5/10/2009. Department of Environment and Conservation, Western Australia. DEC Ref A369383
- DEC (2011) Site Inspection Photos for Lot 1335, Hopetoun. Site inspection undertaken 1/03/2011. Department of Environment and Conservation, Western Australia. DEC Ref A379704
- 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. (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.
- Shire of Ravensthorpe (2011) Direct Interest Submission for Clearing Application CPS 41391/1, Lot 1335 Hopetoun. DEC Ref A361679
- Submission (2011) Direct Interest Submission for Clearing Application CPS 41391/1, Lot 1335 Hopetoun. DEC Ref A360863
- Western Australian Herbarium (1998-) FloraBase-The Western Australian Flora. Department of Environment and Conservation. <http://florabase.dec.wa.gov.au/> (Accessed 02/02/11).

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)

