Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 1998/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: Lignor Ltd

1.3. Property details

Property: LOT 105 ON PLAN 44032 (DROME 6330)

Local Government Area: City Of Albany

Colloquial name:

1.4. Application

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

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 consists of two areas. Both areas are mapped as low forest of jarrah, Eucalyptus staeri & Allocasuarina fraseriana (Beard vegetation type 978).	A site visit (DEC 2007) confirmed the presence of the jarrah and Allocasurarina fraseriana. The two areas under application are separated by a blue gum plantation that is six years old. The site visit ascertained that the northern block has substantially more species than the southern block (18 species were identified) but it contains extensive areas (at least 75%) of kikuyu grass (Pennisetum clandestinum) that has replaced the native flora understorey. The southern area contains a jarrah sheoak woodland with an understorey consisting solely of kikuyu grass, Yorkshire fog (Holcus lanatus), wild oats (Avena spp.) and red ink plant (Phytolacca octandra).	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The northern are was rated as degraded whereas the southern area was rated as approaching completely degraded (Keighery 1994).

3. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments

Proposal is not at variance to this Principle

The area under application consists of two small stands of vegetation (both around 1 ha in size) that are in degraded (Keighery 1994) condition (DEC 2007). The vegetation is surrounded by a bluegum plantation that is six years old and all of this is proposed to be cleared to accommodate an Engineered Strand Lumber Plant (ESL Plant).

The vegetation under application is not considered to be representative of the Beard vegetation association 978 that has been mapped for this site as it is in a degraded condition. A site visit (DEC 2007) identified 18 flora

species in the northern area but the area had an extensive groundcover of weeds, being mainly kikuyu grass (Pennisetum clandestinum), that covered at least 75%. The southern area was described as a jarrah sheoak woodland with an understorey consisting solely of kikuyu grass, Yorkshire fog (Holcus lanatus),wild oats (Avena spp.) and ink weed (Phytolacca octandra). The condition of the southern area was considered to be an area approaching completely degraded (Keighery 1994). This vegetation is unlikely to be sustained in the long term due to its degraded condition and isolations from other functioning remnants.

ATA Environmental conducted a flora survey in November 2006 and found a total of 31 species within the site with 18 of these being native and 13 introduced species. The consultants found that introduced species dominated the understorey except for one small patch in the northern remnant.

Methodology

ATA Environmental (2006)
DEC site visit (2007)
Keighery (1994)
GIS database:
- Pre European Vegetation - DA 01/01

(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

Within the local area (10km radius) thirty one Threatened or Endangered fauna species records have been made between 1929 and 2005. Of these there are six aves, two fish and three mammal species. The majority of these sightings were made in large intact remnants within the local area.

No fauna survey was undertaken by ATA Environment (2006, consultant for Lignor Ltd) as the area under application is small in size. However, opportunistic sightings were made during the flora survey. A Forest Red-tailed Black Cockatoo was sighted during the survey utilising the vegetation under application.

The vegetation within the area under application, particularly the southern block, is not considered to be significant habitat for native fauna, given the degraded (Keighery 1994) condition of the vegetation (DEC 2007) and small size the remnants (both the northern and southern remnants are approximately 1ha in size).

There are remnants in the local area that are likely to be significant habitat for the above mentioned fauna. One such area is Down Road Nature Reserve which is 2.04km south of the area under application.

Methodology

ATA Environmental (2006)
Keighery (1994)
GIS database:
- Albany 1.4m Orthomosaic - DLI March 03
- CALM Managed Lands and Waters - CALM 01/06/05
- SAC Biodatasets - accessed 18 Feb 08

(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 (10km radius) there area there are four Declared Rare Flora (DRF), two Priority 1, eight Priority 3 and ten Priority 4 flora species recorded within eight-nine records, recorded between 1902 and 2006 (most records were made in the 90's).

The small size the remnants (both the northern and southern remnants are approximately 1ha in size) allows for a greater edge to volume ratio (edge effect) which has left the remnants more susceptible to disturbance, such as weed invasion. The vegetation within the area under application, particularly the southern block, is not likely to support such species, given the degraded (Keighery 1994) condition of the vegetation (DEC 2007).

A flora survey undertaken by ATA Environmental (2006) found no DRF or Priority flora within the area under application.

Methodology

ATA Environmental (2006)
DEC site visit (2007)
Keighery (1994)
GIS database:
- Albany 1.4m Orthomosaic - DLI March 03
- Declared Rare and Priority Flora List - CALM 13/08/03
- SAC Biodatasets - accessed 18 Feb 08

(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 at variance to this Principle**

There are no recorded occurrences of threatened or priority ecological communities within the vegetation under application or in the local area (10km radius). Therefore, the proposal is not at variance to this principle.

Methodology GIS Database:
- SAC Biodatasets - accessed 18 Feb 08

(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 at variance to this Principle**

There is 36ha (16.7%) of vegetation remaining within Lot 105 on plan 44032. If the proposed clearing was granted there would be 34ha (15.8%) of vegetation remaining. There is approximately 25% of vegetation remaining within the local area (10km) radius.

	Pre-European (ha)	Current extent (ha)	Remaining (%)
IBRA Bioregions*			
Jarrah Forest^	4 506 654	2 405 331	53.4
City of Albany*	427 257	152 274	35.6
Beard Vegetation Complex*			
978	53 230	19 749	37.1

* (Hopkins et al. 2001, Shepherd et al. 2001)
^ Area within Intensive Land Use Zone

The two areas under application are not considered to be significant remnants given that they are small in size (1 ha each) and are in a degraded (Keighery 1994) condition (DEC 2007). The vegetation could be described as stands of trees with exotic grass groundcover and is not considered to be representative of the above mentioned vegetation complex. There proposal is therefore, not at variance to this Principle.

Methodology DEC site visit (2007)
Keighery (1994)
Hopkins et al. (2001)
Shepherd et al (2001)
GIS Databases:
- Albany 1.4m Orthomosaic - DLI March 03
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
- Local Government Authorities - DLI 8/07/04
- Pre European Vegetation - DA 01/01

(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 at variance to this Principle**

The northern area under application is 711m east of a minor perennial watercourse and there is another minor perennial watercourse 545m south of the southern area under application. Both of the areas under application area associated with the subcatchment (Torbay Inlet_Denmark Coast Basin) of the southern watercourse. These watercourses flow into a marsh area which in turn flows into Marbelup Brook (a major river).

The vegetation under application is mapped as Beard Vegetation Association 978 (Hopkins et al 2001, Shepherd et al. 2001). This vegetation association is described as low forest of jarrah (Grey sand, clay or sandy loam, laterite. Hills, rises), Eucalyptus staeri (Sandy soils, laterite. Low dunes, hills, near swamps) & Allocasuarina fraseriana (Lateritic soils, white, grey or yellow sand. Jarrah forest, sand dunes).

Eucalyptus staeri (associated with swamps) was not found within the area under application as part of the flora survey undertaken by ATA Environmental (2006)

The areas under application are in an elevated part of the landscape and therefore the vegetation is not

associated with these watercourses and marsh area.

Methodology

ATA Environmental (2006)
Florabase (2008)
Hopkins et al. (2001)
Shepherd et al (2001)
GIS Databases:
- Hydrography, linear - DoW 13/7/06
- Pre European Vegetation - DA 01/01
- Topographic contours statewide - DOLA and ARMY 12/09/02

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

Comments

Proposal is not at variance to this Principle

Due to extensive clearing, this landscape is prone to the effects of salinity and waterlogging in areas low in the profile.

The two stands of vegetation under application are small in size (1 ha each) and are in a degraded (Keighery 1994) condition (DEC 2007). This vegetation is unlikely to be sustained in the long term due to its degraded condition and isolations from other functioning remnants. The effects of clearing, with respect to salinity and waterlogging will be incremental to those already present.

Methodology

DEC (2007)
Keighery (1994)
GIS database:
- Albany 1.4m Orthomosaic - DLI March 03
- Salinity Risk LM 25m - DOLA 00
- Topographic contours statewide - DOLA and ARMY 12/09/02

(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 at variance to this Principle

There are five Nature Reserves (NR) within the local area (10km radius). This includes Down Road NR (2km SE), Marbelup NR (6.6km S), Phillips Brook NR (4.5km NNE), Lake Powell NR (9.4km S) and Mill Brook NR (8.1km NE). The later two are also Registered National Estates and Mill Brook NR is a System 2 area.

The two areas under application are small in size (1 ha each) and are in a degraded (Keighery 1994) condition (DEC 2007). The vegetation is described as stands of trees with exotic grass groundcover (DEC 2007) and therefore, does not have any biodiversity values that may contribute to the nearby Nature Reserves. Other remnants closer to these Nature Reserves that are bigger and in better condition, are likely to be of significance to the environmental values of these Reserves.

Methodology

DEC site visit (2007)
Keighery (1994)
GIS Databases:
- CALM Managed Lands and Waters - CALM 01/06/05
- Register of National Estate - Environment Australia, Australian & World Heritage Division 12/03/02
- System 1 to 5 and 7 to 12 areas ? DEC 11/07/06

(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 eastern side of property in question is largely planted with bluegums that are six years old, with the exception of the two stands of native vegetation under application. The proponent has proposed to clear both the plantation and native vegetation to accommodate a lumber process plant.

The two areas under application are elevated on a medium slope. The northern area under application is 711m east of a minor perennial watercourse and there is another minor perennial watercourse 545m south of the southern area under application. Both of the areas under application area associated with the subcatchment (Torbay Inlet_Denmark Coast Basin) of the southern watercourse. Both of these watercourses flow into a marsh area which in turn flows into Marbelup Brook (a major river).

It is likely that the proposed clearing will contribute to increased runoff into the watercourse, given that the area under application sits between 70 - 75 metres above sea level and therefore slightly elevated. The removal of vegetative cover could result in some surface soil erosion during heavy rainfall events, which may result in sedimentation within the watercourse. The design of the lumber plant infrastructure proposed to be constructed following the proposed clearing is likely to mitigate the potential for soil erosion thereby mitigating the potential

for sedimentation.

The proposed clearing, the clearing of the bluegum plantation and subsequent construction of lumber process plant may result in changes in the nutrient loading of surface water entering the watercourse. The presence of cleared agricultural land between the area under application and the watercourse suggests that any impacts resulting from the proposed clearing will be incremental to those already present, and given the 2.05 hectare extent of the proposed clearing of degraded (Keighery 1994, DEC 2007) vegetation these impacts are not likely to be significant.

Methodology

Keighery (1994)
DEC site visit (2007)
GIS database:
- Albany 1.4m Orthomosaic - DLI March 03
- Hydrographic catchments, catchments - DoW 01/06/07
- Hydrographic catchments, subcatchments - DoW 01/06/07
- Hydrography, linear - DOW 13/7/06
- Topographic contours statewide - DOLA and ARMY 12/09/02

(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 at variance to this Principle

The vegetation under application is largely comprised of two small (1ha) stands of trees over an exotic grass groundcover.

The northern area under application is 711m east of a minor perennial watercourse and there is another minor perennial watercourse 545m south of the southern area under application. Both of the areas under application area associated with the subcatchment (Torbay Inlet_Denmark Coast Basin) of the southern watercourse. Both of these watercourses flow into a marsh area which in turn flows into Marbelup Brook (a major river).

The average rainfall of the general area is approximately 900 millimetres per annum, and the average evaporation of the general area is approximately 900 millimetres per annum.

Given the presence of watercourses nearby, and the presence of adjacent cleared lands, the clearing of approximately 2.02 hectares of vegetation in predominantly degraded condition (Keighery 1994, DEC 2007), comprising mainly of trees over introduced grasses, is unlikely to exacerbate the incidence or intensity of flooding.

Methodology

Keighery (1994)
DEC site visit (2007)
GIS database:
- Albany 1.4m Orthomosaic - DLI March 03
- Evapouration Isopleths - WRC 29/09/98
- Hydrographic catchments, catchments - DoW 01/06/07
- Hydrographic catchments, subcatchments - DoW 01/06/07
- Hydrography, linear - DoW 13/7/06
- Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05
- Topographic contours statewide - DOLA and ARMY 12/09/02

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

Comments

Shire Planning consent (DOC46464) and DEC Works Approval (DOC46463) have been granted for the proposed Engineered Strand Lumber Plant.

Methodology

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Miscellaneous	Mechanical Removal	2.05	The assessable criteria have been addressed and the clearing as proposed is not at variance to Principles (a), (d), (e), (f), (g), (h) and (j) and is not likely to be at variance to Principles (b), (c) and (i).

5. References

ATA Environmental (2006) Mirambeena Flora and Fauna Assessment Albany, Worley Parsons Infrastructure
DEC, Florabase (2008) http://florabase.dec.wa.gov.au/browse/profile/13619. (Retrieved 06 02 2008).
Department of Environment and Conservation (2007) Site Visit Report. Native Vegetation Conservation CPS 1998/1. DEC

TRIM Ref: DOC40323.
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.

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)