



1. Application details

1.1. Permit application details

Permit application No.: 868/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Worsley Alumina Pty Ltd

1.3. Property details

Property: LOT 5314 ON PLAN 220209 (MORNINGTON 6221)
Local Government Area: Shire Of Collie
Colloquial name: Wellington Loc 5314 Gastaldo Rd

1.4. Application

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

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard Unit 3 - Medium forest; Jarrah-Marri.	The native vegetation is comprised of Marri and Jarrah regrowth with a sparse understorey of weedy grasses and native shrubs (Huxtable 2005).	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994).	The clearing proposal is for the purpose of construction of a 132 kV cable tray.
Mattiske: Dwellingup (D1) - Open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla on lateritic uplands in mainly humid and subhumid zones.			The proposed clearing area has been previously cleared to facilitate the construction of a cable tray and switchyard. The existing native vegetation now comprises regrowth (approximately 15 years old) of native Marri forest with the occasional Jarrah (Huxtable 2005). Rehabilitation of the entire site is outlined separately in Worsley Alumina's closure plan (Huxtable 2005).

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 is not considered to be of high biological diversity due to the close proximity to the highly disturbed environment of the refinery bauxite residue disposal area. The area under application has previously been cleared and consists of marri and jarrah regrowth (Huxtable 2005) and is of a small size limiting the biodiversity value of the vegetation. CALM concurs with DoIR's findings and states that DoIR's assessment report adequately addresses the clearing principles and that the conclusions in the report are warranted (CALM 2005).
Methodology	CALM 2005. Huxtable 2005. GIS Databases: CollieBusselton 2.5m Orthomosaic - DOLA 99 Collie 40cm Orthomosaic - DLI 03

(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 at variance to this Principle Aerial photography indicates that the vegetation is unlikely to provide significant habitat for fauna species as it appears too generally sparse in nature. The area comprises 'regrowth approximately 15 years old consisting mainly of Marri with the occasional Jarrah, with a sparse understorey comprising a mixture of weedy grasses and some native shrubs' (Huxtable 2005). The level of disturbance within the site, and the small size of the area under application, is likely to further limit the habitat value of the vegetation. CALM concurs with DoIR's findings and states that DoIR's assessment report adequately addresses the clearing principles and that the conclusions in the report are warranted (CALM 2005).
Methodology	CALM 2005.

Huxtable 2005.

GIS Databases: CollieBusselton 2.5m Orthomosaic - DOLA 99 Collie 40cm Orthomosaic - DLI 03

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

Comments Proposal is not at variance to this Principle

There are no known Declared Rare or Priority Flora species within the application area. The area under application is a previously cleared area and comprises 'regrowth approximately 15 years old consisting mainly of Marri with the occasional Jarrah, with a sparse understorey comprising a mixture of weedy grasses and some native shrubs' (Huxtable 2005). It is within an active area of the refinery. Given the above, there is therefore a low probability of the proposed clearing being at variance with this principle.

CALM concurs with DoIR's findings and states that DoIR's assessment report adequately addresses the clearing principles and that the conclusions in the report are warranted (CALM 2005).

Methodology CALM 2005.

Huxtable 2005.

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 significant ecological community.

Comments Proposal is not at variance to this Principle

There are no records of Threatened Ecological Communities (TECs) within the local area (10km radius). As the area has previously been cleared and is comprised of Marri and Jarrah regrowth, it can be concluded that it does not contain a TEC.

CALM concurs with DoIR's findings and states that DoIR's assessment report adequately addresses the clearing principles and that the conclusions in the report are warranted (CALM 2005).

Methodology CALM 2005.

GIS Databases: Threatened Ecological Communities - CALM 12/04/05

Threatened Plant Communities - DEP 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 not at variance to this Principle

The vegetation comprises regrowth of Marri and Jarrah forest approximately 15 years old with a sparse understorey of weedy grasses and some native shrubs (Huxtable 2005) and therefore does not compromise this principle.

	Pre-European (ha)*	Current extent (ha)*	Remaining (%)*	Conservation** status	% in reserves/CALM Managed Land
IBRA Bioregion - Jarrah Forest***	4544335	2 624 301	58.3	Least Concern	-
Shire of Harvey	168 294	101 085	60.1	Least Concern	-
Vegetation type: Beard: Unit 3	3 046 385	2 197 837	72.1	Least Concern	78%
Mattiske: Dwellingup (D1) Heddle: Yarragil Complex (no data available)	2 082 806	1 832 869	88	Least Concern	-

* Shepherd et al. 2001.

** Department of Natural Resources and Environment 2002.

*** Within the Intensive Land use Zone

Methodology Department of Natural Resources and Environment 2002.

Hopkins et al. 2001.

Huxtable 2005.

Shepherd et al. 2001.

GIS Databases: Local Government Authorities - DLI 8/07/04_1

Mattiske Vegetation - CALM 24/3/98

Pre-European Vegetation - DA 01/01

Heddle Vegetation Complexes - DEP 21/06/95

Interim Biogeographic Regionalisation of Australia - EA 18/10/00

(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 area under the application is not within a watercourse or wetland, or any associated buffer areas.

Methodology GIS Databases: Rivers, 1M - GA 01/06/00

Hydrography, Linear (hierarchy) - DOE 13/4/05

(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

There is no information for Acid Sulphate Soils within the area under application. Groundwater salinity is mapped at 500 - 1000 mg/L. Salinity is mapped at a low risk in the area. There is a slightly increased risk of salinity occurring in an area 1.5kms to the west of the application as this is a river/ drainage area, however, clearing of the area under application is small and unlikely to significantly contribute to increasing salinity risk.

Methodology GIS Databases: Salinity Risk LM 25m - DOLA 00
Groundwater Salinity, Statewide - 22/02/00

(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

The area under application is within the Harris River State Forest (State Forest No. 15). The land in the immediate vicinity has undergone a high level of disturbance and has been previously cleared and rehabilitated. Clearing of the area under application is unlikely to significantly reduce the environmental value of the area.

Methodology GIS Database: CALM Managed Lands and Waters - CALM 1/07/05

(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 at variance to this Principle

The application area is within the Brunswick Catchment Area Water Source Protection Plan (Bishop 2005) and is within the catchment of the Augustus River, which is a tributary of the Brunswick River. Due to the small scale of the proposed clearing it is unlikely to significantly degrade water quality.

Methodology Bishop 2005.
GIS Databases: Hydrography, Linear - DOE 1/2/04_1
Hydrography, Linear - DOE 1/2/04
Topographic Contours, Statewide - DOLA 12/09/02
Rivers, 1M - GA 01/06/00

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding.

Comments Proposal is not at variance to this Principle

Flooding impacts are unlikely to occur as a result of the proposed clearing due to its size relative to the surrounding vegetated forest.

Methodology GIS Databases: CollieBusselton 2.5m Orthomosaic - DOLA 99
Collie 40cm Orthomosaic - DLI 03

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

Comments

There is a Native Title Claim over the entire area under application (WC98-058) (GIS, DLI 2003). This claim has been registered with the National Native Title Tribunal on behalf of the Gnaala Karla Booja claimant group (GIS, DLI 2003) however, the tenement has been granted and the clearing is for a purpose consistent with the tenement type, therefore the granting of a clearing permit is not a future act under the Native Title Act 1993.

The area under application is zoned Forestry. The proponent has the relevant current licences being an EP Licence No. L50/81, Works Approval No. W50/81/13 and Surface Water Licence No. SWL68041(002). There is no other RIWI Act Licence, Works Approval or EP Act Licence that will affect the area that has been applied to clear' (Carter 2005).

The proposed clearing occurs in an area that is covered by the following Registered Indigenous Heritage Site - *Westrail Survey 22* [ID 5324]. 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 Carter 2005.
GIS Databases: Native Title Claims - DLI 19/12/04
Town Planning Scheme Zones - MFP 8/98

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Building or Structure	Mechanical Removal	0.82	Grant	Recommend that the application be granted as it is not at variance to any of the Clearing Principles.

Clearing will be conducted using bulldozer. Vegetation will be mulched and used for revegetation projects.

5. References

Bishop, C., (2005), Environmental Officer, DoE, Hydrogeological advice.

CALM advice, **CALM**, (2005), Land Clearing proposal advice, Advice to Environmental Assessor, Department of Industry and Resources (DoIR), Department of Conservation and Land Management, Western Australia. DoIR OurDocs Ref LS.140 & KF.225.

Carter, J., (2005), Environmental Officer, DoE, Environmental licensing advice.

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.

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.

Havel, J.J. and Mattiske Consulting Pty Ltd (2002), *Review of management options for poorly represented vegetation complexes*, Conservation Commission.

Hedde, E. M., Loneragan, O. W., and Havel, J. J. (1980), *Vegetation Complexes of the Darling System, Western Australia*. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.

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

Huxtable, B., (2005), Environmental Officer, Worsley Alumina Pty. Ltd., Clarification of Application for Area Permit.

Keighery, BJ (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.

Abbreviations:

CALM - Department of Conservation and Land Management, Western Australia.

DA - Department of Agriculture, Western Australia.

DEP - Department of Environment Protection (now DoE), Western Australia.

DLI - Department of Land Information, Western Australia.

DoE - Department of Environment, Western Australia.

DoIR - Department of Industry and Resources, Western Australia.

DOLA - Department of Land Administration, Western Australia.

EP Act - Environment Protection Act 1986, Western Australia.

GIS - Geographical Information System.

RIWI - Rights in Water and Irrigation Act 1914, Western Australia.

TECs - Threatened Ecological Communities.