



1. Application details

1.1. Permit application details

Permit application No.: 739/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Main Roads Western Australia

1.3. Property details

Property:
 LOT 118 ON PLAN 34037 (House No. 9 COPAL WILLYUNG 6330)
 LOT 5 ON PLAN 4817 (House No. 310 ROCKY CROSSING WILLYUNG 6330)
 LOT 462 ON PLAN 141657 (WILLYUNG 6330)
 LOT 557 ON PLAN 257467 (WILLYUNG 6330)
 LOT 558 ON PLAN 136424 (House No. 80 NEILSON WILLYUNG 6330)
 LOT 4741 ON PLAN 157105 (House No. 35895 ALBANY WILLYUNG 6330)
 LOT 4765 ON PLAN 144402 (WILLYUNG 6330)
 LOT 8 ON DIAGRAM 15721 (House No. 547 CHESTER PASS WILLYUNG 6330)

Local Government Area: City Of Albany
 Colloquial name: Albany Ring Rd - Road Construction

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
8.2		Mechanical Removal	Road construction or maintenance

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
<p>Two Beard Vegetation Associations have been identified on the area under application (Hopkins et al., 2001; Shepherd et al., 2001):</p> <ul style="list-style-type: none"> -Association 3 comprises Medium forest of jarrah and marri. -Association 978 comprises low forest jarrah, Eucalyptus staeri and Allocasuarina fraseriana. 	<p>The vegetation proposed to be cleared is 8.2ha occurring in patches along a proposed highway corridor between Chester Pass Road and Albany Highway. The vegetation is relatively fragmented and includes some riparian vegetation. Large areas of native vegetation in excellent condition are contained in adjacent reserves. Environmental consultants GHD (2005) describes the vegetation to be cleared as:</p> <ul style="list-style-type: none"> - Jarrah/ Banksia grandis over pasture, - Jarrah/ Marri/ Sheoak woodland, - Melaleuca preissiana over Taxandria shrubland and Typha thicket, - Jarrah/ Marri over mixed shrubs, - Taxandria thickets, and - Jarrah/ Albany Blackbutt/ Sheoak woodland over mixed shrubland. <p>There are also areas proposed to be cleared that comprise planted trees that are not considered as part</p>	<p>Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994).</p>	<p>The condition of the vegetation proposed to be cleared ranges from 'completely degraded' to 'very good' GHD (2005). This was verified during a site inspection held on 29/9/2005 (TRIM ref AD240) by Department of Environment officers.</p>

of this permit application as they are exempt from needing a permit to clear.

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 likely to be at variance to this Principle**

A site inspection carried out by DoE officers indicated that the vegetation proposed to be cleared does not display outstanding biodiversity for the locality, region or bioregion. This is because much of the vegetation under application is in relatively poor condition (grazing and weed invasion) and is fragmented. CALM (2005) considers that the proposal is not likely to be at variance with this Clearing Principle.

Methodology DoE site inspection (TRIM ref AD240), CALM (2005)

(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**

A total of 10 Threatened fauna taxa (6 listed under the EPBC Act) and 6 Priority fauna taxa have been recorded within 10 kilometres of the proposed clearing site (CALM, 2005) some of which are listed below:

- *Calyptorhynchus banksii naso* (Forest Red-tailed Black-Cockatoo, Threatened (T)). This subspecies of the Red-tailed Black Cockatoo is restricted to the forests of the south west. It requires tree hollows to nest and breed and is totally dependent on jarrah-marri forest. The nearest records are located approximately 160 metres and 2.8 kilometres from the notified area,
- *Calyptorhynchus* sp. (White-tailed Black Cockatoo, T - either Carnaby's listed as Endangered or Baudin's listed as Vulnerable under the EPBC Act). The nearest record is located approximately 2.5 kilometres from the notified area,
- *Pseudocheirus occidentalis* (Western Ringtail Possum, T, listed as Vulnerable under the EPBC Act). This species occurs in areas of forest and dense woodlands and requires tree hollows and/or dense canopy for refuge and nesting. The nearest record is located approximately 976 metres from the notified area, and
- *Ardeotis australis* (Australian Bustard, P4). This species is uncommon and may occur in open or lightly wooded grasslands. The nearest record is located approximately 1.4 kilometres from the notified area (CALM, 2005).

An Environmental Impact Assessment (EIA) conducted by GHD (2005) on behalf of the proponent identified (based on the results of a fauna survey undertaken in 1998) *Calyptorhynchus banksii naso* (Forest Red-tailed Black-Cockatoo, T) and *Calyptorhynchus baudinii* (Baudin's Black Cockatoo, T, listed as Vulnerable under the EPBC Act) occur within Crown Reserves vested in the Local Government, which are adjacent to the notified area. The EIA states that 'clearing is not expected to impact the vegetation of this reserve, therefore the proposal is not expected to threaten the survival of regional or local populations of either bird species'.

The notified area intersects a number of creeklines (one of which also occurs within Crown Reserve 45064 vested in Local Government), and some of which contain remnant vegetation that may be suitable habitat for *Isodon obesulus fusciventer* (Quenda, P5). The EIA considers that the 'minor clearing of vegetation and culvert construction at the crossings will not threaten the survival of any local populations of this species' (GHD, 2005).

On the basis that this proposal is not likely to directly affect the survival of any Threatened or Priority fauna taxa in the area (CALM, 2005), this proposal is not likely to be at variance to this Principle.

Methodology CALM (2005), GHD (2005)

(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**

A total of 12 Declared Rare Flora (DRF) taxa and 55 Priority flora taxa have been recorded in the local area.

- *Banksia brownii* (Feather-leaved Banksia, R, listed as Endangered under the EPBC Act) is described on CALM's FloraBase website as a bushy, non-lignotuberous shrub or small tree between 1-6 metres tall, with cream, brown, orange and red flowers between March and July, growing in sand over laterite, gravel, and loam over granite, in gullies. The nearest record is located approximately 1.1 kilometres from the notified area.
- *Isopogon uncinatus* (Hook-leaf Isopogon, R, listed as Endangered under the EPBC Act) is described on CALM's FloraBase website as a tufted spreading or prostrate, non-lignotuberous shrub between 0.05-0.4 metres tall, with yellow and cream flowers between October and November, growing in loam or sand on granite or peaty sand, associated with swampy depressions and hillslopes. The nearest record is located approximately 1.1 kilometres from the notified area.
- *Usnea pulvinata* (Priority 1), no description available on CALM's FloraBase website. The nearest record is located approximately 1.1 kilometres from the notified area.
- *Degelia flabellata* (Priority 2), no description available on CALM's FloraBase website. The nearest record is located approximately 1.1 kilometres from the notified area.
- *Boronia crassipes* (Priority 3) is described on CALM's FloraBase website as an erect, spindly shrub between 0.5-2 metres tall, with red and pink flowers between August and September, growing in sand and peaty sand

associated with winter-wet swamps and creeklines. The nearest record is located approximately 1.1 kilometres from the notified area.

- *Dryandra seneciifolia* (Priority 3) is described on CALM's FloraBase website as a columnar, non-lignotuberous shrub between 0.6-1 metre tall, with cream, yellow and brown flowers between June and August, growing in sandy loam and sand associated with rocky hillslopes. The nearest record is located approximately 1.1 kilometres from the notified area.

A Department of Agriculture report (DAWA, 2005) indicates that soils of the notified area range from shallow sands over laterite that is close to the surface, to leached sandy soils over laterite and clay at varying depths. Shallow soils occur at the western and eastern ends of the notified area, with deeper sandy soil in between. These generic soil descriptions are suited to several of the species listed above, thus there is a possibility that Declared Rare or Priority flora taxa may occur within remnant vegetation in the notified area.

An Environmental Impact Assessment conducted by GHD (2005) on behalf of the proponent identifies 61 threatened flora taxa potentially occurring within the vicinity of the proposal, and two botanical surveys undertaken in 1998 and January 2005 did not identify any Declared Rare or Priority flora taxa as being present within the notified area. CALM advises that most of the listed flora species would not have been flowering during the time of the second flora survey, making their positive identification quite problematic.

Flora surveys of potential and proposed alignments were carried out in August 1997, October 1998 (HGM, 2001) and February 2005 (GHD, 2005) and identified a Priority 3 species, *Sphenotoma parviflorum* in Reserve 22892. However, this species has not been identified on the present Ring Road alignment. No Declared Rare Flora (DRF) were identified in the flora surveys. GHD (2005) notes that two DRF have been identified in the area by CALM (*Drakaea elastica* and *D. micrantha*). These species are only likely to occur in a 200m section of vegetation adjacent to the Willyung Creek crossing. Other sites are either too degraded or do not contain suitable soil type or landform to support these species. Main Roads WA has provided information that the flora survey carried out in the spring of 1998 by HGM looked for these species at the Willyung Creek site but was unable to locate any (Neil McCarthy and Lindsay McCartin, pers. comm. MRWA 2005). Given the information provided, it is considered that the proposal is not likely to be at variance with this Clearing Principle.

Methodology CALM (2005), DAWA (2005), HGM (2001), GHD (2005), FloraBase (2005)

(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

The nearest Threatened Ecological Community (TEC) is 38km to the north (Knight East). GHD (2005) carried out a search through the CALM database, which indicated that the area under application does not contain a TEC.

Methodology GHD (2005)
GIS Database:
-Threatened Ecological Communities - CALM 12/04/05

(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 National Objective and Targets for Biodiversity Conservation 2001-2005' (AGPS, 2001) recognises that the retention of 30% or more of the pre-clearing extent of each ecological community is an appropriate target. This is consistent with the targets recommended in the EPA's Position Statement No 2 (EPA, 2000). The City of Albany has 38.9% of its pre-European vegetation coverage remaining and the Jarrah Forest IBRA Bioregion within which this site exists has 58.7% remaining (Hopkins et al., 2001; Shepherd et al., 2001).

The following vegetation representations have been taken from the GHD (2005) report which outlined the Beard Vegetation Associations to be cleared, based on flora surveys:

-Jarrah/ *B. grandis* over pasture- equates to Beard Vegetation Association 23 which has 67.2% remaining (0.1ha proposed to be cleared),

-Jarrah/ Marri/ Sheoak woodland equates to Beard Vegetation Association 979 of which there is 23.5% remaining (1.3ha proposed to be cleared),

-Melaleuca *priessiana* over Taxandria shrubland and Typha thicket/Taxandria thickets equates to Beard Vegetation Association 1114 which has 75.2% remaining (2.02ha proposed to be cleared),

-Jarrah/Sheoak woodland over Taxandria Shrubland equates to Beard Vegetation Association 994 which has 29.6% remaining (3.63ha proposed to be cleared), and

-Jarrah *Eucalyptus staeri*/Sheoak woodland over mixed Shrubland equates to Beard Vegetation Association 978, which has 39.1% remaining (0.6ha proposed to be cleared).

The bioregional conservation status of Association 979 and 994 is classified as vulnerable, Association 978 is depleted, while associations 23 and 1114 are of least concern where threatening processes are not causing degradation (Department of Natural Resources and Environment, 2002).

The benchmark of 15% representation in conservation reserves (JANIS, 1997) has not been met for Vegetation Association 979 (0%) and 978 (14%).

Main Roads Western Australia have proposed to offset the loss of native vegetation (and particularly areas that are classed as vulnerable) through revegetation of land within the acquired road reserve. A Revegetation Plan for this

will be prepared and implemented. This will ensure that the removal of the vegetation will not be at variance with this Clearing Principle.

Methodology EPA (2000), GHD (2005), JANIS (1997), Shepherd et al. (2001), AGPS (2001), Department of Natural Resources and Environment (2002), Hopkins et al. (2001)

(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 likely to be at variance to this Principle**

The area proposed to be cleared will impact on several water courses (GHD, 2005) including:

- Parker Brook Creek (1) which is a minor non perennial watercourse and marsh area,
- Willyung Creek (2) which is a minor non perennial watercourse, and
- Willyung Creek (3) which is a minor non perennial watercourse and marsh area.

Main Roads WA proposes to mitigate against the impacts of vegetation clearing and construction of the road and associated infrastructure by designing and carrying out construction using Department of Environment drainage design principles including maintaining existing surface water flows in the project area and incorporating the following features:

- infiltration at source,
- structures to prevent pollution from entering water courses,
- use of overland flow to reduce volume of water reaching water bodies,
- maintain existing drainage lines,
- no direct discharge from bridges to watercourses and wetlands, and
- providing for the retention of a fuel or chemical spill at major drainage lines.

Given the above considerations it is considered that the proposal is not likely to be at variance with this Clearing Principle.

Methodology GHD (2005), DoE site inspection (TRIM ref AD240)

(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**

A review of the project concept design (GHD, 2005) indicates that removal of vegetation and subsequent works are likely to result in significant erosion if not adequately managed. MRWA has proposed to address this risk by using silt traps, stepping of sandy soils, and rehabilitation.

The Commissioner of Soil and Land Conservation has advised that the proposed clearing is unlikely to result in significant land degradation, and as Main Roads have developed an Environmental Management and Project Revegetation Plan to address management of impacts for this project, it is believed that any potential degradation will be adequately managed.

Methodology DAWA (2005), GHD (2005)

(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**

Nearby conservation areas include:

- Crown reserve 22892 (managed by the City of Albany) which has a purpose of 'Conservation and Protection of Flora', and is immediately adjacent to the area under application on Chester Pass Road.

The following reserves are managed by CALM with a purpose of 'Conservation of Flora and Fauna':

- Down Road Nature Reserve 20948, 3.3 kilometres to the west,
- Bon Accord Road Nature Reserve 30469, 4 kilometres to north east,
- Bakers Junction Nature Reserve 30463, 5 kilometres to the north east,
- Phillips Brook Nature Reserve 619, 8.5 kilometres to the east,
- Nature Reserve 23923, 8.7 kilometres to the north, and
- Millbrook Nature Reserve (Reserve 18739), 9.6 kilometres to the north.

An Environmental Impact Assessment conducted by GHD (2005) on behalf of the proponent indicates that 'clearing is not expected to impact the vegetation of the adjacent Crown Reserve'. No CALM-managed lands are expected to be impacted on by this proposal (CALM, 2005). Provided the proponent implements the dieback disease preventative measures as described in GHD (2005) this proposal is not likely to be at variance to this Principle.

Methodology CALM (2005), GHD (2005)

(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

This MRWA project will impact on surface water flow (DoE site inspection) and it is proposed that they will develop a detailed drainage design for management of water flow around the watercourse crossings (GHD, 2005). MRWA proposes to incorporate the Department of Environment stormwater management principles by constructing detention basins, roadside swales and drain blocks (for emergency spills) to maintain existing surface water flows but prevent direct discharge into water courses and wetlands (GHD, 2005). Given the above information it is considered that any impacts on surface or groundwater will be mitigated.

Methodology GHD (2005), DoE site inspection (TRIM ref AD240)

(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 average rainfall of the area is 799mm per annum (GHD, 2005) with rainfall occurring mostly in winter (some high rainfall events in 2005 caused flooding). The area has an evaporation rate of 800mm per annum. It is unlikely that the removal of 8.2ha will have a significant influence on the run off and flood regimes in the local area. However, drainage planning will be incorporated into the Ring Road project to cater for high rainfall events (1 in 50 year storm, Lindsay Cartin MRD pers comm.). This included siltation traps and rock protection to prevent scouring.

Methodology GHD (2005)
GIS database:
- Evapotranspiration areal actual BOM 30/9/01

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

Comments

The City of Albany has advised that it has no objections to the clearing application (TRIM ref AI833). The proposal has been considered by the Environmental Protection Authority which has subsequently decided not to formally assess the proposal and has recommended that the impacts can be managed under Part V of the Environmental Protection Act 1986 for vegetation clearing (EPA). The proposal is not known to be at variance with any other instrument or planning decision.

Methodology City of Albany (TRIM ref AI833), EPA reference CRN214313

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Road construction or maintenance	Mechanical Removal	8.2	Grant	The proposal has been assessed against the Clearing Principles and it is recommended that the permit to clear native vegetation to construct the Albany Ring Road Stage 1 be granted. It is also recommended that conditions be placed on the permit relating to dieback management and revegetation of the site to ensure the environmental impacts resulting from this clearing are mitigated.

5. References

AGPS (2001) The national objective and targets for biodiversity conservation 2001-2005. Commonwealth of Australia, Canberra.

CALM (2005) Land clearing proposal advice. Advice to A/Director General, Department of Environment (DoE). Department of Conservation and Land Management, Western Australia. DoE TRIM ref IN25238.

Connell and ATA Environmental (2001) Vegetation survey of the Albany Hinterland. Unpublished. City of Albany and Natural Heritage Trust.

DAWA (2005) Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture Western Australia. DoE TRIM ref HD25036.

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.

FloraBase (2005) Descriptions by the Western Australian Herbarium, CALM. Text used with permission (<http://florabase.calm.wa.gov.au/help/copyright>). Accessed on Tuesday, 10 January 2006.

GHD (2005) Albany Ring Road Stage 1- Environmental Impact Assessment and Environmental Management Plan. Unpublished report prepared by GHD Pty Ltd for Main Roads Western Australia. Perth WA. TRIM ref AI836

HGM (2001) Albany Ring Road Environmental Assessment. A report prepared by Halpern Glick Maunsell Pty Ltd for Main Roads Western Australia TH005704Q107. Perth WA.

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.

- JANIS Forests Criteria (1997) Nationally agreed criteria for the establishment of a comprehensive, Adequate and Representative reserve System for Forests in Australia. A report by the Joint ANZECC/MCFFA National Forest Policy Statement Implementation Sub-committee. Regional Forests Agreement process. Commonwealth of Australia, Canberra.
- 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.

6. Glossary

Term	Meaning
CALM	Department of Conservation and Land Management
DAWA	Department of Agriculture
DEP	Department of Environmental Protection (now DoE)
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 DoE)