



1. Application details

1.1. Permit application details

Permit application No.: 887/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: **Commisioner of Main Roads WA**

1.3. Property details

Property:

LOT 3 ON DIAGRAM 66310 (Lot No. 3 ORRONG WELSHPOOL 6106)
 LOT 2 ON DIAGRAM 55108 (Lot No. 2 ORRONG KEWDALE 6105)
 LOT 0 ON DIAGRAM 52827 (KEWDALE 6105)
 LOT 3 ON DIAGRAM 52827 (House No. 8 PICARO KEWDALE 6105)
 LOT 8 ON DIAGRAM 61128 (House No. 17 MAIKAI KEWDALE 6105)
 LOT 0 ON DIAGRAM 52826 (KEWDALE 6105)
 LOT 4 ON DIAGRAM 52826 (House No. 11 PICARO KEWDALE 6105)
 LOT 5 ON DIAGRAM 52826 (House No. 9 PICARO KEWDALE 6105)
 LOT 9 ON DIAGRAM 61128 (House No. 15 MAIKAI KEWDALE 6105)
 (KEWDALE 6105)
 LOT 10 ON DIAGRAM 61128 (House No. 13 MAIKAI KEWDALE 6105)
 LOT 14 ON DIAGRAM 60468 (House No. 11 MAIKAI KEWDALE 6105)
 LOT 11 ON DIAGRAM 60468 (House No. 12 MAIKAI KEWDALE 6105)
 LOT 247 ON PLAN 9521 (House No. 9 BALLANTYNE KEWDALE 6105)
 LOT 248 ON PLAN 9521 (House No. 11 BALLANTYNE KEWDALE 6105)
 LOT 246 ON PLAN 9521 (House No. 7 BALLANTYNE KEWDALE 6105)
 LOT 244 ON PLAN 9521 (House No. 3 BALLANTYNE KEWDALE 6105)
 LOT 2 ON DIAGRAM 45087 (House No. 18 BELLOWS WELSHPOOL 6106)
 LOT 1 ON DIAGRAM 44608 (House No. 14 BELLOWS WELSHPOOL 6106)
 LOT 227 ON PLAN 9795 (House No. 12 BELLOWS WELSHPOOL 6106)
 LOT 226 ON PLAN 9795 (House No. 10 BELLOWS WELSHPOOL 6106)
 LOT 225 ON PLAN 9795 (House No. 8 BELLOWS WELSHPOOL 6106)
 LOT 224 ON PLAN 9795 (House No. 6 BELLOWS WELSHPOOL 6106)
 LOT 222 ON PLAN 9795 (House No. 2 FORGE WELSHPOOL 6106)
 LOT 70 ON PLAN 39261 (House No. 13 BALLANTYNE KEWDALE 6105)
 LOT 5039 ON DIAGRAM 92632 (WELSHPOOL 6106)
 LOT 26 ON DIAGRAM 92632 (House No. 33 KEW WELSHPOOL 6106)
 LOT 25 ON DIAGRAM 92631 (House No. 1 ANNIE WELSHPOOL 6106)
 LOT 500 ON DIAGRAM 93400 (House No. 4 BELLOWS WELSHPOOL 6106)
 LOT 561 ON PLAN 28346 (Lot No. 400 LEACH WELSHPOOL 6106)
 City Of Belmont & City Of Canning

Local Government Area:
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
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
Beard vegetation association 1001: Medium very sparse woodland; jarrah, with low woodland; banksia & casuarina (Hopkins et al. 2001, Shepherd et al. 2001).	The areas affected by this proposal are located on the western side of Leach Highway and extend approximately 650 metres north and 530 metres south of Orrong Road. The clearing is required for road	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	Armstrong, P. (2005) described the vegetation as being in poor to very poor condition with the basic structure no longer apparent. There were few native tree species remaining and the understorey was dominated by introduced weed species. This was confirmed by a site visit (TRIM Ref: HD25622). The area consists of sparse vegetation cover with only several remnant Banksia sp., Eucalyptus marginata and Corymbia calophylla trees

Hedde Vegetation Complex: Bassendean Central and South Vegetation Complex, ranging from woodland of *Eucalyptus marginata*, *Casuarina fraseriana*, *Banksia* spp. to low woodland of *Melaleuca* species, and sedgelands on the moister sites (Hedde et al., 1980).

construction or maintenance works. Native flora species occurring at the site are listed in the flora species list compiled by Armstrong, P. (2005).

remaining, with no understorey and extensive weed invasion. A large proportion of the vegetation is not locally native to the area and may have been planted some time ago.

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**

The vegetation under application is described as being in poor to very poor condition. Of the vegetation present, many species did not appear to be locally native to the area. A high proportion of 'wax', *Acacia saligna* and woolly bush indicated that the area was planted with a mix of species commonly used in revegetation projects some time ago. The area also hosts an extensive weed population with species such as *Ehrharta calycina* and *E. longiflora* (Veldt grass) out-competing native plants.

The high level of disturbance at this site, extensive weed invasion and low native species density suggests that the original biodiversity has been significantly compromised. The native vegetation observed is not representative of the native vegetation communities of the area.

Methodology Armstrong, P., 2005
Site visit (DoE officers), 2005
GIS databases:
- Hedde Vegetation Complexes- DEP 21/06/95

(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**

The clearing proposed consists of two small areas totalling 2 ha with no connectivity to larger tracts of vegetation. The high level of disturbance at this site, close proximity to major transport routes and urban/industrial areas, extensive weed invasion and limited native species suggests that the original biodiversity and habitat value has been significantly compromised. This vegetation is therefore unlikely to provide a significant habitat for indigenous fauna.

Methodology Site visit (DoE Officers), 2005
GIS Databases:
- Swan Coastal Plain North Orthomosaic- DLI 04
- Remnant Vegetation, Metropolitan Area - DPI 00/00

(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**

There are no known Declared Rare or Priority Flora species within the immediate vicinity of the proposed clearing and none were recorded from within the area under application (Armstrong, P., 2005). The site visit (Site visit, 2005) revealed limited native species regeneration due to high levels of disturbance and extensive weed invasion. Given this, the habitat is very unlikely to be suitable for species of conservation significance.

Methodology Armstrong, P., 2005
Site visit (DoE Officers), 2005
GIS Databases:
- Declared Rare and Priority Flora list- CALM 01/07/05
- Threatened Plant Communities- DEP 06/95

(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 are no known Threatened Ecological Communities (TECs) in the area applied to be cleared or within the immediate vicinity. The vegetation is unlikely to include a TEC, given that a majority of the area appears to have been planted with a mix of species commonly used in revegetation. Many of these are not locally native to the area.

Methodology Site visit (DoE Officers), 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 likely to be at variance to this Principle**

The vegetation under application consists of the Heddle vegetation complex Bassendean Central and South (Heddle et al 1980). The area was assessed to be in poor to very poor condition, and the basic structure of vegetation in the area is no longer apparent (Armstrong, P. 2005). A site visit (Site visit, 2005) revealed that the majority of vegetation was likely to have been planted at some time in the past and was not representative of locally occurring ecological communities.

The National Objectives and Targets for Biodiversity Conservation outline that ecological communities with an extent below 30% of that present pre-European should not be cleared (Department of Natural Resources and Environment 2002, EPA 2000). There is 27% of the Bassendean Central and South complex remaining. Whilst below the 30% target, the vegetation at the site is not representative of this vegetation complex.

Methodology Armstrong, P., 2005
Site visit (DoE officers), 2005
Heddle et al, 2001
Department of Natural Resources and Environment, 2002
EPA, 2000
GIS Databases:
- Heddle Vegetation Complexes- DEP 21/06/95.

(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 application falls within the Swan-Avon Lower Swan catchment and lies approximately 4 kilometres from both the Canning River and Swan River Estuary. The site does not include any wetlands or watercourses and therefore, this proposal is not likely to be at variance to this principle.

Methodology Site visit (DOE Officers), 2005
GIS Databases:
- ANCA Wetlands - CALM 08/01
- EPP Lakes - DEP 1/12/92
- Geomorphic Wetlands (Classification) Swan Coastal Plain - DOE 15/9/04
- Hydrographic Catchments - Catchments - DOE 23/3/05

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

Comments **Proposal is not likely to be at variance to this Principle**

The area under application is relatively flat and the surrounding matrix consists of primarily urban and industrial land uses including bitumised roads immediately adjacent. The mainsoil type of the area is described as leached sands with small areas of other sand soils. Sandy soils are prone to wind erosion, however given the small size of the area and the man-made environment surrounding the site, the removal of this vegetation is unlikely to cause appreciable land degradation on or off site.

Methodology Site visit (DoE Officers), 2005
GIS Databases:
- Soils, Statewide - DA 11/99
- Topographic Contours, Metropolitan Area – DLI

(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 vegetation under application does not contribute to, provide a buffer for, or an ecological linkage to a conservation area. This proposal is therefore not likely to be at variance to this principle.

Methodology Site Visit (DoE Officers), 2005
GIS Databases:
- CALM Regional Parks - CALM 12/04/02
- CALM Managed Lands and Waters - CALM 1/07/05_1
- Register of National Estate - EA 28/01/03

- System 6 Conservation - Reserves - DEP 06/95
- Bushforever - MFP 07/01

(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 area under application is in the Swan Avon Lower Swan Catchment, and does not include any Public Drinking Water Source Areas (PDWSA) or PDWSA Protection Zones. There is a moderate to low risk of shallow Acid Sulphate Soils or Potential Acid Sulphate Soils, generally at >3 metres depth. Given the relatively small size of the site, this clearing is not likely to change the salinity of groundwater or cause deterioration in the quality of surface or underground water. This proposal is therefore not likely to be at variance to this principle.

Methodology GIS Databases:
 - Acid Sulfate Soil Risk Map, SCP - DOE 04/11/04_1
 - Hydrographic Catchments- DOE 23/03/05
 - Public Drinking Water Source Areas (PDWSAs) - DOE 09/08/05
 - PDWSA Protection Zones - DOE 7/1/04
 - Groundwater Salinity, Statewide - 22/02/00

(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 vegetation under application lies in an extensively cleared urban/industrial area. Given the small size of the area and relatively flat terrain, it is unlikely that the clearing would exacerbate peak flood height or duration.

Methodology Site visit (DoE Officers), 2005
 GIS Databases:
 - Perth Basin Hydrogeology, Warnbro Group - WRC 17/08/01
 - Topographic Contours, Statewide - DOLA 12/09/02

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

Comments
 No submissions were received and there are no other relevant approvals or planning instruments that affect this proposal.

Methodology

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Road construction or maintenance	Mechanical Removal	2	Grant	The clearing principles have been addressed and it is considered that the clearing as proposed is not likely to be at variance to any of them. Given the relatively small size and the highly modified and degraded nature of the vegetation under application, the assessing officer recommends that the clearing permit be granted.

5. References

Armstrong, P., 2005 (TRIM reference: IN24240).
 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.
 Heddle, 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. CALMScience after J. S. Beard, late 1960's to early 1980's Vegetation Survey of Western Australia, UWA Press.
 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.
 Site visit (DoE Officers), 2005 (TRIM reference: HD25622).

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)