Department of Environment
Government of Western Australia

# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

**Permit application No.:** 1430/1

**Permit type:** Purpose Permit

### 1.2. Proponent details

**Proponent's name:** **City of Armadale**

### 1.3. Property details

**Property:** ROAD RESERVE ( WESTFIELD 6111)

**Local Government Area:** City Of Armadale

**Colloquial name:** Road Reserve Railway Ave (Westfield Rd to Lake Rd, Westfield)Road Reserve Poad Street (Lake Rd to cul-de-sac, Roleystone)Road Reserve Barbara Road (Hawkins Rd to cul-de-sac, Roleystone)Road Reserve Hawkins Road (Holden Rd to cul-de-sac, Roleystone)Road Reserve O'Meager Road (School Rd to Canning Rd, Karragullen)Road Reserve McNess Drive (Croyden Rd to Canning Dam Rd, Roleystone)Road Reserve Canning Dam Road (McNess Dve to Albany Hwy, Bedfordale)Road Reserve Salter Road (end for 200m Mt Nasura)

### 1.4. Application

| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of: |
|---|---|---|---|
| 2.32 | | 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 3: Medium forest; jarrah-marri<br>Beard Vegetation Association 4: Medium woodland; marri & wandoo<br>Beard Vegetation Association 999: Medium woodland; marri<br>Heddle DARLING SCARP COMPLEX : Vegetation ranges from low open woodland to lichens according to depth of soils. Woodland components chiefly E. wandoo with E. laeliae in the north, E. haematoxylon in the south, and E. calophylla throughout the region. Dominant vegetation types R. R.<br>Heddle GUILDFORD COMPLEX : A mixture of open forest to tall open forest of E. calophylla - E. wandoo - E. marginata and woodland of E. wandoo (with rare occurrences of E. lane-poolei). Minor components include E. rudis - M. rhaphiophylla.<br>Heddle SWAN COMPLEX : Fringing woodland of E. rudis - M. rhaphiophylla with localised occurrence of low open forest of Casuarina obesa and M. | The area under application consists of 8 road reserves within the Shire of Armadale. With 6 different vegetation community types.<br>1. Railway Avenue Westfield: 3 distinct community types<br>Commumity 1: Remnant mature Eucalyptus marginate, Eucalyptus sp. with no understorey species with occasional exotic grasses.<br>Community 2: Native/Exotic mix of canopy species that appear to be planted for screening along the road verge of Railway Avenue with an exotic grass understorey.<br>Community 3: Juvenile Eucalyptus marginata and occasional mature species and other unknown Eucalyptus sp.<br>According to the Keighery Scale all vegetation communities are in a degraded state.<br>2. Barbara Rd Roleystone: Scattered trees along the road verge including 3 Grevillea sp. 2 to 3m tall and 1 3mý stand of Adenanthos sp | Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994) | The vegetation description was taken from the proponents application (Trim ref: DOC 519) and a site inspection carried out on the 31/08/2006. |

cuticularis.

Heddle YARRAGIL COMPLEX : Open forest

Heddle DWELLINGUP COMPLEX IN MEDIUM TO HIGH RAINFALL : Open forest

Heddle Helena COMPLEX IN MEDIUM TO HIGH RAINFALL : Open forest to heat and herbland to lichens

Mattiske FORRESTFIELD (Fo) Mosaic of open forest of Corymbia calophylla-Eucalyptus wandoo-Eucalyptus marginata subsp. elegantella and open forest ofEucalyptus marginata subsp.

Mattiske DWELLINGUP 2 (D2) Open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla on lateritic uplands in subhumid and semiarid zones.

Mattiske YARRAGIL 1 (YG1) Open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla on slopes with mixtures of Eucalyptus patens and Eucalyptus megacarpa on the valley floors in humid and subhumid zones.

Mattiske HELENA 1 (HE1) Mosaic of open forest of Corymbia calophylla-Eucalyptus patens-Eucalyptus marginata subsp. marginata with some Eucalyptus rudis on the deeper soils ranging to closed heath and lithic complex on shallow soils associated with granite on steep slopes of valleys in humid and subhumid zones.

Mattiske DARLING SCARP (DS) Mosaic of open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla, with some admixtures with Eucalyptus laeliae in the north (subhumid zone), with occasional Eucalyptus marginata subsp. elegantella (mainly in subhumid zone) and Corymbia haematoxylon in the south (humid zone) on deeper soils adjacent to outcrops, woodland of Eucalyptus wandoo (subhumid and semiarid zones), low woodland of Allocasuarina huegeliana on shallow soils over granite outcrops, closed heath of Myrtaceae-Proteaceae species and lithic complex on or near granite outcrops in all climate zones.

approximately 1-2m tall. Vegetation is in a completely degraded condition.

3. Hawkins Rd Roleystone: 2 distinct vegetation communities with additional 2 remnant Eucalyptus marginata > 25m tall and 3 juvenile Banksia sp. <1m tall.

Community 4: 3 juvenile Banksia sp. and approximately 10 mý of Acacia sp. approximately 1.5m tall.

Community 5: Mid storey of Dryandra sessilis with an Ehrharta calycina groundcover at an approximate density of 2 Dryandra sessilis per mý.

Both community types were in a degraded condition.

4. Poad St: Scattered trees along the verge. 4 multiple trunk Eucalyptus maraginata with an understorey of Kikuyu and Xanthorrhoea preissii in a completely degraded condition.

5. OýMeager Rd Karragullen: 1 distinct vegetation community type plus approximately 10 scattered remnant Eucalyptus marginata approximately 10-15cm diameter

Community 6: Bossiaea aquifolia, juvenile eucalyptus sp. and Hakea undulata with a groundwater plantago sp. and grass cover of Eragrostis curvula.

6. McNess Drive Roleystone:

The maximum amount of clearing that may occur is 1 metre either side of the existing road maintenance area.

Vegetation is typical of the Jarrah Forest with dominant species Eucalyptus marginata and Corymbia calophylla of average 30cm stem diameter. Shrub understorey includes Acacia pulchella, Adenanthos sp., Melaleuca sp and Plantago sp. The density of Eucalyptus marginata is approximately 10 trees per 100m within the 1m clearing strip. The vegetation condition ranges from poor to very good.

7. Canning Dam Rd:

Vegetation is typical of the jarrah forest with dominant species including Eucalytpus marginata/Corymbia calophylla canopy species.

Understorey is dominated by Dryandra sessilis, Xanthorrhoea preissi, Banksia sp., Allocasuarina sp. and Adenanthos sp. Approximately 10 Jarrah/Marri occur within each 100m by 1m clearing strip on either side of the road with an average stem diameter of 30cm. vegetation condition ranges from poor to very good.

8. Salter Rd Mt Nasura:

One stand of six Xanthorrhoea preissi approximately 1.5m high and one additional stand of Eucalyptus wandoo and Eucalyptus marginatewith weedy understorey.

## 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 areas under application total 2.32ha of scattered trees and fragmented, small stands of fringing roadside vegetation across 8 roads throughout the City of Armadale. The extent of clearing into the road reserves will not exceed 1 m either side of the existing roads.

Based on the photographs of the vegetation proposed for clearing the condition of the vegetation varies between completely degraded and very good. Some parts of 3 roads were rated as having a condition rating of good to very good, being O'Meager Rd, McNess Rd and Canning Dam Road. These roads may contain some biodiversity values, and areas have been mapped in Environmental Sensitive Areas due to their close proximity to the Canning River and Churchman Brook. However given the small linear areas proposed for clearing, removing the vegetation within the road reserves is unlikely to impact the overall biodiversity value of the local area.

To mitigate any loss of biodiversity within the road reserves and surrounding areas, the proposed clearing will be carried out in accordance with dieback and weed control conditions.

Additionally the proponent has indicated that where practicable large trees will be avoided and hollows inspected for habitat value.

**Methodology**

Site Visit (2006)
GIS Databases:
- Swan Coastal Plain North 40cm Orthomosaic - DLI 05
- Clearing Regulations - Environmentally Sensitive Areas - DOE 30/5/05

### (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 area under application consists of 2.32ha of scattered trees and fragmented, small stands of fringing roadside vegetation across 8 roads throughout the City of Armadale. The extent of clearing into the road reserves will not exceed 1 m either side of the existing roads.

Based on the photographs of the vegetation proposed for clearing the condition of the vegetation varies between completely degraded and very good.

Some parts of 3 roads were rated as having a condition rating of good to very good, being OMeager Rd, McNess Rd and Canning Dam Road. Parts of these roads may contain some habitat value. However as the roads neighbour large intact remnants of indigenous vegetation the small linear area of clearing proposed is unlikely to impact on the continued existence of local fauna species.

Additionally the proponent has indicated that they will be inspecting larger mature trees for nesting hollows and avoiding them if practicable.

**Methodology**

Site Visit (2006)
GIS Databases:

- Swan Coastal Plain North 40cm Orthomosaic - DLI 05

**(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**

The area under application consists of 2.32ha of scattered trees and fragmented, small stands of fringing roadside vegetation across 8 roads throughout the City of Armadale. 8 known recordings of DRF occur within the City of Armadale. One of these recordings is Eucalyptus balanites which is located in the south western region of the City and is isolated from all the proposed areas. All other 7 recordings are of Thelymitra stellata which are spread out within the western portion of the City of Armadale.

Thelymitra stellata is described as a Tuberous, perennial, herb, 0.15-0.25 m high and found in Sand, gravel and lateritic loam. The soil types in which Thelymitra stellata are compatible with some of the areas under application as are the Mattiske vegetation types. However most of the areas under application are in a degraded to completely degraded state except for O'Meager and Canning Dam roads which have areas that are in good to very good condition. Notwithstanding photos of these roads show that they have been subject to disturbance from previous road works and as a result edge effects including weed invasion are noted.

Specific Biodiversity Advice on Canning Dam Road and O'Meager Road, provided by DEC, Biodiversity Coordination Section states that 'According to available database records no DRF or Priority flora has been recorded along these roadsides.'

Given that the closest recording of Thelymitra stellata to O'Meager road is approximately 7km and the closest to Canning Dam road is 5km, it is unlikely that clearing as proposed will be at variance to this principle.

**Methodology**

Florabase 2006
(http://florabase.calm.wa.gov.au/browse/flora?f=066&level=s&id=10862&PHPSESSID=30701bb733007e124a075498799654e1)
BCS Advice 2006
GIS Databases:
- Swan Coastal Plain North 40cm Orthomosaic - DLI 05
- 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 threatened ecological community.**

**Comments**

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

The areas under application consist of fringing roadside vegetation which has been historically disturbed by road maintenance activities and utility installations across 8 roads within the City of Armadale. There are 16 Threatened Ecological Communities (TEC) recorded within the cities boundaries. The nearest known TEC occurrence is located approximately 800m to the west of the clearing proposed for Salter Rd, Mt Nasura. The proposed clearing on Salter road consists of one stand of six Xanthorrhoea preissi approximately 1.5m high and one additional stand of Eucalyptus wandoo and Eucalyptus marginata with a weedy understorey which is in a completely degraded state.

Specific Biodiversity Advice on Salter Road, provided by DEC, Biodiversity Coordination Section states 'The nearest known TEC occurrence is located approximately 800km to the west of the clearing proposed for Salter Rd, Mt Nasura. Structurally this TEC is described as SCP20a- Banksia attenuata woodlands or Eucalyptus marginata - Banksia attenuata woodlands. This community is distinctive in having a diverse shrub layer and Mesomelaena pseudostygia occurs in all plots surveyed by Gibson et al (1994). This community is found on sandy soils near Koondoola and also at the base of the Scarp at Forrestfield covering two distinct land form units, Southern River unit (part of the Bassendean system) and Karrakatta unit (part of the Spearwood system). Based on the disparate land form unit of this TEC to that of the Salter Rd clearing application area (Darling Scarp complex) and the apparent lack of native ground layer remaining at the site it is unlikely that this clearing area represents a TEC or will impact on any known TEC's.'

Therefore the proposed clearing is not likely to be at variance to this principle.

**Methodology**

BCS Advice, 2006
GIS Databases:
- Threatened Ecological Communities - CALM 15/7/03

**(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**

| | Pre-European | Current extent | Remaining | Conservation** | % In reserves/CALM |
|---|---|---|---|---|---|
| | | (ha)* | (ha)* | (%)* | status | managed land |
| IBRA Bioregions | | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| -Swan Coastal Plain | 1 529 235 | 657 450 | 43.0 | Depleted | |
| - Jarrah Forrest | 4 544 335 | 2 665 480 | 58.7 | Least Concern | |
| Vegetation type: | | | | | |
| Heddle: | | | | | |
| Darling Scarp complex | 49 338 | 18 227 | 36.9 | Depleted | |
| Guildford Complex | 92 497 | 4 662 | 5 | Endangered | |
| Swan Complex | 15 783 | 2 454 | 15.6 | Vulnerable | |
| Mattiske: | | | | | |
| Forrestfield | | | 37 106 | 11 371 | 30.6 |
| Depleted | | | | | |
| Dwellingup 2 | 860 918 | 779 190 | 90.5 | Least Concern | |
| Yarragil 1 | 800 603 | 703 654 | 87.9 | Least Concern | |
| Helena 1 | 158 422 | 127 424 | 80.4 | Least Concern | |
| Darling Scarp | 291 043 | 126 045 | 43.3 | Depleted | |

* (Shepherd et al. 2001)
** (Department of Natural Resources and Environment 2002)
*** Within the Intensive Landuse Zone

The State Government is committed to the National Objectives Targets for Biodiversity Conservation which outlines a target that prevents clearance of ecological communities with an extent below 30% of that present pre-European settlement (Department of Natural Resources and Environment 2002, EPA 2000).

The areas subject to the proposal are covered by flora studies conducted by Beard, Heddle and Mattiske. All roads excepting Poad Road, are covered by the more comprehensive Mattiske survey which shows that all of the areas under application are within the 30% target. Those areas within the depleted Forrestfield complex (30.6%) are in a degraded to completely degraded state and consequently are not representative of the Mattiske Forrestfield vegetation description.

Poad Road is within the Heddle Guildford Complex the clearing on this road consists of 6 plants in a completely degraded structure.

Based on the information above the clearing as proposed is unlikely to be at variance to this principle.

**Methodology**

Heddle et al (1980)
Hopkins et al. (2001)
Mattiske (1998)
Shepherd et al (2001)
Department of Natural Resources and Environment (2002)
EPA (2000)
GIS databases:
- Swan Coastal Plain North 40cm Orthomosaic - DLI 05

## (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 areas under application consist of fringing roadside vegetation which has been historically disturbed by road maintenance activities and utility installations. McNess and Canning Dam roads are located within close proximity or transect the Canning River and Churchman Brook.

Clearing as proposed is only to be undertaken within 1m either side of all roads. No areas under application are associated with bridge or culvert infrastructure and clearing in or near watercourses was undertaken in previous years as such the proposed clearing is not at variance to this principle.

Additionally the City of Armadale has an Erosion and Sediment control policy that applies to all road works within the cities boundaries.

**Methodology**

Information from Proponent (Trim ref:DOC519)
Site Visit (31/8/2006)
GIS Databases:
- Swan Coastal Plain North 40cm Orthomosaic - DLI 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 proposed clearing on roadsides, may cause some short term land degradation issues in terms of localised water logging and soil erosion during works. However these issues should be minimised as the areas proposed to be cleared are within existing roads that have in place roadside infrastructure to prevent land degradation associated with roads ie. table drains and culverts.

Poad St and Railway Rd are located in a moderate to low risk shallow Acid Sulphate Soil (ASS) area however the clearing in these areas is minimal and it is unlikely that the ASS will be exposed as a result of the clearing.

Based on the above the proposed clearing is unlikely to be at variance to this principle.

Additionally the City of Armadale implement an erosion and sediment control policy.

**Methodology**

GIS Databases:
- Acid Sulfate Soil Risk Map, SCP - DOE 04/11/04

**(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 area under application is made up of the fringing roadside vegetation of 8 roads within the City of Armadale. Both McNess Drive and Canning Dam Road neighbour Canning National Park, while Canning Dam Road also neighbours Jarrahdale State Forest.
The area to be cleared will not exceed 1m either side of the current road structure. Given the size of both conservation areas relative to the small amount of clearing on these roads (<1ha) it is unlikely that clearing will impact upon the environmental values of the Canning National Park and Jarrahdale State forest.

**Methodology**

Site Visit (2006)
GIS Databases:
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 likely to be at variance to this Principle**

The area under application consists of fringing roadside vegetation across 8 roads within the City of Armadale. Canning Dam road falls within a Priority 1 PDWSA and NcNess Drive falls within a Policy Use not assigned PDWSA.

The proposed clearing on roadsides may cause some short term water quality issues in terms of localised surface water sedimentation during works. However these issues should be minimised as the proposed clearing will be undertaken on existing roads that have in place roadside infrastructure to prevent water quality issues associated with roads ie. table drains and culverts

Based on the above and the small linear areas it is unlikely the proposed clearing will be at variance to this principle.

Additionally the City of Armadale has a management plan that utilizes best management practices in order to mitigate the effects of erosion and sediment loading.

**Methodology**

GIS Databases:
- Public Drinking Water Source Areas (PDWSAs) - DoE 29/11/04

**(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 application consists of the fringing roadside vegetation of 8 roads located in the City of Armadale. The subject areas are located in a high rainfall area (1000-1200mm per annum). The proposed clearing is for road maintenance, thus the proposed areas lie within the roadside drainage zone. The removal of a small amount of vegetation (2.32ha across 8 roads) is unlikely to cause or exacerbate, the incidence or intensity of flooding.

**Methodology**

Information from Proponent (Trim ref:DOC519)
GIS Databases:
- Rainfall, Mean Annual - BOM 30/09/01

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

**Comments**

There is no RIWI Act Licence, Works Approval or EP Act licence that will affect the area that has been applied to clear.

The applicant is acting under the Local Government Act 1995.

There is one Native Title Claim within part of the Canning Dam Road under application . The Department of Environment and Conservation's advertising of the application in the West Australian newspaper constitutes legal notification of the native title representative body for the purpose of the future act procedures under the Native Title Act 1993. No response was received from the representative body.

Poad and McNess Rd are within mapped Aboriginal Sites of Significance the DEC will advise the proponent of their responsibilities under the Aboriginal Heritage Act 1972. This advise will be placed in the cover letter to this permit.

**Methodology**

## 4. Assessor's recommendations

| Purpose | Method | Applied area (ha)/ trees | Decision | Comment / recommendation |
|---|---|---|---|---|
| Road construction o | Mechanical Removal | 2.32 | **Grant** | The application has been assessed against the 10 clearing principles and the clearing as proposed is unlikely to be at variance to any of the clearing principles. The assessing officer recommends that a clearing permit be granted subject to dieback and weed control conditions. |
| maintenance | | | | |

## 5. References


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.

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, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Mattiske Consulting (1998) Mapping of vegetation complexes in the South West forest region of Western Australia, CALM.

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, 2006, Department of Environment and Conservation (DEC), Western Australia. TRIM ref DOC4666.


## 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) |