



## 1. Application details

### 1.1. Permit application details

Permit application No.: 359/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Department of Justice

### 1.3. Property details

Property: PEEL ESTATE LOT 702 (House No. 288 ORTON CASUARINA 6167)  
PEEL ESTATE LOT 63 (House No. 288 ORTON CASUARINA 6167)  
Local Government Area: Town Of Kwinana  
Colloquial name:

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
12		Mechanical Removal	Hazard reduction or fire control

## 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 to very sparse woodland; jarrah, with low woodland; banksia and casuarina	A Site visit (2003) described vegetation within a 35 metre radius of the prison perimeter as being degraded due to previous clearing activities. During the same site visit the vegetation between 35 and 50 metres radius of the prison was described as being in good to very good condition.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	Clearing description obtained from site inspection 28 October 2003 (DOE) and flora survey (Ecoscape 2004). Vegetation condition ranged from Degraded to Very Good
Heddlle Vegetation Complex Bassendean Complex - Central and South: Vegetation ranges from woodland of <i>E. marginata</i> - <i>Banksia</i> spp. to low woodland of <i>Melaleuca</i> species and sedgelands on the moister sites. (Heddlle et al. 1980).	The clearing permit activities can be separated into two areas:  - Maintaining the existing cleared buffer 0-35 metre radius from the prison; and  - Clearing and then maintaining the proposed buffer of 35-50 metre radius from the prison.  Within the first area vegetation within 0-5 meters will continue to be maintained by slashing and mowing to bare earth, the area within 5- 15 meters will continue to be maintained by slashing to a height no greater than 100mm and 15-35 meters will continue to maintained by slashing to a height of 300mm.  Within the second part the clearing of vegetation between 35-50 metre will		

be cleared by slashing to a height of 300mm and then maintained at this level for the life of the permit. (Ecoscape 2004)

### 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**

Flora surveys and site assessment have identified the area under application does not contain Declared Rare or Priority Flora and the vegetation complexes in the area unlikely to consist of any Threatened Ecological Communities. The CALM (2005) advice considers the area under application unlikely to contain significant habitat for priority or endangered fauna. The condition of vegetation within the 35-50 meter around the prison under application is good to very good, with weed invasion limited to areas of physical disturbance (Site Visit 2003). Although approximately half the vegetation under application is considered as good to very good condition it is unlikely to represent an area of higher biological diversity that the remainder of Bush Forever site 273 due to previous clearing history.

**Methodology**      CALM Advice (2005)  
Site Visit (2003)

#### (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**

CALM (2005) advice that given the known clearing history of the land, it is unlikely to contain mature *Banksia* spp. that would provide feeding opportunities for Endangered Carnaby's Black-Cockatoo *Calyptorhynchus latirostris*.

*Isoodon obesulus fusciventer* (Quenda) have a strong preference for thick understorey so as to hide from predators, and the known clearing history suggests that thick heath is unlikely to be present within the 0-35 metre buffer zone. The 35-50 metre buffer has been described during a site visit as good to very good and as such may provide some habitat for Quenda.

The facility is likely to have considerable lighting operating through out the night, which is not conducive to *Macropus irma* (Western Brush Wallaby) utilising the area since they are a particularly nervous and shy taxon.

**Methodology**      CALM Advice (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**

CALM (DOE Trim ref: IN22257 and IN23735) advise that given the proximity of DRF records in the local area and the apparent good to very good condition of the vegetation to be cleared the area under application appears to be suitable habitat for some Declared Rare flora.

The CALM advice noted that if present on the property, Declared Rare taxa *Caladenia huegelii*, *Drakaea micrantha*, *Drakaea elastica* and *Diuris purdiei* should be visible from September through October, but although *Diuris purdiei* flowers in this period, it will only flower following summer fire. Priority taxa *Dodonaea hackettiana* and *Aponogeton hexatpalus* will typically flower from July to October.

The flora surveys conducted in November 2003 and September 2004 on the area under application did not identify any declared rare or priority flora species. Although no declared rare or priority flora species were identified during the survey short comings were noted. This included *Drakaea micrantha* not being included within the targeted species search although being identified as potentially present by CALM.

In response to this Ecoscape carried out an additional flora survey in October 2005 that searched for, but did not identify, the Declared Rare taxa *Drakaea micrantha*. *Aponogeton hexatpalus* was considered as not requiring a survey because it is an aquatic species and the clearing does not include the clearing of any wetland areas.

**Methodology**      Ecoscape (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 likely to be at variance to this Principle**

Within 10 -12km there are four recorded occurrences of two different Threatened Ecological Communities that are listed under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999.

The site has been previously mapped during the bush plan study as a banksia woodland and it would not be likely that the area consists of either of the *Corymbia calophylla* communities below:

TEC's

Critically Endangered 'Corymbia calophylla - Xanthorrhoea preissii woodlands and shrublands of the Swan Coastal Plain'; and

Critically Endangered 'Corymbia calophylla - Kingia australis woodlands on heavy soils of the Swan Coastal Plain'

**Methodology** GIS Database: Threatened Ecological Communities - CALM 12/4/2005  
CALM Advice (2005)

**(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 may be at variance to this Principle**

Hedde et al (1980) defines the vegetation under application as 'Bassendean Complex - Central and South' and is also classified as vegetation association 1001 (Hopkins et al. 2001) of which both have a representation below 30%.

The State Government is committed to the National Objective Targets for Biodiversity Conservation, which includes targets that prevent clearance of ecological communities with an extent below 30% of that present pre-1750 (Department of Natural Resources and Environment 2002; EPA 2000).

The 'Bassendean Complex - Central and South' currently has minimal (0.7%) vegetation (Hedde et al 1980) in secure tenure. JANIS (1997) recommends that 15% of the pre-1750 distribution of each vegetation ecosystem should be protected in a comprehensive, adequate and representative reserve system.

While these vegetation complexes have a representation under the recommended 30%, the EPA recognises that vegetation within constrained areas may be varied to a minimum level of 10% representation (EPA, 2003).

	Pre-European area (ha)	Current extent (ha)	Remaining %*	Conservation Status**	% in Reserves/CALM-Managed land
IBRA Bioregion	1,529,235	657,450	43%	Depleted	
Shire					
-Town of Kwinana	11980.55	4760.18	39.7%	Depleted	
Local Area (~10km radius)	45,900	15,300	33%	Depleted	
Beard vegetation association -1001	68,475	18,907	27.6%	Vulnerable	4.2%
Hedde vegetation complex					
- Bassendean Complex - Central and South	87,477	23,624	27%	Vulnerable	0.7%

\* (Shepherd et al. 2001)

\*\* (Department of Natural Resources and Environment 2002)

**Methodology** Department of Natural Resources and Environment 2002  
EPA 2000  
Hopkins et al. 2001  
JANIS (1997)  
Hedde et al (1980)

**(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**

There are a series of Conservation Category Wetlands (CCW) and Resource Enhancement Wetlands within a 1Km radius on and surrounding the land under this application. The closest wetland is a CCW that is located less than 125 metres from the proposed clearing at the south east corner of the prison complex. The proposed maximum clearing will be 50 metres surrounding the perimeter of the facility and includes the placement of fencing to prevent encroachment outside this area. Clearing in accordance with this management strategy should ensure that the proposal does not impact vegetation in the CCW or within the 50 metre defined Environmentally Sensitive Area buffer around the CCW. The other surrounding wetlands are greater than 125 metres and the clearing would be unlikely to impact these areas.

**Methodology** GIS Databases:  
Geomorphic Wetlands (Management Categories), Swan Coastal Plain - DOE 15/9/04  
Clearing Regulations - Environmentally Sensitive Areas - DOE 30/5/05

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

**Comments Proposal may be at variance to this Principle**

The Rehabilitation and Management Plan for the site prepared by Ecoscape (2004) identified the potential for wind erosion due to the sandy substrate being exposed following the removal of vegetation.

The main area of concern is where the vegetation is cleared back to bare sand. This level of clearing is limited to a distance of five metres from the perimeter fence and with appropriate management, it is not expected to cause an appreciable impact.

The management plan stipulates that the remaining 5-50m buffer will be mechanically slashed or mown to a vegetation height of 100mm-300mm. The remaining vegetation maintained at these levels will help to minimise erosion of the sandy substrate.

The 5 metres that will be cleared down to the sandy substrate will be managed through the revegetation with local native ground covers. The groundcovers proposed include species such as *Hemiandra pungens* and *Kennedia prostrata*, which are fast growing. It is therefore considered that this management strategy should adequately address the concerns related to wind erosion.

**Methodology** Ecoscape (2004)

**(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 surrounded by bush forever site 273. The prison and more recently the 50 metre buffer around the prison (area under application) do not form part of bush forever site 273 (DoE Trim Reference: 2005/1352). Since the clearing is not being conducted on the bush forever site and a fence will be erected to prevent encroachment into the bush forever site it would be considered unlikely the clearing will directly effect its conservation values.

There is the potential for indirect impact on the conservation area if the proposal is not adequately managed. The applicant has prepared a management plan in response to this which addresses the need to control weeds, erosion and prevent the introduction of dieback to limit the indirect effects of on the conservation value of the bush forever site.

The area under application is located approximately 1000m SW of Modong Nature Reserve, 1500m NW of Banksia Nature Reserve, 4km NE of Wandii Nature Reserve and 5km NE of Leda Nature Reserve.

Although Lots 702 and 63 has been identified under the Perth Biodiversity Project (2004) as part of two regionally significant ecological linkages. CALM (2005) advice that the proposed clearing is unlikely to reduce any linkages between the surrounding remnant vegetation, that the outer perimeter razor wire fence has not already reduced.

**Methodology** CALM (2005)  
Perth Biodiversity Strategy (2004)  
Bush Forever Office (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**

The proposal is not expected to impact on groundwater tables. The clearing of the understorey vegetation has

the potential to increase the groundwater infiltration, however no detectable impacts on groundwater are likely.

**Methodology** Site Visit (2003)

**(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 is not located within the vicinity of any watercourses and the closest CCW is approximately 125 metres away. The proposed clearing is restricted to a 50 metre strip around the prison of which, vegetation will not removed between 5 and 50 metres, but managed at a height of 100mm-300mm. While there is a potential for increased groundwater infiltration, it is not expected to result in any localised flooding of the area.

**Methodology** Site Inspection (2003)

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

**Comments**

Prison safety requirements specify that a 50 metre sterile buffer is maintained to provide an uninterrupted line of sight. The purpose of this zone is to reduce cover and enable easy detection of approaching vehicles and persons attempting to approach the prison perimeter fence or smuggle contraband items into the prison. This requirement is also important to ensure the safety and effectiveness of the prison guards who patrol the boundary.

No other statutory approvals are required under legislation administered by the Department when considering this proposal.

**Methodology** Ecoscape (2004)

**4. Assessor's recommendations**

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Hazard reduction or fire control	Mechanical Removal	12	Grant	<p>The assessable criteria have been addressed, and the proposal may be a variance to Principles (e), (g) and Principle (h).</p> <p>Principle (e): Although the vegetation complex under application is classified as having a representation below the recommended 30% threshold, the proposed clearing is restricted to a thin buffer of 3.6 hectares (15metres*2.4km) surrounding an existing area of disturbance (the prison and 8.4 hectares previously cleared 35m*2.4km). This relatively small buffer around the prison and the vegetation management plan to improve the surrounding bush forever site should minimise any impacts.</p> <p>Principle (g): Although the sandy substrate has the potential to result in wind erosion the revegetation options identified through the proponent's Rehabilitation and Management Plan should minimise these impact.</p> <p>Principle (h): Although the potential for impact on the adjacent bush forever site exists. It is considered that the proponent's Rehabilitation and Management Plan and conditions placed in the permit to manage weeds, erosion and prevent dieback introduction can adequately manage the potential impacts to adjacent conservation reserves.</p> <p>The assessing officer therefore recommends that the permit be granted with the conditions relating to dieback management, weed control, erosion control and ensuring the preparation and implementation of bushland management plan.</p>

**5. References**

CALM Land clearing proposal advice. Advice to A/Director General, Department of Environment (DoE). Department of Conservation and Land Management, Western Australia. DoE TRIM ref IN22257 and IN23735.

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.

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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.

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)