



## CLEARING PERMIT

*Granted under section 51E of the Environmental Protection Act 1986*

<b>Purpose Permit number:</b>	CPS 5182/1
<b>Permit Holder:</b>	Oakajee Port and Rail Pty Ltd
<b>Duration of Permit:</b>	23 November 2012 – 23 November 2022

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

### PART I – CLEARING AUTHORISED

#### 1. Purpose for which clearing may be done

Clearing for the purpose of geotechnical investigations.

#### 2. Land on which clearing is to be done

- LOT 12695 ON PLAN 35751 (NUNIERRA 6630)
- LOT 11802 ON PLAN 26343 (House No. 469 WANDINA NUNIERRA 6630)
- LOT 11803 ON PLAN 28258 (SOUTH MURCHISON 6635)
- LOT 11804 ON PLAN 238483 (NUNIERRA 6630)
- LOT 11805 ON PLAN 28259 (SOUTH MURCHISON 6635)
- LOT 11806 ON PLAN 238407 (YALGOO 6635)
- LOT 11810 ON PLAN 220399 (WOOLGORONG 6630)
- LOT 11811 ON PLAN 220764 (SOUTH MURCHISON 6635)
- LOT 11812 ON PLAN 221150 (YALGOO 6635)
- LOT 11993 ON PLAN 92247 (WOOLGORONG 6630)
- LOT 12 ON PLAN 238345 (PEAK HILL 6642)
- LOT 12559 ON PLAN 221137 (NUNIERRA 6630)
- LOT 12630 ON PLAN 28859 (SOUTH MURCHISON 6635)
- LOT 12712 ON PLAN 35751 (NUNIERRA 6630)
- LOT 128 ON PLAN 221115 (WELD RANGE 6640)
- LOT 132 ON PLAN 220349 (WELD RANGE 6640)
- LOT 133 ON PLAN 238195 (WELD RANGE 6640)
- LOT 14 ON PLAN 238307 (SOUTH MURCHISON 6635)
- LOT 142 ON PLAN 238307 (WELD RANGE 6640)
- LOT 20 ON PLAN 238058 (EAST MURCHISON 6640)
- LOT 27 ON PLAN 221115 (WELD RANGE 6640)
- LOT 28 ON PLAN 220349 (WELD RANGE 6640)
- LOT 30 ON PLAN 238195 (WELD RANGE 6640)
- LOT 300 ON PLAN 64844 (NUNIERRA 6630)
- LOT 301 ON PLAN 64845 (NUNIERRA 6630)
- LOT 33 ON PLAN 220781 (MEEKATHARRA 6642)
- LOT 34 ON PLAN 220918 (MEEKATHARRA 6642)
- LOT 35 ON PLAN 238323 (EAST MURCHISON 6640)
- LOT 36 ON PLAN 238366 (MEEKATHARRA 6642)
- LOT 6378 ON PLAN 226774 (NUNIERRA 6630)
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LOT 7433 ON PLAN 202668 (NUNIERRA 6630)  
LOT 7624 ON PLAN 202677 (NUNIERRA 6630)  
LOT 7625 ON PLAN 202676 (NUNIERRA 6630)  
LOT 7632 ON PLAN 202669 (NUNIERRA 6630)  
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PART LOT 32 ON PLAN 220341 (MEEKATHARRA 6642)  
UNALLOCATED CROWN LAND (NUNIERRA 6630)  
VICTORIA LOCATION 11706 (SOUTH MURCHISON 6635)  
BERINGARRA -CUE ROAD RESERVE (PIN: 11727220; 11727219) (WELD RANGE 6640)  
BERINGARRA -PINDAR ROAD RESERVE (PIN: 11668438) (SOUTH MURCHISON 6640)  
CARNARVON -MULLEWA ROAD RESERVE (PIN: 11663862) (NUNIERRA 6630)  
UNAMED ROAD RESERVE (PIN: 11699571) (MEEKATHARRA 6642)  
UNNAMED ROAD RESERVE (PIN: 11699570) (EAST MURCHISON 6640)  
UNNAMED ROAD RESERVE (PIN: 11706669; 11706951; 11706950) (WELD RANGE 6640)  
UNNAMED ROAD RESERVE (PIN: 11727293) (PEAK HILL 6642)  
WOOLGORONG -YUIN ROAD RESERVE (PIN: 11667415) (WOOLGORONG 6630)  
YALGOO NORTH ROAD RESERVE (PIN: 11665416) (YALGOO 6635)

**3. Area of Clearing**

The Permit Holder must not clear more than 120 hectares of native vegetation within the area hatched yellow on attached Plan 5182/1.

**4. Period in which clearing is authorised**

The Permit Holder shall not clear any native vegetation after 23 November 2017.

**5. Application**

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

**6. Type of clearing authorised**

This Permit authorises the Permit Holder to clear native vegetation for activities to the extent that the Permit Holder has the right to access land under the *Land Administration Act 1997* or any other written law.

**7. Compliance with Assessment Sequence and Management Procedures**

Prior to clearing any native vegetation under conditions 1, 2 and 3 of this Permit, the Permit Holder must comply with the Assessment Sequence and the Management Procedures set out in Part II of this Permit.

**PART II – ASSESSMENT SEQUENCE AND MANAGEMENT PROCEDURES**

**8. Avoid, minimise etc clearing**

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

- (a) avoid the clearing of native vegetation;
- (b) minimise the amount of native vegetation to be cleared; and
- (c) reduce the impact of clearing on any environmental value.

**9. Weed control**

- (a) When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds*:
  - (i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
  - (ii) ensure that no *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and

(iii) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

(b) At least once in each 12 month period for the term of this Permit, the Permit Holder must remove or kill any *weeds* growing within areas cleared under this Permit.

#### 10. Fauna management

(a) Prior to undertaking any clearing authorised under this Permit, the areas shall be inspected by a *fauna specialist* who shall identify habitats/mounds suitable to be utilised by fauna species listed below:

- (i) *Egernia stokesii subsp. Badia* (western spiny-tailed skink);
- (ii) *Acanthiza iredalei iredalei* (slender-billed thornbill); and
- (iii) *Leipoa ocellata* (malleefowl)

(b) Where *Egernia stokesii subsp. Badia* (western spiny-tailed skink) habitat is identified in relation to condition 10(a)(i) of this Permit, the Permit Holder shall ensure that no clearing occurs within 50 metres of the identified habitat, unless first approved by the CEO.

(c) Where *Acanthiza iredalei iredalei* (slender-billed thornbill) habitat is identified in relation to condition 10(a)(ii) of this Permit, the Permit Holder shall ensure that no clearing occurs within 50 metres of the identified habitat, unless first approved by the CEO.

(d) Where *Leipoa ocellata* (malleefowl) mounds are identified in relation to condition 10(a)(iii) of this Permit, the Permit Holder shall ensure that no clearing occurs within 50 metres of the identified *Leipoa ocellata* (malleefowl) mounds, unless first approved by the CEO.

#### 11. Flora management

(a) Prior to undertaking any clearing authorised under this Permit, the Permit Holder shall engage a *botanist* to inspect that area for the presence of rare flora listed in the *Wildlife Conservation (Rare Flora) Notice, priority flora or undescribed flora*.

(b) Where rare, *priority* or *undescribed flora* are identified in relation to condition 11(a) of this Permit, the Permit Holder shall ensure that:

- (i) no clearing occurs within 50 metres of identified rare flora, unless first approved by the CEO; and
- (ii) no clearing of identified rare flora occurs unless first approved under section 23F(4) of the *Wildlife Conservation Act 1950*; and
- (iii) no clearing of identified *priority flora* or *undescribed flora* occurs, unless first approved by the CEO; and
- (iv) no clearing occurs within 20 metres of identified *priority flora* or *undescribed flora*, unless first approved by the CEO.

#### 12. Priority ecological community management

(a) Prior to undertaking any clearing authorised under this Permit, the area(s) shall be inspected by an *environmental specialist* who shall identify *ecological community/ies*:

- (i) Jack Hills Vegetation Complex (banded ironstone formation);
- (ii) Tallering Peak Vegetation Complex; and
- (iii) Weld Range Vegetation Complex (banded ironstone formation).

(b) Where *ecological community/ies* are identified in relation to condition 12(a) the Permit Holder shall ensure that:

- (i) all records of identified *ecological community/ies* are submitted to the CEO; and
- (ii) no clearing occurs within 50m of the identified *ecological community/ies*, unless first approved by the CEO.

### 13. Retain vegetative material and topsoil, revegetation and rehabilitation

The Permit Holder shall:

- (a) retain the vegetative material and topsoil removed by clearing authorised under this Permit and stockpile the vegetative material and topsoil in an area that has already been cleared.
- (b) at an *optimal time* within 12 months following completion of geotechnical investigations, *revegetate* and *rehabilitate* the area(s) that are not required for future scheduled approved development by:
  - (i) ripping the ground on the contour to remove soil compaction; and
  - (ii) laying the vegetative material and topsoil retained under condition 13(a) on the cleared area(s) that are not required for future scheduled approved development.
- (c) within 24 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 13(b) of this Permit:
  - (i) engage an *environmental specialist* to determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and
  - (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 13(c)(i) of this Permit will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, *revegetate* the area by deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area and ensuring only *local provenance* seeds and propagating material are used.
- (d) Where additional *planting* or *direct seeding* of native vegetation is undertaken in accordance with condition 13(c)(ii) of this permit, the Permit Holder shall repeat condition 13(c)(i) and 13(c)(ii) within 24 months of undertaking the additional *planting* or *direct seeding* of native vegetation.
- (e) Where a determination by an *environmental specialist* that the composition, structure and density within areas *revegetated* and *rehabilitated* will result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, as determined in condition 13(c)(i) and (ii) of this permit, that determination shall be submitted for the CEO's consideration. If the CEO does not agree with the determination made under condition 13(c)(ii), the CEO may require the Permit Holder to undertake additional *planting* and *direct seeding* in accordance with the requirements under condition 13(c)(ii).

### PART III - RECORD KEEPING AND REPORTING

#### 14. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit:

- (a) In relation to the clearing of native vegetation authorised under this Permit:
  - (i) the species composition, structure and density of the cleared area;
  - (ii) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
  - (iii) the date that the area was cleared; and
  - (iv) the size of the area cleared (in hectares).
- (b) In relation to fauna management pursuant to condition 10 of this Permit:
  - (i) the location of each habitat identified recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings; and
  - (ii) the species of fauna reasonably likely to utilise, or that have been observed utilising, the habitat/s.

- (c) In relation to flora management pursuant to condition 11 of this Permit:
  - (i) the location of each rare or priority flora species, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
  - (ii) the species name of each rare or priority flora species identified; and
  - (iii) a copy of the botanist's flora survey report.
- (d) In relation to the priority ecological community management management pursuant to condition 12 of this Permit:
  - (i) the location of the Jack Hills Vegetation Complex (banded ironstone formation), Talling Peak Vegetation Complex and Weld Range Vegetation Complex (banded ironstone formation) recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees; and
  - (ii) the species composition, structure and density of each Jack Hills Vegetation Complex (banded ironstone formation), Talling Peak Vegetation Complex and Weld Range Vegetation Complex (banded ironstone formation) identified.
- (e) In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 13 of this Permit:
  - (i) the location of any areas *revegetated* and *rehabilitated*, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
  - (ii) a description of the *revegetation* and *rehabilitation* activities undertaken;
  - (iii) the size of the area *revegetated* and *rehabilitated* (in hectares);
  - (iv) the species composition, structure and density of *revegetation* and *rehabilitation*, and
  - (v) a copy of the environmental specialist's report.

## 15. Reporting

- (a) The Permit Holder must provide to the CEO on or before 30 June of each year, a written report:
  - (i) of records required under condition 14 of this Permit; and
  - (ii) concerning activities done by the Permit Holder under this Permit between 1 January to 31 December of the preceding calendar year.
- (b) Prior to 23 August 2022, the Permit Holder must provide to the CEO a written report of records required under condition 14 of this Permit where these records have not already been provided under condition 15(a) of this Permit.

## DEFINITIONS

The following meanings are given to terms used in this Permit:

*botanist* means a person with specific training and/or experience in the ecology and taxonomy of Western Australian flora;

*direct seeding* means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species;

*ecological community/ies* means a naturally occurring biological assemblage that occurs in a particular type of habitat (English and Blythe, 1997; 1999);

*environmental specialist* means a person who is engaged by the Permit Holder for the purpose of providing environmental advice, who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit;

*fauna specialist* means a person with training and specific work experience in fauna identification or faunal assemblage surveys of Western Australian fauna;

*fill* means material used to increase the ground level, or fill a hollow;

*local provenance* means native vegetation seeds and propagating material from natural sources within 50 kilometres of the area cleared.

*mulch* means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

*optimal time* means the period from April to May for undertaking *direct seeding*, and the period from May to June for undertaking *planting*;

*planting* means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;

*priority flora* means those plant taxa described as priority flora classes 1, 2, 3 or 4 in the *Department's Declared Rare and Priority Flora List for Western Australia* (as amended);

*regenerate/ed/ion* means re-establishment of vegetation from in situ seed banks and propagating material (such as lignotubers, bulbs, rhizomes) contained either within the topsoil or seed-bearing *mulch*;

*rehabilitate/ed/ion* means actively managing an area containing native vegetation in order to improve the ecological function of that area;

*revegetate/ed/ion* means the re-establishment of a cover of *local provenance* native vegetation in an area using methods such as natural *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area;

*undescribed flora* means any flora taxon (either at the genus, species or infraspecies level) that has been discovered, but not yet formally described as per the International Code of Botanical Nomenclature.

*weed/s* means a species listed in Appendix 3 of the "Environmental Weed Strategy" published by the Department of Conservation and Land Management (1999), and plants declared under section 37 of the *Agriculture and Related Resources Protection Act 1976*; and

*Wildlife Conservation (Rare Flora) Notice* means those plant taxa gazetted as rare flora pursuant to section 23F(2) of the *Wildlife Conservation Act 1950* (as amended).



Robert Atkins  
DEPUTY DIRECTOR GENERAL, ENVIRONMENT

*Officer delegated under Section 20  
of the Environmental Protection Act 1986*

1 November 2012

# Plan 5182/1



## LEGEND

- Cadastre
- Clearing Instruments
- Areas Approved to Clear
- Local Government Authorities
- Western Australia Landsat Mosaic 25m - AGO 2006



0 37.5 km

Scale 1:1500000

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

*[Signature]* Date: *[Date]*

R. ALKINS

Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



Department of Environment and Conservation

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## 1. Application details

### 1.1. Permit application details

Permit application No.: 5182/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Oakajee Port and Rail Pty Ltd

### 1.3. Property details

Property:

- LOT 12695 ON PLAN 35751 ( NUNIERRA 6630)
- LOT 11802 ON PLAN 26343 (House No. 469 WANDINA NUNIERRA 6630)
- LOT 11803 ON PLAN 28258 ( SOUTH MURCHISON 6635)
- LOT 11804 ON PLAN 238483 ( NUNIERRA 6630)
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- WOOLGORONG -YUIN ROAD RESERVE (PIN: 11667415) (WOOLGORONG 6630)



Colloquial name:

Oakajee Port and Rail Development

**1.4 Application**Clearing Area (ha)  
120

No. Trees

Method of Clearing  
Mechanical RemovalFor the purpose of:  
Geotechnical investigations**1.5 Decision on application**

Decision on Permit Application: Grant

Decision Date: 1 November 2012

**2 Site Information****1.4. Existing environment and information***1.4.1. Description of the native vegetation under application***Vegetation Description**

The predominant four Beard Vegetation Associations mapped over the clearing footprint area are:

326 - Low woodland over scrub; mulga over bowgada &amp; minnieritchie scrub;

18 - Low woodland; mulga (*Acacia aneura*);

29 - Sparse low woodland; mulga, discontinuous in scattered groups;

40 - Shrublands; acacia scrub, various species (Shepherd et al., 2001)

Fourteen additional Beard Vegetation Associations mapped over the clearing footprint area are:

39 - Shrublands; mulga scrub;

182 - Low woodland; mulga & bowgada (*Acacia ramulosa*);202 - Shrublands; mulga & *Acacia quadrimarginea* scrub;204 - Succulent steppe with open scrub; scattered mulga & *Acacia sclerosperma* over saltbush & bluebush;228 - Shrublands; *Acacia quadrimarginea* scrub;240 - Succulent steppe with open scrub; scattered *Acacia sclerosperma* & bowgada over saltbush & bluebush;268 - Succulent steppe with open scrub; scattered *Acacia sclerosperma* over saltbush & bluebush;

364 - Shrublands; bowgada scrub with scattered eucalypts &amp; cypress pine;

404 - Shrublands; bowgada & *Acacia murrayana* scrub;

420 - Shrublands; bowgada &amp; jam scrub;

676 - Succulent steppe; samphire;

687 - Shrublands; bowgada & jam scrub with scattered *Allocasuarina heugelliana* & York gum;1125 - Succulent steppe with scrub; *Acacia victoriae* & snakewood over saltbush & bluebush;

2081 - Shrublands; bowgada and associated spp. scrub (Shepherd et al., 2001)

**Clearing Description**

The application is to clear up to 120 hectares of native vegetation within an approximately 207,000 hectare footprint for the purpose of geotechnical investigations for a proposed rail development.

The average clearing at each point of interest is expected to be approximately 0.25 hectares (OPR, 2012).

The clearing footprint area includes various Crown leases, road reserves and unallocated Crown land within the 'Modified Feasibility Corridor' project area in the City of Greater Geraldton and the Shires of Yalgoo, Cue, Murchison and Meekatharra.

The area under application is primarily pastoral leasehold land that has been subjected to a history of pastoral activities and grazing pressure from livestock and introduced fauna is the predominant disturbance factor (ecologia, 2010a).

Approximately 33 per cent to the vegetation under application is described as being affected by minimal disturbance, with 36 per cent exhibiting moderate and 22 per cent significant disturbance (ecologia, 2010a).

The vegetation is considered to be in excellent to degraded (Keighery, 1994) condition, with disturbance caused by grazing and weeds reported by ecologia (2010a) to be apparent in some areas.

**Vegetation Condition**

Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994)

To

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994)

**Comment**

Vegetation condition was determined through aerial imagery and adapted from descriptions provided in a Level 2 Vegetation and Flora Assessment (ecologia, 2010a).

## 2. Assessment of application against Clearing Principles

### (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

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

The application is to clear up to 120 hectares of native vegetation within an approximately 207,000 hectare footprint for temporary geotechnical investigation activities. The application area covers approximately 400 kilometres of the 570 kilometre railway corridor for the proposed Oakajee Rail Development project.

The application area is located within pastoral land in the eastern section of the proposed rail corridor. The proponent has committed to avoid clearing native vegetation within the heavily cleared agricultural freehold zone in the west during this investigative phase (OPR, 2012).

The average clearing at each point of interest is expected to be approximately 0.25 hectares (OPR, 2012).

Eighteen Beard vegetation associations have been mapped within the clearing footprint area, all of which are well represented in the respective bioregions (Government of Western Australia, 2011).

The majority of the application area is within the area surveyed by ecologia in August- September 2010 for the entire proposed railway development. Seventy-two vegetation communities were mapped and 1015 taxa were recorded across 614 quadrats within the survey area, with 439 species recorded within the 487 quadrats within the pastoral land section of the rail corridor, which is where the clearing footprint area is located (ecologia, 2010).

Ecologia (2010a) considered the main factor affecting vegetation condition in the application area to be grazing pressure from cattle and introduced fauna. Fifteen weed species were recorded from 43 of the pastoral area survey quadrats (OPR, 2012). The vegetation in the application area is considered to have moderate levels of disturbance (OPR, 2012).

Fifty-seven priority flora were recorded within the area surveyed by ecologia (2010), including ten Priority 1, seven Priority 2, thirty-one Priority 3 and nine Priority 4 species. One of the Priority 4 species is also listed as Vulnerable under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999. Twenty-two of these priority species had not been recorded within the surveyed area before (ecologia, 2010a). There are records of a further eight priority flora species, including four Priority 1 species, within the clearing footprint area (ecologia, 2010a). In addition, the survey conducted by ecologia (2010a) recorded range extensions for twenty-nine species and four species which may be unique taxa (ecologia, 2010a).

Three priority (P1) ecological communities (PEC) are mapped within the clearing footprint area, being the Tallering Peak vegetation complexes in the west, the Weld Range vegetation complexes (banded ironstone formation) in the east, and Jack Hills vegetation complexes (banded ironstone formation) in the north. The applicant has advised that all sites will be reviewed by an Environmental Advisor prior to being cleared and there will be no clearing within 50 metres of priority ecological communities (OPR, 2012). Environmental Advisors should be selected that have good on-ground knowledge of the vegetation units that constitute the various PECs and these areas should be cleared demarcated on-ground prior to any clearing. Considering the clearing at each point of interest is expected to be relatively small area, the proposed clearing is not likely to result in significant secondary impacts such as dust, erosion, or alterations to surface or groundwater flows.

The clearing footprint area contains habitat for a range of indigenous fauna species and may support significant habitat for western spiny-tailed skink, malleefowl and slender-billed thornbill. The applicant has committed to avoid western spiny-tailed skink and slender-billed thornbill habitat and malleefowl mounds by a minimum of 50 metres (OPR, 2012).

Considering the above, the vegetation under application may comprise high biodiversity values and the proposed clearing may be at variance to this principle.

It is noted that the applicant has committed to inspections being conducted at all locations prior to clearing to ensure avoidance of conservation assets (OPR, 2012). All works will be conducted in accordance with the Study Phase Environmental Management Plan (OPR, 2012).

Adherence to flora, fauna and ecological community management strategies will mitigate the risk of impacts to conservation significant species and communities.

#### Methodology

References:

Ecologia, 2010a

OPR, 2012

GIS Databases:

- Interim Biogeographic Regionalisation for Australia (IBRA)

- SAC Biodatasets (Accessed 23 August 2012)

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

Ecologia (2010b) conducted a level 2 fauna survey of the proposed rail corridor between Spring 2006 and Autumn 2009 to provide detailed information regarding the fauna of the area with interest focussed on fauna of conservation significance, to support the Environmental Protection Authority's (EPA) assessment of the rail project. This survey included the majority of the clearing footprint area, which is located in the pastoral land area of the rail corridor.

The dominant habitat types recorded in the pastoral land area were mulga woodland, river and halophyte vegetation, mixed wattle scrub, with smaller areas of sandy or stony plain, granite outcrop, rocky ranges and hillslopes (ecologia, 2010b).

Ecologia (2010b) consider thirty-three fauna of conservation significance have the potential to occur within the rail corridor area. The survey recorded the presence of 20 native mammals, 125 native birds, 83 reptiles and 12 amphibians, with an indication that 73 - 97 per cent of trappable fauna were recorded (ecologia, 2010b).

The majority of these species are mobile and widely distributed, therefore the proposed clearing of relatively small (approximately 0.25 hectare) temporary areas within the 400 kilometre corridor is not likely to impact significant habitat for these taxa.

Western spiny-tailed skink (*Egernia stokesii* subsp. *badia*) is listed as Endangered under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) and Rare or Likely to Become Extinct under the Wildlife Conservation Act (WC Act). This reptile shelters in hollow logs, behind bark of fallen trees and in granite crevices (DEC, 2007). Ecologia's (2010b) survey observed numerous western spiny-tailed skinks inhabiting granite outcrops within the clearing footprint area, to the southwest of Weld range. The applicant has advised targeted inspections have been conducted for western spiny-tailed skink habitat along the entire corridor and that numerous populations and occurrences of potential rocky habitat have been identified (OPR, 2012). No clearing or ground disturbing works will occur within 50 metres of all rocky skink habitat (OPR, 2012).

Tracks and an old nesting mound of malleefowl (*Leipoa ocellata*) were recorded at a location near the centre of the corridor (ecologia, 2010b). This species is listed as Vulnerable under the EPBC Act and Rare or Likely to Become Extinct under the WC Act). Malleefowl build distinctive nests that comprise a large mound of soil covering a central core of leaf litter, on average spanning more than five metres and up to one metre high. Breeding malleefowl tend to be sedentary, as they nest and roost in the same area year after year, and will only take to flight as a last resort (Burbidge, 2004) therefore are vulnerable to disturbance. The applicant has advised targeted inspections have been conducted for malleefowl breeding habitat along the entire corridor and no clearing, ground disturbing or unauthorised access within 50 metres of mounds (OPR, 2012).

The slender-billed thornbill (*Acanthiza iredalei iredalei*) is listed as Vulnerable under the EPBC Act. Habitat for this species has been mapped within the clearing footprint area (OPR, 2012). The applicant has advised that, based on habitat availability, it is possible that the slender-billed thornbill occurs in the application area where patches of salt-flats with chenopod shrubland have been identified through a targeted habitat assessment (OPR, 2012). The applicant has committed to avoid all slender-billed thornbill habitat in the application area by a minimum of 50 metres (OPR, 2012).

Shield-backed trapdoor spider (*Idiosoma nigrum*) is listed as Rare or Likely to Become Extinct under the WC Act and has been recorded in the local area (DEC, 2007-). This species is in decline and is a long-lived species that is very sensitive to disturbance (DEC, 2007). This trapdoor spider is only known from a short endemic range and much of their habitat has been modified or destroyed through land clearing. This species is vulnerable to disturbance as it is a sedentary creature with poor dispersal ability (Wheatbelt NRM, 2011). A short range endemic invertebrate survey conducted across the entire rail corridor included the clearing footprint area and did not record this species and concluded that the impact of the proposed railway development on short range endemic species is expected to be low (ecologia, 2010c).

Carnaby's cockatoo (*Calyptorhynchus latirostris*) is listed as Endangered under the EPBC Act and Rare or Likely to Become Extinct under the WC Act and has been recorded in the local area (DEC, 2007-). This species nests in large hollows of eucalyptus trees and forages on the seeds, nuts and flowers of a large variety of plants including Proteaceous species (*Banksia*, *Hakea*, *Grevillea*), as well as *Allocasuarina* and *Eucalyptus* species, *Corymbia calophylla* (Shah, 2006; Valentine and Stock, 2008). While suitable feeding habitat for Carnaby's cockatoo may occur within the clearing footprint area, considering the habitat types described by ecologia (2010b), the vegetation under application is unlikely to comprise significant habitat for this species.

Considering the above, the vegetation under application may comprise significant habitat for several species of native fauna and the proposed clearing may be at variance to this principle.

It is noted that the applicant has committed to inspections at all locations prior to clearing to ensure avoidance of conservation assets (OPR, 2012). All works will be conducted in accordance with the Study Phase Environmental Management Plan (OPR, 2012).

Fauna management strategies will mitigate the risk of impacts to conservation significant species.

**Methodology** References:  
Burbidge, 2004  
DEC, 2007-  
DEC, 2007  
ecologia, 2010b  
ecologia, 2010c  
OPR, 2012  
Shah, 2006  
Valentine and Stock, 2008  
Wheatbelt NRM, 2011  
GIS Databases:  
- SAC Biodatasets (Accessed 23 August 2012)

**(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 closest records of rare flora are 35 kilometres southwest and 36 kilometres south of the application area.  
  
A level 2 vegetation and flora assessment of the rail corridor that included the majority of the clearing footprint area did not record rare flora (ecologia, 2010a).  
  
Given the distance of the closest rare flora species from the proposed clearing, the proposed clearing is not likely to be at variance to this principle.  
  
It is noted that the applicant has advised pre-clearance targeted inspections will be conducted for rare flora by a qualified botanist and no clearing within 50 metres will occur unless otherwise approved by the DEC (OPR, 2012).

**Methodology** References:  
ecologia, 2010a  
OPR, 2012  
GIS Databases:  
- SAC Biodatasets (Accessed 23 August 2012)

**(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 records of threatened ecological communities within the local area (30 kilometre radius) and the applicant has advised that there will be no clearing within 50 metres of threatened ecological communities (OPR, 2012). Therefore, the proposed clearing is unlikely to be at variance to this principle.

**Methodology** References:  
OPR, 2012  
GIS Databases:  
- SAC Biodatasets (Accessed 23 August 2012)

**(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 application is to clear up to 120 hectares of native vegetation within an approximately 207,000 hectare footprint for temporary geotechnical investigation activities within pastoral land along an approximately 400 kilometre section of railway corridor.  
  
The average clearing at each point of interest is expected to be approximately 0.25 hectares (OPR, 2012).  
  
The application area is within a highly vegetated local area (30 kilometre radius), where aerial imagery indicates there is approximately 95 per cent native vegetation cover.  
  
The vegetation under application is within the Murchison and Yalgoo IBRA Bioregions, which retain approximately 99 and 98 per cent of the pre-European extent of native vegetation, respectively (Government of Western Australia, 2011).  
  
Eighteen Beard vegetation associations have been mapped within the clearing footprint area, all of which are well represented in the respective bioregions (Government of Western Australia, 2011).

Given that the vegetation is well represented locally and regionally, the vegetation under application is not significant as a remnant and the clearing as proposed is not likely to be at variance to this principle.

**Methodology**

**References:**

Government of Western Australia, 2011

OPR, 2012

**GIS Databases:**

- Gould 80cm Orthomosaic - Landgate 2006
- Interim Biogeographic Regionalisation for Australia (IBRA)
- Kalli 50cm Orthomosaic- Landgate 2005
- Kalli 50cm Orthomosaic - Landgate 2005
- Koonmarra 50cm Orthomosaic- Landgate 2005
- Madoonga 50cm Orthomosaic- Landgate 2005
- Mileura 50cm Orthomosaic- Landgate 2005
- Noonie 50cm Orthomosaic - Landgate 2005

**(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 Greenough River, Sanford River, Murchison River, numerous minor watercourses and areas subject to inundation occur within the approximately 207,000 hectare clearing footprint area. Therefore the application area is likely to support riparian vegetation.

The application included an environmental management plan and the applicant has advised that no clearing will be conducted within drainage lines and site specific setbacks from drainage lines will be maintained (OPR, 2012). Therefore the proposed clearing is not likely to be at variance to this principle.

**Methodology**

**References:**

OPR, 2012

**GIS Databases:**

- Hydrography, linear
- Rivers

**(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 application is to clear up to 120 hectares of native vegetation within an approximately 207,000 hectare area for temporary geotechnical investigation activities.

The average clearing at each point of interest is expected to be approximately 0.25 hectares.

Considering the small size and temporary nature of the proposed clearing, it is unlikely to result in appreciable land degradation. Rehabilitation of temporarily cleared areas will minimise the risk of land degradation.

Considering the above, the proposed clearing is not likely to be at variance to this principle.

**Methodology**

**GIS Databases:**

- Groundwater salinity, statewide
- Rainfall, mean annual
- Soils, statewide
- Topographic contours, statewide

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

The application area includes parts of three former pastoral lease areas that are managed by the Department of Environment and Conservation (DEC) for conservation purposes.

The applicant has advised that no clearing will occur within the ex Narloo area, however some investigation will be required within the Woolgorong and Twin Peaks former leasehold areas (OPR, 2012). The applicant advised that clearing in these areas will be minimised through relocation of targets and tracks to existing cleared areas and an overall reduction of points of interest within this area (OPR, 2012). The amount of vegetation cleared within these areas will not exceed 8 hectares (OPR, 2012).

Removal of native vegetation and soil disturbance while undertaking clearing activities poses a high risk of introducing or spreading weeds to the former pastoral lease areas and surrounding environment, which could

impact upon the environmental values of the conservation areas.

Considering the above, the application may be at variance to this principle.

Appropriate management strategies would mitigate impacts to these areas. Access regulation, weed mapping, fire precautions and camp site management strategies are recommended for inclusion into the study phase environmental management plan provided with the application and should be developed in conjunction with DEC's Environmental Management Branch.

**Methodology**   References:  
OPR, 2012  
GIS Databases:  
- DEC Tenure

**(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 Greenough River, Sanford River, Murchison River, numerous minor watercourses and areas subject to inundation occur within the clearing footprint area.

The application included a study phase environmental management plan and the applicant has advised that no clearing of will be conducted within drainage lines and site specific setbacks from drainage lines will be maintained (OPR, 2012).

Given the applicant advised that an average of approximately 0.25 hectares of native vegetation will be cleared at each point of interest (OPR, 2012) and that the proposed 120 hectares of clearing will be spread across an approximately 207,000 hectare area, the proposed clearing is unlikely to have an appreciable impact on the quality of surface or ground water.

Considering the above, the application is not likely to be at variance to this principle.

**Methodology**   GIS Databases:  
- Hydrography, linear  
- Rivers

**(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 application is to clear up to 120 hectares of native vegetation across an area of 207,000 hectares for geotechnical investigation activities, with the average clearing at each point of interest expected to be approximately 0.25 hectares (OPR, 2012).

Given the low topography, low rainfall (200 to 300 millimetres per annum) and the occurrence of the watercourses to maintain natural water flows, the proposed clearing is not likely to cause or increase the incidence or intensity of flooding and therefore is not likely to be at variance to this principle.

**Methodology**   References:  
OPR, 2012  
GIS Databases:  
- Hydrography, linear  
- Rainfall, annual mean  
- Rivers  
- Topographic contours, statewide

## Planning instrument, Native Title, RIWI Act Licence, EP Act Licence, Works Approval, Previous EPA decision or other matter.

### Comments

The proposed Oakajee Rail Development is a component of the larger Oakajee Port and Rail Development which also consists of the Oakajee Port and the Oakajee Port Terrestrial Development. The Minister for Public Works is the proponent for the deepwater port, which was approved by Ministerial Statement 469 in February 1998. Oakajee Port and Rail is the proponent for the rail and terrestrial port developments, which have been assessed by the Environmental Protection Authority (EPA).

The Oakajee Rail Development project was assessed by the EPA and Report 1388 was released in March 2011, with recommended conditions. A Ministerial Statement for the project is yet to be issued. This project was also referred to the Commonwealth Department of Sustainability, Environment, Water, Population, Arts and Communities under the Environment Protection and Biological Conservation Act 1999 (OPR, 2012).

In accordance with section 182 of the Land Administration Act 1997, the Public Transport Authority has granted the applicant authorisation to enter the properties under application to undertake feasibility works for the rail development, effective from 14 June 2012 until 13 June 2014 (PTA, 2012).

The application area is within areas proclaimed for ground and surface water under the Rights in Water and Irrigation Act 1914. The Department of Water (DoW, 2012) advised all necessary permits have been applied for and granted for the construction of wells and interference with beds and banks of watercourses.

The area under application occurs within the boundaries of the Wadjari Yamatji and the Widi Mob native title claim. These claimants and their representative body, the Yamatji Marlpa Aboriginal Corporation, have been notified of this application. No response has been received.

There are numerous Aboriginal Sites of Significance mapped within the clearing footprint area. The applicant is advised to contact the Department of Indigenous Affairs regarding obligations under the Aboriginal Heritage Act 1972.

No public submissions have been received in relation to this application.

The applicant holds three current clearing permits (CPS 3196/1, CPS 3255/1 and CPS 3311/1) over a portion of the clearing footprint area for the same purpose as this application. The applicant has applied to surrender these permits and waived the notification period for the revocation of these permits on 29 October 2012.

### Methodology

#### References:

DoW, 2012

OPR, 2012

PTA, 2012

#### GIS Databases:

- Aboriginal Sites of Significance

- Native Title Claims- Registered with the NNTT

- RIWI Act

## 3. References

- Burbidge, A. (2004) Threatened Animals of Western Australia, Department of Conservation and Land Management, Perth, Western Australia.
- DEC (2007 - ) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/>. Accessed 23/08/2012.
- DEC (2007) DEC Fauna Habitat Notes.xls. February 2007. Department of Environment and Conservation, Western Australia.
- DoW (2012) Advice for clearing permit application CPS 5182/1. Received 18/09/2012. Department of Water, Western Australia. DEC Ref: A546437
- Ecologia (2010a) Vegetation and Flora Assessment for Oakajee Port and Rail Proposed Rail Corridor. Ecologia Environment, May 2010. DEC Ref: A A528924
- Ecologia (2010b) Terrestrial Fauna Assessment for Oakajee Port and Rail Proposed Rail Corridor. Ecologia Environment, May 2010. DEC Ref: A A528924
- Ecologia (2010c) Short Range Endemic Invertebrate Survey for Oakajee Port and Rail Proposed Rail Corridor. Ecologia Environment, March 2010. DEC Ref: A549917
- Government of Western Australia (2011); 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- OPR (2012) Application and Supporting Documentation and Correspondence for Clearing Permit CPS 5182/1. Oakajee Port and Rail Pty Ltd. DEC Ref: A528924;
- PTA (2012) Authorisation to Enter Land, Section 182 Land Administration Act 1997 (WA). 14/06/2012. Public Transport Authority, Western Australia. DEC Ref: A528924
- Shah, B. (2006) Conservation of Carnaby's Black-Cockatoo on the Swan Coastal Plain, Western Australia. December 2006.

Carnaby's Black-Cockatoo Recovery Project. Birds Australia, Western Australia.

Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.

Valentine, L.E. and Stock, W. (2008) Food Resources of Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*) in the Gnarara Sustainability Strategy Study Area. Edith Cowan University and Department of Environment and Conservation. December 2008.

Wheatbelt NRM (2011) Threatened Trapdoor Spiders of the Avon. Wheatbelt Natural Resource Management. Western Australia. <http://www.wheatbeltnrm.org.au/resources/trap-door-spider-kit-090130MW.pdf> Accessed August 2011.

#### 4. Glossary

Term	Meaning
BCS	Biodiversity Coordination Section of DEC
CALM	Department of Conservation and Land Management (now BCS)
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DEP	Department of Environmental Protection (now DEC)
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 DEC)