



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 4725/1
Permit Holder:	Department of Agriculture and Food Western Australia
Duration of Permit:	19 March 2012– 19 March 2017

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 fence installation for the State Barrier Fence (Yilgarn Gap) project

2. Land on which clearing is to be done

Emu Fence Road Reserve PIN 11684660 (GHOOLI 6426)
Emu Fence Road Reserve PIN 11684659 (GHOOLI 6426)
Emu Fence Road Reserve PIN 11684661 (GHOOLI 6426)
Emu Fence Road Reserve PIN 11684662 (GHOOLI 6426)
Great Eastern Highway Road Reserve PIN 11714624 (GHOOLI 6426)
Emu Fence Road Reserve PIN 11684548 (GHOOLI 6426)
Lot 1053 on Plan 95032 (GHOOLI 6426)
Emu Fence Road Reserve PIN 11684546 (GHOOLI 6426)
Emu Fence Road Reserve PIN 11684545 (GHOOLI 6426)
Emu Fence Road Reserve PIN 11684547 (MARVEL LOCH 6426)
Emu Fence Road Reserve PIN 11712455 (MARVEL LOCH 6426)
Emu Fence Road Reserve PIN 11712456 (MARVEL LOCH 6426)
Emu Fence Road Reserve PIN 11680234 (MARVEL LOCH 6426)
Unallocated Crown Land PIN 965955 (SKELETON ROCK 6426)
Unnamed Road Reserve PIN 11680397 (SKELETON ROCK 6426)
Unallocated Crown Land PIN 965952 (SKELETON ROCK 6426)
King-Ingram Road Reserve PIN 11680382 (MOUNT HOLLAND 6426)
Emu Fence Road Reserve PIN 11651187 (MOUNT HOLLAND 6426)
Unallocated Crown Land PIN 642971 (MOUNT HOLLAND 6426)
Unnamed Road Reserve PIN 11680151 (MOUNT HOLLAND 6426)
Unallocated Crown Land PIN 1094543 (MOUNT HOLLAND 6426)
Lot 264 on Plan 209935 (MOUNT HOLLAND 6426)
Unnamed Road Reserve PIN 11651493 (MOUNT HOLLAND 6426)

3. Area of Clearing

The Permit Holder shall not clear more than 315 hectares of native vegetation within the combined areas shaded yellow on attached Plan 4725/1a, Plan 4725/1b, Plan 4725/1c, Plan 4725/1d, Plan 4725/1e, Plan 4725/1f, Plan 4725/1g, Plan 4725/1h, Plan 4725/1i, Plan 4725/1j, Plan 4725/1k and Plan 4725/1l.

4. 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.

5. 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 power to clear native vegetation for those activities under the *Land Administration Act 1997* or any other written law.

6. 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

7. 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.

8. Weed control

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*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

9. 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 the following *priority flora taxa*:
 - (i) *Baeckea grandiflora subsp. Parker Range*;
 - (ii) *Banksia lullfitzii*; and
 - (iii) *Eremophila serpens*
- (b) Where *priority flora* are identified in relation to condition 9(a) of this Permit, the Permit Holder shall ensure that:
 - (i) no clearing of identified *priority flora* occurs, unless approved by the CEO; and
 - (ii) no clearing occurs within 10 metres of identified *priority flora*, unless approved by the CEO.

PART III - RECORD KEEPING AND REPORTING

10. Records must be kept

- (a) The Permit Holder must maintain the following records for activities done pursuant to this Permit in relation to the clearing of native vegetation authorised under this Permit:
 - (i) 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;
 - (ii) the date that the area was cleared; and
 - (iii) the size of the area cleared (in hectares).

- (b) In relation to flora management pursuant to condition 9 of this Permit:
- (i) the location of each *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 priority flora species identified; and
 - (iii) a copy of the botanists flora survey report.

11. Reporting

- (a) The Permit Holder must provide to the CEO on or before 19 March of each year, a written report:
- (i) of records required under condition 10 of this Permit; and
 - (ii) concerning activities done by the Permit Holder under this Permit
- (b) Prior to 19 December 2016, the Permit Holder must provide to the CEO a written report of records required under condition 10 of this Permit where these records have not already been provided under condition 11(a) of this Permit.

DEFINITIONS

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

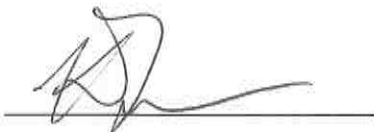
botanist means a person with specific training and/or experience in the ecology and taxonomy of Western Australian flora;

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

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;

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);

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*.

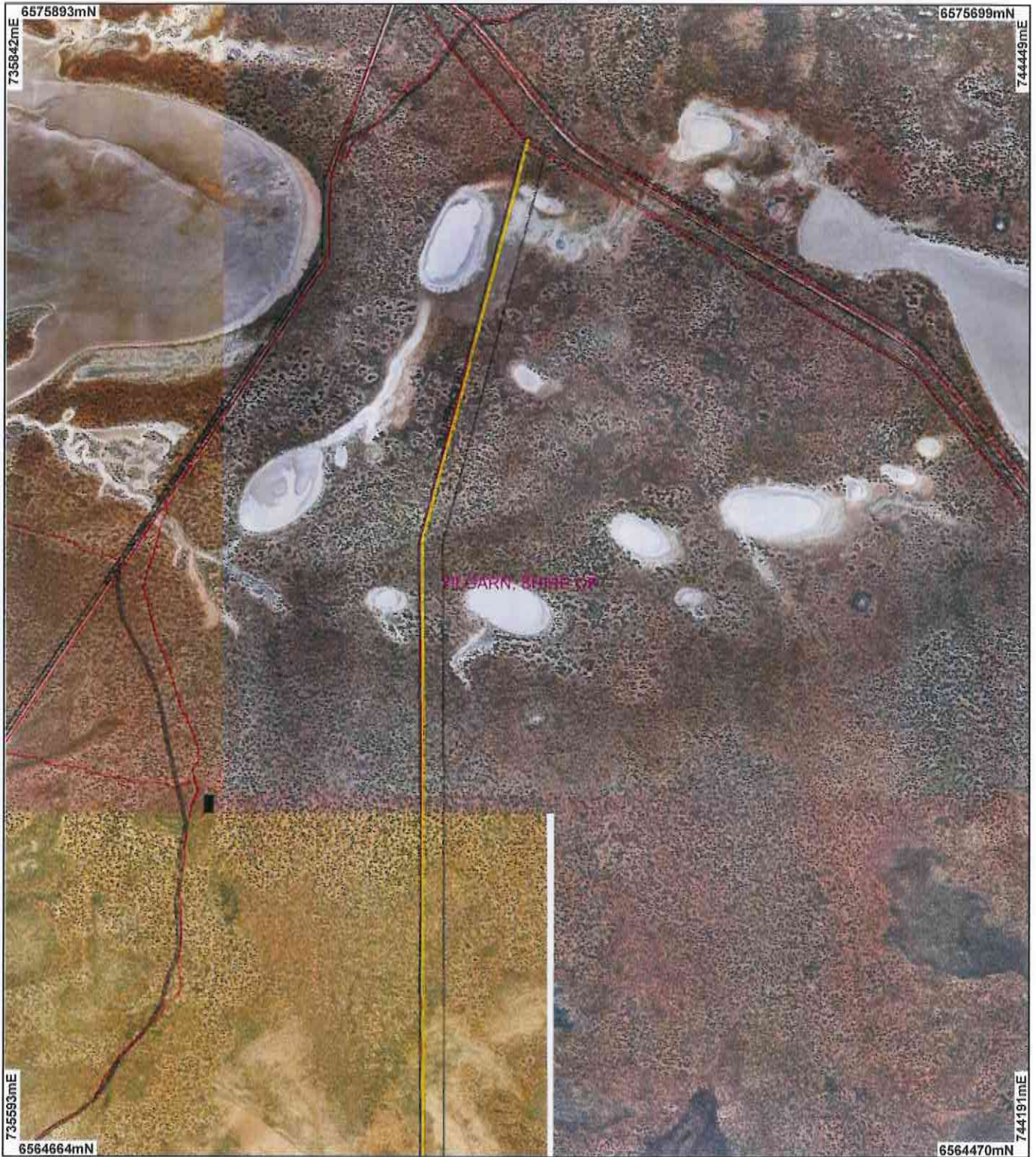


Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

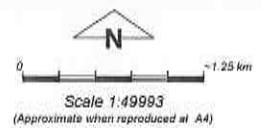
23 February 2012

Plan 4725/1a



LEGEND

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| Road Centrelines | Seabrook 1.4m Orthomosaic - Landgate 2001 | Oconnor 50cm Orthomosaic - Landgate 2004 |
| Cadastre | Yellowdine 1.4m Orthomosaic - Landgate 2003 | Southern Cross 50cm Orthomosaic - Landgate 2004 |
| Local Government Authorities | Holleton 50cm Orthomosaic - Landgate 2004 | |
| Clearing Instruments | Cheritons Find 1.4m Orthomosaic - Landgate 2003 | |
| Areas Approved to Clear | | |
| Bullfinch 1.4m Orthomosaic - Landgate 2001 | | |



Geocentric Datum Australia 1994

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

Date 13/2/12
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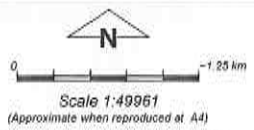
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Plan 4725/1b



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| <ul style="list-style-type: none"> Clearing Instruments Areas Approved to Clear Bullfinch 1.4m Orthomosaic - Landgate 2001 | | |



Geocentric Datum Australia 1994

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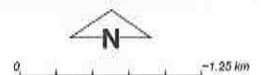


LEGEND

- Road Centrelines
- Cadastre
- Local Government Authorities
- Clearing Instruments**
- Areas Approved to Clear
- Bullfinch 1.4m Orthomosaic - Landgate 2001

- Sealsbrook 1.4m Orthomosaic - Landgate 2001
- Yellowdine 1.4m Orthomosaic - Landgate 2003
- Hollefon 50cm Orthomosaic - Landgate 2004
- Cheritons Find 1.4m Orthomosaic - Landgate 2003

- Oconnor 50cm Orthomosaic - Landgate 2004
- Southern Cross 50cm Orthomosaic - Landgate 2004



Scale 1:49930
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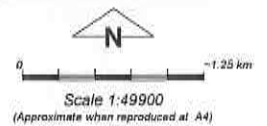
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Plan 4725/1d



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| Cadastre | Yellowdine 1.4m Orthomosaic - Landgate 2003 | Southern Cross 50cm Orthomosaic - Landgate 2004 |
| Local Government Authorities | Holleton 50cm Orthomosaic - Landgate 2004 | |
| Clearing Instruments | Cheritons Find 1.4m Orthomosaic - Landgate 2003 | |
| Areas Approved to Clear | | |
| Bullfinch 1.4m Orthomosaic - Landgate 2001 | | |



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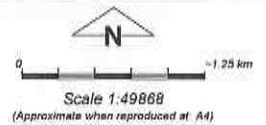


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- Road Centrelines
- Cadastre
- Towns
- Local Government Authorities
- Clearing Instruments
- Areas Approved to Clear

- Bullfinch 1.4m Orthomosaic - Landgate 2001
- Seabrook 1.4m Orthomosaic - Landgate 2001
- Yellowdine 1.4m Orthomosaic - Landgate 2003
- Holleston 50cm Orthomosaic - Landgate 2004
- Cheritons Find 1.4m Orthomosaic - Landgate 2003

- Oconner 50cm Orthomosaic - Landgate 2004
- Southern Cross 50cm Orthomosaic - Landgate 2004



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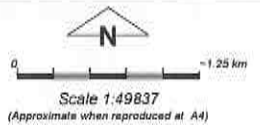
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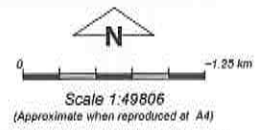
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Plan 4725/1g



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- ✓ Road Centrelines
- Cadastral
- Local Government Authorities
- Yellowdine 1.4m Orthomosaic - Landgate 2003
- Holleton 50cm Orthomosaic - Landgate 2004
- Cheritons Field 1.4m Orthomosaic - Landgate 2003
- O'Connor 50cm Orthomosaic - Landgate 2004
- Southern Cross 50cm Orthomosaic - Landgate 2004
- Clearing Instruments
- Areas Approved to Clear

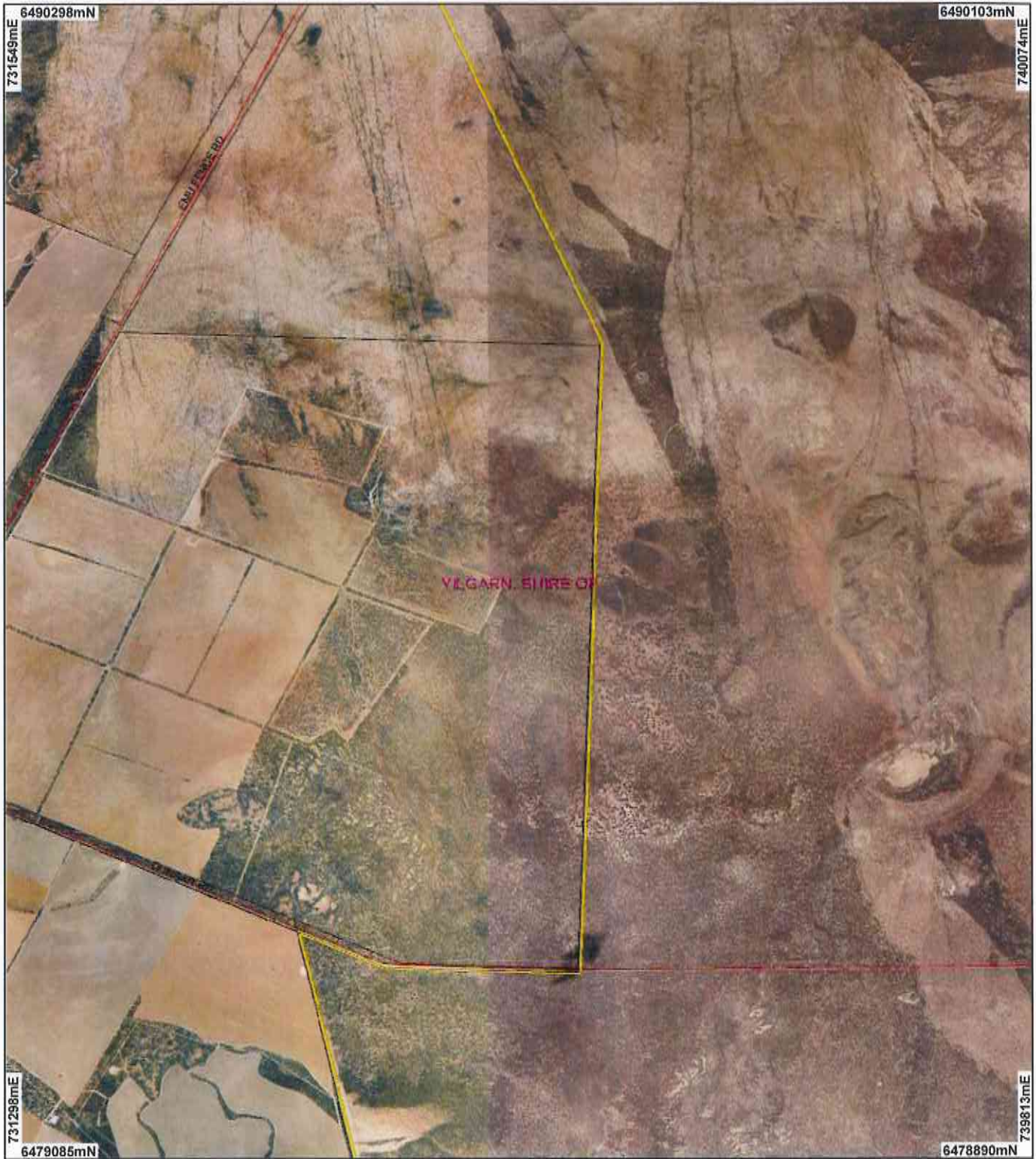


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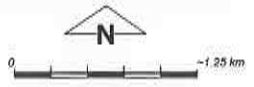
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Plan 4725/1h



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- ✗ Road Centrelines
- Cadastre
- Local Government Authorities
- ✗ Bullfinch 1.4m Orthomosaic - Landgate 2001
- ✗ Seabrook 1.4m Orthomosaic - Landgate 2001
- ✗ Yellowdine 1.4m Orthomosaic - Landgate 2003
- ✗ Holleten 50cm Orthomosaic - Landgate 2004
- ✗ Cheritons Find 1.4m Orthomosaic - Landgate 2003
- ✗ Oconnor 50cm Orthomosaic - Landgate 2004
- ✗ Southern Cross 50cm Orthomosaic - Landgate 2004
- ✗ Clearing Instruments
- Areas Approved to Clear



Scale 1:49774
(Approximate when reproduced at A4)

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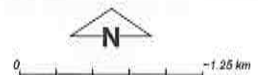
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Plan 4725/1i



LEGEND

- Road Centralines
- Cadastre
- Local Government Authorities
- Bullfinch 1.4m Orthomosaic - Landgate 2001
- Seabrook 1.4m Orthomosaic - Landgate 2001
- Yellowdine 1.4m Orthomosaic - Landgate 2003
- Holleton 50cm Orthomosaic - Landgate 2004
- Cherltons Find 1.4m Orthomosaic - Landgate 2003
- Oconnor 50cm Orthomosaic - Landgate 2004
- Southern Cross 50cm Orthomosaic - Landgate 2004
- Clearing Instruments
- Areas Approved to Clear



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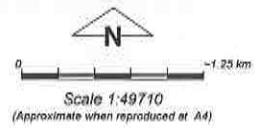
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- Road Centrelines
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- Bullfinch 1.4m Orthomosaic - Landgate 2001
- Seabrook 1.4m Orthomosaic - Landgate 2001
- Yellowdine 1.4m Orthomosaic - Landgate 2003
- Holleton 50cm Orthomosaic - Landgate 2004
- Cherlons Find 1.4m Orthomosaic - Landgate 2003
- Oconnor 50cm Orthomosaic - Landgate 2004
- Southern Cross 50cm Orthomosaic - Landgate 2004
- Clearing Instruments
- Areas Approved to Clear



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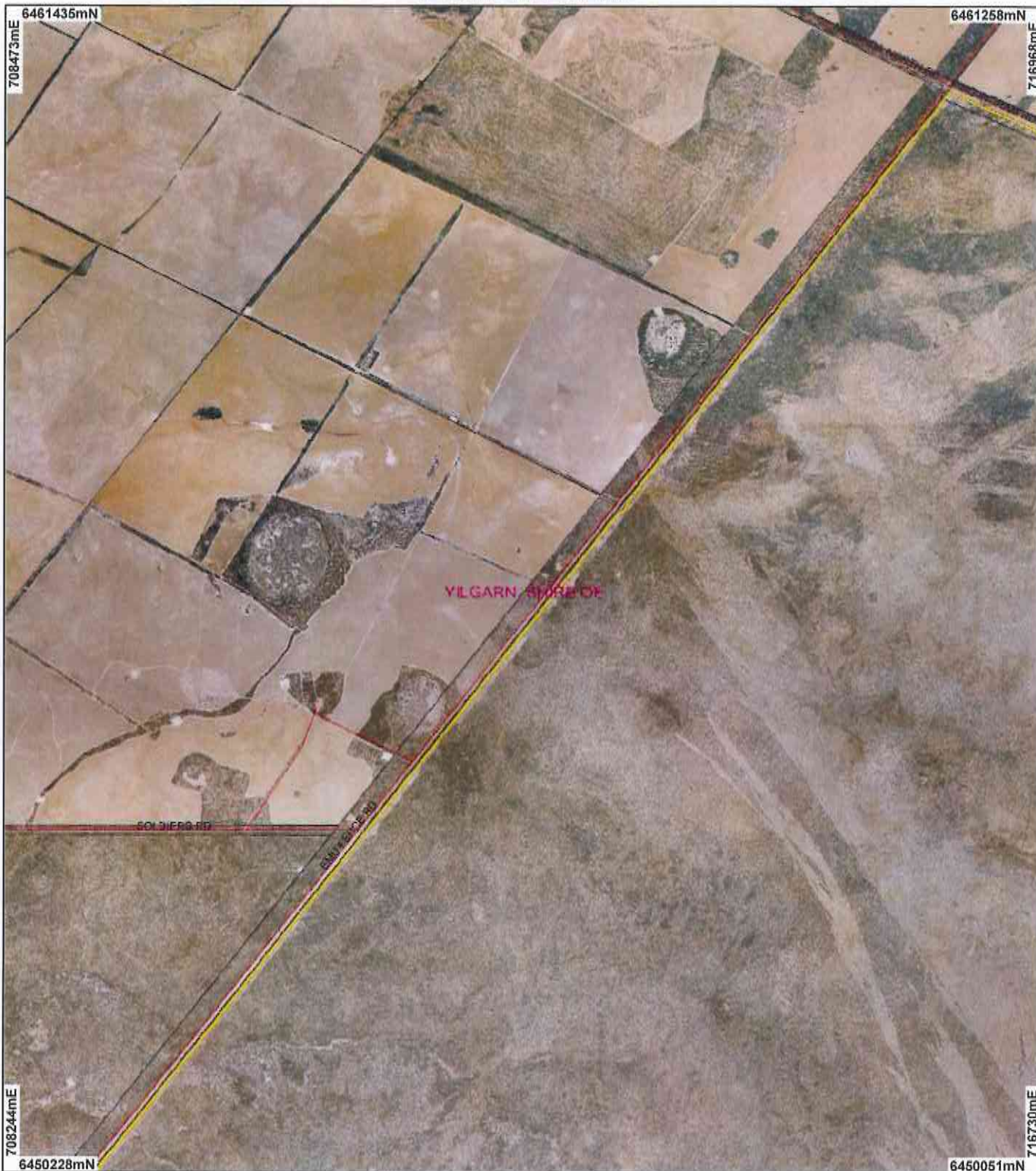
Date 23/2/18

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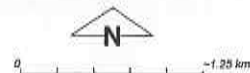
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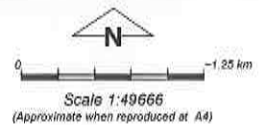
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Plan 4725/11



LEGEND

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Date 23/1/2

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1. Application details

1.1. Permit application details

Permit application No.: 4725/1
 Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Department of Agriculture and Food Western Australia

1.3. Property details

Properties: ROAD RESERVES (GHOOLI 6426)
 LOT 1053 ON PLAN 95032 (GHOOLI 6426)
 ROAD RESERVES (MARVEL LOCH 6426)
 ROAD RESERVES (SKELETON ROCK 6426)
 UNALLOCATED CROWN LAND (SKELETON ROCK 6426)
 ROAD RESERVES (MOUNT HOLLAND 6426)
 UNALLOCATED CROWN LAND (MOUNT HOLLAND 6426)

Local Government Area: Shire of Yilgarn
 Colloquial name: State Barrier Fence

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
315		Mechanical Removal	Fence Line Maintenance

1.5. Decision on application

Decision on Permit Application: GRANT
 Decision Date: 23 February 2012

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
Approximately 130km of the 160km fence line corridor is mapped as three Beard Vegetation Associations: 1413: Shrublands; acacia, casuarina & melaleuca thicket 1148: Shrublands; scrub-heath in the Coolgardie Region 1068: Medium woodland; salmon gum, morrel, gimlet & Eucalyptus sheathiana (Shepherd, 2009).	This application is to clear up to 315ha of native vegetation from road reserves and unallocated Crown land within the State Barrier Fence project area in the Shire of Yilgarn, for the purpose of installing a fence line to close the Yilgarn Gap in the barrier fence (wild dog standard). The proposed clearing will be up to 20m wide and approximately 180km in length. Despite much of the vegetation under application being scrub-rolled there is only a minor occurrence of weed species and the vegetation structure is regenerating with little sign of invasive weeds (Strategen, 2011).	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994) To Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994) To Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994) To Degraded: Structure severely disturbed; regeneration to good condition requires intensive management	The condition and description of the vegetation was determined from a flora and vegetation report (Strategen, 2011).

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 at variance to this Principle

The application is to clear up to 315 hectares of native vegetation within the Shire of Yilgarn, for the purpose of installing a fence line to close a 180km gap in the vermin-proof State Barrier Fence. The amount of clearing was reduced from 360 hectares during assessment, as the fence alignment was modified to utilise an existing cleared closed road for the northern 23km of the fence line.

Most of the proposed alignment falls within the 200m wide road reserve of Emu Fence Road, and where the proposed alignment falls within unallocated Crown land, it will follow Emu Fence Road and private property boundaries as closely as possible (Strategen, 2011),

A recent flora and vegetation survey conducted in September 2011 recorded 339 native species within the fenceline corridor (Strategen, 2011). No declared rare flora was identified during the survey however six priority flora species were recorded within the application area.

Of the six priority flora species recorded, the following three species' conservation status are likely to be significantly impacted upon; *Baeckea grandiflora* subsp. Parker Range (Priority 1), *Banksia lullfitzii* (Priority 3) and *Eremophila serpens* (Priority 4). Potential impacts to these species are described below:

- The local distribution of *Baeckea grandibracteata* subsp. Parker Range is centered around the proposed fenceline. Few locations are known of this species therefore this population is important. In addition, the flora and vegetation survey identified an additional sub-population of this species, approximately 6km south of the known location.
- The known range of *Banksia lullfitzii* is mainly to the east, with scattered collections to the north and south of the eastern range. This location is therefore of significance in that it is the western-most occurrence and well outside the known range of this species.
- *Eremophila serpens* is widely distributed, but this site is a significant range extension to the northwest therefore this location is significant due to the range extension.

The remaining 3 priority flora species recorded; *Euryomyrtus leptospermoides* (P3), *Acacia desertorum* var. *nudipes* (P1) and *Hakea pendens* (P2) are not as likely to be impacted due to extensive distributions of the first two species, and the single *Hakea pendens* that was identified is able to be avoided. Loss of plants of these 3 species should be avoided or minimised where possible.

It is noted that the State Barrier Fence Flora and Vegetation Survey- Southern Cross to Hyden report (Strategen, 2011) did not present information on the likely impacts of the proposed clearing on the identified Priority species and how these impacts can be mitigated. Therefore further survey work or additional data is required to demonstrate this.

Approximately 32 hectares of the vegetation under application is mapped within a Priority Ecological Community (PEC) 'Parker Range Vegetation Complexes.' The State Barrier Fence Flora and Vegetation Survey- Southern Cross to Hyden report (Strategen, 2011) states that the vegetation in the application area is typical of this PEC in structure and composition, and ranges from a completely degraded (Keighery, 1994) to excellent (Keighery, 1994) condition. This PEC is mapped as covering a total area of 55,917 hectares. The proposed clearing of approximately 32 hectares of this PEC will reduce the total area of the mapped PEC by approximately 0.05 per cent. Impacts to this PEC are likely to be minimal given the small percentage which is proposed to be cleared and given that the clearing area mainly follows already disturbed areas, including a previously cleared fenceline.

A level 2 fauna survey was conducted in November 2011 including a desktop fauna survey which identified 282 vertebrate fauna species, including 31 species of conservation significance. The fauna assemblage was identified as rich and substantially intact except for the loss of medium-sized mammal species, primarily due to feral predation (Bamford, 2012).

Given sections of the application area contain vegetation typical of a PEC, habitat for priority flora and the vegetation condition ranges from a completely degraded (Keighery, 1994) to excellent (Keighery, 1994) condition it is considered that those sections of the application area that contain the PEC and habitat for priority flora contain a high level of biological diversity. Therefore, the application area is at variance in those specific areas and is not likely to be at variance in the remaining areas.

Methodology

References:
Bamford (2012)
Keighery (1994)
Strategen (2011)

GIS Databases:
-SAC Biodatasets (accessed 16/12/11)

(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

Fifteen fauna species of conservation significance have been recorded within two 40km radiuses of the application area (DEC, 2007 -). The most notable are *Aganippe castellum* (Tree-stem Trapdoor Spider), *Dasyurus geoffroyi* (Western Quoll/ Chuditch) and *Leipoa ocellata* (Malleefowl). These three species are listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 and threatened under the Commonwealth Environmental Protection and Biodiversity Act 1999.

A fauna survey was conducted in November 2011 and involved a desktop assessment, a Level 1 reconnaissance survey conducted over 3 days over the entire 180km length of the proposed fenceline, and one week of an intensive Level 2 survey sampling of birds, mammals and reptiles at one location in the south of the proposed fence alignment approximately 40km NNE of Hyden (Bamford, 2012).

The desktop assessment as part of the fauna survey identified a total of 282 vertebrate fauna species as potentially occurring within the application area, 31 species of conservation significance (including the 3 fauna species listed above) consisting of 2 reptile species, at least 23 bird species, 3 mammal species and 3 invertebrate species, with the possibility of some Short Range Endemic (SRE) invertebrates (Bamford, 2012). SRE are terrestrial and aquatic invertebrate fauna species which typically occupy small geographic areas of up to 10,000 km² and have low dispersal ability

Of the above 31 species of conservation significance, Bamford (2012) identified the following as likely to be present within the proposed footprint area and are reported to have declined in the Wheatbelt:

- Malleefowl (Vulnerable, Rare or Likely to Become Extinct)- one inactive mound was identified just outside the proposed footprint
- Chuditch (Vulnerable, Rare or Likely to Become Extinct)- may occur in low numbers throughout the proposed clearing footprint with the last recorded animal in 2008
- Bush stone-curlew (Priority 4)- a pair with chicks was identified in remnant vegetation
- Red-tailed Phascogale (Endangered, Rare or Likely to Become Extinct) - favours Eucalypt woodlands but status of this species in the region is uncertain
- Tree-stem Trapdoor Spider (Priority 4) - is abundant around Koolyanobbing Range, at the northern end of the application area (Bamford, 2012). Suitable habitat was also found at one location along the alignment, near Marvel Loch, however a search did not identify any burrows (Bamford, 2012). Impacts to this species will be minimised by utilising a cleared, closed road for the alignment of the northern 23km of the proposed fence line.

In addition to the species listed above the Western Brush Wallaby (Priority 4) has been recorded within a 40km radius of the southern section of the proposed fenceline (DEC, 2007-).

Considering the narrow, linear extent of the proposed clearing and the utilisation of cleared tracks, the vegetation under application is not considered to represent significant habitat for indigenous fauna and the proposed clearing is unlikely to be at variance to this Principle.

Methodology References;
Bamford (2012)
DEC (2007-)

(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 known record of declared rare flora is *Banksia sphaerocarpa* var. *dolichostyla*, located approximately 5km west of the southern end of the proposed clearing area. This species is a large shrub and grows on lateritic gravel and grey sands (WA Herbarium, 1998).

The flora and vegetation survey did not identify this species within the application area (Strategen, 2011).

This species is unlikely to be impacted by the proposed clearing, therefore the proposed clearing is not likely to be at variance to this principle.

Methodology References;
Strategen (2011)
Western Australian Herbarium (1998)

GIS Databases
-SAC Biodatasets (accessed 9/2/12)

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

Comments **Proposal is not at variance to this Principle**
 There are no known Threatened Ecological Communities (TEC) within a 200km radius of the application area.
 The flora and vegetation survey did not identify any TECs within the area under application (Strategen, 2011).
 Given the large distance from the application area to the closest known TEC, the application is not at variance to this principle.

Methodology References:
 Strategen (2011)
 GIS Databases
 -SAC Biodatasets (accessed 9/2/12)

(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**
 Across the 180km of fence line corridor 13 Beard Vegetation Associations have been mapped (Shepherd, 2009).
 All apart from one Beard Vegetation Association, 945 which is described as Medium woodland; salmon gum / Shrublands; mallee scrub, redwood & black marlock and retains 17 per cent of its pre-European vegetation, are above the threshold level of 30 per cent recommended in the National Objectives Targets for Biodiversity Conservation below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001).

Approximately 130km of the 180km corridor is mapped as three Beard Vegetation Associations:
 - 1413: Shrublands; acacia, casuarina & melaleuca thicket
 - 1148: Shrublands; scrub-heath in the Coolgardie Region
 - 1068: Medium woodland; salmon gum, morrel, gimlet & Eucalyptus sheathiana,
 These vegetation associations have approximately 98, 99 and 53 per cent of their pre-European vegetation remaining, respectively.

The local area is extensively cleared with approximately 10 per cent of its pre-European vegetation remaining.

Given that the proposed clearing consists of the removal of up to 315ha of native vegetation including a number of priority flora species and a Priority 3 Ecological Community largely in very good (Keighery, 1994) to excellent (Keighery, 1994) condition, it is considered that the proposed clearing contains high biodiversity values and may be considered a significant remnant in the highly cleared local area.

Therefore, the proposed clearing may be at variance to this principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregions*				
Coolgardie	12,912,204	12,707,873	98	16
Avon Wheatbelt	9,517,110	1,736,215	18	10
Mallee	7,395,897	4,115,655	56	31
Shire*				
Shire of Yilgarn	3,042,765	2,476,599	81	27
Three Predominant Beard Vegetation Associations in Bioregion*				
1413 (approx 60km)	1,061,213	1,041,677	98	19 (192,843ha)
1068 (approx 40km)	193,988	102,263	53	14 (14,113ha)
1148 (approx 30km)	254,932	252,082	99	17 (43,670ha)

*Shepherd (2009)

Methodology References:
 Commonwealth of Australia (2001)
 Keighery (1994)
 Shepherd (2009)

GIS Databases
-NLWA, Current Extent of Native Vegetation
-Pre-European Vegetation

(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 at variance to this Principle

There are 1128 known wetlands and 8242 known watercourses within a 40km radius of the proposed clearing, including chains of ephemeral salt lakes.

The flora and vegetation survey conducted in September 2011 mapped twelve vegetation communities mapped within the area under application however none are representative of riparian vegetation (Strategen, 2011). However it is noted only 42 plots were sampled during the survey therefore riparian vegetation may be present but was not sampled.

Given the large amount of wetlands and watercourses mapped within the local area, it is likely that some of the vegetation under application is growing in, or in association with, a watercourse or wetland therefore the application is at variance to this principle

Given the long, linear nature of the proposed clearing potential impacts to riparian vegetation will be able to be managed therefore the potential impact is likely to be low.

Methodology References:
Strategen (2011)

GIS databases
-Hydrography, linear
-Geomorphic Wetlands (classification), Wheatbelt

(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 area under application is mostly within the Coolgardie Interim Biogeographic Regionalisation for Australia (IBRA) bioregion with the middle section falling within the Avon Wheatbelt IBRA bioregion and the southern section within the Mallee IBRA bioregion.

The main soil type of the application area is described as yellow earthy sands and sandy yellow earths on depositional sites, and ironstone gravels with a smaller amount of sandy alkaline yellow mottled soils (Northcote et al, 1960- 68). Given the sandy nature of the dominant soil types present within the application area, wind erosion may occur however it is not likely to cause appreciable land degradation due to the buffering effect of the surrounding vegetation.

The proposed clearing may also increase the incidence of weeds into adjacent native vegetation. Effective weed management and vehicle hygiene procedures will assist in mitigating potential impacts of weed invasion into adjacent native vegetation.

Given the above the application may be at variance to this principle.

Methodology References:
Northcote et al (1960-68)

GIS Databases:
- Interim Biogeographic Regionalisation for Australia
- Soils, Statewide
- Topographic Contours

(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 proposed State Barrier Fence does not extend over any DEC managed lands or conservation areas. The closest two conservation reserves are the Yellowdine Nature Reserve, which is approximately 10km east of the northern section of the proposed fence alignment, and Jilbadji Nature Reserve which is approximately 15km east of the centre of the proposed fence alignment.

It has been noted that sections of the proposed fence extend into the Great Western Woodlands (GWW) which

is a region representing the largest remaining intact temperate woodland on Earth and spans almost 16 million hectares. The GWW is considered an internationally significant area of great biodiversity containing more than 20 per cent of all Australia's flora species and 25 per cent of Australia's eucalypt species (The Great Western Woodlands Collaboration, 2012).

The proposed clearing may impact the environmental values of the GWW region in terms of edge effects such as weed invasion, changes in the abundance and distribution of species within the GWW and fragmentation of ecological linkages linking the GWW to the nearby conservation reserves.

Given the above, the proposed clearing may be at variance to this Principle.

Effective weed management practices will assist in mitigating potential impacts of weed invasion into the surrounding GWW region.

Methodology References:
The Great Western Woodlands Collaboration (2012)

GIS Databases:
- DEC Tenure
- Casastre

(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 may be at variance to this Principle

There are 1128 known wetlands and 8242 known watercourses within a 40km radius of the proposed clearing, including chains of ephemeral salt lakes.

The ground water salinity of the 180km area under application ranges from 14 000 to greater than 35 000 milligrams per litre of Total Dissolved Solids. This level of groundwater salinity is considered to be saline to highly saline

Due to the low relief of the area under application and the sandy soils it is not likely that the proposed clearing will increase surface water runoff into, or the sediment level within identified watercourses.

Given the high level of groundwater salinity mapped within the application area and the relatively large area under application (315ha) the proposed clearing may increase groundwater salinity.

Therefore, this application may be at variance to this principle.

Methodology GIS Databases:
- Hydrography, linear
- Geomorphic Wetlands (classification), Wheatbelt

(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

Mean annual rainfall is in the 300 to 500mm range. The climate tends towards an extremely dry Mediterranean climate where it is common for five to eight dry months occurring each year (Mitchell et al, 2011).

Given the given the long, linear nature of the application area (180km long by 20m wide) and sandy soils it is not likely to increase flooding.

The application is therefore unlikely to be at variance to this principle.

Methodology References:
Mitchell et al (2011)

GIS databases
- Hydrography, linear
- Geomorphic Wetlands (classification), Wheatbelt
- Mean Annual Rainfall, Isohytes
- Topographic Contours, Statewide

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

Comments The Department of Food and Agriculture Western Australia (DAFWA) and the Agriculture Protection Board

maintains the State Barrier Fence and the purpose of this application is to complete a 180km gap in the State Barrier Fence in the Yilgarn Gap area. This project involves the construction of a 1.3m high fence (to a wild dog standard) with a total proposed clearing area of 315 ha for the purpose of excluding known pest species, including wild dogs, emus and kangaroos from agricultural areas of the state. The amount of clearing was reduced from 360 hectares during assessment, as the fence alignment was modified to utilise an existing cleared closed road for the northern 23 kilometres of the fence line.

The aim of controlling wild dogs is to protect livestock from attacks and harassment and exclusion fencing such as this provides a non-lethal means of protecting livestock from predators (Thompson, 2002).

The applicant has conducted a benefit-cost analysis of the State Barrier Fence in 2007. This analysis proves the highest net present value and benefit-cost ratio for this section of the fence is to install a fence to wild dog specification (URS, 2007).

The fauna survey identified the following potential impacts as a result of the new section fence to native fauna:

- Habitat fragmentation- barrier to fauna movement except for target species such as emus and wild dogs, in particular the echidna. This species is classified by the International Union for Conservation of Nature (IUCN) as 'Least Concern.'
- Most native species in the area will be able to pass through or over the fence.
- Altered movement and abundance of fauna along fence.
- Ongoing mortality, in particular emus- due to increased vehicle traffic along the fence. However DAFWA have advised there will be no increase in vehicular traffic as the service track will be closed to the public and used infrequently for maintenance.
- Altered species interactions- changed in the abundance of feral predators (eg: dingo, fox, feral cat) may affect sensitive native mammals such as the Red-tailed Phascogale and Chuditch.
- Will not restrict the movement of native fauna except potentially the Short-beaked Echidna (*Tachyglossus aculeatus*) which may or may not be able to burrow under the fence (Bamford, 2012).

It is recommended the new section of the State Barrier Fence is monitored for native fauna road kills, especially conservation significant sensitive species such as the Malleefowl, Bush-stone curlew, Western Brush-wallabies and Chuditch.

There are 32 Aboriginal Sites of Significance known within a 70km radius of the area under application. None of these known Sites occur within the application area.

An Aboriginal Archaeological Survey was conducted in November 2011 over the proposed fenceline corridor and identified a significant area that contains Aboriginal heritage and native title rights and interests of a number of groups:

- Central West Goldfield native title claimants (Gubrun- Sambo family)
- Kalimia (Gubrun- Champion family)
- Ballardong, and
- Njaki Njaki people

The Aboriginal Archaeological Survey identified one new Aboriginal archaeological site (DF 11-01) and it is recommended this site, and all Aboriginal heritage sites, are avoided and protected by the applicant (Mitchell et al, 2011). If it is necessary to disturb these sites the applicant should seek consent from the Minister for Indigenous Affairs under section 18 of the Aboriginal Heritage Act 1972 subject to consent from the members of the Traditional Owner groups who participated in the survey (Mitchell et al, 2011).

An Ethnographic Survey was conducted over three phases in November and December 2011, separately but mainly concurrently with the above-mentioned archaeological survey, with the assistance of two indigenous representatives over the proposed fenceline corridor (Gollan and Wright, 2011).

The Shire of Yilgarn has endorsed the proposal to construct the new State Barrier Fence within the road reserves (Shire of Yilgarn, 2011).

State Lands Services- Wheatbelt Lands Division of the Department of Regional Development and Lands (DRDL) supports the proposal and is prepared to create a 20m wide reserve within the Unallocated Crown Land (UCL) for the 45km section that is proposed to be constructed on UCL (DRDL, 2011).

No public submissions have been received.

The application area is zoned as Rural/Mining under the Town Planning Scheme zone.

The Ballardong People Native Title Claimants and the South West Aboriginal Land and Sea Council representative body have been notified but no response has been received.

Methodology References:
DRDL (2011)

Gollan and Wright (2011)
 Mitchell et al (2011)
 Shire of Yilgarn (2011)
 Thompson, P (2002)
 URS (2007)

GIS databases
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 -Town Planning Scheme Zones
 - Native Title Claims

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5. 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)