



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 5262/1
Permit Holder:	Western Australian Land Authority T/A LandCorp
Duration of Permit:	23 November 2012 – 23 November 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 Industrial Development.

2. Land on which clearing is to be done

Lot 600 on Deposited Plan 70566 (Boodarie)

Lot 366 on Deposited Plan 42164 (Boodarie)

Lot 409 on Deposited Plan 28588 (Boodarie)

3. Area of Clearing

The Permit Holder must not clear more than 81.35 hectares of native vegetation within the area hatched yellow on attached Plan 5262/1.

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 right to access land 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:

- avoid the clearing of native vegetation;
- minimise the amount of native vegetation to be cleared; and
- 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. Fauna management

- (a) Prior to undertaking any clearing authorised under this Permit, the area(s) shall be inspected by a *fauna specialist* who shall identify burrow/s suitable to be utilised by Crested-tailed Mulgara (*Dasymercus cristicauda*);
- (b) Prior to clearing, any burrow identified in condition 9(a) shall be inspected by a *fauna specialist* for the presence of fauna listed in condition 9(a).
- (c) Where fauna are identified in relation to condition 9(b) of this Permit, the Permit Holder shall ensure that:
 - (i) no clearing of the identified burrow/s occurs, unless approved by the CEO.
 - (ii) no clearing occurs within 50 metres of the identified burrow/s unless approved by the CEO.
 - (iii) no taking of identified fauna occurs unless approved by the CEO.

PART III - RECORD KEEPING AND REPORTING

10. Records must be kept

The Permit Holder must in relation to condition 9 of this Permit maintain the location of each burrow identified 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.

11. Reporting

- (a) The Permit Holder must provide to the CEO on or before 31 July 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 between 1 July and 30 June of the preceding year.
- (b) Prior to 23 August 2017, 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:

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;

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; and

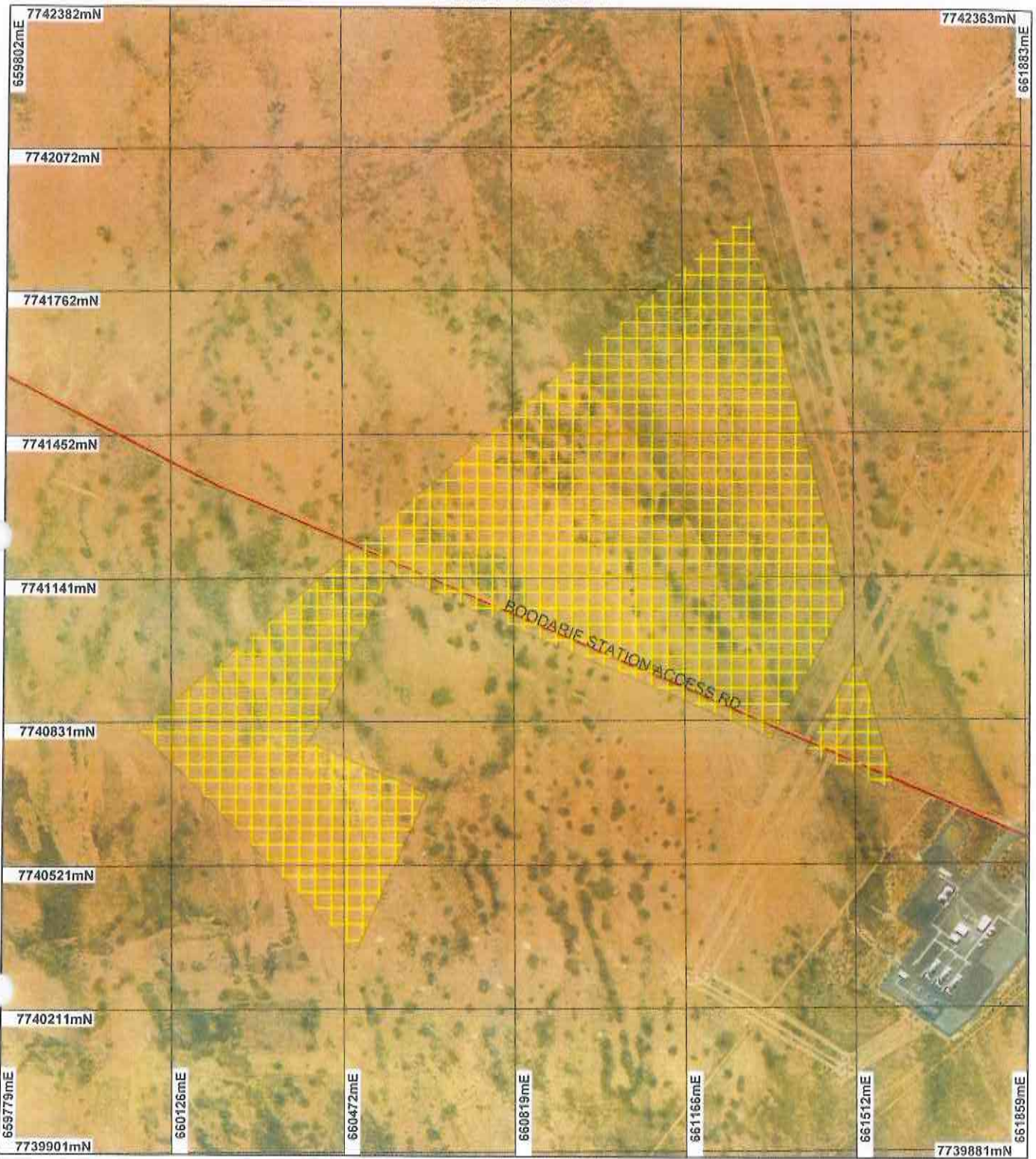
weed/s means a species listed in Appendix 3 of the "Environmental Weed Strategy" published by the Department of Conservation and Land Management (1999), and plants declared under section 37 of the *Agriculture and Related Resources Protection Act 1976*.



Roxane Shadbolt
 A/MANAGER
 NATIVE VEGETATION CONSERVATION BRANCH
 Officer delegated under Section 20
 of the *Environmental Protection Act 1986*

1 November 2012

Plan 5262/1



LEGEND

-  Road Centrelines
-  Clearing Instruments
-  Areas Approved to Clear
-  Port Hedland 50cm Orthomosaic - Landgate 2004



0 300 m

Scale 1:11445

(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.

R. Shadbolt Date 1/11/12
R Shadbolt

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.: 5262/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Western Australian Land Authority t/a LandCorp

1.3. Property details

Property: LOT 366 ON PLAN 42164 (BOODARIE 6722)
LOT 409 ON PLAN 28588 (BOODARIE 6722)
LOT 600 ON PLAN 70566 (BOODARIE 6722)
Local Government Area: Town of Port Hedland
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
81.35		Mechanical Removal	Industrial

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 1 November 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
Mapped Beard vegetation association 589: Mosaic, short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe; soft spinifex soft spinifex (Shepherd et al, 2001).	The application is to clear 81.35 hectares for the purpose of industrial development. A flora and fauna assessment was undertaken by GHD of the proposed Boodarie Industrial Estate which includes the application area. The assessment covered and area of approximately 5000 hectares. The vegetation within the study area is dominated by low open heath over tussock grasslands (GHD, 2010). The majority of the vegetation within the study area is considered to be in an excellent (Keighery, 1994) condition (GHD, 2010). The Study area is subject to previous disturbances from fire, tracks, cattle grazing and infrastructure activities.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	The condition of the vegetation under application was obtained from a flora and fauna assessment undertaken by GHD in June 2009 (GHD, 2010).

3. Assessment of application against clearing principles

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

Comments

Proposal is not likely to be at variance to this Principle

The application is to clear up to 81.35 hectares of native vegetation for the purpose of industrial development. The application area is located approximately 5km west to the town site of South Hedland. The majority of the vegetation under application is in an excellent (Keighery, 1994) condition (GHD, 2010) and consists mainly of low open heath over tussock grasslands (GHD, 2010). The study area is subject to past disturbances from fire, tracks, cattle grazing and infrastructure activities.

Several priority flora species have been mapped within 40km of the clearing area. Most notably are two priority 1 species that have been mapped within the same vegetation and soil types as the application footprint. A flora and fauna assessment undertaken by GHD of the proposed Boodarie Industrial Estate (approximately 5000 hectares) which includes the application area, did not identify any priority or rare flora (GHD, 2010).

A reconnaissance fauna survey undertaken of the proposed Boodarie Industrial Estate recorded a total of 34

birds, 5 mammals and 7 reptile species (GHD, 2010). The fauna survey recorded scats and burrows of the Crested-tailed Mulgara (*Dasyercus cristicauda*) within the study area. The survey found that significant fauna habitat exists within the clearing footprint area, however it is widespread and abundant within the Pilbara Bioregion.

The disturbance caused by the proposed clearing will increase the risk of weeds spreading into adjacent vegetation. Weed management practices will assist in mitigating this risk.

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

Methodology Reference:
Keighery (1994)
GHD (2010)

GIS Databases:
- Pre-European vegetation
- SAC Biodatasets - accessed October 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**

Several fauna species of conservation significance has been recorded in the local area (40 km radius). This includes the Crested-tailed Mulgara (*Dasyercus cristicauda*), Northern Quoll (*Dasyurus hallucatus*) and the Bilby (*Macrotis lagotis*) (DEC, 2007-). These three species are listed as specially protected fauna under the Wildlife Conservation Act 1950. The Northern Quoll is listed as endangered under the Environment Protection and Biodiversity Conservation Act 1999, whilst the Crested-tailed Mulgara and Bilby are listed as vulnerable.

A reconnaissance fauna survey undertaken by GHD of the proposed Boodarie Industrial Estate recorded a total of 34 birds, 5 mammals and 7 reptile species. The fauna survey undertaken by GHD (2010) identified a number of different fauna habitats within the study area that may be suitable for fauna species of conservation significance. The fauna survey recorded scats and burrows of the Crested-tailed Mulgara (*Dasyercus cristicauda*) within the study area (GHD, 2010).

The application it is not likely to significantly impact on fauna habitats given the large amount of suitable habitat remaining in the local area, however given the possibility that burrows of the Crested-tailed Mulgara may be impacted upon by the proposed clearing, the application may be at variance to this principle.

Fauna management practices will assist in mitigating potential impacts to the Crested-tailed Mulgara.

Methodology References:
DEC (2007-)
GHD (2010)

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

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

There are no records of rare flora within a 40km radius of the area under application. The closest mapped rare flora is approximately 240km away.

A flora and fauna survey of the application and surrounding areas undertaken by GHD in June 2009 did not identify any rare flora species (GHD, 2010).

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

Methodology References:
GHD (2010)

GIS Database:
- SAC Bio Datasets October 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 has been no threatened ecological communities (TEC) mapped within a 40km of the area under application. The closest mapped TEC is approximately 300 km away.

The application is not likely to be at variance to this principle.

Methodology GIS Database:
- SAC Bio Datasets October 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 at variance to this Principle**

The application area has been mapped as comprising of Beard vegetation association 589. The mapped vegetation association 589 retains vegetation above the 30 percent threshold level as 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).

The application and surrounding areas are extensively vegetated with approximately 99 percent pre-European vegetation remaining in the local area (40km radius). The Town of Port Hedland contains approximately 98 percent of its pre-European vegetation (Government of Western Australia, 2011).

The application area does not occur within an extensively cleared landscape and is not at variance to this principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion Pilbara	17,804,427	17,729,352	99	8
Shire Town of Port Hedland	1,847,402	1,818,670	98	0
Beard Vegetation Association in Bioregion 589	730,567	725,993	99	2

Methodology References
Commonwealth of Australia (2001)
Government of western Australia (2011)
GIS Databases:
- Interim Biogeographic Regionalisation of Australia

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

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

There are no mapped watercourses or wetlands within the area under application. The closest watercourse is an unnamed, minor perennial watercourse located approximately 550 metres east of the area under application.

Given the above the application is not at variance to this principle.

Methodology GIS Database:
- Hydrography, linear

(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 soil within the area under application consists of sandy plains, chief soils are red earthy sands with extensive areas of red earths, with some hard red soils along creek lines (Northcote et al 1960 - 1968).

Given the nature of the sandy soils and the proposed clearing consists of the removal of 81.35, the application is likely to be at risk of appreciable land degradation in the form of wind erosion.

The application may be at variance to this principle.

The land degradation risk can be controlled if good management practices are put in place.

Methodology References
- Northcote et al (1960-68)

(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 at variance to this Principle

There have been no conservation areas mapped within 40 km of the area under application. The closest recorded conservation area is located approximately 70 km north east from the area under application. Given the distance between the clearing area and the closest known conservation area, the application is not at variance to this principle.

Methodology GIS database
- 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

There are no watercourses or wetlands within the application area and therefore the proposed clearing is unlikely to cause deterioration in the quality of surface water. The groundwater salinity within the application area is 500-1000 milligrams per litre of Total Dissolved Solids. This level of groundwater salinity is considered to be marginal. The application area does not occur within a Country Area Water Supply Act 1914 area or a Public Drinking Water Source Area. Given the above, the proposed clearing is not likely to be at variance to this principle.

Methodology GIS Databases:
- Hydrography, linear
- Groundwater Salinity, Statewide

(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 at variance to this Principle

There has been no recorded watercourses or wetlands within the area under application. The closest watercourse is an unnamed, minor perennial watercourse located approximately 550 metres east of the area under application.

Considering this and the soil type present, the proposed clearing is not likely to cause or exacerbate flooding. The application is not at variance to this principle.

Methodology GIS Databases:
- Hydrography, linear

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

Comments

The area under application is subject to two native title claims. Both the claimants and their representing body have been notified of the application. To date no response has been received.

The applicant has applied for a section 91 Licence in accordance with the Land Administration Act 1997 to access the land for the proposed industrial development.

Methodology The area under application has been zoned for Strategic Industrial purposes.
GIS Database
- Native Title Claims
- Town Planning Scheme

4. References

- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
DEC (2007 -) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/>. Accessed October 2012.
GHD (2010) Report for the Proposed Boodarie Industrial Area. Flora and Fauna Assessment. LandCorp (DEC Ref:A544376)
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.
Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press:

Melbourne.

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.

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)