



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 6060/1
Permit Holder:	Shire of Mukinbudin
Duration of Permit:	27 September 2014 to 27 September 2019

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 road realignment.
- 2. Land on which clearing is to be done**
Lot 14130 on Plan 225462 (Barbalin)
Koorda-Bullfinch Road reserve (PIN 11711785, PIN 11711795, PIN 11711798, Barbalin)
Barbalin North Road reserve (PIN 11711791, Barbalin)
Unnamed road reserve (PIN 11711792, Barbalin)
- 3. Area of Clearing**
The Permit Holder must not clear more than 0.5 hectares of native vegetation within the area shaded yellow on attached Plan 6060/1.
- 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**
The Permit Holder shall only clear native vegetation between 1 October to 30 April.

PART II – MANAGEMENT CONDITIONS

- 6. 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.

DEFINITIONS

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

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;

weed/s means any plant -

- (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
- (b) published in a Department of Parks and Wildlife Regional Weed Rankings Summary, regardless of ranking; or
- (c) not indigenous to the area concerned.

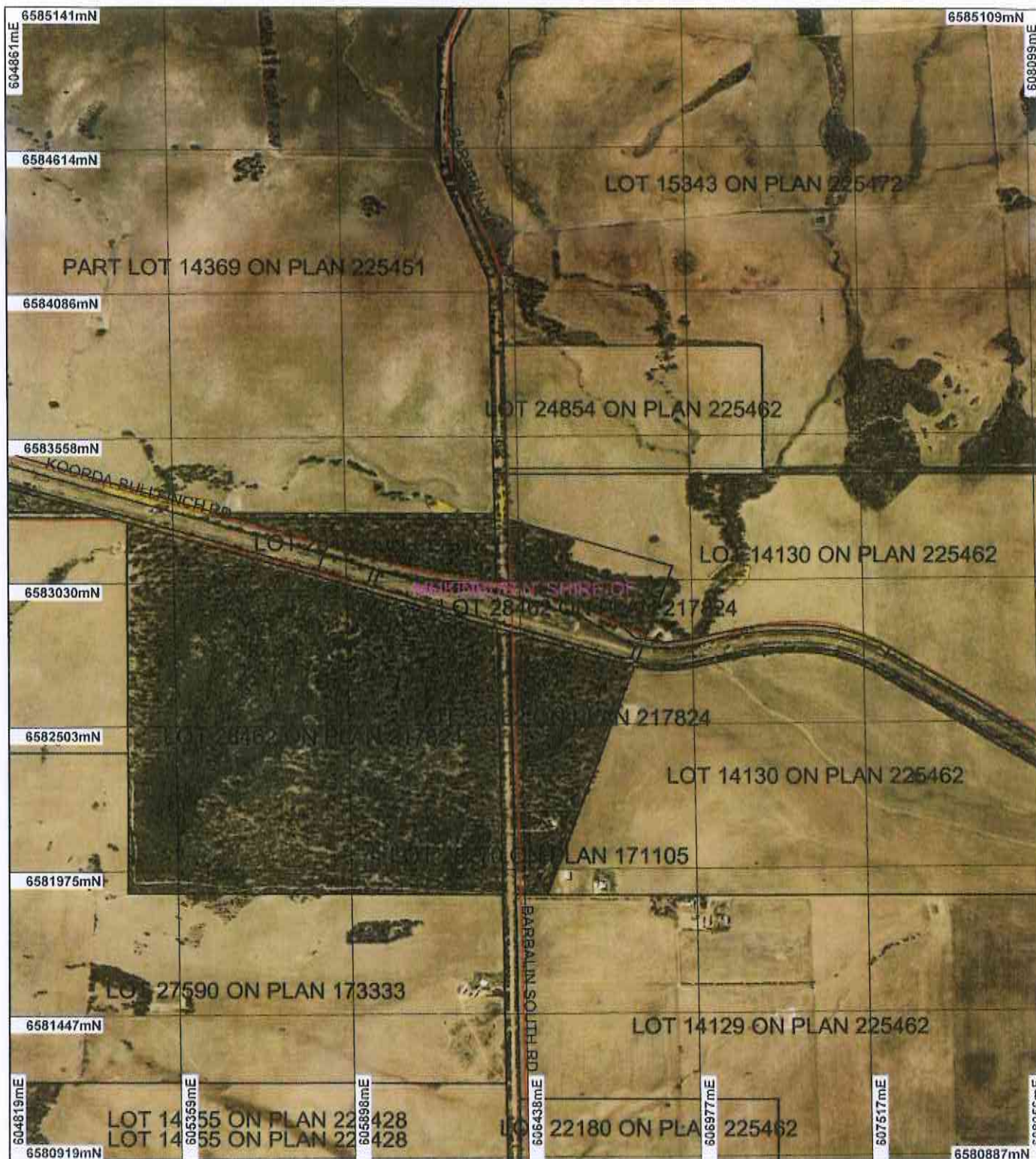


M Warnock
SENIOR MANAGER
CLEARING REGULATION

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

28 August 2014

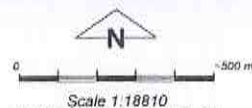
Plan 6060/1



LEGEND

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

Barbalin 1.4m Orthomosaic - Landgate 2003



Geocentric Datum Australia 1994

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

M. Warnock Date: 28/3/14

M Warnock

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.



Government of Western Australia
Department of Environment Regulation

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* Project Data is denoted by asterisk. This data has not been quality assured. Please contact map author for details.



1. Application details

1.1. Permit application details

Permit application No.: 6060/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Shire of Mukinbudin

1.3. Property details

Property: ROAD RESERVE (BARBALIN 6479)
ROAD RESERVE (BARBALIN 6479)
LOT 14130 ON PLAN 225462 (BARBALIN 6479)
Local Government Area: Shire of Mukinbudin
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.5		Mechanical Removal	Road construction or maintenance

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 28 August 2014

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard Vegetation Association 8: Medium woodland; salmon gum & gimlet (Shepherd et al. 2001);	Clearing 0.5 hectares of native vegetation within Lot 14130 on Plan 225462 and Barbalin North Road (PIN 11711791), Koorda-Bullfinch Road (PIN 11711785) and unnamed road (PIN 11711792) reserve, Barbalin, Shire of Mukinbudin, for the purpose of road realignment.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994) To Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	The vegetation under application consists of a medium Eucalyptus woodland in a degraded to completely degraded (Keighery, 1994) condition. The proposed clearing has been subject to past disturbances from activities such as grazing, cropping and the construction of road infrastructure. The condition and structure of the vegetation under application was obtained via aerial imagery (Barbalin 1.4m Orthomosaic)

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 0.5 hectares of native vegetation over five separate areas within a clearing footprint of approximately 5.1 hectares for the purpose of road realignment.

Several priority flora have been recorded within 10 kilometres of the area under application. Of the identified priority flora, none have been mapped as occurring within the same soil or vegetation types as the application area. Additionally, the vegetation under application is in a degraded to completely degraded (Keighery, 1994) condition (DEC, 2013) and has been subject to past disturbances from activities such as grazing, cropping and road infrastructure. Therefore the vegetation under application is not likely to provide suitable habitat for the recorded priority flora species.

There have been no priority ecological communities recorded within 10 kilometres of the application area.

Three fauna species of conservation significance have been recorded within a 10 kilometre radius including the Arid bronze azure butterfly (rare or is likely to become extinct under the Wildlife Conservation Act 1950). The proposed clearing area is within one kilometre of the only known population of the Arid bronze azure butterfly (Parks and Wildlife, 2014a).

Given the condition of the vegetation, it is considered that the clearing area does not comprise of a high level of biological diversity.

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

Methodology References:
DEC (2013)
Keighery (1994)
Parks and Wildlife (2014a)
GIS Databases:
- SAC Bio datasets May 2014

(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

Three fauna species of conservation significance have been recorded within a 10 kilometre radius of the application area, being; Arid bronze azure butterfly (*Ogyris subterrestris petrina*) (rare or is likely to become extinct under the Wildlife Conservation Act 1950) Shield-backed Trapdoor spider (*Idiosoma nigrum*) and Malleefowl (*Leipoa ocellata*) (rare or is likely to become extinct under the Wildlife Conservation Act 1950; vulnerable under the Environment Protection and Biodiversity Conservation Act 1999) (DEC, 2007-).

The proposed clearing area is within one kilometre of the only known population of the Arid bronze azure butterfly (Parks and Wildlife, 2014a). The species is known to be sensitive to disturbance events due to its symbiotic relationship with *Camponotus terebrans* (ants) and its fragile life stages. This is the only known population of this species, therefore this is an area of high conservation importance (Parks and Wildlife, 2014a). There have been no recorded flight paths of the Arid bronze azure butterfly within the proposed clearing areas, however there are potential breeding areas within two of the proposed clearing sites (Parks and Wildlife, 2014a).

To minimise the impact on Arid bronze azure butterfly, surveys should be conducted within the application area to ensure that no *C. terebrans* nests are present sites (Parks and Wildlife, 2014a). If nest are present, clearing should take place in late October when the maximum numbers of gravid females are flying, however all life stages are flying between October and April (Parks and Wildlife, 2014a). The applicant has advised that the clearing will take place during October and April (Shire of Mukinbudin, 2014). This will allow the maximum number of butterflies to escape the immediate destruction and lay their eggs in areas that are unaffected by the clearing event.

The vegetation under application is in a degraded to completely degraded (Keighery, 1994) condition and unlikely to provide suitable habitat for the Shield-backed Trapdoor spider or Malleefowl.

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

Methodology References
DEC (2007-)
Keighery (1994)
Parks and Wildlife (2014a)
Shire of Mukinbudin (2014)

(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

Four rare flora species have been recorded within a 10 kilometre radius of the applied area. Of the rare flora identified two have been recorded within the same vegetation and soil types as the applied areas.

Acacia sp is an erect, open shrub or small tree two to four metres tall and usually grows in shallow soils on granite outcrops (Brown et al, 1994b).

Eremophila sp is a shrub growing three to five metres in height and grows in light brown sandy loam over granite in rocky situations, in thickets or scrub with acacias and sheoaks (Brown et al, 1994).

A site visit of the area under application confirmed that there are no live plants of either Acacia or Eremophila within the application area or the immediate vicinity of the applied area (Parks and Wildlife, 2014b).

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

- Methodology** **References**
- Brown et al, (1998)
 - Parks and Wildlife (2014b)
- GIS Databases:**
- SAC Bio datasets May 2014

(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 were no records of threatened ecological communities recorded within 10 kilometres of the area under application.

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

- Methodology** **GIS Databases:**
- SAC Bio datasets May 2014

(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 area under application is represented by Beard Vegetation Association 8 which has 14 per cent of its pre-European vegetation remaining within the Avon Wheatbelt IBRA Bioregion (Government of Western Australia, 2013).

The National Objectives and Targets for Biodiversity Conservation include a target that prevents the clearance of ecological communities with an extent below 30 per cent of that present pre-European settlement (Commonwealth of Australia, 2001).

The application is within an extensively cleared landscape with approximately 15 per cent of native vegetation remaining within a 10 kilometres radius of the applied area. Additionally, Beard Vegetation Association 8 falls below the 30 per cent threshold level. However, the vegetation under application is in a degraded to completely degraded (Keighery, 1994) condition, is no longer a representation of the mapped vegetation type area and is therefore not likely to be a significant remnant.

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

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DPaW Managed Lands (%)
IBRA Bioregion Avon Wheatbelt	9,517,109	1,778,407	18.6	9.7
Shire Shire of Mukinbudin	343,079	120,805	35.2	14.6
Beard Vegetation Association in Bioregion 8	356,571	50,484	14.1	7.9

- Methodology** **References:**
- Government of Western Australia (2013)
 - Commonwealth of Australia (2001)
 - Keighery (1994)
- GIS Databases:**
- 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**

Several minor, non-perennial watercourses and a significant stream have been mapped as intersecting the proposed clearing areas.

There have been no wetlands recorded within 10 kilometres of the proposed clearing areas.

The proposed clearing will remove vegetation growing in association with the known watercourses, therefore the application is at variance to this principle.

The proposed clearing of native vegetation is unlikely to result in significant residual impacts to the identified watercourses.

Methodology GIS Databases:
- Hydrography, linear

(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 vegetation under application lies within soils associated with broad flat valleys with chief soils being hard alkaline red soils (Northcote et al. 1960-68).

The clearing as proposed is over five separate areas. Given the relative small proposed clearing size within each area and that the vegetation under application is in a degraded to completely degraded (Keighery, 1994) condition, it is unlikely the proposed clearing will cause appreciable land degradation.

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

Methodology References
- Keighery (1994)
- 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 may be at variance to this Principle

The Barbalin Nature Reserve adjoins sections of the proposed clearing areas.

The clearing, as proposed may indirectly impact on the nature reserve through the spread of weeds. Invasive weed species would reduce the value of the vegetation within the reserve and potentially the environmental values of the reserve.

The application may be at variance to this principle.

Weed management practices will assist in mitigating the risk of weeds spreading into Barbalin Nature Reserve.

Methodology 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

Several minor, non-perennial watercourses and a significant stream have been mapped as intersecting the proposed clearing areas.

The proposed clearing may cause some short term localised surface water sedimentation that may impact upon the nearby waterways. However, these effects are likely to be negligible and can be mitigated through the construction of infrastructure such as drains and culverts associated to the road realignment.

The groundwater salinity within the application area ranges between 14000 - 35000 total dissolved solids per milligram per litre. The clearing of 0.5 hectares of degraded to completely degraded (Keighery, 1994) vegetation over five separate areas is not likely to impact upon ground water in the local area.

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

Methodology References:
- Keighery (1994)
GIS Databases:
- Hydrography, linear

(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

Several minor, non-perennial watercourses and a significant stream have been mapped as intersecting the proposed clearing areas. There have been no wetlands recorded within 10 kilometres of the proposed clearing areas.

The proposed clearing of 0.5 hectares of native vegetation in a degraded to completely degraded (Keighery, 1994) condition, over an area comprising of 5.1 hectares will not cause, or exacerbate the incidence or intensity of flooding.

The proposed clearing is not at variance to this principle.

Methodology

References

- Keighery, (1994)
- GIS Databases:
- Hydrography, linear

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

Comments

Known flight patterns for the Arid bronze azure butterfly exist on either side of the current road that runs through Barbalin Nature Reserve. The removal of traffic from this existing road should reduce the number of road kills of the butterfly (Parks and Wildlife, 2014a).

The proposed clearing is located within the Avon River Surface Water System, proclaimed under the Rights in Water and Irrigation Act 1914 and impacts the bed and banks of a significant stream.

The applicant has received a permit from the Department of Water to interfere with the beds and banks of the watercourses that intersect with the proposed clearing areas (Shire of Mukinbudin, 2014).

The applicant has purchased private land to construct the proposed road. This is to avoid and minimise the amount of clearing required.

It is recommended that the old reserve be rehabilitated with the objective of re-establishing a natural vegetation community that favours the Arid Bronze Azure butterfly. This work should be done in consultation with Parks and Wildlife Wheatbelt District staff.

Methodology

References

- DoW (2014)
- Parks and Wildlife (2014a)
- Shire of Mukinbudin (2014)

4. References

- Brown A., Thomson-Dans C. and Marchant N. (1998). Western Australia's Threatened Flora, Department of Conservation and Land Management, Western Australia.
- 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 May 2014.
- Department of Water (2014) Advice received in relation to Clearing Permit Application CPS 6060/1 - Shire of Mukinbudin (DER Ref:A755802)
- Government of Western Australia (2013) 2012 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2012. 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.
- Parks and Wildlife (2014a) Fauna Advice - Advice received in relation to Clearing Permit Application CPS 6060/1 - Shire of Mukinbudin, Department of Parks and Wildlife, Western Australia (DER Ref:A766097)
- Parks and Wildlife (2014b) Flora Advice - Advice received in relation to Clearing Permit Application CPS 6060/1 - Shire of Mukinbudin, Department of Parks and Wildlife, Western Australia (DER Ref:A766096)
- 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.
- Shire of Mukinbudin (2014) Information received in relation to Clearing Permit Application CPS 6060/1 - Shire of Mukinbudin, Shire of Mukinbudin, Western Australia (DER Ref:A794020)