GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 3317/1
Permit Holder:	Commonwealth Scientific and Industrial Research Organisation
Duration of Permit:	3 January 2010 – 3 January 2015

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 construction of the Australian Square Kilometre Array Pathfinder project.

2. **Land on which clearing is to be done**
   Lease 139058 within Lot 18 on Plan 220344 (defined as Lot 502 on Plan 55945)

3. **Area of Clearing**
   The Permit Holder must not clear more than 57 hectares of native vegetation within the area hatched yellow on attached Plan 3317/1.

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. **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

6. **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.

7. **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.

PART III - RECORD KEEPING AND REPORTING

8. Records must be kept

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:

(a) the species composition, structure and density of the cleared area;

(b) 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;

(c) the date that the area was cleared; and

(d) the size of the area cleared (in hectares).

9. Reporting

(a) The Permit Holder must provide to the CEO, on or before 30 June of each year, a written report of records required under condition 8 of this Permit and activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.

(b) Prior to 30 October 2014, the Permit Holder must provide to the CEO a written report of records required under condition 8 of this Permit where these records have not already been provided under condition 9(a) of this Permit.

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;

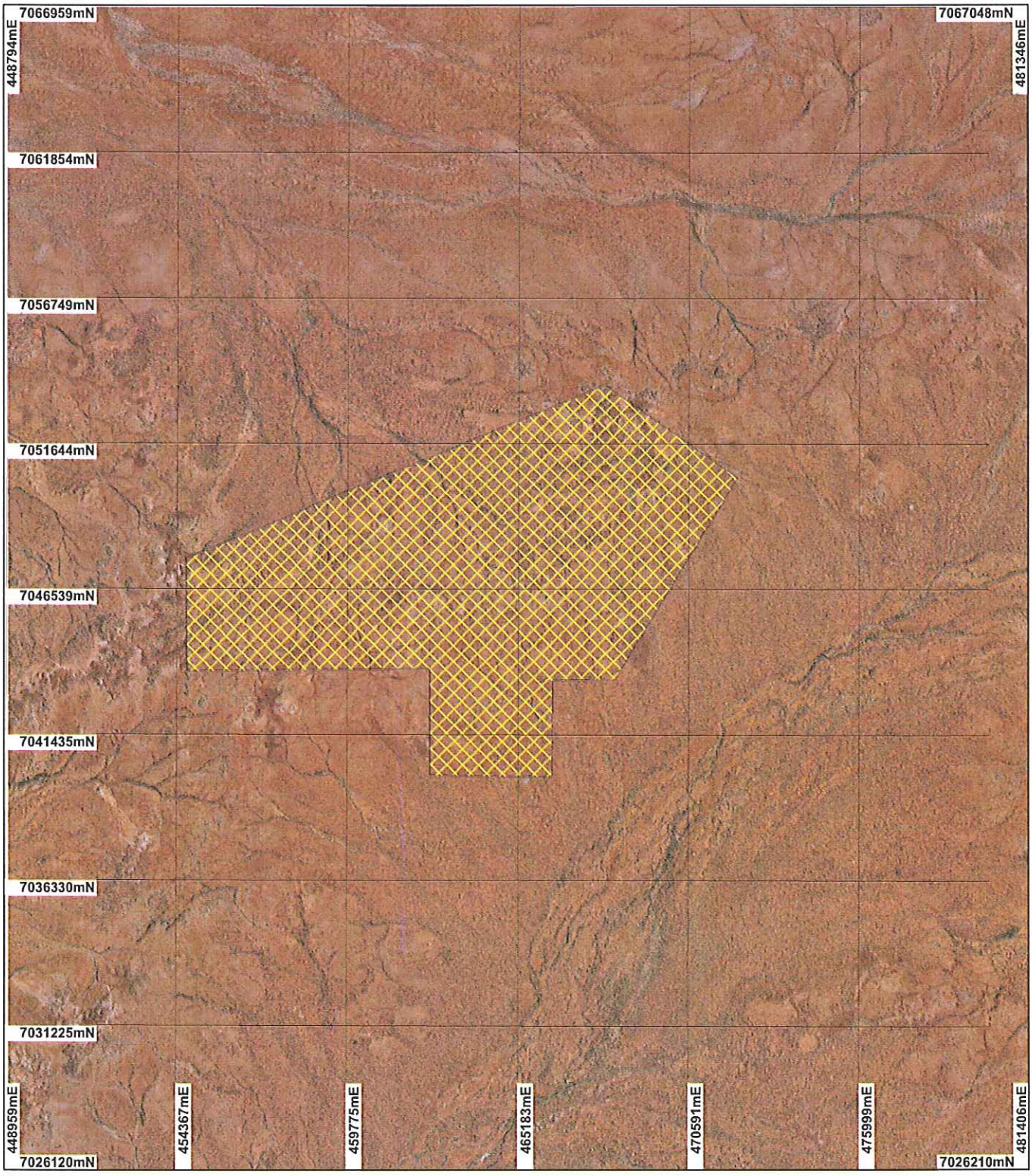
weed/s means a species listed in Appendix 3 of the "Environmental Weed Strategy" published by the Department of Conservation and Land Management (1999), and plants declared under section 37 of the *Agriculture and Related Resources Protection Act 1976*

Keith Claymore
A/ ASSISTANT DIRECTOR
NATURE CONSERVATION DIVISION

Officer delegated under Section 20
of the Environmental Protection Act 1986

3 December 2009

Plan 3317/1



LEGEND

Clearing Instruments

- Areas Approved to Clear

Cadastre

Boolardy 50cm Orthomosaic * Landgate 2005

N

0 ~5 km

Scale 1:184269
(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 of measurement inaccuracies.

Keith Claymore Date 23/12/09

K Claymore

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 acknowleged by the agency acronym in the legend.

Department of Environment and Conservation

Our environment, our future

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

Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 3317/1

Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Commonwealth Scientific and Industrial Research Organisation**

1.3. Property details

Property: LOT 18 ON PLAN 220344 (SOUTH MURCHISON 6635)
LOT 18 ON PLAN 220344 (MURCHISON 6630)

Local Government Area:

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
57		Mechanical Removal	Building or Structure

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
The application area is comprised of 5 beard vegetation associations over the 57 hectares, these include: -Beard 18:Low woodland; mulga (Acacia aneura) -Beard 39: Shrublands; mulga scrub -Beard 29: Sparse low woodland; mulga, discontinuous in scattered groups -Beard 184: Shrublands; mulga & bowgada scrub -Beard 341: Low woodland over scrub; mulga over Acacia sclerosperma bowgada, A. victoriae & minnieritchie (A. grasbyi) (Shepherd et al. 2007).	The proposed clearing of 57 hectares of native vegetation which is considered to be in mostly very good (Keighery, 1994) condition and is to occur within a 1300ha area, is for the purpose of constructing the Australian Square Kilometre Array Pathfinder (ASKAP) project. A flora survey of the application area revealed 11 land unit descriptions and associated vegetation types: 1. Sandplains --Very scattered to scattered tall shrubland of Acacia ramulosa ssp linophylla, A. aneura with under shrubs Eremophila forrestii, E.simulans ssp. megacalyx and grasses Eragrositis lanipes, Eriachne helmsii, Monachather paradoxis. 2. Plateau edges, residuals and breakaways with short upper foot slopes - Stipped surfaces: isolated to very scattered stunted acacias, Thryptomene decussata, Calytrix divergens. There were signs of disturbance from grazing feral goats within this vegetation type. Upper slopes: Very	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The condition and description of the area under application was determined via the use of aerial imagery and flora and vegetation surveys conducted by Alexander Holm & Associates (2008).

scattered Acacia aneura and Ptilotus obovatus shrubland.

3) Saline lower foot slopes below breakaways - Low patchy shrubland or annual herbfield with isolated to very scattered shrubs Acacia victoriae, Maireana glomerifolia, Ptilotus beardii and P. obovantus.

4) Low grantie hills, domes and tor heaps - Hills: very scattered shrubland of Acacia grasbyi, other acacias, numerous low shrubs and occasional grasses such as Cymbopogon ambiguous.

Domes: Mostly unvegetated; fringing communities of moderately close to close tall shrubland/woodland of Acacia aneura, other acacias, mid height and low shrubs and grasses.

5) Non saline stony or gritty surfaced plains - Very scattered mixed height shrubland of Acacia aneura. A. tetragonophylla, Eremophila platycalyx, E. macmillaniana, other eremophilas, Senna spp. And Ptiltus obovantus.

6) Hardpan plains - Often weakly banded. Very scattered to scattered tall shrubland of Acacia aneura, also A. tetragonphylla with mid height and low shrubs Senna artemisiodes ssp. Helmsii, Eremophila fraserii ssp. parva, E. forrestii, E. phyllopoda ssp. phyllopoda and Ptilotus.

7) Uncahhelled drainage tracts - Moderately close to tall shrubland of Acacia craspedocarpa, A. aneura, A. tetragonophylla and low shrubs Eremophila and Senna spp, Grevillea deflexa and Ptilotus obovatus.

8) Channels of creek lines - Scattered to closed tall shrubland/woodland of Acacia aneura, A. burkittii, A. tetragonophylla with numerous Eremophila and Senna spp. and some grasses.

9) Gravelly plains - Very scattered tall shrubland of Acacia aneura, A. grasbyi, A. pruinocarpa and

	occasional low shrubs Mirbelia sp., Eremophila latrobei ssp. latrobei, Ptilotus obovatus. 10) Quartz ridges - Isolated to very scattered low shrub such as Thryptomene decussate and Eremophila latrobei ssp. latrobei along crests; footslopes supporting very scattered tall shrubland of Acacia victoriae, Hakae preissii, other acacias, eremophila spp. And occasionally Ptilotus beardii. 11) Ironstone hills - Scattered tall shrubland dominated by Acacia grasbyi and Eremophila macmillaniana, also A. aneura, Eremophila latrobei ssp. latrobei, Calytrix desolata and numerous low shrubs including small Maireana spp.		
As above	As above	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	As above

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 proposed clearing of 57 hectares of native vegetation which is considered to be in very good (Keighery, 1994) condition over 1300ha area, is for the purpose of constructing the Australian Square Kilometre Array Pathfinder (ASKAP) project. The project will result in the erection of 36 antenna locations, 3 work compounds and the construction of several access roads (Parson Brinkerhoff, 2009). A flora survey of the application area revealed 11 land unit descriptions and associated vegetation types. A total of 128 plant species from were identified within the application area. Of these 128 species, 75 were perennial shrubs or trees, 16 perennial or annual grasses and 37 annual or biennial forbs and herbs (Alexander Holm & Associates, 2008). The most wide spread, representing 48.7% all vegetation types found in the application area, are the non saline stony or gritty surfaced plains, which consist of very scattered mixed height shrubland of Acacia aneura, A. tetragonophylla, Eremophila platycalyx, E. macmillaniana, other eremophilas, Senna spp. and Ptiltus obovantus. This vegetation type is less sensitive to disturbance (Alexander Holm & Associates, 2008) and is considered to be in very good (Keighery, 1994) condition.

Seven priority listed flora species have been collected within or near to the application area and the priority three species Ptilotus beardii, was widely distributed through sections of the application area (Alexander Holm & Associates, 2008).

Given the amount of surrounding vegetation (approx 90% remaining in 20km radius), and that the antenna locations, work compounds and access corridors (roads) are mostly confined to a localised area within the clearing envelope of over 1300ha, the disturbance from the proposed clearing is likely to be minimal.

While there were no declared weed species found within the applied area, potential does exist for weeds to be introduced (Alexander Holm & Associates, 2008). To reduce the risk of weed invasion, weed control conditions will be placed on the permit.

The proposed clearing is considered unlikely to be at variance to this principle.

Methodology

Alexander Holm & Associates (2008)
Keighery (1994)
Parson Brinkerhoff (2009)
GIS DataBases:
- Boolardy 50cm Orthomosaic - Landgate 2005 (9/10/2007)

- CALM Managed Lands and Waters - CALM 01/06/05
- Pre European Vegetation - DA 01/01
- SAC Biodatasets - accessed 1 October 09
- Soils, Statewide DA 11/99
- NLWRA, Current Extent of Native Vegetation 20 Jan 2001

(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

There were no known threatened fauna species recorded within the local area (20km radius). An environmental assessment conducted by Alexander Holm & Associates (2008) of the Boolardy Station, which is where the facility is to be constructed, identified 18 fauna species of conservation significance that may occur in the vicinity. Of theses, nine are likely to occur within the application area. These species are as follows:

- Western spiny-tailed skink (Egernia stokesii) - actually recorded
- Peregrine falcon (Falco peregrinus)
- Fork tailed swift (Apus pacificus)
- Rainbow bee-eater (Merops ornatus)
- Australian bustard (Ardeotis australis)
- Bush stone-curlew (Burhinus grallarius)
- Grey honeyeater (Conopophila whitei)
- Woolley's pseudantechinus - actually recorded
- Kultarr (Antechinomys laniger)

The Western spiny-tailed skink, which was observed on granite outcrops in the north-east section of the applied area and along the southern boundary of the application area (Alexander Holm & Associates, 2008), is considered unlikely to be significantly impacted by the proposed clearing (DEC, 2009).

Habitat restricted Hill's sheathtail bat and inland cave bat were recorded in caves in breakaways and while this species may be impacted by radio waves interfering with echolocation, the clearing is unlikely to negatively impact this species.

Given that the clearing occurs in an area with a large amount of remaining vegetation (approx 90%) the vegetation under application is considered unlikely to be significant habitat for fauna species within the local area.

Methodology

Alexander Holm & Associates (2008)
DEC (2009)
GIS DataBases:
- Pre European Vegetation - DA 01/01
- SAC Biodatasets - accessed 1 October 09
- NLWRA, Current Extent of Native Vegetation 20 Jan 2001

(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 were no known records of rare flora within the local area (20km radius). A flora survey of the application area and surrounds conducted during September, also found no rare flora (Alexander Holm & Associates, 2008).

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

Methodology

Alexander Holm & Associates (2008)
GIS DataBases:
- NLWRA, Current Extent of Native Vegetation 20 Jan 2001
- Pre European Vegetation - DA 01/01
- SAC Biodatasets - accessed 1 October 09
- Soils, Statewide DA 11/99

(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 known Threatened Ecological Communities (TECs) recorded within the local area (20km radius) or on Boolardy Station (Alexander Holm & Associates, 2008). Therefore the proposed clearing is considered unlikely to be at variance to this principle.

Methodology Alexander Holm & Associates (2008)
GIS DataBases:
- Pre European Vegetation - DA 01/01
- SAC Biodatasets - accessed 1 October 09
- Soils, Statewide DA 11/99

(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

At most 0.6% of a single vegetation type will be cleared from within the applied area (Parsons Brinckerhoff, 2009) and the local area (20km radius) has approximately 90% remaining vegetation. This being considered, the vegetation under application is not considered to be significant as a remnant in a highly cleared area.

As the table below indicates, all of the vegetation types mapped as occurring within the applied area retain more than the EPA supported threshold level (30%) recommended in the National Objectives Targets for Biodiversity Conservation; below which species loss appears to accelerate exponentially at an ecosystem level (EPA, 2000).

The proposed clearing is not at variance to this principle.

.	Pre-European (ha	Current extent (ha)	Remaining (%)	% In reserves DEC Managed Land
IBRA Bioregions*				
Mur	28,120,589	28,120,589	100	7.55
Shire*				
Murchison	4,504,360	4,504,360	100	7.8
Beard Vegetation Association within Bioregion*				
18	12,403,172	12,403,172	100	4.8
29	2,956,382	2,956,382	100	3.16
39	1,148,400	1,148,400	100	3.53
184	39,150	39,150	100	0.00
341	10,420	10,420	100	0.00
Beard Vegetation Association with Shire				
18	858,998	858,998	100	3.32
29	1,297,289	1,297,289	100	0.00
39	187,712	187,712	100	1.0
184	39,150	39,150	100	0.00
341	10,420	10,420	100	0.00

* (Shepherd et al. 2007)

Methodology EPA (2000)
Parsons Brinckerhoff (2009)
Shepherd et al. (2007)
GIS DataBases:
- NLWRA, Current Extent of Native Vegetation 20 Jan 2001
- Pre European Vegetation - DA 01/01

(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 may be at variance to this Principle

There is a non-perennial Lake that lies adjacent of the southern most point of the application area and the application area is scattered with minor non-perennial watercourses. The minor non-perennial watercourses consists mostly of channels and creeklines, banks and associated narrow drainage floors subject to occasional short duration flooding, these account for approximately 6.8% of the area to be cleared (Parsons Brinkerhoff, 2009). The vegetation growing in association with these watercourses include scattered to closed tall shrubland/woodland of Acacia aneura, A. burkittii, A. tetragonophylla with numerous Eremophila and Senna spp. and some grasses. The removal of vegetation that is growing is association with non-perennial watercourses may lead to erosion, alteration in groundwater levels and water starvation of plant communities down slope (Alexander Holm & Associates, 2008). To reduce such risks, the proponent has committed to management practises and mitigation methods to reduce environmental impacts by using culverts on access roads, sediment control measures and the gradual removal of stock from the area (Parsons Brinckerhoff, 2009).

Methodology Alexander Holm & Associates (2008)
Parsons Brinkerhoff (2009)
GIS DataBases:
- CALM Managed Lands and Waters - CALM 01/06/05
- Clearing Regulations, Environmentally Sensitive Areas 30 May 2005
- EPP Lakes Policy Area - DEP 14/05/97
- EPP, Wetlands 2004 (DRAFT) - EPA 21/7/04
- Hydrography linear - DOW 13/7/06
- Hydrography linear (hierarchy) - DoW 13/7/06

(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 on which the 36 antenna and work compound sites are to be constructed as part of the proposed clearing are unlikely to be prone to significant land degradation concerns, however the construction of access roads (especially on hardpan soils) may affect overland flows of surface water, leading to soil erosion (Alexander Holm & Associates, 2008; DEC, 2009).

A proposed access corridor appears to cross a drainage line, which is likely to alter the natural dispersion of water in this area (DEC, 2009). Water diversion structures are recommended on access roads to ensure soil erosion does not occur. The proponent has committed to management practises and mitigation methods to reduce environmental impacts by using culverts on access roads, sediment control measures and the gradual removal of stock from the area (Parsons Brinckerhoff, 2009).

The proposed clearing may be at variance to this principle.

Methodology Alexander Holm & Associates (2008)
DEC (2009)
Parsons Brinckerhoff (2009)
GIS DataBases:
- Groundwater Salinity Statewide DoW 13/07/06
- Hydrogeology, statewide - DOW 13/07/06
- Hydrographic catchments, catchments - DoW 01/06/07
- Hydrography, linear - DOW 13/7/06
- Mean Annual Rainfall (30-09-2001)
- Salinity Risk LM 25m - DOLA 00
- Soils, Statewide DA 11/99
- Topographic contours statewide - DOLA and ARMY 12/09/02

(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 are no conservation areas within the local area (20km radius). The proposed clearing is not at variance to this principle.

Methodology GIS DataBases:
- CALM Managed Lands and Waters - CALM 01/06/05
- NLWRA, Current Extent of Native Vegetation 20 Jan 2001
- System 1 to 5 and 7 to 12 areas - DEC 11/7/06

(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

The minor non-perennial watercourses consists mostly of channels and creeklines, banks and associated narrow drainage floors subject to occasional short duration flooding, these account for approximately 6.8% of the area to be cleared (Parsons Brinkerhoff, 2009). The removal of vegetation that is growing is association with non-perennial watercourses may lead to erosion, alteration in groundwater levels and water starvation of plant communities down slope (Alexander Holm & Associates, 2008). To reduce such risks, the proponent has committed to management practises and mitigation methods to reduce environmental impacts by using culverts on access roads, sediment control measures and the gradual removal of stock from the area (Parsons Brinckerhoff, 2009).

Methodology Alexander Holm & Associates (2008)
Parsons Brinkerhoff (2009)
GIS DataBases:

- Groundwater Salinity Statewide DoW 13/07/06
- Hydrographic catchments, catchments - DoW 01/06/07
- Hydrography linear - DOW 13/7/06
- Hydrography linear (hierarchy) - DoW 13/7/06

(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 may be at variance to this Principle

The area on which the 36 antenna and work compound sites are to be constructed as part of the proposed clearing are unlikely to be prone flooding issues, however the construction of access roads (especially on hardpan soils) may affect overland flows of surface water (Alexander Holm & Associates, 2008). Water diversion structures will be constructed on access roads and water crossings will be designed so as to maintain flow patterns to ensure there is no increase in the duration of flooding events (Parson Brinckerhoff, 2009).

Methodology

Alexander Holm & Associates (2008)
GIS DataBases:
- Mean Annual Rainfall (30-09-2001)
- Soils, Statewide DA 11/99
- Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

The State of Western Australia (owner of land under application) has entered into an agreement with applicant whereby a portion of Lot 18 is being surrendered from Pastoral Lease for separate special lease to the applicant.

The Department of Regional Development and Lands have confirmed that an Indigenous Land Use Agreement had been registered with the Native Title Tribunal and that CSIRO have now been issued with a lease and can access Lot 18 (Trim Ref: DOC106543).

The Department of Regional Development and Lands have confirmed the lease number for CSIRO over Lot 18 will be L139058 and that CSIRO is now authorised to conduct development of the site in accordance with the lease conditions (Trim Ref: DOC109135). An usigned copy of the lease has been provided (Trim Ref: DOC109159).

The EPA provided public advice after deciding not to formally assess the proposal for the Australian Square Kilometre Array Pathfinder Telescope, setting the level of assessment at Not Assessed - Public Advise Given and Managed under Part V of the EP Act (Clearing). The Minister for Environment dismissed an appeal against the EPA's determination that the proposal should be treated as Not Assessed Public Advise Given and Managed under Part V (Clearing). The Minister also requested that the EPA advise decision making authorities and the proponent that the following issues be addressed:

- the management of clearing impacts through Part V of the EP Act

- the control of potential soil erosion and land degradation impacts through conditions.

The proponent had provided an Environmental Management Plan (Parsons Brinckerhoff, 2009) to which the EPA supports (TRIM Ref: DOC102691).

Methodology

Parsons Brinckerhoff (2009).

4. Assessor's comments

Comment

The clearing application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the Environmental Protection Act 1986 and has found:

- Principles (f), (g), (i) & (j) may be at variance
- Principles (a), (b), (c) & (d) are not likely to be at variance
- Principle (e) & (h) are not at variance

5. References

Alexander Holm & Associates (2008) Radio Astronomy Project Murchison Region Western Australia, Environmental Assessment. TRIM Ref: DOC97298

DEC (2009) Mid West region, Regional Advice. Department of Environment and Conservation Trim Ref DOC100977

EPA (2000) Environmental protection of native vegetation in Western Australia. Clearing of native vegetation, with particular reference to the agricultural area. Position Statement No. 2. December 2000. Environmental Protection Authority, Western Australia.

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Parson Brinkerhoff (2009) Australian Square Kilomtre Array Pathfinder (ASKAP), Murchison Radio-astronomy Observatory Site, Vegetation Clearing Permit . TRIM Ref: DOC97298

Shepherd, D.P. (2007). Adapted from: 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. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.

6. 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)