



1. Application details

1.1. Permit application details

Permit application No.: 6280/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: SAWA Pty Ltd

1.3. Property details

Property: LOT 1537 ON PLAN 67137 (MUELLER RANGES 6770)
Local Government Area: Shire of Halls Creek

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
28		Mechanical Removal	Grazing & Pasture

1.5. Decision on application

Decision on Permit Application: Refused
Decision Date: 25 June 2015

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description

The vegetation under application has been identified as Beard vegetation association 840 which is described as grasslands, tall bunch grass savanna, ribbon/blue grass (Shepherd et al, 2001).

The application area has been described as an area of Fossil Land System, defined as extensive dark cracking grey plains down slope from limestone hills; Mitchell grass and ribbon-bluegrass grasslands with sparse trees and patches of spinifex on outcrop slopes (Department of Agriculture, 2005).

A site inspection of the property undertaken by the then Department of Environment on 16 September 2005 (DoE, 2005) described the vegetation as a large, expansive, flat to very gently and evenly sloping treeless grassy plain. No over-storey was present and the mid-storey was very sparse (less than one percent of the site) and included *Acacia farnesiana* and *Carissa lanceolata*. The grass layer consisted primarily of *Aristida latifolia*, *Chrysopogon fallax*, *Eulalia aurea*, *Astrebala pectinata*, *Dichanthium fecundum*, and *Panicum decompositum*.

Clearing Description

To clear 28 hectares of native vegetation within Lot 1537 on Deposited Plan 67137, Mueller Ranges, for the purpose of pasture and grazing.

Vegetation Condition

Very Good; Vegetation structure altered; obvious signs of disturbance (Keighery 1994).

Comment

The condition of the vegetation under application was determined via a Department of Environment site inspection undertaken 16 September 2005 (DoE, 2005).

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 28 hectares of native vegetation within Moolla Bulla Pastoral Station, in order to grow fodder crops. The original application was for 800 hectares and consisted of areas which had been cleared and cropped. The application area can now be described in two areas. Area one falls within the east of the property and contains areas that have not been cleared and cropped. Area two falls within the north-west portion of the property and has previously been cleared and cropped.

A site inspection of the property on 16 September 2005, undertaken by the former Department of Environment (DoE) described the vegetation as a large, expansive, flat to very gently and evenly sloping treeless grassy plain. No over-storey was present and the mid-storey was very sparse (less than one percent of the site) consisting of *Acacia farnesiana* and *Carissa lanceolata*. The grass layer consisted primarily of *Aristida latifolia*, *Chrysopogon fallax*, *Eulalia aurea*, *Astrebala pectinata*, *Dichanthium fecundum*, and *Panicum decompositum* (DoE, 2005). Given this, the application is considered to have been in a very good (Keighery, 1994) condition.

The application area has been described as an area of Fossil Land System, defined as extensive dark cracking grey plains down slope from limestone hills; Mitchell grass and ribbon-bluegrass grasslands with sparse trees and patches of spinifex on outcrop slopes (Department of Agriculture, 2005). The fossil land system is an extensive vegetation type containing approximately 311 000 hectares of vegetation. The cracking grey plains that typify the area to be cleared occupy approximately 83 percent of the Fossil Land system (Department of Agriculture, 2005).

The local area (40 kilometre radius) surrounding the application area is highly vegetated, retaining approximately 99 percent native vegetation cover.

Three priority flora species have been recorded within the local area. Given the mapped and observed vegetation type, the habitat within the application area is not likely to support these species (Western Australian Herbarium, 1998-).

No threatened ecological communities or priority ecological communities have been mapped within the local area (40 kilometre radius). Given this and the observed vegetation type, they are not likely to be present or impacted by the proposed clearing.

The Bilby (*Macrotis lagotis*), listed as vulnerable under the state Wildlife Conservation Act 1950 and Commonwealth Environment Protection and Biodiversity Conservation Act 1999 has been recorded within the local area (DPAW, 2007-). Clearing habitat for grazing and competition with livestock are listed as major threats to this species (Department of the Environment, 2012). As the application area falls on the northern boundary of its distribution, given the age and accuracy of the record and the observed soil type, the application area is not likely to form significant habitat for this species (Department of the Environment, 2012; DAFWA, 2012). The remainder of the conservation significant fauna species recorded within the local area (DPAW, 2007-) are associated with extensive wetlands, therefore the application area is not likely to form habitat for these species.

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

Methodology

References:

DAFWA (2012)
Department of Agriculture (2005)
DoE (2005)
Department of the Environment (2012)
DPAW (2007-)
DoE (2005)
Keighery (1994)
Western Australian Herbarium (1998-)

GIS Databases:

- SAC Biodatasets - Accessed April 2015

(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

A site inspection of the property on 16 September 2005, undertaken by the former Department of Environment described the vegetation as a large, expansive, flat to very gently and evenly sloping treeless grassy plain. No over-storey was present, the mid-storey was very sparse (less than one percent of the site) and included *Acacia farnesiana* and *Carissa lanceolata*. The grass layer consisted primarily of *Aristida latifolia*, *Chrysopogon fallax*, *Eulalia aurea*, *Astrebala pectinata*, *Dichanthium fecundum*, and *Panicum decompositum* (DoE, 2005).

The Bilby (*Macrotis lagotis*), listed as vulnerable under the state Wildlife Conservation Act 1950 and Commonwealth Environment Protection and Biodiversity Conservation Act 1999 has been recorded within the local area (40 kilometre radius)(DPAW, 2007-). The Central Kimberley Interim Biogeographic Regionalisation of Australia (IBRA) bioregion, of which the application area is apart, contains suitable habitat for this species. The open tussock grassland identified within the application area is a known habitat for the species, however the observed soil type (DAFWA, 2012) is not likely to be suitable for bilby burrows (Department of the Environment, 2012).

The majority of the records for this species fall to the south of the application area. The record within the local area was taken in 1978 and has an accuracy of 50 kilometres (DPAW, 2007-). Although no recent records of the species exist within the local area this may be due to the remote locality, low survey effort within the area and the bilbies cryptic nature. Clearing habitat for grazing and competition with livestock are listed as major threats to this species (Department of the Environment, 2012).

Although the application area may contain foraging habitat for this species, as the application area falls on the northern boundary of its distribution, given the age and accuracy of the record and the observed soil type, the application area is not likely to form significant habitat for this species (Department of the Environment, 2012; DAFWA, 2012).

The remainder of the conservation significant fauna species recorded within the local area (DPAW, 2007-) are associated with significant wetlands, therefore the application area is not likely to form habitat for these species.

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

Methodology References:
DAFWA (2012)
DPAW (2007-)
Department of the Environment (2012)

GIS Databases:
- SAC Biodatasets - Accessed April 2015

(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 nearest record of rare flora is over 100 kilometres from the proposed clearing, on a different mapped vegetation and soil type.

Given this, the vegetation under application is not likely to support rare flora and the proposed clearing is not likely to be at variance to this principle.

Methodology GIS Databases:
- SAC Biodatasets - Accessed April 2015

(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

No threatened ecological communities (TEC) have been recorded within 100 kilometres of the application area. A site inspection of the property did not identify vegetation consistent with a TEC (DoE, 2005).

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

Methodology References
DoE (2005)

GIS Databases:
- SAC Biodatasets - Accessed April 2015

(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 area under application is located within the Central Kimberley Interim Biogeographic Regionalisation of Australia (IBRA) bioregions. This bioregion retains approximately 99 percent pre-European native vegetation (Government of Western Australia, 2013).

The application area is mapped as Beard Vegetation Associations 840. This vegetation association retains approximately 100 percent pre-European native vegetation within the Central Kimberley bioregion (Government of Western Australia, 2013).

Aerial imagery indicates that the local area (40 kilometre radius) retains approximately 99 percent native vegetation.

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 percent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001).

As all mapped vegetation associations and the local area retain significantly above the recommended 30 percent threshold, the application is not at variance to this clearing principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DPaW Managed Lands (%)
IBRA Bioregion* Central Kimberley	7,675,476	7,674,290	99	4
Shire* Shire of Halls Creek	13,343,781	13,334,436	99	7
Beard Vegetation Association in Bioregion* 840	2,677	2,677	100	0

Methodology

References:
Commonwealth of Australia (2001)
*Government of Western Australia (2013)

GIS Databases:
- Interim Biogeographic Regionalisation of Australia
- Halls Creek 80cm Orthomosaic
- 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

Two minor non-perennial watercourses have been mapped within the application area. One of these is described as a braided stream.

A site inspection of the property undertaken by the then Department of Environment on 16 September 2005 described the vegetation as a large, expansive, flat to very gently and evenly sloping treeless grassy plain. Parallel lines of vegetation evident within the area are thought to be from even lateral flows of water gradually creating windrows/furrows that support regular rows of vegetation (DoE, 2005).

A further site inspection of the area was undertaken by the Department of Agriculture and Food Western Australia (DAFWA) on 11 December 2012. Two drainage lines were observed within the northern application area, correlating to the position of the mapped watercourse. Further drainage lines were identified along the eastern application area, correlating to the position of the mapped braided stream.

Given the above, surface water within the centre of the property is likely to drain via undefined surface water flows to the application areas. Here the greater variation in contour results in the more defined watercourses. DAFWA (2012) has advised that "cleared and cultivated drainage lines receiving overland flow are highly susceptible to erosion; there is significant potential for gully erosion to occur in these areas".

Given the above, the application is at variance to this principle.

Methodology

References:
DAFWA (2012)
DoE (2005)

GIS Databases:
- Halls Creek 80cm Orthomosaic
- 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 at variance to this Principle

Two minor non-perennial watercourses have been mapped within the application areas. One of these is described as a braided stream. Both mapped watercourses fall on the edge of a larger area cleared of native vegetation. Soil within the application area has been observed as dark grey cracking clays (DAFWA, 2012).

A site inspection of the property undertaken by the then Department of Environment on 16 September 2005 described the vegetation under application as a large, expansive, flat to very gently and evenly sloping treeless grassy plain. Parallel lines of vegetation evident within the area are thought to be from even lateral flows of water gradually creating windrows/furrows that support regular rows of vegetation (DoE, 2005).

A site inspection of the property was undertaken by the Department of Agriculture and Food Western Australia (DAFWA) on 11 December 2012. Two drainage lines were observed within the northern application area, correlating to the position of the mapped watercourses. Further drainage lines were identified within the eastern application areas, correlating to the position of the mapped braided stream (DAFWA, 2012).

The site inspection of the property undertaken on 11 December 2012 (DAFWA, 2012) noted that, "after the area was bailed in early 2012, stock was introduced to eat the remaining stubble. Heavy grazing occurred when stock were held in this paddock waiting for a boat". "If stubble remaining post-bailing is grazed to the extent that was evident at the time of inspection, there is a risk of soil erosion" (DAFWA, 2012).

The vegetation under application falls within the Kimberley Region of Western Australia, being north of the Tropic of Capricorn it experiences a distinctive wet and dry season. Should a crop species (sorghum) fail to establish during the wet season, the cleared area would be subject to wind erosion over the course of the dry season and subsequently until a cover could be established or regenerate naturally (Department of Agriculture, 2005). Advice from the former Department of Agriculture (2005) states that there are known agronomic difficulties with achieving a satisfactory establishment of sorghum in this environment. "There is some likelihood that the entire planting could fail, leaving a denuded soil surface" (Department of Agriculture, 2005).

If little to no pasture establishes or the area is heavily grazed post bailing there is a significant risk of water erosion. Given the observed vegetation profile within the property, surface water within is likely to drain via undefined surface water flows to the application areas. Here the greater variation in contour results in the observed watercourses. DAFWA (2012) previously advised that "cleared and cultivated drainage lines receiving overland flow are highly susceptible to erosion; there is significant potential for gully erosion to occur in these areas". It was also advised that slopes greater than or equal to two percent that are bare and cultivated are almost certain to suffer from erosion and the severity will be extreme. Slopes within the application area have been recorded at 0.02 - 2.22 percent (DAFWA, 2012; Commissioner of Soil and Land Conservation, 2014).

The DAFWA (2012) site inspection of the property also noted that the applicant had observed erosion occurring in the south of the property. The drainage line affected was filled and flattened in order to spread out the flow of water.

The Commissioner of Soil and Land Conservation (2015a) has advised that the current application area contains the areas previously identified as at risk of accelerated soil erosion due to the excessive slopes (greater than two percent) for cultivation on those soils in that environment, and also where surface run off occurs and soil erosion is already evident.

Given the above, the removal of the vegetation under application is likely to result in water erosion, may result in wind erosion and the application is at variance to this clearing principle.

Methodology **References:**
Commissioner of Soil and Land Conservation (2014)
Commissioner of Soil and Land Conservation (2015a)
DAFWA (2012)
Department of Agriculture (2005)
DoE (2005)

GIS Databases:
- Topographic Contours, Statewide
- Hydrography Linear

(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 mapped conservation areas within the local area (40 kilometre radius). Given this, the application will not impact on the environmental values of a conservation reserve and is not at variance to this principle.

Methodology **GIS Databases:**
- Halls Creek 80cm Orthomosaic
- DPAW 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 at variance to this Principle**
Two minor non-perennial watercourses have been mapped within the application area. One of these is described as a braided stream. Soils within the application area have been observed as dark grey cracking clays (DAFWA, 2012).

A site inspection of the area undertaken by the then Department of Environment on 16 September 2005 described the vegetation as a large, expansive, flat to very gently and evenly sloping treeless grassy plain.

A site inspection of the property was undertaken by the Department of Agriculture and Food Western Australia (DAFWA) on 11 December 2012. Two drainage lines were observed within the northern application area, correlating to the position of the mapped watercourses. Further drainage lines were identified within the eastern application areas, correlating to the position of the mapped braided stream (DAFWA, 2012).

If little to no pasture establishes or the area is heavily grazed post bailing there is a significant risk of water erosion. Given the observed vegetation profile within the property, surface water within its centre is likely to drain via undefined surface water flows to the application area. Here the greater variation in contour results in the observed watercourses.

DAFWA (2012) previously advised that "cleared and cultivated drainage lines receiving overland flow are highly susceptible to erosion; there is significant potential for gully erosion to occur in these areas". It was also advised that slopes greater than or equal to two percent that are bare and cultivated are almost certain to suffer from erosion and the severity will be extreme. Slopes within the application area have been recorded at 0.02 - 2.22 percent (DAFWA, 2012; Commissioner of Soil and Land Conservation, 2014).

The DAFWA (2012) site inspection also noted that the applicant had observed erosion occurring in the south of the property. The drainage line affected was filled and flattened in order to spread out the flow of water.

The sediment transported and deposited through water erosion within the application area is likely to affect the surface water within the local area. Actions taken to dissipate the erosion on the watercourses through the removal of native vegetation are also likely to significantly impact their course.

The Commissioner of Soil and Land Conservation (2015a) has advised that the current application area contains the areas previously identified as at risk of accelerated soil erosion, due to the excessive slopes (greater than two percent) for cultivation on those soils, in that environment and also where surface run off occurs and soil erosion is already evident.

Given the above, the application is likely to degrade the quality of surface water through increased sedimentation and the application is at variance to this clearing principle.

Methodology References:
Commissioner of Soil and Land Conservation (2014)
Commissioner of Soil and Land Conservation (2015a)
DAFWA (2012)
DoE (2005)

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 likely to be at variance to this Principle**
A site inspection of the property undertaken by the then Department of Environment on 16 September 2005 described the vegetation under application as a large, expansive, flat to very gently and evenly sloping treeless grassy plain.

Given the lack of a major watercourse within the application area and the drainage patterns observed, the application area is not likely to cause or exacerbate flooding and is not likely to be at variance to this clearing principle.

Methodology References:
DoE (2005)

GIS Databases:
- Hydrography linear

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

Comments **Background**
An application for a clearing permit has previously been made over a larger 800 hectare area partially overlapping and adjacent to the current application area. This application (CPS 588/1) was refused on 13 January 2006 due to the risk of land degradation.

On 28 June 2006 the Minister for Environment dismissed an appeal against the refusal of CPS 588/1 as the clearing was likely to result in land degradation in the form of soil erosion.

On 15 July 2013 Lot 1537 was inspected by the Department of Environment Regulation. The inspection revealed that approximately 784 hectares of clearing had been carried out on Lot 1537. A comparison between the GPS track-logged cleared area and the area of CPS 588/1, which was refused in 2005, showed that almost the entire area had been cleared.

On 17 December 2013 the Commissioner of Soil and Land Conservation placed a Soil Conservation Notice (SCN) over the area applied for under CPS 588/1 and portions of the current application area. The SCN directs the applicant to:

- Refrain from clearing the land;
- Refrain from destroying cutting down or destroying any shrub, grass or other plant on the land;
- Refrain from planting crops;
- Refrain from undertaking any activity on the land that might inhibit the regeneration of native vegetation (for example by grazing or ground disturbance activities).

Current

The clearing permit application was received on 29 July 2014 for 800 hectares. On 16 December 2014 SAWA Pty Ltd were sent a letter outlining the environmental impacts of the clearing and noted that a SCN is present over the application area. The applicant's reply received on 8 February 2015 did not address the environmental impacts identified.

On 11 February 2015 the Commissioner of Soil and Land Conservation (2015b) confirmed that the SCN issued under section 32 of the Soil and Land Conservation Act 1945 remains in force.

On 27 March 2015 the applicant was sent a letter requesting that the application area be amended to those areas that currently contain native vegetation.

On 2 April 2015 the application area was amended from 800 hectares to 28 hectares in order to remove areas that do not currently contain native vegetation.

On 14 May 2015 the applicant was sent a letter advising that the areas under application correlate to areas where the Commissioner of Soil and Land Conservation has identified a land degradation risk or erosion has been identified. The letter requested confirmation of the applicant's intentions in relation to the application area. To date, no response has been received.

The Pastoral Lands Board has given in principle approval for a Part 7, Division 5 Diversification Permit under the Land Administration Act 1997 to the applicant (Commissioner of Soil and Land Conservation, 2014a)

Two public submissions have been received in relation to this application (Public submission A, 2014; Public Submission B, 2014). Concerns were raised as to the absence of flora and fauna surveys over the area, the potential for land degradation and impacts to surface water. These concerns have been considered and addressed where appropriate in the clearing principles above.

The Shire of Halls Creek was notified of the proposed clearing. To date, no response has been received.

An Aboriginal Site of Significance is mapped over the application area. The applicant is advised to contact the Department of Aboriginal Affairs in regards to their obligations under the Aboriginal Heritage Act 1972.

Methodology

References:

Commissioner of Soil and Land Conservation (2014a)
Commissioner of Soil and Land Conservation (2015b)
Public submission A (2014)
Public Submission B (2014)

GIS Databases:

Aboriginal Sites of Significance

4. References

- Commissioner of Soil and Land Conservation (2014a) Advice received in relation to clearing permit application CPS 6280/1. Received 4 December 2014 (DER ref: A840425b).
- Commissioner of Soil and Land Conservation (2014) Advice received in relation to clearing permit application CPS 6280/1. Received 2 December 2014 (DER ref: A881985).
- Commissioner of Soil and Land Conservation (2015a) Advice received in relation to clearing permit application CPS 6280/1. Received 7 April 2015 (DER ref: A891783).
- Commissioner of Soil and Land Conservation (2015b) Advice received in relation to clearing permit application CPS 6280/1. Received 11 February 2015 (DER ref: A866526).
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- DAFWA (2012) Site Inspection Report for Moola Bulla Station. Site inspection undertaken 11 December 2012; Department of Agriculture and Food Western Australia.
- DPAW (2007 -) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.DPAW.wa.gov.au/>. Accessed December 2014.

DEC (2007) DEC Fauna Habitat Notes.xls. February 2007. Department of Environment and Conservation, Western Australia.

Department of Agriculture (2005) Advice received by the Commissioner of Soil and Land Conservation in relation to clearing permit application CPS 588/1. Department of Agriculture. (Trim ref: IN23565).

Department of the Environment (2012) Species Profile and Threats Database, *Macrotis lagotis*. <http://www.environment.gov.au/cgi-bin/sprat>. Accessed 13 May 2013. Department of Sustainability, Environment, Water, Population and Community, Canberra, ACT.

DoE (2005) Site Inspection Report for CPS 588/1. Site inspection undertaken 16 September 2005; Department of Environment (DER ref: A881969).

Government of Western Australia (2013) 2013 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2013. WA Department of Parks and Wildlife, 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.

Public submission A (2014) Submission received by DER in objection to clearing permit application CPS 6280/1. Received 20 October 2014 (DER ref: A820589).

Public submission B (2014) Submission received by DER in objection to clearing permit application CPS 6280/1. Received 29 October 2014 (DER ref: A824915).

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.

Western Australian Herbarium (1998-) FloraBase - The Western Australian Flora. Department of Parks and Wildlife. <http://florabase.DPaW.wa.gov.au/> (Accessed December 2014).