



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 7270/1
Permit Holder:	Anna Plains Cattle Co Pty Ltd
Duration of Permit:	12 December 2017 – 12 December 2022

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 irrigated fodder production.

2. Land on which clearing is to be done

Lot 1561 on Deposited Plan 65161, Eighty Mile Beach.

3. Area of Clearing

The Permit Holder must not clear more than 120 hectares of native vegetation within the area cross-hatched yellow on attached Plan 7270/1.

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.

PART II – MANAGEMENT CONDITIONS

5. 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.

6. Direction of clearing

The Permit Holder shall conduct clearing in a progressive manner from one direction to the other (e.g. west to east) to allow fauna to move into adjacent native vegetation ahead of the clearing activity.

7. Period in which clearing is authorised

The Permit Holder must ensure that the planting of crop species occurs within three months of the authorised clearing being undertaken.

8. Fauna management

- (a) Immediately prior to undertaking any clearing authorised under this Permit, the Permit Holder shall engage a *fauna specialist* to undertake clearance surveys using transects spaced at a maximum 100 metres on average within the area cross-hatched yellow on attached Plan 7270/1 and of surrounding areas for the fauna species listed below:
 - (i) greater bilby (*Macrotis lagotis*); and
 - (ii) spectacled hare-wallaby (*Lagorchestes conspicillatus* subsp. *leichardti*).
- (b) Immediately prior to undertaking any clearing authorised under this Permit, the Permit Holder shall engage a *fauna specialist* to relocate any fauna found under condition 8(a) of this permit, in accordance with a fauna licence pursuant to Regulation 15 of the *Wildlife Conservation Regulations 1970*.
- (c) Where fauna are identified and relocated under condition 8(a) and 8(b) of this Permit, the Permit Holder shall include the following in a report submitted to the Department of Water and Environmental Regulation:
 - (i) the scientific name and gender of each fauna captured under condition 8(a);
 - (ii) the location of any fauna species, as listed in condition 8(a), captured 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;
 - (iii) the date, time, vegetation type and weather conditions at each location where a fauna species is captured under condition 8(c)(ii);
 - (iv) the scientific name and gender of each fauna relocated under condition 8(b);
 - (v) the location of any fauna species, as listed in condition 8(b), relocated 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;
 - (vi) the date, time, vegetation type and weather conditions at each location where a fauna species is relocated under condition 8(c)(v);
 - (vii) the name of the fauna specialist that relocated fauna under condition 8(b); and
 - (viii) a copy of the fauna licence authorising the relocation of fauna under condition 8(b).

PART III - RECORD KEEPING AND REPORTING

9. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit:

- (a) In relation to the clearing of native vegetation authorised under this Permit:
 - (i) the species composition, structure and density of the cleared area;
 - (ii) 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;
 - (iii) the date that the area was cleared; and
 - (iv) the size of the area cleared (in hectares).

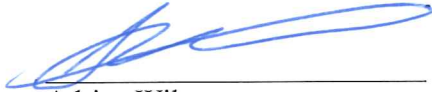
10. Reporting

- (a) The Permit Holder must provide to the CEO on or before 30 June of each year, a written report:
 - (i) of records required under condition 8 and 9 of this Permit; and
 - (ii) concerning activities done by the Permit Holder under this Permit between 1 January to 31 December of the preceding calendar year.
- (b) If no clearing authorised under this Permit was undertaken between 1 January to 31 December of the preceding calendar year, a written report confirming that no clearing under this permit has been carried out, must be provided to the CEO on or before 30 June of each year.
- (c) Prior to 12 September 2022, the Permit Holder must provide to the CEO a written report of records required under condition 8 and 9 of this Permit where these records have not already been provided under condition 10(a) of this Permit.

DEFINITIONS

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

fauna specialist: means a person who holds a tertiary qualification specializing in environmental science or equivalent, and has a minimum of 2 years work experience in fauna identification and surveys of fauna native to the region being inspected or surveyed, or who is approved by the CEO as a suitable fauna specialist for the bioregion, and who holds a valid fauna licence issued under the *Wildlife Conservation Act 1950*.

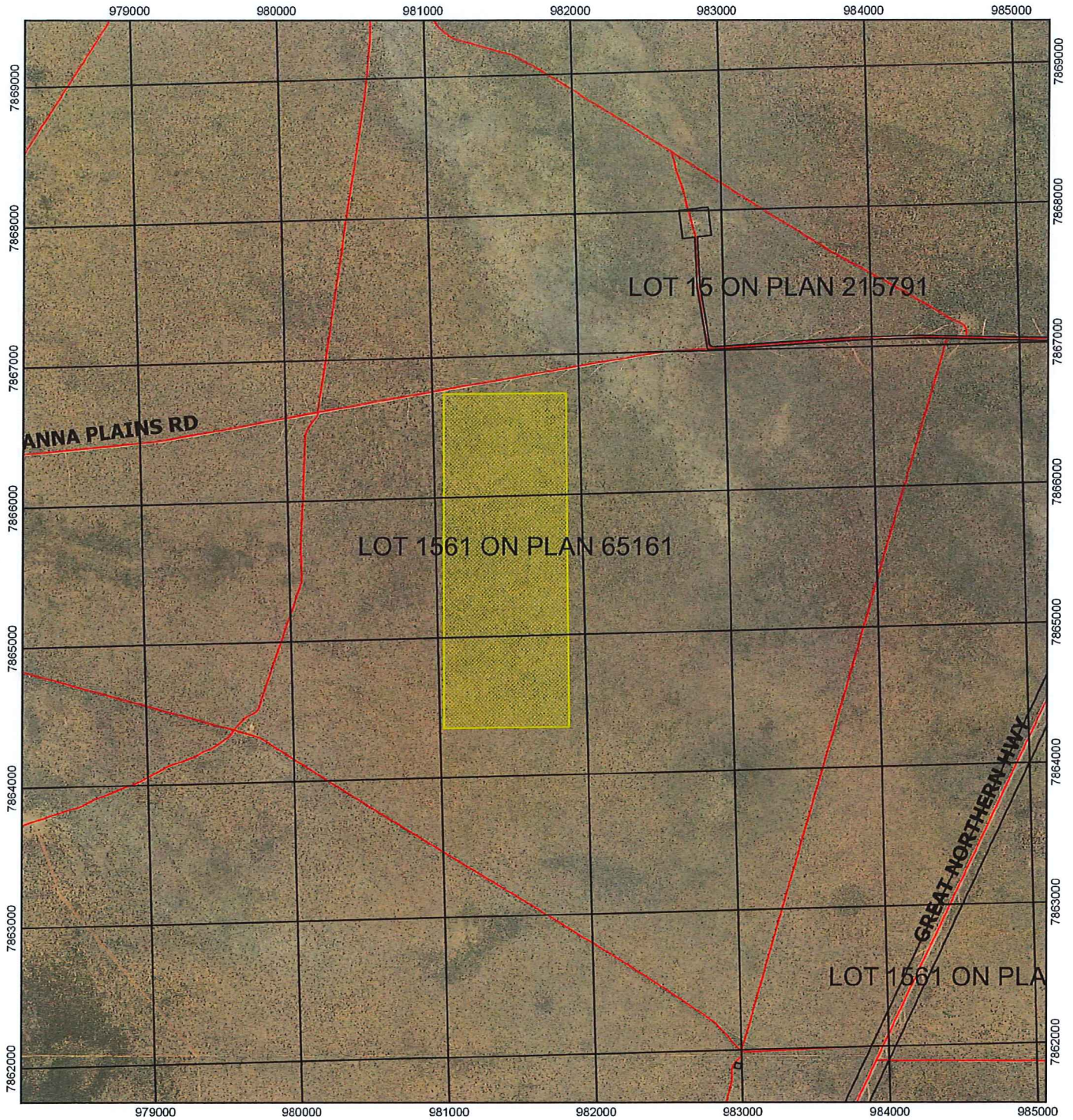


Adrian Wiley
A/SENIOR MANAGER
CLEARING REGULATION

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

13 November 2017

Plan 7270/1



Legend

-  Roads
-  LGA
-  Cadastre
- Virtual Mosaic (LGATE-V001)
-  Areas approved to clear



MGA 94
Geocentric Datum of Australia 1994
1:31,291

 Date 13/11/2017

Officer with delegated authority under Section 20
of the Environmental Protection Act 1986





1. Application details

1.1. Permit application details

Permit application No.: 7270/1
Permit type: Purpose Permit

1.2. Applicant details

Applicant's name: Anna Plains Cattle Co Pty Ltd

1.3. Property details

Property: Lot 1561 on Deposited Plan 65161
Local Government Authority: Shire of Broome
Localities: Eighty Mile Beach

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 13 November 2017

Reasons for Decision: The application for a clearing permit was received on 12 September 2016, and has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986*. It has been concluded that the proposed clearing may be at variance to principles (a), (b) and (g), is not at variance to principle (e) and is not likely to be at variance to the remaining clearing principles.

The Delegated Officer determined that:

- the application area may comprise an area of high biodiversity;
- the application area may be necessary for the maintenance of significant habitat for the greater bilby (*Macrotis lagotis*) and spectacled hare-wallaby (*Lagorchestes conspicillatus* subsp. *leichardti*); and
- the proposed clearing may cause appreciable land degradation in the form of wind erosion between clearing and pasture establishment.

The Delegated Officer has granted the clearing permit subject to conditions to address the abovementioned impacts.

To minimise impacts to the greater bilby and spectacled hare-wallaby the clearing permit contains conditions requiring:

- pre-clearance surveys to identify any greater bilbies and spectacled hare-wallabies within the application area, and the relocation of any individuals of these species recorded during pre-clearance surveys;
- one directional clearing to allow the greater bilby and spectacled hare-wallaby to move into adjacent habitat; and
- the requirement to obtain a fauna licence issued pursuant to Regulation 15 of the *Wildlife Conservation Regulations 1970*.

To minimise the potential for appreciable land degradation the clearing permit contains a condition requiring:

- the planting of crop species within three months of any clearing being undertaken to minimise wind erosion.

In determining to grant a clearing permit subject to conditions, the Delegated Officer found that the proposed clearing is unlikely to lead to an unacceptable risk to the environment.

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
<p>The application area is mapped as Beard vegetation association 699, described as shrublands, pindan; <i>Acacia eriopoda</i> shrubland with scattered low bloodwood (<i>Corymbia dichromophloia</i>) over soft and curly spinifex on sandplain (Shepherd et al, 2001). A targeted flora survey identified that the vegetation under application largely consists of tall and medium height shrubs between one to three metres high over an understorey dominated by grasses and soft perennial sub-shrubs (EnviroWorks Consulting, 2017).</p> <p>Common tall shrub species include <i>Bauhinia cunninghamii</i>, <i>Corymbia zygophylla</i>, <i>Dolichandrone occidentalis</i> and species of <i>Acacia</i>. The dominant grasses are species of <i>Triodia</i> while the dicotyledonous ground layer is relatively rich with species of <i>Ptilotus</i> and is representative of the Families Fabaceae and Proteaceae (EnviroWorks Consulting, 2017).</p>	<p>The applicant proposes to clear up to 120 hectares of native vegetation within a 200 hectare footprint within Lot 1561 on Deposited Plan 65161, Eighty Mile Beach (Anna Plains Station), for the purpose of irrigated fodder production.</p>	<p>Very Good; Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).</p> <p>To</p> <p>Excellent; Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).</p>	<p>The condition and description of the vegetation under application was established via a site inspection undertaken by officers of the former Department of Environment Regulation (DER) and a targeted flora survey undertaken by EnviroWorks Consulting (DER, 2017; EnviroWorks Consulting, 2017).</p>

3. Assessment of application against clearing principles

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

Comments	Proposed clearing may be at variance to this Principle
	<p>The applicant proposes to clear up to 120 hectares of native vegetation within a 200 hectare footprint within Lot 1561 on Deposited Plan 65161, Eighty Mile Beach (Anna Plains Station), for the purpose of irrigated fodder production. The application area is situated approximately nine kilometres north east of the Anna Plains Homestead and is approximately 3.5 kilometres west of the Great Northern Highway.</p> <p>The vegetation within the application area largely consists of tall and medium height shrubs between one to three metres high over an understorey dominated by grasses and soft perennial sub-shrubs. Common tall shrub species include <i>Bauhinia cunninghamii</i>, <i>Corymbia zygophylla</i>, <i>Dolichandrone occidentalis</i> and species of <i>Acacia</i>. The dominant grasses are species of <i>Triodia</i> while the dicotyledonous ground layer is relatively rich with species of <i>Ptilotus</i> and representative of the Families Fabaceae and Proteaceae (EnviroWorks Consulting, 2017).</p> <p>A site inspection undertaken by the former DER (now the Department of Water and Environmental Regulation (DWER)) identified that the vegetation within the application area is in very good to excellent (Keighery, 1994) condition (DER, 2017).</p> <p>Based on land system mapping by the former Department of Agriculture and Food Western Australia (DAFWA) the application area occurs within the Nita Land System. The Nita Land System is described as sandplain with deep red sands that support sparse low tree steppe grassland. A site inspection of the application area identified the presence of red pindan sandy soils throughout and a targeted flora survey recorded the landform as undulating sandplain of red earthy sands (DER, 2017; EnviroWorks Consulting, 2017).</p> <p>According to available datasets, there are no threatened ecological communities (TECs) recorded within the local area (defined as a 50 kilometre radius surrounding the application area).</p> <p>According to available datasets, one priority ecological community (PEC) has been recorded within the local area, being 'Vegetation Association 37 as defined by John Beard's vegetation mapping for the Kimberley (Beard 1979)' (Priority 3). This PEC is mapped approximately 28 kilometres north of the application area and is described as shrublands comprising teatree thicket (Shepherd et al., 2001). The application area is mapped as Beard vegetation association 699, and a site inspection of the application area and targeted flora survey did not record any shrublands comprising teatree thicket (DER, 2017; EnviroWorks Consulting, 2017). Therefore, the proposed clearing is not likely to impact on this PEC.</p> <p>Several priority flora species occur within the local area and the former Department of Parks and Wildlife (Parks and Wildlife) advised that "the rare flora [name withheld] (critically endangered) and Priority flora <i>Bonamia oblongifolia</i> [Priority 1], <i>Tephrosia andrewii</i> [Priority 1], <i>Phyllanthus eremicus</i> [Priority 3] and <i>Tribulopsis marliesiae</i> [Priority 3] are highly likely to occur within the area proposed to be cleared; and <i>Lawrencia</i> sp. Anna Plains (N.T. Burbidge 1433) [Priority 3] may also occur" (Parks and Wildlife, 2016).</p> <p>The former Parks and Wildlife recommended that "targeted surveys be undertaken for the conservation significant species likely to be affected in order to determine potential impacts.</p>

Surveys should consider the extent of the population beyond the application area to enable assessment of impacts at the local scale and within a regional context" (Parks and Wildlife, 2016).

The applicant was notified of the potential occurrence of these species and commissioned EnviroWorks Consulting to conduct a targeted flora survey, which was undertaken from 9 to 13 August 2017. The survey was conducted by traversing the application area on foot in a grid pattern with survey personnel walking approximately 30 metres apart (EnviroWorks Consulting, 2017). GPS coordinates, plant counts and photographs of conservation significant flora were recorded throughout. Areas outside of the development envelope were assessed by a combination of grid-based foot traverses and car-based and opportunistic site recording of roadside and fence-line populations (EnviroWorks Consulting, 2017).

The Department of Biodiversity, Conservation and Attractions (DBCA) advised that "the timing and effort of the flora survey was appropriate to identify rare and priority flora species" (DBCA, 2017).

The flora survey identified two Priority flora species within the application area, being *Bonamia oblongifolia* and *Phyllanthus eremicus* (EnviroWorks Consulting, 2017).

The flora survey identified that *Bonamia oblongifolia* occurs on red earthy sands and gravels within the application area, and appears as a disturbance opportunist along fence-lines, tracks, roads and roadside drainage lines (EnviroWorks Consulting, 2017). A total of 51 plants of this species were identified within the application area and a total of 1,163 plants were found during opportunistic searches surrounding the application area (EnviroWorks Consulting, 2017). The flora survey identified that the regional population of this species, which is based on flora survey information from Anna Plains, Wallal Downs and Pardoo stations, is estimated to exceed 157,991 plants. Therefore, the flora survey concluded that the application area contains 0.03% of the known regional population of *Bonamia oblongifolia* (EnviroWorks Consulting, 2017).

The flora survey identified that *Phyllanthus eremicus* occurs on red sands within the application area. A total of 15 plants of this species were recorded within the application area and 106 plants were found during opportunistic searches surrounding the application area (EnviroWorks Consulting, 2017). The regional population of *P. eremicus*, which is based on surveys at Anna Plains, Wallal Downs and Pardoo stations, is estimated to exceed 3,037 plants. Therefore, the flora survey concluded that the application area contains 0.49% of the known regional population of *Phyllanthus eremicus* (EnviroWorks Consulting, 2017).

With regards to the flora survey findings DBCA advised "impacts of the proposed clearing to the two priority flora species, *Bonamia oblongifolia* (Priority 1) and *Phyllanthus eremicus* (Priority 3), are considered unlikely to be significant locally or regionally (DBCA, 2017). Noting this, the proposed clearing is not likely to impact on the conservation status of these species.

As discussed under Principle (c), a flora survey of the application area did not identify the aforementioned rare flora species (Enviroworks Consulting, 2017), and the proposed clearing is considered unlikely to contain, or be necessary for the continued existence of this species.

Excluding marine species, there are records of 42 conservation significant fauna species recorded within the local area (Parks and Wildlife, 2007-). These include one Threatened (under the *Wildlife Conservation Act 1950* (WC Act)) terrestrial fauna, one Other Specially Protected (under the WC Act) fauna, one Priority 3 (as listed by DBCA) non-migratory avian fauna, and 39 migratory avian fauna, of which eight are Threatened, and 31 are Protected Under International Agreement. Of these species, the application area contains suitable and potentially significant habitat for the greater bilby (*Macrotis lagotis*) and spectacled hare-wallaby (*Lagorchestes conspicillatus* subsp. *leichardti*), which have been recorded four and two times respectively within a 40 kilometre radius of the application area (Parks and Wildlife, 2007- ; DER, 2017).

As discussed under Principle (b), a fauna survey undertaken for the majority of the application area, targeted at the greater bilby and spectacled hare-wallaby, identified potential scats of the spectacled hare-wallaby and did not identify any signs of greater bilbies within or around the application area (Bamford Consulting Ecologists, 2017), despite the application area providing suitable habitat for the aforementioned species. The fauna survey noted that a lack of greater bilby activity is potentially due to the absence of *Acacia* and other woody shrubs, as a result of a recent fire. The fauna survey noted that greater bilbies can quickly disappear and reappear in an area where suitable habitat exists and advised that as the *Acacia* recovers from the effects of bushfire, greater bilbies may return (Bamford Consulting Ecologists, 2017).

Based on known habitat requirements, with the exception of the greater bilby and spectacled hare-wallaby, the application area is considered unlikely to comprise significant habitat for any other abovementioned conservation significant fauna species.

As the application area contains vegetation predominantly in a very good to excellent (Keighery, 1994) condition, one Priority 1 and one Priority 3 flora species, habitat that is utilised by the spectacled hare-wallaby, and suitable habitat for the greater bilby, the proposed clearing may comprise a high level of biodiversity and may be at variance to this Principle.

To minimise direct impacts to the greater bilby and spectacled hare-wallaby, the applicant will be required to:

- Conduct pre-clearance surveys to identify greater bilbies and spectacled hare-wallabies within the application area;
- Relocate any greater bilbies or spectacled hare-wallabies recorded during the pre-clearance survey; and
- Undertake directional clearing to allow the greater bilby and spectacled hare-wallaby to move into adjacent habitat.

While the application area may contain a high level of biological diversity, it is acknowledged that the values present within the application area also occur within the immediate vicinity, and may occur throughout the larger Anna Plains Station (comprising approximately 381,537 hectares). Therefore, it is considered that with the fauna management measures outlined above, the proposed clearing is not likely to have a significant impact on the level of biological diversity in the local area, and will not lead to an unacceptable risk to the environment.

Methodology

References:

Bamford Consulting Ecologists (2017)
DBCA (2017)
DER (2017)
EnviroWorks Consulting (2017)
Keighery (1994)
Parks and Wildlife (2007-)
Parks and Wildlife (2016)
Shepherd et al., (2001)

GIS Databases:

DAFWA Subsystems
Geomorphic Wetlands
Hydrography, Linear
Hydrography, Hierarchy
Landsystem Rangelands
SAC Bio Datasets (Accessed November 2017)

(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

Proposed clearing may be at variance to this Principle

Excluding marine species, there are records of 42 conservation significant fauna species recorded within the local area (Parks and Wildlife, 2007-). Of these species, the former Parks and Wildlife advised that “the proposed clearing has the potential to impact the Vulnerable greater bilby (*Macrotis lagotis*) and possibly the Priority [3] spectacled hare-wallaby (*Lagorchestes conspicillatus*)” (Parks and Wildlife, 2016). The former Parks and Wildlife further advised that “the proposed clearing is likely to contain suitable habitat for the greater bilby, with this species recorded within 10km of the application area in October 2016” (Parks and Wildlife, 2016).

The greater bilby (*Macrotis lagotis*) is known from four records within 40 kilometres of the application area (Parks and Wildlife, 2007-). This species is classified as Threatened (Vulnerable) in Western Australia under the WC Act and Vulnerable under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The greater bilby largely occupies three major vegetation types; open tussock grassland on uplands and hills, mulga woodland or shrubland growing on ridges and rises, and hummock grassland in plains and alluvial areas (Department of the Environment and Energy, 2016). In Western Australia, the species occurs in parts of the Gibson Desert and Great Sandy Desert bioregions, parts of the Pilbara bioregion, the Dampierland bioregion (within which the application area is located) along Eighty Mile Beach north to Beagle Bay, and in the Central Kimberley and Ord-Victoria Plains bioregions south of the Fitzroy and Margaret Rivers. The distribution of the greater bilby is highly fragmented in Western Australia (Pavey, 2006).

The spectacled hare-wallaby has been recorded twice within a 40 kilometre radius of the application area. This species is recognised as a Priority 3 species by DBCA. This species is uncommon in Western Australia and exists in patchily distributed populations within the Pilbara and Kimberley regions (Winter et al., 2016). This species occupies a wide variety of habitat types including open forests, open woodland, tall shrublands, tussock grasslands and hummock grasslands. In the drier southern parts of its range (Western Australia) it commonly occupies spinifex (*Triodia* sp.) sandplains interspersed with low shrubs and a diversity of soft grasses, sedges, or forb species (Winter et al., 2016).

Noting the soil and vegetation type identified during a site inspection and targeted flora survey (described in Principle (a)), it is considered that the application area contains suitable habitat for the greater bilby and spectacled hare-wallaby (DER, 2017; EnviroWorks Consulting, 2017).

A targeted fauna survey was conducted for the greater bilby and spectacled hare-wallaby by Bamford Consulting Ecologists on 31 August 2017. The survey involved ground-truthing the application area and searching for evidence of greater bilbies and spectacled hare-wallabies via walking a series of transects, spaced at 300 metres apart across the application area. DBCA advised that “the survey is consistent with [the departments ‘Guidelines for surveys to detect the presence of bilbies, and assess the importance of the habitat in WA’] in all aspects, except that the surveys did not extend beyond the [application area] to provide context” (DBCA, 2017). DBCA advised that “the survey was adequate for spectacled hare-wallaby” (DBCA, 2017).

The fauna survey did not identify any signs of greater bilbies within or around the application area. The survey indicated that, had greater bilbies been currently or recently active, signs would have been identified through the intensity of the survey and the relatively large area across which greater bilbies are active when resident (Bamford Consulting Ecologists, 2017).

Therefore it is considered that greater bilbies are not currently residing within the application area.

The survey identified evidence of a recent fire within the application area, and a resultant lack of *Acacia* and other woody shrub density, with this a potential cause for the lack of greater bilby activity observed (Bamford Consulting Ecologists, 2017). The survey noted that greater bilbies can quickly disappear and reappear in an area where suitable habitat exists and, as the *Acacia* within the application area recovers from the effects of bushfire, greater bilbies may return (Bamford Consulting Ecologists, 2017).

The fauna survey indicated that greater bilbies are prone to injury and death during vegetation clearing due to their habit of digging in and backfilling their burrows behind them when threatened (Bamford Consulting Ecologists, 2017).

Noting the presence of suitable habitat, and that greater bilbies may return to the application area, the survey recommended that the application area be checked for the presence of greater bilbies immediately prior to clearing (Bamford Consulting Ecologists, 2017).

DBCA advised that "although there was no sign of bilby detected, the advice provided in the survey report confirms that the habitat is suitable; bilbies may return to the area; bilbies are vulnerable to death or injury during vegetation clearing; and a pre-clearing survey should be undertaken immediately prior to vegetation clearing".

"DBCA considers that mitigation measures, such as pre-clearing searches and a fauna management plan, could be employed to minimise impacts on the greater bilby. Pre-clearing searches should be undertaken no more than 2 weeks prior to the proposed clearing... Any bilbies detected during this survey must be removed from harm's way, which could include clearing sequentially to flush animals and/or relocating bilbies." (DBCA, 2017)

The fauna survey did not identify any spectacled hare-wallabies; however two sets of relatively recent scats, which were potentially from this species, were found towards the southern end of the application area. The survey noted that the presence of scats indicate the presence of this species on site in the recent past (Bamford Consulting Ecologists, 2017).

The survey noted that the spectacled hare-wallaby will flush from cover if approached and disperse rapidly, and is therefore not considered to be at high risk of injury or death from the proposed clearing, unless they are restricted from dispersing. The survey concluded that the practise of clearing vegetation from one direction and allowing some vegetation to remain outside the pivots (as an escape path to other habitat) should provide necessary protection for this species (Bamford Consulting Ecologists, 2017).

DBCA advised that "impacts to spectacled hare-wallaby are likely to be at a local scale only. Some individuals may be displaced and there may be some impact due to loss of resources. The greatest impact is likely to be direct injury during clearing... The advice provided in the fauna survey report regarding the management of spectacled hare-wallaby is... supported. This species is generally easily flushed from cover if approached and can be displaced by applying sequential clearing techniques..." (DBCA, 2017).

With regard to other conservation significant fauna, a further 39 migratory avian species have been recorded within 40 kilometres of the application area (Parks and Wildlife, 2007-), with these species likely utilising habitat within the Eighty Mile Beach RAMSAR site, located approximately 15.1 kilometres west of the application area. These highly mobile species occupy large home ranges and given the distance to the RAMSAR site, the proposed clearing is not likely to impact on significant habitat for these species.

One other conservation significant fauna species has been recorded within a 40 kilometre radius, being the peregrine falcon (*Falco peregrinus*) (Other Specially Protected Fauna). The peregrine falcon is known from four records within a 40 kilometre radius, the most recent recorded in 2006 (Parks and Wildlife, 2007-). Noting that the peregrine falcon is a highly mobile avian species with a large home range, the proposed clearing is not likely to impact on significant habitat for this species.

While it is acknowledged that greater bilbies are not currently using the site, noting the extent of proposed clearing (120 hectares), that the application area provides suitable habitat for this species, and therefore may include occurrences of this species in the very near future, and that spectacled hare-wallabies are potentially utilising the application area, the proposed clearing may be a significant remnant for these species.

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

To minimise direct impacts to the greater bilby and spectacled hare-wallaby, the applicant will be required to:

- Conduct pre-clearance surveys to identify greater bilbies and spectacled hare-wallabies within the application area;
- Relocate any greater bilbies or spectacled hare-wallabies recorded during the pre-clearance survey; and
- Undertake directional clearing to allow greater bilbies and spectacled hare-wallabies and other fauna to move into adjacent habitat.

It is considered that with the fauna management measures outlined above, the proposed clearing is not likely to have a significant impact on fauna indigenous to Western Australia, and will not lead to an unacceptable risk to the environment.

Methodology References:
Bamford Consulting Ecologists (2017)
DBCA (2017)
Department of the Environment and Energy (2016)
DER (2017)
Parks and Wildlife (2007-)
Parks and Wildlife (2016)
Pavey (2006)
Shepherd et al. (2001)
Winter et al. (2016)

GIS Databases:
RAMSAR Sites

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

Comments **Proposed clearing is not likely to be at variance to this Principle**

The closest rare flora record is located approximately 61.7 kilometres east of the application area. This species is an erect, compact, multi-stemmed shrub that grows from 0.7 to 0.9 metres high and flowers purple from April to December (Western Australian Herbarium, 1998-). This species grows within red sand in pindan and relict desert dune swales and is known from three records within the Shire of Broome (Western Australian Herbarium, 1998-).

Threats to this rare flora species include hydrological changes, inappropriate fire regimes, lack of tenure security, weed invasion, and disturbance of habitat from recreational land use and development (Department of Environment and Conservation, 2010).

A site inspection of the application area identified suitable habitat for this species (DER, 2017), and the former Parks and Wildlife advised that "the [abovementioned] rare flora [name withheld] (critically endangered)... [is] highly likely to occur within the area proposed to be cleared" (Parks and Wildlife, 2016).

The former Parks and Wildlife recommend that "targeted surveys be undertaken for the conservation significant species likely to be affected in order to determine potential impacts. Surveys should consider the extent of the population beyond the application area to enable assessment of impacts at the local scale and within a regional context" (Parks and Wildlife, 2016).

The applicant commissioned EnviroWorks Consulting to undertake a targeted flora survey of the application area between 9 and 13 August 2017. DBCA provided comment on the adequacy of the flora survey and advised that "the timing and effort of the flora survey was appropriate to identify rare and priority flora species" (DBCA, 2017).

The survey did not identify the presence of rare flora within the application area (EnviroWorks Consulting, 2017), and based on these findings it is considered unlikely that the application area includes or is necessary for the continued existence of rare flora.

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

Methodology References:
DBCA (2017)
Department of Environment and Conservation (2010)
DER (2017)
EnviroWorks Consulting (2017)
Parks and Wildlife (2016)
Western Australian Herbarium (1998-)

GIS Databases:
SAC Bio Datasets (Accessed November 2017)

(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 **Proposed clearing is not likely to be at variance to this Principle**

According to available datasets, there are no records of TECs within the local area. The closest mapped TEC is the 'Assemblages of the organic springs and mound springs of Mandora Marsh area', located approximately 60 kilometres south of the application area.

TECs in the Dampierland IBRA Bioregion endorsed by the Minister for Environment include monsoon vine thickets on coastal sand dunes of the Dampier Peninsula (also listed under the EPBC Act), and four assemblages associated with several organic and/or mound springs in the bioregion.

No organic springs or mound springs occur within the application area (DER, 2017) and on this basis it is considered that the application area is not likely to comprise the whole or a part of, or be necessary for the maintenance of any TECs.

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

Methodology References:
DER (2017)

GIS Databases:
SAC Bio Datasets (Accessed November 2017)

(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 Proposed clearing is not at variance to this Principle

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).

The application area is located within the Dampierland IBRA bioregion and the Shire of Broome, both of which retain greater than 99 per cent of their pre-European vegetation extents (Government of Western Australia, 2016).

The vegetation within the application area is mapped as Beard vegetation association 699 which retains approximately 99.9 per cent of its pre-European vegetation extent within the Dampierland IBRA bioregion (Government of Western Australia, 2016).

The local area is highly vegetated and retains approximately 99 per cent (999,912.17 hectares) of its pre-European vegetation extent (taking into account the coastal water mark). The application area represents approximately 0.012 per cent of the remaining native vegetation within the local area and the proposed clearing would reduce the extent of native vegetation within the local area to 999,792.17 hectares.

Noting that the Shire, the IBRA bioregion and the local area retain more than 30 per cent of their vegetation extents respectively, it is considered that the vegetation within the application area is not significant as a remnant of native vegetation within an area that has been extensively cleared.

Given the above, the proposed clearing is not at variance to this Principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Pre-European Extent in Parks and Wildlife Managed Lands (%)
IBRA Bioregion*				
Dampierland	8,343,939	8,319,873	99.7	1.6
Shire*				
Shire of Broome	5,469,337	5,436,104	99.4	2.7
Beard vegetation association in Bioregion*				
699	1,976,313	1,974,958	99.9	0.0

Methodology References:
Commonwealth of Australia (2001)
Government of Western Australia (2016)

GIS Databases:
IBRA WA (Regions - Sub Regions)
Pre-European Vegetation
Kimberley Remnant Native 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 Proposed clearing is not likely to be at variance to this Principle

According to available databases, there are no wetlands or watercourses mapped within the application area. The closest major wetland or watercourse is the Eighty Mile Beach RAMSAR site located approximately 15.1 kilometres west of the application area. A site inspection of the application area did not identify any wetlands, watercourses or riparian vegetation (DER, 2017).

Noting the findings of the site inspection, distance to the RAMSAR site, and the extent of native vegetation remaining between the RAMSAR site and the application area, it is considered unlikely that the proposed clearing will impact on vegetation that is growing in, or in association with, an environment associated with a watercourse or wetland.

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

Methodology References:
DER (2017)

GIS Databases:
Hydrography, linear
Hydrography, hierarchy
RAMSAR sites

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments **Proposed clearing may be at variance to this Principle**
As discussed in Principle (a), the application area occurs within the Nita Land System. A site inspection of the application area identified the presence of red pindan sandy soils throughout (DER, 2017).

No watercourses or wetlands were identified within the application area (DER, 2017) and given that sandy pindan soils are highly permeable, the proposed clearing is not likely to result in appreciable land degradation via water erosion or waterlogging.

Sandy soils are susceptible to wind erosion and the surface soils may be prone to wind erosion and appreciable land degradation once protective vegetative cover is removed, prior to pasture establishment.

Noting the above, and extent of proposed clearing (120 hectares), the proposed clearing may result in appreciable land degradation via wind erosion and may be at variance to this Principle.

To minimise the risk of wind erosion, the applicant will be required to plant the intended crops over the cleared areas within three months of the date of clearing, which will prevent the prolonged exposure of bare sandy soils.

Methodology References:
DER (2017)

GIS Databases:
DAFWA Subsystems
Hydrography, Hierarchy
Hydrography, Linear
Landsystem Rangelands

(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 **Proposed clearing is not likely to be at variance to this Principle**
According to available databases, the application area is not within any conservation areas or DBCA managed lands. The nearest conservation areas are the Anna Plains former pastoral lease and Eighty Mile Beach marine park (which also includes a RAMSAR site), which are located approximately 14.5 and 15.1 kilometres west of the application area respectively.

Noting the separation distance between these conservation areas and the application area, and the extent of native vegetation within the local area, it is considered that the proposed clearing is not likely to impact the environmental values of these areas.

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

Methodology GIS Databases:
Parks and Wildlife Tenure
RAMSAR Sites

(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 **Proposed clearing is not likely to be at variance to this Principle**
As assessed under Principle (f), according to available databases, no wetlands or watercourses are mapped within the application area. The closest major wetland or watercourse to the application area is the Eighty Mile Beach RAMSAR site, located approximately 15.1 kilometres west. Noting the distance to the nearest wetland or watercourse, the proposed clearing is not likely to impact on the flow or quality of surface water outside of the application area.

Mapped groundwater salinity within the application area is low (less than 500 milligrams per litre total dissolved solids). Given the size of the proposed clearing and that the local area is highly vegetated, no significant rise in groundwater levels is expected. Therefore, deterioration in the quality of surface and/or underground water via increased salinity is considered unlikely.

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

Methodology GIS Databases:
Groundwater salinity, Statewide
Hydrography, linear
Hydrography, hierarchy
RAMSAR sites

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Comments **Proposed clearing is not likely to be at variance to this Principle**
The Dampierland IBRA bioregion has a semi-arid to tropical monsoonal climate, receiving much of its rainfall during summer months (Bastin and ACRIS Management Committee, 2008).

The proposed clearing of 120 hectares of native vegetation may increase the risk of localised flooding following periods of heavy rainfall, which is commonly experienced by the region. The soils within the application area comprise of red sands (DER, 2017). These soils are highly permeable, and while increased localised flooding may occur following periods of heavy rainfall, it is likely to be short term and is not likely to have a significant environmental impact.

Noting that the risk of standing water and water erosion is associated with high rainfall events and that local runoff is likely to be for short durations, it is considered that the proposed clearing is not likely to cause or exacerbate the incidence or intensity of flooding.

Given the above, the proposed clearing is not likely to be at variance to this Principle

Methodology References:
Bastin and ACRIS Management Committee (2008)

GIS Databases:
Landsystem Rangelands

Planning instruments and other relevant matters.

Comments The application was advertised in *The West Australian* newspaper on 10 October 2016 for a 21 day public submission period. No public submissions have been received for this application.

Applicants Submission's

On 13 April 2017 the former DER requested the applicant to provide additional information in the form of biological surveys to determine impacts of clearing to conservation significant flora and fauna species, with this request based on a preliminary assessment undertaken by the former DER. On 27 September 2017 the applicant provided a targeted flora survey and a targeted fauna survey to DWER. As discussed within the relevant clearing Principles, the surveys were deemed to be adequate to determine impacts to conservation significant flora and fauna species.

Other Relevant Approvals

The Shire of Broome (the Shire) advised that the use of the land for irrigated fodder production is consistent with the land-use objectives of the Shire's Local Planning Scheme No.6, under which the subject land is zoned 'General Agriculture'. The Shire notes that "Development Approval was granted to Anna Plains Station on 22 September 2016 for an 'Agriculture – Intensive Land-Use' encompassing land the subject of the current proposal" (Shire of Broome, 2016). The Shire further advised that "Development Approval is not required in relation to the current application and the Shire does not wish to register any objections to the clearing as proposed" (Shire of Broome, 2016).

On 17 October 2016, a DER Delegated Officer provided notice (as required by section 24GB s9 of the *Native Title Act 1993*) (NT Act) and an opportunity to comment on the application to the Kimberley Land Council and wrote to the Nyangumarta-Karajarri Aboriginal Corporation (NKAC) (on behalf of the Nyangumarta-Karajarri native title holders). The Kimberley Land Council advised that the directors of the NKAC were notified and advised the following:

- "NKAC formally requests on behalf of the Nyangumarta-Karajarri native title holders that Anna Plains Cattle Co Pty Ltd (the proponent) undertake an Aboriginal Heritage Survey before any vegetation clearance takes place" (Kimberley Land Council, 2016).

It is the applicant's responsibility to comply with all *Aboriginal Heritage Act 1972* and NT Act obligations.

The application area occurs within the Canning-Kimberley Groundwater Area proclaimed under the *Rights in Water and Irrigation Act 1914* (RIWI Act). In this area a RIWI Act section 5C licence to take groundwater and a RIWI Act section 26D licence to construct or alter a well are required for any groundwater supply bores.

The applicant has a current groundwater licence (GWL160619) with an annual entitlement of 600,000 kilolitres to irrigate up to 40 hectares of pasture. The applicant has applied to increase their allocation to 2.1 gegalitres and increase the area under irrigation to 140 hectares. The applicant is required to undertake a H3 hydrogeological report and a pump test to progress the water licence, and the applicant is currently commissioning these. The data from the pump test and report will be assessed by DWER's North West Region before the groundwater licence is issued.

The greater bilby is protected under the EPBC Act. As a matter of national environmental significance, any action that has, will have, or is likely to have a significant impact on the greater bilby will require approval under the EPBC Act.

Any activities with a likelihood of impacting fauna specially protected under the WC Act (including clearing activities) and the relocation of fauna require a fauna licence pursuant to Regulation 15 of the *Wildlife Conservation Regulations 1970*.

On 9 September 2016, the applicant applied to the former Department of Lands for a Pastoral Diversification Permit (to undertake irrigated agriculture activities), as provided for under section 120 of the *Land Administration Act 1997*. The applicant requested to alter an existing diversification permit, in order to increase the area of irrigated crops on Anna Plains Station, to expand on the feeding and finishing options for cattle. The revised diversification permit application area incorporates the entirety of the current clearing permit application area.

On 6 October 2016 the former Department of Lands provided a copy of a draft pastoral diversification permit to the former DER. The draft permit includes a condition that requires a weed monitoring system to be established to cover the permit area and a 50 metre buffer area beyond the permit area boundary. The condition requires that if any of the intended crop species are found outside the permit area, they are to be controlled immediately (Department of Lands, 2016).

Methodology References:
Department of Lands (2016)
Kimberley Land Council (2016)
Shire of Broome (2016)

4. References

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- Department of Lands (2016) Referral Application and Draft Permit for Pastoral Diversification Amendment Application. Department of Lands, Western Australia.
- Department of Biodiversity, Conservation and Attractions (DBCA) (2017) Advice received from the Department of Biodiversity, Conservation and Attractions on 23 October 2017 for Clearing Permit Application CPS 7270/1 (DER Ref A1554686)
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- Department of Environment Regulation (DER) (2017) Site Inspection Report for Clearing Permit Application CPS 7270/1. Site inspection undertaken 21/02/2017. Department of Environment Regulation, Western Australia (DER Ref A1394034).
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- Pavey, C. (2006) National Recovery Plan for the Greater Bilby *Macrotis lagotis*. Northern Territory Department of Natural Resources, Environment and the Arts.
- Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.
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<http://florabase.dpaw.wa.gov.au/> (Accessed November 2017).

Winter, J., Woinarski, J. and Burbidge, A. (2016). *Lagorchestes conspicillatus*. The IUCN Red List of Threatened Species 2016: Accessed November 2017.