GOVERNMENT OF
WESTERN AUSTRALIA

# CLEARING PERMIT

*Granted under section 51E of the Environmental Protection Act 1986*

**PERMIT DETAILS**
Area Permit Number: CPS 8511/1
Duration of Permit: From 5 October 2019 to 5 October 2021

**PERMIT HOLDER**
Forshaw Pastoral Company Pty Ltd

**LAND ON WHICH CLEARING IS TO BE DONE**
Lot 39 on Deposited Plan 238417, Eighty Mile Beach, (Nita Downs Station)
Lot 41 on Deposited Plan 238418, Eighty Mile Beach (Nita Downs Station)

**AUTHORISED ACTIVITY**
The Permit Holder shall not clear more than 250 hectares of native vegetation within the area cross hatched yellow on attached Plan 8511/1.

**CONDITIONS**

**1. Avoid, minimise and reduce the impacts and extent of 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.

**2. Direction of Clearing**
The permit Holder shall conduct clearing in a progressive manner towards remnant vegetation to allow fauna to move into adjacent native vegetation ahead of the clearing activity.

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

**4. 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 areas cross-hatched yellow on attached Plan 8511/1 for the greater bilby (*Macrotis lagotis*), including the identification and inspection of burrows, and determination of whether burrows are being utilised by greater bilbies.
(b) Where evidence of recent burrow use is identified under condition 4(a) of this Permit, the Permit Holder shall;
  (i) engage a *fauna specialist* to flag the location of the active burrow/s;
  (ii) not clear within five metres of the flagged burrow/s;
  (iii) engage a *fauna specialist* to monitor with cameras, the flagged burrow/s for a maximum of five days, or until such time that greater bilbies have been observed to independently move on from the burrow/s; and
  (iv) immediately prior to clearing, engage a *fauna specialist* to re-inspect any flagged burrow/s for the presence of greater bilbies.

(c) In the event that greater bilbies are identified utilising any flagged burrow/s under condition 4(b)(iv) of this Permit, the Permit Holder shall engage a *fauna specialist* to remove and relocate the identified greater bilbies, in accordance with a fauna licence pursuant to Section 28 of the *Biodiversity Conservation Regulations 2018*.

(d) Where active greater bilby burrows are identified under condition 4(a) of this Permit, and/or greater bilbies are relocated under condition 4(c) of this Permit, the Permit Holder shall include the following in a report submitted to the Department of Water and Environmental Regulation:

(i) The location of any active greater bilby burrows identified, 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;

(ii) a description of the camera monitoring measures undertaken under condition 4(b)(iii) of this Permit;

(iii) the date and time of greater bilbies recorded as independently moving from a flagged burrow;

(iv) the gender of each greater bilby captured under condition 4(c) of this Permit;

(v) the location of any greater bilbies, as referred to under condition 4(a) of this Permit, 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;

(vi) the date, time, vegetation type and weather conditions at each location where greater bilbies are captured under condition 4(d)(v) of this Permit;

(vii) the scientific name and gender of each greater bilby relocated under condition 4(c) of this Permit;

(viii) the location of any greater bilbies, identified in accordance with condition 4(a) of this Permit, 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;

(ix) the date, time, vegetation type and weather conditions at each location where greater bilbies are relocated under condition 4(d)(viii) of this Permit;

(x) the name of the *fauna specialist* that relocated fauna under condition 4(c) of this Permit; and

(xi) a copy of the fauna licence authorising the relocation of fauna under condition 4(c) of this Permit.

**5. 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 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;

(ii) the date that the area was cleared;

(iii) the size of the area cleared (in hectares);

(iv) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 1 of this Permit; and

(v) actions taken in accordance with conditions 2, 3 and 4 of this Permit.

**6. 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 4 and 5 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 23 June 2019, the Permit Holder must provide to the *CE*O a written report of records required under condition 4 and 5 of this Permit where these records have not already been provided under condition 6(a) of this Permit.

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

***CEO*** means the Chief Executive Officer of the Department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986;*

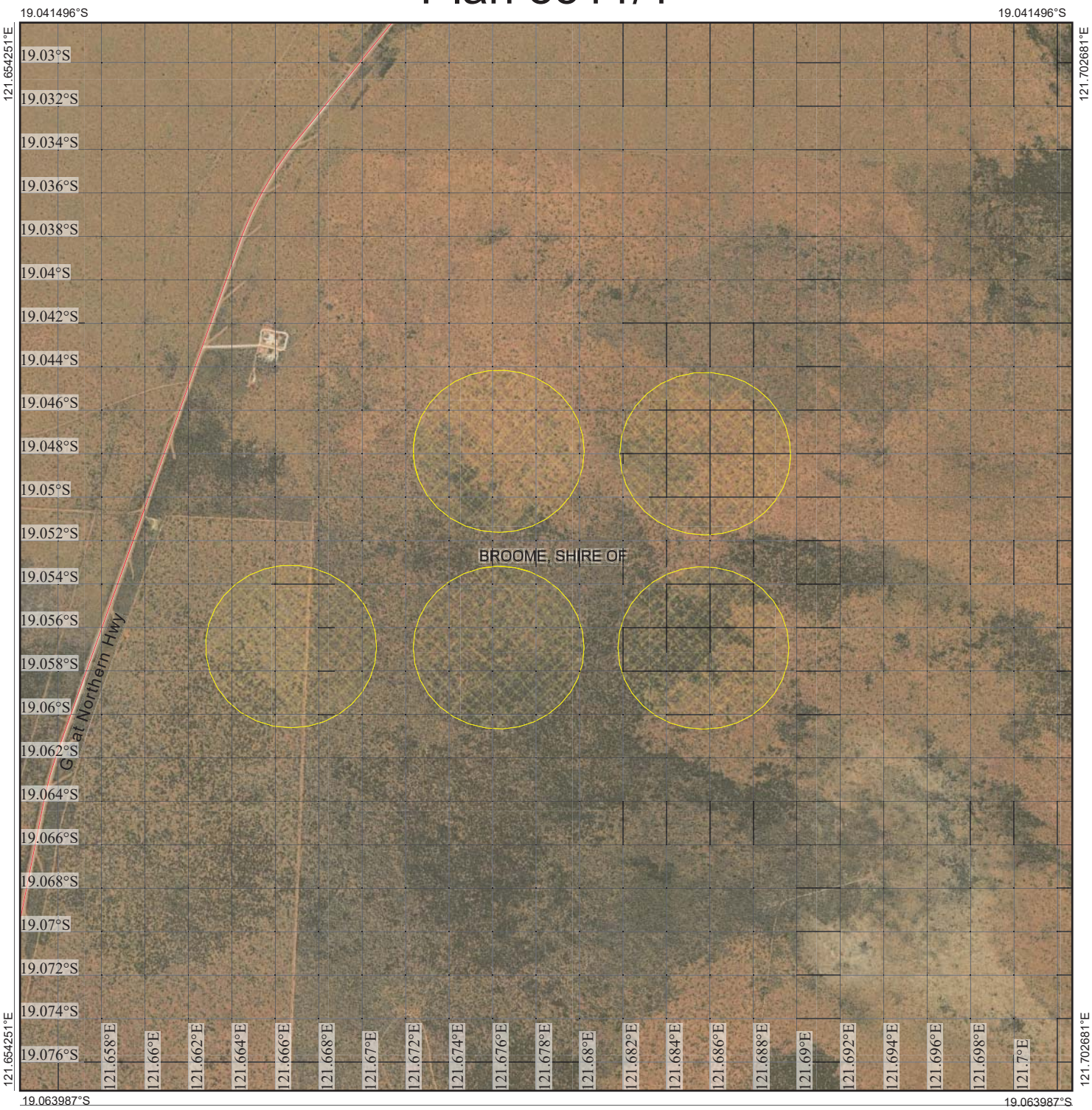
***fauna specialist*** means a person who holds a tertiary qualification specializing in environmental science or equivalent, and has a minimum of 2 years work experience in fauna identification and surveys of fauna native to the region being inspected or surveyed, and who holds a valid fauna licence issued under the *Biodiversity Conservation Act 2016*.

Mathew Gannaway
MANAGER
NATIVE VEGETATION REGULATION

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

5 September 2019

# Plan 8511/1




## Legend

- Imagery
- Clearing Instruments Activities
- Local Government Authority

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(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

Mathew Gannaway ..... Date 5 September 2019

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

GOVERNMENT OF WESTERN AUSTRALIA

Government of Western Australia
Department of Water and Environmental Regulation

# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

**Permit application No.:** 8511/1
**Permit type:** Area Permit

### 1.2. Applicant details

**Applicant's name:** Forshaw Pastoral Company Pty Ltd

### 1.3. Property details

**Property:** Lot 41 on Deposited Plan 238418, Eighty Mile Beach
Lot 39 on Deposited Plan 238417, Eighty Mile Beach
**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: |
|---|---|---|---|
| 250 | | Mechanical Removal | Grazing & pasture |

### 1.5. Decision on application

**Decision on Permit Application:** Grant
**Decision Date:** 5 September 2019
**Reasons for Decision:**

The clearing permit application has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986* (EP Act). It has been concluded that the proposed clearing may be at variance to principles (a), (b) and (g), is not likely to be at variance to principles (c), (d), (f), (h), (i) and (j), and is not at variance to principle (e).

This application involves a proposed clearing area that DWER historically granted a clearing permit (purpose permit) for on 27 September 2017, being Clearing Permit CPS 7122/1. The applicant initially applied to clear up to 800 hectares of native vegetation under CPS 7122/1, however later amended the application area to 250 hectares to reduce environmental impacts. The applicants intention is to now replace e CPS 7122/1 Purpose Permit with an Area Permit to allow for a future permit transfer, noting that Purpose Permits are unable to be transferred.

No additional significant environmental impacts have been identified within the asssessment of this application, therefore the below-mentioned impacts are consistent with those identified within the Decision Report for CPS 7122/1.

Based on the assessment of the application area, the Delegated Officer determined that:

- the application area may be necessary for the maintenance of significant habitat for the greater bilby (*Macrotis lagotis*);
- the proposed clearing activities may result in incedental greater bilby and spectacled hare-wallaby fatalities; and
- the proposed clearing may cause appreciable land degradation in the form of wind erosion between clearing and crop establishment.

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

- pre-clearance surveys to identify the greater bilby 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, brush-tailed mulgara and spectacled hare-wallaby to move into adjacent habitat; and
- the requirement to obtain a fauna licence issued pursuant to the *Biodiversity Conservation Regulations 2018.*

To minimise the potential for appreciable land degradation, the clearing permit contains conditions 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

**Clearing Description** The applicant proposes to clear up to 250 hectares of native vegetation (comprising five 50 hectare pivots) within Lot 39 on Deposited Plan 238417 and Lot 41 on Deposited Plan

238418, Eighty Mile Beach (Nita Downs Station), for the purpose of establishing irrigated fodder crops.

This application involves a proposed clearing area that DWER historically granted a clearing permit (purpose permit) for on 27 September 2017, being Clearing Permit CPS 7122/1.

The applicant initially applied to clear up to 800 hectares of native vegetation under CPS 7122/1, however later amended the application area to 250 hectares to reduce environmental impacts. The applicants intention is to now replace CPS 7122/1 Purpose Permit with an Area Permit to allow for a future permit transfer, noting that Purpose Permits are unable to be transferred.

**Vegetation Description**

According to available datsets, there is one broad vegetation association mapped over the application area, being Beard vegetation association 699, which is described as shrublands, pindan; *Acacia eriopoda* shrubland with scattered low bloodwood (*Eucalyptus dichromophloia*) and *Eucalyptus setosa* over soft and curly spinifex on sandplain (Shepherd et al., 2001).

A flora survey of the application area undertaken between 5 and 9 June 2017 identified that the application area is comprised of open woodland and shrubland over hummock grassland understorey dominated by soft spinifex (*Triodia epactia*) with sparse to moderate amounts of tussock grasses (including *Chrysopogon pallidus, Eriachne obtusa* and *Aristida* sp.) (Biota Environmental Services, 2017).

**Vegetation Condition**

The condition of the vegetation was established via a site inspection undertaken by Officers of the former Department of Environment Regulation (DER) and a flora survey undertaken by Biota Environmental Services (Biota Environmental Services, 2017; DER, 2017). These identified that the application area is in the following condition:

- Excellent: described as vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994); to
- Very Good: described as vegetation structure altered; obvious signs of disturbance (Keighery, 1994).

**Soil type**

The soils within the application area are mapped as the Yeeda and Nita Land Systems, which include the following:

- The Yeeda Land System is described as sandplains of deep yellow and red sands with occasional dunes; and
- The Nita Land System is described as sandplain with deep red sands that support sparse low tree steppe grassland.

**Comment**

The local area considered in the assessment of this application is defined as a 50 kilometre radius measured from the centre of the application area.

**Figure 1. Application Area**

## 3. Assessment of application against clearing principles

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

**Proposed clearing may be at variance to this Principle**

The applicant proposes to clear up to 250 hectares of native vegetation (comprising five 50 hectare pivots) within Lot 39 on Deposited Plan 238417 and Lot 41 on Deposited Plan 238418, Eighty Mile Beach (Nita Downs Station), for the purpose of establishing irrigated fodder crops.

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, which comprises an area of approximately 2,803 square kilometres and extends from the north-eastern edge of the Pilbara bioregion through to Bidyadanga. 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 and sometimes loamy soils throughout (DER, 2017) and a flora survey undertaken by Biota Environmental Sciences identified that the typical habitat of the application area comprised flat pindan sandplain, with soils comprising a substrate of orange-red sand overlying red sand (Biota Environmental Sciences, 2017).

The site inspection and flora survey identified that the vegetation types were consistent with the Nita Land System and typical of pindan sandplain vegetation in the locality, comprising open woodlands and shrublands over hummock grassland understorey dominated by soft spinifex (*Triodia epactia*) with sparse to moderate amounts of tussock grasses (including *Chrysopogon pallidus, Eriachne obtusa* and *Aristida* sp.) (DER, 2017; Biota Environmental Services, 2017).

The flora survey identified that the dominant trees within the application area comprised *Corymbia greeniana* and *Corymbia zygophylla*, with scattered *Corymbia flavescens* and *Bauhinia cunninghamii*. *Acacia drepanocarpa* was the dominant medium to tall shrub species, with other species including *Acacia colei* and occasional *Acacia sericophylla, Acacia tumida* var. *kulparn, Gardenia pyriformis* subsp. *keartlandii* and *Grevillea wickhamii* subsp. *macrodonta*. The most common low shrubs comprise *Chamaecrista symonii, Corchorus incanus* subsp. *incanus, Jacksonia aculeata, Sida* sp. Pindan (B.G. Thomson 3398), *Solanum dioicum* and *Waltheria indica*. The most common herbs comprise *Calandrinia strophiolata, Euphorbia vaccaria* subsp. *vaccaria, Polycarpaea corymbosa, Pterocaulon serrulatum, Ptilotus polystachyus* and *Trianthema pilosum* (Biota Environmental Sciences, 2017).

The majority of the vegetation within the application area is considered to be in a very good to excellent (Keighery, 1994) condition (DER, 2017; Biota Environmental Services, 2017). Only three weed species were recorded during a flora survey of the application area, and these were present at a small number of locations (Biota Environmental Services, 2017).

The local area considered in the assessment of this application is defined as a 50 kilometre radius surrounding the application area. The local area is extensively vegetated and contains approximately 99 per cent native vegetation cover.

According to available datasets, there are no Threatened Ecological Communities (TECs) recorded within the local area.

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 5.9 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 flora survey and site inspection of the application area did not identify any shrublands comprising teatree thicket (DER, 2017; Biota Environmental Services. 2017). Therefore, the application area is not representative of this PEC, and the proposed clearing is not likely to impact on this PEC.

According to available datasets there are seven Priority flora species recorded in the local area, these being *Tephrosia andrewii* (Priority 3), *Lawrencia* sp. Anna Plains (N.T. Burbidge 1433) (Priority 3), *Tribulopis marliesiae* (Priority 3), *Seringia katatona* (Priority 3), *Tephrosia pedleyi* (Priority 3), *Atriplex eremitis* (Priority 1) and *Terminalia kumpaja* (Priority 3). The closest of these to the application area is *Atriplex eremitis* located approximately eight kilometres from the application area, however the application area is not considered to provide suitable habitat for this species (DER, 2017).

The previous Decision Report associated with the assessment of CPS 7122/1 identified a total of nine priority flora species, however since that time four of these species are no longer considered conservation significant (on the basis of increased survey effort in the region identifying higher numbers of these species than previously thought). In addition to these changes, *Tephrosia pedleyi* and *Atriplex eremitis* have since been recorded within the local area.

According to available datasets, the closest threatened flora record is located approximately 53 kilometres south east of the application area. A site inspection identified that the application area provides suitable habitat for this species (DER, 2017).

In consultation with the former Department of Parks and Wildlife, the applicant commissioned Biota Environmental Sciences to undertake a targeted flora survey of the application area in June 2017. DBCA provided comment on the adequacy of the flora survey and advised that "overall, based on the current information, it would appear that the timing, methodology and intensity of the targeted survey are adequate for this particular application" (DBCA, 2017a).

The flora survey identified two Priority flora species within the application area, being *Seringia katatona* and *Phyllanthus eremicus* (Biota Environmental Services, 2017). Since the time of survey *Phyllanthus eremicus* has been excluded from the priority flora species list maintained by DBCA, as it is more widespread and common than previously thought.

*Seringia katatona* was found in all but two of the proposed pivots surveyed. Scattered individuals of this species were recorded in three of the five pivots that make up this application. A total of 443 stems were recorded from approximately 25 locations inside the pivot areas, with a further 11 stems recorded just outside one of the pivots during limited searches outside of the application area (Biota Environmental Services, 2017). The flora survey noted that it is likely that *S. katatona* occurs more broadly through pindan vegetation on Nita Downs Station at a similar density to that observed in the pivots, as there is abundant suitable and contiguous habitat in the vicinity, and a number of collections to the east of Nita Downs Station (Biota Environmental Services, 2017).

DBCA provided comment on the findings of the flora survey and advised that *Seringia katatona* has a broad distribution, extending 260 kilometres, is known from numerous locations and is relatively common where it occurs (DBCA, 2017a). DBCA

noted that this species was recorded relatively frequently within the application area, and noted that the survey report conservatively estimated that the application area encompasses approximately 4 per cent of the local extent of suitable habitat for these species (DBCA, 2017a). DBCA concluded that while exact proportional local impact is difficult to determine based on the limited information available, it is likely that there are substantial areas of continuous habitat between and beyond the application areas, and that the proposed clearing is unlikely to affect the conservation status of this species (DBCA, 2017a).

Excluding marine species, there are records of 52 conservation significant fauna species recorded within the local area (Parks and Wildlife, 2007- ). Of these, the application area contains suitable, and potentially significant habitat for the greater bilby (*Macrotis lagotis*) and spectacled hare-wallaby (*Lagorchestes conspicillatus* subsp. *leichardti*) (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 secondary evidence of the greater bilby in the form of diggings and a relatively recent scat located on the boundary of the south western most pivot proposed for clearing. There was no evidence of the spectacled hare-wallaby recorded (Broome Bird Observatory, 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 of the other abovementioned conservation significant fauna species.

As the application area contains vegetation predominantly in a very good to excellent (Keighery, 1994) condition, one Priority 3 flora species and habitat that is utilised by 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, the applicant will be required to:

- Conduct pre-clearance surveys to identify greater bilbies within the application area;
- Relocate any greater bilbies recorded during the pre-clearance survey; and
- Undertake directional clearing to allow fauna to move into adjacent habitat ahead of the clearing activity.

While the application area may contain a high level of biodiversity, it is acknowledged that the values present within the application area also occur within the immediate vicinity, and may occur throughout the larger Nita Downs Station (comprising approximately 210,000 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 biodiversity in the local area, and will not lead to an unacceptable risk to the environment.

**(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.**

**Proposed clearing may be at variance to this Principle**

Noting the soil and vegetation type identified during a site inspection and targeted fauna survey, as described within Principle (a), it is considered that the application area contains suitable habitat for the greater bilby and spectacled hare-wallaby (DER, 2017; Biota Environmental Sciences, 2017).

The greater bilby (state classified as Threatened (Vulnerable) and Commonwealth classified as Vulnerable) is known from four records within 40 kilometres of the application area (Parks and Wildlife, 2007- ) and 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). The greater bilby once occurred across 70 per cent of mainland Australia, but has now disappeared from up to 90 per cent of its historical range and occurs in fragmented populations in south-western Queensland, drier areas of the Northern Territory, and northern Western Australia (Pavey, 2006).

In Western Australia, the species occurs in parts of the Gibson Desert and Great Sandy Desert bioregions, parts of the Pilbara bioregion, the Dampierland Interim Biogeographic Regionalisation of Australia (IBRA) 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 two known records within a 40 kilometre radius of the application area (Parks and Wildlife, 2007- ). This species 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).

A targeted fauna survey was conducted for the greater bilby and spectacled-hare wallaby by the Broome Bird Observatory in June 2017. As with the flora survey, Broome Bird Observatory also assessed Clearing Permit Application CPS 7342/1 at the time of the survey. The survey included 100 metre transect searches and two hectare plots searches within each of the proposed pivots for both species. DBCA provided comment on the adequacy of the fauna survey methodology and advised that “the fauna survey was adequate to determine, within reason, the presence of greater bilby and spectacled hare wallaby individuals and thus the direct impacts of the proposed clearing” (DBCA, 2017b).

The fauna survey did not find evidence of the spectacled hare-wallaby within the application area, or within the surrounding area (Broome Bird Observatory, 2017). The survey noted that the fire age within the landscape was recent, resulting in low and small *Triodia* hummocks, which were deemed unsuitable for spectacled hare-wallaby sheltering sites. The survey concluded that it is unlikely that any significant population, or even any individuals, occurred at the time of the assessment (Broome Bird

Observatory, 2017). Given the findings of the fauna survey, the application area is considered unlikely to provide significant habitat for this species.

The fauna survey identified greater bilby activity in the form of diggings and a scat on the boundary of the south western most pivot proposed for clearing. The survey noted that the digging evidence was found in open *Senna notabilis* shrubland, where the majority of individual plants had been excavated at their bases (Broome Bird Observatory, 2017). The fauna survey noted that while greater bilbies are likely to occur at times within the proposed pivot areas, the evidence suggests that this species is in low abundance within these areas, and very few individuals are likely to use the pivot areas for either burrowing or foraging (Broome Bird Observatory, 2017).

The fauna survey concluded that based on habitat assessments outside of the pivot areas, where stands of *Acacia monticola* and *Senna notabilis* were also recorded, it is expected the species will occur in similar abundances within the surrounding landscape (Broome Bird Observatory, 2017).

DBCA provided comment on the findings of the fauna survey and specifically on the proposed impacts to the greater bilby, separating impacts to individual, local population and species level. With regards to impacts to individuals, DBCA advised that "as recent signs of bilby were recorded within [one of the proposed pivots], the proposed clearing…would likely have a direct impact on individuals" (DBCA, 2017b).

With regards to impacts to the local population DBCA advised that "evidence of recent activity [within and within relatively close proximity to the application area] indicates this area likely forms part of the home range of at least one individual, and it is therefore likely a local population exists. However, it is recognised that a local population would be nomadic and therefore may occur sporadically within the application areas and in low abundances (specifically within the pivot areas), and comprise of a few individuals that use the proposed pivot areas for either burrowing, foraging and/or traversing…[However] there would likely be a risk of indirect impacts to the local population (and individuals) associated with the loss of habitat, and increased cattle density/impacts in vegetation adjacent to the pivots…(DBCA, 2017b).

With regard to impacts at a species level DBCA advised that "while the loss of a few individuals or a local population will not cause the conservation status of the species to be elevated, the cumulative impacts on the species in many locations should be considered in the context of the overarching decline" (DBCA, 2017b).

DBCA recommended that "If clearing is approved (without relocating the pivots), consider clearing techniques that will minimise or avoid direct impacts to individuals" (DBCA, 2017b).

With regard to other conservation significant fauna, a further 46 migratory avian species (ten threatened, one Priority 4 and 35 protected under international agreement) have been recorded within 40 kilometres of the application area (Parks and Wildlife, 2007- ). These species likely utilise habitat within the Eighty Mile Beach RAMSAR site, located approximately 15 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.

There are records of four other conservation significant fauna species within a 40 kilometre radius, being the peregrine falcon (*Falco peregrinus*) (Other Specially Protected Fauna), princess parrot (*Polytelis alexandrae*) (Priority 4), Dampierland plain slider (*Lerista separanda*) (Priority 2), and golden bandicoot (*Isoodon auratus* subsp. *auratus*) (Threatened). The princess parrot, Dampierland plain slider and golden bandicoot each have one historical record within a 40 kilometre radius of the application area, dated to 1990, 1984 and 1898 respectively (Parks and Wildlife, 2007- ).

Noting the limited historical records within close proximity, it is unlikely that the proposed clearing will impact on significant habitat for these species.

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.

In summary, noting the extent of clearing proposed (250 hectares) and that greater bilby activity was identified bordering the application area, the application area may be necessary for the maintenance of, and may comprise, significant habitat for the greater bilby. Therefore, the proposed clearing may be at variance to this Principle.

To minimise direct impacts to the greater bilby, the applicant will be required to:

- Conduct pre-clearance surveys to identify greater bilbies within the application area;
- Relocate any greater bilbies recorded during the pre-clearance survey; and
- Undertake directional clearing to allow fauna to move into adjacent habitat ahead of the clearing activity.

It is considered that with the fauna management measures outlined above, the proposed clearing will not lead to an unacceptable risk to the greater bilby and spectacled hare-wallaby.

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

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

According to available datasets, the closest threatened flora record is located approximately 53 kilometres south east of the application area and a site inspection identified that the application area provides suitable habitat for this species (DER, 2017).

The abovementioned threatened flora species is an erect, compact, multi-stemmed shrub that grows from 0.7 to 0.9 metres high which flowers 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- ). This species is state classified as Critically Endangered.

In consultation with the former Parks and Wildlife, the applicant commissioned Biota Environmental Sciences to undertake a targeted flora survey of the application area in June 2017. DBCA provided comment on the adequacy of the flora survey and advised that "overall, based on the current information, it would appear that the timing, methodology and intensity of the targeted survey are adequate for this particular application" (DBCA, 2017a).

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

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

**(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.**

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

According to available databases, there are no records of TECs within the local area. The nearest mapped TEC is the 'Assemblages of the organic springs and mound springs of Mandora Marsh area', located approximately 71.5 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.

**(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.**

**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).

As indicated in Table 1, the remaining extents of native vegetation within the Dampierland IBRA bioregion and mapped vegetation associations are all above the recommended 30 per cent threshold.

The local area is well 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 999,752.17 hectares.

Noting that 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.

**Table 1: Vegetation Extents**

| | Pre-European (ha) | Current Extent (ha) | Remaining (%) | Pre-European Extent in Parks and Wildlife Managed Lands (%) |
|---|---|---|---|---|
| **IBRA Bioregion*** | | | | |
| Dampierland | 8,343,944 | 8,319,879 | 99.7 | 1.7 |
| **Beard vegetation association in Bioregion*** | | | | |
| 699 | 1,976,313 | 1,974,958 | 99.9 | 0.5 |

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

**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 kilometres west of the application area. No wetlands, watercourses or riparian vegetation was identified within the application area (DER, 2017; Biota Environmental Services, 2017).

Noting the findings of the site inspection and flora survey, 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.

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

**Proposed clearing may be at variance to this Principle**
As discussed under Principle (a), the application area occurs within the Nita Land System, described as sandplain with deep red sands that support sparse low tree steppe grassland. A site inspection and flora survey of the application area identified the presence of red pindan sandy and sandy loam soils throughout (DER, 2017; Biota Environmental Services, 2017).

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

The Commissioner of Soil and Land Conservation (CSLC) provided comment on the proposed clearing of the initial application submitted by the applicant, which as discussed under Section 2, was for the proposed clearing of the same area that is subject to this application. The CSLC advised that "the risk of land degradation in the forms of salinity, waterlogging, eutrophication and water erosion occurring as a result of the intended land clearing and the proposed irrigation land use is assessed to be low" (CSLC, 2016).

The CSLC further advised that "the sandy and loamy pindan soils are potentially prone to wind erosion…However, the risk of wind erosion occurring as a result of the proposed clearing and irrigated agricultural development based on soil properties and site characteristics is assessed to be moderate. It is therefore likely to be manageable provided sufficient protective is maintained on the site…" (CSLC, 2016).

Noting the advice from the CSLC, and size of the application area (250 hectares), the proposed clearing may result in wind erosion, which has the potential to result in appreciable land degradation should the application area remain bare for an extended period. Therefore, the proposed clearing 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.

**(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.**

**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 Parks and Wildlife managed lands. The closest 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 15 kilometres west of the application area.

Noting the separation distance between these conservation areas and the application area, and the extent of native vegetation within the local area, the proposed clearing is considered unlikely to impact on the environmental values of these areas.

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

**(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.**

**Proposed clearing is not likely to be at variance to this Principle**
As discussed under Principle (f), according to available databases, no wetlands or watercourses are mapped within the application area. The closest major wetland or watercourse is the Eighty Mile Beach RAMSAR site located approximately 15 kilometres west of the application area.

Noting the distance of the application area to the Eighty Mile Beach RAMSAR site, 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). The CSLC advised that "the risk of land degradation in the form of salinity…is assessed to be low" (CSLC, 2016). Noting this advice, and that the local area is highly vegetated, 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.

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

**Proposed clearing is not likely to be at variance to this Principle**
The application area is located within the Dampierland IBRA bioregion which 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 250 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 highly permeable red sands (DER, 2017) 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, particularly given that portions of remnant vegetation would remain between the proposed pivot areas.

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. Furthermore, the CSLC advised that the risk of flooding as a result of the proposed clearing is low (CSLC, 2016).

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

### Planning instruments and other relevant matters.

The clearing permit application was advertised on the DWER website on 30 April 2019 with a 14 day submission period. No public submissions have been received in relation to this application.

The greater bilby is protected under the *Environment Protection and Biodiversity Conservation Act 1999* (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 *Biodiversity Conservation Act 2016* (including clearing activities) and the relocation of fauna require a fauna licence pursuant to the *Biodiversity Conservation Regulations 2018*.

The Department of Planning, Lands and Heritage has issued a pastoral diversification permit to the applicant, which encompasses the clearing permit application area. The 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.

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 holds a current groundwater licence (GWL165440(6)) with an annual entitlement of 500,000 kilolitres (to irrigate one 40 hectare pivot). A further 3,500,000 kilolitres is held in reserve pending appropriate information to support the proposed increase in development. The Department is currently assessing the groundwater licenses associated with the proposed increase in groundwater uptake within Nita Downs Station under the *Rights in Water and Irrigation Act 1914*.

The Shire of Broome has advised that “under the Shire’s Local Planning Scheme No.6 (LPS 6), the land the subject of the pastoral lease is zoned ‘General Agriculture’. The undertaking of pivot irrigation is consistent with the land-use objectives of the Shire’s Local Planning Strategy and LPS 6 and is exempt from the need to obtain development approval from the Shire of Broome. On this basis, the Shire does not wish to raise any objections to the application” (Shire of Broome, 2019).

The application area is located within the Karajarri (Area B) (WAD6100/1998, WCD2004/002) Native Title area, which was determined in 2004. No Aboriginal Ethnographic Heritage Survey has been conducted over the application area. It is the applicant’s responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

On 28 June 2019, a DWER Delegated Officer emailed the Karajarri Traditional Lands Association (Aboriginal Corporation) RNTBC (on behalf of the Karajarri (Area B) claimants), providing notice as required by section 24GB s9 of the *Native Title Act 1993*, and providing an opportunity to comment on the application. A response has not yet been received.

## 4. References


Bastin, G. and the ACRIS Management Committee, Rangelands (2008) Taking the Pulse, published on behalf of the ACRIS Management Committee by the National Land & Water Resources Audit, Canberra.

Biota Environmental Services (2017) Nita Downs Irrigation Pivots Threatened Flora Survey. Additional Information provided for Clearing Permit Applications CPS 7342/1 and CPS 7122/1. (DER Ref A1487839).

Broome Bird Observatory (2017) Greater Bilby and Spectacled Hare-wallaby assessment. Additional Information provided for Clearing Permit Applications CPS 7342/1 and CPS 7122/1 (DER Ref A1485874).

Commissioner of Soil and Land Conservation (CSLC) (2016); Land Degradation Advice and Assessment Report for clearing permit application CPS 7122/1 received 26 August 2016; Department of Agriculture and Food Western Australia (DER Ref A1154980).

Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.

Department of Biodiversity, Conservation and Attractions (DBCA) (2017a) Flora advice received from the Department of Biodiversity, Conservation and Attractions on 21 August 2017 for Clearing Permit Applications CPS 7122/1 and 7342/1 (DER Ref A1508658).

Department of Biodiversity, Conservation and Attractions (DBCA) (2017b) Fauna advice received from the Department of Biodiversity, Conservation and Attractions on 8 August 2017 for Clearing Permit Applications CPS 7122/1 and 7342/1 (DER Ref A1503775).

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Winter, J., Woinarski, J. & Burbidge, A. (2016). *Lagorchestes conspicillatus*. The IUCN Red List of Threatened Species 2016: e.T11161A21954319. Accessed 14 September 2016.

**GIS Databases:**
-Aboriginal Sites of Significance
-DAFWA Heritage
-DBCA Estate
-DEC Covenant
-Groundwater salinity
-Hydrography, linear
-National Trust WA Covenant
-Remnant vegetation
-SAC bio datasets (accessed August 2019)
-Soils, Statewide
-Topographic contours
-Wetlands