



## CLEARING PERMIT

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

### PERMIT DETAILS

Area Permit Number: 6552/1

File Number: 2014/001088-1

Duration of Permit: From 22 August 2015 to 22 August 2017

### PERMIT HOLDER

Pardoo Beef Corporation Pty Ltd

### LAND ON WHICH CLEARING IS TO BE DONE

Lot 325 on Deposited Plan 403101, Eighty Mile Beach

Lot 1556 on Deposited Plan 70856, Eighty Mile Beach

### AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 180 hectares of native vegetation within the area hatched yellow on attached Plan 6552/1.

### CONDITIONS

#### 1. Management plan

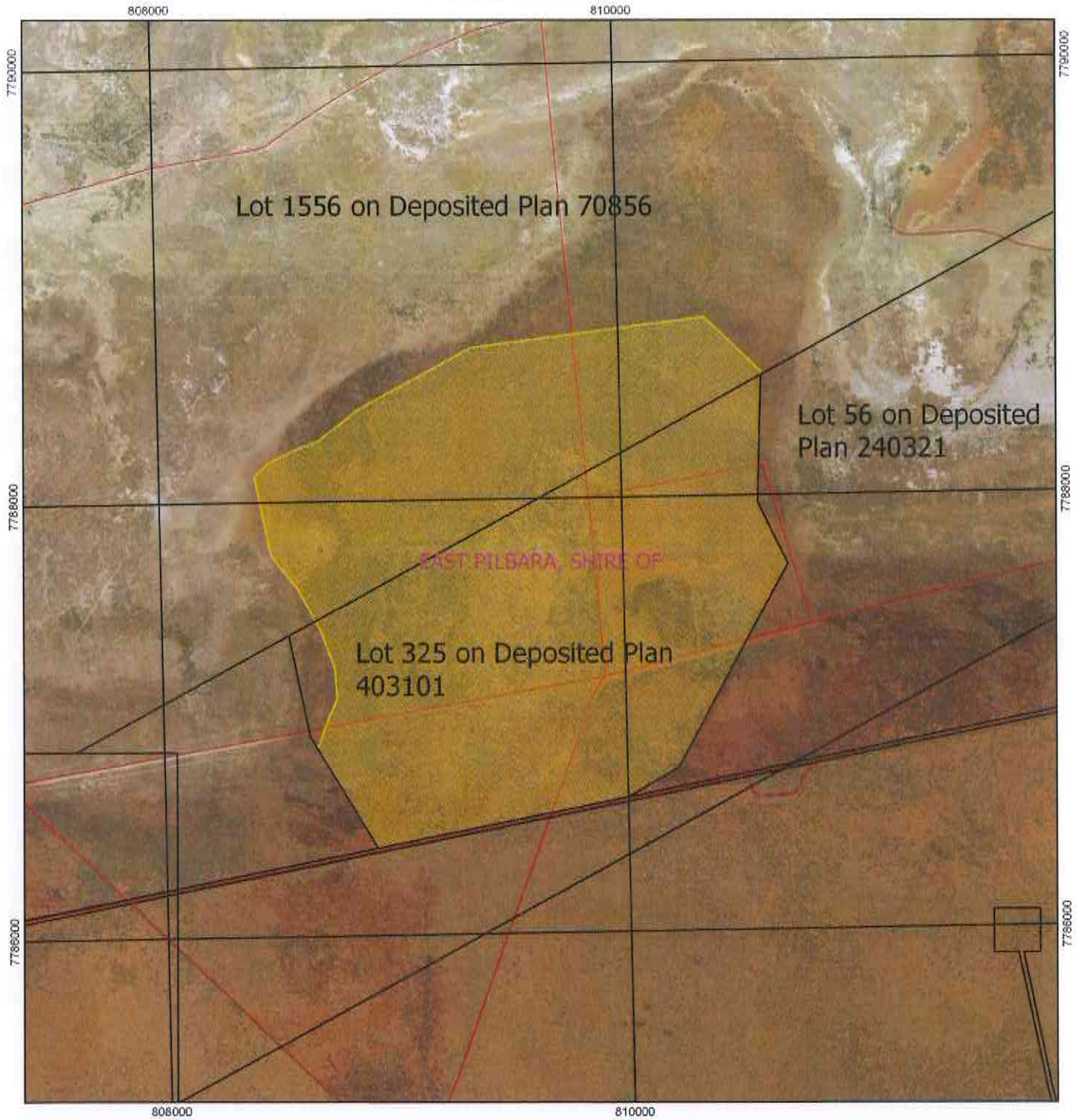
The Permit Holder must implement and adhere to the document, Pardoo Station Irrigation Management Plan, March 2015, version 1.

M Warnock  
SENIOR MANAGER  
CLEARING REGULATION





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

23 July 2015

# Plan 6552/1



## Legend

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



1:20,000

MGA 94  
Geocentric Datum of Australia 1994

*M Wameock* Date *23/7/15*  
M Wameock

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



GOVERNMENT OF  
WESTERN AUSTRALIA



## 1. Application details

### 1.1. Permit application details

Permit application No.: 6552/1  
Permit type: Area Permit

### 1.2. Proponent details

Proponent's name: Pardoo Beef Corporation Pty Ltd

### 1.3. Property details

Property: LOT 1556 ON DEPOSITED PLAN 70856 (Eighty Mile Beach 6721)  
LOT 325 ON DEPOSITED PLAN 403101 (Eighty Mile Beach 6721)  
Local Government Area: Shire of East Pilbara

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
180		Mechanical Removal	Pivot Irrigation

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 23 July 2015

## 2. Site Information

### 2.1. Existing environment and information

#### 2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
The vegetation under application is mapped as Beard vegetation association 32 which is described as shrublands, pindan; acacia shrubland with scattered low trees over Triodia spp. (Shepherd et al, 2001).  The area under application has been mapped within the Nita Land System, described as sandplains supporting shrubby soft spinifex grasslands with occasional trees (Department of Agriculture, 2004).	To clear 180 hectares of native vegetation within Lot 325 on Deposited Plan 403101 and Lot 1556 on Deposited Plan 70856 for the purpose of pivot irrigation, access tracks, fence lines, firebreaks, infrastructure, hay storage and operational areas.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994).	The condition of the vegetation under application was determined via aerial imagery.

## 3. Assessment of application against Clearing Principles

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

#### Comments Proposal is not likely to be at variance to this Principle

The application is to clear 180 hectares of native vegetation within Pardoo Pastoral Lease, for the purpose of pivot irrigation, access tracks, fence lines, firebreaks, infrastructure, hay storage and operational areas. The vegetation to be cleared is considered to be in a good (Keighery, 1994) condition and falls adjacent to areas previously cleared of native vegetation.

A survey of the vegetation types and condition within the Pilbara region of Western Australia mapped the area under application within the Nita Land System, described as sandplains supporting shrubby soft spinifex grasslands with occasional trees. The Nita Land System covers 11,250 square kilometres of the 181,723 square kilometres surveyed. Eighty two percent of the Nita Land System has been mapped in a very good condition (Department of Agriculture, 2004).

The local area (20 kilometre radius) surrounding the application area retains approximately 99 percent vegetation. The mapped Beard vegetation association (32) and Interim Biogeographic Regionalisation of Australia bioregion retain approximately 99 percent native vegetation (Government of Western Australia, 2013).

The area under application falls 50 metres from the Eighty Mile Beach Ramsar Site. The seasonally inundated wetlands that form part of the Ramsar site are recognised as being of international significance to migratory and resident shorebirds. 'The coastline, mudflats, ephemeral lakes and marshland springs of Eighty Mile Beach are considered to be one of the three most important sites for migratory shorebirds in Australia. It is estimated that more than 500,000 shorebirds use Eighty Mile Beach as a migration terminus each year' (Parks and Wildlife 2014).

Thirty fauna species of conservation significance have been recorded within the local area (20 kilometres radius) (Parks and Wildlife, 2007-). Twenty eight of these are avian, highlighting the significance of the adjoining vegetation to shorebirds. Five of these avian species are listed as rare or likely to become extinct under the Wildlife Conservation Act 1950. Given the position of the application area within the landscape, it is not likely to form significant habitat for the two conservation significant terrestrial fauna species recorded from the local area.

No rare flora, priority ecological communities or threatened ecological communities have been recorded within the local area. Two flora species listed as priority 3 by the Department of Parks and Wildlife have been recorded within the local area. Priority 3 taxa are defined as taxa that are known from collections from several localities not under imminent threat, or from few but widespread localities with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Given this and as the priority flora is mapped over 15 kilometres from the application area, clearing the vegetation under application is not likely to impact on priority flora.

Although the application area falls in close proximity to significant fauna habitat, given the extent of vegetation within the local area as well as the extent and condition of the Nita Land System, the application area is not likely to contain a high level of biodiversity. Therefore the proposed clearing is not likely to be at variance to this clearing Principle.

#### Methodology

##### References:

Parks and Wildlife (2007- )  
Department of Agriculture (2004)  
Parks and Wildlife (2014)  
Government of Western Australia (2013)  
Keighery (1994)

##### GIS Datasets:

- SacBiodataSets - accessed June 2015

### **(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.**

#### Comments

##### **Proposal is not likely to be at variance to this Principle**

The area under application falls within 50 metres of the Eighty Mile Beach Ramsar Site. The seasonally inundated wetlands that form part of the Ramsar site are recognised as being of international significance to migratory and resident shorebirds. 'The coastline, mudflats, ephemeral lakes and marshland springs of Eighty Mile Beach are considered to be one of the three most important sites for migratory shorebirds in Australia. It is estimated that more than 500,000 shorebirds use Eighty Mile Beach as a migration terminus each year' (Parks and Wildlife 2014).

Given the position of the application area within the landscape, it is not likely to form significant habitat for the two conservation significant, terrestrial fauna species recorded from the local area. As the local area is highly vegetated (99 percent) the application area is not likely to be significant in the movement of fauna through the landscape.

The application is for the purpose of establishing 40 hectare pivot irrigation circles for growing sorghum and forage oats. These species will require inputs of nitrogen and phosphorus in order to establish. During high rainfall events and given the proximity to the Ramsar site, there is the potential for fertiliser runoff into this sensitive area causing eutrophication (Parks and Wildlife, 2014; Commissioner of Soil and Land Conservation, 2011). The retention of an adequate buffer to the Ramsar site as well as adequate irrigation and fertiliser management would likely mitigate this risk (Commissioner of Soil and Land Conservation, 2011).

The applicant has retained a 50 metre buffer to the Ramsar site. An Irrigation Management Plan for the proposed pivot irrigation has been provided, addressing the potential nutrient loss into adjoining areas. Management actions include (Advanced Fertigation Systems, 2015):

- A closely monitored and managed irrigation schedule to ensure all water is consumed in-situ with no runoff.
- Irrigation will cease prior to and during high rainfall events.
- Irrigation volumes will be calculated according to plant requirements.
- Nutrient input through irrigation.
- Nutrient input rates calculated using the values of the irrigation water supplemented with the calculated requirements of the crop.
- Minimum nutrient input laws applied to avoid build-up of any one particular nutrient.
- Monitoring of nutrient level at three bores that have already been established.

Given the above, the potential impacts to the fauna values of the Ramsar site are considered to be adequately managed and the application is not likely to be at variance to this clearing Principle.

**Methodology** References:  
 Advanced Fertigation Systems (2015)  
 Commissioner of Soil and Land Conservation (2011)  
 Parks and Wildlife (2007-)  
 Parks and Wildlife (2014)

GIS Datasets:  
 - SacBiodataSets - accessed June 2015

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

**Comments** **Proposal is not likely to be at variance to this Principle**  
 No rare flora species have been recorded within the local area (20 kilometre radius). Given this, and the amount of vegetation in the local area (99 percent), the application is not likely to be at variance to this clearing Principle.

**Methodology** GIS Databases:  
 - SAC Biodatasets - accessed June 2015

**(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.**

**Comments** **Proposal is not likely to be at variance to this Principle**  
 No threatened ecological communities have been recorded within 100 kilometres of the application area. Given this, the application is not likely to be at variance to this Principle.

**Methodology** GIS Databases:  
 - SAC Biodatasets - accessed June 2015

**(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.**

**Comments** **Proposal is not at variance to this Principle**  
 The area under application is located within the Dampierland Interim Biogeographic Regionalisation of Australia (IBRA) bioregion. This IBRA bioregion has approximately 99 percent of its pre-European vegetation extent remaining (Government of Western Australia, 2013).

The vegetation under application is mapped as Beard vegetation association 32 which retains approximately 99 percent of its pre-European vegetation extent within the Dampierland bioregion (Government of Western Australia, 2013).

The area under application is located within the Shire of East Pilbara, which retains approximately 99 percent of its pre-European vegetation extent (Government of Western Australia, 2013).

The local area (10 kilometre radius) retains approximately 99 percent native vegetation.

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

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

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DPaW Managed Lands (%)
IBRA Bioregion* Dampierland	8,343,938	8,319,872	99	1.2
Shire Shire of East Pilbara*	37,183,049	37,155,254	99	4
Beard Vegetation Association within Bioregion* 32	244,296	244,265	99	0

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

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

**Comments**

**Proposal is not likely to be at variance to this Principle**

The area under application occurs approximately 50 metres from the Eighty Mile Beach Ramsar Site at its closest point. The seasonally inundated wetlands that form part of the Ramsar site are recognised as being of international significance to migratory and resident shorebirds. 'The coastline, mudflats, ephemeral lakes and marshland springs of Eighty Mile Beach are considered to be one of the three most important sites for migratory shorebirds in Australia. It is estimated that more than 500,000 shorebirds use Eighty Mile Beach as a migration terminus each year' (Parks and Wildlife, 2014).

The application is for the purpose of establishing 40 hectare pivot irrigation circles for growing sorghum and forage oats. These species will require inputs of nitrogen and phosphorus in order to establish. During high rainfall events and given the proximity to the Ramsar site, there is the potential for fertiliser runoff into this sensitive area causing significant eutrophication (Parks and Wildlife, 2014; Commissioner of Soil and Land Conservation, 2011). The retention of an adequate buffer to the Ramsar site as well as adequate irrigation and fertiliser management would likely mitigate this risk (Commissioner of Soil and Land Conservation, 2011).

The applicant has retained a 50 metre buffer to the Ramsar site. An Irrigation Management Plan for the proposed pivot irrigation has been provided, addressing the potential nutrient loss into adjoining areas. Management actions include (Advanced Fertigation Systems, 2015):

- A closely monitored and managed irrigation schedule to ensure all water is consumed in-situ with no runoff.
- Irrigation will cease prior to and during high rainfall events.
- Irrigation volumes will be calculated according to plant requirements.
- Nutrient input through irrigation.
- Nutrient input rates calculated using the values of the irrigation water supplemented with the calculated requirements of the crop.
- Minimum nutrient input laws applied to avoid build-up of any one particular nutrient.
- Monitoring of nutrient level at three bores that have already been established.

Although the application falls in close proximity to a wetland of national importance, as the potential impacts to this system are likely to be managed through the management measures stated above, the proposed clearing is not likely to be at variance to this clearing Principle.

**Methodology**

**References:**

Advanced Fertigation Systems (2015)  
Commissioner of Soil and Land Conservation (2011)  
Parks and Wildlife (2014)

**GIS Datasets:**

- Hydrography linear
- Topographic contours statewide

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

**Comments**

**Proposal is not likely to be at variance to this Principle**

The area under application has been mapped within the Nita land system described as 'sand plains that support shrubby soft spinifex grassland with occasional trees. The soils are typically red deep sands that have low salinity levels, are well drained and probably have moderate water holding ability' (Commissioner of Soil and Land Conservation, 2011).

No drainage lines have been identified within the application area, however the Eighty Mile Beach Ramsar wetland occurs approximately 50 metres away at its closest point.

The application is for the purpose of establishing 40 hectare pivot irrigation circles for growing sorghum and forage oats. These species will require inputs of nitrogen and phosphorus in order to establish. During high rainfall events and given the proximity to the Ramsar site, there is the potential for fertiliser runoff into this sensitive area causing significant eutrophication (Parks and Wildlife, 2014; Commissioner of Soil and Land Conservation, 2011). The retention of an adequate buffer to the Ramsar site as well as adequate irrigation and fertiliser management would likely mitigate this risk (Commissioner of Soil and Land Conservation, 2011).

The applicant has retained a 50 metre buffer to the Ramsar site. An Irrigation Management Plan for the proposed pivot irrigation has been provided addressing the potential nutrient loss into adjoining areas. Management actions include (Advanced Fertigation Systems, 2015):

- A closely monitored and managed irrigation schedule to ensure all water is consumed in-situ with no runoff.
- Irrigation will cease prior to and during high rainfall events.
- Irrigation volumes will be calculated according to plant requirements.
- Nutrient input through irrigation.
- Nutrient input rates calculated using the values of the irrigation water supplemented with the calculated requirements of the crop.
- Minimum nutrient input laws applied to avoid build-up of any one particular nutrient.
- Monitoring of nutrient level at three bores that have already been established.

Given the sandy soil of the Nita land system and gentle slopes (0.5 percent gradient), the application area may be subject to significant soil erosion if left bare. The retention of stubble and use of minimum tilling techniques together with crops grown under irrigation, as proposed by the applicant, is likely to mitigate this risk (Commissioner of Soil and Land Conservation, 2011; Department of Agriculture and Food Western Australia, 2014).

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

**Methodology**

References:

Advanced Fertigation Systems (2015)  
Commissioner of Soil and Land Conservation (2011)  
Department of Agriculture and Food Western Australia (2014)  
Parks and Wildlife (2014)

GIS Datasets:

- Hydrography linear
- Topographic contours

**(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.**

**Comments**

**Proposal is not likely to be at variance to this Principle**

The area under application is situated 50 metres from the Eighty Mile Beach Ramsar Site. The seasonally inundated wetlands that form part of the Ramsar site are recognised as being of international significance to migratory and resident shorebirds. 'The coastline, mudflats, ephemeral lakes and marshland springs of Eighty Mile Beach are considered to be one of the three most important sites for migratory shorebirds in Australia. It is estimated that more than 500,000 shorebirds use Eighty Mile Beach as a migration terminus each year' (Parks and Wildlife, 2014).

The application is for the purpose of establishing 40 hectare pivot irrigation circles for growing sorghum and forage oats. These species will require inputs of nitrogen and phosphorus in order to establish. During high rainfall events and given the proximity to the Ramsar site, there is the potential for fertiliser runoff into this sensitive area causing significant eutrophication (Parks and Wildlife, 2014; Commissioner of Soil and Land Conservation, 2011).

The retention of an adequate buffer to the Ramsar site as well as adequate irrigation and fertiliser management would likely mitigate this risk (Commissioner of Soil and Land Conservation, 2011).

The applicant has retained a 50 metre buffer to the Ramsar site. An Irrigation Management Plan for the proposed pivot irrigation has been provided addressing the potential nutrient loss into adjoining areas. Management actions include (Advanced Fertigation Systems, 2015):

- A closely monitored and managed irrigation schedule to ensure all water is consumed in-situ with no runoff.
- Irrigation will cease prior to and during high rainfall events.
- Irrigation volumes will be calculated according to plant requirements.
- Nutrient input through irrigation.
- Nutrient input rates calculated using the values of the irrigation water supplemented with the calculated requirements of the crop.
- Monitoring of nutrient level at three bores that have already been established.
- Minimum nutrient input laws applied to avoid build-up of any one particular nutrient.

The crop species that are proposed to be grown are not able to survive in the Pilbara without irrigation. It is therefore unlikely that weeds (crop species) will spread into the adjoining conservation area.

Given the above, the potential impacts to the Ramsar site are considered to be adequately managed and the application is not likely to be at variance to this clearing Principle.

**Methodology**

References:

Advanced Fertigation Systems (2015)  
Commissioner of Soil and Land Conservation (2011)  
Parks and Wildlife (2014)

GIS Datasets:

- DPaW Tenure
- SacBiodataSets - accessed June 2015

**(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.**

**Comments Proposal is not likely to be at variance to this Principle**

No drainage lines have been identified within the application area, however the Eighty Mile Beach Ramsar wetland occurs approximately 50 metres away.

The application is for the purpose of establishing 40 hectare pivot irrigation circles for growing sorghum and forage oats. These species will require inputs of nitrogen and phosphorus in order to establish. During high rainfall events and given the proximity to the Ramsar site, there is the potential for fertiliser runoff into this sensitive area causing significant eutrophication (Parks and Wildlife, 2014; Commissioner of Soil and Land Conservation, 2011). The retention of an adequate buffer to the Ramsar site as well as adequate irrigation and fertiliser management would likely mitigate this risk (Commissioner of Soil and Land Conservation, 2011).

The applicant has retained a 50 metre buffer to the Ramsar site. An Irrigation Management Plan for the proposed pivot irrigation has been provided addressing the potential nutrient loss into adjoining areas. Management actions include (Advanced Fertigation Systems, 2015):

- A closely monitored and managed irrigation schedule to ensure all water is consumed in-situ with no runoff.
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Given the above, the potential impacts to the Ramsar site are considered to be adequately managed and the application is not likely to be at variance to this clearing Principle.

**Methodology**

**References:**

Advanced Fertigation Systems (2015)  
Commissioner of Soil and Land Conservation (2011)  
Parks and Wildlife (2014)

**GIS Databases:**

- Groundwater Salinity Statewide
- Topographic Contours, Statewide

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

**Comments Proposal is not likely to be at variance to this Principle**

The application area is located on level to gently undulating land (0.5 percent gradient). Any overland flow of water seeps into the water table or (during heavy rainfall events) drains out to the ocean (Department of Agriculture and Food Western Australia, 2014). Given this, the application is not likely to be at variance to this clearing Principle.

**Methodology**

**Reference:**

Department of Agriculture and Food Western Australia (2014)

**GIS Datasets:**

- Hydrography linear

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

**Comments**

The previous lease holder was previously granted a permit to clear two pivot irrigation circles at a similar location (CPS 4207/1). The areas approved to clear retained a minimum 100 metre buffer to the adjoining Ramsar site. In May 2014 it was identified through aerial imagery that two pivot irrigation circles had been cleared but not in accordance with the approved clearing permit. One of the areas partially overlapped the areas approved under CPS 4207/1 with the second cleared area occurring approximately 300 metres south of the area approved to clear. A majority of both cleared areas occurs within the current application area.

On 14 May 2014 the previous lease holder applied to clear 180 hectares of vegetation within the current application area (CPS 6112/1). A Nutrient Irrigation Management Plan and increased buffer to the Ramsar site (from 30 metres) were requested. CPS 6112/1 was withdrawn on 26 March 2015 as the applicant no longer held the pastoral lease for the property.

On 5 May 2015 the current application, CPS 6552/1 was received from the current lease holder. The application included a finalised Irrigation Management Plan and an increased buffer to the Ramsar site from 30 metres to 50 metres.



The Department of Lands has provided a copy of a draft Pastoral Diversification Permit for the proposed development.

The applicant has obtained the necessary water licences from the Department of Water.

One Aboriginal Site of Significance has been mapped within the application area.

In a letter dated 2 June 2015 Wanparta Aboriginal Corporation (Ngarla people), through MacLean legal provided comment on the current clearing application. It was noted that the previous lease holders were parties to a registered Indigenous Land Use Agreement (IULA) granting non-exclusive rights to the area under application.

The Department of Lands has incorporated a portion of the adjoining Lot 56 on Deposited Plan 240321 into Pardoo Station pastoral lease in order to account for the pivot irrigation activities in the area. The areas under application are situated within this area.

**Methodology**    References:  
MacLean Legal (2015)

GIS Datasets:  
- Aboriginal sites of significance

#### **4. References**

- Advanced Fertigation Systems (2015) Pardoo Station Irrigation Management Plan, prepared for Pardoo Beef Corporation March 2015. Advanced Fertigation Systems Pty Ltd (DER ref: A904501 and A904504).
- Commissioner of Soil and Land Conservation (2011) Advice received in relation to clearing permit application CPS 4207/1. Received 23 March 2011. (DER ref: A378908).
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Department of Agriculture (2004) An inventory and condition survey of the Pilbara region, Western Australia. Technical Bulletin number 92. Published December 2004.
- Department of Agriculture and Food Western Australia (2014) Advice received in relation to clearing permit application CPS 6112/1. Received 24 July 2014, (DER ref: A785484).
- Government of Western Australia (2013) 2013 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2013. WA Department of Parks and Wildlife, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- MacLean Legal (2015) Advice received in relation to clearing permit application CPS 6552/1. Maclean Legal on behalf of Wanparta Aboriginal Corporation. Received 2 June 2015, (DER ref: A914474).
- Parks and Wildlife (2007 - ) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: <http://naturemap.dpaw.wa.gov.au/>. Accessed December 2014
- Parks and Wildlife (2014) Advice received in relation to clearing permit application CPS 6112/1. Received 30 July 2014, (DER ref: A790988).
- Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.
- Western Australian Herbarium (1998-) FloraBase - The Western Australian Flora. Department of Parks and Wildlife. <http://florabase.dpaw.wa.gov.au/> (Accessed December 2014).