Government of Western Australia
Department of Environment Regulation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 7043/1
Permit type: Purpose Permit

1.2. Applicant details

Applicant's name: Forshaw Pastoral Company Pty Ltd

1.3. Property details

Property: LOT 39 ON PLAN 238417, EIGHTY MILE BEACH
LOT 41 ON PLAN 238418, EIGHTY MILE BEACH
Local Government Authority: BROOME, SHIRE OF
DER Region: North West
DPaW District: WEST KIMBERLEY
Localities: EIGHTY MILE BEACH

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
350		Mechanical Removal	Irrigated agriculture (pastoral diversification)

1.5. Decision on application

Decision on Permit Application: Refused
Decision Date: 26 October 2016
Reasons for Decision: The clearing permit application is for 350 hectares. The application was received on 21 April 2016.

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*, and it has been concluded that the proposed clearing may be at variance to Principles (a), (b), (c) and (g), is not at variance to Principle (e) and is not likely to be at variance to the remaining Principles.

The Delegated Officer determined that the proposed clearing may impact on rare and priority flora and may contain significant habitat for the greater bilby (*Macrotis lagotis*) and spectacled hare-wallaby (*Lagorchestes conspicillatus* subsp. *leichardti*). The applicant was advised on 1 August 2016 that fora and fauna surveys of the application area would determine the extent of impacts to rare and priority flora and habitat for fauna. No survey information has been provided and therefore a precautionary approach has been taken in making this decision.

In making the decision to refuse the application, the Delegated Officer had regard to the applicants submissions dated 3 August 2016 and 30 September 2016 (outlined in this report), and to outstanding planning approval from the Shire of Broome.

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
Beard vegetation association 699 is described as shrublands, Pindan; *Acacia eripoda* shrubland with scattered low bloodwood (*Eucalyptus dicromophloia*) & *E. setosa* over soft & curly spinifex on sandplain (Shepherd et al., 2001).	The application is to clear 350 hectares of native vegetation within Lot 39 on Deposited Plan 238417 and Lot 41 on Deposited Plan 238418, Nita Downs Station for pivot irrigation and horticulture. A permit to clear the same area and for the same purpose as for the current application (CPS 3516/1) was granted to the applicant on 26 August 2010. The clearing permit expired 26 September 2015, and no clearing was undertaken under this permit.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994) To Completely degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).	The condition of the vegetation within the application area was determined via aerial imagery and a site inspection undertaken by officers of the former Department of Environment and Conservation in 2010 for application CPS 3516 which wholly overlaps the current application. The site inspection identified open woodland of *Acacia* sp., *Bauhinia cunninghamii* and scattered Eucalypts over perennial grasses on Pindan flats (DEC, 2010a).

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

The applicant proposes to clear 350 hectares of native vegetation within Lot 39 on Deposited Plan 238417 and Lot 41 on Deposited Plan 238418, Nita Downs Station for pivot irrigation and horticulture.

The application area is located within the Dampierland Interim Biogeographic Regionalisation of Australia (IBRA) region, which is characterised by acacia thickets with scattered trees, grasslands, and savannahs over extensive plains, ranges and gorges (Bastin and ACRIS Management Committee, 2008). The vegetation within the application area is mapped as Beard vegetation association 699 described as shrublands, Pindan, comprising *Acacia eripoda* shrubland with scattered low bloodwood (*Eucalyptus dicromophloia*) and *Eucalyptus setosa* over soft and curly spinifex on sandplain (Shepherd et al., 2001). Based on land system mapping by the Department of Agriculture and Food Western Australia (DAFWA) the application area occurs within the Nita land system. The Nita land system supports shrubby hard and soft spinifex with occasional trees (acacia shrublands) over red shallow sands and stony soils.

A site inspection of the application area undertaken by officers of the former Department of Environment and Conservation (DEC) in 2010 for application CPS 3516, which wholly overlaps the current application, identified the majority of the application area to be in a very good to good (Keighery, 1994) condition, with evidence of previous horticultural activities (DEC, 2010a). Aerial imagery indicates that there are also minor areas in a completely degraded (Keighery, 1994) condition, largely the result of previously cleared roads and tracks.

The site inspection identified open woodland of *Acacia* sp., *Bauhinia cunninghamii* and scattered Eucalypts over perennial grasses on Pindan flats (DEC, 2010a), which is largely consistent with the abovementioned mapped soil and vegetation type.

No threatened or priority ecological communities (TEC or PEC) have been recorded within the local area (20 kilometre radius) and the proposed clearing is not likely to impact on any TECs or PECs.

Two Priority 3 flora species have been recorded within 20 kilometres of the application area, being *Lawrencia* sp. Anna Plains (N.T. Burbidge 1433) and *Keraudrenia katatona*. The Department of Parks and Wildlife (Parks and Wildlife) advised that an additional five priority flora species, *Bonamia oblongifolia* (Priority 1), *Tephrosia andrewii* (Priority 1) *Acacia glaucocaesia* (Priority 3), *Pterocaulon intermedium* (Priority 3) and *Terminalia kumpaja* (Priority 3), may also occur within the application area based on the likely presence of suitable habitat for these species (Parks and Wildlife, 2016a).

Lawrencia sp. Anna Plains (N.T. Burbidge 1433) is an upright perennial herb that grows to 0.8 metres high and flowers white in August (Western Australian Herbarium, 1998-). This species is known from five records across four locations, three in the Shire of Broome and one in the Shire of Upper Gascoyne. This species is found on gravel flats and the margins of semi-saline drainage depressions (Western Australian Herbarium, 1998-), but has also been recorded on plains and road verges. Parks and Wildlife (2016a) advised that the application area is likely to provide suitable habitat for this species. Given the limited number of records of this species, any further records may be significant and if present, the proposed clearing may impact on the conservation status of this species.

Keraudrenia katatona is an erect, compact, multi-stemmed shrub that grows to one metre high and flowers purple from March to August (Western Australian Herbarium, 1998-). This species is found on red sand and desert dunes in Pindan, ranges and disturbed areas. This species is known from 24 records across the Shires of Derby-West Kimberley, Broome and East Pilbara. Given the number of records and moderate distribution of this species, the proposed clearing is not likely to impact on the conservation of this species.

Terminalia kumpaja (Priority 3), *Acacia glaucocaesia* (Priority 3) and *Pterocaulon intermedium* (P3) are known from 16, 13 and 22 records, respectively. These species have a moderate distribution, and given the number of records of these species, the proposed clearing is not likely to impact on their conservation status.

Bonamia oblongifolia (P1) is a perennial herb or shrub that flowers blue in February (Western Australian Herbarium, 1998-). This species has a restricted distribution, having been recorded at three locations within the Dampierland IBRA region. Two of the three recorded localities of this species are mapped within Pindan sandplain, which is consistent with the soil and vegetation type identified within (DEC, 2010a) and mapped over the application area. Therefore, this species has the potential to occur within the application area, and if present, the proposed clearing may impact on this species on a local and regional scale.

Tephrosia andrewii (P1) is an ascending, multi-stemmed shrub that grows to 0.8 metres high and flowers orange in April or October. This species grows in sandy soils within Pindan country (Western Australian Herbarium, 1998-). There are eight records of this species over a range of 140 kilometres, with all records in the Shire of Broome. The vegetation and soil type identified within (DEC, 2010a) and mapped over the application area is consistent with the required habitat for this species. Based on the limited number of records of this species, the proposed clearing may impact on its conservation status if present within the application area.

Parks and Wildlife (2016a) advised that one rare flora species classified as critically endangered under the *Wildlife Conservation Act 1950* (WC Act) may occur within the application area.

This rare flora species is known from three records within the Shire of Broome over red Pindan sand, coastal sites, and relict desert dune swales (Western Australian Herbarium, 1998-). During a site inspection for a nearby application located approximately 4.8 kilometres north, a flora specimen believed to be the abovementioned species was identified by Parks and Wildlife (2016b). A site inspection of the application area undertaken by officers of the former DEC in 2010 for application CPS 3516, which wholly overlaps the current application, identified that the application area provides suitable habitat for this species (DEC, 2010b), therefore it may occur within the application area. All occurrences of this species are considered to be significant to its conservation (DEC, 2010b).

Parks and Wildlife (2016a) advised that the habitat within the application area is suitable for and likely to support the greater bilby (*Macrotis lagotis*; rare or likely to become extinct under the WC Act, vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)) and the spectacled hare-wallaby (*Lagorchestes conspicillatus* subsp. *leichardti*; priority 3). Both species have been recorded within the local area (Parks and Wildlife, 2007-).

Based on the above, noting the extent of the proposed clearing and the potential presence of conservation significant flora and fauna, it is considered that the application area may comprise a high level of biological diversity on a local or regional scale.

A Department of Environment Regulation (DER) Delegated Officer wrote to the applicant on 1 August 2016, advising (among other things) that the application area may contain significant habitat for the greater bilby and spectacled hare-wallaby, may contain rare flora and may contain suitable habitat for seven priority flora species. In response the applicant provided the following information relevant to this Principle:

- The applicant advised that clearing permit CPS 3516/1 was granted on 26 August 2010, for the same footprint, extent and purpose of clearing as for the current application.
- The applicant requested that DER consider whether the conservation status of any of the flora and fauna species identified in DER's advice has changed since the previous application was approved in 2010 and, if not, why different requirements would apply to the current application. The applicant noted that officers from the former DEC undertook a site inspection in 2010 and did not identify any issues that warranted a survey. The applicant advised that since 2010 no Parks and Wildlife staff have visited the property to undertake flora and fauna surveys over the identified clearing area, and that officers are welcome to visit the property to repeat the 2010 on-ground survey and confirm the results.
- The applicant advised that the application area is located close to the homestead and has been previously cleared and utilised for grazing, irrigation and station activities over the past 30 years. The applicant noted that under previous ownership the area was managed for intensive horticulture, producing mangoes, lychees, potatoes, melons, pumpkins and tomatoes across approximately 1,000 hectares.

The assessment of the previous application (CPS 3516/1) against Principle (a) found the vegetation within the application to be in very good to good (Keighery, 1994) condition, that the habitat within the application area was well-represented in the surrounding area, and that the application area has been impacted by previous clearing, grazing and weeds. The assessment concluded that the proposed clearing was not likely to be at variance to Principle (a). A clearing permit for this application was granted in 2010 subject to conditions requiring the Permit Holder to avoid, minimise and reduce the impacts of the clearing and to undertake weed control to minimise the risk of introduction or spread of weeds.

The assessment of the current application found that the application area contains suitable habitat for one rare and seven priority flora species recorded from the same soil and mapped vegetation types as present within the application area, and that the greater bilby has been recorded within 10 kilometres of the application area from the same mapped vegetation type as present within the application area. The assessment has taken into account the advice of Parks and Wildlife that the application area is likely to contain suitable habitat for, and is likely to support, the greater bilby and the spectacled hare-wallaby. In the absence of on-ground surveys to confirm otherwise, a precautionary approach has been taken in finding that the proposed clearing may be at variance to this Principle.

Additional advice was sought from Parks and Wildlife regarding the matters raised in the applicant's response. Relevant to this Principle, Parks and Wildlife advised the following (Parks and Wildlife, 2016c):

> The proposed clearing could have impacts on flora and fauna at a local and/or regional scale, due to the extent of the proposal and the potential presence of conservation significant flora and fauna. It is noted that the rare flora [name withheld] (critically endangered) and Priority flora *Tephrosia andrewsii* (P1), *Lawrencia* sp. Anna Plains (N.T. Burbidge 1433) (P3) and *Seringia katatona* (formerly *Keraudrenia katatona*) (P3) are highly likely to occur within the area proposed to be cleared and *Bonamia oblongifolia* (P1), *Terminalia kumpaja* (P3) may also occur.
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> *B. oblongifolia* and *Lawrencia* sp. Anna Plains have both been listed as Priority flora since 2010. *B. oblongifolia* was listed as Priority 1 in April 2011 and *Lawrencia* sp. Anna Plains was listed as Priority 3 in March 2011.
>
> While the conservation status of the spectacled hare-wallaby (*Lagorchestes conspicillatus* subsp. *leichardti*) has not changed since 2010, the Action Plan for Australian Mammals 2012 recommended the conservation status as Near Threatened. This species remains listed as Priority 3 fauna. Concern has recently been expressed by at least two consultants regarding its abundance on the mainland and Parks and Wildlife is aware that a review is being prepared by Chris Knuckey (MWH Global). While the department has provided data to Mr Knuckey, it is not involved in preparing the publication.

It is also noted that the clearing application area potentially contains habitat for the vulnerable bilby (*Macrotis lagotis*). This species is continuing to decline with reductions in extent of occurrence, area of occupancy and population size, with habitat loss and change identified as threats to the species. Rainbow bee-eaters (*Merops ornatus*) may also occur in the area. Mitigation should be undertaken if any active nests are found, including relocation of the nest or care of fledglings by a suitably experienced wildlife carer.

In addition to changes in conservation status, some further information on the biodiversity values in this region has been collected since 2010, including records of conservation significant species within a 40km radius of the application area. Despite this additional information, the region remains poorly surveyed and flora and fauna surveys of the clearing application area targeting the threatened and priority species identified above would better inform an assessment of the impacts that clearing would have on these species. It should be noted that a single visit by departmental staff in 2010 does not constitute a survey of the type that would be needed to identify if threatened or priority species occur within the clearing application area or their abundance or distributions. It is the proponent's responsibility to undertake such surveys, if required.

Lastly, it is understood that a number of similar applications have been submitted to clear native vegetation for agricultural purposes in the west Kimberley. The cumulative impacts of multiple clearing events on this region's flora and fauna should be considered, where possible.

Taking into account the applicant's response and Parks and Wildlife's additional advice, and noting the extent of the proposed clearing and the potential presence of conservation significant flora and fauna, it is considered that the application area may comprise a high level of biological diversity on a local or regional scale.

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

Targeted surveys undertaken at appropriate times by suitably qualified persons would be required to determine whether the proposed clearing is likely to impact on any conservation significant species or communities, and to guide appropriate management measures to mitigate impacts.

Methodology

References:
Bastin and ACRIS Management Committee (2008)
DEC (2010a)
DEC (2010b)
Keighery (1994)
Parks and Wildlife (2007-)
Parks and Wildlife (2016a)
Parks and Wildlife (2016b)
Parks and Wildlife (2016c)
Shepherd et al. (2001)
Western Australian Herbarium (1998-)

GIS Databases:
SAC Bio Datasets (Accessed June 2016)

(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

The threatened fauna greater bilby (*Macrotis lagotis*) has been recorded twice within the local area (20 kilometre radius) (Parks and Wildlife, 2007-), and both records are within 10 kilometres of the application area. 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 (DotE, 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).

One vegetation type has been mapped over the application area, being Beard vegetation association 699 described as shrublands, Pindan, comprising *Acacia eripoda* shrubland with scattered low bloodwood (*Eucalyptus dicromophloia*) and *Eucalyptus setosa* over soft and curly spinifex on sandplain (Shepherd et al., 2001). A site inspection of the application area undertaken by officers of the former DEC in 2010 for application CPS 3516, which wholly overlaps the current application, identified that the vegetation within the application area is consistent with Beard vegetation association 699 (DEC, 2010a). Based on the knowledge of the preferred habitat of the greater bilby, the identified vegetation type, and recent records from proximal areas, including sites less than 10 kilometres away with similar habitat, the application area provides suitable habitat for and may support this species (Parks and Wildlife, 2016a).

Parks and Wildlife advised that the proposed clearing would reduce the quality and quantity of food resources available to the greater bilby. A reduction in food resources may increase competition with other resident species, which may result in a decline in greater bilby breeding and breeding success within a sub-population. The loss of native vegetation also increases the risk of predation, as this species would have to forage and traverse areas that are more open and exposed to natural and introduced predators (Parks and Wildlife, 2016a).

The priority fauna spectacled hare-wallaby (*Lagorchestes conspicillatus* subsp. *leichardti*; priority 3) has also been recorded twice within the local area. This species is uncommon in Western Australia and exists in patchily distributed populations within the Pilbara and Kimberley regions (Winter et al., 2008). Parks and Wildlife (2016a) advised that the application area is likely to contain suitable habitat for this species in the form of *Triodia* grassland and open woodland. The proposed clearing will lead to a reduction in food availability for this species and may increase competition with other fauna species. Given the patchy distribution of this species, the application area may provide significant habitat for any populations that occur within the local area. Therefore, to ascertain impacts of the proposed clearing on this species, a targeted fauna survey of the application area for the spectacled hare-wallaby is required.

Twenty eight migratory avian species protected under international agreement have been recorded within the local area. These highly mobile species occupy large home ranges and the application area is not likely to contain significant habitat for these species.

Based on the extent of the proposed clearing and the condition of the vegetation within the application area, it is considered that the application area may comprise significant habitat for indigenous fauna including threatened and priority fauna.

A DER Delegated Officer wrote to the applicant, advising (among other things) that the application area may contain significant habitat for the greater bilby and spectacled hare-wallaby. In response the applicant provided the following information relevant to this Principle:

- The applicant advised that clearing permit CPS 3516/1 was granted on 26 August 2010 for the same footprint, extent and purpose of clearing as for the current application.
- The applicant requested that DER consider whether the conservation status of any of the fauna species identified in DER's advice has changed since the previous application was approved in 2010 and, if not, why different requirements would apply to the current application. The applicant noted that officers from the former DEC undertook a site inspection in 2010 and did not identify any issues that warranted a survey. The applicant advised that since 2010 no Parks and Wildlife staff have visited the property to undertake fauna surveys over the identified clearing area, and that officers are welcome to visit the property to repeat the 2010 on-ground survey and confirm the results.

The assessment of the previous application (CPS 3516/1) against Principle (b) found that five records of threatened and priority fauna had been recorded within a 50 kilometre radius of the application area, that the habitat within the application area was well-represented in the surrounding area, that no significant habitat values were identified within the application area during the site inspection, and that the application area has been impacted by grazing and weeds. The assessment concluded that the proposed clearing was not likely to be at variance to Principle (b). A clearing permit for this application was granted without fauna management conditions.

The assessment of the current application found that the greater bilby has been recorded within 10 kilometres of the application area from the same mapped vegetation type as present within the application area. The assessment has taken into account the advice of Parks and Wildlife that the application area is likely to contain suitable habitat for, and is likely to support, the greater bilby and the spectacled hare-wallaby. In the absence of on-ground surveys to confirm otherwise, a precautionary approach has been taken in finding that the proposed clearing may be at variance to this Principle.

Additional advice was sought from Parks and Wildlife regarding the matters raised in the applicant's response. Relevant to this Principle, Parks and Wildlife advised the following (Parks and Wildlife, 2016c):

> While the conservation status of the spectacled hare-wallaby (*Lagorchestes conspicillatus leichardti*) has not changed since 2010, the Action Plan for Australian Mammals 2012 recommended the conservation status as Near Threatened. This species remains listed as Priority 3 fauna. Concern has recently been expressed by at least two consultants regarding its abundance on the mainland and Parks and Wildlife is aware that a review is being prepared by Chris Knuckey (MWH Global). While the department has provided data to Mr Knuckey, it is not involved in preparing the publication.
>
> It is also noted that the clearing application area potentially contains habitat for the vulnerable bilby (*Macrotis lagotis*). This species is continuing to decline with reductions in extent of occurrence, area of occupancy and population size, with habitat loss and change identified as threats to the species. Rainbow bee-eaters (*Merops ornatus*) may also occur in the area. Mitigation should be undertaken if any active nests are found, including relocation of the nest or care of fledglings by a suitably experienced wildlife carer.
>
> In addition to changes in conservation status, some further information on the biodiversity values in this region has been collected since 2010, including records of conservation significant species within a 40km radius of the proposed clearing. Despite this additional information, the region remains poorly surveyed and flora and fauna surveys of the clearing application area targeting the threatened and priority species identified above would better inform an assessment of the impacts that clearing would have on these species. It should be noted that a single visit by departmental staff in 2010 does not constitute a survey of the type that would be needed to identify if threatened or priority species occur within the clearing application area or their abundance or distributions. It is the proponent's responsibility to undertake such surveys, if required.

Taking into account the applicant's response and Parks and Wildlife's additional advice, and based on the extent of the proposed clearing and the condition of the vegetation within the application area, it is considered that the application area may comprise significant habitat for indigenous fauna including threatened and priority fauna.

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

A targeted fauna survey undertaken by a suitably-qualified person would be required to determine whether the proposed clearing is likely to impact on the greater bilby and spectacled hare-wallaby. In order to determine whether the proposed clearing will impact these species via habitat fragmentation, the targeted survey must assess how these species use the surrounding area.

Methodology

References:
DEC (2010a)
DotE (2016)
Parks and Wildlife (2007-)
Parks and Wildlife (2016a)
Parks and Wildlife (2016c)
Pavey (2006)
Shepherd et al. (2001)
Winter et al. (2008)

GIS Database:
Pre-European vegetation

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

Comments

Proposed clearing may be at variance to this Principle

One rare flora species has been recorded within the local 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.

During a site inspection for a nearby application located approximately 4.8 kilometres north, a flora specimen believed to be the abovementioned species was identified by Parks and Wildlife (2016b). Identification could not be verified given the absence of flowering individuals at the time of collection, however Parks and Wildlife (2016b) advised that all other diagnostic characters indicate that the specimen collected was the abovementioned rare flora species.

A site inspection of the application area undertaken by officers of the former DEC in 2010 for application CPS 3516, which wholly overlaps the current application indicated that the application area contains red sands consistent with the recorded habitat of this species, and comprises similar habitat to that of the nearby application, and it is considered that the application area provides suitable habitat for this species (DEC, 2010a).

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 (DEC, 2010b). Should this rare flora occur within the application area, the proposed clearing may have a significant impact on the conservation of this species.

Based on the extent of the proposed clearing and the condition of the vegetation within the application area, and noting the absence of on-ground surveys to confirm otherwise, it is considered that the application area may include or be necessary for the continued existence of rare flora.

A DER Delegated Officer wrote to the applicant, advising (among other things) that the application area may contain a species of rare flora. In response the applicant provided the following information relevant to this Principle:

- The applicant advised that clearing permit CPS 3516/1 was granted on 26 August 2010 for the same footprint, extent and purpose of clearing as for the current application.
- The applicant requested that DER consider whether the conservation status of any of the flora species identified in DER's advice has changed since the previous application was approved in 2010 and, if not, why different requirements would apply to the current application. The applicant noted that officers from the former DEC undertook a site inspection in 2010 and did not identify any issues that warranted a survey. The applicant advised that since 2010 no Parks and Wildlife staff have visited the property to undertake flora surveys over the identified clearing area, and that officers are welcome to visit the property to repeat the 2010 on-ground survey and confirm the results.

The assessment of the previous application (CPS 3516/1) against Principle (c) found that no records of rare or priority flora had been recorded within a 50 kilometre radius of the application area, and concluded that the proposed clearing was not likely to be at variance to Principle (c). A clearing permit for this application was granted without flora management conditions.

The assessment of the current application found that the application area contains suitable habitat for a species of rare flora recorded from the same soil and mapped vegetation types as present within the application area.

The assessment took into account the advice of Parks and Wildlife that this species is believed to occur 4.8 kilometres north of the application area and that all occurrences are considered to be significant to its conservation. In the absence of on-ground surveys to confirm otherwise, a precautionary approach has been taken in finding that the proposed clearing may be at variance to this Principle.

Additional advice was sought from Parks and Wildlife regarding the matters raised in the applicant's response. Relevant to this Principle, Parks and Wildlife advised the following (Parks and Wildlife, 2016c):

> The proposed clearing could have impacts on flora and fauna at a local and/or regional scale, due to the extent of the proposal and the potential presence of conservation significant flora and fauna. It is noted that the rare flora [name withheld] (critically endangered) is highly likely to occur within the area proposed to be cleared.
>
> In addition to changes in conservation status, some further information on the biodiversity values in this region has been collected since 2010, including records of conservation significant species within a 40km radius of the proposed clearing. Despite this additional information, the region remains poorly surveyed and flora and fauna surveys of the clearing application area targeting the threatened and priority species identified above would better inform an assessment of the impacts that clearing would have on these species. It should be noted that a single visit by departmental staff in 2010 does not constitute a survey of the type that would be needed to identify if threatened or priority species occur within the clearing application area or their abundance or distributions. It is the proponent's responsibility to undertake such surveys, if required.

Taking into account the applicant's response and Parks and Wildlife's additional advice, based on the extent of the proposed clearing and the condition of the vegetation within the application area, and noting the absence of on-ground surveys to confirm otherwise, it is considered that the application area may include or be necessary for the continued existence of rare flora.

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

A targeted flora survey undertaken at the appropriate time of year by a suitably qualified botanist would be required to determine whether the proposed clearing is likely to impact on rare flora.

Methodology

References:
DEC (2010a)
DEC (2010b)
Parks and Wildlife (2016b)
Parks and Wildlife (2016c)
Western Australian Herbarium (1998-)

GIS Databases:
SAC Bio Datasets (Accessed June 2016)

(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 databases, there are no records of threatened ecological communities (TECs) within the local area. The nearest TEC is the 'Assemblages of the organic springs and mound springs of Mandora Marsh area', located approximately 70 kilometres south of the application area.

TECs in the Dampierland IBRA region endorsed by the Minister for Environment include monsoon vine thickets on coastal sand dunes of Dampier Peninsula (also listed under the EPBC Act), and four assemblages associated with several organic and/or mound springs in the region. According to available databases, no springs are mapped within the application area. 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

GIS Databases:
SAC Bio Datasets (Accessed June 2016)

(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 Interim Biogeographic Regionalisation of Australia (IBRA) bioregion and the Shire of Broome, both of which retain greater than 99 per cent of their pre-European vegetation extents of native vegetation cover (Government of Western Australia, 2015).

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 within the Dampierland IBRA bioregion (Government of Western Australia, 2015).

Based on aerial imagery, the local area (defined as a 20 kilometre radius around the application area) is well vegetated and retains an estimated 99 per cent of the pre-European extent of native vegetation cover.

The application area may be significant as a remnant as it may support priority flora species, a rare flora species, and conservation significant fauna.

However, on the basis that the native vegetation extents present within the application area, the Shire, the IBRA bioregion and the local area retain more than 30 per cent representation 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	8,343,938	8,319,873	99.7	1.4
Shire*				
Shire of Broome	5,469,337	5,436,103	99.3	2.5
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 (2015)

GIS Databases:
IBRA WA (Regions - Sub Regions)
Pre-European Vegetation

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

Comments

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

According to available databases, no wetlands or watercourses are mapped within the application area. A site inspection of the application area undertaken by officers of the former DEC in 2010 for application CPS 3516, which wholly overlaps the current application, did not identify any riparian vegetation within the application area (DEC, 2010a).

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

Methodology

References:
DEC (2010a)

GIS Database:
Hydrography, linear
Hydrography, hierarchy

(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

Based on land system mapping by DAFWA the application area occurs within the Nita land system. The Nita land system supports shrubby hard and soft spinifex with occasional trees (acacia shrublands) over red sands and stony soils. A Land Degradation Assessment Report prepared by a DAFWA officer in 2010 for application CPS 3516, which wholly overlaps the current application, identified that the majority of the application area occurs on the sand plain unit of the Nita land system with Pindan soils comprising deep red sands (CSLC, 2010).

According to available databases, no watercourses or wetlands mapped within the application area. Given that the sandy Pindan soils are highly permeable, the proposed clearing is not likely to result in appreciable water erosion or waterlogging.

The Land Degradation Assessment Report identified that the replacement of native vegetation with pasture or crops will make little difference to the risk of wind erosion (CSLC, 2010). Notwithstanding, based on the extent of clearing proposed and the potential for wind and water erosion between clearing and pasture establishment, it is considered that the proposed clearing may result in wind erosion.

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

Methodology References:
CSLC (2010)

GIS Databases:
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 does not include any conservation areas or Parks and Wildlife managed lands. The nearest conservation areas are the Anna Plains former pastoral lease and Eighty Mile Beach marine park, which are located approximately 14 and 15 kilometres west of the application area respectively. Given the separation distance between these conservation areas and the application area, it is considered that the proposed clearing is unlikely 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

(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**
According to available databases, no watercourses or wetlands are mapped within the application area and the proposed clearing is not likely to impact 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 that the local area is largely intact with remnant native vegetation, no significant rise in groundwater levels is expected. Therefore, deterioration in the quality of surface and/or underground water via increased salinity is not likely.

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

(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 bioregion has a semi-arid to tropical monsoonal climate, receiving much of its rainfall during summer months (Bastin and ACRIS Management Committee, 2008).

According to available databases, no watercourses or wetlands are mapped within the application area and the proposed clearing is not likely to impact the flow or quality of surface water outside of the application area.

The proposed clearing of 350 hectares of native vegetation will increase the risk of localised flooding following periods of heavy rainfall, which is commonly experienced by the region. The soils within the application area are mapped as red sands. 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 unlikely 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 applicant proposes to clear 350 hectares of native vegetation within Lot 39 on Deposited Plan 238417 and Lot 41 on Deposited Plan 238418, Nita Downs Station for pivot irrigation and horticulture. The land is currently under a pastoral lease.

The applicant has applied to clear:

- 50 hectares on Lot 39 on Deposited Plan 238417 for the purpose of pivot irrigation and associated activities (CPS 2097/1). On 4 December 2008 clearing permit CPS 2097/1 was granted for this application. On 6 August 2009 amended clearing permit CPS 2097/2 was granted, allowing for the additional purpose of horticulture.
- 350 hectares of native vegetation on Lot 39 on Deposited Plan 238417 and Lot 41 on Deposited Plan 238418. On 26 August 2010 clearing permit CPS 3516/1 was granted for the application. This permit expired on 26 September 2015 prior to the clearing being undertaken.
- 350 hectares of native vegetation on Lot 39 on Deposited Plan 238417 and Lot 41 on Deposited Plan 238418 (CPS 7043/1 – being the current application), wholly overlapping the area authorised under clearing permit CPS 3516/1.
- 800 hectares of native vegetation on Lot 39 on Deposited Plan 238417 and Lot 41 on Deposited Plan 238418 (CPS 7122/1), currently under assessment by DER.

The cumulative impact of these applications and previous clearing activities is likely to increase impacts to flora, vegetation communities and fauna.

The Pastoral Lands Board granted a renewed pastoral diversification permit for the proposed fodder activity within 56 hectares on Lot 39 on Deposited Plan 238417, corresponding with the area authorised under clearing permit CPS 2097/2 and being a portion of the area authorised under clearing permit CPS 3516/1. The pastoral diversification permit allows the establishment and irrigation of Rhodes grass, and also the harvesting of the fodder prior to seed maturity for feeding cattle across the station, or for sale. The pastoral diversification permit does not apply to the whole of the current application area.

The Shire of Broome advised that the proposed horticultural land-use 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'. Development approval is required for an 'agriculture - intensive' land use (Shire of Broome, 2016). Development approval has not yet been obtained by the applicant (Shire of Broome, 2016).

The application was advertised in *The West Australian* newspaper on 16 May 2016 for a 21 day public submission period. No public submissions have been received.

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 (DoW, 2016). The applicant holds a current groundwater licence with an annual entitlement of 100,000 kilolitres to irrigate up to 40 hectares, and a further 3,900,000 kilolitres has been approved and is held in reserve pending development of the project, which is likely to be adequate for the current application area (DoW, 2016).

The applicant commissioned an Aboriginal Ethnographic Heritage Survey on 20 November 2014. The survey involved inspecting the application area for the presence of Aboriginal Heritage Sites of cultural significance (Kimberley Land Council, 2014). Areas where the proposed work activity could take place without impacting Aboriginal Heritage Sites were recorded 'cleared'. It was determined that the entire application area was 'cleared' for the purpose of commercial grazing of cattle, cultivation and production of cattle fodder and commercial horticulture uses limited to the cultivation and production of fruits, herbs, and vegetables for market (Kimberley Land Council, 2014).

The application area is located within the Karajarri (Area B) (WAD6100/1998, WCD2004/002) Native Title area, which was determined in 2004.

On 17 May 2016, a DER Delegated Officer emailed the Kimberley Land Council (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. On 7 June the Kimberley Land Council advised that the notification had been forwarded on to the Karajarri Traditional Lands Association. A submission from the Karajarri Traditional Lands Association has not been received.

On 1 August 2016 a DER Delegated Officer wrote to the applicant, advising of the potential environmental impacts identified during the preliminary assessment of the application (potential for the application area to include one rare flora and seven priority flora species and significant habitat for the threatened fauna greater bilby and priority fauna spectacled hare-wallaby, and the requirement for a pastoral diversification permit), and inviting the application to provide additional advice addressing these issues within 30 days.

On 4 August 2016 the applicant provided a response to the Delegated Officer's letter of 1 August 2016:

- The applicant noted that the application had been with DER for 102 days prior to the request for further information.

- The applicant advised that clearing permit CPS 3516/1 was granted on 26 August 2010 for the same footprint, extent and purpose of clearing as for the current application. The applicant advised that the primary reason for the delay in clearing is the lengthy native title negotiations associated with tenure changes.
- The applicant requested that DER consider whether the conservation status of any of the flora and fauna species identified in DER's advice has changed since the previous application was approved in 2010, and if not, why different requirements would apply to the current application. The applicant noted that officers from the former DEC undertook a site inspection in 2010 and did not identify any issues that warranted a survey. The applicant advised that since 2010 no Parks and Wildlife staff have visited the property to undertake flora and fauna surveys over the identified clearing area, and that officers are welcome to visit the property to repeat the 2010 on-ground survey and confirm the results.
- The applicant advised that the application area is located close to the homestead and has been previously cleared and utilised for grazing, irrigation and station activities over the past 30 years. The applicant noted that under previous ownership the area was managed for intensive horticulture, producing mangoes, lychees, potatoes, melons, pumpkins and tomatoes across approximately 1,000 hectares.
- The applicant advised that extent of the proposed clearing represents less than 0.2 per cent of the broader pastoral lease. The applicant submitted that the end landuse will mitigate environmental impacts across the broader pastoral lease by producing fodder and feeding cattle through pivot irrigation and consequently reducing grazing pressure on the rangelands.
- The applicant advised that the Western Australian Government has invested over $4M to understand the land and water resources of the La Grange area to support irrigated agricultural development. The applicant advised that the development of irrigated agriculture is critical to the long term sustainability of their business and to the regional State, and National goals of diversifying and growing the economy, particularly in northern Australia. The applicant submitted that DER should weigh up the risk posed by the application with the Liberal-National Government's policy direction reflected in projects like Seizing the Opportunity in Agriculture Initiative, particularly the Northern Beef Futures and Water for Food programs.
- The applicant questioned the need for Pastoral Lands Board and Shire of Broome approvals when considering a clearing permit application, given that neither agency is a decision maker for clearing.

The applicant's response in respect to flora and fauna is considered under Principles (a), (b) and (c).

DER's time frames specifically recognise a risk-based approach by aiming to provide a decision on 80 per cent of applications within 60 calendar days of receipt, and on the remaining 20 per cent within 90 calendar days. The timeframe to assess an application will depend on the complexity of the application and the significance of the native vegetation and surrounding environment. Note that since this application was received, the time frame has been revised to working days.

The application area wholly overlaps the area authorised under clearing permit CPS 3516/1, which was granted on 26 August 2010 and expired on 26 September 2015. An extension to the duration of that clearing permit was not applied for. The assessment of the current application took into account the findings of the 2010 assessment of the previous application.

Site inspections undertaken for clearing permit applications are based on opportunistic observations to inform assessment, and do not include or constitute comprehensive flora or fauna surveys. The assessment of the previous application (CPS 3516/1) included a site inspection of the application area. The site inspection report outlines the vegetation and soil types present within the application area, and notes that a portion of the application area had previously been cleared for horticultural purposes, and that there was evidence of grazing, fire and weeds throughout. As the current application wholly overlaps the previous application, the information in the site inspection report was considered to be relevant to the assessment of the current application.

A number of applications have been received for the purpose of irrigated agriculture in the Pilbara and Kimberley regions, amounting to the clearing of several thousand hectares. As noted above, the cumulative impact of these applications and previous clearing activities is likely to increase impacts to flora, vegetation communities and fauna. Surveys would determine the extent of impacts.

Pursuant to section 51O(4) of the *Environmental Protection Act 1986*, in considering a clearing matter the CEO shall have regard to any planning instrument or other matter that the CEO considers relevant. For this application, development approval may be required from the Shire of Broome. This approval relates to the purpose for which the clearing permit is sought, and considered to be a relevant matter.

Additional advice was sought from Parks and Wildlife regarding the historical clearing and the flora and fauna matters raised in the applicant's response (DER ref. A1155542). Parks and Wildlife's additional advice was received on 12 September 2016 and is outlined under Principles (a), (b) and (c) (Parks and Wildlife, 2016c).

On 21 September 2016, a DER Delegated Officer wrote to the applicant, acknowledging the response of 4 August 2016, advising of the further information provided by Parks and Wildlife and advising that the Delegated Officer remains of the view that the proposed clearing of 350 hectares of native vegetation may impact on threatened and priority flora and may provide significant habitat for rare and priority fauna species (as outlined within Principles (a), (b) and (c)). The applicant was advised that, in order to determine the potential impacts to these species, targeted surveys by suitably qualified persons using approved methodologies would be required.

On 30 September 2016, the applicant requested that DER proceeds with a decision on the clearing permit application as soon as possible. The applicant also advised that:

- The situation is unique as a valid clearing permit over the application area was previously issued and the applicant could have cleared if not for certain other circumstances;
- The proposal is of low risk;
- The extent of clearing is small; and
- The area is close to the homestead, has previously been cleared and used for grazing, irrigation and station activities

The applicant submitted that consideration be given to the benefit of pivot irrigation in reducing grazing pressure on the rangelands. The applicant highlighted the contrast between the current and previous assessment (CPS 3516) of the same application area, whereby no environmental impacts were identified in the assessment of CPS 3516 and that the clearing would not elevate the conservation status of any of the flora and fauna species identified in the preliminary assessment. The applicant's response concluded that the granting of a clearing permit is important to the sustainability of the business and in the interest of growing the regional economy, requested that DER applies a risk based approach to the assessment and granting of a clearing permit.

The points raised by the applicant have been previously addressed above within Planning instruments and other relevant matters and within Principles (a), (b) and (c).

In the absence of on-ground targeted flora and fauna surveys to identify potential significant environmental impacts, the proposed clearing may be at variance to clearing Principles (a), (b) and (c).

Matters raised by the applicant relating to economic viability are acknowledged, however are beyond the scope of the assessment of the application.

A portion of the application area has been subject to recent clearing activities and an investigation into this clearing in the absence of a clearing permit is currently being undertaken by DER. This matter will be dealt with separately to the clearing permit application.

Methodology

References:
DoW (2016)
Kimberley Land Council (2014)
Parks and Wildlife (2016c)
Shire of Broome (2016)

4. References

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