



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 7681/1
Permit type: Area Permit

1.2. Applicant details

Applicant's name: Mr Grant Douglas Creagh
Application received date: 05 July 2017

1.3. Property details

Property: Lot 2 on Plan 8424, Cooljarloo
Local Government Authority: Dandaragan, Shire of
Localities: Dandaragan

1.4. Application

| Clearing Area (ha) | No. Trees | Method of Clearing | Purpose category: |
|--------------------|-----------|--------------------|-------------------------------|
| 50.6 | 0 | Mechanical Removal | Cropping, pasture and fencing |

1.5. Decision on application

Decision on Permit Application: Refused
Decision Date: 19 January 2018
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 is at variance to principles (a), (b), (e) and (g), may be at variance to principle (c) and is not likely to be at variance to the remaining principles.

Decision to refuse the application:

The Delegated Officer determined that the application area contains significant foraging habitat for Carnaby's cockatoo (*Calyptorhynchus latirostris*), has a high risk of causing appreciable land degradation via water erosion and may support rare and priority flora species.

On 13 October 2017, a Delegated Officer of the Department of Water and Environmental Regulation (DWER) wrote to the applicant, outlining the abovementioned environmental impacts and recommended that measures to avoid and minimise impacts to foraging habitat are applied and the application area be amended if necessary. The Delegated Officer also advised that, in order to address potential impacts to rare and priority flora, a targeted flora survey by a suitably qualified botanist would be required. The Delegated Officer provided the applicant 30 days written notice to advise DWER on how they wish to proceed with the application. The applicant advised that they did not wish to modify the application area or undertake flora surveys. The applicant again confirmed this position during a phone conversation on 19 December 2017.

The Delegated Officer had regard to the environmental values of the native vegetation outlined under principles (a) to (j), and planning instruments and other relevant matters outlined in this report, in making the decision on this application.

These matters were taken into consideration by the Delegated Officer in the decision to refuse to grant a clearing permit.

2. Site Information

Clearing Description The applicant proposes to clear 50.6 hectares of native vegetation within Lot 2 on Plan 8424, Cooljarloo, for the purpose of cropping, pasture and fencing. Approximately 4.4 hectares will be cleared via grazing, and the remaining 46.2 hectares will be cleared via mechanical clearing (Figure 1).

Vegetation Description One Beard vegetation association has been mapped within the application area. Beard vegetation association 1031 is described as a mosaic of shrublands; *Hakea* scrub-heath / shrublands; *Banksia* heath (Shepherd et al., 2001).

A site inspection was undertaken by officers from the Department of Water and Environmental Regulation (DWER) on 31 August 2017 (DWER, 2017). The vegetation within the application area was found to be representative of the mapped Beard vegetation association.

| | |
|-----------------------------|---|
| Vegetation Condition | Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994); To Excellent; Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994). |
| Comment | Vegetation condition was determined during a site inspection (DWER, 2017). Little to no weeds were observed within the application area (DWER, 2017). The applicant advised that parts of the application area had been historically chained. In these areas, vegetation structure appeared slightly modified, but not significantly altered (DWER, 2017). The applicant advised that <i>Gastrolobium</i> sp. will be spot-sprayed in the areas used for grazing, as this plant is poisonous to livestock (DWER, 2017). |

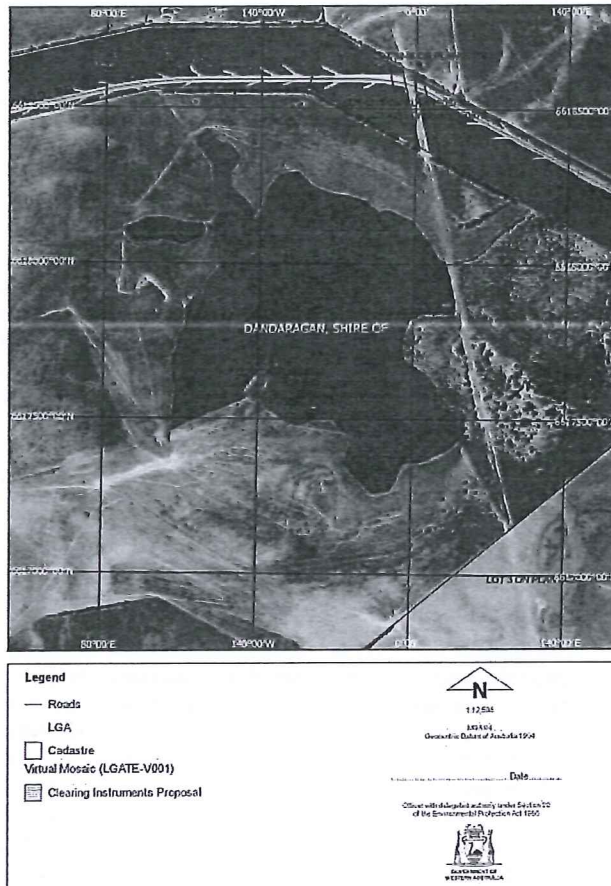


Figure 1: Application area

3. Assessment of application against clearing principles

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

Proposed clearing is at variance to this Principle

The application area comprises 50.6 hectares of native vegetation in very good to excellent (Keighery, 1994) condition that is representative of the mapped Beard vegetation association (mosaic of shrublands; *Hakea* scrub-heath / shrublands; *Banksia* heath) (DWER, 2017).

The local area (defined as a 10 kilometre radius of the application area; 35,030 hectares total) has been extensively cleared, with 26.7 per cent of pre-European native vegetation remaining.

The application area comprises 50.6 hectares of a remnant approximately 60 hectares in size. The remnant is fragmented from other remnants of native vegetation. Three remnants ranging from 1.6 to 3.6 hectares in size are located within 40 to 750 metres of the application area, and a vegetated road reserve approximately 200 metres in width is located approximately 140 metres north of the application area.

No threatened ecological communities (TEC) or priority ecological communities (PEC) have been recorded in the local area. The vegetation within the application area is not likely to be representative of a PEC or TEC.

According to available databases, four rare and 38 priority flora species have been recorded in the local area. The Department of Biodiversity, Conservation and Attractions (DBCA) Regional Office advised that the application area provides suitable habitat for three rare and a number of the 38 priority flora species (DBCA, 2017a). DBCA advised that the potential impacts on the conservation of rare and priority flora if they occur within the application area cannot be determined without a flora survey (DBCA, 2017a).

As discussed in Principle (b), three species specially protected under the *Wildlife Conservation Act 1950* (WC Act) and one priority 4 fauna species have been recorded in the local area (DBCA, 2007-). Of these, the application area is most likely to be used by Carnaby's cockatoo (*Calyptorhynchus latirostris*), listed as endangered under the WC Act. As discussed in Principle (b), the application area provides significant foraging habitat for this species.

Given the very good to excellent (Keighery, 1994) condition of native vegetation, the presence of significant foraging habitat for Carnaby's cockatoo, the potential for rare and priority flora to occur and the extensively cleared local area, the application area is considered to comprise a high level of biological diversity in the context of the local area.

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

A targeted flora survey would be required to confirm impacts to rare and priority flora.

(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.

Proposed clearing is at variance to this Principle

Vegetation within the application area is in very good to excellent (Keighery, 1994) condition, and, given its size, this remnant is likely to have a larger carrying capacity for fauna than the majority of remnants in the local area, and may be important for the persistence of some indigenous fauna species. The application area does not provide a continuous ecological linkage between other remnants, but may be used as a stepping stone as fauna species move across the landscape.

According to available databases, three species specially protected under the WC Act and one priority 4 fauna species have been recorded in the local area, as follows (DBCA, 2007-):

- Carnaby's cockatoo (listed as endangered under the WC Act);
- Rainbow bee-eater (*Merops ornatus*; listed as protected under international agreement under the WC Act);
- Peregrine falcon (*Falco peregrinus*; listed as other specially protected fauna under the WC Act); and
- Western brush wallaby (*Macropus irma*; priority 4).

Of these species, the application area is most likely to be used by Carnaby's cockatoo. Carnaby's cockatoo forages on the seeds, nuts and flowers of a large variety of plants including proteaceous species (*Banksia* sp., *Hakea* sp., *Grevillea* sp.), as well as *Allocasuarina* and *Eucalyptus* species, marri, and a range of introduced species (Valentine and Stock, 2008). The application area provides suitable foraging habitat for Carnaby's cockatoo (DWER, 2017).

The recovery plan for Carnaby's cockatoo defines breeding habitat as including nesting sites, and the foraging habitat and water sources within foraging distance of nesting sites (Department of Parks and Wildlife [Parks and Wildlife], 2013). These areas are considered to be habitat critical to the survival for Carnaby's cockatoo (Parks and Wildlife, 2013). The loss or degradation of feeding habitat within 12 kilometres of nesting sites is considered to pose the greatest risk to Carnaby's cockatoo (Saunders and Ingram, 1998; Parks and Wildlife, 2013). The application area is within eight kilometres of a known nesting site, and is therefore 'breeding habitat' and considered to represent significant foraging habitat for Carnaby's cockatoo.

Given the presence of significant foraging habitat for Carnaby's cockatoo, the proposed clearing is at variance to this Principle.

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

Proposed clearing may be at variance to this Principle

According to available databases, four rare flora species have been recorded in the local area. Of these, DBCA advised that the application area provides suitable habitat for three rare flora species (DBCA, 2017a).

The first rare flora species is a mallee or tree that grows from 2.3 to 10 metres in height on lateritic sand (Western Australian Herbarium, 1998-). This species is known from nine records in Western Australia, with only one of these occurring on conservation tenure and all restricted to the Shire of Dandaragan. While the majority of vegetation within the application area comprises a low heath, scattered *Eucalypts* in both mallee and tree form do occur around the perimeter of the remnant (DWER, 2017). The risk of impacts to this rare flora species would be addressed by avoiding all trees within the application area.

The second rare flora species is also known from nine records in Western Australia, and is restricted to an area of 8.5 kilometres in a north to south direction, with the nearest record approximately 9.2 kilometres south of the application area. This species flowers in April, June or August, and occurs on grey or yellow sand over laterite, with gravel (Western Australian Herbarium, 1998-). Given its restricted distribution and number of known records, the proposed clearing may have a significant impact on this species if it occurs within the application area.

The third rare flora species is known from 27 records across the Shires of Three Springs, Carnamah, Coorow and Dandaragan. This species flowers from May to June and occurs on grey sand and loam, on laterite hills and rocks (Western Australian Herbarium, 1998-). Only seven records of this species occur in the Shire of Dandaragan, and the proposed clearing may have a significant local impact on this species if it occurs within the application area.

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

A targeted flora survey would be required to determine the presence or absence of rare flora within the application area. DBCA advised that although the above rare flora species flower from April to August, they are easily identifiable outside their flowering period (DBCA, 2017b).

(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

As discussed in Principle (a), no TECs have been recorded in the local area. The vegetation within the application area is not likely to be representative of a TEC listed under the *Environment Protection and Biodiversity Conservation Act 1999* or endorsed by the Western Australian Minister for Environment.

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 at variance to this Principle

The application area is located within the Geraldton Sandplains Interim Biogeographic Regionalisation of Australia (IBRA) bioregion, in which approximately 45 per cent of the pre-European vegetation remains (Government of Western Australia, 2016).

The local area (10 kilometre radius; 35,030 hectares) has been extensively cleared, with 9,359 hectares (26.7 per cent) of pre-European vegetation remaining. Noting that larger remnants exist in the local area, the majority of remnants are less than 10 hectares in size. The application area represents a stepping stone that is considered to facilitate landscape connectivity and contribute to fauna dispersal between larger isolated bushland fragments in an extensively cleared landscape. The proposed clearing is likely to increase fragmentation and further isolate fauna and flora species, and decrease landscape connectivity. Given this information, the local area is considered to be extensively cleared and fragmented.

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750 as, below this level species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001). Noting Beard vegetation association 1031, is only just above the 30 per cent threshold and so this vegetation association is at risk of falling below this level.

The vegetation within the application area is in a very good to excellent (Keighery, 1994) condition, with an intact vegetation structure and minimal signs of weed invasion (DWER, 2017).

The proposed clearing will fragment the 60 hectare remnant into three smaller remnants approximately one hectare, four hectares and 4.5 hectares in size. These smaller remnants will be susceptible to edge effects, which may reduce vegetation condition around the perimeter of each remnant.

As discussed in Principles (a), (b) and (c), the application area may contain rare and priority flora, and contains significant foraging habitat for Carnaby's cockatoo. Given the extensively cleared local area, presence of vegetation in very good to excellent (Keighery, 1994) condition that provides significant foraging habitat for Carnaby's cockatoo and potential habitat for rare and priority flora, it is considered that the application area is significant as a remnant of native vegetation in an area that has been extensively cleared.

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

| | Pre-European (ha) | Current Extent (ha) | Remaining (%) | Extent in DBCA Managed Lands (%) |
|---|-------------------|---------------------|---------------|----------------------------------|
| IBRA Bioregion* | | | | |
| Geraldton Sandplains | 3,136,038 | 1,404,373 | 45 | 40 |
| Local government* | | | | |
| Shire of Dandaragan | 671,022 | 296,632 | 44 | 43 |
| Beard vegetation association in Bioregion* | | | | |
| 1031 | 241,350 | 83,155 | 34 | 44 |

(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 at variance to this Principle

According to available databases, there are no watercourses or wetlands within the application area. One minor, non-perennial watercourse is mapped to the west of the application area, however this area has been cleared for cropping and the watercourse unlikely to remain in this area. No watercourses or wetlands were observed during the site inspection (DWER, 2017).

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 is at variance to this Principle

Two soil types have been mapped within the application area (Department of Primary Industries and Resource Development [DPIRD], 2017). These soil types are described as:

- Yerramullah 1 subsystem: laterite plateau residual; shallow gravel, shallow sand over duricrust, sandy gravels; and
- Yerramullah 2 subsystem: plateau residuals, very gently to gently inclined hillcrest and hillslopes; pale sandy gravels, shallow gravel over duricrust, gravelly pale deep sand, pale and yellow deep sands (DPIRD, 2017).

The majority of the application area is mapped as Yerramullah 1 subsystem (DPIRD, 2017).

The Deputy Commissioner of Soil and Land Conservation (Deputy Commissioner) arranged a site inspection which was conducted by the Department of Primary Industries and Regional Development (DPIRD) on 1 August 2017. DPIRD provided a land degradation report based on the results of the inspection (DPIRD, 2017).

DPIRD's land degradation report noted that the application area is located on a laterite plateau and the general slope of the land is to the south and west. The report noted that on laterite plateaus, short steep slopes are present along the edges (DPIRD, 2017). These steep slopes were also observed during the DWER site inspection (DWER, 2017). The land degradation report advised that due to the nature of the soils and the steepness of the slopes water erosion is likely to occur. The Deputy Commissioner advised that the plateau edges are at a risk of water erosion due to the short steep slopes and soil types of the Yerramullah 2 subsystem (DPIRD, 2017). The Deputy Commissioner concluded that the proposed clearing is at variance with principle (g) for land degradation in the form of water erosion.

The DPIRD's land degradation report noted that the risk of the proposed clearing causing appreciable land degradation via wind erosion, salinity, eutrophication, waterlogging and flooding is low (DPIRD, 2017).

Given the high risk of water erosion causing appreciable land degradation within steep slopes, the proposed clearing is at variance to this Principle.

The Deputy Commissioner advised that the risk of water erosion would be minimised by excluding the steep slopes of the plateau edges (DPIRD, 2017).

(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

The nearest conservation areas to the application area are the Badgingarra National Park, located 6.6 kilometres west of the application area, an unnamed Conservation Park located 7.8 kilometres west of the application area, and the Minyulo Nature Reserve located 8.6 kilometres south of the application area.

The application area is not within, nor does it form, an ecological linkage to any of these conservation areas. From these distances, the proposed clearing is not likely to impact the environmental values of any conservation areas in the vicinity of the application area.

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 in Principle (f), there are no wetlands or watercourses within the application area. The proposed clearing is not likely to impact the quality of surface water.

The application area does not contain deep-rooted vegetation, except for a low number of eucalypts scattered around the perimeter of the application area (DWER, 2017). Groundwater salinity within the application area is mapped as 500 to 1,000 milligrams per litre total dissolved solids. DPIRD advised that the proposed clearing is not likely to cause salinity (DPIRD, 2017).

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

DPIRD advised that the proposed clearing is not likely to cause flooding within the application area, and is not likely to increase surface runoff (DPIRD, 2017).

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 DWER's website on 21 July 2017 for a 21 day public submission period. No submissions from the public were received.

DPIRD advised that the application area has a low to moderate capability for the intended land use (DPIRD, 2017).

The Shire of Dandaragan advised that the property is zoned as 'rural', and that planning approval is not required for the proposed activities (Shire of Dandaragan, 2017).

There are no Aboriginal Sites of Significance mapped within the application area.

4. Applicant's Submissions

- On 13 October 2017, a DWER Delegated Officer wrote to the applicant, outlining the abovementioned environmental impacts and recommended that measures to avoid and minimise impacts to foraging habitat are conducted first, in order to determine the final area. The Delegated Officer advised that in order to address potential impacts to rare and priority flora, a targeted flora survey by a suitably qualified botanist would be required. The Delegated Officer provided the applicant 30 days written notice to advise DWER on how they wish to proceed with the application.
- On 17 October 2017, the applicant emailed DWER advising that he would not be undertaking flora surveys for the application area. The applicant also raised concerns of clearing native vegetation for subdivisions and clearing of black cockatoo habitat and other matters that are not relevant to this assessment; and
- On 30 October 2017, a DWER Delegated Officer emailed the applicant to advise that the comments will be considered prior to making a determination on the clearing permit application.
- On 19 December 2017, a DWER Delegated Officer contacted the applicant by phone to again explain that without an amendment to the application area and relevant flora survey reports, the application was likely to be refused. The applicant confirmed that flora surveys and an amended application area would not be provided.

5. References

- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra. Department of Biodiversity, Conservation and Attractions (DBCA) (2007-) Naturemap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife, Perth. <http://naturemap.dpaw.wa.gov.au/default.aspx> (Accessed September 2017).
- Department of Biodiversity, Conservation and Attractions (DBCA) (2017a) Regional advice received on 14 September 2017 (DWER REF: A1522724)
- Department of Biodiversity, Conservation and Attractions (DBCA) (2017b) Further Regional advice received on 14 September 2017 (DWER REF: A1522856)
- Department of Environment and Conservation (DEC) (2011) Invasive Plant Prioritisation, Department of Environment and Conservation, Perth.
- Department of Parks and Wildlife (2013). Carnaby's cockatoo (*Calyptorhynchus latirostris*) Recovery Plan. Department of Parks and Wildlife, Perth, Western Australia.
- Department of Primary Industries and Regional Development (DPIRD) (2017) Advice received on 12 September 2017 (DWER REF: A1521564).
- Department of Water and Environmental Regulation (DWER) (2017) CPS 7681/1 site inspection report (DWER REF: A1521557).
- Government of Western Australia (2016). 2016 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2016. 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.
- Saunders, D.A. and Ingram, J.A. (1998) Twenty-eight years of monitoring a breeding population of Carnaby's cockatoo. *Pacific Conservation Biology*. 4: 261-270.
- Shire of Dandaragan (2017) Advice received from the Shire of Dandaragan on 26 July 2017 (DWER REF: A1489970).
- Valentine, L.E. and Stock, W. (2008) Food Resources of Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*) in the Gnarara Sustainability Strategy Study Area. Edith Cowan University and Department of Environment and Conservation. December 2008.
- Western Australian Herbarium (1998-) FloraBase - The Western Australian Flora. Department of Biodiversity, Conservation and Attractions. <http://florabase.dpaw.wa.gov.au/>. Accessed September 2017.