



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 8757/1
Permit type: Purpose Permit

1.2. Applicant details

Applicant's name: Shire of Dandaragan
Application received date: 12 December 2019

1.3. Property details

Property: Lot 323 on Plan 55939, Jurien Bay.

Local Government Authority: Shire of Dandaragan

Localities: Latitude: -30.1881 Longitude: 115.0029

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	Purpose category:
0.58	NA	Mechanical removal	Road construction or upgrades

1.5. Decision on application

Decision on Permit Application: Granted

Decision Date: 27 February 2020

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*. The assessment has found that proposed clearing may be at variance with Principle (g) and is not likely to be at variance with the remaining clearing principles.

Through assessment it was identified that the application area is subject to strong prevailing winds and comprises soils prone to wind erosion, if left exposed. Surrounding vegetation may be impacted by short-term wind erosion during the road construction process, as well as through the introduction or spread of weeds and/or dieback. Standard road construction methodologies and a wind erosion management condition will mitigate any long-term wind erosion impacts.

The Delegated Officer determined that the proposed clearing is not likely to lead to an unacceptable risk to the environment. Given the above, the Delegated Officer decided to grant a clearing permit subject to weed and dieback management, wind erosion management and avoid and minimise conditions.

2. Site Information

Clearing Description: The Shire of Dandaragan plans to widen approximately 700 metres of the Sandy Cape Road north of Jurien Bay, Western Australia. The works will involve realigning and widening the road at two severe bends in the northern section, and widening the existing road to the south through clearing 0.58 hectares of native vegetation.

Vegetation Description: The application area consists of Beard Association 1026. Mosaic: Shrublands; *Acacia rostellifera*, *A. cyclops* (in the south) and *Melaleuca cardiophylla* (in the north) thicket / Shrublands; *Acacia lasiocarpa* & *Melaleuca acerosa* heath (Government of Western Australia, 2019). GHD (2015) described the northern portion of the application area as Mixed Coastal Scrub.

Vegetation Condition: Available aerial imagery and supporting information provided by the applicant indicates that the vegetation is Excellent (Keighery, 1994) condition in the undisturbed areas away from the existing road alignment, and Very Good in areas along the existing road where weeds are more likely to be present. The area already cleared for the existing road is Completely Degraded.

Soil Description: The application area consists of two soil types:

- Foredune complex adjacent to the coast, and parabolic dune systems with trailing arms ();
- Flat coastal plain of shallow grey calcareous sands over calcrete (221Qu_6); and
- Unstable active dunes (221Qu_5).

Comments: Assessment of the environmental values of the application area was considered at a local scale given the minimal extent of proposed clearing. That is, within a 10 kilometre radius of the application area.

3. Minimisation and mitigation measures

The Shire of Dandaragan plans to realign and widen approximately 700 metres of the Sandy Cape Road that leads to the Sandy Cape Recreational Campsite north of Jurien Bay, Western Australia. The works are required for road safety purposes, and will involve realigning and widening the road at two severe (almost right-angle) bends in the northern section, and widening the existing road to the south.

In particular, up-graded access is required for emergency vehicles such as fire engines and ambulances that may require access to the associated Sandy Cape Recreational Campsite. The Shire of Dandaragan has minimised the area to be cleared as much as possible whilst considering road safety and emergency vehicle access requirements, and will rehabilitate areas not required. In the northern section of the application area, in the vicinity of the bends, clearing up to a maximum 20 metre width is required, and in the southern section a maximum 15 metre width is required. This area covers approximately 1.2 hectares, of which 0.58 hectares will require clearing for the proposed upgrade as 0.62 hectares is already cleared for the existing road.

Approximately 0.11 ha of the already cleared old section of road will be rehabilitated to local native vegetation once the roadworks have been completed. The Shire of Dandaragan will rip these areas and rehabilitate them with locally-province plant material and brushing sourced from material salvaged from the new alignment.



Figure 1: Location of proposed clearing

4. Assessment of application against clearing principles

The clearing application of 0.58 hectares of Beard Vegetation Association 1026 is located in the Shire of Dandaragan. The location is within the Swan Coastal Plain Bioregion (SWA), and the Perth (SWA02) sub-region of Thackway and Cresswell (1995), and within the intensive land-use zone. A vegetation and flora survey was undertaken over the northern component of the application area by GHD (2015) as a component of a broader regional study, and Maia (2019) undertook a recent desktop study of the application area.

Two Beard Vegetation Associations (Shepherd, *et al.* 2001) are mapped over the application area: Beard Association 1026 Mosaic: Shrublands; *Acacia rostellifera*, *A. cyclops* (in the south) and *Melaleuca cardiophylla* (in the north) thicket / Shrublands; *Acacia lasiocarpa* & *Melaleuca acerosa* heath; and Beard Association 129 - Bare areas; dune sand. Aerial photography confirms that the entire application area is vegetated (Figure 1), with large areas of bare dunal sand areas (Beard Association 129) occurring within 40 metres to the east. Beard vegetation mapping is coarse, and it is likely that the entire application area is broadly representative with Beard Association 1026. GHD (2015) described and mapped the northern portion of the application area as Mixed Coastal Scrub; a mosaic of Tall Shrubland of *Acacia cyclops*, *Allocasuarina humilis*, *Myoporum insulare*, *Olearia axillaris*, *Santalum acuminatum*, *Nitraria billardieri*, *Spyridium globulosum* over *Acanthocarpus preissii*, *Acacia lasiocarpa* with weedy species present in the understorey of disturbed areas.

No Threatened or Priority flora taxa have been recorded from within the application area. According to available databases 18 Priority (P) flora taxa have been recorded within a ten kilometre radius of the application area, with no Threatened taxa recorded. None of these taxa has been recorded within one kilometre of the application area with the closest being *Stylidium maritimum* (P3) and *Beyeria cinerea* subsp. *cinerea* (P3) approximately 1.2 kilometres to the south, and an additional five Priority taxa have been recorded between three and five kilometres of the application area.

Of these Priority taxa GHD (2015) assessed three as 'Possibly' occurring over the application area; the P3 taxa *Beyeria cinerea* subsp. *cinerea*, *Calandrinia oraria*, and *Stylidium maritimum*, with the others either 'Unlikely' or 'Extremely Unlikely' to occur. Maia (2019) determined that based on habitat preferences an additional two species may possibly occur; *Thryptomene* sp. Lancelin (M.E. Trudgen 14000) (P3) and *Grevillea olivacea* (P4). Each of these species has records in protected lands, and none of them is restricted to the local area within ten kilometers of the application area, or to the Perth subregion (SWA02) of the Swan Coastal Plain (Maia 2019). There the vegetation within the application area is not likely to comprise significant habitat for conservation significant flora.

There are no recognised ecological linkages within close proximity to the application area. Sandy Cape Road has a roadside Conservation Value of 8 on either side of the road. However roadside vegetation is not isolated but contiguous with surrounding native vegetation associated with Crown Reserve R 19206 (zoned Parks and Recreation). The closest Environmentally Sensitive Areas (ESAs) are the Islands associated with Jurien Bay Marine Park, approximately 2.3 kilometres to the south-west, Lesueur National Park approximately kilometres km to the north-east, and Drovers Cave National Park approximately 7.3 kilometres to the east.

No Threatened Ecological Communities (TECs) or Priority Ecological Communities (PECs) have been mapped over the application area. The State-listed PEC (Priority 3) *Subtropical and Temperate Coastal Saltmarsh* has been mapped 820 metres to the east, associated with a salt lake system (Beard Vegetation association 125 - Bare areas; salt lakes). *Subtropical and Temperate Coastal Saltmarsh* is also listed as a Vulnerable (VU) TEC under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Key attributes of the *Subtropical and Temperate Coastal Saltmarsh* community are not represented within the vegetation occurring within the application area.

Noting the location and small scale of clearing the application area is not likely to comprise a high level of biological diversity when compared to adjacent areas. No threatened flora taxa have been recorded within ten kilometres of the application area and vegetation present is not likely to be consistent with key diagnostic criteria for any TECs or PEC's. Therefore the proposed clearing is not likely to be at variance with Principles (a), (c) or (d).

According to available databases eighteen Threatened, Priority or Migratory vertebrate fauna species have been recorded within the local area. Of these, nine are migratory waterbirds or shorebirds, and five are terns or shearwaters associated with marine or estuarine habitats, and are not likely to utilise habitats of the application area. Of the remainder one is a marine mammal (Australian Sea-lion *Neophoca cinerea*), one is a bat (Ghost Bat *Macroderma gigas*), and two are birds; the Malleefowl (*Leipoa ocellata*) and Carnaby's Cockatoo (*Calyptorhynchus latirostris*). One P2 invertebrate was also recorded within the local area; The Thorny Bush Katydid - Moora (*Hemisaga vepreculae*). As this species occurs in shrublands habitat may be present, however, the certainty is low as the requirements for this species is largely unknown.

The Threatened Australian Sea-lion (VU) is unlikely to utilise habitats of the application area. Similarly the Ghost Bat (VU) roosts in cave systems not present over the application area is now regionally extinct, with the one record in the local area likely to be of sub-fossil remains (Maia 2019). The application area may provide suitable shrubland habitat for Malleefowl (VU). However, the nearest known records are of three historical sightings made in 1959 approximately 9.6 kilometres to the north-east and it is unlikely that this species persists in the local area.

GHD (2015) assessed the threatened Carnaby's Cockatoo (EN) as unlikely to occur in the area due to a lack of habitat. Black cockatoo habitat can be considered in terms of breeding habitat, night roosting habitat, and foraging habitat. Black cockatoos will generally forage up to 12 kilometres from an active breeding site and, following breeding, will flock in search of food, usually within six kilometres of a night roost (Commonwealth of Australia 2012; DoEE 2020). The closest Carnaby's Cockatoo record is approximately 9.5 kilometres to the east, a known breeding area is located approximately 16.6 kilometres to the north-east, and a confirmed roost is located approximately 14.8 kilometres south-east. Vegetation of the application area therefore is not located within foraging distances of known roosting or breeding sites. Additionally, Carnaby's Cockatoo prefers woodland dominated by proteaceous plant species such as *Banksia* spp., *Hakea* spp. and *Grevillea* spp. (Commonwealth of Australia, 2012), species that are not dominant within Beard Association 1026, or the described Mixed Coastal Scrub mapped by GHD (2015).

Given the vegetation within the application area, the extent of the proposed clearing, and the extent of remnant vegetation cover in the local area proposed clearing is not likely to be at variance with Principle (b).

Vegetation within the application area is mapped regionally as Beard Association 1026, and GHD (2015) described and mapped the northern portion of the application area as Mixed Coastal Scrub broadly consistent with Beard Association 1026. National Objectives and Targets for Biodiversity Conservation (2001-2005) include a target to have clearing controls in place that prevent clearance of ecological communities with an extent below 30 per cent of that present prior to the year 1750 (Commonwealth of Australia 2001). The application area is located within the intensive landuse zone of the Swan Coastal Plain bioregion that has been extensively cleared with 38.6 per cent remaining (Government of Western Australia 2018). The represented vegetation association over the application area: Beard Association 1026 (Shepherd, *et al.* 2001) has 93.8 per cent remaining in total (and within the Swan Coastal Plain bioregion) and over 50 percent protected for conservation (Government of Western Australia 2018). At the local scale of within a ten kilometre radius of the application area 86.5 per cent of remnant vegetation remains. Therefore the application is not within an extensively cleared area, and the proposed clearing is not likely to be at variance with Principle (e).

Several areas managed for conservation purposes occur within the local area including the Jurien Bay Marine Park just 110 metres to the north-west. Terrestrial areas managed for conservation purposes in the vicinity include; Beekeepers Nature Reserve approximately 750 metres to the east, Lesueur National Park approximately 4.6 kilometres to the north-east, and Drovers Cave National Park approximately 7.2 kilometres to the east. With standard controls implemented proposed clearing is not likely to impact these conservation areas and is therefore not likely to be at variance with Principle (h).

No wetlands or watercourses within the application area, and no wetlands recognised as Ramsar-listed or as Nationally Important Wetlands are located within ten kilometres of the application area. Three Geomorphic Wetlands (Cervantes, Eneabba) occur within the local area; a playa approximately 850 metres to the east (Lake Gypsum), a dampland approximately 2.2 kilometres to the east and a sumpland approximately 2.2 kilometres to the south. Considering the lack of wetlands or watercourses over the application area and distances to known wetlands supporting riparian vegetation, the proposed clearing is not likely to be at variance with Principle (f).

The application area is located within the Arrowsmith Hydrological Zone (Hydrozone), and within the Coastal/Moore-Hill catchment of the Moore-Hill River Basin, with an average annual rainfall of approximately 530 millimetres (BOM 2020). *Phytophthora cinnamomi* (dieback) disease is generally restricted to areas of the south-west of the State, below the 26th parallel of latitude, in areas that receive an average annual rainfall greater than 400 millimetres. The application area is south of the 26th parallel, and receives over 400 millimetres per annum. Although dieback is less common in the well-drained alkaline soils of the coastal dune systems, and the application area is not likely to support species highly susceptible to dieback, standard construction conditions will mitigate the introduction or spread of both weeds and dieback.

The application area is located within the Greenough Geological Province which principally overlies Cretaceous, Jurassic, Triassic, Permian, Carboniferous and Silurian sedimentary rocks of the northern Perth Basin. Three soils types have been mapped over the application area, from north-west to south-east being; foredune complex adjacent to the coast with parabolic dune systems (221Qu_4); flat coastal plain of shallow grey calcareous sands over calcrete (221Qu_6); and unstable active dunes (221Qu_5). Wind erosion risk is associated with the soils mapping, with the H2 unit associated with unstable active dunes (221Qu_5) having a greater than 70 per cent high to extreme risk rating for both wind erosion and water erosion, and the M2 unit associated with soils 221Qu_6 having a 30 per cent to 50 percent high to extreme risk rating for wind erosion. The application area occurs within a location subjected to strong prevailing winds (that is, south-west to westerly 'sea-breezes'), and although the application area is vegetated unstable active dunes occur in close proximity and as such specific management practices should be implemented to minimise risks from wind erosion. Proposed clearing therefore may be at variance with Principle (g). A wind erosion management condition will mitigate impacts of the proposed clearing.

The application area occurs within the Eneabba Coastal Tributaries surface water area and the Cervantes sub-area of the Jurien Groundwater Area, but is outside of any *Country Areas Water Supply Act 1947* reserves, or Public Drinking Water Source Areas proclaimed under the *Rights in Water and Irrigation Act 1914* (RIWI Act) with the Jurien Water Reserve (DWER-033) located approximately 6.5 kilometres to the east. The Cervantes sub-area of the Jurien Groundwater Area records a salinity of approximately 500 to 1,000 Total Dissolved Solids (TDS) milligrams per litre (mg/l), and less than three per cent of the mapped L1 unit has a moderate to high salinity risk rating. No surface water bodies occur over the application area, and less than three per cent of the mapped L1 unit has a moderate to high risk rating for flooding. Given the location and small scale of clearing it is unlikely that proposed clearing would cause deterioration in the quality of surface or underground water or exacerbate the incidence of flooding and is therefore not likely to be at variance with principles (i) or (j).

The assessment has found that proposed clearing may be at variance with Principle (g) and not likely to be at variance with the remaining clearing principles.

Planning instruments and other relevant matters

The application was advertised on the DWER website for a 21 day public comment period on 10 January 2020. No public submissions were received in relation to this application.

Lot 323 on Deposited Plan 55939 (part Reserve 19206) is reserved for the purposes of 'Parkland, Recreation and the Letting of Cottages', and is managed by the Shire of Dandaragan.

The application area is located within the Jurien Groundwater Area, which is proclaimed under the *Rights in Water and Irrigation Act 1914* and a licence is therefore required to take groundwater.

The application area is located within the boundaries of the Yued Indigenous Land Use Agreement (ILUA) (WI2015/009), and a Heritage place (Sandland Island - S01004/5282) is located approximately 2.4 kilometres to the south of the application area. It is the applicant's responsibility to ensure compliance with any obligations under the *Aboriginal Heritage Act 1972*.

5. References

- Bureau of Meteorology (BOM) (2020) Climate Data Online. Available at <http://www.bom.gov.au/>.
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Department of Environment and Energy (DoEE) (2020) Species Profile and Threats Database: *Calyptorhynchus latirostris* — Carnaby's Cockatoo, Carnaby's Black-Cockatoo, Short-billed Black-Cockatoo. Department of Environment and Energy (now the Department of Environment and Energy). Canberra.
- Commonwealth of Australia (2012) EPBC Act referral guidelines for three threatened black cockatoo species: Carnaby's cockatoo (endangered) *Calyptorhynchus latirostris*, Baudin's cockatoo (vulnerable) *Calyptorhynchus baudinii*, Forest red-tailed black cockatoo (vulnerable) *Calyptorhynchus banksii naso*. Department of Sustainability, Environment, Water, Population and Communities (now the Department of Environment and Energy), Canberra.

GHD (2015) Shire of Irwin. Mid West Coastal Nodes. Biological Survey Report. Western Australia. DWER Ref: A1035372
Government of Western Australia (2018) 2017 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of December 2017. WA Department of Biodiversity, Conservation and Attractions.
<https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics>.
Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
Maia Environmental Consultancy (Maia) (2019) Shire of Dandaragan: Sandy Cape Road SLK 6.03 to 6.90 – Flora, Vegetation and Fauna Desktop Study. Version 1. Unpublished report by Maia Environmental Consultancy Pty Ltd. December 11, 2019. DWER Ref: A1857545.
Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.
Thackway, R and Cresswell, I.D. (eds) (1995) An interim biogeographical regionalisation of Australia. Australian Nature Conservation Agency (now Department of Environment and Energy), Canberra.

GIS Databases:

- Aboriginal Sites of Significance
- Department of Biodiversity, Conservation and Attractions, Managed Tenure
- Geomorphic Wetlands Management Category
- Hydrography Linear – Linear
- Hydrography WA 250K – Surface Water Lines
- IBRA Australia
- Land Degradation Hazards
- SAC bio datasets
- Threatened and Priority Fauna Data November 2019
- TPFL Data November 2019
- WA Herb Data November 2019
- WA TEC-PEC Boundaries