



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 9239/1
File Number: DWERVT7663
Duration of Permit: From 24 April 2022 to 24 April 2024

PERMIT HOLDER

Lombadina Aboriginal Corporation

LAND ON WHICH CLEARING IS TO BE DONE

Lot 373 on Deposited Plan 220266, Dampier Peninsula

AUTHORISED ACTIVITY

The permit holder must not clear more than 5.13 hectares of *native vegetation* within the area cross-hatched yellow in Figure 1 of Schedule 1.

CONDITIONS

1. Avoid, minimise, and reduce impacts and extent of clearing

In determining the *native vegetation* authorised to be cleared under this permit, the permit holder must apply the following principles, set out in descending order of preference:

- (a) avoid the clearing of *native vegetation*;
- (b) minimise the amount of *native vegetation* to be cleared; and
- (c) reduce the impact of clearing on any environmental value.

2. Weed management

When undertaking any clearing authorised under this permit, the permit holder must take the following measures to minimise the risk of introduction and spread of *weeds*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no known *weed*-affected soil, *mulch*, *fill*, or other material is brought into the area to be cleared;

- (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

3. Directional clearing

The permit holder must conduct clearing activities in a slow, progressive manner in a single direction towards adjacent *native vegetation* to allow fauna to move into adjacent *native vegetation* ahead of the clearing activity.

4. Fauna management

The permit holder must conduct clearing activities during the daylight hours to avoid the possibility of injury to fauna.

5. Water erosion management

When undertaking any clearing authorised under this permit, the permit holder must take following measures to minimise the risk of erosion:

- a) The permit holder must commence development no later than three months after undertaking the authorised clearing activities to reduce the potential for water erosion.
- b) If clearing activities occur during the period of December to March in any given year the permit holder must;
 - i. Place biodegradable erosion matting within the areas cleared; and
 - ii. Ensure materials placed under Condition 5(b)(i) of this permit are maintained until development activities under condition 5(a) can be undertaken.

6. Records that must be kept

The permit holder must maintain records relating to the listed relevant matters in accordance with the specifications detailed in Table 1.

Table 1: Records that must be kept

| No. | Relevant matter | Specifications |
|-----|---|--|
| 1. | In relation to the authorised clearing activities generally | (a) the species composition, structure, and density of the cleared area; (b) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings; (c) the date that the area was cleared; (d) the direction that clearing was undertaken; |

| No. | Relevant matter | Specifications |
|-----|-----------------|--|
| | | <ul style="list-style-type: none"> (e) the time of day that clearing was commenced and ceased; (f) the size of the area cleared (in hectares); (g) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 1; (h) actions taken to minimise the risk of the introduction and spread of <i>weeds</i> in accordance with condition 2; and (i) erosion management activities undertaken in accordance with condition 5. |

7. Reporting

The permit holder must provide to the *CEO* the records required under condition 6 of this permit when requested by the *CEO*.

DEFINITIONS


In this permit, the terms in Table have the meanings defined.

Table 2: Definitions

| Term | Definition |
|-------------------|--|
| CEO | Chief Executive Officer of the department responsible for the administration of the clearing provisions under the <i>Environmental Protection Act 1986</i> . |
| clearing | has the meaning given under section 3(1) of the EP Act. |
| condition | a condition to which this clearing permit is subject under section 51H of the EP Act. |
| fill | means material used to increase the ground level, or to fill a depression. |
| department | means the department established under section 35 of the <i>Public Sector Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3. |
| EP Act | <i>Environmental Protection Act 1986</i> (WA) |
| mulch | means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation. |
| native vegetation | has the meaning given under section 3(1) and section 51A of the EP Act. |
| weeds | means any plant – <ul style="list-style-type: none"> (a) that is a declared pest under section 22 of the <i>Biosecurity and Agriculture Management Act 2007</i>; or |

| Term | Definition |
|------|--|
| | (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or (c) not indigenous to the area concerned. |

END OF CONDITIONS



Mathew Gannaway
MANAGER
NATIVE VEGETATION REGULATION

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

31 March 2022

SCHEDULE 1 CPS 9239/1

The boundary of the area authorised to be cleared is shown in the map below (

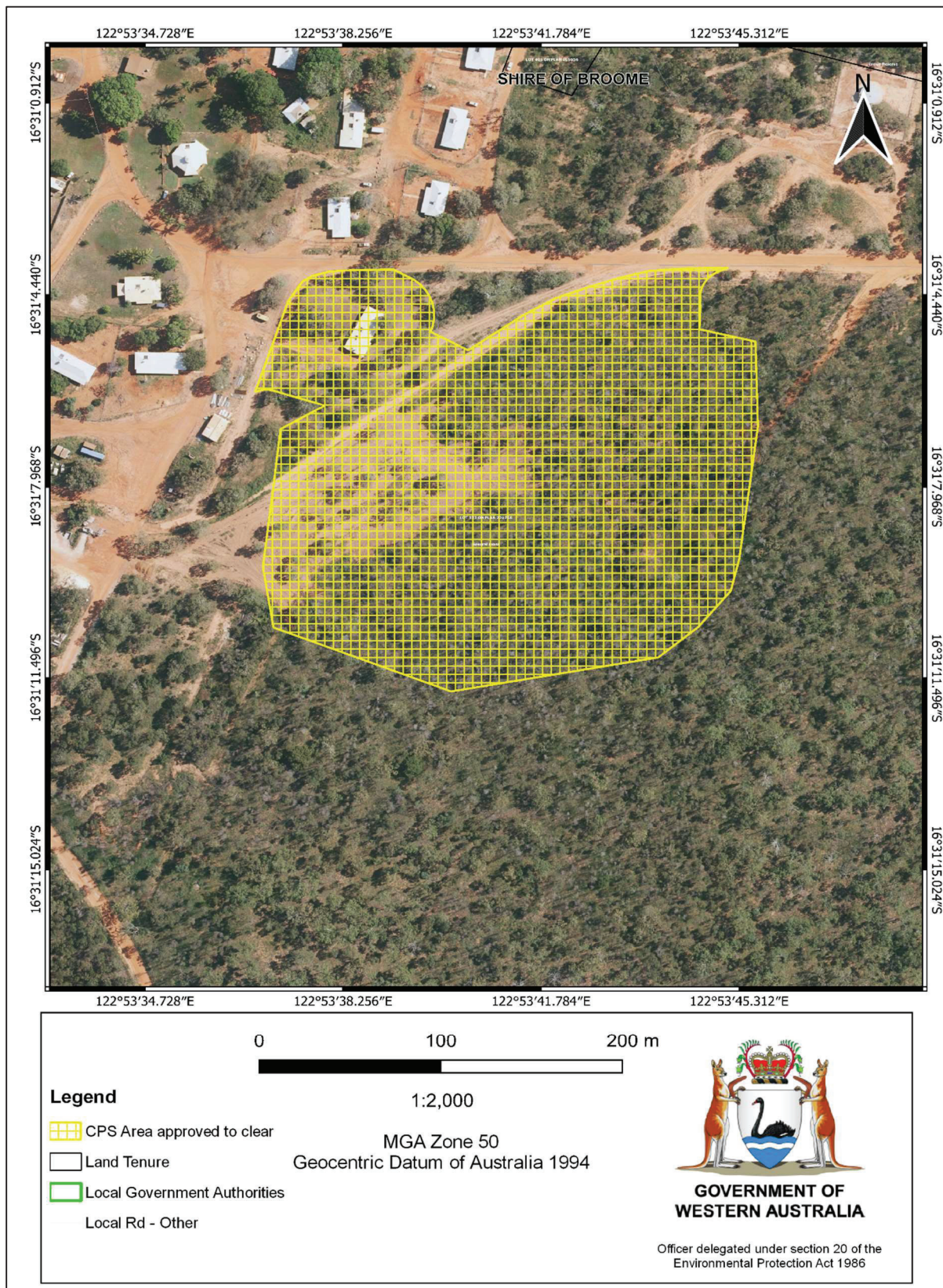


Figure 1).

Figure 1: Map of the boundary of the area within which clearing may occur



Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

| | |
|-------------------------------|--|
| Permit number: | CPS 9239/1 |
| Permit type: | Area permit |
| Applicant name: | Lombadina Aboriginal Corporation |
| Application received: | 17 March 2021 |
| Application area: | 5.13 hectares (revised) of native vegetation |
| Purpose of clearing: | Development of a campground |
| Method of clearing: | Mechanical Removal |
| Property: | Lot 373 on Deposited Plan 220266 |
| Location (LGA area/s): | Shire of Broome |
| Localities (suburb/s): | Dampier Peninsula |

1.2. Description of clearing activities

The vegetation proposed to be cleared is contained within a single contiguous area (see Figure 1, Section 1.5).

Lombadina Aboriginal Corporation proposes to clear 5.13 hectares of native vegetation for development of a campground at Lombadina, which is an extension to the Lombadina community (Lombadina Aboriginal Corporation, 2021). The proposed clearing area is located approximately 175 kilometres northeast of Broome on the Dampier Peninsula. The application area is bordered south and east by remnant native vegetation.

The application area was revised during the assessment process. The modification included a reduction in the extent of clearing from 6.29 hectares to 5.13 hectares to avoid clearing on the Local Planning Scheme zone, culture and natural resource use (DPLH-071).

1.3. Decision on application

| | |
|-----------------------|--|
| Decision: | Granted |
| Decision date: | 31 March 2022 |
| Decision area: | 5.13 hectares of native vegetation, as depicted in Section 1.5, below. |

1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Water and Environmental Regulation (DWER) advertised the application for 21 days and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix B), relevant datasets (see Appendix F.1) and the findings of a biological survey (see Appendix F), the clearing principles set out

in Schedule 5 of the EP Act (see Appendix C), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3).

The Delegated Officer has determined that the proposed clearing of 5.13 hectares of native vegetation is unlikely to result in significant residual environmental impacts, noting that the biological survey did not identify any priority or threatened flora, fauna, or ecological communities.

However, the assessment identified that the proposed clearing will result in the following:

- direct impacts to fauna utilising the site during the time of clearing;
- the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values; and
- short term water erosion during the wet season.

After consideration of the available information, the Delegated Officer determined that the following requirements will be conditioned on the clearing permit to manage and address the potential impacts of clearing. The Delegated Officer decided to grant a clearing permit subject to conditions to:

- avoid, minimise to reduce the impacts and extent of clearing.
- take hygiene steps to minimise the risk of the introduction and spread of weeds.
- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity.
- undertake clearing during the daylight hours to avoid fauna fatalities.
- undertake development no later than three months post clearing of vegetation to reduce the potential water erosion risk.

1.5. Site map

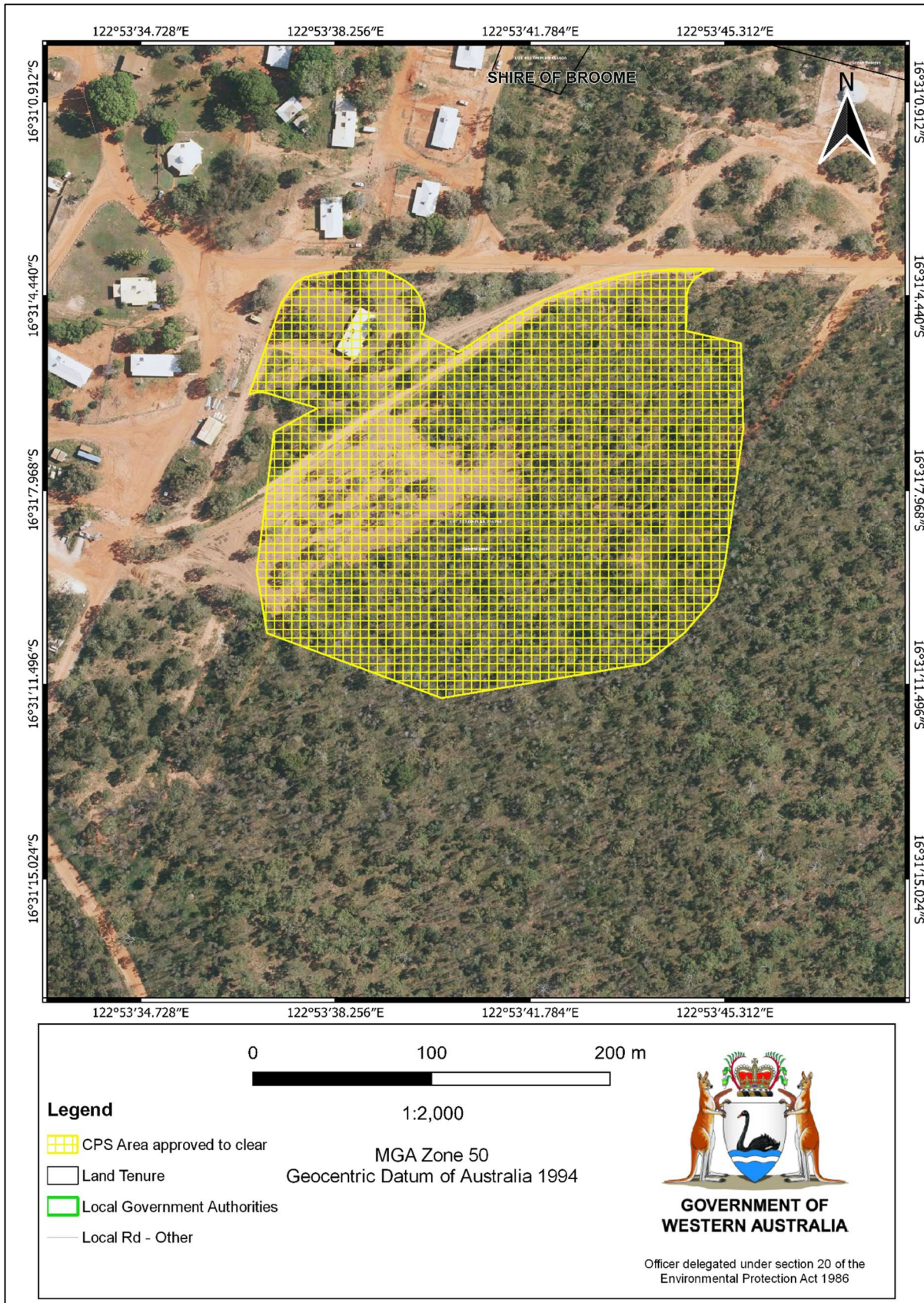


Figure 1 Map of the application area

The area crosshatched yellow indicates the area authorised to be cleared under the granted clearing permit.

2 Legislative context

The clearing of native vegetation in Western Australia is regulated under the EP Act and the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (Clearing Regulations).

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.4), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

- the precautionary principle
- the principle of intergenerational equity
- the principle of the conservation of biological diversity and ecological integrity.

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Planning and Development Act 2005* (WA) (P&D Act)
- *Soil and Land Conservation Act 1945* (WA)

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2016)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

Lombadina Aboriginal Corporation advised DWER that no other suitable sites on the boundary of the existing community is available to develop the campground (Lombadina Aboriginal Corporation, 2021). The initial application area was 6.29 hectares however, Lombadina Aboriginal Corporation avoided the clearing of native vegetation within the local planning scheme zone, culture and natural resource use which reduced the proposed clearing footprint to 5.13 hectares.

The Delegated Officer was satisfied that the applicant has made a reasonable effort to avoid and minimise potential impacts of the proposed clearing on environmental values and other matters.

3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (see Appendix B) and the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values.

The assessment against the clearing principles (see Appendix C) identified that the impacts of the proposed clearing present a risk to biological values (fauna and adjacent native vegetation) and land degradation. The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

3.2.1. Biological values (fauna) - Clearing Principles (a and b)

Assessment

The application area is located within the Interim Biogeographic Regionalisation for Australia (IBRA) Dampierland Bioregion and the Pindanland subregion (GIS Database). The mapped broadscale vegetation type over the application area is the Pindan woodland described floristically as *Acacia* thicket with *Eucalypt* woodland over spinifex *Acacia tumida*, *Eucalyptus tectifica*, *Corymbia grandifolia*, *Triodia pungens* and *T. bitextura*.

The biological survey by Biota Environmental Sciences Pty Ltd (Biota) (2021) determined two vegetation types within the survey area however, only the vegetation unit, CgCbAtCHpSe described as *Corymbia greeniana*, *C. bella* very open woodland over *Acacia tumida* tall shrubland over *Chrysopogon pallidus*, *Sorghum ecarinatum* mixed tussock grassland occurred over the application area. This was determined as the dominant vegetation type of the survey area, covering 6.23 hectares (50 per cent). *Corymbia greeniana* (Bilal) and *C. bella* (Maroolal) were co-dominant overstorey trees. *Acacia tumida* (Wanggay) was the only dominant shrub and these were often still recovering from fire. The understorey consisted of *Chrysopogon pallidus* (Irooloo), *Sorghum ecarinatum* (Oonbi) and tussock grasses.

Typical non-dominant herb species occurring in this vegetation included *Bonamia linearis*, *Calandrinia strophiolata*, *Corchorus pumilio*, *Evolvulus alsinoides*, *Goodenia sepalosa*, *Gyrostemon tepperi*, *Sida rohlenae*, *Spermacoce occidentalis* and *Trianthema pilosum* (Biota, 2021).

Condition of the native vegetation over the application area ranged from Completely degraded (Trudgen, 1991) to Good (Trudgen, 1991) condition. Approximately 2.14 hectares of the application area is rated as Completely degraded (Trudgen, 1991), approximately 2.78 hectares of native vegetation is rated as Good (Trudgen, 1991) and approximately 0.208 hectares of native vegetation is rated to be in Poor (Trudgen, 1991) condition within the proposed clearing area. The Completed Degraded (Trudgen, 1991) nature of the application area is due to the invasion by introduced flora (weeds), impacts from human activities including items been dumped on the site, feral and livestock activities and the structural integrity of the vegetation. The small area of native vegetation rated as Poor (Trudgen, 1991) condition is due to the dense Birdwood grass (**Cenchrus setiger*) infestation (Biota, 2021) (See Appendix E).

The native vegetation identified within the application area does not represent a conservation significant ecological community (Biota, 2021).

Seventeen records of Priority flora were identified during the desktop assessment in which 15 of the records were located over ten kilometres from the application area. The flora species, *Triodia acutispicula* was determined to be possibly occurring over the application area however, the targeted flora search over the application area by Biota did not identify the presence of *Triodia acutispicula* species or any threatened or priority flora (Biota, 2021).

DWER notes that the biological survey was undertaken during February, which is within the optimum survey period for the Dampierland Bioregion, (January to March) (Biota, 2021; EPA, 2016) and if flora species were to occur over the application area, these species will have been identified during the survey.

Weed

The biological survey identified a total of 15 introduced species from the survey area. One of these species, **Jatropha gossypifolia*, is considered a Weed of National Significance. Two of the weed species, **Jatropha gossypifolia* and **Azadirachta indica* are listed as declared pests under the *WA Biosecurity and Agriculture Management Act 2007* (Biota, 2021).

Weeds have the potential to out-compete native flora and reduce the biodiversity of an area. Potential impacts to biodiversity of the adjacent native vegetation as a result of the introduction and spread of weeds may be minimised by the implementation of a weed management condition.

Fauna

The desktop assessment identified 40 conservation significant fauna species within the 50-kilometre radius buffer of the application area (excluding the area which extended into the ocean). The recorded list of species includes 36 bird species, two mammal species and two reptile species.

According to the biological survey (Biota, 2021), one fauna habitat was identified within the survey area, Eucalyptus and Corymbia woodlands over tussock grassland on orange pindan sands which comprise of both vegetation types described above. This habitat type is widespread in the local area and therefore unlikely to represent significant core habitat for the identified fauna species. No evidence of fauna of significance were recorded during the biological survey (Biota, 2021).

According to the analysis of a likelihood of occurrence, the following conservation significant fauna species have been identified as having a 'likelihood of occurrence' over the application area and required further consideration.

- *Erythrura gouldiae* (Gouldian finch)
- *Elanus scriptus* (Letter-winged kite)
- *Falco peregrinus* (Peregrine falcon)
- *Macrotis lagotis* (Bilby, dalgyte, ninu)
- *Mormopterus cobourgianus* (North-western free-tailed bat)
- *Simoselaps minimus* (Dampierland burrowing snake)

This assumption is based on the habitat requirements, distribution, mapped vegetation types and condition of the vegetation as well as the findings of the biological survey.

Class: Bird

Numerous migratory shorebird species (27) protected under International Agreement have been recorded within the local area. Majority of these birds are species that breed in northern latitudes and given the habitat preference of these migratory birds and the highly mobile, avian nature with the large home ranges for these species (DAWE, n.d), it is unlikely the proposed application area will provide core habitat for the identified migratory birds.

The *Erythrura gouldiae* (Gouldian finch) is known to inhabit Eucalyptus woodlands with suitable hollows for breeding during the dry season and inhabit lowland drainage areas with native grasses such as Sorghum in the wet season; often associated with recently burnt areas with exposed seeds. The Gouldian finch exclusively nests in tree hollows or holes in termite mounds with the breeding season ranging from January to April (Australian Museum, 2020). The closest record of this species occurred approximately 0.45 kilometres from the application area. It is unlikely that the native vegetation within the proposed application area will provide core habitat for the Gouldian finch, however it is likely this species may utilise the application area.

The *Elanus scriptus* (Letter-winged kite) is associated with open grasslands in arid and semi-arid areas; may disperse to coastal regions when food is plentiful; roost in high canopy of leafy trees during the day, hunts at night for small rodents and marsupials, particularly the long-haired rat (DAWE, n.d). The record of the Letter-winged kite was identified over 35 kilometres from the application area. Given the letter-winged kite is a highly mobile, avian species with large home ranges, the proposed clearing is considered unlikely to significantly impact on this species.

The *Falco peregrinus* (Peregrine falcon) may regularly overfly the application area. According to the Australian Museum, the Peregrine Falcon 'is found in most habitats, from rainforests to the arid zone, and at most altitudes, from the coast to alpine areas. It requires abundant prey and secure nest sites and prefers coastal and inland cliffs or open woodlands near water and may even be found nesting on high city buildings. This species is widespread and highly mobile and is found in various habitats (Birdlife, n.d). The biological survey did not identify any evidence of the Peregrine falcon (Biota, 2021). It is likely that the Peregrine falcon may overfly the application area but based on the habitat preference and the large home range of this bird, the proposed clearing will not have a significant impact on the Peregrine falcon

Class: Mammal

The *Macrotis lagotis* (Bilby) is known from four records within the local area and largely occupies three major vegetation types; open tussock grassland on uplands and hills, mulga woodland or shrubland growing on ridges and rises, and hummock grassland in plains and alluvial areas (DAWE, n.d). The distribution of the greater Bilby is highly fragmented in Western Australia (Pavey, 2006). Bilbies are found in a range of habitats from arid rocky soils with little ground cover to semi-arid shrublands and woodlands (DAWE, n.d). The closest record was identified 10.36 kilometres from the application area. Bilbies are known to emerge after dark to forage for food. The biological survey did not identify evidence of bilby activity (footprint, scats and digging) within the survey area (Biota, 2021). While this species was not identified within the survey area, it may transiently occur on site given the high mobility of the species and the habitat suitability of the application area. It is recommended that clearing activities are conducted slowly, in one direction and is limited to daylight hours as the Bilby is known to be active during the dark hours.

The *Mormopterus cobourgianus* (North-Western Free-Tailed Bat) Inhabit mangroves, Eucalypt or Melaleuca woodland and other coastal habitats. This species is found at coastal regions, up to one hundred kilometres inland. The North-Western Free-Tailed Bat roost in the hollows of Eucalypt or Melaleuca trees and known to seek food from the same habitats mentioned prior (Reardon et al, 2014). The biological survey did not identify presence of the North-Western Free-Tailed Bat within the application area (Biota, 2021).

Class: Reptile

The *Simoselaps minimus* (Dampierland burrowing snake) is known from one location approximately 4.2 kilometres from the application area. This species is a small fossorial snake known only from the Dampierland Bioregion of the western Kimberley region of Western Australia. This species is poorly known and has a characteristic habitat which is the pindan woodland (Atlas of Living Australia, n.d). The biological survey did not identify evidence of this species (Biota, 2021). However, noting that there are relatively recent records of these species within the local area, it is considered that the Dampierland burrowing snake may be a transient visitor within the application area while foraging and dispersing. Given this, it is important the clearing activities are conducted slowly and in one direction towards the adjacent native vegetation to avoid possible death of Dampierland burrowing snake species.

Conclusion

Based on the above assessment, the proposed clearing is unlikely to impact on significant habitat for any conservation listed fauna species. However, the proposed clearing may result in fauna fatalities should they occur within the application area at the time of clearing.

It is important that machinery operators involved in the clearing process are advised to be alert for fauna when clearing the native vegetation within the application area and to take steps to avoid impacts to fauna, where practical. Conducting the clearing in a slow progressive manner from one direction towards the adjacent vegetation will allow any fauna (in particular, the bilby) present to move into the adjacent native vegetation ahead of the clearing activity. Restricting the proposed clearing to daylight hours will further avoid potential injuries to the Bilby and any other fauna species.

It is also considered that the impacts of the proposed clearing on adjacent native vegetation will be managed by taking steps to minimise the risk of the introduction and spread of weeds.

Conditions

To address the above impacts, the following management measures will be required as conditions on the clearing permit:

- Slow directional clearing to allow fauna to move into adjacent vegetation ahead of the clearing activity will minimise impact to individuals.
- Limit clearing to daylight hours.
- Weed management measures will be required as a condition on the clearing permit.

3.2.2. Environmental Value: (land and water resources) - Clearing Principles (g)

Assessment

The soils within the application area have been mapped at a regional scale as the Yeeda land system (Mapping Unit 335Ye). This soil type is described as deep red and yellow sandplains supporting pindan vegetation with dense Acacia shrubs, scattered bloodwood and grey box trees and curly spinifex and ribbon grass (DPIRD, 2019).

It is unlikely the soil type over the application area is susceptible to land degradation in the form of salinity and eutrophication as a result of the proposed clearing. There is no risk of acid sulfate over the application area (DPIRD, 2019).

The average annual rainfall of the application area is estimated to be 635 millimetres and the months of highest rainfall are during December to March (BoM, 2022). During the wet season, proposed clearing may lead to short term water erosion given the episodic high intensity rainfall experienced in the region.

Noting the sandy soil type, the land degradation risk assigned to this type of soil, it is considered that the proposed clearing may lead to minor wind erosion (depending on the season). However, wind erosion is not expected to be significant given the application area bordered by remnant native vegetation and the small scale of clearing.

DWER notes that the proposed application area is small in scale in comparison to the surrounding landscape and approximately half of the application area is already in a completely degraded condition. The implementation of appropriate development methodologies such as dust control, drainage control and other standard methodologies implemented will ameliorate any potential land degradation in the form of wind and water erosion.

Conclusion

Based on the above assessment, the proposed clearing may result in short term water erosion at a small scale and be limited to the wet season. It is considered that the above impact of the proposed clearing can be managed by applying appropriate measures to minimise and mitigate the risk associated with short term water erosion.

Condition

To address the above impact, the proposed development should commence no later than three months post clearing.

3.3. Relevant planning instruments and other matters

Other relevant authorisations required for the proposed land use include Development Approval under the *Planning and Development Act 2005* (issued by the Shire of Broome).

The Shire of Broome initially advised DWER that local government approvals are required, and that the initial proposed clearing footprint is inconsistent with the Shire's Local Planning Scheme. The Shire stated that "The area subject to the proposal is deemed to be for 'Open Space' (agriculture - extensive, essential service distribution network and traditional law and culture) and 'Commercial' (art centre, caravan park, motel, office, service station,

shop and tourism accommodation). Visitor Camping is a defined land use under the adopted Lombadina Layout Plan 3, though the land subject of this application, is not within this defined area” (Shire of Broome, 2021). With the advice received by the Shire, Lombadina Aboriginal Corporation revised the application area to avoid clearing within area zoned as “culture and natural resource use”.

The Shire of Broome issued Development Approval on 10 March 2022 for the proposed development of a caravan park (campground) within Lot 375 on Deposited Plan 220266, Dampier Peninsula.

The application area is located within an onground management offset area which was conditioned under the clearing permit CPS 6078/4. The Permit holder of CPS 6078/4 shall locate two to three wild Greater Bilby populations to be ‘managed populations’, and two to three wild Greater Bilby populations to be ‘control’ populations from within the area shaded red on the plan included within Appendix E of CPS 6078/4 (Figure 6). The Permit holder is also conditioned to revegetate and rehabilitate an area of at least 38 hectares within the combined area shaded red on the plan included within Appendix E of CPS 6078/4 (Figure 6). Given the area shaded red is approximately 1,715,112 hectares in size, the clearing proposed for an area of 5.13 hectares will not impact on the offset for CPS 6078/4.

One registered Aboriginal sites of significance (Lombadina Mission, Place ID: 14665) has been mapped within the application area. It is the permit holder’s responsibility to comply with the *Aboriginal Heritage Act 1972 (WA)* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

End

Appendix A. Additional information provided by applicant

| Information | Description |
|---|---|
| Lombadina Campground Biological Assessment (Biota, 2021). | Biota was commissioned by Tourism Western Australia to undertake a desktop study followed by a biological assessment to identify flora and fauna values within the survey area. Biota further undertook an assessment of the application area against the ten clearing principals outlined within the EP Act. |

Appendix B. Site characteristics

B.1. Site characteristics

The information provided below describes the key characteristics of the area proposed to be cleared and is based on the best information available to DWER at the time of this assessment. This information was used to inform the assessment of the clearing against the Clearing Principles, contained in Appendix C.

| Characteristic | Details |
|------------------------|--|
| Local context | <p>The area proposed to be cleared is part of an expansive tract of native vegetation in the extensive land use zone of Western Australia. The application area is located immediately adjacent to the Lombadina community.</p> <p>Aerial imagery indicates the local area (50-kilometre radius from the centre of the area proposed to be cleared) retains approximately 99 per cent of the original native vegetation cover.</p> |
| Ecological linkage | The application area is not part of any mapped formal ecological linkage. |
| Conservation areas | No conservation areas of significance are mapped within the application area (DBCA-012, DBCA-026). The closest conservation area to the proposed clearing is the Swan Island Nature Reserve, located approximately 25 kilometres to the north of the application area. |
| Vegetation description | <p>The biological survey (Biota, 2021) indicates that the native vegetation within the proposed clearing area consists of the vegetation unit, CgCbAtCHpSe: <i>Corymbia greeniana</i>, <i>Corymbia bella</i> very open woodland over <i>Acacia tumida</i> tall shrubland over <i>Chrysopogon pallidus</i>, <i>Sorghum ecarinatum</i> mixed tussock grassland.</p> <p>Representative photos and the full survey descriptions and maps are available in Appendix F.</p> <p>The broad scale mapped vegetation type over the application area is:</p> <ul style="list-style-type: none"> Beard vegetation association 750, which is described as pindan woodland consisting of acacia thicket with eucalypt woodland over spinifex <i>Acacia tumida</i>, <i>Eucalyptus tectifera</i>, <i>Corymbia grandifolia</i>, <i>Triodia pungens</i> and <i>T. bitextura</i> (Shepherd et al, 2001). <p>The mapped vegetation type retains approximately 99 per cent of the original extent (Government of Western Australia, 2019).</p> |
| Vegetation condition | <p>The biological survey (Biota, 2021) indicates the vegetation within the proposed clearing area range from Completely degraded to Good (Trudgen, 1991) condition.</p> <p>The full Trudgen (1991) condition rating scale is provided in Appendix D.</p> |

| Characteristic | Details |
|------------------------|---|
| | Representative photos and the full survey descriptions and mapping are available in Appendix F. |
| Climate and landform | <p>The application area is located on the Yeeda land system (335Ye) which is a widespread land system and is well represented through the Pindanland subregion of the Dampierland bioregion (DPIRD, 2019).</p> <p>Yeeda landform is described as Sandplain and dunefields with little organised drainage; sandplain up to 16 kilometres in extent, with shallow valleys, plains with thin sand cover, and scattered pans; with limited surface drainage in zones of sheet-flow up to 3.2 kilometres wide and extending up to eight kilometres downslope from adjacent uplands (DPIRD, 2019).</p> <p>The Dampierland IBRA bioregion has a semi-arid to tropical monsoonal climate, receiving much of its rainfall during summer months (December to March) (Bastin G & ACRIS Management Committee, 2008). Annual mean rainfall is 635 millimetres (BoM, 2022).</p> |
| Soil description | The soil is mapped as deep red and yellow sandplains supporting pindan vegetation with dense acacia shrubs, scattered bloodwood and grey box trees and curly spinifex and ribbon grass (DPIRD, 2019). |
| Land degradation risk | <p>The mapped soil type is generally not prone to degradation or erosion but grazing pressure and frequency of burning is required (DPIRD, 2019).</p> <p>During the high intensity rainfall, short term water erosion may occur.</p> |
| Waterbodies | <p>The application area is within the Cape Leveque Coast Basin hydrographic catchment (DPIRD-069).</p> <p>The desktop assessment and aerial imagery indicate that no watercourse or wetlands occur over the application area. The nearest watercourse is a non-perennial minor river located approximately 0.67 kilometres south-west from the application area.</p> |
| Hydrogeography | <p>The proposed application area falls within the Canning-Kimberley Groundwater Area, proclaimed under the <i>Rights in Water and Irrigation Act 1914</i> (RiWI) (DWER-034). Applicant has no intention to abstract groundwater and therefore will not impact on groundwater.</p> <p>Application area does not fall within an area subject to the <i>County Areas Water Supply Act 1917</i> and does not fall within a proclaimed surface water area under the RiWI Act, nor does it occur within a Public Drinking Water Source Area.</p> <p>Groundwater salinity level (Total Dissolved Solids) is mapped as less than 500 milligrams per litre (fresh) (DWER-026).</p> |
| Flora | <p>Seventeen conservation significant flora records were identified in the local area with no records of threatened species. Nearest record is located approximately 2.8 kilometres from the application area. Only one flora species (<i>Triodia acutispicula</i>) was identified as having a possibility to occur over the application area given it is associated with pindan soils, but this species was not identified during the targeted search as part of the biological survey (Biota, 2021).</p> <p>No threatened or priority species were recorded within the application area during the biological survey (Biota, 2021).</p> |
| Ecological communities | <p>The Monsoon (vine) thickets on coastal sand dunes of Dampier Peninsula which is listed as a Threatened Ecological Community (TEC) is located approximately 670 metres north of the application area. The application area does fall within the buffer zone of this TEC.</p> <p>The biological survey did not identify any species or vegetation representative of conservation significant ecological communities which occur within the local area and</p> |

| Characteristic | Details |
|----------------|---|
| | did not identify species representative of the TEC; the Monsoon (vine) thickets on coastal sand dunes of Dampier Peninsula (Biota, 2021). |
| Fauna | <p>Forty conservation significant fauna records were identified in the local area, which include 36 bird species, two mammal species and two reptile species. The nearest record was the Priority four bird; <i>Erythrura gouldiae</i> (Gouldian finch), identified 0.5 kilometres from the application area.</p> <p>Six species were identified as having a likelihood of occurrence over the application area however, the application area is unlikely to provide core habitat for these species.</p> <p>No evidence of conservation significant fauna species was identified during the survey by Biota (2021).</p> |

B.2. Vegetation extent

| | Pre-European extent (ha) | Current extent (ha) | Extent remaining (%) | Current extent in all DBCA managed land (ha) | Current proportion (%) of pre-European extent in all DBCA managed land |
|-----------------------------------|--------------------------|---------------------|----------------------|--|--|
| IBRA bioregion* | | | | | |
| Dampierland | 8,343,944.95 | 8,319,879.14 | 99.71 | 142,055.31 | 1.70 |
| Beard Vegetation complex | | | | | |
| Beard vegetation association 750* | 1,229,182.16 | 1,225,280.52 | 99.68 | 34,114.53 | 2.78 |

*Government of Western Australia (2019)

B.3. Flora analysis table

Seventeen conservation significant flora species were recorded within the 50-kilometre radius local buffer. No threatened flora was identified within the local area or during the biological survey (Biota, 2021)

| Species name | Conservation status | Number of known records (total) | Distance of closest record to application area (km) | Likelihood of occurrence over application area | Did the survey identify (Y/N) |
|---|---------------------|---------------------------------|---|--|-------------------------------|
| <i>Acacia monticola x tumida var. kulparn</i> | P3 | 6 | 2.8 | Not likely | N |
| <i>Aphyllodium glossocarpum</i> | P3 | 1 | 42.0 | Not likely | N |
| <i>Glycine pindanica</i> | P3 | 1 | 47.4 | Not likely | N |
| <i>Haemodorum capitatum</i> | P1 | 2 | 42.0 | Not likely | N |
| <i>Lophostemon grandiflorus subsp. grandiflorus</i> | P3 | 1 | 13.6 | Not likely | N |
| <i>Nymphoides beaglensis</i> | P3 | 2 | 5.5 | Not likely | N |
| <i>Parsonsia kimberleyensis</i> | P1 | 1 | 46.3 | Not likely | N |
| <i>Stylidium pindanicum</i> | P3 | 2 | 13.5 | Not likely | N |
| <i>Thespidium basiflorum</i> | P1 | 3 | 13.6 | Not likely | N |
| <i>Utricularia bidentata</i> | P3 | 2 | 40.3 | Not likely | N |

| Species name | Conservation status | Number of known records (total) | Distance of closest record to application area (km) | Likelihood of occurrence over application area | Did the survey identify (Y/N) |
|--|---------------------|---------------------------------|---|--|-------------------------------|
| <i>Alysicarpus suffruticosus</i> | P2 | 3 | 11.9 | Not likely | N |
| <i>Cullen candidum</i> | P1 | 2 | 34.4 | Not likely | N |
| <i>Tephrosia valleculata</i> | P3 | 2 | 22.0 | Not likely | N |
| <i>Triodia acutispicula</i> | P3 | 6 | 2.8 | Possible | N |
| <i>Tribulopsis</i> sp. Koolan Island (K.F. Kenneally 8278) | P1 | 5 | 23.7 | Not likely | N |
| <i>Utricularia stellaris</i> | P1 | 1 | 32.7 | Not likely | N |
| <i>Utricularia tubulata</i> | P1 | 1 | 40.9 | Not likely | N |

P: Priority

B.4. Fauna analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix F.1), and biological survey information (Appendix E), impacts to the following conservation significant fauna required further consideration.

| Species scientific name | Species Common name | Conservation status | Number of known records (total) | Distance of closest record to application area (km) | Year of the most recent record | Species identified during survey? [Y, N, N/A] | Likelihood of occurrence |
|----------------------------------|--|---------------------|---------------------------------|---|--------------------------------|---|--------------------------|
| BIRD | | | | | | | |
| <i>Calidris ferruginea</i> | curlew sandpiper | CR | 4 | 37.09 | 1982 | N | Not Likely |
| <i>Calidris tenuirostris</i> | Great knot | CR | 5 | 10.51 | 2011 | N | Not Likely |
| <i>Charadrius leschenaultii</i> | Greater sand plover, large sand plover | VU | 17 | 9.76 | 2012 | N | Not Likely |
| <i>Charadrius mongolus</i> | Lesser Sand Plover | EN | 10 | 10.51 | 2011 | N | Not Likely |
| <i>Elanus scriptus</i> | letter-winged kite | P4 | 4 | 37.09 | 1977 | N | Likely |
| <i>Erythrura gouldiae</i> | Gouldian finch | P4 | 19 | 0.46 | 2017 | N | Likely |
| <i>Falco peregrinus</i> | Peregrine falcon | OS | 4 | 13.90 | 2014 | N | Likely |
| <i>Numenius madagascariensis</i> | Eastern curlew | CR | 8 | 10.11 | 2011 | N | Not Likely |
| <i>Tringa brevipes</i> | Grey-tailed tattler | P4 | 18 | 2.76 | 2017 | N | Not Likely |
| MAMMAL | | | | | | | |
| <i>Mormopterus cobourgianus</i> | North-western free-tailed bat | P1 | 2 | 2.75 | 2008 | N | Likely |
| <i>Macrotis lagotis</i> | Bilby, dalgyte, ninu | VU | 4 | 10.36 | 2015 | N | Likely |
| REPTILE | | | | | | | |
| <i>Simoselaps minimus</i> | Dampierland burrowing snake | P2 | 1 | 4.2 | 2008 | N | Likely |
| <i>Crocodylus porosus</i> | Salt-water crocodile | OS | 1 | 35.96 | 2008 | N | Not Likely |

CR: critically endangered, EN: endangered, VU: vulnerable, P: priority, OS: Other Specially Protected

Appendix C. Assessment against the clearing principles

| Assessment against the clearing principles | Variance level | Is further consideration required? |
|---|------------------------------|--|
| Environmental value: biological values | | |
| <p><u>Principle (a):</u> <i>“Native vegetation should not be cleared if it comprises a high level of biodiversity.”</i></p> <p><u>Assessment:</u></p> <p>The biological survey did not identify any threatened or priority flora or fauna or ecological communities within the application area (Biota, 2021).</p> <p>Although not identified during the survey, six fauna species were considered likely to visit the application area. However, given the location of the application area and the abundance of similar native vegetation within the surrounding area, the likelihood of the fauna species utilising the application area is low.</p> | Not likely to be at variance | Yes <i>Refer to Section 3.2.1, above.</i> |
| <p><u>Principle (b):</u> <i>“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.”</i></p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared does contain habitat for six conservation significant fauna. None of these species were identified within the application area (Biota, 2021).</p> <p>Noting the above and the extent of equally suitable habitat for these species within the local area, the application area is not likely to contain significant habitat for these species.</p> | May be at variance | Yes <i>Refer to Section 3.2.1, above</i> |
| <p><u>Principle (c):</u> <i>“Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</i></p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared is unlikely to contain habitat for flora species listed under the BC Act and the EPBC Act.</p> <p>No threatened flora species were recorded within the local area or during the biological survey.</p> | Not likely to be at variance | No |
| <p><u>Principle (d):</u> <i>“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.”</i></p> <p><u>Assessment:</u></p> <p>According to the available datasets, and the biological survey of the application area, the area proposed to be cleared does not contain species that indicate a threatened ecological community.</p> | Not likely to be at variance | No |
| Environmental value: significant remnant vegetation and conservation areas | | |
| <p><u>Principle (e):</u> <i>“Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</i></p> <p><u>Assessment:</u></p> <p>The application area is located within the Dampierland IBRA bioregion and the Shire of Broome, both of which retain greater than 99 per cent of their pre-European vegetation extents (Government of Western Australia, 2019).</p> | Not at variance | No |

| Assessment against the clearing principles | Variance level | Is further consideration required? |
|---|------------------------------|---|
| <p>The extent of the mapped vegetation type and the native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia (Commonwealth of Australia, 2001). The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area.</p> | | |
| <p><u>Principle (h):</u> <i>“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.”</i></p> <p><u>Assessment:</u></p> <p>Given the distance to the nearest conservation area is 25 kilometres from the proposed application area, the proposed clearing is not likely to have an impact on the environmental values of conservation areas.</p> | Not at variance | No |
| Environmental value: land and water resources | | |
| <p><u>Principle (f):</u> <i>“Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”</i></p> <p><u>Assessment:</u></p> <p>Given no water courses or wetlands are recorded within the application area, the proposed clearing is unlikely to impact on vegetation growing in association with a watercourse or wetland.</p> <p>The biological survey did not identify any riparian vegetation within the application area (Biota, 2021).</p> | Not at variance | No |
| <p><u>Principle (g):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</i></p> <p><u>Assessment:</u></p> <p>The mapped soils over the application area are generally not susceptible to land degradation or erosion (DPIRD, 2019). However, some short-term water erosion can be expected as a result of heavy rainfall typically experienced in the region during the wet season (December to March) (BoM, 2022).</p> <p>As the application area is mapped as sandy soils, a minor increase in wind erosion may occur from the clearing of vegetation but is not considered significant.</p> | May be at variance | Yes <i>Refer to Section 3.2.2, above</i> |
| <p><u>Principle (i):</u> <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.”</i></p> <p><u>Assessment:</u></p> <p>Given no water courses, wetlands and Public Drinking Water Sources Areas are recorded within the application area, the proposed clearing is unlikely to impact surface or ground water quality.</p> | Not at variance | No |
| <p><u>Principle (j):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</i></p> <p><u>Assessment:</u></p> <p>The proposed clearing may increase the risk of localised flooding following periods of heavy rainfall, which is commonly experienced by the region. Given the soil within application area is sandy which is highly permeable, the localised flooding that may occur will be short term and is not likely to have a significant environmental impact.</p> | Not likely to be at variance | No |

| Assessment against the clearing principles | Variance level | Is further consideration required? |
|--|----------------|------------------------------------|
| Given no water courses and wetlands are recorded within the application area, the proposed clearing is unlikely to contribute to waterlogging and exacerbate flooding. | | |

Appendix D. Vegetation condition rating scale

Appendix E. Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation's ability to regenerate. Disturbance at a site can be a cumulative effect from a number of interacting disturbance types.

Table F1: Measuring vegetation condition for the Eremaean and Northern Botanical Provinces (Trudgen 1991)

| Condition | Description |
|---------------------|--|
| Excellent | Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement. |
| Very good | Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks. |
| Good | More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds. |
| Poor | Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds. |
| Very poor | Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species. |
| Completely degraded | Areas that are completely or almost completely without native species in the structure of their vegetation; i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs. |

6.0 Vegetation Results

6.1 Description of the Vegetation

Cleared and/or heavily disturbed areas (roads, drains, tracks as well as houses and gardens associated with the Lombadina community) comprised 5.37 ha (44%) of the study area. There were two main native vegetation types recorded in the study area; both were recorded from orange sandy pindan plains (see Figure 6.1) and are described below.

P1: CgCbAtCHpSe *Corymbia greeniana*, *C. bella* very open woodland over *Acacia tumida* tall shrubland over *Chrysopogon pallidus*, *Sorghum ecarinatum* mixed tussock grassland.

This was the dominant vegetation type of the study area, covering 6.23 ha (50%) of the study area (see Plate 6.1). *Corymbia greeniana* (Bilal) and *C. bella* (Maroolal) were co-dominant overstorey trees. *Acacia tumida* (Wanggay) was the only dominant shrub and these were often still recovering from fire. The understorey consisted of *Chrysopogon pallidus* (Irooloo), *Sorghum ecarinatum* (Oonbi) tussock grasses. Typical non-dominant herb species occurring in this vegetation included *Bonamia linearis*, *Calandrinia strophiolata*, *Corchorus pumilio*, *Evolvulus alsinoides*, *Goodenia sepalosa*, *Gyrostemon tepperi*, *Sida rohlenae*, *Spermacoce occidentalis* and *Trianthema pilosum*. Fire age was less than one year, and the condition for this vegetation type was rated as Good (discussed in Section 6.2).

P2: EmCHpSe *Eucalyptus miniata* open woodland over *Chrysopogon pallidus*, *Sorghum ecarinatum* mixed tussock grassland.

This vegetation type was recorded in the southeast corner of the study area over 0.77 ha (6%) of the study area. *Eucalyptus miniata* (Manowan) was the dominant overstorey tree species, and the same dominant tussock grasses of *Chrysopogon pallidus* (Irooloo), *Sorghum ecarinatum* (Oonbi) were present. The condition of this vegetation type was rated as Very Good (discussed in Section 6.2).



Plate 6.1: Vegetation type P1: CgCbAtCHpSe



Plate 6.2: Vegetation type P2: EmCHpSe

Figure 2: Descriptions of the vegetation units identified over the survey area

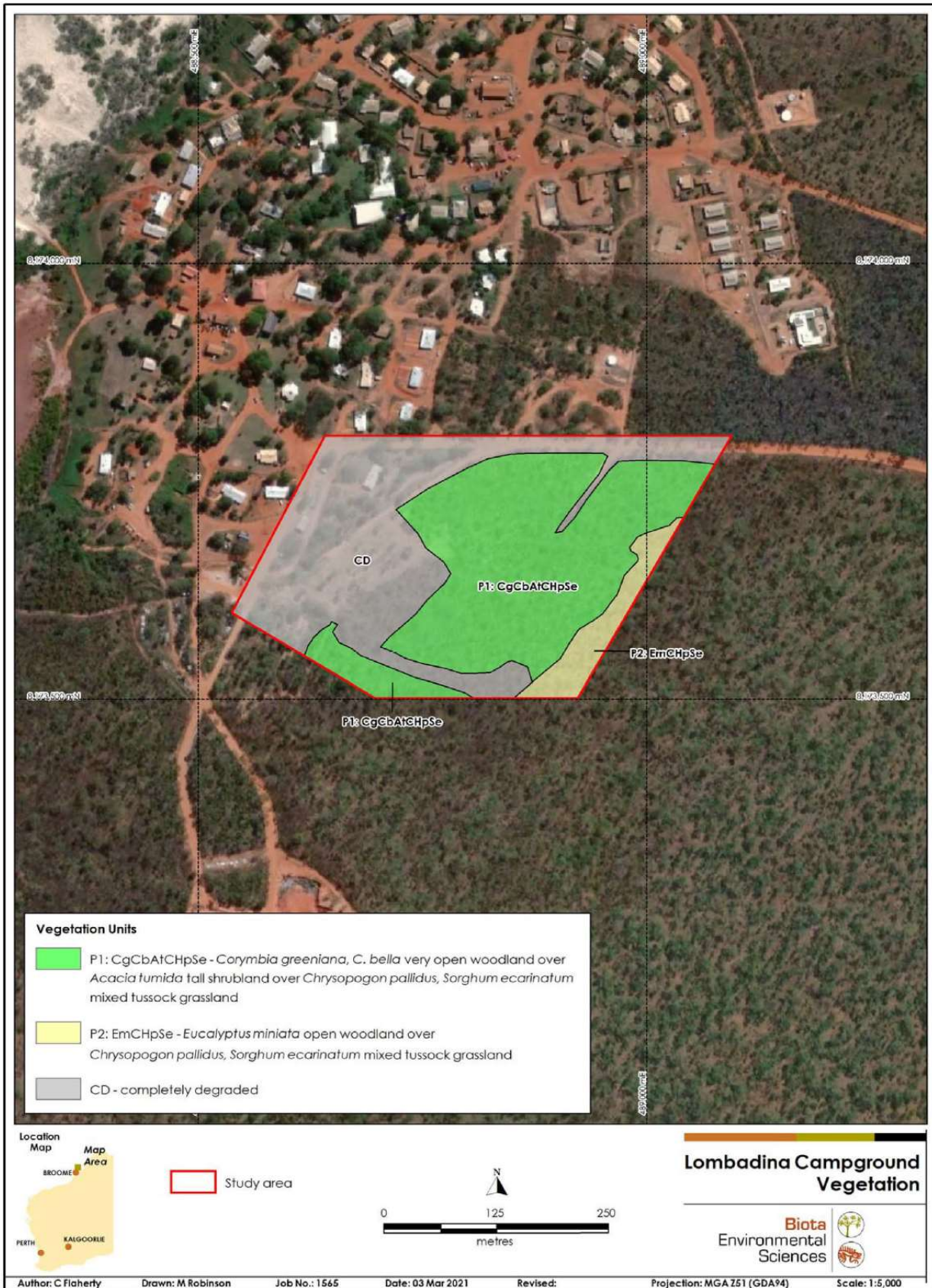


Figure 6.1: Vegetation of the Lombadina study area.

Figure 3: Map of the vegetation units identified over the survey area

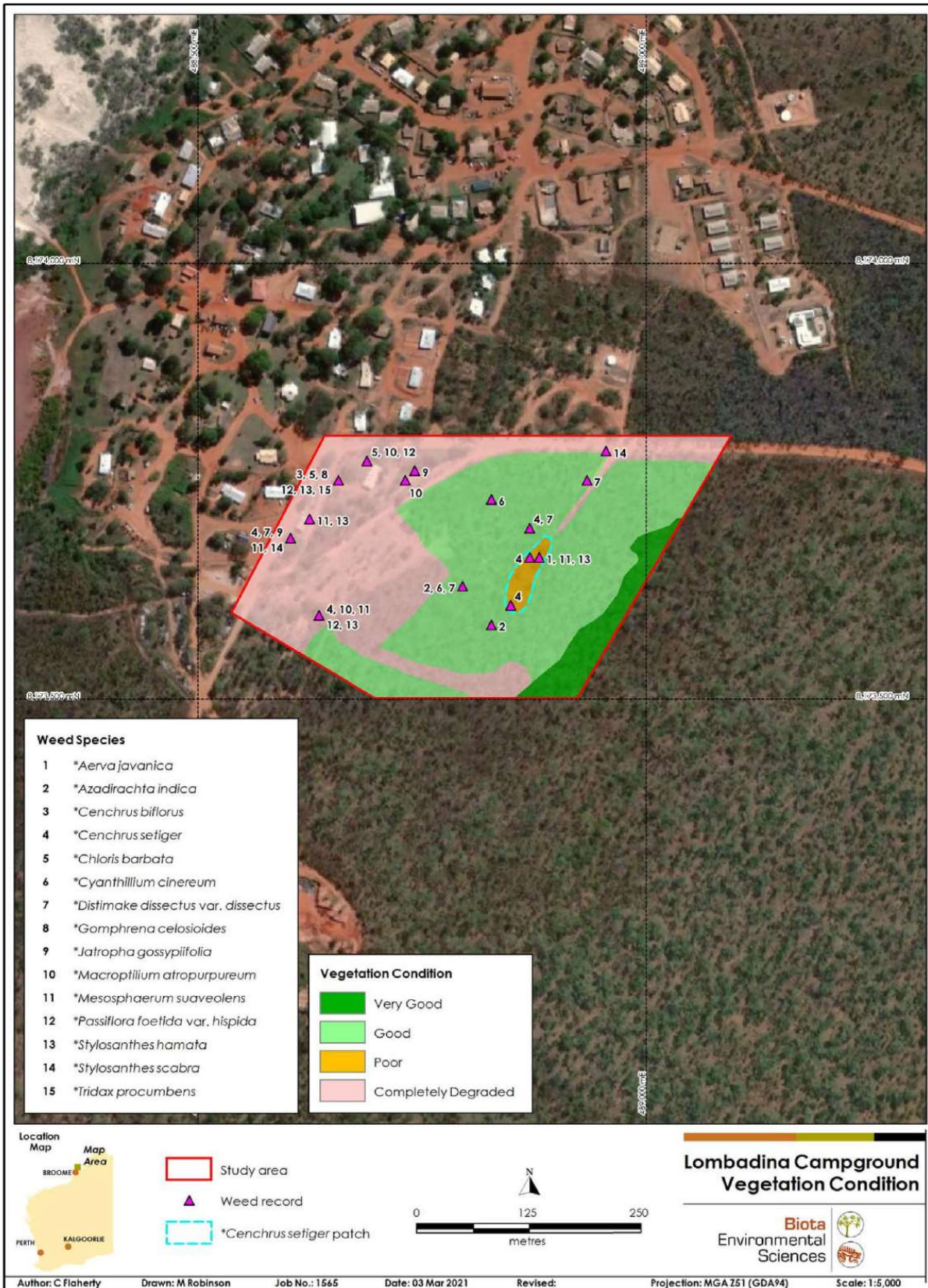


Figure 6.2: Vegetation condition ranking of the Lombadina study area.

Figure 4: Map of the vegetation condition over the survey area



Plate 6.3: Rusty steel hull of a boat dumped in vegetation type P1.



Plate 6.4: Earthy mound recorded in vegetation type P1.



Plate 7.1: *Jatropha gossypifolia* (Bellyache Bush) in the study area.



Plate 7.2: *Azadirachta indica* (Neem Tree) in the study area.

Figure 5: Photographs of the Survey area

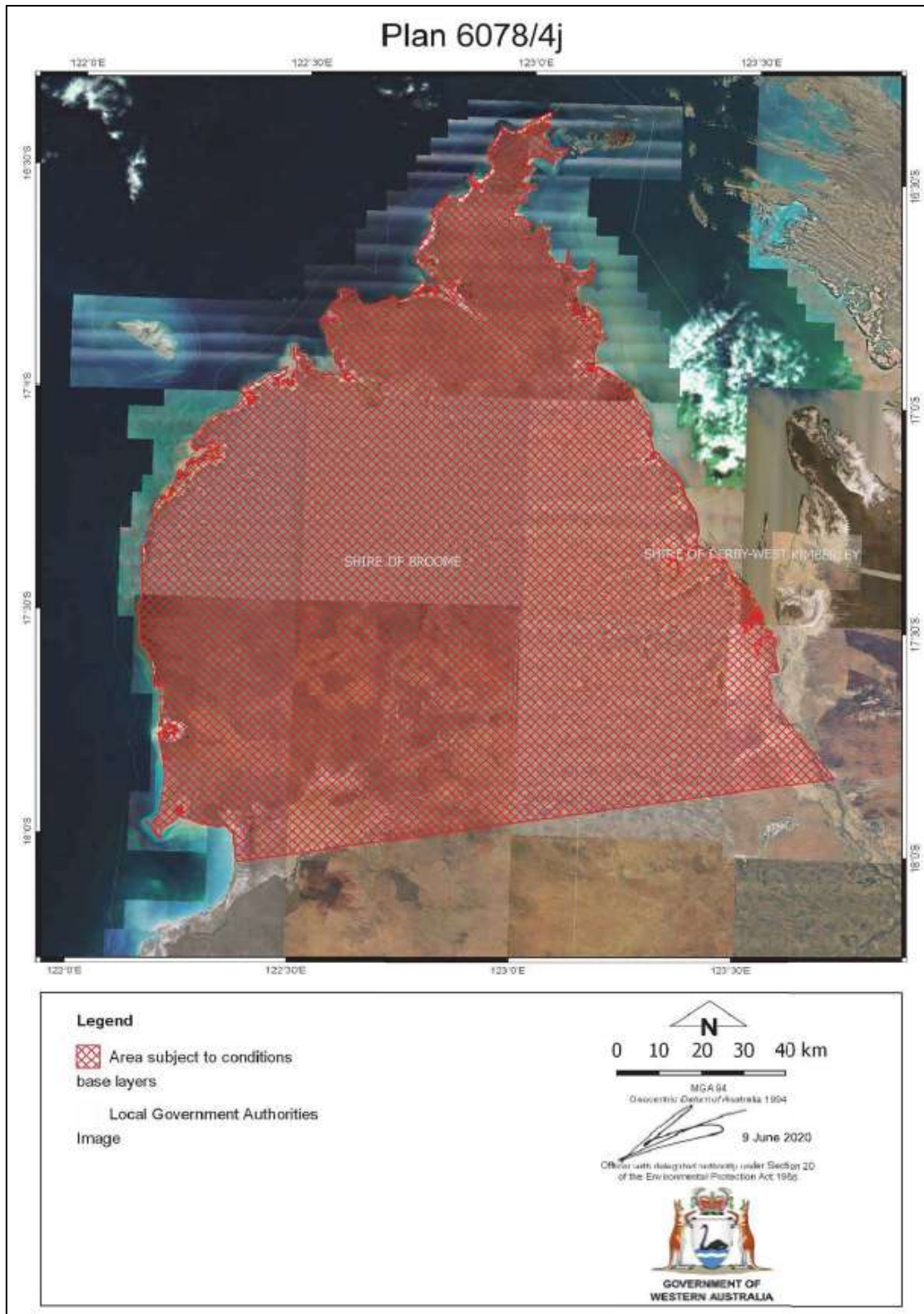


Figure 6: Area subject to conditions under the clearing permit CPS 6078/4.

Appendix F. Sources of information

F.1. GIS databases

Publicly available GIS Databases used (sourced from www.data.wa.gov.au):

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems
- Wheatbelt Wetlands Stage 1 (DBCA-021)

Restricted GIS Databases used:

- ICMS (Incident Complaints Management System) – Points and Polygons
- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

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