GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS
Area Permit Number: 8066/1
File Number: DER2018/000813
Duration of Permit: From 7 September 2019 to 7 September 2034

PERMIT HOLDER
Iluka Resources Ltd

LAND ON WHICH CLEARING IS TO BE DONE
Lot 61 on Deposited Plan 222236, Capel
Lot 56 on Deposited Plan 222236, Capel
Lot 2 on Diagram 90768, Capel

AUTHORISED ACTIVITY
The Permit Holder shall not clear more than 3.64 hectares of native vegetation within the area hatched yellow on attached Plan 8066/1a.

ADVICE NOTE
The area referred to in condition 4 of this Permit totals 2.3 hectares.

CONDITIONS

1. Avoid, minimise and reduce the impacts and extent of clearing
In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in 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. Dieback and weed control
When undertaking clearing authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:
(a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
(b) ensure that no known *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
(c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

3. Western Ringtail Possum Management
(a) In relation to the area cross-hatched yellow on attached Plan 8066/1a, the Permit Holder must engage a *fauna specialist* to inspect that area immediately prior to, and for the duration of clearing, for the presence of (*Pseudocheirus occidentalis*) western ringtail possum(s).
(b) Clearing must cease in any area where fauna referred to in condition 3(a) above are identified until either:
(i) the western ringtail possum(s) individual has been removed by a *fauna specialist*; or
(ii) the western ringtail possum(s) individual has moved on from that area to adjoining *suitable habitat*.

(c) Any western ringtail possum (*Pseudocheirus occidentalis*) individuals removed in accordance with condition 3(b)(i) of this Permit must be relocated by a *fauna specialist* to *suitable habitat*.

(d) Where fauna is identified under condition 3(a) of this Permit, the Permit Holder must provide the following records to the *CEO* as soon as practicable:
   (i) the number of individuals identified;
   (ii) the date each individual was identified;
   (iii) the location where each individual was identified recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
   (iv) the number of individuals removed and relocated;
   (v) the date each individual was removed;
   (vi) the date each individual was relocated;
   (vii) the location where each individual was relocated to, recorded using a GPS unit set to GDA94, expressing the geographical coordinates in Eastings and Northings or decimal degrees; and
   (viii) details pertaining to the circumstances of any death of, or injury sustained by, an individual.

4. Offset – Revegetation

Within 12 months of completion of remediation works as required under the *Contaminated Sites Act 2003* and no later than April 2022, the Permit Holder shall implement and adhere to the revegetation commitments in '*CPS 8066/1 and CPS 8092/1 Offset proposal and associated attachments'*, including but not limited to the following actions;

(a) commence *revegetating* and *rehabilitating* the area hatched red on Plan 8066/1b by;
   (i) undertaking an extensive pre-*planting* weed control program;
   (ii) deliberately *planting* native vegetation that will provide suitable habitat for western ringtail possum; and
   (iii) ensuring only *local provenance* seeds and propagating material are used to *revegetate* and *rehabilitate* the area.

(b) establishing ten 10 x 10 metre quadrat monitoring sites within the *rehabilitated* area;

(c) fencing the *rehabilitated* area;

(d) implementing hygiene protocols by cleaning earth-moving machinery of soil and vegetation prior to entering and leaving the site;

(e) undertaking annual weed control activities to maintain a minimum 80 per cent weed free state by the end of the project maintenance period;

(f) achieve the following completion criteria after the ten year monitoring period for the area *revegetated* and *rehabilitated* under this Permit;

Proposed Completion criteria (CC)	**Monitoring (method, frequency)**	**Timing**	**Thresholds triggers and remedial actions**	**Evidence to demonstrate completion (validation)**
CC1: No declared weeds present in revegetation	Visual inspection for weeds bi-annually to identify declared weeds	By 10 years post planting	Any declared weeds are treated within three months of identification.	Visual inspection at completion to verify absence of declared weeds.
CC2: Weed cover is less than 20% at completion	Spring survey year 1, 2, 3, 5, 7 and 10 post veg establishment. A minimum of ten 10x10m quadrats will be established.	By 10 years post planting	Weeds will be sprayed annually (irrespective of % cover observed in monitoring)	Third-party report by suitably qualified professional verifying completion criteria have been met.
CC3: Select, establish and maintain a minimum of 15 species that provide western ringtail possum habitat in revegetation prior to completion and	Spring survey year 1, 2, 3, 5, 7 and 10 post veg establishment. A minimum of ten 10x10m quadrats will be established.	By 10 years post planting	Infill planting will be conducted if scheduled monitoring shows minimum standard has not been met.	Third-party report by suitably qualified professional verifying completion criteria have been met.

include at least: - 5 species that provide foraging value - 5 species that provide canopy value - 5 species that provide understorey value				
CC4: A density of 800 stems per hectare of species contributing to canopy (shrubs and trees) utilised by western ringtail possum achieved in revegetation prior to completion.	Spring survey year 1, 2, 3, 5, 7 and 10 post veg establishment. A minimum of ten 10x10m quadrats will be established.	By 10 years post planting	Infill planting will be conducted if scheduled monitoring shows minimum standard has not been met.	Third-party report by suitably qualified professional verifying completion criteria have been met.
CC5: No areas greater than 250m^2 without a developing understorey (foliage cover between 0-50cm height) at completion.	Spring survey year 1, 2, 3, 5, 7 and 10 post veg establishment. A minimum of ten 10x10m quadrats will be established.	By 10 years post planting	Infill planting will be conducted if scheduled monitoring shows minimum standard has not been met.	Third-party report by suitably qualified professional verifying completion criteria have been met.
CC6: A minimum of 30% cover will be established in revegetation at completion	Spring survey year 1, 2, 3, 5, 7 and 10 post veg establishment. A minimum of ten 10x10m quadrats will be established.	By 10 years post planting	Infill planting will be conducted if scheduled monitoring shows minimum standard has not been met.	Third-party report by suitably qualified professional verifying completion criteria have been met.
CC7: A perpetual covenant will be established 2 years prior to completion	n/a	By 8 years post planting	n/a	Conservation covenant will be registered on the freehold title at time of completion and will prevent clearing and grazing.

5. Offset – Conservation Covenant

Two years prior to completion of revegetation commitments under Condition 4 of this Permit and no later than April 2030, the Permit Holder shall:

(a) give a conservation covenant under section 30B of the *Soil and Land Conservation Act 1945* setting aside the area hatched red on attached Plan 8066/1b for the protection and management of vegetation in perpetuity; and

(b) provide to the CEO a copy of the executed conservation covenant.

6. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit:

(a) in relation to the clearing of native vegetation authorised under this Permit:
   (i) 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;
   (ii) the date that the area was cleared;
   (iii) the size of the area cleared (in hectares);

(b) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 1 of this Permit;

(c) actions taken to minimise the risk of the introduction and spread of *dieback* and *weeds* in accordance with condition 2 of this Permit;

(d) activities in relation to condition 3 of this permit;
(e) in relation to the revegetation of areas pursuant to condition 4 of this Permit:
    (i) a description of the *revegetation* and *rehabilitation* activities undertaken;
    (ii) the size of the area *revegetated* and *rehabilitated* (in hectares); and
    (iii) the date that the area was *revegetated* and *rehabilitated*; and
(f) actions taken to give a conservation covenant in accordance with condition 5 of this Permit

7. Reporting

The Permit Holder must provide to the *CEO* on or before 30 June of each year, a written report:
    (i) of records required under condition 6 of this Permit; and
    (ii) concerning activities done by the Permit Holder under this Permit between 1 January to 31 December of the preceding calendar year.

(b) If no clearing authorised under this Permit was undertaken between 1 January to 31 December of the preceding calendar year, a written report confirming that no clearing under this permit has been carried out, must be provided to the *CEO* on or before 30 June of each year.
(c) Prior to 7 June 2034, the Permit Holder must provide to the *CEO* a written report of records required under condition 6 of this Permit where these records have not already been provided under condition 7(a) of this Permit.

DEFINITIONS

The following meanings are given to terms used in this Permit:

CEO: means the Chief Executive Officer of the Department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*.

dieback means the effect of *Phytophthora* species on native vegetation.

fauna specialist means a person:
(a) Who holds a tertiary qualification specializing in environmental science or equivalent, has a minimum of two years work experience in fauna identification and surveys of fauna native to the region being inspected or surveyed and holds a valid fauna licence issued under the *Biodiversity Conservation Act 2016*; or
(b) Who does not have appropriate professional qualifications, but has a minimum of seven years work experience in fauna identification and surveys of fauna native to the region being inspected or surveyed and holds a valid fauna licence issued under the *Biodiversity Conservation Act 2016*.

fill means material used to increase the ground level, or fill a hollow;

local provenance means native vegetation seeds and propagating material from natural sources within 50 kilometres and the same Interim Biogeographic Regionalisation for Australia (IBRA) subregion of the area cleared;

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;

planting means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;

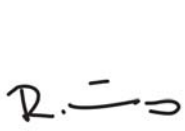
rehabilitate/ed/ion/ing means actively managing an area containing native vegetation in order to improve the ecological function of that area;

revegetate/ed/ion means the re-establishment of a cover of *local provenance* native vegetation in an area using methods such as natural *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.

suitable habitat: means habitat known to support western ringtail possums (*Pseudocheirus occidentalis*) within the known current distribution of the species. This often includes stands of myrtaceous trees (usually Peppermint Tree (*Agonis flexuosa*)) growing near swamps, watercourses or floodplains, and at topographic low points which provide cooler, often more fertile, conditions.

weed/s means any plant -

(a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
(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.

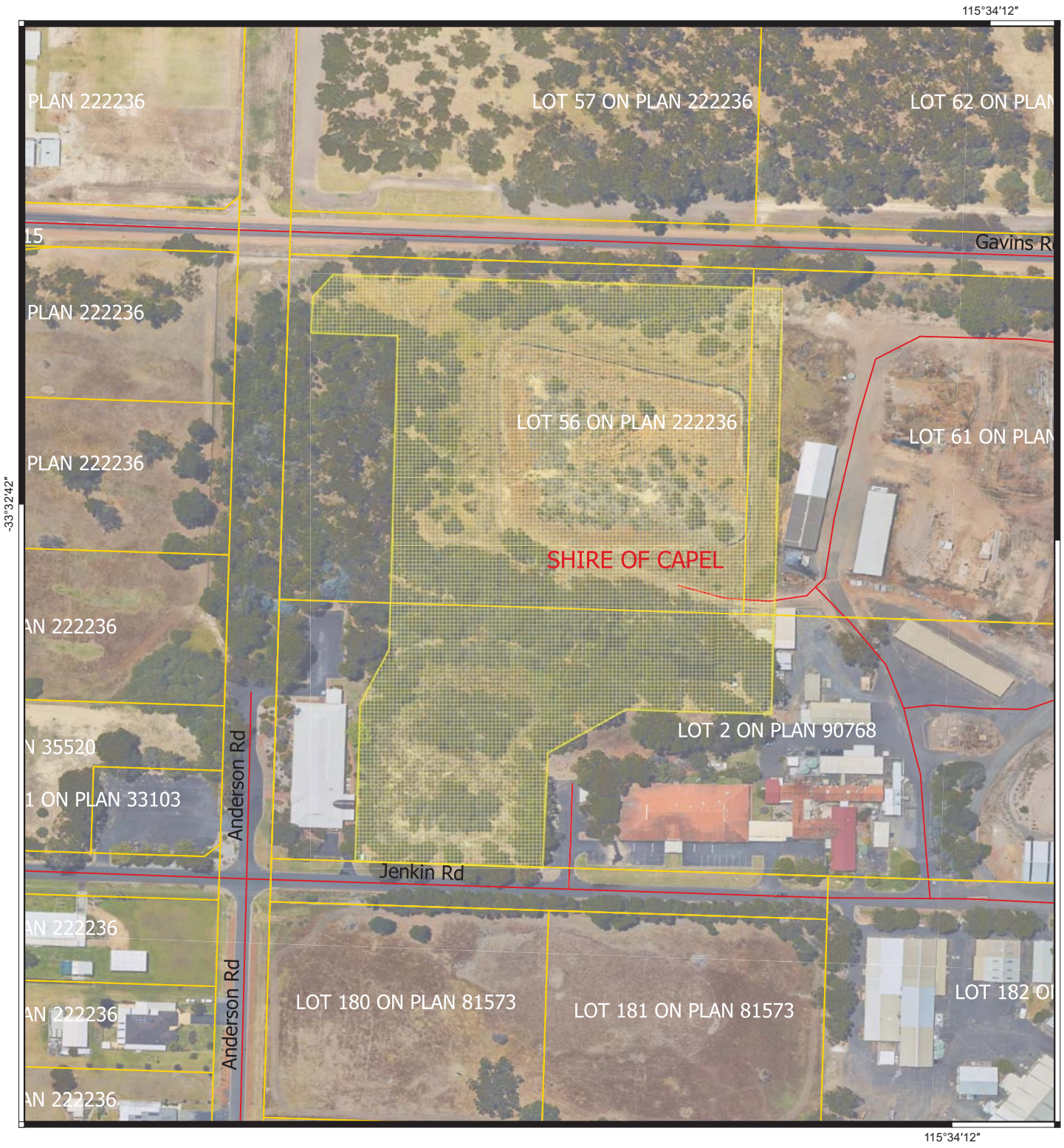


Ryan Mincham
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

8 August 2019

Plan 8066/1a



Legend

- Areas approved to clear
- Cadastre
- Local Government Authorities
- Roads

Image

N

60 0 60 m

MGA 94
Geocentric Datum of Australia 1994

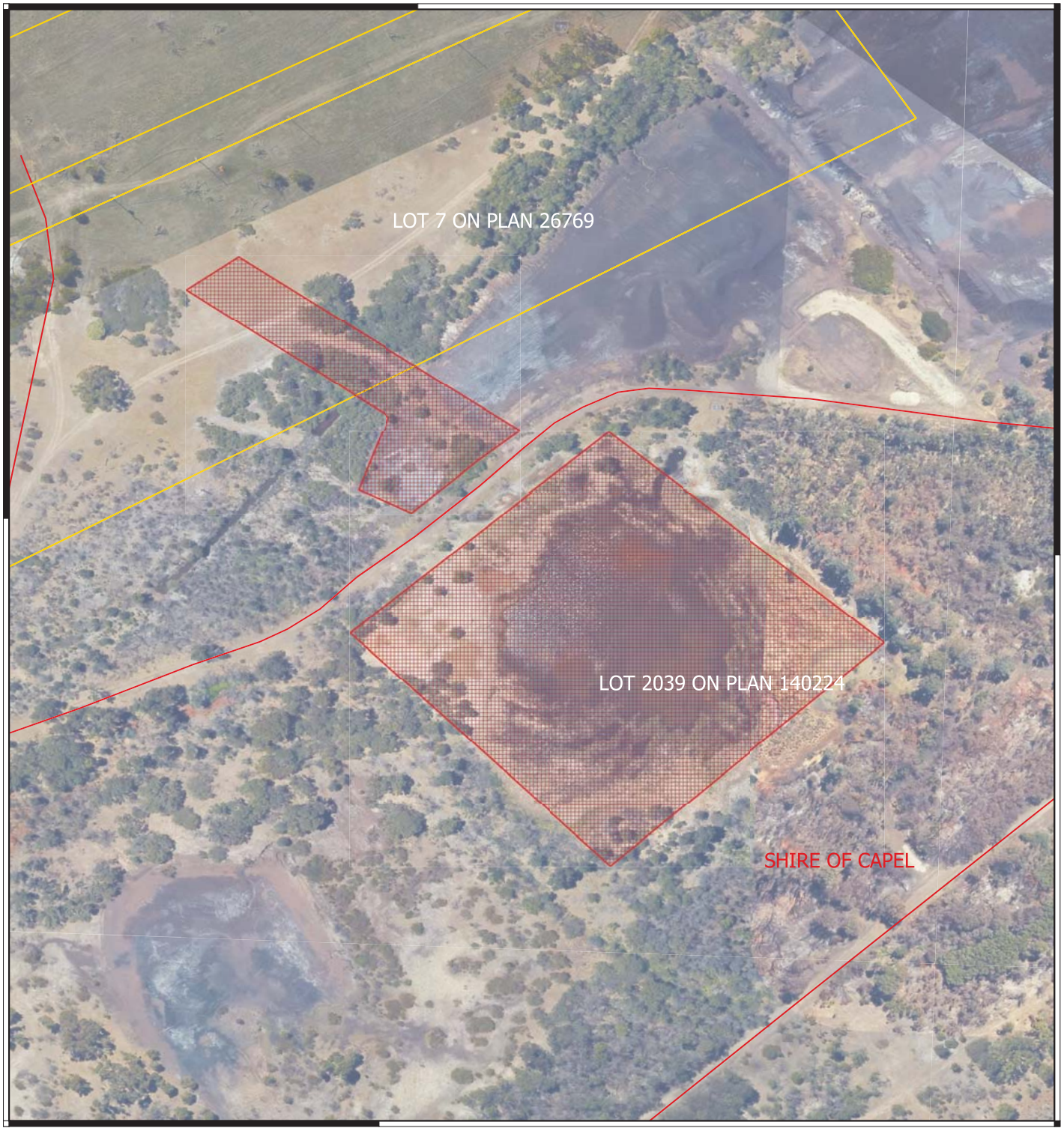
Ryan Mincham
2019.08.08
10:30:04 +08'00'

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

GOVERNMENT OF WESTERN AUSTRALIA

Plan 8066/1b

115°31′48″



-33°34′30″

-33°34′30″

115°31′48″

Legend

- Area subject to conditions
- Cadastre
- Local Government Authorities
- Roads

Image

N

60 0 60 m

MGA 94
Geocentric Datum of Australia 1994

Ryan Mincham
2019.08.08
10:30:29 +08'00'

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

GOVERNMENT OF WESTERN AUSTRALIA

Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 8066/1
Permit type: Area Permit

1.2. Applicant details

Applicant's name: Iluka Resources Limited
Application received date: 10 May 2018

1.3. Property details

Property: Lot 61 on Deposited Plan 222236, Capel
Lot 56 on Deposited Plan 222236, Capel
Lo 2 on Diagram 90768, Capel
Local Government Authority: Shire of Capel
Localities: Capel

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	Purpose category:
3.64	0	Mechanical Removal	Restoration

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 8 August 2019

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 principle (b) and is not likely to be at variance to the remaining principles.

Through assessment it was determined that the application area contains 1.34 hectares of suitable habitat for western ringtail possum.

To mitigate the significant environment impacts identified above, and in accordance with the WA Environmental Offset Policy and Environmental Offsets Guidelines, the applicant has committed to revegetate 2.323 hectares of suitable western ringtail possum habitat at Lot 2039 on Deposited Plan 140224 and Lot 7 on Diagram 26769, Capel.

It is considered that an inspection of the application area by a fauna specialist for the presence of western ringtail possum and relocating any individuals identified to suitable habitat will further mitigate any impacts to western ringtail possum.

The Delegated Officer determined that the proposed clearing may increase the risk of weeds and dieback spreading into surrounding vegetated areas. A weed and dieback management condition has been placed on the permit to mitigate the impact of spreading weeds and dieback into adjacent native vegetation.

Given the above, the Delegated Officer determined to grant a clearing permit subject to avoid/minimise, offset, fauna management and dieback and weed management conditions.

2. Site Information

Clearing Description

The application is to clear 3.64 hectares of native vegetation within Lot 61 on Plan 222236, Lot 56 on Plan 222236 and Lot 2 on Diagram 90768, Capel, for the purpose of remediating contaminated soil (Figure 1).

Vegetation Description

The application area is mapped as Guildford Complex and is described as a mixture of open forest to tall open forest of *Corymbia calophylla* (marri) - *Eucalyptus wandoo* (wandoo) - *Eucalyptus marginata* (jarrah) and woodland of *Eucalyptus wandoo* (wandoo) (with rare occurrences of *Eucalyptus lane-poolei* (salmon white gum).

The application area is also mapped as Swan Complex and is described as a fringing woodland of *Eucalyptus rudis* (flooded gum) - *Melaleuca rhaphiophylla* (swamp paperbark) with localised occurrence of low open forest of *Casuarina obesa* (swamp sheoak) and *Melaleuca cuticularis* (saltwater paperbark) (Heddle et al., 1980).

Vegetation Condition

Corymbia calophylla / *Eucalyptus rudis* over pasture or weeds comprises 0.45 hectares of the application area and is in a completely degraded condition (Iluka Resources Limited, 2018a). Planted exotic eucalypts and other amenity species comprises 0.89 hectares of the application area and its condition has not been assessed (Iluka Resources Limited, 2018a)

Completely degraded; No longer intact, completely/almost completely without native species to Degraded; severely impacted by disturbance, scope for regeneration (Keighery, 1994).

Soil type

The soils within the application area are mapped as Bassendean B1 Phase, described as extremely low to very low relief dunes, undulating sandplain and discrete sand rises with deep bleached grey sands sometimes with a pale yellow B horizon or a weak iron-organic hardpan at depths generally greater than 2 metres; banksia dominant (DPIRD, 2017).

Comment

The local area considered in the assessment of this application is defined as the area within a 10 kilometre radius of the application area.

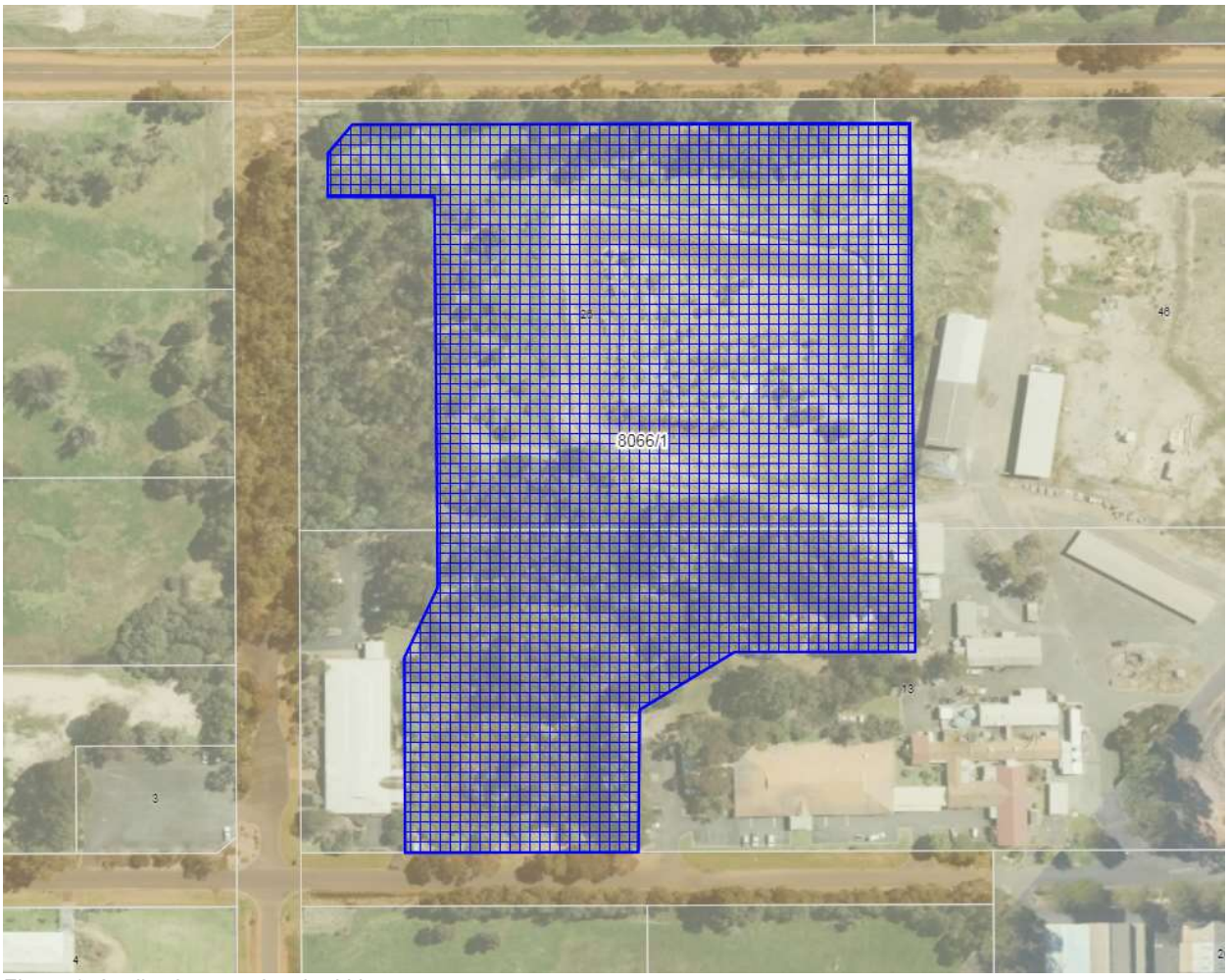


Figure 1: Application area hatched blue

Figure 2: Vegetation occurring within the application area (by-product area) (Iluka Resources Limited, 2018a)

Figure 3: Vegetation occurring within the application area (artificial lake) (Iluka Resources Limited, 2018a)

3. Minimisation and mitigation measures

The management measures below will be implemented by Iluka Resources Limited (Iluka Resources Limited, 2018a).

- Clearing undertaken in daylight hours;
- A ground disturbance permit system will be used;
- Clearing pattern will be used that encourages fauna to move into adjacent habitats;
- A qualified fauna spotter will be on-site when clearing is being undertaken.

The following measures have been taken by the applicant to avoid impacts to western ringtail possums (Iluka Resources Limited, 2019a):

- Avoiding vegetation on the west side of the clearing area and vegetation on the north side of the clearing area currently providing a link to the rail reserve to the east. A total of 0.2 hectares has been avoided;
- Western ringtail possums to be relocated prior to clearing to areas approved by Department of Biodiversity, Conservation and Attractions (DBCA). A Fauna Taking (Relocation) Licence, issued by DBCA, will be required for this activity;
- Earthmoving machinery and other vehicles will be required to remain within disturbed areas and existing tracks in order to prevent impacts to surrounding habitat;
- Vehicles and machinery will be required to be free of weed and seed material prior to mobilisation to site in order to protect the surrounding vegetation.

4. Assessment of application against clearing principles

The applicant proposes to clear 3.64 hectares of native vegetation within Lot 61 on Plan 222236, Lot 56 on Plan 222236 and Lot 2 on Diagram 90768, Capel, for the purpose of remediating contaminated soil.

Corymbia calophylla / *Eucalyptus rudis* over pasture or weeds comprises 0.45 hectares of the application area and is in a completely degraded condition (Iluka Resources Limited, 2018a). Planted exotic eucalypts and other amenity species comprises 0.89 hectares of the application area and its condition has not been assessed (Iluka Resources Limited, 2018a). The remaining 2.3 hectares of the application area includes infrastructure, dirt roads and bare ground, some of which comprises recolonised vegetation (grassland with scattered trees (Iluka Resources Limited, 2018a).

Iluka Resources Limited commissioned Ecoedge to conduct a Level 1 survey of the vegetation and flora within an area of approximately 123 hectares (Ecoedge, 2015) and Harewood to conduct a Level 1 survey of the fauna within an area of approximately seven hectares (Harewood, 2018), which contains the application area.

No priority or rare flora, or threatened or priority ecological communities were identified within the application area.

Seven threatened fauna species, seven species protected under an international agreement and three other specially protected fauna have been recorded within the local area (10 kilometre radius) (Department of Biodiversity, Conservation and Attractions (DBCA), 2007-).

The fauna survey confirmed that three threatened fauna species were within the application area, being the forest red-tailed black cockatoo (*Calytorhynchus banksii naso*), Baudin's cockatoo (*Calytorhynchus baudinii*) and western ringtail possum (*Pseudocheirus occidentalis*) (Harewood, 2018). Three other fauna species of conservation significance may utilise the application area, being; Carnaby's cockatoo (*Calyptorhynchus latirostris*), peregrine falcon *(Falco peregrinus)* and quenda (*Isoodon fusciventer)* (Harewood, 2018).

Black cockatoo foraging evidence was observed within the survey area including chewed marri fruits, however the application area is not regarded as representing quality foraging habitat due to the general absence of favoured foraging species (Harewood, 2018). Within the survey area there are 55 habitat trees, with two of those trees being suitable for nesting black cockatoos. Twenty five of these trees were observed within the application area, however, none contain hollows suitable for nesting black cockatoos (Harewood, 2018).

Within the survey area, 13 western ringtail possum dreys were observed during the day survey (Harewood, 2018), with nine being within the application area (Iluka Resources Limited, 2018a). Within the survey area, 14 western ringtail possums (WRP) were identified during two nocturnal surveys (Harewood, 2018), with ten being within the application area (Iluka Resources Limited, 2018). It is estimated that 10 WRP utilise the application area (Harewood, 2018). The area surrounding the artificial lake which is approximately 0.9 hectares offers the best quality habitat for western ringtail possum (Iluka Resources Limited, 2018a).

DBCA advice (DBCA, 2018a) stated the clearing of the application area will remove a majority of the western ringtail possum habitat and fragment the remaining vegetation. As the application area and the vegetation to be retained have minimal connectivity to other areas of remnant vegetation, there will be a significant impact on the western ringtail possum. Iluka Resources Limited has proposed to relocate the WRP into road and rail reserve vegetation on the east of the Iluka Processing Plant, however, it is likely the proposed relocation area will be at carrying capacity (DBCA, 2018a). DBCA recommended a fauna survey be conducted to ascertain if WRP are within the proposed relocation area and their numbers. Subsequently, Iluka Resources Pty Ltd identified relocations areas in liaison with DBCA at Settler's Reserve and Capel Nature Reserve, west of the South Capel disturbance area (Iluka Resources Limited, 2019b).

The National Objectives and Targets for Biodiversity Conservation include a target that prevents the clearance of ecological communities with an extent below 30 per cent of that present pre-European settlement (Commonwealth of Australia, 2001). The application area is mapped as Guildford Complex and Swan Complex, however, the application area is not representative of these complexes. The local area retains approximately 30 per cent remnant vegetation.

The soil type in the application area is mapped as extremely low to very low relief dunes, undulating sandplain and discrete sand rises with deep bleached grey sands sometimes with a pale yellow B horizon or a weak iron-organic hardpan at depths generally greater than 2 metres (DPIRD, 2017). Sandy soils are prone to wind erosion, however given the degraded condition of the application area it is not likely to cause appreciable land degradation.

Groundwater salinity within the application area is 1000-3000 milligrams per litre total dissolved solids, which is classified as 'brackish-saline' (DWER, 2018). The majority of the application area vegetation which is of degraded condition and therefore the proposed clearing is not likely to impact on groundwater quality.

Within the application area, there are no naturally occurring watercourses or wetlands that have been mapped and no naturally occurring riparian or wetland vegetation is present, therefore the clearing is not likely to deteriorate surface water quality.

The nearest conservation area is an un-named Nature Reserve, located approximately 569 metres from the application area. Tuart Forest National Park is located three kilometres from the application area. Considering the distance of the application area to these nature reserves it is not likely to impact the environmental values of the conservation areas.

Given the porous nature of the sandy soils, the proposed clearing is not likely to cause or exacerbate the incidence or intensity of flooding.

Given the above, the proposed clearing is at variance to Principle (b) and is not likely to be at variance to the remaining Principles.

Taking into account the applicant's avoidance and minimisation measures (outlined in Section 3 of this report), it is considered that a suitable offset (outlined in Section 5 of this report) will counterbalance impacts to western ringtail possum.

Planning instruments and other relevant matters.

In 2007, Iluka Resources Limited reported the Capel Dry Plant as a contaminated site under the *Contaminated Sites Act 2003* and it has been classified as "Contaminated – remediation required". The clearing of the application area is required for Iluka Resources Limited to be compliant with the *Contaminated Sites Act 2003*. The clearing of the application area to perform remediation of the contaminated site forms part of a larger program titled South Capel Remediation Project (SCRP).

Two clearing permit applications have been lodged for the SCRP: one with DWER (CPS 8066/1) and the other with the Department of Mines, Industry Regulation and Safety (DMIRS) (CPS 8092/1), as planted and regrowth vegetation has established within contaminated areas and will require clearing in order to facilitate remediation.

The proposed clearing will impact upon a total 8.44 hectares of western ringtail possum (WRP) habitat, of which 1.34 hectares falls under CPS 8066/1 with DWER and 7.1 hectares falls under CPS 8092/1 with DMIRS (Table 1)

Table 1 - South Capel Remediation Project Clearing Permit Applications

Site	Clearing Permit	Assessing Agency	Lodged	Clearing Permit Area	WRP Habitat to be Cleared
Capel Dry Plant	CPS 8066/1	DWER	8 May 2018	3.64 hectares	1.34 hectares
South Capel	CPS 8092/1	DMIRS	1 June 2018	46.49 hectares	7.10 hectares
Total				50.13 hectares	8.44 hectares

The application area is zoned 'Special Use' under the Shire's Town Planning Scheme No 7 (TPS 7) with the permitted uses of Mineral Sands Processing, Offices and ancillary uses. The Shire of Capel confirmed that the proposed clearing of vegetation is consistent with TPS 7 and the state regulatory framework and therefore no development approval is required (Shire of Capel, 2018).

The proposed clearing has also been referred to the Department of the Environment and Energy to be assessed under the *Environment Protection and Biodiversity Conservation Act 1999* (Reference 2018/8250).

A current valid prescribed premises licence as issued by DWER (L6194/1989/14) is in place for the Capel Mineral Separation Plant owned by Iluka Resources Limited, and is within the clearing permit application area.

Prior to undertaking the proposed clearing, the applicant is required to obtain a fauna taking (relocation) licence pursuant to Regulation 23 of the *Biodiversity Conservation Regulations 2018*, from DBCA for relocating WRPs within the application area.

No Aboriginal sites of significance have been mapped within the application area.

The clearing permit application was advertised on the DWER website on 31 May 2018 with a 21 day submission period and readvertised with the revised application area on 26 July 2019 with a seven day submission period. No public submissions have been received in relation to this application.

5. Applicant's Submissions

DWER wrote to the applicant on 14 August 2018 advising that during the assessment of the clearing permit application it was identified that the application area contains significant habitat for western ringtail possums (*Pseudocheirus occidentalis*) as nine dreys were identified within the application area. The applicant was advised that the Department of Biodiversity, Conservation and Attractions noted that the area proposed for the relocation of the western ringtail possum (WRP) is likely to already be at its WRP carrying capacity. DWER recommended that a fauna survey of the proposed relocation area be undertaken to ascertain if WRP are within the proposed relocation area and to ensure the area has adequate carrying capacity.

The applicant provided a fauna survey undertaken in February 2010 of the proposed relocation area to DWER on 20 August 2018. The Department of Biodiversity, Conservation and Attractions noted that this survey is dated and it is highly likely that population dynamics have changed since then and that alternative relocation sites should be considered when undertaking surveys. DBCA advised of potential alternative relocation sites (DBCA, 2018b) which were forwarded to the applicant by DWER. The applicant advised that the provision of additional fauna surveys of potential relocation areas will be delayed (Iluka Resources Limited, 2018b). It was agreed by DWER and DMIRS that Iluka Resources Limited can finalise the translocation process with DBCA and that the granting of the clearing permits will not be held up by this process and that the issue will be addressed by appropriate permit conditions (DWER, 2019).

DWER also advised Iluka Resources Limited that significant residual impacts to habitat for WRP from the proposed clearing will require adequate environmental offsets, as although the application area is in a completely degraded condition, the area contains significant habitat for WRP. The applicant provided an offset proposal on 20 March 2019.

A meeting was held between Iluka Resources Limited, DMIRS and DWER on 28 February 2019 to discuss the adequacy of the offset proposal. Iluka Resources Limited's offset proposal proposing revegetation at the South Capel site was discussed with a general consensus that, although the location of the proposed revegetation fits into both the 'mitigation' and 'offset' definitions, it would provide an overall benefit to the WRP population through increasing the presence of habitat and improving linkages to adjacent WRP habitat.

On 7 June 2019, the applicant provided a revised offsets package and further details for the proposed rehabilitation. The revised package proposes to revegetate 14.632 hectares with WRP habitat post-remediation at South Capel (Lot 2039 on Deposited Plan 140224 and Lot 7 on Diagram 26769, Capel) which includes 2.323 hectares for this clearing permit application and 12.309 hectares for CPS 8092/1 lodged with DMIRS. This area will be fenced off and placed under a conservation covenant to be managed in perpetuity for conservation (Iluka Resources Limited, 2019a).

Iluka Resources Limited advised on 2 August 2019 that a suitable translocation site has been identified and agreed to by DBCA and that Iluka Resources Limited are in the process of obtaining a fauna taking (relocation) licence to relocate WRP within the application area from DBCA (Iluka Resources Limited, 2019b).

6. Suitability of Proposed Offset

The proposed clearing will result in the loss of 1.34 hectares of native vegetation, which although in a completely degraded condition, provides suitable habitat for western ringtail possums (WRP).

The applicant avoided, minimised and mitigated impacts to WRP by avoiding a total of 0.2 hectares of vegetation on the west side of the clearing area and vegetation on the north side of the clearing area, currently providing a link to the rail reserve to the east (figure 1).

To address the remaining residual environmental impacts, the applicant has committed to revegetating 2.323 hectares of suitable WRP habitat outside of the application area, at Lot 2039 on Deposited Plan 140224 and Lot 7 on Diagram 26769, Capel. The revegetation site also includes an additional 12.309 hectares, as required for the clearing permit application lodged with DMIRS for the South Capel Remediation Project (Figure 4).

The proposed remediation requires clearing of a total of 8.44 hectares of WRP habitat. Therefore, the offset package involves the revegetation of WRP habitat and results in:

- The creation of new WRP habitat (approximately 14.6 hectares between both clearing permit applications);
- An overall increase in the presence of WRP habitat in better condition to that cleared;
- Improved linkages between existing areas of WRP habitat adjacent to the revegetation area;
- Consolidation of WRP habitat into a large area, as opposed to the existing patchy habitat;

- The conservation in perpetuity of the WRP habitat through a conservation covenant established under Section 30B of the *Soil and Land Conservation Act 1945* (Iluka Resources Limited, 2019b).

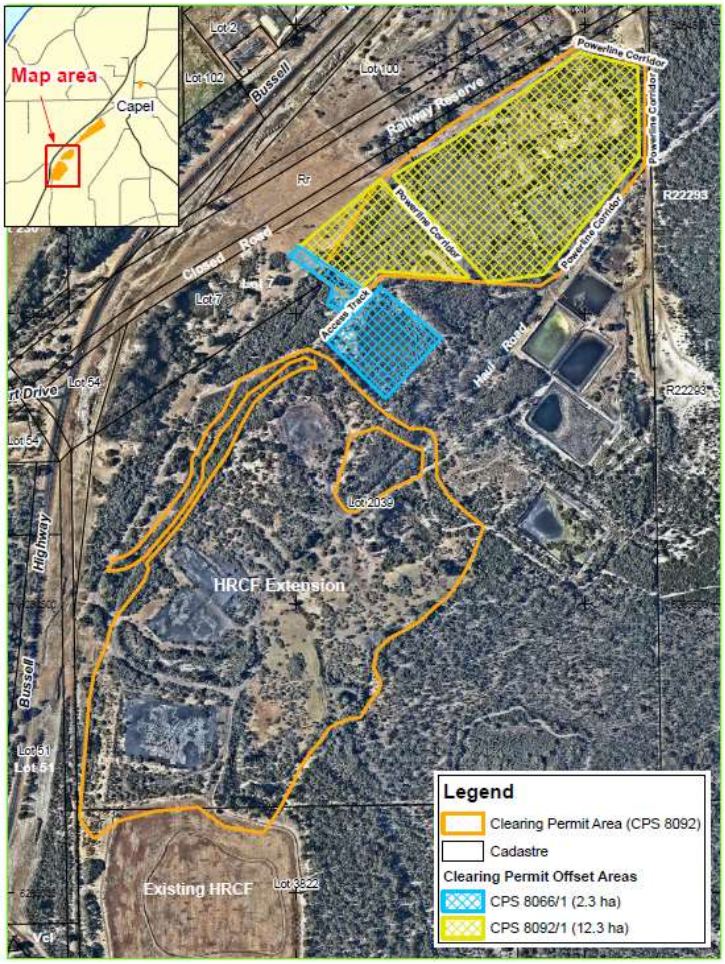


Figure 4: Offset sites for the South Capel Remediation Project (Iluka Resources Limited, 2019b)

The proposed offsets deviate from the Guidelines and Procedure as below:

- The WA Environmental Offsets Guidelines 2014 defines revegetation on-site as mitigation and revegetation off-site as offsets. The offset for CPS 8066/1is completely outside the clearing permit area, however, the offset for CPS 8092/1 is partially within the clearing permit boundary. It is acknowledged that the definition requires the offset to be outside the clearing permit boundary; however, the proposed offset site has been discussed with both DMIRS and DWER and the area chosen provides the best possible outcome for the WRPs by providing consolidated habitat with improved quality and linkages with surrounding remnant habitat. Both DWER and DMIRS agreed on this approach.
- Clearing of Native Vegetation Offsets Procedure 2014 indicates that contaminated sites classified under the *Contaminated Sites Act 2003* are not suitable offsets. The applicant advised that in this case, the project is a remediation project. The primary purpose of the SCRP is to remove sources of groundwater contamination and contain them in the Hutton Road Containment Facility Extension. Consequently, any of the proposed offset areas subject to contamination will have been remediated and validated as such prior to undertaking revegetation, thereby eliminating the risk of future remediation and associated disturbance being required.

Notwithstanding, while the WA Environmental Offsets Guidelines 2014 and Clearing of Native Vegetation Offsets Procedure 2014 provide useful guidance to applicants on the development of offsets, they are not legally binding, as discussed during consultation with DMIRS and DWER. Both DWER and DMIRS support the view that some flexibility is acceptable when applying these guidelines where a better outcome for the WRPs can be achieved without any unacceptable environmental risks being introduced.

Where possible, alignment has been sought with the Department of the Environment and Energy's requirements for an offset under the *Environment Protection and Biodiversity Conservation Act 1999* assessment.

The approved South Capel Closure Plan for the proposed offset area is to return it to the pre-mining land use of agriculture and Iluka Resources Limited notes that the proposed offset strategies are additional to these mine closure requirements (Iluka Resources Limited, 2018b).

DWER considers the mitigation measures and the two offsets outlined above are adequate to counterbalance the significant residual impacts to western ringtail possum.

7. 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. URL: http://naturemap.dpaw.wa.gov.au/. Accessed August 2018.

Department of Biodiversity, Conservation and Attractions (DBCA) (2018a) Regional advice from the South West Region for Clearing Permit application CPS 8066/1. Western Australia. Received by DWER on 23 July 2018 (DWER Reference: A1708671).

Department of Biodiversity, Conservation and Attractions (DBCA) (2018a) Additional advice from the South West Region for Clearing Permit application CPS 8066/1. Western Australia. Received by DWER on 24 August 2018 (DWER Reference: A1714159).

Department of Primary Industries and Regional Development (DPIRD) (2017). NRInfo Digital Mapping. Department of Primary Industries and Regional Development. Government of Western Australia. URL: https://maps.agric.wa.gov.au/nrm-info/ (Accessed August 2018).

Department of Water and Environmental Regulation (DWER) (2018) Understanding Salinity. URL: http://www.water.wa.gov.au/. (Accessed July 2018).

DWER (2019) Email to applicant advising of meeting outcomes between DWER and the Department of Mines, Industry Regulation and Safety on 24 January 2019 (DWER Reference: A1759026).

Ecoedge (2015) Report of a Level 1 Flora and Vegetation Survey at the Capel Dry Plant, Capel. Perth, Western Australia.

Harewood (2018) Fauna Assessment: Capel Dry Plant, Perth Western Australia.

Heddle, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.

Iluka Resources Limited (2018a) Capel Dry Plant Remediation: Native Vegetation Clearing Permit Application: Area Permit. Iluka Resources Limited, Perth, Western Australia (DWER Reference: A1670958).

Iluka Resources Limited (2018b) South Capel Remediation Project Native Vegetation Clearing Permits Offset Proposal. Capel Dry Plant CPS 8066/1. South Capel CPS 8092/1. Iluka Ref: 0058-1624046663-1071. March 2019. Received by DWER on 20 March 2019 (DWER Reference: A1778009).

Iluka Resources Limited (2019a) Revised offset proposal and associated attachments for CPS 8066/1 and CPS 8092/1. Received by DWER on 7 June 2019 (DWER Reference: A1798843).

Iluka Resources Limited (2019b) Email from applicant providing maps of the release relocation for western ringtail possum for the South Capel Remediation Project. Received by DWER on 2 August 2019 (DWER Reference: A1811880).

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Shire of Capel (2018) Shire of Capel Advice for Clearing Permit Application CPS 8066/1 (DWER Reference: A1687766).

8. GIS Datasets

- Aboriginal Sites of Significance
- Clearing Regulations - Environmentally Sensitive Areas
- Carnaby's cockatoo: breeding, roosting, feeding
- Department of Biodiversity Conservation and Attractions, Tenure
- Geomorphic Wetlands, Swan Coastal Plain
- Groundwater salinity, statewide
- Swan coastal plain vegetation complexes
- Hydrology, linear
- IBRA Australia
- Land for Wildlife
- PDWSA, CAWSA, RIWI Act Areas
- Remnant vegetation
- SAC Biodatasets (accessed July 2019)
- Soils, statewide
- South coast significant wetlands
- Town Planning Scheme Zones