GOVERNMENT OF WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 10271/1
Permit Holder:	Vocus Fibre Pty Ltd
Duration of Permit:	From 12 July 2024 to 12 July 2034

The permit holder is authorised to clear *native vegetation* subject to the following conditions of this permit.

PART I – CLEARING AUTHORISED

1. Clearing authorised (purpose)

The permit holder is authorised to clear *native vegetation* for the purpose of installing underground telecommunications cabling.

2. Land on which clearing is to be done

Great Northern Highway road reserve (PIN 11698376), Kumarina
Great Northern Highway road reserve (PIN 11698904), Kumarina
Great Northern Highway road reserve (PIN 11698907), Kumarina

3. Clearing authorised

The permit holder must not clear more than 7.72 hectares of *native vegetation* within the area cross-hatched yellow in Figure 1 and Figure 2 of Schedule 1.

4. Period during which clearing is authorised

The permit holder must not clear any *native vegetation* after 12 July 2029.

PART II – MANAGEMENT CONDITIONS

5. 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.

6. 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; and

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

7. Soil erosion management

The permit holder must commence fibre optic cable installation no later than three (3) months after undertaking the authorised clearing activities to reduce the potential for soil erosion.

8. Fauna management

The permit holder must:

(a) fence all trenches for the duration of fibre optic cable installation activities with fine mesh to prevent fauna access; or

(b) cover all trenches for the duration of fibre optic cable installation activities with a cover which prevents entry to the pits by fauna species and backfill upon completion; and

(c) cover all bore holes at the end of each day and backfill upon completion.

9. Fauna management – pre-clearance survey

(a) Within seven (7) days prior to undertaking any clearing authorised under this permit, the permit holder shall engage a *fauna specialist* to undertake clearance surveys within the area cross-hatched yellow on Figure 1 and Figure 2 of Schedule 1 for the following fauna species:

(i) Greater Bilby (*Macrotis lagotis*);
(ii) Brush-tailed Mulgara (*Dasycercus blythi*); and
(iii) Crest-tailed mulgara (*Dasycercus cristicauda*);

including the identification and inspection of burrows, and determination of whether burrows are being utilised.

(b) Where evidence of recent burrow use is identified under condition 9(a) of this permit, the Permit Holder shall;

(i) engage a *fauna specialist* to flag the location of the burrow(s) showing signs of recent use; and
(ii) not clear within five (5) metres of the flagged burrow(s);

(c) If species identified under condition 9(a) of this permit are utilising any flagged burrow(s) under condition 9(b), and cannot be avoided in accordance with condition 5 of this permit, the permit holder shall engage a *fauna specialist* to remove and relocate the individual(s) to an area of *suitable habitat.*

(i) any removal and relocation of Greater Bilby under condition 9(c) of this permit must be conducted in accordance with a section 40 authorisation under the *Biodiversity Conservation Act 2016*.

(ii) any removal and relocation of brush-tailed mulgara and crest-tailed mulgara under condition 9(c) of this permit must be conducted in accordance with a fauna taking licence under the *Biodiversity Conservation Regulations 2018*.

(d) Where active burrows for species identified under condition 9(a) of this permit are identified and/or species identified under condition 9(a) of this permit are relocated in accordance with condition 9(c), the permit holder shall include the following in a report submitted to the *CEO* within two (2) months of undertaking any clearing authorised under this permit:

(i) the location of any active burrows identified using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
(ii) the gender of each individual captured under condition 9(c) of this Permit;
(iii) the locations of where any species listed under condition 9(a) of this Permit are captured from and relocated to using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
(iv) the dates, times, vegetation types and weather conditions at each location where species listed under condition 9(a) of this permit are captured from and relocated to under condition 9(d)(iii) of this permit;
(v) the name of the *fauna specialist* that relocated fauna under condition 9(c) of this permit; and

(vi) a copy of the fauna licences authorising the relocation of fauna under condition 9(c)(i) of this permit.

10. Fauna management – fauna specialist

(a) The permit holder must:

(i) engage a *fauna specialist* to traverse the area cross-hatched yellow on Figure 1 and Figure 2 of Schedule 1 ahead of clearing machinery immediately prior to, and for the duration of, clearing activities; and

(ii) conduct clearing activities in a slow, progressive manner in one direction, to allow fauna to move into adjacent native vegetation ahead of the clearing activity.

(b) Clearing activities must cease in any area where native fauna are identified under condition 10(a), until native fauna individual(s) have moved on from that area to adjoining vegetation or have been removed and relocated by a *fauna specialist* to an area of *suitable habitat*.

(i) any removal and relocation of *threatened fauna* under condition 10(b) of this permit must be conducted in accordance with a section 40 authorisation under the *Biodiversity Conservation Act 2016*.

(ii) the removal and relocation of native fauna species that are not *threatened fauna* under condition 10(b) of this permit must be conducted in accordance with a fauna taking licence under the *Biodiversity Conservation Regulations 2018*.

(c) Where *conservation significant fauna* individual(s) are identified under condition 10(a) of this permit, the permit holder must include the following in a report submitted to the *CEO* within three (3) months of undertaking any *clearing* authorised under this permit:

(i) the species of each *conservation significant fauna* individual(s) identified;
(ii) the number of individuals identified;
(iii) the date and time each individual was identified and recorded as independently moving into adjoining vegetation;
(iv) the location where each individual was identified recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
(v) the relevant qualifications of the *fauna specialist* undertaking identification, under condition 10(b);
(vi) details pertaining to the circumstances of any death of, or injury sustained by, a *conservation significant fauna* individual.

(d) Where *conservation significant fauna* individual(s) identified under condition 10(a) of this permit are removed and relocated, the permit holder must include the following in a report submitted to the *CEO* within three (3) months of undertaking any *clearing* authorised under this permit:

(i) the species and number of individual(s) of *conservation significant fauna* relocated;
(ii) the location of any *conservation significant fauna* captured using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
(iii) the date, time, vegetation type and weather conditions at each location where *conservation significant fauna* are captured under condition 10(d)(ii) of this permit;
(iv) the location of any *conservation significant fauna* relocated using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
(v) the date, time, vegetation type and weather conditions at each location where *conservation significant fauna* are relocated under condition 10(d)(iv) of this permit;
(vi) the relevant qualifications of the *fauna specialist* that relocated *conservation significant fauna* under condition 10(b) of this permit; and
(vii) a copy of the fauna licences authorising the relocation of native fauna under condition 10(b)(i)of this permit.

11. Revegetation and rehabilitation (temporary works)

The Permit Holder must:

(a) retain the vegetative material and topsoil removed by clearing authorised under this permit and stockpile the vegetative material and topsoil in an area that has already been cleared;

(b) at an *optimal time* and no later than 12 months following clearing authorised under this permit, *revegetate and rehabilitate* the area(s) that are no longer required for the authorised purpose under this permit by:

(i) re-shaping the surface of the land so that it is consistent with the surrounding five (5) metres of uncleared land;
(ii) ripping the ground on the contour to remove soil compaction; and
(iii) laying the vegetative material and topsoil retained under condition 11(a) on the cleared area(s).

(iv) undertake *weed* control activities on an 'as needed' basis to reduce *weed* cover within the cleared areas to no greater than the *weed* cover within the surrounding five (5) metres of uncleared land

(c) Within 12 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 11(b) of this permit:

(i) engage an *environmental specialist* to determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and

(ii) where, in the opinion of an *environmental specialist*, the composition, structure and density determined under condition 11(c)(i) of this permit will not resemble the surrounding five (5) metres of uncleared land, the Permit Holder must *revegetate* the area by deliberately *planting* and/or *direct seeding native vegetation* that will result in a similar species composition, structure and density of *native vegetation* of the surrounding five (5) metres in that area, ensuring only *local provenance* seeds and propagating material are used.

PART III - RECORD KEEPING AND REPORTING

12. 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 GDA2020, expressing the geographical coordinates in Eastings and Northings; (c) the date that the area was cleared; (d) the size of the area cleared (in hectares); (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 5; (f) actions taken to minimise the risk of the introduction and spread of *weeds* in accordance with condition 6; and (g) actions taken to cover or backfill all trenches and boreholes in accordance with condition 8.
2.	In relation to fauna management pursuant to condition 9	(a) results of the pre-clearance surveys undertaken in accordance with condition 9 of this permit; and (b) a copy of the *fauna specialist's* report.
3.	In relation to fauna management pursuant	(a) actions taken to avoid impacts to fauna in accordance with condition 10; and

No.	Relevant matter	Specifications
	to condition 10	(b) a copy of the *fauna specialist's* report.
4.	In relation to *revegetation* and *rehabilitation* pursuant to condition 11	(a) the size of the area *revegetated* and *rehabilitated*; (b) the location of any *revegetated* and *rehabilitated* areas, recorded using a Global Positioning System (GPS) unit set to GDA2020, expressing the geographical coordinates in Eastings and Northings; (c) a description of the *revegetation* and *rehabilitation* activities undertaken; and (d) actions taken to demarcate each the date(s) on which the *revegetation* and *rehabilitation* was undertaken.

13. Reporting

The permit holder must provide to the *CEO* the records required under condition 12 of this permit when requested by the *CEO*.

DEFINITIONS

In this permit, the terms in Table 2 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 *Environmental Protection Act 1986*.
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.
conservation significant fauna	means those fauna taxa listed as threatened (critically endangered, endangered or vulnerable) or specially protected species under the *Biodiversity Conservation Act 2016* (WA) or as priority fauna classes 1, 2, 3, or 4 in the Department of Biodiversity, Conservation and Attractions *Threatened and Priority Fauna List for Western Australia* (as amended from time to time) and/or listed as threatened under the *Environment Protection and Biodiversity Conservation Act 1999*.
department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
direct seeding	means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species.
environmental specialist	means a person who holds a tertiary qualification in environmental science or equivalent and has a minimum of 2 years work experience relevant to the type of environmental advice that an *environmental specialist* is required to provide under this permit, or who is approved by the *CEO* as a suitable *environmental specialist*.
EP Act	*Environmental Protection Act 1986* (WA)

Term	Definition
fauna specialist	means a person who holds a tertiary qualification specialising in environmental science or equivalent, and has a minimum of 2 years work experience in fauna identification and surveys of fauna native to the region being inspected or surveyed, or who is approved by the *CEO* as a suitable *fauna specialist* for the bioregion, and who holds a valid fauna licence issued under the *Biodiversity Conservation Act 2016*.
fill	means material used to increase the ground level, or to fill a depression.
local provenance	means native vegetation seeds and propagating material from natural sources within 50 kilometres and the same 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.
native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.
optimal time	means the period from April to June for undertaking planting and seeding
planting	means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species.
suitable habitat	means habitat known support a native fauna species within the known current distribution of the species.
threatened fauna	means those fauna taxa listed as threatened (critically endangered, endangered or vulnerable) or specially protected species under the *Biodiversity Conservation Act 2016* (WA).
rehabilitate/ rehabilitated/ rehabilitation	means actively managing an area containing native vegetation in order to improve the ecological function of that area.
revegetate/ revegetated/ revegetation	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.
weeds	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.

END OF CONDITIONS

Ryan Mincham
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

19 June 2024

Schedule 1

The boundary of the area authorised to be cleared is shown in the maps below (Figure 1 and Figure 2).

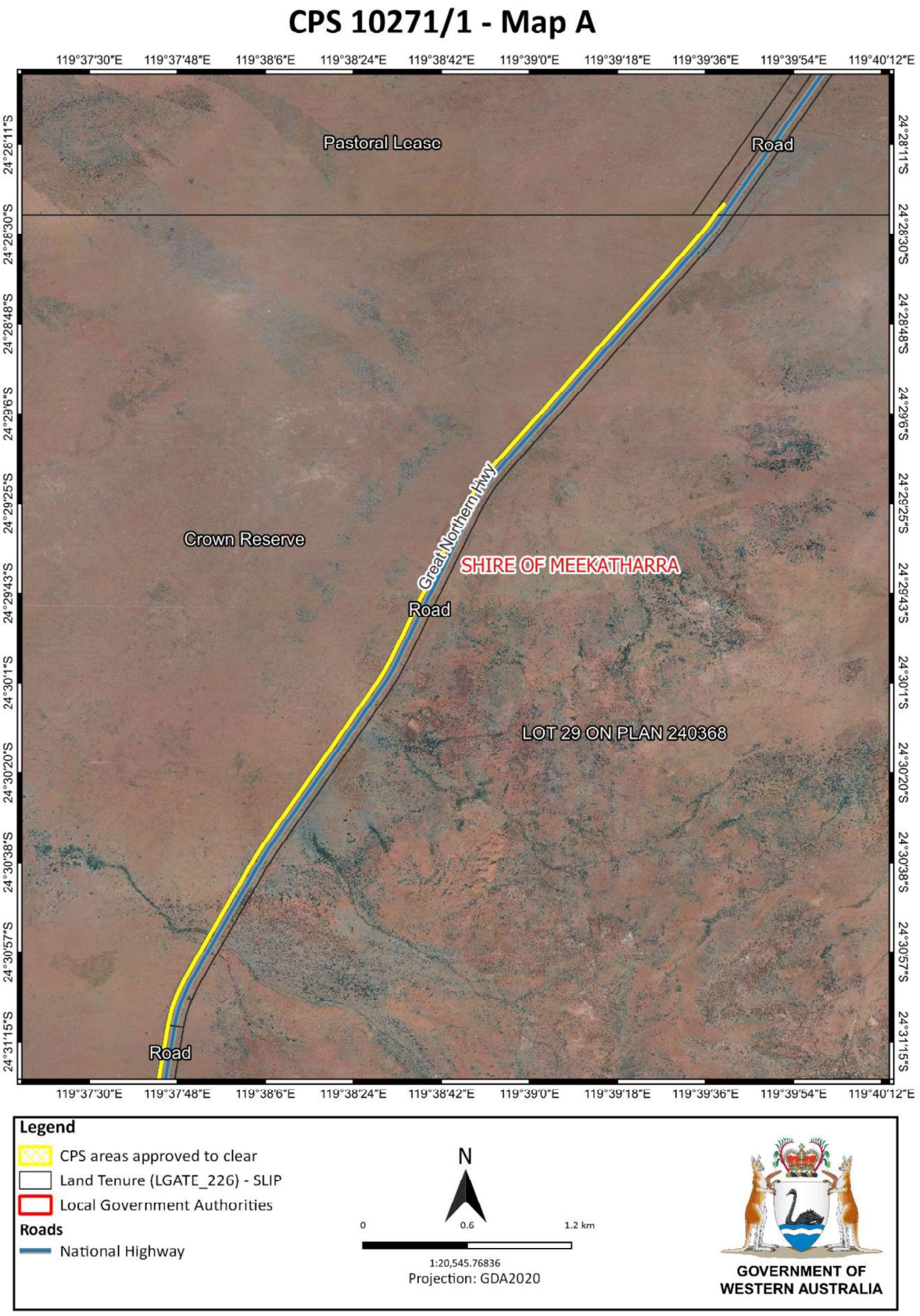

Figure 1: Map of the boundary of the area within which clearing may occur

CPS 10271/1 - Map B

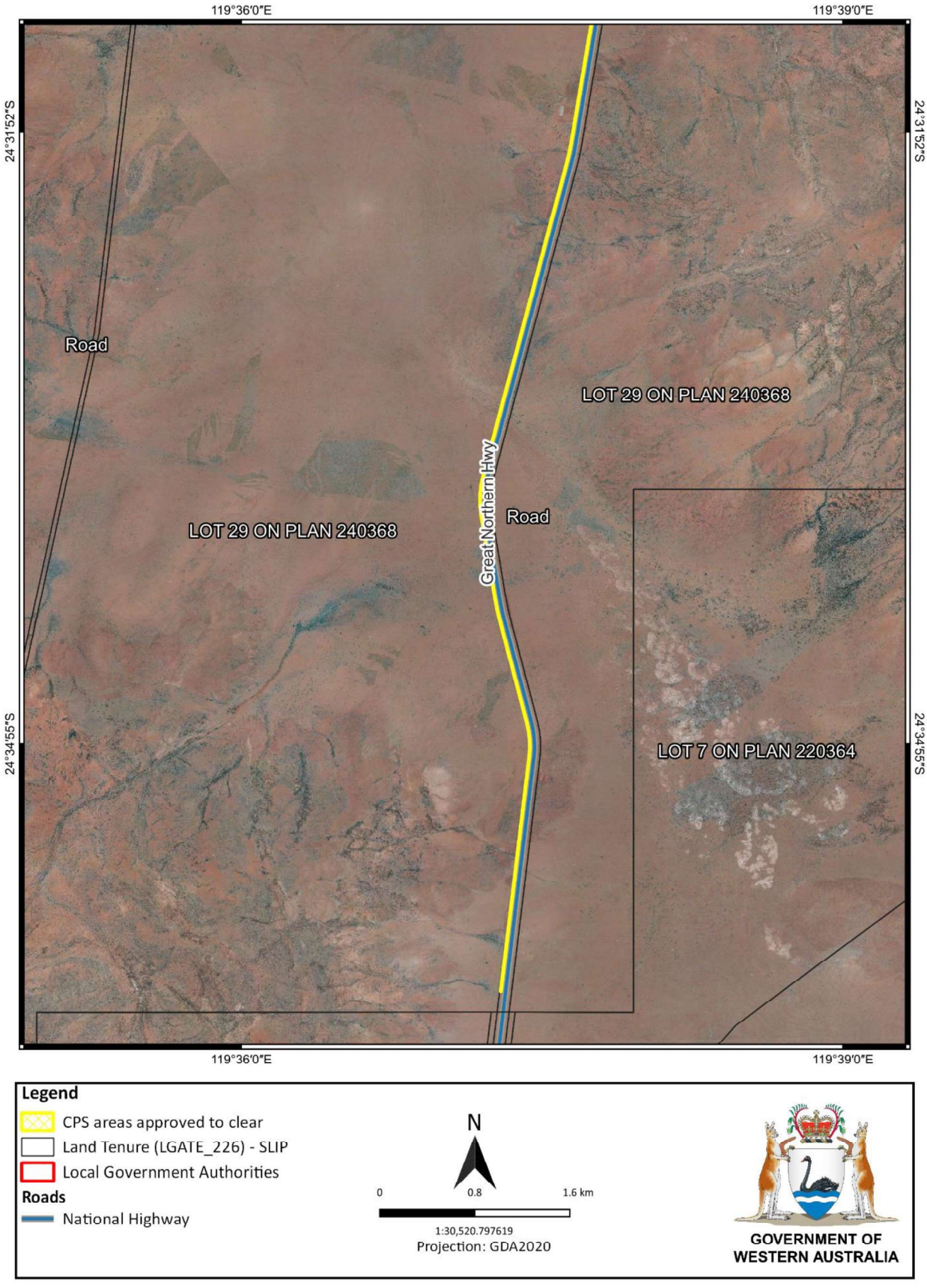

Figure 2: Map of the boundary of the area within which clearing may occur

Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 10271/1
Permit type:	Purpose permit
Applicant name:	Vocus Fibre Pty Ltd
Application received:	12 July 2023
Application area:	7.72 hectares (ha) of native vegetation within a 64.47 ha footprint
Purpose of clearing:	Installation of underground telecommunications cabling
Method of clearing:	Mechanical
Property:	Great Northern Highway road reserve (PINs 11698376, 11698904 and 11698907)
Location (LGA area/s):	Shire of Meekatharra
Localities (suburb/s):	Kumarina

1.2. Description of clearing activities

The application is to temporarily clear vegetation for the installation of fibre optic cable. The area proposed to be cleared is approximately five metres wide and 17-kilometres long within the Great Northern Highway road reserve.

The proposed clearing is part of a larger project entitled 'Project Horizon' which involves the installation of fibre optic cabling from Geraldton to Port Hedland, mostly along Great Northern Highway. The installation of the fibre optic cable involves a combination of ripping, trenching and boring.

The majority of native vegetation clearing for the project is being completed under Schedule 3 of the *Telecommunications Act 1997*. *Schedule 3 – Carriers powers and immunities* contains provisions to allow carriers to install a 'low-impact facility' on land without the need to obtain approvals from local, state or territory governments. Part of the criteria of a 'low-impact facility' is that it cannot be located in an area of 'environmental significance'. The proposed clearing area is mapped as an Environmentally Sensitive Area as it traverses through Collier Range National Park and therefore cannot be considered a 'low-impact facility'.

During assessment, the clearing footprint was revised to include the whole road reserve to provide the applicant flexibility to implement alternative routes and avoid environmental values without requiring an amendment. The amount of clearing did not change from 7.72 ha but is now within a 64.47 ha footprint.

1.3. Decision on application

Decision:	Granted
Decision date:	19 June 2024
Decision area:	7.72 ha of native vegetation within a 64.47 ha footprint 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 G.1), the findings of a biological survey (see Appendix E), 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 also took into consideration the purpose of 'Project Horizon' which is to improve Western Australia's telecommunications network which will benefit the public and industry within the region and is supported by the Department of Jobs, Tourism, Science and innovation (JTSI) as a major project.

The assessment identified that the proposed clearing will result in:

- the loss of suitable habitat for the brush-tail mulgara and crest-tail mulgara, as well as potentially suitable habitat for the western-pebble mound mouse and greater bilby
- the potential introduction and spread of weeds into Collier Range National Park, which could impact on the quality of vegetation and its habitat values
- the loss of native vegetation growing in, or in association with a watercourse; and
- potential land degradation in the form of wind erosion, water erosion, subsurface acidification, and nutrient export.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined that impacts from the proposed clearing can be minimised and managed to unlikely lead to an unacceptable risk to environmental values.

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
- commence cable installation within three (3) months of clearing to minimise soil erosion
- pre-clearance surveys to be undertaken to confirm the presence / absence of brush-tailed mulgara, crest-tailed mulgara and bilby;
- engage a fauna spotter for the duration of clearing activities;
- cover all trenches and boreholes at the end of each day and backfill all trenches and boreholes with excavated material upon completion; and
- revegetating and rehabilitating the area post-cable installation

1.5. Site maps

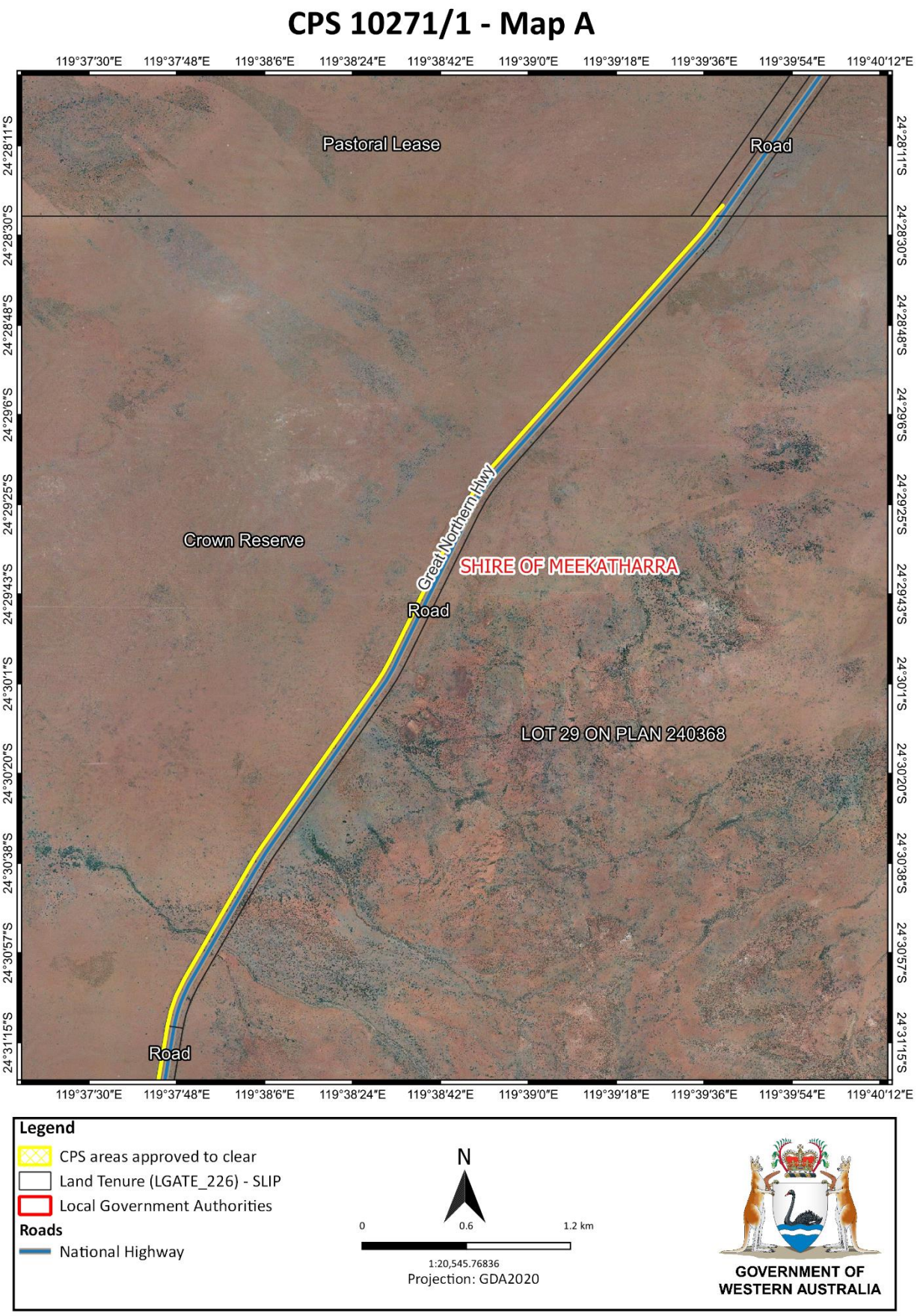

Figure 1.1. Map of the application area

The area cross-hatched yellow indicates the area authorised to be cleared under the granted clearing permit.

CPS 10271/1 - Map B

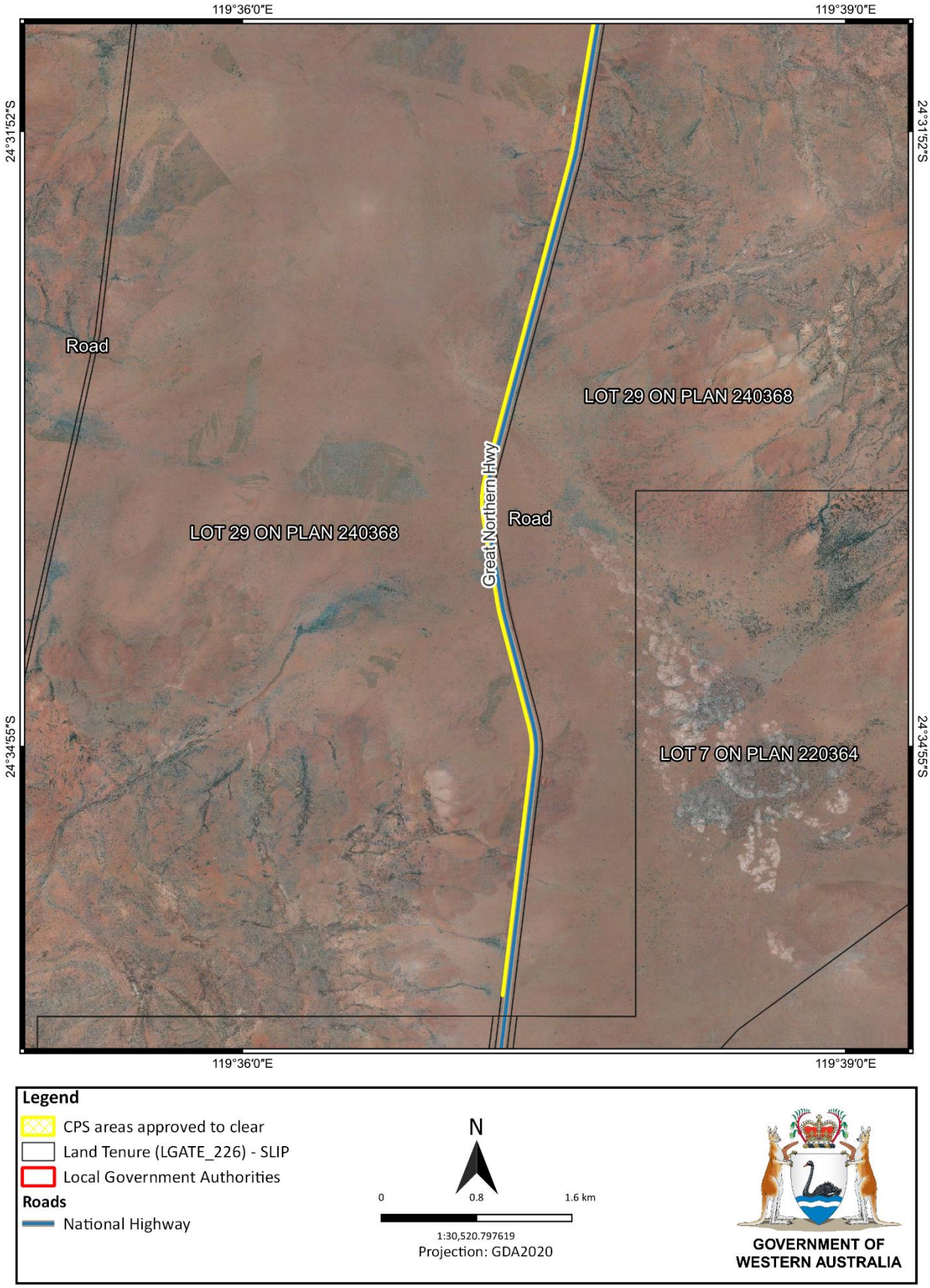

Figure 1.2. Map of the application area

The area cross-hatched 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 polluter pays principle
- 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)

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

The applicant has included a number of avoidance and mitigation measures for the project, including environmental controls, no-go zones for sensitive areas, erosion and sediment controls, pollution and spills, air quality and dust suppression, and noise and vibration (Vocus, 2023b). See Appendix F for specific detail regarding the applicant's proposed avoidance and mitigation measures.

The applicant has proposed the following revegetation and rehabilitation measures for the disturbance footprint following the completion of the activities associated with the clearing (Vocus, 2023b):

- the clean-up dozer reinstates the rip-line and tows a grid roller through to compact the rip line;
- any vegetation that may have been removed is pulled back across the rip line;
- any large rocks that are brought to the surface will be maintained on site, but off the rip line; and
- smaller rocks will be left on the rip line to mitigate possible erosion if/when there is water flow.

Advice received regarding potential impacts on Collier Range National Park identified further need to implement weed and hygiene measures within the proposed clearing area (DBCA, 2023). The applicant proposed the following additional measures to minimise the risk of spreading weeds into the National Park (NP) (Vocus, 2023c):

- weed blow-down zones will be established outside the southern and northern boundary of the NP and a log of its use will be maintained by the contractor.
- these areas will be subject to monthly inspections and an annual audit post works.
- all vehicles that intend to pass through the Collier NP works zone must be thoroughly cleaned before they enter the works zone or have a certified 'Weed Free' status certificate if arriving from off-site.

While the Biological Survey did not identify any priority flora, the applicant proposed additional avoidance and mitigation measures as a precaution, including (Red Gum, 2024):

- pre-construction searches for targeted species are to be conducted by an ecologist to ensure there are no specimens of significant flora on the proposed cable alignment;
- if threatened species are located in the field by contract staff or the ecologists/botanists involved in final route planning, then work must halt until an agreed approach can be determined via discussions with the appropriate authority involved;
- micro-siting of the final alignment is to take place and is to be based on avoidance of any significant flora or vegetation;
- if threatened flora are detected during micro-siting or construction, the appropriate approvals and permits to conduct works within the 50-metre buffer are required (given a 50 metre buffer is not able to be avoided in a narrow road reserve corridor);
- all staff involved with construction project need to be inducted on the locations of known threatened species records on the route, as well as any species that are located during the construction works. The induction should include basic advice on identifying the known species that have been recorded and the steps to take if unsure, or if threatened species or communities are encountered during works;

- any *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) listed threatened species or communities encountered during the works will need a Significant Impact Criteria assessment (SIC) to be completed by a suitably qualified person (ecologist). Liaison with the responsible Commonwealth department is also recommended if EPBC Act species or communities are found or suspected during construction; and
- The management of exotic vegetation (weeds) must be conducted to best practice standards, ensuring machinery is decontaminated prior to works starting in the Environmentally Sensitive Area (ESA), and where any weed infestations are unavoidable, decontamination must be undertaken to ensure weeds are not pushed along the alignment into clean parts of the ESA.

The biological survey also identified burrows associated with the brush-tailed and crest-tailed mulgara and potential burrows and mounds associated with bilbies and the western pebble-mound mouse (Red Gum, 2024). Noting this, additional avoidance and mitigation measures are proposed by the applicant, including:

- the potential impacts are to be minimised as much as possible via pre-construction surveys and micro-siting of the final alignment to avoid burrows or other signs of recent fauna habitation, wherever possible;
- the results of this survey (burrow/habitat locations) will inform the final alignment of the cable route, and the construction is to be further micro-sited prior to construction to ensure mulgara, greater bilby and western pebble-mound mouse burrows are avoided, wherever possible, via fine scale alignment changes;
- an ecologist or a suitable trained wildlife handler should be present to follow machinery that is operating through the ESA. Appropriate equipment needs to be on hand to ensure any animals that are displaced or injured as a result of the construction are adequately rescued and cared for until they are relocated to a safer area away from the development, or until they can be taken to the nearest veterinarian or wildlife rescue facility for treatment and eventual reintroduction;
- if threatened fauna species are located in the field by contract staff or the ecologists/botanists involved in final route planning, then work must halt until an agreed approach can be determined via discussions with the appropriate authority involved;
- all staff involved with construction project need to be tool-boxed (inducted) on the locations of known threatened species records on the route, as well as any species that are located during the construction works. The induction should include basic advice on identifying the known species that have been recorded and the steps to take if unsure, or if threatened species are encountered during works; and
- any EPBC Act listed threatened fauna species encountered during the works will need an SIC to be completed by a suitably qualified person (ecologist). Liaise with the responsible Commonwealth department is also recommended if EPBC Act species are found or suspected during construction.

The Delegated Officer was satisfied that the applicant has undertaken reasonable measures to avoid and mitigate potential impacts of the proposed clearing on environmental values.

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 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 (flora and fauna), conservation areas, and land and water values (watercourse, 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 (priority flora) - Clearing Principle (a)

Assessment

The desktop identified 21 records of six priority flora species within the local area. The proposed clearing's location through a National Park may mean that significant flora may be present. A likelihood assessment based on the habitat features within the application area determined that all of these species may occur within the application area namely:

- *Bothriochloa decipiens* var. *cloncurrensis* (Priority 1)
- *Eremophila appressa* (Priority 1)
- *Eremophila fasciata* (Priority 3)
- *Swainsona katjarra* (Priority 1)
- *Rhagodia* sp. Hamersley (M. Trudgen 17794) (Priority 3)
- *Thysanotus* sp. Desert East of Newman (R.P. Hart 964) (Priority 2)

Bothriochloa decipiens var. *cloncurrensis* is a perennial grass associated with soil composed of red-brown clay loam with *Acacia* woodland or shrubland over tussock grassland and has been observed in disturbed vegetation with weeds (Florabase, 1998-). There are two records of the species within the local area, approximately 12.33 km south of the proposed clearing and from 2022.

Eremophila appressa is associated with *Acacia aneura* open scrub and is usually found in ironstone slopes and gravel (Florabase, 1998-). The entire known distribution of this species is within 30-kilometres of the proposed clearing area with the nearest record to the application area being 13.87 km away.

Eremophila fasciata is associated with low acacia shrublands and generally grows on flats and the sides of breakaways (Florabase, 1998-). There is one record of *E. fasciata* within the local area, approximately 5.35 km from the proposed clearing.

Swainsona katjarra is associated with very open mulga woodland over *Acacia* shrubland and hummock grassland on plains with brown sandy clay (Florabase, 1998-). There are currently six records total records of the species, one of which is within the local area approximately 12.90 km from the proposed clearing.

Rhagodia sp. Hamersley (M. Trudgen 17794) is associated with *Acacia aneura* shrubland over tussock grasslands in red to brown sandy clay or loam (Florabase, 1998-). Two records of the species were found within the local area, the nearest being 6.78 km from the proposed clearing.

Thysanotus sp. Desert East of Newman (R.P. Hart 964) is associated with hummock grassland and has been found within a variety of soil types including red-brown loamy sand or red sand, sand plain and pisolitic buckshot plain (Florabase, 1998-). The nearest record of this species is 0.05 m away from proposed clearing, within the road reserve on the other side of Great Northern Highway.

According to the biological survey, there are two vegetation types mapped within the proposed clearing area (Red Gum, 2024):

- Hummock Grasslands, Shrub Steppe - Several *Acacia*, *Hakea* and *Grevillea* species present but scattered, with occasional *Codonocarpus*, over *Seringia* spp., *Scaevola parvifolia* subsp. *pilbarae* and *Senna* spp. over *Triodia basedowii*, *Triodia schinzii* and *Eragrostis eriopoda* hummock grassland; and
- Low Woodland, Open Low Woodland and Sparse Woodland; Mulga - *Acacia*, *Hakea* and *Grevillea* species (with occasional *Corymbia* spp.) over *Eremophila* spp., *Senna* spp. and *Ptilotus* spp. over occasional *Triodia basedowii*, *Paraneurachne muellerii* and *Calandrinia polyandra*.

The majority of the proposed clearing area is mapped as the hummock grasslands, shrub steppe vegetation type in good to very good (Trudgen, 1991) condition with the Low woodland, open low woodland and sparse woodland vegetation type identified as being in good (Trudgen, 1991) condition.

The biological survey conducted found no conservation significant flora species within the proposed clearing area (Red Gum, 2024). The survey notes that the given the timing of the survey and that the area had experienced sufficient rainfall during the wet season, if present, *E. appressa*, *E. fasciata*, *B*. d. var. *cloncurrensis* and *R*. sp. Hamersley, would likely have been identified during the targeted searches. Therefore, the proposed clearing would not likely result in the loss of these species.

While the conditions and timing of the survey were appropriate for both *S. katjarra* and *T*. sp. Desert East of Newman, they may be present and not identifiable at the time of survey (Red Gum, 2024). Given that *Swainsona* species can be short lived and may not flower if previous seasonal conditions are not appropriate, the survey notes that *S. katjarra* may have been present but not flowering during the survey especially since the species has been recorded in similar habitats near the proposed clearing (Red Gum, 2024). *T.* sp. Desert East of Newman has previously been recorded in close proximity to the proposed clearing and the survey noted that *Thysanotus* species can often be inconspicuous in appearance and if not flowering, the species may not have been found (Red Gum, 2024).

It is noted that neither vegetation type within the proposed clearing is restricted in nature and it is likely to extend into the National Park adjacent to the proposed clearing. On that basis, the application is not likely to represent significant habitat for priority flora. Furthermore, noting that no priority flora species were identified during the survey and given the narrow, linear nature of the application, the Delegated Officer is satisfied that the proposed clearing is not likely to have a significant impact on individuals of priority flora.

Conclusion

Based on the above assessment, the proposed is not likely to impact on critical habitat for priority flora species. It is considered that potential impacts to priority flora species can be managed effectively through the Applicant's avoidance and mitigation measures (see Section 3.1.).

Conditions

No flora management conditions required.

3.2.2. Biological values (fauna) - Clearing Principle (b)

Assessment

The desktop assessment identified 31 records across 14 species of conservation significant fauna within the local area, twelve of which are birds and two are mammals. Based on the habitat preferences of the species recorded and

the findings of the biological survey (Red Gum, 2024), the following species were determined to require further assessment:

- *Dasycercus blythi* (brush-tailed mulgara) (P4)
- *Dasycercus cristicauda* (crest-tailed mulgara) (P4)
- *Macrotis lagotis* (bilby) (VU)
- *Pseudomys champani* (western pebble-mound mouse) (P4)

Mulgara and western pebble-mound mouse (P4)

The brush-tailed mulgara (*Dasycercus blythi*) and crest-tailed mulgara (*Dasycercus cristicauda*) are small marsupials that are known from small, scattered populations near the Kennedy and Collier Ranges (DBCA, n.d.a). The two species are distinguished by their tail with the brush-tailed mulgara has a tail covered largely in black hairs while the crest-tailed mulgara has a short, reddish-brown tail with a distinct black crest. Both of these species inhabit the same areas and prefer sandy, arid regions with spinifex grass and are known to dig complex burrows on flats between sand dunes (DBCA, n.d.a).

While not identified during the desktop assessment, the Department of Biodiversity, Conservation and Attractions (DBCA) noted in their advice that the western pebble-mound mouse (*Pseudomys champani*) may have suitable habitat within the proposed clearing area (DBCA, 2023). The western pebble-mound mouse is typically found within spinifex grasslands on gravelly areas where is constructs above ground mounds out of pebbles accompanied with underground burrows that can extend for metres and be up to 30-40cm deep (DBCA, n.d.b).

The targeted survey identified approximately 116 suspected mulgara burrows and two suspected western pebble-mound mouse mounds throughout the clearing footprint (Red Gum, 2024) (see Appendix E), meaning that the proposed clearing area is comprised of suitable habitat for these species. The large number of mulgara burrows suggests that the species is well represented in the local area and provided that only a small number of burrows are impacted, the proposed clearing is not likely to significantly impact on habitat for mulgara (DBCA, 2024). Furthermore, since the survey only identified two potential western-pebble mound mouse mounds, the proposed clearing is not likely to have an impact on this species (DBCA, 2024).

All three of the species listed above are not constrained to the vegetation within proposed clearing area and similar habitat is readily available within the adjacent National Park that is likely in better quality and subject to less disturbance from Great Northern Highway. Noting the proposed clearing's linear nature and proximity to Great Northern Highway, provided only a small number of burrows are impacted, the proposed clearing is not likely to significantly impact on mulgara habitat (DBCA, 2023; 2024)

Bilby (VU)

Bilby (*Macrotis lagotis*) were not initially identified in the desktop assessment, with the nearest record being approximately 73.31 km from the proposed clearing area. During the targeted survey, several burrows that may have been used by bilby were identified within the proposed clearing area (Red Gum, 2024). No individuals were identified (Red Gum, 2024), however, this is not unusual as bilbies are known to be quite elusive (DCCEEW, 2023).

The bilby was once found across 70 per cent of Australia, however, has since disappeared from at least 80 per cent of their original range (DCCEEW, 2023) now only found in the Pilbara and Southern Kimberly in Western Australia, central Northern Territory and south-west Queensland with some established reintroductions outside of these areas (DCCEEW, 2023). According to the Recovery Plan for the species (DCCEEW, 2023), the bilby's preferred habitat in north Western Australia is primarily:

- woodlands with *Eucalyptus* and *Acacia* spp., Pindan woodlands with hummock and tussock grass, on coarse sand to light medium clay;
- low shrub cover of *Acacia* spp. Over hummock and tussock grasses, on sandy soils, loams and red earth;
- spinifex grasslands with low shrub cover of *Acacia* and *Melaleuca* spp. On sandy and sandy loam soils.

According to the Recovery Plan, the proposed clearing area is located within the south western extent of the bilby's mapped suitable habitat and outside of the species current mapped distribution (DCCEEW, 2023), meaning that if present, the proposed clearing area is considered to be significant habitat for the bilby.

Despite the above, advice received from DBCA suggests that burrows identified in the survey (Red Gum, 2024) are not likely to be for bilbies as their entrances tend to be rounder with a high dome entrance and the vegetation types within the proposed clearing area suggests that if bilbies were present, they would likely be vagrant, especially given the proximity of the application to Great Northern Highway (DBCA, 2024). This can account for the lack of additional evidence of bilbies such as scats, tracks and diggings to confirm their presence (Red Gum, 2024) which suggests that if the burrows can be attributed to bilbies, it is likely that they have not been used recently or regularly.

<u>Conclusion</u>

Based on the above assessment, while the proposed clearing may not represent significant habitat for fauna, the proposed clearing may result in the injury or mortality of individuals that may be present within burrows during the clearing activities or if trenches and boreholes are left open.

For the reasons set out above, it is considered that the impacts of the proposed clearing on fauna can be managed by conducting pre-clearance surveys for brush-tailed mulgara, crest-tailed mulgara and bilby, engaging a fauna specialist to be present during clearing activities, applying a slow, directional clearing method, placing barriers to prevent fauna from becoming trapped within trenches and boreholes, and revegetating and rehabilitating the area post-clearing activities.

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

- undertake a targeted pre-clearance fauna survey for the brush-tailed mulgara, crest-tailed mulgara bilby prior to any vegetation clearing.
- engage a fauna spotter to be present during clearing activities
- slow, directional clearing to allow fauna to move into adjacent vegetation.
- covering trenches and boreholes at the end of each day and backfilling once complete to avoid trapping fauna.
- revegetation and rehabilitating the area so that suitable habitat is not permanently lost.

3.2.3. Significant remnant vegetation and conservation areas (Conservation area) - Clearing Principles (h)

Assessment
The proposed clearing is located along a portion of Great Northern Highway that transects Collier Range National Park. Collier Range National Park is a remote park that lies between the Ashburton and Gascoyne rivers. Its landscape varies from hills to ridges and cliffs (DBCA, n.d.c). Vegetation within the park is dominated by mulga and spinifex with eucalyptus along drainage lines (DBCA, n.d.c). Little information is available on the flora and fauna of the park.

DBCA advised that the proposed clearing has the potential to have indirect impacts on Collier Range National Park through the spread of weeds and alterations to surface hydrology (DBCA, 2023). In particular, DBCA noted the potential for the spread of mesquite through the waterways that drain into the park (DBCA, 2023). The applicant has committed to a number avoidance and mitigation measures to minimise the risk of spreading weeds into the National Park which are captured under Section 3.1.

Conclusion
Based on the above assessment, the proposed clearing may result in the spread of weeds into Collier Range National Park. For the reasons set out above, it is considered that the impacts of the proposed clearing on Collier Range National Park can 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:

- weed hygiene measures to mitigate the introduction and spread of weeds into Collier Range National Park

3.2.4. Land water resources (water) - Clearing Principles (f), (i) and (j)

Assessment
Several minor, unnamed watercourses intersect the proposed clearing area and a small portion of the southern section of the clearing is mapped within the Gascoyne River Tributaries surface water area. The soils mapped within the proposed clearing area are high risk for flooding.

The applicant has stated that they do not intend to rip or clear vegetation through areas that include running water and will instead bore underneath (Vocus, 2023b). Furthermore, given that the clearing footprint will be linear, narrow and temporary, it is not expected that the proposed clearing will have a significant or long-term impact on surface hydrology of the area.

Conclusion
For the reasons set out above, it is considered that the proposed clearing is not likely to have a significant or long-term effect on surface hydrology and can be managed through the Applicant's avoidance and mitigation measures.

Conditions
No surface water management conditions required.

3.2.5. Land and water resources (land degradation) - Clearing Principles (g)

Assessment

According to available databases, the soil within all three of the proposed clearing areas are at high to extreme risk of land degradation from wind erosion, water erosion, and subsurface acidification. The proposed clearing may cause land degradation if soils are left exposed for extended periods post-clearing.

Given that the proposed clearing will be temporary and narrow to allow the installation of cabling, it is not likely to have an appreciable impact to land degradation over a long period of time, however, as the soils have been mapped as high risk for several types of land degradation, precautionary measures should be placed to minimise these risks.

Conclusion

Based on the above assessment, the proposed clearing may result in land degradation through wind erosion, water erosion and sub-surface acidification.

For the reasons set out above, it is considered that the impacts of the proposed clearing on land degradation can be managed by minimising the time between clearing and the commencement of cable installation activities and revegetating and rehabilitating the cleared areas post-installation of the cable.

Conditions

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

- cable installation activities must commence within three (3) months of clearing
- revegetating and rehabilitating cleared areas post-installation activities.

3.3. Relevant planning instruments and other matters

The Shire of Meekatharra advised DWER that local government approvals are not required. The Shire did not have any objections to the proposed clearing.

No registered Aboriginal sites of significance have 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

Summary of comments	Consideration of comment
Additional avoidance and mitigation measures for the National Park as requested by DBCA.	See Section 3.1 Avoidance and mitigation measures.
Targeted flora and fauna survey of the proposed clearing area including proposed additional avoidance and mitigation measures.	The survey identified evidence of brush-tailed and crest-tailed mulgara and suitable habitat for bilby within the proposed clearing area (Red Gum, 2024). The survey did not identify any priority flora species. See Section 3 and Appendix E.

Appendix B. Site characteristics

B.1. Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is part of an expansive tract of native vegetation in the extensive land use zone of Western Australia. It is surrounded by extensive vegetation and adjacent to Great Northern Highway. Aerial imagery indicates the local area (30-kilometre radius from the centre of the area proposed to be cleared) retains almost 100 per cent of the original native vegetation cover.
Ecological linkage	The proposed clearing area is not mapped within a formal ecological linkage.
Conservation areas	The proposed clearing area is within road reserve, however, is completely surrounded by Collier Range National Park. Mapping suggests that it is approximately 6.73 m from the application area.
Vegetation description	The Biological Survey (Red Gum, 2024) identified two vegetation types within the proposed clearing area: • Hummock Grasslands, Shrub Steppe - Several *Acacia*, *Hakea* and *Grevillea* species present but scattered, with occasional *Codonocarpus*, over *Seringia* spp., *Scaevola parvifolia* subsp. *pilbarae* and *Senna* spp. over *Triodia basedowii*, *Triodia schinzii* and *Eragrostis eriopoda* hummock grassland; and • Low Woodland, Open Low Woodland and Sparse Woodland; Mulga - *Acacia*, *Hakea* and *Grevillea* species (with occasional *Corymbia* spp.) over *Eremophila* spp., *Senna* spp. and *Ptilotus* spp. over occasional *Triodia basedowii*, *Paraneurachne muellerii* and *Calandrinia polyandra*. Representative maps are available in Appendix E. This is consistent with the mapped vegetation types: • Beard 111, which is described as Hummock grasslands, shrub steppe; *Eucalyptus gamophylla* over hard spinifex (Shepherd et al, 2001) • Beard 39, which is described as shrublands; mulga scrub (Shepherd et al., 2001) The mapped vegetation types retain almost 100 per cent of their original extent (Government of Western Australia, 2019).
Vegetation condition	The biological survey (Red Gum, 2024) indicates that the vegetation within the proposed clearing area is in good to very good (Trudgen, 1991) condition, described as: • 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. • 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. The full Trudgen (1991) condition rating scale is provided in Appendix D. Representative photos are available in Appendix E and Appendix F.
Climate and landform	The proposed clearing is located within the Gascoyne region of Western Australia which is described as having a moderate arid tropical climate. Newman is the nearest town to

Characteristic	Details
	the proposed clearing which has an average maximum temperature of 31.4 degrees Celsius and minimum of 17.3 degrees Celsius. The mean rainfall is 310.2 mm. Landform of the proposed clearing area varies from Erosional surfaces - mountain ranges and hills with steep escarpments and upper slopes, to Depositional surfaces - sandplain and dunes; - broad sandplain with occasional linear and reticulate dunes.
Soil description	Two soil types are mapped within the application area: • Augustus System, which is described as Rugged ranges, hills, ridges and plateaux with skeletal soils supporting mulga and other acacia shrublands in southern parts or hard spinifex grasslands in northern parts – 20% • Divide System, which is described as Gently undulating sandplains with minor dunes, supporting hard spinifex hummock grasslands with numerous shrubs – 80%
Land degradation risk	The proposed clearing is mapped high to extreme risk for water erosion, wind erosion, salinity, flooding, waterlogging, subsurface acidification, and phosphorus export.
Waterbodies	The desktop assessment and aerial imagery indicated that one minor river associated with Terminal Lake transects the proposed clearing area. A minor river associated with the Gascoyne River North is located approximately 30 metres from the proposed clearing area.
Hydrogeography	The very southern area of the proposed clearing is mapped within the Gascoyne River and Tributaries Surface Water Area and the entire application area is mapped within the East Murchison Groundwater Area, both proclaimed under the RIWI Act.
Flora	A total of 21 records across six species of conservation significant flora were recorded within the local area. One species was located within close proximity to the proposed clearing *Thysanotus* sp. Desert East of Newman (R.P. Hart 964) (P2) which was recorded approximately 0.05 km west. According to the biological survey (Red Gum, 2024), no conservation significant flora species are found within the proposed clearing footprint.
Ecological communities	The proposed clearing is not mapped within a threatened or priority ecological community. The nearest record is the Frederick Land System which is listed as Priority 3 and is recorded approximately 18.51 km south of the application area.
Fauna	A total of 13 records across six species of conservation significant fauna were recorded in the local area. No records were located within one kilometre of the proposed clearing, however, four species are recorded within ten kilometres: • *Apus pacificus* (fork-tailed swift) (MI) – 4.83 km • *Dasycercus blythi* (brush-tailed mulgara) (P4) – 8.85 km • *Dasycercus cristicauda* (crest-tailed mulgara, Minyiminyi) (P4) – 9.17 km • *Falco peregrinus* (peregrine falcon) (MI) – 9.75 km According to the biological survey (Red Gum, 2024), secondary evidence of two conservation significant fauna species were identified within the proposed clearing footprint: • *Dasycercus blythi* (brush-tailed mulgara) (P4) • *Dasycercus cristicauda* (crest-tailed mulgara, Minyiminyi) (P4) The survey also identified potential habitat for *Macrotis lagotis* (bilby) (VU) and *Pseudomys champani* (western pebble-mound mouse) (P4) (Red Gum, 2024).

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*					
Gascoyne	18,075,219.48	18,067,441.44	99.96	1,855,508.22	10.27
Vegetation complex					
Beard 39*	2,338,128.28	2,337,580.69	99.98	325,615.46	13.93

	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
Beard 111*	212,465.74	211,882.95	99.73	34,577.55	16.32
Local area					
50 km radius	937,977.17	937,977.17	100.00	-	-

*Government of Western Australia (2019a)

B.3. Flora analysis table

Species name	Conservation status	Suitable habitat features ? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Bothriochloa decipiens var. *cloncurrensis*	1	Y	Y	Y	12.33	2	Y
Eremophila appressa	1	Y	Y	Y	13.87	15	Y
Eremophila fasciata	1	Y	Y	Y	5.35	1	Y
Swainsona katjarra	1	Y	Y	Y	12.90	1	Y
Rhagodia sp. Hamersley (M. Trudgen 17794)	3	Y	Y	Y	6.78	2	Y
Thysanotus sp. Desert East of Newman (R.P. Hart 964)	2	Y	Y	Y	0.05	1	Y

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

B.4. Fauna analysis table

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Dasycercus blythi (brush-tailed mulgara)	P4	Y	Y	8.85	1	Y
Dasycercus cristicauda (crest-tailed mulgara)	P4	Y	Y	9.17	1	Y

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

B.5. Land degradation risk table

Risk categories	Description	Proportion of application area
Wind erosion	99% of map unit has a high to extreme hazard	100%
Water erosion	99% of map unit has a very high to extreme hazard	100%
Salinity	99% of map unit has a moderate hazard	100%
Subsurface Acidification	100% of map unit has a high susceptibility	80%
	0% of map unit has a high susceptibility	20%
Flood risk	99% of the map unit has a moderate to high hazard	100%
Water logging	99% of map unit has a moderate to very high risk	100%
Phosphorus export risk	99% of map unit has a high to extreme hazard	100%

Appendix C. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The desktop assessment identified that the area proposed to be cleared contains suitable habitat for several species of priority flora, however, no individuals were identified during the survey (Red Gum, 2024). The survey and desktop assessment also identified potentially suitable habitat for conservation significant fauna within the application area, however, given the proposed clearing is located within a road reserve in proximity to a National Park, potential impacts are not expected to be significant.	May be at variance	Yes *Refer to Section 3.2.1, above.*
Principle (b): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna."* Assessment: A number of brush-tailed and crest-tailed mulgara burrows are recorded within the proposed clearing area (Red Gum, 2024). Furthermore, the proposed clearing may comprise suitable habitat for bilbies.	At variance	Yes *Refer to Section 3.2.2, above.*
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: No threatened flora species are recorded within the local area and the biological survey (Red Gum, 2024) did not identify any threatened flora within the proposed clearing area.	Not likely to be at variance	No
Principle (d): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community."* Assessment: There are no threatened ecological communities recorded within the local area and the vegetation composition of the proposed clearing area (Red Gum, 2024) is not likely to represent a threatened ecological community.	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		
Principle (e): *"Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."* Assessment: The extent of the mapped vegetation type and native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia.	Not likely to be at variance	No
Principle (h): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."* Assessment: The proposed clearing is along a section of Great Northern Highway that transects Collier Range National Park and therefore may impact on the environmental values of the National Park.	May be at variance	Yes *Refer to Section 3.2.3, above.*
Environmental value: land and water resources		

Assessment against the clearing principles	Variance level	Is further consideration required?
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: Several water courses transect the application area. The Gascoyne River North is also located approximately 29.45 m west of the application area. Noting that the proposed clearing is linear, narrow and temporary, impacts are not expected to be significant or long-term.	At variance	Yes *Refer to Section 3.2.4, above.*
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The mapped soils are highly susceptible to wind erosion, water erosion, subsurface acidification, and phosphorous export. Noting the extent and location of the application area, the proposed clearing may have an appreciable impact on land degradation.	May be at variance	Yes *Refer to Section 3.2.5, above.*
Principle (i): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water."* Assessment: There are a number of watercourses intersecting the proposed clearing area, that may be impacted by the proposed clearing and alter surface water hydrology, however, noting that the proposed clearing is linear, narrow and temporary, impacts are not expected to be significant or long-term.	Not likely to be at variance	Yes *Refer to Section 3.2.4, above.*
Principle (j): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."* Assessment: The mapped soils are at high risk of flooding and the application intersects a number of watercourses. Noting that the proposed clearing is linear, narrow and temporary, impacts are not expected to be significant or long-term.	Not likely to be at variance	Yes *Refer to Section 3.2.4, above.*

Appendix D. Vegetation condition rating scale

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.

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from Trudgen, M.E. (1991) *Vegetation condition scale* in National Trust (WA) 1993 Urban Bushland Policy. National Trust of Australia (WA), Wildflower Society of WA (Inc.), and the Tree Society (Inc.), Perth.

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.

Condition	Description
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.

Appendix E. Biological Survey Excerpts

Vegetation Type	Description	Quadrats	Extent in Study Area (Ha)
Hummock Grasslands, Shrub Steppe	Several *Acacia*, *Hakea* and *Grevillea* species present but scattered, with occasional *Codonocarpus*, over *Seringia* spp., *Scaevola parvifolia* subsp. *pilbarae* and *Senna* spp. over *Triodia basedowii*, *Triodia schinzii* and *Eragrostis eriopoda* hummock grassland.	Q001, Q002, Q003, Q004, Q005, Q006, Q007, Q008, Q009, Q010, Q011, Q012, Q018, Q019, Q020, Q022, Q023, Q024, Q025, Q026, Q027, Q028, Q029, Q030 and Q031.	62
Low Woodland, Open Low Woodland and Sparse Woodland; Mulga	*Acacia*, *Hakea* and *Grevillea* species (with occasional *Corymbia* spp.) over *Eremophila* spp., *Senna* spp. and *Ptilotus* spp. over occasional *Triodia basedowii*, *Paraneurachne muellerii* and *Calandrinia polyandra*.	Q013, Q014, Q015, Q016, Q017 and Q021.	17.1

Figure 2. Vegetation types within the application area and a representative photograph of the hummock grasslands (top) and woodlands (bottom) encountered in the survey (Red Gum, 2024)

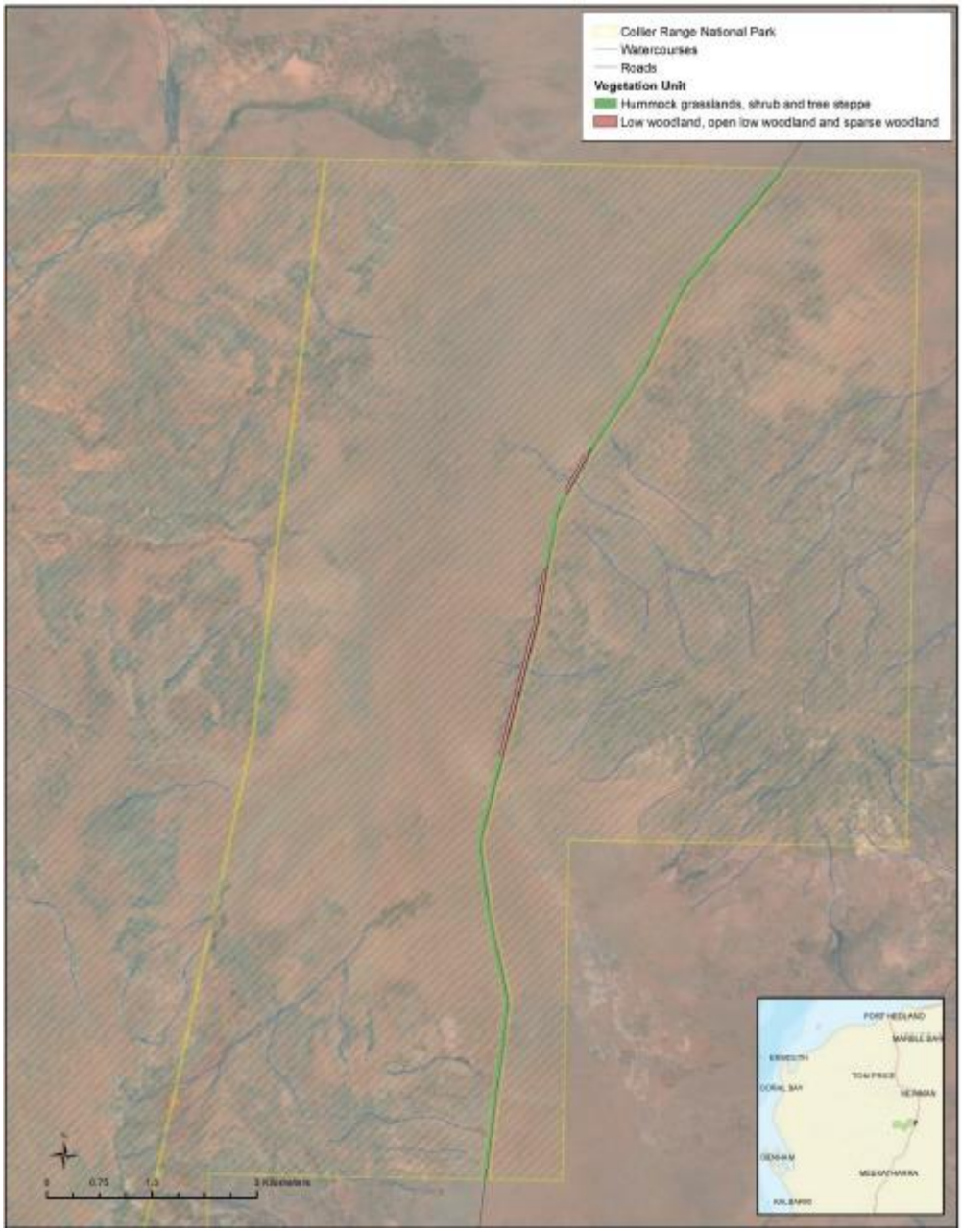

Figure 3. Vegetation mapping within the proposed clearing area (Red Gum, 2024)

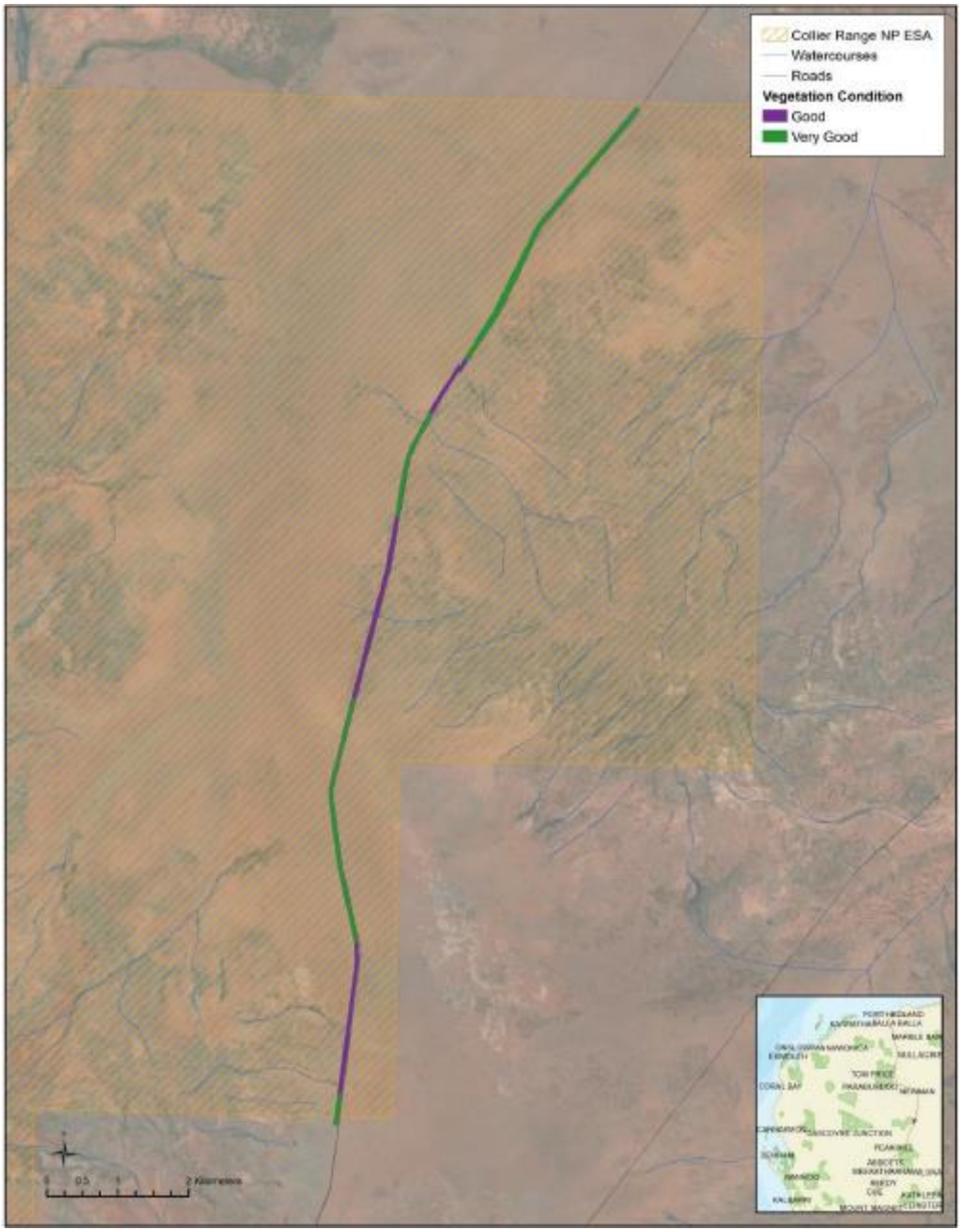

Figure 4. Vegetation condition mapping within the proposed clearing area (Red Gum, 2024).

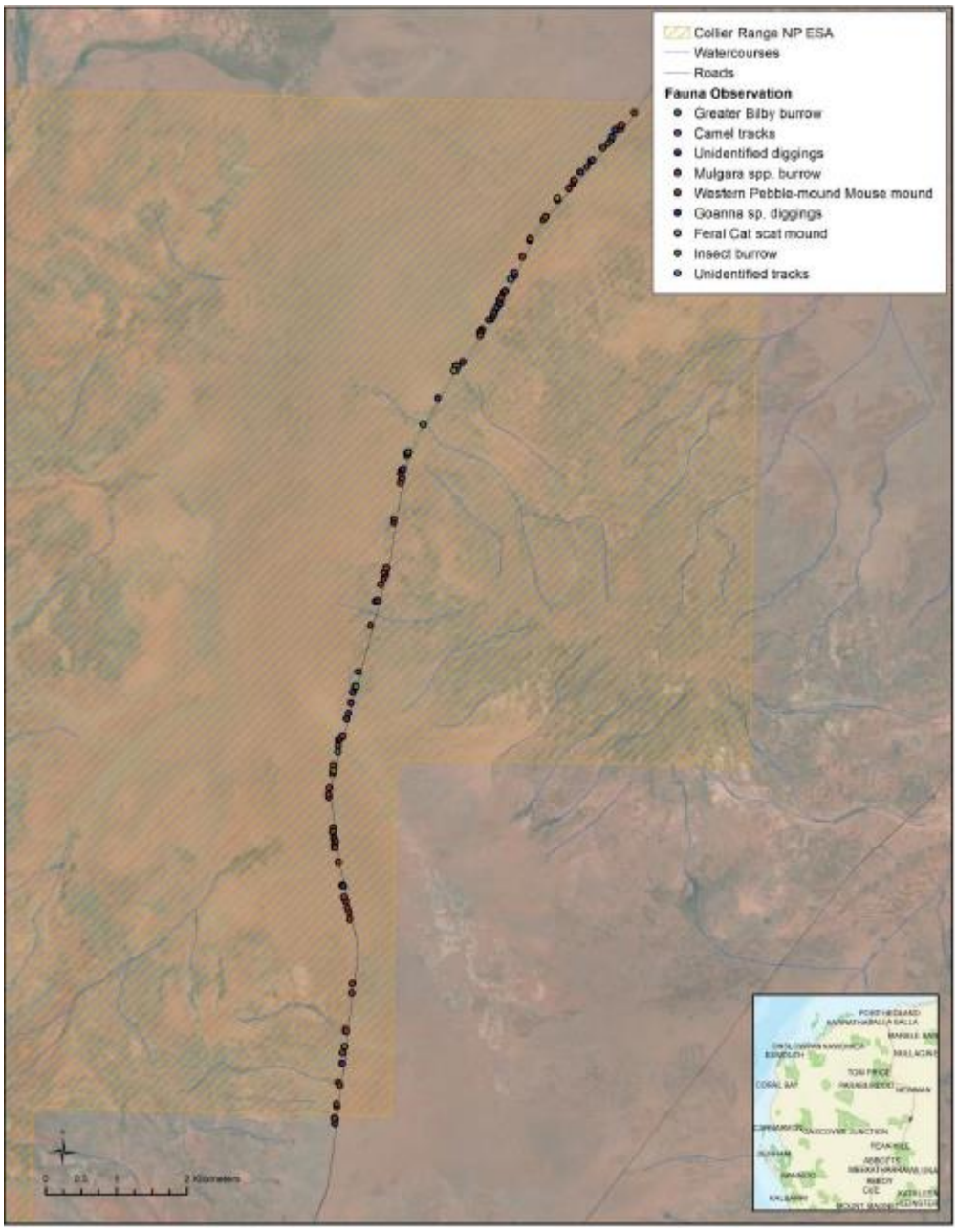

Figure 5. Map of fauna observed within the proposed clearing area (Red Gum, 2024).

Figure 6. Picture of a mulgara burrow found within the proposed clearing area (Red Gum, 2024).

Figure 7. Pictures of suspected bilby burrows within the proposed clearing area (Red Gum, 2024).

Figure 8. Pictures of suspected western pebble-mound mouse pebble mounds found within the proposed clearing area (Red Gum, 2024).

Appendix F. Excerpts from work methodology

Appendix 2: Representative site photographs

Photo 1: Sensitive sand dune on western side of highway – Being avoided

Photo 2: Typical vegetation within the alignment through Collier Range NP road reserve

Photo 3: Typical vegetation within the alignment through Collier Range NP road reserve

Photo 4: Existing north-south Telstra cable alignment on western side of highway

Photo 5: Existing north-south Telstra cable alignment on western side of highway

Photo 6: Thicker vegetation on side of highway (run-off zone) being avoided by route being placed just beyond this zone, at approx. 25 metres from road edge.

Figure 9. photographs of the vegetation (Vocus, 2023b)

5. Environmental controls during construction

Key environmental controls during the installation phase are detailed below.

- Limit access to essential vehicles and machinery.
- Minimize vegetation clearing and excavation of banks.
- Employ micro-siting for waterways wider than 250m with contiguous vegetation and significant landscape features.
- Under boring will be necessary in areas with significant water flow due to recent rain events.
- Pre-ripping is essential to ensure no obstructions to the laying dozer.
- Restore natural soil surface profiles by reinstating the rip line with a clean-up dozer and compacting using a grid roller.
- Sediment control is generally not required in flat T-sections with no occurring rain events.
- Ripped and reinstated waterways with no steep slopes will have vegetation and smaller rocks placed back over the rip line.

5.1 No-go zones

- Identify and map out all no-go zones and ensure they are clearly marked on site plans and communicated to all staff and contractors.
- Ensure that all staff and contractors are trained on the location and boundaries of no-go zones.
- Implement physical barriers or signage to prevent access to no-go zones.
- Regularly inspect no-go zones to ensure they are being properly enforced and to identify any potential hazards that may have developed.
- Document all incidents of unauthorised access to no-go zones and investigate to determine

5.2 Erosion and sedimentation

- Note: sediment control won't generally be necessary in T-sections where the land is flat, and there is no occurring or forecast rain events. Ripped and reinstated waterways won't have steep slopes of any significance that will require sediment controls, other than removed vegetation and/or smaller rocks being placed back over the rip line.
- If waterways are running a waterway will not be ripped and reinstated but instead be bored.
- When bores are greater than 250m, bore entry and exit points will be positioned in locations where there is no flow.

5.3 Pollution and spills

- Refuelling locations shall be planned to minimise any environmental impacts of spills. Refuelling to take place outside of sensitive areas such as PEC, or water catchment areas etc.
- Workers shall conduct appropriate training in fuel and chemical handling, spill response pertaining to works undertaken.
- Inductions to include appropriate fuel locations and chemical storage requirements for the project.
- Appropriate spill response equipment to be available for the duration of works.
- SDS or equivalent should be obtained for any chemicals and available onsite for all chemicals stored and handled.
- Inductions or toolbox meetings should include regular information on spill response processes, to ensure that work crews understand procedures and reporting requirements.
- Appropriate spill kits will be available and maintained for the duration of works.
- Spill kits will be positioned sufficiently close and clearly marked to active construction activities to enable effective deployment in the event of a fuel or chemical spill.
- If a fuel or chemical spill occurs outside a bunded area. Appropriate spill response must be followed to control, isolate, and remediate the spill.
- An inventory of spill response kits, their contents and location should be prepared and checked at least every six months.

5.4 Air quality & Dust Suppression

Due to the nature of construction activities involving earthworks, dust emissions, plant and equipment exhaust emissions may result. Emissions that may have an adverse effect on air quality include:

- Vehicle and machinery exhaust emissions;
- Emissions from generators supporting on-site works, site camps or offices;
- Dust blown off exposed areas during construction works; and dust emissions from vehicle and equipment movement.
- Air Quality and dust suppression will be adequately identified and controlled by completing the Project Pre-Commencement HSE Assessment to ensure that:
- All vehicles and machinery be properly serviced and maintained to ensure that they do not cause undue air pollution.
- Dust will be controlled on site, if necessary, by using acceptable dust suppression techniques, which may include the dampening down of the site, minimising the disturbance to ground cover and retaining, where possible, existing trees and shrubs to act as windbreaks.
- All vehicles transporting fill to and from a construction site, shall be covered to prevent the emission of dust and other particles; and
- Any long-term stockpiles will be placed on a flat, grassed area where possible and covered to prevent dust generation.

5.5 Noise & Vibration

Construction noise will generally be within normal working hours and will be controlled by the site-specific specifications. Those likely to be affected by excessive noise (e.g., generator noise. Excavation machinery etc.) will be notified prior to any work commencing. Noise will be adequately managed and reduced on Vocus worksites by implementing the following techniques:

Objectives:

- To minimise disturbance on nearby residents and other land users, biodiversity and sensitive locations from noise and dust. Sensitive locations may include childcare centres, schools, hospitals, health centres, businesses and or wildlife and habitats.
- To minimise vibration impacts on nearby buildings, particularly heritage buildings; and
- To minimise greenhouse gas emissions.

Controls:

- Don't leave your vehicle idling.
- Drive slowly on dirt roads to keep the dust down.
- Check and maintain your vehicle, plant and equipment regularly, paying particular attention to exhaust emissions,

Construction plant & equipment (noise, dust)

- Equipment must be fitted with appropriate noise abatement devices (e.g. mufflers, silencers and screens) and shall be maintained in good working order.
- Limit noisy works to within standard hours in accordance with local government bylaws, unless otherwise specified in approvals. Standard hours within residential areas are generally 7am – 7pm Monday to Friday and 8am to 3pm on Saturday. Works outside the prescribed times generally needs an out of hours permit from the local government and/or notice to occupants in close proximity to the affected area.
- Limit the use of reversing alarms or use 'low tone' alarms where practicable.

During excavation activities:

- Minimise dust generating activities. Consider using water if dust is likely to impact on surrounding properties and areas.
- Development approvals, or permits, may include requirements for dust suppression.
- Secure your load to prevent loss of material i.e. dust and spills.
- Remove debris for offsite disposal and reinstate site as soon as possible.
- Ensure that vehicles leaving the site are free of mud and other debris.

Avoiding risk of non-compliance with permit conditions (noise and vibration):

- Ensure all required permits have been obtained to undertake construction works outside standard hours prior to commencing onsite.
- Construction activities to comply with all relevant regulatory requirements and permit conditions and guidelines pertaining to noise control.
- Landowners and local residents shall receive adequate notice of all noisy activities associated with the project, prior to their commencement.
- Where vibration is likely to be an issue, dilapidation surveys shall be undertaken to record pre-construction condition of buildings in proximity to work areas that might be affected.

Figure 10. Avoidance and mitigation measures proposed by the applicant (Vocus, 2023b)

Appendix G. Sources of information

G.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)
- 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

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)

G.2. References

Commonwealth of Australia (2001) *National Objectives and Targets for Biodiversity Conservation 2001-2005*, Canberra.

Department of Biodiversity, Conservation and Attractions (DBCA) (n.d.a) *Mulgara (Dasycercus sp.)*. Department of Biodiversity, Conservation and Attractions, Western Australia. Available from: https://library.dbca.wa.gov.au/static/FullTextFiles/071542.pdf

Department of Biodiversity, Conservation and Attractions (DBCA) (n.d.b) *The Pebble-mound mouse (Pseudomys champani)*. Department of Biodiversity, Conservation and Attractions, Western Australia. Available from: https://library.dbca.wa.gov.au/FullTextFiles/150217.pdf

Department of Biodiversity, Conservation and Attractions (DBCA) (n.d.c) *Collier Range National Park.* Department of Biodiversity, Conservation and Attractions, Western Australia. Available from: https://exploreparks.dbca.wa.gov.au/park/collier-range-national-park

Department of Biodiversity, Conservation and Attractions (DBCA) (2023) *Species and Communities Branch advice for clearing permit application CPS 10271/1*, received 17 October 2023. Department of Biodiversity, Conservation and Attractions, Western Australia (DWER Ref: DWERDT851204).

Department of Biodiversity, Conservation and Attractions (DBCA) (2024) *Additional Species and Communities Branch advice for clearing permit application CPS 10271/1*, received 13 June 2024. Department of Biodiversity, Conservation and Attractions, Western Australia (DWER Ref: DWERDT963615).

Department of Climate Change, Energy, the Environment and Water (DCCEEW) (2023) *Recovery Plan for the Greater Bilby (Macrotis lagotis)*. Canberra. Available from: http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=282

Department of Environment Regulation (DER) (2013). *A guide to the assessment of applications to clear native vegetation*. Perth. Available from: https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Guidelines/Guide2_assessment_native_veg.pdf.

Department of Primary Industries and Regional Development (DPIRD) (2019). *NRInfo Digital Mapping. Department of Primary Industries and Regional Development.* Government of Western Australia. URL: https://maps.agric.wa.gov.au/nrm-info/.

Department of Water and Environmental Regulation (DWER) (2019). *Procedure: Native vegetation clearing permits*. Joondalup. Available from: https://dwer.wa.gov.au/sites/default/files/Procedure_Native_vegetation_clearing_permits_v1.PDF.

Department of Water and Environmental Regulation (DWER) (Regulatory Services – Water) (2023) *Rights in Water and Irrigation Act 1914 advice for clearing permit application CPS 10271/1*, received 15 August 2023 (DWER Ref: DWERDT821233).

Environmental Protection Authority (EPA) (2016). *Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment*. Available from: http://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/EPA%20Technical%20Guidance%20-%20Flora%20and%20Vegetation%20survey_Dec13.pdf.

Government of Western Australia. (2019) *2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019.* WA Department of Biodiversity, Conservation and Attractions. https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics

Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68) *Atlas of Australian Soils*, Sheets 1 to 10, with explanatory data. CSIRO and Melbourne University Press: Melbourne.

Red Gum Environmental Consulting (Red Gum) (2024) *Detailed flora and vegetation survey of Collier Range National Park – Project Horizon – Fibre optic installation*. Received 30 April 2024. (DWER Ref: DWERDT942755)

Schoknecht, N., Tille, P. and Purdie, B. (2004) *Soil-landscape mapping in South-Western Australia – Overview of Methodology and output*s Resource Management Technical Report No. 280. Department of Agriculture.

Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) *Native Vegetation in Western Australia, Extent, Type and Status*. Resource Management Technical Report 249. Department of Agriculture, Western Australia.

Shire of Meekatharra (2023) *Advice for clearing permit application CPS 10271/1*, received 23 August 2023 (DWER Ref: DWERDT824754).

Trudgen, M.E. (1991) *Vegetation condition scale* in National Trust (WA) 1993 Urban Bushland Policy. National Trust of Australia (WA), Wildflower Society of WA (Inc.), and the Tree Society (Inc.), Perth.

Vocus Fibre Pty Ltd (Vocus) (2023a) *Clearing permit application CPS 10271/1*, received 12 July 2023 (DWER Ref: DWERDT806844).

Vocus Pty Ltd (Vocus) (2023b) *Supporting information for clearing permit application CPS 10271/1,* received 12 July 2023 (DWER Ref: DWERDT806844).

Vocus Pty Ltd (Vocus) (2023c) *Additional supporting information for clearing permit application CPS 10271/1,* received 30 November 2023. (DWER Ref: DWERDT874918)

Western Australian Herbarium (1998-). *FloraBase - the Western Australian Flora*. Department of Biodiversity, Conservation and Attractions, Western Australia. https://florabase.dpaw.wa.gov.au/.