Clearing Assessment Report

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Great Central Road Work Package 3 – SLK 207 to SLK 386
Great Central Road (Outback Way)
Goldfields-Esperance Region
2735

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1 PROPOSAL

1.1 Purpose and Justification

Main Roads Western Australia (Main Roads) proposes to upgrade 179 km of the Great Central Road between Straight Line Kilometres (SLK) 207 and SLK 386, east of the Yilka Native Title Area. This includes sealing and widening 171.5 km of existing unsealed road and widening a 7.5 km sealed road section (SLK 300- SLK 307.5) including a road into Tjukayirla Roadhouse (SLK 304). The Great Central Road forms part of the iconic Outback Way route, also known as Australia's Longest Shortcut, which connects the town of Laverton in Western Australia to Winton in Queensland, via Alice Springs. The 2,800-km route is predominantly unsealed, with sealing plans to be completed in stages through to the year 2032.

The Great Central Road is a section within Western Australia, which spans 872 km from Laverton to the Western Australia/Northern Territory border, of which 736 km is currently unsealed.

The road upgrades will improve the transport network across Western Australia, the Northern Territory, and Queensland. There will be improved access to health care and social services for the local communities, increased regional connectivity, reduced travel times and improved road safety. The project will create:

- New local employment.
- New construction contracts.
- Opportunities for local businesses to compete for interstate work.
- New access to mine sites and businesses throughout Central Australia.

1.1.1 Main Roads Approach to Road Safety and the Environment

Main Roads manages the State road network to achieve balanced economic, social, safety and environmental benefits for the community and is committed to minimising the environmental impacts of its activities. Main Roads recognises that Western Australia's environment is globally significant, including unique conservation values contained within its road reserve. Main Roads road network often adjoins natural areas, and in some locations, the reserve itself hosts remnant vegetation with high environmental values. Although the reserves were not established for this purpose, Main Roads recognises that it has a responsibility to conserve the environmental values that occur within the State's road network and minimise the impact its proposals have on the environment. In addition to providing a safe and efficient road network for all people using the roads under its control, Main Roads is committed to protecting the natural environment.

In accordance with National and State Government road safety policies, Main Roads is also committed to substantially reducing road trauma on the road network through Safe System principles. The Safe System approach acknowledges that more than two thirds of all serious crashes are due to human error rather than deliberate risk taking (e.g. speeding or drink driving) and seeks to improve behaviour through education and enforcement while managing the safety of vehicles, speeds, the road and road infrastructure. It is shown that improving sub-optimal road formation will substantially reduce the likelihood and severity of road crashes. For example, according to the Road Safety Management Guideline, increasing the sealed shoulder from 0.5 m to 2 m will reduce Killed and Seriously Injured numbers by more than 50%.

As the statutory authority responsible for providing and managing a safe and efficient main road network in Western Australia, Main Roads focuses on improving road safety by thoroughly considering all environmental, economic and community benefits and impacts. It operates on a hierarchy of avoiding, minimising, reducing and then, if required, offsetting our environmental

impacts. This has been achieved through changes in proposal scope and design. Main Roads regularly reduces its clearing footprint by restricting earthworks limits for proposals, steepening batters, installing barriers, establishing borrow pits in cleared land and averting temporary clearing for storage, stockpiles and turn around bays to avoid and minimise its impacts.

Further details on measures to avoid, minimise and reduce are provided in Section 1.5.

1.2 Proposal Scope

Main Roads proposes to upgrade a 179 km section of the Great Central Road east of the Yilka Native Title Area (SLK 207-SLK 386) with a 10 m seal and 10 m pavement. The Proposal will comprise the following components:

- Upgrading 171.5 km of gravel road to sealed surface, including road construction and widening, and intersection upgrades.
- Widening a 7.5 km section of road from 7.5 m to 10 m in the vicinity of Tjukayirla Roadhouse.
- Parking/resting areas.
- Turnaround areas.
- Establishment of material pits and borrow pits (including geotechnical investigations).
- Construction of water bores and a turkey's nest for water extraction (including investigations).
- Establishment of laydown areas.
- Construction Camp.
- Construction of drainage infrastructure including floodways, table drains, offshoot drains and culverts.

1.3 Proposal Location

The Development Envelope is located on the Great Central Road SLK 207 to SLK 386 east of the Yilka Native Title Area and within the Local Government Authority of Laverton as shown in Figure 1. The central coordinate of the Proposal is Longitude 124.5055459°E; Latitude 27.1723536°S.

- Start
  - Longitude: 123.9958724°E °E
  - Latitude: -27.7832011°S
- End
  - Longitude: 125.3399584°E
  - Latitude: -26.9911645°S

The location of the Proposal is shown in Figure 1.

1.4 Clearing Details

Proposed Clearing:

Main Roads is proposing to clear up to 660 ha of native vegetation within a 5,366.6 ha Development Envelope, subject to approval of a Native Vegetation Clearing Permit (NVCP).

Type of Native Vegetation:

The Development Envelope is dominated by low woodland and shrubland. Further information on the types of native vegetation proposed to be cleared are provided in Table 2 and Table 3.

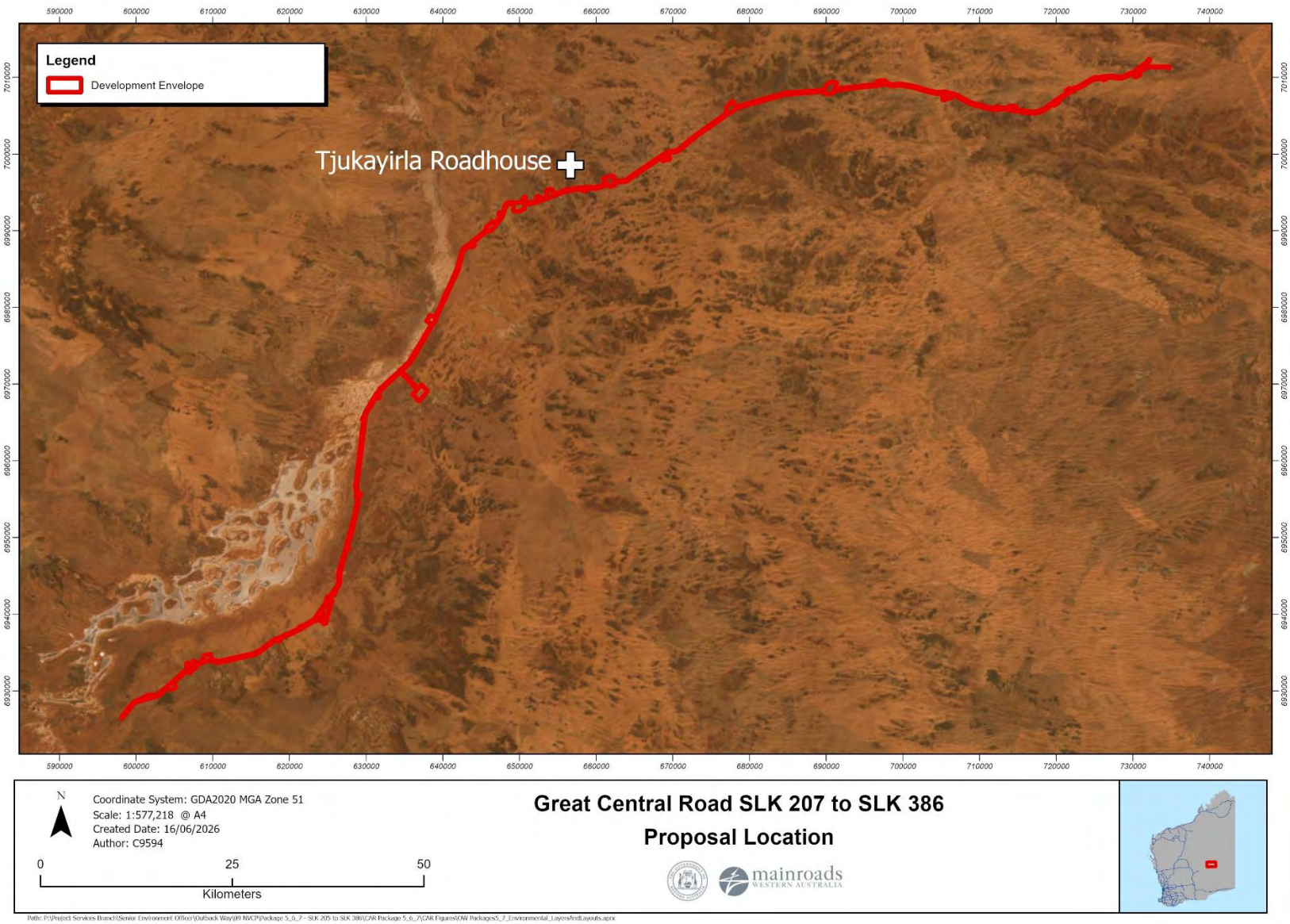


Figure 1. Proposal Location

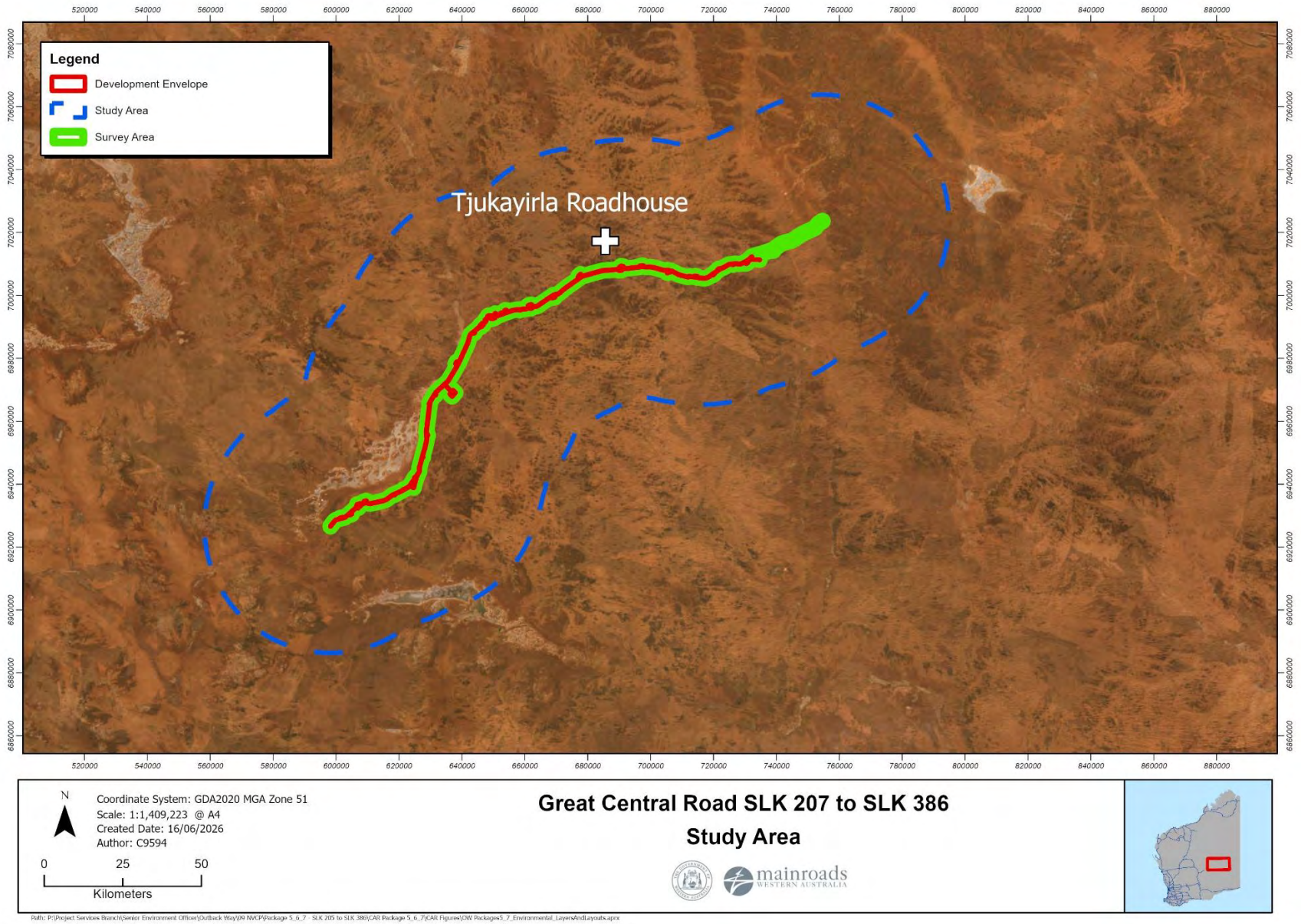


Figure 2: Study Area

1.5 Alternatives to Native Vegetation Clearing Considered During Proposal Development

The following alternatives to clearing were considered during the development of the Proposal:

- **Do not upgrade the road**. However, this would result in a poorer safety outcome with possible future fatalities or serious injuries and further degradation of the State Road asset.
- **Main Roads retains frangible vegetation in 'clear zones'**. For this project; however, clearing will only be required to accommodate the road formation, with no clear zone being established. Accordingly, the retention of frangible vegetation does not apply to the Proposal.
- **Reducing the speed limit to minimise clearing requirements**, while still balancing safety (driver fatigue) and freight efficiency. Speed Limits are an essential mechanism to ensure the safe and efficient operation of road networks. The application of appropriate speed limits and other traffic management measures is a key mechanism in managing vehicle speeds to achieve desired safety, mobility, traffic management, local amenity, and road user expectations. There are several factors involved in road safety, including road conditions, driver behaviour and overall road design. Except in special situations, reducing speed limits below national standards on state and national roads is not supported as it has the potential to contribute to driver frustration, impatience, tiredness and recklessness. The environmental values potentially protected by reducing the speed limit do not justify impacts on freight efficiencies or road user safety. Accordingly, the reduction of the speed limits to avoid native vegetation clearing is not proposed.

1.6 Measures to Avoid, Minimise, Reduce and Manage Proposal Clearing Impacts

The design and management measures implemented to avoid and minimise the potential clearing impacts of the Proposal are as indicated in Table 1:

Table 1. Measures Undertaken to Avoid, Minimise, Reduce and Manage the Proposal Clearing Impacts

Design or Management Measure	Discussion and Justification
Alignment to one side of existing road	Widening was required on both sides of the road, consequently this measure could not be implemented,

Design or Management Measure	Discussion and Justification
Alternative alignment located within pasture or degraded areas	The road passes entirely through vegetation lands, consequently this measure could not be implemented. No alternative alignments were possible, given the area is heavily constrained by Aboriginal Cultural Heritage values.
Simplification of design to reduce number of lanes and/or complexity of intersections	The road design involved widening of the existing road. The design was simple, there is only one lane in each direction and there are very few intersections, consequently the design could not be further simplified.
Use of existing cleared areas for access tracks, construction storage and stockpiling	The proposal will: • Be aligned with an existing gravel road that has been previously cleared. • Extend existing cleared areas (for road construction) rather than create new cleared areas. • Use existing material pits and water bores where possible to minimise new clearing areas. • Locate new material pits and water bores within the existing cleared areas, where practicable. • Use existing cleared areas for proposed rest areas and heavy vehicle pull off bays where possible • Use existing cleared areas for construction storage and stockpiling.
Drainage modification	Existing road drains (A-Drains) will be utilised where possible. Clearing at existing drains will be limited to drainage maintenance. Where new road drains are required, additional clearing areas will be minimised.

1.7 Approved Policies and Planning Instruments

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, Main Roads has also had regard to the below instruments where relevant.

Other Legislation potentially relevant for assessment of clearing and planning/other matters:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)

- *Country Areas Water Supply Act 1947* (WA) (CAWS Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Planning and Development Act 2005* (WA) (P and D Act)
- *Soil and Land Conservation Act 1945* (WA)
- *Rights in Water and Irrigation Act 1914* (WA) (RIWI Act)
- *Aboriginal Heritage Act 1972* (WA).

Other relevant policies and guidance documents:

- Environmental Offsets Policy (Government of Western Australia, 2011)
- A guide to the assessment of applications to clear native vegetation (DER, 2014)
- Procedure: Native vegetation clearing permits (DWER, 2021)
- Environmental Offsets Guidelines (Government of Western Australia, 2014)
- Technical guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA, 2016)
- Technical guidance – Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment (EPA, 2020)
- Approved conservation advice under section 266B of the EPBC Act for threatened flora/fauna/vegetation communities.

2 SCOPE AND METHODOLOGY ASSESSMENT OF CLEARING

Native vegetation will be cleared to accommodate this Proposal. This clearing will be undertaken using a project-specific Clearing Permit.

This CAR outlines the key activities associated with the Proposal, describes the existing environment and assesses native vegetation clearing. This assessment evaluates vegetation clearing impacts associated with the Proposal using the ten Clearing Principles listed under s51 of the *Environmental Protection Act 1986* (EP Act) and proposed strategies to manage vegetation clearing.

2.1 Report Terminology and Sources

The following terms are used in this Clearing Report:

- **Native Vegetation Clearing Area (Clearing Area)** – The maximum amount of native vegetation to be cleared for the Proposal to accommodate earthworks including a nominal buffer to allow for the safe movement of machinery during construction. The Clearing Area for this Proposal is 660 ha.
- **Development Envelope** – The maximum extent within which the Proposal's Clearing Area (179 km; SLK 207 – SLK 385) will be located. This envelope is larger than the Clearing Area to allow for minor changes to the Proposal footprint as the design process continues, and to account for minor and unexpected changes that may occur during construction, such as working to avoid a large tree or encountering buried boulders or services. This flexibility allows the site personnel to make modifications to minimise impact to environmental values.

  The Development Envelope includes a 200 m wide road corridor and prospective material and water target areas outside the road corridor.

  The CAR has assessed all environmental values within the Development Envelope as though all these values will be impacted, up to the amount specified within the Clearing Area. The Development Envelope for this Proposal is 5,366.6 ha.
- **Survey Area** – The Biological Survey Area (approximately 5,918.4 ha) consisting of 206 km of the Great Central Road (Outback Way) road from SLK 207.0 to SLK 412.0, extending 100 m either side of the road centreline and including material resource pits, water target and laydown areas. The Survey Area incorporates the entire Development Envelope.

- **Study Area** – Area used for the Desktop Assessment. The Study Area includes the Survey Area (SLK 207-SLK 412), incorporates the Development Envelope (SLK 207-SLK 386) and includes a 40 km buffer around the Survey Area.

2.2 Desktop Assessment

A desktop assessment of the Development Envelope was undertaken by reviewing Main Roads and government spatial data, and consulting with relevant stakeholders.

Spatial layer viewing and mapping employed ArcGisPro and/or Main Roads corporate mapping system known as iMaps. Relevant spatial layers are referenced in the methodology section of each clearing principle. Government databases searched, are listed under References in Section 0.

2.3 Surveys and Assessments

Biological surveys / assessments undertaken for the Proposal to inform this CAR are outlined in Table 1. A summary of report findings is presented in Sections 3.1 to 3.2.

Table 2. Summary of Biological and Targeted Surveys Relevant to the Proposal

Consultant and Survey Name	Survey Details
Botanica Consulting (2025) Great Central Road (SLK 206.25-412.0) Biological Survey	**Survey Area:** Survey comprised 5,918.4 ha area along 205 km of the Great Central Road from SLK 207 to SLK 412.0 in the Shire of Laverton. The survey was within Great Central Road reserve extending 100 m either side of the road centreline, as well as associated material resource pits and laydown areas. **Type:** Detailed flora and vegetation, targeted flora and basic fauna survey. The survey identified and mapped the dominant vegetation types, assessed vegetation condition, completed targeted searches for significant flora, completed opportunistic, low intensity sampling of fauna, mapped ecological communities and fauna habitats. **Timing:** Fieldwork conducted from 2 to 5 May 2025 and 15 to 17 July 2025. **Survey Results Shapefile TRIM Ref:** D25#818854 **Document TRIM Ref:** D25#818433

3 SURVEY RESULTS

3.1 Summary and Analysis of Flora and Vegetation Surveys

Botanica (2025) conducted a detailed flora and vegetation survey and targeted flora survey along the Great Central Road between SLK 206.25-412.0.

The Botanica (2025) survey identified nineteen vegetation types within the Survey Area. These vegetation types were located within nine landform types and comprised of six NVIS major vegetation groups. Vegetation was represented by a total of 162 vascular flora taxa within the Survey Area. These taxa represented 74 genera across 28 families.

The vegetation condition ranged from 'Completely Degraded' to 'Very Good'. Disturbance in the area was attributed to previous fire events, road siding of the Great Central Road, access tracks, camping areas and existing clearing for gravel pits/materials storage. Two introduced flora taxa (weeds) were identified within the Survey Area. Buffel Grass (*Cenchrus ciliaris*) and Citron Melon (*Citrullus amarus*). These were only observed growing in the SLK 206-250 and the SLK 250-349 sections of the Survey Area. No weeds were seen in the SLK 349-412 section of the Survey Area. Neither of these species are categorised as Declared Pests or Weeds of National Significance (WoNS).

No State-listed Threatened, Priority or otherwise significant flora taxa were recorded within the Survey Area.

One Threatened Flora taxa, *Seringia exastia*, listed as Critically Endangered under the Commonwealth EPBC Act, was identified within the Survey Area. While currently listed under the EPBC Act, it has been delisted in Western Australia and is now regarded as a common and widespread species based on taxonomic revision. Delisting at the Commonwealth level is anticipated, although timing is uncertain (Botanica, 2025).

No Threatened Ecological Communities (TECs) listed under the EPBC Act or BC Act, or Priority Ecological Communities (PECs) listed by DBCA, were identified within the Survey Area.

3.2 Summary and Analysis of Fauna Surveys

Botanica (2025) identified eight broad scale terrestrial fauna habitats (not including cleared vegetation) within the Survey Area. The most widespread fauna habitat was the '*Acacia* woodland over *Eremophila* mid open shrubland with hummock grass on clay loam plain' occupying 33% of the total Survey Area.

The 2025 survey recorded 45 fauna species comprising 0 amphibians, 4 volant mammals (bats), 8 non-volant mammals, 30 birds and 3 reptile species (Botanica 2025).

Eight conservation fauna species were identified as possible to occur within the Survey Area based on desktop database searches conducted within a 40 km buffer and a literature review:

- Southern Whiteface (*Aphelocephala leucopsis*) (listed as Vulnerable under the EPBC Act and BC Act).
- Malleefowl (*Leipoa ocellata*) (listed as Vulnerable under the EPBC Act and BC Act).
- Princess Parrot (*Polytelis alexandrae*) (listed as Vulnerable under the EPBC Act and as Priority 4 by DBCA).
- Brush-tailed Mulgara (*Dasycercus blythi*) (listed as Priority 4 by DBCA).
- Bilby (*Macrotis lagotis*) (listed as Vulnerable under the EPBC Act and BC Act).
- Long-tailed Dunnart (*Sminthopsis longicaudatus*) (listed as Priority 4 by DBCA).
- Buff snouted blind snake (*Anilios margaretae*) (listed as Priority 2 by DBCA).
- Great Desert Skink (*Liopholis kintorei*) (listed as Vulnerable under the EPBC Act and BC Act).

Note: some species were excluded based on the lack of suitable habitat within the Survey Area and in the general area or known local extinction even if suitable habitat is present.

Botanica (2025) state that "despite the omission of some species it should be noted that the list provided is still very likely an over estimation of the fauna species utilising the Survey Area (either on a regular or infrequent basis)…"

Of the eight conservation significant fauna species considered possible to occur prior to the field survey, Botanica (2025) determined six as having the potential to occur post survey but would need to conduct further surveys to confirm their presence or otherwise. Malleefowl (*Leipoa ocellata*) and Bilby (*Macrotis lagotis*) were considered as unlikely to occur post-survey.

No conservation significant fauna taxa were recorded (directly or indirectly) during the 2025 survey.

4 DESKTOP ASSESSMENT OF VEGETATION

4.1 Desktop Vegetation Description

According to the broad scale mapping undertaken by Beard (Sheperd et al 2013), the Development Envelope is mapped as occurring within six pre-European vegetation associations. As outlined in Table 3, all six vegetation associations have greater than 95% of their pre-European extent remaining at the State, IBRA Bioregion, IBRA Sub-region and Local Government Authority scales.

Table 3. Pre-European Vegetation Representation

Pre-European Vegetation Association	Scale	Pre–European Extent (ha)	Current Extent (ha)	% Remaining	% Current Extent in DBCA Managed Land (proportion of pre-European Extent)
Veg Association 19	**Statewide**	4,385,295.47	4,384,249.90	99.98	0.71
	IBRA Bioregion Great Victoria Desert	902,247.79	902,170.93	99.99	
	IBRA Sub-region Shield (GVD01)	902,247.79	902,170.93	99.99	
	Local Government Authority Shire of Laverton	1,968,539.94	1,968,539.94	100.00	
Veg Association 24	**Statewide**	263,147.66	263,128.56	99.99	1.37
	IBRA Bioregion Great Victoria Desert	226,362.03	226,362.03	100.00	
	IBRA Sub-region Shield (GVD01)	22,083.14	22,083.14	100.00	
	Local Government Authority Shire of Laverton	209,307.60	209,307.60	100.00	
Veg Association 39	**Statewide**	6,613,567.48	6,602,578.44	99.83	12.02
	IBRA Bioregion Great Victoria Desert	1,183,999.19	1,183,999.19	100.00	2.96
	IBRA Sub-region Shield (GVD01)	151,986.17	151,986.17	100.00	-
	Local Government Authority Shire of Laverton	826,833.70	826,456.13	99.95	4.23
Veg Association 45	**Statewide**	224,862.26	224,672.21	99.92	4.32
	IBRA Bioregion Great Victoria Desert	170,379.67	170,379.67	100.00	5.70
	IBRA Sub-region Shield (GVD01)	73,640.13	73,640.13	100.00	-
	IBRA Sub-region Central (GVD02)	96,739.54	96,739.54	100.00	10.04
	Local Government Authority Shire of Laverton	124,446.62	124,446.62	100.00	7.80
Veg Association 84	**Statewide**	1,799,366.05	1,799,366.05	100.00	9.23
	IBRA Bioregion Great Victoria Desert	1,781,533.03	1,781,533.03	100.00	9.32

Pre-European Vegetation Association	Scale	Pre–European Extent (ha)	Current Extent (ha)	% Remaining	% Current Extent in DBCA Managed Land (proportion of pre-European Extent)
	IBRA Sub-region Shield (GVD01)	876,290.53	876,290.53	100.00	15.16
	Local Government Authority Shire of Laverton	491,980.20	491,980.20	100.00	5.17
Veg Association 676	**Statewide**	2,063,413.95	1,963,881.55	95.18	14.69
	IBRA Bioregion Great Victoria Desert	206,634.58	206,522.57	99.95	14.10
	IBRA Sub-region Shield (GVD01)	40,329.39	40,329.39	100.00	-
	Local Government Authority Shire of Laverton	233,756.65	233,591.10	99.93	8.03

Botanica (2025) recorded 4,803.6 ha of native vegetation within the Development Envelope, comprising of eleven vegetation types. The Development Envelope is dominated by Mallee Woodland and Shrubland and Acacia open woodland covering about 1,045.1 ha and 913.4 ha respectively.

Table 3 provides details of vegetation types and extents within the Development Envelope.

Vegetation condition (Table 4) is mapped as ranging from 'Cleared' to 'Very Good' with the majority (95%) in 'Very Good' condition. No introduced species were identified within the Development Envelope.

Table 4. Vegetation types within the Development Envelope

Vegetation group	Veg Code	Vegetation Type	Area (ha)
Acacia Forest and Woodland	CLP-AFW1	Low woodland of *Acacia incurvaneura* and/or *A. aptaneura* over *Eremophila latrobei* subsp. *latrobei* mid open shrubland over *Triodia basedowii* hummock grassland on clay loam plain.	1,469.6
	DD-AFW1	Low woodland *Acacia incurvaneura* and/or *A. aptaneura* over *Eremophila latrobei* subsp. *latrobei* mid open shrubland over low shrubland of *Ptilotus obovatus* in drainage depression.	8.5
	RP-AFW1	Low woodland of *Acacia incurvaneura* and/or *A. aptaneura* over *Eremophila latrobei* subsp. *latrobei* mid open shrubland over low open tussock grassland of *Eragrostis eriopoda*.	54.8
	RS-AFW1	Mid open forest of *Acacia mulganeura* over *Senna artemisioides* subsp.x *sturtii* mid open shrubland over low shrubland of *Ptilotus obovatus* on rocky slope.	63.4

Vegetation group	Veg Code	Vegetation Type	Area (ha)
	SCLP-AFW1	Low woodland of *Acacia incurvaneura* and/or *A. aptaneura* over *Eremophila latrobei* subsp. *latrobei* mid open shrubland over *Triodia basedowii* hummock grassland on sandy-clay loam plain	424.6
	SP-AFW1	Low open forest woodland of *Acacia incurvaneura* and/or *A caesaneura* over mid open shrubland of *Eremophila forrestii* subsp. *forrestii*, over *Triodia basedowii* hummock grassland.	241.6
Acacia Open Woodland	CLP-AOW1	Low open woodland of *Acacia caesaneura*, *A. aptaneura*, *A. incurvaneura* over *Senna artemisioides* subsp. x *artemisioides*, *Senna artemisioides* subsp. *helmsii* mid shrubland over *Ptilotus obovatus* low shrubland.	18.2
	OD-AOW1	Low open woodland of *Acacia ayersiana* over mid chenopod shrubland of *Maireana pyramidata* over low open tussock grassland of *Eragrostis eriopoda* in open depression.	67.6
	SP-AOW1	Low open woodland of *Acacia caesaneura*, *A incurvaneura* over *Senna artemisioides* subsp. *filifolia*, *Eremophila latrobei* subsp. *latrobei* mid open shrubland over *Triodia basedowii* hummock grassland.	827.4
Acacia Low Woodland	SP-AOW2	Low woodland of *Acacia pruinocarpa* over *Acacia ligulata* mid open shrubland over *Triodia basedowii* hummock grassland.	53.9
	SD-AW1	Low woodland of *Acacia ligulata* and/or *Grevillea eriostachya* over mid shrubland of *Aluta maisonneuvei* over low hummock grassland of *Triodia basedowii* on sand dune.	24.6
	RP-AOW1	Low woodland of *Acacia incurvaneura* and/or *A. aptaneura* over *Eremophila latrobei* subsp. *latrobei* mid open shrubland over low open tussock grassland of *Eragrostis eriopoda*.	10.8
Casuarina Forests and Woodland	GD-CFW1	Mid woodland of *Casuarina pauper* over mid open shrubland of *Acacia colletioides* over low open chenopod shrubland with *Sclerolaena diacantha* on gypsum dunes.	4.3
	CLP-COW1	Mid woodland of *Casuarina pauper* over mid open shrubland of *Senna artemisioides* subsp. *filifolia* over low open grassland of *Eragrostis kennedyae* on clay loam plain.	126.5
Chenopod shrublands	OD-CS1	Mid chenopod shrubland of *Maireana pyramidata* over low chenopod shrubland of *Atriplex vesicaria* and/or *Maireana radiata* in open depression.	102.6
Eucalyptus Open Woodland	SD-EW1	Low woodland of *Eucalyptus gongylocarpa* over *Aluta maisonneuvei* mid open shrubland over *Triodia basedowii* and/or *T. schinzii* hummock grassland on sand dune.	61.5

Vegetation group	Veg Code	Vegetation Type	Area (ha)
	SP-EW1	Low woodland of *Eucalyptus gongylocarpa* over *Acacia ligulata* mid shrubland over *Triodia basedowii* closed hummock grassland.	199.0
Mallee Woodland and Shrubland	SP-MW1	Mid mallee woodland of *Eucalyptus youngiana* over *Acacia ligulata*, *Grevillea juncifolia* subsp. *juncifolia*, *Aluta maisonneuvei* mid open shrubland over *Triodia basedowii* hummock grassland.	972.0
	SP-MW2	*Eucalyptus concinna* open mallee woodland over *Eremophila latrobei* subsp. *glabra* mid open shrubland over *Triodia irritans* hummock grassland.	72.9
NA		Cleared areas	563.0
Total			**5,366.6**

Table 5. Summary of Vegetation Condition within Development Envelope

Vegetation Condition	Extent within Development Envelope (ha)
Very Good	5,095.3
Good	33.2
Cleared	238.1
Total	**5,366.6**

5 ASSESSMENT AGAINST THE TEN CLEARING PRINCIPLES

In assessing whether the Proposal's proposed clearing is likely to have a significant impact on the environment, the Proposal was assessed against the ten Clearing Principles (EP Act, Schedule 5).

Each principle has been assessed in accordance with the former Department of Environment Regulation (now Department of Water and Environmental Regulation (DWER) '*A Guide to the Assessment of Applications to Clear Native Vegetation*' (Department of Environment Regulation, 2014) and other relevant clearing permit application decision reports prepared by DWER.

The proposed clearing is at variance to Principle (f) and is not at variance, or not likely to be at variance, to the remaining Clearing Principles.

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

Proposed clearing is not likely to be at variance to this Principle.

The Development Envelope falls within the Great Victoria Desert bioregion, within the Shield (GVD-01) and Central (GVD-02) subregions (Government of Western Australia, 2019).

Vegetation

Six Beard *et al*. (2013) pre-European vegetation associations are mapped within the Development Envelope:

- GVD19 - Low woodland; mulga between sand ridges.
- GVD24 - Low woodland; Allocasuarina cristata
- GVD39 - Wattle, teatree & other species *Acacia* spp. Melaleuca spp.
- GVD45 - Shrublands; mallee scrub (Great Victoria Desert), eucalypt shrubland *Eucalyptus eremophila*, *E. redunca*, E. spp.
- GVD84 - Hummock grasslands, open low tree & mallee steppe; marble gum & mallee (*Eucalyptus youngiana*) over hard spinifex *Triodia basedowii* between sandhills & mallee (*Eucalyptus youngiana*) over hard spinifex on sandplain
- GVD676 – Samphire; *Tecticornia* spp. communities in saline areas

These vegetation associations have more than 95 % of their pre-European extent remaining intact at the State, bioregion and local government levels.

Main Roads engaged Botanica to survey a Survey Area incorporating the Development Envelope in 2025. Botanica (2025) mapped a total of 4,803.6 ha of native vegetation within the Development Envelope, comprising 18 vegetation types. All vegetation types identified are common, with the dominant vegetation type being *Acacia* Forest woodland. The vegetation condition within the Development Envelope ranges from 'Degraded to Very Good' with majority (95 %) in 'Very Good' condition.

The Botanica (2025) desktop assessment indicated that no Threatened Ecological Communities (TECs) listed under the Commonwealth EPBC Act, or the Western Australian BC Act are known to occur within the Survey Area or within 40 km of the Survey Area.

Field surveys confirmed that no TECs or Priority Ecological Communities (PECs) classified by DBCA, are present within the Development Envelope.

Flora

The Botanica (2025) desktop assessment identified 338 flora species, found that no Threatened Flora or Priority Flora species had previously been recorded within the Survey Area and that the

following five species classified as Priority by the DBCA have previously been recorded within the Study Area:

- *Abutilon* sp. Warburton (A.S. George 8164) – Priority 1
- *Calytrix warburtonensis* – Priority 2
- *Grevillea* sp. Victoria Desert (R. Davis et al. RD 11611) – Priority 1
- *Melaleuca apostiba* – Priority 3
- *Verticordia jamiesonii* – Priority 3

Botanica (2025) identified no WA-listed Threatened or Priority Flora within the Survey Area (and by extension, the Development Envelope). Of the five Priority Flora taxa identified in the desktop assessment, all five were considered as 'possible' to occur within the Survey Area based on their broad habitat descriptions/ soil types. Following the field survey, all Priority Flora were assessed by Botanica (2025) as unlikely to occur.

One Threatened Flora taxa listed as Critically Endangered under the Commonwealth EPBC Act, *Seringia exastia*, was identified within the Survey Area (Botanica, 2025). This species was recently delisted from Threatened status in Western Australia under the BC Act. The listing of this taxon as Threatened was supported by knowledge at the time of listing, which indicated this taxon was discrete from all other *Seringia* taxa on morphological grounds and was known from a single population within the Port of Broome. Further taxonomic work determined that *Seringia exastia* is conspecific with (the same as) *Seringia elliptica*, which is widespread across northern and central Western Australia, Northern Territory and extending into South Australia (Binks et al., 2020).

Seringia elliptica and *Seringia exastia* were synonymised under the oldest valid name, being *Seringia exastia*. The newly circumscribed *Seringia exastia* now represents a common, widespread species that would not meet the criteria for conservation significance and should be delisted (Binks *et al.* 2020). It is expected that this taxon will be delisted on a Commonwealth level in the near future given its delisting in Western Australia and is now considered a common and widespread species. . According to the Department of Climate Change, Energy, the Environment and Water (2026), *Seringia exastia* is on the 'Deletion and Other Changes List' (DOCL) that contains listed species, ecological communities and key threatening processes that are being assessed by the Commonwealth Environment Minister for potential deletion or other changes (for example, renaming) under the EPBC Act. DCCEEW (2026) advise that *Seringia exastia* is proposed for deletion from the list of threatened species as recent taxonomic work has determined that *Seringia exastia* is the same as *Seringia elliptica*. *Seringia elliptica* is found across the western desert and adjacent Kimberely and Pilbara regions. Therefore, *Seringia exastia* may no longer be eligible for listing. The assessment completion time is listed as 30 October 2026.

Botanica (2025) recorded fifty-six (56) populations in the Survey Area, totalling approximately 29,500 plants.

Fauna

The Botanica (2025) desktop assessment identified eight conservation significant species as possible to occur within the Survey Area based on desktop database searches and a literature review for the Study Area (Survey Area with a 40 km buffer):

- Southern Whiteface (*Aphelocephala leucopsis*) (listed as Vulnerable under the EPBC Act and BC Act).
- Malleefowl (*Leipoa ocellata*) (listed as Vulnerable under the EPBC Act and BC Act).

- Princess Parrot (*Polytelis alexandrae*) (listed as Vulnerable under the EPBC Act and as Priority 4 by DBCA).
- Brush-tailed Mulgara (*Dasycercus blythi*) (listed as Priority 4 by DBCA).
- Bilby (*Macrotis lagotis*) (listed as Vulnerable under the EPBC Act and BC Act).
- Long-tailed Dunnart (*Sminthopsis longicaudatus*) (listed as Priority 4 by DBCA).
- Buff-snouted blind snake (*Anilios margaretae*) (listed as Priority 2 by DBCA).
- Great Desert Skink (*Liopholis kintorei*) (listed as Vulnerable under the EPBC Act and BC Act).

Post survey, Botanica (2025) considered six of these eight conservation significant fauna species as potentially occurring, with Malleefowl (*Leipoa ocellata*) and Bilby (*Macrotis lagotis*) determined as unlikely to occur.

Botanica (2025) recorded no conservation significant fauna taxa (directly or indirectly) during the 2025 survey which incorporated the Development Envelope.

Eight fauna habitat types were recorded within the Survey Area (Botanica, 2025). Interrogation of spatial information provided with survey report indicates the same eight habitat types also occur within the Development Envelope:

- Clay-Loam Plain containing *Acacia* woodland over low mixed shrubs.
- Sand Plain containing *Acacia*, *Eucalyptus* Woodland, Mallee woodland over low mixed shrubs and spinifex grassland.
- Clay-loam Plain containing Acacia woodland over *Ptilotus* low open shrubland.
- Sand Plain containing *Acacia* woodland over *Triodia* hummock grassland.
- Sand Plain containing *Acacia/Allocasuarina* woodland over *Triodia* hummock grassland.
- Sand Plain containing *Eucalyptus* mallee woodland over *Triodia* hummock grassland.
- Sand Plain containing *Eucalyptus* woodland over *Acacia* shrubland over *Triodia* hummock grassland.
- Sand Dune containing *Eucalyptus* woodland/ mallee woodland over *Triodia* hummock grassland.

The vegetation and fauna habitats within the Development Envelope are considered common throughout the region and do not include any unique landforms likely to support a high level of biological diversity in comparison to surrounding uncleared areas both locally and regionally.

The proposed clearing is therefore not likely to be at variance to this Principle.

Methodology

- Botanica (2025)
- DCCEEW (2026)
- Government of Western Australia (2019)

(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.

Proposed clearing is not likely to be at variance to this Principle.

Botanica (2025) identified 259 native vertebrate fauna species in their desktop assessments of the Study Area. Of these, eight species are of conservation significance. These species are discussed further in the Table below.

Table 6 - Significant fauna identified in pre-survey desktop assessment

Fauna Species & Conservation Status	Discussion	Closest record
Aphelocephala leucopsis (Southern Whiteface) Vulnerable – EPBC Act and BC Act	No evidence of this species was observed during the Botanica (2025) survey. Critical habitat includes relatively undisturbed open woodlands and shrublands with an understorey of grasses and/or shrubs, habitat with low tree densities and an herbaceous understory litter cover which provides essential foraging habitat and living and dead trees with hollows and crevices which are essential for roosting and nesting. Post-survey likelihood of occurrence deemed this species **potential to occur**.	No recent records within Study Area.
Leipoa ocellata (Malleefowl) Vulnerable - EPBC and BC Act	No evidence of this species was observed during the Botanica (2025) survey, including active or inactive mounds, tracks, scats or feathers. Approximately 48 % of vegetation in the Survey Area is suitable habitat for malleefowl (Botanica, 2025). However, as the Survey Area is at the northern extent of Malleefowl range it is **unlikely to be present** (Botanica, 2025).	Previous records, secondary evidence, >18 km away
Polytelis alexandrae (Princess Parrot) Vulnerable – EPBC Act and DBCA Priority 4	No evidence of this species was observed during the Botanica (2025) survey. The Princess Parrot occupies sand dune and sand flat areas as well as occurring in open savanna woodlands and shrublands. The area of sand plain with large *Eucalyptus gongylocarpa* could provide areas for nesting in large trees with hollows, however this only accounts for 3.4 % of the Survey Area (Botanica, 2025). As this species has a wide-ranging distribution, it is considered as **having potential to occur, however only occasionally and for short periods** (Botanica, 2025).	No recent records within 40 km of Survey Area
Dasycercus blythi (Brush-tailed Mulgara) DBCA Priority 4	There are no recent records of this species within the desktop Survey Area. No evidence of burrows, tracks or scats were seen during the Botanica (2025) survey, therefore it is not likely to be present in the area. The species occurs on spinifex sand plain habitat, as well as Mulga Woodlands with a spinifex understory across the arid areas of central Australia (ALA, 2025; Western Wildlife, 2022).	~5 km north of Survey Area
Macrotis lagotis (Bilby) Vulnerable - EPBC and BC Act	There are no recent Bilby records within the desktop Survey Area. No evidence of burrows, tracks or scats was seen during the Botanica (2025) survey, therefore the species is considered **not likely to be present in the area**. Western Wildlife (2022) concluded the Bilby is likely to be locally extinct in the region.	N/A

Sminthopsis longicaudatus (Long-tailed Dunnart) DBCA Priority 4	Western Wildlife (2022) identified it as present. It could occur in areas of rocky slopes, of which there was only 86.2 ha in the Botanica (2025) Survey Area, of which 63.4 ha occurs in the Development Envelope (less than 1.2 % of the DE). (Botanica, 2025).	~5 km north of Survey Area
Anilios margaretae (Buff- Snouted Blind Snake) DBCA Priority 2	According to ALA (2025), this species occurs in desert and grassland. There are no recent records within the 40 km desktop Survey Area. There is an historic record from 1962 at northern end of Lake Throssell (Botanica, 2025). Given the paucity of records of this species, it is considered unlikely to occur in the Development Envelope.	~1 km west of Survey Area
Liopholis kintorei (Great Desert Skink) Vulnerable – EPBC Act and BC Act	No evidence including burrows, tracks or scats seen during the Botanica (2025) survey. Western Wildlife (2022) identified 'secondary signs' for example scats and burrows, within 5km of the Survey Area. The species occurs in the Great Sandy, Gibson, Great Victoria and Tanami Deserts in the eastern interior of Western Australia. Sites in WA are dominated by *Triodia basedowii* and *Triodia schinzii* with some *Eremophila leucophylla* shrubs (DCCEEW, 2025). Botanica (2025) assessed the species as having **potential to occur**.	~5 km north of Survey Area

Despite Botanica (2025) assessing some significant fauna species as having the potential to occur, no significant fauna species were recorded (directly or indirectly) during the Botanica (2025) field surveys.

Eight fauna habitats were recorded within the Development Envelope, being:

- Clay-Loam Plain containing Acacia woodland over low mixed shrubs.
- Sand Plain containing Acacia, Eucalyptus Woodland, Mallee woodland over low mixed shrubs and spinifex grassland.
- Clay-loam Plain containing Acacia woodland over Ptilotus low open shrubland.
- Sand Plain containing Acacia woodland over Triodia hummock grassland.
- Sand Plain containing Acacia/Allocasuarina woodland over Triodia hummock grassland.
- Sand Plain containing Eucalyptus mallee woodland over Triodia hummock grassland.
- Sand Plain containing Eucalyptus woodland over Acacia shrubland over Triodia hummock grassland.
- Sand Dune containing Eucalyptus woodland/ mallee woodland over Triodia hummock grassland.

All eight fauna habitat types recorded within the Development Envelope are well represented both locally and regionally, with no restricted habitat types recorded. The proposed clearing of 660 ha, spread across a 5,366.6 ha Development Envelope, spanning approximately 180 km along an existing road corridor, is unlikely to significantly impact habitat availability for any of the species listed in Table 5, in either a local or regional context. The Survey Area does not comprise the whole or part of a habitat necessary for maintenance of a significant habitat for fauna.

Botanica (2025) state "while habitats onsite for the species listed are considered possibly suitable, some or all may be marginal in extent/quality and therefore the fauna species considered as possibly occurring may in fact only visit the area for short periods as infrequent vagrants".

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology

- ALA (2025)
- Botanica (2025)
- DCCEEW (2025)
- Western Wildlife (2022)
- Government GIS shapefiles:
    - DBCA Threatened fauna database search (Accessed 03/06/2026)

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

Proposed clearing is not at variance to this Principle.

A search of DBCA and Western Australian Herbarium datasets did not identify any Threatened Flora species within the Study Area, including the Development Envelope.

No Threatened flora species were recorded within the Survey Area or Development Envelope during the field survey undertaken by Botanica (2025) and none were considered likely to occur in the post survey Likelihood of Occurrence assessment.

Based on the above, the proposed clearing is not at variance to this Principle.

Methodology

- Botanica (2025)
- Government GIS shapefiles:
    - WAHerb (Restricted) (Accessed 03/06/2026)
    - TPFL (Restricted) (Accessed 03/06/2026)

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

Proposed clearing is not at variance to this Principle.

Botanica (2025) did not identify any known desktop records of State or Federally listed TECs within the Study Area.

No vegetation communities representative of TECs were recorded within the Survey Area or the or the Development Envelope during the biological surveys (Botanica, 2025).

Based on the above, the proposed clearing is not at variance to this Principle.

Methodology

- Botanica (2025)
- Government GIS shapefiles:
    - DBCA Threatened Ecological Community database search (Accessed 03/06/ 2026)

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

Proposed clearing is not at variance to this Principle.

The National Objectives and Targets for Biodiversity Conservation recognise that the retention of 30 % or more of the pre-clearing extent of each ecological community is necessary if Australia's biological diversity is to be protected (Commonwealth of Australia, 2001) except in constrained areas (Perth and Peel) where 10 % representation should be maintained.

The Development Envelope falls within the Great Victoria Desert bioregion, within the Shield (GVD-01) and Central (GVD-02) subregions (Government of Western Australia, 2019).

The vegetation in the Development Envelope has been broadly mapped as comprising the following pre-European Beard vegetation associations:

- **GVD19** - Low woodland; mulga between sand ridges.
- **GVD24** - Low woodland; Allocasuarina cristata
- **GVD39** - Wattle, teatree & other species Acacia spp. Melaleuca spp.
- **GVD45** - Shrublands; mallee scrub (Great Victoria Desert), eucalypt shrubland *Eucalyptus eremophila*, *E. redunca*, E. spp.
- **GVD84** - Hummock grasslands, open low tree & mallee steppe; marble gum & mallee (*Eucalyptus youngiana*) over hard spinifex *Triodia basedowii* between sandhills& mallee (*Eucalyptus youngiana*) over hard spinifex on sandplain
- **GVD676** – Samphire; Tecticornia spp. communities in saline areas

These vegetation associations have more than 95 % of their pre-European extent remaining intact at the State, bioregion and local government levels.

Given that the vegetation associations are widespread throughout the area, are well-represented locally and regionally and the landscape surrounding the Development Envelope is uncleared, the native vegetation proposed for clearing is not significant as a remnant in an area that has been extensively cleared.

Based on the above, the proposed clearing is not at variance to this Principle.

Methodology

- Commonwealth of Australia (2001)
- Government of Western Australia (2019)
- Government GIS shapefiles:
  - Pre-European vegetation (Accessed 27/05/2026)

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Proposed clearing is at variance to this Principle.

No perennial waterbodies, including DBCA mapped Wetlands, Ramsar Sites or Wetlands of National Importance occur within the Development Envelope.

There are no wetlands of international importance (Ramsar Wetlands) or national importance (Directory of Important Wetlands in Australia) within the Survey Area (Botanica, 2025).

Two nationally important wetlands are located within the Study Area (Botanica, 2025):
- Lake Throssell; and
- Yeo Lake.

At its closest point, Lake Throssell is located approximately 200 m west of the Development Envelope. At this distance, no indirect impacts to Lake Throssell or its associated vegetation are expected as a result of the proposed clearing.

According to the Geoscience Australia database (2015) and the Hydrography, Linear (Hierarchy) (DWER-031) dataset, there are numerous ephemeral drainage lines and multiple un-named salt lakes. There are numerous non-perennial drainage lines and un-named non-perennial inland water bodies ((WWYS Geoscience Australia Regional Surface Hydrology Lines) within the Study Area. However, only a small number of non-perennial drainage lines (and no inland waters) intersect the Development Envelope.

Vegetation type DD-AFW1 (Drainage Depression: Acacia Open Forest Woodland) is associated with the minor non-perennial watercourses (Botanica, 2025), with 8.53 ha mapped within the Development Envelope. Whilst this vegetation type will be impacted by the proposed clearing, it is not restricted to the Development Envelope and extends well beyond the project into the surrounding Study Area.

No DBCA Conservation Category Wetlands, Ramsar sites or Wetlands of National Importance occur within the Development Envelope, however one vegetation type growing in association with non-perennial watercourses will be impacted by the proposed clearing. As such, the proposed clearing is at variance to this Principle.

Methodology

- Botanica (2025)
- Government GIS shapefiles:
  - Geomorphic Wetlands (Accessed 03/06/2026)
  - Ramsar Wetlands (Accessed 03/06/2026)
  - Important Wetlands (Accessed 03/06/2026)
  - Watercourses (Accessed 03/06/2026)
  - RIWI Act Rivers (Accessed 03/06/2026)

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Proposed clearing is not likely to be at variance to this Principle.

The Development Envelope is mapped within the Western Region soil landscape within the Leemans Sandplain Zone (274) and the North-western Great Victorian Desert Zone (122). The project is predominantly located in the Leemans Sandplain which is characterised by sandplains (with some gravel plains, mesas and salt lakes) on granitic rocks of the Yilgarn Craton. The terrain predominantly consists of gently undulating wash plains and sandplains below the mesas and hills. Soils consist of red sandy earths with red loamy earths and some red deep sands, red-brown hardpan shallow loams and calcareous loamy earths.

The Development Envelope occurs within the following landscape systems:

- AB47 atlas system; Plains and dunes-longitudinal and ring dunes with interdune corridors and plains; occasional salt pans.
- BY6 atlas system; Scarpland-breakaways and residuals of various forms, cuestas, mesas, buttes, stony hillocks, and hills commonly with large bare slabs of silcrete; stone and gravel pavements are common.
- Mx22 atlas system; Plains often flanking areas of regional drainage (unit SV10); some longitudinal sand dunes.
- My99 atlas system; Plains with extensive gravel pavements and small tracts of longitudinal dunes.
- SV10 atlas system; Shallow valleys with lakes, clay pans, salt pans, calcrete (kunkar) platforms, sand dunes, kopi dunes, and calcareous dunes.

A major portion of the Development Envelope occurs within soil group 445-Red deep sand and classified Tenosols. These types of soil are described to have rapid permeability and low water holding capacity (Schoknecht and Pathan, 2013) and therefore a low risk of water erosion. A small portion of the Development Envelope in the midsection occurs within the soil group 522-Red shallow loam and classified Red Kandosol described moderate permeability and water holding capacity.

The climate of the Shield subregion (GVD01) is described as arid, with summer and winter rain with approximately 190 mm per annum (Barton and Cowan, 2001a). The climate of the Central subregion (GVD02) is described as arid, with summer and winter rain averaging 150 –180 mm annually (Barton and Cowan, 2001b).

The Development Envelope is mapped as 'extremely low' risk of containing Acid Sulfate Soils (ASS).

It is unlikely that the proposed clearing will cause appreciable land degradation given that the Proposal occurs along the already existing road and road verges. However, given that Main Roads is proposing to clear up to 660 ha of native vegetation, standard erosion and dust management control measures will be implemented during construction to reduce the incidence of wind erosion.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology

- Barton and Cowan (2001a)
- Barton and Cowan (2001b)
- Botanica (2025)
- Schoknecht and Pathan (2013)
- Tille (2006)
- Government GIS Shapefiles:
  - Atlas of Australian Acid Sulfate Soils (CSIRO 2013)
  - Australian Soil Resource Information System (ASRIS)
  - Soil landscape Mapping – Systems (DPIRD-064) (accessed 03/06/2026)
  - Soil landscape Mapping – Zones (DPIRD-017) (Accessed 03/06/2026)

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Proposed clearing is not at variance to this Principle.

The Development Envelope does not intersect any conservation areas. The nearest gazetted conservation reserve is the Yeo Lake Nature Reserve (R 36271), located approximately 1.5 km south of the southern end of the Development Envelope.

The Development Envelope does not intersect any registered offsets or wetlands of international importance (Ramsar) or nationally important wetlands (Government of Western Australia, 2025; GIS Databases).

Given the lack of conservation areas within, adjacent or nearby the Development Envelope, the proposed clearing is not at variance to this Principle.

Methodology

- Government of Western Australia (2025)
- Government GIS Shapefiles:
  - DBCA Legislated Lands and Waters & Lands of Interest (Accessed 03/06/2026)
  - Geomorphic Wetlands (conservation category wetlands only) (Accessed 03/06/2026)
  - Ramsar Wetlands (Accessed 03/06/2026)
  - Important Wetlands (Accessed 03/06/2026)

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

Proposed clearing is not likely to be at variance to this Principle.

The Development Envelope does not intersect any perennial surface water or underground water courses (GIS Databases; BoM, 2025).

The Development Envelope does not occur within a Public Drinking Water Source Area (PDWSA) or within any of the controlled catchment areas under the CAWS Act. It is within the Goldfields Groundwater Area, proclaimed under the RIWI Act.

Although there are no perennial surface water bodies, a few minor, non-perennial drainage lines intersect the Development Envelope. Given that surface water flow is intermittent and most clearing will occur adjacent to an existing road within disturbed areas, it is unlikely that the proposed clearing will cause deterioration in the quality of surface water.

Groundwater salinity within the Development Envelope is between 1000 to 3000 mg/L except for a section approximately 10 km long having salinity levels >35,000 mg/L. Natural Resource Management Soil Systems DWER (2018b) and CSIRO Acid Sulfate Soils risk mapping (CSIRO, 2018) indicates the soil within the Development Envelope to have extremely low probability of sulphide material occurrence.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology

- BoM (2025)
- Botanica (2025)
- CSIRO (2018)
- DWER (2018b)
- Government GIS Shapefiles:
  - RIWI Act, Surface Water Areas and Irrigation Districts (Accessed 03/06/2026)
  - CAWSA Part 2A Clearing Control Catchments (Accessed 03/06/2026)
  - RIWI Act, Groundwater Areas (Accessed 03/06/2026)
  - Groundwater Salinity Statewide (Accessed 03/06/2026)
  - Geoscience Australia database (Accessed 3/06/2026)
  - Atlas of Australian Acid Sulfate Soils (CSIRO 2018)
  - Australian Soil Resource Information System (ASRIS)

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Proposed clearing is not likely to be at variance to this Principle.

The Development Envelope is characterised by gently undulating wash plains and sandplains below the mesas and hills. The Development Envelope is characterised by an arid climate and bioclimate described by Beard (1990) as Eremaean (Tille, 2006) with annual rainfall ranging from 200-250 mm. Given the arid climate and soil type in the Development Envelope, risk of flooding is assessed as low.

The Development Envelope occurs within soil groups Red loamy earth (48 %), Red shallow loam (42 %) and Salt Lake soil (10 %). These types of soil are described to have low water holding capacity (Schoknecht and Pathan, 2013) and therefore lower risk of causing waterlogging.

Given the absence of perennial watercourses within and in the vicinity of the Development Envelope, soil type and climatic condition, the proposed vegetation clearing is not likely to cause, or exacerbate, the incidence or intensity of flooding.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology

- Schoknecht and Pathan (2013)
- Tille (2006)
- Government GIS Shapefiles:
  - Geoscience Australia database (Accessed 4/6/2026)
  - Australian Soil Resource Information System (ASRIS)
  - Soil landscape Mapping – Zones (DPIRD-017) (03/09/2025)
  - Soil landscape Mapping –Western Australia Attributed by WA Soil Group (DPIRD-076) (Accessed 4/6/2026)

6 VEGETATION MANAGEMENT

Main Roads will avoid clearing native vegetation where possible. Where clearing cannot be avoided then this clearing is kept to a minimum.

7 REHABILITATION, REVEGETATION AND OFFSETS

7.1 Revegetation and Rehabilitation

No temporary clearing will be undertaken as part of the Proposal activities.

7.2 Offset Proposal

No offset proposal is required as the proposed clearing will not result in significant residual impacts to native vegetation within the region.

8 STAKEHOLDER CONSULTATION

Main Roads will undertake stakeholder consultation as required.

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