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Clearing Assessment Report – CPS 818

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Western Australia.*

Great Eastern Highway and Parker Range
Road Intersection Upgrade SLK 343 to SLK 344.33
Great Eastern Highway (H005)
Wheatbelt Region
EOS 3095

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1 PROPOSAL

1.1 Purpose and Justification

The purpose of this Clearing Assessment Report (CAR) is to provide a report detailing the assessment of native vegetation clearing that is proposed to be undertaken using the State-wide Clearing Permit CPS 818 issued to Main Roads Western Australia (Main Roads).

The CAR outlines the key activities associated with the project, the existing environment and an assessment of native vegetation clearing. This assessment provides an evaluation of the vegetation clearing impacts associated with the project using the ten Clearing Principles, and the strategies used to manage vegetation clearing.

Covalent Lithium is proposing to start carting iron ore from its Mount Holland mining operation, located south of Southern Cross, to Kwinana from mid-2024. This will result in a significant increase in the number of heavy vehicles using Great Eastern Highway and Parker Range Road Intersection. As such Main Roads Western Australian (Main Roads) is proposing to upgrade this intersection (the Proposal) to cater for the increase in heavy vehicle movements and to provide safety for other road users due to slow heavy vehicles and/or heavy vehicles waiting to turn at this intersection.

1.1.1 Main Roads Approach to Road Safety and the Environment

Main Roads is committed to minimising the environmental impacts of all of its activities and manages the State road network to achieve balanced economic, social, safety and environmental benefits for the community. Main Roads recognises that Western Australia's environment is significant from a global perspective and the unique conservation values that are 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 also committed to protecting and enhancing 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 and 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 paddocks and avoiding 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 undertake an upgrade to the intersection of Great Eastern Highway (GEH) and Parker Range Road between Straight Line Kilometre (SLK) 343 and 344.33. The project will comprise the following:

- Auxiliary Right hand turn treatment from GEH east-bound into Parker Range Road (i.e., separate right-turn turning pocket);
- Basic Left hand turn treatment from GEH West-bound into Parker Range Road;
- 600m acceleration lane (plus approx. 200m taper / merge) from Parker Range Road onto GEH West-bound;
- Widening of the intersection to accommodate truck movements turning east out of Parker Range Road.
- Upgrades to drainage infrastructure;
- Full width reconstruction of GEH between the above SLK extents
 - Overlay and widening to achieve 11m seal on an 11m wide formation;
- Audible edge and centreline markings.
- Telstra relocation works (to be undertaken through Telstra if deemed required)

1.3 Proposal Location

The Clearing Area is located on Great Eastern Highway (H006), between SLK 343 and SLK 344.33, in the Shire of Yilgarn as shown in Figure 1.

The central coordinate of the proposal is:

- Latitude: -31.3155032
- Longitude: 119.1218335

1.4 Clearing Details

Proposed Clearing to be undertaken using CPS 818: 2.590 ha

Areas of Native Vegetation Clearing:

The areas of native vegetation to be cleared are shown in Figures 2 and 3.

Type of Native Vegetation:

The type of vegetation to be cleared under this Proposal is *Eucalyptus capillosa* mid woodland, shown in Figure 3.

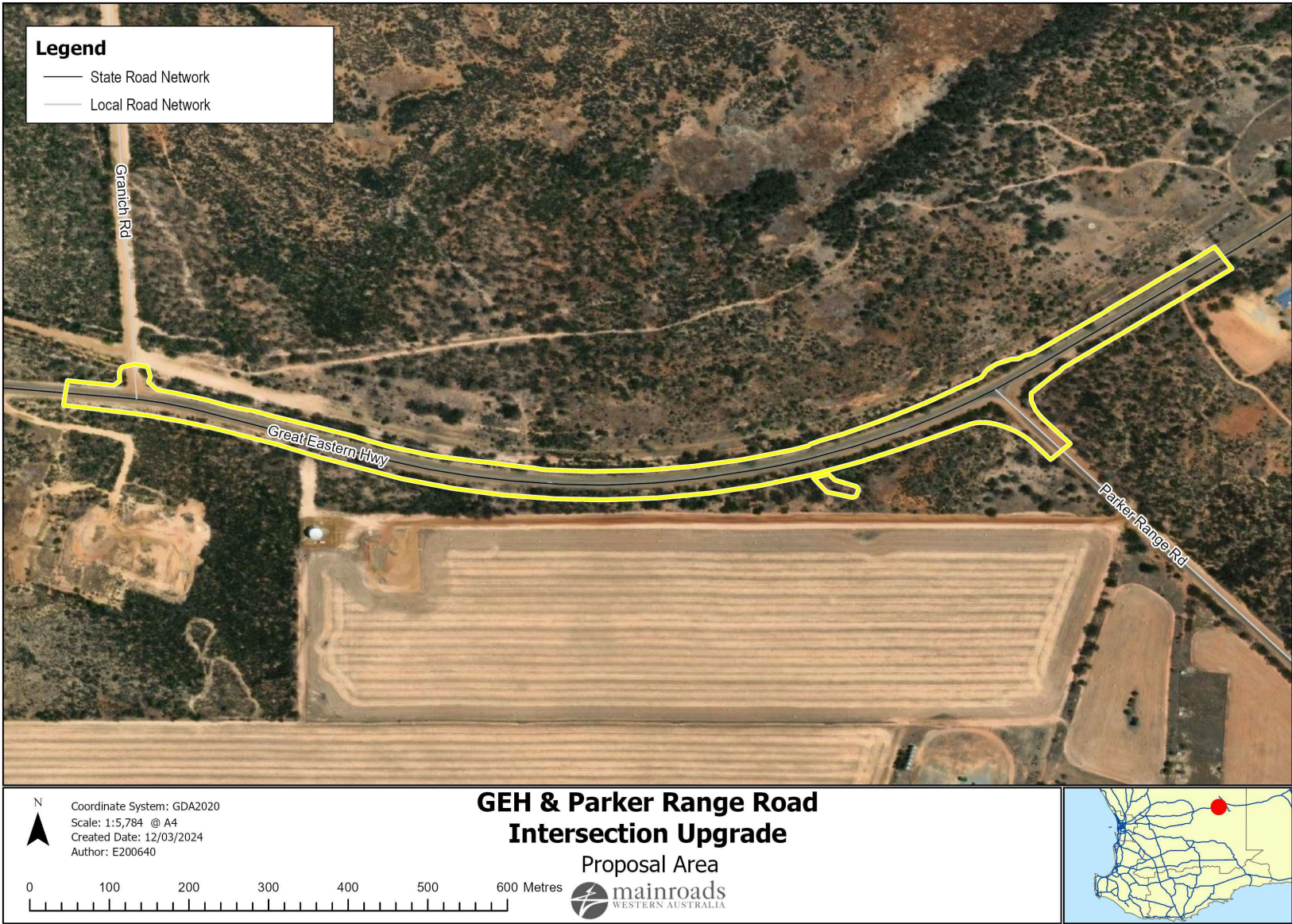


Figure 1. Proposal Area Location.

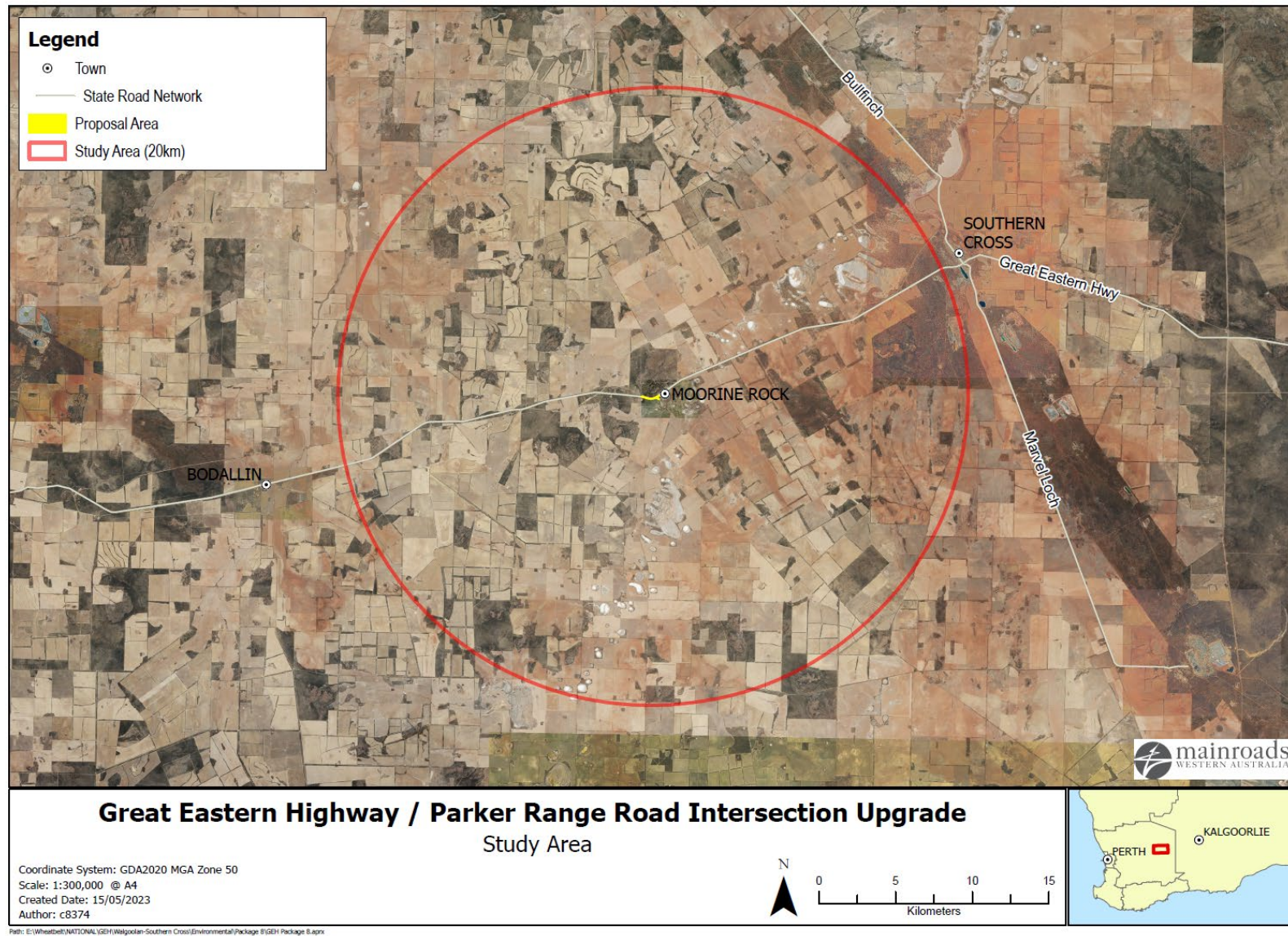


Figure 2. Study Area

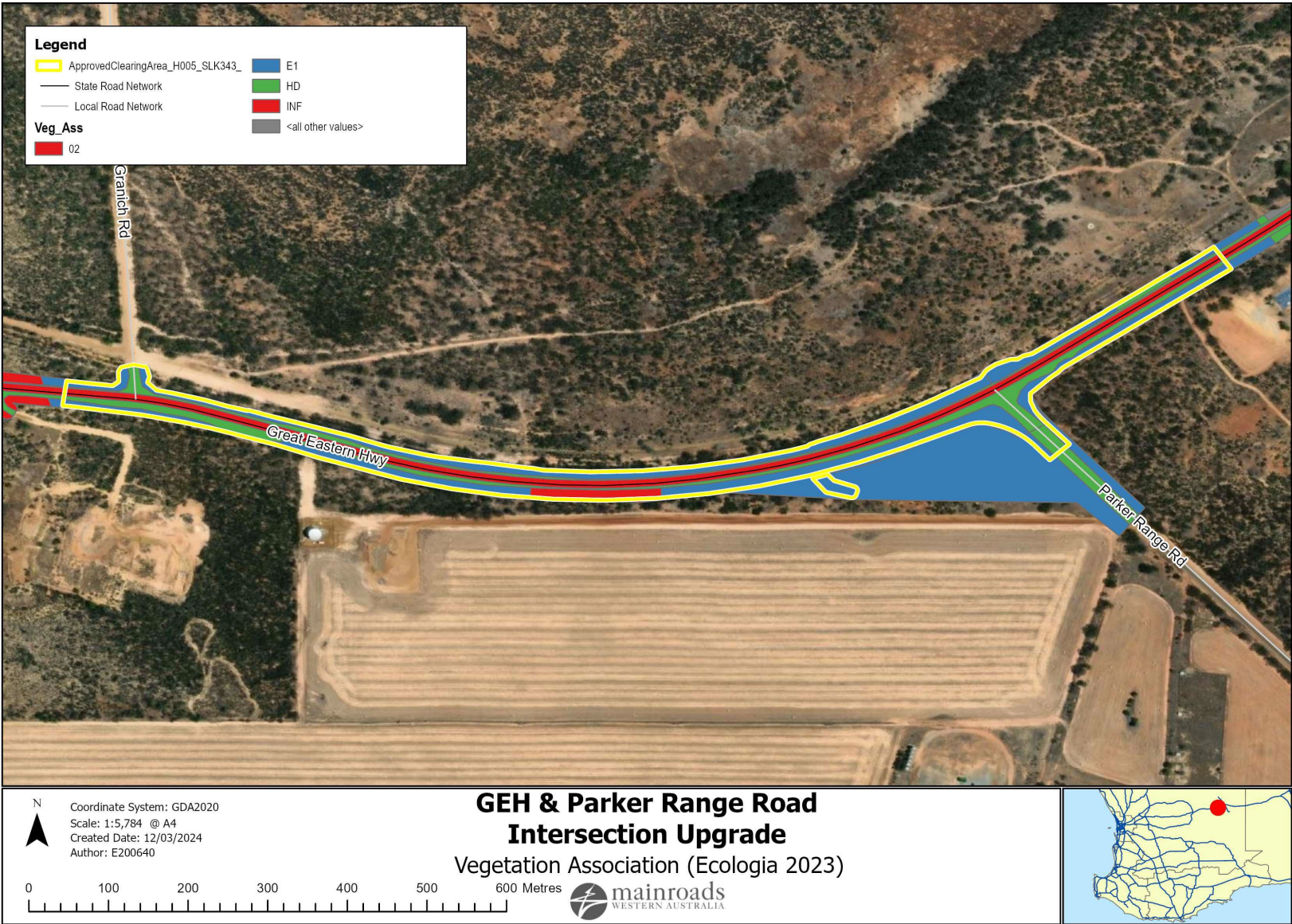


Figure 3. Vegetation within Development Envelope

1.5 Alternatives to Native Vegetation Clearing Considered During Proposal Development

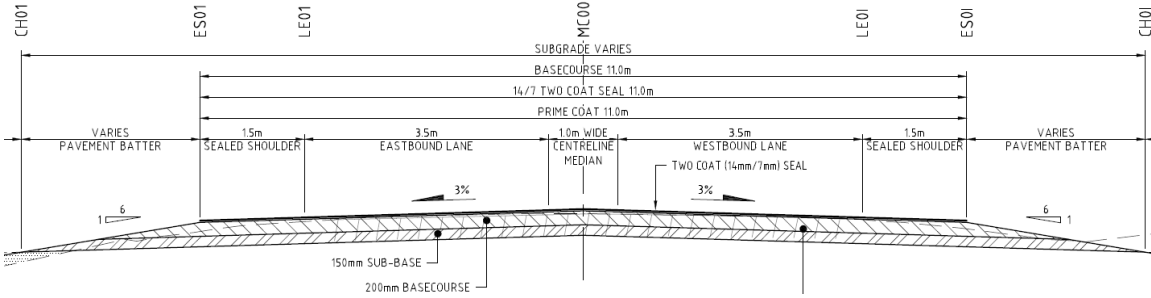
The following alternatives to clearing were considered during the development of the proposal:

- No upgrades to the existing Great Eastern Highway (GEH) / Parker Range Road intersection, however with the significant increase in heavy vehicle movements expected from mid-2024 (see table below for further discussion / background), this would potentially result in a poorer safety outcome and may result in future fatalities or serious injuries. Fully-loaded road trains will be turning left onto GEH West-bound from Parker Range Road. The presence of an incline immediately to the West of this intersection would mean that these heavy vehicles would require even more distance than normal to build up some speed. Preferably, the merge between heavy vehicles and through traffic should be such so that the differential speed between these vehicle types is not more than 20km/hr. An acceleration lane would help heavy vehicles build up speed and hence reduce the differential speed with GEH through traffic.
- Main Roads retains frangible vegetation where a clear zone is to be established for road projects. 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 this 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 typically supported as it has the potential to contribute to driver frustration, impatience, tiredness and recklessness. The environmental values protected by reducing the speed limit, do not justify the impacts on freight efficiencies nor road user safety. Accordingly, the reduction of the speed limits to avoid clearing of native vegetation for this proposal 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 provided 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	The re-construction of the Great Eastern Highway at this location is in line with the re-construction works to widen and seal the remainder of the Great Eastern Highway. For the extents of the Parker Range Road intersection upgrade, the shifting of the design centre-line from the current centre-line would be considered impractical for the following reasons: 1. Requirement to tie in with the existing centre-line alignment at nearby Moorine Rock townsite (dwellings on both sides of the Great Eastern Highway); 2. Existing topography would mean more earthworks would be required if clearing & building only on one side of the current alignment – hence significantly increasing costs; 3. The horizontal alignment of the Great Eastern Highway was kept as-is so as to mitigate extended widening / upgrade works into the Parker Range Road side road. Please see cross-section below, showing the ‘balanced’ widening at both sides of Great Eastern Highway at the location of the Parker Range Road intersection upgrade (SLKs 343.00 to 344.30 approx.):  Both the Design Consultant as well as Main Roads’ Road & Traffic Engineering department identified the need for an Auxiliary Right (AUR) turning treatment for Great Eastern Highway East-bound traffic turning into Parker Range Road due to anticipated increased traffic volumes to/from Mount Holland mine site. As such, the intersection will be widened at this location to enable through-going vehicles to pass any vehicles waiting to turn right into Parker Range Road.

Design or Management Measure	Discussion and Justification
	The new West-bound acceleration lane has been shortened from the ideal approximate 2-kilometre length to about 800 metres (600 metres full-width and 200 metres for the merge / taper).
Alternative alignment located within pasture or degraded areas	Scope of works is to upgrade GEH along its existing alignment. Re-alignment is not applicable to this project and would have resulted in significant greater land acquisition requirements.
Simplification of design to reduce number of lanes and/or complexity of intersections	The upgrade of this section of GEH will utilise the existing cleared zone as far as practicable, with only minor clearing required to widen GEH to the full design extent. The GEH / Parker Range Road intersection does require an upgrade to its turn treatments, for the following reasons: • Covalent Lithium has expressed its intention to commence hauling operations from its Mount Holland mine site (South of Southern Cross) from mid-2024. This would result in a significant increase of road train movements between Perth and Mount Holland via Parker Range Road. • Auxiliary Right (AUR) turn treatment for GEH East-bound traffic turning into Parker Range Road: ○ This has been identified as a requirement by both the Design Consultant as well as MRWA's Road & Traffic Engineering department, due to geometry and type of vehicles. The AUR treatment would provide an opportunity for GEH East-bound through traffic to pass any vehicles waiting to turn right into Parker Range Road (note that the intersection is on a curve with reduced lines of sight). • Acceleration lane for GEH West-bound traffic turning out of Parker Range Road: ○ This has been identified as a requirement by MRWA's Road & Traffic Engineering department, as per MRWA Guideline drawing 201431-0001. ○ Moreover, with the commencement of hauling operations from the Mount Holland mine site expected in mid-2024, there will be a significant number of fully-loaded road trains coming out of Parker Range Road, heading West onto GEH towards Perth. These heavy vehicles will take a significant amount of distance to get up to speed, especially because there is also a long incline immediately West of the GEH / Parker Range Road intersection. The provision of an acceleration lane will help reduce the differential speed between road trains and GEH through traffic at the merging point.

Design or Management Measure	Discussion and Justification
Steepen batter slopes	The batter slopes have been designed at 1:6. Due to the traffic volumes, vehicle types and posted speeds, these batters cannot be changed significantly. Furthermore, the existing terrain correlates to the design batter slope without significantly changing the existing shape of the batter. See below. Increasing the batter slopes to 1:4 or 1:3 for example, would result in: • The need to design / install safety barriers, increasing project costs (surface drainage would still be required in any case, see below <i>Installation of barriers</i> section); • Increased cut-to-spoil volumes resulting in increased waste volumes; • A safety hazard because of the horizontal geometry (noting GEH curves at this location).
Installation of barriers	Within this project area, the installation of safety barriers would not reduce the clearing footprint due to the requirements of roadside drainage.
Installation of kerbing	Kerbing for this section of road would be impracticable, as it would be a hazard to road users due to existing level differences. Moreover, at a posted speed of 110km/hr an errant vehicle could potentially be lifted when hitting the kerb.
Use of existing cleared areas for access tracks, construction storage and stockpiling	Existing cleared areas have been considered for access over vegetated areas. All ancillary activities, such as site offices, laydown areas, storage areas, materials extraction and new fencing will be restricted to existing cleared areas, such as utilising cleared farmland close to the project.
Drainage Modification	Surface drainage requirements have been considered by the Design Consultant and kept to a minimum to satisfy calculated stormwater run-off volumes.

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&D Act)
- *Soil and Land Conservation Act 1945* (WA)
- *Rights in Water and Irrigation Act 1914*
- *Aboriginal Heritage Act 1972* (WA).

Environmental Protection Policies:

- Environmental Protection (Peel Inlet - Harvey Estuary) Policy 1992
- Environmental Protection (Western Swamp Tortoise Habitat) Policy 2011.

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 (Government of WA, December 2014)
- Procedure: Native vegetation clearing permits (Government of WA, October 2019)
- 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 OF CLEARING ASSESSMENT

Native vegetation will be cleared to accommodate this Proposal. This clearing will be undertaken using the Main Roads Statewide Clearing Permit CPS 818.

To comply with CPS 818, Main Roads must prepare a Clearing Assessment Report (CAR).

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

2.1 Report Terminology and Sources

The following terms are used in this Clearing Report:

- **Native Vegetation Clearing Area** – The maximum amount of native vegetation to be cleared for the Proposal that will accommodate the designed earthworks and, typically, a nominal buffer to allow for the safe movement of machinery during construction.
- **Proposal Area** – The total footprint of the Proposal including both cleared and uncleared areas. This is based on the current design and is less than the development envelope. It usually includes a buffer to allow for constructability and the movement of machinery during construction.
- **Study Area** – Area covered by the Desktop Assessment. The Study Area for the Proposal is confined to a local area of a 20 km radius.
- **Survey Area** – Area covered by the Biological Survey, which is typically larger than the Development Envelope.

2.2 Desktop Assessment

A desktop assessment of the Development Envelope was undertaken by viewing internal datasets and other government agency managed databases, and consulting with relevant stakeholders where necessary.

GIS layer viewing and mapping is done using ArcMap and/or Main Roads corporate mapping system known as iMaps. Referencing of the GIS layers accessed is done under the relevant methodology section of each clearing principle. Government managed databases were searched to locate additional information, which are found under References in Section 9.

2.3 Surveys and Assessments

The following surveys/assessments were undertaken to inform this CAR:

- Walgoolan to Southern Cross Package 8 Great Eastern Highway (H005) Biological Survey (Ecologia, 2023);
- Great Eastern Highway Walgoolan to Southern Cross: Package 6 to 8: SLK 327 to 365.8 Targeted Flora Survey (Ecologia, 2020);
- Great Eastern Highway 327– 365.8 SLK Desktop Assessment (Ecologia, 2019);
- Great Eastern Highway – Merredin to Southern Cross SLK 258.5 – 365.5 Biological Assessment (Astron, 2018);

- Great Eastern Highway – Merredin to Southern Cross SLK 258.5-365.5 Biological Assessment (GHD, 2016).

Biological and targeted surveys conducted for the proposal are outlined in Table 2 and a summary of the findings in these reports are presented in Sections 3.1 to 3.2.

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

Consultant & Survey Name	Survey Details
Ecologia (2023) <i>Walgoolan to Southern Cross Package 8 Great Eastern Highway (H005) Biological Survey</i>	Survey Area: Survey Area comprises 95 ha on GEH between Walgoolan to Southern Cross (SLK 340.86 to SLK 365.75). Type: Detailed Flora and Vegetation Survey and basic fauna and fauna habitat assessment and black cockatoo assessment. The work was a re-survey of part of the GHD (2015) survey area with the aim to review and update information. Timing: Fieldwork was conducted in September 2023. Survey Results Shapefile TRIM Ref: D23#237285 Document TRIM Ref: D23#673348
Ecologia (2020) <i>Great Eastern Highway Walgoolan to Southern Cross: Package 6 to 8: SLK 327 to 365.8 Targeted Flora Survey</i>	Survey Area: Survey Area comprised approximately 512 ha located along a 38.8 km section of GEH between SLK 327 and SLK 365.8. Type: Targeted survey for Threatened and Priority listed flora identified as likely or potentially occurring in the Development Envelope. Areas of habitat within the survey area that had been assessed by GHD (2016) to be in 'Good' or better condition that were inside, or adjacent to the survey area were searched as part of this study. Timing: Fieldwork was conducted 26 and 27 of September 2019. Document TRIM Ref: D21#292491
Ecologia (2019) <i>Great Eastern Highway 327–365.8 SLK Desktop Assessment</i>	Survey Area: Survey area comprised approximately 512 ha located along a 38.8 km section of GEH (includes Package 8) between Walgoolan and Southern Cross (Straight Line Kilometre (SLK) 327–365.8). Type: Supplementary desktop assessment to determine the likelihood of occurrence of any Threatened and Priority flora that may be impacted by the Proposal. Timing: October 2019. Document TRIM Ref: D21#292478
Astron (2018) <i>Great Eastern Highway – Merredin to Southern Cross SLK 258.5 – 365.5 Biological Assessment</i>	Survey Area: Survey area comprised approximately 1,418 ha adjacent to GEH between the towns of Merredin and Southern Cross (SLK 258.5 to 365.5) Type: Biological assessment and the resurvey of areas inferred as Eucalypt woodlands of the Western Australian Wheatbelt TEC in the GHD (2016) biological assessment. Timing: Fieldwork conducted 25 to 30 September 2018 Document TRIM Ref: D21#147725

Consultant & Survey Name	Survey Details
GHD (2016) <i>Great Eastern Highway – Merredin to Southern Cross SLK 258.5-365.5 Biological Assessment</i>	Survey Area: Survey area comprised approximately 1,399 ha adjacent to GEH between the towns of Merredin and Southern Cross (SLK 258.5 to 365.5 was 107 km and on average 60 m wide. Type: Reconnaissance vegetation, flora and fauna survey. The survey identified and mapped the dominant vegetation units, assessed vegetation condition and completed opportunistic searches for conservation significant ecological communities and flora and fauna taxa. Timing: Fieldwork conducted from 7 to 12 October 2015. Targeted conservation significant flora survey was conducted on 20 January 2016. Document TRIM Ref: D21#147870

3 SUMMARY OF SURVEYS

3.1 Summary of Flora and Vegetation Surveys

Whilst an original biological survey was undertaken by GHD in 2015, due to the time that has passed, MRWA engaged Ecologia to undertake a re-survey of GEH between Walgoolan and Southern Cross (SLK 340.86 – 365.75) to verify the GHD survey results. Ecologia had previously undertaken a desktop assessment followed by targeted field survey in 2019 and 2020 respectively for Threatened and Priority listed flora identified as likely or potentially occurring in the Study area. The summary presented below and in section 3.2 is that of the Ecologia surveys (2019, 2020, 2023).

Eucalypt Woodland of the Western Australian Wheatbelt Threatened Ecological Community (TEC) has been mapped as potentially occurring within the survey area. Fourteen patches of Eucalypt woodland were assessed against minimum threshold criteria for inclusion in the TEC. Two patches were considered to meet minimum threshold criteria for inclusion in the TEC: EW12 (1.09 ha) and EW13 (0.88 ha) and both are considered to be Category A. None of the vegetation within the Proposal Area is considered to represent Wheatbelt TEC.

There were no other plant communities observed that corresponded to any state (BC Act) or Commonwealth (EPBC Act) listed TEC, or any state listed Priority Ecological Community (PEC).

A total of 195 vascular taxa representing 43 families and 117 genera were recorded from the Ecologia (2023) survey area (including records made by GHD in 2015). Twenty-two introduced species were recorded, of which one (*Opuntia* sp.), is listed as a Declared Pest and Weed of National Significance (WONS) and was recorded from a single location. The location of the Declared Pest species was outside of the proposal area.

No *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) or *Biodiversity Conservation Act 2016* (BC Act) listed Threatened or Priority species were recorded in the survey area. This finding is consistent with the GHD (2015) survey of the same area, and a follow-up desktop and targeted flora survey undertaken by Ecologia in 2019 and 2020 respectively.

Sixty-one sampling sites (four quadrats, eleven vegetation description sites and 46 vegetation observation sites) were assessed within the survey area including resurvey of GHD sites. Fourteen vegetation types were described by GHD within the survey area, twelve vegetation types were recorded in the current survey. Nine of these were consistent with GHD vegetation descriptions with

only one minor change. Five vegetation types mapped by GHD within the survey area were considered not to occur. Three of these have been remapped as new vegetation types. Vegetated areas were mostly in Very Good to Excellent condition according to the EPA (2016) scale. Two of the mapped vegetation types were present within the Proposal Area, being:

- **E1**- *Eucalyptus capillosa* mid woodland: *Eucalyptus capillosa* mid woodland; *Acacia hemiteles*, *Enchylaena lanata/tomentosa*, *clerolaena diacantha* low open shrubland; *Austrostipa elegantissima*, *Pentameris airoides* subsp. *airoides*, *Rytidosperma caespitosum* open tussock grassland.
- **02**- *Melaleuca* spp. And *Acacia* spp. Tall shrubland: *Allocasuarina* spp., *Melaleuca ?hamata*, *Melaleuca vinnula*, *Santalum acuminatum* and *Acacia acuminata* tall shrubland over *Baeckea muricata* and *Baeckea elderiana* mid-open shrubland over *Euryomyrtus maidenii* and *Comesperma spinosum* low isolated shrubs over *Amphipogon caricinus* var. *caricinus*, *Neurachne alopecuroidea* and *Austrostipa* spp. open grassland over *Schoenus hexandrus* sparse sedgeland over *Waitzia acuminata* var. *acuminata*, *Podolepis lessonii* and *Brunonia australis* open herbland.

3.2 Summary of Fauna Surveys

The Ecologia (2023) survey identified two fauna habitat types within the survey area, being: Woodland (open) and Shrubland (Open). The remainder of the survey area is comprised of cleared areas including roads and cleared agricultural land. All habitat types identified within the survey area are considered generally common at a local and regional level. Habitat condition ranged from 'Completely Degraded' to 'Excellent' with impacts from introduced herbivores, weed infestations, and fire resulting in lower condition ratings for several habitat assessment sites.

Thirty-five vertebrate fauna species were recorded during the survey including 2 mammals (one introduced), 29 birds and 4 reptiles. Fauna recorded during the survey were generally common and are not restricted to the survey area. No significant vertebrate fauna were recorded during the survey.

Database searches identified three birds (Malleefowl, Peregrine Falcon, Common Greenshank) and one mammal (Chuditch) within 20 km of the survey area, none of which were recorded during the current survey and were all deemed as having a low likelihood of occurrence. Database searches also identified three Priority invertebrate species within 20km of the survey area, being the Tree-stem Trapdoor Spider (*Aganippe castellum*), Brine Shrimp (Wheatbelt) (*Paratemia contracta*) and the Water Flea (inland southwest) (*Daphnia jollyi*). Targeted searches within suitable habitat were undertaken for the Tree-stem Trapdoor Spider (*Aganippe castellum*); with no burrows recorded from the survey area, and this species was assessed having a low likelihood of occurrence rating. No suitable habitat for Brine Shrimp or Water Flea were present within the survey area.

The Ecologia (2023) survey area contained 20 trees with a suitable diameter at breast height (DBH) for Threatened black cockatoos, however all trees lacked hollows or contained hollows with characteristics unsuitable for black cockatoos. No suitable breeding trees are located in the proposal area.

Black cockatoo foraging habitat within the survey area was assessed as low quality due to the general absence of primary foraging resources utilised by the Carnaby's Cockatoo. Given the appropriate timing of the survey, lack of primary or secondary observations, low quality of foraging habitat and the fact that no trees were recorded with suitable breeding hollows, it is unlikely that Carnaby's Cockatoos are currently utilising any of the trees within the survey area as breeding or roosting habitat.

4 VEGETATION DETAILS

4.1 Proposal Site Vegetation Description

The project is located towards the eastern Wheatbelt region. The proposal area is surrounded by a mix of cleared agricultural land and patches of remnant vegetation.

A biological survey conducted along GEH mapped two native vegetation associations within the proposal area (Ecologia, 2023), being:

- E1 – *Eucalyptus capillosa* mid woodland
Eucalyptus capillosa mid woodland; *Acacia hemiteles*, *Enchylaena lanata/tomentosa*, *Sclerolaena diacantha* low open shrubland; *Austrostipa elegantissima*, *Pentameris airoides* subsp. *airoides*, *Rytidosperma caespitosum* open tussock grassland.
- 02 - *Melaleuca* spp. And *Acacia* spp. Tall Shrubland
Allocasuarina spp., *Melaleuca ?hamata*, *Melaleuca vinnula*, *Santalum acuminatum* and *Acacia acuminata* tall shrubland over *Baeckea muricata* and *Baeckea elderiana* mid-open shrubland over *Euryomyrtus maidenii* and *Comesperma spinosum* low isolated shrubs over *Amphipogon caricinus* var. *caricinus*, *Neurachne alopecuroidea* and *Austrostipa* spp. open grassland over *Schoenus hexandrus* sparse sedgeland over *Waitzia acuminata* var. *acuminata*, *Podolepis lessonii* and *Brunonia australis* open herbland.

E1 was the most common vegetation association recorded, comprising 93% of the native vegetation.

The composition of vegetation association is summarised in Table 3 below. The vegetation condition of the proposal area ranges from Excellent to Degraded as is summarised in Table 4 below.

Table 3. Summary of Vegetation Types within the Proposal and Survey Areas.

Vegetation Type	Extent within DE (ha)	Total Extent Mapped (ha) within Survey Area
E1 – <i>Eucalyptus capillosa</i> mid woodland	2.410	7.27
02 - <i>Melaleuca</i> spp. And <i>Acacia</i> spp. Tall Shrubland	0.180	2.05
No Vegetation	2.647	57.31
Total	5.237	

Table 4. Summary of Vegetation Condition within Clearing Area

Vegetation Condition (EPA, 2019)	Extent within Clearing Area (ha)	Total Extent Mapped (ha) within Survey Area
Excellent	2.416	14.78
Good	0.164	9.02
Degraded	0.010	1.24
N/A (No Vegetation)	2.647	57.31
Total	5.237	

Table 5 and Table 6 provide details of the Pre-European Vegetation Associations within the Development Envelope and the remaining extent of these associations.

Vegetation association 1413 has greater than 30% of its pre-European extent remaining at all levels.

Table 5. Summary of Project Area's Mapped Pre-European Vegetation Associations

Pre-European Vegetation Association	Clearing Description	Vegetation Condition	Comments
Vegetation Association 1413 described as Shrublands; <i>Acacia</i> , <i>Casuarina</i> and <i>Melaleuca</i> thicket	Clearing of up to 2,590 ha of native vegetation for the purposes of road widening and intersection upgrade on Great Eastern Highway and Parker Range Road.	Excellent to Good.	Vegetation description and condition determined from biological survey (Ecologia, 2023)

Table 6. 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 Assoc No. 1413	Statewide 1413	1,679,916.32	1,286,855.48	76.60	13.22
	IBRA Bioregion Avon Wheatbelt	546,675.55	174,102.84	31.85	2.33
	IBRA Sub-region Merredin	546,675.55	174,102.84	31.85	2.33
	Local Government Authority Shire of Yilgarn	538,791.10	395,458.48	73.40	19.26

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 not likely to be, or is not at variance with the ten 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.

Assessment

The proposed clearing will result in the removal of up to 2.590 ha of native vegetation around the Great Eastern Highway and Parker Range Road Intersection. Condition of the vegetation ranges from Excellent to Degraded. The project comprises the following two vegetation types, which are considered typical of the local area:

- E1 – *Eucalyptus capillosa* mid woodland
- 02 - *Melaleuca* spp. And *Acacia* spp. Tall Shrubland.

Database searches by Ecologia (2023) indicated that 28 Threatened and Priority Flora Species have been recorded or may be likely to occur within 20km of the survey area. 10 flora species were considered to have a High likelihood of occurrence and 8 having a Moderate likelihood of occurrence, prior to field survey.

A field survey undertaken in September 2022 (Ecologia, 2023) identified 195 vascular flora species within the survey area. 22 introduced species were recorded, of which one (*Opuntia* sp.), is listed as a Declared Pest and Weeds of National Significance (WONS) and was recorded from a single location. The location of the Declared Pest species was outside of the proposal area.

None of the flora species identified were Threatened or Priority Species. Furthermore, the post-survey assessment considered that all conservation significant species were considered to have a Low likelihood of occurrence within the project area (Ecologia, 2023).

None of the vegetation types described by Ecologia (2023) within the Proposal area are representative of communities that correspond to any state (BC Act) or Commonwealth (EPBC Act) listed Threatened Ecological Community (TEC) or any state listed Priority Ecological Community (PEC).

The proposed clearing area comprises two fauna habitat types:

- Woodland (Open); and
- Shrubland (Open).

35 vertebrate fauna species were recorded during the survey including 2 mammals (one introduced), 29 birds and 4 reptiles. Fauna recorded during the survey were generally common

and are not restricted to the survey area. No significant vertebrate fauna were recorded during the survey.

Database searches identified 3 birds (Malleefowl, Peregrine Falcon, Common Greenshank) and 1 mammal (Chuditch) within 20 km of the survey area, none of which were recorded during the current survey and were all deemed as having a low likelihood of occurrence. Database searches also identified three Priority invertebrate species within 20 km of the survey area, being the Tree-stem Trapdoor Spider (*Aganippe castellum*), Brine Shrimp (Wheatbelt) (*Paratemia contracta*) and the Water Flea (inland southwest) (*Daphnia jollyi*). Targeted searches within suitable habitat were undertaken for the Tree-stem Trapdoor Spider (*Aganippe castellum*) with no burrows recorded from the survey area, and this species was assessed having a low likelihood of occurrence rating. No suitable habitat for Brine Shrimp or Water Flea were present within the survey area.

The native vegetation proposed to be cleared for the Proposal is not considered to provide a high level of biological diversity with no significant flora and fauna species identified. The clearing adjacent to the existing roadway will not further impact on ecological linkages within the local area with large areas of remnant vegetation to both the north and south of GEH and the proposal area.

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

Methodology

- Biological Survey (Ecologia, 2023)
- DCCEEW Protected Matters Search Tool Report
- Department of Natural Resources and Environment (2002)
- Government GIS Shapefiles:
 - DBCA Threatened and Priority Ecological Community database search (Accessed 16/05/2023)
 - DBCA Threatened and Priority flora database search (Accessed 16/05/2023)
- Statewide Vegetation Statistics (Government of Western Australia 2018)

(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 indigenous to Western Australia.

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

Assessment

A basic fauna assessment was conducted between Walgoolan and Southern Cross, which includes the proposal area (Ecologia, 2023). Two fauna habitat types were identified within the proposal area, being:

- Open Shrublands (0.180 ha, 6.94%) - This habitat supports an open shrubland of *Acacia* sp., *Melaleuca* sp. and *Eremophila* sp. over daisies, mixed native grasses and chenopods on clay loam soils. These areas include areas previously rehabilitated by replanting native shrubs and low trees.
- Open Woodlands (2.410 ha, 93.06%) - This habitat supports an open woodland of mixed *Eucalyptus* sp. (*E. longicornis*, *E. loxophleba*, *E. salubris*, *E. capillosa*, *E. myriadena*) over *Acacia* sp., *Melaleuca* sp. and *Eremophila* sp. over daisies and mixed native grasses on clay loam soils.

These two habitat types are well represented in the project area and at a local scale where the project areas adjoin a larger area of remnant native vegetation.

One species listed as Vulnerable, Malleefowl (*Leipoa ocellata*) is known to occur within the local area, with the nearest record being an opportunistic sighting (in 2006) 600m from the proposal area. No sightings of Malleefowl or secondary evidence in the form of mounds were identified during the survey.

Desktop searches within 20km of the Proposal area identified eight additional conservation significant fauna species that may occur within the proposal area, being:

- *Calidris ferruginea* - Curlew Sandpiper
- *Falco hypoleucos* – Grey Falcon
- *Pezoporus occidentalis* - Night Parrot
- *Calyptorhynchus latirostris* – Carnaby's Black Cockatoo
- *Dasyurus geoffroii* - Chuditch
- *Egernia stokesii badia* – Western Spiny-tailed Skink
- *Idiosoma nigrum* – Shield-backed Trapdoor Spider.

No sightings of conservation significant species were made during the biological survey (Ecologia, 2023) with species deemed post survey to have a low likelihood of occurrence within the project area.

Although the habitat requirements of the Night Parrot are poorly understood, based on accepted evidence, the project area does not contain suitable habitat for this species (GHD, 2016). There are no known records within 20km of the proposal area.

Curlew Sandpiper can occur inland around ephemeral and permanent waterbodies (DoE, 2023). There is no suitable habitat for this species in the project area and no known records within 20km of the proposal area.

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The Grey Falcon may utilise the project area when dispersing or foraging, however taking into consideration the project area occurs within a larger remnant of native vegetation, the proposed clearing is not likely to significantly reduce the extent of available habitat for this species. There are no records of this species within 20km of the proposal area.

The proposal area is located just outside the eastern most extent of the distribution for Carnaby's Cockatoo. There are no historical records in the local area, the nearest being 83 km west of the project. No primary or secondary evidence of the species was recorded by Ecologia during the survey. No suitable breeding trees are present within the proposal area and the area contains low numbers of plant species that black cockatoos are known to utilise as a food source (Ecologia, 2023). The proposed clearing is not likely to impact on this species, with Ecologia (2023) concluding that the species is unlikely to utilise the vegetation within the proposal area as breeding or roosting habitat. The proposal area does not contain important foraging habitat for black cockatoos.

Chuditch are largely restricted to the south-west of Western Australia, with small numbers in the Midwest, Wheatbelt and South Coast Regions (DBCA, 2017). There are no records of this species within 20km of the proposal and the field survey found no evidence of the species within the survey area. Ecologia (2023) concluded that the likelihood occurrence within the area is low.

The project area is located outside of the distribution of Western Spiny-tailed Skink as mapped by Department of the Environment (2023), with no records of the species within 20 km of the project area. No individuals were sighted during any of the biological surveys conducted (Ecologia, 2023 and GHD, 2016) and the species is deemed to be unlikely to occur within the project area.

The proposal area is on the eastern most extent of the distribution of Shield-backed Trapdoor Spiders (DoE, 2023) with no records of the species found within the local area. The biological surveys did not identify any spider burrows within the survey area.

Whilst the project area may provide some habitat value for fauna, including conservation significant species, both habitat types are well represented in the wider surrounding area of revegetation, with a significant patch of remnant vegetation located to the north of the Proposal area. The small size of the proposed clearing along an existing infrastructure corridor does not represent significant habitat for fauna indigenous to Western Australia.

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

Methodology

- Biological Survey (GHD, 2016)
- Biological Survey (Ecologia, 2023)
- DCCEEW Protected Matters Search Tool Report
- Government GIS Shapefiles:
 - DBCA Threatened and Priority fauna database search (Accessed 16/05/2023)

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

Proposal is not at variance to this Principle.

Assessment

According to available databases, two Threatened flora species are known to occur within 20km of the project area, being *Eucalyptus crucis subsp. crucis* and *Daviesia macrocarpa*. The records for *Daviesia macrocarpa* are located 20km to the east of the proposal area and two records of *Eucalyptus crucis subsp. crucis* are located 17km and 1km from the proposal area.

Eucalyptus crucis subsp. crucis is found in association with granite outcrops (Western Australian Herbarium, 1998). There is no suitable habitat for this species in the project area (Ecologia, 2020).

Daviesia macrocarpa is known from a single population, ~20km from the proposal area. No individuals of this species were recorded within during biological surveys.

No other Threatened flora species have been recorded in the project area (Ecologia, 2023).

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

Methodology

- Biological Survey (Ecologia, 2023)
- Biological Survey (Ecologia, 2020)
- Biological Survey (GHD, 2016)
- Government GIS shapefiles:
 - DBCA Threatened flora database search (Accessed 11/05/2023)
- Species specific conservation listing advice and recovery plans

(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.

Assessment

None of the vegetation types recorded within the proposal area represent Threatened Ecological Communities (Ecologia, 2023)

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

Methodology

- Biological Survey (Ecologia, 2023)

(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 likely to be at variance to this Principle.

Assessment

The project is located within the Avon Wheatbelt IBRA region.

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).

According to the broadscale mapping undertaken by Beard (Shepherd et al 2001), the project area lies within vegetation association 1413 which is described as shrublands; acacia, casuarina & melaleuca thicket.

Vegetation association 1413 has greater than 30% of pre-European extent remaining at all scales as shown below.

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 Assoc No. 1413	Statewide 1413	1,679,916.32	1,286,855.48	76.60	13.22
	IBRA Bioregion Avon Wheatbelt	546,675.55	174,102.84	31.85	2.33
	IBRA Sub-region Merredin	546,675.55	174,102.84	31.85	2.33
	Local Government Authority Shire of Yilgarn	538,791.10	395,458.48	73.40	19.26

Whilst the vegetation association is just above 30% at the bioregion and sub-region scale, locally at the Local Government Authority scale there is 73% remaining.

The proposed clearing is narrow and linear in nature directly adjacent to the existing road and around the GEH/Parker Range Road intersection where the patch of vegetation to be cleared lies between the existing road and existing agricultural farmland, as shown in Figure 3.

A significant patch of remnant vegetation exists to the north of GEH (997 ha), and to the east and west of the proposal area on the southern side of GEH (618 ha). The proposed clearing represents 0.16 % of these areas.

It is unlikely that the removal of 2.590 ha of native vegetation around the intersection and along the 1.3 km stretch of the existing road will reduce the ecosystem functioning and is unlikely to change the existing linkages between these remnant patches.

The native vegetation proposed to be cleared does not include flora or communities of significance or comprise significant habitat for fauna.

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Based on the above, with the vegetation association well represented at the local and region scale and immediately surrounding the project area, the 2.590 ha of native vegetation proposed to be cleared is not considered to be significant as a remnant of native vegetation in an area that has been extensively cleared.

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

Methodology

- Aerial photography
- Biological Survey (Ecologia, 2023)
- Government GIS shapefiles:
 - Pre-European vegetation (Accessed 11/05/2023)
 - Vegetation complexes (Accessed 11/05/2023)
 - Native Vegetation Extent: DPIRD-005 (Accessed 11/05/2023)
- Statewide Vegetation Statistics (Government of Western Australia 2018)

(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 not at variance to this Principle.**Assessment**

No wetlands have been recorded intersecting or adjacent to the proposal area. Several small non-perennial lakes occur within the local area, none of which occur within 1km of the proposal area.

The historically registered site for the Moorine Rock Dam is located approximately 250m to the north of the proposal area. This site will not be impacted by the proposed clearing and associated activities.

The biological survey (Ecologia, 2023) included mapping of riparian vegetation, typically associated with non-perennial drainage lines. No such vegetation was identified within the proposal area.

As no native vegetation growing in, or in association with a wetland or watercourse will be impacted, the proposed clearing of native vegetation is not at variance to this Principle.

Methodology

- Biological Survey (Ecologia, 2023)
- Government GIS shapefiles:
 - Geomorphic Wetlands (Accessed 11/05/2023)
 - Ramsar Wetlands (Accessed 11/05/2023)
 - Important Wetlands (Accessed 11/05/2023)
 - Watercourses (Accessed 11/05/2023)
 - Heritage Council WA – Local Heritage Survey – DPLH-008 (Accessed 11/05/2023)

(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.

Assessment

The proposal area has the following levels of risk for land degradation (GIS database):

- Salinity – 3-10% of map unit has a moderate to high salinity risk or is presently saline
- Water Erosion – <3% of map unit has a high to extreme water erosion risk
- Water Logging - <3% of map unit has a moderate to very high waterlogging risk
- Wind Erosion - 30-50% of map unit has a high to extreme wind erosion risk
- Acid Sulphate Soils – extremely low probability of occurrence
- Flood Risk - <3% of the map unit has a moderate to high flood risk.

Based on the above risk levels for the proposal area, clearing of native vegetation may lead to a moderate increase in wind erosion.

The clearing will be undertaken over a short period (<6 months), with cleared areas subsequently being sealed or covered by non-dispersive materials. Wind erosion and dust will be managed via the Construction Environmental Management Plan for the life of the project.

The proposed clearing is not likely to lead to a long-term increase in wind erosion causing appreciable land degradation.

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

Methodology

- Government GIS Shapefiles:
 - Acid Sulphate Soil Risk Map (Accessed 16/05/2023)
 - Soil landscape land quality – Water Erosion Risk (DPIRD-013) (Accessed 16/05/2023)
 - Soil landscape land quality – Wind Erosion Risk (DPIRD-016) (Accessed 16/05/2023)
 - Soil landscape land quality – Salinity Risk (DPIRD-009) (Accessed 16/05/2023)
 - Soil landscape land quality – Waterlogging Risk (DPIRD- 015) (Accessed 16/05/2023)
 - Soil landscape land quality – Flood Risk (DPIRD-007) (Accessed 16/05/2023)

(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.

Assessment

A search of ArcGIS shapefiles indicates that no A class Reserves, DBCA Managed Lands or Environmentally Sensitive Areas (as declared under the EP Act) are located in or near the proposal area. No Ramsar wetlands are located within 20km of the proposal area.

The closest DBCA managed reserves, Frog Rock Nature Reserve and un-named Reserve R40460, are located approximately 16km southeast and 16km southwest, respectively.

The closest ESA is located 1 km to the north of the project area.

Given the distance of the proposal to the reserves, the conservation areas will not be impacted by proposed activities.

The proposed clearing of native vegetation is not at variance to this Principle.

Methodology

- Biological Survey (Ecologia, 2023)
- [Environmental Offsets Register](#)
- Government GIS Shapefiles:
 - DBCA Legislated Lands and Waters & Lands of Interest (Accessed 11/05/2023)
 - Clearing Regulations – Environmentally Sensitive Areas – DWER-046 (Accessed 11/05/2023)
 - Ramsar Wetlands (Accessed 11/05/2023)

(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.

Assessment

The proposal area is not within a Public Drinking Water Source Protection Area (PDWSA) or a Proclaimed Surface Water Area under the *Rights in Water and Irrigation Act 1914 (WA)* (RIWI Act).

A search of ArcGIS shapefiles has confirmed that the proposed works will not disturb or interrupt any natural drainage and surface run-off patterns. Given the nature of the works and that no surface water will be taken for this project, it is unlikely that there will be any change to the water quality of this area.

The Development Envelope is located within the 'Westonia' proclaimed Groundwater Area under the RIWI Act. Construction contractors will be required to obtain an appropriate licence to take water or construct a bore, if required.

There is no dewatering required during construction and clearing of a relatively small area of native vegetation is not likely to impact on groundwater quality.

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

Methodology

- Government GIS Shapefiles:
 - RIWI Act, Surface Water Areas and Irrigation Districts – DWER-037 (Accessed 18/05/2023)
 - CAWSA Part 2A Clearing Control Catchments – DWER-004 (Accessed 18/05/2023)
 - RIWI Act, Groundwater Areas – DWER-034 (Accessed 18/05/2023)
 - Public Drinking Water Source Area – DWER-033 (Accessed 18/05/2023)

(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.

Assessment

The proposal area averages 292.8 mm of rainfall per year and the desktop assessment identified that there is a low risk of waterlogging and flooding in the area, as discussed in Principle (g).

There is a fall in topography from west to east which continues beyond the project area, which would allow water to move through and away from the project area.

Accordingly, the clearing of 2.590 ha to allow for widening of an existing road and upgrade to the intersection, inclusive of drainage, is unlikely to exacerbate the incidence or intensity of flooding in the area.

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

Methodology

- BoM Website (Accessed 16/05/2023)
- Government GIS Shapefiles:
 - Contours 2m – DPIRD-072 (Accessed 16/05/2023)
 - Soil landscape land quality - Waterlogging Risk – DPIRD- 015 (Accessed 16/05/2023)
 - Soil landscape land quality - Flood Risk – DPIRD-007 (Accessed 16/05/2023)

6 REHABILITATION, REVEGETATION & OFFSETS

6.1 Revegetation and Rehabilitation

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

6.2 Offset Proposal

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

7 COMPLIANCE WITH CPS 818

Table 4 summarises what further pre-clearing impact assessment is required in accordance with CPS 818.

Table 7. Summary of Additional Management Actions Required by CPS 818

Impact of Clearing	Yes/No or NA	Further Action Required
1. The CAR indicates that the clearing is 'At Variance' or 'May be at Variance' with one or more of the Clearing Principles.	No	No further action required.
2. Clearing is at variance or may be at variance with Clearing Principle (g) land degradation, (i) surface or underground water quality or (j) the incidence of flooding.	No	No further action required.
3. Clearing is at variance with Clearing Principle (g) land degradation, (i) surface or underground water quality and (j) the incidence of flooding.	No	No further action required.
4. The Proposal involves clearing for temporary works (as defined by CPS 818).	No	No further action required.
5a. Proposal is within a Region that: - has rainfall greater than 400mm; and, - is South of the 26th parallel; and, - works are necessary in 'Other than dry conditions'; and, - works have potential for uninfested areas to be impacted.	No	Standard Vehicle and Plant management actions from Principal Environmental Management Requirements (PEMRs) and <u>Hygiene Checklists</u> will be applied.
5b. Do the proposed works require clearing within or adjacent to DBCA managed lands in non-dry conditions?	No	No further action required.
6. Main Roads has been notified by DWER or an environmental specialist that the area to be cleared is susceptible to a pathogen other than dieback.	No	No further action required.

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Impact of Clearing	Yes/No or NA	Further Action Required
7. Weeds are likely to spread to and result in environmental harm to adjacent areas of native vegetation that are in good or better condition.	No	No further action required. CEMP requires that all vehicles and machinery arrive on site clean and that weed infested mulch be removed from site, therefore there is a low risk of weed spread.
8. Did an environmental specialist conduct the survey or field assessment?	Yes	The Environmental Specialist undertaking the biological assessments was suitably qualified and had more than three years' experience.
9. Did an environmental specialist prepare the Assessment Report and any other associated documentation including the VMP, Dieback Management Plan or Offset Proposal?	Yes	The Environmental Specialist preparing the Assessment Report and any other associated documentation including the VMP, Dieback Management Plan or Offset Proposal was suitably qualified and had more than three years' experience.

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