Clearing Desktop Report – Short Form

1. PROPOSAL DETAILS

Proposal Name:	Intersection improvement of H052 Brookton Highway & East Hyden Bin Road – SLK 315.23		
Region/Directorate:	Wheatbelt		
Local Government:	Northam		
Road/Bridge Name & Number:	H052 Brookton Highway		
Proposal Location (SLK):	SLK 315.23		
CDR Short Form TRIM Number:	D23#1002948		
Spatial Data TRIM Number:	D23#1004534 (Clearing Area), D23#873535 (Development Area)		
EOS Number:	3201		
Expected Proposal Start Date:	April 2024		
Oracle Project No:	30002847	**Task Code:**	19135
LISC TRIM Number:	D23#850699	**HRA TRIM Number:**	D23#980752

2. PURPOSE OF CLEARING

A Risk Safety Assessment was conducted on Brookton Highway and East Hyden Bin Road T-intersection, following complaints from the local council concerning intersection safety, identified road hazards and deficiencies that may pose a risk to road user safety.

2022/23 traffic data shows Brookton Highway within this section carries 568 vehicles daily with 28.2% heavy vehicles, and East Hyden Bin Road carries 205 vehicles daily, with 37.6% heavy vehicles. The absence of sealed shoulders adjacent to the intersection with a high volume of heavy vehicles turning movement poses a high risk of losing control resulting in a crash. Intersection layout restricts heavy vehicles turn alignment, and this may conflict with traffic approaching the intersection. There are non-frangible objects within the clear zone and evidence of pavement deterioration at the intersection due to truck turning.

To alleviate these issues, it is proposed to:

- Widen and seal the shoulders adjacent to the intersection.
- Extend the drainage pipe outside of the clear zone at the intersection.
- Widen the carriageway through the intersection and increase the radius to ensure that all vehicles can turn lane correct through the intersection.

The Proposal was originally assessed in October 2023. In late March 2024, it was identified that the drainage design had been amended, extending the table drain in the south-western portion of the Proposal area further south, resulting in an increase in the amount proposed clearing. The CDR Short has been reviewed and updated to reflect this additional clearing.

The Proposal area is located primarily in road reserve, with a small portion located on Shire land (north) and freehold land (east). Consent to clear vegetation in these non road-reserve areas have been provided by the landowners.

3. ALTERNATIVES TO CLEARING

As this Proposal is for the upgrade of an existing intersection along the existing alignment, which require specific turning radiuses, and table drains that ensure appropriate management of water, there is limited scope to alter the clearing.

4. MEASURES TO AVOID, MINIMISE, MITIGATE AND MANAGE PROPOSAL CLEARING IMPACTS

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

- As part of the design, the use of steeper batters and drain backslopes and the installation of safety barrier was considered. As a larger portion of the intersection upgrade is in cut, the backslopes of the drain have been increased to reduce the amount of clearing, as the use of safety barriers would actually increase the

amount of clearing required (due to required separation distances). Further, with the majority of eastbound traffic turning south and northbound traffic turning east, then vehicle speeds are reduced, reducing the need for safety barriers. Road drainage has been installed to allow for effective management of water without compromising the integrity of the seal.

- The realignment of Brookton Highway to be a curve (with East Hyden Bin Road entering as a T-junction), rather than the current T junction has safety implications for heavy vehicles accessing and entering East Hyden Bin Road, as well as result in even more clearing than currently proposed.
- 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 and associated table drain, 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. Being an intersection upgrade, with the bulk of traffic movements turning right (south) using the upgraded, vehicles will slow to make this turn.

5. APPROVED POLICES AND PLANNING INSTRUMENTS

The clearing of native vegetation in Western Australia is regulated under the *Environmental Protection Act 1986* (EP Act) and the Environmental Protection (Clearing of Native Vegetation) Regulations 2004 (Clearing Regulations).

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.3), Main Roads has also had regard to the following documents.

Environmental Protection Policies:

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

Other legislation of relevance 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* (WA) (RIWI Act)
- *Aboriginal Heritage Act 1972* (WA) (AHA)
- *Town Planning and Development Act* (WA)*1928*

Relevant other policies and guidance documents:

- Environmental Offsets Policy (Government of Western Australia, 2011)
- A guide to the assessment of applications to clear native vegetation (DER, December 2014)
- Procedure: Native vegetation clearing permits (DWER, October 2021)
- Environmental Offsets Guidelines (Government of Western Australia, August 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
- Approved Recovery Plans for threatened species
- EPBC Act Referral guidelines for the three threatened black cockatoo species

- Strategic advice – EPA
- EPA Advice: Carnaby's Cockatoo in Environmental Impact Assessment in the Perth and Peel Region (EPA, 2019)

6. CLEARING AREA

Clearing Area (ha):	0.41 ha in a 1.36 ha Development Area	**No. Trees Cleared:**	1 (overstorey)
Species Name(s):	Sheoak (overstorey), Open shrubland - Mixed Proteaceae species, Acacia and Allocasuarina/Casuarina.		
Easting and Northing:	118.89617 E, 32.450754 S		

7. EXISTING ENVIRONMENT AND SITE INFORMATION

Site Vegetation Description/Association:	Beard VA 945: Medium woodland; salmon gum / Shrublands; mallee scrub, redwood & black marlock. Visual observation: Open shrubland - Mixed Proteaceae species, Acacia and Allocasuarina/Casuarina.
Site Vegetation Condition:	SE Corner: Degraded-Good SW Corner: Degraded Northern side: Degraded - Good
Pre-European Extent Remaining (%):	18.45 (Statewide), 18.45 (IBRA Bioregion/Sub-region), 17.44 (LGA)

8. ASSESSMENT OF PROPOSAL AGAINST CLEARING PRINCIPLES

Is vegetation to be cleared at variance with:	Justification or Evidence:
Principle (a) – Native vegetation should not be cleared if it comprises a high level of biological diversity.	It is proposed to clear 0.41 ha of vegetation (including one Sheoak) located on the edge of the maintenance zone, with no Diameter at Breast Height (DBH) trees, likely priority or threatened species, and considered to be in Degraded - Good condition. According to Main Roads GIS WA Herbarium layer, the closest conservation significant flora records were *Stypandra jamesii* (P2), 270m north and *Acacia lanei* (P3) 120m north east of the Proposal area. The closest threatenedflora species was Saltmat (*Roycea pycnophylloides)*, recorded more than 9km west of the Proposal area. The closest priority one flora record was the Elegant Rufous Greenhood Orchid (*Pterostylis elegantissima)*, 1km north of the Proposal area. None of the abovementioned Threatened or Priority flora species were observed by the Main Roads Environmental Officer during a site visit on 3 October 2023. Photographs taken of vegetation and flora within the Proposal area were subsequently provided to a Main Roads botanist. None of the photographed vegetation or flora was identified as being threatened or priority flora. Local records of *Roycea pycnophylloides* are associated with salt lakes and saline soils; habitat which is not present in the proposal area. Similarly, local records of *Pterostylis elegantissima* are from mallee woodlands with Inland Wandoo (*Eucalyptus capillosa*) which is not representative of the vegetation in the proposal area. *Acacia lanei* has a wide distribution, with records in the Avon Wheatbelt and Mallee IBRA bioregions, across six Local Government Areas and spanning several hundred kilometres north

	to south and east to west (WA Herbarium, 1998-). This species occurs on clay, clay loam and gravelly loam. It is known to occur along drainage lines and creeks (WA Herbarium, 1998-). Given the wide distribution and habitat description of *Acacia lanei*, the small Proposal area is unlikely to constitute important habitat for this species if it were present. *Stypandra jamesii* occurs in crevices and fissures in granite outcrops and around edges of outcrops (WA Herbarium, 1998-). The local record is from Hyden Rock. The Proposal area does not contain the preferred habitat type for this species. Based on the lack of Threatened and Priority flora observed during the site inspection, and the habitat requirements of locally recorded conservation significant flora, it is unlikely that threatened or priority flora would occur in the Proposal area. The Proposal area's small size, degraded condition and linear nature adjacent to existing transport corridors make it unlikely to support a high level of fauna species diversity. Based on the above, the proposed clearing is not at variance to this Principle.
Principle (b) – Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna.	According to DBCA GIS TPFA layer, six records were observed within 3km of the Proposal area. These were four Malleefowl (VU) (1976-1996 records), one Sandpiper (MI) (2001 record) and one Bilby (VU) (1934 record). It is likely that the Proposal area may contain Malleefowl habitat, although the latest (2) Malleefowl records are from 2006, between seven and ninekm from the Proposal area. No Malleefowl mounds were observed within or close to the Proposal area during the site visit on 3 October 2023. The clearing of ha of native vegetation adjacent to the road that does not contain any Malleefowl mounds is unlikely to significantly impact on this species. The Proposal area is within the modelled range of Carnaby's Black Cockatoo (DSEWPAC, 2012), and on the edge of the estimated range mapped by EPA (2019). Although certain species (eg Hakea), may offer some foraging habitat, there is no suitable, roosting or breeding habitat in the Proposal area. Furthermore, there are no DBCA records of Black Cockatoos within 10km of the Proposal area. The proposed clearing area is not part of, or is necessary for the maintenance of, a significant habitat for Black Cockatoo species. Based on the above, the proposed clearing is not at variance to this Principle.
Principle (c) – Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.	According to Main Roads GIS Threatened Priority Flora layer, the closest Threatened flora species is Saltmat (*Roycea pycnophylloides*), recorded more than 9km west of the Proposal area. *Roycea pycnophylloides* was not observed in the proposed clearing area during a site visit by a Main Roads Environmental Officer on 3 October 2023. Local records of this species are associated with salt lakes and saline soils; habitat that is not present in the proposed clearing area.

	Based on the above, the proposed clearing is not at variance to this Principle.
Principle (d) – Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community.	According to Main Roads TEC/PEC layer, the eastern half of the Proposal area is located within the mapped buffer of the Commonwealth-listed 'Eucalypt woodlands of the Western Australian Wheatbelt' Threatened Ecological Community (TEC). According to the Main Roads Wheatbelt Woodlands Factsheet , the lack of overstorey cover (<10%), and a dominant presence of non-eucalypt species such as Sheoaks, are Contra-indicators of this TEC. Based on the above, the proposed clearing is not at variance to this Principle.
Principle (e) – Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.	One vegetation association of Beard (1976) has been mapped over the Proposal area, namely: Vegetation Association 945: Medium woodland; salmon gum / Shrublands; mallee scrub, redwood & black marlock. The pre-European extent remaining of this Vegetation Association is 32,672 ha (18.45%) remaining at a Statewide level, with 8,227 ha (17.44 %) remaining at a LGA level. The removal of 0.41 ha (with a canopy of approximately 0.001 ha) in a Degraded - Good condition on the edge of the maintenance zone, equates to 0.004% of this vegetation association at a LGA level. The proposed clearing will not sever any ecological linkages and the Proposal area is not considered significant as a remnant given its condition, linear nature and local context. Based on the above, the proposed clearing is not at variance to this Principle.
Principle (f) – Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.	According to the Main Roads GIS layers, no watercourses or wetlands are present in the Proposal area. A site visit by the Main Roads Environmental Officer on 3 October 2023 confirmed this to be the case. The closest mapped watercourse is approximately 1 km north of the Proposal area, on the other side of Wave Rock. The Open shrubland - Mixed Proteaceae species, Acacia and Allocasuarina/Casuarina vegetation in the Proposal area is not representative of riparian vegetation. The 0.41 ha of vegetation to be removed is not considered to be growing in, or in association with, an environment associated with a watercourse or wetland. Based on the above, the proposed clearing is not at variance to this Principle
Principle (g) – Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.	DPIRD mapping indicates that the Proposal area has: • 0% very high to extreme water erosion hazard • 20% high to extreme wind erosion hazard • 0% very poor to poor site drainage potential • 0% moderate salinity hazard The Australian Soil Resource Information System (ASRIS) has been used to determine the likelihood of Acid Sulphate Soils (ASS) occurring within the Proposal area. The ASRIS database (accessed 17-Oct-2023) indicates there is a low probability of occurrence within the Proposal area. The removal of 0.41 ha of Good - Degraded condition will not cause appreciable land degradation, especially as the majority of

	the land where the vegetation is located is covered with road infrastructure. Based on the above, the proposed clearing is not at variance to this Principle.
Principle (h) – Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.	A search of ArcGIS shapefiles indicated that the closest reserve or conservation areas (Lake Gounter Nature Reserve – Class A) is located 0.9km to the west of the Proposal area. This Proposal is unlikely to impact on any reserves or conservation sites as works will largely remain within the road reserve. Based on the above, the proposed clearing is not at variance to this Principle.
Principle (i) – Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.	According to the Main Roads GIS layers, no Public Drinking Water Source Areas, Proclaimed surface water areas, or CAWS Catchment Areas occur within the 10km study area. The Proposal area is located within the Kondinin-Ravensthorpe Groundwater Area, proclaimed under the RIWI Act. No groundwater will be intersected and works will not require dewatering. No change to surface or groundwater level or quality will occur as a result of these works. Based on the above, the proposed clearing is not at variance to this Principle.
Principle (j) – Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.	The removal of 0.41 ha of vegetation adjacent to the road in a Degraded – Good condition is unlikely to cause, or exacerbate, the incidence or intensity of flooding. DPIRD mapping indicates that the area has: • 0% moderate to high flood hazard, • 0% moderate to very high waterlogging and inundation risk. A review of ArcGIS shapefiles has confirmed that the proposed works will not disturb or interrupt any natural drainage and surface run-off patterns. Based on the above, the proposed clearing is not at variance to this Principle.
Methodology Used and References:	Main Roads Site Inspection and map: (D23#859782) Proposal and Clearing Areas (Appendix 1) Australian Soil Resource Information System (ASRIS) Mapping (http://www.asris.csiro.au/mapping/viewer.htm) DPIRD mapping (https://maps.agric.wa.gov.au/nrm-info/) DBCA/Main Roads GIS Shapefiles Shapefile of clearing area/trees: D23#1004534 WA Herbarium (1998-) EPA (2019)
9. REHABILITATION, REVEGETATION AND OFFSETS	
Offset Proposal:	No offset proposal is required as the proposed clearing will not result in significant residual impacts to native vegetation within the region.
Revegetation and Rehabilitation:	No temporary clearing will be undertaken as part of the Proposal activities.
10. COMPLIANCE WITH CPS818	

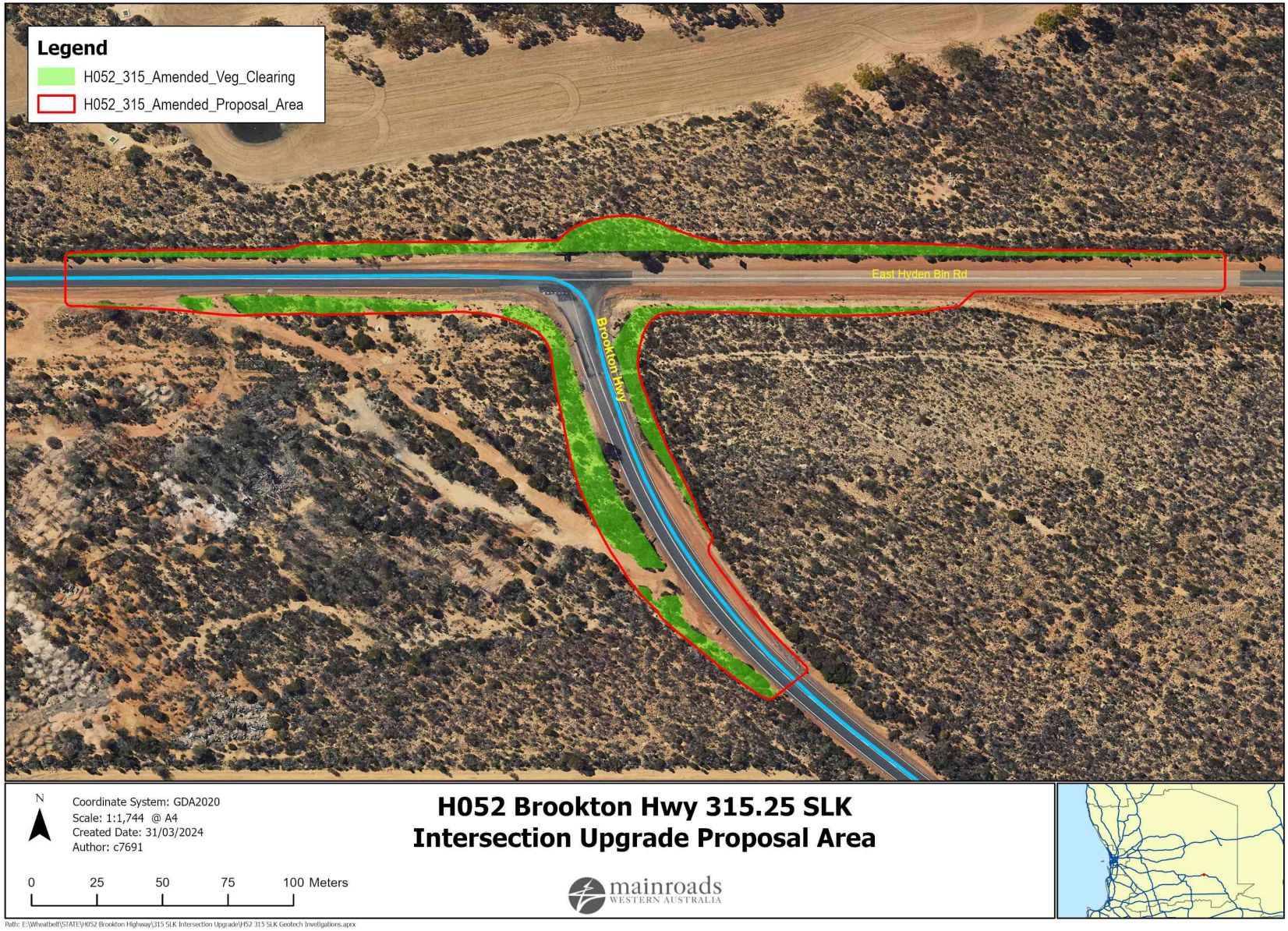
The clearing associated with the Proposal is not at variance with the Clearing Principles. Additional management actions under CPS 818 are detailed below.		
Impact of Clearing	**Yes/No or NA**	**Further Action Required**
1. Proposal is within a Region that: • has rainfall greater than 400mm; and, • is 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 Annexure 204B (TABLE 204B.9.1), Hygiene Checklists and Vehicle, Plant and Machinery Hygiene Vehicle Register Template will be applied**.**
2. Do the proposed works require clearing within or adjacent to DBCA managed lands in non-dry conditions?	**No**	No further action required.
3. 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.
4. 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.

Completed By:	
Name	REDACTED
Signature	REDACTED
Job Title	Senior Environment Officer
Date	17-Oct-2023 and 31-Mar-2024

Once all sections are completed, send the form to CRSP for review and endorsement.

DECISION ON CLEARING ASSESSMENT	
Name	REDACTED
Signature	REDACTED
Job Title	Principal Environmental Officer
Date	18/10/2023 and 02/04/2024

Appendix 1:


Legend
H052_315_Amended_Veg_Clearing
H052_315_Amended_Proposal_Area
East Hyden Bin Rd
Brookton Hwy
N
Coordinate System: GDA2020
Scale: 1:1,744 @ A4
Created Date: 31/03/2024
Author: c7691
0 25 50 75 100 Meters
H052 Brookton Hwy 315.25 SLK
Intersection Upgrade Proposal Area
mainroads
WESTERN AUSTRALIA
Path: E:\Wheatbelt\STATE\H052 Brookton Highway\315 SLK Intersection Upgrade\H52 315 SLK Geotech Invetigations.aprx