

Clearing Desktop Report – Short Form



1. PROPOSAL DETAILS

Proposal Name:	South Western Hwy Intersection Upgrades (following closure of Byron Road Level Crossing)		
Region/Directorate:	Metropolitan Region		
Local Government:	City of Armadale		
Road/Bridge Name & Number:	South Western Highway (H009) & Dickens Place South Western Highway (H009) & Stone Street South Western Highway (H009) & Eleventh Road		
Proposal Location (SLK):	South Western Highway & Stone St. / Dickens Pl. Intersections – SLK 1.80 – 3.00 South Western Highway & Eleventh Rd Intersection – SLK 3.80 – 4.50		
CDR Short Form TRIM Number:	D23#1364289		
Spatial Data TRIM Number:	Development Envelope: D23#459651 Clearing Area: D24#6304		
EOS Number:	3105		
Expected Proposal Start Date:	19 th February 2024		
Oracle Project No:	30002142	Task Code:	19101
LISC TRIM Number:	D23#355801	HRA TRIM Number:	D23#355802

2. PURPOSE OF CLEARING

Main Roads WA Metro Region is upgrading three intersections along South Western Highway H009 SLK 1.80 – 4.50 (Figure 1) to improve road user safety and transport efficiency due to an expected increased traffic flow at these intersections caused by the Byron Road Rail Crossing closure (part of the METRONET Byford Rail Extension project). The Proposal requires the following intersection treatments:

South Western Hwy / Dickens Place:

- Installation of an auxiliary left turn lane on SWH northbound
- Installation of channelised right turn pocket on SWH southbound plus new signage and pavement markings.

South Western Hwy / Stone Street:

- Installation of traffic signals and an auxiliary left turn lane on SWH northbound
- Installation of a channelised right turn 'CHR' on SWH southbound
- Installation of splitter island on Stone Street
- The provision of two lanes on Stone Street eastbound approaching traffic signals plus new signage and pavement markings.

South Western Hwy / Eleventh Road:

- Installation of traffic signals for all movements
- Installation of channelised left turn 'CHL' on SWH northbound and channelised 'CHR' on SWH southbound
- Installation of minimum 2m wide raised median on SWH and installation of splitter island on Eleventh Rd
- Installation of High Entry Angle Island
- Provision of two lanes on Eleventh Rd eastbound approaching traffic signals plus new signage and pavement markings.

3. ALTERNATIVES TO CLEARING

Main Roads has reduced the scope of work to avoid all vegetation where possible to allow for the expedited timeframe for delivery. The design has been reworked to reduce the need to remove the one tree on Eleventh Road that now only requires some pruning.

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

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

- The design brief for the Proposal was to minimise impacts to services and significant vegetation and retain the intersection upgrades to within the existing road reserve boundary to avoid land acquisition. The chosen intersection treatments were selected with this in mind, and as such, impacts to vegetation were greatly avoided. The one Marri tree to be removed was unavoidable due to its close proximity to existing services and the South Western Highway road corridor.
- 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. The intersection upgrade works under this Proposal are to address increased traffic flow. Accordingly, the reduction of the speed limits to avoid clearing of native vegetation for this Proposal is not applicable and therefore, is not proposed.

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 (DEC, December 2014)
- Procedure: Native vegetation clearing permits (DWER, October 2019)
- 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

6. CLEARING AREA

Clearing Area (ha):	0.03 ha	No. Trees Cleared:	2
Species Name(s):	Marri (<i>Corymbia calophylla</i>) and WA Native Christmas Tree (<i>Nuytsia floribunda</i>)		
Easting and Northing:	116.0149103°E / 32.1719631°S and 116.0154967°E / 32.1874084°S		

7. EXISTING ENVIRONMENT AND SITE INFORMATION

Site Vegetation Description/Association:	VA 3: Medium forest: jarrah-marri VA 968: Medium woodland: Jarrah, marri and wandoo
Site Vegetation Condition:	Completely Degraded
Pre-European Extent Remaining (%):	VA 3: State-wide: 67.7% IBRA region (SWA): 18.14% IBRA sub-region (Perth; SWA02): 16.65% LGA (Armadale): 90.16% VA 968: State-wide: 32.02% IBRA region (SWA): 6.62% IBRA sub-region (Perth; SWA02): 6.62% LGA (Armadale): 6.05%

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.	Clearing of one Marri tree (<i>Corymbia calophylla</i>) and one WA Christmas Tree (<i>Nuytsia floribunda</i>) representing an area of approximately 0.03 ha is required for this Proposal (Figures 2a and 2b; Photos 1-4). The trees are located on the roadside in a degraded environment subject to vehicular disturbance and regular mowing so no understorey is present. The Marri tree is approximately 8-10 m with a Diameter at Breast Height (DBH) of 450mm high with no hollows and no ability to form hollows in the near future due to the age of the tree. The tree is within the South Western Highway road reserve and a small commercial / light industrial area in Wungong. The vegetation has limited biodiversity value and does not provide habitat for ground dwelling fauna species with no understorey present. The WA Christmas Tree is approximately 2.5 m high and is in Completely Degraded condition. There is no understorey present. Main Roads WA GIS datasets indicate the nearest conservation significant flora records are <i>Eucalyptus x balanites</i> (T) and <i>Johnsonia pubescens</i> subsp. <i>cygnorum</i> (PS) approximately 900m and 1km to the south-west of the Proposal Area, respectively. The proposed clearing of the Marri tree does not occur within the mapped boundaries of any Threatened or Priority Ecological Communities (TEC/PEC's).

	The WA Christmas Tree occurs within the mapped boundaries of a 'Banksia Woodlands of the Swan Coastal Plain' TEC. However, taking into consideration the tree is an isolated individual with no understorey present and in a Completely Degraded condition, the tree does not constitute a TEC patch and is therefore not representative of this TEC. Given the small scale of clearing required, no understorey present at the proposed tree removal sites, and the area is highly modified in a commercial landscape or roadside environment, it is considered highly unlikely the clearing would comprise a high level of biodiversity. 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 indigenous to Western Australia.	The Proposal Area is within the modelled range of Carnaby's Black Cockatoo (<i>Zanda latirostris</i>) (DSEWPAC, 2012; EPA, 2019). According to the DBCA Threatened and Priority Fauna GIS layer, there are a number of Carnaby's Black Cockatoo records within 2km of the Proposal Area. The Proposal clearing also occurs within the GIS boundaries of mapped Carnaby's Cockatoo confirmed breeding area on the Swan Coastal Plain but not within the EPA (2019) estimated breeding range. The clearing also occurs within the 6km buffer of a known Black Cockatoo roosting site. Although Marri are a preferred breeding species likely to develop hollows suitable for Carnaby's Black cockatoos, the Marri tree to be removed does not contain any hollows and is not able to form hollows in the near future due to its age. Analysis of historical aerial imagery indicates that the tree is approximately 43 years old. Refer to Figure 3. The WA Christmas Tree is not listed as a foraging species for any of the three WA threatened Black Cockatoo species. Given this tree is an isolated species, is only 2.5 m tall and exists close to the existing South Western Highway, it is not considered to support roosting habitat and would not have the potential to form hollows, Based on the above, the trees proposed to be removed for these works are not considered to represent breeding habitat for Threatened Black Cockatoo species. With no understorey present where the proposed clearing will occur, the area is not considered to be significant foraging habitat, with the Marri tree potentially providing a temporary feeding stop when birds are in transit to larger, better quality foraging areas nearby such as Bungendore Park or Lambert Lane Nature Reserve. The Bungendore Park occurs approximately 890 m to the east of the Proposal Area which contains numerous records of Threatened Black Cockatoo records and Lambert Lane Nature Reserve occurs approximately 650 m to the south-west of the proposed clearing. Considering the above and given the location of the two isolated trees is within a highly developed commercial precinct and within the South Western Highway road reserve, it is not considered to be vegetation that is necessary for the maintenance of a Threatened Black Cockatoo species. Other priority listed fauna records identified nearby to the proposed clearing include:

	- Peregrine Falcon (<i>Falco peregrinus</i>) OS (1.01 km away), - Southern Death Adder (<i>Acanthophis antarcticus</i>) P3 (610 m away), - Quenda / Southwestern Brown Bandicoot (<i>Isodon fusciventer</i>) P4 (1.5 km away). The Southern Death Adder is a historical record with no other recent records of this species in the area. The absence of understorey and road disturbance would not support the ongoing presence of this species. Whilst the Peregrine Falcon can be found in a wide range of habitats and could occur within the Proposal Area, the proposed clearing is not necessary for the maintenance of a significant habitat for the Peregrine Falcon. The species is also considered highly mobile and not likely to be directly impacted by the proposed clearing works should one happen to occur in the area at the time. As the proposed clearing consists of two individual trees with no understorey or ground cover present, they are unlikely to support the presence of Quenda. Whilst Quenda can occur in urban bushland areas, preferred habitat includes scrubby often swampy vegetation with dense cover up to 1m high, which is not present within the proposed clearing area. Considering the trees close proximity to the South Western Highway and light industrial area, it is not considered likely that the proposed clearing will impact this species. Based on the above information, 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 WA Herbarium and Rare Flora GIS datasets, the closest Threatened Flora records are: - <i>Eucalyptus x balanites</i> approximately 900 m to the south-west of the proposed clearing, - <i>Synaphea sp. Serpentine</i> approximately 1.2 kms to the south-west of the proposed clearing. Due to the proposed clearing area being in Degraded to Completely Degraded condition, with no understorey present, it is highly unlikely that Threatened Flora species will be present. The removal of one Marri tree and one WA Christmas Tree will not significantly impact (directly or indirectly) any Threatened Flora species. Based on the above information, 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.	The proposed clearing of the one Marri does not occur within any mapped boundaries of any Threatened Ecological Communities (TECs). Main Roads WA GIS datasets indicate the mapped buffers of three TEC's occur within 200 m of the proposed clearing. These are: - SCP3b (State TEC): <i>Corymbia calophylla</i> – <i>Eucalyptus marginata</i> woodland on sandy clay soils of the Swan Coastal Plain - SCP3a (State/Federal): <i>Corymbia calophylla</i> – <i>Kingia australis</i> woodlands on heavy soils - Banksia Woodlands of the Swan Coastal Plain (State PEC/Federal TEC)

	According to the DBCA TEC Factsheet on <i>Corymbia calophylla</i> – <i>Kingia australis</i> woodlands on heavy soils, typical native taxa in the community are the Marri tree with the following shrubs and herbs/rushes/sedges: • Shrubs: <i>Banksia dallanneyi</i>, <i>Philotheca spicata</i>, <i>Kingia australis</i> and <i>Xanthorrhoea</i>, Herbs/rushes/sedges: <i>Cyathochaeta avenacea</i>, <i>Dampiera linearis</i>, <i>Haemodorum laxum</i>, <i>Desmocladius fasciculatus</i>, <i>Mesomelaena tetragona</i> and <i>Morelotia octandra</i>. The soil type preferred by this community is heavy soils on the wettest of sites and groundwater is generally within 3 m of the natural surface. Given the lack of understorey where the single Marri tree occurs, it is highly unlikely the proposed clearing would represent this TEC. According to the MRWA Banksia Woodlands TEC Factsheet, the structure of the ecological community is a low woodland to forest with a distinctive upper sclerophyllous layer of low trees typically dominated or co-dominated by one or more of the four Banksia species and an often highly species-rich understorey that consists of layers of sclerophyllous shrubs and a herbaceous ground layer of cord rushes and sedges. The proposed clearing does not contain these characteristics and as such, the clearing is not considered to be representative of the Banksia Woodlands of the SCP TEC. The WA Christmas Tree occurs within the mapped boundaries of a 'Banksia Woodlands of the Swan Coastal Plain' TEC. However, taking into consideration the tree is an isolated individual with no understorey present and in a Degraded condition, the tree does not constitute a patch and is therefore not representative 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.	Two Vegetation Associations have been mapped over the Proposal Area (Beard, 1976), namely: Vegetation Association 3: Medium forest: jarrah-marri and Vegetation Association 968: Medium woodland: Marri Jarrah and Wandoo. <u>Vegetation Association 3:</u> The pre-European extent remaining of this Vegetation Association is 67.7% (state-wide) with 90.16% remaining at a LGA level. The removal of 0.02 ha (one tree) in Degraded to Completely Degraded condition situated within the South Western Highway road reserve and Wungong commercial/light industrial area is not considered significant as a remnant taking into account its condition and local context. The proposed clearing will not sever any ecological linkages. <u>Vegetation Association 968:</u> The state-wide pre-European extent remaining of this Vegetation Association is 32.02% which is above the 30% retention threshold and above the constrained Perth-Peel 10% retention threshold. This Vegetation Association has less than 10% remaining at the IBRA region and sub-region levels and the Local Government Authority level (approximately 6% remaining at each level).

	Analysis of the 10km study area indicates there is approximately 12,300 ha of remnant native vegetation in the surrounding area. When considering the surrounding landscape, the Proposal requires the removal of one small, isolated tree in Degraded condition (0.01 ha) within a 10km study area that contains approximately 12,300 ha of remnant native vegetation. Based on this, the vegetation is not considered significant as a remnant of vegetation. Based on the above information, 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.	The Main Roads WA Hydrology GIS dataset (DWER) indicates the nearest watercourses to the proposed clearing areas is an insignificant tributary (unnamed) traversing the northern end of the Proposal Area and a minor tributary ('Wungong Brook') located approximately 670 m to the south. The Fletcher Park Conservation Category Wetland also occurs approximately 600 m to the south west of the proposed clearing area. A site visit to the proposed clearing area on 1st December 2023 by Main Roads WA Senior Environment Officer, confirmed there are no watercourses or wetlands present within proximity of the Proposal Area. The single Marri tree and single WA Christmas Tree with no understorey present (mowed landscape/gravel roadside surrounding each isolated tree) is not representative of any riparian vegetation. The 0.03 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. As such, 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 proposed clearing area has the following risk levels: - <3% moderate to very high waterlogging risk - 3-10% high-extreme water erosion risk - <3% moderate to high salinity risk (presently saline) - <3% moderate to high flood risk Acid Sulfate Soil (ASS) risk mapping indicates the proposed clearing area has a low probability of ASS occurrence. The removal of two trees (0.03 ha) in Degraded to Completely Degraded condition will not cause appreciable land degradation, especially considering the location of the trees is in a roadside environment and/or directly adjacent to a light industrial area. 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.	The nearest reserve or area of conservation is an un-named Nature Reserve vested with the Conservation Commission of WA (R 42044) located approximately 500 m to the west of the proposed clearing area. This Nature Reserve is separated from the proposed clearing area by the South Western Highway and a large residential area. The Proposal is unlikely to impact on any reserves or conservation areas as the clearing requires the removal of only two isolated trees, within the South Western Highway road reserve. Based on the above information, 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.	Main Roads WA GIS layers indicate the nearest Public Drinking Water Source Area (PDWSA) to the proposed clearing area is approximately 6kms to the west. The proposed clearing is also not within a protection zone of a PDWSA or Proclaimed Surface Water Area. The proposed clearing area is located within the Swan Avon Canning River Catchment area and Perth Groundwater Area, proclaimed under the RIWI Act. No dewatering is proposed as part of the Proposal activity and the nature of the works are unlikely to intersect groundwater. As such, no changes to nearby surface or groundwater levels/quality will occur as a result of these works. Based on the above information, 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 two isolated trees (0.03 ha) in an area of vegetation that is Degraded to Completely Degraded condition within the South Western road reserve and adjacent to the Wungong light industrial area is highly unlikely to cause or exacerbate the incidence or intensity of flooding in the area. DPIRD mapping indicates the proposed clearing area has: - <3% moderate to high flood risk, - <3% moderate to very high waterlogging risk. The Proposal will not disturb or interrupt any natural drainage or surface water run-off patterns and is not at variance to this Principle.	
Methodology Used and References:	Main Roads Site Inspection and map: 01/12/2023 (D24#6549) Photographs from site inspection: D23#1365377 Shapefile of clearing area (two trees): D24#6304	
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, 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	30/11/2023	
	REDACTED	
	REDACTED	
	Senior Environment Officer	
	15/02/2024	

DECISION ON CLEARING ASSESSMENT	
Name	REDACTED
Signature	REDACTED
Job Title	Senior Environment Officer
Date	18/01/2024
	REDACTED
	REDACTED

OFFICIAL

	Senior Environment Officer
	18/02/2024

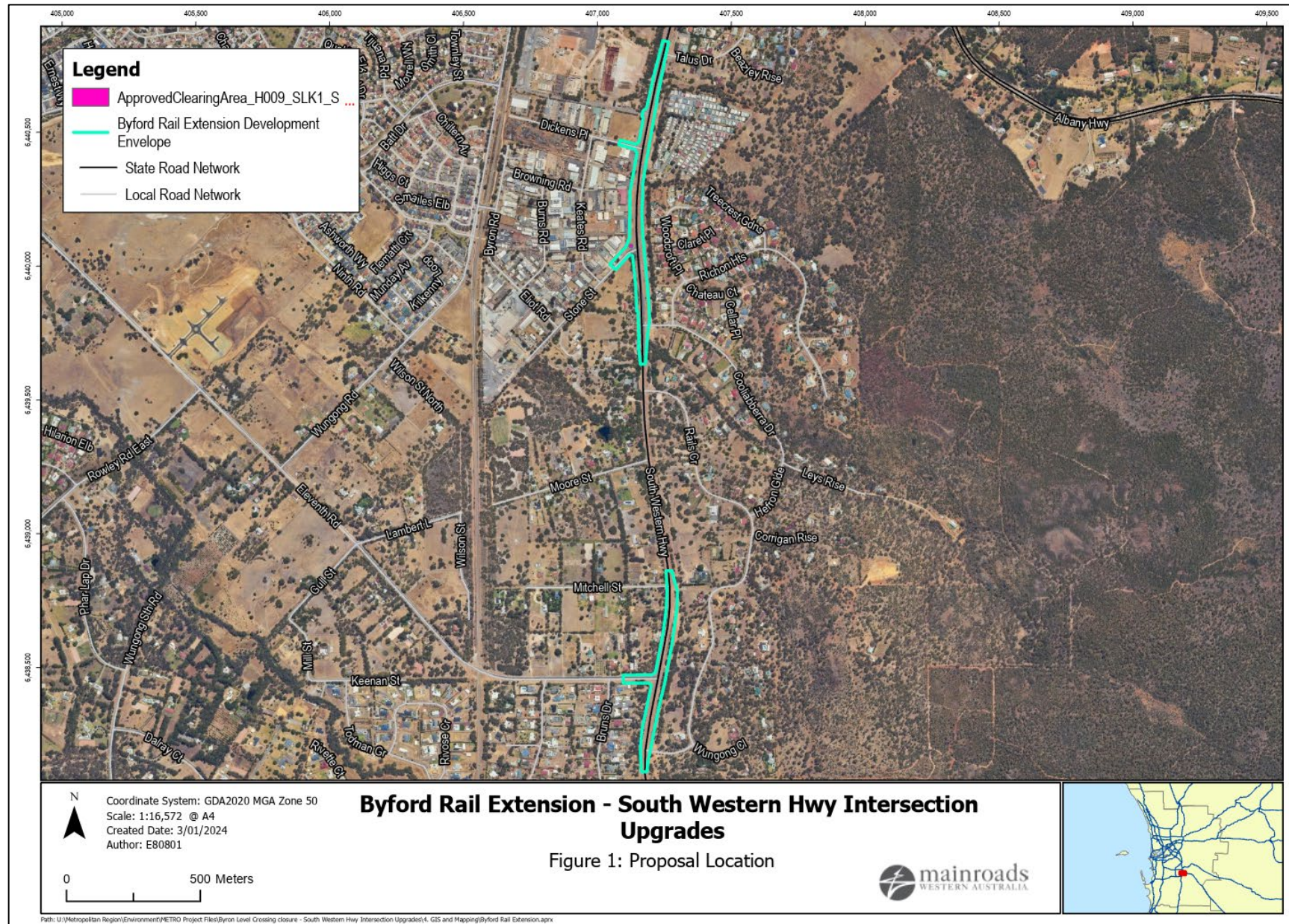


Figure 1: Proposal Location



Figure 1a: Marri tree removal



Figure 1b: WA Christmas tree removal

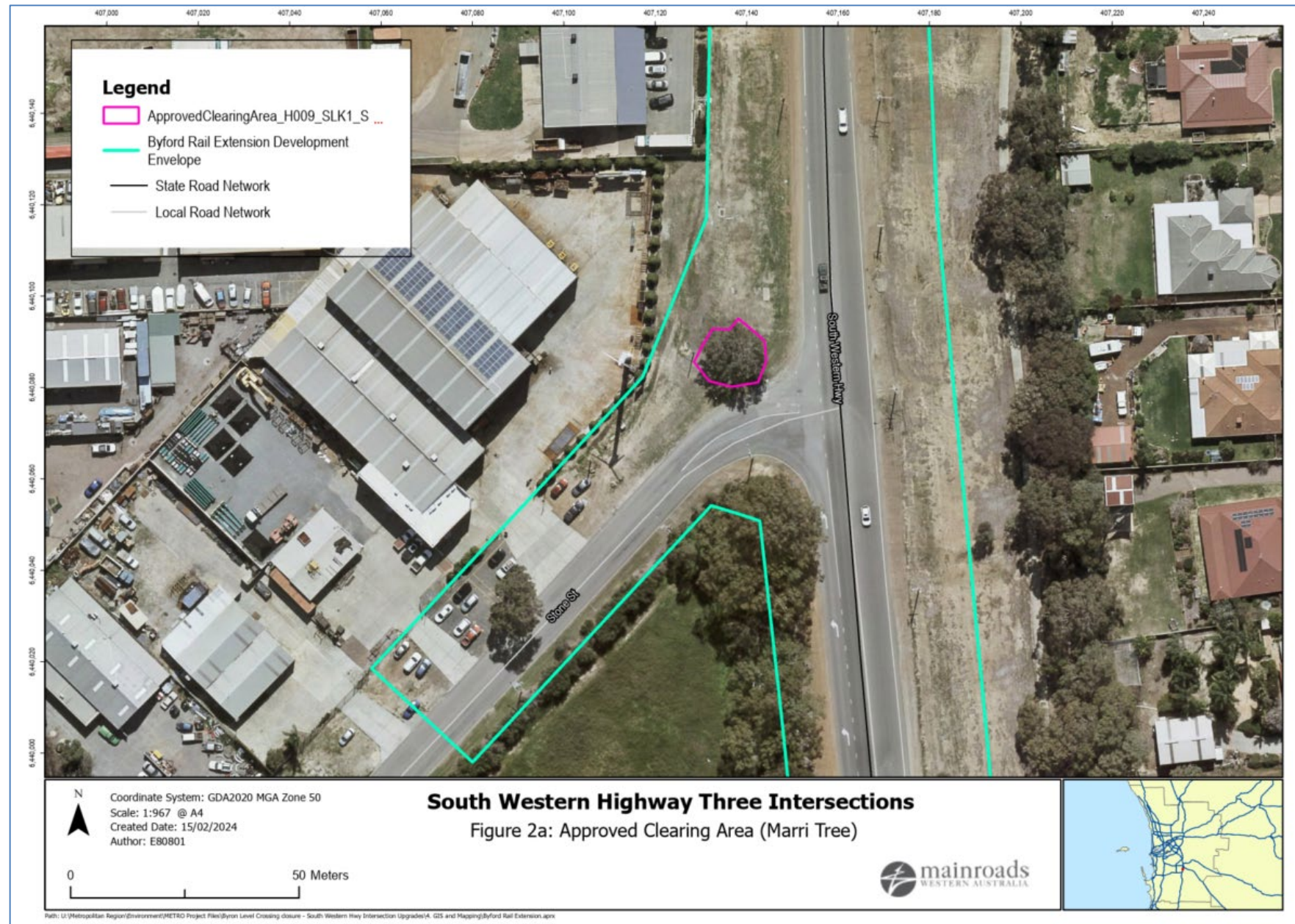


Figure 2a: Proposed Clearing Approval Area (Marri Tree)



Figure 2b: Proposed Clearing Approval Area (WA Christmas Tree)

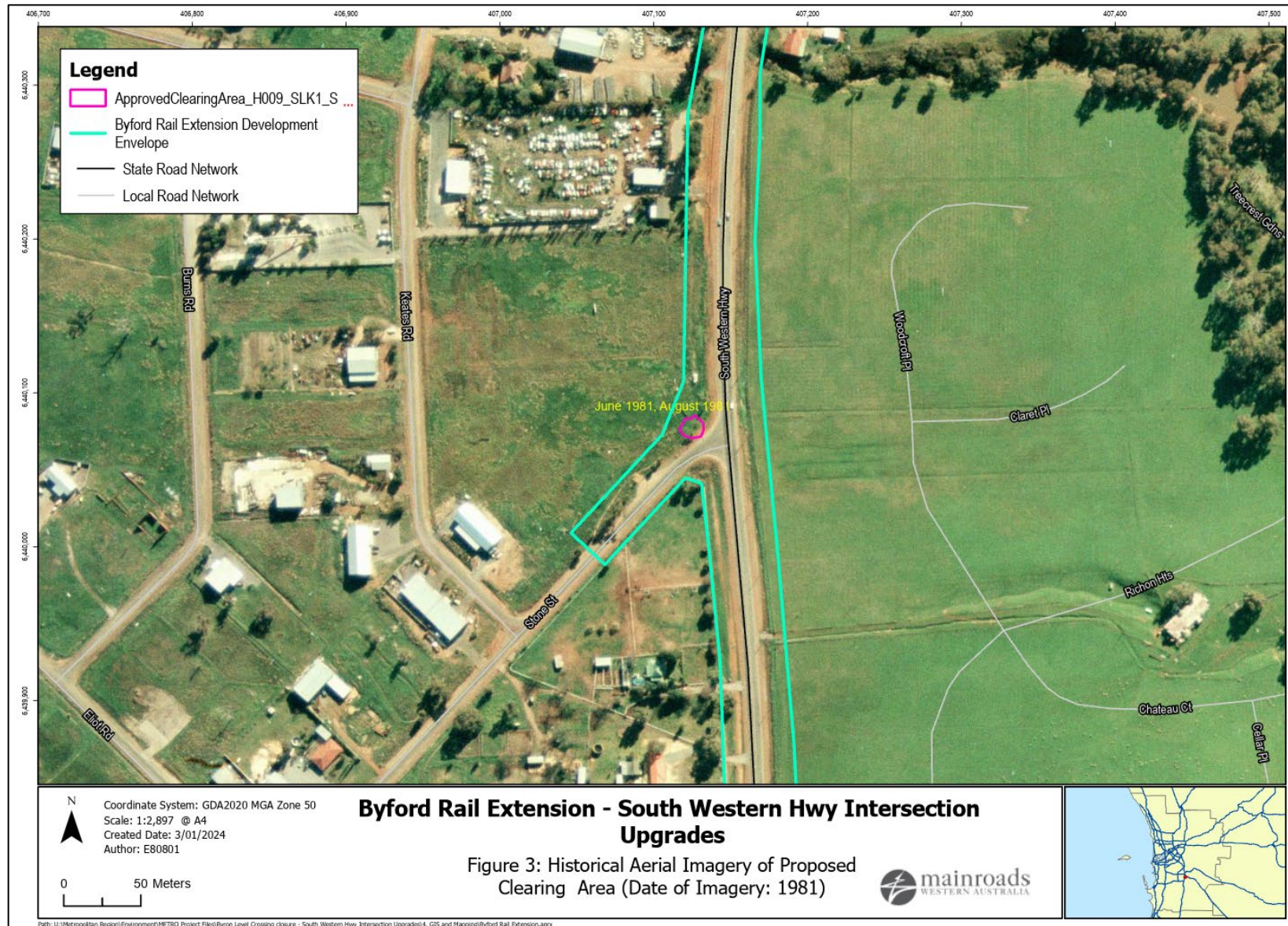


Figure 3a: Historical Imagery of Proposed Clearing Area (circa 1981)



Figure 3b: Historical Imagery of Proposed Clearing Area (circa 1983)



Photo 1: *Corymbia calophylla* (Marri) to be removed. Looking north-east from Stone Street towards South Western Highway.



Photo 2: *Corymbia calophylla* (Marri) to be removed. Looking north-west from South Western Highway towards Wungong light industrial area.



Photo 3: *Nuytsia floribunda* (WA Christmas Tree) to be removed. Looking north east at South Western Highway



Photo 4: *Nuytsia floribunda* to be removed (looking east at South Western Highway)