



mainroads  
WESTERN AUSTRALIA

# Clearing Desktop Report – CPS 818

*We're working for  
Western Australia.*

M053 Pinjarra Williams Road – SLK  
102 – 104 T4 Widening

July 2022

EOS 2804

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# Amendments

Report Compilation & Review	Name and Position	Document Revision	Date
Author:	Environment Officer	Draft v1	28/07/2022
Reviewer:	Senior Environment Officer	Rev 0	02/08/2022

## 1 PURPOSE

This Clearing Desktop Report (CDR) is a desktop assessment of native vegetation clearing that is proposed to be cleared using the Statewide Clearing Permit CPS 818 issued to Main Roads Western Australia (Main Roads).

## 2 SCOPE

### 2.1 Project Scope

**Project Name:** M053 Pinjarra Williams Road | SLK 102 – 104 | T4 Widening

**Project Purpose / Components:** The project involves the widening of the Pinjarra to Williams Road (M053) between 102.00 and 104.00 SLK to increase the current sealed width to 9.0m. The aim of the project is to improve road user safety by attempting to reduce the frequency and severity of crashes.

**The proposed clearing under CPS 818 is: 0.01ha** representing three individual trees (the Clearing Area). Details of the three trees proposed to be cleared are outlined in **Table 1**. In summary:

- SLK 102.34 RHS - One dead tree (approx. 4m high) No hollows not suitable DBH.
- SLK 103.14 LHS – One *Eucalyptus rudis* (approx. 10m high). No hollows no suitable DBH.
- SLK 103.14 LHS – One Dead Tree. No hollows no suitable DBH.

**The proposed temporary clearing under CPS 818 is:** 0ha

**Project Location(s):** The Project Area is located on the Pinjarra to Williams Road between SLK 102.00 to SLK 104.00, within the Shire of Williams as shown in **Figure 1**.

### 2.2 Desktop Assessment Scope

The assessment area is confined to a local area of a 10 km radius, as shown in **Figure 2**.

**Table 1: Photographs and descriptions of trees proposed to be cleared**

CULVERT	COMMENT	PHOTOS
102.34 - RHS	<p>Culvert extension required on RHS – <b>Clearing required</b></p> <p>Groundcover strata layer contains introduced weed species only.</p> <p><b>Tree 1</b> - One dead tree located outside of maintenance zone (<b>CPS818</b>)</p>	 <p style="text-align: center;"><b>View of Tree 1 Location</b></p>  <p style="text-align: center;"><b>Tree 1</b></p>
103.14 - LHS	<p>Culvert extension required on LHS – <b>Clearing required</b></p> <p><b>Tree 2</b> - One tall (10m) tree (<i>Eucalyptus rudis</i>) contained within maintenance zone. No hollows noted. Not suitable DBH for hollow formation. However due to size of tree, estimated age is &gt; 10 years. <b>Clearing therefore proposed under CPS 818</b></p> <p><b>Tree 3</b> - One dead tree (2m), snapped trunk. <b>Clearing proposed under 818</b></p>	 <p style="text-align: center;"><b>Tree 2</b></p>

		<div data-bbox="934 178 1627 341"><p><b>A</b> M053</p><p><b>Pinjarra Williams Rd</b> <b>0103.13</b></p><p>Lat/Long: -33.095300, 116.671826 Created on: 20/07/2022 12:07:22 PM</p><p><b>STNGLE</b></p></div>  <p data-bbox="1239 1053 1323 1083"><b>Tree 3</b></p>
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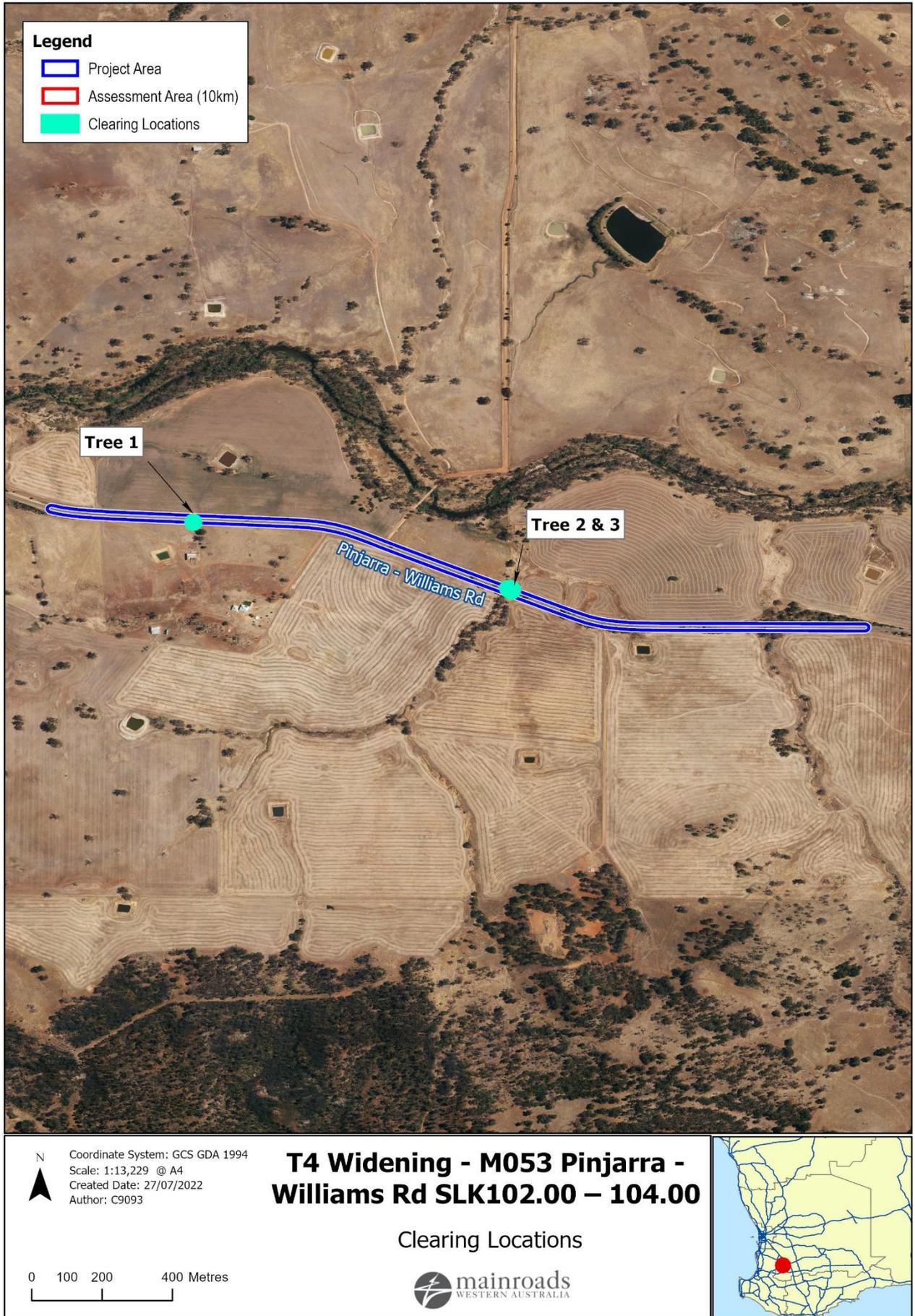


Figure 1: Project Area and Clearing Locations



Figure 2: Project Location and Study Area

## 2.3 Alternatives to Clearing

This section is to be widened on both sides as part of the Blackspot programme following several fatalities and serious crashes along this section in recent years. As the project will require the clearing to achieve a 9.0 m wide sealed formation on an alignment, no alternatives to clearing exist.

## 2.4 Measures to Avoid, Minimise, Mitigate and Manage Project Clearing Impacts

The design and management measures implemented to avoid and minimise the clearing impacts by the project are provided in **Table 2**.

In addition, impacts to vegetation will be minimised through the implementation of the following measures:

- the Clearing Area will be demarcated prior to the commencement of native vegetation clearing;
- where possible vegetation will be pruned as opposed to removed;
- further Project clearing will be avoided as the site office, materials storage areas, construction vehicles/machinery and access tracks will be located on previously disturbed or cleared areas; and
- development and implementation of a site-specific CEMP which will establish the following vegetation management actions including:
  - clearing and access control measures (such as demarcation of clearing boundaries);
  - weed and dieback management;
  - erosion and sediment control;
  - waste and fire management;
  - topsoil management;
  - dust control; and
  - tree and vegetation retention where possible.

**Table 2: Justification of Avoiding, Minimising, Mitigating and Managing Project Clearing Impacts**

DESIGN OR MANAGEMENT MEASURE	DISCUSSION AND JUSTIFICATION
Steepen batter slopes	The widened seal is proposed to stay within the existing road formation. Batters will be steepened as required to achieve the target seal width.
Installation of safety barriers	The three trees are too close to the road to allow for the safe and effective use of safety barriers.
Alignment to one side of existing road	The widened seal is proposed to stay within the existing road formation which occurs on either side of the seal.

## 2.5 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 (see Section 1.3), Main Roads has also had regard to:

### **EPPs**

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

### **Relevant other policies and guidance documents:**

- The Western Australian Environmental Offsets Policy (Government of Western Australia, 2011)
- A guide to the assessment of applications to clear native vegetation (DWER, 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

### **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*
- *Aboriginal Heritage Act 1972* (WA)
- *Town Planning and Development Act 1928*

### 3 Methodology

#### 3.1 Desktop Study

A desktop assessment of the Project Area and an assessment of native vegetation clearing were undertaken by reviewing a number of government agency managed databases, viewing GIS shapefiles and consulting with relevant stakeholders where necessary. Results from searches can be found in the relevant Appendix.

GIS layer viewing and mapping is done using ArcMap and / or Main Roads Integrated Mapping System (IMS). 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, these are referenced in Section 7.

## 4 VEGETATION DETAILS

#### 4.1.1 Project Site Vegetation Description

Vegetation within the Project Area is Completely degraded and comprises isolated trees and shrubs located within the road reserve, adjacent to historically cleared farmland. The understorey is dominated by introduced weeds to the exclusion of native species.

**Table 3** and **Table 4** provide details of the Pre-European Vegetation Associations with the Project Area and the remaining extents of these associations.

**Table 3: Summary of Project Area's Mapped Pre-European Vegetation Associations**

PRE-EUROPEAN VEGETATION ASSOCIATION(S)	CLEARING DESCRIPTION	VEGETATION CONDITION	COMMENTS
Vegetation Association 4 described as a Medium woodland; marri & wandoo (Government of Western Australia, 2018)	Clearing of up to 0.02 ha for road widening and drainage on Pinjarra – Williams Road.	Completely degraded (EPA 2016)	Vegetation description and condition determined from Main Roads site visit on 20 July 2022

**Table 4: Pre-European Vegetation Representation**

PRE-EUROPEAN VEGETATION ASSOCIATION	SCALE	PRE-EUROPEAN (HA)	CURRENT EXTENT (HA)	% REMAINING	% REMAINING IN DBCA RESERVES
Veg Assoc No. 4	State-wide	1,054,279.89	284,102.41	26.95	6.43
	IBRA Bioregion <i>Jarrah Forest</i>	1,022,712.69	277,087.18	27.09	6.45
	IBRA Sub-region <i>Northern Jarrah Forest</i>	614,200.82	197,903.81	32.22	9.85
	Local Government Authority <i>Shire of Williams</i> <i>This row is obtained from the report sheet 4a</i>	108,949.52	19,454.77	17.86	1.69

## 5 Assessment Against the Ten Clearing Principles

In assessing whether the project’s proposed clearing is likely to have a significant impact on the environment, the project was assessed against the ten Clearing Principles (*Environmental Protection Act 1986* (EP Act), Schedule 5).

Each principle has been assessed in accordance with DWER’s ‘A Guide to the Assessment of Applications to Clear Native Vegetation’.

The proposed clearing is not likely to be at variance with the 10 Clearing Principles.

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

<b>Proposed clearing is not at variance to this Principle</b>
<p><b>Comments</b></p> <p>Vegetation within the Project Area is Completely degraded and comprises isolated trees and shrubs located within the road reserve, adjacent to historically cleared farmland. The understorey is dominated by introduced weeds to the exclusion of native species.</p> <p>Clearing is limited to three individual trees comprising:</p> <ul style="list-style-type: none"> <li>• 1 x living <i>Eucalyptus rudis</i>; and</li> <li>• 2 x dead trees (sp. unknown)</li> </ul> <p>As the understory is comprised entirely of introduced weed species, no clearing of native understory vegetation is proposed.</p> <p>Analysis of GIS Flora databases reveal that very few Threatened or Priority flora species are known from the Project Area locality, with only five records returned from the 10km study area (<b>Figure 3</b>).</p> <p>Analysis of Main Roads GIS Threatened Fauna layer reveal that very few Threatened or Priority fauna species are known from the Project Area locality (<b>Figure 4</b>),</p> <p>The isolated vegetation within the Completely degraded and sparsely vegetated road corridor does not provide habitat linkage for native fauna.</p> <p>Trees proposed to be cleared do not contain hollows, or provide significant habitat for fauna species and are unlikely to provide significant foraging or roosting habitat for black cockatoo species.</p> <p>The vegetation does not comprise a TEC or PEC (<b>Figure 5</b>) and is not located within an ESA or conservation area (<b>Figure 8</b>).</p> <p><b>Assessed Outcome</b></p> <p>Proposed clearing is not at variance to this Principle.</p>
<p><b>Methodology</b></p> <p>DBCA shapefiles</p> <p>EPA (2016)</p> <p>Main Roads GIS Shapefiles</p> <p>Main Roads Site Inspection 20 July 2022</p>

### (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.

<b>Proposed clearing is not at variance to this Principle</b>
<p><b>Comments</b></p> <p>Analysis of Main Roads GIS Threatened Fauna layer reveal that very few Threatened or Priority fauna species are known from the Project Area locality (<b>Figure 4</b>),</p>

<p>The isolated vegetation within the Completely degraded and sparsely vegetated road corridor does not provide habitat linkage for native fauna.</p> <p>Trees proposed to be cleared do not contain hollows, or provide significant habitat for fauna species and are unlikely to provide significant foraging or roosting habitat for black cockatoo species.</p> <p><b>Assessed Outcome</b></p> <p>Proposed clearing is not at variance to this Principle.</p>
<p><b>Methodology</b></p> <p>DBCA shapefiles</p> <p>EPA (2016)</p> <p>Main Roads GIS Shapefiles</p> <p>Main Roads Site Inspection 20 July 2022</p>

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

<p><b>Proposed clearing is not at variance to this Principle</b></p>
<p><b>Comments</b></p> <p>The open and Completely degraded nature of the proposed clearing area allowed for easy identification of species during the site inspection. No rare flora was observed.</p> <p>As the understory is comprised entirely of introduced weed species, no clearing of native understory vegetation is proposed.</p> <p>Analysis of GIS Flora databases reveal that very few Threatened or Priority flora species are known from the Project Area locality, with only five records returned from the 10km study area (<b>Figure 3</b>).</p> <p><b>Assessed Outcome</b></p> <p>Proposed clearing is not at variance to this Principle.</p>
<p><b>Methodology</b></p> <p>DBCA shapefiles</p> <p>EPA (2016)</p> <p>Main Roads GIS Shapefiles</p> <p>Main Roads Site Inspection 20 July 2022</p>

**(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.**

<p><b>Proposed clearing is not at variance to this Principle</b></p>
<p><b>Comments</b></p> <p>According to Main Roads TEC/PEC layer (<b>Figure 5</b>), there are no known incidences of TECs or PECs within the Project Area area, or within the 10km Study Area. The closest known location of a TEC/PEC is an incidence of the Eucalypt Woodlands of the Wheatbelt, a Threatened Ecological Community (TEC) listed as Critically Endangered under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) and a State Priority Ecological Community (PEC) (Priority 3), located approximately 11.7km to the north west of the Project Area.</p> <p>The three isolated trees proposed to be cleared within a fragmented and Completely degraded landscape do not represent PEC or TEC vegetation.</p> <p><b>Assessed Outcome</b></p> <p>Proposed clearing is not at variance to this Principle.</p>

**Methodology**

Main Roads GIS Shapefiles

Main Roads Site Inspection 20 July 2022

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

**Proposed clearing is not at variance to this Principle**

**Comments**

The Project Area is located within the Northern Jarrah Forest IBRA sub-region of the Jarrah Forest bioregion (Figure 6). Vegetation Association Williams (4) retains 26.95% of its representation at the State-wide scale, 32.22% at the IBRA Subregion scale and 17.86% within the Shire of Williams. The Vegetation association is described as Medium woodland of Marri and Wandoo. The species proposed to be cleared within the 0.01ha of proposed disturbance are *Eucalyptus rudis* and an *Acacia* sp. and are not representative of the key species associated with this vegetation type.

The National Objectives and Targets for Biodiversity Conservation recognise that the retention of 30 per cent 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).

Although only 26.95% of this vegetation association remains at the state level, at IBRA subregion scale 32.22% of the vegetation association remains. The three individuals proposed to be cleared (inclusive of two dead and one living trees) within a Completely degraded area do not represent a significant remnant of native vegetation

Within the 10km study area a significant proportion (21.12%) of native vegetation remains including the Lavender Nature Reserve (Figure 7). The proposed clearing will not affect any regional habitat linkage.

**Assessed Outcome**

Proposed clearing is not at variance to this Principle.

**Summary of Project Area’s Mapped Pre-European Vegetation Associations**

PRE-EUROPEAN VEGETATION ASSOCIATION(S)	CLEARING DESCRIPTION	VEGETATION CONDITION	COMMENTS
Vegetation Association 4 described as a Medium woodland; marri & wandoo (Government of Western Australia, 2018)	Clearing of up to 0.02 ha for road widening and drainage on Pinjarra – Williams Road.	Completely degraded (EPA 2016)	Vegetation description and condition determined from Main Roads site visit on 21 July 2022

**Pre-European Vegetation Representation**

PRE-EUROPEAN VEGETATION ASSOCIATION	SCALE	PRE-EUROPEAN (HA)	CURRENT EXTENT (HA)	% REMAINING	% REMAINING IN DBCA RESERVES
Veg Assoc No. 4	State-wide	1,054,279.89	284,102.41	26.95	6.43
	IBRA Bioregion	1,022,712.69	277,087.18	27.09	6.45

	<i>Jarrah Forest</i>				
	IBRA Sub-region <i>Northern Jarrah Forest</i>	614,200.82	197,903.81	32.22	9.85
	Local Government Authority <i>Shire of Williams</i> <i>This row is obtained from the report sheet 4a</i>	108,949.52	19,454.77	17.86	1.69
<p><b>Methodology</b>                      Aerial photography                      DBCA shapefiles                      EPA (2016)                      Main Roads GIS Shapefiles                      Main Roads Site Inspection 20 July 2022                      Shepherd (2009)</p>					

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

<p><b>Proposed clearing may be at variance to this Principle</b></p>
<p><b>Comments</b></p> <p>The Williams River runs roughly parallel to the Project Area in an east to west direction, approximately 150m to the north at its closest point (<b>Figure 9</b>).</p> <p>Culverts under the Pinjarra – William Rd transit localised ephemeral drainage from farmland to the south, northward to the Williams River. One tree proposed to be cleared (Tree 2) is located adjacent to one of these culverts. Removal of this individual tree comprises a clearing area of approximately 0.006ha.</p> <p>Due to the minor, non-perennial nature of the drainage and the clearing impact only comprising a single tree, in a Completely degraded landscape with no native understory present, no impacts to the values of the drainage line are anticipated.</p> <p>Furthermore, as activities are proposed for dry conditions, no impacts to the riparian system are anticipated from the implementation of the Project Area.</p> <p><b>Assessed Outcome</b></p> <p>Proposed clearing may be at variance to this Principle.</p>
<p><b>Methodology</b></p> <p>DWER and DBCA shapefiles</p> <p>Main Roads Site Inspection 20 July 2022</p>

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

<p><b>Proposed clearing is not at variance to this Principle</b></p>
<p><b>Comments</b></p> <p>The Natural Resource Management risk mapping indicates the soils of the Clearing Area have a low risk of water erosion, a moderate risk of wind erosion, a low to moderate risk of salinity, and a low to moderate water logging risk.</p> <p>ASRIS mapping indicates that the Clearing Area is located in an area with a low probability of Acid Sulfate Soils.</p> <p>Given the small area (0.01 ha) and isolated nature of the clearing associated with sealing of areas for road construction, the proposed clearing is not likely to lead to an appreciable increase in land degradation. Standard erosion and dust management control measures will be implemented during construction to reduce the incidence of wind erosion. As construction is proposed to occur in spring-summer, this will reduce the potential for waterlogging.</p> <p><b>Assessed Outcome:</b></p> <p>Proposed clearing not at variance to this Principle.</p>
<p><b>Methodology</b></p> <p>ASIRS (2022)</p> <p>Main Roads Site Inspection 20 July 2022</p> <p>DPIRD Natural Resource Management Information (Accessed July 2022)</p>

**(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.**

<p><b>Proposed clearing is not at variance to this Principle</b></p>
<p><b>Comments</b></p> <p>According to Main Roads GIS DBCA Lands and Waters layer (<b>Figure 8</b>), the Lavender Nature reserve is located approximately 1.7km to the South of the Project Area. Due to the spatial separation and the regional hydrology reporting northward, away from the Lavender Nature reserve, no impacts are anticipated. The proposed clearing of 0.01 ha comprising three trees is unlikely to have any impact on any ecological linkages.</p> <p><b>Assessed Outcome:</b></p> <p>Project Area clearing not at variance to this Principle.</p>
<p><b>Methodology</b></p> <p>DBCA shapefiles                  EPA (2016)                  Main Roads Site Inspection 20 July 2022</p>

**(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.**

<p><b>Proposed clearing is not likely to be at variance to this Principle</b></p>
<p><b>Comments</b></p> <p>The Williams River runs roughly parallel to the Project Area area in an east to west direction, approximately 150m to the north at its closest point (<b>Figure 9</b>).</p> <p>A search of ArcGIS shapefiles has confirmed that only minor localised drainage intersects the Clearing Area. The proposed works will not disturb or interrupt any natural drainage and surface run-off patterns. The Project Area will require clearing of three trees located within the existing maintenance zone comprising 0.01ha, with only a single tree located adjacent to a minor non-perennial drainage line comprising 0.06ha of clearing.</p> <p>Given the ‘Completely degraded’ nature of the vegetation present, the clearing of this small amount of vegetation is unlikely to cause a deterioration in the quality of surface or underground water. In addition, contract documentation will incorporate management actions to ensure potential indirect and short-term impacts, such as sedimentation and erosion, are managed.</p> <p>Analysis of GIS databases reveal that the Clearing Area is not located within a:</p> <ul style="list-style-type: none"> <li>• RIWI Act Ground Water or Irrigation district;</li> <li>• Public Drinking Water Source Area; or</li> <li>• CAWSA Clearing Control Catchment.</li> </ul> <p>The Project Area is located within the Murray River System surface water area; however, no clearing will occur within or close to a mapped watercourse.</p> <p>Dewatering is not proposed and no change to groundwater level or quality is anticipated from the removal of the trees. Standard operational controls will be implemented with regards to potential spill risks.</p> <p>Given no dewatering or major drainage modifications are likely to be required and the scale of clearing is relatively minor and linear in nature, no deterioration of surface or underground water levels or quality is expected to result from clearing.</p> <p><b>Assessed Outcome:</b></p> <p>Project Area clearing not likely to be at variance to this Principle.</p>

**Methodology**

DWER and DBCA shapefiles

EPA (2016)

Main Roads Site Inspection 20 July 2022

**(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 at variance to this Principle**

**Comment**

The closest Bureau of Metrology Weather Station to the Project Area is Williams (Station Number 10655), located approximately 20km to the North east. The annual mean rainfall at the William BOM Station is 531.1mm (Bureau of Meteorology).

According to DPIRDs Natural Resource Soil Information, the Clearing Area has a low flood hazard risk. The Clearing Area is located in the following soil landscape map units:

- William subsystem: valley floor subtended by the steep slopes of the Michibin unit; yellow duplex soils and a lower sandy terrace;
- Michibin subsystem (Quindanning): Hillslopes containing soils formed by the weathering of fresh rock. Rock outcrop is common.

Both of the above map units have been assessed as exhibiting a very low risk of poor drainage potential.

The proposed clearing involves the removal of three trees (0.01ha) with the maintenance zone of an existing road corridor. Given the small, intermittent patches of clearing proposed within a largely vegetated local landscape, clearing is unlikely to exacerbate the incidence or intensity of flooding.

**Assessed Outcome:**

Project Area clearing not at variance to this Principle.

**Methodology**

Main Roads Site Inspection 20 July 2022

Natural Resource Management SLIP Soil Systems (Accessed insert latest date)

## 6 ADDITIONAL ACTIONS REQUIRED

The clearing associated with the Project Area is unlikely to be or not at variance with the Clearing Principles, except 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.*

One tree is located on the edge of a minor, non-perennial watercourse. Although no impacts to the drainage line are anticipated, the proposed clearing may be at variance to Principle (f).

Additional management actions under CPS 818 are detailed in **Table 5**.

**Table 5: Summary of Additional Management Actions Required by Permit CPS 818**

IMPACT OF CLEARING	YES/NO OR NA	FURTHER ACTION REQUIRED
1. The project involves clearing for temporary works (as defined by CPS 818).	<b>No</b>	No further action required.
2 Project is within Region that: <ul style="list-style-type: none"> <li>• Has rainfall greater than 400mm;</li> <li>• Is South of the 26<sup>th</sup> parallel;</li> <li>• Works are in 'Other than dry conditions'; and</li> <li>• Works have potential for uninfested areas to be impacted</li> </ul>	<b>No</b>	Proceed with standard Vehicle and Plant management actions from PEMR's and Vehicle and Plant Hygiene Checklists. Dieback management measures will be incorporated in Contract documentation.
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	<b>No</b>	No further action required.
4. The vegetation within the area to be cleared and/or the surrounding vegetation in a good or better condition and weeds likely to spread to and result in environmental harm to adjacent areas of native vegetation that are in good or better condition	<b>No</b>	No further action required.

## 7 VEGETATION MANAGEMENT

Main Roads will avoid clearing native vegetation where possible. Where clearing cannot be avoided then this clearing is kept to a minimum. Vegetation will be managed in accordance with the Principal Environmental Management Requirements (PEMR's).

## 8 REFERENCES

Australian Soil Resource Information System (2022). Atlas of Australian Acid Sulfate Soils. Available online from [A S R I S - Atlas of Australian Acid Sulfate Soils \(csiro.au\)](https://www.asris.csiro.au) Accessed 26 July 2022

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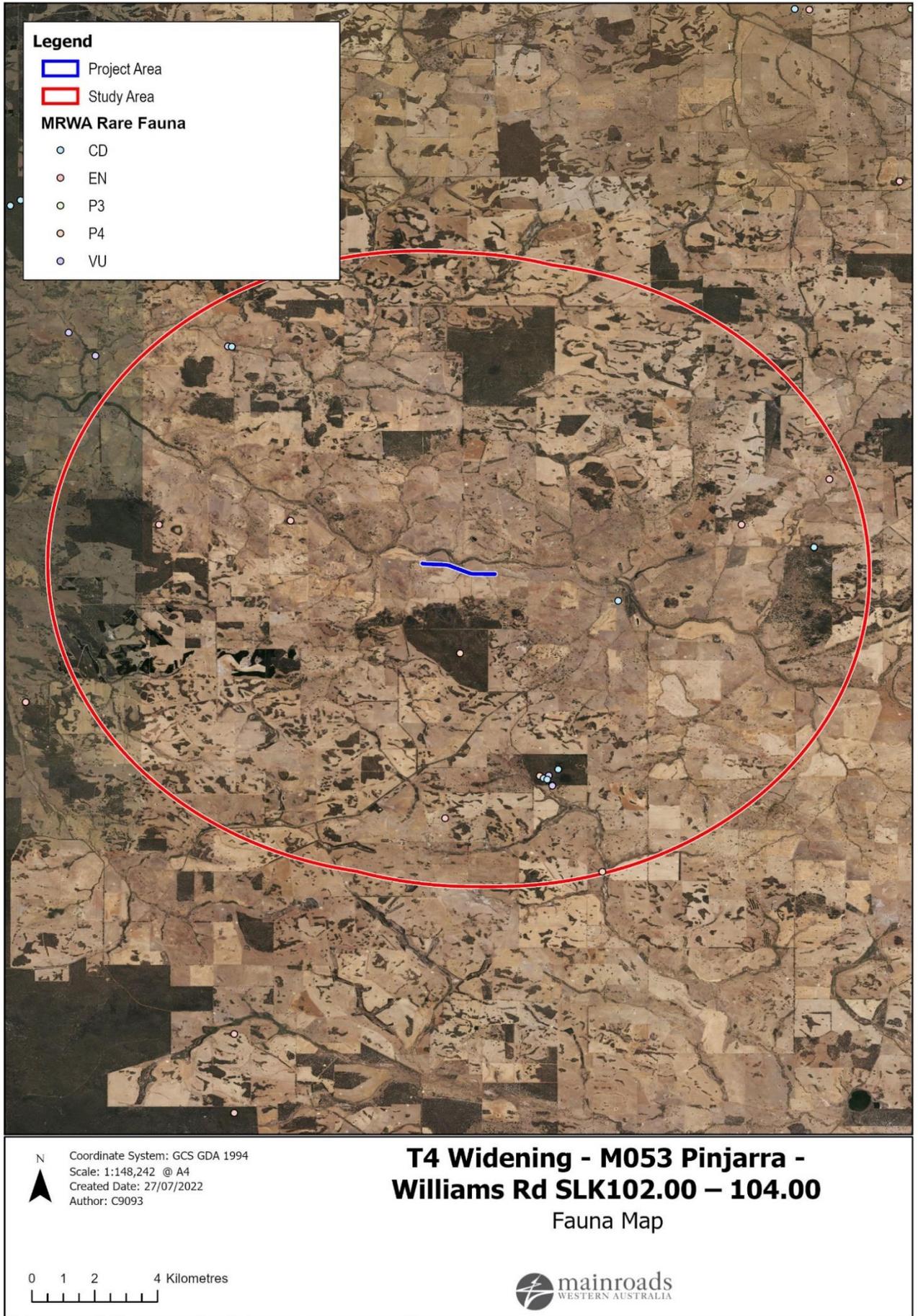
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## 9 APPENDICES

Appendix	Title
<b>Appendix 1</b>	Environmental Constraints Mapping

## Appendix 1: Environmental Constraints Mapping

### Figure 3: Flora– Study Area



**Figure 4: Fauna – Study Area**



Figure 5: TEC/PEC – Study Area

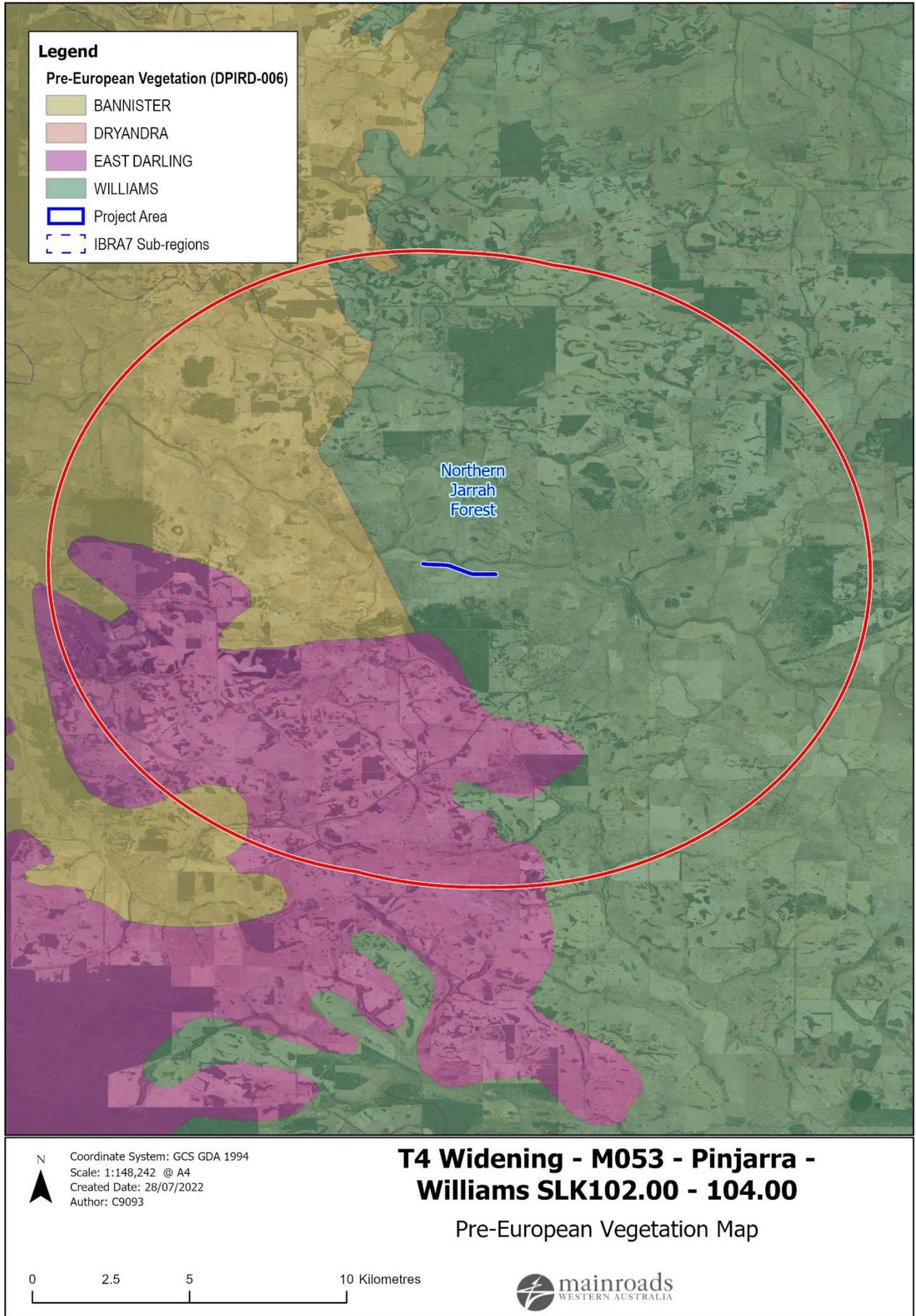
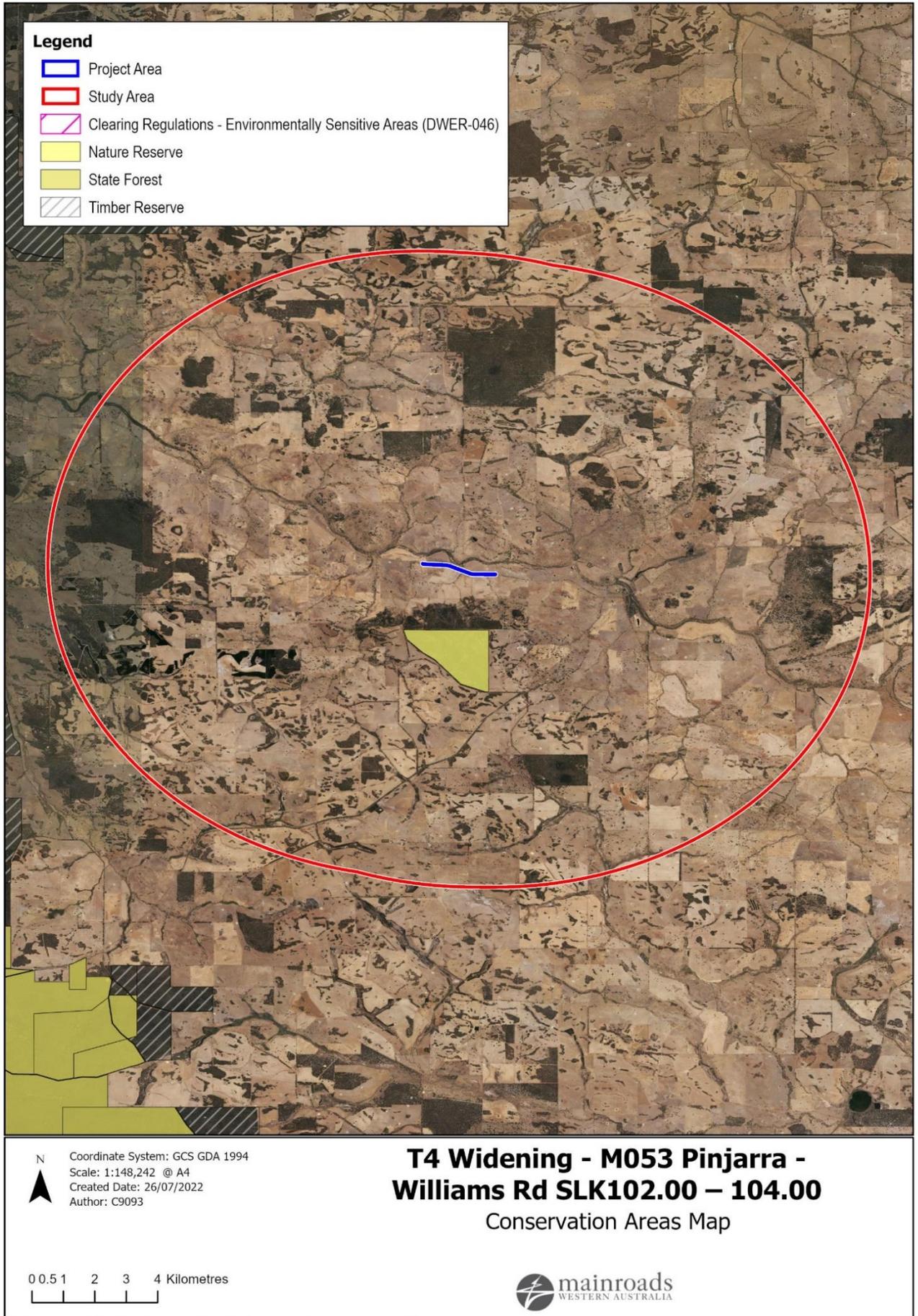


Figure 6: Pre-European Vegetation – Study Area



**Figure 7: Remnant Vegetation – Study Area**



**Figure 8: DBCA Managed Lands, Heritage – Study Area**

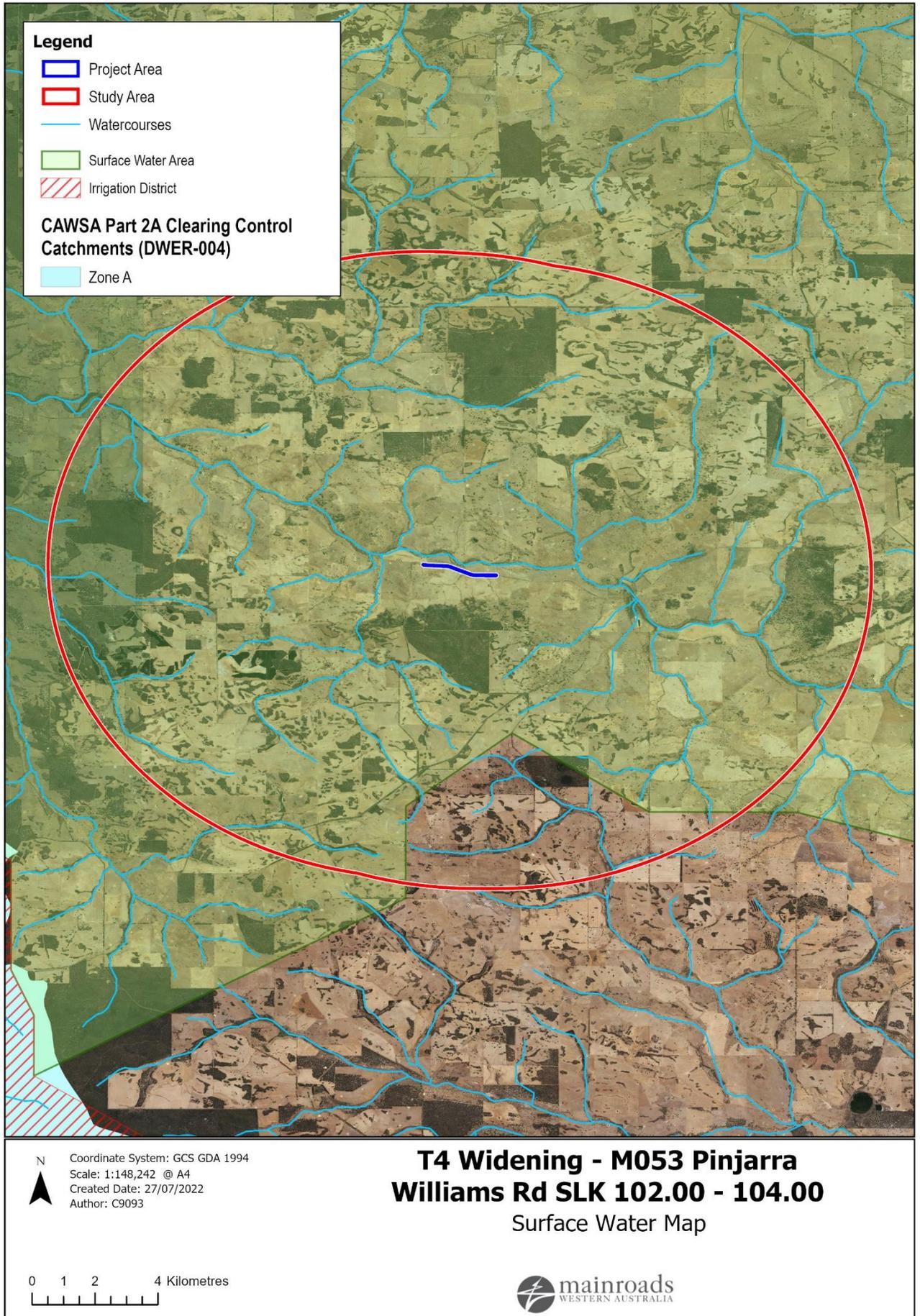


Figure 9: Water Constraints – Study Area