

# Clearing Assessment Report – CPS 818

*We're working for  
Western Australia.*

Cockburn Intersection Upgrades  
Great Northern Highway (H006)  
Kimberley Region  
3139

# Contents

|          |                                                                                        |           |
|----------|----------------------------------------------------------------------------------------|-----------|
| <b>1</b> | <b>PROPOSAL .....</b>                                                                  | <b>5</b>  |
| 1.1      | Purpose and Justification.....                                                         | 5         |
| 1.1.1    | Main Roads Approach to Road Safety and the Environment .....                           | 5         |
| 1.2      | Proposal Scope.....                                                                    | 6         |
| 1.3      | Proposal Location .....                                                                | 6         |
| 1.4      | Clearing Details.....                                                                  | 6         |
| 1.5      | Alternatives to Native Vegetation Clearing Considered During Proposal Development..... | 13        |
| 1.6      | Measures to Avoid, Minimise, Reduce and Manage Proposal Clearing Impacts .....         | 13        |
| 1.7      | Approved Policies and Planning Instruments .....                                       | 15        |
| <b>2</b> | <b>SCOPE AND METHODOLOGY ASSESSMENT OF CLEARING .....</b>                              | <b>16</b> |
| 2.1      | Report Terminology and Sources.....                                                    | 16        |
| 2.2      | Desktop Assessment .....                                                               | 16        |
| 2.3      | Surveys and Assessments .....                                                          | 16        |
| <b>3</b> | <b>SURVEY RESULTS .....</b>                                                            | <b>17</b> |
| 3.1      | Summary of Focused Vision’s 2024 Biological Survey.....                                | 17        |
| 3.2      | Conclusions.....                                                                       | 18        |
| <b>4</b> | <b>DESKTOP ASSESSMENT OF VEGETATION .....</b>                                          | <b>18</b> |
| 4.1      | Desktop Vegetation Description.....                                                    | 18        |
| <b>5</b> | <b>ASSESSMENT AGAINST THE TEN CLEARING PRINCIPLES .....</b>                            | <b>21</b> |
| <b>6</b> | <b>REHABILITATION, REVEGETATION AND OFFSETS .....</b>                                  | <b>37</b> |
| 6.1      | Revegetation and Rehabilitation .....                                                  | 37        |
| <b>7</b> | <b>COMPLIANCE WITH CPS 818 .....</b>                                                   | <b>38</b> |
| <b>8</b> | <b>REFERENCES .....</b>                                                                | <b>40</b> |
|          | Appendix 1: DBCA Threatened Flora and Fauna Database Searches .....                    | 42        |

## List of Figures

|                                                                                                     |    |
|-----------------------------------------------------------------------------------------------------|----|
| Figure 1. Development Envelope for Cockburn Intersection Upgrade works .....                        | 7  |
| Figure 2. Development Envelope and Survey Area for Cockburn Intersection Upgrade works. Map 1. .... | 8  |
| Figure 3. Development Envelope and Survey Area for Cockburn Intersection Upgrade works. Map 2. .... | 9  |
| Figure 4. Development Envelope and Survey Area for Cockburn Intersection Upgrade works. Map 3. .... | 10 |

Figure 5. Vegetation mapped in the Development Envelope for Cockburn Intersection Upgrade works.....11

Figure 6. Fauna Habitat mapped in the Development Envelope for Cockburn Intersection Upgrade works.....12

Figure 7. Study Area Map: Observations of conservation significant species from WA Herbarium and DBCA datasets. ....42

## List of Tables

Table 1. Measures Undertaken to Avoid, Minimise, Reduce and Manage the Proposal Clearing Impacts.....14

Table 2. Summary of Biological and Targeted Surveys Relevant to the Proposal .....17

Table 3. Summary of Vegetation Types within the Development Envelope.....19

Table 4. Pre-European Vegetation Representation .....20

Table 5. Fauna Habitat within the Development Envelope (DE) as mapped by Focused Vision’s (2024) Biological Survey.....24

Table 6. Vegetation Condition within the Development Envelope and Survey Area as mapped by Focused Vision (2024).....25

Table 7. Summary of Additional Management Actions Required by CPS 818.....38

## Document Control

| Report<br>Compilation<br>& Review | Name and Position            | Document<br>Revision | Date       |
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# 1 PROPOSAL

## 1.1 Purpose and Justification

Great Northern Highway (GNH) forms part of National Route 1, and is a strategic freight, tourist and inter-town route. The efficiency and reliability of the Great Northern Highway is vital to the mining, agricultural, and tourism sectors of the Kimberley. Main Roads Western Australia (Main Roads) proposes to upgrade the intersection of Great Northern Highway (H006) and Victoria Highway (H011). This will occur from H006 SLK 3132.27 – 3133.87 and H011 from SLK 0 – 1.5.

The proposal includes native vegetation clearing to widen the intersection to include a passing lane and facilitate the wide turning circle of haul trucks. In addition, a slip lane into Cockburn rest area is proposed. These works are proposed to increase the safety of Cockburn Intersection and decrease the risk of interactions between heavy and light vehicles.

### 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 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 Western Australia proposes to upgrade the intersection of Great Northern Highway and Victoria Highway where Cockburn Rest Area is adjacent, inclusive of approximately 3.25 km of road surrounding this intersection. The upgrades include the addition of acceleration & through lanes, turn pockets and tie-ins. The adjacent 24-hour rest area access to Cockburn Intersection will be formalised and a truck parking bay will be tied into the upgrade works. Existing table/catch drains in the vicinity will be upgraded along with new offshoots. Solar lighting is also proposed to be installed in the rest area for improved lighting. This also includes localised earthworks using graders, tippers, and rollers as well as sealing/asphalting using spray trucks and batch trucks.

## 1.3 Proposal Location

The Development Envelope is located on Great Northern Highway and Victoria Highway, between Wyndham and Kununurra, from H006 SLK 3132.27 – 3133.87 and H011 from SLK 0 – 1.5 in the Shire of Wyndham East Kimberley as shown in Figure 1. The central coordinate of the proposal is - 15.8684436°S, 128.3721699°E.

## 1.4 Clearing Details

### **Proposed Clearing to be undertaken using CPS 818:**

Up to 2.06 ha.

### **Areas of Native Vegetation Clearing:**

The areas of native vegetation to be cleared are shown in Figure 2 and further detailed in Figures 3 to 5.

### **Type of Native Vegetation:**

The type of vegetation to be cleared under this Proposal consists of four vegetation types (CfTc CfEc, MmTc, TcCf) as described by Focused Vision (2024) and shown in Figure 5.

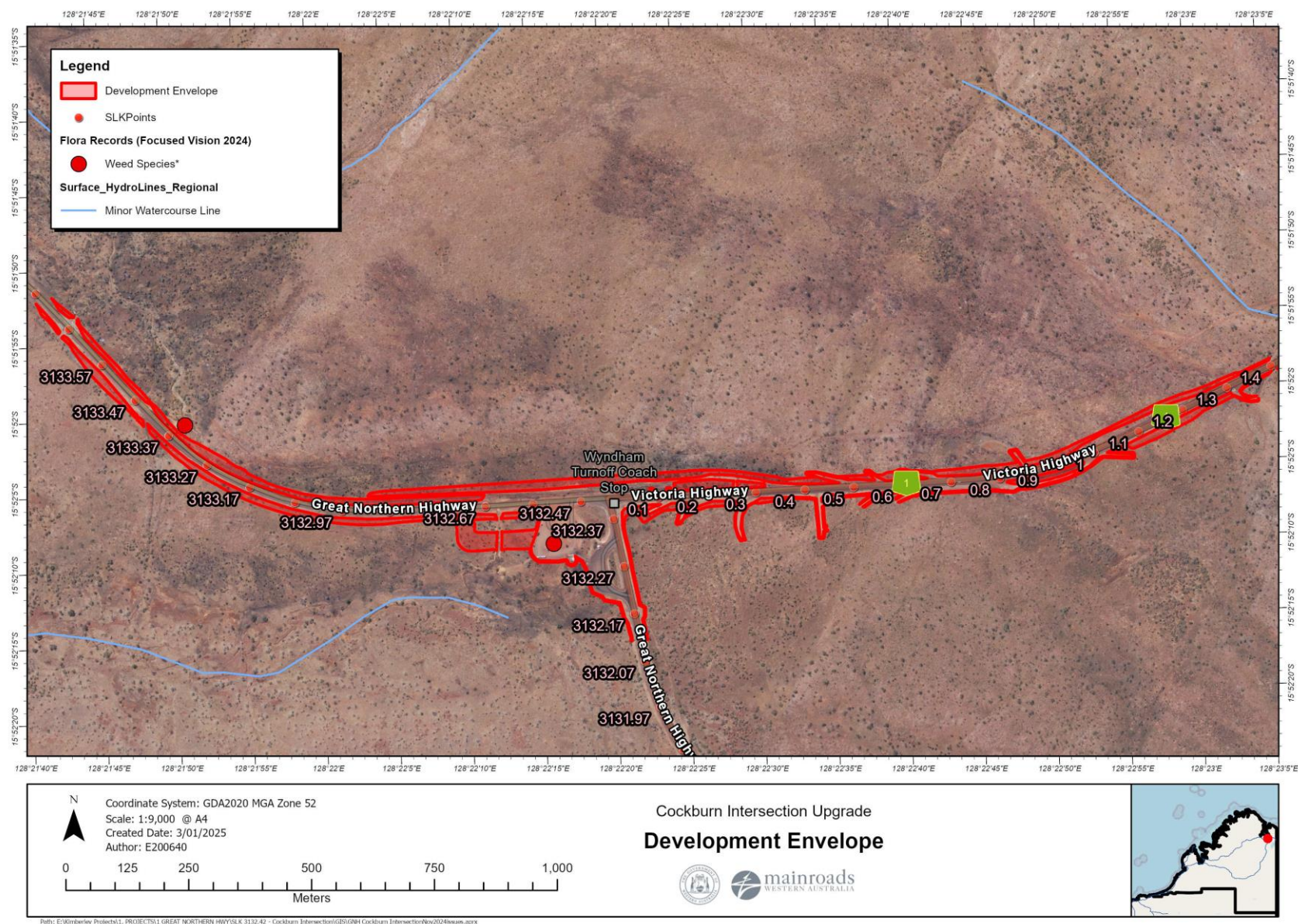


Figure 1. Development Envelope for Cockburn Intersection Upgrade works.

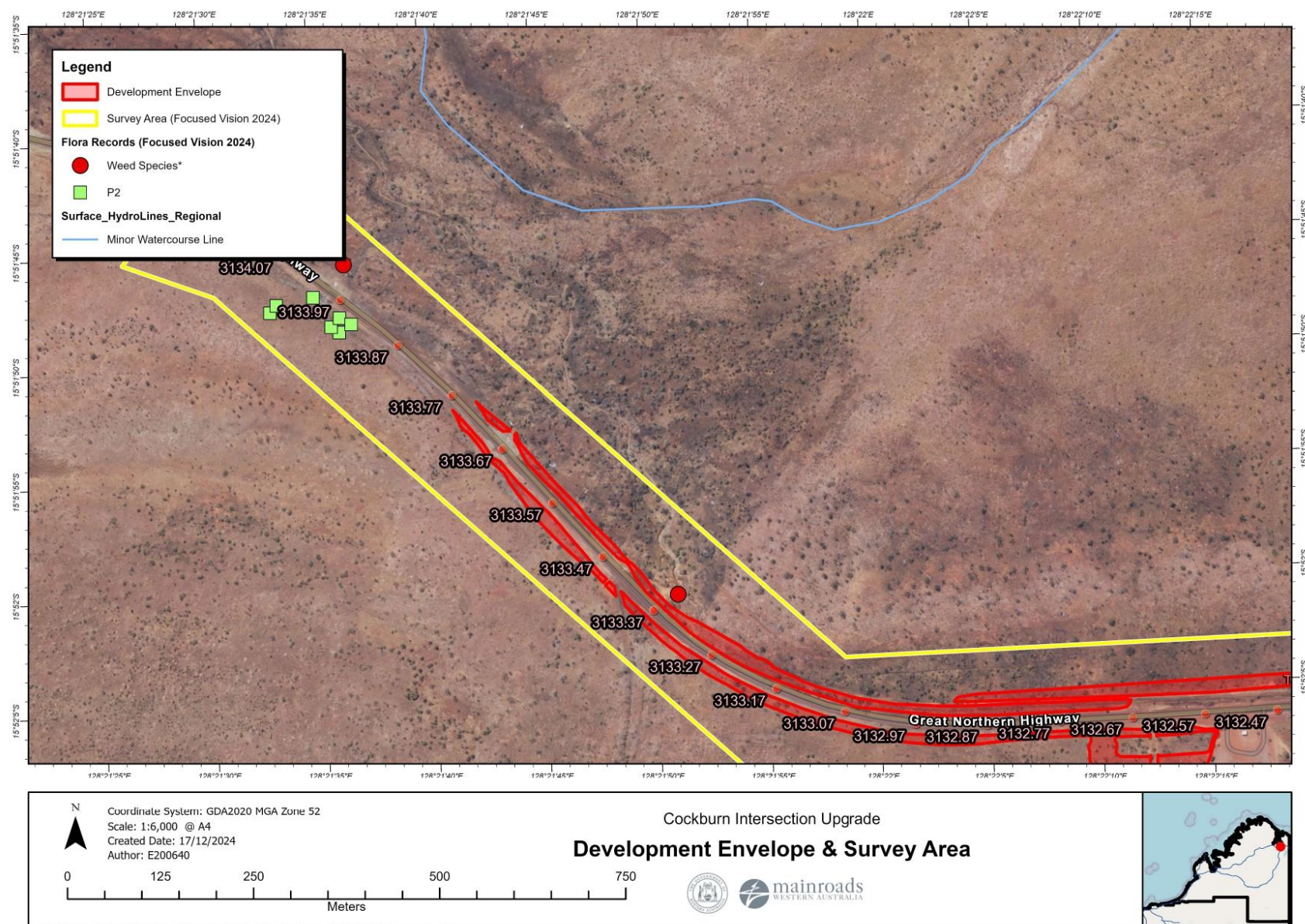


Figure 2. Development Envelope and Survey Area for Cockburn Intersection Upgrade works. Map 1.

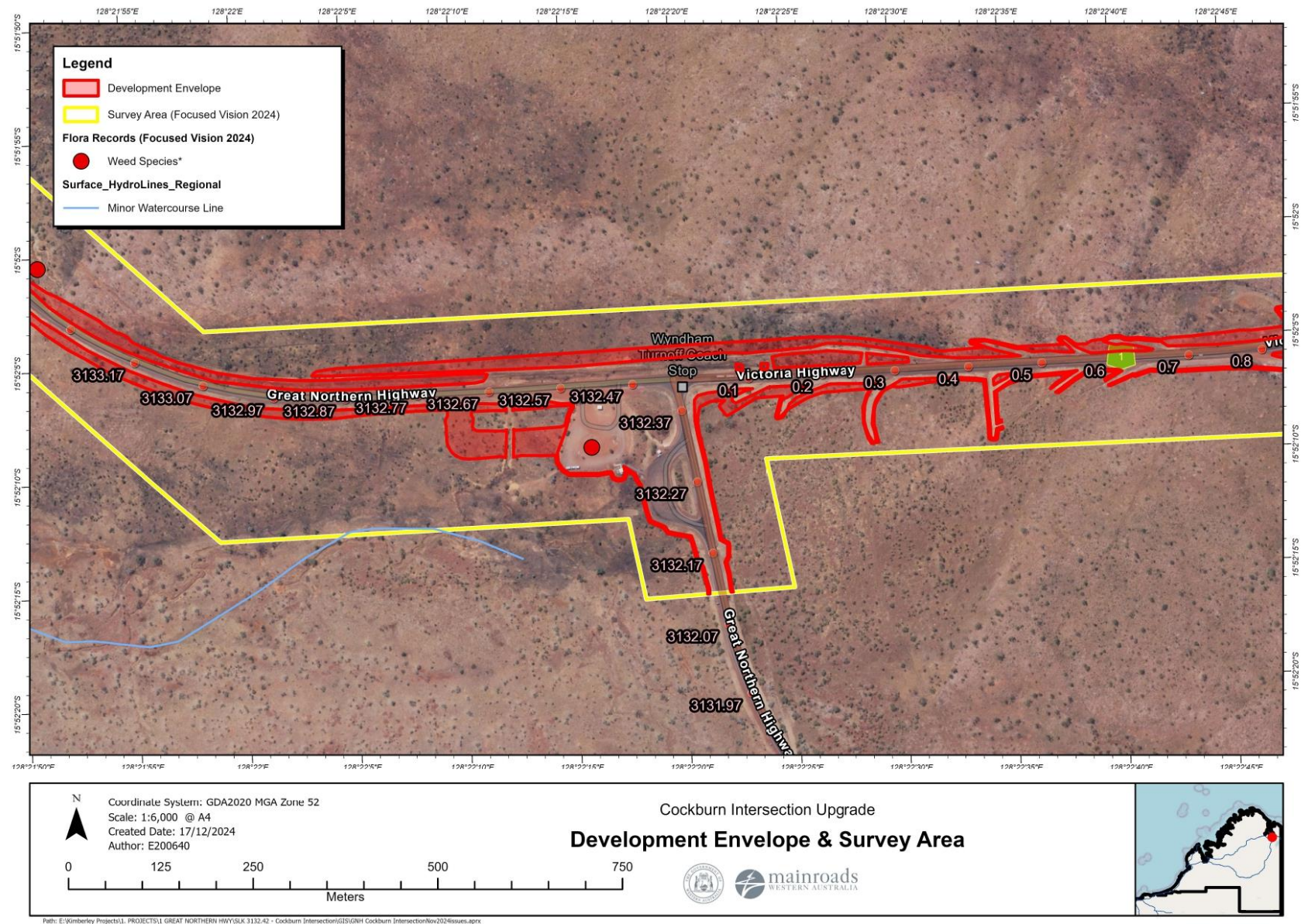


Figure 3. Development Envelope and Survey Area for Cockburn Intersection Upgrade works. Map 2.

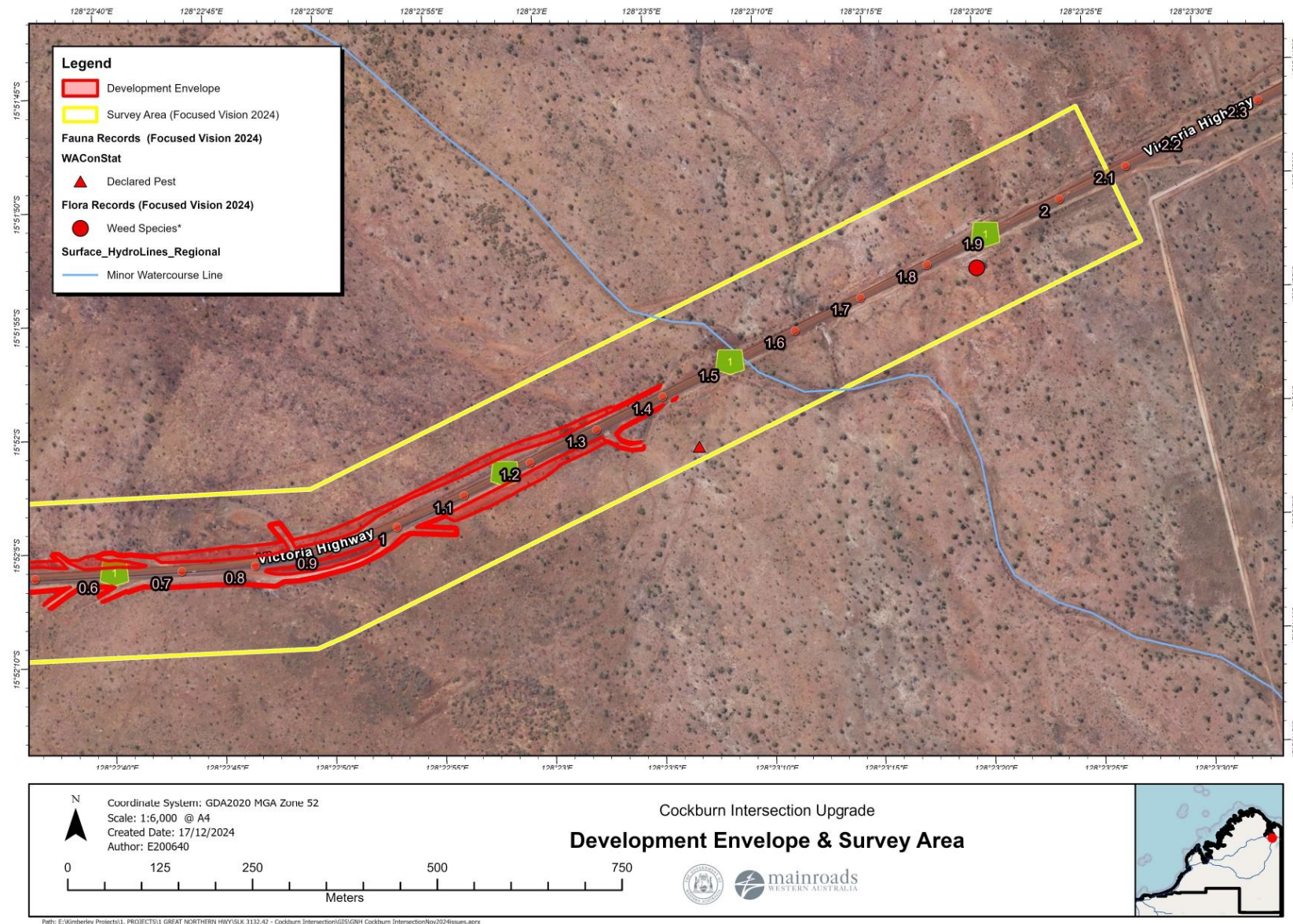


Figure 4. Development Envelope and Survey Area for Cockburn Intersection Upgrade works. Map 3.

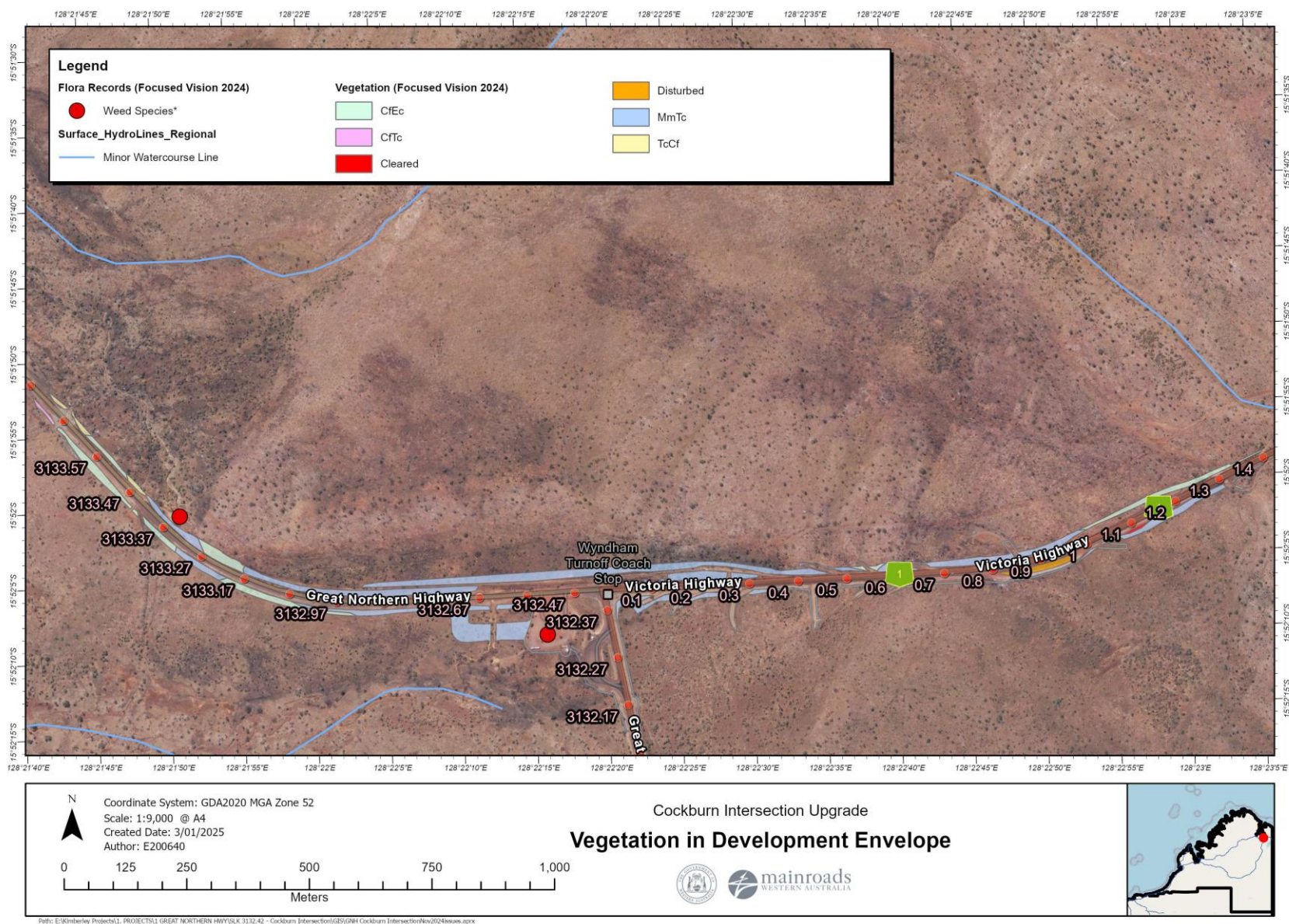


Figure 5. Vegetation mapped in the Development Envelope for Cockburn Intersection Upgrade works.

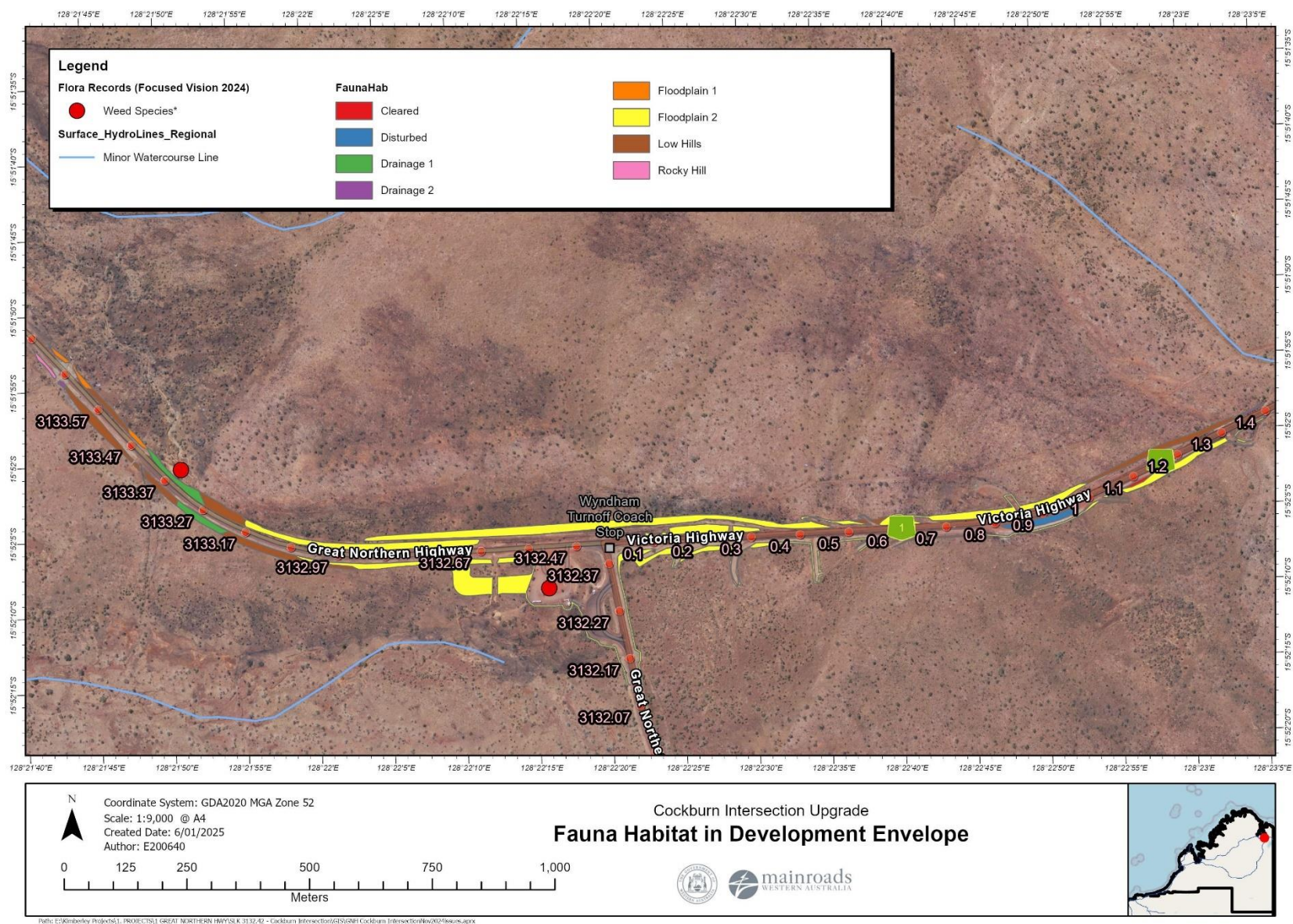


Figure 6. Fauna Habitat mapped in the Development Envelope for Cockburn Intersection Upgrade works.

## **1.5 Alternatives to Native Vegetation Clearing Considered During Proposal Development**

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

- Do not upgrade the road or intersection, however this will potentially result in a poorer safety outcome and may result in future fatalities or serious injuries and further degradation of the State road asset.
- 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Use of existing cleared areas</b> | <p>Existing cleared areas will be utilised where practicable, including temporary material stockpiles including the adjacent Cockburn Rest Area, and Heavy Vehicle resting bay on Great Northern Highway. Utilising existing cleared areas rather than developing new dedicated areas for Laydowns and Material Stockpiles in vegetation that is in Good or better condition will reduce the amount of clearing required for the works to progress.</p> <p>Additional existing infrastructure will be used for turnarounds to limit clearing to that necessary to construct the road upgrades.</p> |
| <b>Drainage modification</b>         | <p>To accommodate a wider intersection with upgraded infrastructure to support safe access to Cockburn Intersection, drainage for this section of road also required upgrades. The design has utilised existing drainage infrastructure and cleared areas where practicable as seen below in Plate 1.</p>  <p>Plate 1. Drainage design for Cockburn Intersection upgrades.</p>                                                                                                                                  |

## 1.7 Approved Policies and Planning Instruments

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

In addition to the matters considered in accordance with section 51O of the EP Act, Main Roads has also had regard to the below instruments where relevant.

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

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Country Areas Water Supply Act 1947* (WA) (CAWS Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Planning and Development Act 2005* (WA) (P and D Act)
- *Soil and Land Conservation Act 1945* (WA)
- *Rights in Water and Irrigation Act 1914* (WA) (RIWI Act)
- *Aboriginal Heritage Act 1972* (WA)

### **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 2021)
- Environmental Offsets Guidelines (Government of Western Australia, 2014)
- Technical guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA, 2016)
- Technical guidance – Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment (EPA, 2020)
- Approved conservation advice under section 266B of the EPBC Act for threatened flora/fauna/vegetation communities

## 2 SCOPE AND METHODOLOGY ASSESSMENT OF CLEARING

Native vegetation will be cleared to accommodate this Proposal. This clearing will be undertaken using 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. The native vegetation clearing area for this Proposal is 2.06 ha.
- **Development Envelope** – The maximum extent within which the Clearing Area will be located. This envelope is larger than the Clearing Area to allow for minor changes to the Proposal footprint as the design process continues, and to account for minor and unexpected changes that may occur during construction, such as working to avoid a large tree or encountering buried boulders or services. This flexibility allows the site personnel to make modifications to the Proposal to avoid areas that may contain better environmental values. The CAR has assessed all environmental values within the Development Envelope as though all of these values will be impacted, up to the amount specified within the Clearing Area. The Development Envelope for this proposal is 7.04 ha.
- **Study Area** – Area covered by the Desktop Assessment. The Study Area for the Proposal is confined to a local area of a 40 km radius.
- **Survey Area** – Area covered by the Biological Survey, which is larger than the Development Envelope. The Survey Area for this Proposal is 87.67 ha.

### 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. Results from searches can be found in Appendix 1.

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 8.

### 2.3 Surveys and Assessments

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

- Detailed and targeted flora and vegetation survey (Focused Vision (2024)).
- Fauna survey (Focused Vision (2024)).

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 and Survey Name                     | Survey Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Focused Vision (2024)<br>Cockburn Intersection | <p><b>Survey Area:</b> The Survey Area comprised approximately 87.67 ha along Great Northern Highway and Victoria Highway Intersection.</p> <p><b>Type:</b> Basic fauna survey and a Detailed Flora and Vegetation Survey and a Targeted (opportunistic) survey for flora and ecological communities of conservation significance</p> <p><b>Timing:</b> Fieldwork for both Fauna and Flora surveys was conducted in March 2024.</p> <p><b>Survey Results Shapefile TRIM Ref:</b> D24#934554</p> <p><b>Document TRIM Ref:</b> D24#934544</p> |

### 3 SURVEY RESULTS

#### 3.1 Summary of Focused Vision's 2024 Biological Survey

An 87.67 ha area was surveyed (with a 500m contextual area buffer) incorporating and extending beyond the Development Envelope assessed in this CAR, consisting of a desktop study and Basic Fauna and Detailed/Targeted Flora component (Focused Vision, 2024).

The desktop study consolidated all available and relevant existing data to identify known biological features and constraints near the Survey Area, and to inform the field survey. The Detailed Flora and Vegetation Survey was conducted from 8 - 13 March 2024 with a total of three-person days, and the Basic terrestrial fauna survey was conducted from 8 - 13 March 2024 with a total field effort of 1.5 person days.

No State or Federally listed Threatened Ecological Communities or Priority Ecological Communities were recorded in the Survey Area. Four vegetation types associated with six fauna habitats (excluding Disturbed and Cleared) were mapped. Vegetation condition within the Survey Area was mapped as 'Excellent' to 'Degraded', with the majority (55.12 ha, 62.87%) in 'Excellent' condition.

A total of 137 flora species, from 84 genera and 34 families were recorded during the field assessment. The total includes 130 (94.9%) native species, and seven (5.1%) introduced (weed) species. No species listed as Threatened under the EPBC Act or BC Act were recorded during the survey. One Priority flora, *Dolichandrone filiformis* (P2), was recorded. A total of 25 *Dolichandrone filiformis* individuals were recorded within the Survey Area.

A total of 51 vertebrate fauna species were recorded during the field assessment, either from direct sightings, or evidence such as calls, scats, tracks, digging, foraging evidence, feathers, or bones. All the fauna species recorded during the field assessment are considered relatively common and widespread. Of the 51 fauna species recorded during the survey, there were 47 birds, three mammals, and one reptile. One introduced species, European Cattle (*Bos taurus*) and one native species listed as a Declared Pest (DP) species, the Agile Wallaby (*Macropus agilis*) were recorded. The Agile Wallaby is listed as a s22(2) DP animal under the BAM Act with a 'C3 Management' control category and 'Exempt' keeping category.

The post-survey occurrence conclusions determined that one species, Gouldian Finch (*Erythrura gouldiae*) likely to utilise the Survey Area as a resident and three species, Grey Falcon (*Falco hypoleucos*), Northern Quoll (*Dasyurus hallucatus*), and Northern Brushtail Possum (*Trichosurus vulpecula arnhemensis*) likely to utilise the Survey Area as a regular visitor'. It is considered that all other species, identified through the desktop assessment 'May occur' as 'vagrants', 'irregular visitors' or 'will not occur', due to the lack of suitable habitat and the population ecology of the potentially occurring significant fauna.

### 3.2 Conclusions

The key findings and conclusions arising from the flora, vegetation, fauna and habitat assessment within the Survey Area are as follows:

- No Threatened flora listed under the EPBC Act or under the BC Act were recorded.
- One Priority 2 flora species, *Dolichandrone filiformis* was recorded in one vegetation unit (CfTc).
- No DP plants or Weeds of National Significance (WoNS) were recorded within the Survey Area.
- Four intact vegetation units were defined and mapped within the 87.67 ha Survey Area, consisting of three vegetation units of low isolated tree units and one tall spare shrubland, with remaining areas disturbed or cleared for roads and infrastructure.
- The majority of the Survey Area (55.12 ha, 62.87%) is in 'Excellent' condition, with areas of 'Good' and 'Degraded' vegetation associated with historic and current areas of disturbance.
- No EPBC-listed TECs and/or State-listed PECs occur in the Survey Area
- No fauna species of conservation significance were recorded during the field assessment.
- Four significant fauna species are 'likely to occur' within or utilise the Survey Area, comprised of one 'Resident'; Gouldian Finch (*Erythrura gouldiae*) (Endangered) and three 'Regular Visitors'; Grey Falcon (*Falco hypoleucos*) (Vulnerable), Northern Quoll (*Dasyurus hallucatus*) (Endangered), and Northern Brushtail Possum (*Trichosurus vulpecula arnhemensis*) (Vulnerable).
- One introduced fauna species was recorded within the Survey Area; the European Cow (\**Bos taurus*), and one native species that has been classified as a pest, the Agile Wallaby (*Macropus agilis*) was recorded, with both species listed as DPs.
- Seven fauna habitats were recorded, described and mapped within the Survey Area.
- All seven fauna habitats are likely to be utilised by one or more significant fauna species 'likely to occur' within the Survey Area. The Low Hills habitat is likely to be utilised by all four significant fauna species.

## 4 DESKTOP ASSESSMENT OF VEGETATION

### 4.1 Desktop Vegetation Description

Table 3 and Table 4 provide details of the vegetation types and their condition within the Development Envelope and the remaining extents of these associations.

For a full description of the existing vegetation, refer to the Biological Report found at D24#934544 and relevant shapefiles at D24#934554.

Table 3. Summary of Vegetation Types within the Development Envelope.

| Vegetation Type | Mapping Unit                                                                                                                                                                                                                                                                                                                                                  | Development Envelope (ha) | Survey Area (ha) |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------------------|
| CfEc            | <i>Corymbia ?ferruginea subsp. stypophylla</i> and <i>Erythrophleum chlorostachys</i> low isolated trees over <i>Cochlospermum fraseri</i> and <i>Terminalia canescens</i> tall sparse shrubland over <i>Sorghum stipoideum</i> , <i>Sorghum bulbosum</i> and <i>Triodia bitextura</i> hummock grassland.<br><u>Condition:</u> Very Good to Good; some weeds. | 1.44                      | 31.14            |
| CfTc            | <i>Cochlospermum fraseri</i> and <i>Terminalia canescens</i> tall sparse shrubland over <i>Tephrosia sp. F Kimberley Flora</i> (B.R. Maslin 5139) open shrubland over <i>Sorghum bulbosum</i> and <i>Triodia bitextura</i> closed grassland.<br><u>Condition:</u> Very Good to Good; some weeds.                                                              | 0.04                      | 4.19             |
| MmTc            | <i>Eucalyptus ?bigalerita</i> and <i>Eucalyptus spp.</i> low isolated trees over <i>Melaleuca minutifolia</i> and <i>Terminalia canescens</i> tall sparse shrubland over <i>Themeda triandra</i> , <i>Sorghum stipoideum</i> , and <i>Eriachne spp.</i> closed grassland.<br><u>Condition:</u> Very Good to Good; some weeds.                                 | 5.19                      | 32.27            |
| TcCf            | <i>Eucalyptus pruinosa subsp. pruinosa</i> low isolated trees over <i>Terminalia canescens</i> tall sparse shrubland over <i>Chrysopogon fallax</i> and <i>Sehima nervosum</i> low closed grassland.<br><u>Condition:</u> Very Good to Good; some weeds.                                                                                                      | 0.12                      | 6.28             |
| Disturbed       | Disturbed areas of <i>Corymbia grandifolia subsp. lamprocardia</i> low isolated trees over <i>Dactyloctenium radulans</i> and <i>Eragrostis cumingii</i> low open grassland.<br><u>Condition:</u> Degraded.                                                                                                                                                   | 0.17                      | 0.61             |
| Cleared         | Cleared Areas.                                                                                                                                                                                                                                                                                                                                                | 0.08                      | 13.18            |
| Total           |                                                                                                                                                                                                                                                                                                                                                               | 7.04                      | 87.67            |

Table 4. 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) |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|--------------------------|---------------------|-------------|---------------------------------------------------------------------------|
| <b>Veg Assoc No. 814</b> described as "Hummock grasslands, low steppe woodland; silver-leaved box ( <i>Eucalyptus pruinosa</i> ) & <i>melaleuca</i> over <i>Triodia</i> " | <b>Statewide</b>                                                     | 171,121.81               | 171,114.48          | 100.00      | 16.27                                                                     |
|                                                                                                                                                                           | <b>IBRA Bioregion</b><br>Victoria Bonaparte (VIB)                    | 110,409.18               | 110,401.85          | 99.99       | 25.22                                                                     |
|                                                                                                                                                                           | <b>IBRA Sub-region</b><br>Keep (VIB01)                               | 110,409.18               | 110,401.85          | 99.99       | 25.22                                                                     |
|                                                                                                                                                                           | <b>Local Government Authority</b><br>Shire of Wyndham-East Kimberley | 171,121.81               | 171,114.48          | 100.00      | 16.27                                                                     |
| <b>Veg Assoc No. 52</b> described as "Grasslands, high grass savanna woodland; bloodwood & stringybark over upland tall grass & curly spinifex"                           | <b>Statewide</b>                                                     | 271,480.74               | 271,417.56          | 99.98       | 32.50                                                                     |
|                                                                                                                                                                           | <b>IBRA Bioregion</b><br>Victoria Bonaparte (VIB)                    | 194,527.94               | 194,464.76          | 99.97       | 39.56                                                                     |
|                                                                                                                                                                           | <b>IBRA Sub-region</b><br>Keep (VIB01)                               | 194,527.94               | 194,464.76          | 99.97       | 39.56                                                                     |
|                                                                                                                                                                           | <b>Local Government Authority</b><br>Shire of Wyndham-East Kimberley | 194,546.08               | 194,482.89          | 99.97       | 39.55                                                                     |

## 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 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.

The Development Envelope does not occur in any of the eight Biodiversity Hotspots located in Western Australia. The nearest Biodiversity Hotspot is the Northern Kimberley IBRA region, located over 36 km northwest of the Development Envelope. Current guidance on the assessment of biological diversity, described in DER (2014), includes the following five metrics as indicators of high diversity:

1. Flora and Fauna species diversity;
2. Priority and other Significant Flora;
3. Fauna Habitat & Priority Fauna;
4. Significant Ecological Communities;
5. Vegetation Condition.

#### 1. Flora and Fauna species diversity

##### Flora

A total of 137 flora species, from 84 genera and 34 families were recorded during Focused Vision's (2024) Biological Survey. Seven of these (5.1%) are introduced (weed) species. No Threatened flora taxa, range extension taxa, undescribed taxa or flora considered to potentially represent conservation significant taxa were recorded. One Priority flora species, *Dolichandrone filiformis* (Priority 2) was recorded within the Survey Area, but not the Development Envelope. Post-field assessment of likelihood of occurrence determined that no Threatened flora have the potential to occur, while three Priority species are considered 'likely to occur' and five 'may occur':

- *Fimbristylis subaristata*, listed as Priority 1 (Likely to occur);
- *Jacquemontia* sp. Keep River (J.L. Egan 5015), listed as Priority 1 (May occur);
- *Utricularia tridactyla*, listed as Priority 1 (May occur);
- *Minuria macrorhiza*, listed as Priority 2 (Likely to occur);
- *Tephrosia* sp. Kununurra (T. Handasyde TH00 250), listed as Priority 2 (May occur);
- *Dendrophthoe odontocalyx*, listed as Priority 3 (May occur);
- *Gardenia sericea*, listed as Priority 3 (May occur); and
- *Goodenia byrnesii*, listed as Priority 3 (Likely to occur).

The proposed clearing will have a maximum potential impact of 6.38% of the mapped extent of any intact vegetation type in the Survey Area (2.06 ha of MmTc). The proposed clearing will impact less than 3% of the vegetation mapped from Focused Vision's (2024) Biological Survey.

Vegetation types in the Development Envelope are likely to be common and widespread at a regional scale based on the remaining extent of pre-European vegetation as outlined in Table 4. Floristic diversity within the Development Envelope is unlikely to be high in comparison to surrounding uncleared areas both locally and regionally given the absence of conservation significant or undescribed taxa recorded, and flora comprising vegetation types that are well represented beyond the Development Envelope.

### **Fauna**

A total of 51 terrestrial vertebrate fauna species were observed or positively identified from field evidence within the Survey Area during the Focused Vision's (2024) Biological Survey. No observations of significant species or evidence of their presence was recorded during the survey. The relatively low abundance and low diversity of fauna recorded during the field assessment can be attributed to the proximity to major roads and human disturbance, the small, linear nature of the project area and the low intensity of the assessment (Basic level) (Focused Vision, 2024).

Whilst no significant fauna were recorded during the field assessment, a post-survey assessment of the nature of occurrence of significant fauna determined that nineteen species with varying potential to occur in the Survey Area. One EBPC Threatened (Endangered) species, the Gouldian Finch, is 'Likely to occur' and utilise the Survey Area as a 'resident', three species (EBPC Threatened) are 'Likely to occur' and utilise the Survey Area as 'regular visitors' and 15 'May occur' and utilise the Survey Area as an 'Irregular Visitor' or a 'Vagrant'. These species include:

#### **Resident (1)**

1. Gouldian Finch (*Erythrura gouldiae*) (P4 listing by DBCA, EN under EPBC Act)

#### **Regular Visitor (3)**

2. Grey Falcon (*Falco hypoleucos*) (VU under BC Act and EPBC Act);
3. Northern Quoll (*Dasyurus hallucatus*) (EN under BC Act and EPBC Act); and
4. Northern Brushtail Possum (*Trichosurus vulpecula arnhemensis*) (VU under BC Act and EPBC Act).

#### **Irregular Visitor (7)**

5. Red Goshawk (*Erythrotriorchis radiatus*) (VU under BC Act and EN under EPBC Act);
6. Fork-tailed Swift (*Apus pacificus*) (MI under EPBC Act);
7. Peregrine Falcon (*Falco peregrinus*) (OS under the BC Act);
8. Ghost Bat (*Macroderma gigas*) (VU under BC Act and EPBC Act);
9. Northern Short-tailed Mouse (*Leggadina lakedownensis*) (P4 listing by DBCA); and
10. Orange Leaf-nosed Bat (*Rhinonictis aurantia*) (P4 listing by DBCA).
11. Northern Leaf-nosed Bat (*Hipposideros stenotis*) (P4 listing by DBCA)

#### **Vagrant (8)**

12. Crested Shrike-tit (Northern) (*Falcunculus frontatus whitei*) (P3 listing by DBCA, VU under the EPBC Act);
13. Sharp-tailed Sandpiper (*Calidris acuminata*) (MI under BC Act and EPBC Act);
14. Red-rumped Swallow (*Cecropis daurica*) (MI under BC Act and EPBC Act);
15. Oriental Plover (*Charadrius veredus*) (MI under the BC Act and EPBC Act);
16. Barn Swallow (*Hirundo rustica*) (MI under BC Act and EPBC Act);
17. Garganey (*Spatula querquedula*) (MI under BC Act and EPBC Act);
18. Wood Sandpiper (*Tringa glareola*) (MI under BC Act and EPBC Act); and
19. Letter-Winged Kite (*Elanus scriptus*) (P4 listing by DBCA).

## 2. Priority and other Significant Flora

A desktop search of DBCA TPFL and WA Herbarium records identified 85 species of conservation significant flora within 40 km of the Development Envelope. Of these species, the following nine species were listed as either May Occur, Likely to Occur, or Observed within the Survey Area.

Three Priority 1 species:

1. *Fimbristylis subaristata* (Likely to occur) (nearest record over 2 km from the DE);
2. *Jacquemontia* sp. Keep River (J.L. Egan 5015) (May Occur) (nearest record over 24 km from the DE); and
3. *Utricularia tridactyla* (May Occur) (nearest record over 20 km from the DE).

Three Priority 2 species:

1. *Minuria macrorhiza* (Likely to occur) (nearest record over 5 km from the DE);
2. *Tephrosia* sp. Kununurra (T. Handasyde TH00 250) (May occur) (nearest record over 12 km from the DE); and
3. *Dolichandrone filiformis* (Observed) (over 200 m from the DE).

Three Priority 3 species:

1. *Dendrophthoe odontocalyx* (May occur) (nearest record over 41 km from the DE);
2. *Gardenia sericea* (May occur) (nearest record over 25 km from the DE); and
3. *Goodenia byrnesii* (Likely to occur) (nearest record over 5 km from the DE).

Of these flora species, three were considered to be likely to occur and five may occur in the Survey Area based on their distribution and habitat preferences (Focused Vision, 2024). None of these flora species were identified in the Development Envelope, and one was identified in the Survey Area, *Dolichandrone filiformis* (P2).

Focused Vision's (2024) Biological Survey was conducted during the recommended EPA (2016) season, during the report flowering period for the species, and found flora and vegetation to be in good condition. As such, conditions were likely optimal to identify these species if they were present. *Dolichandrone filiformis* was recorded over 200 m from the Development Envelope, however, none were recorded within the Development Envelope. Whilst the presence of Priority flora within the Development Envelope cannot be completely discounted, the proposed clearing of 2.06 ha represents approximately 2.3 % of the broader Survey Area within which Focused Vision (2024) considered some species 'May' or are 'Likely' to occur. None of these species are likely to be significantly impacted by the proposed clearing given the extent of habitat remaining within the Survey Area and more broadly at a local and regional scale, including the adjacent Ngamoowalem Conservation Park, spanning more than 60,000 ha.

## 3. Fauna Habitat & Priority Fauna

Focused Vision (2024) conducted a Basic Fauna Survey of the Development Envelope, including the wider Survey Area. Six fauna habitats (as summarised below in Table 5) were mapped within the Development Envelope. All fauna habitats except Disturbed are typically in 'Good' to 'Excellent' condition and would provide good quality fauna habitat, due to the presence of dense Sorghum, Chrysopogon and/or Triodia grassland understorey species.

Table 5. Fauna Habitat within the Development Envelope (DE) as mapped by Focused Vision's (2024) Biological Survey.

| Fauna Habitat Type | Mapping Unit                                                                                                                                                                                                                                                                                                                                                 | DE Extent (ha) | Survey Area (ha) |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------------|
| Drainage 1         | <i>Eucalyptus ?bigalerita</i> and <i>Eucalyptus spp.</i> low isolated trees over <i>Melaleuca minutifolia</i> and <i>Terminalia canescens</i> tall sparse shrubland over <i>Themeda triandra</i> , <i>Sorghum stipoideum</i> , and <i>Eriachne spp.</i> closed grassland.<br><u>Condition:</u> Good to Excellent (MmTc)                                      | 0.31           | 1.75             |
| Drainage 2         | <i>Corymbia ?ferruginea subsp. stypophylla</i> and <i>Erythrophleum chlorostachys</i> low isolated trees over <i>Cochlospermum fraseri</i> and <i>Terminalia canescens</i> tall sparse shrubland over <i>Sorghum stipoideum</i> , <i>Sorghum bulbosum</i> and <i>Triodia bitextura</i> hummock grassland.<br><u>Condition:</u> Very Good to Excellent (EcCf) | 0.03           | 2.84             |
| Floodplain 1       | <i>Eucalyptus pruinosa subsp. pruinosa</i> low isolated trees over <i>Terminalia canescens</i> tall sparse shrubland over <i>Chrysopogon fallax</i> and <i>Sehima nervosum</i> low closed grassland.<br><u>Condition:</u> Very Good (TcCf)                                                                                                                   | 0.12           | 6.28             |
| Floodplain 2       | <i>Eucalyptus ?bigalerita</i> and <i>Eucalyptus spp.</i> low isolated trees over <i>Melaleuca minutifolia</i> and <i>Terminalia canescens</i> tall sparse shrubland over <i>Themeda triandra</i> , <i>Sorghum stipoideum</i> , and <i>Eriachne spp.</i> closed grassland.<br><u>Condition:</u> Excellent (MmTc)                                              | 4.88           | 30.52            |
| Low Hills          | <i>Corymbia ?ferruginea subsp. stypophylla</i> and <i>Erythrophleum chlorostachys</i> low isolated trees over <i>Cochlospermum fraseri</i> and <i>Terminalia canescens</i> tall sparse shrubland over <i>Sorghum stipoideum</i> , <i>Sorghum bulbosum</i> and <i>Triodia bitextura</i> hommock grassland.<br><u>Condition:</u> Excellent (TcTe)              | 1.41           | 28.30            |
| Rocky Hills        | <i>Cochlospermum fraseri</i> and <i>Terminalia canescens</i> tall sparse shrubland over <i>Tephrosia sp. F Kimberley Flora</i> (B.R. Maslin 5139) open shrubland over <i>Sorghum bulbosum</i> and <i>Triodia bitextura</i> closed grassland.<br><u>Condition:</u> Excellent (CfTc)                                                                           | 0.04           | 4.19             |
| Disturbed          | Disturbed areas of <i>Corymbia grandifolia subsp. lamprocardia</i> low isolated trees over <i>Dactyloctenium radulans</i> and <i>Eragrostis cumingii</i> low open grassland<br><u>Condition:</u> Degraded.                                                                                                                                                   | 0.17           | 0.61             |
| <b>Cleared</b>     | Cleared areas.                                                                                                                                                                                                                                                                                                                                               | 0.08           | 13.18            |
| <b>Total</b>       |                                                                                                                                                                                                                                                                                                                                                              | <b>7.04 ha</b> | <b>87.67 ha</b>  |

These fauna habitats are likely widespread at a local and regional scale, with over 99% pre-European vegetation remaining at all scales, and less than 3% (up to 2.06 ha) of fauna habitat mapped by Focused Vision (2024) proposed to be cleared. Focused Vision (2024) noted that a review of aerial imagery and soil systems indicates that fauna habitats within the Development Envelope extend beyond the Survey Area and into the contextual area and beyond. Therefore, fauna habitats in the Development Envelope are unlikely to comprise a high level of biodiversity in comparison to surrounding uncleared areas both locally and regionally. Furthermore, habitat proposed to be cleared adjacent to the highway is unlikely to be significant for these species due to the frequent disturbance of vehicles and associated edge effects.

Further assessment of the significance of fauna habitat is provided in Clearing Principle (b).

#### 4. Significant Ecological Communities

No Threatened or Priority Ecological Communities (TECs/PECs) listed under the EPBC Act or BC Act were recorded by Focused Vision (2024) from within the Development Envelope or the Survey Area. The nearest PEC is the Kimberley Vegetation Association 918 which is over 5.5 km southeast of the Development Envelope, and the nearest TEC is the North Kimberley mounds which are over 219 km west.

Focused Vision (2024) noted that none of the vegetation associations defined by Beard (1975, 1990) or Shepherd et al. (2002) for the Survey Area (including Development Envelope) have restricted regional representation or distribution. Similarly, none of the recorded vegetation units occur as small, isolated communities and all extend beyond the boundary of the Survey Area in multiple locations and are not considered to be limited in their local extent or distribution.

No significant Ecological Communities will be impacted by the proposed clearing.

#### 5. Vegetation Condition

Table 6. Vegetation Condition within the Development Envelope and Survey Area as mapped by Focused Vision (2024).

| Vegetation Condition | Survey Area (ha)<br>(%)   | DE (ha)<br>(%)             |
|----------------------|---------------------------|----------------------------|
| Excellent            | 5.51<br>(78.27%)          | 55.12<br>(62.88%)          |
| Very Good            | 0.23<br>(3.27%)           | 15.79<br>(18.01%)          |
| Good                 | 1.04<br>(14.77%)          | 2.56<br>(2.92%)            |
| Degraded             | 0.17<br>(2.41%)           | 1.02<br>(1.16%)            |
| Cleared              | 0.08<br>(1.14%)           | 13.18<br>(15.03%)          |
| <b>Total</b>         | <b>7.04 ha<br/>(100%)</b> | <b>87.67 ha<br/>(100%)</b> |

DE\* = Development Envelope

The Development Envelope predominantly consists of vegetation mapped as Excellent (5.51 ha, 78.27%), followed by Good (1.04 ha, 14.77%), and Very Good (0.23 ha, 3.27%). However, the maximum potential impact on vegetation mapped in Excellent condition is 3.74% (2.06 ha). The availability of high-quality vegetation is unlikely to be significantly impacted by the proposed clearing, with over 96% of Excellent vegetation remaining, and this high-quality vegetation is likely to extend beyond the Survey Area, both locally and regionally.

No significant impact on the availability of quality vegetation is anticipated from 2.06 ha of roadside clearing.

#### Summary

The Development Envelope is not representative of any TEC or PEC, does not contain any known conservation significant flora, does not contain critical fauna habitat, is unlikely to significantly impact conservation significant fauna, and will impact an insignificant amount of vegetation in Excellent condition. The Development Envelope is unlikely to comprise a high level of biodiversity based on the absence of key indicators.

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

### Methodology

- Focused Vision (2024)
- BoM (2025)
- DCCEEW (2024)
- DER (2014)
- Government GIS Shapefiles:
  - DBCA Threatened and Priority Ecological Community database search (Accessed December 2024)
  - DBCA Threatened and Priority flora database search (Accessed December 2024)
  - Bush Forever (Region Scheme - Special Areas) (Accessed December 2024)

## (b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna.

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

Focused Vision's (2024) Biological survey mapped six fauna habitat types within the Development Envelope (excluding Disturbed and Cleared). The fauna habitats identified within the Development Envelope are detailed in Table 5.

These fauna habitats are likely to be common and widespread at a local and regional scale, with over 99% pre-European vegetation remaining at all scales, and less than 3% (up to 2.06 ha) of fauna habitat mapped by Focused Vision (2024) proposed for clearing. Therefore, fauna habitats present in the Development Envelope are unlikely to be necessary for the maintenance of a significant habitat for fauna in comparison to surrounding vegetation which is widespread both locally and regionally. Furthermore, habitat proposed to be cleared adjacent to the highway is unlikely to be significant for these species due to the frequent disturbance by vehicles and associated edge effects.

A desktop search of DBCA TPFA records, PMST data, and ALA records within the Study Area (40 km buffer) (Figure 7) identified 74 conservation significant fauna. After conducting the field component of the survey, Focused Vision (2024) identified 19 species that had varying potential to occur within the Development Envelope. Fifteen of these species were assessed as May Occur unpredictably and visits may be up to decades apart. Due to the infrequent utilisation of these fifteen vagrant and irregular visitor species, no significant impact is anticipated due to the low significance of habitat within the Development Envelope. The remaining four species consist of one "Resident" species (Likely to Occur) and three "Regular Visitors". The significance of fauna habitat within the Development Envelope for these species is further discussed below:

#### **Gouldian Finch (*Erythrura gouldiae*) (State Listing - P4, EPBC Listing - EN) – Likely to Occur**

The Gouldian Finch is distributed throughout northern Australia, occurring within the Kimberley region of Western Australia from as far west as Derby. This species utilises small patches of open

woodland areas during their breeding period (April-July), nesting in hollow-bearing trees and congregates around nearby waterholes and springs. The Gouldian Finch feeds on grass seeds, particularly species of *Sorghum* during the dry season and *Chrysopogon fallax* during the wet season (Dostine and Franklin 2002). These tussock grasslands are common throughout the Kimberley region (Focused Vision, 2024). Outside of the breeding period the species often flocks to follow grass seed resources across the region (TSSC, 2016).

The species was not observed by Focused Vision (2024) and the nearest observation of the species was made in 2017, 1.2 km east of the Development Envelope.

Focused Vision (2024) mapped approximately 73.88 ha of foraging habitat within the Survey Area and 69.69 ha likely to be utilised as a resident for breeding as well as a food source. The proposed clearing (2.06 ha) represents less than 3 percent of the potential breeding and foraging habitat available within the Survey Area and is therefore unlikely to significantly impact the availability of breeding or foraging habitat in a local or regional context, noting over 99% of the surrounding Kimberley landscape remains uncleared. The proposed clearing is unlikely to significantly impact the species, with key threatening processes for the Gouldian Finch operating at a landscape scale, including altered fire regimes and grazing from introduced herbivores affecting the supply of seed as a food source (TSSC, 2016).

**Grey Falcon** (*Falco hypoleucos*) (VU under the BC Act and EPBC Act) **Regular Visitor**

The Grey Falcon is distributed throughout inland Australia at low densities, occurring within the Kimberley region of Western Australia from as far west as Broome. This species is mainly found in arid and semi-arid Australia where annual rainfall is less than 500 mm, except when wet years are followed by drought, species may become marginally more widespread (TSSC, 2020). The nearest observation of the species is over 36 km southwest of the Development Envelope. Focused Vision (2024) concluded the species is likely to visit all fauna habitats within the Survey Area. Grey Falcons typically nest in the tallest trees along watercourses. Given the absence of watercourses within the Development Envelope, the proposed clearing is unlikely to impact nesting habitat for the Grey Falcon. Due to the species' widespread distribution, broad use of habitat, and widespread extent of habitats mapped in the Survey Area, habitat within the Development Envelope is not significant for this species.

**Northern Quoll** (*Dasyurus hallucatus*) (EN under the BC Act and EPBC Act) **Regular Visitor**

The Northern Quoll is distributed along the coastline of the northern portion of Australia, occurring within the Kimberley region of Western Australia from as far west as Derby. This species is mainly found in savanna landscapes containing rocky escarpments, open forest and open woodland (TSSC, 2005). This species is a solitary carnivorous marsupial that makes its dens in rock crevices, tree holes or occasionally termite mounds and typically occupies home ranges of approximately 35 ha for females and 150 ha for males (TSSC, 2005). The nearest observation of the species is over 30 km from the Development Envelope.

Whilst the Development Envelope may provide some suitable habitat, this is unlikely to represent critical habitat for the species as there were no recorded sightings or evidence of Quolls during the survey, the distance to nearest observation, fauna habitats not being unique to the Development Envelope; and more suitable habitat being broadly available across the region. Furthermore, only 1.41 ha of suitable habitat, Low Hills, was mapped within the

Development Envelope which represents approximately 4.5% of the 31.14 ha of suitable habitat mapped in the Survey Area (Focused Vision, 2024).

Similar, if not higher quality habitat is likely to be available in the local area and in the adjacent Ngamoowalem Conservation Park, with Focused Vision (2024) noting that a review of aerial imagery indicates that the Low Hills habitat extends beyond the Survey Area to the north, south and east.

**Northern Brushtail Possum** (*Trichosurus vulpecula arnhemensis*) (VU under the BC Act and EPBC Act) **Regular Visitor**

Whilst the Development Envelope may provide some suitable habitat, the Northern Brushtail Possum, would not rely solely on this habitat based on no recorded sightings during the survey, the distance to nearest observations (over 291 km), the fauna habitat not being unique to the Development Envelope and more suitable habitat being broadly available across the region. Similar, if not higher quality habitat is available in the local area and in the adjacent DBCA reserve, the Ngamoowalem Conservation Park. Suitable habitat is not restricted to the Development Envelope, with approximately 69.69 ha of suitable habitat mapped in the Survey Area (Focused Vision, 2024). The proposed clearing of 2.06 ha will not significantly reduce the availability of fauna habitat for this species in the Survey Area or Local Area.

In summary, the fauna habitats present in the Development Envelope are well represented within the broader Survey Area, with less than 3% (up to 2.06 ha) of fauna habitat mapped by Focused Vision (2024) proposed to be cleared. Beyond the Survey Area, habitats are also likely to be common and widespread at a local and regional scale, with over 99% pre-European vegetation remaining at all scales and analysis of aerial imagery by Focused Vision indicating habitats extend well beyond the Survey Area. proposed to be cleared.

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

### Methodology

- DCCEEW (2024)
- Dostine and Franklin (2002)
- Focused Vision (2024)
- TSSC (2005)
- TSSC (2016)
- TSSC (2020)
- Government GIS Shapefiles:
  - DBCA Threatened and Priority fauna database search (Accessed December 2024)
  - Ecological Linkages (Accessed December 2024)

**(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.****Proposed clearing is not at variance to this Principle.**

Desktop database searches identified no known records of Threatened flora within a 40 km radius of the Development Envelope.

Focused Vision (2024) did not record any Threatened flora taxa from the Development Envelope or the Survey Area and none are considered likely to occur.

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

**Methodology**

- Focused Vision (2024)
- Government GIS shapefiles:
  - DBCA Threatened flora database search (December 2024)

**(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.**

Neither the desktop study nor Focused Vision's Biological Survey identified any TECs in the Survey Area or within 40 km of the Development Envelope (Study Area)(Figure 7).

Based on the above, the native vegetation proposed for clearing does not comprise the whole or a part of, and is not necessary for the maintenance of a TEC.

The proposed clearing is not at variance to this Principle.

**Methodology**

- Focused Vision (2024)
- Government GIS shapefiles:
  - DBCA Threatened Ecological Community database search (December 2024)

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

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

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

Vegetation within the Development Envelope is broadly mapped as pre-European Vegetation Associations 814 and 52 (as seen in Table 4), both of which have over 99% of their pre-European extent remaining (Government of Western Australia, 2019). The proposal is not located in an area that has been extensively cleared and the vegetation proposed for clearing is not significant as a remnant.

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

**Methodology**

- Aerial photography
- Commonwealth of Australia (2001)
- Focused Vision (2024)
- Government GIS shapefiles:
  - Pre-European vegetation (Accessed December 2024)
- Government of Western Australia (2019)

**(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.**

No watercourses, wetlands or riparian vegetation is present within the Development Envelope (Focused Vision, 2024; GIS databases). The nearest watercourses are two minor non-perennial watercourses, located approximately 30 m and 100 m from the Development Envelope (refer to Figures 1 – 6). The loss of a small amount of vegetation growing immediately adjacent to the existing roads and rest areas will not result in a loss of wetland values or functions.

According to the Groundwater Dependent Ecosystems (GDE) Atlas, no potential GDEs are present within the Development Envelope or larger Focused Vision Survey Area (Focused Vision, 2024).

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

**Methodology**

- Focused Vision (2024)
- Government GIS shapefiles:
  - Ramsar Sites (Accessed December 2024)
  - Directory of Important Wetlands in Australia – Western Australia (Accessed December 2024)
  - WWYS Geoscience Australia Regional Surface Hydrology Lines (Accessed December 2024)

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

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

The Development Envelope intersects one Soil Landscape System (Payne and Schoknecht 2011); the Cockburn System (316Co). This system is characterised by low hills and undulating plains on shale supporting curly spinifex grasslands or paperbark sparse low woodlands over curly spinifex. This Land system is not usually prone to degradation or erosion, but control of grazing pressure and frequency of burning is desirable to minimise potential degradation. The proposed clearing will not alter existing grazing or fire regimes.

The CSIRO Acid Sulfate Soils risk mapping indicates that acid sulfate soils have an extremely low probability of occurring in the Development Envelope. The proposed clearing is unlikely to cause land degradation associated with acid sulfate soils.

Given the Soil Landscape System in the Development Envelope has a low susceptibility to erosion, and noting the small extent of clearing proposed in the context of the largely uncleared surrounding landscape, the proposed clearing is unlikely to cause appreciable land degradation.

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

**Methodology**

- Payne and Schoknecht (2011)
- Government GIS Shapefiles:
  - Acid Sulfate Soil Risk Map (Accessed December 2024)

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

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

The Development Envelope is entirely confined to the road reserve, which abuts the Ngamoowalem Conservation Park (R49678). The Ngamoowalem Conservation Park is a conservation area for the purpose of conservation and traditional aboriginal uses as a Section 5(1)(h) Reserve under the CALM Act. This conservation park covers more than 60,000 hectares. All proposed clearing will be located within the road reserve and a buffer of at least 50 metres exists between the Development Envelope and conservation park boundary. As such, no direct or indirect impact to the environmental values of Ngamoowalem Conservation Park are anticipated.

No other conservation areas or Bush Forever Sites are located within 100 metres of the Development Envelope. The nearest:

- Environmentally Sensitive Area is over 10.9 km northwest of the Development Envelope around the Parry Lagoons Nature Reserve.
- Bush Forever site is over 2,100 km southwest of the Development Envelope.

The proposed clearing will not impact any buffers, ecological linkages or environmental values of any conservation areas.

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

**Methodology**

- Government GIS Shapefiles:
  - DBCA Legislated Lands and Waters (Accessed December 2024)
  - DBCA Lands of Interest (Accessed December 2024)
  - Ramsar Sites (Accessed December 2024)
  - Directory of Important Wetlands in Australia – Western Australia (Accessed December 2024)

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

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

The Development Envelope is not located within or adjacent to a Public Drinking Water Source Area or Clearing Control Catchment (GIS databases). The Development Envelope is located in the Canning-Kimberley Groundwater Area and Ord River and Tributaries Surface Water Area, both proclaimed under the RIWI Act.

No mapped watercourses (WWYS Geoscience Australia Regional Surface Hydrology Lines) intersect the Development Envelope. The nearest watercourses are two minor, non-perennial watercourses located approximately 30 m and 100 m from the Development Envelope. Minor roadside drainage modifications will occur to accommodate the proposed road upgrades associated with the vegetation clearing. The proposed linear roadside clearing of 2.06 ha is unlikely to cause any deterioration in the quality of surface or groundwater given the local catchment is largely uncleared and works are scheduled to occur during the dry season. Furthermore, no known riparian or groundwater-dependent vegetation (GDV) is proposed to be cleared (Focused Vision, 2024).

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

**Methodology**

- Focused Vision (2024)
- Government GIS Shapefiles:
  - RIWI Act, Surface Water Areas and Irrigation Districts (Accessed December 2024)
  - CAWSA Part 2A Clearing Control Catchments (Accessed December 2024)
  - RIWI Act, Groundwater Areas (Accessed December 2024)
  - Public Drinking Water Source Areas (Accessed December 2024)
  - WWYS Geoscience Australia Regional Surface Hydrology Lines (Accessed December 2024)

**(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.**

The subregional climate is described as dry winter and hot semi-arid summer with a median annual rainfall of 809.9 mm (Kingston Rest (Station Number 2060) (BoM, 2025). Extreme weather events are a significant component of the Kimberley climate. Tropical cyclones and tropical storms can bring heavy and sustained rainfall, particularly in the months leading up to and during the wet season. It is common for a large proportion of the region's rainfall to be recorded in one single event, leading to extensive flooding of rivers, creeks and roadways.

The proposed clearing will take place in the dry season, reducing the potential escalation of flooding, waterlogging or erosion. No changes to the existing levels of natural flooding are anticipated given the minor extent of clearing proposed. As noted above, climatic conditions are the main factor influencing flooding and the small amount of proposed clearing will have no measurable influence on flood regimes in the area.

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

**Methodology**

- BoM ( 2025)
- Government GIS Shapefiles:
  - Soil Mapping (Accessed December 2024)
  - Contours (Accessed January 2025)

## **6 REHABILITATION, REVEGETATION AND OFFSETS**

### **6.1 Revegetation and Rehabilitation**

No temporary clearing will be undertaken as part of the Proposal activities and therefore no revegetation or rehabilitation will be conducted under CPS 818.

## 7 COMPLIANCE WITH CPS 818

Table 7 below 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 <u>or</u> (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 <u>and</u> (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.                                                                                                                                                                                               |
| <b>5a.</b> Proposal is within a Region that: <ul style="list-style-type: none"> <li>• has rainfall greater than 400mm; and,</li> <li>• is South of the 26<sup>th</sup> parallel; and,</li> <li>• works are necessary in 'Other than dry conditions'; and,</li> <li>• works have potential for <b>uninfested</b> areas to be impacted.</li> </ul> | No           | Standard Vehicle and Plant management actions from Annexure 204B (TABLE 204B.9.1), <u>Hygiene Checklists (D17#859669)</u> and <u>Vehicle, Plant and Machinery Hygiene Register Template (D23#179551)</u> will be applied. |
| <b>5b.</b> Do the proposed clearing 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.                                                                                                                                                                                               |

| 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.                         | <b>No</b>    | No further action required.                                                                                                                                           |
| 8. Did an environmental specialist conduct the survey or field assessment?                                                                                             | <b>Yes</b>   | 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? | <b>Yes</b>   | The Environmental Specialist preparing the Assessment Report and any other associated documentation was suitably qualified and had more than three years' experience. |

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## Appendix 1: DBCA Threatened Flora and Fauna Database Searches

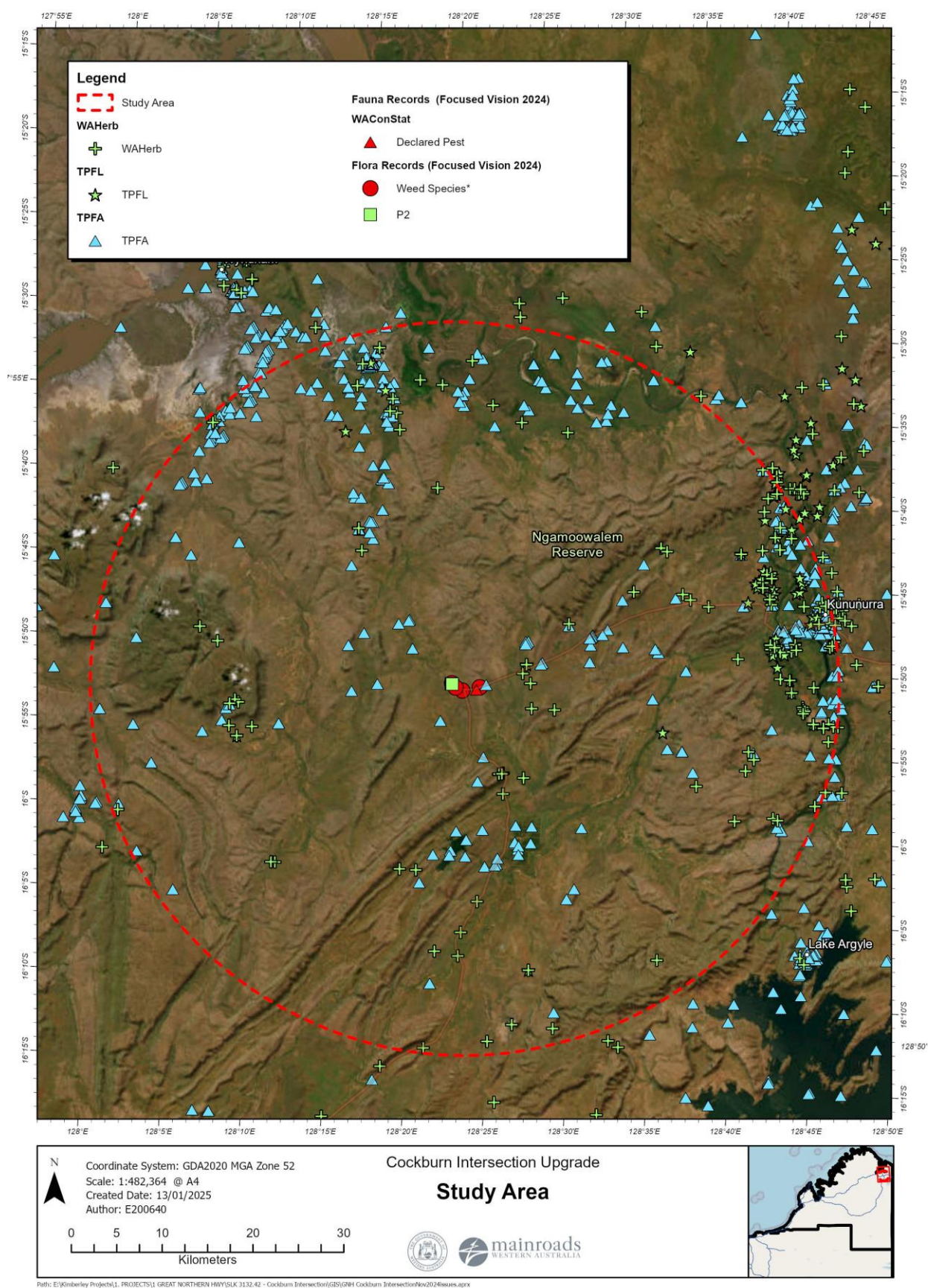


Figure 7. Study Area Map: Observations of conservation significant species from WA Herbarium and DBCA datasets.