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Clearing Assessment Report CPS 818

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Kununurra Road Train Assembly Area
Ivanhoe Road (0040183)
Kimberley
3174

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1 PROPOSAL

1.1 Purpose and Justification

Main Roads Western Australia proposes to install a formal Road Train Assembly Area (RTAA) within the road reserve on Ivanhoe Road in Kununurra, to provide a safe and suitable truck parking facility for heavy vehicles. The RTAA will provide a safe location in Kununurra where road trains park, rest, and break down to distribute freight to Kununurra and surrounding townsites.

The site on Ivanhoe Road SLK 0.3-0.8 has been identified as a suitable site as it is conveniently located, currently used by most truck operators, is located adjacent to a 24-hr fuel supplier and is easily accessible from Victoria Highway. This section of Ivanhoe Road is also part of the future Kununurra Heavy Vehicle Route and will become the main road/highway.

1.1.1 Main Roads Approach to Road Safety and the Environment

Main Roads is committed to minimising the environmental impacts of all of its activities and manages the State road network to achieve balanced economic, social, safety and environmental benefits for the community. Main Roads recognises that Western Australia's environment is significant from a global perspective and the unique conservation values that are contained within its road reserve. Main Roads road network often adjoins natural areas and, in some locations, the reserve itself hosts remnant vegetation with high environmental values. Although the reserves were not established for this purpose, Main Roads recognises that it has a responsibility to conserve the environmental values that occur within the State's road network and minimise the impact its proposals have on the environment. In addition to providing a safe and efficient road network for all people using the roads under its control, Main Roads is also committed to protecting and enhancing the natural environment.

In accordance with National and State Government road safety policies, Main Roads is also committed to substantially reducing road trauma on the road network through Safe System principles. The Safe System approach acknowledges that more than two thirds of all serious crashes are due to human error rather than deliberate risk taking (e.g. speeding or drink driving) and seeks to improve behaviour through education and enforcement while managing the safety of vehicles, speeds and the road and road infrastructure. It is shown that improving sub-optimal road formation will substantially reduce the likelihood and severity of road crashes. For example, according to the Road Safety Management Guideline, increasing the sealed shoulder from 0.5 m to 2 m will reduce Killed and Seriously Injured numbers by more than 50%.

As the statutory authority responsible for providing and managing a safe and efficient main road network in Western Australia, Main Roads focuses on improving road safety by thoroughly considering all environmental, economic and community benefits and impacts. It operates on a hierarchy of avoiding, minimising, reducing and then, if required, offsetting our environmental impacts. This has been achieved through changes in proposal scope and design. Main Roads regularly reduces its clearing footprint by restricting earthworks limits for proposals, steepening batters, installing barriers, establishing borrow pits in cleared paddocks and avoiding temporary clearing for storage, stockpiles and turn around bays to avoid and minimise its impacts.

Further details on measures to avoid, minimise and reduce are provided in Section 1.5.

1.2 Proposal Scope

Main Roads proposed to construct a Road Train Assembly Area on Ivanhoe Road in Kununurra. The scope of work includes:

- the construction of access roads and a Road Train Assembly Area that consists of eight heavy vehicle parking bays and a dolly storage area;
- widening works on the southbound lane of Ivanhoe Road to accommodate right-turning vehicles; and
- the addition of a left-turn slip lane for vehicles travelling northbound on Ivanhoe Road.

1.3 Proposal Location

The Native Vegetation Clearing Area is located on Ivanhoe Road (0040183), Kununurra, SLK 0.3 – 0.8, within the Shire of East Kimberley Wyndham as shown in Figure 1. The central coordinate of the proposal is 128.7313888°E, 15.7803105°S.

1.4 Clearing Details

Proposed Clearing to be undertaken using CPS 818: 1.04 ha

Areas of Native Vegetation Clearing: The areas of native vegetation to be cleared are shown in Figure 1.

Type of Native Vegetation: Clearing of 1.04 ha of native vegetation surrounding the existing road infrastructure consists of the following vegetation types:

- AiAl: **Azadirachta indica* and *Albizia lebbek* closed forest.
- AgLcTt: *Eucalyptus* sp. and *Adansonia gregorii* open woodland over *Themeda triandra* and *Heteropogon contortus* closed grassland;
- Roadside/Verge: Isolated *Eucalyptus* sp.

Vegetation to be cleared under this Proposal is 1.04 ha and shown in Figure 1.



Figure 1. Native Vegetation Clearing Area for the Kununurra Road Train Assembly Area.

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 formalise a Road Train Assembly Area in Kununurra, 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.
- Upgrading other alternative locations that are less vegetated and environmentally constrained, however these are not suitable due to longer travel times, sensitive local receptors (such as residences) or other planning issues.
- 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
Use of degraded and existing cleared areas adjacent to existing infrastructure	The location of the Road Train Assembly Area (RTAA) was assessed against several criteria, including the need to be close to the Kununurra townsite, on or near Victoria Highway, and in an area where existing disturbance could be maximised. The elected location fulfils these criteria and will be on a direct route for road trains once the Kununurra Heavy Vehicle Route Upgrades are complete. By formalising the RTAA in this location the native vegetation clearing has maximised the use of existing cleared areas and avoided unnecessary clearing of vegetation in Good condition.
Drainage modification	Drainage modification is required for the construction of the Road Train Assembly Area as a greater footprint is required to accommodate the increased parking capacity. Drains have been designed to wrap around the new parking bay and tie into existing drainage channels for Ivanhoe Road, reducing the amount of vegetation clearing required.

1.7 Approved Policies and Planning Instruments

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

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

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

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

Environmental Protection Policies:

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

Other relevant policies and guidance documents:

- Environmental Offsets Policy (Government of Western Australia, 2011)
- A guide to the assessment of applications to clear native vegetation (Government of WA, December 2014)
- Procedure: Native vegetation clearing permits (Government of WA, October 2019)
- Environmental Offsets Guidelines (Government of Western Australia, 2014)
- Technical guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA, 2016)
- Technical guidance – Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment (EPA, 2020)
- Approved conservation advice under section 266B of the EPBC Act for threatened flora/fauna/vegetation communities.

2 SCOPE AND METHODOLOGY 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.
- **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 typically larger than the Native Vegetation Clearing Area.

2.2 Desktop Assessment

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

GIS layer viewing and mapping is done using ArcPro and 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 7.

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); and
- Basic 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 Section 3.1.

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

Consultant & Survey Name	Survey Details
Focused Vision (2024) Kununurra Road Train Assembly Area	Survey Area: Survey area comprised approximately 27.96 ha along Ivanhoe Road in the Kununurra Townsite. An additional 400 m of buffer for Contextual Mapping was also completed. Type: A Basic Fauna and Detailed/Targeted Flora Survey of the proposed Kununurra RTAA construction area on Ivanhoe Road. The survey identified and mapped the dominant vegetation units, assessed vegetation condition and completed opportunistic searches for conservation significant ecological communities and flora and fauna taxa. Timing: Flora and Fauna Fieldwork conducted March 2024 Survey Results Shapefile TRIM Ref: D24#934632 Document TRIM Ref: D24#934627

3 SURVEY RESULTS

3.1 Summary of Flora and Vegetation Surveys

A 27.96ha area was surveyed incorporating and extending to the north, south and west of the Native Vegetation Clearing Area, consisting of a Basic Fauna and Detailed/Targeted Flora component (Focused Vision, 2024). The Survey was conducted in March 2024, and conditions were optimal for the identification of flowering flora, and annual/ephemeral species. A total of 82 flora species, from 63 genera and 29 families were recorded which included 66 (80.49%) native flora species. Vegetation types identified were not found to be representative of a PEC, TEC, or ESA.

The Focused Vision (2024) survey area consists of four vegetation types described as:

- AiAl: **Azadirachta indica* and *Albizia lebbbeck* closed forest.
- AgLcTt: *Eucalyptus* sp. and *Adansonia gregorii* open woodland over *Themeda triandra* and *Heteropogon contortus* closed grassland.
- AiPfP: **Azadirachta indica*, over **Passiflora foetida* low shrubland over Poaceae sp. tussock grassland.
- Roadside/Verge: Isolated *Eucalyptus* sp. over exotic closed grasses.

The vegetation condition within the survey area consists of Good (25%), Degraded (12%) and Completely Degraded (46%) vegetation, with the remainder of the survey area cleared. The Native Vegetation Clearing Area (Figure 1) will impact two naturally occurring native vegetation types - AiAl – Forest, AgLcTt - Exotic Woodland, and isolated *Eucalyptus* sp. on the roadside/verge.

Further information and a summary of the clearing area is provided in Section 4.

4 VEGETATION DETAILS

4.1 Proposal Site Vegetation Description

Three vegetation types are present within the Native Vegetation Clearing Area and are mapped as Good to Degraded by Focused Vision in their 2024 Biological Survey. This condition of vegetation in the Native Vegetation Clearing Area has been impacted by the high presence of weeds and disturbance from illegal dumping of waste.

Table 3 and Table 4 provide details of the vegetation types and their condition and the remaining extents of the represented vegetation association.

Table 3. Summary of Vegetation Types within the Native Vegetation Clearing Area.

Vegetation Type	Extent within Native Vegetation Clearing Area (ha)	Total Extent Mapped in Survey Area (ha)	Vegetation Description
AiAI Forest	0.01	4.78	<i>*Azadirachta indica</i> and <i>Albizia lebbeck</i> closed forest over <i>Atalaya variifolia</i> and <i>Lysiphyllum cunninghamii</i> isolated shrubs over <i>*Distimake aegyptius</i> and <i>Commelina ensifolia</i> isolated herbs
AgLcTt Exotic Woodland	0.90	10.49	<i>Adansonia gregorii</i> , <i>*Azadirachta indica</i> and <i>Albizia lebbeck</i> low woodland over FABACEAE sp., <i>Lysiphyllum cunninghamii</i> and <i>*Grewia asiatica</i> tall sparse shrubland over <i>Themeda triandra</i> , <i>*Bothriochloa pertusa</i> and <i>Urochloa pubigera</i> tussock grassland.
Roadside/Verge	0.12	5.59	Isolated <i>Eucalyptus</i> sp.

The native vegetation types present within the Native Vegetation Clearing Area represent one pre-European Vegetation Association, Victoria Bonaparte 59. Over 86% of this vegetation association remains at all scales, and over 10% of this current extent occurs in DBCA-managed land as summarised in Table 4 below.

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)
Veg Assoc No. 59	Statewide Veg. Assoc. 59	139,451.36	121,191.90	86.91	10.57
	IBRA Bioregion <i>Victoria Bonaparte</i>	138,636.87	120,695.78	87.06	10.36
	IBRA Sub-region <i>VIB01 - Keep</i>	138,636.87	120,695.78	87.06	10.36

Pre-European Vegetation Association	Scale	Pre-European Extent (ha)	Current Extent (ha)	% Remaining	% Current Extent in DBCA Managed Land (proportion of pre-European Extent)
	Local Government Authority <i>Shire of Wyndham-East Kimberley</i>	139,155.11	121,178.14	87.08	10.59

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 at, or 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 proposal falls within the Victoria Bonaparte Keep bioregion of the Interim Biogeographic Regionalisation for Australia, of which over 86% of pre-European extent remains at all scales (Government of Western Australia, 2018).

The proposed clearing of 1.04ha of this vegetation association will not significantly impact on the availability of vegetation locally or regionally.

The Native Vegetation Clearing Area does not occur in any of the eight Biodiversity Hotspots located in WA. The nearest Biodiversity Hotspot is the Northern Kimberley IBRA region, located over 68 km northwest of the Native Vegetation Clearing Area.

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

A total of 82 flora species, from 63 genera and 29 families were recorded during Focused Vision's 2024 Biological Survey. This included 66 (80.49%) native flora species. No conservation-significant flora were identified within the Native Vegetation Clearing Area. The Majority of the Native

Vegetation Clearing area is mapped within an Exotic Woodland (AiPFP), which largely consists of exotic weed species. The proportion of endemic species within the Native Vegetation Clearing Area is already low due to the large proportion of weeds in the mapped Exotic Woodland; but is further reduced by the displacement of natives by encroaching exotics into the adjacent mapped Forest (AiAI) vegetation type.

Flora species within the Native Vegetation Clearing Area are common within the local area and are widely available across the region (Focused Vision, 2024), therefore, do not represent rich biodiversity or endemism. Vegetation is impacted by large proportions of weeds present at all canopy levels in the Native Vegetation Clearing Area, reducing the condition and value of the vegetation.

During Focused Vision’s 2024 Biological Survey a total of 47 vertebrate fauna species were recorded during the field assessment, either from direct sightings, or evidence such as calls, scats, tracks, diggings, foraging evidence, feathers, or bones. This included two amphibians, 39 birds, three mammals and three reptiles (which includes three Declared Pest species).

No fauna species of conservation significance were recorded within the Survey Area during the field assessment. All the fauna species recorded during the field survey are considered relatively common and widespread (Focused Vision 2024). The majority of fauna habitat in this area is in Completely Degraded condition as a result of historic activities associated with the Kununurra Arboretum and planting of non-endemic vegetation. The poor-quality vegetation and proximity to residential areas provides little value for native fauna and has a lower capacity to support most fauna species, compared to nearby intact and undisturbed habitats (Focused Vision 2024).

As such, the Native Vegetation Clearing Area does not support a large flora, or fauna species diversity.

2. Priority and other Significant Flora

The Focused Vision 2024 survey did not identify any Threatened, Priority or other significant flora species within the Native Vegetation Clearing Area.

A post-survey likelihood of occurrence assessment of the Survey Area identified nine priority species. Within the Survey Area, species was observed, two are Likely to Occur, and six May Occur. These species are listed below.

Scientific Name	Species Status	Likelihood
<i>Goodenia brachypoda</i>	(P1)	Occur
<i>Typhonium</i> sp. Kununurra (A.N. Start ANS 1467)	(EN)	Likely
<i>Goodenia malvina</i>	(P1)	Likely
<i>Hullisia argillicola</i>	(P1)	May Occur
<i>Hibiscus</i> sp. Kununurra (K.F. Kenneally 1940)	(P1)	May Occur
<i>Euphorbia stevenii</i>	(P3)	May Occur
<i>Goodenia purpurascens</i>	(P3)	May Occur
<i>Synostemon hubbardiid</i>	(P3)	May Occur

Utricularia muelleri

(P3)

May Occur

However, all taxa are unlikely to occur due to the degraded nature of the vegetation in the Native Vegetation Clearing Area, the high presence of weed species (19% weed species), and the absence of records during field surveys conducted (during the appropriate season with sufficient search effort). As such, no impact on any of the above nine species is anticipated.

3. Fauna Habitat & Priority Fauna

Three fauna habitats occur within the Native Vegetation Clearing Area. These include two Exotic Woodlands and a Tussock Grassland which are summarised in Table 5 below.

Table 5. Fauna Habitat within Native Vegetation Clearing Area.

Fauna Habitat	Survey Area (ha)	Vegetation Clearing (ha)	Description
Tussock Grassland (Completely Degraded)	5.59	0.12	Isolated <i>Eucalyptus</i> sp. Veg Unit: Roadside/Verge
Exotic Forest (Good-Degraded)	4.78	0.90	<i>Azadirachta indica</i> and <i>*Albizia lebbbeck</i> closed forest over <i>Atalaya variifolia</i> and <i>Lysiphyllum cunninghamii</i> isolated shrubs over <i>*Distimake aegyptius</i> and <i>Commelina ensifolia</i> isolated herbs. Veg Unit: AiAl
Exotic Woodland (Completely Degraded)	9.67	0.01	<i>*Azadirachta indica</i> , <i>*Albizia lebbbeck</i> and <i>Lysiphyllum cunninghamii</i> low closed woodland over <i>Themeda triandra</i> , <i>*Bothriochloa pertusa</i> and Poaceae sp. tussock grassland. Veg Unit: AgLcTt, AiAl

Fauna habitat in the Native Vegetation Clearing Area is subject to ongoing disturbance from vehicles and illegal dumping of waste and supports a high weed load. The Native Vegetation Clearing Area is located in close proximity to residential areas, and is subject to ongoing noise disturbance and human presence. The Native Vegetation Clearing Area provides little value for native fauna and has a lower capacity to support most fauna species when compared to nearby intact and undisturbed habitats (Focused Vision, 2024).

Adjacent mapped Woodland habitat in Good condition with low evidence of human disturbance provides higher quality habitat for fauna and preferentially be utilised over the Native Vegetation Clearing Area.

No significant fauna species were recorded during the survey. A post-survey likelihood of occurrence assessment identified four species with the potential to occur in the Native Vegetation Clearing Area:

Gouldian Finch (P4, EN) (*Chloebia gouldiae*) – May Occur

The Gouldian Finch inhabits woodlands dominated by Eucalyptus trees that support a ground cover of Sorghum and other grasses nearby water sources. Inhabits unburnt hollow-bearing Eucalyptus trees. The nearest observation of the species was made in 1981 from over 250 m southeast of the Native Vegetation Clearing Area. The species may have historically utilised habitat in the Native Vegetation Clearing Area; however, this area no

longer represents good quality habitat due to the lack of suitable Eucalyptus trees and foraging sorghum species. This species was not recorded during the field surveys. While the species may occur, it would not be reliant on habitat within the Native Vegetation Clearing Area when habitat in better condition is available in adjacent areas. Impacts, if any on this species would not be significant.

Purple-crowned Fairy-wren (Western) (EN, EN) (*Malurus coronatus coronatus*) – May Occur

The species inhabits dense, riparian vegetation in the wet-dry tropics of Western Australia and the Northern Territory (Boekel 1979). The nearest observation of the species was made in 2022 over 9 km northwest of the Native Vegetation Clearing Area. The species may have historically utilised habitat in the Native Vegetation Clearing Area; however, this area no longer represents good quality habitat due to the high weed load, edge effects from illegal waste dumping, road infrastructure, and ongoing disturbance from residents located in close proximity. The proposed clearing will not significantly impact this species if individuals were to occur given the extensive habitat available in better condition beyond the Native Vegetation Clearing Area.

Wood Sandpiper (MI, MI) (*Tringa glareola*) – Unlikely to Occur

The species is widespread worldwide and inhabits coastal shorelines, and wetlands. The Native Vegetation Clearing Area does not contain suitable wetland habitat to support the ongoing presence of this species. Habitat in areas outside of the Native Vegetation Clearing Area such as Lake Argyle, would represent suitable habitat for this species. It is unlikely this species would occur, therefore no impacts are expected.

Northern Brushtail Possum (VU, VU) (*Trichosurus vulpecula arnhemensis*) – Unlikely to Occur

Occurs in tall Eucalypt open forests with large hollow-bearing trees, typically where understory shrubs bear fleshy fruits. Also known to occur in some mangrove communities, rainforests and semi-urban areas. The nearest observation of the species was made in Halls Creek in 1902 which is over 290 km southwest of the Native Vegetation Clearing Area. Vegetation types within the Native Vegetation Clearing Area do not include Eucalypt tree species with suitable hollow-bearing habitat. Vegetation canopy within the Native Vegetation Clearing Area consists primarily of weed species and unsuitable for foraging. This species was not recorded during Focused Vision's 2024 Survey. It is unlikely this species would occur in the Native Vegetation Clearing Area given the absence of key habitat features and survey records. No impact on the species will occur.

4. Significant Ecological Communities

The desktop assessment identified no Threatened Ecological Communities (TEC) and nine Priority Ecological Communities (PEC) that are known to occur within the Study Area. Of these, only the Ivanhoe Land System intersects the Survey Area (DPIRD 2024). Vegetation within the Native Vegetation Clearing Area does not align with any of the landform descriptions for the Ivanhoe Land System Vegetation types (Payne and Schoknecht 2011) with little to no species overlap, and therefore, is not considered representative of this PEC.

5. Vegetation Condition

Vegetation condition within the Survey Area was found to range from 'Good' to 'Completely Degraded', with the majority of the Survey Area (46.05%), in 'Completely Degraded' condition.

Table 6. Vegetation Condition in the Native Vegetation Clearing Area.

Vegetation Condition	Native Vegetation Clearing Area (ha)	Mapped in Survey Area (ha)
Good - Degraded	0.90	3.69
Completely Degraded	0.13	12.88

The condition of the Native Vegetation Clearing Area is impacted by:

- adjacent vegetation in Degraded and Completely Degraded;
- the high presence of weeds including Declared Pest species (19.51% of flora species identified are weeds); and
- edge effects and illegal dumping of waste contributing to the continual degradation of this vegetation.

Summary

The Native Vegetation Clearing Area is not representative of any TEC or PEC; does not contain any conservation significant flora or fauna ; does not represent quality fauna habitat; and is in disturbed and degraded condition. to the Native Vegetation Clearing Area does not represent an area of high biodiversity based on the absence of key indicators. Considering the above, native vegetation clearing associated with this proposal is not likely to impact a high level of biological diversity and the clearing proposed is not significant in the local context. The proposed clearing is not likely to be at variance to this Principle.

Methodology

- Biological Survey (Focused Vision 2024)
- BoM Website (Accessed August 2024)
- DCCEEW Protected Matters Search Tool Report (August 2024)
- Department of Natural Resources and Environment (2002)
- Government GIS Shapefiles:
 - DBCA Threatened and Priority Ecological Community database search (Accessed August 2024)
 - DBCA Threatened and Priority flora database search (Accessed August 2024)
- Natural Resource Management SLIP Soil Systems (Accessed August 2024)
- Land Systems of the Kimberley Region, Western Australia (Payne and Schoknecht 2011)
- Statewide Vegetation Statistics (Government of Western Australia 2018)

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

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

Fauna Habitat

Three fauna habitats occur within the Native Vegetation Clearing Area. These include two Exotic Woodlands and a Tussock Grassland which are summarised in Table 5.

Table 5. Fauna Habitat within Native Vegetation Clearing Area.

Fauna Habitat	Survey Area (ha)	Vegetation Clearing (ha)	Description
Tussock Grassland (Completely Degraded)	5.60	0.12	Isolated <i>Eucalyptus</i> sp. over exotic closed grasses. Veg Unit: Roadside/Verge
Exotic Woodland 1 (Good)	4.78	0.90	* <i>Azadirachta indica</i> and <i>Albizia lebbbeck</i> closed forest. Veg Unit: AiAl
Exotic Woodland 2 (Completely Degraded)	9.67	0.01	* <i>Passiflora foetida</i> open forest over * <i>Azadirachta indica</i> , <i>Albizia lebbbeck</i> and <i>Lysiphyllum cunninghamii</i> low open woodland over <i>Poaceae</i> sp. open grassland. Veg Unit: AgLcTt, AiAl

Fauna habitat in the Native Vegetation Clearing Area provides habitat of low value given the area is subject to a high level of ongoing disturbance from vehicles and illegal waste dumping and contains a high weed load. The vegetation is noted by Focused Vision (2024) to be of poor-quality and in close proximity to residential areas which provides little value for native fauna with a lower capacity to support most fauna species compared to areas of nearby intact and undisturbed habitats.

Adjacent mapped Woodland habitat provides higher value fauna habitat in areas with low evidence of human disturbance and would be preferentially used over the Native Vegetation Clearing Area.

Fauna

No signs of use by, or observations of significant fauna species were recorded during the Focused Vision 2024 Survey.

A post-survey likelihood of occurrence assessment determined four species have the potential to occur in the Survey Area. Their occurrence in the Native Vegetation Clearing Area is discussed below.

Gouldian Finch (P4, EN) (*Chloebeia gouldiae*) - May Occur

The Gouldian Finch inhabit woodlands dominated by Eucalyptus trees that support a ground cover of Sorghum and other grasses nearby water sources. Inhabits unburnt hollow-bearing Eucalyptus trees. The nearest observation of the species was made in 1981 from over 250 m southeast of the Native Vegetation Clearing Area. The species may have historically utilised habitat in the Native Vegetation Clearing Area; however, this area no longer represents good quality habitat due to the lack of suitable Eucalyptus trees and foraging sorghum species. This species was not recorded during the field surveys. While the species may occur, it would not be reliant on habitat within the

Native Vegetation Clearing Area when habitat in better condition is available in adjacent areas. Impacts, if any on this species would not be significant.

Purple-crowned Fairy-wren (Western) (EN, EN) (*Malurus coronatus coronatus*) - May Occur

The species inhabits dense, riparian vegetation in the wet-dry tropics of Western Australia and the Northern Territory (Boekel 1979). The nearest observation of the species was made in 2022 over 9 km northwest of the Native Vegetation Clearing Area. The species may have historically utilised habitat in the Native Vegetation Clearing Area; however, this area no longer represents good quality habitat due to the high weed load, edge effects from illegal waste dumping, road infrastructure, and ongoing disturbance from residents located in close proximity. The proposed clearing will not significantly impact this species if individuals were to occur given the extensive habitat in better condition beyond the Native Vegetation Clearing Area.

Wood Sandpiper (MI, MI) (*Tringa glareola*) Unlikely to Occur

The species is widespread worldwide and inhabits coastal shorelines, and wetlands. The Native Vegetation Clearing Area does not contain suitable wetland habitat to support the ongoing presence of this species. Habitat in areas outside of the Native Vegetation Clearing Area such as Lake Argyle, would represent suitable habitat for this species. It is unlikely this species would occur, therefore no impacts are expected.

Northern Brushtail Possum (VU, VU) (*Trichosurus vulpecula arnhemensis*) – Unlikely to Occur

Occurs in tall Eucalypt open forests with large hollow-bearing trees, typically where understory shrubs bear fleshy fruits. Also known to occur in some mangrove communities, rainforests and semi-urban areas. The nearest observation of the species was made in Halls Creek in 1902 which is over 290 km southwest of the Native Vegetation Clearing Area. Vegetation types within the Native Vegetation Clearing Area do not include Eucalypt tree species with suitable hollow-bearing habitat. Vegetation canopy within the Native Vegetation Clearing Area consists primarily of weed species and unsuitable for foraging. This species was not recorded during Focused Vision's 2024 Survey. It is unlikely this species would occur in the Native Vegetation Clearing Area given the absence of key habitat features and survey records. No impact on the species will occur.

Given the majority of vegetation within the Native Vegetation Clearing Area is in degraded condition and subject to ongoing disturbance, it is not considered representative of significant fauna habitat while vegetation in good or better condition is available in abundance in adjacent areas. The Native Vegetation Clearing Area does not contain key habitat features to support the ongoing presence and reliance of fauna species on this area. The Native Vegetation Clearing Area does not comprise the whole, or a part of, and is not necessary for the maintenance of a significant habitat for fauna indigenous to Western Australia.

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

Methodology

- Species-specific conservation listing advice and recovery plans
- Biological Survey (Focused Vision 2024)
- DCCEEW Protected Matters Search Tool Report (August 2024)
- Department of Natural Resources and Environment (2002)
- Government GIS Shapefiles:
 - DBCA Threatened and Priority Ecological Community database search (Accessed August 2024)
 - DBCA Threatened and Priority flora database search (Accessed August 2024)

- Natural Resource Management SLIP Soil Systems (Accessed August 2024)
- Land Systems of the Kimberley Region, Western Australia (Payne and Schoknecht 2011)
- Statewide Vegetation Statistics (Government of Western Australia 2018)

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

Proposal is not at variance to this Principle.

Desktop Database Searches (Main Roads ArcGIS files and PMST report) identified no known records of Threatened flora listed under the Biodiversity Conservation Act 2016 within a 40 km radius of the Native Vegetation Clearing Area.

The Biological Surveys undertaken by Focused Vision (2024) did not record any Threatened flora taxa from within the broader surveyed areas and none are considered likely to occur.

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

Methodology

- Biological Survey (Focused Vision 2024)
- Florabase (Accessed August 2024)
- Government GIS shapefiles:
 - DBCA Threatened flora database search (Accessed August 2024)
- NatureMap (Accessed August 2024)
- Species specific conservation listing advice and recovery plans

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

Proposed clearing is not at variance to this Principle.

The Desktop database searches (PMST report and DBCA Shapefiles) identified no known records of State or Federally listed Threatened Ecological Communities (TECs) within 40 km of the Native Vegetation Clearing Area.

A Biological Survey undertaken by Focused Vision (2024) confirmed vegetation is not representative of any TEC and none are considered likely to occur in the Native Vegetation Clearing Area.

Based on the above, native vegetation 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

- Biological Survey (Focused Vision 2024)
- Government GIS shapefiles:
 - DBCA Threatened Ecological Community database search (Accessed August 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 & Peel) where 10% representation should be maintained.

Vegetation within the Native Vegetation Clearing Area is broadly mapped as the pre-European Vegetation Association 59 (Mainly Mitchell grass *Astrebla spp.*). Vegetation Association 59 accounts for 6.38% of the Victoria Bonaparte IBRA Region and is the fifth largest association within the region.

Over 86% of the pre-European extent of Vegetation Association, Victoria Bonaparte 59 remains at all scales. As such, the proposal is not located in an area that has been extensively cleared with regionally significant remnant vegetation. Vegetation Association 59 is widespread and well-represented locally and regionally. The proposed clearing will not reduce the availability of remnant vegetation.

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

Methodology

- Biological Survey (Focused Vision 2024)
- Government GIS shapefiles:
 - Pre-European vegetation (Accessed August 2024)
- Statewide Vegetation Statistics (Government of Western Australia 2018)

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

Proposed clearing is not at variance to this Principle.

The Native Vegetation Clearing Area is not within, and does not intersect:

- an Internationally Important Wetland (i.e. RAMSAR); or
- a Nationally Important Wetland.

No watercourses intersect or are in the vicinity of the Native Vegetation Clearing Area. The closest watercourse to the proposed clearing is a stream/canal line over 530 m west. This watercourse is a man-made channel from the Ord River to service agricultural land northwest of the Kununurra Townsite. The works will not impact any mapped watercourses.

The nearest wetland is Lake Argyle and Kununurra ([Ramsar Site 32](#)) which is located over 680 m south of the Native Vegetation Clearing Area and will not be impacted by the proposed clearing.

The Native Vegetation Clearing Area is located within the proclaimed surface water area, the Ord River and Tributaries (Section 27) and the Ord Irrigation District (Section 29(h) and 29(i)). No clearing of native vegetation growing in, or in association with a watercourse or wetland is proposed.

The proposed clearing is not at variance to this Principle.

Methodology

- Biological Survey (Focused Vision 2024)
- Government GIS shapefiles:
 - Geomorphic Wetlands (Accessed August 2024)
 - Ramsar Wetlands (Accessed August 2024)
 - Important Wetlands (Accessed August 2024)
 - Watercourses (Accessed August 2024)
 - RIWI Act Rivers (Accessed August 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 likely to be at variance to this Principle.

Assessment

The Native Vegetation Clearing Area is in a region prone to severe rainfall events, that could contribute to land degradation via flooding and heavy runoff. Clearing is proposed to be completed during the dry season and is proposed in degraded areas which are subject to ongoing disturbance. The proposed linear clearing in areas adjacent to existing road infrastructure will not significantly alter the natural surface water flow.

The Native Vegetation Clearing Area intersects two Soil Landscape Systems:

1. Ivanhoe System (711lv)

- a. Alluvial flood plains with black cracking clay soils supporting blue grass grasslands and minor eucalypt woodlands with frontage tall grasses.
- b. Minor parts may be flooded and inaccessible for periods. High pastoral value with pastures attractive to cattle; control of grazing pressure is essential. Most of the system has low susceptibility to erosion except for levees (unit four) which have moderate susceptibility. Parts of the system are used for irrigated agriculture.

2. Cockatoo System (711Cc)

- a. Gently undulating plains with deep sand soils on sandstone and calcareous sandstone supporting stringybark-bloodwood woodlands over upland tall grass.
- b. System supports pastures which are only moderately favoured by livestock and are generally stable with low susceptibility to erosion. Fire management programs desirable; in the Kununurra area unit two has potential for horticultural use.

These systems both have a low to moderate susceptibility to erosion with high to moderate pastoral value.

The Native Vegetation Clearing Area is unlikely to be significantly impacted by erosion or cause appreciable land degradation given the small extent of clearing proposed in the dry season from an area that is subject to ongoing disturbance.

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

Methodology

- Biological Survey (Focused Vision 2024)
- Government GIS Shapefiles:
 - Acid Sulphate Soil Risk Map (Accessed August 2024)
 - Soil Landscape Mapping – Rangelands (DPIRD-063) (Accessed August 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 likely to be at variance to this Principle.

Assessment

The proposed clearing will not impact any environmentally sensitive areas, ecological linkages or connecting native vegetation remnants. The closest DBCA managed reserve is Mirima National Park, which is located over 1.5 km to the east of the Native Vegetation Clearing Area.

One Conservation Area, the Kununurra Arboretum intersects the Native Vegetation Clearing Area. DBCA has provided Main Roads with permission to clear a parcel of land in this area for the purpose of constructing the Road Train Assembly Area. This area is illustrated in Plate 1 below.

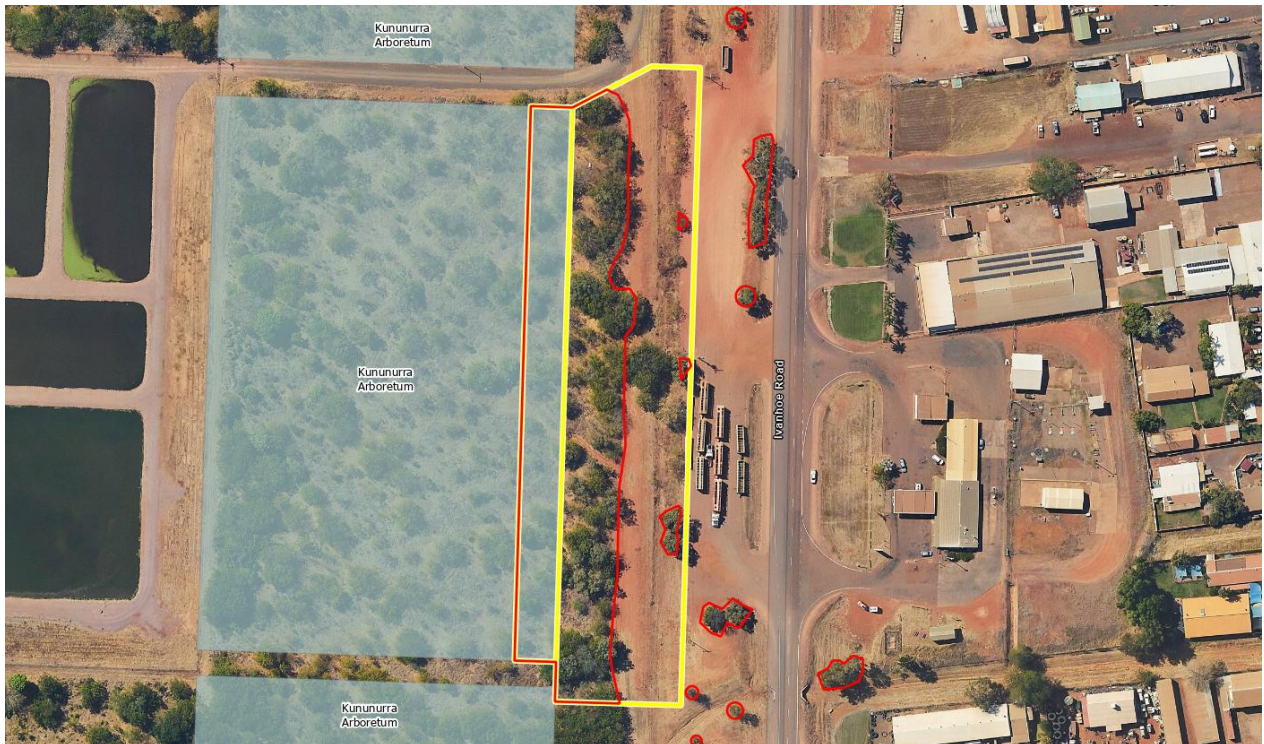


Plate 1. Kununurra Arboretum (green shaded area) and DBCA-approved area (green shaded area outlined in yellow) for construction of a Road Train Assembly Area (outlined in yellow), and Native Vegetation Clearing Area (outlined in red).

The Kununurra Arboretum is registered under the CALM Act (1954) as a Section 5(1)(h) Reserve. This reserve is categorised as “any other land, other than excluded waters, reserved under Part 4 of the Land Administration Act 1997 the care, control and management of which are placed by order under that Part with the Commission or the Executive Body, either solely or jointly with another person or persons”. As such, this area is not a conservation reserve for the purpose of conserving rare or threatened species and native vegetation clearing within this area will not have an impact on the reported Reserve purpose, of “Arboretum, Depot And Administration”.

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 likely to be at variance to this Principle.

Methodology

- Biological Survey (Focused Vision 2024)
- [Environmental Offsets Register](#)
- Government GIS Shapefiles:
 - DBCA Legislated Lands and Waters & Lands of Interest (Accessed August 2024)
 - Geomorphic Wetlands (conservation category wetlands only) (Accessed August 2024)
 - Ramsar Wetlands (Accessed August 2024)
 - Important Wetlands (Accessed August 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 at variance to this Principle.

Assessment

No wetlands or watercourses (including RAMSAR or Nationally Important Wetlands) occur within the Native Vegetation Clearing Area with the nearest watercourse and wetland located over 500 m from the Native Vegetation Clearing Area. No riparian vegetation is proposed to be cleared under this proposal.

The Native Vegetation Clearing Area is not located within a Public Drinking Water Source Area (PDWSA), however, it does intersect the Ord River and Tributaries (Section 27) and the Ord Irrigation District (Section 29(h) and 29(i)) proclaimed Surface Water Area, and the proclaimed Canning-Kimberley Groundwater Area. The proposed clearing of 1.04 ha is unlikely to result in deterioration to the quality of surface or groundwater given the extent of native vegetation remaining beyond the Project Clearing Footprint, absence of riparian vegetation, no groundwater dependent vegetation being recorded by Focused Vision (2024), and noting the clearing is in an area that is highly disturbed and degraded as a result of the existing urban activities, development, and roads.

Clearing is proposed to be undertaken in the dry season to further reduce the potential for impact on surface or ground water.

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

Methodology

- Biological Survey (Focused Vision 2024)
- Government GIS Shapefiles:
 - RIWI Act, Surface Water Areas and Irrigation Districts (Accessed August 2024)
 - CAWSA Part 2A Clearing Control Catchments (Accessed August 2024)
 - RIWI Act, Groundwater Areas (Accessed August 2024)
 - Soil Mapping (Accessed August 2024)
 - Acid Sulphate Soil risk mapping (Accessed August 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 an average annual rainfall of 773.4 mm (Kununurra Aero (Station Number 2056) (BoM, 2024). 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 to reduce 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

- Biological Survey (Focused Vision 2024)
- BoM Website (Accessed August 2024)
- Government GIS Shapefiles:
 - Soil Mapping (Accessed August 2024)
 - Contours (Accessed August 2024)

6 COMPLIANCE WITH CPS 818

Table 7 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 is required.
2. Clearing is at variance or may be at variance with Clearing Principle (g) land degradation, (i) surface or underground water quality or (j) the incidence of flooding.	No	No further action is required.
3. Clearing is at variance with Clearing Principle (g) land degradation, (i) surface or underground water quality and (j) the incidence of flooding.	No	No further action is required.
4. The Proposal involves clearing for temporary works (as defined by CPS 818).	No	No further action is required.
5a. Proposal is within a Region that: • has rainfall greater than 400mm; and, • is South of the 26th parallel; and, • works are necessary in 'Other than dry conditions'; and, • works have potential for uninfested areas to be impacted.	No	Standard Vehicle and Plant management actions from 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
5b. Do the proposed works require clearing within or adjacent to DBCA managed lands in <u>non-dry conditions</u> ?	No	No further action is 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 is 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.	No	No further action is required.
8. Did an environmental specialist conduct the survey or field assessment?	Yes	The Environmental Specialist undertaking the biological assessments was suitably qualified and had more than three years' experience.
9. Did an environmental specialist prepare the Assessment Report and any other associated documentation including the VMP, Dieback Management Plan or Offset Proposal?	Yes	The Environmental Specialist preparing the Assessment Report and any other associated documentation including the VMP, Dieback Management Plan or Offset Proposal was suitably qualified and had more than three years' experience.

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