GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 10505/1
Permit Holder:	Shire of Mukinbudin
Duration of Permit:	From 20 June 2025 to 20 June 2035

The permit holder is authorised to clear *native vegetation* subject to the following conditions of this permit.

PART I – CLEARING AUTHORISED

1. Clearing authorised (purpose)

The permit holder is authorised to clear *native vegetation* for the purpose of road construction.

2. Land on which clearing is to be done

Nungarin North Road reserve (PIN 11594592, 11594593, 11594594, 11594595 and 11711762), Barbalin and Dandanning.

3. Clearing authorised

The permit holder must not clear more than 0.06 hectares of *native vegetation* within the combined area cross-hatched yellow in Figure 1, Figure 2, Figure 3 and Figure 4 of Schedule 1.

4. Period during which clearing is authorised

The permit holder must not clear any *native vegetation* after 20 June 2030.

PART II – MANAGEMENT CONDITIONS

5. Avoid, minimise, and reduce impacts and extent of clearing

In determining the *native vegetation* authorised to be cleared under this permit, the permit holder must apply the following principles, set out in descending order of preference:

(a) avoid the clearing of *native vegetation*;

(b) minimise the amount of *native vegetation* to be cleared; and

(c) reduce the impact of clearing on any environmental value.

6. Weed and dieback management

When undertaking any clearing authorised under this permit, the permit holder must take the following measures to minimise the risk of introduction and spread of *weeds* and *dieback*:

(a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;

(b) ensure that no known *dieback* or *weed*-affected soil, *mulch*, *fill*, or other material is brought into the area to be cleared; and

(c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

7. Revegetation and rehabilitation

Within 12 months of commencing clearing authorised under this permit and no later than 20 June 2030, the permit holder must:

(a) undertake deliberate *planting* of at least 20 native trees, comprising of a combination of *Eucalyptus salubris* and *Eucalyptus salmonophloia*, within the area cross-hatched red on Figure 5 of Schedule 1 by:
  (i) ensuring only *local provenance* species are used; and
  (ii) ensuring *planting* is undertaken at the *optimal time*.

(b) undertake watering and *weed* control of *plantings* for at least two years post *planting*;

(c) the permit holder must, within 24 months of *planting* the native trees in accordance with condition 7(a) of this permit:
  (i) engage an *environmental specialist* to make a determination that at least 20 trees, comprising a combination of *Eucalyptus salubris* and *Eucalyptus salmonophloia*, will persist and survive.
  (ii) if the determination made by the *environmental specialist* under condition 7(c)(i) is that at least 20 of the *planted* trees will not survive, the permit holder must *plant* additional trees that will result in at least 20 native trees, comprising a combination of *Eucalyptus salubris* and *Eucalyptus salmonophloia*, persisting within the area cross-hatched red in Figure 5 of Schedule 1.

(d) where additional *planting* of native trees is undertaken in accordance with condition 7(c), the permit holder must repeat the activities required by condition 7(a), 7(b) and 7(c) of this permit.

PART III - RECORD KEEPING AND REPORTING

8. Records that must be kept

The permit holder must maintain records relating to the listed relevant matters in accordance with the specifications detailed in Table 1.

Table 1: Records that must be kept

No.	Relevant matter	Specifications
1.	In relation to the authorised clearing activities generally	(a) the species composition, structure, and density of the cleared area; (b) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to GDA2020, expressing the geographical coordinates in Eastings and Northings; (c) the date that the area was cleared; (d) the size of the area cleared (in hectares); (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 5; and (f) actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 6.
2.	In relation to the revegetation and rehabilitation pursuant to condition 7	(a) the date(s) the *planting* occurred; (b) the locations of trees *planted*, recorded using a Global Positioning System (GPS) unit set to

No.	Relevant matter	Specifications
		Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings or decimal degrees; (c) a description of the *planting* activities undertaken; (d) the total number of trees planted from each species in accordance with condition 7(a); (e) a copy of the *environmental specialist*'s monitoring report and determination; and (f) a description of any *remedial actions* undertaken pursuant to condition 7(c)(ii) and 7(d) of this permit.

9. Reporting

The permit holder must provide to the *CEO* the records required under condition 8 of this permit when requested by the *CEO*.

DEFINITIONS

In this permit, the terms in Table have the meanings defined.

Table 2: Definitions

Term	Definition
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*.
clearing	has the meaning given under section 3(1) of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
dieback	means the effect of *Phytophthora* species on native vegetation.
department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
environmental specialist	means a person who holds a tertiary qualification in environmental science or equivalent, and has a minimum of 2 years work experience relevant to the type of environmental advice that an environmental specialist is required to provide under this permit, or who is approved by the CEO as a suitable environmental specialist.
EP Act	*Environmental Protection Act 1986* (WA)
fill	means material used to increase the ground level, or to fill a depression.
local provenance	means native vegetation seeds and propagating material from natural sources within 50 kilometres and the same Interim Biogeographic Regionalisation for Australia (IBRA) subregion of the area cleared.
mulch	means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation.
native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.
optimal time	means the period from May to July for undertaking planting.
plant/ed/ing	means the re-establishment of vegetation by creating soil conditions and planting seedlings of the desired species.

Term	Definition
remedial action/s	means for the purpose of this permit, any activity that is required to ensure successful re-establishment and survival of planted trees.
weeds	means any plant – (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or (c) not indigenous to the area concerned.

END OF CONDITIONS

Jessica Burton
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

28 May 2025

Schedule 1

The boundary of the area authorised to be cleared is shown in the maps below (Figure 1, Figure 2, Figure 3 and Figure 4).

Figure 1: Map of the boundary of the area within which clearing may occur (hatched yellow)

Figure 2: Map of the boundary of the area within which clearing may occur (hatched yellow)

Figure 3: Map of the boundary of the area within which clearing may occur (hatched yellow)

Figure 4: Map of the boundary of the area within which clearing may occur (hatched yellow)

Figure 5: Map of the area within which specific revegetation and rehabilitation conditions apply (hatched red)

Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 10505/1
Permit type:	Purpose permit
Applicant name:	Shire of Mukinbudin
Application received:	1 February 2024
Application area:	0.06 hectares (as revised) of native vegetation
Purpose of clearing:	Road construction
Method of clearing:	Mechanical
Property:	Nungarin North Road reserve (PIN 11594592, 11594593, 11594594, 11594595 and 11711762)
Location (LGA area/s):	Shire of Mukinbudin
Localities (suburb/s):	Barbalin and Dandanning

1.2. Description of clearing activities

The purpose of clearing these trees is to facilitate Nungarin North Road widening, which belongs to a large project to upgrade approximately 10.8 kilometres of Nungarin North Road, 2.5 kilometres of McGregor Road and 3.7 kilometres Koorda-Bullfinch Road within the Shire of Mukinbudin (Shire of Mukinbudin, 2024b). The project is funded by the Federal and State funding through the Wheatbelt Secondary Freight Network (WSFN). This project will widen the Nungarin North Road to a 9-metre seal road on a 9-metre formation (Shire of Mukinbudin, 2024a).

1.3. Decision on application

Decision:	Granted
Decision date:	28 May 2025
Decision area:	0.06 hectares of native vegetation, as depicted in Section 1.5, below.

1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Water and Environmental Regulation (DWER) advertised the application for 21 days and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix B), relevant datasets (see Appendix F.1), the findings of vegetation surveys and photographs of the vegetation proposed to be cleared (see Appendix E), the clearing principles set out in Schedule 5 of the EP Act (see Appendix C), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3). The Delegated Officer also took into consideration that the purpose of the clearing is to widen Nungarin North Road as part of the Wheatbelt Secondary Freight Network (WSFN) which is a program to strategically improve the regional road freight safety and efficiency.

The assessment identified that the proposed clearing will result in:

- the loss of 0.06 hectares of native vegetation that is a part of a significant remnant within an extensively cleared landscape; and
- the potential introduction and spread of weeds and dieback into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined the impacts from the proposed clearing can be minimised and managed to unlikely lead to an unacceptable risk to environmental values. The applicant has suitably demonstrated avoidance and minimisation measures.

The Delegated Officer decided to grant a clearing permit subject to conditions to:

- avoid, minimise, and reduce the impacts and extent of clearing;
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback;
- undertake the revegetation of at least 0.08 hectares in Nungarin North Road reserve by deliberately planting and maintaining at least 20 trees, in a combination of gimlet (*Eucalyptus salubris*) and salmon gum (*Eucalyptus salmonophloia*), to mitigate the loss of significant remnant vegetation within an extensively cleared landscape.

1.5. Site maps

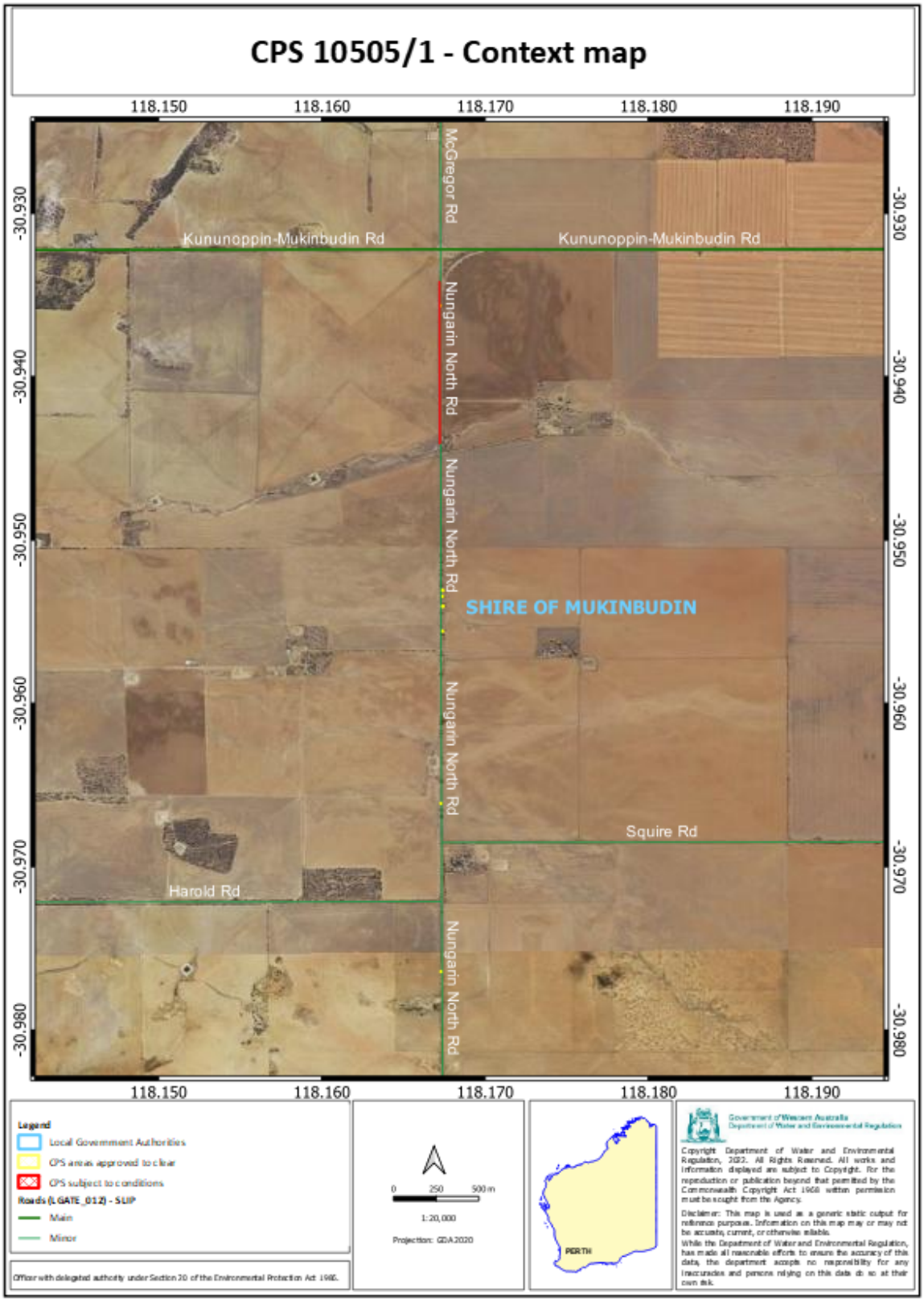

Figure 1a Context map of the application area

The areas crosshatched yellow indicate the areas authorised to be cleared under the granted clearing permit.

The area cross-hatched red indicates area within which the revegetation occurs.

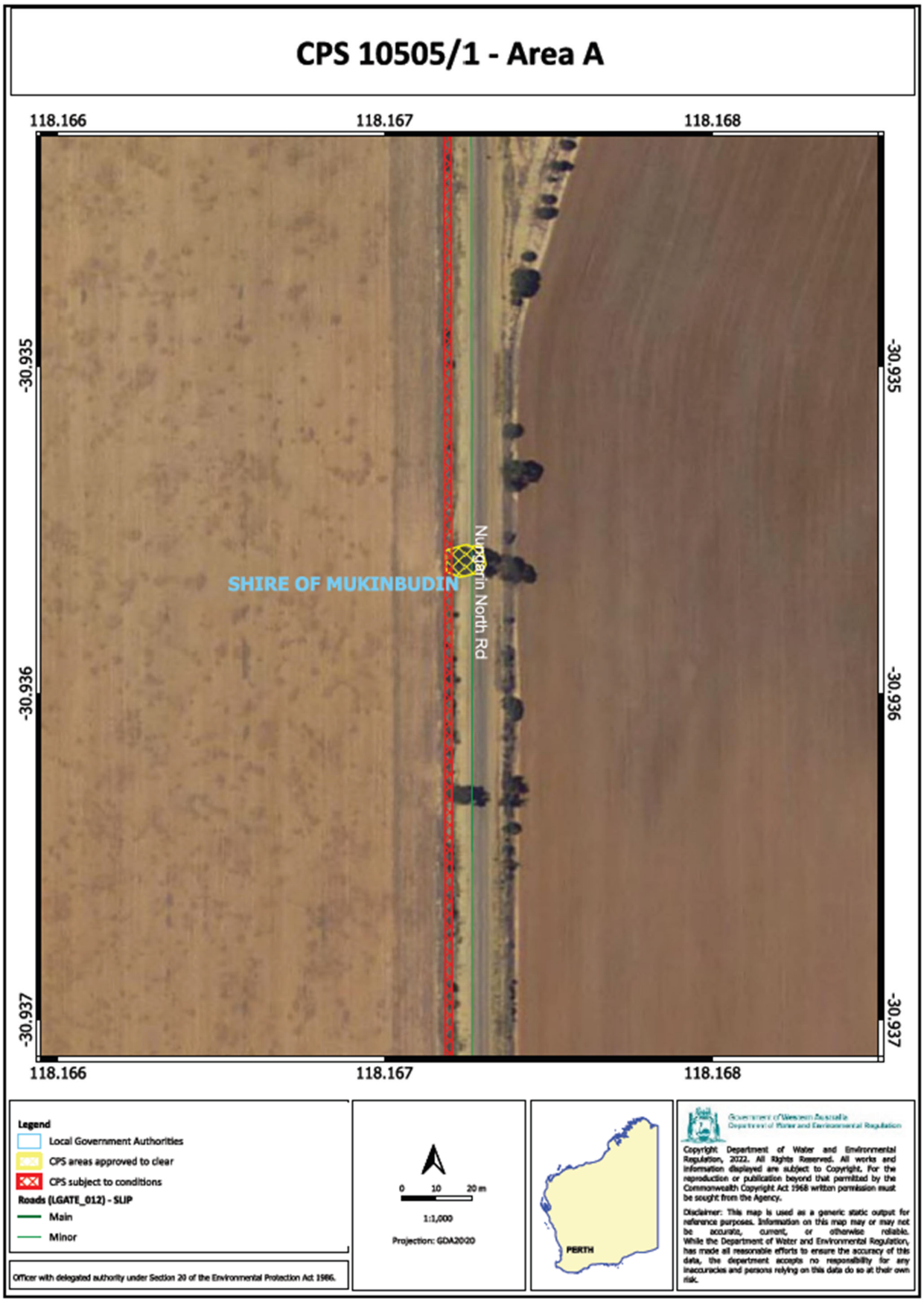

Figure 1b Map of the application area (Area A)

Figure 1c Map of the application area (Area B)

Figure 1d Map of the application area (Area C)

Figure 1e Map of the application area (Area D)

2 Legislative context

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

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.4), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

- the precautionary principle
- the principle of intergenerational equity
- the polluter pays principle
- the principle of the conservation of biological diversity and ecological integrity.

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Rights in Water and Irrigation Act 1994* (RiWI Act)

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

Supporting information submitted by the applicant indicates that the mitigation hierarchy has been applied, as follows:

During the design (Shire of Mukinbudin, 2024b):

- Changing the design of the first 5.4 kilometres of Nungarin North Road (from SLK 10.8 to 5.4) from the standard 8-metre seal on a 10-metre formation (8-on-10) to a 9-metre seal on a 9-metre formation (9-on-9). This design revision has reduced the native vegetation required to be cleared from approximately 1.8 hectares to 0.37 hectares (initial application area).
- Applying the design of 9-on-9 for the remaining length of the road with the WSFN's approval, which further reduced the application area to approximately 0.17 hectares.

During the construction (Shire of Mukinbudin, 2025a):

- Installing a 100m crash barrier to avoid clearing a line of mature eucalypts.
- Applying trimming instead of clearing, where possible, which has resulted in not clearing any vegetation during the construction of the first half of the road. Thanks to that, the application area has been reduced further to 0.06 hectares.

Onsite revegetation

- The applicant has proposed to plant 320 gimlet (*Eucalyptus salubris*) and salmon gum (*E. salmonophloia*) trees by infill planting 0.22 hectares of bare areas between SLKs 0.1 and 1.2 on the western side of the Nungarin North Road, adjacent to the application area (Shire of Mukinbudin, 2025a and 2025b).

The Delegated Officer considers that the applicant has made a reasonable effort to avoid and minimise potential impacts of the proposed clearing on environmental values. The applicant's revegetation commitment is enforced as a condition of the clearing permit.

3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (see Appendix B) and the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values.

The assessment against the clearing principles (see **Error! Reference source not found.**) identified that the impacts of the proposed clearing present a risk to threatened ecological community (TEC) and significant remnant vegetation. The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

3.2.1. Biological value (threatened ecological community - TEC) - Clearing Principles (d)

Assessment

The provided photographs of the vegetation proposed to be cleared indicate that the species occurring within the application area are indicative of the Eucalypt woodlands of the Western Australian Wheatbelt TEC (Wheatbelt Eucalyptus Woodland TEC). Some portions of the initial application area are located adjacent to an occurrence of the Wheatbelt Eucalyptus Woodland TEC mapped along the existing road.

Noting this, the Department requested a further assessment of vegetation composition and patch width to accurately determine the presence/absence of the Wheatbelt Eucalyptus Woodland TEC within the application area. Responding to this request, a vegetation condition survey including a TEC assessment was undertaken in July 2024 for the application area and surrounding areas (Shire of Mukinbudin, 2024b).

Based on the vegetation condition report, it has been identified that the application area does not comprise vegetation representative of the Wheatbelt Woodlands TEC as the width of each side of the Nungarin North Road reserve is smaller than 5 metres and therefore, does not meet the minimum size requirement for roadside patches of this TEC, as stated in the Conservation Advice for this community (Shire of Mukinbudin, 2024b). The applicant has amended the application area during the assessment to remove portions of the original application area that occurred adjacent to known occurrences of the Wheatbelt Eucalyptus Woodland TEC. This area was adjacent to Reserve 17855 which is now located at least four kilometres from the revised application area.

Conclusion

Based on the above assessment, the proposed clearing is unlikely to have a direct impact an area that comprises of an occurrence of the Wheatbelt Woodlands TEC and is not likely to have an indirect impact on known occurrences of this TEC through edge effects such as weed introduction or spread.

Conditions

No management conditions required.

3.2.2. Fauna habitat and significant remnant vegetation - Clearing Principle (b) and (e)

Assessment

The National Objectives and Targets for Biodiversity Conservation 2001-2005 includes a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750 (i.e., pre-European settlement). This is the threshold level below which species loss appears to accelerate exponentially (Commonwealth of Australia, 2001).

The application area is located within the Avon Wheatbelt IBRA Bioregion which retains approximately 18.5 per cent of its pre-European vegetation extent (Appendix B.2.) (Government of Western Australia, 2019). The application area is mapped within the Beard vegetation association (BVA) 8, which also falls below the national targets with only 14.1 per cent of its pre-European extent remaining in the Wheatbelt bioregion (Government of Western Australia, 2019). A review of available datasets and aerial imagery indicates that the local area has approximately 17.7 per cent of pre-European vegetation extent remaining (Appendix B.2). and is considered an extensively cleared landscape.

Given the degree of historical clearing and the highly fragmented nature of native vegetation locally, the vegetation proposed to be cleared is considered a significant remnant of BVA 8 and within the local area. Given the extent to which the local area has been previously cleared, the application area may contribute towards fauna dispersal within the landscape. However, considering the small area proposed to be cleared and the applicant's revegetation commitment (see Section 3.1), the proposed clearing is not likely to have a significant impact to linkage and dispersal values.

To mitigate the loss of 0.06 hectares of native vegetation that is significant as a remnant within an extensively cleared landscape, the applicant has proposed to plant 320 trees, including a combination of gimlet and salmon gum, within an adjacent area of 0.22 hectares on Nungarin North Road reserve. The department has assessed the suitability of this mitigation measure through a calculation consistent with the WA Environmental Offsets Metric Calculator and determined that the planting of 20 trees within an area of 0.08 hectares, noting the narrow nature of proposed revegetation area (2-metre strip along the roadside), is required to counterbalance the significant residual impact caused by the proposed clearing. The department considers that the onsite revegetation proposed by the applicant exceeds the number of trees required to be planted and it aligns with the *WA Environmental Offset Policy* (2011) and

WA Environmental Offsets Guideline (2014).

It should be noted that there is potential that the proposed clearing could impact on the remnant native vegetation through the introduction or spread of weeds and dieback into adjacent vegetation. The implementation of hygiene management measures is considered appropriate to mitigate this risk.

Conclusion

Based on the above assessment, the proposed clearing will result in loss of 0.06 hectares of native vegetation that is a significant remnant within an extensively cleared landscape. It is considered that the impacts of the proposed clearing to significant remnant vegetation can be appropriately mitigated and managed through the revegetation of at least 20 trees of gimlet and salmon gum on the adjacent road reserve and the implementation of weed and dieback management measures.

Conditions

To address the above impacts, the following management measures will be required as conditions on the clearing permit:

- avoidance and minimisation to reduce the impacts and extent of clearing;
- weed and dieback management measures, requiring the permit holder to take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback to adjacent vegetation; and
- undertake deliberate planting of at least 20 trees, comprising a combination of gimlet and salmon gum, within an adjacent area of Nungarin North Road reserve.

3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on DWER's website on 18 March 2024, inviting submissions from the public within a 21-day period. No submissions were received.

DWER's Swan Avon Region team advised that the e application area falls within the Primary Avon River System Surface Water Resource proclaimed under the RiWI Act. However, as the applicant is not proposing to intercept or draw groundwater in association with the proposed works, neither a licence to take water, nor a licence to construct or alter a well is required (DWER, 2024).

The proposed clearing if for a road upgrade project that is part of the Wheatbelt Secondary Freight Network (WSFN) which is a jointly funded program between Commonwealth, State and 42 Wheatbelt Local Governments to strategically improve the regional road freight safety and efficiency across the key transport routes that support the region's major industries. A total of 4400km of high priority routes will be upgraded in a rolling program.

The Wheatbelt region produces 41 per cent of the State's total gross value of agricultural production, worth $3.35 billion. Industry and jobs depend on an efficient supply chain in order to remain internationally competitive. It is vital that the Wheatbelt has an interconnected network that is well integrated with Western Australia's intermodal freight transport system. Many of the roads in the Wheatbelt region were not designed for and are unable to safely accommodate the increase in size and mass of the vehicles required by industry to remain competitive. Key routes have been identified for upgrade on Local Government roads, which will enable these requested larger vehicles to access the routes with a resulting increase in transport efficiency.

No Aboriginal sites of significance have been mapped within the application area. It is the permit holder's responsibility to comply with the *Aboriginal Heritage Act 1972* (WA) and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

End

Appendix A. Additional information provided by applicant

Summary of information	Consideration of provided information
Vegetation condition survey, including a TEC assessment	The findings of this survey have been used to assess the potential impacts of the proposed clearing on TEC as presented in Section 3.2.1 of this Report.
Information on revised application area	The application area has been revised accordingly.
Proposal on onsite revegetation	This has been considered as a mitigation measure and presented in Sections 3.1 and 3.2.2 of this Report.

Appendix B. Site characteristics

B.1. Site characteristics

The information provided below describes the key characteristics of the area proposed to be cleared and is based on the best information available to DWER at the time of this assessment. This information was used to inform the assessment of the clearing against the Clearing Principles, contained in Appendix C.

Characteristic	Details
Local context	The area proposed to be cleared consist of several separated small areas as part of the native vegetation along an existing road in the intensive land use zone of Western Australia. The proposed clearing area includes small, isolated remnants along a road in a highly cleared landscape. Aerial imagery indicates the local area (10-kilometre radius from the area proposed to be cleared) retains approximately 17.7 per cent of the original native vegetation cover.
Ecological linkage	The application area lies along roadsides which partly form linkages mapped under the Roadside Conservation layer.
Conservation areas	The nearest conservation area to the application area is an area mapped under the Remnant Vegetation Protection Scheme which is located approximately nine kilometres from the application area.
Vegetation description	Survey report (Trudgen, 2023) and photos supplied by the applicant (Shire of Mukinbudin, 2024a) indicate the vegetation within survey area (including the proposed clearing area) consists of *Eucalyptus* trees and *Acacia* scattered tall shrubs over *Atriplex*, *Maireana*, *Sclerolaena* low shrubland. Associated species noted included *Ptilotus obovatus*, *Lomandra* sp., *Ptilotus polystachyus*, *Dianella revoluta*, *Allocasuarina* sp. and *Aristida contorta*. This is partly consistent with the mapped vegetation type: Moorine Rock_8, which is described as Wheatbelt; York gum, salmon gum etc. *Eucalyptus loxophleba*, *E. salmonophloia*. Goldfields; gimlet, redwood etc. *E. salubris*, *E. oleosa*. Riverine; rivergum *E. camaldulensis*. Tropical; messmate, woolyb *The mapped vegetation type retains approximately 14.1 per cent of the original extent (Government of Western Australia, 2019).*
Vegetation condition	Vegetation condition survey (Shire of Mukinbudin, 2024b) indicates the vegetation within the proposed clearing area is in Degraded to Completely Degraded (Keighery, 1994) condition. The full Keighery (1994) condition rating scale is provided in Appendix D. Photos of vegetation proposed to be cleared are available in Appendix E.
Climate	The closest BOM weather station with available data is located at Bencubbin, which is 35.1 kilometres from Mukinbudin (BOM, 2024). The highest mean maximum temperature is in January at 34.5°C, the lowest is in July at 16.5°C. The highest mean

Characteristic	Details
	minimum temperature is in January and February at 18.2°C and the lowest is in August at 5.9°C. The average annual rainfall is 313.0 mm.
Soil and landform	The soils are mapped as: • 258KbMU: Valley floors, in the central Zone of Ancient Drainage, with calcareous loamy earth and alkaline red loamy duplex (mostly shallow). Woodland. • 258KyNU: Gently undulating plains, in the central Zone of Ancient Drainage, with grey sandy duplex (shallow and deep) and grey shallow loamy duplex (often alkaline). Salmon gum-gimlet-wandoo woodland and mallee scrub. • 258KyKW: Undulating granitic low hills, in the central Zone of Ancient Drainage, with bare rock, deep sandy duplex (grey and red), shallow sand (red and yellow/brown) and red loamy duplex. York gum-jam woodland. • 258KyYE: Gently undulating sandplain plain, in the central Zone of Ancient Drainage, with yellow sandy earth (occasionally acid), yellow deep sand, gravel and pale deep sand. Heath, shrubland and mallee scrub. • 258KyNE: Rises and low hills, in the northern Zone of Ancient Drainage, with alkaline red loamy duplex (mostly shallow) and yellow sandy earth. Mallee scrub and woodland. (DPIRD, 2019).
Land degradation risk	The soil types within the application area are mapped as having a low risk of land degradation resulting from water erosion and flooding; as having low to moderate risk of wind erosion and salinity; but as having a high risk of subsurface acidification. Risks of water logging and phosphorus export range from low to high across different soil types (Appendix B.3).
Waterbodies	The desktop assessment and aerial imagery indicated that no wetlands or waterbodies transecting the application area. The closest watercourse is an earth dam, locating approximately 23 metres from a part of the application area, which is on the other side of the existing road.
Hydrogeography	The application area is the Avon River System Surface Water Area as proclaimed under the *Rights in Water and Irrigation Act 1914* (RiWI Act). Groundwater salinity within the application area is mapped as over 35000 milligrams per litre total dissolved solids.
Flora	According to available databases, there are 18 conservation significant flora species within the local area, including five threatened and 13 priority species. The most frequently recorded species is *Eremophila virens* (T). The closest recorded species were *Eremophila viscida* (T) and *Grevillea minutiflora* (P1) which are mapped approximately 320 metres from the application area, on the roadside of the existing road. Survey (Trudgen, 2023) recorded two priority 3 species *Thysanotus tenuis* and *Baeckea exserta* along the verge of the existing road, approximately 370 metres from the application area. The application area does not contain any threatened or priority flora species (Trudgen, 2023).
Ecological communities	Some parts of the application area are adjacent to an occurrence of the Eucalypt woodlands of the Western Australian Wheatbelt (Wheatbelt Eucalyptus Woodland) threatened ecological community locating along the existing road.
Fauna	According to available databases, eight conservation significant fauna species have been recorded within the local area, including five threatened fauna species, one priority fauna species, and two specially protected fauna species. The application area is unlikely to provide suitable habitat for any of these eight species. The closest record is for wester quoll (*Dasyurus geoffroii*), approximately 4.1 kilometres from the application area. No records of black cockatoos are mapped within the local area.

B.2. Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA managed land
IBRA bioregion*					
Avon Wheatbelt	9,517,109.95	1,761,187.42	18.51	174,980.68	1.84
Vegetation complex					
Beard vegetation association (BVA) 8	694,638.14	346,425.77	49.87	47,035.60	6.77
BVA 8 within Avon Wheatbelt	356,571.81	50,340.31	14.12	4,353.66	1.22
Moorine Rock_8	319,538.96	45,102.86	14.11	3,129.62	0.98
Local area					
10km radius	51,392.02	9,096.06	17.70	-	-

B.3. Land degradation risk table

Risk categories	Soil unit				
	258KbMU	258KyNU	258KyKW	258KyYE	258KyNE
Wind erosion	L1	M1	M1	M2	M1
Water erosion	L1	L1	L1	L2	L2
Salinity	H1	M1	L1	L2	L2
Subsurface Acidification	L2	H2	H2	H2	M2
Flood risk	L1	L1	L1	L1	L1
Water logging	H2	H2	L1	L1	L2
Phosphorus export risk	H2	M2	L1	L2	L2

Note:

L1 <3% of map unit has a moderate/high to high/extreme (or is presently acid/saline for the risk of subsurface acidification/salinity)

L2 3-10% of map unit has a moderate/high to high/extreme (or is presently acid/saline for the risk of subsurface acidification/salinity)

M1 10-30% of map unit has a moderate/high to high/extreme (or is presently acid/saline for the risk of subsurface acidification/salinity)

M2 30-50% of map unit has a moderate/high to high/extreme (or is presently acid/saline for the risk of subsurface acidification/salinity)

H1 50-70% of map unit has a moderate/high to high/extreme (or is presently acid/saline for the risk of subsurface acidification/salinity)

H2 >70% of map unit has a moderate/high to high/extreme (or is presently acid/saline for the risk of subsurface acidification/salinity)

Appendix C. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The area proposed to be cleared does not contain threatened/priority flora species and suitable habitat for conservation significant fauna. Noting the degraded to completely degraded condition of the vegetation proposed to be cleared, the clearing area is considered as not comprise a high level of biodiversity.	Not likely to be at variance	No
Principle (b): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna."* Assessment: The area proposed to be cleared does not contain suitable habitat for conservation significant fauna however may contribute to the movement of fauna through an extensively cleared landscape.	May be at variance	Yes *Refer to Section 3.2.1, above.*
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: The area proposed to be cleared does not contain threatened flora species (Trudgen, 2023).	Not at variance	No
Principle (d): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community."* Assessment: The area proposed to be cleared contains species that can indicate the Wheatbelt Eucalyptus Woodlands TEC and some parts of the application area are located adjacent to an occurrence of the Wheatbelt Woodland TEC mapped along the existing road. A TEC assessment confirmed that the proposed clearing does not comprise and impact to the Wheatbelt Woodland TEC.	Not likely to be at variance	Yes *Refer to Section 3.2.1, above.*
Environmental value: significant remnant vegetation and conservation areas		
Principle (e): *"Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."* Assessment: The extent of native vegetation in the local area is inconsistent with the national objectives and targets for biodiversity conservation in Australia. The vegetation proposed to be cleared is considered to be part of ecological linkages in the local area.	At variance	Yes *Refer to Section 3.2.2, above.*
Principle (h): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."* Assessment:	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
Given the distance to the nearest conservation area (nine kilometres from the application area), the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.		
Environmental value: land and water resources		
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: Given no water courses or wetlands are recorded within the application area, the proposed clearing does not impact an environment associated with a watercourse or wetland.	Not at variance	No
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The mapped soils are highly susceptible to subsurface acidification. However, noting the small extend of the application area, the degraded to completely degraded conditions of the vegetation proposed to be cleared and that the final land use will be road infrastructure that will not leave bare ground exposed to weathering for extended periods, the proposed clearing is not likely to have an appreciable impact on land degradation.	Not likely to be at variance	No
Principle (i): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water."* Assessment: Given no watercourses / wetlands are recorded within the application area, the proposed clearing does not impact surface water quality. The clearing of 0.37 hectares of degraded to completely degraded vegetation over 26 separated areas is unlikely to impact the underground water in the local area.	Not likely to be at variance	No
Principle (j): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."* Assessment: Given no water courses / wetlands are recorded within the application area and the application area consists of 26 small, separated areas of degraded and completely degraded vegetation, the proposed clearing is unlikely to contribute to waterlogging.	Not likely to be at variance	No

Appendix D. Vegetation condition rating scale

Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation's ability to regenerate. Disturbance at a site can be a cumulative effect from a number of interacting disturbance types.

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Measuring vegetation condition for the South West and Interzone Botanical Province (Keighery, 1994)

Condition	Description
Pristine	Pristine or nearly so, no obvious signs of disturbance.
Excellent	Vegetation structure intact, with disturbance affecting individual species; weeds are non-aggressive species.
Very good	Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and/or grazing.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and/or grazing.
Completely degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.

Appendix E. Photographs of the vegetation

Figure E.1. Photographs of vegetation proposed to be cleared (Shire of Mukinbudin, 20204a and 2025a)

Appendix F. Sources of information

F.1. GIS databases

Publicly available GIS Databases used (sourced from www.data.wa.gov.au):

- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)

- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems
- Wheatbelt Wetlands Stage 1 (DBCA-021)

Restricted GIS Databases used:

- ICMS (Incident Complaints Management System) – Points and Polygons
- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

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