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WESTERN AUSTRALIA

Clearing Assessment Report – CPS 818

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Western Australia.*

Bridge 4202 Maintenance

January 2022

Contents

1	PURPOSE	4
2	SCOPE	4
2.1	Project Scope	4
2.2	Assessment Report Scope.....	4
2.3	Alternatives to Clearing	8
2.4	Measures to Avoid, Minimise, Mitigate and Manage Project Clearing Impacts	8
2.5	Approved Policies and Planning Instruments	10
3	SUMMARY OF SURVEYS	10
3.1	Biological Survey	10
3.1.1	Summary of Biological Survey.....	10
4	VEGETATION DETAILS	11
4.1.1	Project Site Vegetation Description.....	11
5	ASSESSMENT AGAINST THE TEN CLEARING PRINCIPLES.....	12
6	ADDITIONAL ACTIONS REQUIRED	18
7	VEGETATION MANAGEMENT	19
8	REFERENCES	19

Amendments

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

1 PURPOSE

The purpose of this Clearing Assessment Report (CAR) is to provide a report detailing the assessment of native vegetation clearing that is proposed to be undertaken using the Statewide Clearing Permit CPS 818 issued to Main Roads Western Australia (Main Roads).

The CAR outlines the key activities associated with the project, the existing environment and an assessment of native vegetation clearing. This assessment provides an evaluation of the vegetation clearing impacts associated with the project using the ten Clearing Principles, and the strategies used to manage vegetation clearing.

2 SCOPE

2.1 Project Scope

Project Name: Bridge 4202 Maintenance

Project Purpose / Components: Bridge maintenance is required to maintain the structural integrity and functionality of the River crossing. Proposed works include:

- stringer packing (3)
- Abutment 1 pile repairs (2), Abutment 2 pile repairs (1), wingwall pile repairs (2)
- Abutment 1 and 2 full cap replacement, timber pile cut and cap (1), bearing repair (1 pile)
- Abutment 1 concrete sheeting repair, wingwall concrete sheeting repair
- removal of timber spiking rail, pile banding (10 piles)

The proposed clearing under CPS 818 is: 0.0089 ha, comprising a 10 m-wide driveway from the Road to the laydown area.

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

Project Location(s): The project area is located on Bolgart East Road over Mortlock River, 2.34 SLK, Shire of Goomalling, as shown in Figure 1.

- MGA reference, Zone 50: 476493 6542157
- Latitude and Longitude: 31° 15' 16" S 116° 45' 11" E

The location of the proposed works is at Figure 1.

2.2 Assessment Report Scope

The assessment area is confined to a local area of a 20 km radius, as shown in Figure 2. The proposed clearing area is shown in Figure 3.

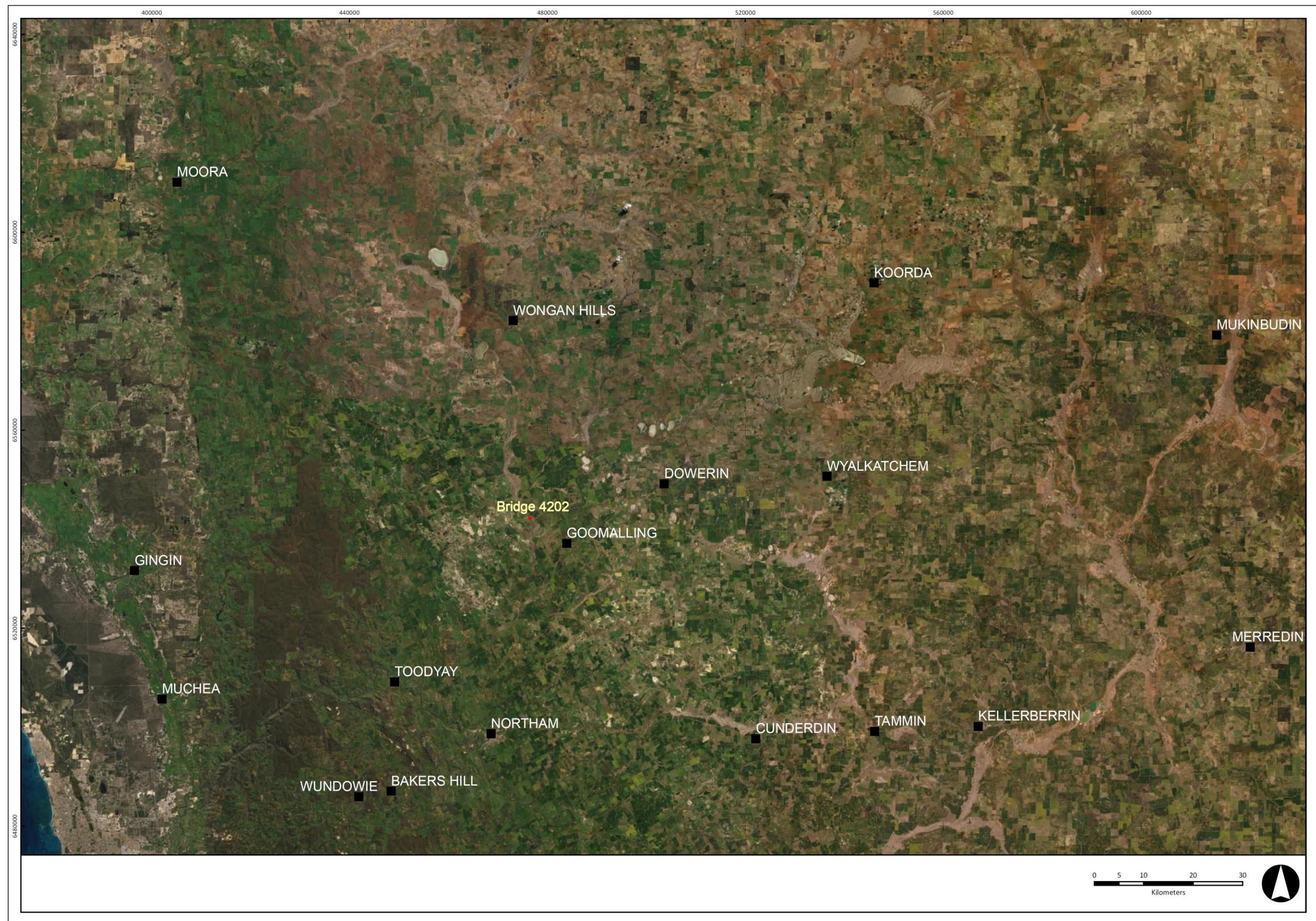


Figure 1. Project Location

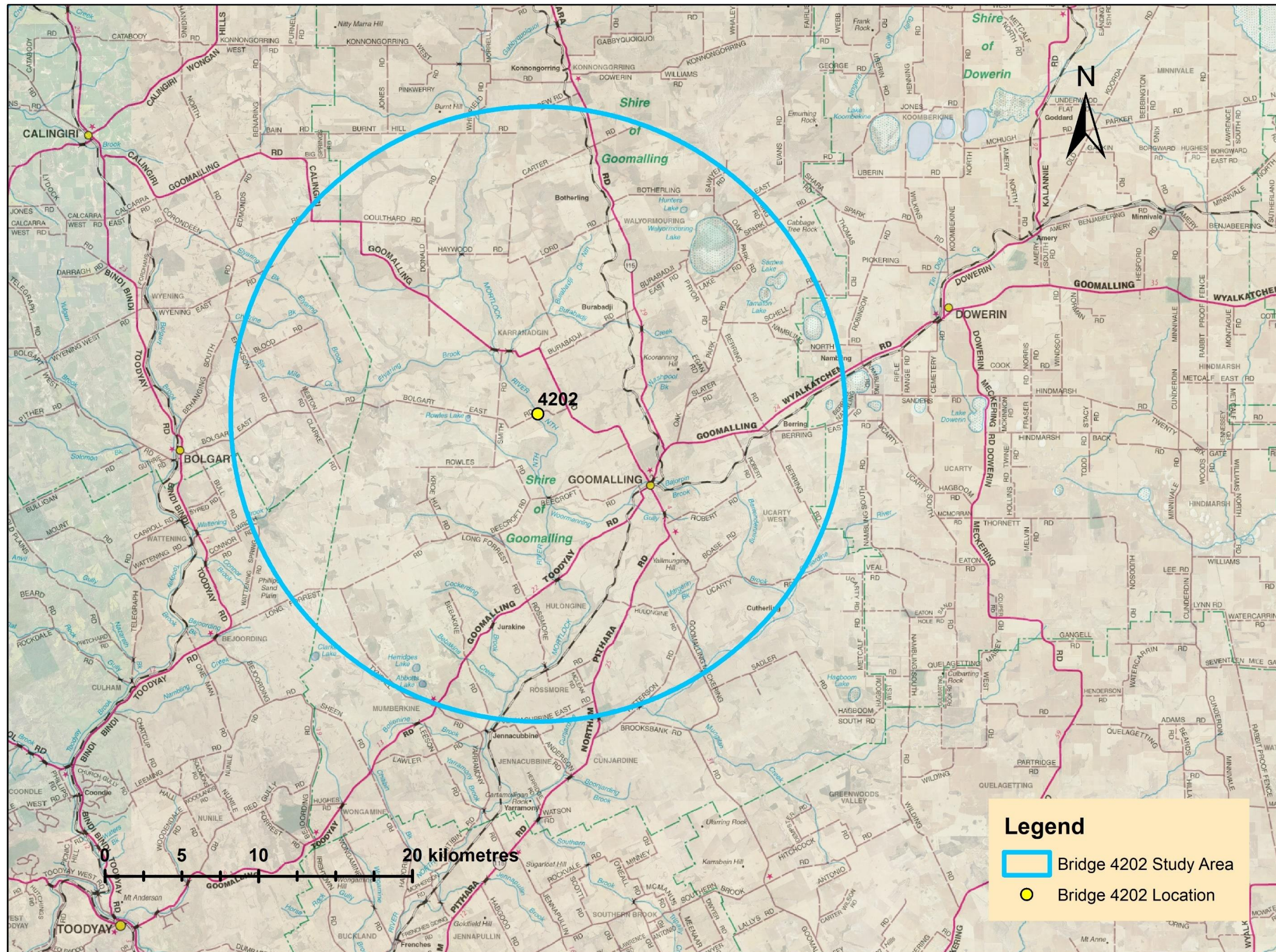


Figure 2. Study Area



Figure 3. Clearing Area

2.3 Alternatives to Clearing

The proposed works are to an existing structure, within the previously disturbed construction and maintenance footprint. This fixed location allowed for no alternatives to clearing – the impacts associated with the Bridge function and maintenance could not be relocated, and would have greater vegetation impacts if it could be such as for bridge duplication or bridge replacement.

The layout of the site – specifically for the necessary access and laydown – was designed to avoid vegetation impacts. Alternatives have been considered, including the extent to which materials and equipment can be positioned from the bridge deck, and ways that the required work can be done with the smallest plant feasible thus reducing access and turnaround requirements.

Existing access to the proposed laydown area from an un-named road/track to the west was deemed too far from the Bridge to be practicable, such that construction of a 10 m-wide driveway from Bolgart East Road to the laydown area was considered necessary and likely to require clearing. Alternative positions have been considered to ensure that as little vegetation clearing as possible is done and that it avoids the larger, older or better-condition vegetation in the area. Positioning of a 5 m-wide access track from the laydown area to the Bridge was determined to require no vegetation clearing.

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

The design and management measures implemented to avoid and minimise the project clearing impacts are provided in Table 1.

Clearing impacts have been avoided and minimised in the following ways:

- A small project construction footprint was developed to avoid adjacent vegetation.
- The location of the proposed laydown area has been positioned to avoid impacting vegetation – it is a large grassy area 20 x 30 m requiring no vegetation removal
- Large trees will be retained and only large shrubs or small trees will be removed as part of the project activities.
- Existing commercial material sources are being used rather than opening a new pit.

Table 1. Justification of Avoiding, Minimising, Mitigating and Managing Project Clearing Impacts

Design or Management Measure	Discussion and Justification
Steepen batter slopes	Works do not involve batter modification of the construction of new batters.
Installation of safety barriers	The proposed works do not involve the installation of safety barriers. None of the proposed vegetation clearing is related to the construction of new road or batters, or to any proposed increase in the recovery zone adjacent to the road for errant vehicles. Safety barriers will not, therefore, protect or allow for the retention of vegetation.
Alignment to one side of existing road	Works proposed do not involve changes to road alignment or any new road construction. Bridge access is restricted to one side of the Bridge, reducing vegetation and foreshore impacts.
Alternative alignment to follow existing road (or) to preferentially locate within pasture or a degraded areas	Works proposed do not involve changes to road alignment or any new road construction.
Installation of kerbing	Works proposed do not involve kerbing installation or modification.
Simplification of design to reduce number of lanes and/or complexity of intersections	Works proposed do not involve changes in road width, alignment or intersection configuration.
Preferential use of existing cleared areas for access tracks, construction storage and stockpiling	Bridge access has been previously cleared, with minimal regrowth such that this access will be maintained. No temporary clearing for storage, side tracks, stockpiles or turn around bays will be undertaken as part of project activities. Further project clearing will be avoided as the site office, materials storage areas, construction vehicles/machinery and access tracks will be located on previously disturbed or cleared areas.
Drainage modification	Works proposed do not involve drainage.

2.5 Approved Policies and Planning Instruments

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

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.3), Main Roads has also had regard to the below instruments.

Legislation of relevance for assessment of clearing and planning/other matters

- Biodiversity Conservation Act 2016 (WA) (BC Act)
- Conservation and Land Management Act 1984 (WA) (CALM Act)
- Country Areas Water Supply Act 1947 (WA) (CAWS Act)
- Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act)
- Planning and Development Act 2005 (WA) (P&D Act)
- Soil and Land Conservation Act 1945 (WA)
- Rights in Water and Irrigation Act 1914
- Aboriginal Heritage Act 1972 (WA)
- Town Planning and Development Act 1928

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 (DEC, December 2014)
- Procedure: Native vegetation clearing permits (DWER, October 2019)
- Environmental Offsets Guidelines (Government of Western Australia, August 2014)
- Technical guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA, 2016)
- Technical guidance – Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment (EPA, 2020)
- Approved conservation advice under section 266B of the EPBC Act for threatened flora/fauna/vegetation communities
- Approved Recovery Plans for threatened species
- EPBC Act Referral guidelines for the three threatened black cockatoo species
- Strategic advice - EPA

3 SUMMARY OF SURVEYS

3.1 Biological Survey

The Wheatbelt Bridges Package 3 Biological Survey was conducted on 12th to 16th October 2020 by ecologia.

Section 3.1.1 contains the summary of the survey.

3.1.1 Summary of Biological Survey

Main Roads Western Australia (Main Roads) undertakes bridge repairs and replacement works across the State each year to ensure the ongoing safety and maintenance of the road network. Main Roads required a biological survey of Bridge 4202 within the Avon Wheatbelt IBRA bioregion for which maintenance works are scheduled for the 2021/22 construction season. The Bridge 4202 survey area is located ca. 9 km north-west of Goomalling on Calingiri-Goomalling Road and is 1.57 ha in size. Ecologia Environment (ecologia) completed biological surveys including a desktop

assessment, a detailed flora and vegetation survey, a basic fauna and fauna habitat assessment, and a black cockatoo habitat assessment.

Flora and Vegetation Assessment

No Weeds of National Significance were recorded within the survey area. Declared Pest, *Echium plantagineum* was recorded. No EPBC Act or BC Act listed Threatened species were recorded within the survey area. One Priority 3 species, *Eucalyptus sargentii* subsp. *onesis*, was recorded within the survey area. Other significant plant species identified by the desktop assessment are considered unlikely to be present.

Vegetation condition within road reserves and along drainage bank lines and channels is largely in 'Degraded to 'Completely Degraded' condition, as these areas have been subject to extensive historical clearing, grazing, and weed invasion. Riparian vegetation was in comparatively better condition and assessed as 'Very Good' to 'Good', with dominant native species and comparatively few introduced species. Vegetation condition on plains and undulating plains was assessed as 'Degraded' to 'Very Good' with vegetation condition varying with past and present land management practices.

No vegetation types within the survey area were assessed as corresponding to any National or State listed TEC or PEC, nor were any considered to be otherwise significant based on available data.

Fauna and Fauna Habitat Assessment

Four habitat types were identified within the Bridge 4202 survey area that were generally in Completely Degraded to Good condition, with weeds and grazing by introduced herbivores contributing to the lower rating. No significant fauna species were recorded. Eleven significant fauna species were identified from the desktop assessment. The peregrine falcon (OS BC Act) and Carnaby's cockatoo (EN BC Act and EPBC Act) were given a likelihood of occurrence rating of 'Possible' for this survey area. All the other species were considered "Unlikely" to be present.

Black Cockatoo Assessment

An assessment was undertaken to investigate potential breeding habitat, night roosting habitat, and foraging habitat for Carnaby's black cockatoo within the bridge survey area. No sightings or secondary evidence of black cockatoos were recorded during the survey. No potentially suitable breeding habitat trees (> 500 mm DBH) were recorded within the Bridge 4202 survey area. As the tallest trees in the wider regional area are not located within the bridge survey area, it is unlikely that Carnaby's black cockatoo roosts are present at Bridge 4202. *Banksia*, *Hakea* and *Grevillea* species, known foraging species for black cockatoos, were not dominant within the understorey. Given the appropriate timing of the survey, the lack of confirmed breeding records, low quality foraging habitat recorded within the survey areas, and absence of trees with a suitable DBH, it is unlikely that black cockatoos are using habitat within the Bridge 4202 survey area for breeding, roosting or foraging.

4 VEGETATION DETAILS

4.1.1 Project Site Vegetation Description

Vegetation is Very Good to Completely Degraded, small patches of remnant vegetation with scattered trees on either side of the road that are generally infested by weeds, including Very Good *Tecticornia* low samphire shrubland (15.4 % of survey area) and Good to Very Good *Callitris* low open woodland (34.38 % of survey area), with lower condition areas invested by weeds and heavily grazed by livestock.

Tables 2 and 3 show details of the Pre-European Vegetation Associations with the project area and the remaining extents of these associations.

For a full description of the existing vegetation, refer to the Site Inspection Report in Appendix A.

Table 2. Summary of Project Area's Mapped Pre-European Vegetation Associations

Pre-European Vegetation Association(s)	Clearing Description	Vegetation Condition	Comments
Vegetation Association 988 described as Succulent steppe with thicket; <i>Melaleuca thyoides</i> over samphire (Government of Western Australia, 2017)	No clearing of this Vegetation Association is proposed.	Very Good to Completely Degraded (EPA 2016)	Vegetation description and condition determined from Biological Survey (ecologia, 2021) and aerial imagery.
Vegetation Association 1049 described as Medium woodland; wandoo, York gum, salmon gum, morrel & gimlet (Government of Western Australia, 2017)	Clearing of up to 0.0089 ha for bridge maintenance and access on Jarrahdale Road, Serpentine.		

Table 3. Pre-European Vegetation Representation

Pre-European Vegetation Association	Scale	Pre-European (ha)	Current Extent (ha)	% Remaining	% Remaining in DBCA reserves
Veg Assoc No. 988	Statewide Western Australia	96635	29324	30	15
	IBRA Bioregion Avon Wheatbelt	94338	27553	29	13
	IBRA Sub-region Katanning	27112	8712	32	4
	Local Government Authority Shire of Goomalling	14452	8910	61	1
Veg Assoc No. 1049	Statewide Western Australia	833384	56618	6	6
	IBRA Bioregion Avon Wheatbelt	833384	56618	6	6
	IBRA Sub-region Katanning	255402	20572	8	2
	Local Government Authority Shire of Goomalling	79902	8861	11	0.4

5 ASSESSMENT AGAINST THE TEN CLEARING PRINCIPLES

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

Each principle has been assessed in accordance with DWERs 'A Guide to the Assessment of Applications to Clear Native Vegetation' and other relevant CPS Decision Reports prepared by DWER. The proposed clearing is not likely to be at variance with the 10 Clearing Principles.

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

Proposed clearing is not likely to be at variance to this Principle
Comments Vegetation is Very Good to Completely Degraded, comprising: - small patches of remnant vegetation with scattered trees on either side of the road that are generally infested by weeds - Very Good <i>Tecticornia</i> low samphire shrubland (15.4 % of survey area) - Good to Very Good <i>Callitris</i> low open woodland (34.38 % of survey area) Lower-condition areas are heavily grazed by livestock and infested by weeds, including Declared Pest Paterson's Curse.

Nine individuals of Priority 3 species *Eucalyptus sargentii* subsp. *onesis* were recorded within the Bridge 4202 project area within *Callitris* low open woodland. No trees of this species will be impacted by the proposed works.

Suitable habitat was not identified at Bridge 4202 for Bilby, Chuditch, Numbat, Malleefowl, Australian Painted Snipe, Curlew Sandpiper, Pectoral Sandpiper, Sharp-tailed Sandpiper and Red-necked Stint. Carnaby's Black Cockatoo may overfly the bridge, with a known breeding area 15 km away and unconfirmed roosting area 8 km away. Northern Shield-backed Trapdoor Spider and Shield-backed Trapdoor Spider have been historically identified within 20 km of Bridge 4202 but not at the bridge or in the project area.

There were no species recorded deemed to be at the limits of their distributional range, representing bioregional range extensions, isolated outliers, endemic to the study area, relictual (representative of taxonomic groups that no longer occur widely in the broader landscape), potentially new species or otherwise anomalous or significant.

Methodology

DBCA shapefiles

Department of Natural Resources and Environment (2002)

ecologia Biological Survey (2021)

EPA (2016, 2020)

Government of WA (2013)

Main Roads GIS Shapefiles

(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

Comments

9 Threatened Fauna species have been historically recorded within 1 km of the project area – Curlew Sandpiper, Grey Falcon, Malleefowl, Night Parrot, Australian Painted Snipe, Carnaby's Black Cockatoo, Chuditch, Red-tailed Phascogale and Shield-backed Trapdoor Spider. None of these were identified in the project area, with no suitable habitat present for Curlew Sandpiper, Malleefowl, Australian Painted Snipe and Chuditch, and Carnaby's Black Cockatoo only considered a possible overfly with a known Carnaby's Black Cockatoo breeding area 15 km away and unconfirmed roosting area 8 km away (Biological Survey, ecologia, 2021).

Two Threatened Fauna species have been identified as potentially occurring within 20 km of the project area – Numbat and Western Spiny-tailed Skink. None of these were identified in the project area, with no suitable habitat present for Numbat (Biological Survey, ecologia, 2021).

The project will not involve the clearing of vegetation that is suitable feeding, nesting or roosting habitat for black cockatoo species, including revegetation, and/or pine trees. There are no trees with DBH > 500 mm (or 300 mm for wandoo).

Peregrine Falcon habitat will not be impacted by the proposed works – any presence of Peregrine Falcon is likely to only be a fly-over or hunting waterfowl if present, with no dependence on the vegetation in the project area and highly unlikely to be a regular visitor or a permanent resident.

Methodology

DBCA Shapefiles

DBCA website

ecologia Biological Survey (2021)

EPA (2016, 2020)

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

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

Comments

No EPBC Act or BC Act listed Threatened species were recorded within or near the project area. One Priority 3 species, *Eucalyptus sargentii* subsp. *onesis* (nine individuals), was present at the bridge. No trees of this species – locations shown below – will be impacted by the proposed works.



Thirteen Threatened Flora species have been historically recorded within 1 km of the project area – Large-fruited Tammin Wattle, Velvety Spiral Pod Wattle, Slender Andersonia, Hinged Dragon Orchid, Native Foxglove, Wongan Cactus, Hook-point Poison, Christine's Grevillea, Hairy Phalanx Grevillea, Woolly Lysiosepalum, Wongan Melaleuca, Saltmat and Wongan Featherflower. None of these were identified in the project area (Biological Survey, ecologia, 2021).

Twelve Threatened Flora species within 20 km of the project area – Spiral-fruited Wattle, Vassal's Wattle, Tangled Wattle, King Spider Orchid, Prostrate Flame Pea, Diels' Daviesia, Scale-leaf Poison, Zig Zag Grevillea, Red Snakebush, Sargents Snakebush, Wongan Eriostemon and Hughan's Featherflower. None of these were identified in the project area (Biological Survey, ecologia, 2021).

Significant plant species identified by desktop assessment as potentially occurring on-site were deemed unlikely to be present following biological survey. There were no species recorded deemed to be at the limits of their distributional range, representing bioregional range extensions, isolated outliers, endemic to the study area, relictual (representative of taxonomic groups that no longer occur widely in the broader landscape), potentially new species or otherwise anomalous or significant.

Methodology

DBCA shapefiles

ecologia Biological Survey (2021)

(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 likely to be at variance to this Principle

Comments

No Threatened Ecological Communities have been identified within the project area at the Bridge, including the Eucalypt Woodlands of the Western Australian Wheatbelt considered potentially present based on mapped presence within the larger study area. No other Threatened Ecological Communities were considered likely to occur in or near the project area or impacted by the works, and there are no Environmentally Sensitive Areas at or near the bridge site. The vegetation clearing proposed is minimal.

Methodology

DBCA shapefiles

ecologia Biological Survey (2021)

(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 likely to be at variance to this Principle****Comments****Summary of Project Area's Mapped Pre-European Vegetation Associations**

Pre-European Vegetation Association(s)	Clearing Description	Vegetation Condition	Comments
Vegetation Association 988 described as Succulent steppe with thicket; <i>Melaleuca thyoides</i> over samphire (Government of Western Australia, 2017)	No clearing of this Vegetation Association is proposed.	Very Good to Completely Degraded (EPA 2016)	Vegetation description and condition determined from Biological Survey (ecologia, 2021) and aerial imagery.
Vegetation Association 1049 described as Medium woodland; wandoo, york gum, salmon gum, morrel & gimlet (Government of Western Australia, 2017)	Clearing of up to 0.0089 ha for bridge maintenance and access on Jarrahdale Road, Serpentine.		

Pre-European Vegetation Representation

Pre-European Vegetation Association	Scale	Pre-European (ha)	Current Extent (ha)	% Remaining	% Remaining in DBCA reserves
Veg Assoc No. 988	Statewide Western Australia	96635	29324	30	15
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	IBRA Sub-region Katanning	27112	8712	32	4
	Local Government Authority Shire of Goomalling	14452	8910	61	1
Veg Assoc No. 1049	Statewide Western Australia	833384	56618	6	6
	IBRA Bioregion Avon Wheatbelt	833384	56618	6	6
	IBRA Sub-region Katanning	255402	20572	8	2
	Local Government Authority Shire of Goomalling	79902	8861	11	0.4

Vegetation Association 988 is well-represented regionally and locally, but not so Vegetation Association 1049, considered Endangered. The impacts to vegetation from the works are minimal and will not significantly impact either Vegetation Association:

- only 0.0020 % of the remaining Association 988 is present in the project area, and none will be cleared
- only 0.0018 % of the remaining Association 1049 is present in the project area, and only 0.86 % of this 0.0018 % i.e. 0.000016 % of the Association will be impacted
- the vegetation to be cleared does not comprise any mature trees, noting that wandoo, york gum, salmon gum, morrel & gimlet characterise Vegetation Association 1049

Methodology

Aerial photography
ecologia Biological Survey (2021)
EPA (2016)

Government of Western Australia (2017)
Perth Biodiversity Project (2013)
Shepherd (2009)

(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 likely to be at variance to this Principle
Comments Mortlock River is a non-perennial watercourse that passes through the project area. The vegetation to be impacted by the proposed works is not associated with the watercourse as it comprises dryland species found distant to watercourses and wetlands. The mapped Beard Vegetation Associations are (i) Succulent steppe with thicket; <i>Melaleuca thyoides</i> over samphire, and (ii) Medium woodland; wandoo, York gum, salmon gum, morrel & gimlet. The vegetation on the site ranges from Very Good to Completely Degraded condition, with the better quality vegetation not to be impacted and the clearing proposed minimal – less than 0.01 ha. No nationally important wetlands are located within 20 km of Bridge 3125. Methodology DWER and DBCA shapefiles ecologia Biological Survey (2021)

(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
Comments The soil within the project area, as described by Department of Primary Industries and Regional Development consolidated soil-landscape mapping (2016), comprises the following: - System 1594: Goomalling Mortlock Subsystem – 91.7 % of the survey area – valley floors of the Mortlock River and other similar creeks that predominantly contain sand over yellowish clay soils, prone to salinity and waterlogging - System 1602: Ewerts 1 Phase – 8.3 % of the survey area – hillslopes containing sand and loamy sand over yellowish clay soils, with some gravel ridges, and some heavier soils that often occur immediately below a breakaway The vegetation proposed to be removed is not significant in relation to the continued viability of any ecological community. Soil salinity, structure and fertility are not dependent on the vegetation proposed to be cleared. Neither erosion nor sediment accumulation are likely to be increased as a result of the proposed vegetation removal. Increased waterlogging will not occur as a result of the proposed clearing, which is not significant in terms of soil stability, soil structure or water uptake, noting that the clay soil is susceptible to waterlogging. Clearing will be minimal. Project activities will not involve dewatering or excavation below the water table. Methodology ecologia Biological Survey (2021)

(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
Comments The project area is not within or adjacent to a reserve, conservation area, Bush Forever Site or Environmentally Sensitive Area. Weeds are not likely to be spread to adjacent better-condition vegetation, and impacts are aligned with the existing road and bridge and will not impact ecological connectivity. Wattening Nature Reserve, Walyormouring Nature Reserve and an unnamed Nature Reserve are within 20 km of Bridge 4202 and are the closest conservation areas to the project area. Methodology DBCA shapefiles ecologia Biological Survey (2021) EPA (2016)

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

Proposed clearing is not likely to be at variance to this Principle
Comments The project area is not located in a Proclaimed Surface Water Area. There will be no disturbance or interruption to natural drainage and surface runoff patterns. Works are not likely to disturb the bed or banks of the watercourse – works are to be carried out during summer when the area is dry. No water will be taken from a watercourse or wetland. The project area is not located in a Groundwater Proclamation Area or Pollution Control Area, and there is no requirement for dewatering, drainage modification, a well or bore.
Methodology DWER and DBCA shapefiles ecologia Biological Survey (2021) EPA (2016)

(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 likely to be at variance to this Principle
Comments The average annual rainfall for the project area is 364 mm. Soils are described as sand over yellowish clay, generally with poor infiltration. The topography ranges from gently undulating rises to low hills, with continuous stream channels that flow most years. A relatively small area of vegetation will be impacted and this is unlikely to affect the incidence or extent of flooding. It is not significant with regard to soil stability or water uptake, will not significantly impact salinity, soil structure or waterlogging capacity, and will not result in changes to the topography or surface water flows that may be associated with flooding events.
Methodology ecologia Biological Survey (2021)

6 ADDITIONAL ACTIONS REQUIRED

Table 5 summarises what further pre-clearing impact assessment and vegetation management is required in accordance with CPS 818.

Table 5. 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. Where the clearing is at variance or may be at variance to Clearing Principle (f) and no other Clearing Principle, and the area of the proposed clearing is less than 0.5 hectares in size and the Clearing Principle (f) impacts only relate to: (i) a minor non-perennial watercourse(s); (ii) a wetland(s) classed as a multiple use management category wetland(s); and/or (iii) a wetland that is not a defined wetland; the preparation of an Assessment Report, as required by condition 6(e), is not required.	No	No further action required.
2. Clearing is at variance or may be at variance with Clearing Principle (g) land degradation, (i) surface or underground water quality or (j) the incidence of flooding.	No	No further action required.
3. The project involves clearing for temporary works (as defined by CPS 818).	No	No further action required.
4 a. Project is within Region that: - Has rainfall greater than 400mm and - Is South of the 26th parallel and - Works are in 'Other than dry conditions' and - Works have potential for uninfested areas to be impacted.	No	Proceed with standard Vehicle and Plant management actions from PEMR's and Vehicle and Plant Hygiene Checklists.
4b. Does the proposed works require clearing within or adjacent to DBCA estate in non-dry conditions?	No	No further action required.
5. Main Roads has been notified by DWER or an environmental specialist that the area to be cleared is susceptible to a pathogen other than dieback.	No	No further action required.
6. The vegetation within the area to be cleared and/or the surrounding vegetation in a good or better condition and weeds likely to spread to and result in environmental harm to adjacent areas of native vegetation that are in good or better condition.	No	No further action required.

7 VEGETATION MANAGEMENT

Main Roads will avoid clearing native vegetation where possible. Where clearing cannot be avoided then this clearing is kept to a minimum.

8 REFERENCES

Australian Government. EPBC Act referral guidelines for three threatened black cockatoo species (2012). Department of Sustainability, Environment, Water, Population and Communities.

Beeston, G.R., Hopkins, A.J.M. and Shepherd, D.P. (2002). Land-use and vegetation in Western Australia. Department of Agriculture, Western Australia, Resource Management Technical Report 250.

Department of Natural Resources and Environment (2002). Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.

ecologia (2021) Main Roads Western Australia Wheatbelt Bridge Program 2020 – Package 3 – Biological Survey, August 2021. TRIM reference D21#929700.

Environmental Protection Authority (2020). Technical Guidance – Terrestrial vertebrate fauna surveys for Environmental Impact Assessment. Perth, Western Australia.

Environmental Protection Authority (2016). *Technical Guide – Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment* (eds. K Freeman, G Stack, S Thomas and N Woolfrey). Perth, Western Australia.

Government of Western Australia. (2018). 2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of December 2017. WA Department of Biodiversity, Conservation and Attractions, Perth. Available online from: <https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics>

Government of Western Australia (2019). Native Vegetation Clearing Permits. Application, assessment, and management requirements under Part V Division 2 of the Environmental Protection Act 1986. Department of Water and Environmental Regulation.

Government of Western Australia (2014). A guide to the assessment of applications to clear native vegetation Under Part V Division 2 of the Environmental Protection Act 1986. Department of Environmental Regulation.

Government of Western Australia (2014). WA Environmental Offset Guidelines. Perth, Western Australia.

Havel, J.J. and Mattiske, E.M. (2000) Vegetation Mapping of South West Forest Regions of Western Australia. Prepared for CALMSCIENCE, Department of Conservation and Land Management and Environment Australia