



mainroads
WESTERN AUSTRALIA

Clearing Assessment Report – CPS 818

*We're working for
Western Australia.*

Bridge 3125 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	11
3.1	Biological Survey	11
	3.1.1 Summary of Biological Survey.....	11
4	VEGETATION DETAILS	12
	4.1.1 Project Site Vegetation Description.....	12
5	ASSESSMENT AGAINST THE TEN CLEARING PRINCIPLES.....	13
6	ADDITIONAL ACTIONS REQUIRED	18
7	VEGETATION MANAGEMENT.....	19
8	REFERENCES	19

Amendments

Report Compilation & Review	Name and Position	Document Revision	Date
Author:	[REDACTED] 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 3125 Maintenance

Project Purpose / Components: Bridge maintenance is required to maintain the structural integrity and functionality of the River crossing, to improve the bridge overall condition and ensure continued safe performance. Proposed works include:

- Load Rating
- Abutment 1 pile repairs (3), Abutment 2 pile repairs (9)
- Abutment 2 full cap replacement
- Abutment 2 concrete sheeting repair
- stringer replacement (3), corbel replacement (4)
- stringer 7 bolting, packing between stringer and corbel (3)
- replace width markers (4), replace guardrail bullnoses (4)
- clear all vegetation within 10 m of the Bridge

The proposed clearing under CPS 818 is: 0.009 ha, comprising 20 x 30 m laydown area, 10 m-wide driveway from the Road to the laydown area, 5 m-wide access track from laydown area to the Bridge, and 10 m clearance around the Bridge.

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

Project Location(s): The project area is located on Whinbin Rock Road over Arthur River, 6.11 SLK, Shire of Narrogin, as shown in Figure 1.

- MGA reference, Zone 50: 528483 6339648
- Latitude and Longitude: 33° 4' 53" S 117° 18' 19"

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

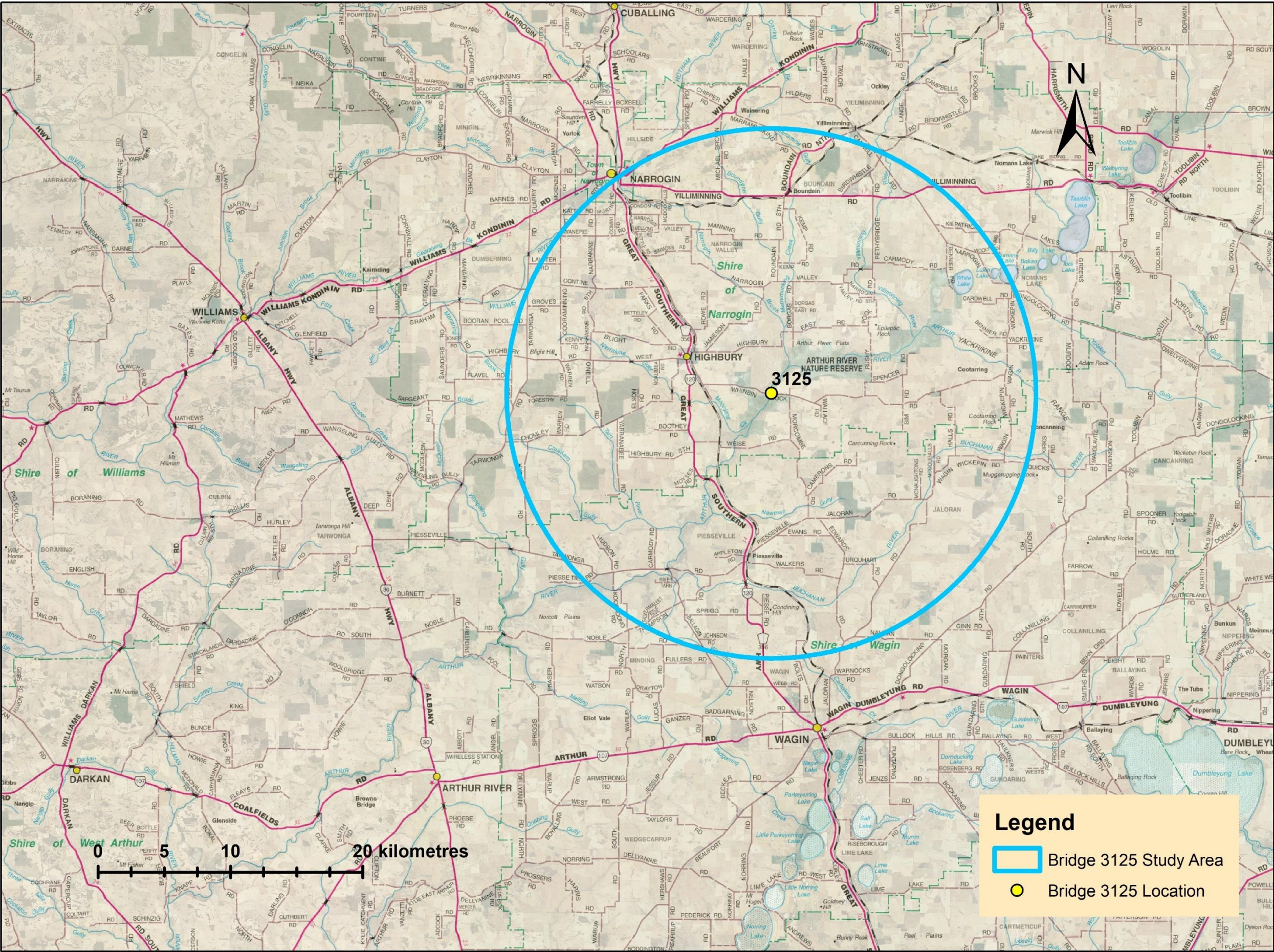


Figure 2. Study Area



Figure 3. Clearing Area – areas in square metres are shown

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 re-located, 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.

The extent of any clearing within 10 m of the Bridge to reduce fire risk is not dependent on the bridge materials – wood can burn, concrete can crack, steel can buckle – but is prioritised to the removal of grasses, weeds and other fine material, and to foliage within 2 m of the Bridge, while retaining larger, lower-risk trees

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.
- 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 1 Biological Survey was conducted on 2nd to 5th November 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. These works may include various substructure and/or superstructure repairs or bridge replacement works. Main roads required a biological survey of Bridge 3125 within the Avon Wheatbelt IBRA bioregion that is scheduled for construction during the 2020/21 construction season. Ecologia Environment (ecologia) completed a biological survey 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 EPBC Act or BC Act listed Threatened species were recorded during the survey. One Priority 3 species, *Frankenia drummondii* (one individual) was recorded within the Bridge 3125 survey area. The remaining significant plant species identified by the desktop assessment as potentially occurring within the survey area are considered unlikely to be present. No species recorded represented bioregional range extensions, no taxa were endemic to the study area, and no taxa were potentially new species or otherwise anomalous.

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.

Vegetation condition is generally Good to the west of Arthur River, and varies from Completely Degraded to Very Good east of Arthur River. The best vegetation is SE of the Bridge. Riparian vegetation south of Whinbin Rock Road is Degraded.

Approximately 37 % of Bridge 3125 survey area falls within the Class A Arthur River Nature Reserve. No other conservation reserves or nationally important wetlands are located within the survey area.

Fauna and Fauna Habitat Assessment

A basic fauna assessment was undertaken concurrently with a flora and vegetation survey to outline fauna habitats present within the survey area. All habitat types identified are considered common in the wheatbelt and no habitat types were restricted to the survey area. In general, habitat types were considered to be in Degraded to Very Good condition. Human disturbances, clearing and the presence of weeds and rubbish were the contributing factors leading to lower condition ratings.

Low intensity fauna sampling was undertaken, and fauna recorded are generally common and not restricted to survey areas. No species of significance were recorded during the field assessment.

The red-tailed phascogale was deemed likely to occur due to potentially suitable habitat present within the Bridge 3125 survey area.

Black Cockatoo Assessment

An assessment was undertaken to investigate potential breeding habitat, night roosting habitat, and foraging habitat for the three WA black cockatoo species within the survey area. None were identified on-site. None of the potential habitat trees based on diameter (> 500 mm DBH) had known or probable nesting hollows, nor did they have hollows of a suitable size, height or angle to support black cockatoos.

Black cockatoo foraging habitat was assessed as low quality. Given the appropriate timing of the survey, the lack of confirmed breeding records, low quality foraging habitat recorded within the survey areas, and that no trees had 'known' or 'probable' breeding hollows, it is unlikely that black cockatoos are currently using any of the trees within the survey area for breeding or roosting.

4 VEGETATION DETAILS

4.1.1 Project Site Vegetation Description

Vegetation was mapped as mostly Good to Very Good condition, with small patches of low open shrubland and sheoak woodland bordering the creekline that were generally infested by weeds.

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 1074 described as Succulent steppe with open woodland & thicket; wandoo & <i>Allocasuarina obesa</i> over teatree & samphire (Government of Western Australia, 2017)	Clearing of up to 0.009 ha for bridge maintenance and access on Whinbin Rock Road, Highbury.	Good to Very Good (EPA 2016)	Vegetation description and condition determined from Biological Survey (ecologia, 2021) and aerial imagery.

Table 3. Pre-European Vegetation Representation

Pre-European Vegetation Association	Scale	Pre-European (ha)	Current Extent (ha)	% Remaining	% Current Extent Remaining in DBCA reserves
Veg Assoc No. 1074	Statewide Western Australia	4625	2590	56	55
	IBRA Bioregion Avon Wheatbelt	4625	2590	56	55
	IBRA Sub-region Katanning	4625	2590	56	55
	Local Government Authority Shire of Narrogin	4145	2222	53	64

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 DWER's '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
<p>Comments</p> <p>Vegetation is mostly Good to Very Good condition, comprising small patches of low open shrubland and sheoak woodland bordering the creekline that were generally infested by weeds. Approximately 37% of Bridge 3125 survey area falls within the Class A Arthur River Nature Reserve. Priority 3 flora <i>Frankenia drummondii</i> is present at Bridge 3125 within Very Good condition Casuarina mid open forest.</p> <p>There are no Threatened or Priority Ecological Communities, Flora or Fauna, and no Environmentally Sensitive Areas located within or near the project area.</p> <p>Species diversity is very low, with 23 native flora species identified on-site compared with 635 flora species identified as potentially occurring in the project area. Only 7 native vertebrate species were identified in the project area.</p> <p>No species recorded represented bioregional range extensions, no taxa were endemic to the study area or relictual, and no taxa were potentially new species or otherwise anomalous.</p> <p>The clearing area is small and any potential impacts are very minor.</p>
<p>Methodology</p> <p>DBCA shapefiles Department of Natural Resources and Environment (2002) ecologia Biological Survey (2021) EPA (2016, 2020) Government of WA (2013) Main Roads GIS Shapefiles</p>

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

Proposed clearing is not likely to be at variance to this Principle
<p>Comments</p> <p>11 Threatened Species have been mapped as potentially occurring within 1 km of the project area – Curlew Sandpiper, Forest Red-tailed Black Cockatoo, Grey Falcon, Malleefowl, Night Parrot, Carnaby's Black Cockatoo, Chuditch, Red-tailed Phascogale, Slender Andersonia, Wagin Banksia and Saltmat. None of these were identified in the project area (Biological Survey, ecologia, 2021). There are small areas of potentially-suitable open woodland habitat for Red-tailed Phascogale, which has historically been recorded within 20 km of the Bridge. Although considered 'likely to occur', the species has not previously been recorded within the project area and was not recorded during the 2020 survey. As such this habitat is considered to be marginal and therefore not a significant habitat for the species.</p>

3 Threatened Fauna species have been historically found within 20 km of the project area – Forest Red-tailed Black Cockatoo, Baudin's Black Cockatoo and Numbat. None of these were identified in the project area (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. Trees are present with DBH > 500 mm – 1 *Eucalyptus loxophleba* with no suitable hollows, 1 *E. loxophleba* with no hollows and 1 dead tree with no hollows. The survey area does not include the tallest trees within the surrounding area, and high-quality foraging resources for black cockatoos are not present within the survey area. The vegetation to be cleared is not a significant habitat for Black Cockatoos.

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

There are no Threatened Flora identified within or near the project area. Priority 3 flora *Frankenia drummondii* is present at Bridge 3125 within Very Good condition *Casuarina* mid open forest. This vegetation will not be impacted.

11 Threatened Flora species have been mapped as potentially present within 20 km of the project area – Yornaning Wattle, *Boronia capitata ssp. capitata*, Cossack Spider Orchid, Stilted Tinsel Lily, Drummond's Conostylis, Mogumber Bell, Wongan Cactus, Dwarf Bee Orchid, Keighery's Eleocharis, Narrogin Pea and Shy Featherflower. None of these were identified in the project area (Biological Survey, ecologia, 2021).

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 occurrences of Threatened Ecological Communities were identified within the project area.

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 1074 described as Succulent steppe with open woodland & thicket; wandoo & <i>Allocasuarina obesa</i> over teatree & samphire (Government of Western Australia, 2017)	Clearing of up to 0.009 ha for bridge maintenance and access on Whinbin Rock Road, Highbury.	Good to Very Good (EPA 2016)	Vegetation description and condition determined from Biological Survey (ecologia, 2021) and aerial imagery.

Pre-European Vegetation Representation

Pre-European Vegetation Association	Scale	Pre-European (ha)	Current Extent (ha)	% Remaining	% Current Extent Remaining in DBCA reserves
Veg Assoc No. 1074	Statewide Western Australia	4625	2590	56	55
	IBRA Bioregion Avon Wheatbelt	4625	2590	56	55
	IBRA Sub-region Katanning	4625	2590	56	55
	Local Government Authority Shire of Narrogin	4145	2222	53	64

The vegetation on-site resembles the mapped Vegetation Association. This Association is well-represented regionally and locally, with the vegetation within the project area not a significant remnant and not significantly impacted by the proposed works.

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
<p>Comments</p> <p>Arthur 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 Beards's Vegetation Association is Succulent steppe with open woodland & thicket; wandoo & <i>Allocasuarina obesa</i> over teatree & samphire. The vegetation on the site includes Good to Very Good condition vegetation, though this will not be impacted and the clearing proposed is minimal – less than 0.01 ha.</p> <p>No nationally important wetlands are located within 20 km of Bridge 3125.</p> <p>Methodology</p> <p>DWER and DBCA shapefiles ecologia Biological Survey (2021)</p>

(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
<p>Comments</p> <p>The soil within the project area, as described by Department of Primary Industries and Regional Development consolidated soil-landscape mapping (2016), is System 1684: Arthur River 2 Subsystem – Broad saline flats (1.5 - 4.5km wide) along the Arthur River with mainly samphire, ti tree vegetation, often bare land.</p> <p>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. Given the very small scale of clearing required for the project, neither erosion nor sediment accumulation are likely to be increased as a result of the proposed vegetation removal. Waterlogging will not occur as a result of the proposed clearing, the scale of which is not significant in terms of soil stability, soil structure or water uptake.</p> <p>Clearing will be minimal. Project activities will not involve dewatering or excavation below the water table.</p> <p>Methodology</p> <p>ecologia Biological Survey (2021)</p>

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

Proposed clearing is not likely to be at variance to this Principle
<p>Comments</p> <p>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.</p> <p>Mount Saddleback heath Priority Ecological Community, Boundain Nature Reserve, Manning Road Nature Reserve, Highbury Nature Reserve, Arthur Nature Reserve, Quongunnerunding Nature Reserve, Whinbin Rock Nature Reserve and Jaloran Nature Reserve are within 20 km of the Bridge.</p> <p>Methodology</p> <p>DBCA shapefiles ecologia Biological Survey (2021)</p>

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

EPA (2016)

Main Roads Site Inspection (insert date)

(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 531 mm. Soils are described as saline flats, comprising sands and sandy loams with good infiltration and silty clay loams along the floodplain. 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
<p>1. The CAR indicates that the clearing is 'At Variance' or 'May be at Variance' with one or more of the Clearing Principles.</p> <p>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:</p> <ul style="list-style-type: none"> (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; <p>the preparation of an Assessment Report, as required by condition 6(e), is not required.</p>	No	No further action required.
<p>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.</p>	No	No further action required.
<p>3. The project involves clearing for temporary works (as defined by CPS 818).</p>	No	No further action required.
<p>4 a. Project is within Region that:</p> <ul style="list-style-type: none"> - Has rainfall greater than 400 mm 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 PEMRs and Vehicle and Plant Hygiene Checklists

Impact of Clearing	Yes/No or NA	Further Action Required
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.

Australian Government (2021) Protected Matters Search Tool Report. TRIM reference D21#1189617.

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 1 – Biological Survey, October 2021. TRIM reference D21#1049773.

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.

Government of Western Australia (2011). WA Environmental Offset Policy. Perth Western Australia.