Clearing Assessment Report – CPS 818

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Coolgardie Esperance Hwy Material Pit

April 2021

EOS 2160

D21#420666

Contents

Amendments

Report Compilation & Review	Name and Position	Document Revision	Date
Author:	Environment Officer	Draft v1	23/4/2021
Reviewer:	Environment Officer	Draft v1	29/04/2021

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: Coolgardie Esperance Hwy Material Pit.

Project Purpose / Components: The project involves extraction and stockpiling of road building material for upcoming projects on Coolgardie Esperance Hwy. Native vegetation and topsoil will be removed in the material pit area and stockpiled in previously cleared areas, for later use in rehabilitation of the site. Suitable gravel will be stockpiled on site ready for use on Coolgardie Esperance Hwy projects. Access to the area is by disused mine haul roads.

The proposed clearing undertaking using CPS 818 is: up to 26 ha.

The proposed temporary clearing undertaking using CPS 818 is: 0 ha.

Project Location(s): The project area is located on Coolgardie Esperance Hwy in the locality of Higginsville, and is within both the Shire of Coolgardie and Shire of Dundas.

2.2 Assessment Report Scope

The study area is confined to a local area of a 20 km radius.

2.3 Alternatives to clearing

Commercial sources of material and existing cleared areas with gravel potential were considered. None was identified within 50 km of this section of Coolgardie Esperance Hwy that would make such sources economically viable.

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

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

Table 1. Measures undertaken to Avoid, Minimise, Reduce and Manage the Project Clearing Impacts

Design or Management Measure	Discussion and Justification
Steepen batter slopes	Not relevant to this type of project – materials pit.
Installation of safety barriers	Not relevant to this type of project – materials pit.
Alignment to one side of existing road	Not relevant to this type of project – materials pit.
Alternative alignment to follow existing road (or) to preferentially locate within pasture or a degraded areas	Not relevant to this type of project – materials pit.
Installation of kerbing	Not relevant to this type of project – materials pit.
Simplification of design to reduce number of lanes and/or complexity of intersections	Not relevant to this type of project – materials pit.
Preferential use of existing cleared areas for access tracks, construction storage and stockpiling	Existing haul roads will be used to gain access and existing cleared areas will be used for stockpiling.
Drainage modification	Not relevant to this type of project – materials pit.

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.

Other 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 Coolgardie Esperance Hwy Material Pit Biological Survey was conducted on 4 October 2020 by Botanica Consulting.

3.1.1 Summary of Biological Survey

Four vegetation types were identified within the survey area that were representative of five pre-European vegetation associations (association 9, 501, 522, 936 and 1413) of the Binneringe System. These vegetation types were identified within three different landform types and comprised of four major vegetation groups, which were represented by a total of 17 families, 27 genera and 41 taxa. No Threatened flora or Threatened Ecological Communities as listed under the Western Australian *Biodiversity Conservation (BC) Act 2016* or Commonwealth *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* were identified within the survey area.

Based on the vegetation condition rating scale specified in the Environmental Protection Authority (EPA) *Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment – December 2016* (EPA, 2016a) (ranging from 'pristine' to 'completely degraded'), vegetation ranged from 'good' to 'very good' with the majority of vegetation rated as 'very good'. No introduced flora taxa were identified within the survey area.

No Priority Flora or Priority Ecological Communities (as listed by DBCA) were identified within the survey area.

Three fauna habitats were identified within the survey area. Results of the literature review identified 32 mammals (including nine bat species), 113 bird, 82 reptile and nine frog species as having been previously recorded in the general area, some of which have the potential to occur within the survey area. A total of seven fauna species were observed during the survey. Three conservation significant fauna were identified in the desktop assessment as potentially occurring within the survey area based on their habitat preferences including Mallee woodlands and Eucalypt woodlands:

1. Malleefowl (*Leipoa ocellata*)-Threatened (Vulnerable)
2. Peregrine Falcon (*Falco peregrinus*)-Other specially protected species
3. Central Long-eared Bat (*Nyctophilus major tor*)-P4

No Threatened fauna or Migratory fauna as listed under the Western Australian BC Act or Commonwealth EPBC Act were identified within the survey area. No Priority fauna as listed by DBCA were recorded within the survey area.

There are no wetlands of international importance (Ramsar Wetlands), national importance (Australian Nature Conservation Agency Wetlands) or conservation category wetlands within the desktop study area or the survey area. There are no proposed conservation reserves within the desktop study area or survey area, however two gazetted conservation reserves; Twenty-Five Mile Rocks Nature Reserve and Binaronca Nature Reserve, are located within the desktop study area,

located approximately 6 km south and 18 km north-east of the survey area respectively. The desktop study area and survey area do not contain any Environmentally Sensitive Areas (ESA) listed under the *Environmental Protection (EP) Act 1986*.

4 VEGETATION DETAILS

4.1.1 Project Site Vegetation Description

Four vegetation types (not included cleared vegetation) were identified within the survey area. These vegetation types were located within three different landform types and comprised four major vegetation groups. Mid woodland of *Eucalyptus salmonophloia* over mid open shrubland of *Melaleuca pauperiflora/ Beyeria sulcate* var. *brevipes* and low open shrubland of *Olearia* spp./ *Cratystylis conocephala* on clay-loam plain. Mid mallee woodland of *Eucalyptus eremophila/ E. livida* over mid shrubland of *Trymalium myrtillus/ Melaleuca pauperiflora* and low open shrubland of *Olearia muelleri* on clay-loam plain. Regrowth mid open mallee woodland of *Eucalyptus livida/* tall open heathland of *Allocasuarina acutivalvis* over mid open shrubland of *Acacia acuminata* and low open shrubland of *Westringia cephalantha* on rocky plain/ gravel pit. Tall heathland of *Allocasuarina campestris* over mid shrubland *Leptospermum erubescens/ Thryptomene kochii* and low open sedgeland of *Lepidosperma sanguinolentum* on sand-loam plain. Condition was rated as Good to Very Good (EPA, 2016).

The project lies wholly within Pre-European Vegetation Association 522 (Medium woodland; redwood (*Eucalyptus transcontinentalis*) & merrit (*E. floctoniae*)). Details of this association within the project area and the remaining extent at various scales are provided in Table 2 and Table 3.

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

Pre-European Vegetation Association(s)	Clearing Description	Vegetation Condition	Comments
522 – Medium woodland; redwood (*Eucalyptus transcontinentalis*) & merrit (*E. floctoniae*)	Clearing of up to 26 ha for the purpose of gravel extraction.	Good to Very Good (EPA 2016)	Vegetation description and condition determined from Biological survey on 4th October 2020.

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. 522	**Statewide**	709 714	709 228	99	5.5
	IBRA Bio region Coolgardie	688 406	687920	99	5.7
	IBRA Sub-region Eastern Goldfield	208 175	207 714	99	2
	Local Government Authority Shire of Coolgardie & Shire of Dundas	674 519	674 032	99	5.5

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

Comment

Four vegetation types were identified within the survey area.

- Mid woodland of *Eucalyptus salmonophloia* over mid open shrubland of *Melaleuca pauperiflora/ Beyeria sulcate* var. *brevipes* and low open shrubland of *Olearia* spp./ *Cratystylis conocephala* on clay-loam plain.
- Mid mallee woodland of *Eucalyptus eremophila/ E. livida* over mid shrubland of *Trymalium myrtillus/ Melaleuca pauperiflora* and low open shrubland of *Olearia muelleri* on clay-loam plain.
- Regrowth mid open mallee woodland of *Eucalyptus livida/* tall open heathland of *Allocasuarina acutivalvis* over mid open shrubland of *Acacia acuminata* and low open shrubland of *Westringia cephalantha* on rocky plain/ gravel pit.
- Tall heathland of *Allocasuarina campestris* over mid shrubland *Leptospermum erubescens/ Thryptomene kochii* and low open sedgeland of *Lepidosperma sanguinolentum* on sand-loam plain. Condition was rated as Good to Very Good (EPA, 2016).

No priority or rare flora species were identified during the flora survey (Botanica, 2021). Fourteen priority and no rare species have been recorded within the study area. The fourteen priority species are listed below with a likelihood of occurrence based on flora survey findings and habitat preference of each species (Botanica, 2021).

Taxon	Rating	Likelihood
Acacia dorsenna	P1	Unlikely
Bossiaea aurantiaca	P1	Unlikely
Bossiaea saxosa	P1	Possible
Calandrinia lefroyensis	P1	Unlikely
Eremophila lucida	P1	Unlikely
Pterostylis xerampelina	P1	Unlikely
Senecio microbasis	P1	Possible
Newcastelia insignis	P2	Unlikely
Chrysocephalum apiculatum subsp. *norsemanense*	P3	Possible
Diocirea acutifolia	P3	Possible
Eucalyptus brockwayi	P3	Unlikely
Pityrodia scabra subsp. *dendrotricha*	P3	Unlikely

Frankenia glomerata	P4	Unlikely
Myriophyllum petraeum	P4	Unlikely

Analysing the four species likely to be present showed the following. *Bossiaea saxosa* (P1) is a 1.5 m shrub that flowers in September to October. The survey was carried out in early October and so if present would have had a high probability of being found during the survey.

Senecio microbasis (P1) is an upright herb found in schist soils, on low hills and disturbed areas in woodlands. This species is found throughout New South Wales, Victoria and Tasmania, having a wide distribution across southern Australia (PlantNET, 2021). Soil type does not match those described above in the project area though it may be present in pre-disturbed locations. Flowering period is September to February. As the flora survey was accessed via pre-disturbed tracks, the possibility of detection would have been high if present. Given its wide distribution and soil preference, it would be unlikely that a significant amount of the remaining population would be cleared.

Chrysocephalum apiculatum subsp. *norsemanense* (P3) is a perennial herb with most of the collections coming from within 50 km of Norseman, and a few 90 km to the east of Norseman at Fraser Range (Wilson, 2016). The project area lies 40 km north of Norseman with the closest known location of this species 15 km south-west of the project area. Given it was not located during the survey, and there are other populations within the local region, the probability of clearing a significant proportion of the remaining population is low.

Diocirea acutifolia (P3) is a locally prevalent species and was not located during the survey (FloraBase). If any were cleared it would not significantly affect the remaining local population given that vegetation associations in the study area containing *Diocirea acutifolia* have 97% remaining of their Pre-European extent.

There are no known records of significant fauna in the project area. Records show Peregrine falcon and Malleefowl have been recorded in the study area. In addition to the above Botanica (2021) reported that suitable habitat for the Central Long-eared Bat is present based on recorded sightings in other fauna studies of the local area.

The Peregrine falcon is found throughout Australia in a variety of habitats including woodlands and grasslands. They feed almost entirely on other bird species. This species is highly mobile and most likely to be a transient visitor to the area as there are no suitable nesting hollows or nest sites in this vegetation (Botanica, 2021). Project clearing is therefore unlikely to affect these species because there is ample foraging habitat remaining regionally.

No evidence (i.e. individuals, nest mounds, footprints) of Malleefowl was observed during the basic terrestrial fauna survey (Botanica, 2021). There are also no records of this species from within or in close proximity to the survey area vicinity, with the closest records being made in 2011 approximately 14 km south-west. Available information therefore suggests that a breeding population of this species is very unlikely to be present in the general area, though transient, non-breeding individuals may occasionally occur (Botanica, 2021).

Some suitable foraging and possibly roosting habitat for the Central Long-eared Bat is present in the project area. Botanica (2021) did not identify the presence of this species during their survey and reported that it would be uncommon given the lack of documented records in the local area.

No TEC or PEC, restricted vegetation, highly disturbed vegetation, vegetation providing important refuge or significant ecological function was identified within the survey area (Botanica, 2021).

The proposed clearing is in an area that contains large tracts of intact connected vegetation similar in structure and condition. The proposal is highly unlikely to clear significant fauna habitat or sever ecological linkages that prevent fauna moving across the landscape.

Given the above the proposal is not likely to be at variance to this Principle.

Methodology
DBCA shapefiles – threatened/priority flora & threatened fauna
Botanica Consulting (2021)
EPA (2016)
Florabase (Accessed 27/4/2021)
Government of Western Australia (2019)
Birdlife Australia (2021)
Birdlife International (2021)
PlantNET (Accessed 27/4/2021)
Wilson (2016)

(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

Comment
There are no known records of significant fauna in the project area. Records show Peregrine falcon and Malleefowl have been recorded in the study area. In addition to the above Botanica (2021) reported that suitable habitat for the Central Long-eared Bat is present based on recorded sightings in other fauna studies of the local area.

The Peregrine falcon is found throughout Australia in a variety of habitats including woodlands and grasslands. They feed almost entirely on other bird species. This species is highly mobile and most likely to be a transient visitor to the area as there are no suitable nesting hollows or nest sites in this vegetation (Botanica, 2021). Project clearing is therefore unlikely to affect these species because there is ample foraging habitat remaining regionally.

No evidence (i.e. individuals, nest mounds, footprints) of Malleefowl was observed during the field reconnaissance survey (Botanica, 2021). There are also no records of this species from within or in close proximity to the survey area vicinity, with the closest records being made in 2011 approximately 14 km south-west. Available information therefore suggests that a breeding population of this species is very unlikely to be present in the general area, though transient, non-breeding individuals may occasionally occur (Botanica, 2021).

Some suitable foraging and possibly roosting habitat for the Central Long-eared Bat is present in the project area. Botanica (2021) did not identify the presence of this species during their survey and reported that it would be uncommon given the lack of documented records in the local area.

The proposed clearing is in an area that contains large tracts of intact connected vegetation similar in structure and condition. Given the above the proposal is unlikely to comprise significant habitat for fauna.
Methodology DBCA Shapefiles - threatened fauna Botanica Consulting (2021) Birdlife Australia (2021) Birdlife International (2021)

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

Proposal is not likely to be at variance to this Principle
Comment There are no known records of rare flora within the Study area. Botanica (2021) did not identify any rare flora in the project area. The only known rare flora from the local region is *Daviesia microcarpa* and *Allocasuarina globosa*. *Daviesia microcarpa* is known from one population near Norseman (more than 40 km from Project area) and is found alongside watercourses. As exploration will not occur near watercourses or wetlands, it is unlikely that this species will be impacted. *Allocasuarina globosa* is located on assemblages of greenstone rock, located more than 50 km south-west of the Project area. The Project area does not contain a greenstone belt, the underlying geology is Yilgarn craton granite, so this species is not likely to be found in the Project area. Consequently, it is considered unlikely rare flora or its associated flora habitat will be impacted by the proposal. Therefore, the proposal is not likely at variance to this principle.
Methodology DBCA shapefiles Florabase (Accessed 27/4/2021) Botanica Consulting (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 at variance to this Principle
Comment In the list of TECs endorsed by the Minister for the Environment (June 2018), none are found in the Coolgardie IBRA region. Botanica (2021) reported the project area did not contain any TEC's. Therefore, the proposed clearing is not at variance to this Principle.
Methodology DBCA shapefiles

DBCA (2018)
Botanica Consulting (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 at variance to this Principle

Comment

The project area is mapped as containing *Eucalypt* woodlands that remain at 99% of their Pre-European extent in the Shire, IBRA sub-region and IBRA region. Aerial imagery shows the study area to contain approximately 80% native vegetation, the remainder being salt lakes. The project area is therefore not located within an extensively cleared area.

Botanica (2021) found no conservation significant flora or ecological communities in the project area. No wetlands or watercourses are located in the project area. No threatened or priority fauna were found in the project area. The project is not considered a significant remnant as it does not comprise vegetation with high ecological values.

The proposal is therefore not at variance to this Principle.

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

Pre-European Vegetation Association(s)	Clearing Description	Vegetation Condition	Comments
522 – Medium woodland; redwood (*Eucalyptus transcontinentalis*) & merrit (*E. floctoniae*)	Clearing of up to 26 ha for the purpose of gravel extraction.	Good to Very (EPA 2016)	Vegetation description and condition determined from Biological survey on 4th October 2020.

Pre-European Vegetation Representation

Pre-European Vegetation Association	Scale	Pre–European (ha)	Current Extent (ha)	% Remaining	% Remaining in DBCA reserves
Veg Assoc No. 522	**Statewide**	709 714	709 228	99	5.5
	IBRA Bio region Coolgardie	688 406	687920	99	5.7
	IBRA Sub-region Eastern Goldfield	208 175	207 714	99	2
	Local Government Authority Shire of Coolgardie & Shire of Dundas	674 519	674 032	99	5.5

Methodology

Government of Western Australia (2019)
Skyview imagery
EPA (2016)
Botanica Consulting (2021)

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

Proposed clearing is not at variance to this Principle

Comment

There are no mapped watercourses or wetlands within the project area. The closest mapped watercourse lies more than 200 m north of the project area, and is a non-perennial drainage depression emptying into Lake Cowan 9 km to the east. Vegetation in the project area consisted of Eucalypt woodlands, Casuarina woodlands, and Mallee woodlands and shrublands. Botanica (2021) did not identify these vegetation types as watercourse or wetland dependent.

Therefore, the proposed clearing is not at variance with this Principle.

Methodology

DWER and DBCA shapefiles
Botanica Consulting (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

Comment

The project area is in a low rainfall area. Average annual rainfall for the local area, Coolgardie, is 270 mm which generally falls throughout the year at between 16 – 29 mm per month. The clearing in the project area is up to 26 ha in a well-vegetated area on flat to gently undulating sandplain. These soils have good infiltration rates, and combined with the low rainfall, the potential for waterlogging and soil erosion is low.

The study area retains approximately 80% native vegetation, with the remainder being salt lakes. Most of the rainfall in this region is either lost to evaporation or used by vegetation, providing little for groundwater recharge DoW (2007). The area proposed to be cleared is therefore unlikely to increase the chances of waterlogging or provide a large change in recharge. The potential for changes to salinity levels is low given the groundwater is already saline.

As the proposed clearing lies within a larger well vegetated area where trees and shrubs reduce wind velocities, the probability of significant wind erosion is low. Topography is low relief plains decreasing the potential for significant soil movement during rain events. As there is no excavation below the water table it is unlikely acid sulfate soils will become a risk. Given the above the potential for appreciable land degradation is low.

Therefore the proposed native vegetation clearing is not likely to be at variance to this Principle.

Methodology

Botanica Consulting (2021)
BoM (2021)
DoW (2007)

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

Proposed clearing is not at variance to this Principle
Comment No conservation reserves are adjacent the project area. The closest conservation reserve is an unnamed nature reserve more than 6 km to the south of the project area. The next closest is Binaronca nature reserve 18 km to the north. The proposed clearing is within a well vegetated landscape so ecological linkages between these reserves will not be broken. Given the distance from the project area to the reserves the conservation values of the nature reserves will not be impacted. The proposed clearing is therefore not at variance to this Principle.
Methodology DBCA shapefiles - conservation estate

(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
Comment The project area overlies the Goldfields groundwater area but does not occur in a proclaimed surface water area or public drinking water source area. The Goldfields region is characterised by saline groundwater where recharge by rainfall is minimal due to low annual rainfall, evaporation losses and vegetation use. Surface water is seasonal after rains flowing along drainage channels into Playa Lakes where it evaporates leaving salt deposits (DoW 2007). The study area lies within native vegetation that has been subject to limited clearing. The landscape is low relief sandplains, which coupled with low rainfall, provide low erosion potential. Any direct rainfall to the material pit will be contained within the pit to prevent soil mobilisation into drainage lines, therefore preventing any turbidity issues affecting surface water. The proposed clearing is unlikely to deteriorate groundwater quality due to low average rainfall (270 mm), existing saline groundwater, and the large tracts of surrounding native vegetation using the water. Given the above it is considered the proposal will not significantly deteriorate surface or groundwater quality, and therefore is not likely to be at variance to this Principle.
Methodology BoM (2021) Botanica Consulting (2021) DoW (2007)

(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
Comment The project area is in a low rainfall area. Average annual rainfall for the local area, Coolgardie, is 270 mm that generally falls throughout the year at between 16 – 29mm per month. The topography is low relief sandplain with good infiltration. Any rainfall will be contained within the pit area and so reduce the possibility of localised flooding to native vegetation during significant rain events. Due to the low rainfall it is unlikely that the incidence or intensity of flooding will increase. Large connected areas of native vegetation remain in the surrounding area to attenuate water flow in the event of heavy rain. Given the above this proposal is not likely to be at variance to this Principle.
Methodology BoM (2021) Botanica Consulting (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

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	**NA**	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 REFERENCES

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