

Clearing Assessment Report – CPS 818

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Reid Highway Amenity Wall from Wanneroo Road to Mirrabooka Avenue

June 2022

EOS no.: 2218

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D21#976880

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Amendments

| Report Compilation & Review | Name and Position | Document Revision | Date |
|-----------------------------------|---|----------------------|-------------------|
| Author: | Savita Goldsworthy Environmental Scientist | Draft v1 | June 2021 |
| Reviewer: | Jordan Tindiglia Senior Environmental Scientist | Rev 0 | July 2021 |
| Reviewer: | Karen Ganza Main Roads Environmental Officer | Rev 0 | September 2021 |
| Author: | Savita Goldsworthy GHD Environmental Scientist | Rev 1 | September 2021 |
| Reviewer: | Marni Baetge GHD Senior Environmental Scientist | Rev 1 | October 2021 |
| Reviewer: | Marni Baetge GHD Senior Environmental Scientist | Rev 2 | October 2021 |
| Author: | Savita Goldsworthy GHD Environmental Scientist | Rev 3 | May 2022 |
| Reviewer: | Marni Baetge GHD Senior Environmental Scientist Drew Farrar GHD Technical Director | Rev 3 | May 2022 |
| Author: | Julia White Main Roads Environment Oficer | Rev3 | May 2022 |
| Reviewer: | Peter Bouteloup Main Roads Senior Environment Oficer | Rev3 | June 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).

Main Roads is proposing to construct an amenity wall to the south of Reid Highway from Wanneroo Road to Mirrabooka Avenue. The Project Impact Area is 1.54 ha. The Impact Area for the Project represents the maximum area of disturbance, within which all Project activities will be contained.

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: Reid Highway Amenity Wall from Wanneroo Road to Mirrabooka Avenue.

Project Purpose / Components: The Project will involve the construction of an amenity wall to the south of Reid Highway. The amenity wall will tie into existing amenity wall structures where some gaps remain.

The proposed clearing undertaking using CPS 818 is: Approximately 0.36 ha of native vegetation.

The proposed temporary clearing undertaking using CPS 818 is: None.

Project Location(s): The Project is located in the Perth Metropolitan Region, to the south of Reid Highway between Wanneroo Road and Mirrabooka Avenue, between SLK 5.50 and 7.77.

The Impact Area location is shown in Figure 1.

2.2 Assessment Report Scope

The Desktop Assessment Area, see Figure 2, is confined to a local area of a 5 kilometre (km) radius.



Figure 1. Impact Area



Figure 2. Desktop Assessment Area

2.3 Alternatives to clearing

The location of the amenity wall will tie into existing amenity wall structures where some gaps remain. While the Impact Area avoids native vegetation clearing where possible, there is limited flexibility in the amenity wall location. The community have requested the amenity walls.

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 Pro | iect Clearin | a Impacts |
|----------|------------|---------------|--------|-----------|-------------------|--------|---------|--------------|-----------|
| | | | | | | | | | |

| Design or Management Measure | Discussion and Justification |
|---|---|
| Steepen batter slopes | Not applicable for this Project. |
| Installation of safety barriers | Not applicable for this Project. |
| Alignment to one side of existing road | The amenity wall will be located to the south of Reid Highway only. The amenity wall will tie into existing amenity wall structures where some gaps remain. |
| Alternative alignment to follow existing road (or) to preferentially locate within pasture or a degraded areas | Not applicable for this Project. The Project involves the construction of an amenity wall that is required to tie into existing amenity wall structures where some gaps remain. Clearing will occur as a result of the amenity wall construction. |
| Installation of kerbing | Not applicable for this Project. |
| Simplification of design to reduce number of lanes and/or complexity of intersections | Not applicable for this Project. |
| Preferential use of existing cleared areas for access tracks, construction storage and stockpiling | Access tracks will not be required. Construction storage and stockpiling will be restricted to existing cleared or highly disturbed areas. |
| Amendment of Project Footprint | The design of the Impact Area (1.54 ha) was refined to avoid unnecessary impacts to native vegetation. |
| Drainage modification | Not applicable for this Project. |

2.5 Approved Policies and Planning Instruments

The clearing of native vegetation in Western Australia is regulated under the *Environmental Protection Act 1986* (EP Act) and the Environmental Protection (Clearing of Native Vegetation) Regulations 2004 (Clearing Regulations).

In addition to the matters considered in accordance with section 510 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 (WA) (RIWI Act)
- Aboriginal Heritage Act 1972 (WA) (AH Act)
- Town Planning and Development Act 1928.

Other Relevant policies and guidance documents:

- Environmental Offsets Policy (Government of Western Australia [GoWA] 2011)
- A guide to the assessment of applications to clear native vegetation (DWER October 2021)
- Procedure: Native vegetation clearing permits (DWER October 2021)
- Environmental Offsets Guidelines (DWER 2021)
- 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

Biologic conducted a detailed flora and vegetation survey, targeted flora survey, basic terrestrial vertebrate fauna survey and a Black Cockatoo habitat assessment in October and November 2020 (Biologic 2021). The biological survey assessed a 19.83 ha area (the Biologic survey area) between Reid Highway and Wanneroo Road which covered 1.47 ha of the 1.54 ha Impact Area.

As the Biologic (2021) survey did not include the entirety of the Impact Area, GHD has extrapolated the remaining 0.07 ha utilising the vegetation units, vegetation condition and fauna habitat described in the Biologic (2021) survey and an interrogation of aerial imagery. These extrapolated areas have not been subjected to surveys for significant flora or fauna species, however, as they comprise thin strips located adjacent to roads and disturbed areas, they are considered unlikely to comprise significant flora or fauna.

The extrapolated area includes:

- Tall open woodland of *Eucalyptus gomphocephala* over mid shrubland of *Chamelaucium uncinatum, Jacksonia furcellata* and *Acacia* sp. *Indet*, over low grassland of **Ehrharta calycina* (0.05 ha).
- Low isolated trees of *Callistemon* sp. and *Agonis flexuosa* over closed grassland of **Cynodon dactylon* (0.005 ha)
- Cleared areas (0.015 ha).

Section 3.1.1 contains the summary of the Biologic (2021) survey.

3.1.1 Summary of Biological Survey

Flora and vegetation

A total of 146 vascular flora taxa (104 native and 42 introduced) were recorded within the Biologic survey area. Two significant taxa, *Grevillea manlesii* subsp. *dissectifolia* (P3) and *Jacksonia sericea* (P4) were observed. One individual of *Grevillea manlesii* subsp. *dissectifolia* was recorded on a path edge in rehabilitated vegetation and is likely to have been planted, and 177 *Jacksonia sericea* (P4) individuals were recorded from 68 locations, all of which were subject to historical clearing. This significant taxon is also likely to have historically been planted in the Biologic survey area, however individuals are found within vegetation mapped as remnant trees over rehabilitated understorey.

The Impact Area for the Project contains no individuals of *Grevillea manlesii* subsp. *dissectifolia* and/or *Jacksonia sericea*. Of the introduced species recorded within the Impact Area, no taxa were listed as WoNS and/or Declared Pests under Section 22 of the BAM Act.

Vegetation condition within the Biologic survey area ranged from Completely Degraded to Very Good. The majority of the vegetation was in Degraded to Completely Degraded condition. A total of nine vegetation types and cleared areas were recorded and mapped within the Biologic survey area. This included one remnant type, two remnant trees over a rehabilitated understorey, six rehabilitated types and cleared areas. Six vegetation types occur within the Impact Area, including two types listed as remnant trees over a rehabilitated understorey (native vegetation) and four rehabilitated types (non-native/planted vegetation). The two native vegetation types (the Low woodland of *Banksia menziesii* over low sparse shrubland of *Gompholobium tomentosum* and

Acacia pulchella over low mixed rush-shrub-grassland of Alexgeorgea nitens, Corynotheca micrantha var. micrantha, Jacksonia sericea (P4) and *Ehrharta calycina and the Tall open woodland of Eucalyptus gomphocephala over mid shrubland of Chamelaucium uncinatum, Jacksonia furcellata and Acacia sp. Indet, over low grassland of *Ehrharta calycina) are assessed within this CAR.

The mapped vegetation types did not meet the criteria for the '*Banksia* woodlands of the Swan Coastal Plain' TEC or PEC, or for the 'Tuart (*Eucalyptus gomphocephala*) woodlands and forests of the Swan Coastal Plain' TEC and PEC.

Terrestrial Vertebrate Fauna

Seven broad fauna habitats were recorded and mapped within the Biologic survey area, comprising Revegetation – Native Non-Provenance, Open Tuart Woodland, Parkland/ Isolated Trees, Jarrah Woodland, Tussock Grassland/ Heavily Disturbed, *Banksia* Woodland, and Introduced *Eucalyptus*. The Revegetation – Native Non-Provenance, Open Tuart Woodland, Jarrah Woodland, and *Banksia* Woodland are known to support vertebrate fauna species listed under the EPBC Act, BC Act and/or as Priority fauna listed by the DBCA. These habitat types are therefore regarded as being of moderate significance to vertebrate fauna. The remainder of the Biologic survey area comprised existing cleared areas and is not considered fauna habitat. Of the seven fauna habitats, five are mapped within the Impact Area including Revegetation – Native Non-Provenance, Open Tuart Woodland, Parkland/ Isolated Trees, Tussock Grassland/ Heavily Disturbed and *Banksia* Woodland. The Open Tuart Woodland and *Banksia* Woodland habitats are mapped as native vegetation (remnant trees over a rehabilitated understorey) and are assessed within this CAR.

The desktop assessment identified a total of 39 significant fauna species as potentially occurring within the Biologic survey area based on previous records and distribution mapping. One species was recorded within the Biologic survey area, Carnaby's Cockatoo (*Calyptorhynchus latirostris*). The Biologic survey area contains suitable habitat for a further five species of significance. This includes one species considered Likely to occur, Forest red-tailed Black Cockatoo (FRTBC, *Calyptorhynchus banksii naso*), and four species considered Possible to occur, Quenda (*Isoodon fusciventer*), Western Brush Wallaby (*Notamacropus irma*), Baudin's Cockatoo (*Calyptorhynchus baudinii*) and Black-striped Snake (*Neelaps calonotos*).

The fauna habitat present has connectivity extending outside of the Biologic survey area in the broader vicinity, and the habitats present are not restricted to the Biologic survey area. Therefore, while the six significant species that were present or deemed Possible or Likely to occur may utilise the habitat types present within the Biologic survey area, they are unlikely to be solely reliant on the Biologic survey area (and Impact Area) itself.

Based on species' distribution and ecology, previous records and the habitat present within the Biologic survey area, the remaining 33 species identified in the desktop assessment were considered Unlikely and Highly Unlikely to occur.

One species of Black Cockatoo (Carnaby's Cockatoo) was identified from the field surveys via both direct observation and foraging evidence, with High and Low Quality foraging habitat for the species identified within the Impact Area (0.93 ha). Native vegetation (*Banksia* Woodland) accounted for 0.04 ha of High Quality potential foraging habitat for Carnaby's Cockatoo. The habitat types within the Impact Area were considered to be of Low or Medium foraging quality for Baudin's cockatoo (1.25 ha) and FRTBC (1.14 ha) based on the lack of high quantities of primary

foraging resources and lack of evidence of species presence. Native vegetation accounted for 0.32 ha of Low Quality foraging habitat for FRTBC and 0.36 ha of Low Quality foraging habitat for Baudin's Cockatoo.

Although no night roosts were identified within the Biologic survey area, potential night roosting habitat was identified within several woodland habitat types, and both white-tailed and forest red-tailed Black Cockatoo night roosts are identified within 5 km of the Biologic survey area. There is 1.14 ha of potential Black Cockatoo roosting habitat within the Impact Area, consisting of 0.32 ha of Open Tuart Woodland habitat (native vegetation) and 0.82 ha of Revegetation – Native Non-Provenance habitat (non-native vegetation). Overall, the foraging habitat in the Biologic survey area, although of small quantity, may be valued on a local level to support night roosting as the birds favour night roost sites within 1 - 6 km of quality foraging resources.

In total 47 potential breeding trees that are of suitable Diameter at Breast Height (DBH) and species to potentially support Black Cockatoo breeding were identified within the Biologic survey area. No DBH trees are located within the Impact Area. No breeding was identified within the Biologic survey area, however, there are confirmed records of Black Cockatoo breeding in both artificial hollows and a natural hollow within 12 km. Overall, the Impact Area is likely to be valued for providing supporting foraging rather than the provision of actual breeding habitat.

3.2 Dieback survey

The *Phytophthora* Dieback Occurrence Assessment was conducted on February 26, 2021 by Glevan Consulting.

Section 3.2.1 contains the summary of the Dieback survey.

3.2.1 Summary of Dieback Survey

Glevan Consulting was commissioned by Umwelt (Australia) Pty Ltd (Umwelt) on behalf of Main Roads to conduct an assessment of the area associated with the Reid Highway Amenity Wall project for the presence of *Phytophthora* Dieback.

The total area surveyed for the presence of *Phytophthora* Dieback was 63.98 ha (the Glevan survey area). This included an assessed area of 18.5 ha and the remaining 45.48 ha being excluded from the assessment due to being degraded or devoid of vegetation. The total Glevan survey area included the Impact Area for the Project.

A desktop assessment of previous *Phytophthora* spp. recoveries for the area indicates that *Phytophthora* has not previously been recovered within, or near the Glevan survey area.

No *Phytophthora* Dieback infestations were observed during the assessment. Within the Impact Area, Glevan (2021) mapped 0.16 ha of protectable uninfested vegetation and 0.83 ha of uninterpretable vegetation, of which 0.65 ha is considered protectable and 0.18 ha is considered unprotectable. 0.55 ha of the Impact Area was excluded from the assessment due to being degraded or devoid of vegetation. Glevan (2021) noted that while some of the areas classified as protectable are small, these areas are contiguous with a much larger, potentially protectable, areas outside the Impact Area.

4 VEGETATION DETAILS

4.1.1 Project Site Vegetation Description

The Impact Area is located within the Perth Metropolitan region. Broadly, the landscape comprises a mosaic of residential areas, industrial areas and patches of parks and recreational areas. There is limited vegetated areas surrounding the Project, however there is a vegetated area to the east of the Project.

The Impact Area comprises two native vegetation types mapped as 'remnant trees over a rehabilitated understorey' (0.36 ha, 23.4%, Table 2) (Biologic 2021). The remainder of the Impact Area comprises non-native/planted vegetation (0.92 ha, 59.7%) and cleared areas (0.26 ha, 16.9%).

Table 2. Summary of Mapped Native Vegetation Types within the Impact Area

| Vegetation type | Description | Vegetation Condition | Area (ha) |
|---|---|-------------------------|-----------|
| Low woodland of <i>Banksia menziesii</i> over low sparse shrubland of <i>Gompholobium tomentosum</i> and <i>Acacia</i> <i>pulchella</i> over low mixed rush-shrub-grassland of <i>Alexgeorgea nitens</i> , <i>Corynotheca micrantha</i> var. <i>micrantha</i> , <i>Jacksonia sericea</i> (P4) and * <i>Ehrharta calycina</i> (Bm GtAp AnCmmJsEc) | Remnant trees over rehabilitated understorey | Good | 0.04 |
| Tall open woodland of <i>Eucalyptus gomphocephala</i> over mid shrubland of <i>Chamelaucium uncinatum</i> , <i>Jacksonia furcellata</i> | Remnant trees over | Good | 0.30 |
| and <i>Acacia</i> sp. Indet, over low grassland of * <i>Ehrharta calycina</i> (Eg CuJfAi Ec) | rehabilitated understorey | Degraded | 0.02 |
| Total | • | • | 0.36 |

Tables 3 and 4 provide details of the Pre-European Vegetation Association within the Impact Area and the remaining extent of this association within Western Australia, IBRA Bioregion, IBRA sub-region and City of Stirling.

Table 3. Summary of Impact Area's Mapped Pre-European Vegetation Associations

| Pre-European Vegetation Association(s) | Clearing Description | Vegetation Condition | Comments |
|--|---|-------------------------|--|
| Vegetation Association Spearwood 6 described as a Jarrah, marri and wandoo woodland (<i>Eucalyptus</i> <i>marginata, Corymbia calophylla, E.</i> <i>wandoo</i>) (Government of Western Australia, 2019) | Clearing of up to 0.36 ha of native vegetation for the purpose of the amenity wall construction along Reid Highway. | Good and Degraded | Vegetation description and condition determined from the biological survey (Biologic 2021). |

| Pre-European Vegetation Association | Scale | Pre– European (ha) | Current Extent (ha) | % Remaining | % Remaining in DBCA reserves |
|---|---|--------------------------|---------------------------|----------------|---------------------------------|
| Veg Assoc No. Spearwood 6 | Statewide Western Australia | 56,343.01 | 13,362.25 | 23.72 | 9.45 |
| | IBRA Bioregion Swan Coastal Plain | 56,343.01 | 13,362.25 | 23.72 | 9.45 |
| | IBRA Sub-region Perth (SWA02) | 56,343.01 | 13,362.25 | 23.72 | 9.45 |
| | Local Government Authority City of Stirling | 5,380.68 | 208.78 | 3.88 | - |

Table 4. Pre-European Vegetation Representation

4.1.2 Vegetation Complexes and Representation

The vegetation complexes of the Swan Coastal Plain are those defined by Heddle *et al.* (1980) at the scale of 1:250,000. The Impact Area lies within a single vegetation complex (Table 5).

Table 5. Vegetation Complexes (Heddle/Mattiske) within the Impact Area

| Heddle/Mattiske Veg Complex | Pre-European Extent (ha) | Current Extent (ha) | % Remaining |
|--|-----------------------------|------------------------|-------------|
| Karrakatta Complex – Central and South: Predominantly open forest of <i>Eucalyptus</i> <i>gomphocephala</i> (Tuart) - <i>Eucalyptus marginata</i> (Jarrah) - <i>Corymbia calophylla</i> (Marri) and woodland of <i>Eucalyptus marginata</i> (Jarrah) - <i>Banksia</i> species. <i>Agonis flexuosa</i> (Peppermint) is codominant south of the Capel River. | 53,080.99 | 12,467.20 | 23.49 |

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 assessment has determined that the proposed clearing is not or not likely to be at variance with any of the 10 Clearing Principles.

| (a) Native vegetation should not be cleared in it comprises a much level of biological diversity |
|--|
|--|

| Comments | Proposed clearing is not likely to be at variance to this Principle |
|----------|--|
| | Vegetation and flora |
| | The Impact Area comprises 0.36 ha of native vegetation in Good (0.34 ha, 95%) and Degraded (002 ha, 5%) condition (Biologic 2021). The native vegetation within the Impact Area comprises two vegetation types (mapped as 'remnant trees over rehabilitated understorey', Biologic 2021), including: Low woodland of <i>Banksia menziesii</i> over low sparse shrubland of <i>Gompholobium tomentosum</i> and <i>Acacia pulchella</i> over low mixed rush-shrub-grassland of <i>Alexgeorgea nitens, Corynotheca micrantha</i> var. <i>micrantha, Jacksonia sericea</i> (P4) and *<i>Ehrharta calycina</i> (0.04 ha) Tall open woodland of <i>Eucalyptus gomphocephala</i> over mid shrubland of <i>Chamelaucium uncinatum, Jacksonia furcellata</i> and <i>Acacia</i> sp. Indet., over low grassland of *<i>Ehrharta calycina</i> (0.32 ha). |
| | Desktop searches identified the presence/potential presence of three ecological communities of significance within the Desktop Assessment Area. These included: SCP20a Banksia attenuata woodlands over species rich dense shrublands (BC Act: Endangered [EN], EPBC Act [EN], component of Banksia Woodlands of the Swan Coastal Plain) Banksia Woodlands of the Swan Coastal Plain (DBCA: P3, EPBC Act [EN]) Tuart (Eucalyptus gomphocephala) woodlands and forests of the Swan Coastal Plain (DBCA: P3, EPBC Act: Critically Endangered [CR]). |
| | The Biologic (2021) survey did not identify any vegetation that is representative of EPBC Act-listed TECs or State-listed TECs or PECs, including within the Impact Area. |
| | The Biologic (2021) survey recorded a total of 146 vascular flora taxa (104 native and 42 introduced) across 41 families and 105 genera within the Biologic survey area. |
| | Desktop searches (<i>NatureMap</i> , EPBC Act Protected Matters Search Tool [PMST], DBCA databases) identified the presence/potential presence of 17 significant flora taxa within the Desktop Assessment Area. Of the 17 taxa, 13 are listed as Threatened under the BC Act and/or the EPBC Act and four are listed as Priority flora by the DBCA. No Threatened or Priority flora listed under EPBC Act, BC Act or by the DBCA were recorded within the Impact Area (Biologic 2021). A likelihood of occurrence assessment identified one flora taxa, <i>Jacksonia sericea</i> as 'Possible to occur' within the Impact Area (adapted from Biologic 2021). |



| | Conservation Estates |
|-------------|--|
| | No DBCA managed Lands or Waters occur within or adjacent to the Impact Area (GoWA |
| | 2022). Conservation areas are therefore unlikely to be impacted as a result of the Project. |
| | The nearest DBCA managed area is located approximately 4.08 km north of the Project. |
| | |
| | The vegetation to be cleared has connectivity extending outside of the Impact Area to the |
| | surrounding areas. The small extent of clearing for the Project will not remove entire |
| | corridors of vegetation, ensuring linkage along Reid Highway remains. Whilst the Project |
| | will result in the loss of up to 0.36 ha native vegetation, the vegetation does not comprise |
| | a high biological diversity in the local or regional context. |
| | |
| | Clearing for the Project is not likely to be at variance to this Principle. |
| Methodology | Biological Survey (Biologic 2021) |
| | PMST report (DAWE 2022) |
| | NatureMap Search Report (DBCA 2007-) |
| | DBCA Database: |
| | Threatened and Priority Ecological Communities |
| | Threatened and Priority Flora (WA Herbarium and TPFL) |
| | Threatened and Priority Fauna |
| | DBCA Legislated Lands and Waters |
| | DWER Clearing Regulations - Environmentally Sensitive Areas. |
| | |

(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.

| Comments | Proposed clearing is not likely to be at variance to this Principle |
|----------|--|
| | The Impact Area comprises 0.36 ha of native vegetation which is suitable fauna habitat. |
| | Fauna habitat |
| | Two native vegetation fauna habitat types were recorded within the Impact Area during the biological survey (Biologic 2021), which broadly aligns with the the native vegetation units mapped within the Impact Area. These habitat types include: Open Tuart Woodland – 0.32 ha Banksia Woodland – 0.04 ha. |
| | The Open Tuart Woodland habitat comprises tall open woodland of <i>Eucalyptus gomphocephala</i> over mid shrubland of <i>Chamelaucium uncinatum, Jacksonia furcellata</i> and <i>Acacia</i> sp. Indet, over low grassland of <i>Ehrharta calycina</i> . The habitat is not restricted to the Impact Area (Biologic 2021). <i>E. gomphocephala</i> is considered a potential roosting tree species for Black Cockatoos. |
| | The <i>Banksia</i> Woodland habitat comprises low <i>Banksia</i> woodland over sparse shrubland over low mixed rush-shrub-grassland. It contains potential habitat for the Quenda and Western Brush Wallaby (Woinarski <i>et al.</i> , 2014b), and provides potential foraging habitat for Black Cockatoos. |
| | The fauna habitat within the Impact Area has connectivity extending outside of the Impact Area, within the local area. As the Project is located within close proximity to the existing highway, and only a minimal amount of native vegetation clearing is required for the |

Project, the Project is not expected to significantly impact significant fauna species within the vicinity of the Impact Area.

Significant fauna

Desktop searches (*NatureMap*, EPBC Act PMST, DBCA databases) identified the presence/potential presence of 38 significant fauna taxa within the Desktop Assessment Area (Biologic 2021). One vertebrate fauna species of significance, Carnaby's Cockatoo, was recorded within the Biologic survey area. The Forest Red-tailed Black Cockatoo (FRTBC) is considered 'Likely' to occur in the Impact Area; and a further four species are considered to 'Possibly' occur, including:

- Baudin's cockatoo (Calyptorhynchus baudinii)
- Black-striped snake (Neelaps calonotos)
- Quenda (Isoodon fusciventer)
- Western brush wallaby (Notamacropus Irma).

Black Cockatoos

Carnaby's Cockatoo was identified from the field surveys via both direct observation and foraging evidence (Biologic 2021). A total of 15 observations of Carnaby's cockatoo were recorded during the biological survey (Biologic 2021). This comprised of six individuals sitting in a Callistemon tree and 14 foraging evidence observations consisting of chewed *Banksia* (13 records) and chewed marri (one record). The Project is located within the modelled distribution of Carnaby's cockatoo (DSEWPaC 2012). The Impact Area contains 0.04 ha of High Quality native foraging habitat for Carnaby's Cockatoo, comprising of *Banskia* Woodland habitat.

The FRTBC was considered by Biologic (2021) as 'Likely' to occur based on the presence of suitable habitat. The Project is located within the modelled distribution of FRTBC (DSEWPac 2012). There is 0.32 ha of Low Quality native foraging habitat for FRTBC within the Impact Area, comprising of the Open Tuart Woodland habitat.

The Project does not lie within the modelled distribution of Baudin's cockatoo (DSEWPaC 2012), however the species was considered by Biologic (2021) as 'Possible' to occur based on suitable habitat. Although considered 'Possible', the species may be an infrequent visitor and is unlikely to be reliant on any of the habitat that occurs within the Impact Area. The Impact Area contains 0.36 ha of Low Quality native foraging habitat for Baudin's Cockatoo, comprising of 0.04 ha of *Banskia* Woodland and 0.32 ha of Open Tuart Woodland habitats.

There are no suitable DBH trees within the Impact Area. No impacts to Black Cockatoo potential breeding habitat is expected as a result of the Project. Breeding was not observed within the Biologic survey area during the survey (Biologic 2021). Black cockatoo breeding has been confirmed at 11 locations (one natural and ten artificial hollows) within a 12 km radius of the Project (BirdLife Australia 2021).

The Impact Area may provide potential suitable roosting habitat for Black Cockatoos as several recognised roosting species (i.e., jarrah, marri, tuart and introduced eucalypts) (DoEE 2017, Johnstone et al. 2011) are present within the Impact Area and are of suitable height. There is 0.32 ha (Open Tuart Woodland) of native vegetation that is potentially Black Cockatoo roosting habitat within the Impact Area. No evidence of roosting activity was recorded during the Biologic (2021) survey. Thirty-eight Black Cockatoo night roosts occur within 12 km of the Project, comprising 18 Carnaby's Cockatoo roosts, 14 FRTBC roosts and six joint roosts. None of the 38 night roost locations occur within the Biologic survey area (Biologic 2021). The nearest Carnaby's Cockatoo roost is located approximately

| | 2 km north-west of the Project. The nearest FRTBC roost is located approximately 685 m north of the Project. |
|-------------|---|
| | There is an estimated 5,210 ha of potential Black Cockatoo habitat present within 12 km of the Project (GoWA 2022). This 12 km radius represents the typical maximum distance that Black Cockatoos will fly from roosting or breeding locations to forage (DSEWPaC 2012). The clearing of native vegetation that is suitable foraging habitat for Black Cockatoos that is required for the Project represents less than 0.01% of the available suitable habitat for these species. |
| | The Impact Area does not support known Black Cockatoo roosting or breeding, but contains suitable foraging habitat for all three Black Cockatoo species, although minimal. |
| | Ouenda |
| | The Quenda inhabits jarrah forest and swamp habitats, in dense vegetation around wetland fringes and heathland (Pentland 1999, Woinarski et al. 2014). The Quenda was not observed during the Biologic (2021) survey, however, was considered as 'Possible' to occur based on suitable habitat. There are 18 records of the species within the surrounding area of the Project, the closest being approximately 1.2 km north-west of the Project. The Impact Area contains 0.04 ha of suitable native habitat for the Quenda, comprising of <i>Banksia</i> Woodland habitat. |
| | Western Brush Wallaby |
| | The Western Brush Wallaby inhabits a wide range of habitats including low <i>Banksia</i> woodlands, jarrah/marri woodlands and moist <i>Melaleuca</i> lowlands, favouring open, grassy areas (Wann & Bell 1997, Woinarski et al. 2014). The Western Brush Wallaby was not recorded during the Biologic (2021) survey, however was considered as 'Possible' to occur. There are six records of the species within the surrounding area of the Project, the closest which falls approximately 500 m north-east (DBCA 2020). The Impact Area contains 0.04 ha of suitable native habitat for the Western Brush Wallaby, comprising of <i>Banksia</i> Woodland habitat. |
| | Black-striped snake The Black-striped Snake inhabits sand dunes and sand plains vegetated with heaths, and <i>Banksia</i> and Eucalypt woodlands (ALA 2019). The Black-striped Snake was not observed during the Biologic (2021) survey, however was considered as 'Possible' to occur based on the presence of potentially suitable habitat. There are 11 records of the species within a 5 km radius of the Project, the closest being 500 m east of the Project (DBCA 2020). The Impact Area contains 0.04 ha of suitable native habitat for the Black-striped Snake, comprising of Banksia Woodland habitat. |
| | The proposed clearing will impact native vegetation that is suitable habitat for fauna indigenous to Western Australia, although this impact is minimal. Significant fauna species are highly unlikely to be reliant on the habitats within the Impact Area, and the majority of the habitat is not considered to be high value. The scale of the proposed clearing is small on a regional and local level when compared to available habitat in the surrounding area. |
| | The proposed clearing is not likely to be at variance to this Principle. |
| Methodology | Biological Survey (Biologic 2021) |
| | PMST report (DAWE 2022) |
| | NatureMap Search Report (DBCA 2007-) |
| | DDCA Dalabase. |

| Threatened and Priority Fauna |
|---|
| Black Cockatoo Referral Guidelines (DSEWPaC 2012) |
| DataWA (GoWA 2022) |
| Native Vegetation Extent. |

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

| Comments | Proposed clearing is not likely to be at variance to this Principle | | | | | |
|-------------|---|--|--|--|--|--|
| | Desktop searches (<i>NatureMap</i> , EPBC Act PMST, DBCA databases) identified the presence/potential presence of 13 Threatened flora species within the Desktop Assessment Area. A targeted flora survey conducted by Biologic (2021) did not record any Threatened flora species in the Impact Area. A post-survey likelihood of occurrence | | | | | |
| | assessment concluded all Threatened flora were unlikely to occur. | | | | | |
| | The proposed clearing is not likely to be at variance with this Principle. | | | | | |
| Methodology | Biological Survey (Biologic 2021) | | | | | |
| | PMST report (DAWE 2022) | | | | | |
| | NatureMap Search Report (DBCA 2007-) | | | | | |
| | DBCA Database: | | | | | |
| | Threatened and Priority Flora (WA Herbarium) | | | | | |
| | Threatened and Priority Flora (DBCA). | | | | | |

(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.

| Comments | Proposed clearing is not at variance to this Principle | | |
|-------------|---|--|--|
| | Desktop searches identified one State-listed TEC listed as potentially occurring within the | | |
| | shrublands (FCT 20a) TEC. | | |
| | None of the vegetation types recorded by Biologic (2021) were considered to represent the <i>Banksia attenuata</i> woodlands over species rich dense shrublands TEC. No TECs occur within the Impact Area and none are considered to occur. | | |
| | The proposed clearing is not at variance with this Principle. | | |
| Methodology | y Biological Survey (Biologic 2021) | | |
| | DBCA Database: | | |
| | Threatened and Priority Ecological Communities. | | |

| (e) Native vegetation should not be cleared if it is si | gnificant as a remnant of native vegetation in a | n area that has been extensively cleared. |
|---|--|---|
| (-) | g | · · · · · · · · · · · · · · · · · · · |

| Proposed clearing | <mark>,</mark> is not likely to be at va | iance to this Prin | ciple | | |
|--|--|---|---|--|---|
| he Impact Area fa re-European vege xtent of the Perth outh. This vegetat | Ils within the Swan Coasta etation still exists in the Sw Metropolitan Region Scho tion complex retains appro | l Plain Interim Bio an Coastal Plain IE ame and is situated oximately 23.5% of | geographic Region 3RA Bioregion and 3 d within the Swan C f its pre-European e | alisation for Aust Subregion. The a Coastal Plain veg extent. | ralia (IBRA) Bioreg pplication area is l etation complex Ka |
| Pre-European Vegetation Association | Scale | | Pre-European Extent (ha) | Current Extent (ha) | % Remaining |
| Veg Assoc No. | Statewide | | 56,343.01 | 13,362.25 | 23.72 |
| Spearwood 6 | IBRA Bioregion Swa | an Coastal Plain | 56,343.01 | 13,362.25 | 23.72 |
| | IBRA Sub-region Pe | erth | 56,343.01 | 13,362.25 | 23.72 |
| | 10 km radius Of the | Impact Area | 13,973 | 849 | 6.08 |
| | LGA City of Stirling | LGA City of Stirling | | 208.78 | 3.88 |
| Heddle/Mattiske | e Veg Complex | Pre-European | Extent (ha) Curi | rent Extent (ha) | % Remaining |
| Karrakatta Comp | olex – Central and South | 53,080.99 | 12,4 | 67.20 | 23.49 |
| he EPA recognises ommunities is reco outh are above 10 andscape, it comp complex – Central | s the Perth Metropolitan R ommended. The current v 0%, but below this thresho rises of less than 0.18% of and South and the Swan (| egion to be a con egetation extents Id for the City of S vegetation remain Coastal Plain IBRA | strained area, withi for the Swan Coast Stirling LGA. Whilst ning in the City of S Bioregion. | n which a minim al Plain IBRA Bio the Impact Area tirling LGA and I | um 10% represent region and the Kar may be located wi ess than 0.003% re |
| t is also noted that and developed loca | t the Impact Area compris al area, which are likely to | es long, linear rem be subject to ong | nnants of native veg oing disturbance ar | jetation in Good nd degradation. | to Degraded cond |
| The proposed smal comprises a thin st | ll Impact Area (0.36 ha) is rip of vegetation adjacent | not considered to to the highway, is | be part of a signific not considered im | cant ecological lin portant for the n | nkage, is not biolo naintenance of eco |

| | compensate for a high degree of fragmentation. Subsequently the 0.36 ha of vegetation in the Impact Area is not considered a significant remnant of native vegetation within an extensively cleared landscape. |
|-------------|--|
| | The proposed clearing is not likely to be at variance to this Principle. |
| Methodology | Biological Survey (Biologic 2021) |
| | Commonwealth of Australia (2001) |
| | DataWA (GoWA 2022): |
| | DPIRD Remnant Vegetation |
| | Pre-European Vegetation. |

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

| Comments | Proposed clearing is not at variance to this Principle | | |
|-------------|--|--|--|
| | No watercourses or wetlands intersect the Impact Area. The Impact Area does not comprise of any vegetation that is associated with a watercourse or wetland. | | |
| | The proposed clearing is not at variance to this Principle. | | |
| Methodology | Biological Survey (Biologic 2021) | | |
| | DataWA (GoWA 2022): | | |
| | Aerial Imagery | | |
| | Directory of Important Wetlands | | |
| | RAMSAR Wetlands | | |
| | Geomorphic wetlands | | |
| | Hydrography, Linear | | |

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

| Comments | Proposed clearing is not likely to be at variance to this Principle | | | | |
|-------------|--|--|--|--|--|
| | The Project is located on the Swan Coastal Plain that is formed from the deposition of sediments, from either fluviatile or aeolian activity (Biologic 2021). The pattern of | | | | |
| | deposition of these sediments forms a series of geomorphic entities which are subparallel | | | | |
| | to the coastline (McArthur & Bettenay 1974). | | | | |
| | The Project is mapped in an area classified as having (GoWA 2022): | | | | |
| | Low surface and subsurface acidity | | | | |
| | Low subsurface acidification risk High wind provide risk | | | | |
| | Low flood risk | | | | |
| | Low water erosion risk. | | | | |
| | | | | | |
| | While the risk of wind erosion is high due to the sandy soils present, the linear nature of | | | | |
| | the clearing for the Project is not likely to cause appreciable increase in land degradation. | | | | |
| | dust management control measures during construction will reduce the incidence of wind | | | | |
| | erosion. | | | | |
| | | | | | |
| | The proposed clearing is not likely to be at variance to this Principle. | | | | |
| Methodology | Biological Survey (Biologic 2021) | | | | |
| methodology | DataWA (GoWA 2022): | | | | |
| | Soil Landscape Land Quality – Surface Acidity | | | | |
| | Soil Landscape Land Quality – Subsurface Acidity | | | | |
| | Soil Landscape Land Quality – Subsurface Acidification Risk | | | | |
| | Soil Landscape Land Quality – Wind Erosion Risk | | | | |
| | Soil Landscape Land Quality – Water Erosion Risk | | | | |
| | Soil Landscape Land Quality – Flood Risk. | | | | |

(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.

| Comments | Proposed clearing is not at variance to this Principle | | |
|-------------|---|--|--|
| | No conservation areas occur within or intersect the Impact Area (GoWA 2022). The closest reserve is Errina Road Nature Reserve (R 53332, Class C), which is located approximately 4 km north of the Project. The proposed clearing is not expected to impact on the values of this reserve or any other conservation areas. | | |
| | The proposed clearing is not at variance to this Principle. | | |
| Methodology | DataWA (GoWA 2022): | | |
| | DBCA Legislated Lands and Waters. | | |

(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.

| Comments | Proposed clearing is not likely to be at variance to this Principle | | |
|-------------|---|--|--|
| | The Impact Area is not located within a Surface Water Area proclaimed under the RIWI Act (GoWA 2022), however, the Priority 3 West Mirrabooka Public Drinking Water Source Area is located immediately north of the Impact Area (GoWA 2022). | | |
| | No rivers or watercourses intersect the Impact Area, and no vegetation mapped within the Impact Area is associated with a watercourse (Biologic 2021). Dewatering or excavation below the water table is not required during construction of the Project. | | |
| | Given the small scale of clearing, the Project is not expected to impact on surface water flows or quality in the local area. Nor is the Project expected to impact on groundwater regimes or quality. | | |
| | The proposed clearing is not likely to be at variance to this Principle. | | |
| Methodology | / Biological Survey (Biologic 2021) | | |
| | DataWA (GoWA 2022): | | |
| | Surface Water Areas and Irrigation Districts | | |
| | Public Drinking Water Source Areas. | | |

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

| Comments | Proposed clearing is not likely to be at variance to this Principle |
|-------------|--|
| | The Project is located in the Perth Metropolitan area and receives approximately 733.2 mm of rainfall annually (Perth Metro weather station, station number 9225) (BoM 2021). |
| | The majority of the Impact Area is mapped as having a low Water Logging Risk and Flood Risk (GoWA 2022). However, it is mapped as having a medium Water Repellence Risk (GoWA 2022). |
| | The minor and linear nature of the required clearing is unlikely to result in excessive levels of surface water runoff that would increase the intensity or incidence of flooding. |
| | The proposed clearing is not likely to be at variance to this Principle. |
| Methodology | Biological Survey (Biologic 2021) |
| | DataWA (GoWA 2022): |

| • | Soil Landscape Land Quality – Waterlogging Risk |
|---|---|
| • | Soil Landscape Land Quality – Flood Risk |
| • | Soil Landscape Land Quality – Water Repellence Risk |
| • | Soil Landscape Land Quality – Hydrography, Linear. |

6 ADDITIONAL ACTIONS REQUIRED

Table 6 summarises what further pre-clearing impact assessment and vegetation management is required in accordance with CPS 818.

Table 6. Summary of Additional Management Actions Required by CPS 818

| Impact of Clearing | Yes/No or NA | Further Action Required | |
|--|-----------------|---|--|
| 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. | Νο | Submissions will be sought from relevant parties, including the LGA, in accordance with Condition 8 of CPS 818/15 published on the website. Vegetation Management Plan (VMP) has been completed, refer to Appendix 1. An offset proposal for approval by DWER is required where clearing is 'at variance'. The offset proposal must be approved prior to undertaking clearing of the area to which the offset is related. | |
| 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. | Νο | No further action required. | |
| 3. The project involves clearing for temporary works (as defined by CPS 818). | Νο | 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 | Yes | Standard dieback actions will be implemented in line with Condition 10 of CPS 818/15. | |

| Impact of Clearing | Yes/No or NA | Further Action Required | |
|---|-----------------|--|--|
| Works have potential for uninfested areas to be impacted | | | |
| 4b. Does the proposed works require clearing within or adjacent to DBCA estate in non-dry conditions? | Νο | 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 | Νο | 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 | Νο | No further action required. The Project includes implementation of a CEMP, which will prevent the spread of weeds to adjacent areas of native vegetation. | |

7 STAKEHOLDER CONSULTATION

Main Roads will undertake stakeholder consultation in accordance with CPS 818/15 Condition 8.

This section of the CAR will be updated once submissions have been received from Stakeholders and DWER.

8 VEGETATION MANAGEMENT

Main Roads will avoid clearing native vegetation where possible. Where clearing cannot be avoided then this clearing is kept to a minimum. A VMP has been developed to manage and minimise vegetation clearing for the project (refer to Appendix 1).

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- Soil Landscape Land Quality Subsurface Acidity (Current) (DPIRD-036)
- Soil landscape land quality Wind Erosion Risk (DPIRD-016)
- Soil landscape land quality Flood Risk (DPIRD-007)
- Soil landscape land quality Water Erosion Risk (DPIRD-013)
- Soil landscape land quality Waterlogging Risk (DPIRD-015)
- Soil landscape land quality Water Repellence Risk (DPIRD-014)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Directory of Important Wetlands in Australia Western Australia (DBCA-045)
- Ramsar Sites (DBCA-010)
- Geomorphic Wetlands, Swan Coastal Plain (DBCA-019)
- Hydrography, Linear (Hierarchy) (DWER-031)
- 1:2 500 000 State interpreted bedrock geology (DMIRS-014)
- Pre-European Vegetation (DPIRD-006)
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10 APPENDICES

| Appendix | Title |
|--------------|---|
| Appendix 1 | Vegetation Management Plan |
| Appendix 1.1 | Principal Environmental Management Requirements |

Appendix 1: Vegetation Management Plan

REID HIGHWAY AMENITY WALL FROM WANNEROO ROAD TO MIRRABOOKA AVENUE

Purpose and Scope

This Vegetation Management Plan (VMP) has been prepared by Main Roads for the purpose of managing native vegetation clearing impacts associated with the Reid Highway Amenity Wall from Wanneroo Road to Mirrabooka Avenue project.

Main Roads Western Australia (Main Roads) proposes to construct an amenity wall south of Reid Highway from Wanneroo Road to Mirrabooka Avenue. The amenity wall will tie into existing amenity wall structures south of Reid Highway where some gaps remain.

In specified circumstances, Main Roads VMP is required to be approved by Department of Water and Environmental Regulation (DWER) as a condition of Main Roads Statewide Clearing Permit CPS 818.

Action

Appendix 1.1 references the standard Principal Environmental Management Requirements (PEMRs) (Table's 1 to 9) that will be utilised for all projects that involve clearing to avoid, mitigate and manage the environmental impacts of the project.

Timeframes

Actions shall be undertaken in accordance with those described in the relevant PEMR and the Project Specific Environmental Management Requirements.

Responsibilities

It is the responsibility of the Superintendent's Contract Management Team to ensure that the requirements are implemented by the Contractor. This shall be done by adhering to the Environmental Measurement and Evaluation Checklist.

Vegetation Management

| VMP Requirement | Standard Management Action | Specific Management Action |
|-----------------------|--|-------------------------------|
| Clearing | Refer to Table 1: Clearing PEMR | Not Applicable. |
| | Specification 204 Environmental Management Construction Environmental Management Plan Specification 301 Vegetation Clearing and Demolition Environment Measurement and Evaluation Checklist (for release of HOLD POINTS) Contract Tender Documents available at <u>https://www.mainroads.wa.gov.au/technical-</u> commercial/tender-preparation/ | |
| Dieback | Refer to Table 2: Dieback PEMR | Not Applicable. |
| Management | Specification 204 Environmental Management Construction Environmental Management Plan Contract Tender Documents available at <u>https://www.mainroads.wa.gov.au/technical-</u> commercial/tender-preparation/ | |
| Erosion and | Refer to Table 3: Erosion and Sedimentation | Not Applicable. |
| Sedimentation | Control PEMR | |
| Control | Specification 204 Environmental Management Construction Environmental Management Plan Contract Tender Documents available at <u>https://www.mainroads.wa.gov.au/technical-</u> commercial/tender-preparation/ | |
| Fauna | Refer to Table 4: Fauna PEMR | Not Applicable. |
| | Specification 204 Environmental Management Construction Environmental Management Plan Contract Tender Documents available at <u>https://www.mainroads.wa.gov.au/technical-</u> <u>commercial/tender-preparation/</u> | |
| Machinery and | Refer to Table 5: Machinery and Vehicle | Not Applicable. |
| Vehicle Management | Management PEMR Specification 204 Environmental Management Construction Environmental Management Plan Contract Tender Documents available at <u>https://www.mainroads.wa.gov.au/technical-</u> | |
| Mulch and Tancail | Pofer to Table 6: Mulch and Tongoil Management | Not Applicable |
| Management | Specification 204 Environmental Management Construction Environmental Management Plan Specification 301 Vegetation Clearing | |

| VMP Requirement | Standard Management Action | Specific Action | Management |
|-------------------------|---|--------------------|------------|
| | Specification 304 Revegetation and Landscaping Contract Tender Documents available at <u>https://www.mainroads.wa.gov.au/technical-</u> commercial/tender-preparation/ | | |
| Pegging and Flagging | Refer to Table 7: Pegging and Flagging PEMR Specification 204 Environmental Management Construction Environmental Management Plan Specification 301 Vegetation Clearing and Demolition | Not Applica | ble. |
| | Contract Tender Documents available at <u>https://www.mainroads.wa.gov.au/technical-</u> <u>commercial/tender-preparation/</u> Refer to Table 8: Water Drainage PEMR | Not Applica | ble |
| Management | Specification 204 Environmental Management Construction Environmental Management Plan | | Die. |
| Weed Management | Refer to Table 9: Weed Management PEMR Specification 204 Environmental Management Construction Environmental Management Plan Contract Tender Documents available at https://www.mainroads.wa.gov.au/technical- commercial/tender-preparation/ | Not Applica | ble. |
| Monitoring | Specification 204 Environmental Management Construction Environmental Management Plan Superintendent's Contract Management Plan & Environmental Measurement and Evaluation Checklist. Contract Tender Documents available at https://www.mainroads.wa.gov.au/technical-commercial/tender-preparation/ | Not Applica | ble. |
| Auditing | Specification 204 Environmental Management Superintendent's Contract Management Plan & Environmental Measurement and Evaluation Checklist. | Not Applica | ble. |
| | Contract Tender Documents available at https://www.mainroads.wa.gov.au/technical- commercial/tender-preparation/ | | |

Appendix 1.1 Principal Environmental Management Requirements (PEMR's)