GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 11153/1

File Number: DWERVT19294

Duration of Permit: From 16 October 2025 to 16 October 2027

ADVICE NOTE

Monetary contribution to the Offsets fund

The monetary contribution to the Offsets Fund referred to in condition 5 of this permit is intended to contribute towards the purchase, and conservation in perpetuity of at least 1.25 hectares of native vegetation that comprises:

- at least 1.25 hectares of high-quality foraging habitat for *black cockatoo species*,
- at least 1.04 hectares of significant remnant vegetation within an extensively cleared area
- at least 0.86 hectares of significant remnant vegetation of native vegetation that is growing in, or in association with a wetland containing values that are commensurate with a conservation category wetland, and
- at least 0.42 hectares of native vegetation for inclusion within Bush Forever Estate (like-for-like) or inclusion within conservation estate (like-for-similar).

PERMIT HOLDER

Public Transport Authority

LAND ON WHICH CLEARING IS TO BE DONE

Railway Reserve (PIN 11525945), Byford and Mundijong

AUTHORISED ACTIVITY

The permit holder must not clear more than 0.21 hectares of *native vegetation* within the area cross-hatched yellow in Figure 1 and Figure 2 of Schedule 1.

CONDITIONS

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

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

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

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

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

2. Weed and dieback management

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

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

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

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

3. Directional clearing

The permit holder must:

(a) conduct *clearing* activities in a slow, progressive manner from north to south, towards adjacent *native vegetation*; and

(b) allow reasonable time for fauna present within the area being cleared to move into adjacent *native vegetation* ahead of the *clearing* activity.

4. Demarcation of the clearing area

Prior to undertaking any *clearing* authorised under this permit, the permit holder must demarcate the area authorised to clear under this permit to avoid the inadvertent removal of adjacent *native vegetation*.

5. Offsets – monetary contributions to the Offsets Fund

Prior to undertaking any *clearing* authorised under this permit, the permit holder must provide documentary evidence to the CEO that funding of $43,750 has been transferred to the Department of Water and Environmental Regulation for the purpose of establishing or maintaining native vegetation as an environmental offset for the clearing activities authorised under this permit.

6. Records that must be kept

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

Table 1: Records that must be kept

No.	Relevant matter	Specifications
1.	In relation to the authorised clearing activities generally	(a) the species composition, structure, and density of the cleared area; (b) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to GDA2020, expressing the geographical coordinates in Eastings and Northings; (c) the date that the area was cleared; (d) the size of the area cleared (in hectares); (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 1; (f) actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 2; (g) actions taken clear in a slow, progressive in accordance with condition 3; and (h) actions taken to demarcate the clearing area in accordance with condition 4

7. Reporting

The permit holder must provide to the *CEO* the records required under condition 6 of this permit when requested by the *CEO*.

DEFINITIONS

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

Table 2: Definitions

Term	Definition
black cockatoo species	means one or more of the following species: (a) *Zanda latirostris* (Carnaby's cockatoo); (b) *Zanda baudinii* (Baudin's cockatoo); and/or (c) *Calyptorhynchus banksii naso* (forest red-tailed black cockatoo).
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*.

Term	Definition
clearing	has the meaning given under section 3(1) of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
dieback	means the effect of *Phytophthora* species on native vegetation.
department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
EP Act	*Environmental Protection Act 1986* (WA)
fill	means material used to increase the ground level, or to fill a depression.
mulch	means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation.
native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.
weeds	means any plant – (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or (c) not indigenous to the area concerned.

END OF CONDITIONS

C Robertson
22.09.2025
4.22PM

Caron Robertson
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

22 September 2025

SCHEDULE 1

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

Figure 1: Map of the boundary of the area within which clearing may occur.

Figure 2: Map of the boundary of the area within which clearing may occur.

Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 11153/1
Permit type:	Area permit
Applicant name:	Public Transport Authority
Application received:	26 June 2025
Application area:	0.21 hectares of native vegetation
Purpose of clearing:	Rail signalling upgrades
Method of clearing:	Mechanical
Property:	Railway Reserve (PIN 11525945)
Location (LGA area/s):	Serpentine-Jarrahdale
Localities (suburb/s):	Byford and Mundijong

1.2. Description of clearing activities

The application is to upgrade rail signalling by installing a new monopole and a trackside signalling equipment room (TSER). The vegetation proposed to be cleared is distributed across two separate areas within the rail reserve, approximately 2.4 kilometres apart (see Figure 1 and Figure 2, Section 1.5).

1.3. Decision on application

Decision:	Granted
Decision date:	22 September 2025
Decision area:	0.21 hectares of native vegetation, as depicted in Section 1.5, below.

1.4. Reasons for decision

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

In making this decision, the Delegated Officer had regard for:

- the site characteristics (see Appendix A),
- relevant datasets (see Appendix F.1),
- the findings of biological surveys (see Appendix E),
- the clearing principles set out in Schedule 5 of the EP Act (see Appendix B),
- relevant planning instruments and any other matters considered relevant to the assessment (see Section 3).

The Delegated Officer also took into consideration that the proposed clearing is part of a broader initiative across the rail network to transition to an integrated, digital communications-based train control system and will support the new Byford rail extension and re-established Australind train.

The assessment identified that the proposed clearing will result in:

- the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values
- the loss of 0.12 hectares of native vegetation that is suitable for foraging by black cockatoos
- the loss of 0.12 hectares of native vegetation that is growing in, or in association with a wetland containing values that are commensurate with a conservation category wetland,
- the loss of 0.21 hectares of native vegetation growing within Bush Forever Area 350, and
- the loss of 0.12 hectares of native vegetation that is representative of the extensively cleared Guildford Complex.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined the potential introduction and spread of weeds and dieback into adjacent vegetation and impacts to ecological linkage function can be minimised and managed to be unlikely to lead to an unacceptable risk to environmental values through permit conditioning. However, impacts on suitable habitat for black cockatoos, conservation category wetlands, significant remnant vegetation within an extensively cleared landscape, and Bush Forever site remained significant even after the application of minimisation and mitigation measures and constituted a significant residual impact.

In accordance with the Government of Western Australia's Environmental Offsets Policy (2011) and Environmental Offsets Guidelines (2014), the Delegated Officer determined that an offset is required to counterbalance the above significant residual impacts. Further information on the suitability of the offset provided is summarised in Section 4.

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

- avoid, minimise to reduce the impacts and extent of clearing
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback
- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity
- demarcate the application area to avoid the inadvertent clearing of adjacent high quality native vegetation, and
- provide a monetary contribution to the Part V Offsets Fund to fund the purchase of 1.25 hectares of native vegetation in Very Good (Keighery, 1994) or better condition.

1.5. Site maps

Figure 1. Map of the application area (Byford Monopole).

Figure 2. Map of the application area (TSER).

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

2 Legislative context

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

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

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

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)

Relevant policies considered during the assessment include:

- *Environmental Offsets Policy* (2011)
- *State Planning Policy 2.8 - Bushland policy for the Perth Metropolitan Region* (2010) (SPP 2.8)

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)
- *Environmental Offsets Guidelines* (August 2014)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2016)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

Avoidance

The applicant advised that they had taken several actions to avoid clearing where possible. This includes conducting several biological surveys through the rail reserve to identify the environmental values to determine the most appropriate location and changes to the design of the project (AECOM, 2025).

The original concept for the project included a traditional buried pipe which would have required trenching of a five-metre-wide corridor over eight kilometres and require approximately four hectares of clearing (AECOM, 2025). The applicant also initially planned to place the project further south but relocated due to the environmental values identified in the surveys (AECOM, 2025).

The applicant has only applied for the minimum area required for the construction of the monopole and TSER with site accessible through already existing tracks (AECOM, 2025).

Mitigation

Actions proposed by the applicant to mitigate the impacts of the proposal include (AECOM, 2025):

- fauna spotting and relocation prior to clearing
- demarcation of clearing boundaries and sensitive vegetation using bunting or fencing
- weed and dieback hygiene and washdown procedures
- salvage of *Xanthorrhoea preissii* (grass trees) to replant in nearby areas.

After consideration of avoidance and mitigation measures, it was determined that offsets to counterbalance the significant residual impacts to black cockatoo foraging habitat, significant remnant vegetation, conservation category wetland, and Bush Forever necessary. In accordance with the Government of Western Australia's *Environmental Offsets Policy* and *Environmental Offsets Guidelines*, these significant residual impacts have been addressed through the conditioning of environmental offset requirements on the permit. The nature and suitability of the offset provided are summarised in Section 4.

3.2. Assessment of impacts on environmental values

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

The assessment against the clearing principles (see Appendix B.) identified that the impacts of the proposed clearing present a risk to biological values (fauna, adjacent flora and vegetation), significant remnant vegetation and conservation areas, and land and water resources. The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

3.2.1. Biological values (flora) - Clearing Principles (a) and (c)

Assessment
Based on the results of the flora and vegetation surveys (Focused Vision, 2022 & NACMS, 2025) and the preliminary assessment, the proposed clearing may impact on the following species of conservation significant flora:

- *Johnsonia pubescens* subsp. *cygnorum* (P2)
- *Synaphea* sp. Pinjarra Plain (A.S. George 17182) (T)
- *Synaphea* sp. Serpentine (G.R. Brand 103) (T)

Johnsonia pubescens subsp. *cygnorum* is a tufted perennial herb which is generally found in flats and seasonally wet areas (Florabase, 1998-). This species has only been recorded within the Perth and Mandurah Regions. This species was recorded during the broader survey, outside the proposed clearing areas (Focused Vision, 2022). According to available databases, this species has been recorded within the same remnant multiple times.

Synaphea sp. Pinjarra Plains and *Synaphea* sp. Serpentine are both listed as threatened under the *Biodiversity Conservation Act 2016* (BC Act). Both species have previously been recorded in the rail reserve in proximity to the southern area of the application. These species were not recorded during the flora survey (Focused Vision, 2022). *S.* sp. Pinjarra Plains prefers flat terrain on grey-brown sandy loams and occurs more often on the boundaries of seasonal wetlands rather than within them (TSSC, 2018a), while *S.* sp. Serpentine is found in predominantly in grey-brown sandy-loam or clay in seasonally wet areas (TSSC, 2018b).

Noting the above, the proposed clearing areas have been subject to significant historical and ongoing disturbance and therefore is not likely to be significant habitat for conservation significant flora, particularly the *Synaphea* spp. which have been noted to be sensitive to weeds. Additionally, the flora surveys were conducted at the appropriate time of year and therefore, if present these species would likely have been recorded within the application areas.

The proposed clearing may introduce and spread weeds and dieback into adjacent vegetation impacting on its habitat values.

Conclusion
Based on the above assessment, the proposed clearing is not likely to result in significant impacts to habitats and individuals of conservation significant flora. Indirect impacts to suitable habitat for conservation significant flora can be managed through standard weed and dieback management conditions.

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

- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback into adjacent remnant vegetation.

3.2.2. Biological values (fauna) - Clearing Principles (a) and (b)

Assessment
The preliminary assessment identified that there are 30 species of conservation significant fauna recorded in the local area comprised of 12 birds, four invertebrates, 10 mammals and four reptiles. Of these species, several were determined to have suitable habitat within the proposed clearing, particularly given the sites position as a significant regional ecological linkage. In particular, the assessment determined that the following species required further assessment:

- Baudin's cockatoo (*Zanda baudinii*) (EN)
- Carnaby's cockatoo (*Zanda latirostris*) (EN)
- Chuditch (*Dasyurus geoffroii*) (VU)
- Forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*) (VU)
- Quenda (*Isoodon fusciventer*) (P4)

Black cockatoos
The proposed clearing is mapped within known distribution of all three species of threatened black cockatoo species. According to available databases, all three species have been recorded in proximity to the proposed clearing area.

Breeding habitat

Suitable breeding habitat for black cockatoos includes trees which either have a suitable nest hollow or are of a suitable diameter at breast height (DBH) to develop a nest hollow (DAWE, 2022). The proposed clearing is located on the Swan Coastal Plain, which is primarily used for foraging habitat, with some patches of breeding (DAWE, 2022). According to available databases, there are seven known breeding sites in the local area, the nearest being 2.66 km from the proposed clearing.

Habitat trees considered potentially suitable for Black Cockatoo breeding have a DBH greater than 500 millimetres. The fauna survey identified 117 trees with a suitable DBH to form hollows, of which 20 had hollows, and two had hollows large enough for breeding for black cockatoos, one of which had evidence of use (Focused Vision, 2022). Two trees with a suitable DBH but no hollows, a *Eucalyptus camaldulensis* (red river gum) and *E. rudis* (flooded gum), are located within the southern application area. The northern application area contains no trees. The red river gum is not typically associated with breeding by black cockatoos and is not native to the area, but flooded gum is (DAWE, 2022). Photographs of the trees indicate that they do not have the appropriate shape to form hollows. Therefore, the proposed clearing is not likely to impact on significant breeding habitat for black cockatoos.

Roosting habitat

Night-roosts are usually located in the tallest trees of an area, and near both a food supply and a water source (DAWE, 2022). According to available databases, there are 28 known roosting sites within the local area, the nearest being 1.85 kilometres from the proposed clearing.

The fauna survey did not identify any evidence of roosting within the proposed clearing area, however, did note that several of the potential breeding trees may be suitable for roosting (Focused Vision, 2022). Given the large number of roosting sites within the local area, it is considered that the proposed clearing is not likely to have a significant impact on the availability of roosting habitat for black cockatoos.

Foraging habitat

Black cockatoo species are noted to forage on a range of plant species, with the primary foraging resources varying between species (DAWE, 2022). Food resources within the range of roosting and breeding sites are important to sustain populations of black cockatoos, and foraging resources should therefore be viewed in the context of the proximity to the known night roosting and breeding sites to the application area. Black cockatoos will generally forage up to 12 kilometres from an active breeding site. Following breeding, they will flock in search of food, usually within six kilometres of a night roost (DAWE, 2022). The fauna survey identified suitable foraging habitat within the broader survey area, including observations of FRTBC foraging and secondary evidence of foraging (Focused Vision, 2022). No evidence of foraging by Baudin's or Carnaby's cockatoo was observed.

The northern application area is in a degraded to completely degraded (Keighery, 1994) condition and only contains Xanthorrhoea species (NACMS, 2025) which are not a primary foraging resource for black cockatoos and therefore this portion of the proposed clearing is not likely to impact on significant foraging habitat.

The TSER area is mapped as wandoo woodland (Focused Vision, 2022) which includes *Corymbia calophylla* (marri), a key foraging species for all three species of black cockatoo. Therefore, the proposed clearing will result in the loss of 0.12 hectares of high-quality foraging habitat for threatened black cockatoos.

Chuditch and quenda

Chuditch (*Dasyurus geoffroii*) (VU) are known to occupy a range of habitats including jarrah forests, eucalypt woodlands, mallee shrublands and heathland (DEC, 2012). They require den resources such as tree hollows, hollow logs, burrows or rock crevices (DEC, 2012). According to available databases, there are 20 records of the chuditch in the local area, the nearest being 0.02 kilometres from the proposed clearing.

Quenda (*Isoodon fusciventer*) (P4) require a dense understorey for cover and are often found digging in leaf litter for invertebrates, earthworms, beetles and plant material, generally inhabiting dense understorey vegetation of forests, woodlands, shrubland and heathland (DBCA, 2017a). According to available databases, there are 361 records of quenda in the local area, the nearest being 0.05 kilometres from the proposed clearing.

No evidence of either species was identified during the fauna survey (NACMS, 2024), however, noting the number of local records and their proximity to the proposal, it is highly likely that chuditch and quenda are present within the broader remnant vegetation and at a minimum utilise the area to move through the landscape.

The proposed clearing has the potential to increase the risk of injury to any fauna using the application area at the time of clearing via machinery strike. Fauna management measures that require slow, one directional, progressive clearing would assist in minimising this risk.

Ecological linkage
The application area forms part of a formally mapped Perth Regional Ecological Linkage (No. 65), as mapped by the WA Local Government Association's biodiversity project (Del Marco et al., 2004).

While the vegetation within the application areas contributes to linkage values within the railway reserve, the proposed clearing will not completely sever the linkage between the vegetation occurring north and south of the application area, with vegetation to the west of each area maintained. Therefore, the proposed clearing is not likely to impact on the ability of fauna to disperse through the landscape. The proposed clearing will increase the risk of weeds and dieback spreading into adjacent areas of fauna habitat. Adherence to specific hygiene protocols would assist to manage this risk.

Conclusion
For the reasons set out above, it is considered that the impacts of the proposed clearing on threatened black cockatoo foraging habitat constitutes a significant residual impact. Impacts to chuditch and quenda can be managed through implementing slow, directional clearing and impacts to ecological linkage values can be managed through weed and dieback hygiene measures.

In accordance with the Government of Western Australia's *Environmental Offsets Policy* (2011) and *Environmental Offsets Guidelines* (2014), this significant residual impact has been addressed through the conditioning of environmental offset requirements, as outlined under Section 4.

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

- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback into adjacent remnant vegetation,
- slow directional clearing to allow fauna to move into adjacent vegetation ahead of the clearing activity
- provision of an offset in the form of a monetary contribution to the Part V Offsets Fund to fund the purchase of at least 1.25 hectares of high-quality black cockatoo foraging habitat.

3.2.3. Biological values (ecological communities) - Clearing Principles (a) and (d)

Assessment
A flora and vegetation survey has been over the broader reserve area (Focused Vision, 2022) which recorded eight vegetation types over the rail reserve, two of which were recorded within the proposed clearing area:

- CcXp - Marri/Xanthorrhoea Woodland
- EwTo - Wandoo Woodland

A targeted survey of the northern Monopole area in November 2024 determined that this area is composed of *Corymbia calophylla* open woodland over *Xanthorrhoea preissii* shrubland over closed introduced grassland (NACMS, 2025).

The desktop assessment identified that the proposed clearing area is mapped within two threatened ecological communities (TEC):

- *Banksia attenuata* and/or *Eucalyptus marginata* woodlands of the eastern side of the Swan Coastal Plain (floristic community type 20b as originally described in Gibson et al. 1994) (FCT 20b), and
- *Corymbia calophylla — Eucalyptus marginata* woodlands on sandy clay soils of the southern Swan Coastal Plain (floristic community type 3b as originally described in Gibson et al. 1994) (FCT 3b)

FCT 20b is listed as Critically Endangered under the BC Act and *Endangered under the Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) and FCT 3b is listed as endangered under the BC Act and is not listed under the EPBC Act.

An analysis of the floristic community types (FCT) determined that none of the vegetation within the survey area was representative of the FCT 20b TEC, but two vegetation types, CcXP and CcXpKa, are representative of the FCT 3b TEC (NACMS, 2024). Based on this result, the monopole area is representative of FCT 3b.

Part of the Scope of the 2024 targeted survey was to determine whether any TECs were present within the monopole area (NACMS, 2025). The survey concluded that this area was not likely to be representative of FCT 3b as the species recorded within the site had a low affinity with FCT 3b and the completely degraded to degraded (Keighery, 1994) condition of the vegetation does not meet the Department of Biodiversity, Conservation and Attractions' (DBCA) minimum good (Keighery, 1994) condition to be considered a TEC (NACMS, 2025).

Based on the results of the flora and vegetation survey, the southern area is also not representative of a TEC (NACMS, 2024). While *Corymbia calophylla* is described within this vegetation type, *Eucalyptus wandoo* is not typically associated with either FCT 20b or FCT 3b, and there is a lack of other defining species present such as *Banksia attenuata* or *Eucalyptus marginata* to meet the criteria for these TECs (DBCA, 2023a &2023b).

The FCT 3b TEC surrounds both application areas and may be indirectly impacted by the clearing activities and subsequent end land use. The proposed clearing will not result in the isolation of any patches of SCP3b, nor will it significantly fragment the larger SCP3b occurrences at these locations. This is noting the small size of both areas (0.09 hectares and 0.12 hectares) and that they are located over 2.4 kilometres apart.

The proposed clearing and end land use will not intercept groundwater and noting the small size distance between areas, the risk of impact to natural hydrology is minimal.

The proposed clearing will increase the risk of weeds and dieback spreading into adjacent native vegetation. The applicant has advised that while there are no declared weed species within the application area, weed management protocols will be implemented to control any weed species within the proposed clearing areas during construction (AECOM, 2025). The applicant further notes that appropriate hygiene protocols will be implemented to ensure the risk of spreading dieback is carefully managed and minimised (AECOM, 2025). Demarcating the area to be cleared prior to activities commencing will also assist in preventing any accidental clearing of these communities.

Conclusion
Based on the above assessment, the proposed clearing will not result in the direct loss of a TEC, but may have indirect impacts on adjacent vegetation representative of the FCT 3b TEC.

For the reasons set out above, it is considered that the impacts of the proposed clearing on adjacent TECs can be managed by taking steps to minimise the risk of the introduction and spread of weeds and dieback and demarcating the clearing area prior to activities commencing.

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

- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback into adjacent remnant vegetation
- Demarcation of the clearing area

3.2.4. Significant remnant vegetation and conservation areas (remnant vegetation) - Clearing Principles (e)

Assessment
The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001). However, the Environmental Protection Authority (EPA) recognises the Perth Metropolitan Region to be a constrained area, within which a minimum 10 per cent representation threshold for ecological communities is recommended (EPA, 2008).

The current vegetation extent for the Swan Coastal Plain and local area (10-kilometre radius) is above the 10 per cent threshold for constrained areas, however, the mapped vegetation type, the Guildford Complex, has less than 10 per cent of its original extent remaining.

Based on the results of the flora and vegetation surveys, the proposed clearing areas are described as:

- CcXp (Marri/Xanthorrhoea Woodland) - *Corymbia calophylla* and *Eucalyptus marginata* Low Woodland over *Xanthorrhoea preissii* and occasional *Kingia australis* Tall Sparse Shrubland over *Mesomelaena tetragona* Sedgeland (Focused Vision, 2022), and
- *Corymbia calophylla* open woodland over *Xanthorrhoea preissii* shrubland over closed introduced grassland (NACMS, 2025).

The Guildford Complex is described as a mixture of open forest to tall open forest of *Corymbia calophylla* (Marri) - *Eucalyptus wandoo* (Wandoo) - *Eucalyptus marginata* (Jarrah) and woodland of *Eucalyptus wandoo* (Wandoo) (with rare occurrences of *Eucalyptus lane-poolei* (Salmon White Gum)). Minor components include *Eucalyptus rudis* (Flooded Gum) - *Melaleuca rhaphiophylla* (Swamp Paperbark).

Given the vegetation in the monopole area is in degraded to completely degraded (Keighery, 1994) condition and lacking in any of the key indicator species, only the TSER is representative of the Guildford Complex. Therefore, the proposed clearing will result in the loss of 0.12 hectares of native vegetation that is significant as a remnant within

an extensively cleared vegetation type. The proposed clearing may also result in the introduction and spread of weeds into adjacent vegetation representative of the Guildford Complex, impacting its habitat values.

Conclusion
For the reasons set out above, it is considered that the impacts of the proposed clearing on significant remnant vegetation constitutes a significant residual impact.

In accordance with the Government of Western Australia's *Environmental Offsets Policy* (2011) and *Environmental Offsets Guidelines* (2014), this significant residual impact has been addressed through the conditioning of environmental offset requirements, as outlined under Section 4.

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

- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback into adjacent remnant vegetation
- provision of an offset in the form of a monetary contribution to the Part V Offsets Fund to fund the purchase of at least 1.04 hectares of significant remnant vegetation within an extensively cleared area.

3.2.5. Significant remnant vegetation and conservation areas (Bush Forever) - Clearing Principle (h)

Assessment
The entire application area occurs within Bush Forever site 350, known as the 'Byford to Serpentine Rail/Road Reserves and Adjacent Bushland'. During the assessment of this application, advice was sought from the Department of Planning, Lands and Heritage (DPLH) on the impacts to this Bush Forever site. DPLH (2025) recommended that, to ensure the integrity of Bush Forever Area 350 is not compromised, and in accordance with State Planning Policy (SPP) 2.8 5.1.1 (ii) and 5.1.2.3 (c):

- the development including construction, access, and ongoing maintenance, shall not result in any further disturbance or clearing of Bush Forever Area 350; and
- an offset package be prepared for and approved by DWER prior to clearing, in accordance with the WA Environmental Offsets Policy (2011) and Appendix 4 of SPP 2.8 for any clearing within Bush Forever Area 350.

Appendix 4 of SPP 2.8 specifies that clearing of high-value vegetation within Bush Forever Sites should be offset with a net outcome of at least 2 times the calculated habitat loss in hectares, to ensure there will be an environmental gain for the proposed clearing. Given the application area comprises significant foraging habitat for Carnaby's cockatoo and is representative of a conservation category wetland, it is considered 'high value' vegetation. Therefore, it has been estimated that the offset required to counterbalance impacts to Bush Forever Site 350 from the proposed clearing is 0.42 hectares (2 x 0.21 hectares). Information regarding the suitability of offsets is available in Section 4 of the Decision Report.

Conclusion
For the reasons set out above, it is considered that the impacts of the proposed clearing on Bush Forever Area 350 constitutes a significant residual impact.

In accordance with the Government of Western Australia's *Environmental Offsets Policy* (2011) and *Environmental Offsets Guidelines* (2014), this significant residual impact has been addressed through the conditioning of environmental offset requirements, as outlined under Section 4.

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

- provision of an offset in the form of a monetary contribution to the Part V Offsets Fund to fund the purchase of at least 0.42 hectares of native vegetation for inclusion within conservation estate.

3.2.6. Land and water resources (watercourse and wetlands) - Clearing Principle (f)

Assessment
The proposed clearing is mapped within wetland. Specifically, the monopole area is mapped within a multiple use category wetland (MUW) (UFI 15383) and the TSER intersects a conservation category wetland (CCW) (UFI 15462). MUWs are considered wetlands with few remaining important attributes and functions and CCWs are the highest priority wetlands, and the management objective is the preservation of wetland attributes and functions (DBCA, 2017b).

Based on available wetland mapping, the monopole clearing area is part of a much larger palusplain wetland that has now been developed into urban and farmland areas, and the proposed clearing is not likely to significantly impact this wetland.

According to *A methodology for the evaluation of wetlands on the Swan Coastal Plain, Western Australia* (DBCA, 2017b), one of the primary criteria for a wetland to be a CCW is that it is dominated by vegetation in good (Keighery, 1994) or better condition vegetation. Available mapping suggests that approximately 0.03 hectares of native vegetation within the TSER is mapped as CCW, however, based on the results of the flora and vegetation survey (Focused Vision, 2022), the vegetation within the proposed clearing area is in good (Keighery, 1994) condition and therefore, is likely the entire TSER is representative of a CCW.

CCWs support a high level of ecological attributes and function through various mechanisms (DBCA, 2017b) and the loss of 0.12 hectares of CCW, in the context of the broader area where very few intact wetlands remain, is considered a significant residual impact.

Conclusion
For the reasons set out above, it is considered that the impacts of the proposed clearing on conservation category wetlands constitutes a significant residual impact.

In accordance with the Government of Western Australia's *Environmental Offsets Policy* (2011) and *Environmental Offsets Guidelines* (2014), this significant residual impact has been addressed through the conditioning of environmental offset requirements, as outlined under Section 4.

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

- provision of an offset in the form of a monetary contribution to the Part V Offsets Fund to fund the purchase of at least 0.86 hectares of significant remnant vegetation of native vegetation that is growing in, or in association with a wetland containing values that are commensurate with a conservation category wetland.

3.3. Relevant planning instruments and other matters

The Shire of Serpentine-Jarrahdale did not have any objections to the proposed clearing (Shire of Serpentine-Jarrahdale, 2025).

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

4 Suitability of offsets

Through the detailed assessment outlined in Section 3.2 above, the Delegated Officer has determined that the following significant residual impacts remain after the application of the avoidance and mitigation measures summarised in Section 3.1:

- 0.12 hectares of native vegetation that is suitable for foraging by threatened black cockatoos,
- 0.12 hectares of native vegetation that is growing in, or in association with a wetland containing values that are commensurate with a conservation category wetland,
- 0.12 hectares of native vegetation that is representative of the extensively cleared Guildford Complex, and
- 0.21 hectares of native vegetation growing within Bush Forever Area 350

In determining the appropriateness of an offset, the Delegated Officer took into consideration the applicant's implementation of the mitigation hierarchy and the public benefit of the proposed clearing (see Section 3.1). In considering these matters, the Delegated Officer determined that it was appropriate to grant the clearing permit in relation to the significant residual impacts, on the basis that a suitable environmental offset was implemented to counterbalance the impacts.

To counterbalance the significant residual impacts of the proposal, the applicant has committed to provide a monetary contribution to fund the purchase of 1.25 hectares of native vegetation which comprises the following:

- at least 1.25 hectares of high-quality foraging habitat for black cockatoos,
- at least 1.04 hectares of significant remnant vegetation within an extensively cleared area
- at least 0.86 hectares of significant remnant vegetation of native vegetation that is growing in, or in association with a wetland containing values that are commensurate with a conservation category wetland, and

- at least 0.42 hectares of native vegetation for inclusion within Bush Forever Estate (like-for-like) or inclusion within conservation estate (like-for-similar)

The size of the offset required was determined using the WA Environmental Offsets Guidelines (August 2014) and informed by guidance such as Quantifying Environmental Offsets in Western Australia (DWER, 2021), the Draft Procedure for Environmental Offset Metric Inputs and associated DWER WA environmental offsets calculator (DWER, 2022). The monetary contribution amount is calculated based on the 'rate per hectare' value selected from a table of land values in different local government authorities, provided to DWER by Landgate. In the assessment of the proposed offset, the Delegated Officer considered the prospect of acquiring land containing similar or better-quality environmental values via the Part V Offsets Fund and determined that a per-hectare land value, in this instance, is appropriate and is consistent with the WA Environmental Offsets Policy (2011).

Given the uncertainty surrounding the site for acquisition, the Delegated Officer determined that the unimproved land value in the Shire of Murray was appropriate for use in determining a suitable monetary contribution. Based on unimproved land values for the Shire of Murray, a parcel less than 20-hectares in size has a market value of $35,000 per hectare. Therefore, a monetary contribution of $43,750 will be required to fund the acquisition of 1.25 hectares of vegetation.

The Delegated Officer considers that this adequately counterbalances the significant residual impacts listed above. The justification for the values used in the offset calculation is provided in Appendix D.

End

Appendix A. Site characteristics

A.1. Site characteristics

Characteristic	Details
Local context	The application area is part of an approximately 20-ha remnant of native vegetation within the railway reserve and adjacent rod reserve in the intensive land use zone of Western Australia. Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 34 per cent of the original native vegetation cover.
Ecological linkage	The entire application area forms part of Perth Regional Ecological Linkage mapped by WA Local Government Association's (WALGA) biodiversity project (Del Marco et al., 2004).
Conservation areas	The entire application area is mapped within Bush Forever Site 350, known as the Byford to Serpentine Rail/Road Reserves and Adjacent Bushland.
Vegetation description	Vegetation surveys (Focused Vision, 2022 & NACMS, 2025) indicate the vegetation within the proposed clearing area consists of Marri woodland in the Byford monopole and wandoo woodland in the TSER. The full survey descriptions and maps are available in Appendix E. This is consistent with the mapped vegetation type(s): • Guildford Complex, which is described as A mixture of open forest to tall open forest of *Corymbia calophylla* (Marri) - *Eucalyptus wandoo* (Wandoo) - *Eucalyptus marginata* (Jarrah) and woodland of *Eucalyptus wandoo* (Wandoo) (with rare occurrences of *Eucalyptus lane-poolei* (Salmon White Gum)). Minor components include *Eucalyptus rudis* (Flooded Gum) - *Melaleuca rhaphiophylla* (Swamp Paperbark) (Heddle et. al., 1980). The mapped vegetation type retains approximately 5.09 per cent of the original extent (Government of Western Australia, 2019).
Vegetation condition	Vegetation surveys (Focused Vision, 2022 & NACMS, 2025) indicate the vegetation within the proposed clearing area is in degraded to completely degraded (Keighery, 1994) condition for the monopole and good (Keighery, 1994) condition for the TSER. The full Keighery (1994) condition rating scale is provided in Appendix C. The full survey descriptions and mapping] are available in Appendix E.
Climate and landform	The proposed clearing is in Perth which experiences a mediterranean climate with cool winters and hot summers with a mean annual rainfall of 970 millimetres. Landform is described as well drained low slopes and foot slopes up to 5-10%.
Soil description	The soil is mapped as the Forrestfield F2b Phase, which is described as Low slopes and foot slopes up to 5-10% with well drained moderately deep to deep, gravelly acidic yellow duplex soils and rare laterite.
Land degradation risk	The mapped soil type has a high to extreme risk of land degradation from wind erosion and subsurface acidification. The soils are low risk for salinity and phosphorous export.
Waterbodies	The desktop assessment and aerial imagery indicated that the proposed clearing intersects multiple waterbodies including: • Un-named wetland (UFI 15462) • Armadale palusplain wetland (UFI 15383), and • Un-named tributary of the Serpentine River (ID 14535)
Hydrogeography	The proposed clearing is entirely mapped within the Serpentine Groundwater Area as Proclaimed under the RIWI Act. The mapped soil type is not at a high risk of water erosion, waterlogging or flooding.
Flora	According to available databases, 37 species of conservation significant flora have been recorded in the local area (10-kilometre radius), 25 of which are Priority species, 11 are listed as threatened under the BC Act and one is presumed extinct. One of the vegetation surveys (Focused Vision, 2022) recorded Priority 2 species *Johnsonia pubescens* subsp. *cygnorum* within the broader survey area, but not within the proposed clearing area.

Characteristic	Details
Ecological communities	According to available databases, the proposed clearing areas are mapped within two threatened ecological communities, namely: • *Banksia attenuata* and/or *Eucalyptus marginata* woodlands of the eastern side of the Swan Coastal Plain (floristic community type 20b as originally described in Gibson et al. 1994) (SCP 20b), and • *Corymbia calophylla — Eucalyptus marginata* woodlands on sandy clay soils of the southern Swan Coastal Plain (floristic community type 3b as originally described in Gibson et al. 1994) (FCT 3b) SCP 20b is listed as Critically Endangered under the BC Act and Endangered under the EPBC Act and FCT3b is listed as Endangered under the BC Act. The flora and vegetation surveys (Focused Vision, 2022 & NACMS, 2025) did record these communities in the broader survey area, but not within the proposed clearing areas.
Fauna	According to available databases, there are 30 species of conservation significant fauna in the local area (10-kilometre radius), composed of 12 birds, four invertebrates, 10 mammals and four reptiles. Of these, five species have been recorded within one kilometre of the proposed clearing, namely: • Baudin's cockatoo (*Zanda baudinii*) (EN) • Carnaby's cockatoo (*Zanda latirostris*) (EN) • chuditch (*Dasyurus geoffroii*) (VU) • forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*) • quenda (*Isoodon fusciventer*) (P4) Seven known black cockatoo breeding sites and 28 known black cockatoo roosting sites are recorded within the local area. The fauna survey (NACMS, 2024) recorded one conservation significant fauna species, the forest red-tailed black cockatoo within the survey area.

A.2. Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA managed land
IBRA bioregion*					
Swan Coastal Plain	1,501,221.93	579,813.47	38.62	222,916.97	14.85
Vegetation complex					
Guildford complex**	90,513.13	4,607.91	5.09	287.49	0.32
Local area					
10km radius	35,843.36	12,184.92	33.99	-	-

*Government of Western Australia (2019a)

**Government of Western Australia (2019b)

A.3. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix F.1), and biological survey information, impacts to the following conservation significant flora required further consideration.

Species name	Conservation status	Suitable habitat features ? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Johnsonia pubescens subsp. *cygnorum*	P2	N	Y	Y	0.66	8	Y

Species name	Conservation status	Suitable habitat features ? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Synaphea sp. Pinjarra Plain (A.S. George 17182)	T	N	Y	Y	0.15	21	Y
Synaphea sp. Serpentine (G.R. Brand 103)	T	N	Y	Y	0.11	17	Y

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

A.4. Fauna analysis table

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Baudin's cockatoo (*Zanda baudinii*)	EN	Y	Y	0.60	192	Y
Carnaby's cockatoo (*Zanda latirostris*)	EN	Y	Y	0.09	931	Y
Chuditch (*Dasyurus geoffroii*)	VU	Y	Y	0.02	20	Y
Forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*)	VU	Y	Y	0.77	226	Y
Quenda (*Isoodon fusciventer*)	P4	Y	Y	0.05	361	Y

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

A.5. Ecological community analysis table

Community name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Banksia attenuata and/or *Eucalyptus marginata* woodlands of the eastern side of the Swan Coastal Plain (floristic community type 20b as originally described in Gibson et al. 1994)	CR (BC Act) EN (EPBC Act)	N	Y	Y	0.00	12	Y
Corymbia calophylla — *Eucalyptus marginata* woodlands on sandy clay soils of the southern Swan Coastal Plain (floristic community type 3b as originally described in Gibson et al. 1994)	EN (BC Act)	N	Y	Y	0.00	10	Y

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		

Assessment against the clearing principles	Variance level	Is further consideration required?
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The proposed clearing area contains several significant environmental values that may be significantly impacted by the proposed clearing, including: • Significant foraging habitat for threatened black cockatoos (b) • Ecological linkage values (b) • Vegetation representative of an extensively cleared vegetation type (e) • located within a Bush Forever site (h), and • within a conservation category wetland (f)	At variance	Yes *Refer to Section 3.2.1, 3.2.2 & 3.2.3, above.*
Principle (b): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna."* Assessment: The proposed clearing area contains significant foraging habitat for three threatened black cockatoo species, suitable habitat for many conservation significant fauna species and is part of a mapped ecological linkage.	At variance	Yes *Refer to Section 3.2.2, above.*
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: Two species of threatened flora have been recorded in proximity to the TSER proposed clearing area and may contain suitable habitat for these species.	Not likely to be at variance	Yes *Refer to Section 3.2.1, above.*
Principle (d): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community."* Assessment: The proposed clearing area is mapped within two different threatened ecological communities. Based on the results of the flora and vegetation surveys, the applicant has designed the proposal to avoid clearing vegetation representative of the TECs, however, given the proximity to the TECs, the proposed clearing may indirectly impact these communities.	Not likely to be at variance	Yes *Refer to Section 3.2.3, above.*
Environmental value: significant remnant vegetation and conservation areas		
Principle (e): *"Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."* Assessment: The extent of the mapped vegetation type (Guildford Complex) is inconsistent with the national objectives and targets for biodiversity conservation in Australia within a constrained area where a 10 per cent threshold applies.	At variance	Yes *Refer to Section 3.2.4, above.*
Principle (h): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."* Assessment: The proposed clearing is mapped within Bush Forever Area 350.	At variance	Yes *Refer to Section 3.2.5, above.*
Environmental value: land and water resources		
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."*	At variance	Yes

Assessment against the clearing principles	Variance level	Is further consideration required?
Assessment: Given three water courses or wetlands are recorded within the application area, the proposed clearing is likely to impact on- or off-site hydrology and water quality.		*Refer to Section 3.2.6, above.*
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: Noting the extent of the proposed clearing, the application is not likely to result in appreciable land degradation.	Not likely to be at variance	No
Principle (i): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water."* Assessment: Noting the extent of the proposed clearing and that is it located across two separate areas, the application is not likely to cause deterioration in the quality of surface of underground water.	Not likely to be at variance	No
Principle (j): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."* Assessment: The mapped soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding.	Not likely to be at variance	No

Appendix C. Vegetation condition rating scale

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

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

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

Condition	Description
Pristine	Pristine or nearly so, no obvious signs of disturbance.
Excellent	Vegetation structure intact, with disturbance affecting individual species; weeds are non-aggressive species.
Very good	Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and/or grazing.

Condition	Description
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and/or grazing.
Completely degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.

Appendix D. Offset calculator value justification

D.1. Black cockatoo foraging habitat

Calculation	*Score*	*Rationale*
Conservation significance		
Description	BC foraging	TSER contains marri which is key foraging for 3 threatened black cockatoos
Type of environmental value	Species (Flora/Fauna)	Baudin's cockatoo, Carnaby's cockatoo and forest red-tailed black cockatoo
Conservation significance of environmental value	Rare/Threatened Species - Endangered	The species with the highest listing is used, in this case Baudin's and Carnaby's cockatoo.
Landscape-level value impacted	yes/no	No
Significant impact		
Description	BC foraging habitat	The TSER area contains species suitable for foraging by threatened black cockatoos.
Significant impact (hectares)	0.12	Only the TSER, which is 0.12 hectares, contains suitable foraging habitat.
Quality (scale)	7.00	The TSER area is mapped as wandoo woodland (Focused Vision, 2022) which includes *Corymbia calophylla* (marri), a key foraging species for all three species of threatened black cockatoo. The vegetation is also located within an extensively cleared area and both direct and indirect evidence of foraging was observed during surveys (Focused Vision, 2022). Therefore, the proposed clearing area is high-quality foraging habitat for black cockatoos.
Rehabilitation credit		
Description	N/A	No onsite revegetation proposed
Offset		
Description	Acquisition and conservation	The acquisition and conservation in perpetuity of an offset site that contains high-quality foraging habitat for black cockatoos.
Proposed offset (area in hectares)	1.25	The acquisition and conservation of 1.25 hectares of native vegetation that contains high-quality black cockatoo foraging habitat is required to offset the residual impacts to this environmental value.
Current quality of offset site	7.00	The geographic spread of the quality values reflects that the locations of offset sites likely to be associated with those impact sites will vary in quality. The values themselves are based on the Department's understanding of land potentially available and the Department's previous experience in delivering land acquisitions.
Future quality WITHOUT offset (scale)	7.00	In the absence of specific site information that might indicate threatening processes, it is reasonable to assume no change in quality in the absence of the offset.

Future quality WITH offset (scale)	7.00	As monetary contributions do not generally account for management actions that would improve site quality, it is reasonable to assume no change in quality.
Time until ecological benefit (years)	1.00	No change to ecological values is expected, therefore the minimum value is input.
Confidence in offset result (%)	90.0%	The Department is confident that an acquisition will occur; monetary contributions for offsets with low likelihood of being acquitted will generally not be accepted.
Duration of offset implementation (maximum 20 years)	20.00	As the acquired land will be incorporated into the conservation estate, it will be protected in perpetuity. The maximum value is therefore applied
Time until offset site secured (years)	3.00	Accounts for the delay in finding a property, conducting due diligence and negotiating the acquisition with DBCA.
Risk of future loss WITHOUT offset (%)	15.0%	Land zoned 'rural' is typically acquired as offsets. 15% is a conservative risk of loss score that can be applied for this zoning. It is consistent with most direct offsets accepted by the Department.
Risk of future loss WITH offset (%)	5.0%	As the acquired land will be incorporated into the conservation estate, the lowest risk of loss score is therefore applied.

D.2. Significant remnant vegetation

Calculation	***Score***	***Rationale***
Conservation significance		
Description	Significant remnant vegetation	The extent of the mapped vegetation type within the is below the Commonwealth of Australia (2001) targets for biodiversity within a constrained area
Type of environmental value	Vegetation/Habitat	Guildford Complex
Conservation significance of environmental value	Terrestrial native vegetation complex - <10% extent remaining in a constrained area	Approximately 5.09% of the Guildford Complex's pre-European extent remains.
Landscape-level value impacted	yes/no	No
Significant impact		
Description	Guildford Complex	The TSER is mapped as wandoo woodland which contains Eucalyptus wandoo and Corymbia calophylla, both of which are key indicator species for the Guildford Complex.
Significant impact (hectares)	0.12	Only the TSER, which is 0.12 hectares, is representative of the Guildford Complex
Quality (scale)	6.00	The flora survey maps the TSER as being in good (Keighery, 1994) condition
Rehabilitation credit		
Description	N/A	No onsite revegetation proposed
Offset		
Description	Acquisition and conservation	The acquisition and conservation in perpetuity of an offset site that contains significant remnant vegetation.
Proposed offset (area in hectares)	1.04	The acquisition and conservation of 1.04 hectares of native vegetation that contains significant remnant vegetation is required to offset the residual impacts to this environmental value.

Current quality of offset site	7.00	The geographic spread of the quality values reflects that the locations of offset sites likely to be associated with those impact sites will vary in quality. The values themselves are based on the Department's understanding of land potentially available and the Department's previous experience in delivering land acquisitions.
Future quality WITHOUT offset (scale)	7.00	In the absence of specific site information that might indicate threatening processes, it is reasonable to assume no change in quality in the absence of the offset.
Future quality WITH offset (scale)	7.00	As monetary contributions do not generally account for management actions that would improve site quality, it is reasonable to assume no change in quality.
Time until ecological benefit (years)	1.00	No change to ecological values is expected, therefore the minimum value is input.
Confidence in offset result (%)	0.9	The Department is confident that an acquisition will occur; monetary contributions for offsets with low likelihood of being acquitted will generally not be accepted.
Duration of offset implementation (maximum 20 years)	20.00	As the acquired land will be incorporated into the conservation estate, it will be protected in perpetuity. The maximum value is therefore applied
Time until offset site secured (years)	3.00	Accounts for the delay in finding a property, conducting due diligence and negotiating the acquisition with DBCA.
Risk of future loss WITHOUT offset (%)	15.0%	Land zoned 'rural' is typically acquired as offsets. 15% is a conservative risk of loss score that can be applied for this zoning. It is consistent with most direct offsets accepted by the Department.
Risk of future loss WITH offset (%)	5.0%	As the acquired land will be incorporated into the conservation estate, the lowest risk of loss score is therefore applied.

D.3. Conservation Category Wetland

Calculation	***Score***	***Rationale***
Conservation significance		
Description	CCW	The proposed clearing will impact on native vegetation that is growing in or has values that are commensurate with a Conservation Category Wetland.
Type of environmental value	Wetland/Watercourse	Wetland vegetation
Conservation significance of environmental value	A category or type of wetland or watercourse for which an offset is required	The clearing of native vegetation that contains values that are commensurate with a CCW is considered to constitute a significant residual impact for which an offset is required.
Landscape-level value impacted	yes/no	No
Significant impact		
Description	Conservation category wetland	Native vegetation that contains values that are commensurate with a CCW
Significant impact (hectares)	0.12	Only the TSER, which is 0.12 hectares, contains values commensurate with a CCW.
Quality (scale)	6.00	The flora survey maps the TSER as being in good (Keighery, 1994) condition
Rehabilitation credit		
Description	N/A	No onsite revegetation proposed
Offset		
Description	Acquisition and conservation	The acquisition and conservation in perpetuity of an offset site that contains native vegetation with values that are commensurate with a CCW.

Proposed offset (area in hectares)	1.04	The acquisition and conservation of 1.04 hectares of native vegetation that contains values that are commensurate with a CCW.
Current quality of offset site	7.00	The geographic spread of the quality values reflects that the locations of offset sites likely to be associated with those impact sites will vary in quality. The values themselves are based on the Department's understanding of land potentially available and the Department's previous experience in delivering land acquisitions.
Future quality WITHOUT offset (scale)	7.00	In the absence of specific site information that might indicate threatening processes, it is reasonable to assume no change in quality in the absence of the offset.
Future quality WITH offset (scale)	7.00	As monetary contributions do not generally account for management actions that would improve site quality, it is reasonable to assume no change in quality.
Time until ecological benefit (years)	1.00	No change to ecological values is expected, therefore the minimum value is input.
Confidence in offset result (%)	0.9	The Department is confident that an acquisition will occur; monetary contributions for offsets with low likelihood of being acquitted will generally not be accepted.
Duration of offset implementation (maximum 20 years)	20.00	As the acquired land will be incorporated into the conservation estate, it will be protected in perpetuity. The maximum value is therefore applied
Time until offset site secured (years)	3.00	Accounts for the delay in finding a property, conducting due diligence and negotiating the acquisition with DBCA.
Risk of future loss WITHOUT offset (%)	15.0%	Land zoned 'rural' is typically acquired as offsets. 15% is a conservative risk of loss score that can be applied for this zoning. It is consistent with most direct offsets accepted by the Department.
Risk of future loss WITH offset (%)	5.0%	As the acquired land will be incorporated into the conservation estate, the lowest risk of loss score is therefore applied.

Appendix E. Biological survey information excerpts

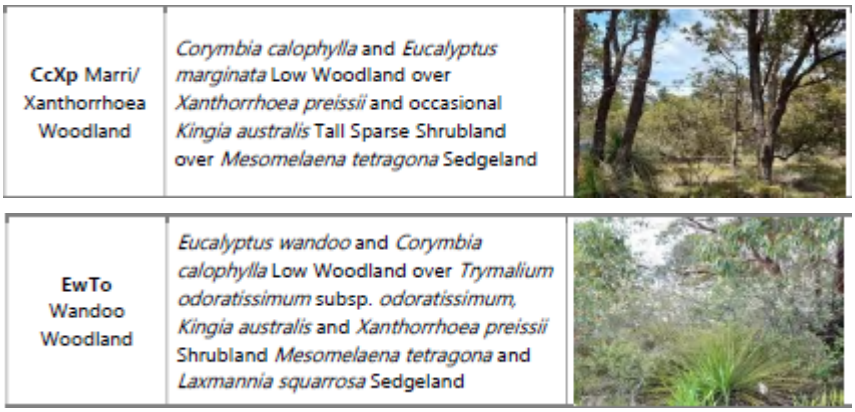

Figure 3. Vegetation types within the proposed clearing areas (Focused Vision, 2022)

Table 6: Vegetation condition within RSR tower site

Vegetation Condition	Pristine	Excellent	Very Good	Good	Degraded	Completely Degraded	Total
Area (ha)	0	0	0	0	0.176	0.194	0.37
Area (%)	0	0	0	0	47.6	52.4	100

Figure 6: *Corymbia calophylla* open woodland.

Figure 4. Vegetation condition and photographs within the monopole area (NAH, 2025).

Foraging evidence of Forest Red Tailed Black Cockatoos on Marri nuts

Forest Red Tail Black Cockatoos sighted foraging

Figure 5. Evidence of foraging by black cockatoos within the survey area (NAH, 2024).

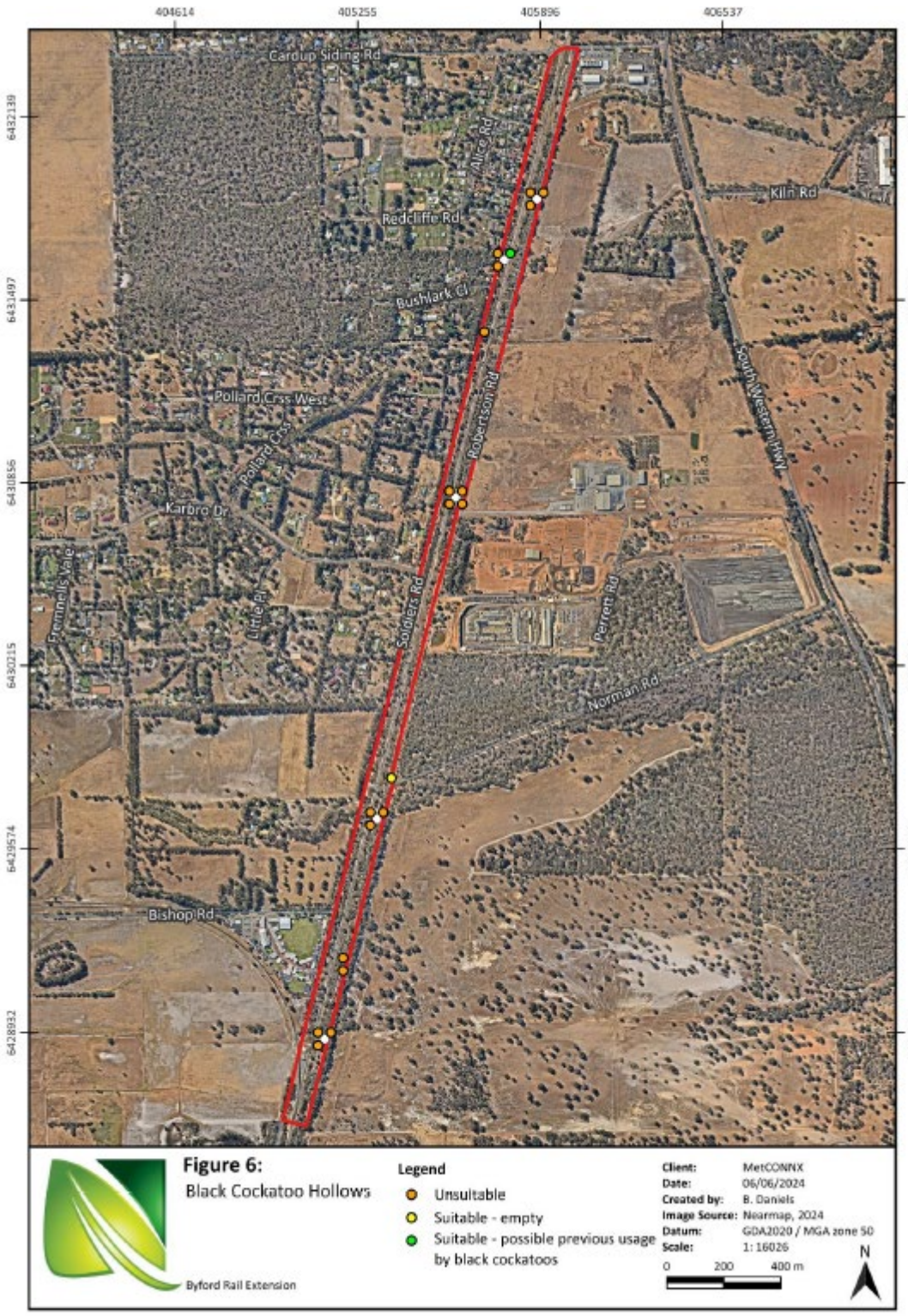

Figure 6. Map of trees containing hollows within the broader survey area (NAH, 2024).

Appendix F. Sources of information

F.1. GIS databases

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

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)

- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems
- Wheatbelt Wetlands Stage 1 (DBCA-021)

Restricted GIS Databases used:

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

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