



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 9427/3
Permit Holder:	Public Transport Authority of Western Australia
Duration of Permit:	From 14 February 2022 to 14 February 2032

The permit holder is authorised to clear *native vegetation* subject to the following conditions of this permit.

PART I – CLEARING AUTHORISED

1. **Clearing authorised (purpose)**

The permit holder is authorised to clear *native vegetation* for the purpose of removing level crossing along the Armadale passenger rail line.

2. Land on which clearing is to be done

Lot 173 on Plan 1883, Cannington Lot 109 on Plan 2209, East Cannington Hamilton Street Road reserve (PIN 1102146), Cannington Hamilton Street Road reserve (PIN 1283682), Cannington Railway Parade Road reserve (PIN 1291025), East Cannington Albion Street Road reserve (PIN 1291035), East Cannington Lot 4973 on Deposited Plan 36744 (Crown Reserve 47138), Cannington and East Cannington Sevenoaks Street Road reserve (PIN 11149143), Cannington Sevenoaks Street Road reserve (PIN 11806820), Cannington Sevenoaks Street Road reserve (PIN 11934034), Cannington Sevenoaks Street Road reserve (PIN 11934037), Cannington Unnamed road reserve (PIN 11262586), Queens Park Lot 52 on Diagram 53934, Cannington Lot 800 on Deposited Plan 60803, Cannington Lot 320 on Deposited Plan 61379 (Crown Reserve 51572), Beckenham Roberts Road reserve (PIN 11809493), Carlisle Rutland Avenue Road reserve (PIN 11809494), Carlisle Rutland Avenue Road reserve (PIN 11809497), Lathlain Rutland Avenue Road reserve (PIN 11814786), Welshpool Rutland Avenue Road reserve (PIN 11816683), Welshpool Bank Street Road reserve (PIN 11814788), East Victoria Park and Welshpool Bank Street Road reserve (PIN 11814789), East Victoria Park CPS 9427/3, 3 April 2024 Page 1 of 12

OFFICIAL

Railway Parade Road reserve (PIN 11814845), Queens Park Railway Parade Road reserve (PIN 11845388), Beckenham and East Cannington Wharf Street Road reserve (PIN 11814846), Queens Park and Cannington Sevenoaks Street Road reserve (PIN 11815137), Bentley and Welshpool Railway Parade Road reserve (PIN 11815140), Welshpool Welshpool Road reserve (PIN 11815142), Welshpool Railway Parade Road reserve (PIN 11815540), Welshpool and Queens Park Sevenoaks Road reserve (PIN 11815541), Bentley and Cannington Hamilton Street Road reserve (PIN 11815547), Queens Park Hamilton Street Road reserve (PIN12251191), Queens Park Railway Parade Road reserve (PIN 11815800), East Cannington and Queens Park Railway Parade Road reserve (PIN 11815801), Cannington Railway Parade Road reserve (PIN 11817395), East Cannington Lot 67 on Plan 796, Beckenham Railway Parade Road reserve (PIN 11845387), Beckenham Sevenoaks Street Road reserve (PIN 11845389), Beckenham and Cannington Sevenoaks Street Road reserve (PIN 11845390), Beckenham Lot 70 on Plan 796, East Cannington and Cannington Lot 9003 on Deposited Plan 67766, Bentley, Carlisle, East Victoria Park, Welshpool, Queens Park, and Cannington Lot 9002 on Deposited Plan 67766, Queens Park and Cannington Lot 9001 on Plan 67766, Queens Park, East Cannington, and Cannington Railway reserve (PIN 12486790), East Victoria Park, Lathlain, Carlisle, and Victoria Park

3. Clearing authorised

The permit holder must not clear more than 1.44 hectares of *native vegetation* within the area cross-hatched yellow in Figure 1-3 of Schedule 1.

4. Period during which clearing is authorised

The permit holder must not clear any native vegetation after 14 February 2027.

PART II – MANAGEMENT CONDITIONS

5. 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.

6. 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.

7. Offset – revegetation (black cockatoo foraging)

- (a) Within 24 months of the commencement of clearing authorised under this permit, the permit holder must:
 - (i) undertake deliberate planting of at least 449 *black cockatoo foraging trees or shrubs* within the area cross-hatched red in Figures 1-3 of Schedule 2;
 - (ii) in addition to the 449 *black cockatoo foraging trees or shrubs* planted in accordance with condition 7(a)(i), salvage, transport, and *re-plant* 224 grass trees (*Xanthorrhoea preissii*) from the area cross-hatched yellow in Figures 1-3 of Schedule 1 to the area cross-hatched red in Figures 1-3 of Schedule 2;
 - (iii) ensure only *local provenance* propagating material is used for the revegetation activities; and
 - (iv) undertake *weed* control and watering of *planted black cockatoo foraging trees or shrubs* for at least two years post *planting*.
- (b) Within 24 months of commencing planting activities in accordance with condition 7(a)(i) and 7(a)(ii) of this permit, the permit holder must:
 - (i) engage an *environmental specialist* to make a determination that at least 449 of the *planted black cockatoo foraging trees or shrubs* and at least 180 of the *re-planted* grass trees (*Xanthorrhoea preissii*) will survive;
 - (ii) if the determination made by the *environmental specialist* under condition 7(b)(i) is that at least 449 of the *planted black cockatoo foraging trees or shrubs* and at least 180 of the *re-planted* grass trees will not survive, the permit holder must *plant* additional *black cockatoo foraging trees or shrubs* that will result in at least 449 *black cockatoo foraging trees or shrubs* and at least 180 grass trees (*Xanthorrhoea preissii*) persisting within the area cross-hatched red in Figures 1-3 of Schedule 2;
 - (iii) undertake *weed* control activities on an 'as needs' basis to ensure the success of *revegetation*; and
 - (iv) where additional *planting of black cockatoo foraging trees or shrubs* is undertaken in accordance with condition 7(b)(ii), the permit holder must repeat the activities required by conditions 7(a)(iii)-(v) and 7(b) of this permit.
- (c) The revegetation activities required by conditions 7(a) and 7(b) must commence before 14 February 2029.

PART III - RECORD KEEPING AND REPORTING

8. 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.	1. In relation to the authorised clearing	(a)	the species composition, structure, and density of the cleared area;
activities generally	(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, minimize, and reduce the impacts and extent of clearing in accordance with condition 5; and	
	(f)	actions taken to minimize the risk of the introduction and spread of <i>weeds</i> and <i>dieback</i> in accordance with condition 6.	
2.	In relation to the required offset (<i>revegetation</i>)	(a)	the species composition, structure, and density of the <i>revegetation</i> area;
activities pursuant to condition 7	(b)	the location where the revegetation occurred, recoded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Easting and Northings;	
		(c)	a copy of the environmental specialist's report and determination;
		(d)	a description of the revegetation activities undertaken pursuant to condition 7(a); and
		(e)	any remedial actions required to be undertaken pursuant to condition 7(b).

9. Reporting

- (a) The permit holder must provide to the *CEO*, on or before 30 June of each calendar year, a written report containing:
 - (i) the records required to be kept under condition 8; and
 - (ii) records of activities done by the permit holder under this permit between1 January and 31 December of the preceding calendar year.
- (b) If no clearing authorised under this permit has been undertaken, a written report confirming that no clearing under this permit has been undertaken, must be provided to the *CEO* on or before 30 June of each calendar year.

(c) The permit holder must provide to the *CEO*, no later than 90 calendar days prior to the expiry date of the permit, a written report of records required under condition 8, where these records have not already been provided under condition 9(a).

DEFINITIONS

In this permit, the terms in Table 2 have the meanings defined.

Term	Definition		
Black cockatoo foraging trees or shrubs	means native plant species known to be utilised by black cockatoo species for foraging and includes <i>Corymbia calophylla</i> (marri), <i>Eucalyptus marginata</i> (jarrah), <i>Eucalyptus</i> spp., <i>Banksia</i> spp., <i>Allocasuarina</i> spp., and <i>Xanthorrhoea</i> spp.		
black cockatoo species	 means one or more of the following species: (a) <i>Zanda latirostris</i> (Carnaby's cockatoo); (b) <i>Zanda baudinii</i> (Baudin's cockatoo); and/or (c) <i>Calyptorhynchus banksii naso</i> (forest red-tailed black cockatoo). 		
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the <i>Environmental Protection Act 1986</i> .		
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.		
department	means the department established under section 35 of the <i>Public Sector</i> <i>Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.		
dieback	means the effect of <i>Phytophthora</i> species on native vegetation.		
environmental specialist	means a person who holds a tertiary qualification in environmental science or equivalent, and has a minimum of two (2) years' work experience relevant to the type of environmental advice that an environmental specialist is required to provide under this permit, or who is approved by the <i>CEO</i> as a suitable environmental specialist.		
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.		
planting/ed/ion	means the re-establishment of vegetation by creating soil conditions and planting seedlings or saplings of the desired species or re-plating salvaged individuals of the desired species		
regenerated/ed/ion	means re-establishment of vegetation from in situ seed banks and propagating material (such as lignotubers, bulbs, rhizomes) contained either within the topsoil or seed-bearing mulch.		
revegetate/ed/ion	means the re-establishment of a cover of local provenance native vegetation in an area using methods such as natural regeneration and/or planting, so that the species composition, structure, and density is similar to pre-clearing vegetation types in that area.		
weeds	 means any plant – (a) that is a declared pest under section 22 of the <i>Biosecurity and</i> Agriculture Management Act 2007; or (b) published in a Department of Biodiversity, Conservation and 		

Term	Definition
	Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or
	(c) not indigenous to the area concerned.

END OF CONDITIONS

Mathew Gannaway MANAGER NATIVE VEGETATION REGULATION

Officer delegated under Section 20 of the Environmental Protection Act 1986

3 April 2024

Schedule 1

The boundary of the area authorised to be cleared is shown in the map below (Figure 1-3).



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.



Figure 3: Map of the boundary of the area within which clearing may occur.

Schedule 2

The boundary of the area subject to conditions is shown in the map below (Figure 1-3).



Figure 1: Map of the boundary of the area subject to conditions.

CPS 9427/3



Figure 2: Map of the boundary of the area subject to conditions.

CPS 9427/3



Figure 3: Map of the boundary of the area subject to conditions.



Clearing Permit Decision Report

1 Application details and outcome				
1.1. Permit application details				
Permit number:	CPS 9427/3			
Permit type:	Purpose permit			
Applicant name:	Public Transport Authority of Western Australia (PTA)			
Application received:	5 December 2023			
Application area:	1.44-hectare of native vegetation within a 36.45 hectare footprint			
Purpose of clearing:	Removing level crossing along the Armadale passenger rail line			
Method of clearing:	Mechanical			
Property:	Lot 173 on Plan 1883 Lot 109 on Plan 2209 Hamilton Street Road reserve (PIN 1102146) Hamilton Street Road reserve (PIN 1283682) Railway Parade Road reserve (PIN 1291025) Albion Street Road reserve (PIN 1291035) Lot 4973 on Deposited Plan 36744 (Crown Reserve 47138) Sevenoaks Street Road reserve (PIN 1149143) Sevenoaks Street Road reserve (PIN 1149143) Sevenoaks Street Road reserve (PIN 11806820) Sevenoaks Street Road reserve (PIN 11934034) Sevenoaks Street Road reserve (PIN 11934037) Unnamed road reserve (PIN 11262586) Lot 52 on Diagram 53934 Lot 800 on Deposited Plan 61379 (Crown Reserve 51572) Roberts Road reserve (PIN 11809493) Rutland Avenue Road reserve (PIN 11809494) Rutland Avenue Road reserve (PIN 11809497) Rutland Avenue Road reserve (PIN 11814786) Bank Street Road reserve (PIN 11814788) Bank Street Road reserve (PIN 11814789) Railway Parade Road reserve (PIN 11844845) Railway Parade Road reserve (PIN 1184486) Sevenoaks Street Road reserve (PIN 11815137)			

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	Railway Parade Road reserve (PIN 11815140)		
	Welshpool Road reserve (PIN 11815142)		
	Railway Parade Road reserve (PIN 11815540)		
	Sevenoaks Road reserve (PIN 11815541)		
	Hamilton Street Road reserve (PIN 11815547)		
	Hamilton Street Road reserve (PIN 12251191)		
	Railway Parade Road reserve (PIN 11815800)		
	Railway Parade Road reserve (PIN 11815801)		
	Railway Parade Road reserve (PIN 11817395)		
	Lot 67 on Plan 796		
	Railway Parade Road reserve (PIN 11845387)		
	Sevenoaks Street Road reserve (PIN 11845389)		
	Sevenoaks Street Road reserve (PIN 11845390)		
	Lot 70 on Plan 796		
	Lot 9003 on Deposited Plan 67766		
	Lot 9002 on Deposited Plan 67766		
	Lot 9001 on Plan 67766		
	Railway reserve (PIN 12486790)		
Location (LGA area/s):	City of Canning		
	City of Gosnells		
	Town of Victoria Park		
Localities (suburb/s):	Beckenham		
	Bentley		
	Cannington		
	Carlisle		
	East Cannington		
	East Victoria Park		
	Kenwick		
	Lathlain		
	Queens Park		
	Victoria Park		
	Welshpool		

1.2. Description of clearing activities

The amendment to Clearing Permit CPS 9427/2 is to increase the area of clearing by 0.36 hectares to a total of 1.44 hectares. The application proposes to clear native vegetation to facilitate the METRONET Inner Armadale Level Crossing Removal (IALXR) Project, which involves the removal of up to six level crossings along the Armadale passenger rail line (see Figure 1, Section 1.5).



Figure 1: Map of the application area, additional areas applied for in CPS 9427/3 (blue) compared to the area authorised under CPS 9427/2 (yellow).



Figure 2: Map of the application area, additional areas applied for in CPS 9427/3 (blue) compared to the area authorised under CPS 9427/2 (yellow).



Figure 3: Map of the application area, additional areas applied for in CPS 9427/3 (blue) compared to the area authorised under CPS 9427/2 (yellow).

1.3. Decision on application			
Decision:	Granted		
Decision date:	3 April 2024		
Decision area: 1.44-hectare of native vegetation, as depicted in Section 1.5, below.			

1.4. Reasons for decision

This clearing permit amendment 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 (DWER) advertised the application for 21 days and no submissions were received.

This clearing permit amendment gives effect to increase the proposed clearing by 0.36 hectares bringing the collective clearing to 1.44 hectares of native vegetation within various properties in the localities of Beckenham, Bentley, Cannington, Carlisle, East Cannington, East Victoria Park, Kenwick, Lathlain, Queens Park, Victoria Park, and Welshpool for the purpose of removing level crossings along the Armadale passenger rail line.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix B), 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 C), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3). The Delegated Officer also took into consideration the Minister for Environment's (the Minister) determination for an offset requirement under CPS 9427/2, as well as the IALXR Project aims to deliver significant community benefit, including improved safety at rail line crossings, reduced congestion for road, improved capacity for rail operation, improved functionality, accessibility and connectivity of rail station infrastructure, and enhanced environmental values through landscaped public open space.

The assessment identified that the proposed amendment will result in:

- The loss of 1.42 hectares of primary and secondary foraging habitat for all three black cockatoo species (*Calyptorhynchus banksii naso*, *Calyptorhynchus baudinii*, and *Calyptorhynchus latirostris*),
- The loss of 0.65 hectares of native vegetation that is mapped within the extensively cleared Guildford complex, and
- The potential introduction and spread of weeds and dieback into adjacent vegetation, which could impact on the quality of nearby vegetation and its habitat value in an extensively cleared landscape.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures and offset- revegetation proposal (see Section 3.1), the Delegated Officer determined that impacts of the additional proposed clearing, including damage to black cockatoo foraging habitat, can be minimised and managed to unlikely lead to an unacceptable risk to environmental values through permit conditioning.

The Delegated Officer determined that the following measures was sufficient to counterbalance the significant residual impacts of the proposed clearing.

- salvage, translocation and replant of 224 grass trees (increase from 194 under CPS 9427/2) located within the application area and replant them in the offset area (Figures 7-9), with a completion criterion of at least 80 per cent survival of translocated grass trees are to be included in permit conditioning.
- planting of 449 foraging trees, shrubs and grass trees (increase from 413 under CPS 9427/2) in the landscaped areas of the project footprint within road and rail reserve (Figures 7-9).

The calculations for the increase in the number of plants to be utilised is consistent with the Minister's determination against the appeal for CPS 9427/1 (Appeal number: 007 of 2022).

Given the above, the Delegated Officer determined to issue an amended clearing permit, subject to amending condition 7 of the clearing permit as per above and including the additional properties where clearing is to occur.



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Figure 4: Map of the application area, the area crosshatched yellow indicates the area authorised to be cleared under the granted clearing permit.



Figure 5: Map of the application area, the area crosshatched yellow indicates the area authorised to be cleared under the granted clearing permit.



Figure 6: Map of the application area, the area crosshatched yellow indicates the area 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 510 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, and
- 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)
- Contaminated Sites Act 2003 (WA) (CS Act)
- Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act)
- Rights in Water and Irrigation Act 1914 (WA) (RIWI Act)

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)
- Technical guidance Flora and Vegetation Surveys for Environmental Impact Assessment (EPA, 2016)
- Technical guidance Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment (EPA, 2020)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

Project design and planning and during clearing

Project design and planning and works during clearing, has remained unchanged and can be found in the Decision report prepared for clearing permit CPS 9427/1.

Post-clearing

In addition to the Minister requirement for a revegetation offset to counterbalance the significant residual impacts of the proposed clearing on foraging habitat for *Calyptorhynchus banksii naso* (forest red-tailed black cockatoo), *Zanda baudinii* (previously *Calyptorhynchus baudinii*) (Baudin's cockatoo), and *Zanda latirostris* (previously *Calyptorhynchus baudinii*) (Baudin's cockatoo), and *Zanda latirostris* (previously *Calyptorhynchus baudinii*) (Baudin's cockatoo), and *Zanda latirostris* (previously *Calyptorhynchus latirostris*) (Carnaby's cockatoo) under CPS 9427/2, the PTA proposed the following revegetation measures for the additional area. This is to be added to the already existing offset calculated using the WA Environmental Offset Calculator with the same input parameters used to establish the planting requirements set out in CPS 9427/2:

- The salvage and translocation of 30 grass trees located within the amendment area and replant them in the offset area (Figures 7-9), with a completion criterion of at least 80 per cent survival of translocated grass trees are to be included in permit conditioning.
- The planting of 36 foraging trees, shrubs and grass trees in the landscaped areas of the project footprint within road and rail reserve in proximity to the areas proposed to be cleared Figures 7-9)).

The offset- revegetation total proposed by PTA includes:

- the salvage and translocation of 224 grass trees located within the amendment area and replant them in the offset area (Figures 7-9), with a completion criterion of at least 80 per cent survival of translocated grass trees.
- the planting of 449 foraging trees, shrubs and grass trees in the landscaped areas of the project footprint within road and rail reserve in proximity to the areas proposed to be cleared (Figures 7-9).

An assessment of the revegetation was undertaken using the WA Environmental Offsets Metric and having consideration for the Environmental Offsets Policy (2011), the Environmental Offsets Guidelines (2014) and the Minister's determination against the appeal for CPS 9427/1 (Appeal number: 007 of 2022)... To ensure adequate

suitability of the revegetation balancing the significant residual impact of the loss of foraging habitat, the calculation identified that the translocation of 30 grass trees and revegetation of 36 black cockatoo foraging species within various railway reserve and the road reserves of Railway Parade Road, Sevenoaks Street and Rutland Avenue, Town of Victoria Park, City of Canning and City of Gosnells would be sufficient to ensure that no significant residual impacts remain.

The Delegated Officer was satisfied that the applicant has made a reasonable effort to avoid and minimise potential impacts of the proposed clearing on environmental values.



Figure 7: Map of the Offset area, the area crosshatched red indicates the area subject to conditions.



Figure 8: Map of the Offset area, the area crosshatched red indicates the area subject to conditions.





Figure 9: Map of the Offset area, the area crosshatched red indicates the area subject to conditions.

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

Assessment

The assessment against biological values (Peregrine falcon and Ecological linkages) remains unchanged and can be found in the Decision Report prepared for Clearing Permit CPS 9427/1. The following is the assessment based on the additional foraging habitat for black cockatoos in the amendment area, consisting of multiple small, isolated patches of remnant vegetation comprising of 54 scattered native plants within a 0.36 hectare footprint.

Black cockatoos

When considering the habitat of Black Cockatoos, it can be categorized into three distinct groups: foraging, breeding, and night roosting. Black Cockatoos typically engage in foraging activities within a 12-kilometre radius of their active breeding site (Commonwealth of Australia, 2022; DCCEEW, 2022; DPaW, 2013). following breeding, they will flock in search of food sources within six kilometres of their night roost (Commonwealth of Australia, 2022; DCCEEW, 2022; DPaW, 2013). However, they may travel up to 20 kilometres or more in search of sustenance (Commonwealth of Australia, 2022). To maintain their populations, it is crucial to have an abundance of food resources within the range of their breeding and roosting sites. Consequently, foraging resources are evaluated based on known breeding and night roosting sites, primarily within 12 kilometres of a breeding site or 20 kilometres of a roost site (Commonwealth of Australia, 2022).

Carnaby's and Baudin's cockatoos forage on a variety of seeds, nuts, and flowers, and plants, including Proteaceous species (*Banksia* spp., *Hakea* spp., and *Grevillea* spp.), as well as *Allocasuarina* and *Eucalyptus* species, marri, and a range of introduced species (Valentine and Stock, 2008). Forest red tailed black cockatoos (FRBC) feed predominantly on the seeds of marri and jarrah, which comprise approximately 90 per cent of their diet (DEC, 2008).

The amendment area is located within the Carnaby's distribution zone modelled range; FRBC northern core, and the northern border of the Boudin's cockatoo range. The amendment area is surrounded by urbanised development and is in a Completely Degraded (Keighery, 1994) condition. Of the 54 scattered native trees proposed to be cleared under this amendment, only 37 have been classified as black cockatoo foraging habitat.

Table 1: Black cockatoo foraging habitat trees species and number of individuals within the additional amended application area of 0.36 hectares.

Species name	Total amount of trees	Origin	Black cockatoo habitat
Corymbia calophylla (marri)	6	Native	Yes
Eucalyptus gomphocephala (tuart)	1	Exotic (planted)	Yes
Eucalyptus marginata (jarrah)	1	Native	Yes
Xanthorrhoea preissii (grass tree)	30	Native	Yes
<i>Eucalyptus rudis</i> (Flooded gum)	4	Native	No
Melaleuca rhaphiophylla (Swamp	12	Native	No
paperbark)			

The targeted black cockatoo habitat assessment identified evidence of foraging by all three species of black cockatoo within the greater survey area (see appendix F), primarily in the form of chewed marri fruits (Harewood, 2020; Aurora Environmental, 2020). It is unclear from the targeted black cockatoo habitat assessment report exactly where within the greater survey envelope this evidence was identified. Therefore, as within CPS 9427/2, it has been assumed that the application area may currently be utilised for foraging by black cockatoo species. Given the above, the proposed amendment clearing area is likely to negatively impact black cockatoo foraging habitat.

To mitigate impacts to local foraging habitat for black cockatoo species within the extensively cleared Swan Coastal Plain, the applicant has committed to undertaking additional replacement planting that aligns with the Minister's determination of CPS 9427/2.

Conclusion

Based on the above assessment, the proposed amendment clearing will result in the loss of 37 primary and secondary foraging habitat trees for all three black cockatoo species. For the reasons set out above, it is considered that the impacts of the proposed clearing on local black cockatoo foraging habitat can be mitigated through permit conditioning requiring the applicant to undertake revegetation within the application area in accordance with Minister's

determination of CPS 9427/2. The Delegated Officer determined that after mitigation planting, the impacts of the proposed clearing on black cockatoo foraging habitat does not constitute a significant residual impact.

3.1.2. Significant remnant vegetation and conservation areas (extensively cleared) - Clearing Principle (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). Noting that the current vegetation extent for the mapped Swan Coastal Plain vegetation complexes and vegetation extent within the local area fall below the 30 per cent threshold (see Appendix B.2), the application area is considered to be a remnant within an extensively cleared landscape.

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 IBRA Bioregion, the Bassendean Complex-Central and South, the Cannington Complex, and the local area are all above the 10 per cent threshold for constrained areas (see Appendix B.2). However, the current vegetation extent for the Guildford Complex falls below the 10 per cent threshold and is considered to be extensively cleared within the Perth Metropolitan Region constrained area (see Appendix B.2).

While it is acknowledged that native vegetation within the additional application area is limited to small, isolated remnants of marri and *Callistemon phoeniceus* Lindl (Lesser Bottlebrush), these canopy species may be representative of the Guildford Complex (excluding the Lesser Bottlebrush). Noting that the pre-European vegetation extent of the Guildford Complex has been significantly reduced and that only 0.32 per cent of remaining vegetation mapped within this complex lies within conservation estate, occurrences of intact vegetation that is representative of the Guildford Complex may be significant for its maintenance. However, it is noted that flora and vegetation surveys indicate that the vegetation within the application area is too degraded to be considered truly representative of any vegetation complex (Aurora Environmental, 2020). It is also acknowledged that the total increase in size of the application area that is mapped within the Guildford complex is 0.02 hectares, bringing the cumulative clearing within the Guildford complex to 0.65, which represents approximately 0.014 per cent of all vegetation remaining within the Guildford Complex remaining unchanged from CPS 9427/1.

Given the above, the lack of representative mid-and understorey species, the fragmentation and isolation of the vegetation by adjacent road and rail infrastructure, and the Completely Degraded (Keighery, 1994) condition of the vegetation within the amended application area, it is unlikely that the amendment application area is significant for the ongoing maintenance of the Guildford Complex or that the proposed clearing will significantly reduce the pre-European extent of the complex.

It is acknowledged that the proposed clearing may cause degradation of nearby remnant native vegetation within the extensively cleared landscape by facilitating the spread of weeds and dieback, including into the landscaped and revegetated land conditioned under this permit. A weed and dieback management condition is considered to minimise this risk, and it is not considered likely that the proposed clearing will have a significant impact on nearby significant remnant vegetation.

Conclusion

Based on the above assessment, the amendment application area is not considered to be significant as a remnant of native vegetation within an area that has been extensively cleared. However, the proposed clearing has the potential to facilitate the spread of weeds and dieback into significant remnant vegetation in the local area.

Conditions

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

• Dieback and weed control, which ensures protocols are put in place to limit the introduction and transportation of dieback- and weed-affected materials.

3.2. Relevant planning instruments and other matters

The clearing permit application was advertised on DWER's website on 5 March 2024, inviting submissions from the public within a 21-day period. No submissions were received in relation to this application.

The City of Canning, City of Gosnells, and the Town of Victoria Park (the Town), were invited to provide comments on the clearing permit amendment. No response has been received from either City of Canning or the Town of Victoria Park. The City of Gosnells provided information that they have provided approvals to the PTAs clearing and have accepted the required tree management plan for the vegetation that would be removed. The City accepted the management plan noting that there will be a net gain in trees proposed under the PTA's plan.

The Department of Planning, Lands and Heritage property services expressed no concerns regarding the proposed amendment of clearing permit CPS 9427/2 to increase the clearing of native vegetation on Lot 800 on Deposited Plan 60803, Lot 173 on Plan 1883, and Lots 5,6,7 and 8 on 21597.

DWER's Contaminated Sites Branch (CS) did not object to the proposed additional clearing within the additional lots. However, due to the potential presence of ACM in the surface soils in isolated areas, they recommend that any clearing works be carried out under the provisions of an appropriate site management plan, which has been reviewed and approved by a contaminated sites auditor and includes an unexpected finds protocol, to address human health risks associated with potential breaking/crushing or dispersal of ACM.

One Aboriginal site of significance, the Hamilton Crossing, has 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.

End

Appendix A. Details of public submissions

Summary of comments	Consideration of comment
The applicant provided the offset calculations used for determining there proposed offset.	This information helped with the understanding of how the proposed offset from PTA was determined.

Appendix B. Site characteristics

B.1. Site characteristics

The information provided below describes the key characteristics of the area proposed to be cleared and is based on the best information available to the department at the time of this assessment. This information was used to inform the assessment of the clearing against the Clearing Principles, contained in Appendix B.

Characteristic	Details			
Local context	Twenty-two (22) isolated patches of native vegetation in the intensive land use zone of western Australia, varying in size from approximately 0.002 to 0.282 hectares. The application area is adjacent to the existing Armadale passenger rail line and associated infrastructure along Sevenoaks Street and Railway Parade. The proposed clearing area comprises small, isolated remnants of native vegetation in a highly cleared landscape within the Perth Metropolitan Area. Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 16.95 per cent of the original native vegetation cover (see Appendix B.2).			
Ecological linkage	The application area does not intersect any formally mapped ecological linkages. Although the vegetation may be providing some connectivity in an extensively cleared landscape, it is noted that the application area is surrounded by historically cleared residential and industrial land and does not provide connectivity to larger remnants of native vegetation in the local area. Given that the application area consists of fragmented and isolated patches of remnant native vegetation surrounded by infrastructure, it is not considered to contribute significantly to the values of the nearby mapped linkages or to any formal or informal ecological linkages in the local area			
Conservation areas	The application area does not intersect any formally mapped conservation areas. The following are the closest known conservation areas to the application area			
	Conservation area type	Name/ID	Approximate Distance from application area (km)	Direction from application area
	Canning river regional park	99	1.30	Southwest
	Bush forever	224	0.99	Southwest
	Bush forever	387	1.20	Southeast
	Bush forever	283	1.50	Northeast
	Bush forever	48	2.01	West
Vegetation description	The nearest conservation a cleared land and established Flora and vegetation assess the entire Armadale passen on behalf of Aurora Enviror 2020; PGV Environmental, 2 proposed clearing area con native or planted vegetation	reas are se <u>d infrastruc</u> sments of t ger rail line mental (Au 2019). Thes isists of sc , described	eparated from the applicatio sture. he Oats Street level crossin in 2020 were undertaken by urora Environmental, 2020; se assessments indicate the attered native vegetation in I by location:	n area by historically og site in 2018 and of PGV Environmental PGV Environmental, vegetation within the terspersed with non-
			-	

Characteristic	Details		
	Vegetation Location	on Vegetation description	
	Oats Street, East Victoria Park to Welshpool Road, Welshpool	Xanthorrhoea preissii, Exotic Trees and Shrubs intermixed with Xanthorrhoea preissii, Eucalyptus marginata / Corymbia calophylla intermixed with Exotic Trees and Shrubs. This area also contains other potentially local native species such as Adenanthos cygnorum, Jacksonia furcellata, Xanthorrhoea preissii, Gompholobium tomentosum, Scholtzia involucrata and Stirlingia latifolia. It is unclear if these specimens were planted or have naturally regenerated.	
	Gerard Street, Cannington to Willia Street, Beckenham	Scattered <i>Corymbia calophylla</i> and <i>Corymbia calophylla</i> intermixed with exotic trees and shrubs.	
	South of William Street, Beckenham	A line of dense remnant <i>Corymbia calophylla</i> over cleared or maintained grass understorey with planted Grevillea shrubs (Aurora Environmental, 2020; PGV Environmental, 2020; PGV Environmental, 2019).	
	This is broadly con	sistent with the mapped Swan Coastal Plain vegetation types:	
	Vegetation name	Vegetation description	
	Bassendean Complex-Central ar South	Vegetation ranging from woodland of Eucalyptus marginata (jarrah) – Allocasuarina fraseriana (sheoak) - Banksia species, to low woodland of Melaleuca species, and sedgelands on the moister sites. This area includes the transition of jarrah to <i>Eucalyptus todtiana</i> (pricklybark) in the vicinity of Perth	
	Cannington Comple	mosaic of vegetation from adjacent vegetation complexes of Bassendean, Karrakatta, Southern River and Vasse,	
	Guildford Complex,	mixture of open forest to tall open forest of <i>Corymbia calophylla</i> (marri) - <i>Eucalyptus wandoo</i> (wandoo) – jarrah and woodland of wandoo (with rare occurrences of <i>Eucalyptus lane-poolei</i> (salmon white gum)). Minor components include <i>Eucalyptus rudis</i> (flooded gum) - <i>Melaleuca rhaphiophylla</i> (swamp paperbark) (Heddle et al., 1980).	
Vegetation condition	The flora and vegetation assessments undertaken by PGV Environmental on behalf of Aurora Environmental (Aurora Environmental, 2020; PGV Environmental, 2020; PGV Environmental, 2019) indicate that the vegetation within the proposed clearing area is in Completely Degraded (Keighery, 1994) condition.		
	The full Keighery (1994) condition rating scale is provided in Appendix D.		
Climate and landform	The application area occurs on gently undulating topography, sloping gently down from the northern extent in Carlisle to the southern extent near Beckenham, ranging between 15 metres Isohyet in the north to approximately 4 meters Isohyet in the south (PTA, 2021a).		
	The application area has a mean annual maximum temperature of 25.6°C and a mean annual minimum temperature of 13.4°C. The mean annual rainfall and the annual evapotranspiration rate are both 800 millimetres.		
Soil description	The soil within the	application area is mapped as the following systems:	
	Name	EnvGeol S10 Phase	
	Soils	213PjS10	
Description		sand, as S8 as relatively thin veneer over sandy clay to clayey sand and of eolian origin. Comprises approximately 53 per cent of the application area,	
	Soils 212Bs S8		
	Description	sand, very light grey at surface, yellow at depth, fine to medium-grained, sub-rounded quartz, moderately well sorted and of eolian origin. Comprises approximately 38 per cent of the application area	

Characteristic	Details					
	Name	Name EnvGeol LS5 Phase				
	Soils	211Sp_LS5				
	Description	Comprises approximately nine per cent of the application area			blication area	
Land degradation risk	The degradation risk factors mapped over the application area are detailed below:					
	E		I S10 Phase	EnvGeol S8 Phase	EnvGeol LS5 Phase	
	Wind erosion		M2	H1	H2	
	Water erosion		M1	L1	L1	
	Salinity risk		M1	L1	L1	
	Phosphorous expo	ort	M2	M2	M1	
	Waterlogging		H1	L2	L1	
	Subsurface acidification		H2	H2	L1	
	Acid sulphate soils	;	L1	L1	No know risk	
	Flooding		M2	L1	L1	
	Floodplains		-	-	-	
Waterbodies	L2 Low 3-10% M1 Medium 10-30% M2 Medium 30-50% H1 High 50-70% H2 High >70% Aerial imagery ind lines. However, th tributaries, located located located	of the map has a of the map has a of the map has a of the map has a of the map has a icated that th ne closest n d approximal	high to extreme ris high to extreme ris high to extreme ris high to extreme ris high to extreme ris ne application atural water tely one kilo	k k k k m on area intersects seve ercourse is the Canni ometre southwest of th	eral manmade drainag ng River and its maj ne application area ar	
	separated by road to the application application area b Swamp Multiple U in Cannington, bot	, railway, res area are a etween Geo lse wetlands th separated	idential and Multiple Us rge and Wh located adj from the ap	l industrial infrastructur e damp land (basin) narf Streets in Queens acent to the applicatio oplication area by road	re. The closest wetland located adjacent to th Park and the Carous on area at Gerard Stre I infrastructure.	
Hydrogeography	Hydrological Zone		Coastal Pla	ain		
	Basin		Swan Coas	stal (616)		
	Hydrographic Catchment		SwanAvon SwanAvon	Lower Swan and Canning River		
	RIWI Act Surface V Irrigation District	Nater and	No			
	RIWI Act Rivers		No			
	RIWI Act Groundw	ater Areas	Yes	Perth Groundwater Area		
	CAWS Act Clearin Catchment	g Control	No			
	Public Drinking Wa	ater Source	No			
	Wellhead Protection	on Zone	No			
	Reservoir Protection	on Zone	No			

Characteristic	Details
	The salinity of the application area is mapped at 500-1000 total dissolved solids milligrams per litre.
Flora	The desktop assessment identified that a total of 137 conservation significant flora species have been recovered within the local area (10-kilometre buffer). Comprising 12 Priority 1, 23 Priority 2, 46 Priority 3, 26 Priority 4, and 30 threatened flora taxa. None of these existing records occur within the application area, with the closest records being occurrences of <i>Diuris purdiei</i> (T), <i>Grevillea thelemanniana</i> (T), <i>Morelotia australiensis</i> (T), <i>Schoenus benthamii</i> (P3), <i>Schoenus pennisetis</i> (P3) and <i>Verticordia lindleyi</i> subsp. <i>lindleyi</i> (P4) approximately 0.9 kilometres from the application area.
	Two flora and vegetation surveys have been undertaken within the application area; a detailed flora and vegetation survey for the level crossing at Oats Street over two days in October 2018 (PGV Environmental, 2019) and a reconnaissance flora and vegetation survey for the entire Perth to Armadale Rail Line over five days in January and February 2020 (PGV Environmental, 2020). No threatened or priority flora species were identified within the application area or the greater survey areas at the time of either survey (PGV Environmental, 2020; PGV Environmental, 2019). The reconnaissance flora and vegetation survey for the Perth to Armadale Rail Line noted that the greater survey area, which included the entirety of the application area, was unlikely to provide suitable habitat for any threatened or priority flora species, given the Completely Degraded (Keighery, 1994) condition of the vegetation and the significant ongoing disturbance from adjacent road and railway infrastructure (PGV Environmental, 2020). Although the reconnaissance flora and vegetation survey was undertaken outside of the spring flowering season, it is acknowledged that the majority of the conservation significant flora species recorded in the local area are perennial species and, although not flowering, are likely to have been observed if present at the time of the summer survey, given the Completely Degraded (Keighery, 1994) condition of the application of the application area and distinct lack of native understorey.
	With consideration for the site characteristics set out above, relevant datasets (see Appendix F.1), the habitat preferences and conservation statuses of the aforementioned species, the distribution and extent of existing records, and biological survey information as summarised above (Aurora Environmental, 2020; PGV Environmental, 2020; PGV Environmental, 2019), the application area is unlikely to provide suitable or significant habitat for threatened or priority flora species and impacts to flora species did not require further consideration.
Ecological communities	According to available databases the closest state-listed threatened ecological community (TEC) is an occurrence of the Shrublands and woodlands on Muchea Limestone of the Swan Coastal Plain (Muchea Limestone) TEC, located approximately 230 metres east of the application area, separated by historically cleared land and road infrastructure (Sevenoaks Street).
	The closest state-listed Priority Ecological Community (PEC) is an occurrence of the Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region (Banksia Woodlands) PEC, located approximately 430 metres west of the application area, separated by industrial and road infrastructure.
	With consideration for the site characteristics set out above, relevant datasets (see Appendix F.1), and biological survey information (Aurora Environmental, 2020; PGV Environmental, 2020; PGV Environmental, 2019), the vegetation within the application area is unlikely to be representative of these communities, despite its proximity to existing records, and impacts to ecological communities did not require further consideration.
Fauna	According to available databases, 66 conservation significant fauna species have been recorded within the local area comprising of
	One Priority 2, eight Priority 3, nine Priority 4, 10 Endangered, eight Vulnerable, six critically endangered, 21 migratory, one specially protected species (OS), and two

Characteristic	Details
	conservations dependent. fauna taxa. None of these existing records occur within the application area, with the closest record being an occurrence of <i>Calyptorhynchus banksii naso</i> (Red tailed Black Cockatoo) approximately 20 meters from the application area and <i>Isoodon fusciventer</i> (quenda) approximately 60 metres from the application area.
	With consideration for the site characteristics set out above, relevant datasets (see Appendix F.1), the habitat preferences and conservation statuses of the aforementioned species, the distribution and extent of existing records, and biological survey information (Harewood, 2020), the application area may provide suitable habitat for four conservation significant fauna species and impacts to these species required further consideration (see Appendix B.3).

B.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					
Bassendean Complex-Central and South	87,476.26	23,508.66	26.87	4,377.36	5.00
Cannington Complex	16,661.33	1,965.94	11.80	981.34	5.89
Guildford Complex	90,513.13	4,607.91	5.09	287.49	0.32
Local area					
10km radius	44,253.84	6,158.20	13.91	-	-

*Government of Western Australia (2019a)

**Government of Western Australia (2019b)

B.3. Fauna analysis table

Species name	Conservatio n status	Suitable habitat features ? [Y/N]	Suitable vegetatio n 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]
Calyptorhynchus banksii naso (Forest red- tailed black cockatoo)	VU	Y	Y	0.02	241	Y
Falco peregrinus (Peregrine falcon)	OS	Y	Y	1.36	67	Y
Zanda baudinii (Baudin's cockatoo)	EN	Y	Y	0.14	3955	Y
Zanda latirostris (Carnaby's cockatoo)	EN	Y	Y	3.36	42	Y

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

Appendix C. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?		
Environmental value: biological values				
Principle (a):"Native vegetation should not be cleared if it comprises a high level of biodiversity."Assessment:The area proposed to be cleared does not contain locally or regionally significant assemblages of plants. However, the area does contain suitable habitat for conservation significant fauna species. The area does not have any portion mapped as a priority ecological community (PEC).	May be at variance	Yes Refer to Section 3.2.1, above. Changed from CPS 9427/1		
 <u>Principle (b):</u> "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." <u>Assessment:</u> The area proposed to be cleared contains potential foraging, roosting, or breeding habitat for four conservation significant fauna species. 	At variance	Yes Refer to Section 3.2.1, above. Changed from CPS 9427/1		
Principle (c): "Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora." <u>Assessment:</u> The area proposed to be cleared is not considered likely to contain suitable or significant habitat for threatened flora species, given the Completely Degraded (Keighery, 1994) condition of the vegetation and the significant ongoing disturbance from adjacent road and railway infrastructure.	Not likely to be at variance	No As per CPS 9427/1		
 <u>Principle (d):</u> "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." <u>Assessment:</u> The area proposed to be cleared does not contain any vegetation representative of any Threatened ecological communities (TECs). Given the separation from the nearest TEC through road infrastructure, the proposed clearing is not likely to impact or be necessary for maintaining any TEC. 	Not at variance	No As per CPS 9427/1		
Environmental value: significant remnant vegetation and conservation areas				

Assessment against the clearing principles	Variance level	Is further consideration required?		
<u>Principle (e):</u> "Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."	May be at variance	Yes As per CPS		
<u>Assessment:</u> The extent of the mapped vegetation types and native vegetation in the local area is inconsistent with the national objectives and targets for biodiversity conservation in Australia, however, is consistent with the 10 per cent threshold for constrained areas.		9427/1		
<u>Principle (h):</u> "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."	Not likely to be at variance	No As per CPS 9427/1		
<u>Assessment:</u> Given the distance and separation from the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of any nearby conservation areas.	Assessment: Given the distance and separation from the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of any nearby conservation areas.			
Environmental value: land and water resources				
<u>Principle (f):</u> "Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."	May be at variance	No As per CPS		
<u>Assessment:</u> Given the application area intersects several drainage lines and is adjacent to two wetlands, the vegetation may be considered to be growing in, or in association with, an environment associated with a watercourse or wetland. However, it is acknowledged that the drainage lines are manmade and the wetlands adjacent to the application area have been highly disturbed and modified by historical clearing and adjacent residential and industrial land uses. Noting the condition of the vegetation and extent of the clearing in the context of the landscape, the proposed clearing is unlikely to result in any significant or long-term impacts to the ecological values of riparian communities in the local area or to significantly impact surface water quality.		9427/1		
 <u>Principle (g):</u> "Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation." <u>Assessment:</u> The mapped soils of the application area are moderately susceptible to wind erosion and subsurface acidification. Noting the extent of the proposed clearing, the highly disturbed condition of the vegetation, and that the final land use will be infrastructure associated with the elevated rail line or landscaped POS that will not leave bare ground exposed to weathering for extended periods, the proposed clearing is not likely to have an appreciable impact on land degradation. 	Not likely to be at variance	No As per CPS 9427/1		
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 that the application area does not transect any natural sources of perennial surface water, the condition of the vegetation, and extent of the clearing in the context of the landscape and adjacent land uses, the proposed clearing is unlikely to result in significant or long-term impacts to surface or groundwater quality.	Not likely to be at variance	No As per CPS 9427/1		
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." <u>Assessment:</u> The mapped soils and topographic contours in the surrounding area of the application area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding or waterlogging. Noting this, the extent of the proposed clearing and condition of the vegetation within the application area, the proposed clearing is unlikely to cause, or exacerbate the incidence or intensity of flooding.	Not likely to be at variance	No As per CPS 9427/1		

Appendix D. 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.
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 E. Biological survey information excerpts

The Biological Survey information for this amendment has remained unchanged and can be found in the Decision report prepared for clearing permit CPS 9427/1

Appendix F. Sources of information

F.1. GIS databases

Publicly available GIS Databases used (sourced from s):

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Bush Forever Areas 2000 (DPLH-019)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- CAWSA Part 2A Clearing Control Catchments (DWER-004)
- Consanguineous Wetlands Suites (DBCA-020)
- Contours (DPIRD-073)
- DBCA Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- DBCA Statewide Vegetation Statistics
- Directory of Important Wetlands in Australia Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Geomorphic Wetlands, Swan Coastal Plain (DBCA-019)
- Groundwater Salinity Statewide (DWER-026)
- Hydrographic Catchments Catchments (DWER-028)
- Hydrographic Catchments Divisions (DWER-029)
- Hydrography, Linear (Hierarchy) (DWER-031)
- 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 (DPIRD-006)
- 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 (DPIRD-027)
- Soil Landscape Mapping Systems (DPIRD-064)
- Vegetation Complexes Swan Coastal Plain (DBCA-046)

Restricted GIS Databases used:

- Conservation Covenants Western Australia (DPIRD-023)
- Contaminated Sites Database Restricted (DWER-073)
- 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)

F.2. References

- Aurora Environmental (2020) *Environmental Advice, Armadale Train Line, Platform and Signalling Upgrade Program prepared for the Public Transport Authority*, received 13 September 2021 (DWER Ref: A2046307).
- Australian Museum (2021) Perengrine falcon (Falco peregrinus). The Australian Museum, New South Wales. Available from: <u>https://australian.museum/learn/animals/birds/peregrine-falcon/</u> (accessed November 2021).
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Commonwealth of Australia (2012) EPBC Act referral guidelines for three threatened black cockatoo species. Department of Sustainability, Environment, Water, Populations and Communities, Canberra.
- Department of Biodiversity, Conservation and Attractions (DBCA) (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. Available from: <u>http://naturemap.dpaw.wa.gov.au/</u> (accessed November 2021).
- Department of Environment and Conservation (DEC) (2008) *Forest black cockatoo (Baudin's cockatoo, Calyptorhynchus baudinii, and forest red-tailed black cockatoo, Calyptorhynchus banksii naso) Recovery Plan.* Department of Environment and Conservation, Canberra.
- Department of Environment and Conservation (DEC) (2012) *Fauna profiles: Quenda, Isoodon obesulus fusciventer*. Department of Environment and Conservation, Western Australia.
- Department of Environment Regulation (DER) (2013) *A guide to the assessment of applications to clear native vegetation*. Perth. Available from: <u>https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Guidelines/Guide2_assessment_native_veg.pdf</u>.
- Department of Parks and Wildlife (2013) *Carnaby's cockatoo (Calyptorhynchus latirostris) Recovery Plan.* Department of Parks and Wildlife, Perth, Western Australia.
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