



Environmental
Protection
Authority

Urban Development of Lots 11 and 74 Beenyup Road, Banjup

Aigle Royal Developments

Report 1799

13 January 2026

This assessment report has been prepared by the Environmental Protection Authority (EPA) under s. 44 of the *Environmental Protection Act 1986* (EP Act) (WA). It describes the outcomes of the EPA's assessment of the Urban Development of Lots 11 and 74 Beenyup Road, Banjup proposal by Aigle Royal Developments.

This assessment report is for the Western Australian Minister for Environment and sets out:

- what the EPA considers to be the key environmental factors identified in the course of the assessment
- the EPA's recommendations as to whether or not the proposal may be implemented and, if it recommends that implementation be allowed, the conditions and procedures, if any, to which implementation should be subjected to
- further information, advice and recommendations as the EPA sees fit.



Darren Walsh
Chair
Environmental Protection Authority

6 January 2026

ISSN 1836-0491 (Online)
Assessment No. 2255

Contents

Summary	1
1 Proposal.....	4
2 Assessment of key environmental factors	11
2.1 Flora and vegetation	11
2.2 Terrestrial fauna.....	16
2.3 Inland waters	20
3 Holistic and cumulative assessment	24
4 Offsets	25
5 Recommendations	28
6 Other advice	29

Figures

Figure 1: Proposal location and context	7
Figure 2: Proposal development envelope.....	8
Figure 3: Broader conservation area context	9
Figure 4: Wetlands.....	10

Tables

Table 1: Proposal content document (Aigle Royal Developments 2025)	4
Table 2: Summary of assessment for flora and vegetation.	12
Table 3: Summary of assessment for terrestrial fauna.	17
Table 4: Summary of assessment for inland waters.	21
Table B1: Identified relevant decision-making authorities for the proposal.	52

Appendices

Appendix A: Recommended conditions.....	30
Appendix B: Decision-making authorities.....	52
Appendix C: Regulation under other statutory processes	53
Appendix D: Environmental Protection Act principles.....	54
Appendix E: Other environmental factors	57
Appendix F: List of submitters.....	58
Appendix G: Assessment timeline	59
Appendix H: Relevant policy, guidance, procedures and references.....	60

Summary

Background

Proposal

The Urban Development of Lots 11 and 74 Beenyp Road is a proposal to construct a 2.78 hectare (ha) residential development area and establish a 21.55 ha conservation area within a 26.17 ha development envelope. A 1.85 ha wetland buffer ('development exclusion area') is also part of the proposal. The proposal is located approximately 27 kilometres south of Perth Central Business District, in the suburb of Banjup.

Context and key environmental values

The proposal is located in a semi-rural setting within the Swan Coastal Plain. The development envelope contains environmental values, including: Carnaby's and Forest red-tailed black cockatoo foraging habitat (including habitat for other conservation significant fauna), and a conservation category wetland.

Consultation

The level of assessment was set at 'referral information with additional information' (two-week public review). The proponent provided an initial additional information package in 2021, after which comments were provided on 28 July 2022. A revised additional information package, in the form of an environmental review document, was submitted to the EPA on 29 October 2024. Thirteen submissions were received during the two-week public review period. The response to submissions was submitted on 24 July 2025.

Assessment of key environmental factors

The EPA has identified the key environmental factors (listed below) in its assessment. For each factor, the EPA has assessed the residual impacts of the proposal on the environmental values and considered whether the environmental outcomes are likely to be consistent with the EPA environmental factor objectives.

Environmental factor: Flora and vegetation	
Residual impact on key environmental value	Assessment finding
Direct impacts Clearing of 2.78 ha of native vegetation, including: <ul style="list-style-type: none"> 2.13 ha of Banksia woodlands of the SCP PEC 2.39 ha of FCT21c (P3). 	The EPA considers the loss of vegetation representative of Banksia woodlands PEC a significant residual impact, noting the cumulative loss of this ecological community on the Swan Coastal Plain, and within the Perth Metropolitan Region. The proponent proposed avoidance and minimisation measures in the form of a conservation area and development exclusion area, as well as measures to limit the clearing of vegetation during construction.
Indirect impacts <ul style="list-style-type: none"> spread of weeds and dieback disease 	Subject to recommended conditions for clearing limits, environmental outcomes, rehabilitation, and appropriate offsets to counterbalance the significant residual impacts, the

<ul style="list-style-type: none"> increased edge effects. 	environmental outcome is likely to be consistent with the EPA objective for flora and vegetation.
---	---

Environmental factor: Terrestrial fauna

Residual impact on key environmental value	Assessment finding
<p>Direct impacts Clearing of up to 2.78 ha of fauna habitat, including:</p> <ul style="list-style-type: none"> 2.60 ha of black cockatoo foraging habitat three potential breeding trees with no suitable hollows. <p>Indirect impacts</p> <ul style="list-style-type: none"> increased dust and noise emissions increased risk of vehicular strikes from increased traffic movement increased feral animal activity habitat degradation from proposal activities. 	<p>The loss of black cockatoo foraging habitat is a significant residual impact, noting the cumulative loss of black cockatoo habitat on the Swan Coastal Plain.</p> <p>The proponent proposed avoidance and minimisation measures in the form of a conservation area and development exclusion area. The proponent has also proposed minimisation measures during the construction phase of the proposal, which includes weed and dieback management.</p> <p>Subject to recommended conditions and the implementation of offsets to counterbalance the significant residual impacts to black cockatoo habitat, the environmental outcome is likely to be consistent with the EPA objective for terrestrial fauna.</p>

Environmental factor: Inland waters

Residual impact on key environmental value	Assessment finding
<p>Direct impacts</p> <ul style="list-style-type: none"> clearing of 0.11 ha of 'transitional' wetland vegetation associated with the CCW. <p>Indirect impacts</p> <ul style="list-style-type: none"> impacts to water quality associated with the Jandakot Groundwater Mound alteration of surface and groundwater levels / hydrology. 	<p>The proposal area intersects a conservation category wetland and a resource enhancement wetland, including wetland vegetation. The proposal area is also mapped within the Jandakot Groundwater Mound, which contains the Leederville and Yarragadee North superficial aquifers. Ministerial Statement 688 conditions and environmental outcomes are relevant to the proposed development in the Jandakot Groundwater Mound but are outside the scope of this proposal.</p> <p>The EPA has provided advice and recommendations as to how future planning processes can manage and mitigate potential impacts to groundwater quantity and quality of the Jandakot Groundwater Mound.</p> <p>The EPA has considered and supports the implementation of a 50 m wetland buffer ('development exclusion area'), which will minimise impacts to the CCW. Subject to recommended conditions for clearing limits and rehabilitation outcomes that can improve and maintain the hydrological regime and ecological value of the CCW, the environmental outcome is likely to be consistent with the EPA objective for inland waters.</p>

Holistic assessment

The EPA considered the connections and interactions between relevant environmental factors and values to form a holistic view of impacts to the whole environment. The EPA formed the view that the holistic impacts would not alter the EPA's conclusions about consistency with the EPA factor objectives.

Conclusions and recommendations

The EPA has taken the following into account in its assessment of the proposal:

- environmental values which may be significantly affected by the proposal
- assessment of key environmental factors, separately and holistically (this included consideration of cumulative impacts)
- likely environmental outcomes which can be achieved with the imposition of conditions
- consistency of environmental outcomes with the EPA's objectives for the key environmental factors
- EPA's confidence in the proponent's proposed mitigation measures
- whether other statutory decision-making processes can mitigate potential impacts of the proposal on the environment
- principles of the *Environmental Protection Act 1986*.

The EPA has recommended that the proposal may be implemented subject to recommended conditions in Appendix A.

1 Proposal

The proposed development is located within the City of Cockburn (the City) approximately 27 kilometres south of Perth Central Business District (Figure 1).

The proposal for the Urban Development of Lots 11 and 74 Beenyup Road, Banjup will, within a development envelop of 26.17 ha, involve the construction of a 2.78 ha residential development area, the establishment of a 21.55 ha conservation area and a 1.85 ha wetland buffer shown as the 'development exclusion area' (the proposal) (Figure 2).

The proponent for the proposal is Aigle Royal Developments.

The proposal is on the fringe of the Aubin Grove and Banjup suburban areas and adjoins Jandakot Regional Park, including Bush Forever Sites (Figure 3).

The development envelope is currently zoned 'Rural Water Protection' under the Metropolitan Region Scheme (MRS) and 'Resource' under the City's Local Planning Scheme 3 (LPS 3). Therefore, a future MRS amendment will be referred to the EPA for consideration under the EP Act.

The development envelope is entirely vegetated, excepting access tracks and clearing associated with an adjoining residential building, and contains a Conservation Category Wetland (CCW) and a Resource Enhancement Wetland (REW) (Figure 4). The proposal retains the entirety of the CCW and REW within the conservation area that is proposed to be ceded to the relevant authority and managed as part of the Jandakot Regional Park. The remnant vegetation provides habitat for black cockatoos and banksia woodland.

The proposal was referred to the EPA on 5 May 2020. The EPA published the proponent's referral information for the proposal on its website for a seven-day public comment period from 29 June to 5 July 2020. The proponent's additional information (in the form of an Environmental Review Document (ERD)) was published on the EPA website for public review from 22 November 2024 to 6 December 2024, with 13 submissions received. The EPA considered the submissions received during its assessment and the SLR Consulting response to submissions (RTS) (SLR Consulting 2025), which was published on the EPA website on 2 December 2025.

The elements of the proposal which have been subject to the EPA's assessment are included in Table 1.

Table 1: Proposal content document (Aigle Royal Developments 2025)

Proposal element	Location	Maximum extent or range
Physical elements		
Residential development including roads, Public Open Space and residential housing	Figure 2	Development Area of 4.63 ha, including 1.85 Wetland Buffer

Creation of a conservation reserve to be managed as part of Jandakot Regional Park	Figure 2	Creation of a 21.55 ha Conservation Area
Land clearing	Figure 2	Clearing of up to 2.78 ha of native vegetation including approximately 2.13 ha of the Banksia Woodlands TEC and 2.60 ha of Black Cockatoo habitat
Operational Elements		
Urban water management	Figure 2	Development Envelope
Proposal elements with greenhouse gas emissions		
Peak annual average		
Scope 1	3,544.9 tCO ₂ -e	
Scope 2	1.5 tCO ₂ -e	
Scope 3	N/A	
Rehabilitation		
N/A		
Commissioning		
N/A		
Decommissioning		
N/A		
Other elements which affect the extent of effects on the environment		
Proposal time	Maximum project life	60 years
	Construction phase	3 years
	Operations phase	50 years
	Decommissioning phase	N/A

Units and abbreviations

ha – hectares tCO₂-e – tonnes of carbon dioxide equivalent

Proposal alternatives

The EPA acknowledges the proponent made significant commitments to the retention of vegetation throughout the assessment process. The original proposal referred to the EPA did not clearly define a CCW buffer distance and the initial landscape master plan included clearing of native vegetation adjoining the CCW (including wetland vegetation) for bushfire setbacks, parkland, infrastructure and drainage. As part of the RTS prepared by SLR Consulting (2025), the proponent committed to providing a 50 metre buffer to the CCW, which will be protected from development (Figure 2).

The EPA notes that the proponent engaged with the City of Cockburn and the Department of Planning, Lands and Heritage (DPLH) to discuss preferred design outcomes for the draft master plan. No alternative proposal design options were presented to the EPA.

Other environmental approvals

In December 2021, approval (including conditions) was granted under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act [ref 2017/7923]) for the proposal to clear no more than 8.27 ha of remnant vegetation

that provides habitat for threatened black cockatoos. This approval included the implementation of a Revegetation Management Plan, Landscape Management Plan and Environmental Management Plan. In August 2024, a variation to the original EPBC approval conditions was granted by the Commonwealth in relation to the WAPC lifting of urban deferment and the requirement for an offset strategy.

The EPA notes the EPBC Act approval implementation conditions target the key environmental values of flora and vegetation and terrestrial fauna and include requirements for the conservation area to be reserved and ceded to an approved management body and an offset strategy and management plan to be implemented. The EPA notes the proponent will be required to cede the conservation area and fulfill offset requirements under the EP Act and EPBC Act. The EPA considers its recommended conditions are specific and suitable to counterbalance the significant residual impacts of the proposal and are also complimentary in nature to the EPBC Act approval implementation conditions.

In May 2020, an original proposal was referred to the EPA under section 38 of the EP Act as part of a larger subdivision. After obtaining Commonwealth approval, the proponent amended the proposal twice under section 43A (s.43A) of the EP Act.

In July 2022, the first s.43A amendment was approved that reduced the development area from 10.25 ha to 5.59 ha, with no changes to the proposed conservation area. The development area was reduced by removing the area already zoned 'Urban Deferred' under the Metropolitan Region Scheme (MRS) and as a result the proponent 'split' the proposal area into Stage 1 and Stage 2. In June 2024, Stage 1 was considered by the EPA under Part IV of the EP Act and the proposal was deemed 'not assessed' primarily due to retention of a conservation area that will form an ecological linkage between the Jandakot Regional Park and the larger conservation area forming part of Stage 2, and mitigation of impacts through EPBC Act approval implementation conditions.

In January 2024, the second s.43A amendment was approved that decreased the development area by a further 0.96 ha (from 5.59 ha to 4.63 ha), and the conservation area by a further 1.4 ha (from 22.95 ha to 21.55 ha). It is the 4.63 ha residential development area and the 21.55 ha conservation area, which relates to Stage 2, that the EPA has assessed (Figure 2).

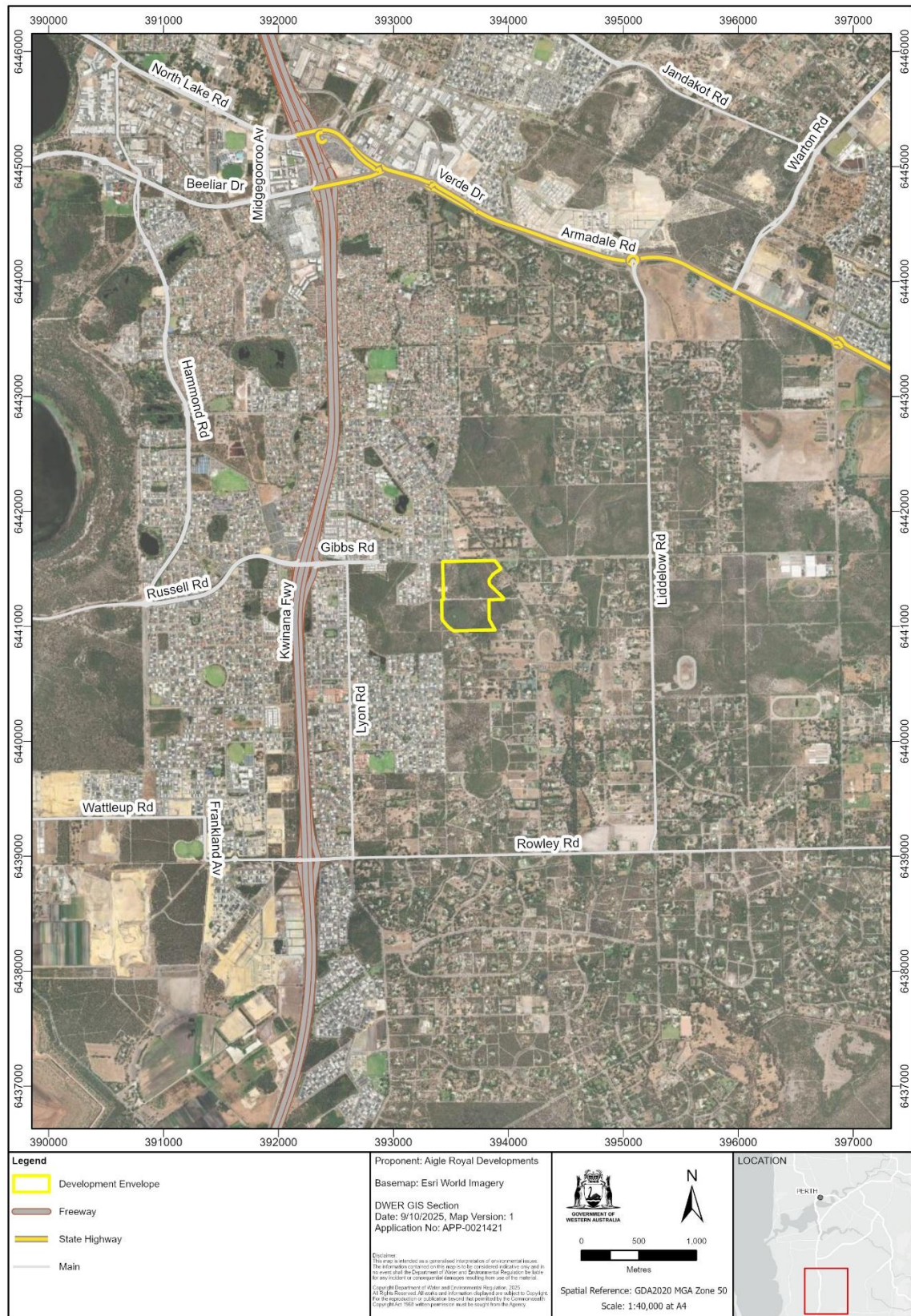


Figure 1: Proposal location and context

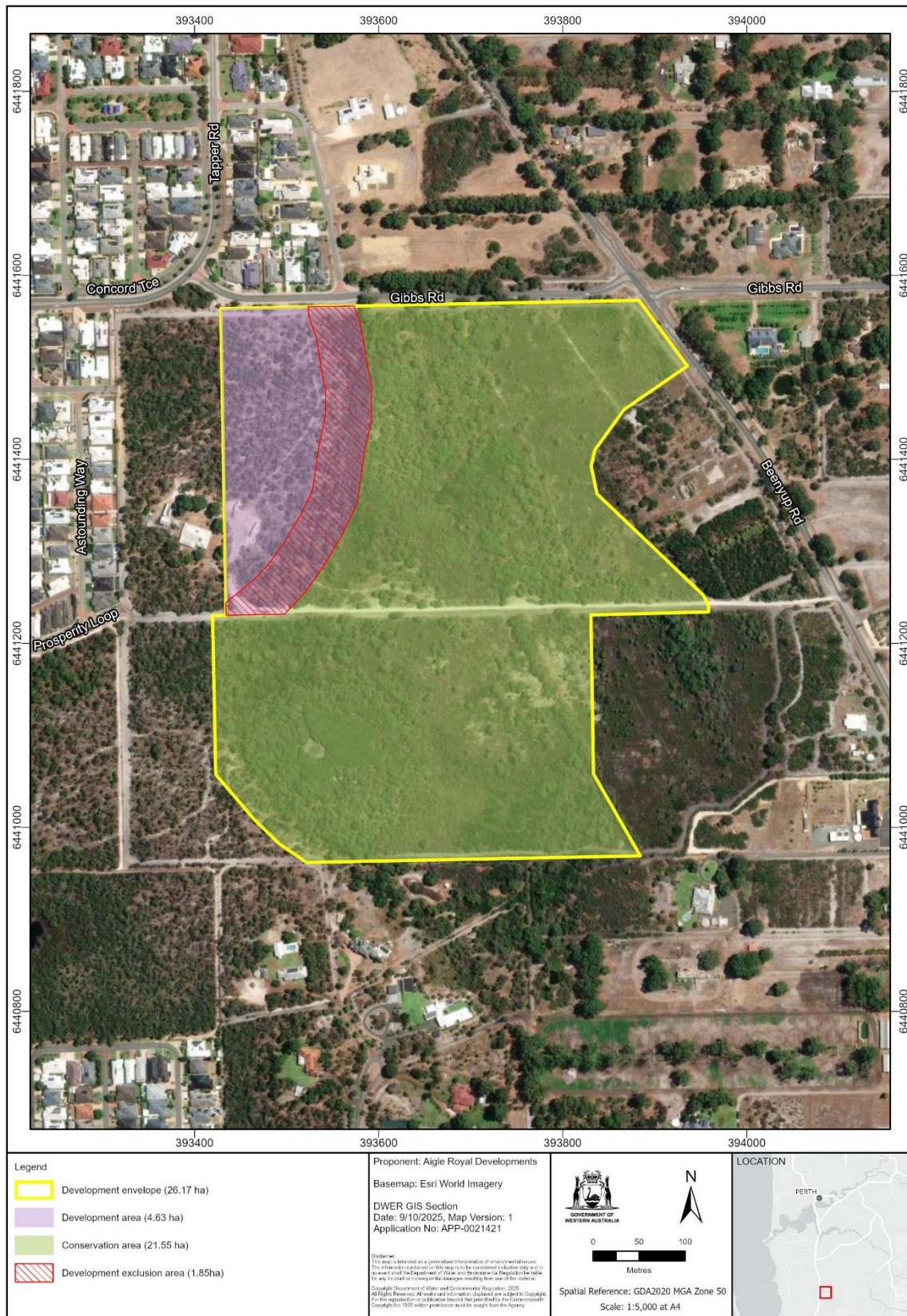


Figure 2: Proposal development envelope

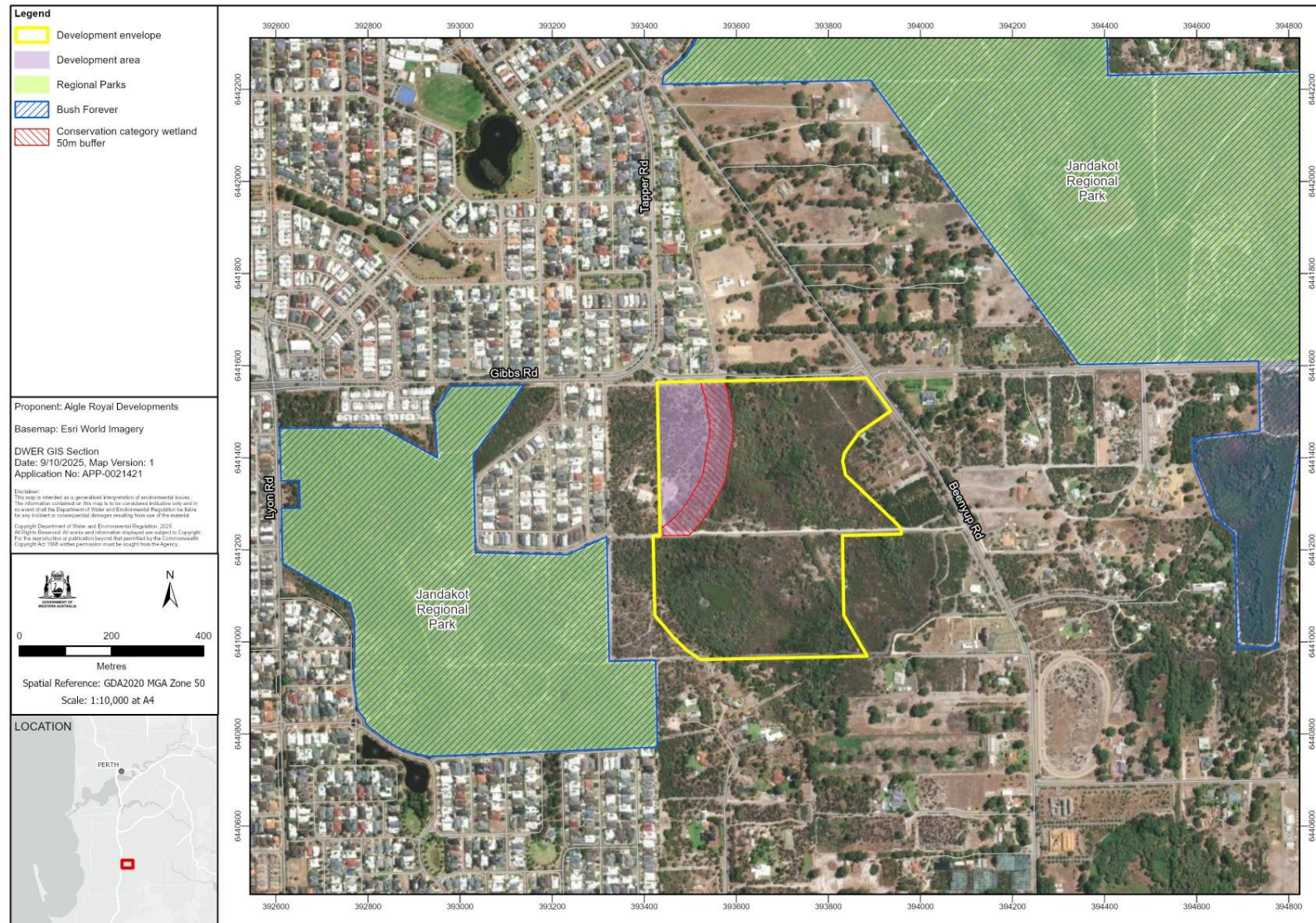


Figure 3: Broader conservation area context

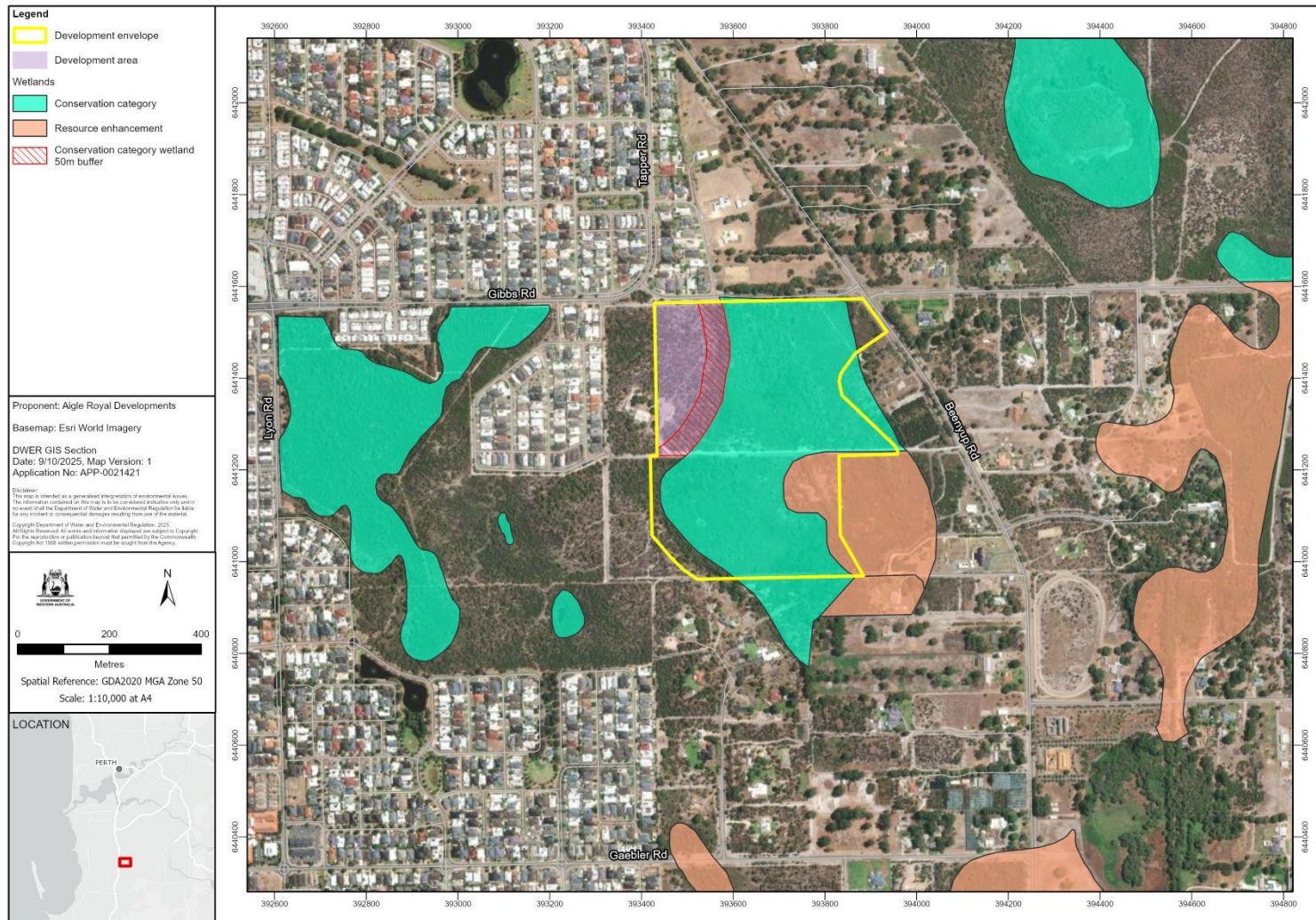


Figure 4: Wetlands

2 Assessment of key environmental factors

This section reports the outcome of the EPA's assessment of the key environmental factors against its environmental factors and objectives, and its recommendations on conditions the proposal should be subject to if it is implemented. The EPA evaluated the impacts of the proposal on other environmental factors (greenhouse gases and social surroundings (Aboriginal heritage) and concluded these were not key environmental factors for the assessment. This evaluation is included in Appendix E.

2.1 Flora and vegetation

2.1.1 Environmental objective

The EPA environmental objective for flora and vegetation is “*to protect flora and vegetation so that biological diversity and ecological integrity are maintained*” (EPA 2016a).

2.1.2 Investigations and surveys

The EPA advises the following proponent investigations and surveys were undertaken to inform the assessment of potential impacts to flora and vegetation:

- ERD: Beenyup Road, Banjup - Assessment on Referral Information (Version 0.3) (SLR Consulting 2024)
- Flora and Vegetation Survey: Part Lots 11 and 74 Beenyup Road, Banjup (PGV Environmental 2023 (Version 2); Appendix G of the ERD)
- Targeted Flora Survey: Lots 11 and 74 Beenyup Road, Banjup (360 Environmental 2017a; Appendix B of the ERD)
- Level 2 Flora and Vegetation Survey: Beenyup Road (360 Environmental 2016 (Revision C, Final); Appendix A of the ERD)
- Response to Submissions (SLR Consulting 2025; Revision 2.0).

The flora and vegetation surveys were considered appropriate to inform the assessment of potential impacts to the above environmental factor. The EPA has also considered additional information, including information provided in the RTS (SLR Consulting 2025) and the former Department of Environment and Energy approved conservation advice for the Banksia Woodlands of the Swan Coastal Plain (SCP) threatened ecological community (TEC) (EPBC 2016) in its assessment of flora and vegetation values.

Table 2: Summary of assessment for flora and vegetation.

Key environmental values and context	
<p>The proposal contains three vegetation types within the residential development area and 11 vegetation types within the conservation area, which are representative of the 'Bassendean Complex – Central and South' woodland to low woodland and sedgelands (PGV Environmental 2023). Based on a Floristic Community Analysis (FCT), vegetation types AfBaBmKg (2.13 ha) and AfBiKg (0.27 ha) within the development area is mapped as FCT21c, <i>Low-lying Banksia attenuata woodland or shrublands</i>, listed as a 'Priority 3' (P3) Ecological Community (PEC) by the DBCA and as a Threatened Ecological Community (TEC) under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) (PGV Environmental 2023).</p> <p>Vegetation condition within the development area ranges from 'Completely Degraded' to 'Very Good' condition, with the majority (2.24 ha) reported in 'Good' condition (SLR Consulting 2025). Vegetation within the conservation area (21.55 ha) ranges from 'Completely Degraded' to 'Excellent' condition, with the majority (8.77 ha) in 'Very Good' condition (SLR Consulting 2025).</p> <p>No threatened or priority flora species listed by the DBCA or under the EPBC Act have been recorded in the development area or in the conservation area. However, the EPA notes that remnant vegetation within both the development area and conservation area provide suitable habitat for <i>Caladenia huegelii</i> and <i>Drakaea micrantha</i> (360 Environmental 2017).</p>	
Impacts from the proposal	Assessment findings, environmental outcomes and recommended conditions
<p>Potential direct impacts</p> <p>Potential impacts to flora and vegetation from:</p> <ul style="list-style-type: none"> clearing of up to 2.78 ha of native vegetation, including: <ul style="list-style-type: none"> 2.13 ha of Banksia woodlands of the SCP PEC 2.39 ha of FCT21c (P3) fragmentation and loss of ecological connectivity of remnant vegetation. <p>Potential indirect impacts</p> <ul style="list-style-type: none"> spread of weeds and <i>Phytophthora</i> dieback to uninfected areas potential alteration of vegetation structure and floristic composition in adjacent and/or surrounding areas via changes to surface water drainage patterns increased edge effects. 	<p>Assessment finding and environmental outcomes</p> <p><u>Conservation significant ecological communities</u></p> <p>The proposal will clear up to 2.39 ha of <i>Low-lying Banksia attenuata woodland or shrublands</i> (FCT21c) in primarily 'Good' condition, within the development area; FCT21c is a component of the Banksia woodlands of the Swan Coastal Plain, which is a state (DBCA) listed PEC, and a Commonwealth-listed (EPBC Act 1999) TEC.</p> <p>The EPA considers that although the proponent has proposed reasonable efforts to minimise impacts to FCT21c, the proposal would still result in a small overall impact to the total mapped extent of this community, which the EPA considers as a significant residual impact given the threat of ongoing clearing of representative occurrences of Banksia woodland from development within the SCP, particularly in the Perth Metropolitan Region.</p> <p>Further, the EPA notes that FCT21c is known from 27-point locations over a 230 km range across the SCP (EPBC 2016). As such, the EPA has considered that the clearing of up to 2.39 ha of FCT21c is not likely to change the P3 status of the FCT or significantly reduce the extent of its occurrence within the SCP.</p>

<p>Avoidance and minimisation measures (including regulation by other DMAs) The proponent has proposed the following measures:</p> <ul style="list-style-type: none"> • a 21.55 ha conservation reserve, adjacent to the residential development footprint, is proposed. The reserve will be ceded into the Jandakot Regional Park and will be subject to long term (ongoing) management by the City of Cockburn • clearing of vegetation for temporary works will not be undertaken • implementation of a Construction Environmental Management Plan (CEMP) (SLR Consulting 2025). <p>Consultation The key matters raised during the consultation period include:</p> <ul style="list-style-type: none"> • permanent fragmentation of remnant vegetation • impacts to environmental values from a cumulative (local) and holistic (regional) viewpoint • suitability of proposed offset (Rose Shanks Reserve) and whether they adequately counterbalance the significant residual impacts. 	<p>The EPA advises that the significant residual impact to FCT21c should be subject to conditions for clearing limits (recommended condition B1) and be counterbalanced by appropriate offsets for impacts to the Banksia SCP PEC (condition B6), to ensure the environmental outcome is likely to be consistent with the EPA objective for this factor.</p> <p><u>Conservation significant flora</u></p> <p>The EPA notes that no threatened or priority flora species were recorded within the development area or conservation area during both the 2015 (360 Environmental) and 2023 (PGV Environmental) flora and vegetation surveys.</p> <p>A targeted flora survey was undertaken to determine the potential presence of <i>Drakaea micrantha</i> (listed as 'Vulnerable' under the EPBC Act) and <i>Caladenia huegelii</i> (listed as 'Endangered' under the EPBC Act). No specimens of <i>D. micrantha</i> or <i>C. huegelii</i> were recorded during the targeted flora survey (360 Environmental 2017a).</p> <p>The EPA therefore considers that no significant residual impact to flora is present and considers that the environmental outcome is likely to be consistent with the EPA objective for flora and vegetation.</p> <p><u>Fragmentation</u></p> <p>The proposal is not expected to fragment adjacent Bush Forever (BF) sites, particularly BF Site No. 492 (Lyon Road Bushland, Banjup) and BF Site No. 263 (Banjup Bushland, Banjup). The 21.55 ha conservation area will maintain an ecological linkage between BF Site No. 492 and 263 to Jandakot Regional Park.</p> <p>The EPA therefore considers the loss of up to 2.78 ha of vegetation would not compromise the ecological integrity, or the environmental values associated with the Jandakot Regional Park, BF Site No. 492 or 263. Furthermore, the proposed 21.55 ha conservation area, to be ceded into the Jandakot Regional Park, will contribute to the availability of 'Good' or better-quality native vegetation, resulting in a positive environmental outcome.</p> <p><u>Indirect impacts to flora and vegetation</u></p> <p>Weed control and management is proposed to be undertaken, consistent with the CEMP. The EPA notes that dieback may be prevalent outside the development envelope, for example, in BF Site No. 492. However, the EPA notes dieback management (hygiene) measures and weed control measures included in the CEMP and considers that the proposal is not likely to result in a substantial increase in</p>
---	---

	<p>the risk of proliferation of weeds or dieback (or other disease / pathogens) to uninfected areas within the development envelope.</p> <p>The EPA considers that the proposal is not likely to result in a substantial indirect impact to wetland vegetation through changes to hydrological regimes; modelling predicted it would reflect the pre-development regime. The proposed 50 m wetland buffer (within the development exclusion area) will also protect wetland vegetation, further minimising potential impacts to the CCW and overall hydrological regime.</p> <p>The EPA advises that potential indirect impacts on wetland vegetation can be mitigated through proposed avoidance and minimisation measures, and through reasonable conditions (A1, B1, B4, and B5). The EPA considers that the environmental outcome is likely to be consistent with flora and vegetation factor objective.</p> <p><u>Cumulative impact assessment</u></p> <p>The EPA has considered the successive, incremental and interactive cumulative impacts on the environment of a proposal with one or more past, present and/or reasonably foreseeable future activities within a 20 km radius of the development envelope. Reasonably foreseeable transport, residential and infrastructure proposals surrounding the development envelope has been considered in the EPA's cumulative impact assessment.</p> <p>The proponent has provided a generic cumulative impact assessment (section 11 of the ERD) for flora and vegetation, terrestrial fauna habitat and inland waters values being impacted by recent and foreseeable transport and urban development proposals in proximity to the development envelope, and has estimated that up to 70.26 ha of Banksia woodland and approximately 3.95 ha of vegetation associated with CCWs are cumulatively affected from developments (SLR Consulting 2024).</p> <p>The EPA acknowledges that the proposal will have the effect of reducing the known local and regional extent of FCT21c and considers that cumulative impacts to the regional extent of these values remains small relative to their known extents but is still an incremental loss in the cumulative context. The EPA has also considered flora and vegetation values (i.e., occurrence of FCT21c) are present within nearby BF Sites and within the Jandakot Regional Park.</p> <p>Recommended conditions to ensure consistency of environmental outcome with EPA objectives</p> <p>Condition A1</p> <ul style="list-style-type: none"> • limitations on the proposal extent • development exclusion area and conservation area.
--	---

	<p>Condition B1</p> <ul style="list-style-type: none">• limitations on disturbance to banksia woodland of the Swan Coastal Plain• implement dieback hygiene protocols and weed management controls during construction activities. <p>Condition B4</p> <ul style="list-style-type: none">• development exclusion area• rehabilitation of native vegetation areas in the conservation area and development exclusion area. <p>Condition B5</p> <ul style="list-style-type: none">• conservation area. <p>Condition B6</p> <ul style="list-style-type: none">• offset environmental management plan. <p>Condition C1</p> <ul style="list-style-type: none">• implementation and monitoring conditions.
--	---

2.2 Terrestrial fauna

2.2.1 Environmental objective

The EPA environmental objective for terrestrial fauna is “*To protect terrestrial fauna so that biological diversity and ecological integrity are maintained*” (EPA 2016b).

2.2.2 Investigations and surveys

The EPA used the following investigations and surveys to inform the assessment of the potential impacts to flora and vegetation:

- ERD: Beenyup Road, Banjup- Assessment on Referral Information (Version 0.3) (SLR Consulting 2024)
- Basic and Targeted Vertebrate Fauna Assessment: Lots 11 and 74 Beenyup Road, Banjup (Terrestrial Ecosystems 2023; Appendix E of the ERD)
- Short Range Endemic Invertebrate Assessment of Lots 11 and 74 (Part) Beenyup Road, Banjup, Perth, Western Australia (Invertebrate Solutions Pty Ltd 2021; Appendix F of the ERD)
- Banjup Black Cockatoo Tree Hollow Assessment: Lots 11 and 74 Beenyup Road, Banjup (360 Environmental 2020; Appendix D of the ERD)
- Black Cockatoo Habitat Assessment and Desktop Banksia Woodlands of the Swan Coastal Plain TEC Assessment – Lots 11 and 74 Beenyup Road, Banjup (360 Environmental 2017b; Appendix C of the ERD)
- Response to Submissions (SLR Consulting 2025; Revision 2.0).

The terrestrial and invertebrate fauna assessments were considered appropriate to inform the assessment of potential impacts to the above environmental factor. The EPA has also considered additional information, including information provided in the RTS (SLR Consulting 2025) and the recovery plans for black cockatoo species (DEC 2008; DPAW 2013). The EPA has considered the likely residual impacts of the proposal on terrestrial fauna environmental values in assessing the proposal.

Table 3: Summary of assessment for terrestrial fauna.

Key environmental values and context	
<p>Banksia and eucalypt woodland, which is within the development envelope, provides suitable habitat for the Carnaby's black cockatoo (<i>Zanda latirostris</i>) and Forest red-tailed black cockatoo (<i>Calyptorhynchus banksii naso</i>), but it is 'highly unlikely' to provide habitat for the Baudin's black cockatoo (<i>Zanda baudinii</i>), as the development envelope is outside the known geographic range for this species.</p> <p>The development envelope contains a total of 25.23 ha of foraging habitat for Carnaby's and Forest red-tailed black cockatoos, of which 2.60 ha occurs within the development area and 20.87 ha in the conservation area (SLR Consulting 2025). There are no recorded active black cockatoo breeding trees within the development envelope; three potential breeding trees with no suitable hollows are within the development area, and a further 19 suitable trees are within the broader conservation and wetland buffer areas (Terrestrial Ecosystems 2023).</p> <p>In addition to the fauna habitats noted above, the development envelope contains <i>Melaleuca</i> thicket (0.61 ha), which provide suitable habitat for the quenda (<i>Isoodon fusciventer</i>) (DBCA-listed 'Priority 4' [P4] species). Evidence of quenda diggings and scratching were recorded during the 2023 (Terrestrial Ecosystems) fauna survey, and there is high likelihood of quenda being present in habitat surrounding the development envelope, such as in the conservation area (SLR Consulting 2024).</p> <p>Vegetation within the development area contains 1.53 ha of 'low' and 2.73 ha of 'moderate' suitability SRE habitat, in which mygalomorph spiders, land snails, tree crickets, native bees and slaters may occur (Invertebrate Solutions 2021; Terrestrial Ecosystems 2023).</p>	
Impacts from the proposal	Assessment findings, environmental outcome and recommended conditions
<p>Potential direct impacts</p> <p>Potential impacts to terrestrial fauna from:</p> <ul style="list-style-type: none"> clearing of up to 2.78 ha of fauna habitat, including: <ul style="list-style-type: none"> 2.60 ha of black cockatoo foraging habitat 1.53 ha of 'low' and 2.73 ha of 'moderate' suitability SRE habitat three potential breeding trees with no suitable hollows. fragmentation and loss of ecological connectivity of fauna habitat. 	<p>Assessment finding and environmental outcomes</p> <p><u>Black cockatoos</u></p> <p>The proposal area contains 25.23 ha of black cockatoo habitat, of which 2.60 ha is mapped in the development area, 1.75 ha within the 50m wetland buffer, and 20.87 ha in the conservation area. Evidence of black cockatoo foraging has been recorded within and outside the development envelope (Terrestrial Ecosystems 2023). The EPA notes that foraging habitat for Carnaby's cockatoo, when it is located within 12 km of known nesting locations, benefits and supports breeding efforts (DPAW 2013).</p> <p>While there are no recorded (confirmed) roost sites, the EPA notes that the development envelope is within a buffered 'Carnaby's cockatoo confirmed roost sites (1 km)' area (DBCA-064), and notes that there are multiple confirmed Carnaby's and Forest red-tailed black cockatoo roost sites between (approximately) 3 and 8.5 km of the development envelope (DBCA-050).</p>
<p>Potential indirect impacts</p> <ul style="list-style-type: none"> increased dust, noise, and light emissions from development, and risk of vehicular strikes and feral animal activity 	<p>The EPA notes that the proposal area is in close vicinity to BF Site No. 492 – Lyon Road Bushland, Banjup, BF Site No. 263 – Banjup Bushland, Banjup, and BF Site No. 344 – Denis de Young Reserve and Gibbs Road Swamp Bushland, Banjup/Forrestdale. The EPA has considered that the clearing of 2.60 ha of black</p>

<ul style="list-style-type: none"> decline in the overall quality of retained habitat from altered hydrology, earthworks and levelling. <p>Avoidance and minimisation measures (including regulation by other DMAs)</p> <p>The proponent has proposed minimisation measures, including:</p> <ul style="list-style-type: none"> a 21.55 ha conservation reserve, adjacent to the residential development footprint, is proposed. The reserve will be ceded into the Jandakot Regional Park and will be subject to long term (ongoing) management by the City of Cockburn. <p>Consultation</p> <p>Key matters relevant to terrestrial fauna raised during the consultation period included concerns about:</p> <ul style="list-style-type: none"> clearing of and cumulative impact to black cockatoo foraging habitat within the SCP adequacy of the proposed offset site. 	<p>cockatoo foraging habitat represents approximately 1.4% of the known (estimated) foraging habitat within 20 km of the development envelope (SLR Consulting 2024).</p> <p>To minimise impacts to these values, the proponent has committed to management measures (section 5.6 of the ERD, implementation of the CEMP). The EPA recommends that there is no planting of suitable black cockatoo foraging habitat within 10 m of Gibbs Road/ Beenyp Road, noting that it may increase the risk of fauna strikes.</p> <p>While the proposal would result in a small overall impact to the total mapped extent of foraging habitat, the EPA has assessed the impact to black cockatoo as a significant residual impact given the threat of ongoing clearing of foraging habitat from development across the SCP. The EPA has recommended implementation conditions (A1, B1, B2, B4, and B5) and offsets (condition B6) to ensure consistency with the EPA objective for this factor.</p> <p><u>Other fauna</u></p> <p>Whilst the Terrestrial Ecosystems (2023) fauna survey did not record the Perth slider (<i>Lerista lineata</i>) (DBCA-listed P3 species) and black-striped snake (<i>Neelaps calonotos</i>) (DBCA-listed P3 species) within the development envelope and surrounds, these species may occur due to the presence of suitable habitat (Terrestrial Ecosystems 2023). The EPA also notes that the proposal will clear up to 0.61 ha of quenda (P4) habitat. Given the proponent's proposed mitigation measures and recommended conditions (A1, B2, and B4, and B5), and proposed offsets (B6), the EPA considers that the environmental outcome will be consistent with the EPA objective for terrestrial fauna.</p> <p><u>Short range endemics</u></p> <p>The EPA notes that of the 2.78 ha of terrestrial fauna habitat, 1.53 ha is 'low' suitability, and 2.73 ha is 'moderate' suitability SRE habitat. No confirmed SRE species were recorded during the field survey; however, one likely SRE species (<i>Pseudodiploexochus</i> indet.) was recorded at seven of eight survey quadrats, and two possible SRE species (<i>Spherilla</i> sp. '2' and <i>Laevophiloscia</i> sp. '2') were recorded. The EPA considers that subject to recommended conditions (B1, B4, and B5) and offsets (B6), the environmental outcome is likely to be consistent with the EPA objective for this factor.</p> <p><u>Cumulative impacts</u></p> <p>The EPA has considered existing and reasonably foreseeable cumulative impacts to terrestrial fauna from developments occurring in the vicinity of the proposal. The EPA's cumulative impact assessment has considered the cumulative effects from the range of threats and pressures surrounding the proposal and whether the environment affected by the proposal has significant value due to other successive, incremental and interactive cumulative impacts within the assessment area.</p>
---	--

	<p>The proponent has provided a cumulative impact assessment (section 11 of the ERD), which identifies black cockatoo habitat being impacted by recent and foreseeable proposals within 20 km of the proposal. The proponent identified the following cumulative losses to black cockatoo habitat (Table 37 of the ERD; SLR Consulting 2024):</p> <ul style="list-style-type: none"> • up to 85.70 ha of Carnaby's cockatoo foraging habitat • up to 120.02 ha Forest red-tailed black cockatoo foraging habitat • up to 52.67 ha of Baudin's cockatoo foraging habitat. <p>Considering the cumulative effect and past environmental impacts on black cockatoos in the constrained Perth Metropolitan Region, the EPA highlights the importance and increasing need for offsets that include habitat restoration and rehabilitation of degraded areas close to the area of impact (EPA 2024). This provides positive regional environmental outcomes that distant acquisition offset sites would not otherwise deliver for locally impacted populations of black cockatoos (EPA 2019). The EPA has therefore recommended conditions to set clearing limits to foraging habitat and to require offsets that sufficiently counterbalance significant residual impacts, which includes requirements for rehabilitation of degraded vegetation and fauna habitat.</p> <p>Recommended conditions to ensure consistency of environmental outcome with EPA objectives.</p> <p>Condition A1</p> <ul style="list-style-type: none"> • limitation on extent. <p>Condition B2</p> <ul style="list-style-type: none"> • limits on disturbance to good quality black cockatoo foraging habitat. <p>Condition B4</p> <ul style="list-style-type: none"> • development exclusion area • rehabilitation of native vegetation areas in the conservation area and development exclusion area, to commence within twelve (12) months from the date of ground disturbing activities. <p>Condition B5</p> <ul style="list-style-type: none"> • conservation area. <p>Condition B6</p> <ul style="list-style-type: none"> • offset environmental management plan. <p>Condition C1</p> <ul style="list-style-type: none"> • implementation and monitoring conditions.
--	---

2.3 Inland waters

2.3.1 Environmental objective

The EPA environmental objective for inland waters is “*To maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected*” (EPA 2016).

2.3.2 Investigations and surveys

The EPA advises that the proponent submitted the following investigations and surveys, which informed the assessment of potential impacts to inland waters:

- ERD: Urban Development of Lots 11 and 74 Beenyp Road, Banjup (SLR Consulting 2024)
- Lots 11 & 74 Beenyp Road, Banjup: District Water Management Strategy (Ochre West Consulting Engineers 2017; Appendix H of the ERD)
- UNDO Tool Report (Department of Water and Environmental Regulation 2021; Appendix M of the ERD)
- Aubin Grove and Banjup Monitoring Programme 2021/2022 (Hyd2o 2022; Attachment 3 of the RTS)
- Response to Submissions (SLR Consulting 2025; Revision 2.0).

The EPA considers that the proponent has completed the relevant studies to appropriately inform the assessment of the potential impacts from the proposal to the above environmental factor. The EPA notes the proponent also utilised the Department of Biodiversity, Conservation and Attractions (DBCA) geomorphic wetlands database. The EPA has also considered the DBCA geomorphic wetlands database and methodology for the evaluation of wetlands on the Swan Coastal Plain (DBCA 2017) in its assessment of inland waters values. The proponent’s RTS has also been considered.

Table 4: Summary of assessment for inland waters.

Key environmental values and context	
<p>The proposal is located upstream of the Gibbs Road Swamp wetland system (listed in the <i>Directory of Important Wetlands in Australia</i>) and contains a CCW (UFI: 12984) and REW (UFI: 15180) within the conservation area. The wetland system is located within a regional ecological linkage associated with the Jandakot Regional Park. The EPA notes the development envelope is classified as a 'Priority 2' (P2) Public Drinking Water Source Area (PDWSA) and part of the Jandakot Mound Groundwater Protection Area and Jandakot Underground Water Pollution Control Area. The Jandakot Mound is associated with the Leederville and Yarragadee North superficial aquifers.</p> <p>Surface water within the development envelope is primarily derived from direct rainfall, with limited influence from surface runoff due to the high infiltration capacity of the sandy soils. Seasonal inundation occurs within the CCW, outside the development area, and surface water is generally retained within the site. Groundwater flows southeast toward the CCW, with depths ranging from 6.85 m below ground level (mbgl) to less than 2 mbgl in the eastern portion. The EPA acknowledges that a long-term DWER monitoring bore (ID 61410711) is located within the development area to ensure groundwater levels are maintained. Groundwater monitoring data (2010-2020) indicates that groundwater levels of the CCW do not intersect with the natural soil surface (section 6.5.3 of the ERD). In 2021, monitoring data recorded higher groundwater levels at nearby bores that indicate local groundwater levels may be rising, potentially attributed to land use changes (Hydr2o 2022).</p>	
Impacts from the proposal	Assessment findings, environmental outcomes and recommended conditions
<p>Potential Impacts</p> <p>Potential direct impacts to inland waters from:</p> <ul style="list-style-type: none"> clearing of 0.11 ha of 'transitional' wetland vegetation associated with the CCW permanent alteration of the local hydrological regime, including surface water drainage and groundwater decreased available wetland storage volume and increased impervious drainage catchment. <p>Potential indirect impacts</p> <ul style="list-style-type: none"> decreased drinking water quality associated with the Jandakot Groundwater Mound changes to surface and/or groundwater levels changes to the Gibbs Road Swamp wetland system. 	<p>Assessment finding and environmental outcomes</p> <p><u>CCW</u></p> <p>The EPA has considered impacts to the CCW, and indirect impacts to the Gibbs Road Swamp wetland system, and acknowledges a significant portion of the development envelope (21.55 ha) is proposed to be ceded as a conservation area to be managed in line with Jandakot Regional Park. In addition, a 50 m wetland buffer is proposed to the CCW boundary. The EPA supports the 50 m wetland buffer to be managed in line with the proposed conservation area or as public open space with controlled access. The EPA notes that the SLR Consulting (2025) RTS document establishes no development, including for infrastructure, will occur within the 50 m wetland buffer.</p> <p>The EPA also supports the proposed rehabilitation of degraded areas within the conservation area and 50 m wetland buffer through infill planting, weed management, fence maintenance and access control as outlined in wetland buffer management plan framework in the RTS (SLR Consulting 2025).</p> <p>The EPA advises, as per the <i>Planning for Bushfire Guidelines</i> section 5.1.4 (WAPC 2024), future design considerations must adequately consider the wetland buffer, and it may be necessary during future planning to modify the development location or reduce lot yield to provide adequate hazard separation from the 50 m wetland buffer.</p>
Avoidance and minimisation measures	

<ul style="list-style-type: none"> ceding land containing CCW and REW as conservation area proposed 50 m wetland buffer to the CCW with proposed rehabilitation of degraded wetland vegetation as per wetland buffer management plan framework in the RTS (SLR Consulting 2025) implementation of District Water Management Strategy (DWMS) (Ochre West 2017) with a Local Water Management Strategy (LWMS) and Urban Water Management Plan (UWMP) to be prepared and implemented prior to ground-disturbing activities no dewatering is proposed CEMP is proposed to be prepared at future planning stage as per CEMP framework in the RTS (SLR Consulting 2025). 	<p>Given the above, and subject to minimising hydrological impacts to the CCW through the implementation of a 50m wetland buffer and conservation area, the EPA advises the environmental outcome is likely to be consistent with the EPA objective for inland waters. The EPA has recommended condition A1 (limit of extent), B4 (development exclusion area) and B5 (conservation area) to ensure consistency with the EPA objective for inland waters.</p> <p><u>Jandakot Mound public drinking water source area</u></p> <p>The EPA notes that land within the development envelope is currently zoned 'Rural Water Protection', and classified as a P2 PDWSA under the Jandakot Mound Groundwater Resource Area and the Jandakot Underground Water Pollution Control Area, which are subject to requirements under Ministerial Statement (MS) 688 (link). The EPA notes that reclassification of PDWSA will occur once the government led strategic planning process has determined that an urban rezoning is the preferred outcome for the land. The existing P2 PDWSA will need to be reclassified to P3*, to enable residential / urban development.</p> <p>The EPA notes potential development may alter groundwater level in and around Beenyup Swamp and notes the environmental condition under MS 688 to meet minimum groundwater level (MinGL). Groundwater level monitoring undertaken in 2022 shows minimum groundwater level are currently compliant with the minimum water level criteria of MS 688; however, 2021 data from nearby bores suggests rising groundwater levels, likely due to land use changes (Hydr2o 2022).</p> <p>The EPA notes that mitigation measures significantly rely on future DMA regulation under the PD Act. The EPA expects the proposed mitigation measures (stormwater management, connection to main sewer, CEMP and water management plans or strategies), at a minimum, to be implemented through future planning processes. Through mitigation measures, and subject to the recommended condition B5 being implemented (conservation area), the EPA advises the environmental outcome is likely to be consistent with the EPA objective for inland waters. The EPA has provided advice regarding the future reclassification of the P2 PDWSA, and how environmental commitments under MS 688 can be met, in section 6 – other advice.</p> <p><u>Water management</u></p> <p>EPA notes urbanisation of the development area may increase the pollutants, and nutrient inputs compared to pre-development through the removal of deep-rooted native vegetation and increased residential densities. The proposed development area will also reduce the surface water catchment of CCW by 6.3%. The EPA notes this is not expected to significantly impact the wetland as the majority of the CCW water comes from direct rainfall and expects appropriate management measures and protection of surface water and groundwater values to be implemented through future planning processes.</p>
<p>DMA regulation</p> <ul style="list-style-type: none"> the WAPC under the <i>Planning and Development Act 2005</i> (PD Act) can regulate the LWMS and UWMP and implementation of drainage infrastructure through specific subdivision requirements the EPA expects that any water management plans or strategies will consider and include, but not be limited to: <ul style="list-style-type: none"> a framework to meet the environmental outcome in condition B3-1 ongoing hydrological monitoring that is at minimum consistent with the DWMS (Ochre West 2017) and may be subject to refinement during future of stages of planning on advice of Department of Water and Environmental Regulation (DWER). 	

<p>Consultation</p> <p>The key matters raised during the consultation period include:</p> <ul style="list-style-type: none"> • impacts to the CCW and loss of wetland vegetation • impacts to wetland water quality and pollution • impacts to public drinking water quality associated with the Jandakot Groundwater Mound. 	<p>The EPA notes that LWMS documents are required through the planning process to be prepared as part of structure planning and UWMP documents as part of subdivision. The EPA notes that stormwater management and infrastructure can also be subject to regulation by WAPC under the PD Act. The EPA expects subject to mitigation measures (water management plans or strategies and regulation under the PD Act), the environmental outcome is likely to be consistent with the EPA objective for inland waters. The EPA notes MS 688 outlines that DWER must manage the groundwater system to comply with water level criteria and commitments set at sites across the Jandakot Mound. The Ministerial Criteria and commitments under MS 688 have not been adequately addressed for this proposal and is considered outside of the scope of the proposal. Advice is provided in section 6 – other advice.</p> <p>The EPA also supports that no dewatering is proposed during development and construction is proposed during periods of low groundwater. The EPA notes there is an existing groundwater abstraction licence registered for irrigation within the development envelope, which is significantly more than the proposed irrigation requirements for the residential development area (section 6.8.3 of the ERD). As such, the existing groundwater abstraction licence is considered sufficient, and no additional groundwater abstraction is proposed.</p> <p>The EPA considers that as no dewatering is proposed and the site is not subject to inundation within the development area, any resulting change in water levels is likely to be small and it is unlikely to result in impacts to acid sulfate soils. The EPA advises that subject to mitigation of dewatering and abstraction through licences under the RiWI Act, the environmental outcome is likely to be consistent with EPA's objective for inland waters.</p> <p>Recommended conditions to ensure consistency of environmental outcome with EPA objective</p> <p>Condition A1 Limitations</p> <ul style="list-style-type: none"> • limitation on extent. <p>Condition B3 Inland Waters</p> <ul style="list-style-type: none"> • maintains the hydrological regime, water quality, ecological integrity, or ecological function of the CCW. • no adverse impacts to water dependent ecological communities within 50 m outside of the development envelope. <p>Condition B4 Development exclusion area</p> <ul style="list-style-type: none"> • implementation of development exclusion area (inclusive of a 50 m wetland buffer). <p>Condition B5 Conservation area</p> <ul style="list-style-type: none"> • implementation of conservation area.
--	--

3 Holistic and cumulative assessment

While the EPA assessed the impacts of the proposal against the key environmental factors and environmental values individually in the key factor assessments above, given the link between flora and vegetation, terrestrial fauna, and inland waters, the EPA also considered connections and interactions between them to inform a holistic view of impacts to the whole environment.

Flora and vegetation, Terrestrial fauna, and Inland waters

Actions that may impact significant flora and vegetation are likely to also impact foraging habitat for significant fauna (black cockatoos) and also have the potential to impact surface water quality. The EPA has recommended condition B1 which aims to minimise the direct and indirect impacts to flora and vegetation, minimising impacts to conservation significant fauna habitat and inland waters.

The offset conditions (condition B6) to counterbalance the significant residual impacts to flora and vegetation and terrestrial fauna will also mean the inter-related impacts to the health of other environmental factors will be consistent with the EPA's environmental factor objectives and would not alter conclusions about consistency with the EPA objectives for the above factors.

Summary of holistic assessment

When the separate environmental factors and values affected by the proposal were considered together in a holistic assessment, the EPA formed the view that the impacts from the proposal would not alter the EPA's views about consistency with the EPA's factor objectives as assessed in section 2.

The EPA has considered the proposal in the context of cumulative and holistic impacts associated with flora and vegetation and terrestrial fauna. The additional area of native vegetation that is proposed to be cleared for the approved Stage 1 proposal (3.33 ha) does not result in a substantial increase to the amount of clearing proposed, noting Stage 1 was already assessed as to not significantly impact environmental factors. The EPA has recommended conditions to minimise potential impacts to environmental values.

4 Offsets

Environmental offsets are actions that provide environmental benefits which counterbalance the significant residual impacts of a proposal.

Consistent with the *WA Environmental Offsets Guidelines* (Government of Western Australia 2014), the EPA may consider the application of environmental offsets to a proposal where it determines that the residual impacts of a proposal are significant, after avoidance, minimisation and rehabilitation have been pursued.

In the case of this proposal, likely (and potential) significant residual impacts are:

- Clearing of vegetation representative of:
 - 2.13 ha of Banksia woodland SCP PEC
 - 2.60 ha of black cockatoo habitat.

Environmental offsets are not appropriate in all cases. In this case the EPA considers offsets are appropriate given:

- the proponent has applied avoidance and mitigation measures mainly by refining the development envelope and ceding the proposed conservation area for management in line with the Jandakot Regional Park (principle 1 of the *WA Environmental Offsets Policy*).
- the scale of the significant residual impacts on environmental biodiversity values for this project are not minor (principle 2 of the *WA Environmental Offsets Policy*). Further details on the EPA's determination of significant residual impacts outlined in section 2.1 of this report.

The proponent's proposed offset package will provide offsets that are enduring and will deliver long term strategic outcomes (principle 6 of the *WA Environmental Offsets Policy*). The proponent has proposed an offset area for Banksia woodland and black cockatoo habitat over the eastern part of Rose Shanks Reserve located 3.15 km north-east from the proposal (Appendix A, Figure 2). The EPA has considered the offset area and notes the following:

- Rose Shanks Reserve is under an existing management order to the City of Cockburn (City) for the purpose of conservation.
- The City and proponent have entered into a memorandum of understanding regarding use and access of the offset area and compensation arrangements.
- The offset area will be managed for conservation by the City in perpetuity.
- The proponent (or relevant third party) may be granted lease or licence provisions to access reserve for rehabilitation works.
- The proposed offset area was historically a sand quarry and is currently in a degraded state, which is suitable to be rehabilitated.

The offset details provide in the proponents RTS are listed below (SLR Consulting 2025).

Flora and vegetation

- To rehabilitate 13.86 ha of Banksia woodland to 'Good' condition over a 20 year time period.

Terrestrial fauna

- To rehabilitate 11.05 ha black cockatoo foraging habitat over a 20 year time period. Black cockatoo habitat will be established in areas of low (or worse) quality and is proposed to be restored to achieve moderate quality.
- 3.32 ha of existing lower quality habitat is proposed to be increased across the black cockatoo foraging habitat, and 1.84 ha of high to very high quality habitat is proposed to be maintained.

In considering whether the offsets are likely to counterbalance the significant residual impacts, the EPA has had regard for principles 3 and 4 of the *WA Environmental Offsets Policy*. Given proposals for environmental offsets should be underpinned by sound information and knowledge, and should be relevant and proportionate to the significance of the environmental values being impacted, the EPA is recommending that the offset environmental management plan be prepared (condition B6-3) to demonstrate how environmental values will be achieved to counterbalance the significant residual impacts. In support of principles 3 and 4 the EPA has recommended condition C1-1(1) to prevent ground disturbing activities from occurring until the CEO has confirmed that the environmental offset management plan meets all requirements of the recommended offset condition (condition B6), to ensure greater confidence that the offsets will counterbalance the significant residual impacts of the proposal.

The offset environmental management plan will also need to account for the uncertainty in predicting environmental impacts for each environmental value and to manage the risk associated with any time-lag between establishing offsets and generating the anticipated benefits. Further, should the environmental offset fail to achieve the environmental outcomes required to counterbalance impacts, the EPA has recommended contingency offsets under conditions B6-7 and B6-8.

The EPA recognises that the offset details provided by the proponent in the RTS are consistent with the offset details provided to DCCEE (SLR 2025). The approval under the EPBC Act (ref: 2017/7923) is conditional on the approval of an offset strategy and management plan prior to commencement. This is complimentary in nature to the EPA's recommended conditions. The EPA notes that DCCEE advised it will review the offset details once the relevant State Ministerial Statement is published and additional details may be required from the proponent. Both EPA and DCCEE note the proponent will be required to fulfil offset requirements under the EP Act and EPBC Act.

Notwithstanding the above, the EPA considers that it has received sufficient information to give it confidence that the offset is suitable to counterbalance the significant residual impacts. The EPA is therefore reasonably confident that, once successfully rehabilitated, the proposed offset area will substantially increase the quantity and quality of Banksia woodland habitat within Rose Shanks Reserve and contribute to the Jandakot Regional Park. The EPA has considered the likely outcome of the rehabilitated habitat would be a net gain in habitat (Banksia

woodland and black cockatoo foraging) within managed conservation tenure at a local and regional scale.

Conclusion

The EPA has considered and assessed the offset proposal and if it would result in a net environmental benefit. The anticipated outcome from the offset is the creation of additional Banksia woodland habitat and foraging habitat for black cockatoos.

The EPA has recommended condition B6 to ensure the environmental outcomes are achieved. The EPA therefore considers that, subject to recommended condition B6 (environmental offsets), the environmental outcome is likely to be consistent with the EPA objective for flora and vegetation, terrestrial fauna and inland waters.

5 Recommendations

The EPA has taken the following into account in its assessment of the proposal:

- environmental values which may be significantly affected by the proposal
- assessment of key environmental factors, separately and holistically (this has included considering cumulative impacts of the proposal where relevant)
- likely environmental outcomes which can be achieved with the imposition of conditions
- consistency of environmental outcomes with the EPA's objectives for the key environmental factors
- EPA's confidence in the proponent's proposed mitigation measures
- whether other statutory decision-making processes can mitigate the potential impacts of the proposal on the environment
- principles of the EP Act.

The EPA recommends that the proposal may be implemented subject to the conditions recommended in Appendix A.

6 Other advice

The EPA may, if it sees fit, include other information, advice or recommendations relevant to the environment in its assessment reports, even if that information has not been considered by the EPA in its assessment of a proposal. The EPA provides the following information for consideration by the Minister.

Public Drinking Water Source Area

The EPA notes that the proposal development envelope lies within the Jandakot Groundwater Protection Area and is classified as a Priority 2 Public Drinking Water Source Area (PDWSA), which includes a Water Corporation extraction bore and corresponding wellhead protection zone. As per guidance in the *Water Quality Protection Note No. 38*, the reclassification of the PDWSA to urban should only occur once a government led strategic planning process, such as a sub-regional planning framework or sub-regional structure plan, has determined the development benefit is greater than the water quality protection benefit.

Accordingly, the EPA notes that should the WAPC resolve to rezone the land from 'Rural Water Protection' to the 'Urban' zone, future development within the proposal development envelope should be consistent with the recent State Planning Policy No. 2.9 – Water and the accompanying Planning for Water Guidelines, and relevant DWER water quality protection notes for PDWSAs.

The EPA expects any future planning processes to be consistent with the following outcomes, and expects these outcomes are reflected in the requirements of future planning approvals (including through the local planning scheme):

- post-development hydrological conditions (groundwater and surface water levels/flow) to be consistent with pre-development conditions
- no hydrological impacts, including to water quality and quantity, to the CCW and Gibbs Road Swamp
- minimise impacts to water quality within the Wellhead Protection Zone
- monitoring of groundwater levels for the environmental water provisions of wetlands, and terrestrial phreatophytic vegetation and flora sites.

Appendix A: Recommended conditions

Section 44(2)(b) of *Environmental Protection Act 1986* specifies that the EPA's report must set out (if it recommends that implementation be allowed) the conditions and procedures, if any, to which implementation should be subject. This appendix contains the EPA's recommended conditions and procedures.

Recommended Environmental Conditions

STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED **(*Environmental Protection Act 1986*)**

URBAN DEVELOPMENT OF LOTS 11 AND 74 BEENYUP ROAD, BANJUP

Proposal: The proposal is for the construction of a 4.63 ha residential and urban area, and the establishment of a 21.55 ha conservation area on Lots 11 and 74 Beenyup Road, Banjup

Proponent: Aigle Royal Developments
Australian Business Number: 24 749 154 661

Proponent address: 225 St Georges Terrace
PERTH WA 6000

Assessment number: 2255

Report of the Environmental Protection Authority: 1799

Introduction: Pursuant to section 45 of the *Environmental Protection Act 1986* (EP Act), it has been agreed that the proposal entitled Urban Development of Lots 11 and 74 Beenyup Road, Banjup described in the 'Proposal Content Document' attachment of the referral of 28 April 2020, as amended by the change to proposal approved under section 43A of the EP Act on 14 July 2022 and 31 January 2024, may be implemented and that the implementation of the proposal is subject to the following implementation conditions and procedures:

Conditions and procedures

Part A: Proposal extent

Part B: Environmental outcomes, prescriptions and objectives

Part C: Environmental management plans and monitoring

Part D: Compliance and other conditions

PART A: PROPOSAL EXTENT

A1 Limitations and Extent of Proposal

A1-1 The proponent must ensure that the proposal is implemented in such a manner that the following limitations or maximum extents are not exceeded:

Proposal element	Location	Maximum extent
Physical elements		
Development envelope	Figure 1	26.17 ha
Development area	Figure 1	4.63 ha
Development exclusion area	Figure 1	1.85 ha
Conservation area	Figure 1	21.55 ha
Direct disturbance of native vegetation	Within the development envelope shown in Figure 1	Clearing of no more than 2.78 ha

PART B – ENVIRONMENTAL OUTCOMES, PRESCRIPTIONS AND OBJECTIVES

B1 Flora and vegetation

B1-1 The proponent must ensure the implementation of the proposal achieves the following environmental outcome:

- (1) disturb no more than the following environmental values:
 - (a) 2.39 **ha** of Banksia woodlands of the Swan Coastal Plain ecological community (Priority 3)

B1-2 The proponent must:

- (1) implement hygiene protocols consistent with the Management of *Phytophthora cinnamomi* for Biodiversity Conservation in Australia, Part 2 National Best Practice Guidelines as amended or replaced from time to time; and
- (2) undertake weed control and management **during ground disturbing activities** to prevent the introduction or spread of **environmental weeds** within the **development exclusion area** or **conservation area**.

B2 Terrestrial fauna

B2-1 The proponent must ensure the implementation of the proposal achieves the following environmental outcome:

- (1) **Disturb** no more than 2.60 **ha** of good quality **foraging habitat** for black cockatoos.

B3 Inland waters (*PDWSA*)

B3-1 During construction, the proponent must:

- (1) ensure no refuelling, chemical or hydrocarbon storage occurs within the **development exclusion area** or **conservation area**.

B4 Development exclusion area

B4-1 The proponent must ensure the implementation of the proposal achieves the following environmental outcomes within the **development exclusion area** identified in Figure 1:

- (1) ensure no **ground disturbing activities** permitted, excepting **low impact activities**; and

- (2) ensure **controlled access** to the development exclusion area by installing fencing around the **development exclusion area** boundary (except where it abuts **conservation area**); and
- (3) **rehabilitation** of ‘**degraded**’ and ‘**completely degraded**’ areas of vegetation to a ‘**good**’ **condition** or better to improve the condition of **black cockatoo foraging** habitat and vegetation associated **Conservation Category Wetland** (UFI 12984).

B5 Conservation area

B5-1 During construction, and for two (2) years following the completion of construction, the proponent must implement the proposal to meet the following environmental outcome within the **conservation area** identified in Figure 1:

- (1) maintain the hydrological regime and water quality of **Conservation Category Wetland** (UFI 12984).

B5-2 The proponent must:

- (1) Protect and enhance the **conservation area** identified in Figure 1, which must include but not be limited to: **rehabilitation** of ‘**degraded**’ and ‘**completely degraded**’ areas of vegetation to a ‘**good**’ **condition** or better; undertake weed control and management and **control access**;
- (2) within 3 years of subdivision approval either the **conservation area** is ceded to the Crown for the purpose of management for conservation, or the site is managed under another suitable mechanism for the purpose of conservation, as agreed in writing by the CEO, whichever is sooner; and
- (3) identify the relevant management body for management of the **conservation area**, including its role, and the role of the proponent, and confirmation in writing that the relevant management body accepts responsibility for its role, as approved by the CEO in writing.

B6 Offsets

B6-1 The proponent must implement offsets to counterbalance the significant residual impacts of the proposal on the following **environmental values**:

- (1) Banksia woodlands of the Swan Coastal Plain ecological community (Priority 3);
- (2) **foraging habitat** for **black cockatoos**; and

- (3) potential **nesting habitat**.

B6-2 The proponent must ensure the implementation of the offset achieves the following environmental outcomes:

- (1) counterbalance the significant residual impacts to the **environmental values** identified in condition B6-1
- (2) ensure a **tangible improvement** in habitat managed for offset purposes for **black cockatoos**; and
- (3) ensure a strategic conservation benefit is achieved for **black cockatoos**.

Offset Environmental Management Plan

B6-3 The proponent must prepare an **Offset Environmental Management Plan** and demonstrate how the environmental outcomes in condition B6-2 will be achieved and submit it to the **CEO**.

B6-4 The **Offset Environmental Management Plan** must include the implementation of the offset measures to the extent and at the location as set out and described in Table 1:

Table 1: Environmental values, location and extent and type of offset measures required to meet condition B6-1

Environmental value	Offset location	Extent of area to receive offset measures	Type of offset measures
<i>Banksia woodland and black cockatoo habitat</i>	<i>Part Rose Shanks Reserve (Lot 505 on Plan 416332, Reserve 1820) (Figure 2)</i>	<i>16.16 ha</i>	<i>Rehabilitation</i>

B6-5 The proponent must:

- (1) commence the **Offset Environmental Management Plan** at the proposed **offset area** prior to **ground disturbing activities** in the development envelope;
- (2) continue to implement the **Offset Environmental Management Plan** until the **CEO** has confirmed in writing that condition B6-2 has been achieved.

B6-6 The **Offset Environmental Management Plan** must:

- (1) describe how the offset measures will be implemented consistent with condition B6-2;
- (2) have regard to the conservation advice, recovery plans and threat abatement plans relevant to **black cockatoos**;
- (3) spatially identify the proposed **offset area** to receive **on-ground management** and **rehabilitation** offset measures in accordance with condition B6-3, that contains the **environmental values** identified in condition B6-1;
- (4) demonstrate how the **environmental values** within the proposed **offset area** will be maintained, improved and/or managed in order to counterbalance the significant residual impact to the **environmental values** in condition B6-1 and achieve the environmental **outcomes** in condition B6-2;
- (5) demonstrate application of the principles of the WA Environmental Offsets Policy, the WA Environmental Offsets Metric and the WA Offsets Template, as described in the WA Environmental Offsets Guidelines, and the *Environment Protection and Biodiversity Conservation Act 1999* Environmental Offsets Policy Assessment Guide, or any subsequent revisions of these documents;
- (6) identify how the ongoing performance of the offset measures, and whether they are achieving the **outcomes** in condition B6-2, will periodically be made publicly available;
- (7) where **on-ground management** is proposed:
 - (a) state the **management target** for each **environmental value** to be achieved by **on-ground management**, including completion criteria, which will result in a **tangible improvement** to the **environmental values** listed in condition B5-1.
- (8) for **rehabilitation** offsets, this must include but not be limited to:
 - (a) quantity of potential nesting habitat and foraging habitat for black cockatoos to be achieved;
 - (b) quantity of Banksia woodland habitat to be achieved;
 - (c) completion criteria to measure (at a minimum) **foraging habitat** value, vegetation structure, species diversity and abundance, plant density and vegetation condition that is to be achieved to provide high-quality potential **nesting habitat** and **foraging**

habitat for **black cockatoos** and Banksia woodland habitat;

- (d) completion criteria to measure and determine the spread of existing **environmental weeds**, pathogens and **dieback** and that the introduction of new **environmental weeds**, pathogens and **dieback** is minimised;
- (e) criteria to measure and demonstrate the **rehabilitation** is **self-sustaining**; and
- (f) adaptive management to ensure successful **rehabilitation**.

B6-7 If, after receiving the **Offset Environmental Management Plan** required by condition B6-3, the CEO determines that the proposal has not met the environmental outcome in condition B6-2 and has resulted in an additional significant residual impact to Banksia woodland and black cockatoo values, and after notifying the proponent in writing, the proponent must undertake an additional offset to counterbalance the significant residual impact from the additional impact to Banksia woodland and black cockatoo values.

B6-8 Within twelve (12) months of receiving notice in writing from the **CEO** that an additional offset is required under condition B6-7 the proponent must update the **Offset Environmental Management Plan** required by B6-3, to include additional offsets to counterbalance the significant residual impacts to Banksia woodland and black cockatoo values.

PART C – ENVIRONMENTAL MANAGEMENT PLANS AND MONITORING

C1 Environmental Management Plans: Conditions Related to Commencement of Implementation of the Proposal

C1-1 The proponent must not undertake:

- (1) **ground disturbing activities** (or other relevant activity) until the **CEO** has confirmed in writing that the environmental management plan required by condition B6-3 meets the requirements of that condition and condition C4;

C2 Environmental Management Plans: Conditions Relating to Approval, Implementation, Review and Publication

C2-1 Upon being required to implement an environmental management plan under Part B, or after receiving notice in writing from the **CEO** under condition C1-1 that the environmental management plan(s) required in Part B satisfies the relevant requirements, the proponent must:

- (1) implement the most recent version of the **confirmed** environmental management plan; and
- (2) continue to implement the **confirmed** environmental management plan referred to in condition C2-1(1), other than for any period which the **CEO** confirms by notice in writing that it has been demonstrated that the relevant requirements for the environmental management plan have been met, or are able to be met under another statutory decision-making process, in which case the implementation of the environmental management plan is no longer required for that period.

C2-2 The proponent:

- (1) may review and revise a **confirmed** environmental management plan provided it meets the relevant requirements of that environmental management plan, including any consultation that may be required when preparing the environmental management plan;
- (2) must review and revise a **confirmed** environmental management plan and ensure it meets the relevant requirements of that environmental management plan, including any consultation that may be required when preparing the environmental management plan, as and when directed by the **CEO**; and
- (3) must revise and submit to the **CEO** the **confirmed** Environmental Management Plan if there is a material risk that the outcomes or objectives it is required to achieve will not be complied with, including but not limited to as a result of a change to the proposal.

- C2-3 Despite condition C2-1, but subject to conditions C2-4 and C2-5, the proponent may implement **minor revisions** to an environmental management plan if the revisions will not result in new or increased **adverse impacts** to the environment or result in a risk to the achievement of the limits, outcomes or objectives which the environmental management plan is required to achieve.
- C2-4 If the proponent is to implement **minor revisions** to an environmental management plan under condition C2-3, the proponent must provide the **CEO** with the following at least twenty (20) business days before it implements the revisions:
- (1) the revised environmental management plan clearly showing the **minor revisions**;
 - (2) an explanation of and justification for the **minor revisions**; and
 - (3) an explanation of why the **minor revisions** will not result in new or increased **adverse impacts** to the environment or result in a risk to the achievement of the limits, outcomes or objectives which the environmental management plan is required to achieve.
- C2-5 The proponent must cease to implement any revisions which the **CEO** notifies the proponent (at any time) in writing may not be implemented.
- C2-6 **Confirmed** environmental management plans, and any revised environmental management plans under condition C2-4(1), must be published on the proponent's website and provided to the **CEO** in electronic form suitable for on-line publication by the Department of Water and Environmental Regulation within twenty (20) business days of being implemented, or being required to be implemented (whichever is earlier).

C3 Conditions Related to Monitoring

- C3-1 The proponent must undertake monitoring capable of:
- (1) substantiating whether the proposal limitations and extents in Part A are exceeded; and
 - (2) **detecting** and substantiating whether the environmental outcomes identified in Part B are achieved (excluding any environmental outcomes in Part B where an environmental management plan is expressly required to monitor achievement of that outcome).
- C3-2 The proponent must submit as part of the Compliance Assessment Report required by condition D2, a compliance monitoring report that:
- (1) outlines the monitoring that was undertaken during the implementation of the proposal;

- (2) identifies why the monitoring was capable of substantiating whether the proposal limitation and extents in Part A are exceeded;
- (3) for any environmental outcomes to which condition C3-1(2) applies, identifies why the monitoring was scientifically robust and capable of **detecting** whether the environmental outcomes in Part B are met;
- (4) outlines the results of the monitoring;
- (5) reports whether the proposal limitations and extents in Part A were exceeded and (for any environmental outcomes to which condition C3-1 (2) applies) whether the environmental outcomes in Part B were achieved, based on analysis of the results of the monitoring; and
- (6) reports any actions taken by the proponent to remediate any potential non-compliance.

C4 Environmental Management Plans: Conditions Relating to Monitoring and Adaptive Management for Outcomes Based Conditions

C4-1 The environmental management plans required under condition B6-3 must contain provisions which enable the substantiation of whether the relevant outcomes of those conditions are met, and must include:

- (1) **threshold criteria** that provide a limit beyond which the environmental outcomes are not achieved;
- (2) **trigger criteria** that will provide an early warning that the environmental outcomes are not likely to be met;
- (3) monitoring parameters, sites, control/reference sites, methodology, timing and frequencies which will be used to measure **threshold criteria** and **trigger criteria**. Include methodology for determining alternate monitoring sites as a contingency if proposed sites are not suitable in the future;
- (4) baseline data;
- (5) data collection and analysis methodologies;
- (6) adaptive management methodology;
- (7) **contingency measures** which will be implemented if **threshold criteria** or **trigger criteria** are not met; and
- (8) reporting requirements.

C4-2 Without limiting condition C3-1, failure to achieve an environmental outcome, or the exceedance of a **threshold criteria**, regardless of whether threshold **contingency measures** have been or are being implemented, represents a non-compliance with these conditions.

PART D – COMPLIANCE, TIME LIMITS, AUDITS AND OTHER CONDITIONS

D1 Non-compliance Reporting

D1-1 If the proponent becomes aware of a potential non-compliance, the proponent must:

- (1) report this to the **CEO** within seven (7) days;
- (2) implement **contingency measures**;
- (3) investigate the cause;
- (4) investigate environmental impacts;
- (5) advise rectification measures to be implemented;
- (6) advise any other measures to be implemented to ensure no further impact;
- (7) advise timeframe in which contingency, rectification and other measures have and/or will be implemented; and
- (8) provide a report to the **CEO** within twenty-one (21) days of being aware of the potential non-compliance, detailing the measures required in conditions D1-1(1) to D1-1(7) above.

D1-2 Failure to comply with the requirements of a condition, or with the content of an environmental management plan required under a condition, constitutes a non-compliance with these conditions, regardless of whether the **contingency measures**, rectification or other measures in condition D1-1 above have been or are being implemented.

D2 Compliance Reporting

D2-1 The proponent must provide an annual Compliance Assessment Report to the **CEO** for the purpose of determining whether the implementation conditions are being complied with.

D2-2 Unless a different date or frequency is approved by the **CEO**, the first annual Compliance Assessment Report must be submitted within fifteen (15) months of the date of this Statement, and subsequent reports must be submitted annually from that date.

D2-3 Each annual Compliance Assessment Report must be endorsed by the proponent's Chief Executive Officer, or a person approved by proponent's Chief Executive Officer to be delegated to sign on the Chief Executive Officer's behalf.

D2-4 Each annual Compliance Assessment Report must:

- (1) state whether each condition of this Statement has been complied with, including:
 - (a) exceedance of any proposal limits and extents;
 - (b) achievement of environmental outcomes;
 - (c) achievement of environmental objectives;
 - (d) requirements to implement the content of environmental management plans;
 - (e) monitoring requirements;
 - (f) implement **contingency measures**;
 - (g) requirements to implement adaptive management; and
 - (h) reporting requirements;
- (2) include the results of any monitoring (inclusive of any raw data) that has been required under Part C in order to demonstrate that the limits in Part A, and any outcomes or any objectives are being met;
- (3) provide evidence to substantiate statements of compliance, or details of where there has been a non-compliance;
- (4) include the corrective, remedial and preventative actions taken in response to any potential non-compliance;
- (5) be provided in a form suitable for publication on the proponent's website and online by the Department of Water and Environmental Regulation; and
- (6) be prepared and published consistent with the latest version of the Compliance Assessment Plan required by condition D2-5 which the **CEO** has confirmed by notice in writing satisfies the relevant requirements of Part C and Part D.

D2-5 The proponent must prepare a Compliance Assessment Plan which is submitted to the **CEO** at least six (6) months prior to the first Compliance Assessment Report required by condition D2-2, or prior to implementation of the proposal, whichever is sooner.

D2-6 The Compliance Assessment Plan must include:

- (1) what, when and how information will be collected and recorded to assess compliance;
- (2) the methods which will be used to assess compliance;

- (3) the methods which will be used to validate the adequacy of the compliance assessment to determine whether the implementation conditions are being complied with;
- (4) the retention of compliance assessments;
- (5) the table of contents of Compliance Assessment Reports, including audit tables; and
- (6) how and when Compliance Assessment Reports will be made publicly available, including usually being published on the proponent's website within sixty (60) days of being provided to the **CEO**.

D3 Contact Details

- D3-1 The proponent must notify the **CEO** of any change of its name, physical address or postal address for the serving of notices or other correspondence within twenty-eight (28) days of such change. Where the proponent is a corporation or an association of persons, whether incorporated or not, the postal address is that of the principal place of business or of the principal office in the State.

D4 Time Limit for Proposal Implementation

- D4-1 The proposal must be substantially commenced within five (5) years from the date of this Statement.
- D4-2 The proponent must provide to the **CEO** documentary evidence demonstrating that they have complied with condition D4-1 no later than thirty (30) days after substantial commencement.
- D4-3 If the proposal has not been substantially commenced within the period specified in condition D4-1, implementation of the proposal must not be commenced or continued after the expiration of that period.

D5 Public Availability of Data

- D5-1 Subject to condition D5-2, within a reasonable time period approved by the **CEO** upon the issue of this Statement and for the remainder of the life of the proposal, the proponent must make publicly available, in a manner approved by the **CEO**, all validated environmental data collected before and after the date of this Statement relevant to the proposal (including sampling design, sampling methodologies, monitoring and other empirical data and derived information products (e.g. maps)), environmental management plans and reports relevant to the assessment of this proposal and implementation of this Statement.

D5-2 If:

- (1) any data referred to in condition D5-1 contains trade secrets; or

- (2) any data referred to in condition D5-1 contains particulars of confidential information (other than trade secrets) that has commercial value to a person that would be, or could reasonably be expected to be, destroyed or diminished if the confidential information were published,

the proponent may submit a request for approval from the **CEO** to not make this data publicly available and the **CEO** may agree to such a request if the **CEO** is satisfied that the data meets the above criteria.

- D5-3 In making such a request the proponent must provide the **CEO** with an explanation and reasons why the data should not be made publicly available.

D6 Independent Audit

- D6-1 The proponent must arrange for an independent audit of compliance with the conditions of this statement, including achievement of the environmental outcomes and/or the environmental objectives and/ or environmental performance with the conditions of this statement, as and when directed by the **CEO**.
- D6-2 The independent audit must be carried out by a person with appropriate qualifications who is nominated or approved by the **CEO** to undertake the audit under condition D6-1.
- D6-3 The proponent must submit the independent audit report with the Compliance Assessment Report required by condition D2, or at any time as and when directed in writing by the **CEO**. The audit report is to be supported by credible evidence to substantiate its findings.
- D6-4 The independent audit report required by condition D6-1 is to be made publicly available in the same timeframe, manner and form as a Compliance Assessment Report, or as otherwise directed by the **CEO**.

Table 1: Abbreviations and definitions

Acronym or abbreviation	Definition or term
Adverse impact / adversely impacted	Negative change that is neither trivial nor negligible that could result in a reduction in health, diversity or abundance of the receptor/s being impacted, or a reduction in environmental value. Adverse impacts can arise from direct or indirect impacts, or other impacts from the proposal.
Black cockatoos	Carnaby's cockatoo (<i>Zanda latirostris</i>) and Forest red-tailed black cockatoo (<i>Calyptorhynchus banksii naso</i>)
'Degraded' and 'completely degraded'	Means the condition of native vegetation rated in accordance with the <i>Technical guidance – Flora and vegetation surveys for environmental impact assessment (EPA 2016)</i> including any revision to this technical guidance.
Detecting/ Detectable	The smallest statistically discernible effect size that can be achieved with a monitoring strategy designed to achieve a statistical power value of at least 0.8 or an alternative value as determined by the CEO .
CEO	The Chief Executive Officer of the Department of the Public Service of the State responsible for the administration of section 48 of the <i>Environmental Protection Act 1986</i> , or the CEO's delegate.
Clearing	Has the same meaning as in section 51A of the <i>Environmental Protection Act 1986</i> .
Confirmed	In relation to a plan required to be made and submitted to the CEO , means, at the relevant time, the plan that the CEO confirmed, by notice in writing, meets the requirements of the relevant condition. In relation to a plan required to be implemented without the need to be first submitted to the CEO , means that plan until it is revised, and then means, at the relevant time, the plan that the CEO confirmed, by notice in writing, meets the requirements of the relevant condition.
Conservation area	The 21.55 ha area identified as 'conservation area' in Figure 1.
Conservation category wetland	Wetlands which support a high level of attributes and ecological function including the wetland identified as UFI 12984.
Contingency measures	Planned actions for implementation if it is identified that an environmental outcome, environmental objective, threshold criteria, Environmental Quality Standard or management target are likely to be, or are being, exceeded. Contingency measures include changes to operations or reductions in disturbance or adverse impacts to reduce impacts and must be decisive actions that will quickly bring the impact to below any relevant threshold,

	management target and to ensure that the environmental outcome and/or objective can be met.
Controlled access / control access	Means to exclude, or completely prevent, access by pedestrians or vehicles that is not required for maintenance or management.
Development exclusion area	The 1.85 ha area identified as 'development exclusion area' in Figure 1.
Dieback	A plant disease of native ecosystems. The main species responsible, <i>Phytophthora cinnamomi</i> , is a microscopic and soilborne organism that was introduced into Western Australia.
Disturb / disturbance	<p>Means directly has or materially contributes to the disturbance effect on health, diversity or abundance of the receptor/s being impacted or on an environmental value.</p> <p>In relation to flora, vegetation or fauna habitat, includes to result in the death, destruction, removal, severing or doing substantial damage. In relation to fauna, includes to have the effect of altering the natural behaviour of fauna to its detriment.</p> <p>In relation to inland waters, includes to have the effect of altering hydrological regimes or water quality to the detriment of the environmental values supported by or dependent on surface water and/or groundwater.</p>
Environmental value	A beneficial use, or ecosystem health condition.
Environmental weeds	Any plant declared under section 22(2) of the <i>Biosecurity and Agriculture Management Act 2007</i> , any plant listed on the Weeds of National Significance List and any weeds listed on the Department of Biodiversity, Conservation and Attractions' Swan Impact and Invasiveness Ratings list, as amended or replaced from time to time.
Foraging habitat	Vegetation and plant species known to support foraging within the range of the black cockatoos including proteaceous and myrtaceous plant species.
'Good' condition	Means the condition of native vegetation rated in accordance with the <i>Technical guidance – Flora and vegetation surveys for environmental impact assessment (EPA 2016)</i> including any revision to this technical guidance.
Ground disturbing activities	Any activity or activities undertaken in the implementation of the proposal, including any clearing, civil works or construction.
Ha	Hectare
Low impact activities	Means activities involving minimal disturbance of ground or vegetation. Activities may include revegetation, rehabilitation monitoring of fauna, vegetation or water, or management activities associated with feral fauna species control or weed control.

Management target	A type of indicator to evaluate whether an environmental objective is being achieved.
Minor revisions	Minor revisions are changes that are administrative or clerical in nature, or changes that do not require significant assessment to approve, confirm or endorse the environmental management plan.
Nesting habitat	Trees of a species known to support black cockatoos that have a suitable diameter at breast height (DBH) to develop a nest hollow, but do not currently have suitable hollows. Trees suitable to develop a nest hollow in the future are 300-500 mm DBH
On-ground management	This includes revegetation and rehabilitation with the objective of achieving a tangible improvement to the environmental values in the offset area.
Offset Environmental Management Plan	<p>A detailed document prepared to address offsets at a regional scale, prepared to address:</p> <ul style="list-style-type: none"> • Government of Western Australia (2011) WA Environmental Offset Policy • Government of Western Australia (2014) • Environmental Offset Guidelines • Conservation advice notices • Interim/recovery plans. <p>To be informed by <i>Proposed Environmental Offset</i> document (Western Environmental 2025; Attachment 3 in the Response to Submissions).</p>
Offset area	The 16.16 ha area identified as 'offset area' in Figure 2.
Rehabilitate / rehabilitation	The process of reinstating a level of ecosystem functionality on degraded areas as a means of enabling ongoing provision of ecosystem goods and services. This can include revegetation and is focussed on ecosystem function and services such as water filtering through a wetland ecosystem, reinstating habitat connectivity across a landscape, preventing spread of weeds.
Revegetate / revegetation	Establishment, by any means, of plants on sites (including terrestrial, freshwater and marine areas) that may or may not involve local or indigenous species. This may be required to mitigate impacts relating to soil erosion, contamination or other terrestrial environmental quality issues.
Self-sustaining	Refers to vegetation that is self-perpetuating (able to continue to survive indefinitely) without external assistance such as watering, weed control or infill planting.
Tangible improvement	A perceptible, measurable and definable improvement that provides additional ecological benefit and/or value.
Trigger criteria	Indicators that have been selected for monitoring to provide a warning that, if exceeded, the environmental outcome may not be achieved. They are intended to forewarn of the approach of the threshold criteria and trigger response actions.

Threshold criteria	The indicators that have been selected represent limits of impact beyond which the environmental outcome is not being met.
---------------------------	--

Figures (attached)

Figure 1 Development envelope, development area, conservation area, development exclusion area

Figure 2 Offset area in Rose Shanks Reserve

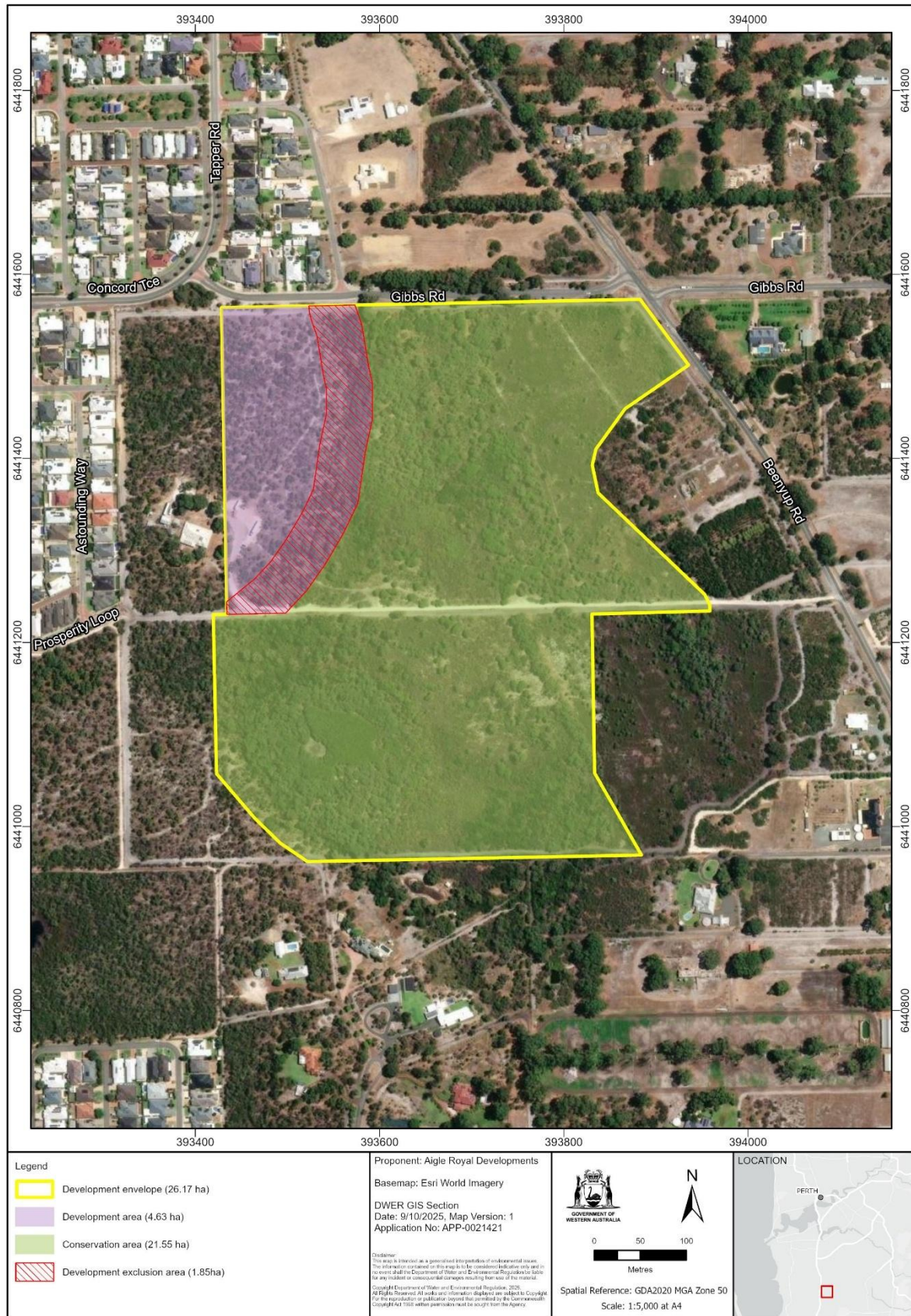


Figure 1 Development envelope, development area, conservation area, development exclusion area

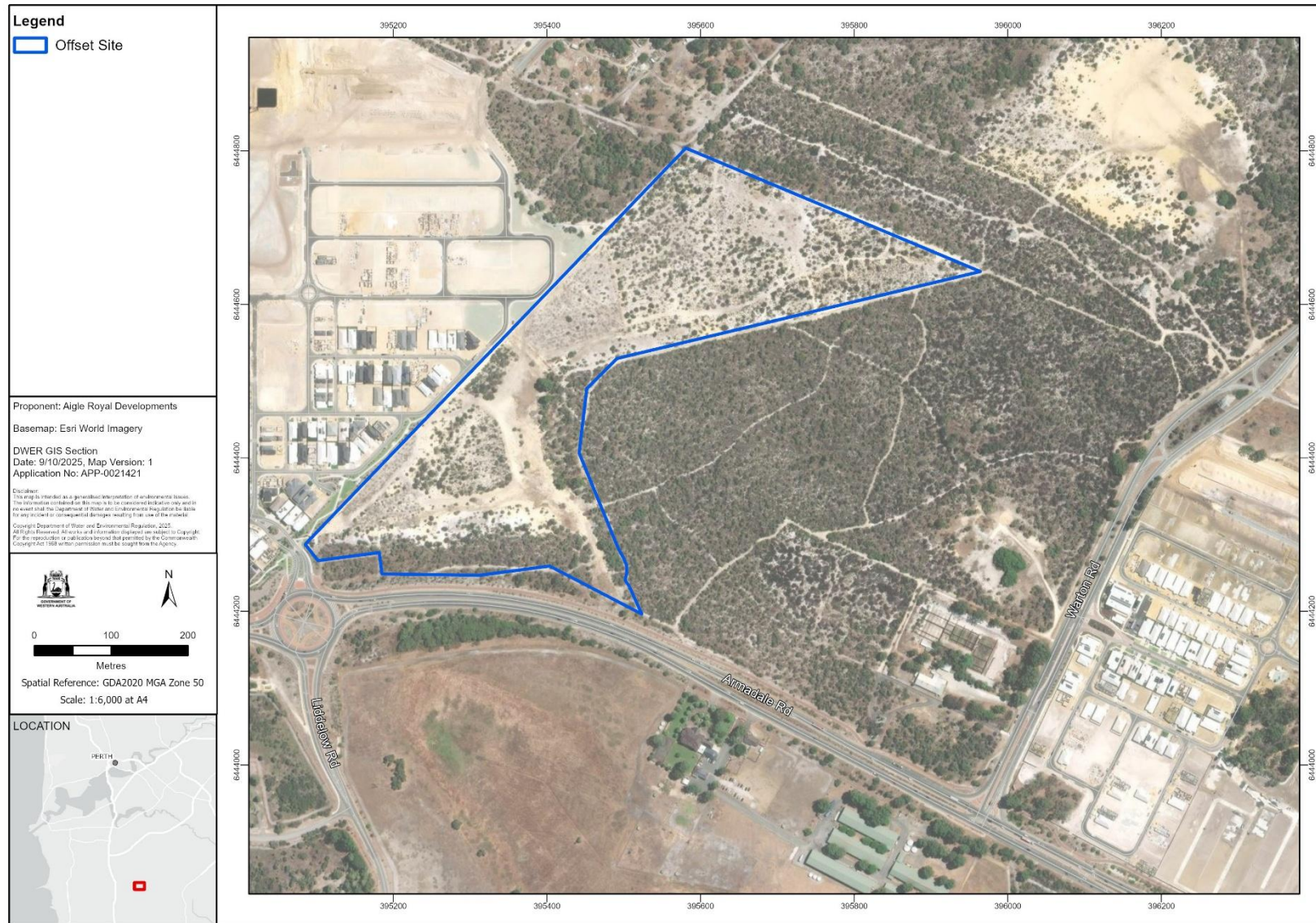


Figure 2 Offset area in Rose Shanks Reserve

Schedule 1

All co-ordinates are in metres, listed in Map Grid of Australia Zone 50 (MGA Zone 50), datum of Geocentric Datum of Australia 2020 (GDA2020).

Spatial data depicting the figures are held by the Department of Water and Environmental Regulation. Environment Online record no. APP-0021421.

Appendix B: Decision-making authorities

Table B1: Identified relevant decision-making authorities for the proposal.

Decision-Making Authority	Legislation (and approval)
1. Minister for Environment	<i>Biodiversity Conservation Act 2016</i> <ul style="list-style-type: none"> - section 40 authority to take or disturb threatened species and communities - section 45 authority to modify occurrence of threatened ecological community
2. Minister for Water	<i>Rights in Water and Irrigation Act 1914</i> <ul style="list-style-type: none"> - permit to take water - groundwater abstraction licence - licence to construct bores
3. Chief Executive Officer, Department of Biodiversity, Conservation and Attractions	<i>Biodiversity Conservation Act 2016</i> <ul style="list-style-type: none"> - authority to take flora and fauna (other than threatened flora and fauna)
4. Chief Executive Officer, City of Cockburn	<i>Planning and Development Act 2005</i> <i>Environmental Protection (Noise) Regulations 1997</i> <ul style="list-style-type: none"> - planning approvals - approval of noise management plans for construction outside of prescribed hours
5. Chair, Western Australian Planning Commission	<i>Planning and Development Act 2005</i> <ul style="list-style-type: none"> - subdivision approval - approval for developments in areas reserved under the Metropolitan Region Scheme
6. Minister for Lands	<i>Land Administration Act 1997</i> <ul style="list-style-type: none"> - re-vestment of land to Crown land - creation of a reserve (including placing care, control and management under a relevant management body)

Appendix C: Regulation under other statutory processes

Table C1: Identified relevant decision-making authorities for the proposal.

Statutory decision-making process	Environmental outcome
<i>Environmental Protection Act 1986</i> Environmental Protection (Noise) Regulations 1997	Through proposed mitigation measures, noise sensitive premises are protected from unreasonable noise levels.
<i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act)	The Department of Climate Change, Energy, the Environment and Water (DCCEEW) approved the proposal and imposed conditions under the EPBC Act (ref: 2017/7923) to protect matters of national environmental significance, specifically black cockatoos and the Banksia Woodlands of the Swan Coastal Plain TEC. This includes the requirement of an offset strategy.
<i>Planning and Development Act 2005</i>	Protect key environmental values through imposing environmental conditions on the future subdivision approval (i.e., wetland and wetland buffer management plan, UWMP). Obligations to maintain water quality and quantity of the Jandakot groundwater mound, including environmental commitments specified under MS 688, can be addressed at subsequent planning stages (i.e., a future scheme amendment to the City of Cockburn LPS 3).
<i>Rights in Water and Irrigation Act 1914</i>	No adverse impacts to groundwater or surface water. The proponent has indicated that no dewatering will occur during the construction phase.

Appendix D: Environmental Protection Act principles

Table D1: Consideration of principles of the *Environmental Protection Act 1986*.

EP Act principle	Consideration
<p>1. The precautionary principle</p> <p><i>Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.</i></p> <p><i>In application of this precautionary principle, decisions should be guided by –</i></p> <ol style="list-style-type: none"> <i>careful evaluation to avoid, where practicable, serious, or irreversible damage to the environment; and</i> <i>an assessment of the risk-weighted consequences of various options.</i> 	<p>The EPA has considered the precautionary principle in its assessment of flora and vegetation, terrestrial fauna, and inland waters.</p> <p>The EPA considers that the proponent has undertaken appropriate studies and investigations to determine potential risks and has provided sufficient management and mitigation measures to manage these risks to flora and vegetation, terrestrial fauna, inland waters, and the overall biophysical environment. The following management and minimisation measures are to be implemented by the proponent (through commitments and/or conditions imposed) to avoid potential serious or irreversible damage to the environment by:</p> <ul style="list-style-type: none"> limiting the development area to 4.63 ha and clearing footprint to 2.78 ha creation of a 21.55 ha conservation area to form part of the Jandakot Regional Park implementation of a 1.85 ha development exclusion area implementing a CEMP to minimise impacts to flora and vegetation, terrestrial fauna and inland waters during the construction phase of the project measures to limit impacts to hydrology, which is of particular importance given the development envelope includes a CCW and REW, and is within a P2 PDWSA area: <ul style="list-style-type: none"> 50 m vegetated wetland buffer use of native vegetation and soil improvements in landscaped areas to minimise irrigation and groundwater abstraction installation of vegetated batters to provide filtration of surface water runoff during major rainfall events on-site retention and filtration of rainfall from gross pollutant traps requirement for the proponent to update the D/LWMS to reflect MS 688 requirements proposed water quality management consistent with <i>Water Sensitive Urban Design</i>

	<ul style="list-style-type: none"> ○ a minimum 2 mm separation to controlled groundwater levels (CGL) is proposed, with depth between the base of soak wells to CGL to be a minimum of 1 m. <p>The EPA notes that detailed water management measures will form part of the UWMP to be prepared during the future subdivision stage.</p> <p>The EPA is satisfied that these measures, if implemented, would mean that the proposal is likely to be consistent with the EPA objectives and that there is no threat of serious or irreversible harm.</p>
<p>2. The principle of intergenerational equity</p> <p><i>The present generation should ensure that the health, diversity, and productivity of the environment is maintained and enhanced for the benefit of future generations.</i></p>	<p>The EPA has considered the principle of intergenerational equity in its assessment and has regard to this principle in its assessment of flora and vegetation, terrestrial fauna, and inland waters. The EPA notes that the proponent, based on limited proposal alternatives, has identified some measures to minimise and manage impacts to the key environmental factors. The EPA has considered these measures during its assessment and has recommended conditions to ensure the appropriate implementation of these measures.</p> <p>The EPA has concluded that the health, diversity, and productivity of the environment will be maintained for the benefit of future generations.</p>
<p>3. The principle of the conservation of biological diversity and ecological integrity</p> <p><i>Conservation of biological diversity and ecological integrity should be a fundamental consideration.</i></p>	<p>The EPA has considered the principle of conservation of biological diversity and ecological integrity in its assessment of flora and vegetation, terrestrial fauna, inland waters, and consideration of the proponent's proposed offsets.</p> <p><u>Flora and vegetation and Terrestrial fauna</u></p> <p>The EPA notes that the proponent has proposed suitable minimisation and management measures for flora and vegetation and terrestrial fauna (including the proposed conservation area) to minimise the loss of biological diversity and ecological integrity. The EPA has considered to what extent the potential impacts from the proposal to flora and vegetation and terrestrial fauna can be ameliorated to ensure consistency with the principle of conservation of biological diversity and ecological integrity, including by provision of offsets. The EPA has concluded that given the nature of the impacts, the proposed offsets are likely to counter-balance the impacts of the loss of biological diversity and ecological integrity.</p> <p><u>Inland waters</u></p> <p>Similarly, the EPA notes that although the proposal will have an impact on 0.11 ha of wetland vegetation. The proponent has proposed sufficient minimisation and management measures to retain the hydrological functioning and ecological</p>

	<p>integrity of the CCW and associated wetland vegetation. The EPA has also considered the proposed 50 m wetland buffer, being exempt from clearing, provides for enhanced protection of environmental values and overall ecological integrity of the CCW.</p> <p>The EPA has concluded that given the nature of the impacts of the proposal, and the proposed offset environmental management plan, that is likely to counterbalance the residual impacts, serious or irreversible loss of biological diversity and ecological integrity is not expected.</p>
<p>4. Principles relating to improved valuation, pricing and incentive mechanisms</p> <ol style="list-style-type: none"> <i>Environmental factors should be included in the valuation of assets and services.</i> <i>The polluter pays principle — those who generate pollution and waste should bear the cost of containment, avoidance or abatement.</i> <i>The users of goods and services should pay prices based on the full life cycle costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any wastes.</i> <i>Environmental goals, having been established, should be pursued in the most cost-effective way, by establishing incentive structures, including market mechanisms, which enable those best placed to maximise benefits and/or minimise costs to develop their own solutions and responses to environmental problems.</i> 	<p>In considering this principle, the EPA notes that the proponent will bear the costs relating to implementing the proposal to achieve the intended environmental outcomes, including management and monitoring of environmental impacts during construction and operation of the proposal.</p> <p>The EPA has had regard to this principle in considering flora and vegetation, terrestrial fauna, inland waters, and the proponent's proposed offsets, and concludes that the proposal will be consistent with the principles relating to valuation, pricing and incentive mechanisms.</p>
<p>5. The principle of waste minimisation</p> <p><i>All reasonable and practicable measures should be taken to minimise the generation of waste and its discharge into the environment.</i></p>	<p>The EPA notes that the proponent has committed to taking all reasonable and practicable actions to ensure the generation of waste during clearing and construction will be minimised. Construction waste will be managed in accordance with the CEMP. Biofiltration areas and soak wells that will be constructed as part of the development will capture waste to prevent it from entering the adjoining CCW.</p> <p>Therefore, the EPA concludes that the proposal will be consistent with the principle of waste minimisation.</p>

Appendix E: Other environmental factors

Table E1: Evaluation of other environmental factors.

Environmental factor	Description of the proposal's likely impacts on the environmental factor	Government agency and public comments	Evaluation of why the factor is not a key environmental factor
Air			
Greenhouse gas emissions	Generation of greenhouse gas (GHG) scope 1 and 2 emissions.	No agency or public comments were received for this environmental factor.	A greenhouse gas emissions assessment for the proposal identified that it would not result in the emission of 100,000 tonnes of carbon dioxide from scope 1 or 2 sources in any year. Accordingly, the EPA did not consider greenhouse gas emissions to be a key environmental factor at the conclusion of its assessment.
People			
Social surroundings	The proposal has the potential to impact social surroundings via increased traffic and noise emissions.	<p><u>Public comments</u></p> <ul style="list-style-type: none"> One member of the public raised concerns about noise impacts from the development. <p><u>Agency comments</u></p> <ul style="list-style-type: none"> No agency comments were received for this environmental factor. 	<p>Social surroundings was not identified as a preliminary environmental factor when the EPA decided to assess the proposal.</p> <p>The assessment of social surroundings within the development envelope concluded that:</p> <ul style="list-style-type: none"> no registered Aboriginal Heritage sites and/or other heritage places are recorded within the development envelope. The nearest registered sites are Mather Reserve (ID: 3447) (1.28 km), Thompsons Lake (ID: 15934) (1.36 km), and Kraemer Reserve (ID: 21811) (2.32 km). Should the proponent encounter any Aboriginal Heritage artefacts during construction, the proponent would be subject to requirements under the <i>Aboriginal Heritage Act 1972</i> no Local or State Heritage places occur within the Development Envelope or within a 1 km radius of the development envelope construction noise can be regulated via DWER and local government processes (for example, at future subdivision approval), consistent with the <i>Environmental Protection (Noise) Regulations 1997</i> and the CEMP dust emissions during construction can be managed in accordance with the CEMP. <p>Accordingly, the EPA did not consider this factor to be a key environmental factor at the conclusion of its assessment.</p>

Appendix F: List of submitters

7-day comment on referral

Organisations and public

- A total of five (5) public comments were received during the seven-day public comment period, with one comment received from the Wildflower Society of Western Australia.

Public review of proponent information

Organisations and public

- Banjup Residents Group
- City of Cockburn
- Private submitters (11)

Government agencies

- Department of Biodiversity, Conservation and Attractions (DBCA)
- Department of Water and Environmental Regulation
- City of Cockburn

Appendix G: Assessment timeline

Date	Progress stages	Time (weeks)
15 July 2020	EPA decided to assess – Additional Assessment Information (Public Review)	
14 November 2024	EPA accepted additional information	2
22 November 2024	Public review period for additional information opened	1
6 December 2024	Public review period for additional information closed	2
4 November 2025	EPA received final information for assessment	47
20 November 2025	EPA completed its assessment	2
8 January 2026	EPA provided report to the Minister for Environment	3
13 January 2026	EPA report published	3 days
3 February 2026	Appeals period closed	3

Timelines for an assessment may vary according to the complexity of the proposal and are usually agreed with the proponent soon after the EPA decides to assess the proposal and records the level of assessment.

In this case, the EPA met its timeline objective to complete its assessment and provide a report to the Minister.

Appendix H: Relevant policy, guidance, procedures and references

The EPA had regard to the policies, guidelines and procedures listed below in the assessment of the proposal.

Department of Planning, Lands and Heritage 2025, *Aboriginal Cultural Heritage Inquiry System, List of Aboriginal Cultural Heritage (ACH) Register*. Available at: www.wa.gov.au/government/document-collections/find-aboriginal-cultural-heritage-wa

DWER 2021, *UNDO Tool Report*.

DWER 2018, *Water quality protection note no. 38 Priority 3* (P3*) areas*, Department of Water and Environmental Regulation, Perth, WA. Available at: www.wa.gov.au/system/files/2022-04/WQPN-38-Priority-3-areas.pdf

Department of Parks and Wildlife (DPAW) 2013, *Carnaby's Cockatoo (Calyptorhynchus latirostris) Recovery Plan, Western Australian Wildlife Management Program No. 52, Perth, WA*.

Department of Biodiversity, Conservation and Attractions (DBCA), *Black cockatoo confirmed roosting sites (DBCA-050)*.

DBCA, *Black cockatoo roosting sites – buffered (1 km) (DBCA-064)*.

Department of Climate Change, Energy, the Environment and Water 2016, *Environment Protection and Biodiversity Conservation Act 1999, Approved conservation advice (incorporating listing advice) for the Banksia woodlands of the Swan Coastal Plain ecological community*.

EPA 2016a, *Environmental factor guideline – Flora and vegetation*, Environmental Protection Authority, Perth, WA.

EPA 2016b, *Environmental factor guideline – Terrestrial fauna*, Environmental Protection Authority, Perth, WA.

EPA 2018c, *Environmental factor guideline – Inland waters*, Environmental Protection Authority, Perth, WA.

EPA 2021, *Environmental impact assessment (Part IV Divisions 1 and 2) procedures manual*, Environmental Protection Authority, Perth, WA.

EPA 2016a, *Technical guidance – Flora and vegetation surveys for environmental impact assessment*, Environmental Protection Authority, Perth, WA.

EPA 2016b, *Technical guidance – Sampling of short-range endemic invertebrate fauna*, Environmental Protection Authority, Perth, WA.

EPA 2024, *Public Advice: Considering environmental offsets at a regional scale*. Environmental Protection Authority, Perth, WA.

Government of Western Australia 2011, *WA Environmental Offsets Policy*, Government of Western Australia, Perth, WA.

Government of Western Australia 2014, *WA Environmental Offsets Guidelines*, Government of Western Australia, Perth, WA.

Hyd2o 2022, *Aubin Grove and Banjup Monitoring Programme 2021/2022*.

Invertebrate Solutions Pty Ltd 2021, *Short Range Endemic Invertebrate Assessment of Lots 11 and 74 (Part) Beenyup Road, Banjup, Perth WA*.

Ochre West Consulting Engineers 2017, *Lots 11 & 74 Beenyup Road, Banjup: District Water Management Strategy*.

PGV Environmental 2023, *Flora and Vegetation Survey: Part Lots 11 and 74 Beenyup Road, Banjup*.

SLR Consulting 2025, *Response to Submissions (Revision 2.0)*.

Terrestrial Ecosystems 2023, *Basic and Targeted Vertebrate Fauna Assessment: Lots 11 and 74 Beenyup Road, Banjup*.

360 Environmental 2020, *Banjup Black Cockatoo Tree Hollow Assessment: Lots 11 and 74 Beenyup Road, Banjup*.

360 Environmental 2017a, *Targeted Flora Survey: Lots 11 and 74 Beenyup Road, Banjup*.

360 Environmental 2017b, *Black Cockatoo Habitat Assessment and Desktop Banksia Woodlands of the Swan Coastal Plain TEC Assessment – Lots 11 and 74 Beenyup Road, Banjup*.

360 Environmental 2016, *Flora and Vegetation Survey: Beenyup Road*.

Western Australian Planning Commission (WAPC) 2005, *Guideline for the Determination of Wetland Buffer Requirements* (Draft), Prepared for the Department for Planning and Infrastructure on behalf of the Western Australian Planning Commission by Essential Environmental Services, Perth, WA.

WAPC 2024, *Planning for Bushfire Guidelines*, Western Australian Planning Commission, Perth, WA.