Government of **Western Australia**
Department of **Environment Regulation**

Appendix A

Clearing permit offset proposal form

Environmental Protection Act 1986

1. Occupier's details	
Date: Clearing permit application number:	CPS
Applicant:	
Phone numbers:	9780 5255
Email:	amrshire@amrshire.wa.gov.au
Contact person or environmental specialist:	
Name:	Hayley Bain
Company:	Shire of Augusta Margaret River
Phone numbers:	9780 5218, 0439 208 476
Email:	hbain@amrshire.wa.gov.au
Environmental specialist's qualifications or equivalent, and relevant experience:	BSc (Environmental Management) Hons. 23 years relevant experience in environmental management roles in State and local government agencies, including experience in Part IV and Part V EP Act approvals
Purpose of clearing:	Construction of the final section of the multi-use (walk/cycle) Leeuwin Trail.
Land details of the clearing application area:	Reserve 25141 (PIN 538054, 122879 & 538048), Reserve 29219 (PIN 538052), Unnamed Road Reserves (PIN 11622190 & PIN 11622189), Leeuwin Road Reserve (PIN 11607702)
Total area of the proposed clearing (hectares):	0.62 ha total clearing; 0.099ha clearing within Black Cockatoo foraging habitat

2. Proposed on site mitigation (if applicable)	
Area (ha) / number of trees to be planted:	0.23 ha revegetation total, 0.13 ha in foraging habitat for black cockatoo species
Other on ground management actions proposed:	Permanent closure of informal walk and vehicle tracks in project area. Erosion restoration work along a degraded informal track (stair construction and revegetation) Installation of directional and interpretive signage to foster environmentally responsible trail use Implementation of ongoing visual monitoring of vegetation condition in the project area, and follow up control measures where required, with a focus on controlling and managing weeds.
Future tenure and/or zoning: (e.g. a conservation covenant will be placed on the certificate of title after sand mining and rehabilitation is undertaken)	Formally change purpose of Reserve No 25141 from 'Recreation' to 'Conservation and Recreation'

Estimated future vegetation condition (Keighery scale):	Very Good to Excellent
Proposed commencement date of rehabilitation and revegetation:	Winter 2025
Proposed completion date of rehabilitation and revegetation: (date by which the benefit for the species/vegetation community impacted has been achieved)	2030
Is a revegetation plan attached?	No, but this will be prepared using DWER's 'A guide to Preparing Revegetation Plans for Clearing Permits' and submitted to DWER for approval.
Is the spatial data for the location of on site mitigation provided (ESRI shapefile format)?	Yes
Estimated cost of mitigation (on site rehabilitation and revegetation):	Total $61,350, which includes: $31,350 upfront revegetation works, including seed collection, propagation/plant purchase, tree guards and stakes, erosion control works, weed control, contractor time. $6,000 per year for 5 years, including on site monitoring, weed control, watering, plant maintenance, replacement plants, contractor time.

3: Proposed offset site (off site location)	
Land details:	1. Wadandi Trail Reserve south of Witchcliffe townsite (R47049)
Area (ha) or number of trees at site prior to offset being undertaken:	0.3 ha
Type of offset: (rehabilitation and revegetation, on ground management or land acquisition)	Rehabilitation and revegetation, and on ground management
Current scheme zoning: (region or local scheme)	Parks and Recreation
Are there any development approvals? (for example, extractive industry license or *Environment Protection and Biodiversity Conservation Act 1999* approval)	No
Future tenure and/or zoning: (e.g. proposed to change local council reserve from recreation to conservation purposes)	'Conservation and Recreation'
Current vegetation condition (Keighery scale):	Degraded
Future predicted vegetation condition, if rehabilitation and revegetation or other on ground management are being carried out as part of the offset proposal (Keighery scale):	Good
Proposed commencement date of rehabilitation and revegetation and/or other on ground management:	Winter 2025

Proposed completion date of rehabilitation and revegetation and/or other on ground management: (date by which the benefit for the species/vegetation community impacted has been achieved)	2035
Proposed date of land acquisition or method of securing the tenure of the site:	December 2025
Is the environmental survey of the offset site attached?	Yes
Is a revegetation plan attached (if required)?	No, but this will be prepared using DWER's 'A guide to Preparing Revegetation Plans for Clearing Permits' and submitted to DWER for approva
Is the spatial data for the location of the offset site provided (ESRI shapefile format)?	No, this will be sent to DWER as soon as the site has been confirmed.
Is the spatial data for the environmental survey of the offset site provided (ESRI shapefile format) (vegetation condition and type, locations of habitat trees)	No, this will be submitted to DWER when the Spring 2024 survey has been undertaken.
Estimated cost of the offset:	$90,000

4. Information demonstrating that the offset policy principles have been addressed (if you require more space for this section, please attach separate documents)

1.Environmental offsets will only be considered after avoidance and mitigation options have been pursued.

Please explain how the significant impacts of the project (as identified by DER or DMP in the preliminary assessment report provided to the applicant) have been avoided and/or minimised. You should explain how each of the mitigation hierarchy steps (avoid, minimise, rehabilitate) have been applied to address each significant impact (that is, each clearing principle that is at variance), from the original proposed clearing application area through to the current proposed clearing application area. Offsets are only applied to the significant residual impact that remains after these steps have been taken.

Refer to clearing assessment report attached to clearing permit application.

2. Environmental offsets will be cost-effective, as well as relevant and proportionate to the significance of the environmental value being impacted.

You should explain how the proposed offset will address each of the impacts described under the biodiversity related clearing principle(s) that the application is at variance to (as outlined in the DER or DMP preliminary assessment report provided to the applicant). Under each principle at variance, you should provide information on each environmental value that may be removed or decline as a result of the clearing and how the offset will provide equivalent or better replacement for these values (e.g. fencing the site, other habitat provided, etc.)

It is preferable that the design of an offset leads to a net gain in size, density and diversity of native vegetation and an overall improvement in the condition of the natural environment and the specific environmental values requiring offsetting. Please include information on how your offset has given consideration to ecosystem function, rarity, connectivity, vegetation condition, habitat quality and the type of ecological community cleared.

The requirement for 'equivalent or better replacement' is the key to successfully addressing this offset principle. For example, if breeding habitat (trees with hollows) for Carnaby's cockatoo is cleared then it is not appropriate to propose feeding habitat as an offset.

You may also provide information detailing expertise and demonstrated success in rehabilitation of the same vegetation type.

The offset is in relation to the loss of 0.1 ha of foraging habitat for 3 black cockatoo species.

Onsite mitigation and rehabilitation includes the following:
- Existing informal vehicle access tracks in this PEC will be closed to restrict future vehicle and informal public access, which will improve the overall protection of this PEC that is currently at risk from uncontrolled vehicle access.
- 0.13 ha of informal tracks and disturbed areas within the mapped occurrence of this PEC will be closed rehabilitated using locally collected seed. This will restrict informal access to the coastal granites in the future by both people and vehicles.
- Weed control will be undertaken where required.
- A Boardwalk section will restrict trail user movement in fragile areas, and protect the granite ecosystem in the long term.
- Clearing corridor within granite community will be marked temporarily in the field during construction to avoid indirect disturbance.
- Approvals will be sought for works near Aboriginal Cultural Heritage sites, and necessary mitigation strategies implemented (e.g. Aboriginal Heritage Management Plan, Monitors during construction).
- Preparation and implementation of a CEMP to manage environmental risks during construction, and ongoing monitoring of vegetation condition post-trail construction.

The offset will involve rehabilitating, revegetating and on-site management of a comparable granite vegetation community in Shire tenure at least 0.3 ha in size, as agreed with DBCA, to enhance the size, condition and resilience of the community that is otherwise at risk of threats including weeds, grazing, and informal vehicle and pedestrian access.

3. Environmental offsets will be based on sound environmental information and knowledge.

Describe how the environmental specialist has been involved in the design of the offset proposal and how and when an environmental specialist will be involved in the implementation and monitoring of the offset.

An environmental specialist means a person who is engaged by the permit holder for the purpose of providing environmental advice, who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that is required under the clearing permit and offset proposal.

You must describe the methodology for determining the components of an offset proposal. For example, this may include the identification of a suitable site based on landform, soil, proximity, species composition and relationship to the environmental values impacted.

If your offset includes rehabilitation and revegetation, please provide evidence of how the completion criteria were determined as appropriate and evidence of your ability to successfully meet those criteria. (Note. You may refer to the revegetation plan rather than repeat information)

The prospective offset site is located on the Shire's Wadandi Trail Reserve, south of Witchcliffe townsite. This location has been selected as it can provide security of tenure (change of purpose to 'Conservation and Recreation') and surrounding vegetation is representative of both feeding and nesting habitat for black cockatoo species, with the presence of trees such as marri, jarrah, karri, hakea and banksia species. Detailed specifications on the site will be provided to DWER during the clearing permit assessment.

Shire Environmental Officers used DWER's Offset Metric and related guideline to determine a suitable offset to counterbalance the impact - see attached. Shire staff involved in developing the offset all have tertiary qualification and extensive experience in the environmental management field.

If required, environmental consultants with necessary qualifications and experience will be engaged to develop the offset project and prepare the revegetation plan, including completion criteria and monitoring methodology.

4. Environmental offsets will be applied within a framework of adaptive management.

Adaptive management involves defining the problem, establishing goals, implementing the action (including monitoring plans), evaluating the results and adapting in response to new information. For environmental offsets, this principle primarily relates to rehabilitation and revegetation or on ground management of native vegetation.

An adaptive management approach requires that contingency measures are in place to respond if monitoring determines an offset is not on track to meet completion criteria.

You should briefly describe the following (detailed information should be provided in the revegetation plan):

- Objectives
- Brief description of how the offset will be implemented (including timeframes)
- Monitoring techniques and timeframes
- Contingencies (e.g. monitoring results may trigger infill planting to ensure rehabilitation is successful).

The offset will involve rehabilitating, revegetating and on-site management of a degraded site within Shire tenure at least 0.3 ha in size, with the objective of enhancing the size, condition and resilience of the vegetation and habitat values that is otherwise at risk of threats including weeds, grazing, and informal access.

The works will be developed into a Revegetation Plan for approval by DWER, and will address the following:
- Access Management - restricting vehicle and pedestrian access using rocks, bollards and/or fences and gates where required.
- Weed control - removal of invasive weeds present at the site
- Seed collection - collection of local provenance seed for either direct seeding, or propagation for infill planting
- Rabbit control - release of calici virus
-Summer watering and plant maintenance
- Ongoing monitoring, and reporting, as per DWER's 'A guide to Preparing Revegetation Plans for Clearing Permits'. It is anticipated that a 10 year period of rehabilitation, monitoring and adaptive management will be required.

5. Environmental offsets will be focused on longer term strategic outcomes.

Before an offset can be approved, you must ensure that any other licences or approvals that are required have been obtained, and provide evidence of these. Examples include a letter of support from the landowner of an offset acquisition, a copy of the applicant's licence to collect seed or a licence to relocate fauna.

Explain what management processes will be implemented to ensure that there is an environmental benefit achieved over the longer term. You must be able to demonstrate that the tenure of the offset is secure and provides a long term conservation benefit for the environmental value/s impacted by the clearing. For example, an offset may be based on the types of actions proposed in a species recovery plan but additional to work already undertaken by the Department of Parks and Wildlife or land manager and not part of normal responsibilities.

The tenure of the reserve where the offset program will be implemented will have its purpose formally converted to 'Conservation and Recreation'. This is to recognise the long term management objective being primarily conservation.

This will require an application to be made to DPLH to change the reserve purpose, which will include consultation with the relevant agencies.

Consultants engaged by the Shire to undertake rehabilitation works will have access to the respective reserve to do this work, and any other licenses, e.g. seed collection, will need to be obtained.

5. Ongoing commitments and consultation	
Monitoring commitment (including costs): (Note: you may refer to the revegetation plan here, if applicable, rather than repeat information.)	Implementation of Revegetation Plan, including Annual monitoring and reporting - Environmental Consultant $2,000/yr Weed management - $700 Watering and seedling maintenance - $2,000 Rabbit control - $700 Additional plant purchases $500 Total Annual Monitoring and Management - $5,900 10 year commitment to monitoring and management - approx $60,000
Management commitment (including costs): (Note: you may refer to the revegetation plan here, if applicable, rather than repeat information.)	
Agencies or other organisations consulted and submissions received:	Pre application meeting with DWER on 17/04/24 Consultation meeting with DBCA regional and district nature conservation staff at meeting on 7/5/24.

6. Other	
Please note that contaminated site/s classified under the *Contaminated Sites Act 2003* (past refuse disposal facilitates, maintenance yards) are not considered to be suitable offset sites	✔ Noted
You must ensure all laws are complied with (e.g. *Native Title Act 1993*) and that necessary approvals are obtained (e.g. from landowner/s on which the offset will occur in the event that the subject land is not vested with the applicant) prior to submission.	✔ Noted
The agreed offset proposal document and revegetation plan may be published on the WA Environmental Offsets Register.	✔ Noted

Step 1: Determining conservation significance

Key:

	Data to be entered
	Drop-down selection
	Automatically-generated scores

(Or, if appropriate, manual data entry permitted)

***Area / feature* (Impact site)**

Conservation significance determination for the environmental value impacted		
Conservation significance	**Description**	Loss of black cockatoo habitat
	Type of environmental value	Species (flora/fauna)
	Conservation significance of environmental value	Rare/threatened species - endangered
	Conservation significance score	**1.2%**

Please select *area* or *feature* for the calculations	**Area**

Step 2: Calculating significant residual impact

Key:
- Data to be entered
- Drop-down selection
- Automatically-generated scores

Environmental value (step 1)	Loss of black cockatoo habitat

***Area* (impact site)**

Part A: Significant impact calculation *Area*

Significant impact	Description	Quantum of impact	
	Loss of 0.1 ha of foraging habitat	Significant impact (hectares)	0.10
		Quality (scale)	4.00
		Total quantum of impact	0.04

Part B: Rehabilitation credit calculation *Area* (onsite)

Rehabilitation Credit	Description				
		Proposed rehabilitation (area in hectares)	0.10	Time until ecological benefit (years)	10.00
	Revegetation of cleared area	Current quality of rehabilitation site (scale)	1.00	Confidence in rehabilitation result (%)	80.0%
		Future quality WITHOUT rehabilitation (scale)	1.00	Rehabilitation credit	0.04
		Future quality WITH rehabilitation (scale)	6.00		

Part C: Significant residual impact calculation *Area*

Significant residual impact		
	Total quantum of impact	0.04
	Rehabilitation credit	0.04
	Significant residual impact	0.00

WA Environmental Offsets Calculator

Step 3: Calculating offsets

Key:
- Data to be entered
- Drop-down selection
- Automatically-generated scores

Environmental value (step 1)	Loss of black cockatoo habitat	Significant impact (step 2, part A)	0.10
		Rehabilitation credit (step 2, part B)	0.04
		Significant residual impact (step 2, part C)	0.00

Area **(offset site)**

Offset calculation *Area*							
Offsets calculation	Description	Proposed offset (area in hectares)	0.30	Duration of offset implementation (maximum 20 years)	10.00	Offset value	0.10
		Current quality of offset site (scale)	1.00	Time until offset site secured (years)	1.00		2193.3%
		Future quality WITHOUT offset (scale)	1.00	Risk of future loss WITHOUT offset (%)	25.0%		
		Future quality WITH offset (scale)	6.00	Risk of future loss WITH offset (%)	5.0%		
		Time until ecological benefit (years)	10.00				
		Confidence in offset result (%)	80.0%			OFFSET ADEQUATE?	YES

WA Environmental Offsets Calculator

Rationale for scores used in the offsets calculator

Environmental value to be offset			
Calculation	***Score (Area)***		***Rationale***
Conservation significance			
Description	Loss of black cockatoo habitat		The proposed clearing will impact on foraging habitat for Carnaby's cockatoo, Baudin's cockatoo, and Forest Red-tailed cockatoo. Food source includes Banksia sessilis var. cordata, and Hakea oleifolia. Absence of trees representing roosting or nesting habitat.
Type of environmental value	Species (flora/fauna)		
Conservation significance of environmental value	Rare/threatened species - endangered		
Landscape-level value impacted	yes/no		No
Significant impact			
Description	Loss of 0.1 ha of foraging habitat		Clearing of 0.099 ha of vegetation in 'excellent' to 'degraded' condition that includes habitat for 3 x black cockatoo species
Significant impact (hectares) / Type of feature	0.10		
Quality (scale) / Number	4.00		Based on: Vegetation condition - Excellent (Ecosystem Solutions, 2024) Site context - Large continuous expanse of suitable foraging habitat immediately adjacent to project area in Leeuwin Naturaliste National Park, which is easily accessible for highly mobile species. Approx 1.08% of locall Habitat value - foraging habitat that is present for black cockatoo species is unlikely to represent a significant feeding source (Litoria, 2019b, Ecosystem Solutions, 2024). Absence of marri which represents primary food source. Absent of trees over 30cm DBH so does not represent roosting or nesting habitat.
Rehabilitation credit			
Description	Revegetation of cleared area		Closure of existing informal vehicle tracks, and revegetation of these areas via infill planting using locally collected seed.
Proposed rehabilitation (area in hectares)	0.10		This rehabilitation credit is for single species only
Current quality of rehabilitation site / Start number (of type of feature)	1.00		The sites are completely cleared but hav some value as they have connectivity to existing native vegetation.
Future quality WITHOUT rehabilitation (scale) / Future number WITHOUT rehabilitation	1.00		Without closure and rehabilitation of the vehicle tracks, there will be no improvements in quality.
Future quality WITH rehabilitation (scale) / Future number WITH rehabilitation	6.00		With closure of tracks and revegetation via infill planting of locally collected seed
Time until ecological benefit (years)	10.00		Rehabilitation can commence at the completion of trail construction. Expected time lag of 10 years for establishment of foraging habitat.
Confidence in rehabilitation result (%)	0.8		An adequate revgetation plan with ongoing management will be submitted to DWER
Offset			
Description	0		Revegetation along a degraded section of the Wadandi Trail Reserve (R47049) south of Witchcliffe that is known to provide foraging, roosting and potentially nesting habitat for black cockatoo species.
Proposed offset (area in hectares)	0.30		
Current quality of offset site / Start number (of type of feature)	1.00		The site is completely cleared but has some value as it has connectivity to existing native vegetation and habitat.
Future quality WITHOUT offset (scale) / Future number WITHOUT offset	1.00		The quality of the habitat would not be expected to change in the absence of an offset due to ongoing threats (e.g. weeds)
Future quality WITH offset (scale) / Future number WITH offset	6.00		With weed control and revegetation via infill planting of locally collected seed
Time until ecological benefit (years)	10.00		Rehabilitation can commence imminently. Expected time lag of 10 years for establishment of foraging habitat.
Confidence in offset result (%)	0.8		An adequate revgetation plan with ongoing management will be submitted to DWER
Duration of offset implementation (maximum 20 years)	10.00		The purpose of the reserve will be changed to 'Conservation and Recreation' or similar
Time until offset site secured (years)	1.00		The change in purpose will involve consultation and referral to DPLH
Risk of future loss WITHOUT offset (%)	25.0%		There could be a minor risk that the site could be deveoped for future recreation
Risk of future loss WITH offset (%)	5.0%		As the offset site will be transferred to conservation purpose, the risk of loss is reduced.
Offset ratio (Conservation area only)	N/A		

Step 1: Determining conservation significance

Key:

	Data to be entered
	Drop-down selection
	Automatically-generated scores

(Or, if appropriate, manual data entry permitted)

***Area / feature* (Impact site)**

Conservation significance determination for the environmental value impacted		
Conservation significance	**Description**	Loss of granite PEC
	Type of environmental value	Ecological community
	Conservation significance of environmental value	Priority ecological community
	Conservation significance score	**0.1%**

Please select *area* or *feature* for the calculations	**Area**

Step 2: Calculating significant residual impact

Key:
- Data to be entered
- Drop-down selection
- Automatically-generated scores

Environmental value (step 1)	Loss of granite PEC

***Area* (impact site)**

Part A: Significant impact calculation *Area*

Significant impact	Description	Quantum of impact	
	Loss of 0.12 ha of PEC	Significant impact (hectares)	0.12
		Quality (scale)	6.00
		Total quantum of impact	0.07

Part B: Rehabilitation credit calculation *Area* (onsite)

Rehabilitation Credit	Description				
		Proposed rehabilitation (area in hectares)	0.12	Time until ecological benefit (years)	10.00
	Revegetation of cleared area	Current quality of rehabilitation site (scale)	1.00	Confidence in rehabilitation result (%)	80.0%
		Future quality WITHOUT rehabilitation (scale)	1.00	Rehabilitation credit	0.05
		Future quality WITH rehabilitation (scale)	6.00		

Part C: Significant residual impact calculation *Area*

Significant residual impact		
	Total quantum of impact	0.07
	Rehabilitation credit	0.05
	Significant residual impact	0.02

WA Environmental Offsets Calculator

Step 3: Calculating offsets

Key:
- Data to be entered
- Drop-down selection
- Automatically-generated scores

Environmental value (step 1)	Loss of granite PEC	Significant impact (step 2, part A)	0.12
		Rehabilitation credit (step 2, part B)	0.05
		Significant residual impact (step 2, part C)	0.02

***Area* (offset site)**

Offset calculation *Area*							
Offsets calculation	**Description**	**Proposed offset (area in hectares)**	0.36	**Duration of offset implementation (maximum 20 years)**	10.00	**Offset value**	**0.11**
	Weed control and rehabilitation of comparable coastal granite ecosystem in AMR Shire	**Current quality of offset site (scale)**	4.00	**Time until offset site secured (years)**	1.00		**452.3%**
		Future quality WITHOUT offset (scale)	3.00	**Risk of future loss WITHOUT offset (%)**	25.0%		
		Future quality WITH offset (scale)	7.00	**Risk of future loss WITH offset (%)**	5.0%		
		Time until ecological benefit (years)	10.00				
		Confidence in offset result (%)	80.0%			**OFFSET ADEQUATE?**	**YES**

WA Environmental Offsets Calculator

Rationale for scores used in the offsets calculator

Environmental value to be offset			
Calculation	***Score (Area)***		***Rationale***
Conservation significance			
Description	Loss of granite PEC		The proposed clearing will impact on part of the Coastal granitic shrublands and herblands PEC (Priority 2)
Type of environmental value	Ecological community		
Conservation significance of environmental value	Priority ecological community		
Landscape-level value impacted	yes/no		No
Significant impact			
Description	Loss of 0.12 ha of PEC		Clearing of 0.12 ha of PEC in predominantly 'very good to excellent' condition to 'degraded' condition.
Significant impact (hectares) / Type of feature	0.12		
Quality (scale) / Number	6.00		Based on: Vegetation condition - Very Good to Excellent (Litoria 2019b & Ecosystem Solutions, 2024) Site context - Impacts 0.48% of the local mapped PEC.
Rehabilitation credit			
Description	Revegetation of cleared area		Closure of existing informal vehicle tracks, weed control, and revegetation of these areas via infill planting using locally collected seed..
Proposed rehabilitation (area in hectares)	0.12		
Current quality of rehabilitation site / Start number (of type of feature)	1.00		The sites are completely cleared but have some value as they have connectivity to existing native vegetation.
Future quality WITHOUT rehabilitation (scale) / Future number WITHOUT rehabilitation	1.00		Without closure and rehabilitation of the vehicle tracks, there will be no improvements in quality.
Future quality WITH rehabilitation (scale) / Future number WITH rehabilitation	6.00		With closure of tracks and revegetation via infill planting of locally collected seed
Time until ecological benefit (years)	10.00		Rehabilitation can commence at the completion of trail construction. Expected time lag of 10 years for establishment of PEC values.
Confidence in rehabilitation result (%)	0.8		An adequate revgetation plan with ongoing management will be submitted to DWER
Offset			
Description	Weed control and rehabilitation of comparable coastal granite ecosystem in AMR Shire		Wadandi Trail granite ecosystem - restriction of vehicle access, weed control and rehabilitation using locally collected seed.
Proposed offset (area in hectares)	0.36		
Current quality of offset site / Start number (of type of feature)	4.00		The site is under threat from uncontrolled vehicle access and weed invasion.
Future quality WITHOUT offset (scale) / Future number WITHOUT offset	3.00		The quality of the PEC will continue to decline over time without the offset.
Future quality WITH offset (scale) / Future number WITH offset	7.00		With closure of tracks, weed control, and revegetation via infill planting of locally collected seed
Time until ecological benefit (years)	10.00		Rehabilitation can commence at the completion of trail construction. Expected time lag of 10 years for establishment of PEC values.
Confidence in offset result (%)	0.8		An adequate revgetation plan with ongoing management will be submitted to DWER
Duration of offset implementation (maximum 20 years)	10.00		The purpose of the reserve will be changed to 'Conservation and Recreation'.
Time until offset site secured (years)	1.00		The change in purpose will involve some consultation and referral to DPLH
Risk of future loss WITHOUT offset (%)	25.0%		There is some risk that the site could be cleared for future recreation
Risk of future loss WITH offset (%)	5.0%		As the offset site will be transferred to conservation purpose, the risk of loss is reduced.
Offset ratio (Conservation area only)	N/A		

Step 1: Determining conservation significance

Key:

	Data to be entered
	Drop-down selection
	Automatically-generated scores

(Or, if appropriate, manual data entry permitted)

***Area / feature* (Impact site)**

Conservation significance determination for the environmental value impacted		
Conservation significance	**Description**	Loss of Banksia sessilis var. cordata plants
	Type of environmental value	Species (flora/fauna)
	Conservation significance of environmental value	Priority species
	Conservation significance score	**0.1%**

Please select *area* or *feature* for the calculations	**Area**

Step 2: Calculating significant residual impact

Key:

	Data to be entered
	Drop-down selection
	Automatically-generated scores

Environmental value (step 1)	Loss of Banksia sessilis var. cordata plants

***Area* (impact site)**

Part A: Significant impact calculation *Area*

	Description	Quantum of impact	
Significant impact	Loss of 0.02 ha of population	**Significant impact (hectares)**	0.01
		Quality (scale)	5.00
		Total quantum of impact	**0.01**

Part B: Rehabilitation credit calculation *Area* (onsite)

	Description				
Rehabilitation Credit	Revegetation of cleared area	**Proposed rehabilitation (area in hectares)**	0.01	**Time until ecological benefit (years)**	10.00
		Current quality of rehabilitation site (scale)	1.00	**Confidence in rehabilitation result (%)**	80.0%
		Future quality WITHOUT rehabilitation (scale)	1.00	**Rehabilitation credit**	**0.00**
		Future quality WITH rehabilitation (scale)	6.00		

Part C: Significant residual impact calculation *Area*

Significant residual impact	**Total quantum of impact**	**0.01**
	Rehabilitation credit	**0.00**
	Significant residual impact	**0.00**

WA Environmental Offsets Calculator

Step 3: Calculating offsets

Key:
- Data to be entered
- Drop-down selection
- Automatically-generated scores

Environmental value (step 1)	Loss of Banksia sessilis var. cordata plants	Significant impact (step 2, part A)	0.01
		Rehabilitation credit (step 2, part B)	0.00
		Significant residual impact (step 2, part C)	0.00

***Area* (offset site)**

Offset calculation
Area

Offsets calculation

Description	**Proposed offset (area in hectares)**	0.13	**Duration of offset implementation (maximum 20 years)**	10.00	**Offset value**		**0.05**
	Current quality of offset site (scale)	1.00	**Time until offset site secured (years)**	1.00			**4462.9%**
	Future quality WITHOUT offset (scale)	1.00	**Risk of future loss WITHOUT offset (%)**	25.0%			
	Future quality WITH offset (scale)	6.00	**Risk of future loss WITH offset (%)**	5.0%			
	Time until ecological benefit (years)	10.00					
	Confidence in offset result (%)	80.0%			**OFFSET ADEQUATE?**		**YES**

WA Environmental Offsets Calculator

Rationale for scores used in the offsets calculator

Environmental value to be offset			
Calculation	***Score (Area)***		***Rationale***
Conservation significance			
Description	Loss of Banksia sessilis var. cordata plants		The proposed clearing will impact on a population of the P4 species Banksia sessilis var. cordata.
Type of environmental value	Species (flora/fauna)		
Conservation significance of environmental value	Priority species		
Landscape-level value impacted	yes/no		No
Significant impact			
Description	Loss of 0.02 ha of population		Clearing of 0.02 ha of vegetation in 'very good to excellent' to 'degraded' condition.
Significant impact (hectares) / Type of feature	0.01		
Quality (scale) / Number	5.00		Based on: Vegetation condition - Very Good to Excellent (Litoria 2019b, Ecosystem Solutions, 2024) Site context - 0.48% of local mapped population will be impacted. Habitat value - Species is foraging habitat for black cockatoo species
Rehabilitation credit			
Description	Revegetation of cleared area		Closure of existing informal vehicle tracks, weed control and revegetation of these areas via infill planting using locally collected seed..
Proposed rehabilitation (area in hectares)	0.01		
Current quality of rehabilitation site / Start number (of type of feature)	1.00		The sites are completely cleared but hav some value as they have connectivity to existing native vegetation.
Future quality WITHOUT rehabilitation (scale) / Future number WITHOUT rehabilitation	1.00		Without closure and rehabilitation of the vehicle tracks, there will be no improvements in quality.
Future quality WITH rehabilitation (scale) / Future number WITH rehabilitation	6.00		With closure of tracks, weed control and revegetation via infill planting of locally collected seed
Time until ecological benefit (years)	10.00		Rehabilitation can commence at the completion of trail construction. Expected time lag of 10 years for establishment of foraging habitat.
Confidence in rehabilitation result (%)	0.8		An adequate revgetation plan with ongoing management will be submitted to DWER
Offset			
Description	0		Closure of existing informal vehicle tracks, and revegetation of these areas via infill planting using locally collected seed..
Proposed offset (area in hectares)	0.13		
Current quality of offset site / Start number (of type of feature)	1.00		The sites are completely cleared but have some value as they have connectivity to existing native vegetation.
Future quality WITHOUT offset (scale) / Future number WITHOUT offset	1.00		The quality of the P4 population would not be expected to change in the absence of an offset
Future quality WITH offset (scale) / Future number WITH offset	6.00		With closure of tracks, weed control and revegetation via infill planting of locally collected seed
Time until ecological benefit (years)	10.00		Rehabilitation can commence at the completion of trail construction. Expected time lag of 10 years for establishment of foraging habitat.
Confidence in offset result (%)	0.8		An adequate revgetation plan with ongoing management will be submitted to DWER
Duration of offset implementation (maximum 20 years)	10.00		The purpose of the reserve will be changed to 'Conservation and Recreation'.
Time until offset site secured (years)	1.00		The change in purpose will involve some consultation and referral to DPLH
Risk of future loss WITHOUT offset (%)	25.0%		There is some risk that the site could be cleared for future recreation
Risk of future loss WITH offset (%)	5.0%		As the offset site will be transferred to conservation purpose, the risk of loss is reduced.
Offset ratio (Conservation area only)	N/A		