

WA Environmental Offsets calculator

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Produced by:

The Department of Water and Environmental Regulation (DWER) in consultation with stakeholder working groups

Purpose:

Use the WA Environmental Offsets calculator in conjunction with the *Environmental offsets metric: Quantifying environmental offsets in Western Australia* guideline. Together, they form a supplement to section 4 of the *WA Environmental Offsets Guidelines* and provide information to help decision-makers, government officers, industry and the community to quantify environmental offsets.

Data currency:

The correct application of the WA Environmental Offsets Calculator relies on access to current datasets (such as vegetation extent and land tenure).

Process for using the WA Environmental Offsets Calculator

Step	Worksheet	Component
Step 1: Determining conservation significance	Step1_ConservationSignificance	Conservation significance determination
		Combined <i>area/feature</i>
Step 2: Calculating significant residual impact	Step2_SignificantResidualImpact	Part A: Significant impact calculation
		Separate <i>area</i> or <i>feature</i> calculations
		Part B: Rehabilitation credit calculation
		Separate <i>area</i> or <i>feature</i> calculations
Step 3: Calculating offsets	Step3_Offsets	Part C: Significant residual impact calculation
		Separate <i>area</i> or <i>feature</i> calculations
Rationale for scores used in the Offsets Calculator	Rationale	Offsets calculation
		Separate <i>area</i> or <i>feature</i> calculations
		All

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 Carnaby's Black Cockatoo Foraging Habitat
Conservation significance	Type of environmental value Species (flora/fauna)
Conservation significance	Conservation significance of environmental value Rare/threatened species - endangered
Conservation significance	Conservation significance score 1.2%

Please select <i>area</i> or <i>feature</i> for the calculations	Area
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Step 2: Calculating significant residual impact

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

Environmental value (step 1)	Carnaby's Black Cockatoo Foraging Habitat
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Area (impact site)

Part A: Significant impact calculation Area				
Significant impact	Description	Quantum of impact		
	Clearing of Carnaby's Black Cockatoo Habitat	Significant impact (hectares)	257.30	
		Quality (scale)	9.00	
		Total quantum of impact	231.57	

Part B: Rehabilitation credit calculation Area (onsite)					
Rehabilitation Credit	Description	Proposed rehabilitation (area in hectares)	256.70	Time until ecological benefit (years)	1.00
	All habitat to be rehabbed apart from 0.6 ha Bibby Road	Current quality of rehabilitation site (scale)	0.00	Confidence in rehabilitation result (%)	80.0%
		Future quality WITHOUT rehabilitation (scale)	0.00	Rehabilitation credit	121.75
		Future quality WITH rehabilitation (scale)	6.00		

Part C: Significant residual impact calculation Area		
Significant residual impact	Total quantum of impact	231.57
	Rehabilitation credit	121.75
	Significant residual impact	109.82

WA Environmental Offsets Calculator

Step 3: Calculating offsets

Key:

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

Environmental value (step 1)	Carnaby's Black Cockatoo Foraging Habitat	Significant impact (step 2, part A)	257.30
		Rehabilitation credit (step 2, part B)	121.75
		Significant residual impact (step 2, part C)	109.82

Area (offset site)

Offset calculation Area							
Offsets calculation	Description	Proposed offset (area in hectares)	467.96	Duration of offset implementation (maximum 20 years)	20.00	Offset value	65.09
	Lot 4133	Current quality of offset site (scale)	9.00	Time until offset site secured (years)	1.00		59.3%
		Future quality WITHOUT offset (scale)	8.00	Risk of future loss WITHOUT offset (%)	7.4%		
		Future quality WITH offset (scale)	9.00	Risk of future loss WITH offset (%)	0.0%		
		Time until ecological benefit (years)	1.00				
		Confidence in offset result (%)	80.0%				

WA Environmental Offsets Calculator

Rationale for scores used in the offsets calculator

Environmental value to be offset		
Calculation	Score (Area)	Rationale
Conservation significance		
Description	Carnaby's Black Cockatoo Foraging Habitat	
Type of environmental value	Species (flora/fauna)	
Conservation significance of environmental value	Rare/threatened species - endangered	
Landscape-level value impacted	yes/no	
Significant impact		
Description	Clearing of Carnaby's Black Cockatoo Habitat	
Significant impact (hectares) / Type of feature	257.30	
Quality (scale) / Number	9.00	
Rehabilitation credit		
Description	All habitat to be rehabbed apart from 0.6 ha Bibby Road	
Proposed rehabilitation (area in hectares)	256.70	
Current quality of rehabilitation site / Start number (of type of feature)	0.00	
Future quality WITHOUT rehabilitation (scale) / Future number WITHOUT rehabilitation	0.00	
Future quality WITH rehabilitation (scale) / Future number WITH rehabilitation	6.00	
Time until ecological benefit (years)	1.00	
Confidence in rehabilitation result (%)	0.8	
Offset		
Description	Lot 4133	
Proposed offset (area in hectares)	467.96	
Current quality of offset site / Start number (of type of feature)	9.00	
Future quality WITHOUT offset (scale) / Future number WITHOUT offset	8.00	
Future quality WITH offset (scale) / Future number WITH offset	9.00	
Time until ecological benefit (years)	1.00	
Confidence in offset result (%)	0.8	
Duration of offset implementation (maximum 20 years)	20.00	
Time until offset site secured (years)	1.00	
Risk of future loss WITHOUT offset (%)	7.4%	
Risk of future loss WITH offset (%)	0.0%	
Offset ratio (Conservation area only)	N/A	