

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	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%; padding: 5px; text-align: center;">Description</td> <td style="padding: 5px; background-color: yellow;">Banksia Woodlands of the Swan Coastal Plain PEC</td> </tr> <tr> <td style="padding: 5px; text-align: center;">Type of environmental value</td> <td style="padding: 5px; background-color: #f4a460;">Ecological community</td> </tr> <tr> <td style="padding: 5px; text-align: center;">Conservation significance of environmental value</td> <td style="padding: 5px; background-color: #f4a460;">Priority ecological community</td> </tr> <tr> <td style="padding: 5px; text-align: center;">Conservation significance score</td> <td style="padding: 5px; background-color: #cccccc;">0.1%</td> </tr> </table>	Description	Banksia Woodlands of the Swan Coastal Plain PEC	Type of environmental value	Ecological community	Conservation significance of environmental value	Priority ecological community	Conservation significance score	0.1%
Description	Banksia Woodlands of the Swan Coastal Plain PEC								
Type of environmental value	Ecological community								
Conservation significance of environmental value	Priority ecological community								
Conservation significance score	0.1%								

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)	Banksia Woodlands of the Swan Coastal Plain PEC
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Area (impact site)

Part A: Significant impact calculation Area			
Significant impact	Description	Quantum of impact	
	Clearing of up to 210 ha of Banksia Woodlands PEC	Significant impact (hectares)	206.50
		Quality (scale)	9.00
		Total quantum of impact	185.85

Part B: Rehabilitation credit calculation Area (onsite)					
Rehabilitation Credit	Description	Proposed rehabilitation (area in hectares)	205.90	Time until ecological benefit (years)	20.00
	All to be rehabbed except 0.6 ha at Bibby Rd/Brand Highway intersection	Current quality of rehabilitation site (scale)	0.00	Confidence in rehabilitation result (%)	80.0%
		Future quality WITHOUT rehabilitation (scale)	0.00	Rehabilitation credit	96.88
		Future quality WITH rehabilitation (scale)	6.00		

Part C: Significant residual impact calculation Area		
Significant residual impact	Total quantum of impact	185.85
	Rehabilitation credit	96.88
	Significant residual impact	88.97

Step 3: Calculating offsets

Key:

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

Environmental value (step 1)	Banksia Woodlands of the Swan Coastal Plain PEC	Significant impact (step 2, part A)	206.50
		Rehabilitation credit (step 2, part B)	96.88
		Significant residual impact (step 2, part C)	88.97

Area (offset site)

Offset calculation Area							
Offsets calculation	Description	Proposed offset (area in hectares)	175.56	Duration of offset implementation (maximum 20 years)	20.00	Offset value	24.69
	Lot 501	Current quality of offset site (scale)	9.00	Time until offset site secured (years)	1.00		
		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%					OFFSET ADEQUATE?

WA Environmental Offsets Calculator

Rationale for scores used in the offsets calculator

Environmental value to be offset		
Calculation	Score (Area)	Rationale
Conservation significance		
Description	Banksia Woodlands of the Swan Coastal Plain PEC	
Type of environmental value	Ecological community	
Conservation significance of environmental value	Priority ecological community	
Landscape-level value impacted	yes/no	
Significant impact		
Description	Clearing of up to 210 ha of Banksia Woodlands PEC	
Significant impact (hectares) / Type of feature	206.50	
Quality (scale) / Number	9.00	
Rehabilitation credit		
Description	All to be rehabbed except 0.6 ha at Bibby Rd/Brand Highway intersection	
Proposed rehabilitation (area in hectares)	205.90	
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)	20.00	
Confidence in rehabilitation result (%)	0.8	
Offset		
Description	Lot 501	
Proposed offset (area in hectares)	175.56	
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	