

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
Step 3: Calculating offsets	Step3_Offsets	Offsets calculation
		Separate <i>area</i> or <i>feature</i> calculations
Rationale for scores used in the Offsets Calculator	Rationale	All

WA Environmental Offsets Calculator

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"> <tr> <td style="text-align: center;">Description</td> <td style="background-color: yellow; text-align: center;">SCP3a TEC</td> </tr> <tr> <td style="text-align: center;">Type of environmental value</td> <td style="background-color: #f4a460; text-align: center;">Ecological community</td> </tr> <tr> <td style="text-align: center;">Conservation significance of environmental value</td> <td style="background-color: #f4a460; text-align: center;">Threatened ecological community - critically endangered</td> </tr> <tr> <td style="text-align: center;">Conservation significance score</td> <td style="background-color: #cccccc; text-align: center;">6.8%</td> </tr> </table>	Description	SCP3a TEC	Type of environmental value	Ecological community	Conservation significance of environmental value	Threatened ecological community - critically endangered	Conservation significance score	6.8%
Description	SCP3a TEC								
Type of environmental value	Ecological community								
Conservation significance of environmental value	Threatened ecological community - critically endangered								
Conservation significance score	6.8%								

Please select <i>area</i> or <i>feature</i> for the calculations	Area
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WA Environmental Offsets Calculator

Step 2: Calculating significant residual impact

Key:

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

Environmental value (step 1)	SCP3a TEC
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Area (impact site)

Part A: Significant impact calculation Area		
	Description	Quantum of impact
Significant impact	Clearing of 0.008 ha of SCP3a	Significant impact (hectares) 0.01
		Quality (scale) 6.00
		Total quantum of impact 0.00

Part B: Rehabilitation credit calculation Area (onsite)				
	Description	Proposed rehabilitation (area in hectares)	Time until ecological benefit (years)	
Rehabilitation Credit		Current quality of rehabilitation site (scale)	Confidence in rehabilitation result (%)	
		Future quality WITHOUT rehabilitation (scale)	Rehabilitation credit	0.00
		Future quality WITH rehabilitation (scale)		

Part C: Significant residual impact calculation Area	
Significant residual impact	Total quantum of impact 0.00
	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)	SCP3a TEC	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)	20.00	Offset value	0.00
	Proposed rehabilitation actions in Brickwood Reserve	Current quality of offset site (scale)	5.00	Time until offset site secured (years)	0.00		101.0%
		Future quality WITHOUT offset (scale)	5.00	Risk of future loss WITHOUT offset (%)	10.0%		
		Future quality WITH offset (scale)	6.00	Risk of future loss WITH offset (%)	10.0%		
		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	SCP3a TEC	The proposed clearing will impact on SCP3a
Type of environmental value	Ecological community	SCP3a is a state and federally listed threatened ecological community
Conservation significance of environmental value	Threatened ecological community - critically endangered	SCP3a is listed as a critically endangered ecological community under the Biodiversity Conservation Act 2016
Landscape-level value impacted	yes/no	Yes
Significant impact		
Description	Clearing of 0.008 ha of SCP3a	Native vegetation that is representative of SCP3a
Significant impact (hectares) / Type of feature	0.01	Extent of proposed impact to SCP3a 0.008 hectares
Quality (scale) / Number	6.00	The recorded occurrence of SCP3a within the application area is in a very good condition. Noting this, and the site context of the application area, a moderate to high quality value has been attributed.
Rehabilitation credit		
Description	0	
Proposed rehabilitation (area in hectares)	0.00	
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	0.00	
Time until ecological benefit (years)	0.00	
Confidence in rehabilitation result (%)	0	
Offset		
Description	Proposed rehabilitation actions in Brickwood Reserve	An offset involving rehabilitation actions within Brickwood Reserve
Proposed offset (area in hectares)	0.13	Rehabilitation actions to improve 0.13 hectares of SCP3a is required to counterbalance 100% of the significant residual impact to this community
Current quality of offset site / Start number (of type of feature)	5.00	The area of SCP3a proposed for rehabilitation ranges in condition from degraded to very good, with similar site context to the application area.
Future quality WITHOUT offset (scale) / Future number WITHOUT offset	5.00	It is presumed that the offset area would remain of similar quality without specific improvement measures.
Future quality WITH offset (scale) / Future number WITH offset	6.00	The applicant has committed to developing a Project Rehabilitation Plan which will set out weed control and infill planting amongst other rehabilitation actions, in accordance with completion criteria. Subject to the required Project Rehabilitation Plan, it is expected that a small improvement to the quality of the area containing SCP3a could be achieved. The Project Rehabilitation Plan is subject to approval by DWERs CEO.
Time until ecological benefit (years)	10.00	The benefits of weed control, fencing and infill planting amongst other rehabilitation actions are expected to provide benefit within 10 years, which has also considered the expected delay in commencement of rehabilitation.
Confidence in offset result (%)	0.8	There is a high level of confidence that a small improvement could be delivered to a 0.13 hectare occurrence of SCP3a within Brickwood Reserve, in accordance with a Project Rehabilitation Plan.
Duration of offset implementation (maximum 20 years)	20.00	The offset area will occur within a portion of Brickwood Reserve that is subject to a Shire of Serpentine Jarrahdale Management Plan where it has been designated as a conservation area and is expected to be managed as such long into the future.
Time until offset site secured (years)	0.00	No change to the purpose or vesting of Brickwood Reserve is proposed.
Risk of future loss WITHOUT offset (%)	10.0%	Brickwood Reserve is zoned for the purpose of recreation, however those areas mapped as SCP3a have been designated as 'high conservation zone', 'conservation zone' or 'vegetation management zone' within the 'Briggs Park and Brickwood Reserve Management Plan, 2016-2026', as such it is considered that there is a low risk of loss.
Risk of future loss WITH offset (%)	10.0%	There is no proposed change in the management purpose or vesting of the offset site.
Offset ratio (Conservation area only)	N/A	