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 Envirionmental 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 *area* /*feature*
Step 2: Calculating significant residual impact	**Step2_SignificantResidualImpact**	**Part A: Significant impact calculation**
		Separate *area* or *feature* calculations
		Part B: Rehabilitation credit calculation
		Separate *area* or *feature* calculations
		Part C: Significant residual impact calculation
		Separate *area* or *feature* calculations
Step 3: Calculating offsets	**Step3_Offsets**	**Offsets calculation**
		Separate *area* or *feature* 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	**Description**	Extensively cleared landscape
	Type of environmental value	Vegetation/habitat
	Conservation significance of environmental value	Terrestrial native vegetation complex - <30% extent remaining in the bioregion
	Conservation significance score	**0.1%**

Please select *area* or *feature* 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)	Extensively cleared landscape

Area **(impact site)**

Part A: Significant impact calculation *Area*			
Significant impact	**Description**	**Quantum of impact**	
	Clearing of significant vegetation within an extensively cleared landscape	**Significant impact (hectares)**	2.50
		Quality (scale)	3.00
		Total quantum of impact	**0.75**

Part B: Rehabilitation credit calculation *Area* (onsite)					
Rehabilitation Credit	**Description**	**Proposed rehabilitation (area in hectares)**		**Time until ecological benefit (years)**	
		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**	**0.75**
	Rehabilitation credit	**0.00**
	Significant residual impact	**0.75**

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Step 3: Calculating offsets

Key:

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

Environmental value (step 1)	Extensively cleared landscape	Significant impact (step 2, part A)	2.50
		Rehabilitation credit (step 2, part B)	0.00
		Significant residual impact (step 2, part C)	0.75

Area **(offset site)**

Offset calculation
Area

Offsets calculation	**Description**	**Proposed offset (area in hectares)**	5.52	**Duration of offset implementation (maximum 20 years)**	20.00	**Offset value**	**0.75**
	Proposed conservation covenant under the SLC Act and weed management	**Current quality of offset site (scale)**	6.00	**Time until offset site secured (years)**	2.00		**100.1%**
		Future quality WITHOUT offset (scale)	5.00	**Risk of future loss WITHOUT offset (%)**	15.0%		
		Future quality WITH offset (scale)	6.00	**Risk of future loss WITH offset (%)**	5.0%		
		Time until ecological benefit (years)	5.00				
		Confidence in offset result (%)	90.0%			**OFFSET ADEQUATE?**	**NO**

WA Environmental Offsets Calculator

Rationale for scores used in the offsets calculator

Environmental value to be offset			
Calculation	***Score (Area)***		***Rationale***
Conservation significance			
Description	Extensively cleared landscape		The proposed clearing will impact on significant vegetation growing in an extensively cleared landscape, including vegetation mapped as the highly cleared BVA 352
Type of environmental value	Vegetation/habitat		As above
Conservation significance of environmental value	Terrestrial native vegetation complex - <30% extent remaining in the bioregion		The local area and BVA 352 contain less than 30% of their original vegetation extents
Landscape-level value impacted	yes/no		Yes
Significant impact			
Description	Clearing of significant vegetation within an extensively cleared landscape		The proposed clearing will impact on vegetation growing in an extensively cleared landscape, including vegetation mapped as BVA 352.
Significant impact (hectares) / Type of feature	2.50		Extent of proposed impact to vegetation growing within an extensively cleared landscape is 2.5 hectares.
Quality (scale) / Number	3.00		The majority (~76%) of the vegetation under application is in a degraded condition. Noting this, a relatively low value has been attributed. The standard value of '2' for degraded vegetation has been increased to account for the small portion of vegetation within the application area that is in a good to very good condition.
Rehabilitation credit			
Description	0		Not proposed
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 conservation covenant under the SLC Act and weed management		An offset involving the placement of a conservation covenant over remnant vegetation 10 kilometres from the proposed clearing area, which is mapped as BVA 352, along with management including fencing and initial and ongoing weed control.
Proposed offset (area in hectares)	5.52		The area required to be placed under a covenant and subject to weed control and fencing to adequately offset the significant residual impact
Current quality of offset site / Start number (of type of feature)	6.00		According to a reconnaissance survey summary (Onshore Environmental, 2024) the majority of the offset area is in a very good condition. Therefore a moderate to high value has been attributed.
Future quality WITHOUT offset (scale) / Future number WITHOUT offset	5.00		It is presumed that the offset area would decrease by a value of 1 without the offset and future fencing and weed control given the adjacent agricultural land use.
Future quality WITH offset (scale) / Future number WITH offset	6.00		It is presumed that the future quality would remain consistent with the current quality, subject to appropriate fencing and ongoing weed control.
Time until ecological benefit (years)	5.00		The benefits of weed control and fencing are expected to be realised within 5 years, also considering the time taken to execute the covenant and undertake these measures.
Confidence in offset result (%)	0.9		There is a high level of confidence that the quality of the offset site could be maintained at its current level with appropriate fencing and weed control as proposed by the applicant.
Duration of offset implementation (maximum 20 years)	20.00		The offset area will be conserved in perpetuity through a conservation covenant under s.30 of the Soil and Land Conservation Act 1954.
Time until offset site secured (years)	2.00		It is considered that the execution of the conservation covenant will occur within two years.
Risk of future loss WITHOUT offset (%)	15.0%		The offset site is freehold land zoned rural under the local town planning scheme, and is considered at a relatively low risk of being completely lost without the offset in the future.
Risk of future loss WITH offset (%)	5.0%		The proposed conservation covenant will ensure the offset site is conserved in perpetuity, and there is a very low risk of the site being lost.
Offset ratio (Conservation area only)	N/A		