

Appendix M

Offset Assessment Guide (Strategen JBS&G 2020)



Offsets Assessment Guide

For use in determining offsets under the *Environment Protection and Biodiversity Conservation Act 1999*
2 October 2012

This guide relies on Macros being enabled in your browser.

Matter of National Environmental Significance	
Name	FCT 20c
EPBC Act status	Critically Endangered
Annual probability of extinction Based on IUCN category definitions	6.8%

Key to Cell Colours
User input required
Drop-down list
Calculated output
Not applicable to attribute

Impact calculator						
Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Units	Information source
<i>Ecological communities</i>						
Area of community	Yes	TEC FCT 20c	Area	0.2	Hectares	Biological surveys Based on 0.15 ha being Degraded condition and 0.05 ha being in Good condition
			Quality	5	Scale 0-10	
			Total quantum of impact	0.10	Adjusted hectares	
<i>Threatened species habitat</i>						
Area of habitat	No		Area			
			Quality			
			Total quantum of impact	0.00		
Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Units	Information source	
Number of features e.g. Nest hollows, habitat trees	No					
Condition of habitat Change in habitat condition, but no change in extent	No					
<i>Threatened species</i>						
Birth rate e.g. Change in nest success	No					
Mortality rate e.g. Change in number of road kills per year	No					
Number of individuals e.g. Individual plants/animals	No					

Offset calculator																												
Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time horizon (years)	Start area and quality		Future area and quality without offset		Future area and quality with offset		Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	% of impact offset	Minimum (90%) direct offset requirement met?	Cost (\$ total)	Information source									
<i>Ecological Communities</i>																												
Area of community	Yes	0.10	Adjusted hectares	Onsite retention of 0.54 ha	Risk-related time horizon (max. 20 years)	20	Start area (hectares)	0.54	Risk of loss (%) without offset	10%	Risk of loss (%) with offset	5%	Raw gain	0.03	Confidence in result (%)	90%	Adjusted gain	0.02	Net present value (adjusted hectares)	0.01	% of impact offset	168.38%	Minimum (90%) direct offset requirement met?	Yes	Cost (\$ total)		Information source	
					Future area without offset (adjusted hectares)	0.5	Future area with offset (adjusted hectares)	0.5	Raw gain	4.00	Confidence in result (%)	90%	Adjusted gain	3.60	Net present value (adjusted hectares)	3.37												
					Time until ecological benefit	1	Start quality (scale of 0-10)	7	Future quality without offset (scale of 0-10)	3	Future quality with offset (scale of 0-10)	7																
<i>Threatened species habitat</i>																												
Area of habitat	No				Time over which loss is averted (max. 20 years)		Start area (hectares)		Risk of loss (%) without offset		Risk of loss (%) with offset		Raw gain		Confidence in result (%)		Adjusted gain		Net present value (adjusted hectares)		% of impact offset		Minimum (90%) direct offset requirement met?		Cost (\$ total)		Information source	
					Future area without offset (adjusted hectares)	0.0	Future area with offset (adjusted hectares)	0.0	Raw gain		Confidence in result (%)		Adjusted gain		Net present value (adjusted hectares)													
					Time until ecological benefit		Start quality (scale of 0-10)		Future quality without offset (scale of 0-10)		Future quality with offset (scale of 0-10)																	
Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time horizon (years)	Start value		Future value without offset		Future value with offset		Raw gain	Confidence in result (%)	Adjusted gain	Net present value	% of impact offset	Minimum (90%) direct offset requirement met?	Cost (\$ total)	Information source									
Number of features e.g. Nest hollows, habitat trees	No																											
Condition of habitat Change in habitat condition, but no change in extent	No																											
<i>Threatened species</i>																												
Birth rate e.g. Change in nest success	No																											
Mortality rate e.g. Change in number of road kills per year	No																											
Number of individuals e.g. Individual plants/animals	No																											

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Calculated output
Not applicable to attribute

Impact calculator						
Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Units	Information source
<i>Ecological communities</i>						
Area of community	Yes	TEC FCT 20c	Area	0.2	Hectares	Biological surveys Based on 0.15 ha being Degraded condition and 0.05 ha being in Good condition
			Quality	5	Scale 0-10	
			Total quantum of impact	0.10	Adjusted hectares	
<i>Threatened species habitat</i>						
Area of habitat	no		Area	55.3		Biological survey
			Quality	5		
			Total quantum of impact	27.65		
<i>Threatened species</i>						
Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Units		Information source
Number of features e.g. Nest hollows, habitat trees	No					
Condition of habitat Change in habitat condition, but no change in extent	No					
Birth rate e.g. Change in nest success	No					
Mortality rate e.g. Change in number of road kills per year	No					
Number of individuals e.g. Individual plants/animals	No					

Offset calculator																				
Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time horizon (years)	Start area and quality	Future area and quality without offset	Future area and quality with offset	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	% of impact offset	Minimum (90%) direct offset requirement met?	Cost (\$ total)	Information source				
<i>Ecological Communities</i>																				
Area of community	Yes	0.10	Adjusted hectares	Revegetation of 0.44 ha	Risk-related time horizon (max. 20 years)	20	Start area (hectares)	0.44	Risk of loss (%) without offset	10%	Risk of loss (%) with offset	5%								
					Future area without offset (adjusted hectares)	0.4	Future area with offset (adjusted hectares)	0.4	Raw gain	0.02	Confidence in result (%)	90%	Adjusted gain	0.02	Net present value (adjusted hectares)	0.01	% of impact offset	96.02%	Minimum (90%) direct offset requirement met?	Yes
					Time until ecological benefit	10	Start quality (scale of 0-10)	5	Future quality without offset (scale of 0-10)	2	Future quality with offset (scale of 0-10)	7	Raw gain	5.00	Confidence in result (%)	90%	Adjusted gain	4.50	Net present value (adjusted hectares)	2.33
<i>Threatened species habitat</i>																				
Area of habitat	No	27.65			Time over which loss is averted (max. 20 years)	20	Start area (hectares)	31.1	Risk of loss (%) without offset	40%	Risk of loss (%) with offset	10%								
					Future area without offset (adjusted hectares)	18.7	Future area with offset (adjusted hectares)	28.0	Raw gain		Confidence in result (%)	80%	Adjusted gain		Net present value (adjusted hectares)		% of impact offset		Minimum (90%) direct offset requirement met?	
					Time until ecological benefit	10	Start quality (scale of 0-10)	3	Future quality without offset (scale of 0-10)	2	Future quality with offset (scale of 0-10)	4	Raw gain		Confidence in result (%)	80%	Adjusted gain		Net present value (adjusted hectares)	
<i>Threatened species</i>																				
Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time horizon (years)	Start value	Future value without offset	Future value with offset	Raw gain	Confidence in result (%)	Adjusted gain	Net present value	% of impact offset	Minimum (90%) direct offset requirement met?	Cost (\$ total)	Information source				
Number of features e.g. Nest hollows, habitat trees	No																			
Condition of habitat Change in habitat condition, but no change in extent	No																			
Birth rate e.g. Change in nest success	No																			
Mortality rate e.g. Change in number of road kills per year	No																			
Number of individuals e.g. Individual plants/animals	No																			