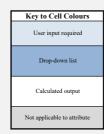
For use in determining offsets under the Environment Protection and Biodiversity Conservation Act 1999 2 October 2012

This guide relies on Macros being enabled in your browser.

Matter of National Environmental Signif	icance
Name	Black cockatoos
EPBC Act status	Endangered
Annual probability of extinction Based on IUCN category definitions	1.2%



			Impact calcu	lator			
	Protected matter attributes	Attribute relevant to case?	Description	Quantum of im	oact	Units	Information source
			Ecological c	ommunities			
				Area			
	Area of community	No		Quality			
				Total quantum of impact	0.00		
			Threatened sp	pecies habitat			
				Area	10.04	Hectares	
Tator	Area of habitat	Yes	Black cockatoo foraging habitat	Quality	5	Scale 0-10	Applicant supporting information
mpace carculator				Total quantum of impact	5.02	Adjusted hectares	
	Protected matter attributes	Attribute relevant to case?	Description	Quantum of im	pact	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					
			Threatene	ed species			
	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 c	alculat	or										
	Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time hori (years)		Start are quali		Future are quality wi offse	thout	Future are quality with		Raw gain	Confidence in result (%)	Adjusted gain	Net pres		% of impact offset	Minimum (90%) direct offset requirement met?	Cost (\$ total)	Information source
										Ecolog	ical Con	nmunities										
						Risk-related time horizon		Start area (hectares)		Risk of loss (%) without offset Future area		Risk of loss (%) with offset Future area										
	Area of community	No				(max. 20 years)		(inceraires)		without offset (adjusted hectares)	0.0	with offset (adjusted hectares)	0.0									
						Time until ecological benefit		Start quality (scale of 0- 10)		Future quality without offset (scale of 0-10)		quality with offset (scale of 0-10)										
											ned spec	cies habitat										
						Time over which loss is		Start area		Risk of loss (%) without offset	30%	Risk of loss (%) with offset	10%									
lator	Area of habitat	Yes	5.02	Adjusted hectares	Land acquisition (conservation covenant under the Soil and Land Conservation Act)	averted (max. 20 years)	20	(hectares)	20.61	Future area without offset (adjusted hectares)	14.4	Future area with offset (adjusted hectares)	18.5	4.12	90%	3.71	2.92	2.05	40.75%	No		
Offset calculator					ŕ	Time until ecological benefit	1	Start quality (scale of 0- 10)	7	Future quality without offset (scale of 0-10)	7	Future quality with offset (scale of 0-10)	7	0.00	80%	0.00	0.00					
Offs	Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time hori (years)		Start va	alue	Future value offset		Future valuoffse		Raw gain	Confidence in result (%)	Adjusted gain	Net pres	ent 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																				
										Thr	eatened :	species										
	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																				

Cockatoo covenant

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 Signif	ficance
Name	Black cockatoos
EPBC Act status	Endangered
Annual probability of extinction Based on IUCN category definitions	1.2%



			Impact calcu	lator			
	Protected matter attributes	Attribute relevant to case?	Description	Quantum of im	oact	Units	Information source
			Ecological c	ommunities			
				Area			
	Area of community	No		Quality			
				Total quantum of impact	0.00		
			Threatened sp	pecies habitat			
				Area	10.04	Hectares	
Tator	Area of habitat	Yes	Black cockatoo foraging habitat	Quality	5	Scale 0-10	Applicant supporting information
mpace carculator				Total quantum of impact	5.02	Adjusted hectares	
	Protected matter attributes	Attribute relevant to case?	Description	Quantum of im	pact	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					
			Threatene	ed species			
	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					

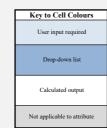
										Offset o	alculat	or										
	Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time hori (years)		Start are quali		Future are quality wi	thout	Future are quality with		Raw gain	Confidence in result (%)	Adjusted gain	Net preso		% of impact offset	Minimum (90%) direct offset requirement met?	Cost (\$ total)	Information source
										Ecolog	gical Con	nmunities										
	Area of community	No				Risk-related time horizon (max. 20 years)		Start area (hectares)		Risk of loss (%) without offset Future area without offset (adjusted	0.0	Risk of loss (%) with offset Future area with offset (adjusted	0.0									
						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)										
										Threate	ned spec	cies habitat										
						Time over which loss is averted (max.	20	Start area (hectares)	8.2	Risk of loss (%) without offset Future area	30%	Risk of loss (%) with offset	10%	1.64	90%	1.48	1.16					
llator	Area of habitat	Yes	5.02	Adjusted hectares	Revegetation / rehabilitation and conservation covenant	20 years)		(nectares)		without offset (adjusted hectares)	5.7	with offset (adjusted hectares)	7.4					1.88	37.53%	No		
Offset calculator						Time until ecological benefit	10	Start quality (scale of 0- 10)	4	Future quality without offset (scale of 0-10)	4	Future quality with offset (scale of 0-10)	7	3.00	70%	2.10	1.86					
sijo	Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time hori (years)		Start va	alue	Future value offse		Future valu		Raw gain	Confidence in result (%)	Adjusted gain	Net pres	ent 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																				
										Thi	eatened s	species										
	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																				

Page 2 of 10

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 Signif	ficance
Name	Black cockatoos
EPBC Act status	Endangered
Annual probability of extinction Based on IUCN category definitions	1.2%



		Impact calcu	lator			
Protected matter attributes	Attribute relevant to case?	Description	Quantum of im	oact	Units	Information source
		Ecological c	ommunities			
			Area			
Area of community	No		Quality			
			Total quantum of impact	0.00		
		Threatened sp	pecies habitat			
			Area	10.04	Hectares	
Area of habitat	Yes	Black cockatoo foraging habitat	Quality	5	Scale 0-10	Applicant supporting information
			Total quantum of impact	5.02	Adjusted hectares	
Protected matter attributes	Attribute relevant to case?	Description	Quantum of im	oact	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					
		Threatene	ed species			
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 c	alculate	or									
	Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time hori: (years)		Start are quali		Future are quality wi offset	thout	Future are quality with		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
										Ecolog	ical Con	ımunities									
	Area of community	No				Risk-related time horizon (max. 20 years)		Start area (hectares)		Risk of loss (%) without offset Future area without offset (adjusted hectares)	0.0	Risk of loss (%) with offset Future area with offset (adjusted hectares)	0.0								
						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)									
											ned spec	ies habitat									
tor	Area of habitat	Yes	5.02	Adjusted hectares	Revegetation	Time over which loss is averted (max. 20 years)	20	Start area (hectares)	10.04	Risk of loss (%) without offset Future area without offset (adjusted hectares)	7.0	Risk of loss (%) with offset Future area with offset (adjusted hectares)	7.0	0.00	90%	0.00	0.00	23.41%	No		
Offset calculator						Time until ecological benefit	15	Start quality (scale of 0- 10)	0	Future quality without offset (scale of 0-10)	0	Future quality with offset (scale of 0-10)	4	4.00	50%	2.00	1.67				
Offs	Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time hori (years)		Start v	alue	Future value offset		Future valu 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																			
										Thr	eatened s	species									
	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																			

Cockatoo pit reveg credit

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 Signi	ficance
Name	Banksia Woodland TEC
EPBC Act status	Endangered
Annual probability of extinction Based on IUCN category definitions	1.2%



			Impact calcu	lator			
	Protected matter attributes	Attribute relevant to case?	Description	Quantum of im	pact	Units	Information source
			Ecological c	ommunities			
				Area	3.68	Hectares	
	Area of community	Yes	Vegetation respresentative of the Banksia Woodland TEC	Quality	5	Scale 0-10	Applicant supporting information
				Total quantum of impact	1.84	Adjusted hectares	
			Threatened sp	oecies habitat			
				Area			
ator	Area of habitat	No		Quality			
Impact calculator				Total quantum of impact	0.00		
Imp	Protected matter attributes	Attribute relevant to case?	Description	Quantum of im	pact	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					
			Threatene	ed species			
	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 c	alculato	or										
	Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time hori (years)		Start are quali		Future are quality wit offset	hout	Future are quality with		Raw gain	Confidence in result (%)	Adjusted gain	Net preso (adjusted		% of impact offset	Minimum (90%) direct offset requirement met?	Cost (\$ total)	Information source
										Ecolog	ical Com	ımunities										
	Area of community	Yes	1.84	Adjusted hectares	Land acquisition (conservation covenant under the Soil and Land Conservation Act)	Risk-related time horizon (max. 20 years)	20	Start area (hectares)	20.61	Risk of loss (%) without offset Future area without offset (adjusted hectares)	30%	Risk of loss (%) with offset Future area with offset (adjusted hectares)	10%	4.12	90%	3.71	2.92	2.05	111.18%	Yes		
					Act)	Time until ecological benefit	1	Start quality (scale of 0- 10)	7	Future quality without offset (scale of 0-10)	7	Future quality with offset (scale of 0-10)	7	0.00	80%	0.00	0.00					
										Threate	ned speci	ies habitat										
						Time over		6		Risk of loss (%) without offset		Risk of loss (%) with offset										
ator	Area of habitat	No				which loss is averted (max. 20 years)		Start area (hectares)		Future area without offset (adjusted hectares)	0.0	Future area with offset (adjusted hectares)	0.0									
Offset calculator						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)										
Offs	Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time hori (years)		Start va	alue	Future value offset		Future val		Raw gain	Confidence in result (%)	Adjusted gain	Net preso	ent 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																				
										Thre	eatened s	species										
	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																				

Banksia Woodland TEC-covenant

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	SWREL Linkage and Southern Rive				
EPBC Act status	Other				
Annual probability of extinction Based on IUCN category definitions	0.0%				

Other annual probability of extinction	Information source
CAINCION	information source

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

			Impact calcu	lator						
	Protected matter attributes	Attribute relevant to case?	Description	Units	Information source					
			ommunities							
				Area						
	Area of community	No		Quality						
				Total quantum of impact	0.00					
			Threatened sp	pecies habitat						
			SWREL	Area	10.04	Hectares				
ıtor	Area of habitat	Yes	Ecological linkage values and vegetation representative of the Southern River	Quality	5	Scale 0-10	Applicant supporting information			
Impact calculator			Complex	Total quantum of impact	5.02	Adjusted hectares				
Imp	Protected matter attributes	Attribute relevant to case?	relevant to Description		oact	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								
			Threatene	ed species						
	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 c	alculate	or										
	Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time hori (years)		Start are quali		Future are quality wi offset	thout	Future are quality witl		Raw gain	Confidence in result (%)	Adjusted gain	Net prese (adjusted		% of impact offset	Minimum (90%) direct offset requirement met?	Cost (\$ total)	Information source
										Ecolog	ical Con	nmunities										
	Area of community	No				Risk-related time horizon (max. 20 years)		Start area (hectares)		Risk of loss (%) without offset Future area without offset (adjusted hectares)	0.0	Risk of loss (%) with offset Future area with offset (adjusted hectares)	0.0									
						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)										
										Threate	ned spec	ies habitat										
						Time over				Risk of loss (%) without offset	30%	Risk of loss (%) with offset	10%									
ator	Area of habitat	Yes	5.02	Adjusted hectares	Land acquisition (conservation covenant under the Soil and Land Conservation Act)	which loss is averted (max. 20 years)	20	Start area (hectares)	20.61	Future area without offset (adjusted hectares)	14.4	Future area with offset (adjusted hectares)	18.5	4.12	90%	3.71	3.71	2.60	51.73%	No		
Offset calculator					ŕ	Time until ecological benefit	1	Start quality (scale of 0- 10)	7	Future quality without offset (scale of 0-10)	7	Future quality with offset (scale of 0-10)	7	0.00	80%	0.00	0.00					
Offs	Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time hori (years)		Start va	alue	Future value offset		Future valu		Raw gain	Confidence in result (%)	Adjusted gain	Net prese	nt 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																				
										Thre	eatened s	species										
	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																				

Linkage & veg complex-covenant

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	SWREL Linkage					
	and Southern Rive					
EPBC Act status	Other					
Annual probability of extinction	0.0%					
Based on IUCN category definitions	0.070					

Other annual probability of extinction	Information source

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 im	oact	Units	Information source	
				Area				
	Area of community	No		Quality				
				Total quantum of impact	0.00			
			Threatened sp	pecies habitat				
			SWREL	Area	10.04	Hectares		
ıtor	Area of habitat	Yes	Ecological linkage values and vegetation representative of the Southern River	Quality	5	Scale 0-10	Applicant supporting information	
Impact calculator			Complex	Total quantum of impact	5.02	Adjusted hectares		
Imp	Protected matter attributes	Attribute relevant to case?	Description	Quantum of im	oact	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						
			Threatene	ed species				
	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 o	alculate	or										
	Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time hori: (years)		Start are qualit		Future are quality wi offse	thout	Future are quality with		Raw gain	Confidence in result (%)	Adjusted gain	Net prese (adjusted l		% of impact offset	Minimum (90%) direct offset requirement met?	Cost (\$ total)	Information source
										Ecolog	gical Con	nmunities										
	Area of community	No				Risk-related time horizon (max. 20 years)		Start area (hectares)		Risk of loss (%) without offset Future area without offset (adjusted hectares)	0.0	Risk of loss (%) with offset Future area with offset (adjusted hectares)	0.0									
						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)					ļ					
	Threatened species habitat																					
itor	Area of habitat	Yes	5.02	Adjusted hectares	Revegetation/ rehabilitation and conservation covenant	Time over which loss is averted (max. 20 years)	20	Start area (hectares)	8.2	Risk of loss (%) without offset Future area without offset (adjusted hectares)	5.7	Risk of loss (%) with offset Future area with offset (adjusted hectares)	7.4	1.64	90%	1.48	1.48	2.24	44.59%	No		
Offset calculator						Time until ecological benefit	1	Start quality (scale of 0- 10)	4	Future quality without offset (scale of 0-10)	4	Future quality with offset (scale of 0-10)	7	3.00	70%	2.10	2.10					
Offse	Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time hori (years)		Start va	alue	Future value offse		Future valu		Raw gain	Confidence in result (%)	Adjusted gain	Net prese	nt 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																				
										Thr	eatened s	species										
	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																				

Linkage & veg complex-rehab

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.

	SWREL ecologica
Name	linkage and
EPBC Act status	Other
Annual probability of extinction	0.0%
Based on IUCN category definitions	0.070

Other annual probability of extinction	Information source

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

			Impact calcu	lator			
	Protected matter attributes	Attribute relevant to case?	Description	Quantum of imp	oact	Units	Information source
			Ecological co	ommunities			
				Area			
	Area of community	No		Quality			
				Total quantum of impact	0.00		
			Threatened sp	oecies habitat			
			SWREL	Area	10.04	Hectares	
Impact calculator	Area of habitat	Yes	SWREL Ecological linkage values and vegetation representative of the Southern River Complex	Quality	5	Scale 0-10	Applicant supporting information
				Total quantum of impact	5.02	Adjusted hectares	
Imp	Protected matter attributes	Attribute relevant to case?	Description	Quantum of imp	pact	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						
			Threatene	ed species			
	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 hori (years)		Start are quali		Future are quality wi offset	thout	Future are quality witl		Raw gain	Confidence in result (%)	Adjusted gain	Net prese (adjusted		% of impact offset	Minimum (90%) direct offset requirement met?	Cost (\$ total)	Information source	
					Ecological Communities																		
	Area of community	No				Risk-related time horizon (max. 20 years)		Start area (hectares)		Risk of loss (%) without offset Future area without offset (adjusted hectares)	0.0	Risk of loss (%) with offset Future area with offset (adjusted hectares)	0.0										
						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)											
										Threate	ned spec	ies habitat											
						Time over		6: .		Risk of loss (%) without offset	30%	Risk of loss (%) with offset	30%										
ator	Area of habitat	area of habitat Yes	Yes 5.02		Adjusted hectares		which loss is averted (max. 20 years)	20	Start area (hectares)	10	Future area without offset (adjusted hectares)	7.0	Future area with offset (adjusted hectares)	7.0	0.00	90%	0.00	0.00	1.40	27.89%	No		
Offset calculator						Time until ecological benefit	15	Start quality (scale of 0- 10)	0	Future quality without offset (scale of 0-10)	0	Future quality with offset (scale of 0-10)	4	4.00	50%	2.00	2.00						
Offs	Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time hori (years)		Start va	alue	Future value offset		Future valu		Raw gain	Confidence in result (%)	Adjusted gain	Net prese	nt 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																					
	Threatened species																						
	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																						

linkage & veg comp pit reveg

Offset Calculation 1 - Mitigation Revegetation (Pit revegetation)

Field Name	Description	Justification for value used
IUCN Criteria	The IUCN criteria for the value being impacted	1.2% - Afforded to black cockatoo habitat as two of these species are listed as Endangered under the Wildlife Conservation Act 1950 and the <i>Environment Protection and Biodiversity Conservation Act 1999</i> . It is noted that forest red-tailed black cockatoo is listed as 'vulnerable' which is of lower conservation status, therefore setting this criteria as endangered also addresses the criteria for this species. 0.0% - Afforded to linkage values and Southern River Vegetation Complex
		0.0 % - Allorded to linkage values and Sodinem River Vegetation Complex
Area of impact (habitat/community) or Quantum of impact (features/individuals)	The area of habitat/community impacted or number of features/individuals impacted	10.04 hectares provides black cockatoo habitat, linkage values and is representative of the Southern River Vegetation Complex
Quality of impacted area (habitat/community)	The quality score for area of habitat/community being impacted - a measure of how well a particular site supports a particular threatened species or ecological community and contributes to its ongoing viability	5 - Vegetation ranges from Very good to completely degraded and provides preferred foraging habitat on the Swan Coastal Plain
Time over which loss is averted (habitat/community)	This describes the timeframe over which changes in the level of risk to the proposed mitigation site can be considered and quantified	20 - The offset site will be conserved in perpetuity under a conservation covenant. 20 years is the maximum value associated with this field.
Time until ecological benefit (habitat/community) or Time horizon (features/individuals)	This describes the estimated time (in years) that it will take for the main benefit of the quality (habitat/community) or value (features/individuals) improvement of the proposed mitigation to be realised	15 - The benefit of the revegetation is considered to be available after 15 years
Start area (habitat/community) or Start value (features/individuals)	The area of habitat/community or number of features/individuals proposed to mitigate the impacts	10.04 hectares of revegetation is proposed; the entire clearing area.
Start quality (habitat/community)	The quality score for the area of habitat/community proposed as mitigation - a measure of how well a particular site supports a particular threatened species or ecological community and contributes to its ongoing viability	0 - The application area will be cleared under the clearing permit
Future quality without offset (habitat/community) or Future value without offset (features/individuals)	The predicted future quality score (habitat/community) or value (features/individuals) of the proposed mitigation site without the mitigation	0 - It is expected that the quality would remain cleared without revegetation.
Future quality with offset (habitat/community) or Future value with offset (features/individuals)	proposed mitigation site with the mitigation	4 - It is assumed that with approriate revegetation/rehabilitation measures the sites will increase from cleared to Degraded to Good condition and contain suitable foraging habitat for black cockatoos.
Risk of loss (%) without offset (habitat/community)	This describes the chance that the habitat/community on the proposed mitigation site will be completely lost (i.e. no longer hold any value for the protected matter of concern) over the foreseeable future without the mitigation	30% - The site is zoned rural
Risk of loss (%) with offset (habitat/community)	This describes the chance that the habitat/community on the proposed mitigation site will be completely lost (i.e. no longer hold any value for the protected matter of concern) over the foreseeable future with the mitigation	30% - As per above
Confidence in result (%) – risk of loss (habitat/community)	The capacity of measures to mitigate risk of loss of the mitigation site	N/A
Confidence in result (%) – Change in quality (habitat/community) or Change in value (features/individuals)	The level of certainty about the successful achievement of the proposed change in quality (habitat/community) or value (features/individuals)	50% - The applicant has submitted a comprehensive revegetation/rehabilitation plan. Difficulty in increasing vegetation quality to good condition has been taken into account in attributing this value, while also noting the applicants previous attempts at revegetation within adjacent areas.
% of impact offset	% of the significant residual impact that would be addressed by the proposed offset (note: the offset calculations combined should equate to 100% for each residual impact)	Black cockatoos - 23.41% (acceptable when combined with below offset measures - totals 101.69%) Linkage values and Southern River Complex - 27.89% (acceptable when combined with below offset measures totals 124.21%)

Offset Calculation 2 - Land Acquisition, conservation covenant (20.61 hectares)

Field Name	Description	Justification for value used
IUCN Criteria	The IUCN criteria for the value being impacted	1.2% - Afforded to black cockatoo habitat as two of these species are listed as Endangered under the Wildlife Conservation Act 1950 and the <i>Environment Protection and Biodiversity Conservation Act 1999</i> . It is noted that forest red-tailed black cockatoo is listed as 'vulnerable' which is of lower conservation status, therefore setting this criteria as endangered also addresses the criteria for this species. 1.2% - Afforded to Banksia Woodland TEC as this community is listed as Endangered under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> 0.0% - Afforded to linkage values and Southern River Vegetation Complex

Justification Page 8 of 10

Area of impact (habitat/community) or Quantum of impact (features/individuals)	The area of habitat/community impacted or number of features/individuals impacted	10.04 hectares that provides black cockatoo habitat, linkge values and is representative of the Southern River Vegetation Complex 3.68 hectares is representative of the Banksia woodland TEC					
	The quality score for area of habitat/community being impacted - a measure of how well a particular site supports a particular threatened species or ecological community and contributes to its ongoing viability	5 - Vegetation ranges from Very good to completely degraded and provides preferred black cockatoo foraging habitat on the Swan Coastal Plain					
	This describes the timeframe over which changes in the level of risk to the proposed offset site can be considered and quantified	20 - The offset site will be conserved in perpetuity under a conservation covenant. 20 years is the maximum value associated with this field.					
Liime norizon iteatiires/individiiaisi	This describes the estimated time (in years) that it will take for the main benefit of the quality (habitat/community) or value (features/individuals) improvement of the proposed offset to be realised	1 - Expected for a conservation covenant to be registered over the site within 1 year					
Start area (habitat/community) or Start value (features/individuals)	The area of habitat/community or number of features/individuals proposed to offset the impacts	20.61 hectares					
	The quality score for the area of habitat/community proposed as an offset - a measure of how well a particular site supports a particular threatened species or ecological community and contributes to its ongoing viability	7 - Vegetation largely considered to be in a very good condition					
Future quality without offset (habitat/community) or Future value without offset (features/individuals)	The predicted future quality score (habitat/community) or value (features/individuals) of the proposed offset site without the offset	7 - It is expected that the quality would remain the same					
	The predicted future quality score (habitat/community) or value (features/individuals) of the proposed offset site with the offset	7 - It is expected that the vegetation would be maintained at its current quality should it be protected under a conservation covenant without ongoing management					
	This describes the chance that the habitat/community on the proposed offset site will be completely lost (i.e. no longer hold any value for the protected matter of concern) over the foreseeable future without an offset	30% - The land proposed to be acquired is zoned rural					
	This describes the chance that the habitat/community on the proposed offset site will be completely lost (i.e. no longer hold any value for the protected matter of concern) over the foreseeable future with an offset	10% - The site would be conserved in perpetuity under a conservation covenant through the <i>Soil and Land Conservation Act 1945</i> . A conservation covennant should reduce the risk of loss to 10%. The risk of catastrophic events (fire, dieback etc.) remain.					
Confidence in result (%) – risk of loss (habitat/community)	The capacity of measures to mitigate risk of loss of the proposed offset site	90% - There is a high level of confidence that the proposed risk of loss will be low (10%) given that it will be secured under a conservation covenant					
Confidence in result (%) – Change in quality (habitat/community) or Change in value (features/individuals)	The level of certainty about the successful achievement of the proposed change in quality (habitat/community) or value (features/individuals)	N/A					
	% of the significant residual impact that would be offset by the proposed offset (note: the offset calculations combined should equate to 100% for each residual impact)	Black cokatoos - 40.75% (acceptable when combined with above mitigation and below offset measure - totals 101.69%) Linkage values and Southern River Complex - 51.73% (acceptable when combined with above mitigation and below offset measure - totals 124.21%)					
	. ,	Banksia Woodland TEC - 111.18%					

Offset Calculation 3 - Rehabilitation and conservation covenant (8.2 hectares) - Total combined covenant area including above offset is 28.81 hectares

Field Name	Description	Justification for value used				
IUCN Criteria	The IUCN criteria for the value being impacted	1.2% - Afforded to black cockatoo habitat as two of these species are listed as Endangered under the Wildlife Conservation Act 1950 and the <i>Environment Protection and Biodiversity Conservation Act 1999</i> . It is noted that forest red-tailed black cockatoo is listed as 'vulnerable' which is of lower conservation status, therefore setting this criteria as endangered also addresses the criteria for this species. 0.0% - Afforded to linkage values and Southern River Vegetation Complex				
Area of impact (habitat/community) or Quantum of impact (features/individuals)	The area of habitat/community impacted or number of features/individuals impacted	10.04 hectares provides black cockatoo foraging habitat, linkage values and is representative of the Southern River Vegetation Complex				
	The quality score for area of habitat/community being impacted - a measure of how well a particular site supports a particular threatened species or ecological community and contributes to its ongoing viability	5 - Vegetation ranges from Very good to completely degraded and provides preferred foraging habitat on the Swan Coastal Plain				
Time over which loss is averted (habitat/community)	This describes the timeframe over which changes in the level of risk to the proposed mitigation site can be considered and quantified	20 - The offset site will be conserved in perpetuity under a conservation covenant. 20 years is the maximum value associated with this field.				
Time until ecological benefit (habitat/community) or Time horizon (features/individuals)	This describes the estimated time (in years) that it will take for the main benefit of the quality (habitat/community) or value (features/individuals) improvement of the proposed mitigation to be realised	10 - The benefit of the revegetation is considered to be available after 10 years				
Start area (habitat/community) or Start value (features/individuals)	The area of habitat/community or number of features/individuals proposed to mitigate the impacts	8.2 hectares is proposed to be rehabilitated				

Justification Page 9 of 10

Start quality (habitat/community)	The quality score for the area of habitat/community proposed as mitigation - a measure of how well a particular site supports a particular threatened species or ecological community and contributes to its ongoing viability	4 - Considered to be largely in a degraded condition with similar values (slightly less) to the application area				
Future quality without offset (habitat/community) or Future value without offset (features/individuals)	The predicted future quality score (habitat/community) or value (features/individuals) of the proposed mitigation site without the mitigation	4 - It is expected that the quality would remain the same				
	The predicted future quality score (habitat/community) or value (features/individuals) of the proposed mitigation site with the mitigation	7 - It is assumed that with approriate revegetation/rehabilitation measures the sites will increase to a very good condition.				
	This describes the chance that the habitat/community on the proposed mitigation site will be completely lost (i.e. no longer hold any value for the protected matter of concern) over the foreseeable future without the mitigation	30% - The site is currently zoned rural				
	This describes the chance that the habitat/community on the proposed mitigation site will be completely lost (i.e. no longer hold any value for the protected matter of concern) over the foreseeable future with the mitigation	10% - The site would be conserved in perpetuity under a conservation covenant through the <i>Soil and Land Conservation Act 1945</i> . A conservation covennant should reduce the risk of loss to 10%. The risk of catastrophic events (fire, dieback etc.) remain.				
Confidence in result (%) – risk of loss (habitat/community)	The capacity of measures to mitigate risk of loss of the mitigation site	90% - There is a high level of confidence that the proposed risk of loss will be low (10%) given that it will be secured under a conservation covenant				
Confidence in result (%) – Change in quality (habitat/community) or Change in value (features/individuals)	The level of certainty about the successful achievement of the proposed change in quality (habitat/community) or value (features/individuals)	70% - The applicant has submitted a comprehensive revegetation/rehabilitation plan. Difficulty in increasing vegetation quality to very good condition has been taken into account in attributing this value.				
% of impact offset	% of the significant residual impact that would be offset by the proposed offset (note: the offset calculations combined should equate to 100% for each residual impact)	Black cockatoos - 37.53% (acceptable when combined with above offset and mitigation measures - totals 101.69%) Linkage values and Southern River Complex - 44.59% (acceptable when combined with above offset and mitigation measures - totals 120.78%)				

Justification Page 10 of 10