Appendix M: Offset Assessment Guide outputs – Coastal swamp oak TEC

TABLE 10.2 Greenridge AU1 OAG

Offsets Assessment Guide

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

Matter of National Environmental Significance	
Name	Coastal Swamp Oak TEC
EPBC Act status	Endangered
Annual probability of extinction Based on IUCN category definitions	1.2%

Impact calculator

Ecological communities

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of community	Yes		Area *(Hectares)*	15.9	
			Quality *(Scale 0-10)*	8	
		Total quantum of impact *(Adjusted Hectares)*		12.72	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of habitat	No		Area *(Hectares)*		
			Quality *(Scale 0-10)*		
		Total quantum of impact *(Adjusted Hectares)*			

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	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

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
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

Ecological Communities

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of community	Yes	12.72	Greenridge AU1	Risk-related time horizon *(max. 20 years)*	20	Start area *(hectares)*	14.2	Risk of loss without offset *(%)*	1%	Risk of loss with offset *(%)*	0%	0.14	100%	0.14	0.11	Overall net present value	2.22	
				Time until ecological benefit	10	Start quality *(scale of 0-10)*	8	Future quality without offset *(scale of 0-10)*	7	Future quality with offset *(scale of 0-10)*	9	2.00	85%	1.70	1.51	% of impact offset	17.47%	
								Future area without offset	14.1	Future area with offset	14.2			Minimum (90%) direct offset requirement met?			FALSE	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of habitat	Yes			Risk-related time horizon *(max. 20 years)*		Start area *(hectares)*		Risk of loss without offset *(%)*		Risk of loss with offset *(%)*		0.00		0.00	0.00	Overall net present value	0.00	
				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)*		0.00		0.00	0.00	% of impact offset	0.00%	
								Future area without offset	0.0	Future area with offset	0.0			Minimum (90%) direct offset requirement met?			FALSE	

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Number of features e.g. Nest hollows, habitat trees	Yes							0.00		0.00	0.00	0.00%	FALSE	
Condition of habitat Change in habitat condition, but no change in extent	No							0.00		0.00	0.00	0.00%	FALSE	

Threatened species

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Birth rate e.g. Change in nest success	No							0.00		0.00	0.00	0.00%	FALSE	
Mortality rate e.g Change in number of road kills per year	No							0.00		0.00	0.00	0.00%	FALSE	
Number of individuals e.g. Individual plants/animals	No							0.00		0.00	0.00	0.00%	FALSE	

TABLE 10.3 Greenridge AU2 OAG

Offsets Assessment Guide

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

Matter of National Environmental Significance	
Name	Coastal Swamp Oak TEC
EPBC Act status	Endangered
Annual probability of extinction Based on IUCN category definitions	1.2%

Impact calculator

Ecological communities

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of community	Yes		Area *(Hectares)*	15.9	
			Quality *(Scale 0-10)*	8	
		Total quantum of impact *(Adjusted Hectares)*		12.72	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of habitat	No		Area *(Hectares)*		
			Quality *(Scale 0-10)*		
		Total quantum of impact *(Adjusted Hectares)*			

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	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

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
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

Ecological Communities

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of community	Yes	12.72	Greenridge AU2	Risk-related time horizon *(max. 20 years)*	20	Start area *(hectares)*	5.16	Risk of loss without offset *(%)*	1%	Risk of loss with offset *(%)*	0%	0.05	100%	0.05	0.04	Overall net present value	0.72	
				Time until ecological benefit	20	Start quality *(scale of 0-10)*	7	Future quality without offset *(scale of 0-10)*	7	Future quality with offset *(scale of 0-10)*	9	2.00	85%	1.70	1.34	% of impact offset	5.67%	
								Future area without offset	5.1	Future area with offset	5.2					Minimum (90%) direct offset requirement met?	FALSE	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of habitat	Yes			Risk-related time horizon *(max. 20 years)*		Start area *(hectares)*		Risk of loss without offset *(%)*		Risk of loss with offset *(%)*		0.00		0.00	0.00	Overall net present value	0.00	
				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)*		0.00		0.00	0.00	% of impact offset	0.00%	
								Future area without offset	0.0	Future area with offset	0.0					Minimum (90%) direct offset requirement met?	FALSE	

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Number of features e.g. Nest hollows, habitat trees	Yes							0.00		0.00	0.00	0.00%	FALSE	
Condition of habitat Change in habitat condition, but no change in extent	No							0.00		0.00	0.00	0.00%	FALSE	

Threatened species

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Birth rate e.g. Change in nest success	No							0.00		0.00	0.00	0.00%	FALSE	
Mortality rate e.g Change in number of road kills per year	No							0.00		0.00	0.00	0.00%	FALSE	
Number of individuals e.g. Individual plants/animals	No							0.00		0.00	0.00	0.00%	FALSE	

Matter of National Environmental Significance	
Name	Coastal Swamp Oak TEC
EPBC Act status	Endangered
Annual probability of extinction Based on IUCN category definitions	1.2%

Impact calculator

Ecological communities

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of community	Yes		Area *(Hectares)*	15.9	
			Quality *(Scale 0-10)*	8	
		Total quantum of impact *(Adjusted Hectares)*		12.72	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of habitat	No		Area *(Hectares)*		
			Quality *(Scale 0-10)*		
		Total quantum of impact *(Adjusted Hectares)*			

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	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

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
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

Ecological Communities

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of community	Yes	12.72	Greenridge AU3	Risk-related time horizon *(max. 20 years)*	20	Start area *(hectares)*	21.97	Risk of loss without offset *(%)*	0%	Risk of loss with offset *(%)*	0%	0.00	100%	0.00	0.00	Overall net present value	4.41	
				Time until ecological benefit	20	Start quality *(scale of 0-10)*	3	Future quality without offset *(scale of 0-10)*	3	Future quality with offset *(scale of 0-10)*	6	3.00	85%	2.55	2.01	% of impact offset	34.70%	
								Future area without offset	22.0	Future area with offset	22.0			Minimum (90%) direct offset requirement met?			FALSE	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of habitat	Yes			Risk-related time horizon *(max. 20 years)*		Start area *(hectares)*		Risk of loss without offset *(%)*		Risk of loss with offset *(%)*		0.00		0.00	0.00	Overall net present value	0.00	
				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)*		0.00		0.00	0.00	% of impact offset	0.00%	
								Future area without offset	0.0	Future area with offset	0.0			Minimum (90%) direct offset requirement met?			FALSE	

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Number of features e.g. Nest hollows, habitat trees	Yes							0.00		0.00	0.00	0.00%	FALSE	
Condition of habitat Change in habitat condition, but no change in extent	No							0.00		0.00	0.00	0.00%	FALSE	

Threatened species

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Birth rate e.g. Change in nest success	No							0.00		0.00	0.00	0.00%	FALSE	
Mortality rate e.g Change in number of road kills per year	No							0.00		0.00	0.00	0.00%	FALSE	
Number of individuals e.g. Individual plants/animals	No							0.00		0.00	0.00	0.00%	FALSE	

Summary

					Cost ($)		
Protected matter attributes	Quantum of impact	Net present value	% of impact offset	Direct offset adequate?	Direct offset	Other compensatory measures	Total
Birth rate	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Mortality rate	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Number of individuals	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Number of features	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Condition of habitat	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Area of habitat		0.00	0.00	FALSE	0.00	N/A	0.00
Area of community	12.72	4.41	0.35	FALSE	0.00	#DIV/0!	#DIV/0!
					$0.00	**#DIV/0!**	**#DIV/0!**

Offsets Assessment Guide

For use in determining offsets under the Environment Protection and Biodiversity Conservation Act 19
2 October 2012

Matter of National Environmental Significance	
Name	Coastal Swamp Oak TEC
EPBC Act status	Endangered
Annual probability of extinction Based on IUCN category definitions	1.2%

Impact calculator

Ecological communities

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of community	Yes		Area *(Hectares)*	15.9	
			Quality *(Scale 0-10)*	8	
		Total quantum of impact *(Adjusted Hectares)*		12.72	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of habitat	No		Area *(Hectares)*		
			Quality *(Scale 0-10)*		
		Total quantum of impact *(Adjusted Hectares)*			

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	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

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
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

Ecological Communities

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of community	Yes	12.72	Greenridge AU4	Risk-related time horizon *(max. 20 years)*	20	Start area *(hectares)*	28.19	Risk of loss without offset *(%)*	1%	Risk of loss with offset *(%)*	0%	0.28	100%	0.28	0.22	Overall net present value	4.41	
				Time until ecological benefit	10	Start quality *(scale of 0-10)*	8	Future quality without offset *(scale of 0-10)*	7	Future quality with offset *(scale of 0-10)*	9	2.00	85%	1.70	1.51	% of impact offset	34.68%	
								Future area without offset	27.9	Future area with offset	28.2					Minimum (90%) direct offset requirement met?	FALSE	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of habitat	Yes			Risk-related time horizon *(max. 20 years)*		Start area *(hectares)*		Risk of loss without offset *(%)*		Risk of loss with offset *(%)*		0.00		0.00	0.00	Overall net present value	0.00	
				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)*		0.00		0.00	0.00	% of impact offset	0.00%	
								Future area without offset	0.0	Future area with offset	0.0					Minimum (90%) direct offset requirement met?	FALSE	

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Number of features e.g. Nest hollows, habitat trees	Yes							0.00		0.00	0.00	0.00%	FALSE	
Condition of habitat Change in habitat condition, but no change in extent	No							0.00		0.00	0.00	0.00%	FALSE	

Threatened species

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Birth rate e.g. Change in nest success	No							0.00		0.00	0.00	0.00%	FALSE	
Mortality rate e.g Change in number of road kills per year	No							0.00		0.00	0.00	0.00%	FALSE	
Number of individuals e.g. Individual plants/animals	No							0.00		0.00	0.00	0.00%	FALSE	

Summary

					Cost ($)		
Protected matter attributes	Quantum of impact	Net present value	% of impact offset	Direct offset adequate?	Direct offset	Other compensatory measures	Total
Birth rate	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Mortality rate	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Number of individuals	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Number of features	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Condition of habitat	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Area of habitat		0.00	0.00	FALSE	0.00	N/A	0.00
Area of community	12.72	4.41	0.35	FALSE	0.00	#DIV/0!	#DIV/0!
					$0.00	**#DIV/0!**	**#DIV/0!**

Matter of National Environmental Significance	
Name	Coastal Swamp Oak TEC
EPBC Act status	Endangered
Annual probability of extinction Based on IUCN category definitions	1.2%

Impact calculator

Ecological communities

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of community	Yes		Area *(Hectares)*	15.9	
			Quality *(Scale 0-10)*	8	
		Total quantum of impact *(Adjusted Hectares)*		12.72	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of habitat	No		Area *(Hectares)*		
			Quality *(Scale 0-10)*		
		Total quantum of impact *(Adjusted Hectares)*			

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	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

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
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

Ecological Communities

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of community	Yes	12.72	Greenrdige AU5	Risk-related time horizon *(max. 20 years)*	20	Start area *(hectares)*	4.74	Risk of loss without offset *(%)*	1%	Risk of loss with offset *(%)*	0%	0.05	100%	0.05	0.04	Overall net present value	0.66	
				Time until ecological benefit	20	Start quality *(scale of 0-10)*	7	Future quality without offset *(scale of 0-10)*	7	Future quality with offset *(scale of 0-10)*	9	2.00	85%	1.70	1.34	% of impact offset	5.20%	
								Future area without offset	4.7	Future area with offset	4.7			Minimum (90%) direct offset requirement met?			FALSE	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of habitat	Yes			Risk-related time horizon *(max. 20 years)*		Start area *(hectares)*		Risk of loss without offset *(%)*		Risk of loss with offset *(%)*		0.00		0.00	0.00	Overall net present value	0.00	
				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)*		0.00		0.00	0.00	% of impact offset	0.00%	
								Future area without offset	0.0	Future area with offset	0.0			Minimum (90%) direct offset requirement met?			FALSE	

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Number of features e.g. Nest hollows, habitat trees	Yes							0.00		0.00	0.00	0.00%	FALSE	
Condition of habitat Change in habitat condition, but no change in extent	No							0.00		0.00	0.00	0.00%	FALSE	

Threatened species

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Birth rate e.g. Change in nest success	No							0.00		0.00	0.00	0.00%	FALSE	
Mortality rate e.g Change in number of road kills per year	No							0.00		0.00	0.00	0.00%	FALSE	
Number of individuals e.g. Individual plants/animals	No							0.00		0.00	0.00	0.00%	FALSE	

Summary

Protected matter attributes	Quantum of impact	Net present value	% of impact offset	Direct offset adequate?	Cost ($) Direct offset	Cost ($) Other compensatory measures	Cost ($) Total
Birth rate	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Mortality rate	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Number of individuals	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Number of features	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Condition of habitat	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Area of habitat		0.00	0.00	FALSE	0.00	N/A	0.00
Area of community	12.72	0.66	0.05	FALSE	0.00	#DIV/0!	#DIV/0!
					$0.00	**#DIV/0!**	**#DIV/0!**

Offsets Assessment Guide

For use in determining offsets under the Environment Protection and Biodiversity Conservation Act 19
2 October 2012

Matter of National Environmental Significance	
Name	Coastal Swamp Oak TEC
EPBC Act status	Endangered
Annual probability of extinction Based on IUCN category definitions	1.2%

Impact calculator

Ecological communities

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of community	Yes		Area *(Hectares)*	15.9	
			Quality *(Scale 0-10)*	8	
		Total quantum of impact *(Adjusted Hectares)*		12.72	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of habitat	No		Area *(Hectares)*		
			Quality *(Scale 0-10)*		
		Total quantum of impact *(Adjusted Hectares)*			

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	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

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
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

Ecological Communities

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of community	Yes	12.72	Greenridge AU6	Risk-related time horizon *(max. 20 years)*	20	Start area *(hectares)*	12.47	Risk of loss without offset *(%)*	1%	Risk of loss with offset *(%)*	0%	0.12	100%	0.12	0.10	Overall net present value	5.87	
				Time until ecological benefit	20	Start quality *(scale of 0-10)*	2	Future quality without offset *(scale of 0-10)*	2	Future quality with offset *(scale of 0-10)*	9	7.00	85%	5.95	4.69	% of impact offset	46.19%	
								Future area without offset	12.3	Future area with offset	12.5			Minimum (90%) direct offset requirement met?			FALSE	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of habitat	Yes			Risk-related time horizon *(max. 20 years)*		Start area *(hectares)*		Risk of loss without offset *(%)*		Risk of loss with offset *(%)*		0.00		0.00	0.00	Overall net present value	0.00	
				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)*		0.00		0.00	0.00	% of impact offset	0.00%	
								Future area without offset	0.0	Future area with offset	0.0			Minimum (90%) direct offset requirement met?			FALSE	

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Number of features e.g. Nest hollows, habitat trees	Yes							0.00		0.00	0.00	0.00%	FALSE	
Condition of habitat Change in habitat condition, but no change in extent	No							0.00		0.00	0.00	0.00%	FALSE	

Threatened species

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Birth rate e.g. Change in nest success	No							0.00		0.00	0.00	0.00%	FALSE	
Mortality rate e.g Change in number of road kills per year	No							0.00		0.00	0.00	0.00%	FALSE	
Number of individuals e.g. Individual plants/animals	No							0.00		0.00	0.00	0.00%	FALSE	

Summary

					Cost ($)		
Protected matter attributes	**Quantum of impact**	**Net present value**	**% of impact offset**	**Direct offset adequate?**	**Direct offset**	**Other compensatory measures**	**Total**
Birth rate	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Mortality rate	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Number of individuals	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Number of features	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Condition of habitat	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Area of habitat		0.00	0.00	FALSE	0.00	N/A	0.00
Area of community	12.72	5.87	0.46	FALSE	0.00	#DIV/0!	#DIV/0!
					$0.00	**#DIV/0!**	**#DIV/0!**

Appendix N: Offset Assessment Guide outputs – Koala habitat

TABLE 10.9 Tabooba AU1 OAG

Offsets Assessment Guide

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

Matter of National Environmental Significance	
Name	Koala
EPBC Act status	Vulnerable
Annual probability of extinction Based on IUCN category definitions	0.2%

Impact calculator

Ecological communities

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of community	Yes		Area *(Hectares)*		
			Quality *(Scale 0-10)*		
		Total quantum of impact *(Adjusted Hectares)*		0.00	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of habitat	Yes		Area *(Hectares)*	73.81	
			Quality *(Scale 0-10)*	7	
		Total quantum of impact *(Adjusted Hectares)*		51.67	

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
Number of features e.g. Nest hollows, habitat trees	Yes			
Condition of habitat Change in habitat condition, but no change in extent	No			

Threatened species

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
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

Ecological Communities

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of community	No			Risk-related time horizon *(max. 20 years)*		Start area *(hectares)*		Risk of loss without offset *(%)*		Risk of loss with offset *(%)*		0.00		0.00	0.00	Overall net present value	0.00	
				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)*		0.00		0.00	0.00	% of impact offset	0.00%	
								Future area without offset	0.0	Future area with offset	0.0			Minimum (90%) direct offset requirement met?			FALSE	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of habitat	Yes	51.67	Tabooba AU1	Risk-related time horizon *(max. 20 years)*	20	Start area *(hectares)*	49.8	Risk of loss without offset *(%)*	1%	Risk of loss with offset *(%)*	0%	0.50	100%	0.50	0.48	Overall net present value	4.54	
				Time until ecological benefit	10	Start quality *(scale of 0-10)*	8	Future quality without offset *(scale of 0-10)*	8	Future quality with offset *(scale of 0-10)*	9	1.00	85%	0.85	0.83	% of impact offset	8.78%	
								Future area without offset	49.3	Future area with offset	49.8			Minimum (90%) direct offset requirement met?			FALSE	

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Number of features e.g. Nest hollows, habitat trees	Yes	0.00						0.00		0.00	0.00	0.00%	FALSE	
Condition of habitat Change in habitat condition, but no change in extent	No							0.00		0.00	0.00	0.00%	FALSE	

Threatened species

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Birth rate e.g. Change in nest success	No							0.00		0.00	0.00	0.00%	FALSE	
Mortality rate e.g Change in number of road kills per year	No							0.00		0.00	0.00	0.00%	FALSE	
Number of individuals e.g. Individual plants/animals	No							0.00		0.00	0.00	0.00%	FALSE	

TABLE 10.10 Tabooba AU2 OAG

Offsets Assessment Guide

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

Matter of National Environmental Significance	
Name	Koala
EPBC Act status	Vulnerable
Annual probability of extinction Based on IUCN category definitions	0.2%

Impact calculator

Ecological communities

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of community	Yes		Area *(Hectares)*		
			Quality *(Scale 0-10)*		
		Total quantum of impact *(Adjusted Hectares)*		0.00	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of habitat	Yes		Area *(Hectares)*	73.81	
			Quality *(Scale 0-10)*	7	
		Total quantum of impact *(Adjusted Hectares)*		51.67	

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
Number of features e.g. Nest hollows, habitat trees	Yes			
Condition of habitat Change in habitat condition, but no change in extent	No			

Threatened species

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
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

Ecological Communities

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of community	Yes	0.00		Risk-related time horizon *(max. 20 years)*		Start area *(hectares)*		Risk of loss without offset *(%)*		Risk of loss with offset *(%)*		0.00		0.00	0.00	Overall net present value	0.00	
				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)*		0.00		0.00	0.00	% of impact offset	0.00%	
								Future area without offset	0.0	Future area with offset	0.0			Minimum (90%) direct offset requirement met?			FALSE	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of habitat	Yes	51.67	Tabooba AU2	Risk-related time horizon *(max. 20 years)*	20	Start area *(hectares)*	145.02	Risk of loss without offset *(%)*	1%	Risk of loss with offset *(%)*	0%	1.45	100%	1.45	1.39	Overall net present value	25.04	
				Time until ecological benefit	10	Start quality *(scale of 0-10)*	6	Future quality without offset *(scale of 0-10)*	6	Future quality with offset *(scale of 0-10)*	8	2.00	85%	1.70	1.67	% of impact offset	48.46%	
								Future area without offset	143.6	Future area with offset	145.0			Minimum (90%) direct offset requirement met?			FALSE	

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Number of features e.g. Nest hollows, habitat trees	Yes	0.00						0.00		0.00	0.00	0.00%	FALSE	
Condition of habitat Change in habitat condition, but no change in extent	No							0.00		0.00	0.00	0.00%	FALSE	

Threatened species

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Birth rate e.g. Change in nest success	No							0.00		0.00	0.00	0.00%	FALSE	
Mortality rate e.g Change in number of road kills per year	No							0.00		0.00	0.00	0.00%	FALSE	
Number of individuals e.g. Individual plants/animals	No							0.00		0.00	0.00	0.00%	FALSE	

TABLE 10.11 Tabooba AU3 OAG

Offsets Assessment Guide

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

Matter of National Environmental Significance	
Name	Koala
EPBC Act status	Vulnerable
Annual probability of extinction Based on IUCN category definitions	0.2%

Impact calculator

Ecological communities

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of community	Yes		Area *(Hectares)*		
			Quality *(Scale 0-10)*		
		Total quantum of impact *(Adjusted Hectares)*		0.00	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of habitat	Yes		Area *(Hectares)*	73.81	
			Quality *(Scale 0-10)*	7	
		Total quantum of impact *(Adjusted Hectares)*		51.67	

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
Number of features e.g. Nest hollows, habitat trees	Yes			
Condition of habitat Change in habitat condition, but no change in extent	No			

Threatened species

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
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

Ecological Communities

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of community	No			Risk-related time horizon *(max. 20 years)*		Start area *(hectares)*		Risk of loss without offset *(%)*		Risk of loss with offset *(%)*		0.00		0.00	0.00	Overall net present value	0.00	
				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)*		0.00		0.00	0.00	% of impact offset	0.00%	
								Future area without offset	0.0	Future area with offset	0.0			Minimum (90%) direct offset requirement met?			FALSE	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of habitat	Yes	51.67	Tabooba AU3	Risk-related time horizon *(max. 20 years)*	20	Start area *(hectares)*	48.1	Risk of loss without offset *(%)*	1%	Risk of loss with offset *(%)*	0%	0.48	100%	0.48	0.46	Overall net present value	15.88	
				Time until ecological benefit	20	Start quality *(scale of 0-10)*	4	Future quality without offset *(scale of 0-10)*	3	Future quality with offset *(scale of 0-10)*	7	4.00	85%	3.40	3.27	% of impact offset	30.73%	
								Future area without offset	47.6	Future area with offset	48.1			Minimum (90%) direct offset requirement met?			FALSE	

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Number of features e.g. Nest hollows, habitat trees	Yes	0.00						0.00		0.00	0.00	0.00%	FALSE	
Condition of habitat Change in habitat condition, but no change in extent	No							0.00		0.00	0.00	0.00%	FALSE	

Threatened species

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Birth rate e.g. Change in nest success	No							0.00		0.00	0.00	0.00%	FALSE	
Mortality rate e.g Change in number of road kills per year	No							0.00		0.00	0.00	0.00%	FALSE	
Number of individuals e.g. Individual plants/animals	No							0.00		0.00	0.00	0.00%	FALSE	

TABLE 10.12 Tabooba AU4 OAG

Offsets Assessment Guide

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

Matter of National Environmental Significance	
Name	Koala
EPBC Act status	Vulnerable
Annual probability of extinction Based on IUCN category definitions	0.2%

Impact calculator

Ecological communities

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of community	Yes		Area *(Hectares)*		
			Quality *(Scale 0-10)*		
		Total quantum of impact *(Adjusted Hectares)*		0.00	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of habitat	Yes		Area *(Hectares)*	73.81	
			Quality *(Scale 0-10)*	7	
		Total quantum of impact *(Adjusted Hectares)*		51.67	

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
Number of features e.g. Nest hollows, habitat trees	Yes			
Condition of habitat Change in habitat condition, but no change in extent	No			

Threatened species

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
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

Ecological Communities

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of community	No			Risk-related time horizon *(max. 20 years)*		Start area *(hectares)*		Risk of loss without offset *(%)*		Risk of loss with offset *(%)*		0.00		0.00	0.00	Overall net present value	0.00	
				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)*		0.00		0.00	0.00	% of impact offset	0.00%	
								Future area without offset	0.0	Future area with offset	0.0			Minimum (90%) direct offset requirement met?			FALSE	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of habitat	Yes	51.67	Tabooba AU4	Risk-related time horizon *(max. 20 years)*	20	Start area *(hectares)*	50.62	Risk of loss without offset *(%)*	1%	Risk of loss with offset *(%)*	0%	0.51	100%	0.51	0.49	Overall net present value	0.39	
				Time until ecological benefit	10	Start quality *(scale of 0-10)*	8	Future quality without offset *(scale of 0-10)*	8	Future quality with offset *(scale of 0-10)*	8	0.00	85%	0.00	0.00	% of impact offset	0.75%	
								Future area without offset	50.1	Future area with offset	50.6			Minimum (90%) direct offset requirement met?			FALSE	

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Number of features e.g. Nest hollows, habitat trees	No							0.00		0.00	0.00	0.00%	FALSE	
Condition of habitat Change in habitat condition, but no change in extent	No							0.00		0.00	0.00	0.00%	FALSE	

Threatened species

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Birth rate e.g. Change in nest success	No							0.00		0.00	0.00	0.00%	FALSE	
Mortality rate e.g Change in number of road kills per year	No							0.00		0.00	0.00	0.00%	FALSE	
Number of individuals e.g. Individual plants/animals	No							0.00		0.00	0.00	0.00%	FALSE	

TABLE 10.13 Tabooba AU5 OAG

Offsets Assessment Guide

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

Matter of National Environmental Significance	
Name	Koala
EPBC Act status	Vulnerable
Annual probability of extinction Based on IUCN category definitions	0.2%

Impact calculator

Ecological communities

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of community	Yes		Area *(Hectares)*		
			Quality *(Scale 0-10)*		
		Total quantum of impact *(Adjusted Hectares)*		0.00	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of habitat	Yes		Area *(Hectares)*	73.81	
			Quality *(Scale 0-10)*	7	
		Total quantum of impact *(Adjusted Hectares)*		51.67	

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
Number of features e.g. Nest hollows, habitat trees	Yes			
Condition of habitat Change in habitat condition, but no change in extent	No			

Threatened species

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
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

Ecological Communities

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of community	Yes	0.00		Risk-related time horizon *(max. 20 years)*		Start area *(hectares)*		Risk of loss without offset *(%)*		Risk of loss with offset *(%)*		0.00		0.00	0.00	Overall net present value	0.00	
				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)*		0.00		0.00	0.00	% of impact offset	0.00%	
								Future area without offset	0.0	Future area with offset	0.0			Minimum (90%) direct offset requirement met?			FALSE	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of habitat	Yes	51.67	Tabooba AU5	Risk-related time horizon *(max. 20 years)*	20	Start area *(hectares)*	19.8	Risk of loss without offset *(%)*	1%	Risk of loss with offset *(%)*	0%	0.20	100%	0.20	0.19	Overall net present value	3.42	
				Time until ecological benefit	10	Start quality *(scale of 0-10)*	7	Future quality without offset *(scale of 0-10)*	6	Future quality with offset *(scale of 0-10)*	8	2.00	85%	1.70	1.67	% of impact offset	6.62%	
								Future area without offset	19.6	Future area with offset	19.8			Minimum (90%) direct offset requirement met?			FALSE	

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Number of features e.g. Nest hollows, habitat trees	Yes	0.00						0.00		0.00	0.00	0.00%	FALSE	
Condition of habitat Change in habitat condition, but no change in extent	No							0.00		0.00	0.00	0.00%	FALSE	

Threatened species

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Birth rate e.g. Change in nest success	No							0.00		0.00	0.00	0.00%	FALSE	
Mortality rate e.g Change in number of road kills per year	No							0.00		0.00	0.00	0.00%	FALSE	
Number of individuals e.g. Individual plants/animals	No							0.00		0.00	0.00	0.00%	FALSE	

Offsets Assessment Guide

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

Matter of National Environmental Significance	
Name	Koala
EPBC Act status	Vulnerable
Annual probability of extinction Based on IUCN category definitions	0.2%

Impact calculator

Ecological communities

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of community	Yes		Area *(Hectares)*		
			Quality *(Scale 0-10)*		
		Total quantum of impact *(Adjusted Hectares)*		0.00	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of habitat	Yes		Area *(Hectares)*	73.81	
			Quality *(Scale 0-10)*	7	
		Total quantum of impact *(Adjusted Hectares)*		51.67	

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
Number of features e.g. Nest hollows, habitat trees	Yes			
Condition of habitat Change in habitat condition, but no change in extent	No			

Threatened species

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
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

Ecological Communities

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of community	Yes	0.00		Risk-related time horizon *(max. 20 years)*		Start area *(hectares)*		Risk of loss without offset *(%)*		Risk of loss with offset *(%)*		0.00		0.00	0.00	Overall net present value	0.00	
				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)*		0.00		0.00	0.00	% of impact offset	0.00%	
								Future area without offset	0.0	Future area with offset	0.0			Minimum (90%) direct offset requirement met?			FALSE	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of habitat	Yes	51.67	Greenridge AU4	Risk-related time horizon *(max. 20 years)*	20	Start area *(hectares)*	28.2	Risk of loss without offset *(%)*	1%	Risk of loss with offset *(%)*	0%	0.28	100%	0.28	0.27	Overall net present value	0.22	
				Time until ecological benefit	10	Start quality *(scale of 0-10)*	8	Future quality without offset *(scale of 0-10)*	8	Future quality with offset *(scale of 0-10)*	8	0.00	85%	0.00	0.00	% of impact offset	0.42%	
								Future area without offset	27.9	Future area with offset	28.2			Minimum (90%) direct offset requirement met?			FALSE	

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Number of features e.g. Nest hollows, habitat trees	Yes	0.00						0.00		0.00	0.00	0.00%	FALSE	
Condition of habitat Change in habitat condition, but no change in extent	No							0.00		0.00	0.00	0.00%	FALSE	

Threatened species

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Birth rate e.g. Change in nest success	No							0.00		0.00	0.00	0.00%	FALSE	
Mortality rate e.g Change in number of road kills per year	No							0.00		0.00	0.00	0.00%	FALSE	
Number of individuals e.g. Individual plants/animals	No							0.00		0.00	0.00	0.00%	FALSE	

Summary

	Cost ($)

Offsets Assessment Guide

For use in determining offsets under the Environment Protection and Biodiversity Conservation Act 19
2 October 2012

Matter of National Environmental Significance	
Name	Koala
EPBC Act status	Vulnerable
Annual probability of extinction Based on IUCN category definitions	0.2%

Impact calculator

Ecological communities

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of community	Yes		Area *(Hectares)*		
			Quality *(Scale 0-10)*		
		Total quantum of impact *(Adjusted Hectares)*		0.00	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of habitat	Yes		Area *(Hectares)*	73.81	
			Quality *(Scale 0-10)*	7	
		Total quantum of impact *(Adjusted Hectares)*		51.67	

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
Number of features e.g. Nest hollows, habitat trees	Yes			
Condition of habitat Change in habitat condition, but no change in extent	No			

Threatened species

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
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

Ecological Communities

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality **without** offset *(adjusted hectares)*		Future area and quality **with** offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of community	Yes	0.00		Risk-related time horizon *(max. 20 years)*		Start area *(hectares)*		Risk of loss **without** offset *(%)*		Risk of loss **with** offset *(%)*		0.00		0.00	0.00	Overall net present value	0.00	
				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)*		0.00		0.00	0.00	% of impact offset	0.00%	
								Future area **without** offset	0.0	Future area **with** offset	0.0			Minimum (90%) direct offset requirement met?			FALSE	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality **without** offset *(adjusted hectares)*		Future area and quality **with** offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of habitat	Yes	51.67	Greenridge AU5	Risk-related time horizon *(max. 20 years)*	20	Start area *(hectares)*	4.74	Risk of loss **without** offset *(%)*	1%	Risk of loss **with** offset *(%)*	0%	0.05	100%	0.05	0.05	Overall net present value	0.81	
				Time until ecological benefit	20	Start quality *(scale of 0-10)*	7	Future quality **without** offset *(scale of 0-10)*	7	Future quality **with** offset *(scale of 0-10)*	9	2.00	85%	1.70	1.63	% of impact offset	1.56%	
								Future area **without** offset	4.7	Future area **with** offset	4.7			Minimum (90%) direct offset requirement met?			FALSE	

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Number of features e.g. Nest hollows, habitat trees	Yes	0.00						0.00		0.00	0.00	0.00%	FALSE	
Condition of habitat Change in habitat condition, but no change in extent	No							0.00		0.00	0.00	0.00%	FALSE	

Threatened species

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Birth rate e.g. Change in nest success	No							0.00		0.00	0.00	0.00%	FALSE	
Mortality rate e.g Change in number of road kills per year	No							0.00		0.00	0.00	0.00%	FALSE	
Number of individuals e.g. Individual plants/animals	No							0.00		0.00	0.00	0.00%	FALSE	

Summary

					Cost ($)		
Protected matter attributes	Quantum of impact	Net present value	% of impact offset	Direct offset adequate?	Direct offset	Other compensatory measures	Total
Birth rate	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Mortality rate	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Number of individuals	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Number of features	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Condition of habitat	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
Area of habitat	51.67	0.81	0.02	FALSE	0.00	#DIV/0!	#DIV/0!
Area of community	0.00	0.00	0.00	FALSE	0.00	N/A	0.00
					$0.00	**#DIV/0!**	**#DIV/0!**

Offsets Assessment Guide

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

Matter of National Environmental Significance	
Name	Koala
EPBC Act status	Vulnerable
Annual probability of extinction Based on IUCN category definitions	0.2%

Impact calculator

Ecological communities

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of community	Yes		Area *(Hectares)*		
			Quality *(Scale 0-10)*		
		Total quantum of impact *(Adjusted Hectares)*		0.00	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of habitat	Yes		Area *(Hectares)*	73.81	
			Quality *(Scale 0-10)*	7	
		Total quantum of impact *(Adjusted Hectares)*		51.67	

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
Number of features e.g. Nest hollows, habitat trees	Yes			
Condition of habitat Change in habitat condition, but no change in extent	No			

Threatened species

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
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

Ecological Communities

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of community	Yes	0.00		Risk-related time horizon *(max. 20 years)*		Start area *(hectares)*		Risk of loss without offset *(%)*		Risk of loss with offset *(%)*		0.00		0.00	0.00	Overall net present value	0.00	
				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)*		0.00		0.00	0.00	% of impact offset	0.00%	
								Future area without offset	0.0	Future area with offset	0.0			Minimum (90%) direct offset requirement met?			FALSE	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of habitat	Yes	51.67	Greenridge AU6	Risk-related time horizon *(max. 20 years)*	20	Start area *(hectares)*	12.47	Risk of loss without offset *(%)*	0%	Risk of loss with offset *(%)*	0%	0.00	100%	0.00	0.00	Overall net present value	3.06	
				Time until ecological benefit	20	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	85%	2.55	2.45	% of impact offset	5.91%	
								Future area without offset	12.5	Future area with offset	12.5			Minimum (90%) direct offset requirement met?			FALSE	

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Number of features e.g. Nest hollows, habitat trees	Yes	0.00						0.00		0.00	0.00	0.00%	FALSE	
Condition of habitat Change in habitat condition, but no change in extent	No							0.00		0.00	0.00	0.00%	FALSE	

Threatened species

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Birth rate e.g. Change in nest success	No							0.00		0.00	0.00	0.00%	FALSE	
Mortality rate e.g Change in number of road kills per year	No							0.00		0.00	0.00	0.00%	FALSE	
Number of individuals e.g. Individual plants/animals	No							0.00		0.00	0.00	0.00%	FALSE	

Summary

	Cost ($)

Appendix O: Offset Assessment Guide outputs – GHFF habitat

TABLE 10.18 Tabooba AU1 OAG

Offsets Assessment Guide

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

Matter of National Environmental Significance	
Name	Grey-headed flying-fox
EPBC Act status	Vulnerable
Annual probability of extinction Based on IUCN category definitions	0.2%

Impact calculator

Ecological communities

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of community	Yes		Area *(Hectares)*		
			Quality *(Scale 0-10)*		
		Total quantum of impact *(Adjusted Hectares)*		0.00	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of habitat	Yes		Area *(Hectares)*	68.76	
			Quality *(Scale 0-10)*	7	
		Total quantum of impact *(Adjusted Hectares)*		48.13	

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
Number of features e.g. Nest hollows, habitat trees	Yes			
Condition of habitat Change in habitat condition, but no change in extent	No			

Threatened species

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
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

Ecological Communities

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of community	No			Risk-related time horizon *(max. 20 years)*		Start area *(hectares)*		Risk of loss without offset *(%)*		Risk of loss with offset *(%)*		0.00		0.00	0.00	Overall net present value	0.00	
				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)*		0.00		0.00	0.00	% of impact offset	0.00%	
								Future area without offset	0.0	Future area with offset	0.0			Minimum (90%) direct offset requirement met?			FALSE	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of habitat	Yes	48.13	Tabooba AU1	Risk-related time horizon *(max. 20 years)*	20	Start area *(hectares)*	49.8	Risk of loss without offset *(%)*	1%	Risk of loss with offset *(%)*	0%	0.50	100%	0.50	0.48	Overall net present value	0.29	
				Time until ecological benefit	10	Start quality *(scale of 0-10)*	6	Future quality without offset *(scale of 0-10)*	6	Future quality with offset *(scale of 0-10)*	6	0.00	85%	0.00	0.00	% of impact offset	0.60%	
								Future area without offset	49.3	Future area with offset	49.8			Minimum (90%) direct offset requirement met?			FALSE	

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Number of features e.g. Nest hollows, habitat trees	Yes	0.00						0.00		0.00	0.00	0.00%	FALSE	
Condition of habitat Change in habitat condition, but no change in extent	No							0.00		0.00	0.00	0.00%	FALSE	

Threatened species

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Birth rate e.g. Change in nest success	No							0.00		0.00	0.00	0.00%	FALSE	
Mortality rate e.g Change in number of road kills per year	No							0.00		0.00	0.00	0.00%	FALSE	
Number of individuals e.g. Individual plants/animals	No							0.00		0.00	0.00	0.00%	FALSE	

TABLE 10.19 Tabooba AU2 OAG

Offsets Assessment Guide

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

Matter of National Environmental Significance	
Name	Grey-headed flying-fox
EPBC Act status	Vulnerable
Annual probability of extinction Based on IUCN category definitions	0.2%

Impact calculator

Ecological communities

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of community	Yes		Area *(Hectares)*		
			Quality *(Scale 0-10)*		
		Total quantum of impact *(Adjusted Hectares)*		0.00	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of habitat	Yes		Area *(Hectares)*	68.76	
			Quality *(Scale 0-10)*	7	
		Total quantum of impact *(Adjusted Hectares)*		48.13	

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
Number of features e.g. Nest hollows, habitat trees	Yes			
Condition of habitat Change in habitat condition, but no change in extent	No			

Threatened species

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
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

Ecological Communities

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of community	Yes	0.00		Risk-related time horizon *(max. 20 years)*		Start area *(hectares)*		Risk of loss without offset *(%)*		Risk of loss with offset *(%)*		0.00		0.00	0.00	Overall net present value	0.00	
				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)*		0.00		0.00	0.00	% of impact offset	0.00%	
								Future area without offset	0.0	Future area with offset	0.0			Minimum (90%) direct offset requirement met?			FALSE	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of habitat	Yes	48.13	Tabooba AU2	Risk-related time horizon *(max. 20 years)*	20	Start area *(hectares)*	145.02	Risk of loss without offset *(%)*	1%	Risk of loss with offset *(%)*	0%	1.45	100%	1.45	1.39	Overall net present value	36.86	
				Time until ecological benefit	10	Start quality *(scale of 0-10)*	5	Future quality without offset *(scale of 0-10)*	4	Future quality with offset *(scale of 0-10)*	7	3.00	85%	2.55	2.50	% of impact offset	76.58%	
								Future area without offset	143.6	Future area with offset	145.0			Minimum (90%) direct offset requirement met?			FALSE	

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Number of features e.g. Nest hollows, habitat trees	Yes	0.00						0.00		0.00	0.00	0.00%	FALSE	
Condition of habitat Change in habitat condition, but no change in extent	No							0.00		0.00	0.00	0.00%	FALSE	

Threatened species

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Birth rate e.g. Change in nest success	No							0.00		0.00	0.00	0.00%	FALSE	
Mortality rate e.g Change in number of road kills per year	No							0.00		0.00	0.00	0.00%	FALSE	
Number of individuals e.g. Individual plants/animals	No							0.00		0.00	0.00	0.00%	FALSE	

TABLE 10.20 Tabooba AU3 OAG

Offsets Assessment Guide

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

Matter of National Environmental Significance	
Name	Grey-headed flying-fox
EPBC Act status	Vulnerable
Annual probability of extinction Based on IUCN category definitions	0.2%

Impact calculator

Ecological communities

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of community	Yes		Area *(Hectares)*		
			Quality *(Scale 0-10)*		
		Total quantum of impact *(Adjusted Hectares)*		0.00	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of habitat	Yes		Area *(Hectares)*	68.76	
			Quality *(Scale 0-10)*	7	
		Total quantum of impact *(Adjusted Hectares)*		48.13	

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
Number of features e.g. Nest hollows, habitat trees	Yes			
Condition of habitat Change in habitat condition, but no change in extent	No			

Threatened species

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
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

Ecological Communities

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of community	Yes	0.00		Risk-related time horizon *(max. 20 years)*		Start area *(hectares)*		Risk of loss without offset *(%)*		Risk of loss with offset *(%)*		0.00		0.00	0.00	Overall net present value	0.00	
				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)*		0.00		0.00	0.00	% of impact offset	0.00%	
								Future area without offset	0.0	Future area with offset	0.0			Minimum (90%) direct offset requirement met?			FALSE	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of habitat	Yes	48.13	Tabooba AU3	Risk-related time horizon *(max. 20 years)*	20	Start area *(hectares)*	48.1	Risk of loss without offset *(%)*	1%	Risk of loss with offset *(%)*	0%	0.48	100%	0.48	0.46	Overall net present value	19.72	
				Time until ecological benefit	20	Start quality *(scale of 0-10)*	5	Future quality without offset *(scale of 0-10)*	1	Future quality with offset *(scale of 0-10)*	6	5.00	85%	4.25	4.08	% of impact offset	40.98%	
								Future area without offset	47.6	Future area with offset	48.1			Minimum (90%) direct offset requirement met?			FALSE	

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Number of features e.g. Nest hollows, habitat trees	Yes	0.00						0.00		0.00	0.00	0.00%	FALSE	
Condition of habitat Change in habitat condition, but no change in extent	No							0.00		0.00	0.00	0.00%	FALSE	

Threatened species

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Birth rate e.g. Change in nest success	No							0.00		0.00	0.00	0.00%	FALSE	
Mortality rate e.g Change in number of road kills per year	No							0.00		0.00	0.00	0.00%	FALSE	
Number of individuals e.g. Individual plants/animals	No							0.00		0.00	0.00	0.00%	FALSE	

TABLE 10.21 Tabooba AU21

Offsets Assessment Guide

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

Matter of National Environmental Significance	
Name	Grey-headed flying-fox
EPBC Act status	Vulnerable
Annual probability of extinction Based on IUCN category definitions	0.2%

Impact calculator

Ecological communities

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of community	Yes		Area *(Hectares)*		
			Quality *(Scale 0-10)*		
		Total quantum of impact *(Adjusted Hectares)*		0.00	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of habitat	Yes		Area *(Hectares)*	68.76	
			Quality *(Scale 0-10)*	7	
		Total quantum of impact *(Adjusted Hectares)*		48.13	

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
Number of features e.g. Nest hollows, habitat trees	Yes			
Condition of habitat Change in habitat condition, but no change in extent	No			

Threatened species

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
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

Ecological Communities

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of community	Yes	0.00		Risk-related time horizon *(max. 20 years)*		Start area *(hectares)*		Risk of loss without offset *(%)*		Risk of loss with offset *(%)*		0.00		0.00	0.00	Overall net present value	0.00	
				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)*		0.00		0.00	0.00	% of impact offset	0.00%	
								Future area without offset	0.0	Future area with offset	0.0			Minimum (90%) direct offset requirement met?			FALSE	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of habitat	Yes	48.13	Tabooba AU4	Risk-related time horizon *(max. 20 years)*	20	Start area *(hectares)*	50.62	Risk of loss without offset *(%)*	1%	Risk of loss with offset *(%)*	0%	0.51	100%	0.51	0.49	Overall net present value	4.52	
				Time until ecological benefit	10	Start quality *(scale of 0-10)*	6	Future quality without offset *(scale of 0-10)*	6	Future quality with offset *(scale of 0-10)*	7	1.00	85%	0.85	0.83	% of impact offset	9.38%	
								Future area without offset	50.1	Future area with offset	50.6			Minimum (90%) direct offset requirement met?			FALSE	

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Number of features e.g. Nest hollows, habitat trees	Yes	0.00						0.00		0.00	0.00	0.00%	FALSE	
Condition of habitat Change in habitat condition, but no change in extent	No							0.00		0.00	0.00	0.00%	FALSE	

Threatened species

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Birth rate e.g. Change in nest success	No							0.00		0.00	0.00	0.00%	FALSE	
Mortality rate e.g Change in number of road kills per year	No							0.00		0.00	0.00	0.00%	FALSE	
Number of individuals e.g. Individual plants/animals	No							0.00		0.00	0.00	0.00%	FALSE	

TABLE 10.22 Tabooba AU22

Offsets Assessment Guide

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

Matter of National Environmental Significance	
Name	Grey-headed flying-fox
EPBC Act status	Vulnerable
Annual probability of extinction Based on IUCN category definitions	0.2%

Impact calculator

Ecological communities

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of community	Yes		Area *(Hectares)*		
			Quality *(Scale 0-10)*		
		Total quantum of impact *(Adjusted Hectares)*		0.00	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of habitat	Yes		Area *(Hectares)*	68.76	
			Quality *(Scale 0-10)*	7	
		Total quantum of impact *(Adjusted Hectares)*		48.13	

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
Number of features e.g. Nest hollows, habitat trees	Yes			
Condition of habitat Change in habitat condition, but no change in extent	No			

Threatened species

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
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

Ecological Communities

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of community	Yes	0.00		Risk-related time horizon *(max. 20 years)*		Start area *(hectares)*		Risk of loss without offset *(%)*		Risk of loss with offset *(%)*		0.00		0.00	0.00	Overall net present value	0.00	
				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)*		0.00		0.00	0.00	% of impact offset	0.00%	
								Future area without offset	0.0	Future area with offset	0.0			Minimum (90%) direct offset requirement met?			FALSE	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result		Cost *($ total)*
Area of habitat	Yes	48.13	Tabooba AU5	Risk-related time horizon *(max. 20 years)*	20	Start area *(hectares)*	19.8	Risk of loss without offset *(%)*	1%	Risk of loss with offset *(%)*	0%	0.20	100%	0.20	0.19	Overall net present value	1.75	
				Time until ecological benefit	10	Start quality *(scale of 0-10)*	5	Future quality without offset *(scale of 0-10)*	5	Future quality with offset *(scale of 0-10)*	6	1.00	85%	0.85	0.83	% of impact offset	3.63%	
								Future area without offset	19.6	Future area with offset	19.8			Minimum (90%) direct offset requirement met?			FALSE	

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Number of features e.g. Nest hollows, habitat trees	Yes	0.00						0.00		0.00	0.00	0.00%	FALSE	
Condition of habitat Change in habitat condition, but no change in extent	No							0.00		0.00	0.00	0.00%	FALSE	

Threatened species

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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)*
Birth rate e.g. Change in nest success	No							0.00		0.00	0.00	0.00%	FALSE	
Mortality rate e.g Change in number of road kills per year	No							0.00		0.00	0.00	0.00%	FALSE	
Number of individuals e.g. Individual plants/animals	No							0.00		0.00	0.00	0.00%	FALSE	

Offsets Assessment Guide

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

Matter of National Environmental Significance	
Name	Grey-headed flying-fox
EPBC Act status	Vulnerable
Annual probability of extinction Based on IUCN category definitions	0.2%

Impact calculator

Ecological communities

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of community	Yes		Area *(Hectares)*		
			Quality *(Scale 0-10)*		
		Total quantum of impact *(Adjusted Hectares)*		0.00	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of habitat	Yes		Area *(Hectares)*	68.76	
			Quality *(Scale 0-10)*	7	
		Total quantum of impact *(Adjusted Hectares)*		48.13	

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
Number of features e.g. Nest hollows, habitat trees				
Condition of habitat Change in habitat condition, but no change in extent	No			

Threatened species

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
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

Ecological Communities

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result	
Area of community	Yes	0.00		Risk-related time horizon *(max. 20 years)*		Start area *(hectares)*		Risk of loss without offset *(%)*		Risk of loss with offset *(%)*		0.00		0.00	0.00	Overall net present value	0.00
				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)*		0.00		0.00	0.00	% of impact offset	0.00%
								Future area without offset	0.0	Future area with offset	0.0			Minimum (90%) direct offset requirement met?			FALSE

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result	
Area of habitat	Yes	48.13	Greenridge AU4	Risk-related time horizon *(max. 20 years)*	20	Start area *(hectares)*	28.22	Risk of loss without offset *(%)*	1%	Risk of loss with offset *(%)*	0%	0.28	100%	0.28	0.27	Overall net present value	2.52
				Time until ecological benefit	10	Start quality *(scale of 0-10)*	6	Future quality without offset *(scale of 0-10)*	6	Future quality with offset *(scale of 0-10)*	7	1.00	85%	0.85	0.83	% of impact offset	5.23%
								Future area without offset	27.9	Future area with offset	28.2			Minimum (90%) direct offset requirement met?			FALSE

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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?
Number of features e.g. Nest hollows, habitat trees	Yes							0.00		0.00	0.00	0.00%	FALSE
Condition of habitat Change in habitat condition, but no change in extent	No							0.00		0.00	0.00	0.00%	FALSE

Threatened species

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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?
Birth rate e.g. Change in nest success	No							0.00		0.00	0.00	0.00%	FALSE
Mortality rate e.g Change in number of road kills per year	No							0.00		0.00	0.00	0.00%	FALSE
Number of individuals e.g. Individual plants/animals	No							0.00		0.00	0.00	0.00%	FALSE

Offsets Assessment Guide

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

Matter of National Environmental Significance	
Name	Grey-headed flying-fox
EPBC Act status	Vulnerable
Annual probability of extinction Based on IUCN category definitions	0.2%

Impact calculator

Ecological communities

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of community	Yes		Area *(Hectares)*		
			Quality *(Scale 0-10)*		
		Total quantum of impact *(Adjusted Hectares)*		0.00	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of habitat	Yes		Area *(Hectares)*	68.76	
			Quality *(Scale 0-10)*	7	
		Total quantum of impact *(Adjusted Hectares)*		48.13	

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
Number of features e.g. Nest hollows, habitat trees				
Condition of habitat Change in habitat condition, but no change in extent	No			

Threatened species

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
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

Ecological Communities

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result	
Area of community	Yes	0.00		Risk-related time horizon *(max. 20 years)*		Start area *(hectares)*		Risk of loss without offset *(%)*		Risk of loss with offset *(%)*		0.00		0.00	0.00	Overall net present value	0.00
				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)*		0.00		0.00	0.00	% of impact offset	0.00%
								Future area without offset	0.0	Future area with offset	0.0			Minimum (90%) direct offset requirement met?			FALSE

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result	
Area of habitat	Yes	48.13	Greenridge AU5	Risk-related time horizon *(max. 20 years)*	20	Start area *(hectares)*	4.74	Risk of loss without offset *(%)*	1%	Risk of loss with offset *(%)*	0%	0.05	100%	0.05	0.05	Overall net present value	0.03
				Time until ecological benefit	20	Start quality *(scale of 0-10)*	6	Future quality without offset *(scale of 0-10)*	6	Future quality with offset *(scale of 0-10)*	6	0.00	85%	0.00	0.00	% of impact offset	0.06%
								Future area without offset	4.7	Future area with offset	4.7			Minimum (90%) direct offset requirement met?			FALSE

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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?
Number of features e.g. Nest hollows, habitat trees	Yes							0.00		0.00	0.00	0.00%	FALSE
Condition of habitat Change in habitat condition, but no change in extent	No							0.00		0.00	0.00	0.00%	FALSE

Threatened species

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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?
Birth rate e.g. Change in nest success	No							0.00		0.00	0.00	0.00%	FALSE
Mortality rate e.g Change in number of road kills per year	No							0.00		0.00	0.00	0.00%	FALSE
Number of individuals e.g. Individual plants/animals	No							0.00		0.00	0.00	0.00%	FALSE

Offsets Assessment Guide

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

Matter of National Environmental Significance	
Name	Grey-headed flying-fox
EPBC Act status	Vulnerable
Annual probability of extinction Based on IUCN category definitions	0.2%

Impact calculator

Ecological communities

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of community	Yes		Area *(Hectares)*		
			Quality *(Scale 0-10)*		
		Total quantum of impact *(Adjusted Hectares)*		0.00	

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Information source
Area of habitat	Yes		Area *(Hectares)*	68.76	
			Quality *(Scale 0-10)*	7	
		Total quantum of impact *(Adjusted Hectares)*		48.13	

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
Number of features e.g. Nest hollows, habitat trees				
Condition of habitat Change in habitat condition, but no change in extent	No			

Threatened species

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
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

Ecological Communities

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result	
Area of community	Yes	0.00		Risk-related time horizon *(max. 20 years)*		Start area *(hectares)*		Risk of loss without offset *(%)*		Risk of loss with offset *(%)*		0.00		0.00	0.00	Overall net present value	0.00
				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)*		0.00		0.00	0.00	% of impact offset	0.00%
								Future area without offset	0.0	Future area with offset	0.0			Minimum (90%) direct offset requirement met?			FALSE

Threatened species habitat

Protected matter attributes	Attribute relevant to case?	Total quantum of impact *(Adjusted Hectares)*	Proposed offset	Time Horizon *(Years)*		Start area and quality		Future area and quality without offset *(adjusted hectares)*		Future area and quality with offset *(adjusted hectares)*		Raw gain	Confidence in result *(%)*	Adjusted gain	Net present value *(adjusted hectares)*	Offset Result	
Area of habitat	Yes	48.13	Greenridge AU6	Risk-related time horizon *(max. 20 years)*	20	Start area *(hectares)*	12.48	Risk of loss without offset *(%)*	0%	Risk of loss with offset *(%)*	0%	0.00	100%	0.00	0.00	Overall net present value	5.10
				Time until ecological benefit	20	Start quality *(scale of 0-10)*	2	Future quality without offset *(scale of 0-10)*	2	Future quality with offset *(scale of 0-10)*	7	5.00	85%	4.25	4.08	% of impact offset	10.59%
								Future area without offset	12.5	Future area with offset	12.5			Minimum (90%) direct offset requirement met?			FALSE

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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?
Number of features e.g. Nest hollows, habitat trees	Yes							0.00		0.00	0.00	0.00%	FALSE
Condition of habitat Change in habitat condition, but no change in extent	No							0.00		0.00	0.00	0.00%	FALSE

Threatened species

Protected matter attributes	Attribute relevant to case?	Quantum of impact	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?
Birth rate e.g. Change in nest success	No							0.00		0.00	0.00	0.00%	FALSE
Mortality rate e.g Change in number of road kills per year	No							0.00		0.00	0.00	0.00%	FALSE
Number of individuals e.g. Individual plants/animals	No							0.00		0.00	0.00	0.00%	FALSE