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

TABLE 10.2 Greenridge AU1 OAG

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 calculate	r		
		Ecological communit	ies		
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 (Adjusted Hecta		12.72	
		Threatened species has	bitat		
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 (Adjusted Hecto			
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	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																	
					_		_			mmunities	_	_		_				
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)		Start area and	d quality	Future area an without of (adjusted her	fset	Future area and with offs (adjusted hec	et	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	et 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 10 benefit 10 scale of 0-10) 8				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	without offset 4.1 with offset 14.2				Mini	imum (90%) direct requirement me	FALSE			
Threatened species habitat																		
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)		Start area and	d quality	Future area an without of (adjusted her	fset	Future area and with offs (adjusted hec	et	Raw gain	Confidence in result (%)	Adjusted gain	value (adjusted hectares)	Offs	et 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 <u>with</u> 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			Mini	imum (90%) direct requirement me		FALSE	
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)		Start Val	ue	Future value w offset	vithout	Future value wi	th 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	
			1					T	hreatened	species								
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)		Start Val	ue	Future value w offset	vithout	Future value wi	th 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

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 calculate	r		
		Ecological communit			
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 (Adjusted Hecta		12.72	
		Threatened species has	bitat		
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 (Adjusted Hecta			
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	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																	
					_		_			mmunities	_	_		_				
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)		Start area and	d quality	Future area an without of (adjusted he	ffset	Future area and with offs (adjusted hec	et	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	et 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							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 Horiz (Years)		Start area and	d quality	Future area an without of (adjusted he	ffset	Future area and with offs (adjusted hec	et	Raw gain	Confidence in result (%)	Adjusted gain	value (adjusted hectares)	Offs	et 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 <u>with</u> 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			Mini	imum (90%) direct requirement me		FALSE	
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)		Start Val	ue	Future value v offset		Future value wi	th 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	
		1						T	hreatened	species							1	
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)		Start Val	ue	Future value v offset		Future value wi	th 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%									

			Im	nac	et ca	len	lote) P									
	_		Ecol						-				-		-	-	-
Protected matter attributes	Attribute relevant to case?				ption			Quantum of impact						Information source			
Area of community	Yes							(Are Hecto			15.	.9				
								Quality (Scale 0-10)					8				
m m m m m m	100 00 00 00 00 00 00 00 00			(A	Adjus	ted F	lecto	- 1				12.	72	123		100 100 100 100 100 100 100 100 100 100	
		T	hrea	tene	d sp	ecie	s ha	bitat									
Protected matter attributes	Attribute relevant to case?		De	escri	ptior	1		(Quar	itum	of in	npact	:	I		natio ırce	n
Area of habitat	No		131 131 131 131	111 111 111	100	100	300	Area (Hectares)				(0) (0) (0) (0)	- 01	11 11 11 11			
300 July 300 July 300 July 300	100 100 100 100 100 100 100 100 100 100 100	(0) (0)	100	101	300	100 101	100	Quality (Scale 0-10)				(0) (0) (0) (1) (1)	- 11		10 21		100
					l qu a Idjus			f impact ares)									100
Protected matter attributes	Attribute relevant to case?		De	escri	ptior	1			Quar	itum	n of impact Informati				n		
Number of features e.g. Nest hollows, habitat trees	No	111 681 141	101 101 101	01 10 10 01	100 100 100 100	10 16 16	100	11	10	11	10 10 10 10		101		100 100 100 100	10 01 15 01	100
Condition of habitat Change in habitat condition, but no change in extent	No	00 00 00 00	1001	011 1401 011 1001	100 100 100 100 100	10 16 10 10	100			101		100	100		100	01 100 01 100	100 100 100 100
		1	Th	rea	tene	d sp	ecies	S									
Protected matter attributes	relevant to Description 0							Quar	itum	of in	npact	:	I		natio ırce	n	
Birth rate e.g. Change in nest success	No	X X X X X	100		100 100 100 100 100					(1) (1) (2) (2)					100		100
Mortality rate e.g Change in number of road kills per year	No	100		10.1 10.1 10.1	134 144 181 181	16. 10. 10.		11			i.	4	101		100	100 00 100 100	1111
Number of individuals e.g. Individual plants/animals	No	101	100	 	100 100 100 100 100	10 10 10 10						100	10		100	81 10 81	100

Offset calculator																		
								Ecol	logical Co	mmunities								
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)	on	Start area and	l quality	Future area an without o (adjusted he	ffset	Future area and with offs (adjusted hea	set	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	set 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	
101 101				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%	
103 123 123 124							(1) (1) (1) (1)	Future area without offset	22.0	Future area with offset cies habitat	22.0			Min	imum (90%) direc requirement me		FALSE	
		Total quantum of						Iniet	иенеи ѕре	lies midimi					Net present			
Protected matter attributes	Attribute relevant to case?	impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)	on	Start area and	l quality	Future area an without o (adjusted he	ffset	Future area an with offs (adjusted hea	set	Raw gain	Confidence in result (%)	Adjusted gain	value (adjusted hectares)	Offs	set 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			Min	imum (90%) direc requirement me		FALSE	
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)	on	Start Val	ue	Future value v		Future value wi	ith 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		100 100	11 00 21 100 110 1		100		00 00 00 000 000 000 000 000 000 000 0		100 100		0.00	100 00 00 100 100 00 100 100 00	0.00	0.00	0.00%	FALSE	000 020 030
		-						T	hreatened	species					-		-	-
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)	on	Start Val	ue	Future value voffset		Future value wi	ith 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						(3 (3) (3) (3) (3) (3) (4) (3)				03 (0) (0) (3) (3) (3) (0) (0)	0.00	100 000 000 100 000 000 100 000	0.00	0.00	0.00%	FALSE	
Mortality rate e.g Change in number of road kills per year	No					(6) (6)		(6) (6) (7) (7) (7) (7) (7) (7) (7) (7) (7) (7	10 10 10 10 10 10	(A) (A) (A) (A) (A) (A) (A) (A) (B) (B) (B) (B) (B) (B) (B) (B)	120 (30 03 (40 00 (00 01 (10	0.00	1001 1000 10 1001 1001 10 1001 1001 10	0.00	0.00	0.00%	FALSE	
Number of individuals e.g. Individual plants/animals	No								11 11 11 11 11 11 11 11 11 11 11 11 11		101 (10 101 (10 101 (10 101 (10	0.00	1001 1001 10 1001 1001 10 1001 1001 10 1001 1001 10	0.00	0.00	0.00%	FALSE	1001 1001 1001 1001 1001 1001 100 1001 1001 1001 1001 1001 1001 1001 1001 1001

	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%							

		I	_			
		Impact calculato Ecological communit				
Protected matter attributes	Attribute relevant to case?	Description Description	Quantum of impact	Information source		
Area of community	Yes		Area (Hectares)			
			Quality (Scale 0-10)			
		Total quantum of (Adjusted Hecta	res) 12.72			
		Threatened species had	bitat			
Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source		
Area of habitat	No	0.02 0.02	Area (Hectares)			
	100 de 100 101 de 101 101 de 101	(6) (0) (00) (00) (00)	Quality (Scale 0-10)			
		Total quantum of (Adjusted Hecta	•			
Protected matter attributes	Attribute relevant to case?	Description	iption Quantum of impact Info			
Number of features e.g. Nest hollows, habitat trees	No	10.0 10.0	Mart	00. 00. 00. 00. 00. 00. 00. 00. 00. 00.		
Condition of habitat Change in habitat condition, but no change in extent	No	N	C	10		
		Threatened species	1			
Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source		
Birth rate e.g. Change in nest success	No	10	C			
Mortality rate e.g Change in number of road kills per year	No		100 100 101 100	600 000 000 000 600 000 000 000 100 000 000 000		
Number of individuals e.g. Individual plants/animals	No	11 10 11 10 10 10 10 10	121 121 121 122 123 124	101 103 104 105		

								C	ffset cal	culator								
								Eco	logical Co.	mmunities								
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Hori: (Years)	zon	Start area and	d quality	Future area ar without o (adjusted he	ffset	Future area an with offs (adjusted hea	set	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	set 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	
100 100				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			Min	imum (90%) direc requirement me		FALSE	
								Three	atened spe	cies habitat								
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Hori: (Years)	zon	Start area and	d quality	Future area ar without o (adjusted he	ffset	Future area an with offs (adjusted hea	set	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	set 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	
100 100 100 the 100		300 (300 (300 (300 (300 (300 (300 (300		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%	[M]
								Future area without offset	0.0	Future area with offset	0.0) [00 00 00 00 00 00 00 00	Min	imum (90%) direc requirement me		FALSE	
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)	on	Start Va	lue	Future value offset		Future value w	ith 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					100 100		100 100		100 00 00 00 00 00 00 00 00 00 00 00 00		0.00	1001 1001	0.00	0.00	0.00%	FALSE	100 100
	1			_		1		1	hreatened	species		T		T		1		
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)	con	Start Va	lue	Future value offset		Future value w	ith 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										(1) (1) (1) (1) (1) (1) (1) (1)	0.00		0.00	0.00	0.00%	FALSE	+10 +10 +10 +10 +10 +10 +10 +10 +10 +10
Mortality rate e.g Change in number of road kills per year	No			01 01 01 01 01 01 01 01 01 01		(0) (0) (0) (1) (0) (0) (0) (1) (0) (0) (0) (1)		(0.) (0.) (0.) (0.) (0.) (0.) (0.) (0.)		100 (20 (0) (0) 100 (0) (0) (0) 100 (0) (0) (0)		0.00		0.00	0.00	0.00%	FALSE	
Number of individuals e.g. Individual plants/animals	No		000 101 000 100 0 1 001 001 001 001 0 1 001 101 001 0	10		100 100		12 12 12 12 12 12 12 12		100 (00) (0) (0) (0) (0) (0) (0) (0) (0) (0) (1) (0) (0) (0) (1)		0.00	001 001 00 1 100 000 1	0.00	0.00	0.00%	FALSE	1001 101 101 100 100 100 100 100 100 101 101 101 100 100 100 100

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

		Impact calculate			
		Ecological communi	ties		
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 (Adjusted Hecto		12.72	
		Threatened species ha	bitat		
Protected matter attributes	Attribute relevant to case?	Description	Quantum of	Information source	
Area of habitat	No		Area (Hectares)		
W W W W W W W W W W W W W W W W W W W		12	Quality (Scale 0-10)		
10 10 10 10 10 10 10 10 10 10 10 10 10 1	10 to 10	Total quantum of (Adjusted Hecto			
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	5		
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				

									ffset cal									
								Ecol	logical Co	mmunities								
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Hori: (Years)		Start area and	d quality	Future area an without o (adjusted he	ffset	Future area an with off (adjusted he	set	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Off	set 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	
100 (00 00 00 00 00 00 00 00 00 00 00 00				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%	11 11 11 11 11 11 11 11 11 11 11 11 11
								Future area without offset	4.7	Future area with offset	4.7		100 100 100 100 100 100 100 100 100	Min	requirement m		FALSE	101 101 101 101 101 101 101 101 101
	T.							Three	itened spe	cies habitat		,						
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Hori: (Years)		Start area and	d quality	Future area an without o (adjusted he	ffset	Future area an with off (adjusted he	set	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Off	set 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	
100 100				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		100 100 100 100 100 100 100 100 100 100 100	Min	nimum (90%) dire requirement m		FALSE	
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time hori: (years)		Start Val	lue	Future value offset		Future value w	ith 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	
				•		•		T	hreatened	species				•			•	
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz		Start Va	lue	Future value offset		Future value w	ith 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	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 Environ	mental Significance
Name	Coastal Swamp Oak TEC
EPBC Act status	Endangered
Annual probability of extinction Based on IUCN category definitions	1.2%

		Import coloulate	**		
	_	Impact calculate Ecological communit		_	
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 (Adjusted Hecto		12.72	
		Threatened species has	bitat		
Protected matter attributes	Attribute relevant to case?	Description	Information source		
Area of habitat	No		Area (Hectares)		
		3	Quality (Scale 0-10)		N W W W
		Total quantum of (Adjusted Hecto			
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	3		
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				

									ffset cal									
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Hori: (Years)	on	Start area and	d quality	Future area ar without o (adjusted he	d quality	mmunities Future area ar with off (adjusted he	set	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Off	set 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%	
				15				Future area without offset	12.3	Future area with offset cies habitat	12.5	110 111		Min	imum (90%) direc requirement m		FALSE	
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)	on	Start area and	d quality	Future area ar without o	d quality	Future area ar with off (adjusted he	set	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Off	set 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	
			100 100	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%	
						1 10 10 10 10 10 10 10 10 10 10 10 10 10		Future area without offset	0.0	Future area with offset	0.0			Min	imum (90%) dired		FALSE	
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)	on	Start Va	llue	Future value offset		Future value w	rith 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	
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)	on	Start Va	ilue	Future value offset		Future value w	rith 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?	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

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

		Impact calculato	r		
		Ecological communit	ies		
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 (Adjusted Hecto	res)	0.00	
		Threatened species has	bitat		
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 (Adjusted Hecta		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				

								0	ffset cal	culator								
								Eco	logical Co	mmunities								
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)	con	Start area and	d quality	Future area and quality without offset (adjusted hectares) Future area and quality with offset (adjusted hectares) Ra		Raw gain	Confidence in result (%)		Net present value (adjusted hectares)		et 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 <u>with</u> 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			Mini	imum (90%) direc requirement m		FALSE	
								Three	itened spe	cies habitat		_				1		
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)	on	Start area and	d quality	Future area an without of (adjusted he	fset	Future area and with offs (adjusted hea	et	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	et 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			Mini	imum (90%) direc requirement m		FALSE	
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)	on	Start Val	lue	Future value v offset	vithout	Future value wi	th 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	
								T	hreatenea	species							1	
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)	on	Start Val	lue	Future value v offset	vithout	Future value wi	th 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 c.g. Individual plants/animals	No											0.00		0.00	0.00	0.00%	FALSE	

TABLE 10.10 Tabooba AU2 OAG

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

		Impact calculato	r		
		Ecological communit	ies		
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 (Adjusted Hecto		0.00	
		Threatened species has	bitat		
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 (Adjusted Hecta		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				

								0	ffset cal	culator								
								Ecol	logical Co	mmunities								
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)		Start area and	d quality	Future area an without of (adjusted he	ffset	Future area and with offs (adjusted hec	et	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	et 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			Mini	imum (90%) direc requirement m		FALSE	
								Three	itened spe	cies habitat				,			•	
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)		Start area and	d quality	Future area an without of (adjusted he	ffset	Future area and with offs (adjusted hec	et	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	et 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			Mini	imum (90%) direc requirement m		FALSE	
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)		Start Val	ue	Future value v offset		Future value wi	th 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	
								T	hreatened	species								
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)		Start Val	ue	Future value v offset	vithout	Future value wi	th 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 EPBC Act status

		Impact calculate	r		
		Ecological communit			
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 (Adjusted Hecto	res)	0.00	
		Threatened species ha	bitat		
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 (Adjusted Hecto		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				

								0	ffset cal	culator								
								Eco	logical Co	mmunities								
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)	con	Start area and	d quality	Future area and quality without offset (adjusted hectares) Future area and quality with offset (adjusted hectares) Ra		Raw gain	gain Confidence in result (%) Adju		Net present value (adjusted hectares)	Offs	et 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			Mini	imum (90%) direc requirement m		FALSE	
	1							Three	itened spe	cies habitat						1		
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)	on	Start area and	d quality	Future area an without of (adjusted he	fset	Future area and with offs (adjusted hec	et	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	et 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			Mini	imum (90%) direc requirement m		FALSE	
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz	on	Start Val	lue	Future value v offset	vithout	Future value wi	th 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	
								T	hreatenea	species								
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz	on	Start Val	lue	Future value v offset	vithout	Future value wi	th 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 EPBC Act status Vulnerable

		Impact calculato	r		
		Ecological communit			
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 i (Adjusted Hecto	res)	0.00	
		Threatened species has	bitat		
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 i (Adjusted Hecto		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				

								0	ffset cal	culator								
										mmunities								
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)	on	Start area and	l quality	Future area an without of (adjusted her	fset	Future area and with offs (adjusted hec	et	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	et 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			Mini	imum (90%) direc requirement m		FALSE	
								Threa	itened spe	cies habitat								
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)	on	Start area and	l quality	Future area an without of (adjusted her	fset	Future area and with offs (adjusted hec	et	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	et 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			Mini	imum (90%) direc requirement m		FALSE	
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)	on	Start Val	ue	Future value w	vithout	Future value wi	th 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	
			1					T	hreatened	species								
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)	on	Start Val	ue	Future value w offset	vithout	Future value wi	th 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

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

		Impact calculate	r		
		Ecological communit			
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 (Adjusted Hecto	res)	0.00	
		Threatened species has	bitat		
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 (Adjusted Hecto		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				

								0	ffset cal	culator								
								Ecol	logical Co	mmunities								
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horizo (Years)	on	Start area and	d quality	without of	Future area and quality without offset (adjusted hectares)		Future area and quality with offset (adjusted hectares)		Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	et 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			Mini	mum (90%) direct requirement me		FALSE	
								Threa	itened spe	cies habitat								
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horizo (Years)	on	Start area and	d quality	Future area an without of (adjusted her	ffset	Future area and with offs (adjusted hec	et	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	et 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			Mini	mum (90%) direct requirement me		FALSE	
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horizo	on	Start Val	ue	Future value w offset		Future value wi	th 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	
								T	hreatened	species								
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horizo	on	Start Val	ue	Future value w offset	vithout	Future value wi	th 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	Koala							
EPBC Act status	Vulnerable							
Annual probability of extinction Based on IUCN category definitions	0.2%							

		Impact calculato	r	
		Ecological communit	ies	
Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
Area of community	Yes		Area (Hectares)	
			Quality (Scale 0-10)	
	i iii iii	Total quantum of (Adjusted Hecto	res) 0.00	
		Threatened species had	bitat	
Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Information source
Area of habitat	Yes		Area (Hectares) 73.81	
11 11 01 11 11 11 11 11	100 00	100 100	Quality (Scale 0-10)	001 001 0001 001 001 0001 001 001 0001
(0 (0 0)	1 100 100	Total quantum of (Adjusted Hecto		000 (000) (000) 000 (000) (000)
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			100 100 100 100 100 100
Mortality rate e.g Change in number of road kills per year	No	100 100 100 100 100 100 100 100 100 100 100 100	101 102 001 003 010 101 102 101 101 101 001 001	100 100 100 100 100 100 100 100 100
Number of individuals e.g. Individual plants/animals	No	100 100 100 100 100 100 100 100 100 100		000 000 1000 000 000 1000 000 000 1000

								0	ffset cal	culator								
								Ecol	logical Co	mmunities								
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)	ton	Start area and	d quality	Future area an without or (adjusted he	d quality ffset	Future area and with offs (adjusted her	set	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	set 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%	
					100			Future area without offset	0.0	Future area with offset	0.0			Min	imum (90%) direc requirement m		FALSE	
								Three	atened spe	cies habitat								
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)	ton	Start area and	d quality	Future area an without of (adjusted he	ffset	Future area and with offs (adjusted hea	set	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Off	set 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	
00 000 000 000 00 000 000 000 00 000 00	20 (0 (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%	0 000 000 0 000 000 0 000 000
	(1) (1) (1 (4) (4)						101 10 34 34	Future area without offset	27.9	Future area with offset	28.2		101 101 101 100	Min	imum (90%) direc requirement m		FALSE	
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)	on	Start Val	lue	Future value v offset	vithout	Future value wi	ith 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		() (3) (3) (3) (1) (3) (3) (3)		100	(i) (ii) (ii)						0.00		0.00	0.00	0.00%	FALSE	
								<i>T</i>	hreatened	species								
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)	con	Start Val	lue	Future value v offset	vithout	Future value wi	ith 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									100 (00) 1 100 (00) 1		0.00	00 00 00 00	0.00	0.00	0.00%	FALSE	(1)001 001 (0 000 000 (1 000 000
Mortality rate e.g Change in number of road kills per year	No		01 101 101 100 C1 001 101 100 O1 101 100 100			10 (10 (10) 11 (10) (21 10) (10) (10)				1001 1000 1 1001 1001 100 1001 1000 1		0.00	100 100 100 100 100 100	0.00	0.00	0.00%	FALSE	000 1000 1000 01 1000 1000 00 1000 1000
Number of individuals e.g. Individual plants/animals	No					X 100 100 X 100 100 X 100 100	100 100	1000 1000 1000 1000 1000 1000		101 100 1 101 100 1		0.00		0.00	0.00	0.00%	FALSE	0. 00. 00. 0. 00. 00.

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 calculate	nr		
		Ecological communi			
Protected matter attributes	Attribute relevant to case?	Description	Quantum of imp	pact	Information source
Area of community	Yes		Area (Hectares)		
			Quality (Scale 0-10)		
		Total quantum of (Adjusted Hecto	ares)	0.00	
		Threatened species ha	bitat		
Protected matter attributes	Attribute relevant to case?	Description	Quantum of imp	pact	Information source
Area of habitat	Yes		Area (Hectares)	73.81	
	10 10 10	10 10 10 10 10 10 10 10	Quality (Scale 0-10)	7	
		Total quantum of (Adjusted Hecto		51.67	
Protected matter attributes	Attribute relevant to case?	Description	Quantum of imp	pact	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	11 12 13 14 15 15 15 15 15 15 15	M	101 (0)	X
		Threatened specie	S		
Protected matter attributes	Attribute relevant to case?	Description	Quantum of imp	pact	Information source
Birth rate e.g. Change in nest success	No			<u> </u>	
Mortality rate e.g Change in number of road kills per year	No	00 00 00 00 00 00 00 00 00 00 00 00 00			
Number of individuals e.g. Individual plants/animals	No	NA NA NA NA NA NA NA NA	m m m m		1

								0	ffset cal	culator								
								Ecol	logical Col	nmunities								
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Hori: (Years)		Start area and	d quality	Future area an without o (adjusted he	ffset	Future area an with offs (adjusted hea	set	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	set 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%	
							10 10 10 10 10 10 10 10 10 10 10 10 10 1	Future area without offset	0.0	Future area with offset	0.0			Min	requirement me		FALSE	
								Three	itened spe	cies habitat								
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)		Start area and	d quality	Future area an without o (adjusted he	ffset	Future area an with offs (adjusted hea	set	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	set 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	
mit mit mit die der	for (or 100	NO 000 000 000 00		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%	
							11 11 11 11 11 11 11 11 11 11 11 11 11	Future area without offset	4.7	Future area with offset	4.7			Min	nimum (90%) direc requirement me		FALSE	
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)	con	Start Val	lue	Future value v		Future value w	ith 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		000 001 007 000 000 000 000 000 000 000	11 00 00 00 00 00 00 00 00 00 00 00 00 0		100 100		101 101 101 102 103		100 101 10 100		0.00	(00) (00) (00 (00) (00) (00 (00) (00) (0	0.00	0.00	0.00%	FALSE	1000 1000
								T	hreatened	species								
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)	con	Start Val	lue	Future value v	without	Future value w	ith 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 (0 (0) (1 (0) (0) (1 (0) (0)		101 - 101 101 - 101 201 - 201 101 - 201		103 (20 104 (34 103 (36 100 (30	0.00	100 100 100 100 100 100 100 100 100 100 100	0.00	0.00	0.00%	FALSE	(2) (2) (2) (2) (2) (2) (2) (2) (2) (2)
Mortality rate e.g Change in number of road kills per year	No			6 6 6 6 6 6 6 6 6 6		(iii) (iii) (iii) (ii) (ii) (ii) (iii) (ii		(iii iii iii iii iii iii iii iii iii ii			10 00 00 00 00 00	0.00		0.00	0.00	0.00%	FALSE	
Number of individuals e.g. Individual plants/animals	No			22			1 100 1200 1 100 1200 1 100 1000 1 100 1000 1 100 1000	10	201 201 201 201 201 201 201 201 201 201	100 (00) 101 (00) 100 (00) 101 (00) 100 (00) 101 (00) 100 (00) 101 (00)	101 (101 101 (101 101 (101 101 (101 101 (101	0.00		0.00	0.00	0.00%	FALSE	1000 1001 1005 005 1000 1000 1000 100 1000 1001 1005 005 1000 1000

			Summary									
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!					

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

		Impact calculate	or					
		Ecological communi	ties					
Protected matter attributes	Attribute relevant to case?	Description	Quantum of imp	pact	Information source			
Area of community	Yes		Area (Hectares)					
			Quality (Scale 0-10)				100	
	333 (31)	Total quantum of (Adjusted Hecto		0.00			1374	
		Threatened species ha	bitat					
Protected matter attributes	Attribute relevant to case?	Description	Quantum of imp	pact	lr	sour		
Area of habitat	Yes		Area (Hectares)	73.81				
10 10 10 10 10 10 10 10 10 10 10 10	300 (00)	100 100	Quality (Scale 0-10)	7	001 014 014	HI 1411 HI	100 130 100	
100 AV 10	000 000 000 000 000 000	Total quantum of (Adjusted Hecto		51.67	(0) (0)	101	100 100 100	
Protected matter attributes	Attribute relevant to case?	Description	Quantum of imp	pact	lr	nforma source	tion	
Number of features e.g. Nest hollows, habitat trees	Yes							
Condition of habitat Change in habitat condition, but no change in extent	No				11. 11.	103 103 100	133	
		Threatened specie	s					
Protected matter attributes	Attribute relevant to case?	Description	Quantum of imp	pact	lr	sour		
Birth rate e.g. Change in nest success	No	10 10 10 10 10 10 10 10	100 100 000 100 100 000	(0)	101 100	101	300 300	
Mortality rate e.g Change in number of road kills per year	No	100 100 101 100 100 100 100 100 100 100 100 100	(10) (10) (1) (1) (1) (2) (0) (0) (0)	101	1011 1011 1011	000 000 000	(80) (80) (80)	
Number of individuals e.g. Individual plants/animals	No	100 100 101 101 100 100 101 101 100 100	101 101 101	(i) (ii)	101 101 101	101	(M) (M)	

								0	ffset cal	culator								
								Ecol	ogical Co.	mmunities								
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)		Start area and	d quality	Future area an without of (adjusted her	fset	Future area and with offs (adjusted hec	et	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	et 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			Mini	imum (90%) direct requirement me		FALSE	
								Three	itened spe	cies habitat								
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)		Start area and	d quality	Future area an without of (adjusted her	fset	Future area and with offs (adjusted hea	et	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	et 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	
	the the c			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%	100 100 100 100 100 100
01 100 100 101 1 03 100 101 100	00 00 0 00 000		11 10 10 10 10 10 10 10	100 100 100 100 100 100	(1) (1) (4) (4)		01.	Future area without offset	12.5	Future area with offset	12.5	(i) (ii)	101 01	Mini	imum (90%) direct requirement me		FALSE	
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)	on	Start Va	lue	Future value w offset	vithout	Future value wi	th 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				12		10 10 10 0				() () () ()	0.00		0.00	0.00	0.00%	FALSE	
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)	on	Start Va	lue	Future value w	hreatened vithout	Future value wi	th 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		n no no no	10 10 10 10 10 10		0 00 00	11 11			120) 100 12 100) 100) 10		0.00	101 101 101 101 101	0.00	0.00	0.00%	FALSE	100 100 100 100 100 100
Mortality rate e.g Change in number of road kills per year	No		1111 1111 1111 11 1111 1111 1111 1111 1111 1111	100 101 101 101 101 101 100 101 101		0 0 00 0 0 0 0 0 0	11 12 12 13 13 14	300 (00)			0 (63) 3 (60 0 (00)	0.00	101 100	0.00	0.00	0.00%	FALSE	
Number of individuals e.g. Individual plants/animals	No		11 100 001 100 11 101 001 100 11 101 001 100	M M M M M M M M M M			10 10	101 (00)	10 10	1901 100 100 1901 100 14	0 (0) (1 (40) (1 (1)	0.00	10 10 10 10 10 10 10 10 10 10 10 10 10 1	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 Grey-headed flying-fox EPBC Act status Vulnerable

		Impact calculate	r		
		Ecological communit			
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 (Adjusted Hecto	res)	0.00	
		Threatened species has	bitat		
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 (Adjusted Hecto		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				

								0	ffset cal	culator								
								Ecol	ogical Co.	mmunities								
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)	on	Start area and	d quality	Future area and without of (adjusted head	fset	Future area and with offs (adjusted hec	et	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	et 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 <u>with</u> 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			Mini	imum (90%) direct requirement me		FALSE	
								Threa	tened spe	cies habitat								
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)	on	Start area and	d quality	Future area and without of (adjusted head	fset	Future area and with offs (adjusted hec	et	Raw gain	Confidence in result (%)	Adjusted gain	value (adjusted hectares)	Offs	et Result	Cost (\$ total)
Area of habitat	Yes	48.13	Tabooba AUI	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			Mini	imum (90%) direct requirement me		FALSE	
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horizo	on	Start Val	ue	Future value w	ithout	Future value wi	th 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	
								T	reatened	species								
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz	on	Start Val	ue	Future value w offset	ithout	Future value wi	th 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

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

		Impact calculato	r		
		Ecological communit	ies		
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 (Adjusted Hecto		0.00	
		Threatened species has	bitat		
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 (Adjusted Hecta		48.13	
Protected matter attributes	Attribute relevant to case?	Description	Quantum of	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				

								0	ffset cal	culator								
								Ecol	logical Co	mmunities								
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)	on	Start area and	d quality	Future area an without of (adjusted he	ffset	Future area and with offs (adjusted hec	et	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	et 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			Mini	imum (90%) direc requirement m		FALSE	
								Three	itened spe	cies habitat				,			•	
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)	con	Start area and	d quality	Future area an without of (adjusted he	ffset	Future area and with offs (adjusted hec	et	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	et 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			Mini	imum (90%) direc requirement m		FALSE	
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)	on	Start Val	lue	Future value v offset		Future value wi	th 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	
						_		T	hreatened	species								
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)	on	Start Val	lue	Future value v offset	vithout	Future value wi	th 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 Grey-headed flying-fox EPBC Act status Vulnerable

		Impact calculate	r		
		Ecological communit			
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 (Adjusted Hecto	res)	0.00	
		Threatened species has	bitat		
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 (Adjusted Hecto		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				

								0	ffset cal	culator								
					Ecological Communities													
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)	on	Start area and	d quality	Future area an without of (adjusted he	ffset	Future area and with offs (adjusted hea	et	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	et 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			Mini	imum (90%) direc requirement m		FALSE	
								Three	itened spe	cies habitat						1		
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)	on	Start area and	d quality	Future area an without of (adjusted he	ffset	Future area and with offs (adjusted hea	et	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	et 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			Mini	imum (90%) direc requirement m		FALSE	
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz	on	Start Val	lue	Future value v offset		Future value wi	th 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	
								T	hreatenea	species								
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz	on	Start Val	lue	Future value v offset	vithout	Future value wi	th 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

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

		Ecological communit	ies			
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 (Adjusted Hecto	res)	0.00		
		Threatened species has	bitat			
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 (Adjusted Hecto		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						
Mortality rate e.g Change in number of road kills per year	No					
Number of individuals e.g. Individual plants/animals	No					

								0	ffset cal	rulator								
									ogical Co									
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)	on	Start area and	l 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)	Offs	et 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			Mini	mum (90%) direct requirement me		FALSE	
								Threa	tened spe	cies habitat								
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)	on	Start area and	l quality	Future area and without of (adjusted hea	fset	Future area and with offs (adjusted hec	et	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	et 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			Mini	mum (90%) direct requirement me		FALSE	
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)	on	Start Val	ue	Future value w offset	vithout	Future value wi	th 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	
								T	hreatened	species								
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)	on	Start Val	ue	Future value w offset	rithout	Future value wi	th 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

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

		Ecological communit	ies		
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 (Adjusted Hecto		0.00	
		Threatened species has	bitat		
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 (Adjusted Hecto		48.13	
Protected matter attributes	Attribute relevant to case?	Description	Quantum of	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				

									ffset cal									
							ommunities											
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)	on	Start area and	d quality	Future area an without of (adjusted he	ffset	Future area and with offs (adjusted hec	et	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	et Result	Cost (\$ total)
Area of community	Yes	0.00		Risk-related time horizon (max. 20 years)		Start area (hectores)		Risk of loss without offset (%)		Risk of loss <u>with</u> 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			Mini	imum (90%) direc requirement mo		FALSE	
			-			•		Three	itened spe	cies habitat	-						*	
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)	con	Start area and	d quality	Future area an without of (adjusted he	ffset	Future area and with offs (adjusted hec	et	Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	et 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 <u>with</u> 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			Mini	imum (90%) direc requirement m		FALSE	
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)	on	Start Val	lue	Future value v offset	vithout	Future value wi	th 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	
								T	hreatened	species								
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horiz (years)	on	Start Val	lue	Future value v offset		Future value wi	th 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 Grey-headed flyin											
Name	Grey-headed flying-fox										
EPBC Act status	Vulnerable										
Annual probability of extinction Based on IUCN category definitions	0.2%										

]	Impac	t cal	culato	r							
						E	cologic	al con	munit	ies							
	ected n			Attribut relevant case?		Description Quan							npact	Information source			
Area of	comm	anity		Yes							Area ctares)						
(1) (1)	W.					100			100		uality le 0-10)			**			
	100 100 100 100	100 100 100	10		100		(A	djusted	l Hecta	- 1			0.00	:::: ::::	100 110 111	 	
			Ų		_	Thi	reatene	d spec	ies ha	bitat							
	ected n			Attribut relevant case?			Descri	ption		Qu	iantum	of ir	npact	lı	nforma sourc		
Area of	Area of habitat										Area ctares)		68.76				
 	100	011 101	100	100 1000 1001	100	100	1801	100	100	Quality (Scale 0-10)			7	301 1603 301	III.)III 101 101	
01	100	101	(0) (0)	111	10	-				impact			48.13	111	100 100)H	
Prote	ected n	natter	128	Attribut relevant case?			Descri	<u>* </u>	rrecto		ıantum	of ir	npact	Information source			
Number			Ī			100	100	111	100	1	100	111		W.	100	100	
e.g. Nest trees	hollows	, habitat				100	100	ļ.,		4	93	-			700	-	
Condition				No		100						Į.			100		
but no ch	ange in	extent		No		(11)	10	120	100	130	101		10	(10)	1110	100	
			Ţ				Threa	tened :	species								
	ected n			Attribut relevant case?			Descri	ption		Qu	ıantum	of ir	npact	Information source			
Birth rate e.g. Change in nest success				No		10 10 10	(M) (M)	10	100 100 100	100	101	11 01 11	101 101	100	10 10 10	100	
Mortality rate e.g Change in number of road kills per year				No		100	100	100 (00)	101 (3)		101	11	100	11	1101	100	
Number	dual	ividuals	1	No		100	100	100 1341 1141	(i) (i)	100	6	10		10.)() 	100	
riants animais						100	100	242	377	1	100		100	100	1777	700	

								0	ffset cal	culator							
										mmunities							
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horizon (Years)		Start area and	d quality	Future area and without of (adjusted hea	fset	with offs	Future area and quality with offset (adjusted hectares)		Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares) Of		et 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 cies habitat	0.0			Mini	mum (90%) direct requirement me		FALSE	
		Total quantum of						I	ieneu spe	lico mionini				1	Net present		
Protected matter attributes	Attribute relevant to case?	impact (Adjusted Hectares)	Proposed offset	Time Horizon (Years)		Start area and	d quality	Future area and without of (adjusted hea	fset	Future area and with offs (adjusted heci	et	Raw gain	Confidence in result (%)	Adjusted gain	value (adjusted hectares)	Offs	et 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
		in jaj jaj Ni jaj jaj		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%
	10 00	n m m						Future area without offset	27.9	Future area with offset	28.2		10. 01. 30. 10				FALSE
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horizon (years)		Start Val	lue	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							I I I I I I I I I I I I I I I I I I I		101 101 101	100	0.00		0.00	0.00	0.00%	FALSE
								T	hreatened	species							
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horizon (years)		Start Value		Future value w offset	ithout	Future value wit	h 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		00 100 100 100 00 100 100 100 00 100 100 100		00	01 101 100 01 00 00 01 10 00	101 101 101 101	100 (00 100 (00	10 10 10 10 10 10 10 10 10 10 10 10 10 1	100 100 0 100 100 100 100 100 100 100	10	0.00	01 00 100 100	0.00	0.00	0.00%	FALSE
Mortality rate e.g Change in number of road kills per year	No		00 100 100 100 00 100 100 100							1001 1001 100 1001 1001 100	800	0.00	11 11	0.00	0.00	0.00%	FALSE
Number of individuals e.g. Individual plants/animals	No	-					101			(3) (3) (3) (3) (3) (3)		0.00	10. 10.	0.00	0.00	0.00%	FALSE

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

						1	mpa	t cal	culato	r							
							cologic										
	ected n			Attribut relevant case?			Descri	ption		Qu	ıantum	of in	npact	Information source			
Area of	comm	unity		Yes							Area ctares)						
1 111	100	000 000		100		100	100		100		uality le 0-10)						
	Total quantum of impact (Adjusted Hectares)								0.00) (1) (1) (1)	100					
						Thi	eatene	d spec	ies ha	bitat							
Protected matter attributes				Attribut relevant case?			Descri	ption		Qı	ıantum	of in	npact	ı	nforma sourc		
Area of habitat				Yes							Area ctares)		68.76				
	100 100 100	011 0001	301 201 301	10) 134) 163)	100	100	100	100	1331 1861 1333	Quality (Scale 0-10)			7	::: ::::::::::::::::::::::::::::::::::	101 201 311		
100	100	101	001 100	(0)	10	1		l quant		impact res)			48.13))))))	300	1111	
Prot	ected n	natter	Local	Attribut relevant case?			Descri				ıantum	of in	npact	Information source			
Number e.g. Nest trees										3.3		111			111		
Conditi Change ir but no ch	n habitat	condition,		No		111		1			2	11			111	100 100 100	
							Threa	tened :	species			-100					
	Protected matter attributes			Attribut relevant case?			Descri	ption		Qu	ıantum	of in	npact	Information source			
Birth ra e.g. Chan		st success		No		10 30 10	100)0. (0.0)	(0.1 (0.1 (0.1)	385	101	100	III	101	101 101	100	
Mortality rate e.g Change in number of road kills per year			No		10.	100	100			(A) (A) (V)	100	1001 1001	111 211 211		10. 101 101		
Number e.g. Indivi plants/ani	idual	ividuals		No		100	100	100 100 100 100	0	35.5	(i) (i)	10 61 11	100	101 101	111	101 101 101	

								0	ffset cale	culator							
								Ecol	ogical Co	mmunities							
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)	on	Start area and quality		Future area an without of (adjusted her	ffset	Future area and quality with offset (adjusted hectares)		Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	et 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			Mini	mum (90%) direc requirement mo		FALSE	
Threatened species habitat Assolute Total quantum of State are and quality State are an																	
Protected matter attributes	Attribute relevant to case?	impact (Adjusted Hectares)	Proposed offset	Time Horiz (Years)	on	Start area and	l quality	Future area an without of (adjusted her	ffset	Future area and with offs (adjusted hea	et	Raw gain	Confidence in result (%)	Adjusted gain	value (adjusted hectares)	Offs	et 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
		in in in		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%
		E					101 10	Future area without offset	4.7	Future area with offset	4.7	H H	101 (01 101 (10)	Mini	mum (90%) direc requirement mo		FALSE
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horizo	on	Start Val	ue	Future value without offset		Future value wi	th 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%	FALSE
Condition of habitat Change in habitat condition, but no change in extent	No							1000 1000				0.00	11 11 11 11 11 11 11 11 11 11 11 11 11	0.00	0.00	0.00%	FALSE
								T.	hreatened	species							
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horizo	on	Start Val	Start Value		vithout	Future value wi	th 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				01 00 01	0 0 00 0 00 00	101 11			100 (0) 1.0 (00 10) (0	((0)	0.00	01 00 100 10	0.00	0.00	0.00%	FALSE
Mortality rate e.g Change in number of road kills per year	No		101 101 100 101 101 101 101 101 101 101 101 101	(0) (0) (0)	(1) (1) (0)		H H				0 (0) 1 (0) 0 (0)	0.00	1000 1001 111 111 110 110	0.00	0.00	0.00%	FALSE
Number of individuals e.g. Individual plants/animals	No		0. 0.1 0.1 0.1 0. 0.0 10 10 0. 0.0 00 10					100 (10) 100 (10) 101 (10)		1961 1961 19 1961 1961 19		0.00	00 00 100 100 101 101	0.00	0.00	0.00%	FALSE

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

]	mpa	et cale	culato	r											
							cologic														
	ected n			Attribut relevant case?	to		Descri	ption		Qu	antum	of ir	npact	Information source							
Area of	comm	unity		Yes							Area ctares)										
W.						100	100		10		uality le 0-10)					111					
	100)** :: 	10	100			Tota (A		111	111											
						Thi	eatene	d spec	ies ha	bitat											
	ected n			Attribut relevant case?			Descri	ption		Qu	antum	of ir	npact	ı	Information source						
Area of habitat				Yes							Area ctares)		68.76								
111 632 111	(0) (4) (4)	111 16:	100	100 1000 1001	1000	100 100 100		100	100	Quality (Scale 0-10)			7	:::: :::::::::::::::::::::::::::::::::	300 300 300))) 					
101	100	10	(0) (0) (0)	101 101	10	1				impact			48.13))))))) (1) (1))H					
Prote	ected n	natter	LAN	Attribut relevant case?			Descri		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		antum	of ir	npact	Information source							
Number e.g. Nest l			Ī			100		100		1			- 11		100						
Conditie Change in out no cha	habitat	condition,		No											110	100					
out no en	unge m	CALCIN					L.II	100	L.J.		1	I.									
Protected matter attributes				Attribut relevant case?			<i>Threa</i> Descri		species		antum	of ir	mpact	Information source							
Birth rate e.g. Change in nest success				No		10	100	10 100	100		00 001	11	100	01 101	101	100					
Mortality rate e.g Change in number of road kills per year				No		10.	131	100 100 100	0		(6) (1) (0)	11		31 31 30	1101 1101 1101	100 01 100					
Number of individuals e.g. Individual plants/animals				No		100	(ii) (ii)	10 104 103	(6) (6)	100	(0) (0)	11	101	10. 10.	100 100 100	300 100 01					

								0	ffset cale	culator							
								Ecol	ogical Co	mmunities							
Protected matter attributes	Attribute relevant to case?	Total quantum of impact (Adjusted Hectares)	Proposed offset	Time Horizo (Years)	on	Start area and quality		Future area an without of (adjusted her	ffset	Future area and quality with offset (adjusted hectares)		Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	Offs	et 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%
							(i)	Future area without offset	0.0	Future area with offset	with offset 0.0			Min	imum (90%) direc requirement m		FALSE
Threatened species habitat Analysis Total quantum of State of the Sta																	
Protected matter attributes	Attribute relevant to case?	impact (Adjusted Hectares)	Proposed offset	Time Horizo (Years)	on	Start area and	l quality	Future area an without of (adjusted her	ffset	Future area and with offs (adjusted hea	et	Raw gain	Confidence in result (%)	Adjusted gain	value (adjusted hectares)	Offs	et 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
		101 101 101		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%
0 10 10 10 1		RI 30 30					101 10	Future area without offset	12.5	Future area with offset	12.5			Min	imum (90%) direc requirement m		FALSE
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horizo (years)	on	Start Val	ue	Future value without offset		Future value wi	th 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							1000 1000				0.00	31 33 103 101	0.00	0.00	0.00%	FALSE
								T	hreatened	species							
Protected matter attributes	Attribute relevant to case?	Quantum of impact	Proposed offset	Time horizo	on	Start Val	Start Value		vithout	Future value wi	th 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				01 00 01	0 0 00 0 0 00	101 11			100 (0) 1.0 (00 10) (0	((0)	0.00	01 01 100 101	0.00	0.00	0.00%	FALSE
Mortality rate e.g Change in number of road kills per year	No		101 101 100 101 101 101 101 101 101 101 101 101	(0) (0) (0)	(1) (1) (0)		H H				0 (0) 1 (0) 0 (0)	0.00	11 11 11 11 11 11 11 11 11 11 11 11 11	0.00	0.00	0.00%	FALSE
Number of individuals e.g. Individual plants/animals	No		0. 0.1 0.1 0.1 0. 0.0 10 10 0. 0.0 0.1 0.1					100 (10) 100 (10) 101 (10)		1960 1961 19 1961 1961 19		0.00	00 00 100 100 01 101	0.00	0.00	0.00%	FALSE