

## **Biodiversity Offsets Payment Calculator**

User guide – standalone version

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Published by: Office of Environment and Heritage 59 Goulburn Street, Sydney NSW 2000 PO Box A290, Sydney South NSW 1232 Phone: +61 2 9995 5000 (switchboard) Phone: 131 555 (environment information and publications requests) Phone: 1300 361 967 (national parks, general environmental enquiries, and publications requests) Fax: +61 2 9995 5999 TTY users: phone 133 677, then ask for 131 555 Speak and listen users: phone 1300 555 727, then ask for 131 555 Email: info@environment.nsw.gov.au Website: www.environment.nsw.gov.au

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ISBN 978 1 76039 913 9 OEH 2017/0499 September 2017: Version 1.1

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## Summary

This user guide aims to document how the **Biodiversity Offset Payment Calculator (BOPC)** applies the pricing models to generate a price for both species and ecosystem credits. The standalone version of the working model comprises an online tool accessible at <u>www.lmbc.nsw.gov.au/offsetpaycalc</u>

There is a version of the BOPC that is integrated with the Biodiversity Assessment Method (BAM) Calculator. Please refer to the BAM Calculator user guide for further reference to the integrated version.

## Who should to use this user guide?

Developers who are required under the *Biodiversity Conservation Act 2016* (the Act) or any other Act (including under an instrument, approval or agreement) to retire biodiversity credits may satisfy that requirement by, instead, paying an amount into the Biodiversity Conservation Fund (BCF) determined in accordance with the offset payment calculator established under Division 6 of the Act.

The total credit cost calculated with the BOPC is a best estimate of the market value, plus a risk premium, plus an administration cost of the biodiversity credits at the time of the calculation session, and is valid only during the quarter of the current year. For the purposes of the BOPC, the four quarters that make up the year are: January, February and March (Q1); April, May and June (Q2); July, August and September (Q3); and October, November and December (Q4).

The underlying econometric model of the BOPC is updated each quarter with the latest data available.

## Disclaimer

It is the responsibility of the BOPC manager to update this user guide and make it available at the online tool website. It is the responsibility of the user of the online tool to download the latest version of the user guide. When using this user guide, verify that the version matches the respective technical note 'Pricing models for the Biodiversity Offsets Payment Calculator'.

## Read this if you are landholder

Please be aware that when a landholder seeks to enter into an agreement with the Minister for the purposes of establishing a biodiversity stewardship site, the total biodiversity credit cost calculated using the standalone version of the BOPC does not represent any obligation for the BCF to purchase the potential credits to be generated.

If the landholder wants to sell biodiversity credits to the BCF, the sale price of each biodiversity credit will be negotiated between the parties, and will be affected by supply and demand for each biodiversity credit. For further information, please contact the Biodiversity Conservation Trust (BCT) team at <u>BCT.transition@environment.nsw.gov.au</u>.

## Contents

Sur	mma	ſŸ	iii
Wh	o sh	ould to use this user guide?	iii
Dis	claim	ner	iii
Rea	ad th	is if you are landholder	iii
1.	Biod	iversity market in NSW	1
	1.1	Background	1
2.	Start	ing off	2
	2.1	Welcome page and Disclaimer section	2
	2.2	Launch the BOPC	2
	2.3	Start a biodiversity credit price calculation within a specific IBRA subregion	3
	2.3.	1 Species credit price	4
	2.3.	2 Ecosystem credit price	7
	2.3.	3 Combined species and ecosystem credits price calculation within the same IBRA subregion	11
3.	Asso	orted credit price calculations	13
	3.1	Species credit price calculation within different IBRA subregions	13
	3.2 3.3	Ecosystem credit price calculation within different IBRA subregions Combined species and ecosystem credits price calculation	13
		within different IBRA subregions	13

## 1. Biodiversity market in NSW

### 1.1 Background

The Biodiversity Offsets Scheme (BOS) is a market-based scheme that provides a consistent biodiversity assessment process for development, a rigorous and credible offsetting scheme as well as an opportunity for rural landowners to generate income by managing land for conservation. The BOS enables 'biodiversity credits' to be generated by landowners and developers who commit to enhance and protect biodiversity values on their land through a biodiversity stewardship agreement. These credits can then be sold, generating funds for the management of the site. Credits can be used to counterbalance (or offset) the impacts on biodiversity values that are likely to occur because of development. The credits can also be sold to those seeking to invest in conservation outcomes, including philanthropic organisations and government. The principle is that creating a market in biodiversity credits gives incentives to protect biodiversity values for future generations.

The BOS may require a developer to offset the biodiversity impacts of a development by acquiring and retiring biodiversity credits.

Rather than retiring credits themselves, a developer can choose to pay into the BCF. When a developer pays into the BCF, the BCT takes on the developer's offset obligation and becomes responsible for securing the required offsets.

The purpose of the BOPC is to determine how much a developer must pay into the BCF to satisfy an offset obligation. The payment is based on predicting the costs that will be incurred by the BCF when securing the necessary offset credits.

## 2. Starting off

### 2.1 Welcome page and Disclaimer section

Open the tool at www.lmbc.nsw.gov.au/offsetpaycalc

NSW	Biodiversity Offset Payment Calculator	
0	Credit Offset Payment Calculator 🗐 Payments 🗐	
Weld	come to the Biodiversity Offset Payment Calculator (BOPC)	Biodiversity Offset Payment Calculator User
of findin	ine bookmensing unsets scheme, a proportion can choose to pay no use bookmensing conservation name to intere an one to organom. This is an alternative to retaining cleans, by comparison that and an other is a start and the scheme to be isolatively conservation. This, sets Payment Calculator is an interactive tool designed to determine how much a developer must pay into the Fund to satisfy their offset obligation. The primary aim of the calculator is to provide a price.	Guide
that acc	unately predicts the costs that the BCT will incur in securing each type of biodiversity credit as an offset sets Baument Calculator commissions three monties.	
a) Bi biodi	odiversity credit price module – this is the predicted market price for biodiversity credits. An econometric model (dynamic panel data model) is used to estimate a pricing curve based on observed versity trades (taken from BioBankino agreements).	
b) Bi abov	odiversity credit price risk premium module – this is a margin that accounts for the statistical probability the market credit price paid by the BCT to landholders is higher or lower than predicted in a) e.	Biodiversity Offsets Payment Calculator
c) Fu	nd administration costs module – this is the cost of operating and administering the BCT for offsetting purposes.	Usar galik – Mandalina version
See the	: User guide for further details about the Calculator. See the Technical Notes on the details about the pricing models for species and ecosystem credits.	
The Off System	sets Payment Calculator that will formally generate the credit price and facilitate payment into the Biodiversity Conservation Fund is located within the Biodiversity Offsets and Agreement Management (BOAMS)	
The	Offsets Payment Calculator public tool	
A public obtaine	: tool is also available for any person to test the cost associated with each credit type. It is important to note that this tool cannot be relied upon to determine the final payment obligation – this must be d through the calculator embedded in the BOAMS.	
The put	blic tool provides:	
• a m	ethod that a member of the public can use to derive a price for an offset without having to complete a Biodiversity Assessment Method (BAM)	DOWNLOAD
• a m	eans of determining biodiversity prices by PTCID, IBRA Subregions and/or Threatened Species ID.	
Access	the public tool here to test how the Offsets Payment Calculator works and to obtain an estimate for a credit obligation.	
Biod By us	diversity Offset Payment Calculator sing this Biodiversity Offset Payment Calculator Standalone Version, you agree to the terms and conditions as specified by the disclaimer below. ART NOW	
D	isclaimer here a anothoder seeks to enter an agreement with the Minister for the purposes of establishing a biodiversity stewardship site, the total biodiversity credit cost calculated using the standatione version the DOPC does not recreased any obligation for the Fund for purphased the potential credits to be enerated. If the landholder wants to seel biodiversity credit cost calculated using the standatione version	

Read the Welcome statement and the Disclaimer section. Scroll down as necessary.

#### 2.2 Launch the BOPC

Click on the 'START NOW' button, or select the `Credit Offset Payment Calculator' tab. You can download the latest version of this user guide on the `DOWNLOAD' button.



# 2.3 Start a biodiversity credit price calculation within a specific IBRA subregion

1. Select from a list the Interim Biogeographic Regionalisation for Australia (IBRA) region where the biodiversity credits or the development to offset are located.

NSW		<b>Biodiversit</b>	y Offset Payment Calculator	
0 0	Credit Offset Payment Calculator 🗐	Payments 🗐		
All fields marke IBRA Sub PCT list Include	ed with an asteritik (*) are mandatory Internim Biogeographic Region: PCT common name	Regionalisation for Australia (IBRA) * IBRA subregion * PCT * Species *	Brgalow Bett South NSW South Vestern Slopes Marry During Desison South Eastern Highlands South Eastern Highlands South Eastern Joberstand Brydery Basin Australian Aple pilot Channel Country Collar Perepriatin Darting Rivertine Plans Mulga Lands Nandewal Nandewal	ADD PCT ADD SPECIES Credit Action
Species li Include	Species		Simpson Strzelecki Dunefields	Credit Action
				CALCULATE

2. Then, select the specific IBRA subregion where the credits or the development to offset are located.

NSW	Biodiversit	y Offset Payment Calculator			
0	Credit Offset Payment Calculator 🗐 🛛 Payments 🗐				
All fields mi	aried with an azterisk (*) are mandatory Interim Biogeographic Regionalisation for Australia (IBRA) * IBRA subregion * PCT * Species *	Sydney Basin •  Surragorang Cumberland Burragorang Cumberland Burragorang Linder Linde	ADD PCT ADD SPECIES	]	
IBRA S PCT lis	ub Region: t	Korrabee Moss Vale Pittwater Sydney Cataract Watemi Wichan			
Specie	s list	Yengo	Credit	Action	
Inclus	de Spacies		Credit	Action	CALCULATE

In this example, **Sydney Basin** is the IBRA region and **Cumberland** is the IBRA subregion.

0	Credit Offset Payment Calculator 🗐	Payments 🔳				
ease ch	oose one or more PCT and/or species	C Perionalisation for Australia (IBPA) *				
	menn biogeographic	(DIA)	Sydney Basin *			
		IBRA subregion *	Cumberland			
		PCT^	Search by PCT name or PCT Id or BVT	ADD PCT		
		Species ^	Search by species name or profile ID ADD	D SPECIES		
BRA S	ub Region: Cumberland					
CT lis	t					
	de PCT common name			Credit	Action	
Inclu						
Inclu pecie	s list					
Inclu pecie Inclu	s list de Species			Credit	Action	
nclu lecie nclu	s list de Species			Credit	Action	
Inclu pecie Inclu	slist de Species			Credit	Action	

#### 2.3.1 Species credit price

In case of species, the pricing model is based on density and threat status of flora, and area of occupation and threat status for fauna. The technical note 'Pricing models for the Biodiversity Offsets Payment Calculator' describes in detail the pricing model for species credits.

3. Select/input the type of species to offset. In the 'Species selection box', you can input either the Species profile ID, scientific name or common name.

Biodiv	ersity Offset Payment Calculator		
Credit Offset Payment Calculator      Payments			
*Please choose one or more PCT and/or species Interim Biogeographic Regionalisation for Australia	IBRA)* Sydney Basin		
IBRA sub	region* Cumberland *		
	PCT* Search by PCT name or PCT Id or BVT	ADD PCT	
si si	10	ADD SPECIES	
IBRA Sub Region: Cumberland PCT list Include PCT common name Species list Include Species	Haddita Analysis       10007 - Acacia cameno Vatteley       10048 - Amytorius statulus (Statule Gasswen)       10056 - Andrektinowy Bauger (Mulan)       10068 - Andrektinowy Bauger (Mulan)       10057 - Andrektinowy Bauger (Mulan)       10058 - Andrektinowy Bauger (Mulan)       10058 - Andrektinowy Bauger (Mulan)       10059 - Audrektinowy Bauger (Mulan)       10050 - Audrektinowy Bauger (Mulan)       10061 - Audrektinowy Bauger (Mulan)       10058 - Audrektinowy Bauger (Mulan)       10068 - Audrektinowy Bauger (Mulan)       10058 - Bautys porticipies (Bustitations (Mussiell Dalsy)       10116 - Bautys porticipies (Bustitations (Mulan)       10116 - Bautys porticipies (Bustitations - Cutewy)       10116 - Lophochroa leadbeater (Major Mitchell's Cockatoo)       10125 - Hylacida cautus (Sh) Heatthwen)       10132 - Hylacida cautus (Sh) Heatthwen)       10132 - Hylacida cautus (Sh) Heatthwen)       10132 - Cabits moore (A burdaisy)	Credit Action Credit Action	CALCULATE

4. Click on the 'Add species' button to add the species of interest into the 'Species list' and proceed to next step.

NSW		Biodiversit	y Offset Payment Calculator			
0	Credit Offset Payment Calculator 🗐	Payments 🔳				
^ Please cf	oose one or more PCT and/or species Interim Biogeographic	c Regionalisation for Australia (IBRA) *	Sydney Basin •			
		IBRA subregion *	Cumberland			
		PCT^	Search by PCT name or PCT Id or BVT	ADD PCT	1.	
		Species ^	10080 - Austrostipa metatoris (A spear-grass)	ADD SPECIES	1 🧲	
					•	
PCT lis	tub Region: Cumberland					
Inclu	de PCT common name			Credit	Action	
Specie	s list					
Inclu	de Species			Credit	Action	
						0410111475
						CALCULATE

5. Input the number of species credits required.

Biodiversi	ty Offset Payment Calculator		
Credit Offset Payment Calculator      Payments			
A Please choose one or more PCT and/or species     Interim Biogeographic Regionalisation for Australia (IBRA) *	0. dow 0.00		
	Sydney Basin		
	Cumberland		
PCT^	Search by PCT name or PCT Id or BVT	ADD PCT	
Species ^	Search by species name or profile ID	ADD SPECIES	
			1
IRRA Sub Region: Cumberland			
PCT liet			
Include PCT common name		Credit	Action
Chapting List			
openes list			
Include Species	k	Credit	Action
Austrostipa metatoris (A spear-grass)			Remove
			CALCULATE

- 6. If more than one species credit is required to be offset in the same IBRA subregion, repeat steps 3 to 5 to add more credits to the 'Species list'.
- 7. When all species credits required to offset are included in the list, click on the 'Calculate' button to proceed into the 'Payments' tab.

NSW.		Biodiversit	y Offset Payment Calculator	
Credit Offset Pay	ment Calculator 🔳	Payments 🔳		
Please choose one or more PCT a	nd/or species Interim Biogeographic	Regionalisation for Australia (IBRA) *	Surfney Racin +	
		IBRA subregion *	Cumberland	
		PCT^	Search by PCT name or PCT Id or BVT ADD PCT	7
		Species ^	Search by species name or profile ID ADD SPECIES	1
IBRA Sub Region: Cumber PCT list Include PCT common I	land name		Credit	Action
Species list				
Include Species			Credit	Action
<ul> <li>Austrostipa me</li> </ul>	otatoris (A spear-grass)		1	Remove

The 'Payments' tab summarises the species credits to be offset, the price per credit, the risk premium, the administrative cost per credit, the number of credits required and the final credits total cost.

NSW			Bi	odiversity Offset Payment	Calculator			Version: 1.1.0.00 Last updated: 13/09/2017 11:00
0	Credit Offset Payment Cal	Iculator 🔳	Payments 🗐					
Species	credits for threatened specie	es						
Speci	es profile ID Sp	pecies		Price per credit	Risk premium	Administrative cost	No. of species credits	Final credits price
10080	Au	ustrostipa meta	toris (A spear-grass	\$40.70	25.00%	\$20.00	1	\$70.88
							Subtotal (excl. GST)	\$70.88
							GST	\$7.09
							Total species credits (incl. GST)	\$77.97
Calcul	ated as on: 14-09-2017 13:55:44	4					Grand total	\$77.97

Click `Ctrl-P' to print/save each species credit total cost report for further reference. Verify that both the version and date of calculation are visible.

NSW			Bi	odiversity Offset Payment	Calculator		(	Version: 1.1.0.0 Last updated: 13/09/2017 11:0
0	Credit Offset Paym	eent Calculator 🔳	Payments 🔳					
Specie Spec	es credits for threatened	species Species		Price per credit	Risk premium	Administrative cost	No. of species credits	Final credits price
1008	0	Austrostipa met	tatoris (A spear-gras	s) \$40.70	25.00%	\$20.00	1	\$70.88
							Subtotal (excl. GST)	\$70.88
							GST	\$7.09
							Total species credits (incl. GST)	\$77.97
Calcu	ulated as on: 14-09-2017 1	13:55:44					Grand total	\$77.97

8. If you want to remove a specific species credit form the 'Species list', go back to the 'Credit Offset Payment Calculator' tab and click on the 'Remove' button in the 'Species list'.

NSW		Biodiversity	y Offset Payment Calculator	
<b>6</b> c	Credit Offset Payment Calculator 🗐	Payments 🗐		
Please choos	e one or more PCT and/or species Interim Biogeographic R	Regionalisation for Australia (IBRA) *	Svdney Basin •	
		IBRA subregion *	Cumberland •	
		PCT ^	Search by PCT name or PCT Id or BVT ADD PCT	
		Species ^	Search by species name or profile ID ADD SPECIE	;
IBRA Sub PCT list Include	Region: Cumberland PCT common name		Cred	t Action
Species li	st			
Include	Species		Cred	t Action
2	Austrostipa metatoris (A spear-grass)		1	Remove
				CALCULATE

9. To start a new species credit calculation within same IBRA subregion, remove all species credits from the list and repeat steps 3 to 7.

#### 2.3.2 Ecosystem credit price

The technical note 'Pricing models for the Biodiversity Offsets Payment Calculator' describes in detail the pricing model for ecosystem credits.

 Once the IBRA region and IBRA subregion have been defined (see steps 1 and 2), to start an ecosystem credit price calculation, select/input the type of ecosystem to offset. You can input in the **PCT** selection box either the Plant Community Type (PCT) ID, Biometric Vegetation ID (BVID) or ecosystem name.

NSW	Biodiversit	y Offset Payment Calculator			
0	Credit Offset Payment Calculator 🗐 Payments 🗐				
^ Please ch	oose one or more PCT and/or species Interim Biogeographic Regionalisation for Australia (IBRA) *	Sydney Basin	•		
	IBRA subregion *	Cumberland	•		
	PCT^	139		ADD PCT	
	Species ^	139 - MR676 / WE34 / LM139 - Prickty Wattle tail open shrubland of dunes and sandplains of semi-arid and arid regions		ADD SPECIES	
		163 - LA139 / LM123 / MR553 / MU544 / WE26 / CW131 - Dillon Bush (Nitre Bush) shrubland of the semi-arid and arid zones			
IBRA S	ub Region: Cumberland	202 - CW139 / NA141 / BR141 - Fuzzy Box woodland on colluvium and alluvial flats in the Brigalow Belt South Bioregion (including Pilliga) and Nandewar Bioregion			
PCT lis	t	212 - NA139 / WE27 / CW137 - Chenopod low open shrubland - ephemeral partly derived forbland saline wetland on occasionally flooded pale clay scalds in the NSW North Western Plains			
Inclue	e PCT common name	242 - CW174 / LA179 / LM141 / MR590 / MU565 / NA188 / WE139 / BR192 - Rats Tail Couch sod grassland wetland of inland floodplains		Credit	Action
Specie	s list	748 - NR139 - Brush Box - Tallowwood shrubby moist forest of the escarpment ranges of central NSW North Coast Bioregion			
Inclue	le Species	1394 - HU603 - Rough-barked Apple - Silvertop Stringybark - Red Stringybark grassy open forest of the upper Hunter Valley, south western New England Tableland Bioregion and southern NSW North Coast Bioregion		Credit	Action
		1395 - ME021 / HN556 - Narrow-leaved ironbark - Broad-leaved ironbark - Grey Gum open forest of the edges of the Cumberland Plain, Sydney Basin Bioregion			
		1966 - NA165 - Rough-banked Apple - Silvertop Stringybark - Ribbon Gum shrub/grass open forest on hills of the southern Nandewar Riomation			CALCULATE

11. Click on the 'Add PCT' button to add the ecosystem of interest into the 'PCT list' and proceed to the next step.

NSW CONSERVENT	Biodiversi	ty Offset Payment Calculator		
Credit Offset Payment Calcu	ator 🔳 Payments 🔳			
* Please choose one or more PCT and/or species	eographic Regionalisation for Australia (IBRA) *			
incini bi		Sydney Basin *		
	IBRA subregion *	Cumberland •		4
	PCT^	Search by PCT name or PCT Id or BVT	ADD PCT	
	Species ^	Search by species name or profile ID	ADD SPECIES	
IBRA Sub Region: Cumberland				
PCT list				
Include PCT common name			Credit	Action
1395 - Narrow-leaved Ironb	rk - Broad-leaved Ironbark - Grey Gum open forest (	I the edges of the Cumberland Plain, Sydney Basin Bioregion		Remove
Species list				
Include Species			Credit	Action
				CALCULATE

12. Input the number of ecosystem credits required.

NSW	Biodivers	ity Offset Payment Calculator		
0	Credit Offset Payment Calculator 🗏 🛛 Payments 🗐			
^ Please choo	se one or more PCT and/or species Interim Biogeographic Regionalisation for Australia (IBRA)	Svdney Basin		
	IBRA subregion	Cumberland *		
	PCT	Search by PCT name or PCT Id or BVT	ADD PCT	]
	Species	Search by species name or profile ID	ADD SPECIES	
IBRA Sub PCT list Include	P. Region: Cumberland		Credit	Action
8	1395 - Narrow-leaved Ironbark - Broad-leaved Ironbark - Grey Gum open fore:	of the edges of the Cumberland Plain, Sydney Basin Biolegion		Remove
Species I Include	IST Species		Credit	Action
				CALCULATE

- 13. If more than one ecosystem credit is required to be offset, repeat steps 10 to 12 to add more ecosystem credits to the 'PCT list'.
- 14. When all ecosystem credits to offset are included in the 'PCT list', click on the 'Calculate' button to proceed to the 'Payments' tab.

		Biodiversit	y Offset Payment Calculator		
0	Credit Offset Payment Calculator 🗐	Payments 🔳			
^ Please cho	ose one or more PCT and/or species	Regionalisation for Australia (IBRA)			
		1004	Syoney Basin Y		
		IBRA subregion -	Cumberland		-
		PCT^	Search by PCT name or PCT Id or BVT	ADD PCT	
		Species ^	Search by species name or profile ID	ADD SPECIES	
					1
IBRA Su PCT list	b Region: Cumberland				
Includ	PCT common name			Credit	Action
2	1395 - Narrow-leaved Ironbark - Broad-	leaved Ironbark - Grey Gum open forest of f	he edges of the Cumberland Plain, Sydney Basin Bioregion 1		Remove
Species	list				
Includ	e Species			Credit	Action
					CALCULATE

The 'Payments' tab summarises the ecosystem credits to offset and:

- 1. the 'baseline price per credit', which is automatically retrieved according the following rules:
  - a) For PCT with trades recorded, the baseline price is the weighted average price from the most recent quarter, regardless of the IBRA subregion of interest.
  - b) For PCT without trades recorded, but within an IBRA subregion with trades recorded, the baseline price is the weighted average price of all PCT ID within the IBRA subregion of interest.
  - c) For PCT without trades recorded, and within an IBRA subregion without trades recorded, the baseline price is the weighted average price from the most recent quarter of the market region D.

- d) When the predicted price (using the baseline price in a), b) or c)) is lower than an observed weighted average price that cover the costs of the management actions for improving vegetation integrity and threatened species habitat at a biodiversity stewardship site (Part A in Biobanking Agreements), the BOCP uses such an observed weighted average price that cover the costs of the management actions.
- 2. the 'dynamic coefficient'.
  - a) The dynamic coefficient is reported for cases 1.a), 1.b) and 1.c), according with the technical note "Pricing models for the Biodiversity Offsets Payment Calculator'.
- 3. the 'market coefficient'.
  - a) The dynamic coefficient is reported for cases 1.a), 1.b) and 1.c), according with the technical note "Pricing models for the Biodiversity Offsets Payment Calculator'
- 4. the 'risk premium'.
- 5. the 'administrative cost per credit'.
- 6. the 'methodology adjustment factor'.
- 7. the 'price per credit'.
  - a) For cases1.a), 1.b) and 1.c), the 'Price per credit' is calculated as:
    - A= EXP[(LN('Baseline price per credit')\*Dynamic Coefficient)+Market Coefficient)]\*Methodology Adjustment factor
      - 'EXP' returns *e*, which is the base of the natural logarithm.
      - 'LN' returns the natural logarithm of a given number.
    - B= A\*Risk Premium
    - C=(A\*0.0026) or C=20 if (A\*0.0026) < 20.
    - Price per Credit= A+B+C
  - b) For case 1.d), the 'Price per credit' is calculated as:
    - A= Baseline price per credit
    - B= A\*Risk Premium
    - C=(A\*0.0026) or C=20 if (A\*0.0026) < 20.
    - Price per Credit= A+B+C
- 8. the number of credits required, per biodiversity type.
- 9. the final credits total price.

NSW NSW		В	iodiversity Offset Pa	yment Cal	culator						V Last updated: :	ersion: 1.1.0. 13/09/2017 11:
0	Credit Offset Payment Calculator 🗐	Payments 🔳										
Ecosystem	n credits for plant communities types (	PCT), ecological co	ommunities & threatened species habitat									
IBRA sub region	PCT common name			Baseline price per credit	Dynamic coefficient	Market coefficient	Risk premium	Administrative cost	Methodology adjustment factor	Price per credit	No. of ecosystem credits	Final credits price
Cumberla	nd 1395 - Narrow-leaved Ironbark - Bro. Cumberland Plain, Sydney Basin Bi Note: This PCT has trades recorded	ad-leaved Ironbark - oregion <b>d</b>	Grey Gum open forest of the edges of the	\$10,521.74	0.6918483	2.815542	16.46%	\$26.33	1.0000	\$11,819.36	1	\$11,819.36
										s	ubtotal (excl. GST)	\$11,819.36
											GST	\$1,181.94
									Te	tal ecosystem (	credits (incl. GST)	\$13,001.30
Calculate	d as on: 14-09-2017 14:24:11								Gra	nd total		\$13,001.30

Click `Ctrl-P' to print/save each species credit total cost report for further reference. Verify that both the version and date of calculation are visible.

NSW.	Biodiversity Offset Payment Calculator							(	V Last updated: :	/ersion: 1.1.0.0 13/09/2017 11:0	
Cre	dit Offset Payment Calculator 🔳 Payments 🔳										
Ecosystem cre	dits for plant communities types (PCT), ecological communities & threatened species habitat										
IBRA sub region	PCT common name	Baseline price per credit	Dynamic coefficient	Market coefficient	Risk premium	Administrative cost	Methodology adjustment factor	Price per credit	No. of ecosystem credits	Final credits price	
Cumberland	1395 - Narrow-leaved Ironbark - Broad-leaved Ironbark - Grey Gum open forest of the edges of the Cumberland Plain, Sydney Basin Bioregion Note: This PCT has trades recorded	\$10,521.74	0.6918483	2.815542	16.46%	\$26.33	1.0000	\$11,819.36	1	\$11,819.36	
								Sut	itotal (excl. GST)	\$11,819.36	
									GST	\$1,181.94	
							Τα	otal ecosystem cr	edits (incl. GST)	\$13,001.30	
Calculated as	on: 14-09-2017 14-24:11						Gra	nd total		\$13,001.30	

15. If you want to remove a specific ecosystem credit from the 'PCT list', go back to the 'Credit Offset Payment Calculator' tab and click on the 'Remove' button in the 'PCT list'.

NSW NSW		Biodiversity	y Offset Payment Calculator	
0	Credit Offset Payment Calculator 🗏	Payments 🔳		
Please ch	oose one or more PCT and/or species Interim Biogeographic	Regionalisation for Australia (IBRA) * IBRA subregion *	Sydney Basin • Cumberland	
		PCT ^	Search by PGT name or PGT Id or BVT ADD PGT	
		opeole s	Search by species name or prome ID ADD SPECIE	\$
IBRA S PCT lis	ub Region: Cumberland		Cred	t Action
8	1395 - Narrow-leaved Ironbark - Broad-	leaved Ironbark - Grey Gum open forest of th	he edges of the Cumbertand Plain, Sydney Basin Bioregion	Remove
Specie	list			
Includ	e Species		Cred	t Action
				CALCULATE

16. To start a new ecosystem credit calculation within the same IBRA subregion, remove all ecosystem credits from the 'PCT list' and repeat steps 10 to 14.

## 2.3.3 Combined species and ecosystem credits price calculation within the same IBRA subregion

The online tool supports a combined species and ecosystem credits price calculation.

17. To start a combined species and ecosystem credits price calculation, repeat steps 1 to 6 for species, and 10 to 13 for ecosystem.

NSW	Biodiversit	y Offset Payment Calculator		
O Ci	edit Offset Payment Calculator 🗐 🛛 Payments 🗐			
* Please choose	one or more PCT and/or species Interim Biogeographic Regionalisation for Australia (IBRA) * IBRA subregion * PCT ^ Species ^	Sydney Basin   Cumberland  Search by PCT name or PCT Id or BVT  Search by species name or profile ID	ADD PCT ADD SPECIES	
IBRA Sub F	Region: Cumberland			
Include	PCT common name		Credit	Action
×	1395 - Narrow-leaved Ironbark - Broad-leaved Ironbark - Grey Gum open forest of I	he edges of the Cumberland Plain, Sydney Basin Bioregion 1		Remove
Species lis	t			
Include	Species		Credit	Action
8	Austrostipa metatoris (A spear-grass)	1		Remove
				CALCULATE

 When all species and ecosystem credits to offset are included in the respective list (either 'PCT' or 'Species'), click on the 'Calculate' button to proceed into the 'Payments' tab.

NSW		Biodiversit	y Offset Payment Calculator		
<b>O</b> Ci	redit Offset Payment Calculator 🗐	Payments 🔳			
* Please choose	e one or more PCT and/or species Interim Biogeographic	Regionalisation for Australia (IBRA) *	Sydney Basin Cumberland	•	
		PCT ^ Species ^	Search by PCT name of PCT Id of BVT	ADD PCT	]
			осаты ту эрешез напие от утоле то	ADD SPECIES	
IBRA Sub F PCT list	Region: Cumberland				
Include	PCT common name			Credit	Action
×	1395 - Narrow-leaved Ironbark - Broad-	leaved Ironbark - Grey Gum open forest of	he edges of the Cumberland Plain, Sydney Basin Bioregion 1		Remove
Species lis	st				
Include	Species			Credit	Action
8	Austrostipa metatoris (A spear-grass)		1		Remove
					CALCULATE

The 'Payments' tab summarises both the ecosystem and species credits to offset and the total cost.

#### Biodiversity Offsets Payment Calculator: User guide – Standalone version

NSW				В	iodivers	sity Offse	et Paymen	t Ca	lculator						Last updated:	Version: 1.1.0.0 13/09/2017 11:0
0	Cred	it Offset Payment O	alculator 🔳	Payments 🔳												
Ecosyste	em cred	lits for plant comm	unities <mark>ty</mark> pes (F	PCT), ecological co	ommunities & t	hreatened species	s habitat									
IBRA si region	ub	PCT common name					Baseli P	ne price er credit	Dynamic coefficient	Market coefficient	Risk premium	Administrative cost	Methodology adjustment factor	Price per credit	No. of ecosystem credits	Final credits price
Cumber	rland	1395 - Narrow-leave Cumberland Plain, S Note: This PCT has	d Ironbark - Broa ydney Basin Bio <b>trades recorded</b>	id-leaved Ironbark - iregion d	Grey Gum open	forest of the edges	of the \$10	),521.74	0.6918483	2.815542	16.46%	\$26.33	1.0000	\$11,819.36	1	\$11,819.36
														S	ubtotal (excl. GST)	\$11,819.36
															GST	\$1,181.94
					xk - Grey Gum open forest of the edges of the         \$10,521.74         0.6918483         2.815542         16.45%         \$26.33         1.0000         \$11,819.36         1         \$11,819.36           Subtotal (excl. GST)           GST         \$11,819.36           GST         \$11,819.36           GST         \$11,819.36           Total ecosystem credits (incl. GST)         \$13,001.30	\$13,001.30										
Species	credits	for threatened spec	cies													
Species	s profile	ID	Species				Price per cre	dit	Risk premium		Admi	nistrative cost	No. of spi	ecies credits	Fin	al credits price
10080			Austrostipa met	<b>tatoris</b> (A spear-gras	SS)		\$40.	70	25.00%			\$20.00		1		\$70.88
													Subtot	al (excl. GST)		\$70.88
														GST		\$7.09
													Total species credit	ts (incl. GST)		\$77.97
Calculat	ted as o	m: 14-09-2017 14:48	08										Grar	nd total		\$13,079.27

Click 'Ctrl-P' to print/save each species credit total cost report for further reference. Verify that both the version and date of calculation are visible.

nsystem credits	ffset Payment Calculator II Payments II	ed snecies habitat								
BRA sub region PC	T common name	Baseline price per credit	Dynamic coefficient	Market coefficient	Risk premium	Administrative cost	Methodology adjustment factor	Price per credit	No. of ecosystem credits	Final credits price
Cumberland 139 Cur Not	95 - Nanow-leaved Ironbark - Broad-leaved Ironbark - Grey Gum open forest of imberland Plain, Sydney Basin Bioregion te: This PCT has trades recorded	the edges of the \$10,521.74	0.6918483	2.815542	16.46%	\$26.33	1.0000	\$11,819.36	1	\$11,819.36
								Su	btotal (excl. GST)	\$11,819.36
									GST	\$1,181.94
pecies credits for	threatened species						To	tal ecosystem c	redits (incl. GST)	\$13,001.30
One of the second last ID	Species	Price per credit	Risk premium		Admi	histrative cost	No. of spe	cies credits	Final	credits price
species profile ID	Austracting matatonic (A spear grace)	\$40.70	25.00%			\$20.00		1		\$70.88
10080	Ausu osupu metatoris (A spear-glass)						Subtota	al (excl. GST)		\$70.88
10080	низа озаћа цилитоц у Сл зћеањдизер)									
10080	маза марри тикакина (л. specingiliss)							GST		\$7.09
10080	Ama confer unamore (r. direnzineze)						Total species credit	GST s (incl. GST)		\$7.09 \$77.97

### 3. Assorted credit price calculations

# 3.1 Species credit price calculation within different IBRA subregions

The current version of the BOPC online tool does not allow you to calculate the species credit price for different IBRA subregions during the same calculation session. For different IBRA subregions, start a different calculation session and follow steps 1 to 7 of this guide. Save and store each species credit total cost report for further reference.

# 3.2 Ecosystem credit price calculation within different IBRA subregions

The current version of the BOPC online tool does not allow you to calculate the ecosystem credit price for different IBRA subregions during the same calculation session. For different IBRA subregions, start a different calculation session and follow steps 10 to 14 of this guide. Save and store each ecosystem credit total cost report for further reference.

# 3.3 Combined species and ecosystem credits price calculation within different IBRA subregions

The current version of the BOCP online tool does not allow you to calculate the combined species and ecosystem credits price for different IBRA subregions during the same calculation session. For different IBRA subregions, start a different calculation session and follow steps 17 to 18 of this guide.

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