

Hunter Land Pty Ltd 1 Hartley Drive, Thornton NSW 2322

ATTENTION: TANYA GURIEFF

RE: PRELIMINARY BDAR FOR A PROPOSED INDUSTRIAL (Pet Food)
DEVELOPMENT AT 91 GARDINER STREET, RUTHERFORD

Please find below a summary of the biodiversity constraints, potential species survey schedules and potential offset credit costs. Relevant figures are also attached.

Biodiversity Constraint Considerations:

- No threatened flora species were recorded during the field assessment.
- Grey-headed flying fox were observed foraging in the canopy trees, within the vegetation to be retained.
- The site investigation identified the following Plant Community Types (PCTs) within the study area (Figure 1):
 - 1600 Spotted Gum Narrow leaved Ironbark -Red Ironbark Shrub grass open forest of the Central and Lower Hunter
 - Associated with the Threatened Ecological Community (TEC)
 - Exotic Vegetation
 - Derived Grassland

Our field assessment indicates that 0.67 hectares of PCT 1600 and 1.4ha of derived grassland will be required to be removed, with the retention of 1941m² of PCT 1600 within the lot. Refer to Figure 1-1 for Vegetation Map. As this exceeds the BAM threshold trigger, a Biodiversity Development Assessment Report (BDAR) is being prepared as part of the proposed Industrial subdivision that includes the development of this site.

The biodiversity assessment undertaken within the study area to date have identified the biodiversity credits requirement listed in Table 1 for the removal of vegetation within the site and Table 2 lists the Candidate species that have been surveyed and Candidate species that need to be surveyed later in the year. The Biodiversity Offset Payment Calculator (BOPC) estimates the cost of these credits, for those credits where pricing is made available. Refer to Attachment 1 for BAM C Reports. It is important to note that this would be the cost if you decide to pay directly to the Biodiversity Trust Fund (BTF) and cheaper prices might be available in the open market.

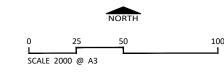


FIGURE 3-1: VEGETATION MAP

CLIENT Client

SITE DETAILS Lot 206 Gardiner Street Rutherford

22 March 2022 DATE





Firebird ecoSultants Pty Ltd ABN - 16 105 985 993 Level 1, 146 Hunter Street, Newcastle NSW 2300 P O Box 354 Newcastle NSW 2300



Table 1: Direct Impacts on Native Vegetation

PCT	BC Act Name / Listing Status	EPBC Act Name / Listing Status	Vegetation Zone (VZ) Name	Direct Impact	VIS	Credits Required
1600 Spotted Gum Narrow leaved Ironbark Red Ironbark Shrub grass open forest of the Central and Lower Hunter	Lower Hunter Spotted Gum Ironbark Forest in the Sydney Basin and NSW North Coast Bioregions	Listed	Moderate	0.67	31.8	11
Derived Grassland of PCT 1600	0	0	Poor	1-4	14.9	0

 Undertake the seasonal targeted surveys listed in Table 2. This option would delay the BDAR completion until September / October 2022.

Table 2: Presence or Absence of Candidate Species

Species		Presence Species -	or	Absence	of	Candidate
Acacia bynoeana		No (Surveye	ed)			
Bynoe's Wattle						
Burhinus Bush Stone-curlew	grallarius	No (surveye	ed)			
Callistemon linearifolius		No (Surveye	ed)			
Netted Bottle Brush						
Callocephalon fimbriatum		No (Surveyed)				
Gang-gang Cockatoo						
(Breeding)						
Calyptorhynchus Glossy Bla (Breeding)	<i>lathami</i> ack-Cockatoo	No (Surveye	ed)			
Cercartetus Eastern Pygmy-possum	nanus	To be surve	yed			
Cryptostylis hunteriana		No (Surveye	ed)			
Leafless Tongue Orchid						

Charica	Drosones or Absence of Condidate
Species	Presence or Absence of Candidate Species -
Cynanchum elegans	No (Surveyed)
•	Two (Surveyed)
White-Flowered Wax Plant Delmar impar	No (Surveyed)
•	Two (Surveyed)
Striped Legless Lizard Diuris tricolor	To be surveyed
Pine Donkey Orchid	100000000000000000000000000000000000000
Eucalyptus castrensis	No (Surveyed)
Singleton Mallee	
Eucalyptus Glaucina	No (Surveyed)
Salty Red Gum	The (Guilleyea)
Eucalyptus parramattensis subsp. Decadens	No (Surveyed)
Eucalyptus parramattensis subsp. Decadens	(54.15)54.
Lucalyplus parramatterisis subsp. Decaderis	
Function and the second	No (Survoyed)
Eucalyptus pumila	No (Surveyed)
Pokolbin Mallee	No (Surveyed)
Grevillea parviflora subsp.	No (Surveyed)
Small-flower grevillea	No (Surveyed)
Haliaeetus leucogaster	No (Surveyed)
White-bellied Sea Eagle	
(Breeding)	To be surveyed
Hieraaetus morphnoides Little Eagle	To be surveyed
(Breeding)	
Hoplocephalus bitorquatus	No (Surveyed)
Pale-headed Snake	
Litoria aurea	No (Surveyed)
Green and Golden Bell Frog	
Litoria brevipalmata	No (Surveyed)
Green-thighed Frog	
Lophoictinia isura	No (Surveyed)
Square-tailed Kite	
(Breeding)	
Monotaxis macrophylla	No (Surveyed)
Large-leafed Monotaxis	
Myotis macropus	No (surveyed)
Southern Myotis	- ()
•	To be surveyed
Ninox connivens	1.0 50 Surveyou
Barking Owl	
(Breeding)	

Species	Presence or Absence of Candidate Species -
Ninox strenua Powerful Owl (Breeding)	To be surveyed
Ozothamnus tesselatus	To be surveyed
Ozothamnus tesselatus	
Petauroides Volans Greater Glider	No (Surveyed)
Phascogale tapoatafa Brush-tailed Phascogale	No (Surveyed)
Phascolarctos cinereus Koala (Breeding)	No (surveyed)
Planigale maculata Common Planigale	To be surveyed
Pomaderris queenslandica Scant Pomaderris	No (surveyed)
Prostanthera cineolifera Singleton Mint Bush	To be surveyed
Pteropus poliocephalus Grey-headed Flying-fox (Breeding)	No
Pterostylis chaetophora Pterostylis chaeterophora	No
Rutidosis heterogams Heath Wrinklewort	No (Surveyed)
Thesium austral Austral Toadflax	No (Surveyed)
Tyto novaehollandiae Masked Owl (Breeding)	To be surveyed



If you need clarification on this matter please do not hesitate to contact the writer.

Firebird EcoSultants Pty Ltd



Sarah Jones

B.Env.Sc., G.DIP.DBPA (Design for Bushfire Prone Areas)

BAAS18020 Accredited Assessor, as required by the Biodiversity Conservation

Regulation 2017 and accredited to apply the BAM

Ecologist / Bushfire Planner



Attachment 1 - BAM C - Reports



Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00032062/BAAS18020/22/00032063	Pet food	24/11/2021
Assessor Name Sarah Elizabeth Jones	Assessor Number BAAS18020	BAM Data version * 50
Proponent Names	Report Created 30/03/2022	BAM Case Status Open
Assessment Revision	Assessment Type Part 4 Developments (General)	Date Finalised To be finalised

Part 4 Developments (General)

0 BOS entry trigger

BOS Threshold: Area clearing threshold

Potential Serious and Irreversible Impacts

Name of threatened ecological community	Listing status	Name of Plant Community Type/ID
Nil		
Species		
Nil		

Additional Information for Approval

Assessment Id 00032062/BAAS18020/22/00032063 Proposal Name

Pet food

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^{*} Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.



PCT Outside Ibra Added

None added

PCTs With Customized Benchmarks

PCT

No Changes

Predicted Threatened Species Not On Site

Name

Grantiella picta / Painted Honeyeater

Ecosystem Credit Summary (Number and class of biodiversity credits to be retired)

Name of Plant Community Type/ID	Name of threatened ecological community	Area of impact	HBT Cr	No HBT Cr	Total credits to be retired
1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter	Central Hunter Ironbark—Spotted Gum—Grey Box Forest in the New South Wales North Coast and Sydney Basin Bioregions	1.4	0	0	0
1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter	Not a TEC	0.7	11	0	11



601-Spotted Gum - Narrow-	Like-for-like credit retirement options						
leaved Ironbark-Red Ironbark shrub - grass open forest of	Name of offset trading group	Trading group	Zone	НВТ	Credits	IBRA region	
the central and lower Hunter	Central Hunter Ironbark—Spotted Gum—Grey Box Forest in the New South Wales North Coast and Sydney Basin Bioregions This includes PCT's: 1601, 1604	-	1601_Poor	No	0	Hunter, Ellerston, Karuah Manning, Kerrabee, Liverpool Range, Peel, Tomalla, Upper Hunter, Wyong and Yengo. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.	
601-Spotted Gum - Narrow-	Like-for-like credit retir	ement options	1	1	1		
eaved Ironbark-Red Ironbark	Class	Trading group	Zone	НВТ	Credits	IBRA region	

the central and lower Hunter

11 Hunter, Ellerston, Karuah Manning, Hunter-Macleay Dry Hunter-Macleay Dry 1601 Moderat Yes Sclerophyll Forests Kerrabee, Liverpool Range, Peel, Sclerophyll Forests This includes PCT's: >=70% and <90% Tomalla, Upper Hunter, Wyong and 1589, 1601 Yengo. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.



1601-Spotted Gum - Narrowleaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter

Species Credit Summary

Species	Vegetation Zone/s	Area / Count	Credits
Diuris tricolor / Pine Donkey Orchid	1601_Moderate	0.7	8.00
Hieraaetus morphnoides / Little Eagle	1601_Poor, 1601_Moderate	2.1	16.00
Lophoictinia isura / Square-tailed Kite	1601_Poor, 1601_Moderate	2.1	16.00
Ninox connivens / Barking Owl	1601_Moderate	0.7	11.00
Ninox strenua / Powerful Owl	1601_Moderate	0.7	11.00
Ozothamnus tesselatus / Ozothamnus tesselatus	1601_Moderate	0.7	8.00
Planigale maculata / Common Planigale	1601_Moderate	0.7	11.00
Prostanthera cineolifera / Singleton Mint Bush	1601_Moderate	0.7	11.00
Pterostylis chaetophora / Pterostylis chaetophora	1601_Moderate	0.7	11.00
Tyto novaehollandiae / Masked Owl	1601_Poor	1.4	10.00

Credit Retirement Options	Like-for-like credit retirement options				
Diuris tricolor / Pine Donkey Orchid	Spp IBRA subregion				
	Diuris tricolor / Pine Donkey Orchid	Any in NSW			



Hieraaetus morphnoides / Little Eagle	Spp	IBRA subregion
	Hieraaetus morphnoides / Little Eagle	Any in NSW
Lophoictinia isura / Square-tailed Kite	Spp	IBRA subregion
	Lophoictinia isura / Square-tailed Kite	Any in NSW
Ninox connivens / Barking Owl	Spp	IBRA subregion
	Ninox connivens / Barking Owl	Any in NSW
Ninox strenua / Powerful Owl	Spp	IBRA subregion
	Ninox strenua / Powerful Owl	Any in NSW
Ozothamnus tesselatus / Ozothamnus tesselatus	Spp	IBRA subregion
	Ozothamnus tesselatus / Ozothamnus tesselatus	Any in NSW
Planigale maculata / Common Planigale	Spp	IBRA subregion
	Planigale maculata / Common Planigale	Any in NSW
Prostanthera cineolifera / Singleton Mint Bush	Spp	IBRA subregion

Assessment Id Proposal Name 00032062/BAAS18020/22/00032063 Pet food



	Prostanthera cineolifera / Singleton Mint Bush	Any in NSW
Pterostylis chaetophora / Pterostylis chaetophora	Spp	IBRA subregion
	Pterostylis chaetophora / Pterostylis chaetophora	Any in NSW
Tyto novaehollandiae / Masked Owl	Spp	IBRA subregion
	Tyto novaehollandiae / Masked Owl	Any in NSW

Pet food



Proposal Details

BAM data last updated * Assessment Id Proposal Name 24/11/2021 00032062/BAAS18020/22/00032063 Pet food Assessor Name Report Created BAM Data version * Sarah Elizabeth Jones 30/03/2022 Assessment Type **BAM Case Status** Assessor Number Part 4 Developments (General) BAAS18020 Open Assessment Revision Date Finalised BOS entry trigger 0 To be finalised BOS Threshold: Area

* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator

clearing threshold

database may not be completely aligned with Bionet.

List of Species Requiring Survey

Name	Presence	Survey Months
Acacia bynoeana Bynoe's Wattle	No (surveyed)	☐ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☐ Dec ☐ Survey month outside the specified months?
Burhinus grallarius Bush Stone-curlew	No (surveyed)	☐ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☐ Dec ☐ Survey month outside the specified months?
Callistemon linearifolius Netted Bottle Brush	No (surveyed)	☐ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☐ Dec ☐ Survey month outside the specified months?



Callocephalon fimbriatum Gang-gang Cockatoo	No (surveyed)	✓ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☐ Dec ☐ Survey month outside the specified months?
Calyptorhynchus lathami Glossy Black-Cockatoo	No (surveyed)	□ Jan □ Feb ☑ Mar □ Apr □ May □ Jun □ Jul □ Aug □ Sep □ Oct □ Nov □ Dec □ Survey month outside the specified months?
Cercartetus nanus Eastern Pygmy-possum	No (surveyed)	□ Jan □ Feb □ Mar □ Apr □ May □ Jun □ Jul □ Aug □ Sep □ Oct □ Nov ☑ Dec □ Survey month outside the specified months?
Cryptostylis hunteriana Leafless Tongue Orchid	No (surveyed)	✓ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☑ Dec ☐ Survey month outside the specified months?
Cynanchum elegans White-flowered Wax Plant	No (surveyed)	☐ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☐ Dec ☐ Survey month outside the specified months?
Delma impar Striped Legless Lizard	No (surveyed)	□ Jan □ Feb □ Mar □ Apr □ May □ Jun □ Jul □ Aug □ Sep □ Oct □ Nov ☑ Dec □ Survey month outside the specified months?

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Diuris tricolor Pine Donkey Orchid	Yes (assumed present)	□ Jan □ Feb □ Mar □ Apr □ May □ Jun □ Jul □ Aug □ Sep □ Oct □ Nov □ Dec □ Survey month outside the specified months?
Eucalyptus castrensis Singleton Mallee	No (surveyed)	☐ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☐ Dec ☐ Survey month outside the specified months?
Eucalyptus glaucina Slaty Red Gum	No (surveyed)	✓ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☐ Dec ☐ Survey month outside the specified months?
Eucalyptus parramattensis subsp. decadens Eucalyptus parramattensis subsp. decadens	No (surveyed)	✓ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☐ Dec ☐ Survey month outside the specified months?
Eucalyptus pumila Pokolbin Mallee	No (surveyed)	✓ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☐ Dec ☐ Survey month outside the specified months?
Grevillea parviflora subsp. parviflora Small-flower Grevillea	No (surveyed)	□ Jan □ Feb □ Mar □ Apr □ May □ Jun □ Jul □ Aug □ Sep □ Oct ☑ Nov □ Dec □ Survey month outside the specified months?



Halianatus Inuas anatau	NIa (augustus d)	
Haliaeetus leucogaster White-bellied Sea-Eagle	No (surveyed)	□ Jan □ Feb □ Mar □ Apr
3		□ May □ Jun □ Jul □ Aug
		□ Sep □ Oct □ Nov ☑ Dec
		☐ Survey month outside the specified months?
Hieraaetus morphnoides Little Eagle	Yes (assumed present)	□ Jan □ Feb □ Mar □ Apr
Little Eagle		□ May □ Jun □ Jul □ Aug
		□ Sep □ Oct □ Nov □ Dec
		☐ Survey month outside the specified months?
Hoplocephalus bitorquatus Pale-headed Snake	No (surveyed)	□ Jan □ Feb ☑ Mar □ Apr
Tale fielded Sticke		□ May □ Jun □ Jul □ Aug
		□ Sep □ Oct □ Nov □ Dec
		☐ Survey month outside the specified months?
Litoria aurea Green and Golden Bell Frog	No (surveyed)	□ Jan □ Feb ☑ Mar □ Apr
Green and Golden Ben 110g		□ May □ Jun □ Jul □ Aug
		□ Sep □ Oct □ Nov □ Dec
		☐ Survey month outside the specified months?
Litoria brevipalmata Green-thighed Frog	No (surveyed)	□ Jan □ Feb ☑ Mar □ Apr
Green unghed riog		□ May □ Jun □ Jul □ Aug
		□ Sep □ Oct □ Nov □ Dec
	☐ Survey month outside the specified months?	
Lophoictinia isura Square-tailed Kite	Yes (assumed present)	□ Jan □ Feb □ Mar □ Apr
Square-tailed Kite		☐ May ☐ Jun ☐ Jul ☐ Aug
		☐ Sep ☐ Oct ☐ Nov ☐ Dec
		☐ Survey month outside the specified months?



Monotaxis macrophylla Large-leafed Monotaxis	No (surveyed)	✓ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☐ Dec ☐ Survey month outside the specified months?
Myotis macropus Southern Myotis	No (surveyed)	☐ Jan ☐ Feb ☑ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☐ Dec ☐ Survey month outside the specified months?
Ninox connivens Barking Owl	Yes (assumed present)	□ Jan □ Feb □ Mar □ Apr □ May □ Jun □ Jul □ Aug □ Sep □ Oct □ Nov □ Dec □ Survey month outside the specified months?
Ninox strenua Powerful Owl	Yes (assumed present)	□ Jan □ Feb □ Mar □ Apr □ May □ Jun □ Jul □ Aug □ Sep □ Oct □ Nov □ Dec □ Survey month outside the specified months?
Ozothamnus tesselatus Ozothamnus tesselatus	Yes (assumed present)	□ Jan □ Feb □ Mar □ Apr □ May □ Jun □ Jul □ Aug □ Sep □ Oct □ Nov □ Dec □ Survey month outside the specified months?
Persoonia pauciflora North Rothbury Persoonia	No (surveyed)	✓ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☐ Dec ☐ Survey month outside the specified months?



Petauroides volans Greater Glider	No (surveyed)	□ Jan □ Feb ☑ Mar □ Apr □ May □ Jun □ Jul □ Aug □ Sep □ Oct □ Nov □ Dec □ Survey month outside the specified months?
Phascogale tapoatafa Brush-tailed Phascogale	No (surveyed)	✓ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☐ Dec ☐ Survey month outside the specified months?
Phascolarctos cinereus Koala	No (surveyed)	□ Jan □ Feb ☑ Mar □ Apr □ May □ Jun □ Jul □ Aug □ Sep □ Oct □ Nov □ Dec □ Survey month outside the specified months?
Planigale maculata Common Planigale	Yes (assumed present)	□ Jan □ Feb □ Mar □ Apr □ May □ Jun □ Jul □ Aug □ Sep □ Oct □ Nov □ Dec □ Survey month outside the specified months?
Pomaderris queenslandica Scant Pomaderris	No (surveyed)	□ Jan □ Feb ☑ Mar □ Apr □ May □ Jun □ Jul □ Aug □ Sep □ Oct □ Nov □ Dec □ Survey month outside the specified months?
Prostanthera cineolifera Singleton Mint Bush	Yes (assumed present)	☐ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☐ Dec ☐ Survey month outside the specified months?



Pterostylis chaetophora Pterostylis chaetophora	Yes (assumed present)	□ Jan □ Feb □ Mar □ Apr □ May □ Jun □ Jul □ Aug □ Sep □ Oct □ Nov □ Dec
		☐ Survey month outside the specified months?
Rutidosis heterogama Heath Wrinklewort	No (surveyed)	□ Jan □ Feb □ Mar □ Apr □ May □ Jun □ Jul □ Aug □ Sep □ Oct □ Nov □ Dec
		☐ Survey month outside the specified months?
Thesium australe Austral Toadflax	No (surveyed)	✓ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☐ Dec
		☐ Survey month outside the specified months?
Tyto novaehollandiae Masked Owl	Yes (assumed present)	□ Jan □ Feb □ Mar □ Apr □ May □ Jun □ Jul □ Aug □ Sep □ Oct □ Nov □ Dec
		☐ Survey month outside the specified months?

Threatened species Manually Added

None added

Threatened species assessed as not on site

Refer to BAR for detailed justification

Common name	Scientific name	Justification in the BAM-C
Brush-tailed Rock-wallaby	Petrogale penicillata	Habitat constraints
Eastern Cave Bat	Vespadelus troughtoni	Habitat constraints
Grey-headed Flying-fox	Pteropus poliocephalus	Habitat constraints
Large Bent-winged Bat	Miniopterus orianae oceanensis	Habitat constraints



Large-eared Pied Bat	Chalinolobus dwyeri	Habitat constraints
Little Bent-winged Bat	Miniopterus australis	Habitat constraints
Pink-tailed Legless Lizard	Aprasia parapulchella	Habitat constraints Geographic limitations
Regent Honeyeater	Anthochaera phrygia	Habitat constraints
Rough Doubletail	Diuris praecox	Refer to BAR
Swift Parrot	Lathamus discolor	Habitat constraints



Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00032062/BAAS18020/22/00032063	Pet food	24/11/2021
Assessor Name	Report Created	BAM Data version *
Sarah Elizabeth Jones	30/03/2022	50
Assessor Number	BAM Case Status	Date Finalised
BAAS18020	Open	To be finalised
Assessment Revision	Assessment Type	BOS entry trigger
0	Part 4 Developments (General)	BOS Threshold: Area clearing threshold

^{*} Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.

Ecosystem credits for plant communities types (PCT), ecological communities & threatened species habitat

-	Zone	Vegetatio	TEC name	Current	Change in	Are	Sensitivity to	Species	BC Act Listing	EPBC Act	Biodiversit	Potenti	Ecosyste
		n		Vegetatio	Vegetatio	a	loss	sensitivity to	status	listing status	y risk	al SAII	m credits
		zone		n	n integrity	(ha)	(Justification)	gain class			weighting		
		name		integrity	(loss /								
				score	gain)								



1		Central Hunter Ironbark— Spotted Gum—Grey Box Forest in the New South Wales North Coast and Sydney Basin Bioregions	14.9	14.9	1.4	PCT Cleared - 71%		Endangered Ecological Community	Critically Endangered	2.00		
											Subtot al	
		arrow-leaved Ironb						ral and lower F	lunter	2.00		
2	1601_Mod erate	Not a TEC	31.8	31.8	0.67	PCT Cleared - 71%	High Sensitivity to Potential Gain			2.00		
											Subtot al	
											Total	

Species credits for threatened species

Vegetation zone	Habitat condition	Change in	Area	Sensitivity to	Sensitivity to	BC Act Listing	EPBC Act listing	Potential	Species
name	(Vegetation	habitat	(ha)/Count	loss	gain	status	status	SAII	credits
	Integrity)	condition	(no.	(Justification)	(Justification)				
			individuals)						



Diuris tricolor / Pine	Donkey Orchid (l	Flora)					
1601_Moderate	31.8	31.8	0.67	Vulnerable	Not Listed	False	8
						Subtotal	8
Hieraaetus morphnoi	des / Little Eagle	(Fauna)					
1601_Poor	14.9	14.9	1.4	Vulnerable	Not Listed	False	8
1601_Moderate	31.8	31.8	0.67	Vulnerable	Not Listed	False	8
						Subtotal	16
Lophoictinia isura / S	quare-tailed Kite	(Fauna)					
1601_Poor	14.9	14.9	1.4	Vulnerable	Not Listed	False	8
1601_Moderate	31.8	31.8	0.67	Vulnerable	Not Listed	False	8
						Subtotal	16
Ninox connivens / Ba	rking Owl (Faun	a)					
1601_Moderate	31.8	31.8	0.67	Vulnerable	Not Listed	False	11
						Subtotal	11
Ninox strenua / Powe	erful Owl (Fauna)					
1601_Moderate	31.8	31.8	0.67	Vulnerable	Not Listed	False	11
						Subtotal	11
Ozothamnus tesselati	us / Ozothamnus	tesselatus (Flo	ora)				
1601_Moderate	31.8	31.8	0.67	Vulnerable	Vulnerable	False	8
						Subtotal	8
Planigale maculata /	Common Planige	ale (Fauna)					
1601_Moderate	31.8	31.8	0.67	Vulnerable	Not Listed	False	11
						Subtotal	11

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Prostanthera cineolif	era / Singleto	n Mint Bush (F	lora)				
1601_Moderate	31.8	31.8	0.67	Vulnerable	Vulnerable	False	11
						Subtotal	11
Pterostylis chaetopho	ra / Pterostyl	lis chaetophora	(Flora)				
1601_Moderate	31.8	31.8	0.67	Vulnerable	Not Listed	False	11
						Subtotal	11
Tyto novaehollandiae	/ Masked Ov	vl (Fauna)					
1601_Poor	14.9	14.9	1.4	Vulnerable	Not Listed	False	10
						Subtotal	10



Assessment Id Payment data version Assessment Revision Report created

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Assessor Name Assessor Number Proposal Name BAM Case Status

Sarah Elizabeth Jones BAAS18020 Pet food Open

Assessment Type Date Finalised BOS entry trigger

Part 4 Developments (General)

To be finalised

BOS Threshold: Area clearing threshold

PCT list

Price calculated PCT common name					
Yes	1601 - Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter	0			
Yes	1601 - Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter	11			

Species list

Price calculated	Species	Credits
Yes	Diuris tricolor (Pine Donkey Orchid)	8
Yes	Lophoictinia isura (Square-tailed Kite)	16
Yes	Ninox connivens (Barking Owl)	11
Yes	Ninox strenua (Powerful Owl)	11
Yes	Ozothamnus tesselatus (Ozothamnus tesselatus)	8

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Yes	Planigale maculata (Common Planigale)	11
Yes	Prostanthera cineolifera (Singleton Mint Bush)	11
Yes	Tyto novaehollandiae (Masked Owl)	10
Yes	Hieraaetus morphnoides (Little Eagle)	16
Yes	Pterostylis chaetophora (Pterostylis chaetophora)	11

Ecosystem credits for plant communities types (PCT), ecological communities & threatened species habitat

IBRA sub region	PCT common name	Threat status	Offset trading group	Risk premiu m	Adminis trative cost	Methodology adjustment factor	Price per credit	No. of ecosystem credits	Final credits price
Hunter	1601 - Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter	Yes	Central Hunter Ironbark— Spotted Gum—Grey Box Forest in the New South Wales North Coast and Sydney Basin Bioregions	19.38%	\$218.78	1.7143	\$6,748.30	0	\$0.00
Hunter	1601 - Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter	No	Hunter-Macleay Dry Sclerophyll Forests >=70% and <90%	20.69%	\$160.54	1.8553	\$5,004.49	11	\$55,049.34

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Subtotal (excl. GST) \$55,049.34

GST \$5,504.93

Total ecosystem credits (incl. GST) \$60,554.27

Species credits for threatened species

Species profile ID	Species	Threat status	Price per credit	Risk premium	Administrative cost	No. of species credits	Final credits price
10243	Diuris tricolor (Pine Donkey Orchid)	Vulnerable	\$158.64	20.6900%	\$80.00	8	\$2,171.70
10495	Lophoictinia isura (Square-tailed Kite)	Vulnerable	\$463.67	20.6900%	\$80.00	16	\$10,233.65
10561	Ninox connivens (Barking Owl)	Vulnerable	\$173.02	20.6900%	\$80.00	11	\$3,177.00
10562	Ninox strenua (Powerful Owl)	Vulnerable	\$463.67	20.6900%	\$80.00	11	\$7,035.64
10581	Ozothamnus tesselatus (Ozothamnus tesselatus)	Vulnerable	\$54.59	20.6900%	\$80.00	8	\$1,167.08
10635	10635 Planigale maculata (Common Vuln Planigale)		\$463.67	20.6900%	\$80.00	11	\$7,035.64
10672	Prostanthera cineolifera (Singleton Mint Bush)	Vulnerable	\$346.03	20.6900%	\$80.00	11	\$5,473.86
10820	Tyto novaehollandiae (Masked Owl)	Vulnerable	\$463.67	20.6900%	\$80.00	10	\$6,396.03

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20131	<i>Hieraaetus morphnoides</i> (Little Eagle)	Vulnerable	\$463.67	20.6900%	\$80.00	16	\$10,233.65
20280	Pterostylis chaetophora (Pterostylis chaetophora)	Vulnerable	\$173.02	20.6900%	\$80.00	11	\$3,177.00
					Subto	otal (excl. GST)	\$56,101.25
						GST	\$5,610.12
	Total species credits (incl. GST)						
						Grand total	\$122,265,65

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BAM Predicted Species Report

Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00032062/BAAS18020/22/00032063	Pet food	24/11/2021
Assessor Name Sarah Elizabeth Jones	Report Created 30/03/2022	BAM Data version * 50
Assessor Number BAAS18020	Assessment Type Part 4 Developments (General)	BAM Case Status Open
Assessment Revision 0	BOS entry trigger BOS Threshold: Area clearing	Date Finalised To be finalised

^{*} Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.

Threatened species reliably predicted to utilise the site. No surveys are required for these species. Ecosystem credits apply to these species.

threshold

Common Name	Scientific Name	Vegetation Types(s)
Barking Owl	Ninox connivens	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Black Falcon	Falco subniger	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Black-chinned Honeyeater (eastern subspecies)	Melithreptus gularis gularis	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Brown Treecreeper (eastern subspecies)	Climacteris picumnus victoriae	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Diamond Firetail	Stagonopleura guttata	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Eastern Coastal Free-tailed Bat	Micronomus norfolkensis	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Eastern False Pipistrelle	Falsistrellus tasmaniensis	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Flame Robin	Petroica phoenicea	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Gang-gang Cockatoo	Callocephalon fimbriatum	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter



BAM Predicted Species Report

Glossy Black- Cockatoo	Calyptorhynchus lathami	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Greater Broad-nosed Bat	Scoteanax rueppellii	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Grey-crowned Babbler (eastern subspecies)	Pomatostomus temporalis temporalis	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Grey-headed Flying- fox	Pteropus poliocephalus	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Hooded Robin (south-eastern form)	Melanodryas cucullata	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Koala	Phascolarctos cinereus	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Large Bent-winged Bat	Miniopterus orianae oceanensis	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Little Bent-winged Bat	Miniopterus australis	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Little Eagle	Hieraaetus morphnoides	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Little Lorikeet	Glossopsitta pusilla	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Masked Owl	Tyto novaehollandiae	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Powerful Owl	Ninox strenua	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Regent Honeyeater	Anthochaera phrygia	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Scarlet Robin	Petroica boodang	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Speckled Warbler	Chthonicola sagittata	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Spotted-tailed Quoll	Dasyurus maculatus	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Square-tailed Kite	Lophoictinia isura	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Swift Parrot	Lathamus discolor	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Turquoise Parrot	Neophema pulchella	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter



BAM Predicted Species Report

Varied Sittella	Daphoenositta chrysoptera	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
White-bellied Sea- Eagle	Haliaeetus leucogaster	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
White-throated Needletail	Hirundapus caudacutus	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Yellow-bellied Glider	Petaurus australis	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter
Yellow-bellied Sheathtail-bat	Saccolaimus flaviventris	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter

Threatened species Manually Added

None added

Threatened species assessed as not within the vegetation zone(s) for the PCT(s)

Common Name	Scientific Name	Plant Community Type(s)
Painted Honeyeater	Grantiella picta	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter

Threatened species assessed as not within the vegetation zone(s) for the PCT(s) Refer to BAR for detailed justification

Common Name	Scientific Name	Justification in the BAM-C
Painted Honeyeater	Grantiella picta	Refer to BAR



BAM Vegetation Zones Report

Proposal Details

Assessment Id Assessment name BAM data last updated *

00032062/BAAS18020/22/00032063 Pet food 24/11/2021

Assessor Name Report Created BAM Data version *

Sarah Elizabeth Jones 30/03/2022 50

Assessor Number Assessment Type BAM Case Status

BAAS18020 Part 4 Developments (General) Open

Assessment Revision Date Finalised BOS

entry trigger

0 To be finalised BOS Threshold: Area clearing threshold

Vegetation Zones

#	Name	PCT	Condition	Area	Minimum	Management zones
					number	
					of plots	

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BAM Vegetation Zones Report

	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter	Poor	1.4		
2 1601_Moderate	1601-Spotted Gum - Narrow-leaved Ironbark-Red Ironbark shrub - grass open forest of the central and lower Hunter	Moderate	0.67	1	

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