

Appendix O Draft Offset Strategy

Prepared for Tarong West Project Co Pty Ltd ABN: 81 679 081 040



Draft Offset Strategy

Tarong West Wind Farm

20-Aug-2025 EPBC 2023/09643



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Client: Tarong West Project Co Pty Ltd

ABN: 81 679 081 040

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1.0 Introduction

1.1 Objective and purpose

This report presents the Draft Offset Strategy (DOS) for the Tarong West Wind Farm (the Project), supporting the Public Environment Report (PER) (EPBC 2023/09643) for assessment under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).

The purpose of the DOS is to detail the direct offsets that will be delivered in response to the potential residual significant impacts on Matters of National Environmental Significance (MNES) attributable to the Project. This DOS demonstrates compliance with Part 9 of EPBC Act and the EPBC Act Environmental Offsets Policy 2012 (EOP), and acts as the overarching strategy to be read in conjunction with the Offset Area Management Plan (OAMP) (in progress).

Whilst the OAMP is progress, this strategy meets the information requirements stipulated in Attachment D1 of the Project PER Guidelines (refer below) and the offset properties where land-based offsets will be established are confirmed via landholder agreements and Proponent acquisitions, thereby providing surety about offset delivery for the Project.

A cross reference of Appendix D1 requirements and this DOS is provided in Table 1.

Table 1 Compliance with minimum requirements of a DOS in PER Guidelines

Item	Requirement	Reference
D1.1	Specific details of the nature of the conservation gain to be achieved for relevant MNES, including the creation, restoration and revegetation of habitat in the proposed offset area/s.	Summary provided in Section 3 of this report, with further information in the OAMP
D1.2	Details of the environmental offset/s (in hectares) to compensate for the residual significant impacts of the proposed action on relevant MNES.	Section 3
D1.3	Details of the potential offset area/s (including a map) to compensate for the residual significant impacts of the proposed action on relevant MNES.	Section 2
D1.4	The methodology, with justification and supporting evidence, used to inform the inputs of the Offsets Assessment Guide in relation to the proposed action area for each relevant MNES, including: total area of habitat (in hectares); and habitat quality (e.g. using the Queensland Government Guide to determining terrestrial habitat quality: A toolkit for assessing land-based offsets under the Queensland Environmental Offsets Policy [2020]). Also refer to C2.5.	Summary provided in Section 3 of this report, with further information in the OAMP
D1.5	Details, with supporting evidence, of how the environmental offset/s meets the requirements of the department's EPBC Act Environmental Offsets Policy (2012), available at: https://www.dcceew.gov.au/sites/default/files/documents/offsets-policy_2.pdf	Section 3.6
D1.6	The methodology, with justification and supporting evidence, used to inform the inputs of the Offsets Assessment Guide in relation to each potential offset area/s for each relevant MNES, including: time over which loss is averted (max. 20 years); time until ecological benefit; risk of loss (%) without offset; risk of loss (%) with offset; and confidence in result (%).	Summary provided in Section 3, with further information in the OAMP
D1.7	Evidence that the relevant MNES, and/or their habitat, can be present in the potential offset area/s.	Summary provided in Section 3, with further information in the OAMP

ltem	Requirement	Reference
D1.8	Information about how the potential offset area/s provides connectivity with other relevant habitats and biodiversity corridors.	Summary provided in Section 3, with further information in the OAMP
D1.9	Details and execution timing of the mechanism to legally secure the environmental offset/s (under Queensland legislation or equivalent) to provide enduring protection for the potential offset area/s against development incompatible with conservation.	Summary provided in Section 4 , with further information in the OAMP

1.2 The Project

Tarong West Project Co Pty Ltd (the Proponent) proposes to construct the Tarong West Wind Farm Project (the Project) in the locality of Ironpot, in the Wide Bay Burnett region. The Project involves construction of up to 97 wind turbine generators and associated supporting infrastructure. The Project Site comprises the planning corridor, a 1,946 ha subset which contains a clearing footprint (872 ha) for the proposed wind turbines, access tracks, underground cables, overhead lines and other associated infrastructure. Except where permanent infrastructure is proposed, the existing land will continue to be used for rural purposes such as grazing livestock and cropping.

The Project infrastructure will be contained wholly within the approved planning corridor impact area with a Project clearing footprint of 872 ha.

An assessment of environmental values, including the presence of MNES has been completed for the Project within the following documents:

- Assessment of Matters of National Environmental Significance (Ecosure, 2023)
- Supplement to the Assessment of Matters of National Environmental Significance (Ecosure, 2025).

1.3 Residual Significant Impacts

Significant impacts which are not able to feasibly be avoided, minimised or mitigated, are deemed residual significant impacts. In determining residual significant impacts, the precautionary principle has been applied when deciding whether the Project may have a residual significant impact on MNES values.

The PER documentation prepared for the Project identified potential residual significant impacts to koala, greater glider, grey-headed flying-fox and glossy black-cockatoo (Table 2). The residual significant impacts have been determined based on the worst-case disturbance posed by the assessment presented in the Project.

Potential Project impacts and mitigation measures are discussed in the PER documentation.

Table 2 Residual significant impacts to MNES

MNES value	EPBC Act status	Likelihood of occurrence in Project area	Potential habitat utilisation within the Project Area	Area (ha) of residual significant impact	Total residual significant impact (ha)
Koala	Endangered	Confirmed	Preferred	15.46	270.52
			General	115.20	
			General low	139.86	
Greater glider (central)	Endangered	Confirmed	Preferred foraging and denning habitat	15.46	270.12

MNES value	EPBC Act status	Likelihood of occurrence in Project area	Potential habitat utilisation within the Project Area	Area (ha) of residual significant impact	Total residual significant impact (ha)
			Potential foraging and future denning habitat	112.08	
			Dispersal habitat	142.58	
Grey-headed	Vulnerable	Confirmed	Potential foraging	130.65	270.51
flying-fox			Low quality Potential foraging	139.86	
Glossy black- cockatoo	Vulnerable	Confirmed	Potential breeding habitat	108 potential nesting trees	
			Potential foraging habitat	15.46	15.46 ha

1.4 Proposed offset approach

As per Part 9 of the EPBC Act and the EPBC Act EOP, unavoidable residual significant impacts require the delivery of offsets. To compensate for the potential residual significant impacts of the Project, direct offsets are proposed to provide more than 100% of the Project offset requirements. This compensation is summarised in the following sections for koala, greater glider, grey-headed flying-fox and glossy black-cockatoo.

2.0 Land-based offset area and management

2.1 Properties

The proposed Offset Area encompasses four properties (Figure 1). The Offset Area covers a total area of approximately 2,107 ha and comprises remnant, regrowth and non-remnant regional ecosystems (REs). Three of the properties are connected via Boyne River and are located directly east of the Project. One property is located 45 km north-west of the Project and is surrounded by protected area. Additional offset property details have been made known to the administering authority.

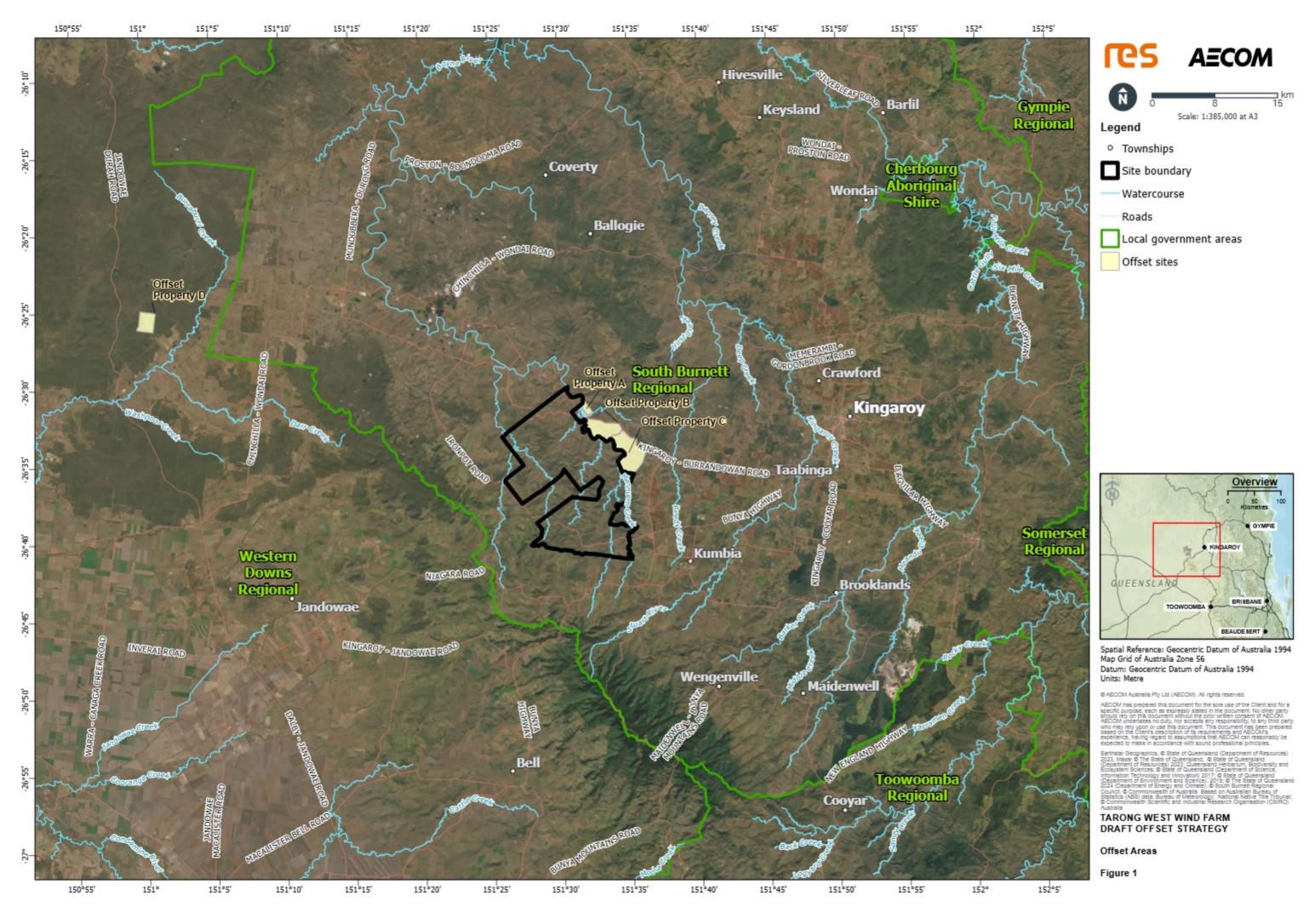
The properties contain a mixed offset management opportunity and starting quality (Table 3). This offset area configuration has been optimised such that:

- offset areas are consolidated into several large blocks that improve connectivity and reduce edge
 effects
- avoids isolated offset patches
- provides 'like-for-like' habitat types for MNES species habitat types within the impact area.

Table 3 Proposed Offset Area Conglomerate

Name	Location, tenure and land use	Ecological features	Offset management opportunity	Area (ha)
Property A	Located to the east adjacent to the Project area, connected to Property B and C. Freehold tenure, with agriculture and grazing land uses. 152 ha suitable land for offset.	 Eucalyptus tereticomis open forest on alluvial soils (RE 11.3.25, 11.3.4). Eucalyptus crebra and Eucalyptus melanophloia woodland on igneous soils (RE 11.12.3). Boyne River is a regionally significant riparian corridor. 	Improve via habitat management, assisted regeneration and revegetation.	152
Property B	Located to the east adjacent to the Project area, connected to	Eucalyptus tereticomis open forest on alluvial soils (RE 11.3.25,	Improve via habitat management.	511
	Property A and C. Freehold tenure, with agriculture and grazing land uses. 628 ha suitable land for offset.	 11.3.4). Eucalyptus crebra woodland on metamorphic soils (RE 11.11.15). Eucalyptus crebra and Eucalyptus melanophloia woodland on igneous soils (RE 11.12.3). Boyne River is a regionally significant riparian corridor. 	Improve via assisted regeneration and revegetation.	118
Property C	Located to the east adjacent to the Project area, connected to	Eucalyptus crebra and Eucalyptus melanophloia woodland on igneous	Improve via habitat management.	706
	Property A and B. Freehold tenure, with agriculture and grazing land uses.	soils (RE 11.12.3). Boyne River is a regionally significant riparian corridor.	Improve via assisted regeneration and revegetation.	431
Property D	Located 45 km north-west of the Project area, surrounded by protected area. Freehold tenure, disused for the last year with agriculture and grazing land uses.	dominance of exotic and native	Improve via assisted regeneration and revegetation.	189

Name	Location, tenure and land use	Ecological features	Offset management opportunity	Area (ha)
			TOTAL	2,107



2.2 Method for habitat quality assessment

The Commonwealth's Offsets Assessment Guide and How to use the Offsets Assessment Guide documents provide the support framework to assess offset requirements via scoring of habitat quality. This framework provides key concepts and guiding principles, however there is no stipulated Commonwealth method for assessing the three components of habitat quality outlined in the framework

The detailed methodology is described in the OAMP, which follows the modified habitat quality assessment (MHQA) method preferred by the administering authority that is founded on Queensland's *Guide to determine terrestrial habitat quality version 1.2.* Field surveys were conducted at impact and offset sites during 2024, with additional surveys conducted in 2025. Surveys within the impact site have occurred at least once a year since 2018 to understand ecological values.

Survey methodology supporting the offsets investigation have included BioCondition surveys and habitat quality assessments within representative sites, targeted species surveys for the four MNES values, and observations including presence of threatening processes and management opportunities.

The OAMP will provide detailed scoring methodology, results, analysis and justifications for the information provided in this DOS. The analysis of impact area starting condition included division of habitat into utilisation types (where applicable) as well as assessment units. The offset areas were divided into management opportunity areas of habitat management or restoration as well as assessment units.

The final habitat quality score for the impact area and offset area is calculated by summing site condition out of 3, site context out of 3, and species stocking rate out of 4, resulting in a score out of 10 for each assessment unit and species.

2.3 Management measures for offset area improvement

The implementation of targeted management measures within the offset area is required to support the restoration and viability of habitat for the koala, greater glider, glossy black-cockatoo and grey-headed flying-fox. Table 4 outlines the actions proposed to enhance habitat quality, address threats such as pest species, and support effective land management and restoration, as well as how each measure will benefit each species. These management measures are detailed further in the OAMP.

Table 4 Species specific management measures for offset area improvement

Management measures	Koala	Greater glider	Grey-headed flying-fox (GHFF)	Glossy black-cockatoo (GBC)
Habitat restoration – assisted regeneration	Facilitate native plant regeneration through weed control, fire management and livestock exclusion to: increase the extent and condition of koala habitat improve koala habitat connectivity improve recruitment of locally important and ancillary koala trees.	Facilitate native plant regeneration through weed control, fire management and livestock exclusion to: increase the extent and condition of greater glider habitat improve greater glider habitat connectivity improve recruitment of greater glider food trees.	Facilitate native plant regeneration through weed control, fire management and livestock exclusion to: increase the extent and condition of GHFF habitat improve recruitment of GGHF important forage trees.	Facilitate native plant regeneration through weed control, fire management and livestock exclusion to: increase the extent and condition of GBC habitat improve recruitment of Allocasuarina and Casuarina spp.
Habitat restoration – revegetation	Where there is little to no natural regeneration of native canopy species, undertake supplementary planting with locally important and ancillary koala trees, with tree species dominance and composition in revegetation areas typically reflecting pre-clear REs.	Where there is little to no natural regeneration of native canopy species, undertake supplementary planting of greater glider food trees, with tree species dominance and composition in revegetation areas typically reflecting pre-clear REs.	Where there is little to no natural regeneration of native canopy species, undertake supplementary planting with GGHF important forage trees, with tree species dominance and composition in revegetation areas typically reflecting pre-clear REs.	Where there is little to no natural regeneration of <i>Allocasuarina</i> and <i>Casuarina</i> spp., include as understorey species in revegetation areas.
Pest animal management – predator monitoring and control	Reduce predation risk through management of feral predators (wild dog, European red fox).	Reduce predation risk through management of feral predators (wild dog, European red fox, feral cat).		
Pest animal management – feral herbivore monitoring and control	Monitoring and control (if required) of feral herbivores (European rabbit and hare) and feral pigs to improve recruitment of food and habitat trees.		Monitoring and control (if required) of feral herbivores (European rabbit and hare) and feral pigs to improve recruitment of food and habitat trees.	Monitoring and control (if required) of feral herbivores (European rabbit and hare) and feral pigs to improve recruitment of food and habitat trees.
Fire management – maintain fire trails and reduced fuel zones	Reduce the risk of uncontrolled, high intensity fire causing death, injury, habitat loss and increased vulnerability to predators.	Reduce the risk of uncontrolled, high intensity fire causing death, injury, and loss of forage resource and denning trees.	Reduce the risk of uncontrolled, high intensity fire causing loss of forage resource.	Reduce the risk of uncontrolled, high intensity fire causing loss of <i>Allocasuarina</i> and <i>Casuarina</i> forage resource and nesting trees.

Management measures	Koala	Greater glider	Grey-headed flying-fox (GHFF)	Glossy black-cockatoo (GBC)
Fire management – monitor fuel loads and	Reduce fuel loads and high intensity fire (as above).	Reduce fuel loads and high intensity fire (as above).	Reduce fuel loads and high intensity fire (as above).	Reduce fuel loads and high intensity fire (as above).
implement planned burns/appropriate fire regimes	Encourage regeneration of locally important and ancillary koala trees. Exclude fire from assisted regeneration and revegetation areas until RE remnant status has been achieved.	Encourage regeneration of greater glider food trees. Exclude fire from assisted regeneration and revegetation areas until RE remnant status has been achieved.	food trees. Exclude fire from assisted regeneration and revegetation	Maintain a mosaic of fire history across offset areas to ensure adequate quantity and quality of <i>Allocasuarina</i> and <i>Casuarina</i> forage resource. Exclude fire from assisted regeneration and revegetation areas until RE remnant status has been achieved.
Management of livestock and associated infrastructure	Implement appropriate livestock grazing strategies (permanent / temporary livestock exclusion, staged livestock removal, reduced stocking rates, strategic/timed grazing) to manage ground cover weeds and bushfire fuel loads.	Implement appropriate livestock grazing strategies (permanent / temporary livestock exclusion, staged livestock removal, reduced stocking rates, strategic/timed grazing) to manage ground cover weeds and bushfire fuel loads. Reduce risk of entanglement in barbed wire through the removal of obsolete livestock fencing and/or installation of fauna-friendly livestock fencing.	Implement appropriate livestock grazing strategies (permanent / temporary livestock exclusion, staged livestock removal, reduced stocking rates, strategic/timed grazing) to manage ground cover weeds and bushfire fuel loads. Reduce risk of entanglement in barbed wire for through the removal of obsolete livestock fencing and/or installation of fauna-friendly livestock fencing.	Implement appropriate livestock grazing strategies (permanent / temporary livestock exclusion, staged livestock removal, reduced stocking rates, strategic/timed grazing) to manage ground cover weeds and bushfire fuel loads. Where appropriate, exclude livestock and protect identified GBC drinking sites (i.e. farm dams, riparian areas).
Installation and maintenance of salvaged tree hollows and artificial hollows (nest boxes)		Increase denning habitat through the salvage of existing tree hollows in cleared vegetation at the impact site and installation at the offset site (where feasible) and provision and ongoing management of artificial hollows (likely nest boxes), as required.		This measure will be explored to try and increase denning habitat through the salvage of existing tree hollows in cleared vegetation at the impact site and installation at the offset site (where feasible) and provision and ongoing management of artificial hollows (likely nest boxes), including a minimum of 225 additional hollow features.

3.0 Offsets per species

3.1 Summary

This section summarises the offset strategy per species, including the residual significant impact and species utilisation within the Project area, offset suitability, proposed offset including OAG calculator metrics, and compliance with the EOP.

3.2 Koala

3.2.1 Residual significant impact

The residual significant impact to koala is characterised as preferred habitat, general habitat, and general low habitat (Table 5).

Table 5 Koala habitat residual significant impact

Habitat utilisation type	Habitat definition (Ecosure, 2025)	Area (ha)	Condition score out of 10
Preferred	Contiguous areas of ground-truthed remnant and high value regrowth eucalypt open forest and woodlands containing locally important koala trees (LIKT).	15.46	7
General	Areas of modified forest or woodland containing species that are known koala food trees, or shrubland with emergent food trees. This includes non-remnant and regrowth vegetation and considers recent clearing, canopy cover and patch size	115.20	7
General low	Areas of low quality modified forest or woodland potentially containing species that are known koala food trees, or shrubland with emergent food trees, that connect to higher quality general or preferred koala habitat. This includes non-remnant vegetation with very sparse coverage.	139.86	6

3.2.2 Offset suitability

The Project proposes a direct land-based offset to compensate for more than 100% of the residual significant impacts to koala. The offset area is considered suitable for the koala based on the presence of factors considered important in improving the condition and viability of existing habitat for the species (Table 6).

Table 6 Factors supporting offset area for koala

	Present in	n Offset Ar	ea Propert	y?	Comment	
Factor	Property A	Property B	Property C	Property D		
Presence of koala within or adjacent to property.	Yes	Yes	Yes	Yes (indirect evidence)	Local and regional presence of the koala supports the viability of this offset being utilised by the species	
Presence of suitable habitat for utilisation impacted	Yes	Yes	Yes	Yes	Preferred, general and general low habitat present within the offset area which will be improved through restoration and habitat management measures.	
Presence of critical habitat features (i.e. trees of Eucalyptus and aligned genera)	Yes	Yes	Yes	Yes	Habitat features for key life functions are present on each offset property, including dominance of locally important and ancillary koala habitat trees within remnant and regrowth REs. Restoration areas are	

Lancon Control	Present i	n Offset Ar	ea Propert		
Factor	Property A	Property B	Property C	Property D	Comment
					largely cleared or have regrowth vegetation which will be improved through the offset.
Connectivity with surrounding adjacent habitat	Yes	Yes	Yes	Yes	Connectivity via riparian corridors and intact vegetation such as protected areas. Habitat corridors and linkages will be prioritised for restoration, particularly riparian zones.
Proximity to the impact area	Adjacent to the east	Adjacent to the east	Adjacent to the east	45 km north-west	The properties are sufficiently proximate to the impact area to support the population being impacted, and also supports the regional population within 50 km.
Location and configuration, which enables the area to be appropriately managed to reduce threatening processes	Yes	Yes	Yes	Yes	The offset properties are configured with A, B and C together forming one large patch, and offset D of sufficiently square configuration. This will ensure edge effects are minimised, and management measures are effective in reducing threatening processes.

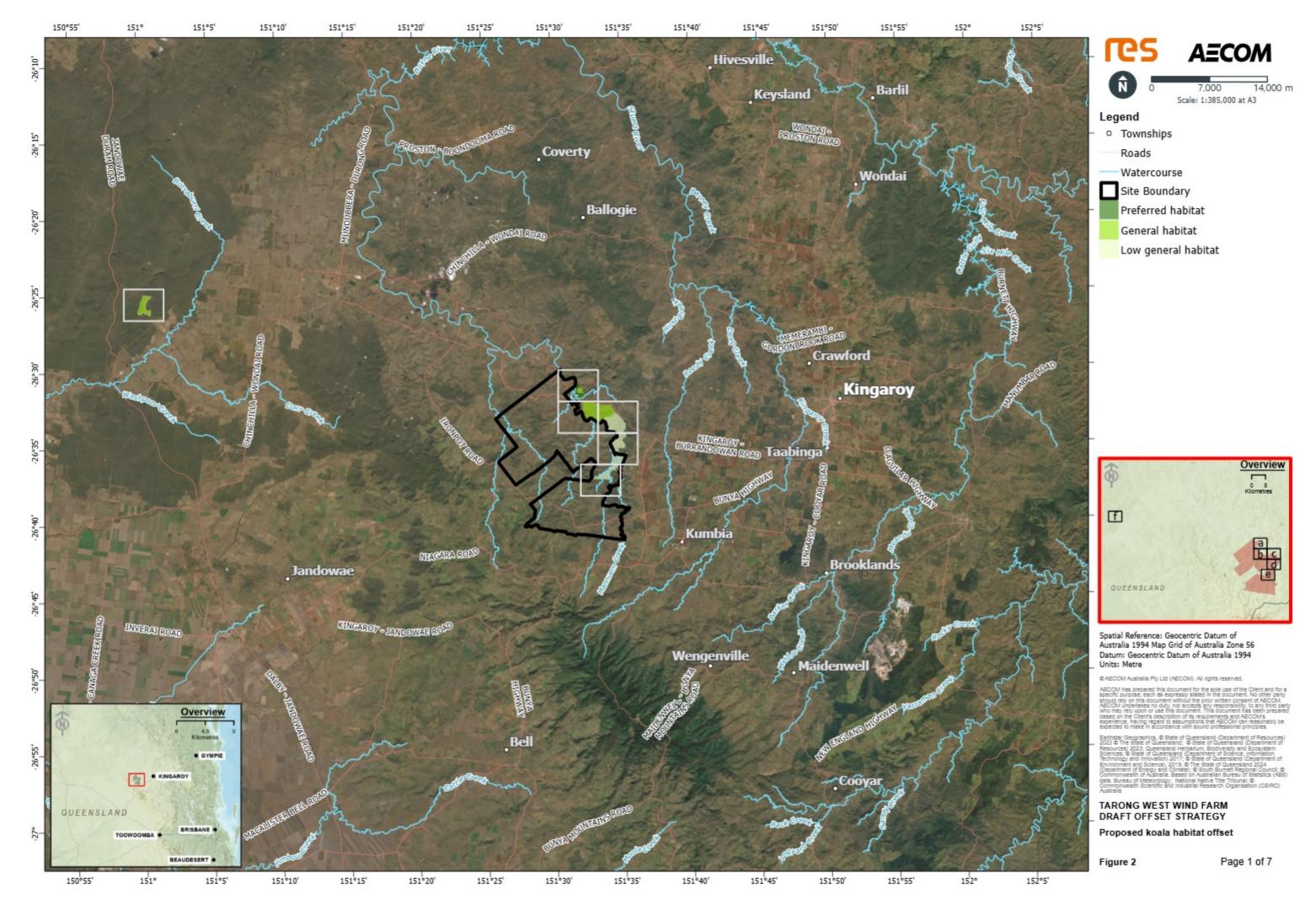
3.2.3 Proposed offset

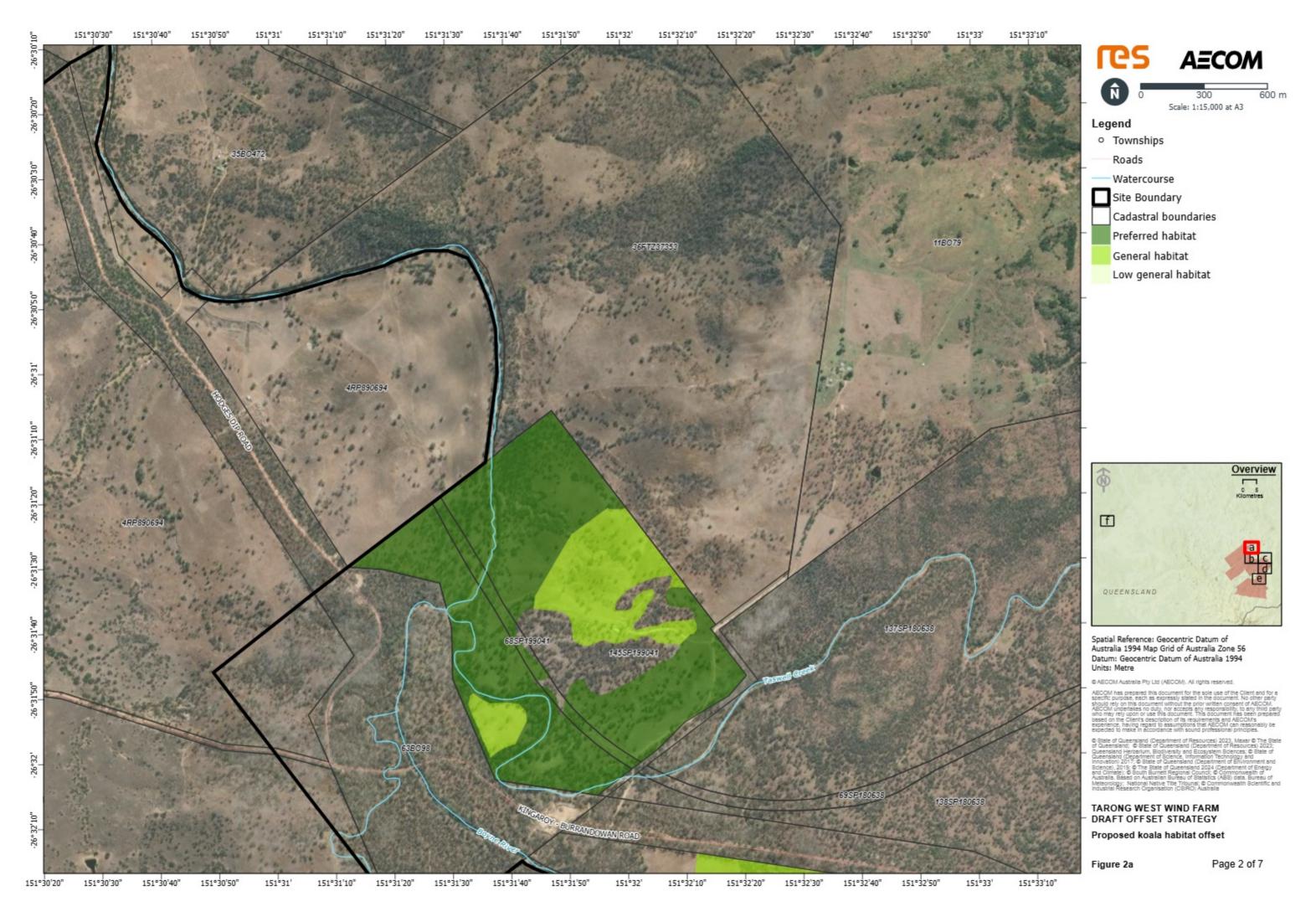
Offsets for the koala will include a direct land-based offset, as detailed below. The offset will include Properties A, B, C and D. Commonwealth OAG calculator results are provided in Table 7, which provides more than 100% offset of the residual significant impact per habitat utilisation. The offset for koala is presented in Figure 2.

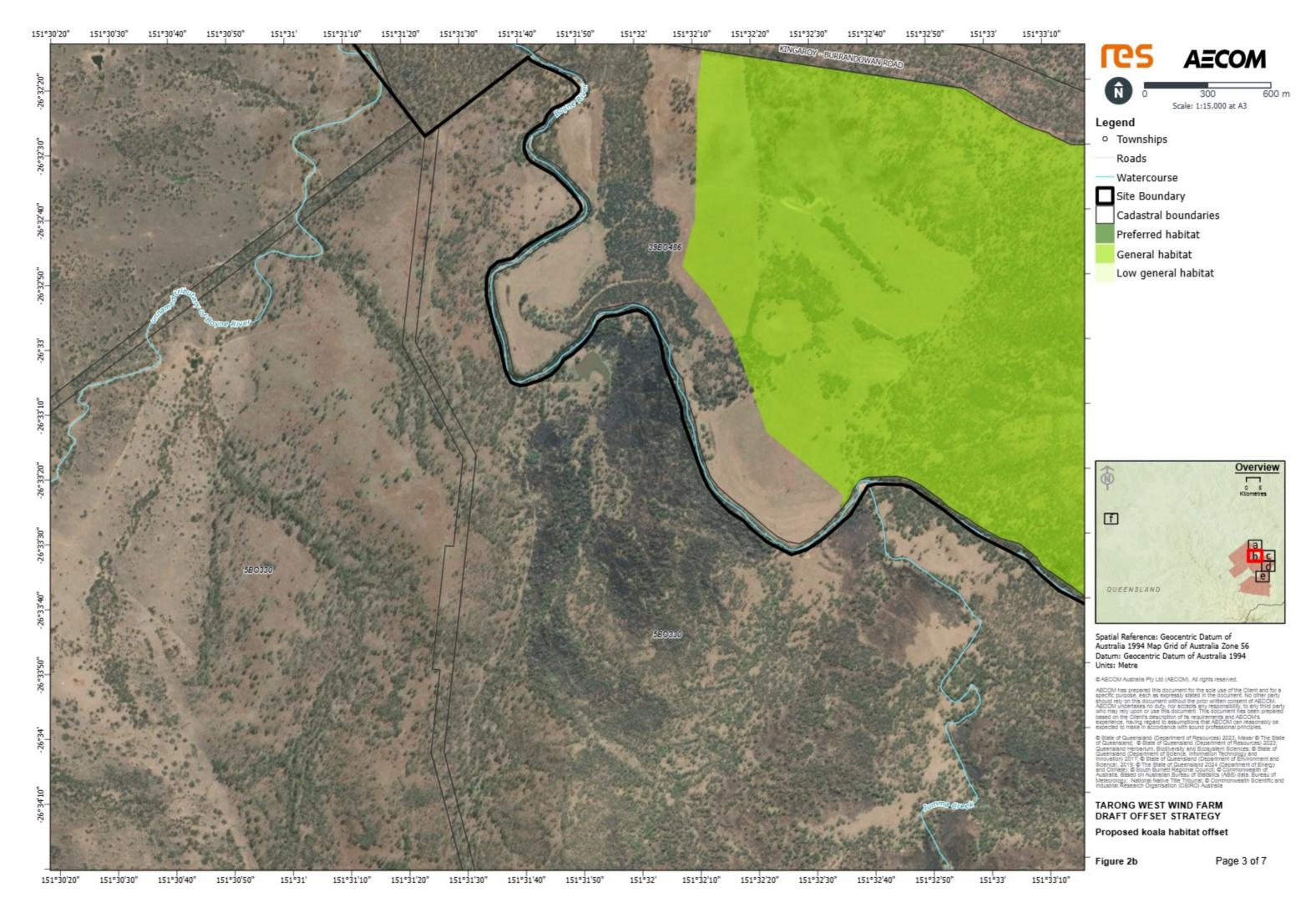
Table 7 Commonwealth OAG values for koala per utilisation type

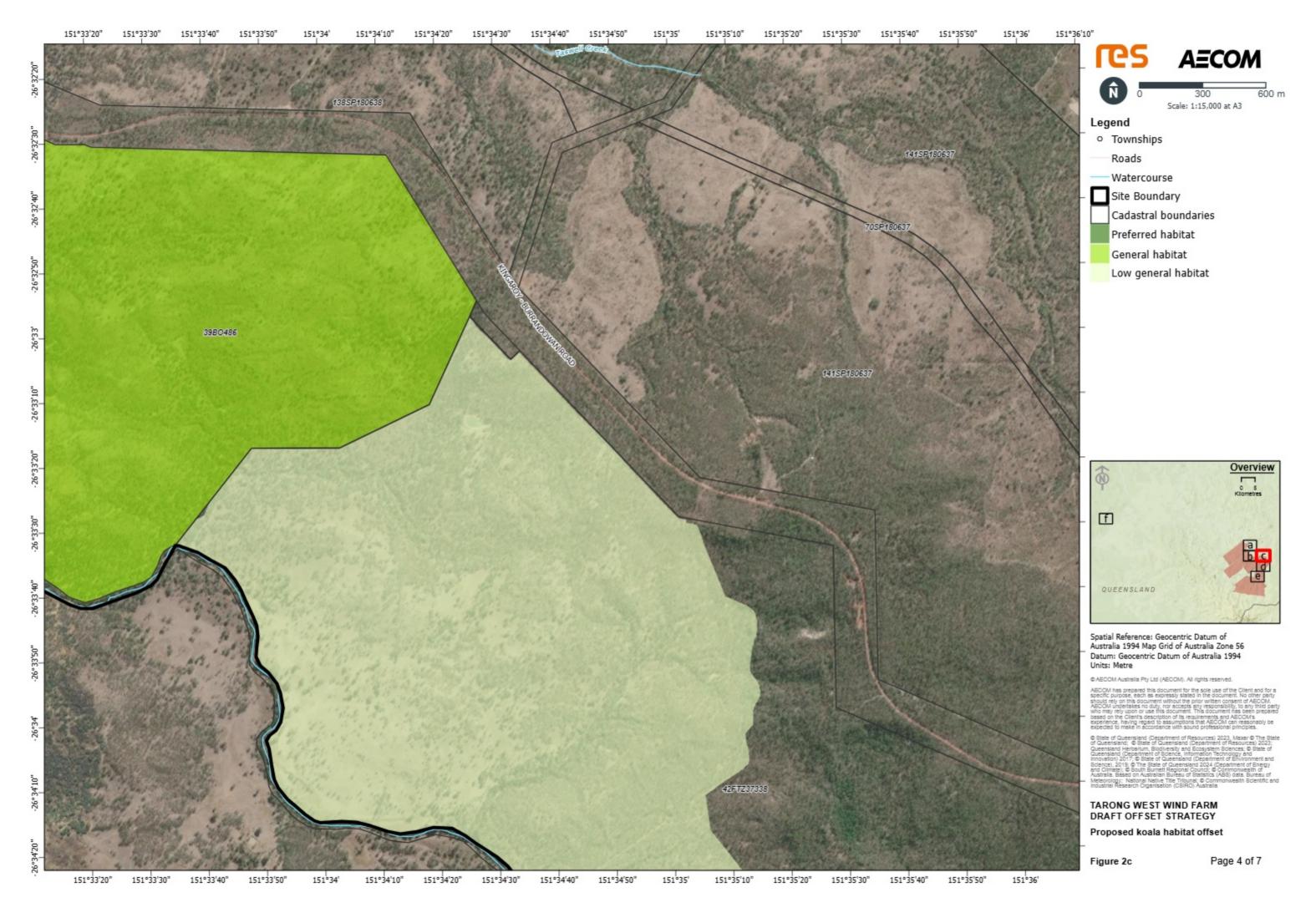
Attribute	Preferred habitat	General habitat #1	General habitat #2	General low habitat #1	General low habitat #2	
Impact Area (ha)	15.46	115.20	115.20	139.86	139.86	
Impact Area quality	7	7	7	6	6	
Offset area (ha)	120	543	307	431	706	
Properties	А	A, B	B, D	С	С	
Quality						
Start quality	6	6	5	6	7	
Future quality without offset	6	6	5	6	7	
Future quality with offset	8	8	7	8	8	
Time until ecological benefit (years)	20	20	20	20	20	
Confidence in quality scores (%)	60	60	70	60	80	

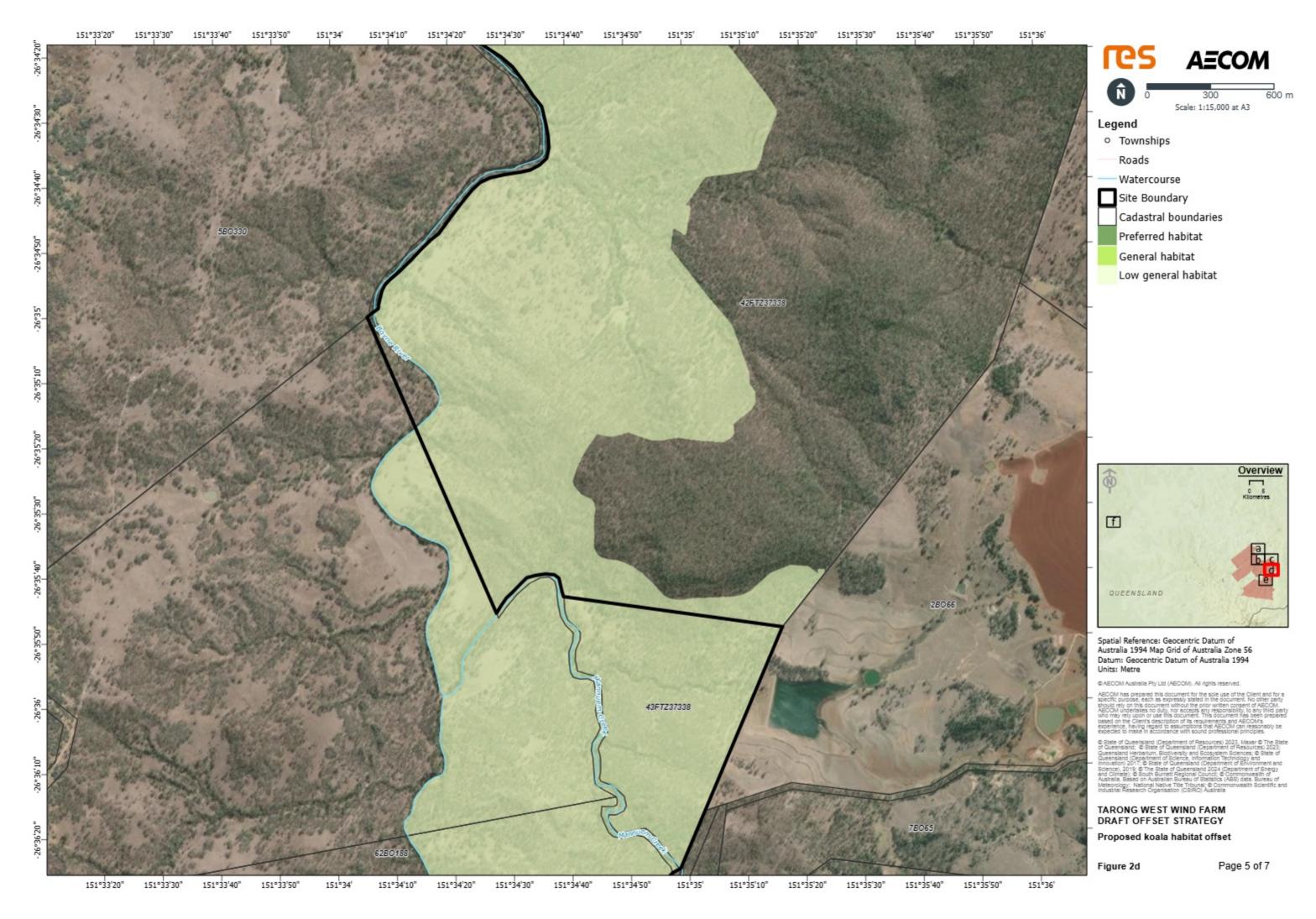
Attribute	Preferred habitat	General habitat #1	General habitat #2	General low habitat #1	General low habitat #2
Raw gain	2.00	2.00	2.00	2.00	1.00
Adjusted gain	1.20	1.20	1.40	1.20	0.80
Risk of Loss					
Risk of loss without offset (%)	0	0	0	0	0
Risk of loss with offset (%)	0	0	0	0	O
Time over which loss is averted (years)	20	20	20	20	20
Confidence in risk scores (%)	60	60	70	60	80
Raw gain	0	0	0	0	C
Adjusted gain	0	0	0	0	C
Results					
Net present value	11.34	51.33	33.86	40.74	44.49
% impact offset	104.82	63.65	41.99	48.55	53.02
% impact offset per habitat utilisation	104.82		105.64		101.57

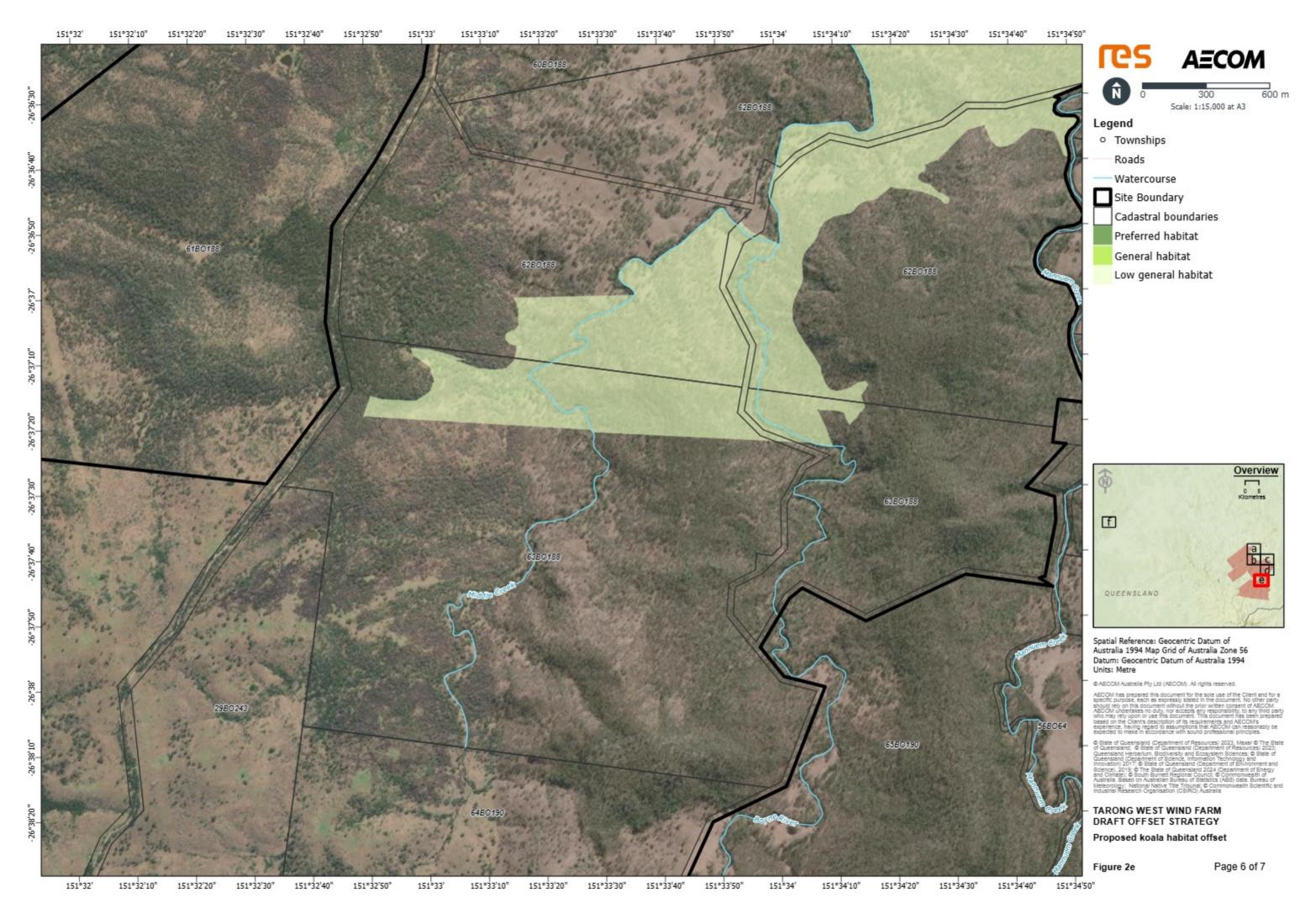


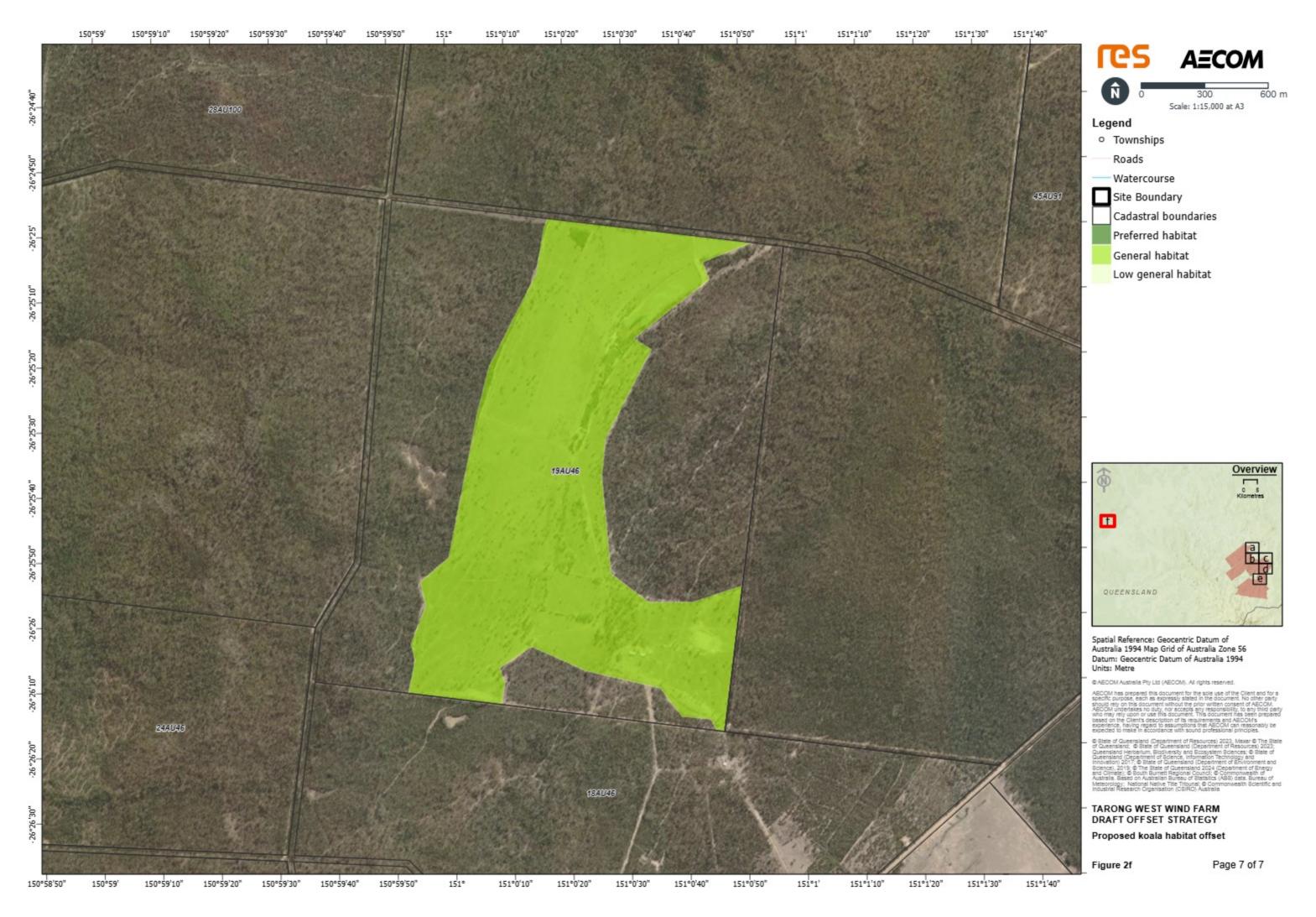












3.3 Greater glider

3.3.1 Residual significant impact

The residual significant impact to greater glider is characterised as foraging and denning habitat (preferred and potential future), and dispersal habitat (Table 8).

Table 8 Greater glider habitat

Utilisation type	Habitat definition (Ecosure, 2025)	Area (ha)	Condition score out of 10
Preferred foraging and denning habitat	Areas within the fragmented landscape that form contiguous patches of ground-truthed remnant and high value regrowth (HVR) eucalypt open forest and woodland vegetation communities containing greater glider food and den tree species. This includes all suitable remnant and regrowth vegetation ground-truthed within the Project site, excluding vine thicket communities.	15.46	7
Potential foraging and future denning habitat	Non-remnant vegetation, containing greater glider food trees and future denning trees, in proximity to Preferred habitat and / or with substantial connectivity. This includes non-remnant and regrowth vegetation and considers recent clearing, canopy cover and patch size.	112.08	7
Dispersal Habitat	Areas of low quality modified non-remnant forest or woodland potentially containing some food tree species, that connect to Preferred or potential foraging and future denning habitat. This includes non-remnant vegetation with sparse coverage.	142.58	6

3.3.2 Offset suitability

The Project proposes a direct land-based offset to compensate for more than 100% of the residual significant impacts to greater glider. The offset area is considered suitable for the greater glider based on the presence of factors considered important in improving the condition and viability of existing habitat for the species (Table 9).

Table 9 Factors supporting offset area for greater glider

	Present in	offset Ar	ea?		
Factor	Property Property Prop A B C			Property D	Comment
Presence of greater glider	Yes	Yes	Yes - adjacent	Yes	Local and regional presence of the greater glider supports the viability of this offset being utilised by the species
Presence of suitable habitat for utilisation impacted	Yes	Yes	Yes	Yes	Foraging, denning and dispersal habitat present within the offset area which will be improved through restoration and habitat management measures.
Presence of critical habitat features (i.e. trees of Eucalyptus and aligned genera)	Yes	Yes	Yes	Yes	Habitat features for key life functions are present within each offset property, including presence of a diversity of known food trees and hollow-bearing trees of suitable size for denning. Restoration areas are largely cleared or have regrowth vegetation which will be improved through the offset.
Connectivity with surrounding adjacent habitat	Yes	Yes	Yes	Yes	Connectivity via riparian corridors and intact vegetation such as protected areas. Habitat corridors and linkages will be prioritised for restoration, particularly riparian zones.

Factor	Present in Offset Area?				
	Property A	Property B	Property C	Property D	Comment
Proximity to the impact area	Adjacent to the east	Adjacent to the east	Adjacent to the east	45 km north- west	The properties are sufficiently proximate to the impact area to support the population being impacted, and also supports the regional population within 50 km.
Location and configuration, which enables the area to be appropriately managed to reduce threatening processes	Yes	Yes	Yes	Yes	The offset properties are configured with A, B and C together forming one large patch, and offset D of sufficiently square configuration. This will ensure edge effects are minimised, and management measures are effective in reducing threatening processes.

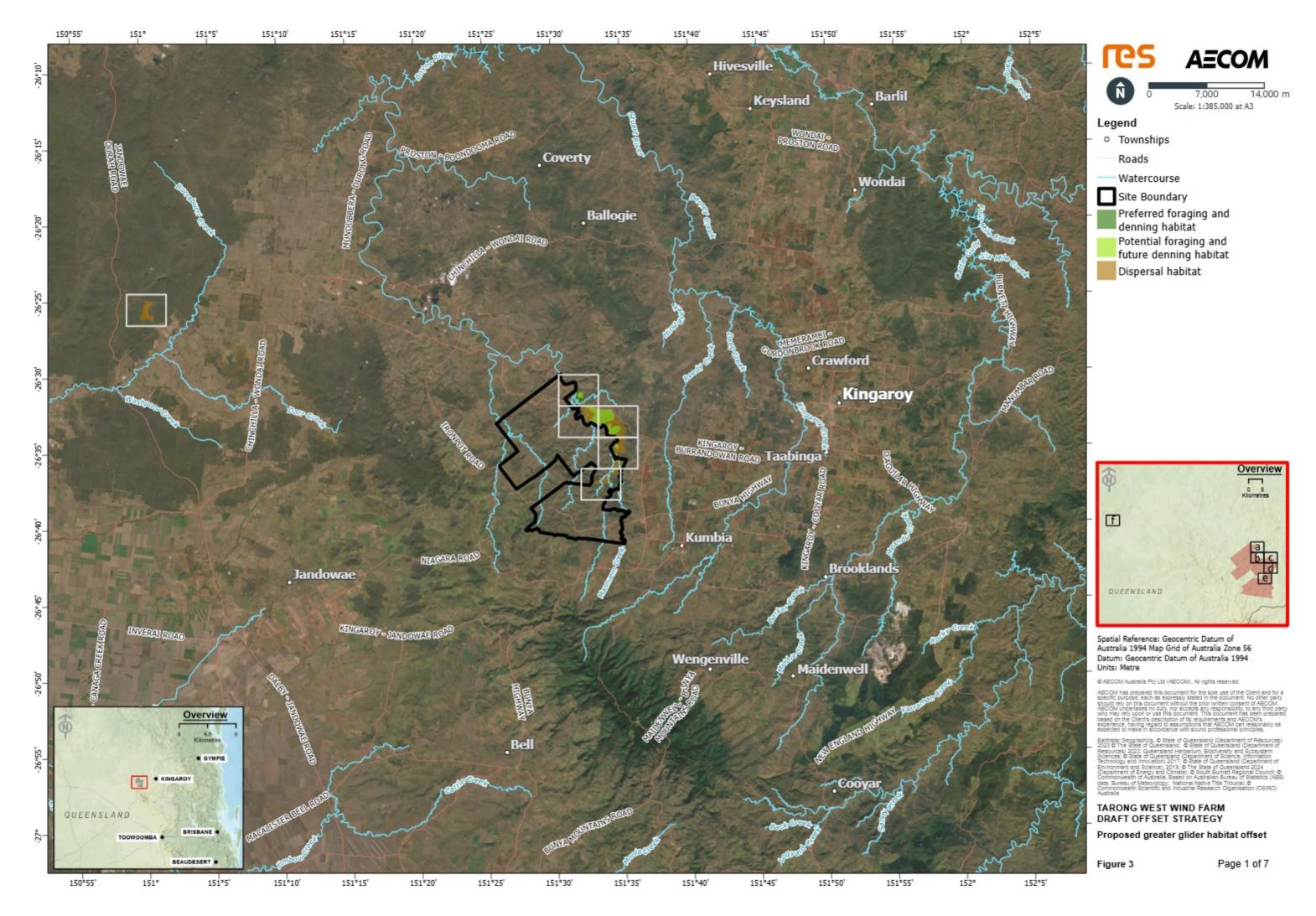
3.3.3 Proposed offset

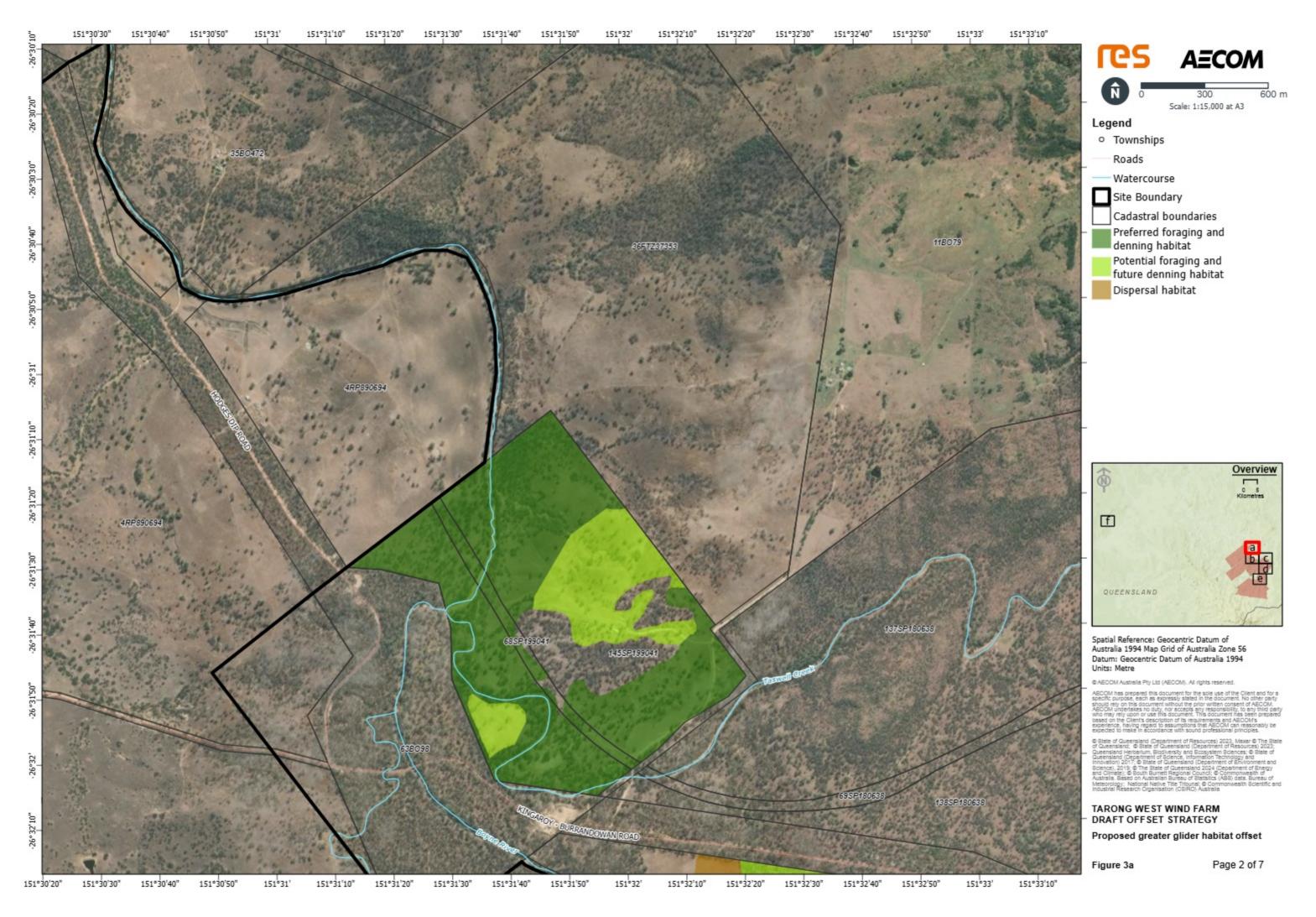
Offsets for the greater glider will include a direct land-based offset, as detailed below. The offset will include Properties A, B, C and D. Commonwealth OAG calculator results are provided in Table 10, which provides more than 100% offset of the residual significant impact. The offset for greater glider is presented in Figure 3.

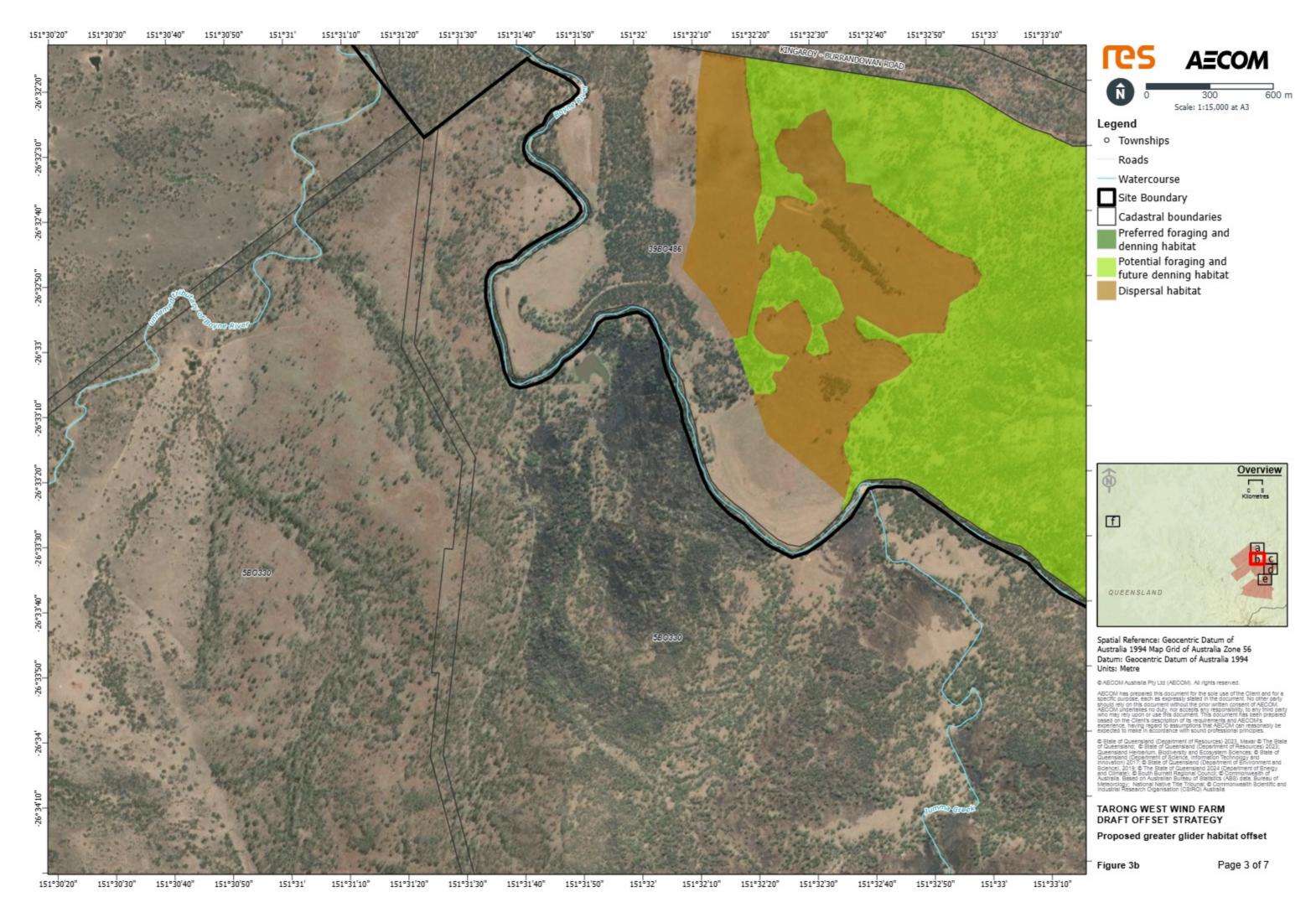
Table 10 Commonwealth OAG values for greater glider per utilisation type

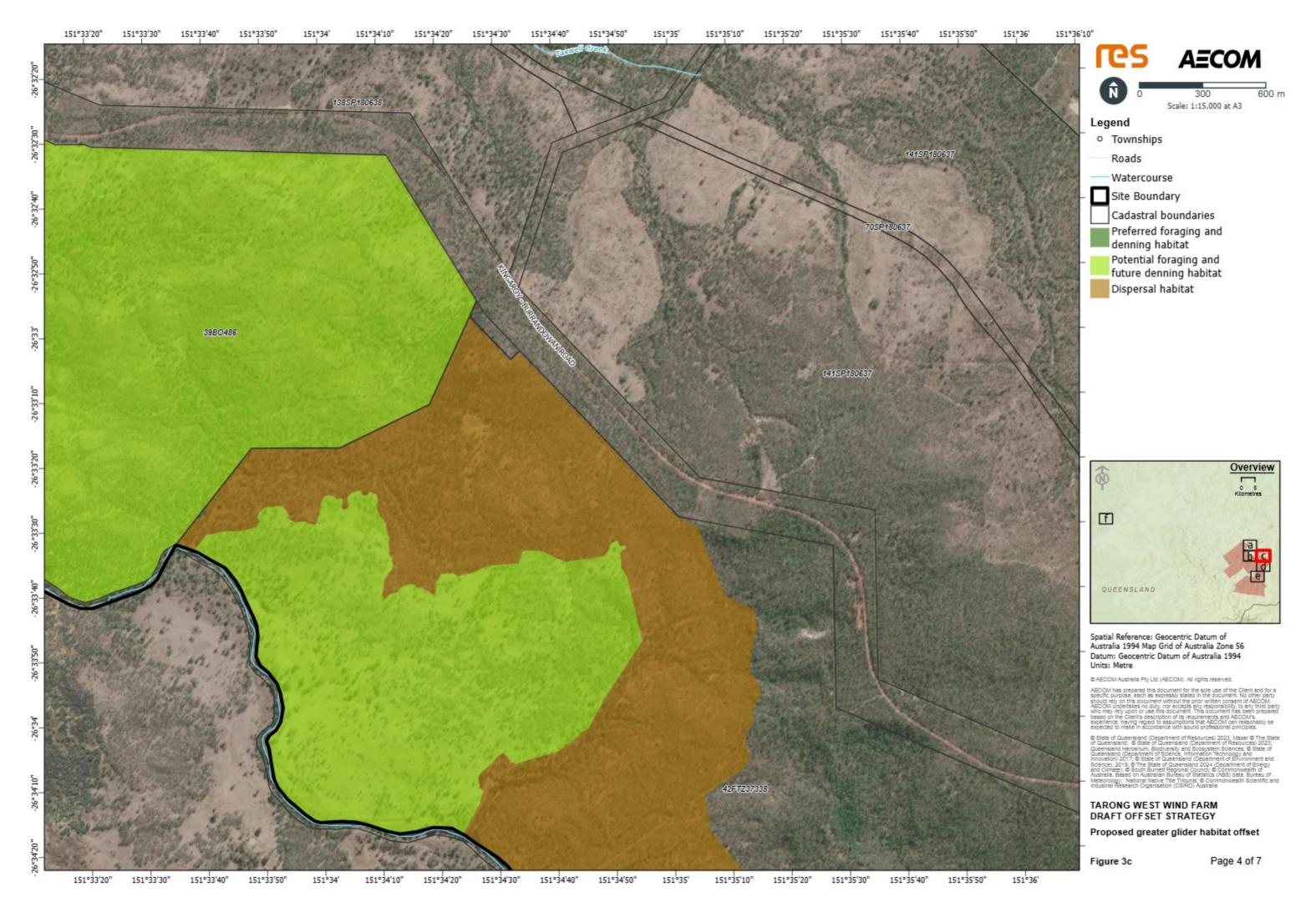
Attribute	Preferred foraging and denning habitat	Potential foraging and future denning habitat #1	Dispersal Habitat #1	Dispersal Habitat #2	Dispersal Habitat #3
Impact Area (ha)	15.46	112.08	142.58	142.58	142.58
Impact Area quality	7	7	6	6	6
Offset area (ha)	120	843	131	307	706
Properties	А	A, B, C	С	B, D	С
Quality					
Start quality	6	6	6	5	7
Future quality without offset	6	6	6	5	7
Future quality with offset	8	8	8	7	8
Time until ecological benefit (years)	20	20	20	20	20
Confidence in quality scores (%)	60	60	60	70	80
Raw gain	2.00	2.00	2.00	2.00	1.00
Adjusted gain	1.20	1.20	1.20	1.40	0.80

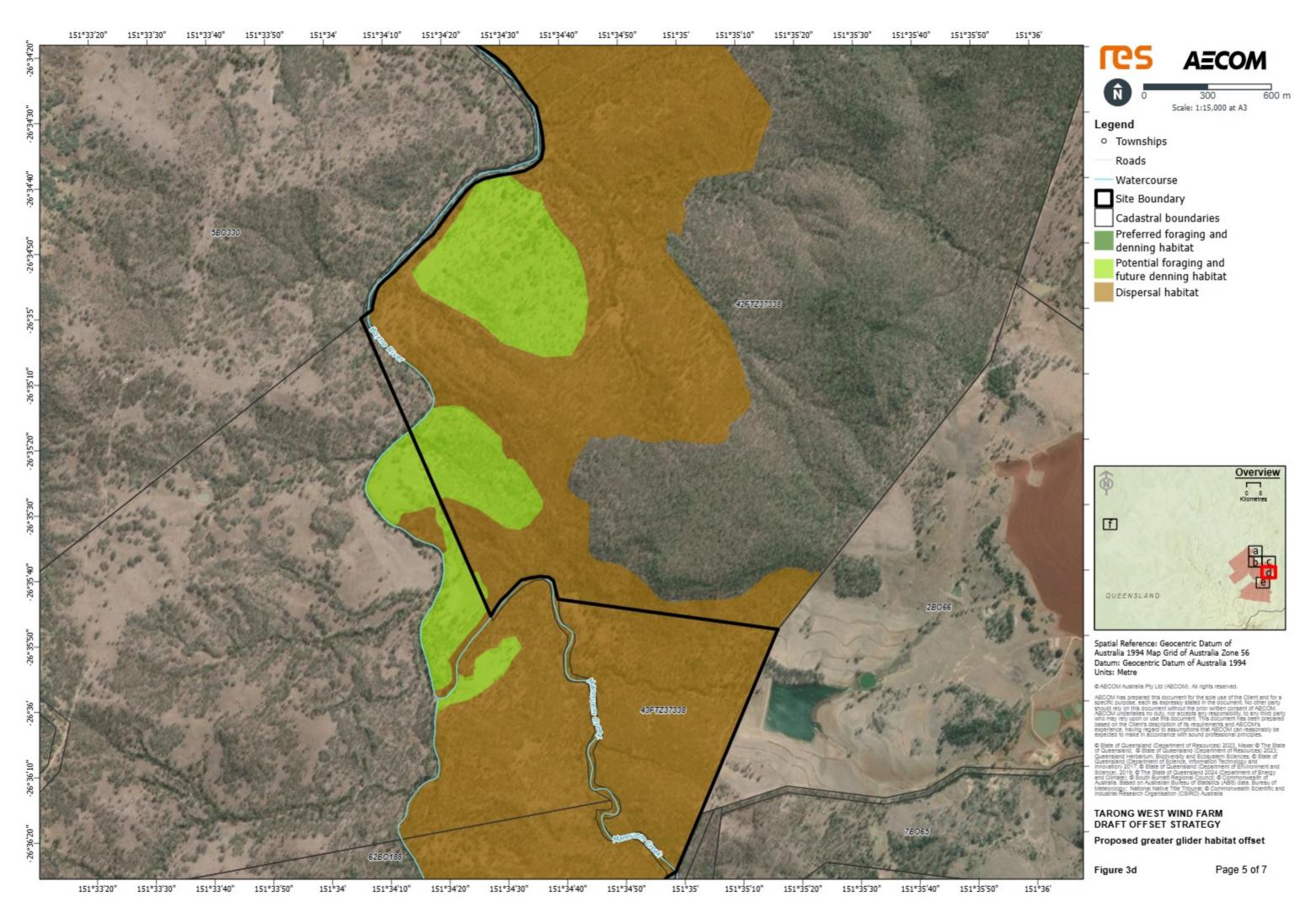
Attribute	Preferred foraging and denning habitat	Potential foraging and future denning habitat #1	Dispersal Habitat #1	Dispersal Habitat #2	Dispersal Habitat #3
Risk of Loss					
Risk of loss without offset (%)	0	0	0	0	0
Risk of loss with offset (%)	0	0	0	0	0
Time over which loss is averted (years)	20	20	20	20	20
Confidence in risk scores (%)	60	60	60	70	80
Raw gain	0	0	0	0	0
Adjusted gain	0	0	0	0	0
Results					1 :
Net present value	11.34	79.69	12.38	33.86	44.49
% impact offset	104.82	101.57	14.48	39.58	52.01
% impact offset per habitat utilisation	104.82	101.57			106.07

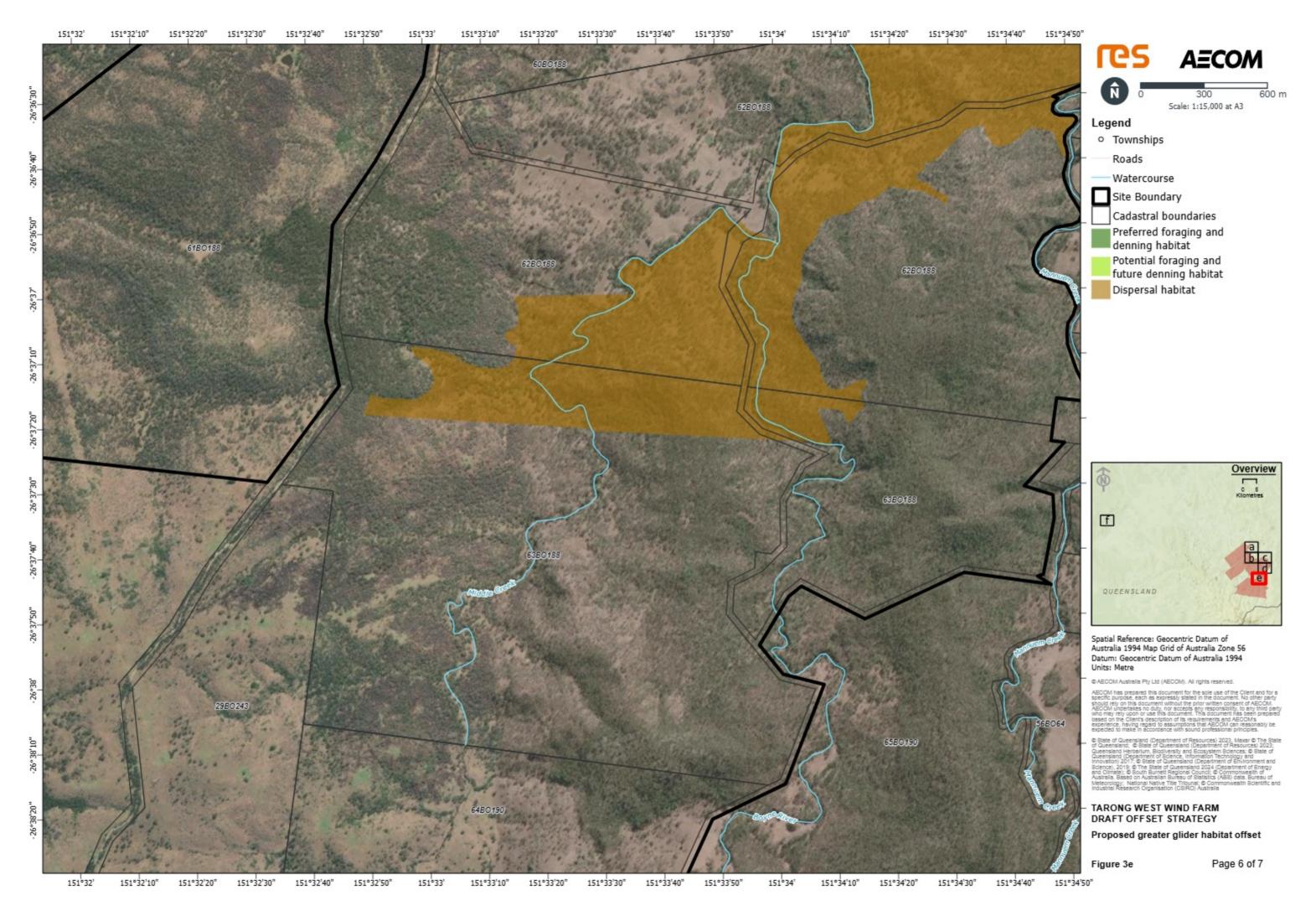


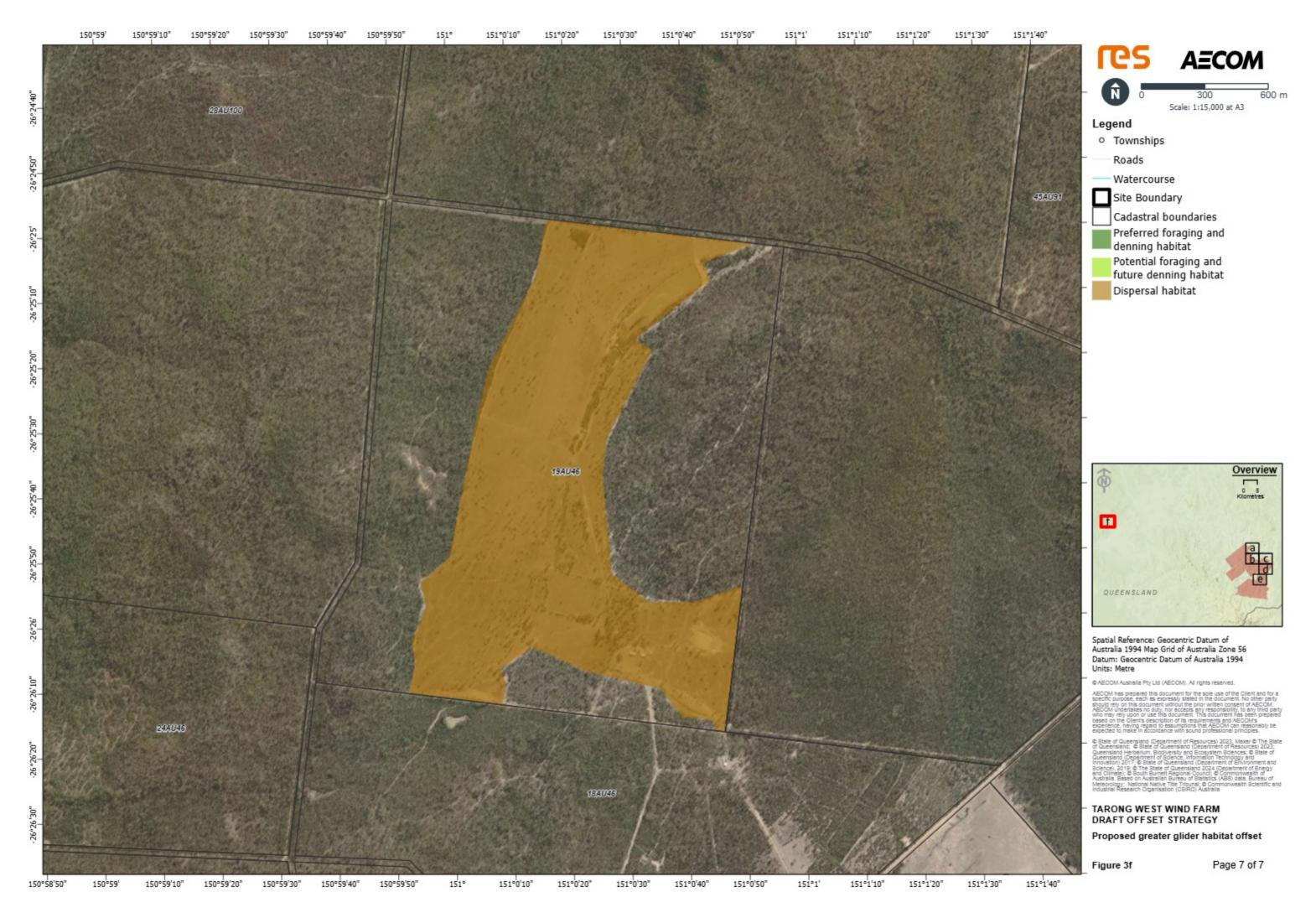












3.4 Grey-headed flying-fox

3.4.1 Residual significant impact

The residual significant impact to grey-headed flying-fox is characterised as foraging habitat (Table 11).

Table 11 Grey-headed flying-fox habitat impacted

Utilisation type	Habitat definition (Ecosure, 2025)	Area (ha)	Condition score out of 10
Potential foraging	Includes important winter and spring flowering vegetation (including Corymbia citriodora, E. crebra, E. tereticornis)	130.65	7
Low quality Potential foraging	Includes important winter and spring flowering vegetation (including Eucalyptus citriodora, E. crebra, E. tereticornis, among other species of Eucalyptus, Castanospermum, Corymbia, Grevillea, Melaleuca, and Syncarpia), in in open non remnant woodlands with sparse vegetation cover, noting seasonal mass flowering does not occur and is less likely to be able to consistently support foraging in these areas.	139.86	6

3.4.2 Offset suitability

The Project proposes a direct land-based offset to compensate for more than 100% of the residual significant impact to grey-headed flying-fox. The offset area is considered suitable for the grey-headed flying-fox based on the presence of factors considered important in improving the condition and viability of existing habitat for the species (Table 12).

Table 12 Factors supporting offset area for grey-headed flying-fox

	Present in	Offset Are	a?	
Factor	Property A	Property B	Property C	Comment
Presence of grey-headed flying-fox	Adjacent	Adjacent	Adjacent	Local and regional presence of the grey-headed flying-fox supports the viability of this offset being utilised by the species. A known camp is located approximately 25 km from the Project site, whilst a nationally significant camp is located approximately 35 km away.
Presence of suitable habitat for utilisation impacted	Yes	Yes	Yes	Foraging habitat is present within the offset area which will be improved through restoration and habitat management measures.
Presence of critical habitat features (i.e. trees of Eucalyptus and aligned genera)	Yes	Yes	Yes	Habitat features for key life functions are present within each offset property, including diversity and dominance of significant food trees in the nectar diet of GHFF, within remnant and regrowth REs. Restoration areas are largely cleared or have regrowth vegetation which will be improved through the offset.
Connectivity with surrounding adjacent habitat	Yes	Yes	Yes	Connectivity via riparian corridors and intact vegetation such as protected areas. GHFF are highly mobile species capable of travelling large distances.
Proximity to the impact area	_	Adjacent to the east	Adjacent to the east	The properties are sufficiently proximate to the impact area to support the population being impacted.
Location and configuration, which enables the area to be appropriately managed	Yes	Yes	Yes	The offset properties are configured with A, B and C together forming one large patch. This will ensure edge effects are minimised, and

2000	Present in	offset Are	ea?		
Factor	Property A	Property B	Property C	Comment	
to reduce threatening processes				management measures are effective in reducing threatening processes.	

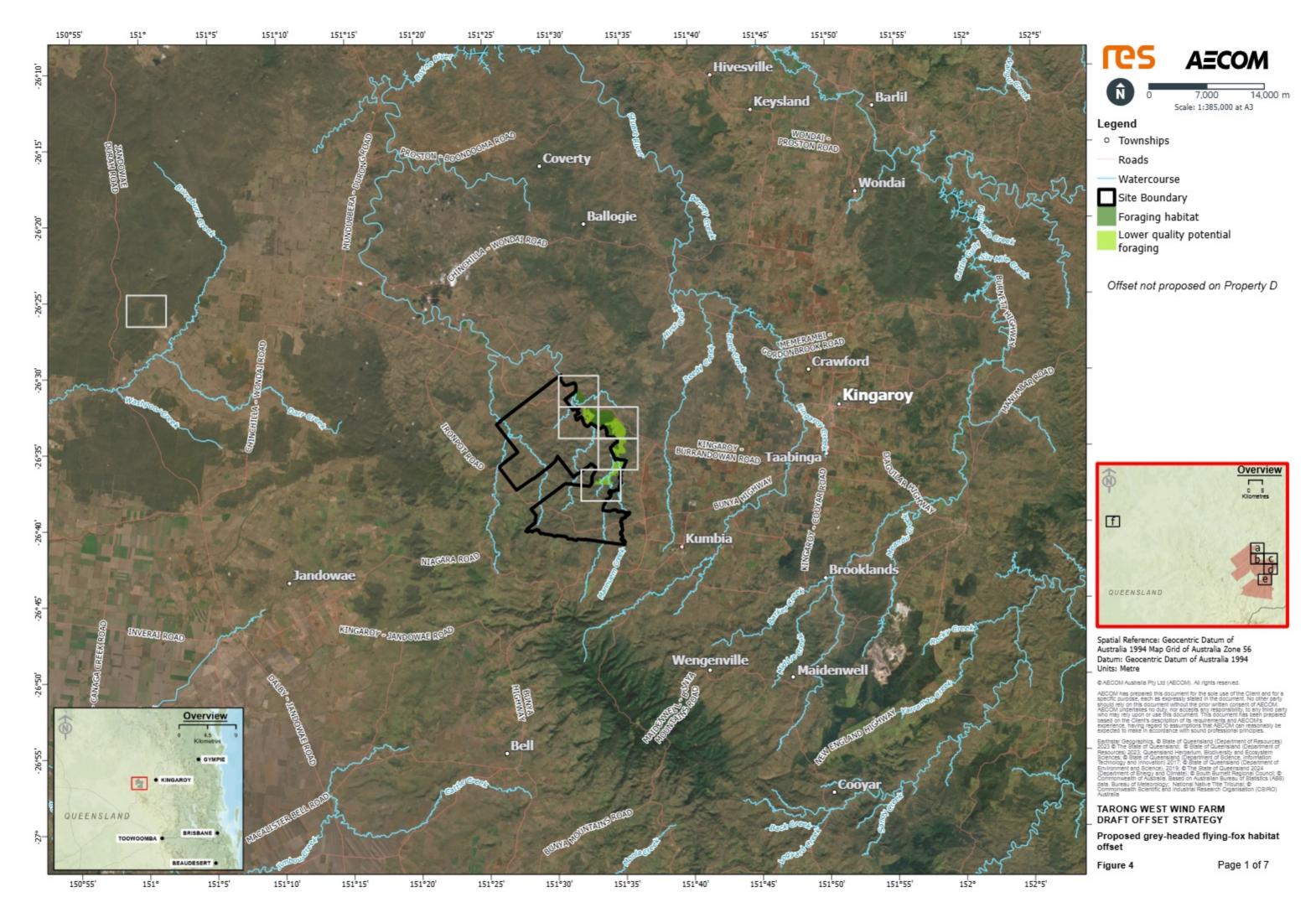
3.4.3 Proposed offset

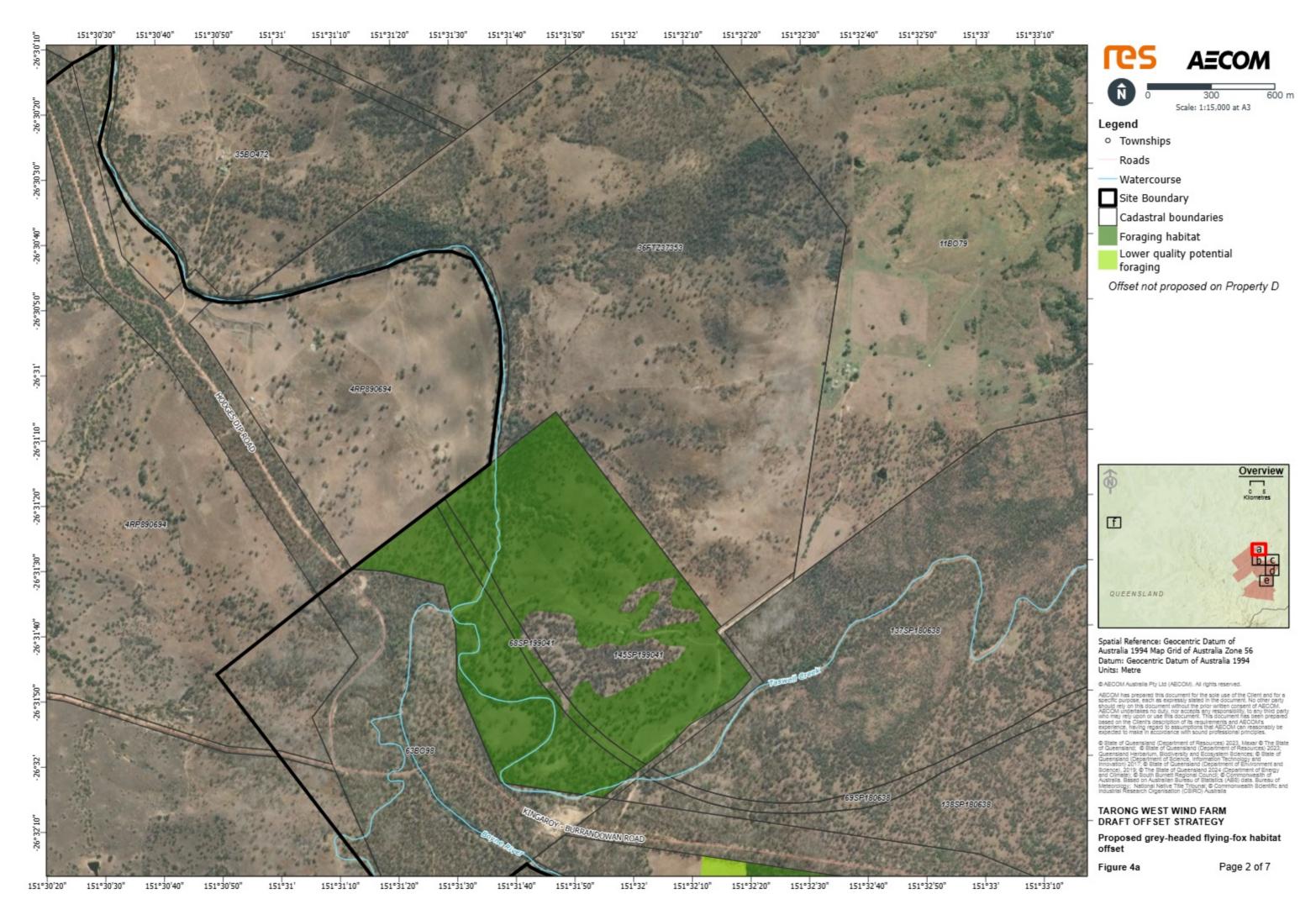
Offsets for the grey-headed flying-fox will include a direct land-based offset, as detailed below. The offset will include Properties A, B and C. Commonwealth OAG calculator results are provided in Table 13, which provides more than 100% offset of the residual significant impact. The offset for grey-headed flying-fox is presented in Figure 4.

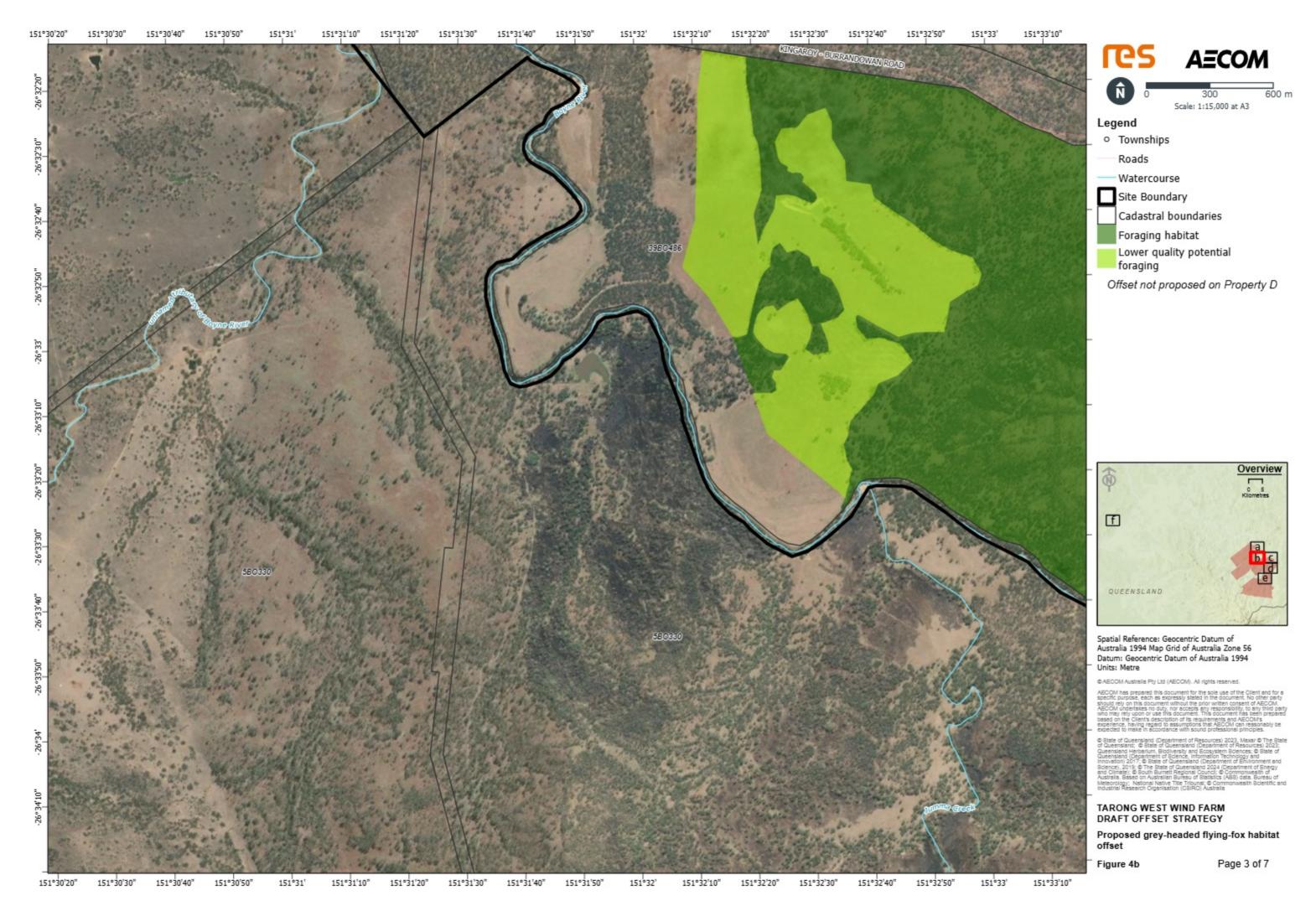
Table 13 Commonwealth OAG values for grey-headed flying-fox per utilisation type

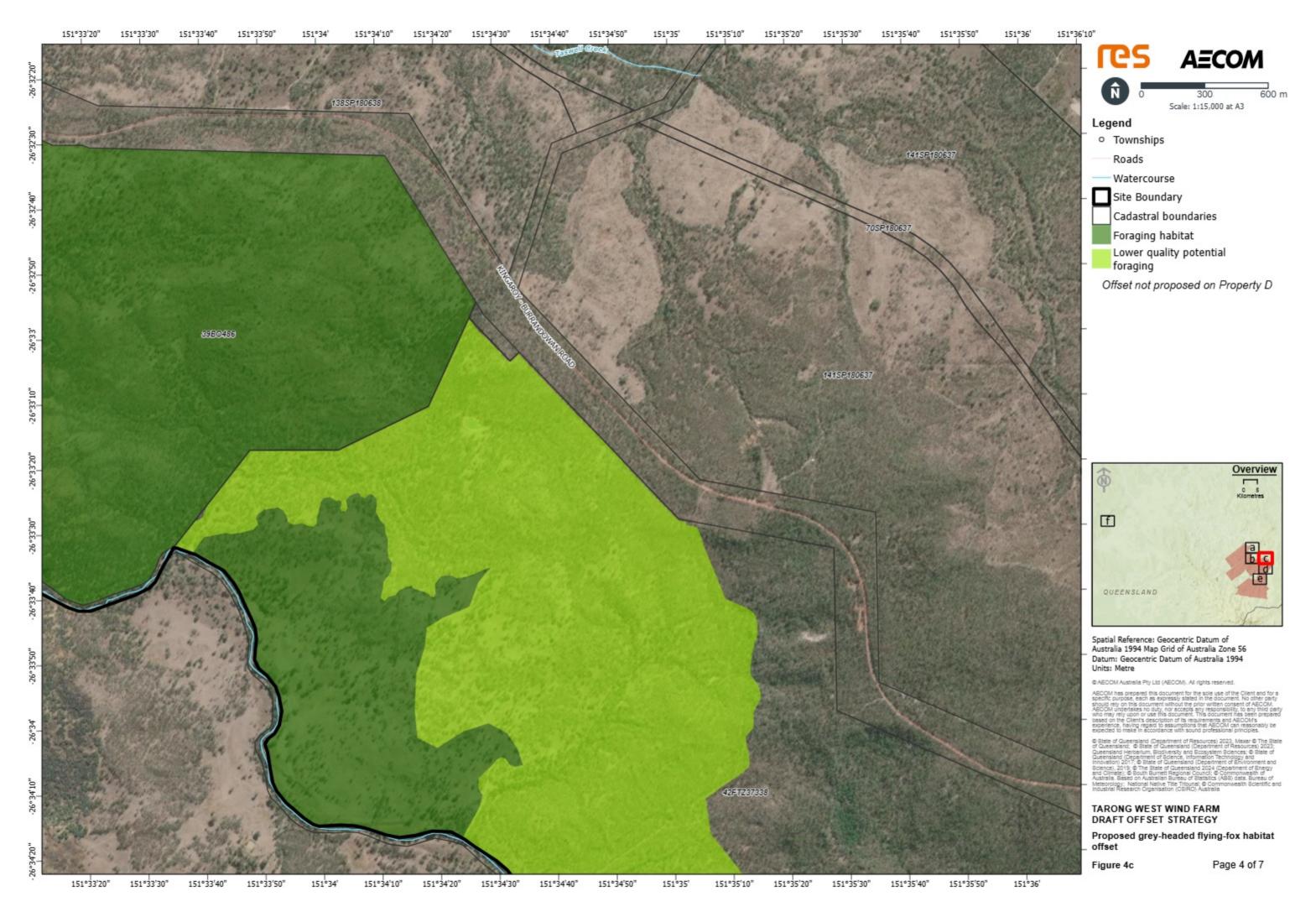
Attribute	Potential foraging	Low Quality Potential Foraging #1	Low Quality Potential Foraging #2	Low Quality Potential Foraging #3	
Impact Area (ha)	130.65	139.86	139.86	139.86	
Impact Area quality	7	6	6	6	
Offset area (ha)	861	233	118	706	
Properties	A, B, C	С	В	С	
Quality					
Start quality	6	6	5	7	
Future quality without offset	6	6	5	7	
Future quality with offset	8	8	7	8	
Time until ecological benefit (years)	20	20	20	20	
Confidence in quality scores (%)	60	60	70	80	
Raw gain	2.00	2.00	2.00	1.00	
Adjusted gain	1.20	1.20	1.40	0.80	
Risk of Loss					
Risk of loss without offset (%)	0	0	0	0	
Risk of loss with offset (%)	0	0	0	0	

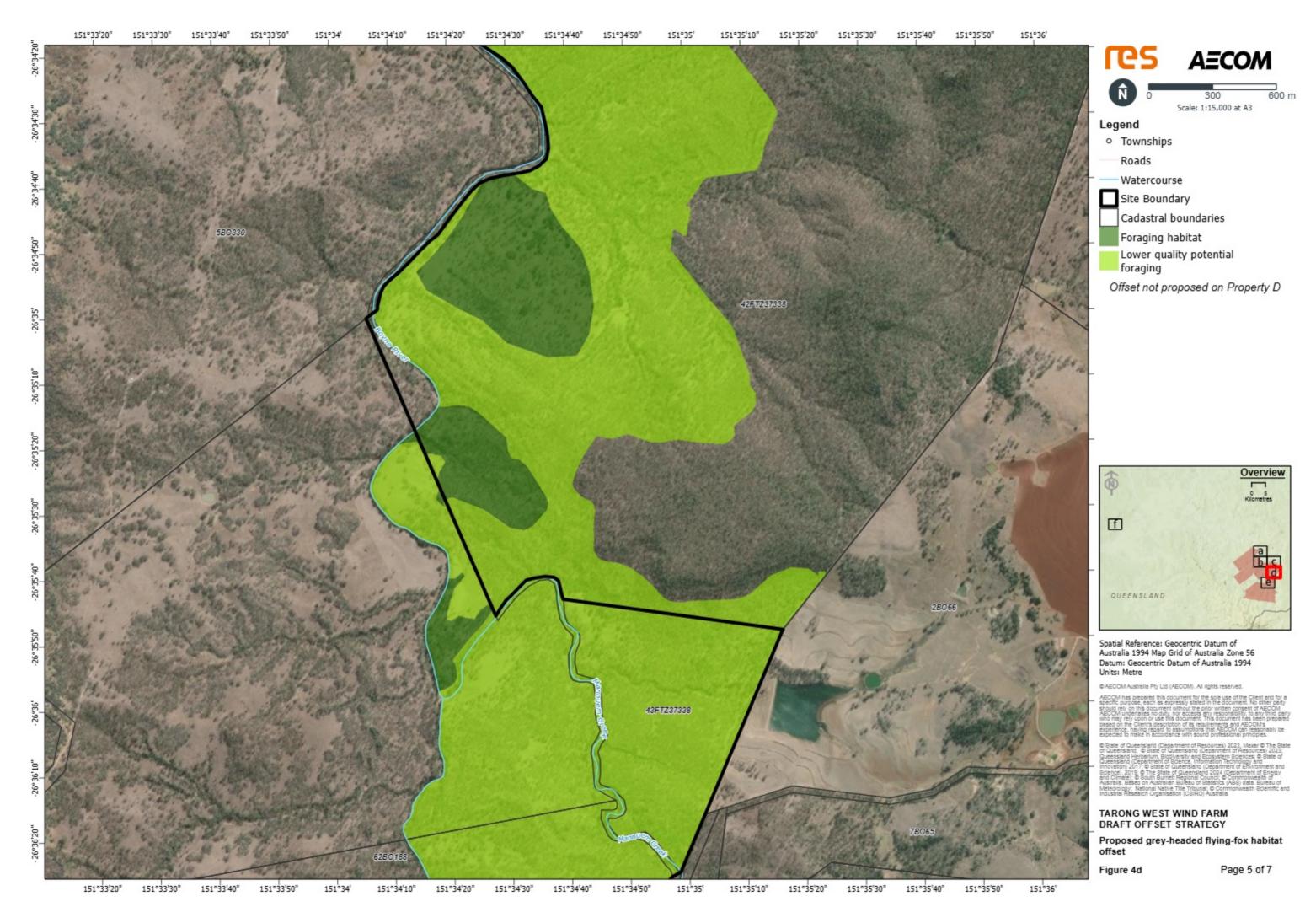
Attribute	Potential foraging	Low Quality Potential Foraging #1	Low Quality Potential Foraging #2	Low Quality Potential Foraging #3
Time over which loss is averted (years)	20	20	20	20
Confidence in risk scores (%)	60	60	70	80
Raw gain	0	0	0	0
Adjusted gain	0	0	0	0
Results				
Net present value	99.27	26.86	15.87	54.27
% impact offset	108.55	32.01	18.92	64.67
% impact offset per habitat utilisation	108.55			115.60

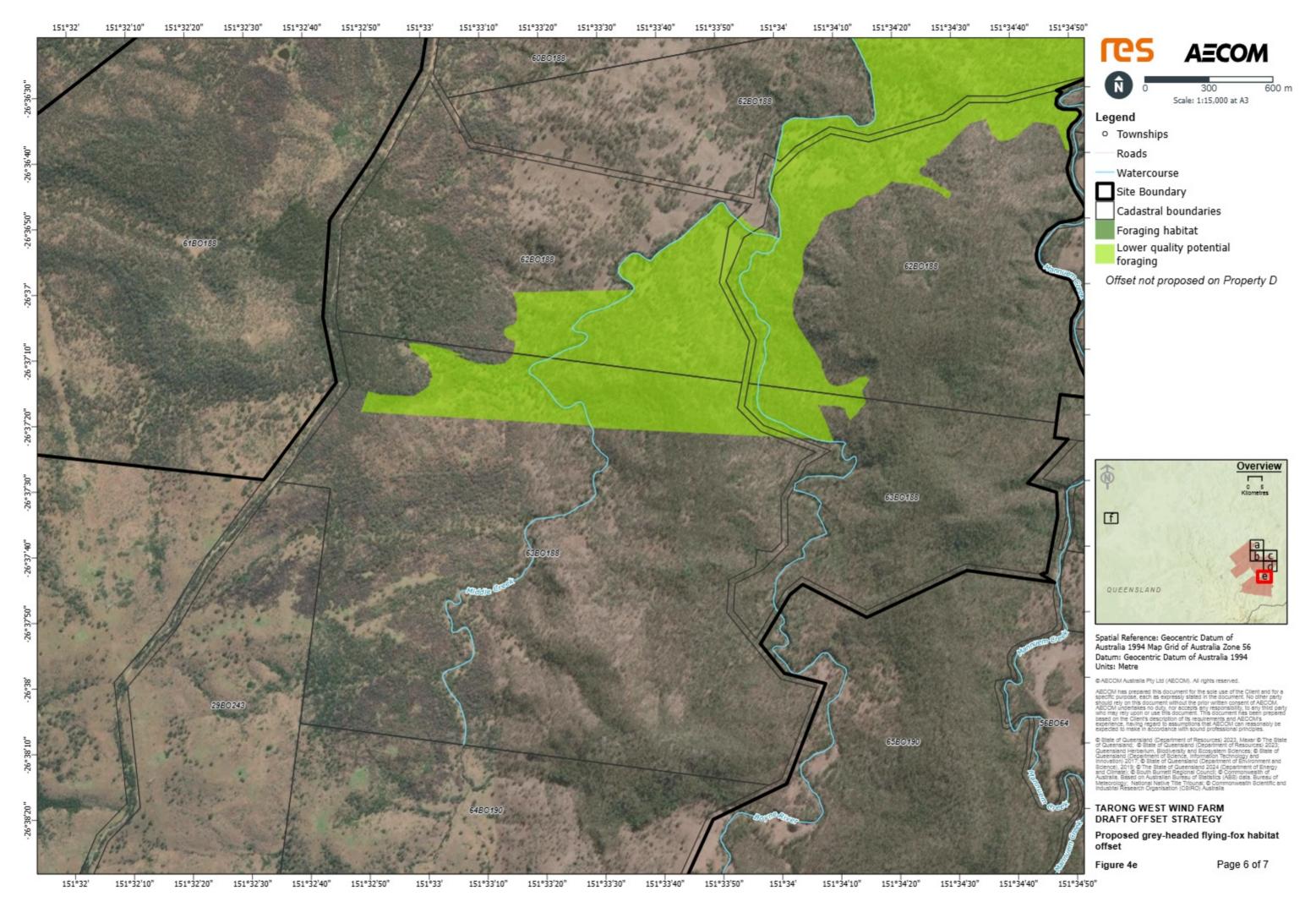














3.5 Glossy black-cockatoo

3.5.1 Residual significant impact

The residual significant impact to glossy black-cockatoo is characterised as foraging habitat (Table 14).

Table 14 Glossy black-cockatoo habitat impacted

Utilisation type	Habitat definition (Ecosure, 2025)	Area (ha)	Condition score out of 10
Potential breeding habitat	Areas with the potential to contain nesting locations were mapped based on a suitable distance from known foraging (1 km buffer), water sources (200 m dam and 1.5 km of a watercourse) (Mooney and Pedler 2005) and including trees known to be >8 m (based on lidar height data) (Cameron 2006, Glossy Black Conservancy 2022).	72.4 (108 trees)	
Potential foraging habitat	Potential south-eastern glossy black-cockatoo foraging habitat was modelled as the ground-truthed extent of remnant and HVR vegetation which is most likely to contain large hollows and/or contains an understory of <i>Allocasuarina</i> or <i>Casuarina</i> food trees. This includes all remnant and HVR eucalypt forest and riparian REs verified within the Project Site (including REs 11.3.25, 11.5.20, 11.7.6, 11.11.4, 11.11.15, 11.12.3 and 11.12.6).	15.46	7

3.5.2 Offset suitability

The Project proposes a direct land-based offset to compensate for more than 100% of the residual significant impact to glossy black-cockatoo, combining land-based habitat with habitat feature offsets. The offset area is considered suitable for the glossy black-cockatoo based on the presence of factors considered important in improving the condition and viability of existing habitat for the species (Table 15).

Table 15 Factors supporting offset area for glossy black-cockatoo

	Present in Offset Area?			
Factor	Property A	Property B	Property C	Comment
Presence of glossy black- cockatoo	Adjacent	Yes (indirect evidence)	Yes (indirect evidence)	Local and regional presence of the GBC supports the viability of this offset being utilised by the species
Presence of suitable habitat for utilisation impacted	Yes	Yes	Yes	Presence of foraging resources, including recruitment of foraging trees. Presence of hollow-bearing trees in varying abundance in habitat management areas.
Presence of critical habitat features (i.e. trees of Eucalyptus and aligned genera)	Yes	Yes	Yes	Habitat features for key life functions are present within offset properties in varying quality and abundance. This includes presence of a diversity of Allocasuarina and Casuarina food tree species (Allocasuarina littoralis, A. luehmannii, A inophloia and Casuarina cunninghamiana) Large trees (live and dead) provide potential nesting habitat in habitat management areas and suitable drinking sites are present within proximality to nesting and foraging habitat. Habitat features (artificial hollows) will also be provided as breeding habitat offset.
Connectivity with surrounding adjacent habitat	Yes	Yes	Yes	Connectivity via riparian corridors and intact vegetation such as protected areas. GBC are highly mobile species capable of travelling large distances.

	Present in Offset Area?				
Factor	Property A	operty Property Property B C		Comment	
Proximity to the impact area	Adjacent to the east		Adjacent to the east	The properties are sufficiently proximate to the impact area to support the population being impacted.	
Location and configuration, which enables the area to be appropriately managed to reduce threatening processes	Yes	Yes	Yes	The offset properties are configured with A, B and C together forming one large patch. This will ensure edge effects are minimised, and management measures are effective in reducing threatening processes.	

3.5.3 Proposed offset

Offsets for the glossy black-cockatoo will include direct land-based offset and habitat feature offset, as detailed below. The offset will include Properties A, B, and C, and habitat features will be offset by artificial hollows (likely nest boxes) within or adjacent to the foraging offset, and located adjacent to suitable water sources. Commonwealth OAG calculator results are provided in Table 16 for foraging habitat, and Table 17 for breeding habitat features, which provides more than 100% offset of the residual significant impact. The offset for glossy black-cockatoo is presented in Figure 5.

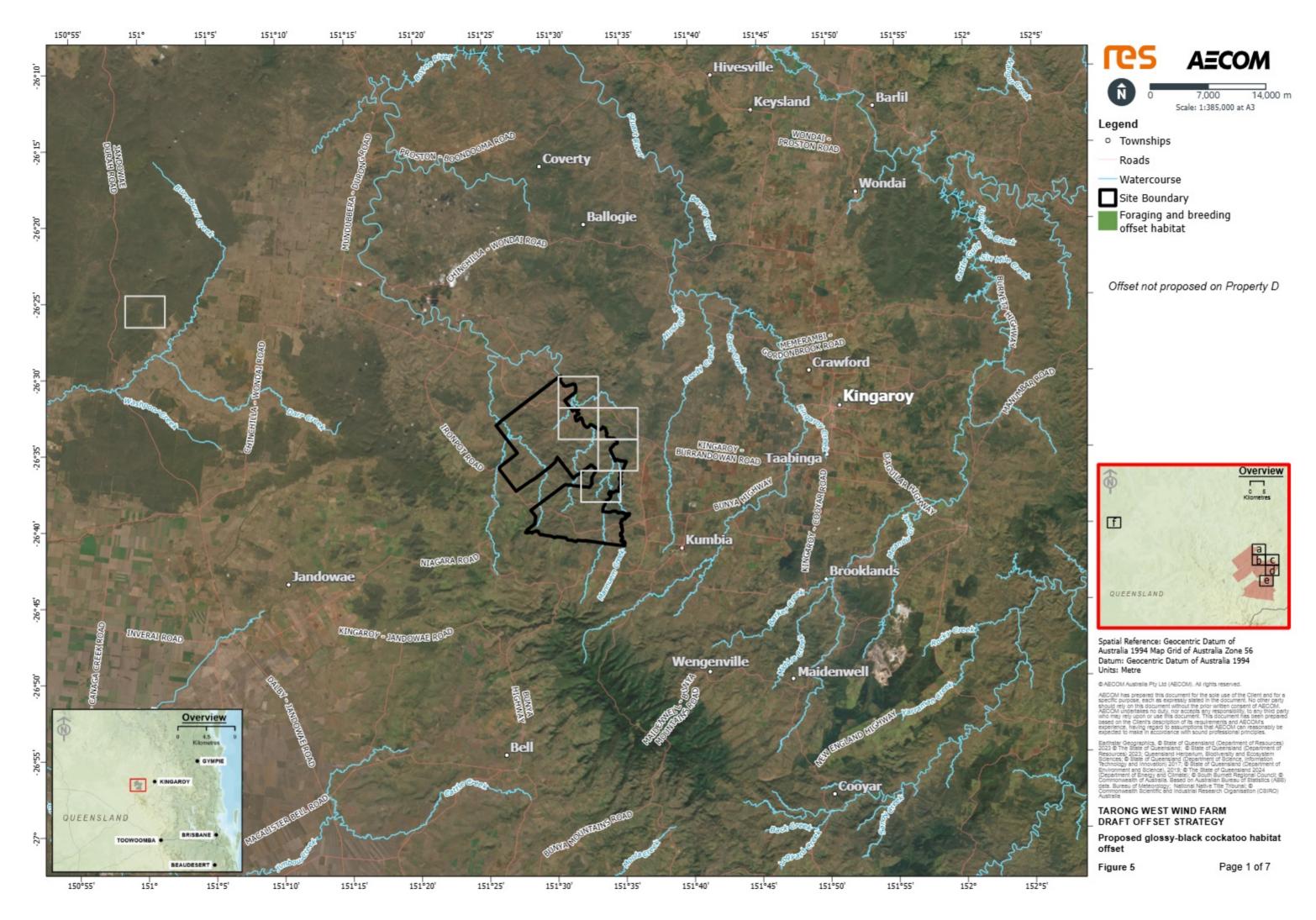
Table 16 Commonwealth OAG values for glossy black-cockatoo foraging habitat

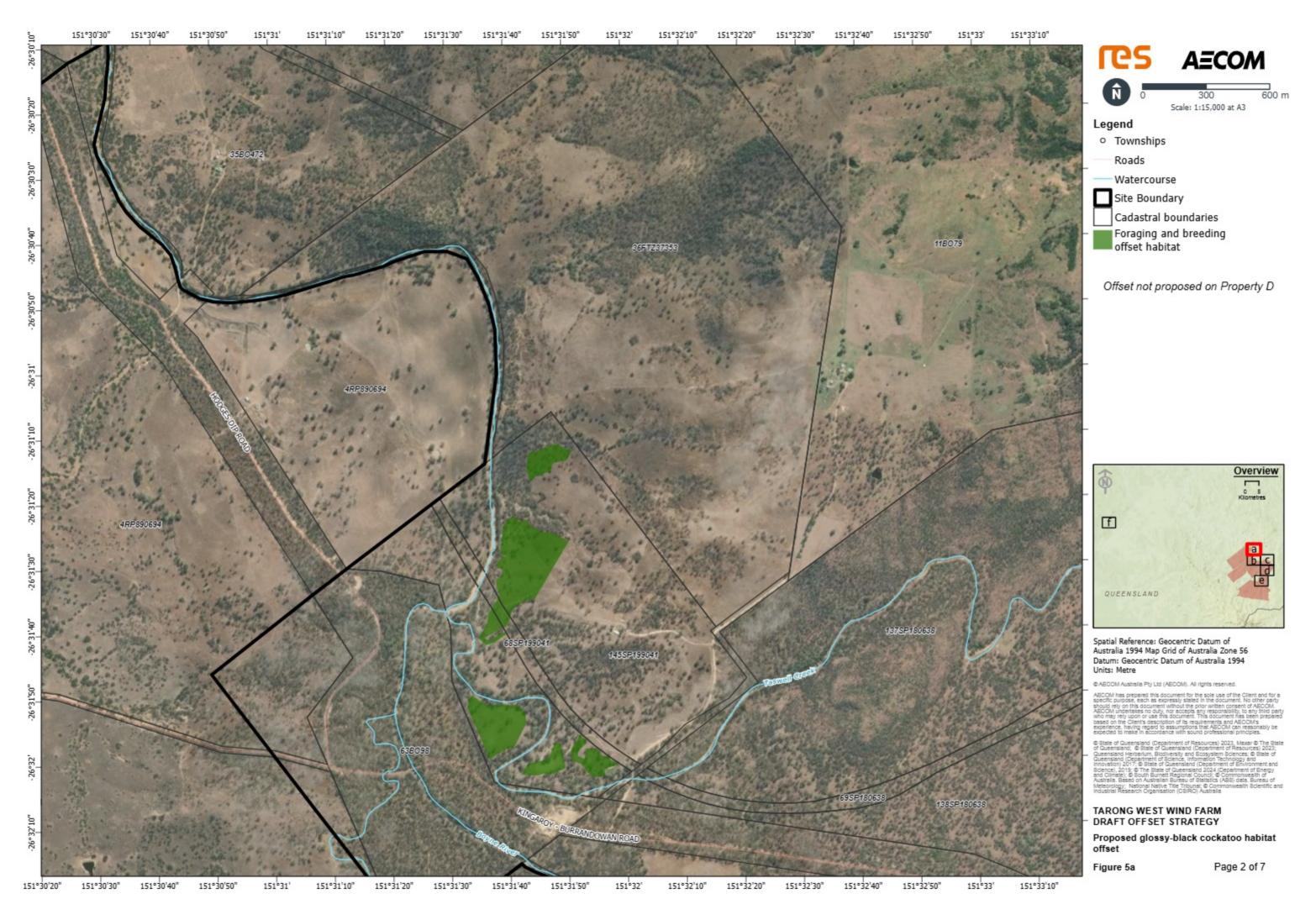
Attribute	Potential foraging habitat
Impact Area (ha)	15.45
Impact Area quality	7
Offset area (ha)	85
Properties	A, B, C
Quality	,
Start quality	5
Future quality without offset	5
Future quality with offset	7
Time until ecological benefit (years)	20
Confidence in quality scores (%)	70
Raw gain	2.00
Adjusted gain	1.40
Risk of Loss	
Risk of loss without offset (%)	0
Risk of loss with offset (%)	0
Time over which loss is averted (years)	20

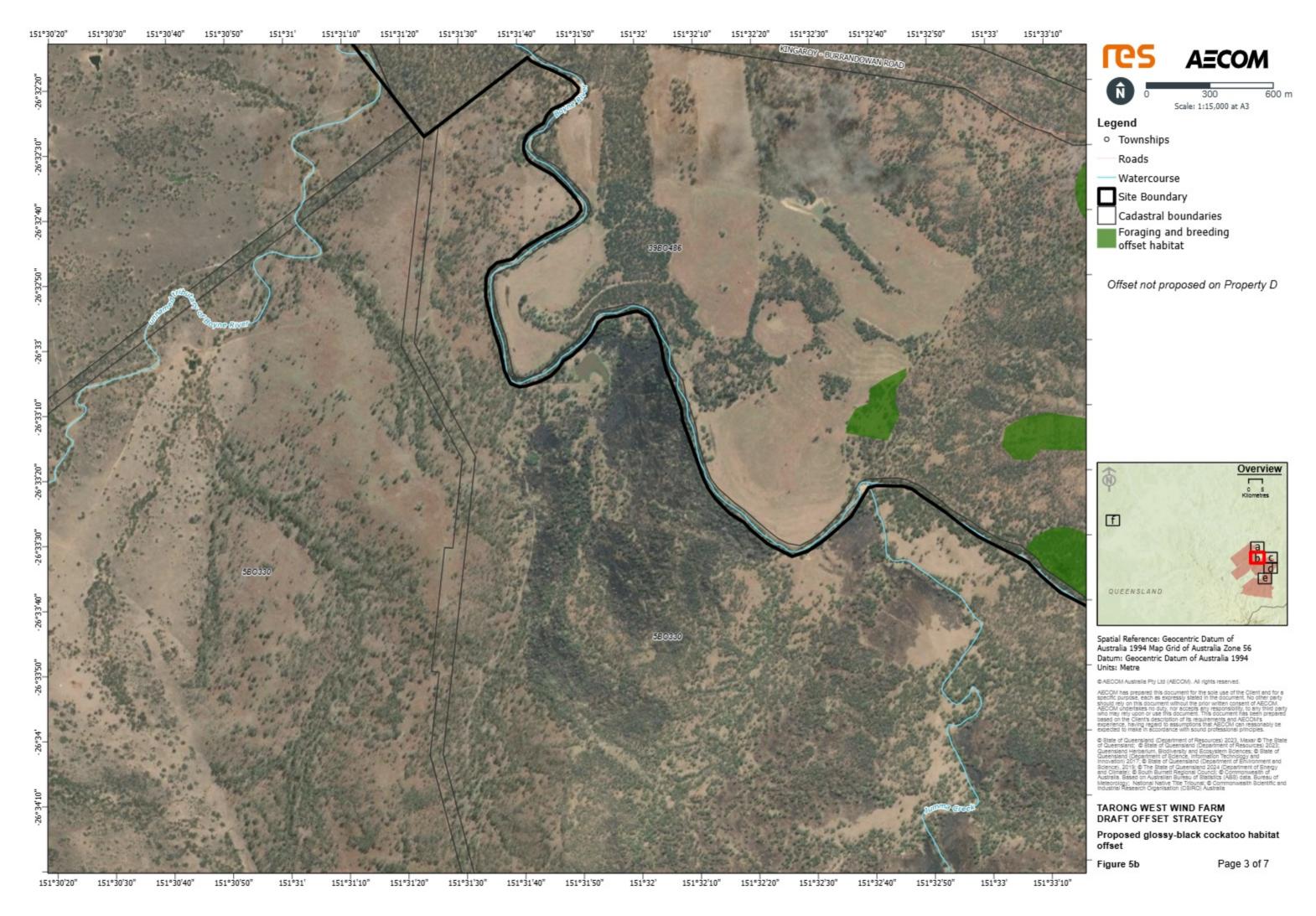
Attribute	Potential foraging habitat
Confidence in risk scores (%)	70
Raw gain	0
Adjusted gain	0
Results	
Net present value	11.43
% impact offset	105.65
% impact offset per habitat utilisation	105.65

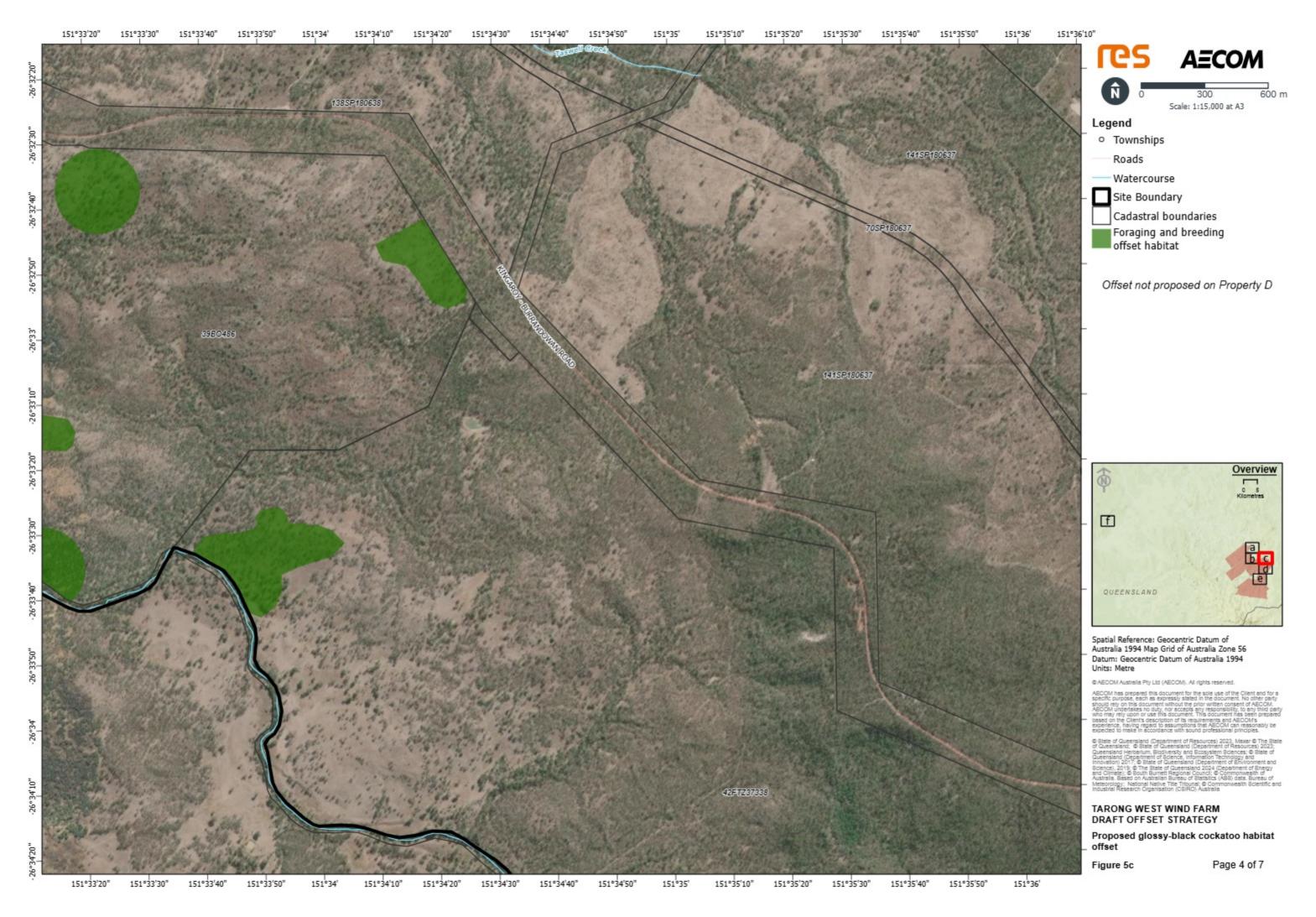
Table 17 Commonwealth OAG values for glossy black-cockatoo breeding habitat features

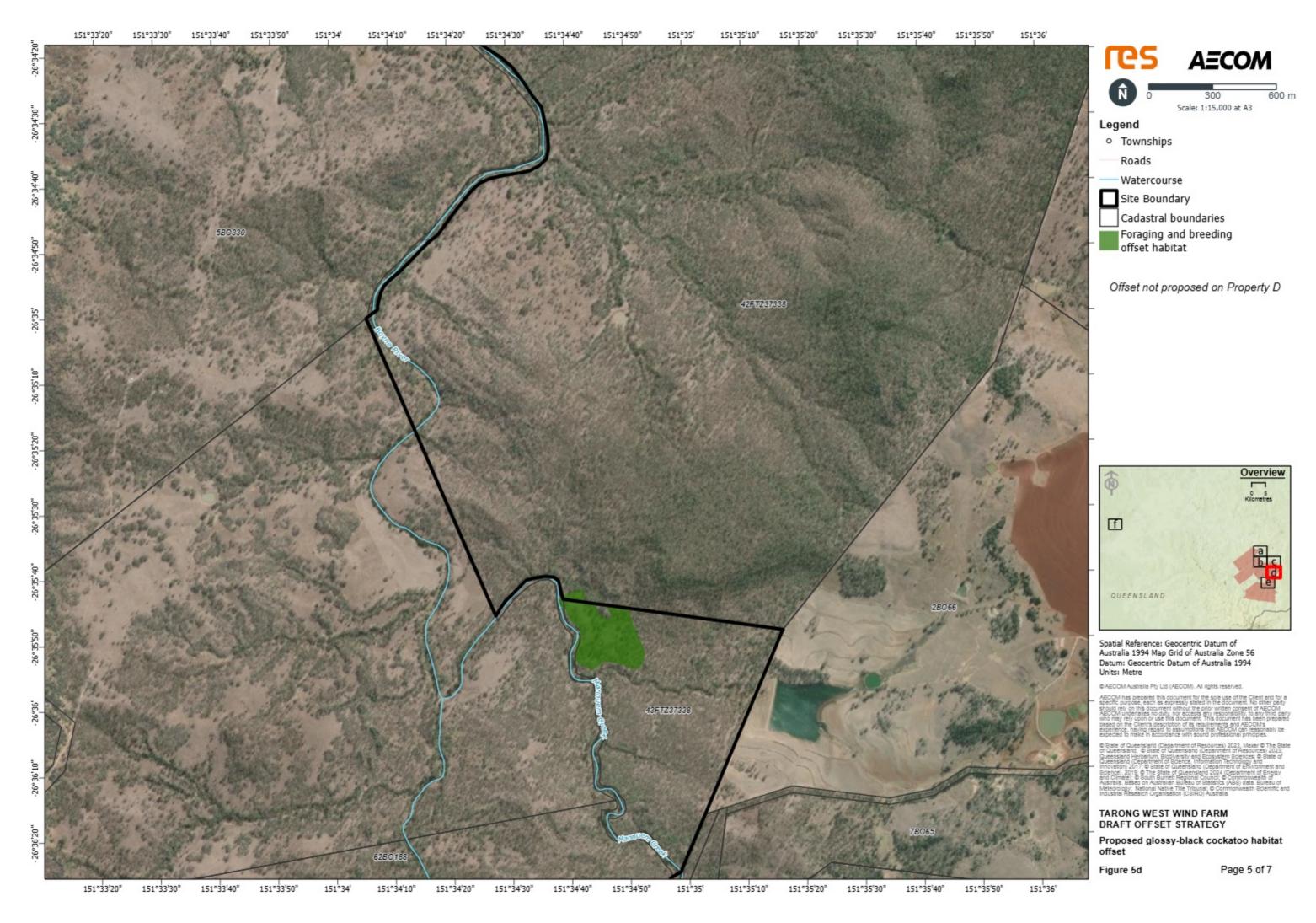
Attribute	Breeding habitat
Description of habitat feature	Nesting hollows
Quantum of impact	108
Units	Coun
Proposed offset	225
Properties	A, B, C
Quality	
Time horizon (years)	20
Start value	(
Future quality without offset	(
Future quality with offset	225
Raw gain	225
Confidence in result (%)	50
Adjusted gain	112.50
Results	
Net present value	108.09
% impact offset	100.09
% impact offset per habitat utilisation	100.09

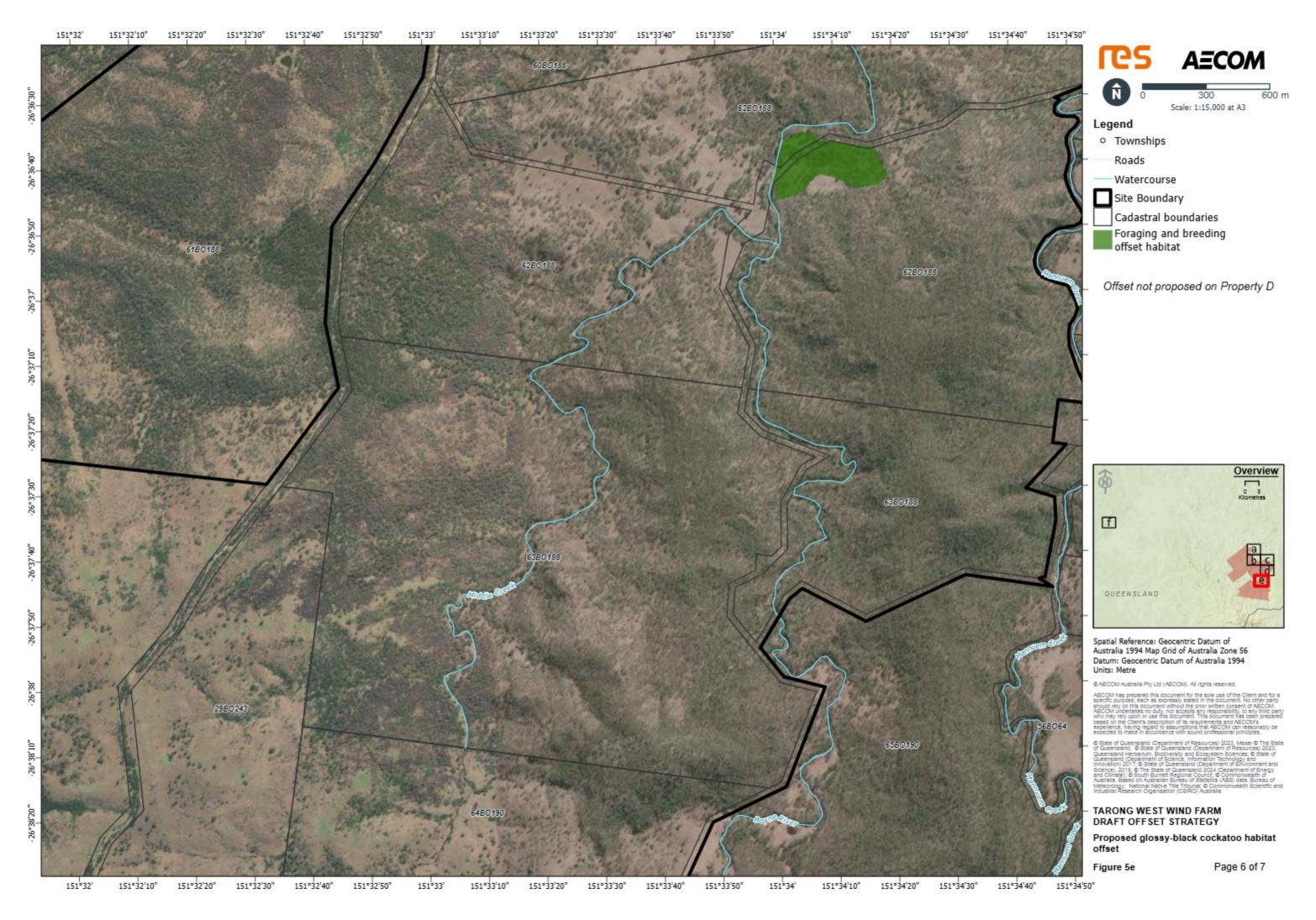














3.6 Compliance with Offset Principles

The delivery of environmental offsets is to comply with the EOP. The EOP was developed with the purpose of improving environmental outcomes through the consistent application of best practice offset principles. The policy provides additional guidance on the identification and assessment of suitable offsets, helping to ensure that projects approved under the EPBC Act are consistent, transparent and achieve high quality environmental outcomes.

The policy outlines offset principles that govern the selection and nature of offsets and government assessment and decision-making. The Project's compliance with these principles is outlined in Table 18.

Table 18 Compliance with EOP Offset Principles

Offset Principles	Compliance
Suitable offsets must deliver an overall conservation outcome that improves or maintains the viability of the aspect of the environment that is protected by national environment law and affected by the proposed action	The Offset Area contains vegetation that provides suitable habitat for each of the four MNES values. The Offset Area provides offsets in excess of minimum requirements for MNES values, which will result in a net conservation gain and overall improvement in the viability of the value being impacted. Management strategies will be designed within the Offset Area Management Plan (OAMP) to ensure that conservation outcomes are achieved, which are based on the recovery actions developed for the species. Threatening processes within the offset area will be mitigated and the habitat quality will be increased to provide for sustainable populations of the MNES values. In doing so the potential offset area will deliver a conservation outcome that will maintain and improve the viability of the affected MNES.
Suitable offsets must be built around direct offsets but may include other compensatory measures	The Offset Area will provide a direct land based offset and measurable conservation gain mitigating more than 100% of the impacts associated with the Project for each MNES value. The management of the offset area will also address the key priority actions for each species.
Suitable offsets must be in proportion to the level of statutory protection that applies to the protected matter	The Offset Area will provide a direct offset and measurable conservation gain of more than 100% of the impacts associated with the Project for the four MNES values. The potential offset has been developed using the OAG which incorporates the level of statutory protection of each protected matter being offset.
Suitable offsets must be of a size and scale proportionate to the residual impacts on the protected matter	The offset area will provide a direct offset and measurable conservation gain of more than 100% of the impacts associated with the Project for each MNES value. The offset has been developed using the OAG, which uses the area of impact and the quality of habitat to assess the total quantum of impact to protected matters that needs to be offset. As such the offset area is of a size and scale that is proportionate to the unavoidable impacts on protected MNES values.
Suitable offsets must effectively account for and manage the risks of the offset not succeeding	Potential risks to the success of the offsets will be detailed within the OAMP. Additional measures and remedial actions will be developed and will be implemented if any potential risks occur. In addition to this, a monitoring and reporting schedule will be developed which will assess the condition of the offset at regular intervals and trigger changes to the management strategies as required.
Suitable offsets must be additional to what is already required, determined by law or planning regulations, agreed to under other schemes or programs	The Offset Area does not have any existing formal conservation arrangement in place or existing requirements from other approvals that require the landowner to undertake conservation works. Current permitted land use across the offset area includes cattle grazing and agriculture.

Offset Principles	Compliance
Suitable offsets must be efficient, timely, transparent, scientifically robust and reasonable	Direct, land-based offset has been selected as the primary offset methodology for this Project as it is a robust and widely accepted approach, with a high degree of confidence in outcome. The proponent will undertake the following timing for this offset: Prior to the commencement of the action secure a legal agreement with the landowner to protect the offset area. Legally secure the offset area through the below mechanisms within 12 months of the commencement of the action. Prepare and implement an OAMP at the Offset Area for the duration of the approval to improve habitat for the four MNES values. Based on the OAG, ecological benefit will be achieved for these species within 20 years. The OAMP will be prepared to ensure the efficient and effective delivery of a conservation outcome in a timely manner.
Suitable offsets must have transparent governance arrangements, including being able to be readily measured, monitored, audited and enforced	The offsets will be secured using a Voluntary Declaration (Vdec) under the provisions of the Vegetation Management Act 1999 (VM Act). As per the requirements of the Vdec, a detailed OAMP will be prepared. A monitoring program and reporting schedule will also be developed within the OAMP.

4.0 Offset Delivery

4.1 Offset Area Management Plan

An OAMP is in draft for the Offset Area to detail the habitat quality currently present within the impact area, offset area, and future quality changes over time. This OAMP will meet the requirements of the PER Guidelines Attachment D2.

Any risk of the OAMP and its associated management strategies not succeeding will be mitigated through the following inclusions and requirements that will be detailed within the OAMP, including:

- i. Offset management strategies supported by clear performance criteria.
- Clearly defined offset management risks which include proposed measures to minimise risk, remedial actions (if risk occurs) and proposed follow up action/s.
- iii. A comprehensive monitoring regime including frequency, method and location.
- iv. Effective reporting mechanisms to report on the implementation of the plan at specific milestones.
- Adaptive management measures to be implemented as necessary in response to regular reviews, monitoring results and changes in legislation.
- A detailed offset implementation strategy detailing the management and monitoring requirements, timing, schedule, responsibility, corrective action and reporting requirement.
- vii. Scheduled reviews which will assess the effectiveness of management strategies and any required modifications to the ongoing management of the offset will be discussed with the administering authority (as required) and implemented at the time.

4.2 Legal mechanisms for security and timing

The mechanism proposed to legally secure the offset is a Vdec under the provisions of the VM Act, based on the offset meeting the criteria for an area of high nature conservation value. The Vdec will be secured to the title of the land and will be recognised and subsequently protected as a Category A area on the Queensland Regulated Vegetation Management Map.

Landholder agreements are well progressed and will be signed following finalisation of the OAMP.

The approval holder will implement the OAMP at the offset area for the duration of the approval to restore habitat for MNES values. The conservation gain as stipulated in the OAG is anticipated to be achieved within 20 years from the commencement of the Offset Area (or sooner).

4.3 Limitations

Impact area and offset area scores currently being finalised, however this is a conservative estimate. The OAMP will supersede this OMS document.

5.0 Conclusion

The Offset Area has been assessed against the Commonwealth OAG for koala, greater glider, greyheaded flying-fox and glossy black-cockatoo habitat impacted by the Project and the EOP for delivery of a direct offset.

The Offset Area provides offsets in excess of minimum requirements for the four MNES values, which will result in a net conservation gain and overall improvement in the viability of the value being impacted.

Management strategies will be designed within the Offset Area Management Plan (OAMP) to ensure that conservation outcomes for MNES values are achieved, which are based on the recovery actions developed for the species. Threatening processes within the offset area will be mitigated and the habitat quality will be increased to provide for sustainable populations of each MNES value. In doing so the potential offset area will deliver a conservation outcome that will maintain and improve the viability of the affected MNES.

6.0 References

Cameron, M, 2006, 'Nesting habitat of the Glossy Black-Cockatoo in central New South Wales', Biological Conservation, vol. 127, no. 4, pp. 402-410.

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Mooney, P.A., & Pedler, L.P., 2005, 'Recovery plan for the South Australian subspecies of the Glossy Black-Cockatoo (*Calyptorhynchus lathami halmaturinus*): 2005-2010', Department for the Environment and Heritage South Australia.