



CHAPTER 7 – BIODIVERSITY OFFSETS

NEW LENTON COAL PTY LTD
NEW LENTON COAL PROJECT

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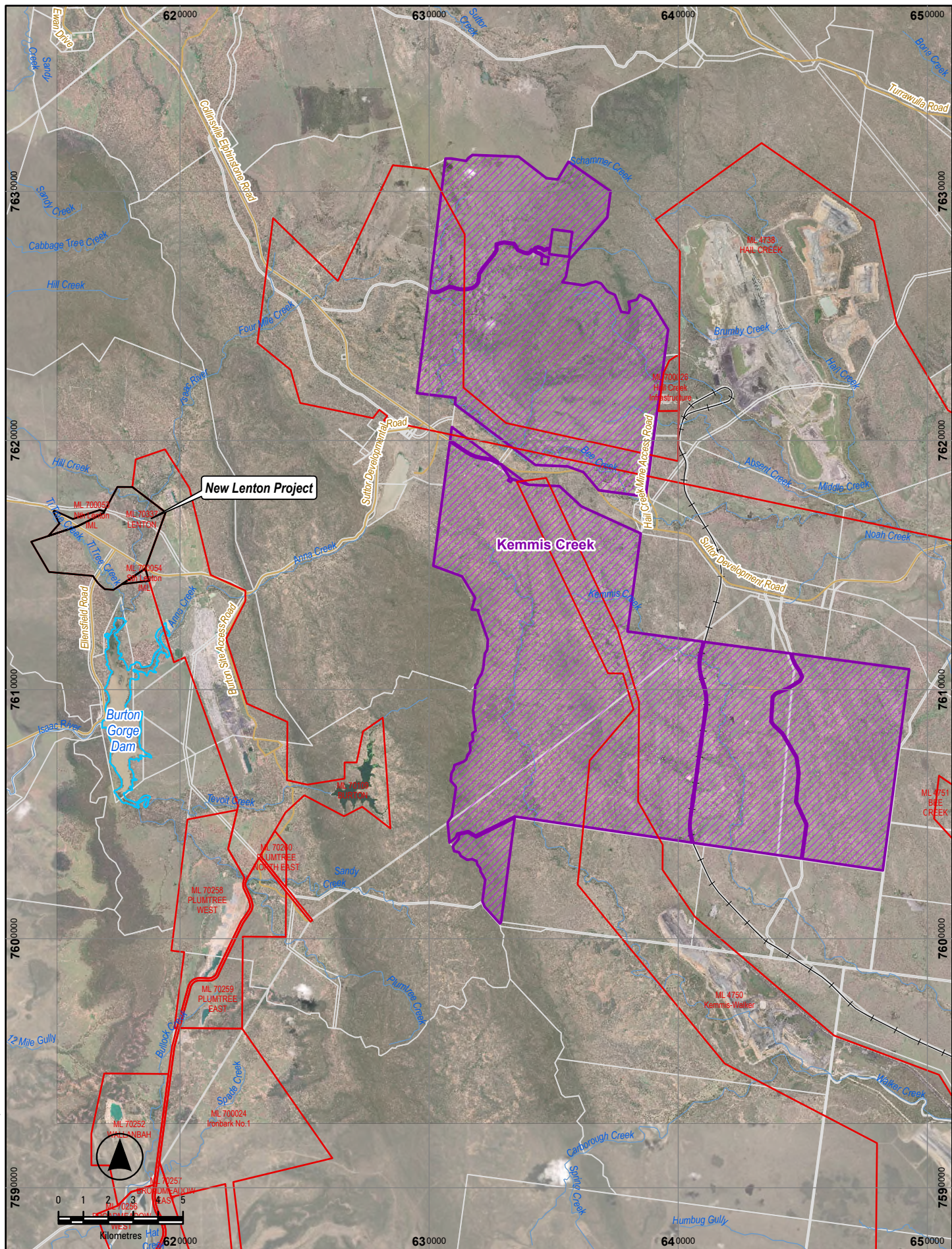
7. BIODIVERSITY OFFSETS

7.1 Introduction

This chapter describes the offset area management plan (OAMP) for the Project, based on the OAMP prepared by CO2 Australia provided in **Appendix 26**. The OAMP describes offsets for those matters of national environmental significance (MNES) which were assessed as potentially having a significant residual impact from the Project (see **Chapter 6** and **Appendix 12**). The OAMP has been prepared in accordance with the PER Guidelines (refer to **Appendix 16** and Section 1.2 of **Appendix 26**), and to guide management and monitoring of the proposed offset area.

The OAMP supersedes an earlier biodiversity offsets strategy (BOS), and hence the BOS is not provided with the final PER. The BOS was utilised as a planning tool to identify potential properties for offsets and undertake preliminary surveys of preferred properties for offsets. All relevant information from the BOS has been included in the OAMP. The proponent has, through the BOS planning process and an existing landholder relationship, identified Kemmis Creek as a preferred option to deliver the required offsets for the Project. Kemmis Creek is a 27,800 ha cattle grazing property located in Kemmis, approximately 55 km northeast of Moranbah and 25 km east of the Project (Figure 7-1).

The OAMP presents the results of all field surveys undertaken at Kemmis Creek to inform the OAMP. The OAMP describes the offset investigation area on Kemmis Creek, the potential offset area for relevant MNES, and the management and monitoring measures to achieve the proposed interim performance targets and completion criteria.



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LEGEND

- New Lenton Project
- ML
- Kemmis Creek
- Waterway
- Roads
- +— Railway

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Kemmis Creek and Project Location

7.2 Relevant Legislation, Policy and Guidelines

7.2.1 Commonwealth

7.2.1.1 Environment Protection and Biodiversity Conservation Act 1999

Any action that is likely to have a significant impact on MNES is subject to assessment under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) by the Department of Climate Change, Energy, the Environment and Water (DCCEEW). An EPBC Act referral was submitted to DCCEEW for the Project in September 2020, with DCCEEW providing a referral decision in October 2020 determining that the Project is a controlled action requiring assessment under the EPBC Act. The controlling provisions are listed threatened species and communities (s18 and 18A), and water resources (s24D & 24E).

Significant residual impacts to threatened species and threatened ecological communities (TECs) listed under the EPBC Act that require offsets are discussed in this chapter, based on the assessments provided in **Chapter 6**.

7.2.1.2 Environmental Offsets Policy

The Commonwealth Offsets Policy relates to the potential for significant residual impacts to MNES. The EPBC Act *Environmental Offsets Policy (2012)* discusses the role of offsets in impact assessments as well as outlining the consideration process undertaken by DCCEEW to determine the suitability of a proposed offset package. The policy defines an offset package as a “*suite of actions that a proponent undertakes in order to compensate for the residual significant impact of a project*” (DSEWPaC 2012). An offset can be in the form of a direct offset or other compensatory measure.

Suitable offset packages must include direct offsets, with at least 90% of the offset requirements met by direct offsets. Direct offsets are actions that result in a measurable conservation gain for the impacted protected matter. The remaining less than 10% of offset requirements within an offsets package can be provided as compensatory measures. Compensatory measures are actions that will benefit the impacted protected matter without directly offsetting the impact (e.g. funding for research).

The OAMP has been prepared to demonstrate how the Project’s anticipated MNES offset requirements will be satisfied in accordance with the EPBC Act *Environmental Offsets Policy* and the requirements of the Offsets Assessment Guide (OAG).

The offset area proposed in the OAMP aligns with the key aims and principles of the EPBC Act *Environmental Offsets Policy* (refer to Section 5.1 of **Appendix 26**)

7.2.2 State

7.2.2.1 Environmental Protection Act 1994

The proponent holds a current environmental authority (EA) EPML00475513 under the *Environmental Protection Act 1994* (EP Act) covering the Project’s mining leases (MLs). All Project activities are conditioned by this EA. Schedule H of the EA conditions offsets approved under the Queensland offsets legislation.

7.2.2.2 Environmental Offsets Act 2014

The Queensland *Environmental Offsets Act 2014* provides for and manages impacts to matters of state environmental significance (MSES). The EA for the Project includes approval for impacts to MSES, which includes of concern regional ecosystem (OCRE) 11.3.2, associated with the Poplar Box Grassy Woodlands on Alluvial Plains threatened ecological community (Poplar Box TEC).

7.3 Biodiversity Values Requiring Offsets

7.3.1 Summary

The assessment of significance of residual impacts for the Project (see Section 6.2.6 of **Chapter 6** and **Appendix 12**) identified two fauna species listed as vulnerable as the date of the Referral (subsequently uplisted to endangered status) and one TEC listed as endangered under the EPBC Act as requiring offsets due to significant residual impacts from the Project. The Project is considered unlikely to result in a significant impact to the squatter pigeon (southern) (*Geophaps scripta scripta*). Nevertheless the OAMP also considers the requirement to provide offsets for this species as the PER guideline has identified that this species may be subject to significant residual impacts. These MNES and the corresponding impact areas are shown in Table 7-1.

Table 7-1 MNES Impacted by the Extension Requiring Offsets

MNES	EPBC Act status	Impact area requiring offsets (ha)
Koala (<i>Phascolarctos cinereus</i>)	Endangered (Vulnerable at time of Referral)	327
Greater Glider (<i>Petauroides volans</i>)	Endangered (Vulnerable at time of Referral)	292.5
Squatter Pigeon (Southern) (<i>Geophaps scripta scripta</i>)	Vulnerable	192.3
Poplar Box TEC	Endangered	112.2

7.3.2 Impact Area Habitat Quality

Based on the results of the ecological assessments undertaken within the Project impact area (see **Chapter 6**), specifically vegetation mapping and habitat quality assessments conducted in March 2023, a habitat quality score was calculated for the MNES listed in Table 7-1. Appendix C of **Appendix 26** presents the method used to quantify the habitat quality score for those MNES, prepared generally in accordance with the Guide to Determining Terrestrial Habitat Quality (Version 1.3) (DES 2020), with the results of that scoring detailed in Appendix B of **Appendix 26** (summary provided in Table B-7 of **Appendix 26**). The method quantifies the three components that contribute to the calculation of habitat quality under the OAG: site condition, site context, and species stocking rate. Appendix C of **Appendix 26** presents a summary of the impact habitat quality score inputs and justifications to be used in the OAGs. Table 7-2 presents the impact habitat quality score for each relevant MNES.

Table 7-2 Impact Area Habitat Quality Scores

MNES	Habitat quality score (out of 10)
Squatter pigeon (southern)	6
Greater glider	6
Koala	5
Poplar Box TEC	7

7.4 Property for Offsets

7.4.1 Kemmis Creek Overview

Based on the BOS planning process, an existing relationship with the landholder and positive sentiment, further assessment was undertaken at the Kemmis Creek property to inform the OAMP.

Kemmis Creek (Lot 12 SP 303309) is within the Northern Bowen Basin Subregion of the Brigalow Belt Bioregion. State and Regional Significant Corridors overlap the property, representing areas of biodiversity significance of land in a bioregion mapped by the Queensland Government (Figure 7-2). The mapping of such corridors within the Brigalow Belt Bioregion has focussed on those corridors that link adjacent bioregions or are considered to connect wildlife refugia. The location of the Kemmis Creek (including the proposed offset area in the west of the property) partially overlaps with a State Significant Corridor along the higher elevational range country that traverses the property from north to south (Figure 7-2).

Kemmis Creek is a leasehold property managed for cattle grazing. Preliminary surveys of the wider Kemmis Creek property were undertaken to refine the preferred offset investigation area. These surveys identified that Kemmis Creek is subject to impacts from historical grazing, with land around artificial waterpoints showing the greatest impact of trampling and compaction of soil. Heavy grazing was noted in sporadic patches throughout the property, often concentrated in lowland alluvial systems. Facilitation of weed transportation and establishment was evident across much of the property, and particularly within areas of RE 11.3.25 corresponding to the beds and banks of Walker Creek in the west. Evidence of pest animals were observed on the site (including deer, rabbits and wild dogs), with management for pest animals to be proposed as part of any OAMP. Large areas of erosion were observed in the assessed REs in the south of the property, associated with drainage lines.

Within the wider landscape, Kemmis Creek offset is well connected to large tracts of remnant vegetation immediately to the west of the property, which remains largely free of active mining tenure. Kemmis Creek provides an important link connecting an intact remnant patch to the west of the property with remnant vegetation extending to the Homevale National Park east of the property (Figure 7-2).

The property is located in the very north of the Isaac River drainage sub-basin of the Fitzroy drainage basin. Drainage features and watercourses flow on and through the property, including Kemmis Creek, Walker Creek, Absent Creek, Middle Creek, Brumby Creek and Bee Creek.

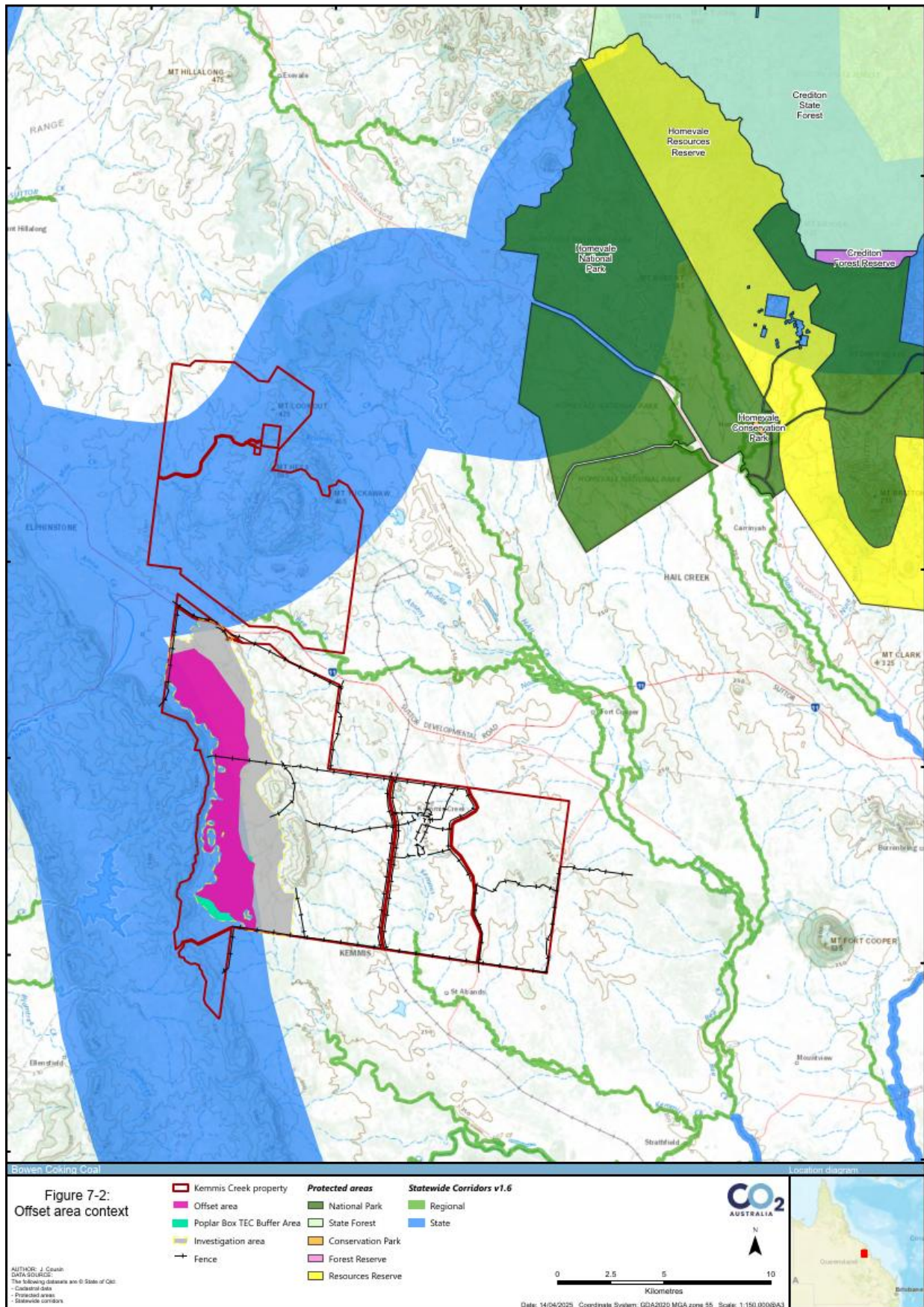


Figure 7-2 Offset Area Context

7.4.2 Offset Areas within Kemmis Creek

Within Kemmis Creek the following areas, as shown in Figure 7-3, were defined based on ecological field surveys and engagement with the landholder (see Section 7.5.1):

- Offset investigation area (referred to as the ‘investigation area’), comprising 4,200 ha
- Preferred offset area (referred to as the ‘offset area’), comprising 2,213 ha, contained within the offset investigation area

The OAMP focusses on the preferred offset area, which centres around Walker Creek. Whilst a preferred offset area is presented in the OAMP, the final location of the offset area will be subject to landholder agreement and preferences, but within the offset investigation area. The final offset area location will be materially similar to the preferred option, given the same regional ecosystems, with the habitat quality scores and OAG calculations to remain the same. The preferred offset area will contain the entirety of the mapped Poplar Box TEC (RE 11.3.2) within the investigation area, along with all areas of RE 11.3.4 and RE 11.3.25. The balance of the offset area consists of the same areas of RE 11.9.7, with the latter three REs fully acquitting the offsets for Koala, Greater Glider and Squatter Pigeon (Southern).

The coordinates of the preferred offset area are provided in Appendix F of **Appendix 26**.

The results of the detailed field surveys, described in Section 7.5.1, were used to inform application of the OAG to calculate the percentage of the Project impacts to be offset for each MNES within the Kemmis Creek offset area. A summary of the OAG inputs and supporting justifications are presented in Section 7.5.4 and Appendix E of **Appendix 26**.

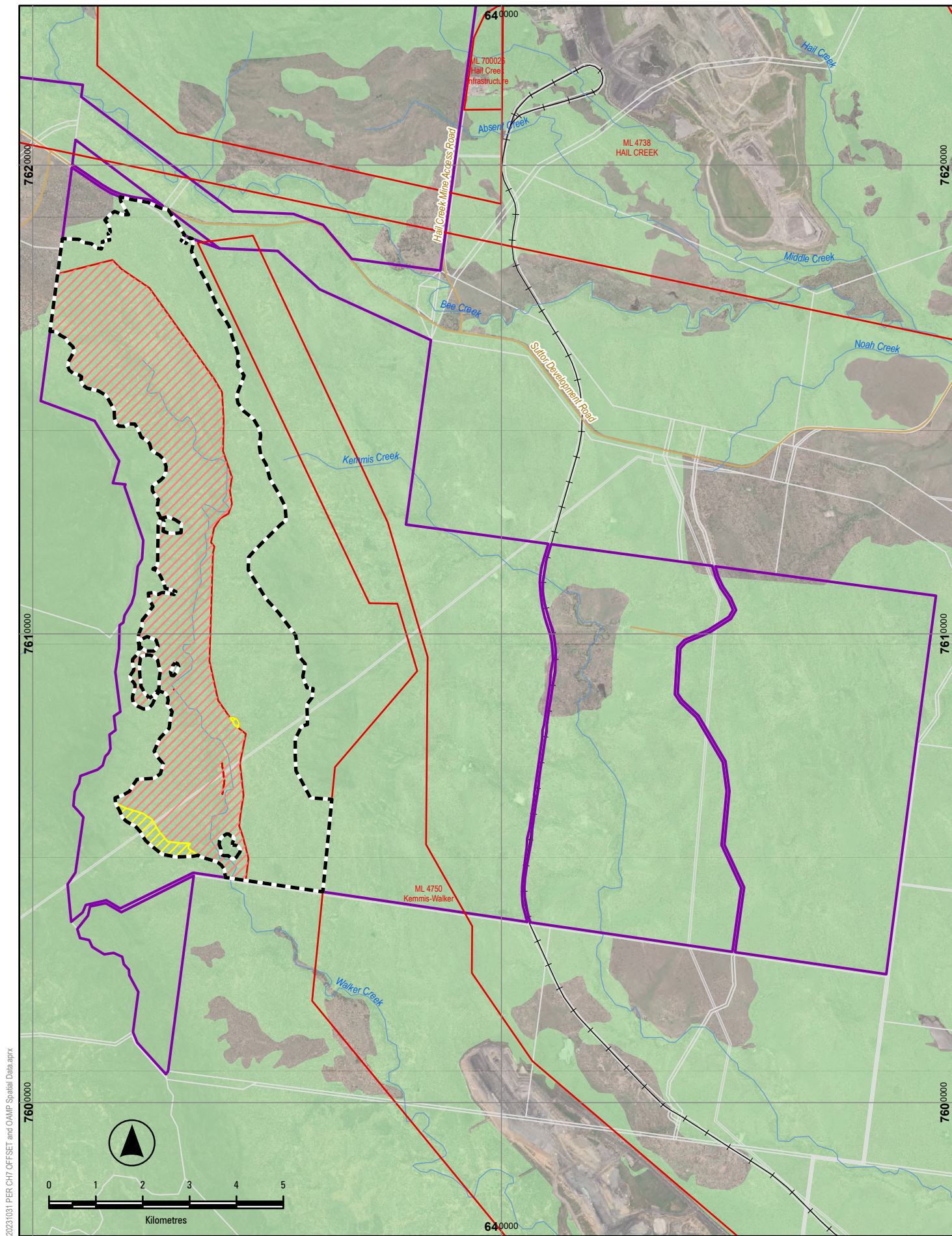
Table 7-3 presents a summary of the Project’s MNES offset requirements and the offset area to be secured on Kemmis Creek to acquit the Project’s impacts. Based on the OAG inputs and extent of suitable MNES habitat present, the Kemmis Creek offset area is able to fully acquit offset requirements for Koala, Squatter Pigeon, Greater Glider and Poplar Box TEC (with a reduction in the Poplar Box TEC impact area of 6 ha from 112 ha to 106 ha). If the Poplar Box TEC impact area is not reduced, then the Kemmis Creek offset area will acquit 94.7 % offset requirements for Poplar Box TEC.

The habitat required for Koala, Squatter Pigeon (Southern) and Greater Glider is co-located within the offset area, namely REs 11.9.7, 11.3.2, 11.3.4 and 11.3.25.

If the Poplar Box TEC impact area is not reduced, then Poplar Box TEC acquittal in the Kemmis Creek offset area meets the minimum requirement of a 90 % direct (land-based) offset for the full impact area as per the Environmental Offsets Policy. The remaining 5.3 % offset acquittal shortfall will be delivered as a compensatory measure, namely additional remnant vegetation areas contiguous with Poplar Box TEC vegetation to act as a buffer for edge effects around the TEC. A 58 ha Poplar Box TEC ‘compensatory offset area’ (Figure 7-3) (also referred to as the ‘Buffer Area’) has been identified in the offset investigation area, representing at least a 100 m buffer to Poplar Box TEC offset habitat areas. This buffer is larger than the recommended minimum buffer zone of 30 m as defined in the Conservation Advice for Poplar Box TEC. Per the Conservation Advice for Poplar Box TEC, a buffer zone is a ‘contiguous area immediately adjacent to a patch of the Poplar Box Grassy Woodland that is important for protecting its integrity’. The purpose of the Buffer Area is to minimise any risk of damage from actions close to the patch of TEC. Known threats to the TEC that can be minimised with a buffer zone include weed invasion, inappropriate fire and grazing regimes by livestock or invasive fauna, chemical drift, hydrological changes, and changes to soil structure such as erosion. The Buffer Area identified as the compensatory offset area (should the impact area not be reduced by 6 ha) will be managed and monitored as part of the greater Kemmis Creek offset area to ensure threats to the Poplar Box TEC are minimised.

Table 7-3 Offset Requirements

MNES matter	EPBC Act Status	Impact area (ha)	Offset area on Kemmis Creek (ha)	Offset starting habitat quality	Offset requirement acquitted on Kemmis Creek?	Percent of impact acquitted on Kemmis Creek ^A	Area required for 100% acquittal (ha)
Threatened fauna species							
Koala (<i>Phascolarctos cinereus</i>)	Endangered, Vulnerable (at date of Referral)	327	2,213	7	Yes	107.54%	2,059
Squatter Pigeon (southern) (<i>Geophaps scripta scripta</i>)	Vulnerable	192.31	2,213	7	Yes	152.62%	1,452
Greater Glider (<i>Petauroides volans</i>)	Endangered, Vulnerable (at date of Referral)	292.54	2,213	7	Yes	100.01%	2,213
Threatened ecological community							
Poplar Box TEC (with a 5.91 ha reduction in impact area)	Endangered	106.34	1,020	8	Partially	100.00%	1,020
Poplar Box TEC Buffer Area (only required if no reduction in impact area from 112.25 ha to 106.34 ha)	-	-	58 ^B	-	-	-	-
A - Calculated using the EPBC Act OAG. B - Represents the area required to meet the 5.26% offset acquittal shortfall for Poplar Box TEC, calculated in an OAG using the same OAG inputs as for the Poplar Box TEC OAG.							



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CO₂
Australia

- LEGEND**
- ML
 - Cadastral Boundary
 - Kemmis Creek
 - Waterway
 - Roads
 - Railway
 - Remnant Vegetation
 - Offset Investigation Area
 - Poplar Box TEC Compensatory Area
 - Preferred Offset Area

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ARGO
NATURAL RESOURCES

Offset Investigation Area
 and Preferred Offset Area

7.4.3 Alternative for Poplar Box TEC Offsets within Kemmis Creek

As an alternative to the proposed 58 ha Poplar Box TEC ‘compensatory offset area’ (representing a 5.3 % offset acquittal shortfall), the proponent can reduce impacts on Poplar Box TEC at the impact site (i.e. the Project area). Utilising the OAG calculator and maintaining all inputs constant, other than a reduction in impact area from 112.25 ha to 106.34 ha (i.e. a reduction of 5.91 ha), results in there being sufficient area at Kemmis Creek to acquit 100% of the Poplar Box TEC offsets (see Table 7-3).

The precise location of the reduced impact of 5.95 ha on Poplar Box TEC at the impact site will be determined during Project detailed design. Whilst the PER is based on a 112.25 ha Poplar Box TEC impact area (requiring a 58 ha Poplar Box TEC ‘compensatory offset area’); if the reduction in impact area was achieved this would remove the requirement for the Poplar Box TEC ‘compensatory offset area’ at Kemmis Creek. Based on the Poplar Box TEC impact area mapping (see Figure 6-13), there is scope for avoidance of 5.95 ha of Poplar Box TEC at the impact site.

7.4.4 Legal Security

Offsets for the Project will be secured via a legally binding mechanism that is considered appropriate for protecting the MNES values in the offset areas on the offset properties.

Such mechanisms include:

- Voluntary Declaration under the VM Act
- Statutory covenant under the *Land Title Act 1994* or the *Land Act 1994*
- Nature Refuge under the *Nature Conservation Act 1992* (NC Act).

An overview and comparison of each of these legally binding mechanisms is provided in Table 9 of **Appendix 26**. The mechanisms to legally secure offset areas are linked to an approved management approach (e.g. an application for a Voluntary Declaration must be accompanied by an approved OAMP). Therefore, the appropriate legally binding mechanism process for each offset area will commence post approval of the relevant OAMP by the Commonwealth (and State where relevant).

Offset areas on Kemmis Creek are proposed to be legally secured through a Voluntary Declaration under the VM Act, subject to necessary further discussions between the proponent, the regulators and the landholders.

7.5 Suitability of Habitat in the Proposed Offset Area

7.5.1 Ecological Survey and Landholder Engagement

A preliminary field survey of the Kemmis Creek property was undertaken in July 2023 to ground-truth the vegetation on Kemmis Creek and refine regional ecosystem (RE) mapping. This included mapping of any remnant and regrowth areas generally in accordance with the Methodology for Survey and Mapping of Regional Ecosystems and Vegetation Communities in Queensland Version 6.0 (Neldner et al. 2022). The OAMP (**Appendix 26**) incorporates the results of preliminary field surveys at Kemmis Creek in July 2023, including ground-truthed REs within the proposed offset investigation area, the quantum of potential offset area for relevant MNES available, as well as likely management requirements and risks and threatening processes to ensure compatibility with environmental offsets.

In February 2024 detailed field assessments of the Kemmis Creek investigation area were undertaken for the purpose of collating information sufficient to prepare an OAMP. The investigation area (see Figure 7-3) is centred on areas of habitat consistent with Poplar Box TEC, as well as habitat for the other MNES species. The investigation area has been identified in consultation with the landholder.

As part of detailed fieldwork, baseline habitat condition of the investigation area was assessed for relevant MNES offset values, vegetation mapping was finalised and management requirements to inform the

preparation of an OAMP were collated. This survey confirmed the presence of koala and squatter pigeon within the investigation area. In June 2024, additional targeted surveys of greater glider (southern and central) were undertaken within the investigation area. These additional surveys resulted in the positive identification of 11 individual greater gliders.

Details of field surveys are provided in the OAMP (Section 2.3 of **Appendix 26**). Detailed field surveys were undertaken generally in accordance with the Guide to Determining Terrestrial Habitat Quality version 1.3 (GTDTHQ) (DES, 2020).

The offset investigation area within Kemmis Creek excludes areas of overlapping production resource tenures (e.g. mining leases and petroleum leases) – see Figure 7-3.

7.5.2 Survey Results

7.5.2.1 Vegetation

Detailed field assessments were undertaken within the investigation area. The area comprises eucalypt woodlands on early Triassic sandstone, with dissecting Quaternary-age alluvial channels (associated with Walker Creek) and flood plains to the west of Walker Creek. A summary of the ground-truthed REs within the offset area (inclusive of RE 11.9.9 and a small portion of RE 11.9.7 within the Poplar Box TEC Buffer Area), including a description of those communities, is presented in Table 7-4. The location of ground-truthed REs within the investigation area and offset area is shown in Figure 7-4. Detailed descriptions of these REs are provided in Section 3 of **Appendix 26**.

Table 7-4 Ground-truthed Regional Ecosystems in the Offset Area

RE	Status ¹	Description	Area (ha)
11.9.7	OC	<i>Eucalyptus populnea</i> , <i>Eremophila mitchellii</i> shrubby woodland on fine-grained sedimentary rocks	708.04 (+1.95 ²)
11.9.9	LC	<i>Eucalyptus crebra</i> woodland on fine-grained sedimentary rocks	56.07 ²
11.3.2	OC	<i>Eucalyptus populnea</i> woodland on alluvial plains	1,019.97
11.3.4	OC	<i>Eucalyptus tereticornis</i> and/or <i>Eucalyptus spp.</i> woodland on alluvial plains	197.16
11.3.25	LC	<i>Eucalyptus tereticornis</i> or <i>E. camaldulensis</i> woodland fringing drainage lines	287.51
Total			2,270.68
1 Vegetation Class under the Vegetation Management Act 1999 (Qld; VM Act): OC = Of Concern, LC = Least Concern.			
2 Area comprising the Poplar Box TEC Compensatory Offset Area (Buffer Area)			

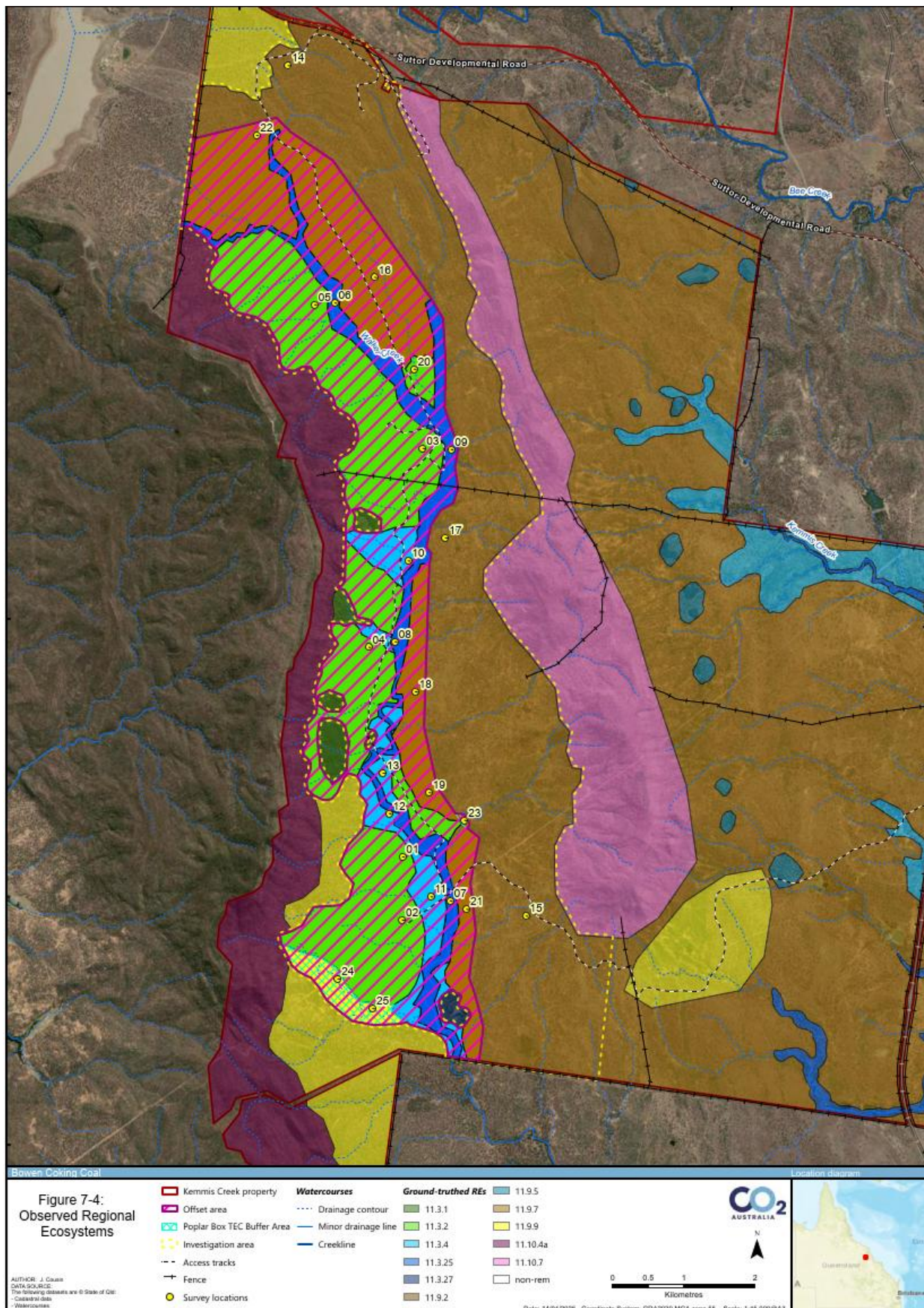


Figure 7-4 Observed Regional Ecosystems

7.5.2.2 Habitat for MNES

Habitat for Koala, Greater Glider, Squatter Pigeon (southern) and Poplar Box TEC has been identified within the investigation area and offset area, as shown in Figure 7-5. Section 4 of **Appendix 26** provides a detailed description of habitat suitability for the MNES listed in Table 7-1.

Squatter Pigeon

Squatter Pigeon (Southern) habitat within the proposed offset area comprises 2,701 ha of ground-truthed remnant RE 11.9.7, 11.3.2, 11.3.4 and 11.3.25. The offset area comprises suitable foraging and breeding habitat for Squatter Pigeon (Southern) in the vicinity of Walker Creek, as well as upslope areas with appropriate grassy woodland habitat. These REs are considered appropriate habitat for Squatter Pigeon (Southern), represented by eucalypt grassy on fine-grained sedimentary rocks (RE 11.9.7), and along alluvial channels and plains (RE 11.3.2, 11.3.4 and 11.3.25). All areas of Squatter Pigeon (Southern) offset habitat support eucalypt and acacia-dominated remnant open-forest to open-woodland with a patchy, open grassy understorey. The entire offset area is within 3 km of permanent (artificial) or seasonal waterbodies, with much of the offset area within 1 km.

During ground-truthing surveys, the presence of Squatter Pigeon (Southern) was confirmed in the offset area, with over 10 individuals recorded in various groups within the north and south of the offset area (in RE 11.3.2 and 11.9.7) as well as at other locations within the Kemmis Creek property (Figure 7-5).

Greater Glider

Greater Glider habitat within the proposed offset area comprises 2,701 ha of ground-truthed remnant RE 11.9.7, 11.3.2, 11.3.4, and 11.3.25. This habitat is located throughout the Kemmis Creek offset area, including lowland areas in the vicinity of Walker Creek as well as upland areas supporting eucalypt woodland for foraging. RE 11.3.25 and RE 11.3.4 provide potential denning and foraging habitat for Greater Glider, with large, hollow-bearing and hollow-forming trees (an important habitat feature for the species) identified throughout alluvial REs. Several locations along Walker Creek supported large *Eucalyptus tereticornis* trees, which are known to be a preferred denning tree for the species and hollow-bearing *E. populnea* were abundant on adjacent alluvial plains.

During targeted Greater Glider surveys undertaken in June 2024, 11 individuals were identified within the offset area. All individuals were observed along or adjacent to Walker Creek, primarily in RE 11.3.25, although four individuals were also found in RE 11.3.4 and the boundary of RE 11.3.2, in large eucalypts (Figure 7-5).

Koala

Koala habitat within the proposed offset area comprises 2,701 ha of ground-truthed remnant RE 11.9.7, 11.3.2, 11.3.4, and 11.3.25. The offset area comprises suitable foraging and breeding habitat for Koala, particularly within remnant riparian vegetation adjacent Walker Creek. Important Koala habitat trees found to be dominant in areas across the offset area included *E. populnea*, *E. crebra*, and *E. tereticornis* (dominant canopy species through RE 11.3.25 and prevalent within RE 11.3.4). Each of these REs are considered suitable habitat, with a high level of connectivity facilitating dispersal of Koalas across the landscape.

An individual Koala was observed during a spotlighting event in February 2024 within the offset area along Walker Creek in an *E. crebra* tree in vegetation mapped as RE 11.3.25 (Figure 7-5). In addition, the landholder noted that Koalas had been observed at the property previously.

Poplar Box TEC

Poplar Box TEC within the offset area comprises 1,020 ha of ground-truthed remnant RE 11.3.2 on Quaternary age clay, silt and sandy alluvium and alluvial fans. Vegetation ground-truthed as RE 11.3.2 was assessed against the key diagnostic characteristics for Poplar Box TEC, being the following:

- a tree crown cover of 10% or more at the patch scale
- a tree canopy dominated by *E. populnea* and capable of reaching 10m or more in height
- a mid-layer (1-10m) crown cover of shrubs to small trees 30% or less
- a ground layer mostly dominated across a patch by native grasses, other herbs and occasionally chenopods.

Based on the field survey measurements, areas of RE 11.3.2 across the offset area were considered to satisfy the key diagnostic characteristics of the Poplar Box TEC.

Should the impact area of Poplar Box TEC not be reduced, then to assist in the management of threats to Poplar Box TEC, a Buffer Area (at least 100m wide) will be managed and monitored as part of the offset.

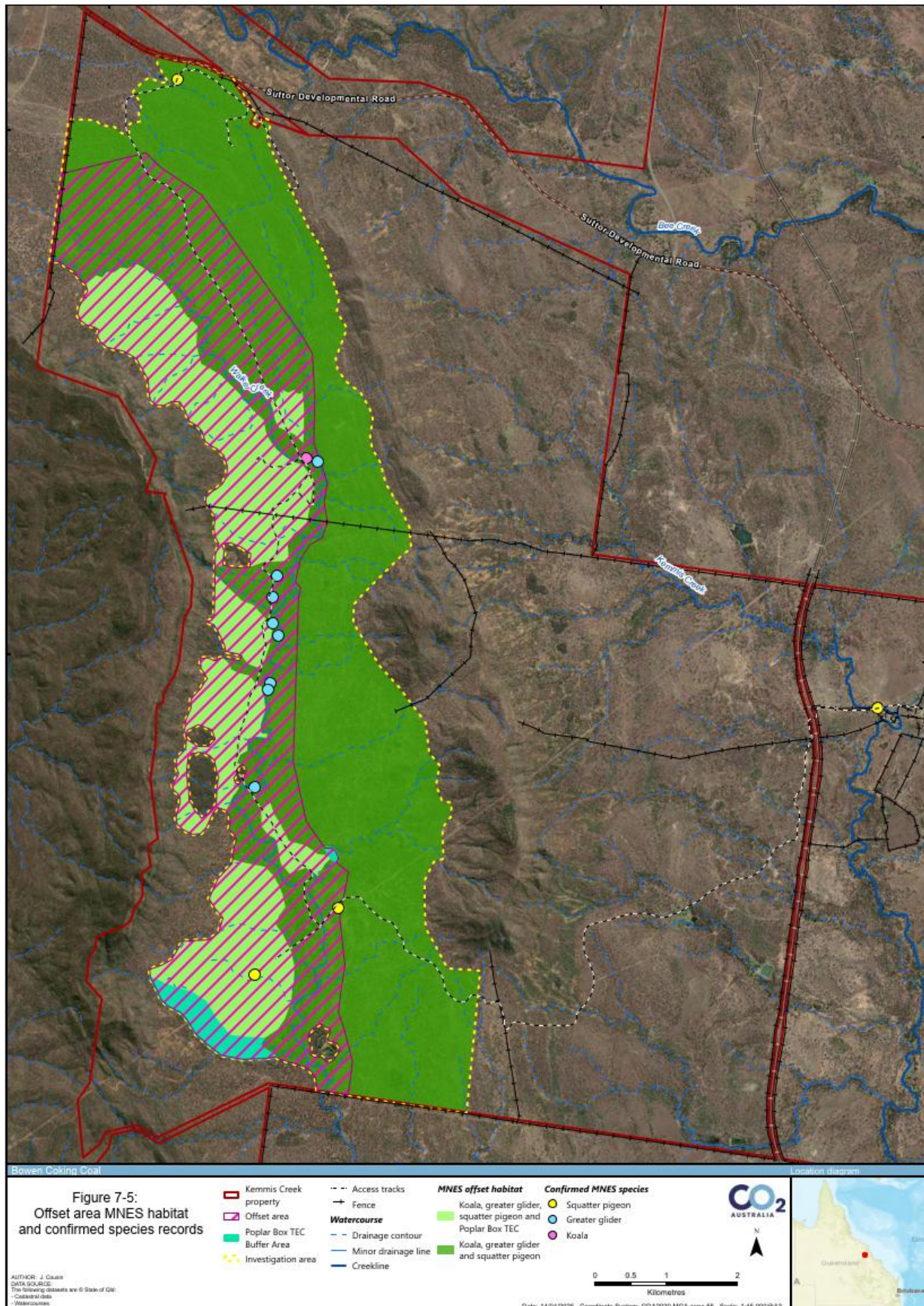


Figure 7-5 Offset Area Habitat for MNES and Confirmed Species Records

7.5.3 Offset Area Habitat Quality

The habitat quality scoring method is described in Appendix C of **Appendix 26**. The habitat quality score for each MNES has been calculated generally in accordance with the GTDTHQ (version 1.3) with the methods used being consistent with the requirements under the EPBC Act OAG.

The habitat quality for each MNES for use in the EPBC Act OAG is required to consider three attributes:

- site condition
- site context
- species stocking rate.

All three components have been assessed for threatened fauna; however, for threatened ecological communities (i.e. Poplar Box TEC) only site condition and site context components inform the habitat quality score.

Appendix A of **Appendix 26** presents a detailed summary of the results of the baseline habitat quality assessments for each MNES within the offset area.

Tables A1 to A3 of **Appendix 26** provide a summary of the data used to calculate the baseline habitat quality score for MNES used in the EPBC Act OAG in accordance with the GTDTHQ. The data required to inform the site condition and the fauna species habitat index scores were collected as part of detailed field surveys in February 2024 and June 2024. The site context score was calculated based on a desktop assessment following the method prescribed in the GTDTHQ (version 1.3).

The offset area habitat quality scores presented in Table 7-3 (summarised in Table A-4 of **Appendix 26**) were determined based on the data collected during baseline field surveys.

Results of site condition surveys (particularly biocondition values presented in Tables A1 to A3 of **Appendix 26**) indicate that weed load, especially *Lantana camara* was substantial, with little evidence of management in the offset area. Additionally, results of motion sensor cameras and incidental observation indicate that pest animal species, especially chital deer, are prevalent within the offset area with little evidence of current landholder management causing a reduction in number across surveying events. Therefore proposed management actions (see Section 7.6.7) are additional to the existing requirements of the landholder in managing their land

7.5.4 Offset Assessment Guide Inputs

Appendix E of **Appendix 26** provides the OAG inputs and supporting justification for MNES in the offset area. Table 7-5 to Table 7-8 (also Table E-1 to Table E-4 of **Appendix 26**) present the following:

- Project impact habitat quality score data for Koala, Squatter Pigeon (southern), Greater Glider and Poplar Box TEC, respectively
- inputs and justifications for the OAG inputs for proposed offset area for each MNES.

The OAG calculator for each MNES is presented following Table E-1 to Table E-4 of **Appendix 26**.

Table 7-5 Koala Offsets Assessment Guide

Input	Score	Justification
Quality of impact area	5	Koala habitat within the immediate vicinity of the Project area was assessed and defined in Appendix 12. Direct impacts of the Project on Koala habitat totals 327 ha compromising primarily remnant RE 11.3.2, as well as remnant REs 11.3.7, 11.3.36, 11.9.7a, 11.3.4, 11.9.7a, 11.3.25, 11.8.5 and non-remnant REs 11.3.25 and 11.8.5. The quality of Koala habitat within the Project impact area was calculated generally in accordance with the GTDTHQ. The scoring method is outlined in Appendix C of Appendix 26. The impact habitat quality score is outlined in Appendix B of Appendix 26 and was determined to be 5/10.

Input	Score	Justification
Quality of offset area	7	The offset management area for Koala on Kemmis Creek is 2,213 ha (107.54% of impact acquitted). Quality was assessed in accordance with the GTDTHQ based on the results of preliminary field surveys in July 2023 and detailed field surveys in February 2024, which identified a habitat quality score of 7.1/10.
Future quality without offset management	7	The main threats to Koala include habitat loss and fragmentation, vehicle strike and predation by dogs (DAWE 2022). Kemmis Creek is currently used for cattle grazing which has the potential to suppress the regeneration of regrowth vegetation in areas that have been previously cleared. In addition, the potential presence of feral animals such as wild dogs have the potential to impact on Koala populations in the offset area. Without offset management it has been conservatively calculated that the habitat quality of the offset area will remain over time at 7/10.
Future quality with offset management	8	The quality of habitat for Koala will be improved and maintained through the establishment of an offset area on Kemmis Creek. Future quality of the offset represents the ecological gain that can be achieved over 20 years of active land management practices to improve the ecological condition of habitat for the species. The OAMP has been developed which details generic property specific management actions, and a suite of management actions that are specific to or targeted for Koala. Specific management actions for the Koala have been developed in accordance with approved conservation advice and recommended threat abatement and management advice for the species. Examples of these management actions include: • pest animal management to reduce mortality due to dog attacks – a pest animal control program will be undertaken to reduce the number pest animals, including dogs, that may predate on the Koala. Methods may include shooting and/or baiting. • pest animal management to reduce numbers of chital deer (Axis axis) – a pest animal control program will be undertaken to reduce the number of pest animals, including deer to assist in the recruitment of native seedlings. Methods may include shooting. • weed management on the property to reduce the spread of lantana (Lantana camara) to aid in the recruitment of seedlings. • cattle grazing management to improve the condition of habitat by reducing the spread of weeds such as lantana and manage soil quality and erosion– cattle will be excluded from the offset area except during strategic grazing events. • restricted access to reduce mortality due to vehicle strikes – access to the offset area will be restricted to authorised personnel only, with any vehicle movement limited to designated access track, and ensuring driving speeds are limited to 40 km/hr. This will reduce the risk of vehicle strike. • fire management to minimise the risk and impacts of unplanned fire and improve habitat quality through controlling weeds and supporting development of structural components of offset values.
Confidence in result – future quality	80%	Through the implementation of the OAMP with specific management objectives and measurable outcomes aimed at improving the quality of Koala habitat, there is a high degree of confidence that the future quality score can be achieved. This is reflected in the 80% confidence in result. Biodiversity monitoring will also be conducted as part of the OAMP to measure the progress of the offset area and ensure the OAMP achieves its required outcomes. However, there is inherent risk associated with ecological restoration. As recognised in the Society for Ecological Restoration primer which states that, ‘restoration attempts to return an ecosystem to its historic trajectory. Historic conditions are therefore the ideal starting point for restoration design. The restored ecosystem will not necessarily recover its former state, since contemporary constraints and conditions may cause it to develop along an altered trajectory. The historic trajectory of a severely impacted ecosystem may be difficult or impossible to determine with accuracy.’ This uncertainty is also reflected in the confidence in result – future quality score.

Input	Score	Justification
Risk of loss without offset	0.42%	The clearing of remnant vegetation in Queensland is regulated by the <i>Vegetation Management Act 1999</i> (VM Act) and the <i>Planning Act 2016</i> (Qld) and associated policies and codes. This framework identifies vegetation as one of four categories, varying in their degree of restriction on permissible clearing. Under the VM Act, an application must be made to the Queensland Government to clear remnant vegetation (Category B) unless an exemption applies. The VM Act prevents broad-scale clearing of remnant vegetation for agriculture or other development activities; however, clearing of some remnant vegetation for resource development purposes (e.g. mining) is allowed. The VM Act allows clearing of category X areas without requiring landholders to obtain approval. Areas mapped as category X are not subject to vegetation clearing codes and therefore have the potential to be cleared by the current or future landholders at any time. Pastoralists are motivated to clear vegetation for a variety of reasons; however, historically a combination of favourable conditions and higher commodity prices have coincided with increased rates of clearing. Market conditions over the coming years look to continue to put pressure on pastoralists to increase production which inevitably leads to higher rates of clearing. This is supported by clearing rates for regrowth vegetation increasing every year since. Historical clearing has disproportionately impacted vegetation on the most fertile soil, such as eucalypt woodlands on alluvial flats and Brigalow vegetation on clay plains. Expert estimates of the likelihood of clearing regrowth of alluvial ecosystems are as high as 90%. Notwithstanding the property-specific decisions influencing any landholder's decision to clear, the risk that areas will be cleared resulting in the complete loss of habitat for MNES within the next 20 years, is considered to be 0.42%. This percentage reflects the average annual background rate of loss (2005 – 2014) within the Isaac Regional Council LGA as outlined in the Guidance for deriving 'Risk of Loss' estimates when evaluating biodiversity offset proposals under the EPBC Act document prepared by Maseyk et al. (2017).
Risk of loss with offset	0%	The offset area is proposed to be secured through declaration as an area of high nature conservation value under section 19F of the VM Act.
Confidence in result – risk of loss	90%	The legally binding mechanism will preclude all development except where the Queensland Government authorises an activity and offsets for both the original offset and any protected matters present on site are provided. Consequently, the resultant difficulty and expense acts as a strong disincentive for development within a protected offset area.
Time over which loss is averted (years)	20	The offset area will be protected by a legally binding mechanism which will remain in effect as required by the applicable State and Commonwealth legislative requirements, therefore, the time over which loss is averted is afforded the maximum allowable time of 20 years.
Time until ecological benefit (years)	20	The implementation of site-specific land management actions through the development and application of an OAMP is expected to increase the quality of the offset area by improving vegetation condition and reducing potential threats to MNES habitat. An ecological benefit is expected to be realised in 20 years. It is estimated that it will take 20 years for Koala habitat within the offset area to realise a habitat quality score improvement of 1 point. This increase in the habitat quality score will principally be achieved by: - reducing mortality through the implementation of a pest animal management plan. Should Koalas be utilising the offset area, this will result in an ecological benefit to the species within a relatively short timeframe and will result in an increase in the habitat species index score. - improving the general condition of habitat through the implementation of a strategic grazing regime, fire regime and weed control program which will result in an improvement in the site condition score within the 20-year timeframe.

Table 7-6 Squatter Pigeon (Southern) Offsets Assessment Guide

Input	Score	Justification
Quality of impact area	6	Squatter Pigeon (Southern) habitat within the immediate vicinity of the Project area was assessed and defined in Appendix 12 to comprise primarily alluvial vegetation communities on the impact site. Clearing associated with direct impacts of the Project on Squatter Pigeon (Southern) habitat totals 192.3 ha supporting primarily RE 11.3.2 as well as REs 11.8.5, 11.3.36 and 11.9.7a. This comprises 150 ha of potential breeding habitat and 42 ha of potential foraging habitat. The quality of Squatter Pigeon (Southern) habitat within the Project impact area was calculated generally in accordance with the GTDTHQ. The scoring method is outlined Appendix C of Appendix 26. The impact habitat quality score is outlined in Appendix B of Appendix 26 and was determined to be 6/10.
Quality of offset area	7	The offset management area identified for Squatter Pigeon (Southern) is 2,213 ha (152.62% of impact acquitted). Quality was assessed in accordance with the GTDTHQ based on the results of preliminary field surveys in July 2023 and detailed field surveys in February 2024, which identified a habitat quality score of 7.2/10.
Future quality without offset management	7	Grazing by livestock and the prevalence of exotic pasture grasses may decrease the quality of Squatter Pigeon (Southern) habitat on Kemmis Creek. Overgrazing and the spread of invasive weeds are known threats to the Squatter Pigeon (Southern) and its habitat. In addition, inappropriate fire regimes may impact on the quality of habitat for Squatter Pigeon (Southern) in the offset area. Without offset management habitat quality of the offset area is predicted to remain over time at 7/10.
Future quality with offset management	8	The quality of habitat for Squatter Pigeon (Southern) will be improved and maintained through the establishment of an offset area on Kemmis Creek. Future quality of the offset represents the ecological gain that can be achieved over 20 years of active land management practices to improve the ecological condition of habitat for the species. The OAMP has been developed which details generic property specific management actions, and a suite of management actions that are specific to or targeted for Squatter Pigeon (Southern). Specific management actions for Squatter Pigeon (Southern) have been developed in accordance with approved conservation advice and recommended threat abatement and management advice for the species. Examples of these management actions include: • cattle grazing management to reduce habitat degradation – cattle will be excluded from the offset areas except during strategic grazing events. Strategic grazing events will be undertaken in the offset area in order to reduce fuel loads and control exotic pasture grasses including buffel grass. Periods of grazing will be followed by an extended period of rest and stocking rates will depend on seasonal conditions and pasture growth. • weed control to reduce habitat degradation –actions to control and prevent the spread of exotic grasses and other weed species in the offset area. • pest animal management to reduce predation – a pest animal control program will be undertaken to reduce the number of pest animals that may predate on the Squatter Pigeon (Southern). Methods may include the baiting of feral cats and foxes.

Input	Score	Justification
Confidence in result – future quality	80%	Through the implementation of the OAMP, detailing specific management objectives and measurable outcomes aimed at improving the quality of Squatter Pigeon (Southern) habitat, there is a high degree of confidence that the future quality score can be achieved. This is reflected in the 80% confidence in result. Biodiversity monitoring will also be conducted as part of the OAMP to measure the progress of the offset area and ensure the OAMP achieves its required outcomes. However, there is inherent risk associated with ecological restoration. As recognised in the Society for Ecological Restoration primer which states that, ‘restoration attempts to return an ecosystem to its historic trajectory. Historic conditions are therefore the ideal starting point for restoration design. The restored ecosystem will not necessarily recover its former state, since contemporary constraints and conditions may cause it to develop along an altered trajectory. The historic trajectory of a severely impacted ecosystem may be difficult or impossible to determine with accuracy.’ This uncertainty is also reflected in the confidence in result – future quality score.
Risk of loss without offset	0.42%	The clearing of remnant vegetation in Queensland is regulated by the VM Act and the <i>Planning Act 2016</i> (Qld) and associated policies and codes. This framework identifies vegetation as one of four categories, varying in their degree of restriction on permissible clearing. Under the VM Act, an application must be made to the Queensland Government to clear remnant vegetation (Category B) unless an exemption applies. The VM Act prevents broad-scale clearing of remnant vegetation for agriculture or other development activities; however, clearing of some remnant vegetation for resource development purposes (e.g. mining) is allowed. The VM Act allows clearing of category X areas without requiring landholders to obtain approval. Areas mapped as category X are not subject to vegetation clearing codes and therefore have the potential to be cleared by the current or future landholders at any time. Pastoralists are motivated to clear vegetation for a variety of reasons; however, historically a combination of favourable conditions and higher commodity prices have coincided with increased rates of clearing. Market conditions over the coming years look to continue to put pressure on pastoralists to increase production which inevitably leads to higher rates of clearing. This is supported by clearing rates for regrowth vegetation increasing every year since 2012. Historical clearing has disproportionately impacted vegetation on the most fertile soil, such as eucalypt woodlands on alluvial flats and Brigalow vegetation on clay plains. Expert estimates of the likelihood of clearing regrowth of alluvial ecosystems are as high as 90%. Notwithstanding the property-specific decisions influencing any landholder’s decision to clear, the risk that areas will be cleared resulting in the complete loss of habitat for MNES within the next 20 years, is considered to be 0.42%. This percentage reflects the average annual background rate of loss (2005 – 2014) within the Isaac Regional Council LGA as outlined in the <i>Guidance for deriving ‘Risk of Loss’ estimates when evaluating biodiversity offset proposals under the EPBC Act</i> document prepared by Maseyk et al. (2017).
Risk of loss with offset	0%	The offset area is proposed to be secured through declaration as an area of high nature conservation value under section 19F of the VM Act.
Confidence in result – risk of loss	90%	The legally binding mechanism will preclude all development except where the Queensland Government authorises an activity and offsets for both the original offset and any protected matters present on site are provided. Consequently, the resultant difficulty and expense acts as a strong disincentive for development within a protected offset area.
Time over which loss is averted (years)	20	The offset area has been protected by a legally binding mechanism which will remain in effect as required by the applicable State and Commonwealth legislative requirements, therefore, the time over which loss is averted is afforded the maximum allowable time of 20 years.

Input	Score	Justification
Time until ecological benefit (years)	20	The Squatter Pigeon (Southern) has been observed in the offset area. It is estimated that it will take 20 years for Squatter Pigeon (Southern) habitat within the offset site to realise improvement in habitat quality from 7/10 to 8/10. This is in line with recommended recovery times for natural grassland habitat (Butler 2008) and demonstrated improvement in woodland bird habitat in grassy woodlands (Bowen et al. 2009). This increase in the habitat quality score will principally be achieved by: - reducing the degradation of habitat through the implementation of strategic grazing regimes and weed control programs (i.e. improving site condition score). - reducing predation by known predators, such as feral cats and foxes, through the implementation of pest animal control strategies (i.e. improving species habitat index score). This is in line with recommended recovery times for natural grassland habitat (Butler 2008) and demonstrated improvement in woodland bird habitat in grassy woodlands (Bowen et al. 2009).

Table 7-7 Greater Glider Offsets Assessment Guide

Input	Score	Justification
Quality of impact area	6	Greater Glider habitat within the immediate vicinity of the Project area was assessed and defined in Appendix 12. Clearing associated with direct impacts of the Project on Greater Glider habitat totals 293 ha and comprises primarily remnant RE 11.3.2, as well as remnant REs 11.3.7, 11.3.36, 11.9.7a, RE 11.3.4, 11.3.25, 11.8.5 and non-remnant RE 11.3.7 and non-remnant RE 11.3.25. The quality of Greater Glider habitat within the Project impact area was calculated generally in accordance with the GTDTHQ. The scoring method is outlined in Appendix C of Appendix 26. The impact habitat quality score is outlined in Appendix B of Appendix 26 and was determined to be 6/10.
Quality of offset area	7	The offset management area for Greater Glider is 2,213 ha (100.01% impact acquitted). Quality was assessed in accordance with the GTDTHQ based on the results of preliminary field surveys in July 2023, the detailed field surveys in February 2024 and the targeted surveys in June 2024, a habitat quality score of 6.9/10 was identified.
Future quality without offset management	7	Greater Glider threats include inappropriate fire regimes and habitat clearing, degradation and fragmentation. Areas of cleared habitat limit dispersal ability of Greater Gliders due to the fragmentation of patches of habitat required for connectivity. Extensive land clearing for agriculture has led to an increasingly fragmented landscape. This is also exacerbated by inappropriate fire regimes. Greater Gliders rely on old, large eucalypts for hollows large enough to support denning. Extensive clearing of suitable habitat results in less hollows available to support viable populations. By securing Kemmis Creek as an offset, existing suitable habitat will be protected from felling for the minimum time frame of 20 years the offset is in agreement. Without offset management it has been conservatively calculated that the habitat quality of the offset area will remain over time as 7/10.

Input	Score	Justification
Future quality with offset management	8	The quality of habitat for the Greater Glider will be improved and maintained through the establishment of an offset area on Kemmis Creek. Future quality of the offset represents the ecological gain that can be achieved over 20 years of active land management practices to improve the ecological condition of habitat for the species. The OAMP has been developed which details generic property specific management actions, and a suite of management actions that are specific to or targeted for the Greater Glider. Specific management actions for the Greater Glider have been developed in accordance with approved conservation advice and recommended threat abatement and management advice for the species. Examples of these management actions include: • cattle grazing management to improve the condition of habitat – cattle will be excluded from the offset area except during strategic grazing events. The exclusion of cattle will allow regrowth vegetation in the offset area to regenerate and mature. • pest animal management to reduce impact of predation by wild dogs, cats and foxes – a pest animal control program will be undertaken to reduce the number pest animals that may predate on or disturb the habitat of the Greater Glider. Methods may include the baiting of feral cats, pigs and dingoes.
Confidence in result – future quality	80%	Through the implementation of the OAMP, detailing specific management objectives and measurable outcomes aimed at improving the quality of Greater Glider habitat, there is a high degree of confidence that the future quality score can be achieved. This is reflected in the 80% confidence in result. Biodiversity monitoring will also be conducted as part of the OAMP to measure the progress of the offset area and ensure the OAMP achieves its required outcomes. However, there is inherent risk associated with ecological restoration. As recognised in the Society for Ecological Restoration primer which states that, ‘restoration attempts to return an ecosystem to its historic trajectory. Historic conditions are therefore the ideal starting point for restoration design. The restored ecosystem will not necessarily recover its former state since contemporary constraints and conditions may cause it to develop along an altered trajectory. The historic trajectory of a severely impacted ecosystem may be difficult or impossible to determine with accuracy.’ This uncertainty is also reflected in the confidence in result – future quality score.

Input	Score	Justification
Risk of loss without offset	0.42%	The clearing of remnant vegetation in Queensland is regulated by the VM Act and the <i>Planning Act 2016</i> (Qld) and associated policies and codes. This framework identifies vegetation as one of four categories, varying in their degree of restriction on permissible clearing. Under the VM Act, an application must be made to the Queensland Government to clear remnant vegetation (Category B) unless an exemption applies. The VM Act prevents broad-scale clearing of remnant vegetation for agriculture or other development activities; however, clearing of some remnant vegetation for resource development purposes (e.g. mining) is allowed. The VM Act allows clearing of category X areas without requiring landholders to obtain approval. Areas mapped as category X are not subject to vegetation clearing codes and therefore have the potential to be cleared by the current or future landholders at any time. Pastoralists are motivated to clear vegetation for a variety of reasons; however, historically a combination of favourable conditions and higher commodity prices have coincided with increased rates of clearing. Market conditions over the coming years look to continue to put pressure on pastoralists to increase production which inevitably leads to higher rates of clearing. This is supported by clearing rates for regrowth vegetation increasing every year since 2012. Historical clearing has disproportionately impacted vegetation on the most fertile soil, such as eucalypt woodlands on alluvial flats and Brigalow vegetation on clay plains. Expert estimates of the likelihood of clearing regrowth of alluvial ecosystems are as high as 90%. Notwithstanding the property-specific decisions influencing any landholder's decision to clear, the risk that areas will be cleared resulting in the complete loss of habitat for MNES within the next 20 years, is considered to be 0.42%. This percentage reflects the average annual background rate of loss (2005 – 2014) within the Isaac Regional Council LGA as outlined in the <i>Guidance for deriving 'Risk of Loss' estimates when evaluating biodiversity offset proposals under the EPBC Act</i> document prepared by Maseyk et al. (2017).
Risk of loss with offset	0%	The offset area is proposed to be secured through declaration as an area of high nature conservation value under section 19F of the VM Act.
Confidence in result – risk of loss	90%	The legally binding mechanism will preclude all development except where the Queensland Government authorises an activity and offsets for both the original offset and any protected matters present on site are provided. Consequently, the resultant difficulty and expense acts as a strong disincentive for development within a protected offset area.
Time over which loss is averted (years)	20	The offset area has been protected by a legally binding mechanism which will remain in effect as required by the applicable State and Commonwealth legislative requirements, therefore, the time over which loss is averted is afforded the maximum allowable time of 20 years.
Time until ecological benefit (years)	20	Greater Glider has been observed 11 times throughout the offset area during targeted spotlight searches in June 2024. It is estimated that it will take 20 years for the Greater Glider habitat within the offset area to realise a habitat quality score improvement of 1 point. This increase in the habitat quality score will principally be achieved by: - reducing the degradation of habitat through the exclusion of grazing in areas of known Greater Glider habitat (i.e. improving site condition score). - improving the quality of habitat (structure and composition) through weed control. - reducing potential predators, such as wild dogs, cats and foxes, through the implementation of pest animal control strategies (i.e. improving species habitat index score). - planned and co-ordinated fire management regime to minimise the risk and impacts of unplanned fire and improve habitat quality through controlling weeds and supporting development of structural components of offset values.

Table 7-8 Poplar Box TEC Offsets Assessment Guide

Input	Score	Justification
Quality of impact area	7	Poplar Box TEC was assessed and mapped in Appendix 12 to comprise 112.2 ha of remnant RE 11.3.2, split into 83 ha of high quality condition and 29 ha of moderate quality condition of the ecosystem. A reduction of 5.91 ha in the impact area to 106.34 ha would result in 100% acquittal of the offset requirements for Poplar Box TEC. A lack of large trees, coarse woody debris, native perennial grasses, and high level of weeds and shrub canopy cover were assessed as drawing the site condition score down for the TEC within the impact area. The quality of Poplar Box TEC within the Project impact area was calculated generally in accordance with the GTDTHQ. The scoring method is outlined in Appendix C of Appendix 26. The impact habitat quality score is outlined in Appendix B of Appendix 26 and was determined to be 7/10.
Quality of offset area	8	The offset management area for Poplar Box is 1020 ha (100.00% impact acquitted with a reduction of 5.91 ha in the impact area). Quality was assessed in accordance with the GTDTHQ based on the results of preliminary field surveys in July 2023 and detailed field surveys in February 2024, which identified a habitat quality score of 7.8/10. A 90/10 weighting of site condition to site context was used to calculate habitat quality to take into account the significantly more important contribution of site condition to the integrity and characterisation of Poplar Box TEC than site context.
Future quality without offset management	7	The invasion of weed species such as large exotic grasses, pose a threat to Poplar Box (DCCEEW 2024b). Increased fuel loads and fire frequency associated with a grassy, weedy understorey may also be detrimental to the TEC particularly through hindered regeneration of poplar box trees, but also native grasses and forbs that would otherwise be able to proliferate in the offset management area. With increased demand and prices for cattle, it is anticipated that with a heating and drying climate in the immediate future, additional stresses from greater density of livestock grazing would further impede the integrity of the species richness, diversity and cover of native canopy, shrub, grasses and forbs that represent the Poplar Box TEC. Without offset management, including grazing management reducing pressures on these MNES, it has been conservatively calculated that the habitat quality of the offset area will decrease over time from 8/10 to 7/10.

Future quality with offset management	8	The quality of habitat for the Poplar Box will be at least maintained through the establishment of an offset area on Kemmis Creek. Future quality of the offset represents the ecological gain that can be achieved over 20 years of active land management practices to improve the ecological condition of habitat for the TEC from a scenario of ongoing and additional cattle grazing pressure that would result in a condition loss over 20 years. The OAMP has been developed which details generic property-specific management actions and a suite of management actions that are specific to or targeted for Poplar Box TEC. Specific management actions for the Poplar Box TEC have been developed in accordance with approved conservation advice and recommended threat abatement and management advice for the matter. Examples of these management actions include: • Weed control, particularly for exotic grasses such as buffel grass (<i>Cenchrus ciliaris</i>) that increase fire frequency that can negatively affect healthy regeneration of species consistent with Poplar Box TEC, including recruitment of poplar box (<i>Eucalyptus populnea</i>) as well as other diagnostic species. Actions to control and prevent the spread of exotic grasses and other weed species in the offset area, and promote understorey regeneration, including species diagnostic of poplar box woodland. • Fire management to reduce the frequency of fires, as increased fire frequency affects the healthy regeneration of Poplar Box. Where required, controlled burns will be undertaken in the late wet season/early dry season in order to reduce fuel loads and prevent uncontrolled wildfires. Firebreaks and mosaic burning will be used to break up the offset area and maintain a range of fire ages. • Excluding cattle from the offset areas except during strategic grazing events.
Confidence in result – future quality	90%	Through the implementation of the OAMP, detailing specific management objectives and measurable outcomes aimed at halting the decline in quality of habitat for Poplar Box, there is a high degree of confidence that the future quality score can be maintained at 8/10; precluding a decline to an alternative habitat quality score of 7/10 in the absence of securing as an offset. This is reflected in the 90% confidence in result. Biodiversity monitoring will also be conducted as part of the OAMP to measure the progress of the offset area and ensure the OAMP achieves its required outcomes. However, there is inherent risk associated with ecological restoration. As recognised in the Society for Ecological Restoration primer which states that, ‘restoration attempts to return an ecosystem to its historic trajectory. Historic conditions are therefore the ideal starting point for restoration design. The restored ecosystem will not necessarily recover its former state, since contemporary constraints and conditions may cause it to develop along an altered trajectory. The historic trajectory of a severely impacted ecosystem may be difficult or impossible to determine with accuracy.’ This uncertainty is also reflected in the confidence in result – future quality score.

Risk of loss without offset	0.42%	The clearing of remnant vegetation in Queensland is regulated by the VM Act and the <i>Planning Act 2016</i> (Qld) and associated policies and codes. This framework identifies vegetation as one of four categories, varying in their degree of restriction on permissible clearing. Under the VM Act, an application must be made to the Queensland Government to clear remnant vegetation (Category B) unless an exemption applies. The VM Act prevents broad-scale clearing of remnant vegetation for agriculture or other development activities; however, clearing of some remnant vegetation for resource development purposes (e.g. mining) is allowed. The VM Act allows clearing of category X areas without requiring landholders to obtain approval. Areas mapped as category X are not subject to vegetation clearing codes and therefore have the potential to be cleared by the current or future landholders at any time. Pastoralists are motivated to clear vegetation for a variety of reasons; however, historically a combination of favourable conditions and higher commodity prices have coincided with increased rates of clearing. Market conditions over the coming years look to continue to put pressure on pastoralists to increase production which inevitably leads to higher rates of clearing. This is supported by clearing rates for regrowth vegetation increasing every year since 2012. Historical clearing has disproportionately impacted vegetation on the most fertile soil, such as eucalypt woodlands on alluvial flats and Brigalow vegetation on clay plains. Expert estimates of the likelihood of clearing regrowth of alluvial ecosystems are as high as 90%. Notwithstanding the property-specific decisions influencing any landholder's decision to clear, the risk that areas will be cleared resulting in the complete loss of habitat for MNES within the next 20 years, is considered to be 0.42%. This percentage reflects the average annual background rate of loss (2005 – 2014) within the Isaac Regional Council LGA as outlined in the <i>Guidance for deriving 'Risk of Loss' estimates when evaluating biodiversity offset proposals under the EPBC Act</i> document prepared by Maseyk et al. (2017).
Risk of loss with offset	0%	The offset area is proposed to be secured through declaration as an area of high nature conservation value under section 19F of the VM Act.
Confidence in result – risk of loss	90%	The legally binding mechanism will preclude all development except where the Queensland Government authorises an activity and offsets for both the original offset and any protected matters present on site are provided. Consequently, the resultant difficulty and expense acts as a strong disincentive for development within a protected offset area.
Time over which loss is averted (years)	20	The offset area will be protected by a legally binding mechanism which will remain in effect as required by the applicable State and Commonwealth legislative requirements, therefore, the time over which loss is averted is afforded the maximum allowable time of 20 years.
Time until ecological benefit (years)	20	Ecological benefits for the species can be realised through the implementation of a weed control program targeting weeds that are known threats to the species (i.e. exotic grasses). Exclusion of cattle grazing will also assist in natural regeneration of Poplar Box trees within the offset area in the short to medium term. The implementation of appropriate fire management will also increase the habitat quality score by aiding natural regeneration of the species.

7.5.5 Offset Policy Requirements

Table 7-9 demonstrates how the proposed Kemmis Creek offset area would meet the key overarching requirements of the EPBC Act *Environmental Offsets Policy*.

Table 7-9 Environmental Offsets Policy Requirements

EPBC Act Environmental Offsets Policy requirement	OAMP for the Project
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.	Kemmis Creek offset area fully acquits the offset requirements for the three MNES species (Koala, Squatter Pigeon [Southern] and Greater Glider) and Poplar Box TEC (with a reduction of 5.91 ha in Poplar Box TEC impact area). If there is no reduction in Poplar Box TEC impact area then a 58 ha compensatory offset area comprising other eucalypt-dominated REs immediately adjacent to, and providing >100 m buffers to, Poplar Box TEC areas will be established. It is noted, as per Section 7.4.3, that a reduction of 5.95 ha in Poplar Box TEC impacts at the impact site, would result in there being sufficient Poplar Box TEC offset area at Kemmis Creek, and therefore remove the requirement for a 58 ha compensatory offset area. The offset area will be managed to improve the condition and viability of the species habitat and vegetation communities in accordance with EPBC Act offset obligations and OAG. The offset area will be managed and monitored from approval of this plan for 20 years. It is anticipated that the completion criteria will be achieved within a 20-year period.
Suitable offsets must be built around direct offsets but may include other compensatory measures.	Kemmis Creek acquits the offset requirements through the delivery of suitable, direct land-based offsets, in accordance with the EPBC Act Environmental Offsets Policy and OAG.
Suitable offsets must be in proportion to the level of statutory protection that applies to the protected matter.	The threatened status of the impacted protected matters is considered in the EPBC Act OAG in calculating the area of the offset to be provided.
Suitable offsets must be of a size and scale proportionate to the residual impacts on the protected matter.	The size of the offset area to be secured has been calculated in accordance with the EPBC Act Environmental Offsets Policy and the OAG. The inputs and justifications are based on the results of detailed field assessments as presented in Appendix A of Appendix 26 .
Suitable offsets must effectively account for and manage the risks of the offset not succeeding.	The suitability of the offset area to be secured has been calculated in accordance with the EPBC Act Environmental Offsets Policy and the OAG. The inputs and justifications are based on the results of detailed field assessments as presented in Appendix A of Appendix 26 . Implementation of the OAMP includes specific management actions to reduce the risk of threatening processes.
Suitable offsets must be additional to what is already required, determined by law or planning regulations or agreed to under other schemes or programs.	The Kemmis Creek property on which the offset area is located is zoned rural under the Isaac Regional Council Planning Scheme. The current primary land use on Kemmis Creek is cattle grazing. The proposed offsets are subject to potential threats, including spread of weeds such as parthenium (<i>Parthenium hysterophorus</i>), lantana (<i>Lantana camara</i>) and malvastrum (<i>Malvastrum americanum</i>) and exotic pasture grasses (e.g. <i>Cenchrus ciliaris</i> and <i>Bothriochloa pertusa</i>), pest animals, inappropriate fire regimes, overgrazing, land clearing where authorised and potential future development.
Suitable offsets must be efficient, effective, timely, transparent, scientifically robust and reasonable.	An offset area has been identified and deemed suitable using an evidence-based and scientifically robust approach. The OAMP supports an efficient, effective, timely, transparent, scientifically robust and reasonable approach to providing offsets.

EPBC Act Environmental Offsets Policy requirement	OAMP for the Project
Suitable offsets must have transparent governance arrangements including being able to be readily measured, monitored, audited and enforced.	The OAMP outlines a clear governance framework and delivery pathway to legally secure the offset area on the title, which will be monitored and audited/enforced.

7.6 Offset Management and Delivery

7.6.1 Adaptative Management and Risk Assessment

The OAMP is based on an adaptive management approach which involves flexible decision making that can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood. The uncertainty factors leading to the requirement for adaptive management are described in Section 6 of Appendix 26.

The adaptive management process for the OAMP is supported by a risk assessment which evaluated the known and potential risks for each offset value (see Appendix D of **Appendix 26**).

7.6.2 Timing for Implementation

The offset area will be managed and monitored until the interim performance targets and completion criteria are achieved. It is anticipated that through the adaptive management approach, interim performance targets and completion criteria will be achieved for all offset values within the proposed 20-year ‘management period’. However, if the interim performance targets and/or completion criteria for all values have not been achieved within the anticipated timeframes, management and monitoring will continue beyond the 20-year period in accordance with the OAMP until the completion criteria have been achieved.

7.6.3 Offset Area Maintenance

As the completion criteria are met for each offset value, the OAMP will transition to actions required to sustain the completion criteria for the life of the Project’s EPBC Act approval. Beyond the achievement of the completion criteria, the OAMP will include appropriate management and monitoring measures to ensure that the completion criteria will be sustained. The amended plan will also be based on the adaptive management process and will be provided to relevant government agencies prior to the end of the anticipated 20-year management period.

7.6.4 Risk of Offset Failure

In the unlikely event that the interim performance targets are not achieved for one or more offset values, the proponent will establish specialist advice with the aim of identifying appropriate additional management interventions.

In the unlikely event that the completion criteria are not likely to be achieved for one or more offset values, the following processes will be followed:

- Propose the provision of additional offset options with the Commonwealth government within 1 year of the year 20 completion criteria not being met.
- Deliver additional offset requirements, if required, in accordance with the Commonwealth Government offset policy and in accordance with timeframes agreed with the Minister.
- Incorporate the additional offset requirements in a revised version of the OAMP and submit to the Minister for approval.

7.6.5 Management Objectives

A summary of the management objectives and performance criteria is presented in Table 7-10, and the complete adaptive management process for the OAMP is described in Table 12 of **Appendix 26**. Management actions, monitoring events, adaptive management triggers and corrective actions have been assigned to each management objective and performance criteria, as presented in Table 12 of **Appendix 26**. Table 12 of **Appendix 26** lists the threats (identified in conservation advices) to each MNES and identifies which management actions will target a reduction in those threats to each MNES.

Table 7-10 Summary of Management Objectives and Performance Criteria

Management objectives	Performance criteria
Achieve the completion criteria and habitat quality improvements for MNES, which include the habitat quality scores in the OAMP.	Increase the habitat quality scores for each MNES at each habitat quality assessment site based on the results of baseline and subsequent monitoring events to achieve the scores presented in Table 7-11.
Maintain the extent of MNES habitat/vegetation within the offset area.	No unapproved/intentional clearing of habitat within the offset area, with the exception of clearing that is required for fencing, access, firebreaks and public safety as outlined in Section 7.6.7.1. Minimise any clearing required within the offset area for the above purposes (i.e. for fencing, access, firebreaks and public safety).
Ensure that any livestock grazing for fire management and weed control maintains and enhances the ground cover attributes for MNES and does not result in the degradation of habitat and vegetation.	Increase the richness and average % cover of native perennial grasses at each habitat quality assessment site based on the results of baseline and subsequent monitoring events. Biomass levels of at least 1,500 kg/ha are retained at each of the monitoring sites at the end of the dry season. Livestock are only observed in the offset management areas during strategic grazing events.
Minimise predation risk by feral cats to threatened fauna species.	Reduction in Catling* Index for feral cats from year 1.
Minimise predation risk by wild dogs to threatened fauna species.	Reduction in Catling* Index for wild dogs from year 1.
Minimise predation risk by foxes to threatened fauna species.	Reduction in Catling* Index for foxes from year 1.
Minimise grazing pressure and associated habitat degradation by chital deer.	Reduction in Catling* Index for chital deer from year 1.
Minimise degradation of MNES habitat by rabbits.	Maintain rabbit impact category as 'acceptable'.
Minimise degradation of MNES habitat by feral pigs.	Reduction in mean feral pig abundance score from year 1.

Management objectives	Performance criteria
Manage invasive weed species to reduce degradation of MNES habitat.	Decrease in relative abundance of weed species at 80% of monitoring sites from year 1 and subsequent monitoring events. No new weed species are identified at any monitoring site (based on year 1 and subsequent monitoring events).
Reduce the risk of adverse impacts on MNES habitat associated with inappropriate fire regimes or unplanned fire.	Increase in habitat quality scores as a result of implementation of the fire management measures.
Achieve the interim performance targets and completion criteria for each MNES within 5, 10 and 20 years.	The interim performance targets presented in Table 7-11 are achieved for all offset values by year 5. The interim performance targets presented in Table 7-11 are achieved for all offset values by year 10. The completion criteria presented in Table 7-11 are achieved for all offset values by year 20.
Once attained, the habitat quality is sustained for all offset values.	Once attained, the habitat quality score, specified as the completion criteria in Table 7-11, is sustained for all offset values.

7.6.6 Management Program

The overall aim of the OAMP is to improve the habitats of MNES within the offset area in order to meet the offset requirements of the Project. The interim performance targets and completion criteria defined in Table 7-11 indicate progress towards achievement of the overall aim. The interim performance targets and completion criteria must be achieved through the implementation of the OAMP.

The offset area start quality score in Table 7-11 for each MNES was determined as part of baseline surveys undertaken in February 2024 in accordance with the GTDTHQ (version 1.3; DES 2020) which follows the Queensland Herbarium's BioCondition Assessment Manual (version 2.2). All future habitat quality scores will also be determined in accordance with the GTDTHQ method.

Table 7-11 Offset Area Interim Performance Targets and Completion Criteria

MNES	Start habitat quality score	Interim performance target – to be achieved by year 5 of management	Interim performance target – to be achieved by year 10 of management	Completion criteria – to be achieved by year 20 of management
Koala	7	greater than 7	8 or greater	8 or greater
Squatter Pigeon (Southern)	7	greater than 7	8 or greater	8 or greater
Greater Glider	7	greater than 7	8 or greater	8 or greater
Poplar Box TEC	8	8 or greater	8 or greater	8 or greater

7.6.7 Management Measures

This section provides an overview of the management measures proposed for the offset area to achieve the management objectives and completion criteria. Details are provided in Section 7 of **Appendix 26**.

Management actions, as described below, support offsets for multiple species. These management actions are not detrimental to the offsets for any of the species requiring offsets.

7.6.7.1 General Restrictions

Access into the offset area will be restricted to authorised personnel only. Existing and new fences, and signs will be used to restrict access into the Kemmis Creek offset area. Vehicle movement will be limited to designated access tracks in the offset area.

No unapproved/intentional clearing of native vegetation is permitted within the offset area except as required for maintenance, public safety or emergencies.

Weed hygiene measures will be implemented to prevent the movement of weed material into the offset area.

7.6.7.2 Access Tracks

Existing access tracks will be preferentially utilised to facilitate necessary management, maintenance and monitoring activities as part of the OAMP. Existing and new access tracks will be no wider than 5 m and vegetation disturbance will be minimised. Additional access tracks may be required for ongoing monitoring of the offset property and management activities.

7.6.7.3 Fencing

Within the first year of management all existing fences contributing to the management of the offset area will be mapped. In addition, as part of the year 1 review of strategic grazing, the location of existing fencing will be assessed and, where required to assist with livestock control for weed and fuel load management, additional fencing will be installed.

Regular inspections of all fencing will be undertaken, and repairs to the fences will be made as required.

7.6.7.4 Pest Animal Management

Pest animal species confirmed within the offset area included deer, feral pig, feral cat, rabbits and wild dogs. Management of pest animals is generally most effective when undertaken as part of a broad scale coordinated approach involving all stakeholders in the area. Pest animal control activities will be conducted in accordance with the Biosecurity Act 2014 (Qld). Species specific pest animal control measures, recommended by the Queensland and Commonwealth Governments, are provided in Section 7.5 of **Appendix 26**. Species-specific control measures and timing for control activities will be reviewed every three years.

7.6.7.5 Weed Management

An initial survey will be undertaken in year 1 at each monitoring site to calculate the species richness and abundance of restricted, prohibited weeds and other weed species, including exotic grasses. The primary weed control methods will be informed by the results of the initial year 1 survey. Weeds will be managed through a combination of herbicide and mechanical techniques. Species-specific control measures and timing for control activities will be reviewed every three years.

Weed infestations in the offset area will be controlled in accordance with the recommended control measures available from the Queensland Department of Agriculture and Fisheries, with examples provided in in Section 7.6 of **Appendix 26**.

7.6.7.6 Fire Management

Fire management of the offset matters will be guided by conservation advice documentation (e.g. for MNES) and the Regional Ecosystem Description Database (REDD; Queensland Herbarium 2024), which provides recommendations for fire management for each of the component REs (refer to Section 7.7 of **Appendix 26**). Fire risk will be managed by a well-maintained network of firebreaks.

7.6.7.7 Livestock Management

Livestock should be generally excluded from or reduced within the offset area during the wet season (November-March):

- Restricting the frequency and intensity of grazing within the offset area is undertaken to reduce the level of damage to the vegetation (native grass and saplings), maximise native grass seed production and facilitate recovery of native perennial grasses and the herbaceous layer, reduce soil impaction and erosion in certain areas, specifically around waterways and reduce fuel loads by decreasing weedy cover.
- To minimise erosion and subsequent impacts on water quality, strategic grazing will be excluded where rainfall causes inundated or waterlogged soils.
- The location and extent of grazing exclusion areas will be reviewed annually based on the results of management and monitoring events.
- End of the wet season also coincides with most common breeding time for squatter pigeon, hence removing or reducing grazing pressure at this time will reduce risk of nest trampling.

Livestock will be permitted into the offset area during the wet season if the minimum 1,500 kg/ha of dry matter is exceeded at the end of dry season surveying in order to reduce fuel loads, and potentially to control weeds.

Best practice management for strategic grazing within the offset area will involve the following:

- Livestock will be permitted in the offset area during the wet season to:
 - reduce fuel loads based on the results of biomass monitoring, and
 - to avoid weed seed set and reduce weed cover based on the results of weed monitoring.
- Livestock will be excluded from the offset area during the wet season (approximately November to March) to maximise native grass seed production and facilitate recovery of native perennial grasses and the herbaceous layer, unless grazing is required under exceptional circumstances (e.g. the grazing event may be required to be extended as a result of additional rainfall and resultant grass growth/extended flowering and seeding period). In the event strategic grazing is required to be undertaken during the wet season the minimum amount of grazing to reduce the identified risk will be implemented.
- Livestock will be excluded from recently burnt areas (< 2 years) to allow native grasses to recover, including seed set, except in instances where biomass monitoring indicates there is a high fire risk.

7.6.7.8 Erosion Management

Erosion will be managed by:

- promoting vegetation colonisation of eroded areas by limiting stock access to those parts of the offset area subject to erosion
- maintaining offset boundary fencing
- restriction of strategic grazing events within these offset management zones following wet season rainfall.

7.6.8 Monitoring Program

Monitoring is required to ensure the OAMP meets the performance criteria and management objectives, and ultimately attains the interim performance targets and completion criteria. The monitoring program includes:

- offset area inspections
- weed monitoring
- pest animal monitoring
- biomass monitoring for grazing and fire management
- habitat quality assessments
- photo monitoring
- targeted fauna surveys.

Details of each of these monitoring programs is provided in Section 8 of **Appendix 26**.

The results of monitoring events will be included in annual reports to be completed at the end of each management year. The monitoring results will also be used to assess adherence to management objectives, interim performance targets and completion criteria, and to determine when corrective actions are required to be implemented. The results will also be compared to those from previous monitoring events in order to assess change over time and to inform the implementation of the OAMP.

Fixed monitoring sites within the offset areas will be established as part of the habitat quality assessments in year 1. The number and location of habitat quality monitoring sites is determined in accordance with the GTDTHQ to assess any variation in condition across the offset area and effectively assess key habitat features for each offset value. Some habitat quality monitoring sites will be used to assess habitat for more than one offset value where relevant habitat overlaps. The number of habitat quality monitoring sites required, based on the area of REs contributing to the offset area, is presented in Table 7-12.

The location of habitat monitoring sites will be consistent with locations established as part of the February 2024 baseline assessments, with additional points proposed to be established to ensure there are the required number in accordance with the GTDTHQ. The locations of habitat monitoring sites assessed in February 2024 are shown Figure 7-4, also identifying the proposed location of additional points to be established within the offset area in the first year.

Table 7-12 Permanent Habitat Monitoring Sites

RE	Description	Area (ha)	Minimum monitoring (GTDTHQ)	number sites
11.3.2	<i>Eucalyptus populnea</i> woodland on alluvial plains	1,019.97	6	
11.3.4	<i>Eucalyptus tereticornis</i> and/or <i>Eucalyptus</i> spp. woodland on alluvial plains	197.16	4	
11.3.25	<i>Eucalyptus tereticornis</i> or <i>E. camaldulensis</i> woodland fringing drainage lines	287.51	4	
11.9.7	<i>Eucalyptus populnea</i> , <i>Eremophila mitchellii</i> shrubby woodland on fine-grained sedimentary rocks	708.04 (+1.95 Poplar Box TEC Buffer Area)	5	
11.9.9	<i>Eucalyptus crebra</i> woodland on fine-grained sedimentary rocks	56.07 (Poplar Box TEC Buffer Area)	2	

7.6.9 Reporting

Annual reports will be provided to the relevant administering authority every year. The annual report will detail progress towards achieving the interim performance targets and/or completion criteria identified in the OAMP. Annual report contexts are described in Section 9 of **Appendix 26**.

Following the completion of weed surveys, pest animal surveys, biomass monitoring and habitat quality assessments in year 1 of OAMP implementation, the OAMP will be reviewed based on the survey results to specify control measures, timing for control activities and the location of monitoring sites.

The OAMP will be reviewed and amended (where applicable) to incorporate changes identified through management activities, regular site visits and monitoring activities. This may include the revision of current management actions, identification of additional activities and responses to unexpected events or threats to the offset area. The OAMP will be updated to incorporate additional information obtained through research programs, as the results become available.

Where changes are proposed from a review of the OAMP, the updated OAMP will be submitted to the Commonwealth Government.

7.6.10 Roles, Responsibilities and Implementation

Suitably qualified and experienced professionals will be engaged to ensure that persons implementing management and monitoring activities described in this management plan have appropriate skills and qualifications.

Section 10 of **Appendix 26** provides an implementation schedule which describes the timing and monitoring for each of the offset area management activities.

For each proposed monitoring objective, Section 10 of **Appendix 26** provides the monitoring activity, timing, survey / monitoring guidelines and reliability of the monitoring.

7.6.11 Landholder Agreements

The proponent will secure a legal interest in an offset area through an executed landholder agreement,. Such an agreement/s will provide the proponent with access to the offset area to implement the OAMP and provide for the offset area to be protected through a suitable legally binding mechanism (e.g. Voluntary Declaration under the *Vegetation Management Act 1999* (VM Act)).

7.6.12 Timeframes

Offsets are proposed to be delivered in accordance with the tasks and timeframes in Table 7-13. These tasks and timeframes are subject to change due to a number of variables, including Commonwealth Government approval, regulatory requirements, climatic conditions, landholder engagement and other unexpected delays.

Table 7-13 Proposed Offset Delivery Timeframe

Description	Target date for completion
Regulator review and anticipated approval of OAMP	Q2 2025
Commonwealth Government approval granted for the Project	Q3 2025
Execute offset agreement with preferred offset area landholder	Q2 2025
Implement approved OAMP	Q4 2025
Legally secure offset areas	Q1 2026

7.7 Conclusion

An OAMP has been prepared in accordance with the PER Guidelines. The OAMP describes the potential offsets required from the Project, based on residual significant impacts to ecological values outlined in **Chapter 6**, which identified that offsets are required for Poplar Box TEC and habitat for the Koala, Greater Glider and Squatter Pigeon. Offsets will be provided in accordance with the EPBC Act *Environmental Offsets Policy* (2012). Habitat quality assessments have been completed for the Project impact area and the proposed offset area, with these assessments used to inform the calculation of required offsets in accordance with the Offsets Assessment Guide (OAG).

The OAMP identifies Kemmis Creek (Lot 12 SP303309) as the preferred property to acquit the Project's offset requirements, with an investigation area, and preferred offset areas identified on Kemmis Creek. Based on field surveys and desktop analysis, the investigation area on Kemmis Creek contains suitable habitat for Poplar Box TEC and the Koala, Greater Glider and Squatter Pigeon. Detailed field surveys of the proposed offset investigation area have been undertaken to confirm the presence of Koala, Greater Glider and Squatter Pigeon, and to assess the habitat suitability for offsets.

The OAMP describes the proposed management actions that are intended to achieve the interim performance targets and completion criteria to acquit the offset requirements. There are a number of mechanisms for providing legal security of an offset site, although it is likely that a Voluntary Declaration under the VM Act will be the preferred option.

7.8 References

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