EPBC Act Ref: 2022/09282

Ecclestone Road Subdivision

Offset Proposal &
Environmental Management and Monitoring Plan

For Growth Developments Pty Ltd

11th December 2025

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Project	Ecclestone Road Subdivision – Offset Proposal
Location	Ecclestone Road (proposed action & offset), Vermont Road (proposed offsite offset)
Proponent	Growth Developments
NBES Job Code	SIX001
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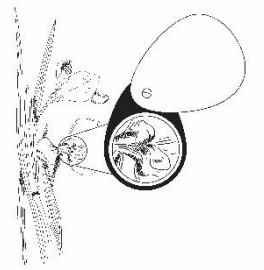
Reporting	Tim Leaman
Mapping	Craig Stobbs/Tim Leaman/Rabin Khatri

Version	Date	Author & Comment	Position
Version 0.1	14/10/2024	Tim Leaman – draft to client	Director/Principal Ecologist
Version 1.0	12/11/2024	Tim Leaman - final	Director/Principal Ecologist
Version 1.1	13/02/2025	Tim Leaman – updates in response to DCCEEW RFI Round 2	Director/Principal Ecologist
Version 1.2	04/07/2025	Tim Leaman review in relation to determined offset protection mechanisms (Conservation Agreement & Part V Agreement)	Director/Principal Ecologist
Version 1.3	15/10/2025	Tim Leaman – amendments to offset extents	Director/Principal Ecologist
Version 2.0	11/12/2025	Tim Leaman – amendments in response to DCCEEW RFI Round 3	Director/Principal Ecologist



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1. BACKGROUND

Growth Developments are the proponents of a 38-lot subdivision proposal at Ecclestone Road near the western suburbs of Launceston in northern Tasmania. The subdivision area has been assessed for natural values by North Barker Ecosystem Services (NBES) and was subsequently referred under the *Environment Protection & Biodiversity Conservation Act 1999* (EPBCA) (referral EPBC 2002/09282) due to the presence of habitat for threatened fauna species listed as matters of national environmental significance (MNES). Preliminary consideration of the referral by the Department of Climate Change Energy Environment and Water (DCCEEW) has determined that the action is a controlled action due to the proposed impacts to MNES. In its consideration of the proposed action, DCCEEW has acknowledged the proponent's strategies for impact avoidance and mitigation, however has determined that there will be outstanding residual significant impacts to the eastern quoll (*Dasyurus viverrinus*) and the Tasmanian Devil (*Sarcophilus harrisii*) as a result of approximately 16.9 ha of permanent habitat loss. As such, the action has been deemed significant and requiring an offset. This report documents the proponent's investigation and now proposal of two offset sites and constitutes it's submission to DCCEEW as a formal Offset Proposal.

2. EPBCA ENVIRONMENTAL OFFSETS POLICY

This section describes how the proposed offset site meets the relevant requirements of the EPBCA Environmental Offsets Policy[1].

POLICY PRINCIPLES

The EPBCA Environmental Offsets Policy details eight overarching principles to determine the suitability of an offset. Table 1 outlines these principles and how they have been considered against the proposed offset site.

Table 1: EPBCA environmental offset policy principles and proposed offset

Policy Principle	Proposed Offset Site
Suitable offsets must deliver an overall conservation outcome that improves or maintains the viability of the protected matter.	The proposed offset will deliver an overall conservation outcome through the reservation of optimal quoll and devil foraging and denning habitat and will also improve the habitat condition of the proposed offset site.
Suitable offsets must be built around direct offsets but may include other compensatory measures.	The proposed offset will provide for at least 102.94 % direct offset for impact to MNES.
Suitable offsets must be in proportion to the level of statutory protection that applies to the protected matter.	The status of the impacted MNES has been taken into account by the EPBCA *Offsets Assessment Guide*[2] (the Guide), which has been used to calculate the offset area requirements.

[1] Department of Sustainability, Environment, Water, Population and Communities. (2012a)
[2] Department of Sustainability, Environment, Water, Population and Communities. (2012b)

Policy Principle	Proposed Offset Site
	The Tasmanian devil and eastern quoll are listed as endangered, and the Tasmanian devil is listed as endangered.
Suitable offsets must be of a size and scale proportionate to the residual impacts on the protected matter.	The extent of the required offset has been calculated using the impacts outlined in the natural values assessment documents[3] as well as correspondence from DCCEEW[4]. This assessment of impact informs the inputs in the habitat quality determination and is used in the guide. The inputs to the guide for the impacted MNES are detailed in Section 4.
Suitable offsets must effectively account for and manage the risks of the offset not succeeding.	The risks associated with the offset are detailed in Section 4.1. Without an offset, the proposed offset site is at risk of land clearance and conversion to residential or industrial developments , and illegal activities conducted on the property such as unregulated timber removal, hunting, and vandalism. Securing the proposed site under a conservation agreement will remove the risk of clearance and conversion (and secure management practices to maintain/improve condition) and will improve security of the site to deter/prevent further illegal activity. A negligible risk of catastrophic environmental change would remain as the values that maintain denning habitat quality are relatively robust to stochastic effects.
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 proposed offset site is an area of land that does not attract any immediate environmental protections under state or federal environmental law or planning regulations. The offset site is zoned as rural under the Tasmanian Planning Scheme. The rural zone does not contain provisions that protect the land from clearance and conversion.
Suitable offsets must be efficient, effective, timely, transparent, scientifically robust, and reasonable.	The proposed offset mechanism of a conservation agreement will be guided by formal Offset Management Plan (OMP) in an efficient and timely manner and will take effective once approved by DCCEEW. The offsets are based on ecological reports, and the proposed offset site has been identified as an ecologically viable asset which can be enhanced further through active management.

[3] EPBC Act Ref: 2022/09828 Ecclestone Road subdivision Request for Additional Information. North Barker Ecosystem Services (8 June 2023)
[4] Email from DCCEEW Assessment Officer to George Walker (23 August 2024)

Policy Principle	Proposed Offset Site
	It is anticipated that measurable environmental outcomes can be delivered within 5 years, with conservation gains occurring almost immediately upon implementation of the first stages of the OMP.
Suitable offsets must have transparent governance arrangements including being able to be readily measured, monitored, audited, and enforced.	The proposed offset site will be protected from land clearance and other risks through the application of a conservation agreement with DCCEEW with an associated Offset Management Plan (OMP), which is expected to become an enforceable condition of the future EPBC permit. The specific conditions of the OMP are yet to be confirmed; however, monitoring, auditing and enforcement components will be included within this agreement/management plan in full detail and consistent with the EMMP (Section 6) .

3. OFFSET STRATEGY

3.1. PROPOSED OFFSET SITES

The proposed offset is comprised of two primary components which include an onsite offset and an offsite offset. The onsite offset area is comprised of a retained balance lot area of 14.57 ha (to be protected under a Conservation Agreement in accordance with Chapter 5, Part 14 of the EPBCA). Additional protection of habitat is proposed through the retention of 30% of each of the remaining 37 subdivision lots (5.3 ha in total), however these areas are not included as part of the proponents offsetting strategy and do not contribute formally to either the direct impact or proposed offset scenarios for this project. The total area of onsite habitat offset within the balance lot area is 14.57 ha.

The second offset component is an offsite property located at 201-213 Vermont Road, Mowbray, in the eastern suburbs of Launceston. This site is 26.31 ha in size and is to be protected under the same Conservation Agreement mechanism described for the onsite offset area. In combination these onsite and offsite locations provide for an overall offset package of 40.88 ha of devil and quoll habitat protected and managed in the long-term for conservation values.

The offsite offset is approximately 6.8 km east of the proposed action (Ecclestone Road subdivision site) and is located within the same bioregion (Tasmanian Northern Midlands) according to the Interim Biogeographic Regionalisation Australia (IBRA 7)[5] (Figure 1). The general environmental parameters between the proposed action and the proposed offset sites are strongly comparable in that they are both lowland environments less than 200 m in elevation, both sites receive an annual rainfall of approximately 680 mm per annum[6], both sites are situated on soils derived from dolerite geology and both support dry woodland vegetation within a mosaic of developed agricultural land.

3.2. OFFSET PROTECTION MECHANISM

The legal mechanism proposed for securing the offset, as outlined in this Offset Proposal, is a Conservation Agreement under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Previous proposals included securing the offsets through an agreement under Part 5 of the *Land Use Planning and Approvals Act 1993* (LUPAA) (Tas). However, following further consideration and in light of the offset proposal provided, it has been determined that a Conservation Agreement under the EPBC Act is the preferred option for legally securing the offsets. The conservation agreement would be subject to review and agreement of its final terms, ensuring alignment with both the legal requirements and the specific conservation outcomes sought. The proponent intends to continue pursuit of a Part V Agreement under LUPAA, for the Ecclestone Road subdivision (including impacted lots and balance lot area), however this agreement will not relate to the matter of direct offsets for impacts to MNES under the EPBCA.

[5] Commonwealth of Australia (2012)
[6] Bureau of Meteorology (2024)

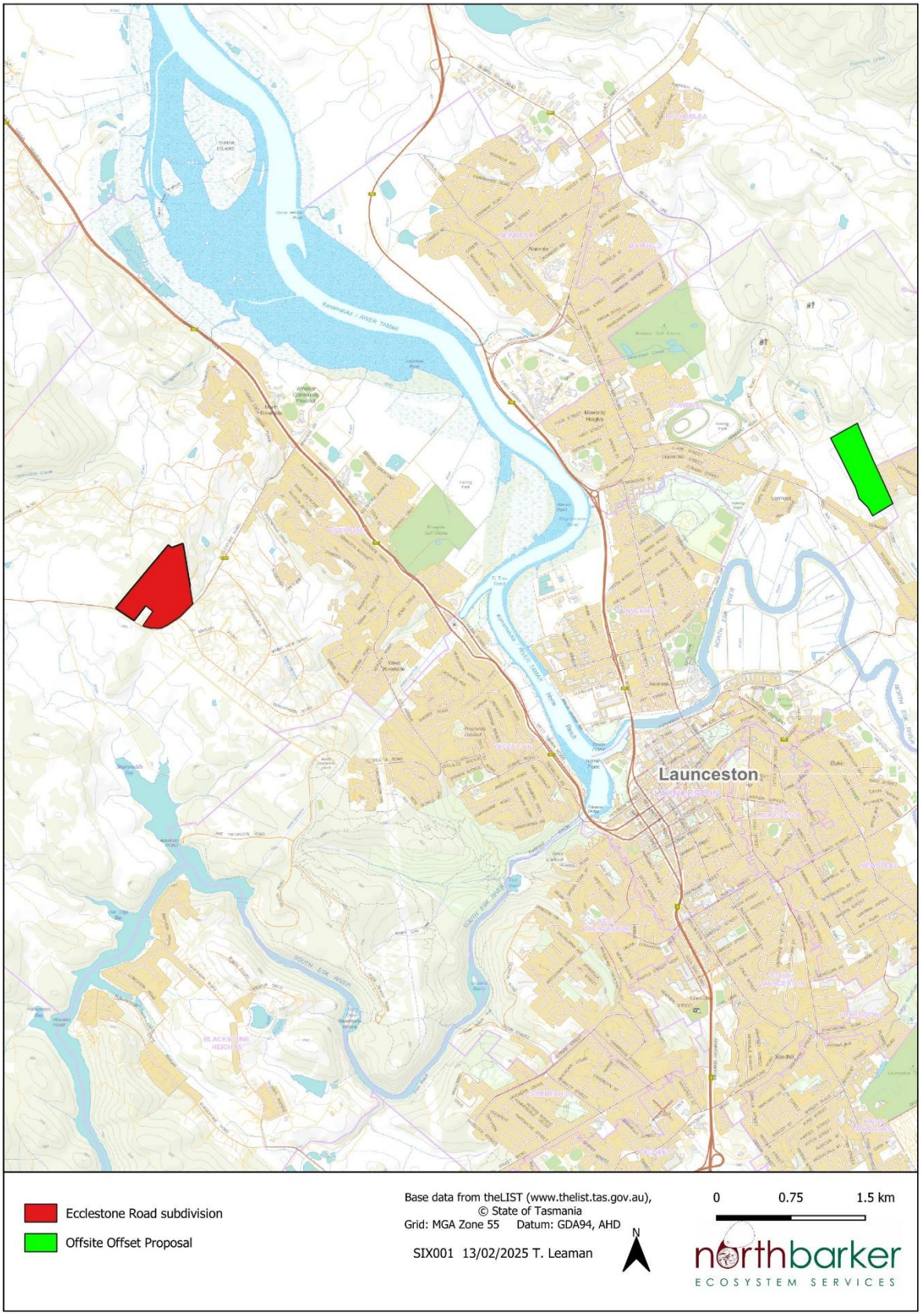

Figure 1. Geographical context between the proposed action (Ecclestone Road) and the offset proposal. (note proposed subdivision boundaries depicted above include both the 38 impact lots and the balance lot – see Figure 2)

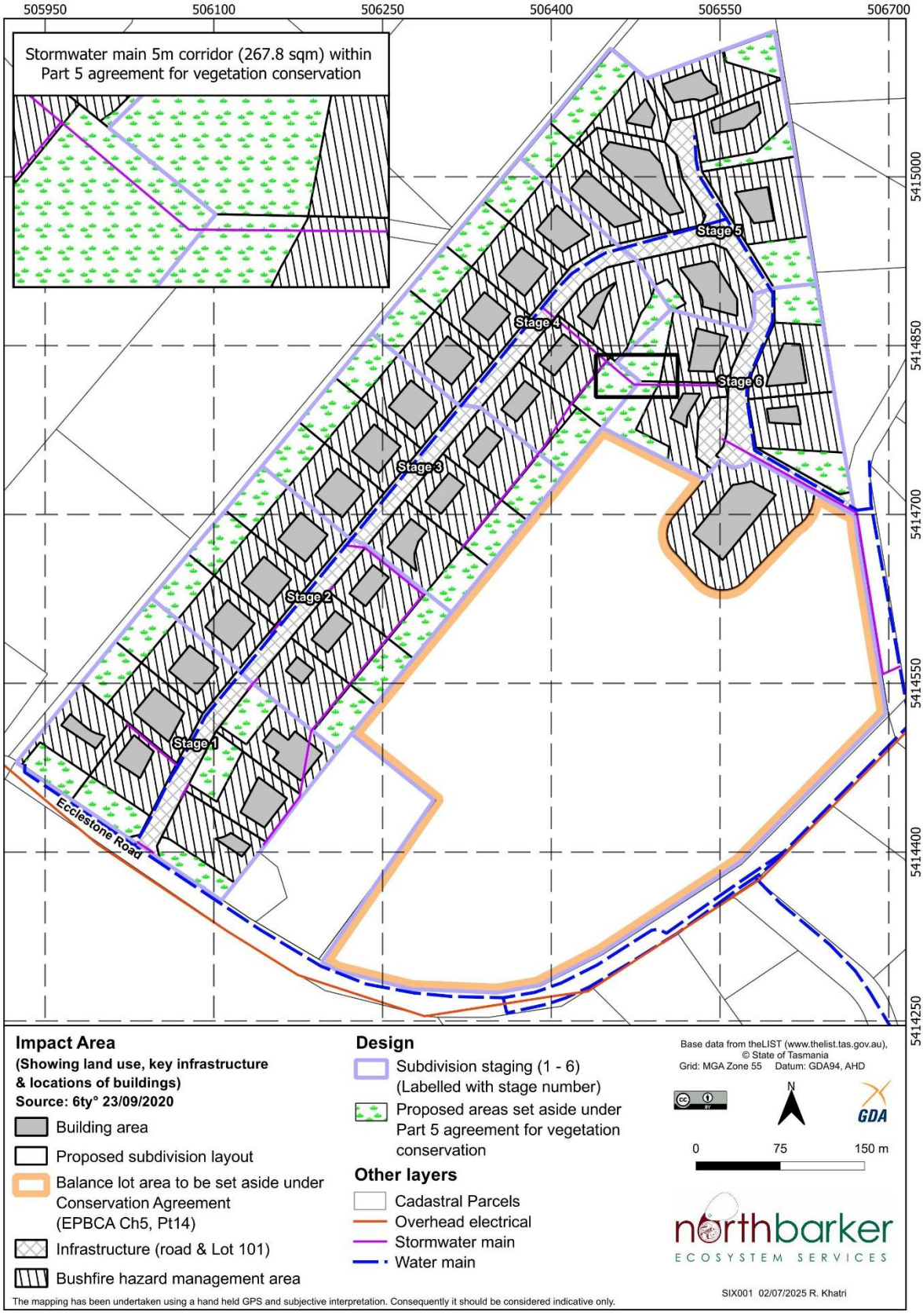

Figure 2. The layout of residential lots and the balance of land to be protected under a Conservation Agreement (EPBCA Chapter 5, Part 14)

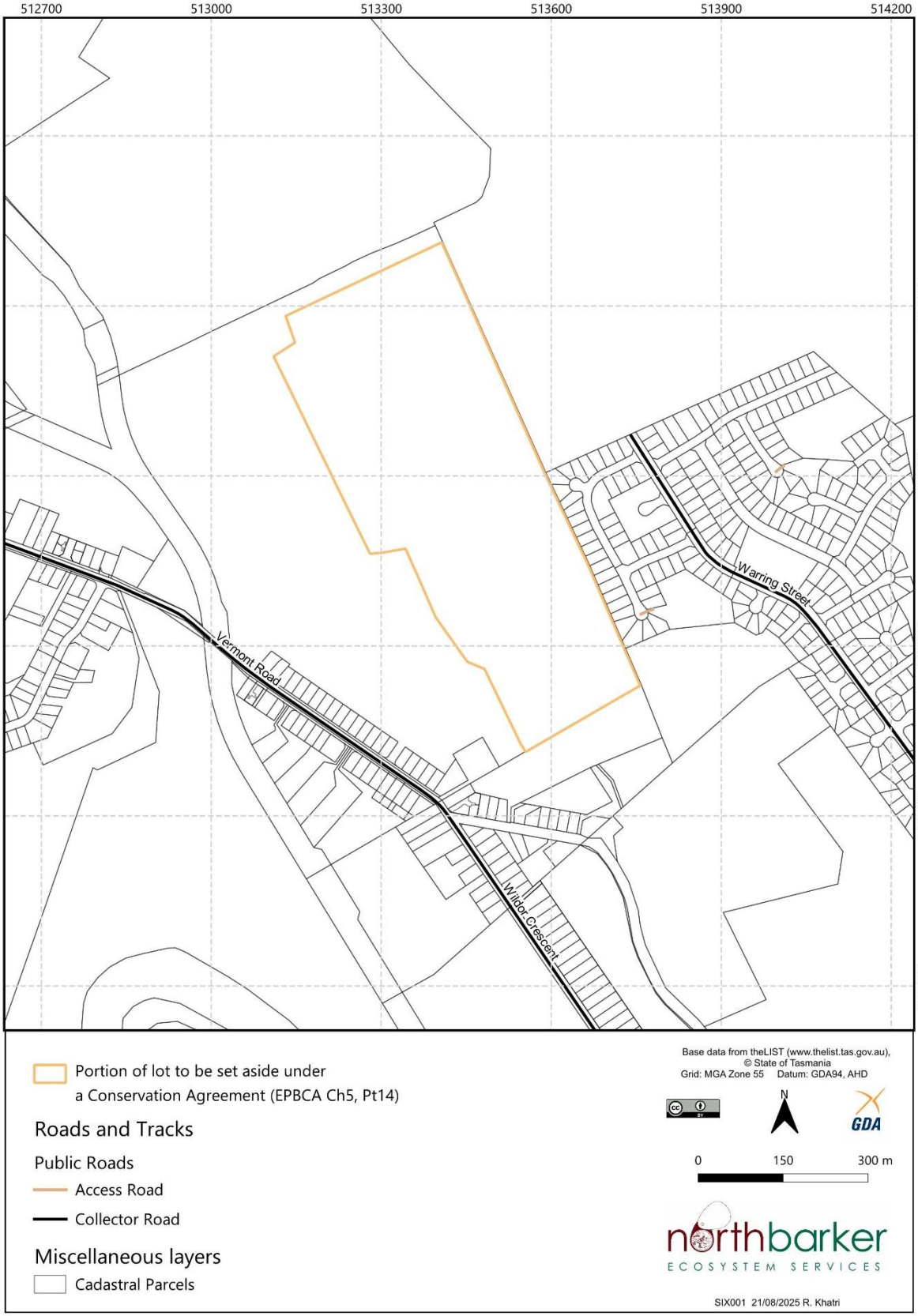

Figure 3. Portion of land to be protected under a Conservation Agreement (EPBCA Chapter 5, Part 14) at 201-213 Vermont Road.

3.3. OFFSET DESCRIPTION

3.3.1. Vegetation values

The proposed onsite offset at Ecclestone Road is characterised by the presence of dry eucalypt woodland communities and Bursaria – Acacia woodlands with shrubby understories. Details of this vegetation are provided in the natural values assessment report provided as Attachment 1 with the initial EPBCA referral documentation.

The proposed offsite offset is characterised by the presence of *Allocasuarina verticillata* (she oak) forest with sparse occurrences of emergent *Eucalyptus viminalis* (white gum) (Figure 4). The vegetation includes a mix of native understorey shrubs, with native grasses and herbs comprising up to 30-40% of the vegetation cover. In places introduced flora species are prevalent amongst the grasses and herbs, however these are not specifically invasive or noxious species but more common and widespread introduced garden and agricultural species. This dry woodland vegetation is not specifically a like-for-like floristic comparison for the vegetation at Ecclestone Road, however in terms of its condition and suitability for mammal denning habitat it ranks highly due to substantial structural diversity and presence of denning habitat features.

Plate 1 – Typical *Allocasuarina verticillata* forest present within the proposed offset area

3.3.2. Denning habitat

Throughout the offsite offset there are two main types of potential denning habitat. Firstly, there are two rocky ridges running along the length of the site with the creek line. These ridges have various sections along them of boulder piles and outcrops that could have potential denning sites within (Plate

2). A small den entrance found on the eastern ridge appears to be actively used by fauna, with disturbed ground and fur found at the den entrance (Plate 3).

Plate 2 – Optimal rocky boulder denning habitat throughout the area of NAV forest within the proposed offset area.

Plate 3 – Potential mammal den entrance identified within the proposed offset area.

Figure 4. Vegetation within the proposed offsite offset area at 201-213 Vermont Road (Mowbray)

4. OFFSET CALCULATIONS

JUSTIFICATION OF OFFSET CALCULATIONS

A complete summary of the offset calculations applied in this offset proposal are found in Table 3 (Section 5). A detailed account of each of the metrics applied in the OAG including any assumptions and interpretations are provided below in Section 4.1 to 4.14.

4.1. IUCN CRITERIA

The IUCN criteria for the value being impacted.

Tasmanian Devil & eastern quoll - 1.2 %

Afforded to the Tasmanian devil and eastern quoll as these species are listed as Endangered under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

4.2. AREA OF IMPACT

The area of habitat/community impacted, or number of features/individuals impacted.

16.9 ha

The proposed subdivision at Ecclestone Road allows for the avoidance of all areas of optimal denning habitat for the Tasmanian devil and eastern quoll within a balance lot area of approximately 14.57 ha which will be retained and managed for conservation purposes under a formal conservation protection mechanism (Conservation Agreement under the EPBCA).

The impact footprint of the proposed development allows for 38 new lots and a new access road totalling approximately 16.9 ha of sub-optimal denning habitat for permanent removal. As such for the purpose of applying the OAG, the area of impact is defined at a total of 16.9 ha.

A 10-point habitat quality scoring system has been defined for Tasmanian devil and eastern quoll habitat for the purpose of operating the OAG (Table 2). Given the similarities in habitat requirements for these species in terms of foraging and denning habitat requirements, it is appropriate to apply the same scoring system to both species.

Table 2: Tasmanian devil and eastern quoll denning and foraging habitat quality scoring system

Suitability class	Rationale	Quality score
Optimal (Denning and Foraging)	This category contains areas deemed optimal for denning opportunities based on field observations and site attributes. Characteristics include: • All areas of dry forest TASVEG units (ideal soil and sheltering conditions)[7]. • Grasslands within 100 m of native forest units and/or with a dense layer of shrubs (ideal soil and sheltering conditions)[8]. • Silvicultural forest (FPH/FPS) areas (ideal soil and sheltering conditions, including the presence of windrows)[9]. • Regenerating cleared land (FRG) within a native mosaic and with optimal soil and sheltering characteristics (including the presence of log piles)[10].	**7-10**
Sub-optimal (Denning and Foraging)	This category includes remaining areas of intermediate habitat, including (but not limited to) those with the following traits: • Seasonally inundated lagoons and other wetland habitats not classified as unsuitable (*i.e.* those that dry out in summer)[11]. • Scrub, heathland, and swamp forest vegetation. • Exposed grassland (lacking shrub cover) distant from native forest[12]. • FAC of FWU vegetation (good shelter at canopy level, but less suitable at ground level)[13].	**3-6**
Unsuitable (Foraging Only)	This class captures all areas that are deemed unsuitable for denning opportunities, based on field observations and site attributes. Characteristics include: • Permanently inundated areas denoted by OAQ and ASF on vegetation mapping[14]. • Areas of FAG or FUM distant from native vegetation. These areas are likely too far separated from high prey densities for energetically efficient maternal denning. In addition to this, exposed sites make young devils vulnerable around their dens and are thus not selected by adults[15].	**0-2**

The ultimate habitat quality score applied to any given site was then considered further in the context of all other important local conditions, the context of the site relative to the surrounding landscape and the stocking rate/known importance of the site to the species (as described in section 4.5 and 4.9 below).

The impact of permanently removing 16.9 ha of sub-optimal denning habitat has been considered in the context of the surrounding 5 km of the proposed action and equates to the loss of approximately 0.3% of sub-optimal habitat at this scale. Within 5 km there are approximately 3,214 ha of optimal denning habitat, 5,276 ha of sub-optimal denning habitat and 653 ha of unsuitable denning habitat (depicted in Figure 5).

[7] Pemberton (1990); Thalmann *et al.* (2015); Jones & Barmuta (2000); Jones *et al.* (2023)
[8] Thalmann *et al.* (2015); Jones & Barmuta (2000); Lyall (2017)
[9] Jones *et al.* (2023); Lyall (2017)
[10] Pemberton (1990); Thalmann *et al.* (2015)
[11] Thalmann *et al.* (2015); Environment Strategic Business Unit (2023)
[12] Thalmann *et al.* (2015); Jones & Barmuta (2000); Lyall (2017); Andersen *et al.* (2017); Guiler (1970)
[13] Thalmann *et al.* (2015); Lyall (2017)
[14] Environment Strategic Business Unit (2023)
[15] Jones *et al.* (2023); Andersen *et al.* (2017)

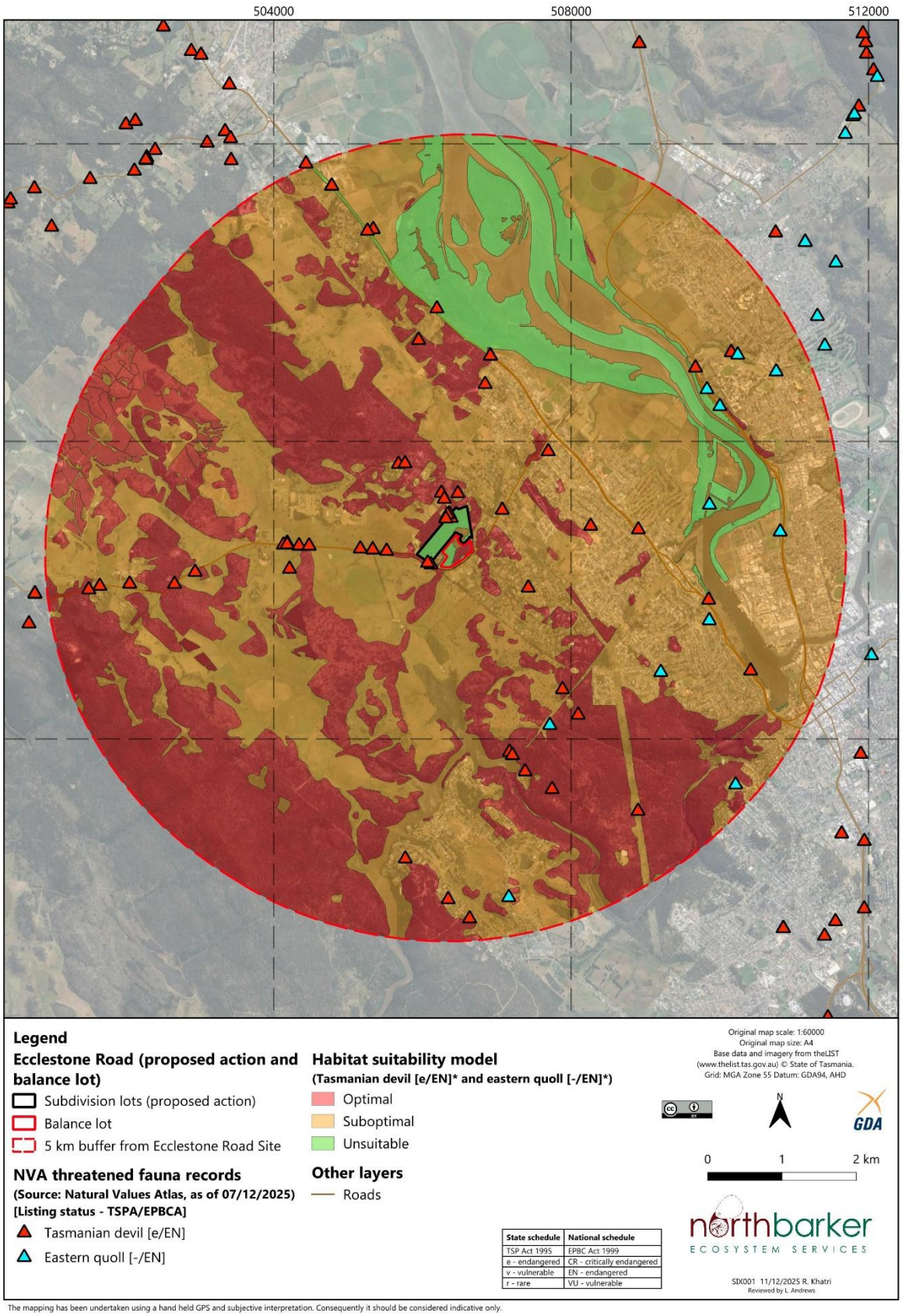

Figure 5. Modelled denning habitat suitability available within 5 km of the proposed action.

4.3. QUALITY OF IMPACTED AREA

The quality score for area of habitat/community being impacted - a measure of how well a particular Site supports a particular threatened species or ecological community and contributes to its ongoing viability.

5

Site condition and context

Habitat suitability for Tasmanian devil and eastern quoll was mapped throughout the proposed impact area during the natural values assessment (see Preliminary Documentation 2.2 and 2.3). This assessment determined that the habitat throughout included some areas which were sub-optimal, whilst the majority was considered unsuitable for denning. This was primarily due to the lack of suitable denning structures (lack of logs, boulders or burrows) which is likely the result of land use history including historical vegetation clearance and animal husbandry on the site[16]. On this basis the habitat condition score commences in the sub-optimal category in range of 3 to 6 (commencing in this case at the base score of 3 due to the distinct lack of current denning/breeding habitat).

Aside from immediate denning habitat parameters the site was also considered in terms of other site conditions including native species diversity, capacity for denning habitat recruitment, landscape position and connectivity, biogeographic context in terms of known devil/quoll populations and local/current management issues relevant to the site. With these parameters considered the following scoring adjustments were made:

- 1 point added for the site occurring within the core breeding range of both species with numerous confirmed observation records within 5 km of the impact area[17]
- 1 point added for the site being comprised of largely native eucalypt woodland species
- 0.5 points added for potential denning habitat recruitment from falling trees (most trees relatively young ie <100 years old with limited potential to provide denning habitat within the next 50-100 years)
- 0.5 points added for the landscape positioning of the site with good generally context in relation to existing reserves and areas of optimal breeding habitat (Figure 6).
- 1 point deducted due to existing threats to the site including invasive species (notably blackberry and gorse) and illegal access for firewood cutting (intense pressure in recent years).

With all these habitat quality and site characteristics taken into consideration, the proposed impacted area attracts an overall existing quality score of 5.

Species Stocking rate

Tasmanian Devil

No evidence in the form of scats, carcasses, footprints, or other identifiable features were recorded during surveys, and no burrows suitable for denning were recorded within the project area over the duration of field surveys. This survey effort exceeded the minimum survey requirement for indirect searches for diurnal mammals defined in the *Survey guidelines for Australia's threatened mammals*[18].

The Natural Values Atlas identifies 62 records of the species within 5 m of the proposed action including records as recent as November 2025. In reality the proposed action impact area forms part of a large home range of several thousand hectares and is possibly utilised periodically by one or more devils for foraging due to a certain degree of overlap between non-territorial individual devils. According to the

[16] Jason Sherriff pers comm. (2025)
[17] Natural Values Atlas (2025)
[18] Department of Sustainability, Environment, Water, Population and Communities (2011)

SPRAT profile for this species[19], the proposed action occurs within the eastern/southwestern population area which equates to a total area of 50,630 km^2. By applying the upper and lower species density estimates of 0.2 to 3.2 individuals/km^2 [20], the proposed action stands to directly impact upon 0.03 to 0.54 individual devils.

Eastern Quoll

No evidence in the form of scats, carcasses, footprints, or other identifiable features were recorded during surveys, and no burrows suitable for denning were recorded within the proposed action over the duration of field surveys.

Despite the lack of direct evidence of eastern quolls in the project area, its presence is not discounted simply due to the species occurring throughout eastern Tasmania and varying locationally by frequency of occurrence and population density associated with habitat variables (including land use), and environmental traits. According to the Natural Values Atles, there have been 11 observations of this species documented within 5 km of the proposed action, with the most recent observations as recent as March 2024.

In areas with frequent occurrences and/or high densities of quolls, indicators of presence are readily encountered (tracks, scats, etc), which is why these are an accepted survey detection technique[21]; the absence of these indicators during surveys would thus indicate the proposed action is sparsely/infrequently utilised. Nonetheless, with the species having very broad habitat use and no factors ruling out its presence entirely, it can be expected that quolls traverse through the site and may use parts of it while foraging or simply moving within their range (as supported by the NVA records). Denning opportunities (which are important in habitat quality and for consideration of avoiding and mitigating impacts) are limited based on survey findings, with none being detected during ground surveys and the majority of the proposed action being modelled as unsuitable or suboptimal for supporting dens or burrows.

Reliable population estimates for these species are lacking within the existing published literature, however most studies report a general decline in the abundance of the species[22]. In light of these findings, the limited published observations of the species within 5 km and the large home range size (34-44 ha), the impact of the proposed action is likely to be experienced by 1-2 eastern quolls as an upper maximum estimate.

[19] Commonwealth of Australia (2025)
[20] Commonwealth of Australia (2025)
[21] Department of Sustainability, Environment, Water, Population and Communities (2011)
[22] Fancourt (2016), Fancourt et al (2013), Cunningham et al (2022)

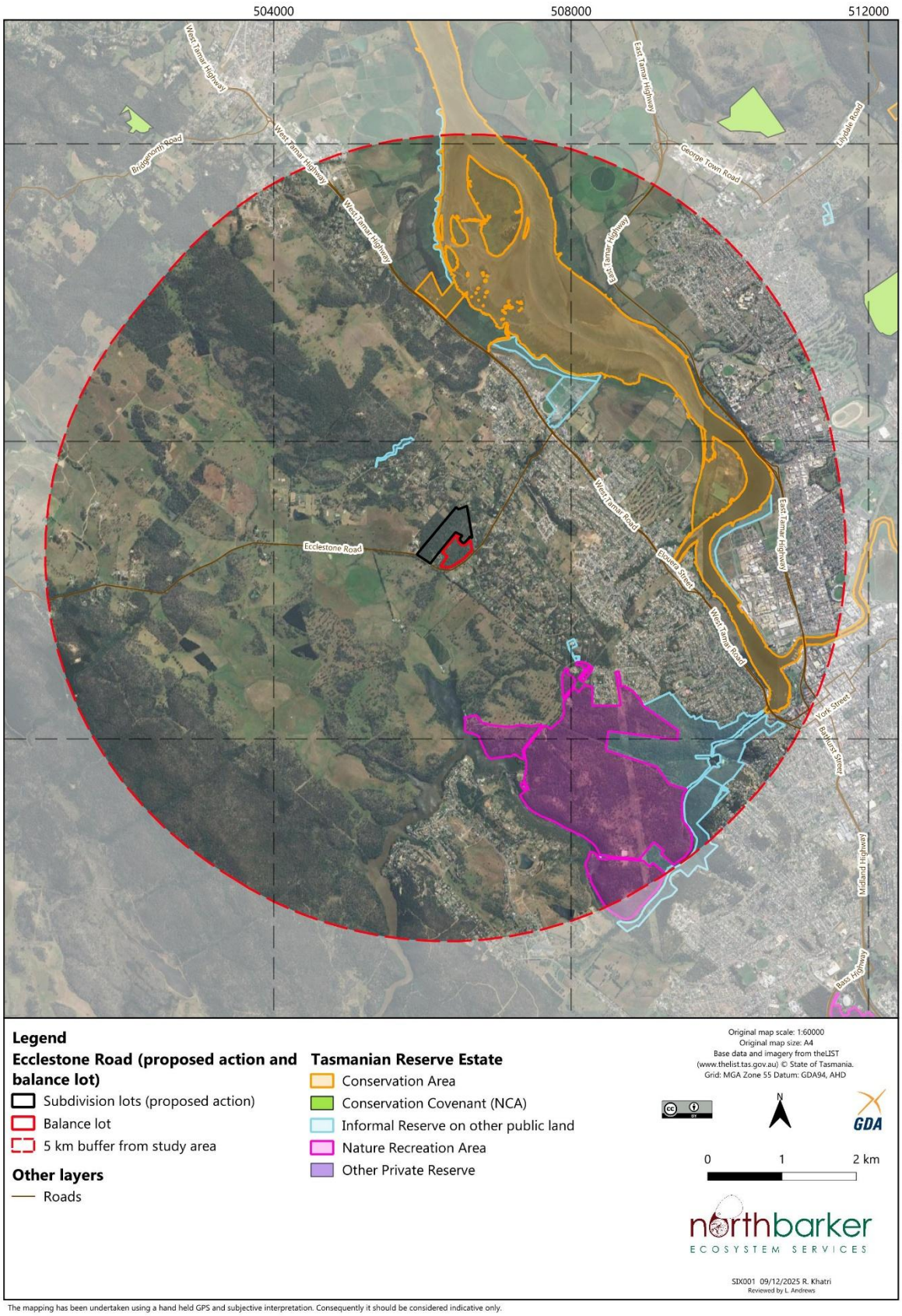

Figure 6. Local landscape within 5 km of the proposed action showing close dispersal distance to formal reserves to the northeast and southeast and large areas of continuous native forest to the north and southwest.

4.4. TIME OVER WHICH LOSS IS AVERTED

This describes the timeframe over which changes in the level of risk to the proposed offset site can be considered and quantified.

20 Years

The proposed offset includes the application of a conservation agreement and offset management plan for both the local (Ecclestone Road Balance Lot) and offsite (Vermont Road) offsets which will protect these sites from risk in the medium to long term. 20 years is the maximum allowable timeframe that can be applied to this specific parameter and has been adopted for all 'time over which loss is averted' calculations undertaken in this offset proposal.

4.5. TIME UNTIL ECOLOGICAL BENEFIT

This describes the estimated time (in years) that it will take for the main benefit of the quality (habitat/community) or value (features/individuals) improvement of the proposed offset to be realized.

Vermont Road forest offset – 3 years

Vermont Road agricultural land offset – 1 year

Vermont Road weed infestations offset – 5 years

Ecclestone Road balance lot offset – 3 years

Variable timeframes have been identified for which the main habitat improvement outcomes will be achieved across the different components of the offset package. At Vermont Road where there are areas of previous farmland within the offset area it is proposed to create new additional denning habitat opportunities for devil and quoll through the creation of den habitat stacks (piles of logs, stumps and rocks which can be inhabited by these species for denning – see examples in Appendix A). Creation of these features can be undertaken in a relatively time efficient manner and will be effectively available for habitation by devils and quolls immediately following their creation (or within 12 months of installation).

Ecological benefits or improvements within the forested portions of Vermont Road and the Ecclestone Road balance lot will take somewhat longer to eventuate and will involve a combination of management measures over time to ensure their effectiveness including boundary/fence management, weed management, rubbish removal surveillance and monitoring. As these areas are not expected to experience the main benefit of these actions until 3 years after their commencement.

Section of the offset which require weed control works as the main management measure will take the longest to implement before tangible positive environmental gains area achieved. These areas will require treatment and regular monitoring/follow up controls to ensure they are successfully achieved and are estimated to take up to approximately 5 years before tangible benefits are achieved.

4.6. START AREA

The area of habitat/community or number of features/individuals proposed to offset the impacts.

Vermont Road forest offset – 13.24 ha

Vermont Road agricultural land offset – 7.39 ha

Vermont Road weed infestations offset – 5.68 ha

Ecclestone Road balance lot offset – 14.57 ha

In relation to Tasmanian devils and eastern quolls a total offset area of 40.88 ha has been proposed. This area is comprised of 13.24 ha of existing optimal condition habitat (existing forest with structural diversity), 14.57 ha of suboptimal condition habitat and 13.07 ha of unsuitable/sub-optimal denning habitat comprised of historically cleared land (7.29 ha) and weed infested agricultural land (5.68 ha). Given the different outcomes and different contributions of these areas to the overall offset proposal these areas have been applied to the offset management guide as distinct entities of 13.24 ha,13.07 ha and 14.57 ha respectively (see Table 1). The Ecclestone Road balance lot area is a total of 14.57 ha in size.

4.7. START QUALITY

The quality score for the area of habitat/community proposed as an offset - a measure of how well a particular site supports a particular threatened species or ecological community and contributes to its ongoing viability.

Vermont Road forest offset – 7

Vermont Road agricultural land offset – 2

Vermont Road weed infestations offset – 3

Ecclestone Road balance lot offset – 5

Site condition and context

Start habitat qualities within the offset areas have been defined separately for the different habitat types to reflect primarily the difference in denning quality between the forest and non-forested portions of the proposed offset area. Forested portions of the proposed offset include structurally diverse boulders and rocky outcrop features which provide optimal denning habitat and have been assigned a quality score of 7 (Vermont Road) and suboptimal areas 5 (Ecclestone Road) (as describes above in 4.4). Modified lands within the offsite offset (Vermont Road) are devoid of denning habitat potential and have been assigned a quality score of 2-3, with 2 representing areas of agricultural land currently devoid of denning habitat potential and 3 representing gorse infested areas which provide some sheltering/foraging habitat but are sub-optimal for denning. Aside from the local denning habitat conditions, consideration was also given to landscape position and connectivity of these areas (Figures 8 and 9). However, direct habitat connectivity is of little significance to the species in question, given their large home range size and large ranging/dispersal abilities. Observations from the Tasmanian

Natural Values Atlas confirm the presence of both Tasmanian devils and eastern quolls in close proximity to all of the above-listed offset areas (Figure 8 and 9). In a 5 km proximity of Vermont Road there have been 25 confirmed observations of the eastern quoll and 15 confirmed observations of the Tasmanian devil, with observations are recent as January 2025. Within a 5 km context of the Ecclestone Road balance lot there have been 11 confirmed observations of the eastern quoll and 62 confirmed observations of the Tasmanian devil. Observation near Ecclestone Road are as recent as November 2025.

These rates of observation confirm the contemporary presence of both species at widely spaced intervals in the surrounding landscapes, which is consistent with their wide-ranging use of most habitats for foraging. As such, surveys targeting the presence/stocking rate of these species are not necessary in order to determine the overall habitat value or quality of an area given their ubiquitous nature and utilisation of all landscapes.

The proposed Vermont Road Offset Site includes an are of 26.31 ha in total. Within 5 km of the site there are approximately 2,946 ha of optimal denning habitat, 5,804 ha of sub-optimal denning habitat and 281 ha of unsuitable denning habitat (depicted in Figure 8).

Species stocking rate

Natural stocking rates of the Tasmanian devil and eastern quoll are the same at Vermont Road as has been described for the proposed action as described in 4.3 and equate to 0.03 to 0.54 individual devils and 1-2 individual eastern quolls. In terms of existing observation records recorded on the Natural Values Atlas there are 25 eastern quoll observations, including records as recent as January 2025 and 15 records of the Tasmanian devil, including records as recent as June 2024.

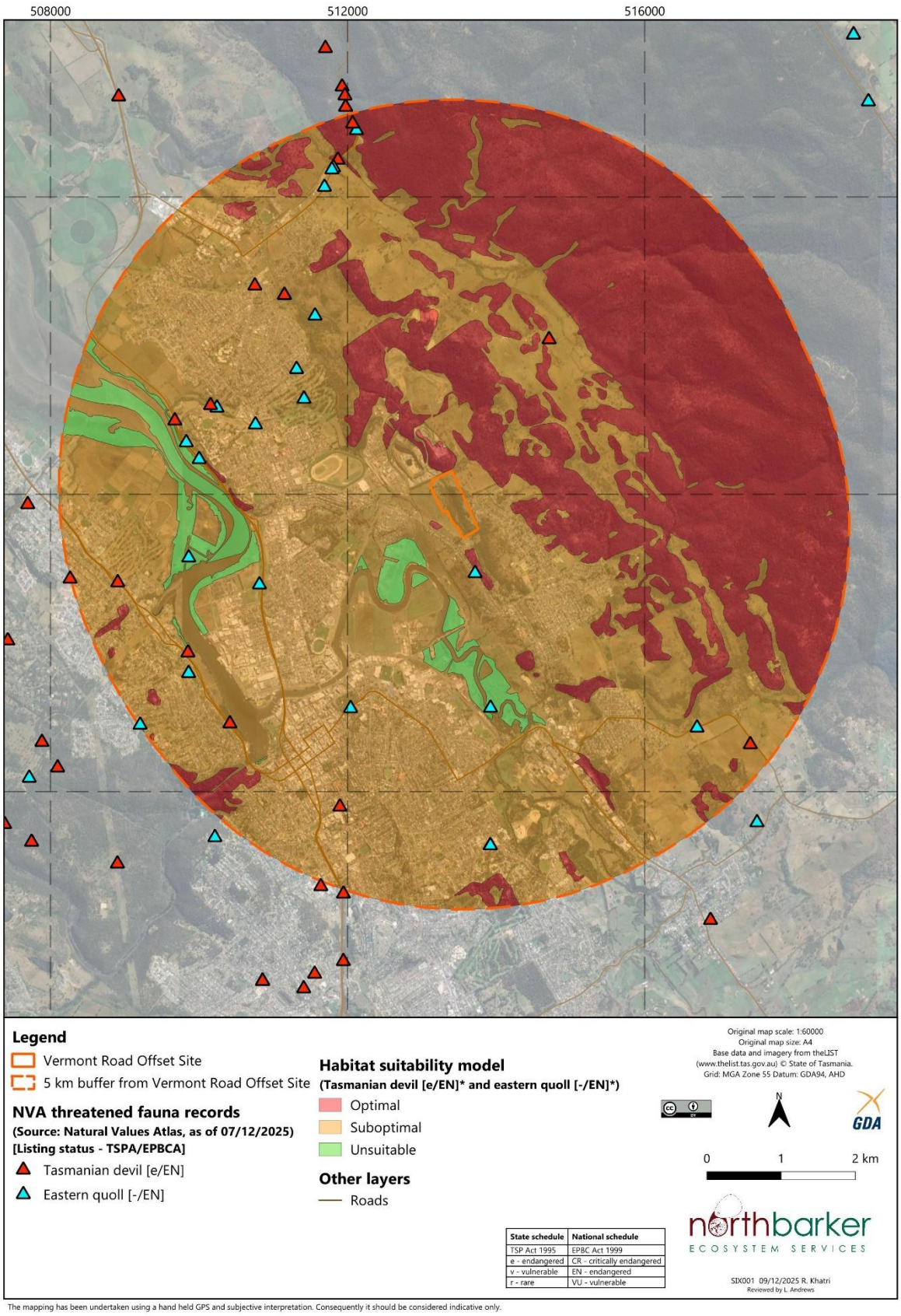

Figure 7. Modelled denning habitat suitability available within 5 km of the proposed Vermont Road Offset Site.

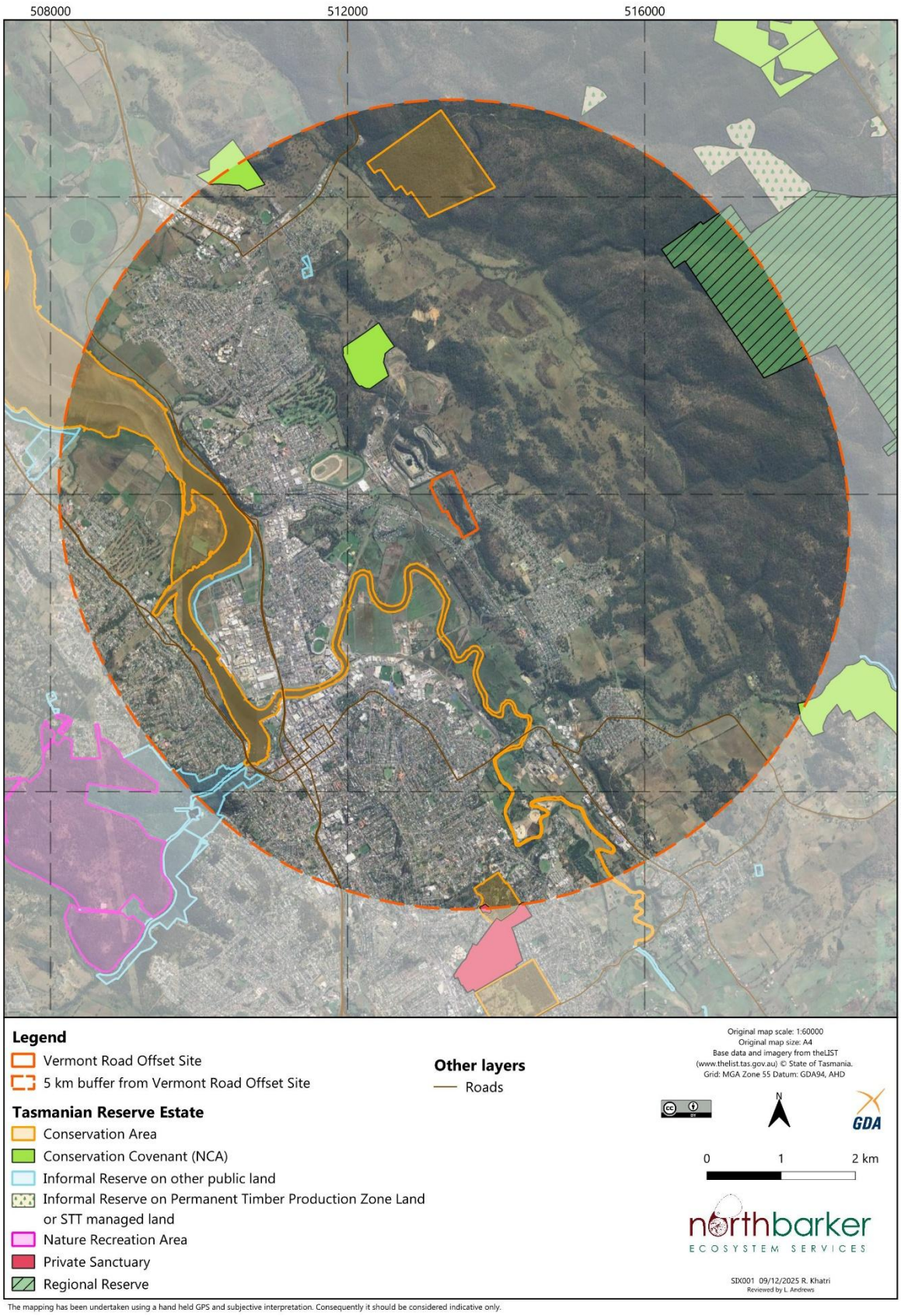

Figure 8. Local landscape within 5 km of the Vermont Road Offset Site showing close dispersal distance to formal reserves and large areas of native forest and woodland mosaics

4.8. FUTURE QUALITY WITHOUT OFFSET

The predicted future quality score (habitat/community) or value (features/individuals) of the proposed offset site without the offset.

Vermont Road forest offset – 6

Vermont Road agricultural land offset – 1

Vermont Road weed infestations offset – 2

Ecclestone Road balance lot offset – 4

Future habitat quality scores within the forested portion of the offset area in the absence of intervention/management have the potential to decrease and may experience the influence of increased weed invasion and unlawful access and rubbish dumping, illegal firewood harvesting which are all existing threats to these sites. As such, it is envisaged that forest areas within the offset may decrease from a score of 7 to a score of 6 (Vermont Road) and from 5 to 4 at Ecclestone Road. Areas of agricultural land and weed infestations within the offsite offset which are largely unsuitable for denning but may become increasingly less suitable (increasingly weedy etc) in the absence of active management and have been assigned a future quality score of 1 and 2 respectively.

4.9. FUTURE QUALITY WITH OFFSET

The predicted future quality score (habitat/community) or value (features/individuals) of the proposed offset Site with the offset.

Vermont Road forest offset – 8

Vermont Road agricultural land offset – 4

Vermont Road weed infestations offset – 5

Ecclestone Road balance lot offset – 7

Habitat quality for the Tasmanian devil and eastern quoll is influenced predominantly by the presence or absence of suitable foraging and denning habitat. Almost all native and non-native terrestrial environments provide optimal foraging habitat opportunities for these species[23] particularly in the drier parts of northern and eastern Tasmania where a prevalence of forest and agricultural mosaic landscapes exist. As such, a key factor that determines whether a particular area provides suitable breeding potential for both species is the presence or absence of local features which are suitable for denning. For this reason, it is the identification and management of suitable den sites for these species which is the primary focus of conservation management efforts in Tasmania[24] and is the main habitat condition which influences the overall habitat quality scores applied to existing and future habitat quality scores (Table 2).

[23] Conservation advice statements for Tasmanian devil (2009) and eastern quoll (2015)
[24] Environment Strategic Business Unit (2023)

Den site selection by these species shows a strong preference towards sites which have a relative proximity to intact forest patches[25], with denning in open, exposed grasslands more than 100 m from a forest edge observed very rarely. However, the utlisation of suitable denning structures is not reliant upon use of natural environments with numerous observations of denning beneath built structures (including shed and houses)[26] and frequent utilisation of log piles and windrowed timber piles in forestry and agricultural landscapes[27], with a documented increase in abundance of both species observed in timber plantation environments (due to their utilisation of timber residue arranged in piles and rows following timber harvesting)[28]. As such, there is strong evidence that constructed denning habitats can provide optimal habitat for both devils and quolls, with the highest quality of such habitats being those comprised of long-lasting, large-diameter stumps and logs[29]. The artificial creation of constructed denning features is a recognised method of fauna habitat restoration[30] with the presence of large log material recognised widely for its importance to conservation of mammals and fauna more generally[31].

The future habitat quality which will result from the protection and management of the proposed offset areas is therefore considered predominantly based their future potential to provide suitable denning habitat. At Vermont Road the existing forest areas within the offset will improve in condition over time through property boundary protection (fences and gates), weed management and regular surveillance. These actions will remove unwanted passive recreational activities, dumping rubbish and ongoing degradation from the expansion of declared weeds. For the most part however, the denning habitat conditions of the site will remain relatively stable with some minor natural recruitment of denning sites likely through the falling of dead trees. As such, the future habitat condition of this area is assessed as increasing by 1 point and remaining ultimately within the category of optimal denning habitat suitability (Table 2).

The modified portions of the offset area at Vermont Road (include FAG and FWU) are currently devoid of devil and quoll denning habitat opportunities. The proposed inclusion of new denning habitat features in these areas (examples in Appendix A), combined with weed management and other controls will increase the effective utilisation of these areas by mammals substantially. In terms of the habitat scoring categories (Table 2) these managed areas have the potential to improve by a number of degrees, and to the extent that habitat quality shifts by a whole class (ie a shift from sub-optimal [3-6] to optimal [7-10]). Such a change would see the future quality scores in reality increase by as much as 3-4 calculation points at these sites which is far more than is generally recognised as permissible under the Offsets Assessment Guide. As such, a conservative approach has been maintained with the overall future habitat quality scores capped at a maximum increase of 2 points. This 2-point increase has been predicted to result at the Vermont Road agricultural/weed areas and the Ecclestone Road balance lot, but remains a conservative prediction based on the likelihood of increased denning and utilisation that will occur at these sites.

The future habitat quality scores for the Vermont Road forest areas is 8. The future quality scores for the agricultural and weed areas at Vermont Road are 4 and 5 respectively and the future quality score for the Ecclestone Road balance lot is 7.

[25] Thalmann *et al.* (2015); Jones & Barmuta (2000); Lyall (2017); Andersen *et al.* (2017); Guiler (1970)
[26] North Barker unpublished data
[27] Pemberton (1990); Thalmann *et al.* (2015)
[28] Jones et al (2023).
[29] Forest Practices Authority (2025)
[30] Queensland Government (2025) Sunshine Coast Council Habitat Stacks
[31] Bowman et al (2000), Loeb (1996), Sullivan et al (2012), Craig et al (2014)

4.10. RISK OF LOSS (%) WITHOUT OFFSET

This describes the chance that the habitat/community on the proposed offset site will be completely lost (i.e. no longer hold any value for the protected matter of concern) over the foreseeable future without an offset.

0 %

The proposed offset area is under an inherent risk of modification or cumulative incremental loss over time given that it is privately owned and is zoned as Rural under the Tasmanian Planning Scheme. Whilst there is a low potential pressure to develop this land further for agricultural purposes, there is a relatively high potential for this site to be considered for residential development, given its proximity to the suburbs of Launceston. It is conceivable that such an action could be permissible under Tasmanian legislation without necessarily warranting referral under the EPBCA. A ROL score of 0% has been applied in this case.

4.11. RISK OF LOSS (%) WITH OFFSET

0%

Securing the land parcels within an offset management plan will remove the risk of clearance and conversion (and secure management practices to maintain/improve condition). A negligible risk of catastrophic environmental change would remain as the values that maintain denning habitat quality are relatively robust to stochastic effects. A ROL score of 0% has been applied in this case.

4.12. CONFIDENCE IN RESULT (%) – RISK OF LOSS

The capacity of measures to mitigate risk of loss of the proposed offset Site.

90 %

The risk of loss scores have been conservatively applied at 0% to future quality both with and without the offset. As such there is a very high degree of confidence that these risk of loss percentages will be achieved and as such a score 90% has been applied to this metric.

4.13. CONFIDENCE IN RESULT (%) – CHANGE IN QUALITY

The level of certainty about the successful achievement of the proposed change in quality (habitat/community) or value (features/individuals).

Vermont Road forest offset – 70%

Vermont Road agricultural land offset – 60%

Vermont Road weed infestations offset – 55%

Ecclestone Road balance lot offset – 70%

Various confidence in result scores have been applied to the anticipated change in quality of the various elements of the offset.

The land protection measures described in the Environmental Management and Monitoring Plan (Section 6) including the statutory protection mechanism (Conservation Agreement) and the various range of management actions and monitoring commitments suggest a high degree of confidence that that proponent (including compliance and corrective action outcomes) will achieve the intended changes to habitat quality and as such a score of 70% has been applied to both the existing forest areas at Vermont Road and Ecclestone Road.

The modified portions of the offset (including the agricultural land and weed infestations) also have a high likelihood of being implemented as proposed but are considered to have a slightly lower likelihood of achievement given they have a more degraded starting point in terms of environmental condition. As such, a confidence of 60% has been applied to agricultural areas and 55% applied to weed areas due to their ongoing follow up treatment requirements.

4.14. PERCENTAGE OF IMPACT OFFSET

Percentage of the significant residual impact that would be offset by the proposed offset (note: the offset calculations combined should equate to 100% for each residual impact).

Tasmanian Devil & Eastern Quoll – 102.94%

These values have been obtained through the input of variables explained above.

5. OFFSET CALCULATION SUMMARY

Table 3: Results of offset calculations for the impacted MNES

Vegetation Type	Species	Status	IUCN criteria	Quality of habitat	Time over which loss is averted	Time until ecological benefit	Start area	Start quality	Future quality without offset	Future quality with offset	Risk of loss without offset	Risk of loss with offset	Confidence in result – risk of loss	Confidence in result – change in quality	Percentage of impact offset
Forested portions of offsite offset – Vermont Road - (13.24 ha)															
Allocasuarina verticillata forest (NAV)	Tasmanian devil / eastern quoll	Endangered	1.2 %	4	20 Years	3 years	**13.24 ha**	7	6	8	0 %	0 %	90 %	70 %	**26.77 %**
Modified portions of offsite offset – Vermont Road (13.07 ha)															
Agricultural land (FAG)	Tasmanian devil / eastern quoll	Endangered	1.2 %	4	20 Years	1 years	**7.39 ha**	1	0	3	0 %	0 %	90 %	60 %	**19.44 %**
Weed infestations (gorse) (FWU)	Tasmanian devil / eastern quoll	Endangered	1.2 %	4	20 Years	5 years	**5.68 ha**	3	2	5	0 %	0 %	90 %	55 %	**13.06 %**
Forested onsite offset (balance lot) – Ecclestone Road (14.57 ha)															
Eucalyptus amygdalina forest on dolerite (DAD)	Tasmanian devil / eastern quoll	Endangered	1.2 %	4	20 Years	3 years	**14.57 ha**	5	4	7	0 %	0 %	90 %	70 %	**43.67 %**
Total Offset							**40.88 ha**								**102.94 %**

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7. ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN

7.1. BACKGROUND

Growth Developments Pty Ltd have proposed the development of a 38-lot subdivision on Ecclestone Road, Riverside (Property ID 7655464, Title Reference 43468/1). This proposal will involve the conversion of 16.9 ha of native vegetation for building areas and bushfire hazard management. Up to 30 % of each of the 38 lots (5.33 ha) and a balance lot (14.57 ha) will be protected under a Part V Agreement under LUPAA. The balance lot and an offset site at Vermont Road (26.31 ha) will protected under a Conservation Agreement under Chapter 5, Part 14 of the EPBCA.

This Environmental Monitoring and Management Plan (EMMP) has been commissioned by Growth Developments Pty Ltd to measure and report on the environmental performance of the proposed offset areas following construction and sale of the development. This plan focuses on Matters of National Environmental Significance (MNES) that are listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA) and their habitat. This plan has been produced by North Barker Ecosystem Services (NBES) to guide the ongoing management and surveys and reporting that will fulfil the mitigation requirements outlined for the development of the 38-lot subdivision.

This EMMP summarises a series of management, monitoring and corrective actions that will be undertaken by the proponent in accordance with Table 4 (below).

The EMMP has been designed to address impact mitigation and monitoring for these MNES:

Threatened mammal denning habitat

- Eastern quoll (*Dasyurus viverrinus*) – EPBCA Endangered
- Spotted-tail quoll (*Dasyurus maculatus maculatus*)[28] – EPBCA Vulnerable
- Eastern barred bandicoot (*Perameles gunnii gunnii*)[28] – EPBCA Endangered
- Tasmanian devil (*Sarcophilus harrisii*)[32] – EPBCA Endangered

Threatened avifauna nesting habitat

- Tasmanian masked owl (Tyto novaehollandiae castanops)[28] – EPBCA Vulnerable
- Tasmanian wedge-tailed eagle (Aquila audax fleayi)[28] – EPBCA Endangered

The key parties involved in the Part 5 Agreement and this EMMP are:

- Landowners - all property buyers are to be provided a copy of the Part 5 Agreement (which includes this EMPP) and their obligations under the agreement are to be made known, e.g. specific requirements for pet owners, management obligations & restrictions regarding the environmental offsets
- Growth Developments Pty Ltd - control of bank guarantee to fund (in-house or outsourced to consultants) monitoring and reporting requirements, receipt and assessment of data and annual reports, routine management of roadside vegetation (via Council), fencing, installation of roadkill warning signs, roadkill collection (via Council), and monitoring landholder compliance of prohibited activities within the balance lot.

The key parties involved in the Conservation Agreement and this EMMP are:

- Growth Developments and the Commonwealth of Australia are to commit to a Conservation Agreement in accordance with Chapter 5, Part 14 of the EPBCA. All management, monitoring and corrective actions remain the responsibility of Growth Developments.

[32] Denotes species that were not assessed to be at risk of significant impacts and therefore ongoing monitoring and management is not required, however this species' habitat is likely to be captured by measures designed to monitor other threatened mammal habitat

Table 4: Summary of environmental management actions, monitoring and corrective actions

Management commitments	Performance indicator	Implementation/Monitoring	Corrective Actions	Delivery	Ultimate Responsibility
1. Establish formal conservation protection mechanism for offset	Offset secured and legally protected. Declaration of the Ecclestone Road balance lot and the Vermont Road site under a conservation agreement under the EPBCA.	To be established within 12-18 months upon receipt of approval conditions.	Regular engagement with DCCEEW required throughout process. No specific corrective actions identified.	Contractor/Growth Developments Pty Ltd	Growth Developments Pty Ltd
2. Signage management	Unwanted access deterred/restricted. Signs warning the general public of the presence of a conservation reserve to be installed at two locations on the boundary of where the offset adjoins other private or public tenures.	Within 12 months of receipt of permit. Will be monitored annually until completion.	If annual monitoring confirms no signage is in place this will be noted as a non-conformance. Remedial action will be required within a maximum of 3 months after the initial 12-month period.	Contractor/Growth Developments Pty Ltd	Growth Developments Pty Ltd
3. Gate access management	Unwanted-unrestricted access to offset site limited. Identification of all gated access points located on the offset boundaries and install a suitable locking system on each.	Within 24 months of receipt of permit. Will be monitored annually until completion.	If at the maximum implementation period of 24 months the gates are not in place or are not locked, a non-conformance will be noted. Remedial action will be required within a maximum of 3 months after the initial 24-month period.	Contractor/Growth Developments Pty Ltd	Growth Developments Pty Ltd
4. Perimeter fencing management	Unwanted human, pet and livestock access restricted. Effective fencing is to be established and maintained on all boundaries of the offset areas (excluding existing fencelines established along the frontages of Ecclestone Road and Valley View Drive).	Within 24 months of receipt of permit. Will be monitored annually for a period of at least 5 years following completion.	If at the maximum implementation period of 24 months there are no fences in place or fences are not providing adequate physical access constraints a non-conformance will be noted., Remedial actions to address the issue will be completed within a maximum of 3 months.	Contractor/Growth Developments Pty Ltd	Growth Developments Pty Ltd
5. Clean-up and rubbish removal	Rubbish removed from offset site. Any rubbish items (ie abandoned vehicles or white goods etc) or piles of waste exceeding 10m2 will be removed from site and disposed of at an appropriate facility.	Will be monitored annually for the life if the permit.	Where annual monitoring identifies any non-compliant rubbish items or rubbish piles, actions will be taken to dispose of the waste items within 6 months.	Contractor/Growth Developments Pty Ltd	Growth Developments Pty Ltd

6. Management of degrading activities	Certain activities which have been identified as potentially degrading to the environmental offset areas including grazing, horse riding, off-road vehicle use, and introduction of plants will be expressly prohibited from being conducted within the offset areas.	Will be monitored annually for the life if the permit.	Where annual monitoring identifies any non-compliant activities have been undertaken within the offset, a review of all signage, fences and gates will be undertaken and maintained in accordance with management action 2 to 4 above. Corrective actions including rehabilitation/restoration of any impacted areas will be completed within 12 months of having been identified.	Contractor/Growth Developments Pty Ltd	Growth Developments Pty Ltd
7. Weed and hygiene management	All declared weeds effectively eradicated or contained according to State weed listing advice. 1. A weed and hygiene management plan will be developed for the Ecclestone Road site (including coverage of the proposed action and offset balance lot) 2. A weed and hygiene management plan will be developed for the Vermont Road Offset Site.	All plans to be developed following the receipt of the permit and prior to the commencement of the action. Effectiveness monitoring will be undertaken annually for a period of 5 years.	Where annual monitoring identifies weed or hygiene outcomes contrary to the management plans, corrective management controls in accordance with the weed and hygiene management plan will be implemented within the proceeding 12-month period.	Contractor/Growth Developments Pty Ltd	Growth Developments Pty Ltd
8. Education of new landowners	An information notesheet/booklet will be developed and provided to all new landowners at the point of purchasing land at Ecclestone Road which outlines each of their environmental management obligations under the Part V Agreement including: Property boundary dog fencing (minimum 100 mm mesh dog proof fencing required. Containment of all domestic animals within their property boundary unless on a lead. Strict prohibition of the use of any form of rodenticide poisons or baits. Roadkill mitigation factors including high-risk times, speed reduction, visibility and driver caution	A record of information provided to owners to be maintained as part of annual monitoring and compliance reporting.	If annual monitoring confirms a new owner has not been provided with the proposed information summary one will be provided within 3 months of the annual monitoring inspection.	Information booklet: Growth Developments Pty Ltd Management actions: Landowners/Council	Council

	Each owner's obligations for weed and disease management under the Tasmanian *Biosecurity Act 2019*.				
9. Roadkill mitigation	Actions will be undertaken to aid in the reduction of roadkill on all public roads bordering the Ecclestone Road Site including Ecclestone Road and Valley View Drive. These include the following: Maintaining low heights of vegetation (<0.5 m) in the road reserve between the seal and the boundary fence to improve visibility of animals to all road users. Collection of all roadkill animals to minimise the risk of scavenging carcasses attracting devils and quolls and so leading to animals being killed within vicinity of the new road.	Implementation to be assessed and reported annually.	Any incidences of non-conformance to be reported to Council.	Council	Council
10. New denning habitat creation	A series of 11 new denning habitat stacks will be created (7 at Vermont Road and 4 at Ecclestone Road) and all located within 50 m of an existing forest edge to maximise potential for utilisation (Figure 6) Each habitat stack will be constructed to be at least 3 m long and 1.5 m high and will be comprised of materials including logs (30 to 100 cm in diameter), stumps and large rocks (>50 cm diameter). Guidance on the intent and design of habitat stacks is provided in Appendix A. Habitat stack materials will be preferentially salvaged from the development areas of Ecclestone Road.	New denning habitat stacks will be constructed within 18 months of commencement of proposed action. Annual progress monitoring	Implementation to be monitored annually. If no progress achieved within the first 12 months of commencing action, a specific implementation plan is to be developed noting how and where materials will be sourced and what resources will be used in the proceeding 12 months to bring this management action to completion.	Contractor/Growth Developments Pty Ltd	Growth Developments Pty Ltd
11. Monitoring and reporting	Annual site inspections of impact and offset areas will be undertaken with annual monitoring and compliance reports submitted to DCCEEW within 6 months of a site inspection.	Annual monitoring and compliance reporting.	Outstanding or overdue monitoring and compliance reports will trigger a non-conformance which will remain outstanding until such time as DCCEEW has been satisfied.	Contractor/Growth Developments Pty Ltd	Growth Developments Pty Ltd

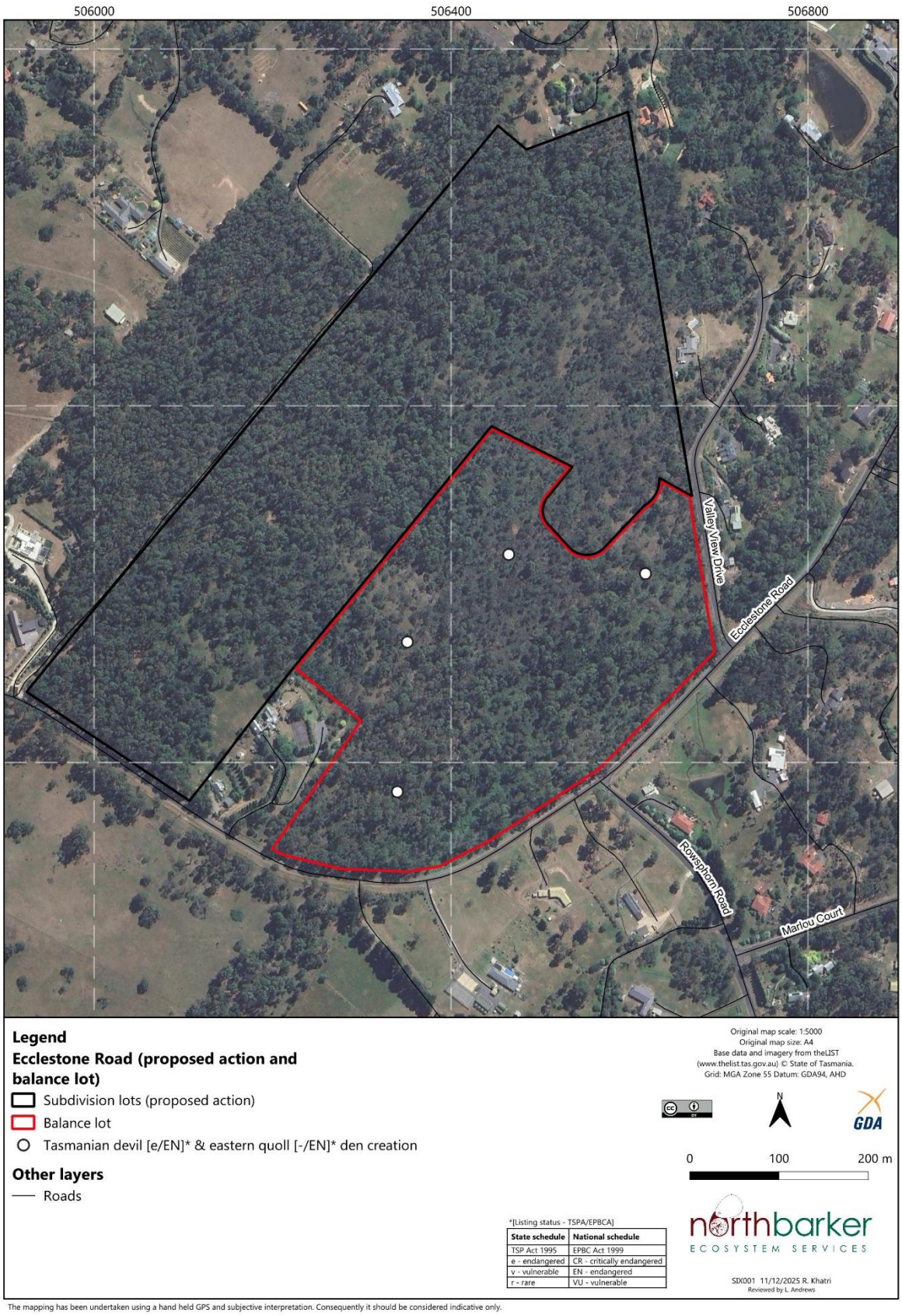

Figure 9. Proposed action and onsite balance lot component of the offset including four denning habitat creation sites.

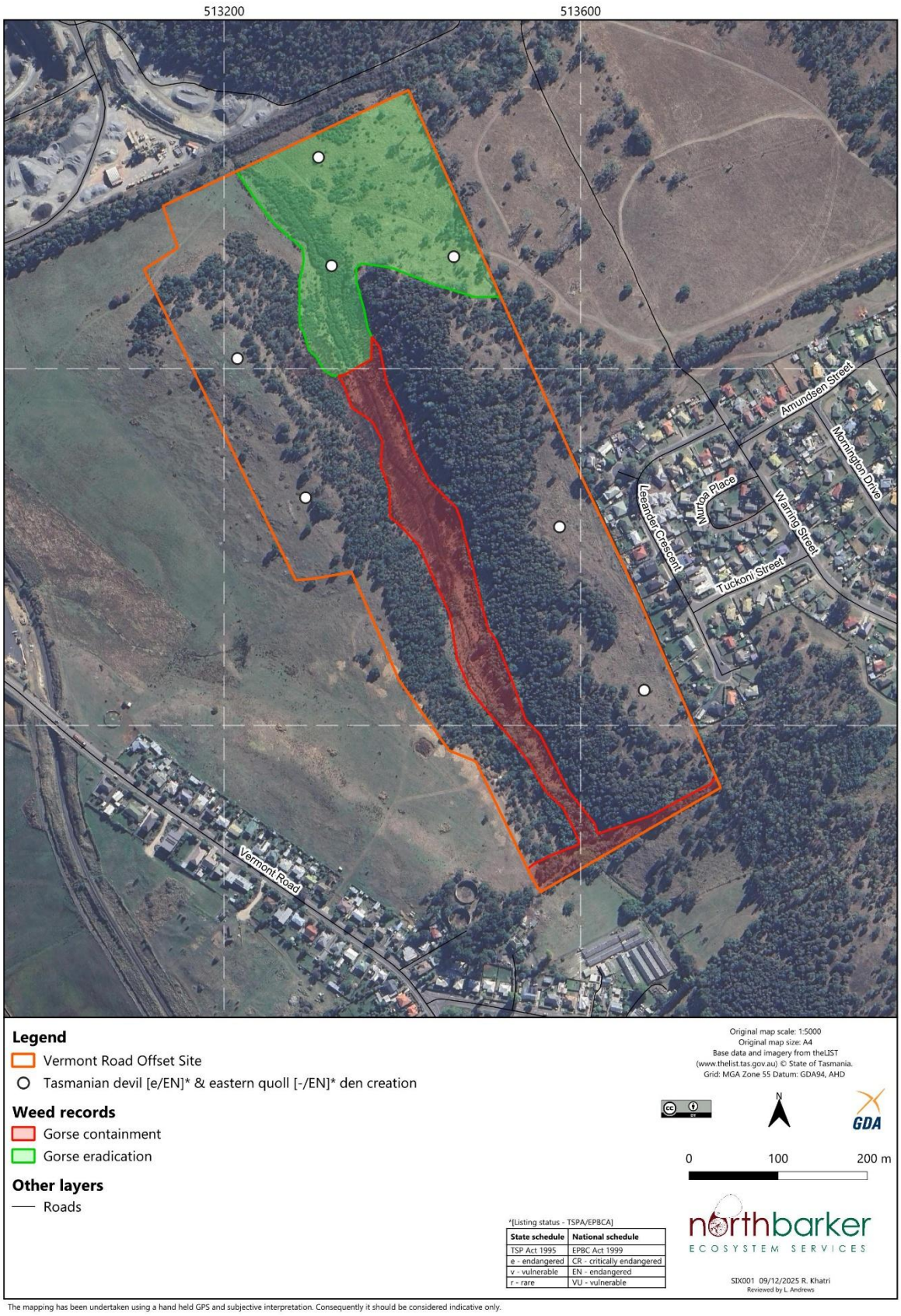

Figure 10. Vermont Road Offset Site including denning habitat creation sites within 50 m of forest edges

8. APPENDIX A – EXAMPLES OF DENNING HABITAT STACKS TO BE CREATED WITHIN THE OFFSET AREA


KUBOTA