



## **ATLAS Stage 3 – ATLAS Pre-clearance Survey Report Bellaringa Wells, Gathering and Landspray**

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**Senex**

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## Glossary of Terms

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Acronym	Description
ATP	Authority to Prospect
ECPPFD	<i>Environmental Constraints Protocol for Planning and Field Development</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>
ha	Hectares
m	Metres
EA	Environmental Authority
PL	Petroleum Lease
sp.	Species (singular)
spp.	Species (plural)
sqm	Square metres
TEC	Threatened Ecological Community

## 1 Introduction

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The pre-clearance survey methodology applied within this package of works is deemed appropriate to confirm the on-the-ground biodiversity values present.

### 1.1 Project background

The Atlas Stage 3 Gas Project (EPBC Act referral 2022/09410) involves developing, operating, decommissioning and rehabilitating up to 151 coal seam gas wells; gas and water gathering systems for the producing wells; access tracks; brine and produced water storages; borrow pits; and ancillary supporting facilities on Authority to Prospect (ATP) 2059, Petroleum Lease (PL) 445, the northern portion of PL209 and parts of PL1037 in the central part of the Surat Basin, Queensland (Senex, 2024). This report is provided to ensure compliance with the following EPBC approval conditions:

4. In accordance with the Constraints Protocol, the approval holder must:
  - b) adhere to the constraints mapping.
5. To ensure no functional change to Koala dispersal habitat, the approval holder must not remove more than a total of 4 ha of trees, measured in canopy cover within mapped Koala dispersal habitat.

#### PRE-CLEARANCE SURVEYS

6. Prior to commencing clearing, the approval holder must:
  - a) undertake at least one pre-clearance survey of the proposed area of clearing, and
  - b) publish on the website the pre-clearance survey findings, including:
    - i) the location and extent of trees to be cleared, including maps, and
    - ii) a discussion of how removal of trees will not change the ability of Koalas to disperse across the landscape.

This report provides the results of pre-clearance survey on an initial footprint layout including landspray areas, wells and gathering Infrastructure (well pads, gas and water gathering lines and access tracks) (the footprint) and a 30 m buffer within the Bellaringa property: 49SP237297 and 52SP237297. Three landspray areas were surveyed in September 2024 and the results added to this report. In October 2024 additional access tracks were assessed and verified in the field where required.

This report is also provided to help ensure compliance with Conditions F1-10 of the Project's Environmental Authority (P-EA-100112777).

### 1.2 Scope

Ausecology Pty Ltd (Ausecology) was engaged by Senex Energy Pty Ltd (Senex) to undertake pre-clearance ecological surveys as part of the approval conditions for the Atlas Stage 3 Gas Project and in accordance with the *Atlas Stage 3 Environmental Constraints Protocol for Planning and Field Development* (ECPDFD) document (Senex, 2024). The ECPDFD provides a framework for identifying, assessing and managing potential impacts to Matters of National Environmental Significance (MNES) and Matter of State Environmental Significance (MNES) associated with development of the Atlas Stage 3 Gas Project. Data collected during the pre-clearance surveys will be used by Senex to ensure:

- infrastructure siting complies with relevant environmental approval conditions and does not exceed the maximum disturbance limits
- infrastructure siting adheres to the constraints mapping
- no functional change to Koala dispersal habitat, the approval holder must not remove more than a total of 4 ha of trees, measured in canopy cover within mapped Koala dispersal habitat.

Results from the pre-clearance survey findings (this report) will be published on the website, including:

- the location and extent of trees to be cleared, including maps, and
- a discussion of how removal of trees will not change the ability of Koalas to disperse across the landscape.

This survey also involved Targeted Threatened Flora Surveys, Active Threatened Fauna Surveys (where suitable habitat was identified) and Fauna Habitat (where encountered) as per the ECPPFD.

## 2 Methodology

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An Ausecology senior ecologist conducted the field surveys on the 25<sup>th</sup> and 26<sup>th</sup> of July, areas were assessed alongside the Senex construction team to determine any further impacts not already identified to be avoided by re-aligning gas gathering, access tracks and well pads. Further surveys for proposed landspray areas were undertaken by a Senior Ecologist on the 30<sup>th</sup> of September to 1<sup>st</sup> of October 2024. The area surveyed and mapped in this report include the Bellaringa property as shown in Figure 2-1.

### 2.1 Regional Ecosystem assessment and Threatened Ecological Communities

#### 2.1.1 Desktop assessments

Baseline assessments of the vegetation communities, including ground-truthed regional ecosystem (GTRE) mapping and threatened ecological community surveys were conducted to an acceptable level of detail and covered the relevant sections of the Field Development Area (ECPPFD). These assessments have been reviewed as part of the desktop assessment prior to the preclearance surveys. Given the level of detail in these reports, no further desktop analysis has been conducted.

#### 2.1.2 Regional Ecosystem assessment

During preclearance surveys, quaternary site assessments to verify regional ecosystems were undertaken where necessary (i.e. where vegetation and ecological communities have been determined to vary from the mapped ground-truthed regional ecosystem at the time of the pre-clearance surveys). These assessments were conducted in accordance with the ECPPFD.

#### 2.1.3 Threatened Ecological Communities

Where necessary Threatened Ecological Community (TEC) assessments were undertaken to confirm the presence and condition of TECs identified as known or potential in the footprint if these were determined to vary from the mapped TEC areas identified in the constraints mapping.

### 2.2 Targeted threatened flora surveys

These surveys were conducted by a suitably qualified person (SQP). Targeted flora surveys of all known, likely or potential threatened flora species were conducted within the footprint and 30 m buffer, where mapped constraint areas were present and/or suitable habitat was identified by the SQP, in accordance with the ECPPFD.

These surveys were conducted using the random meander method and if a species is encountered, a population survey would be undertaken to determine the extent and density of the population. Threatened

flora species and the locations of all individuals were recorded and specimens collected of any unknown individual requiring confirmation by the Queensland Herbarium.

Potentially occurring threatened species in the area include but are not limited to Belson's panic (*Homopholis belsonii*), red soil wooly winklewort (*Rutidosis lanata*), winged nightshade (*Solanum graniticum*) and *Solanum stenopterum*.

### 2.3 Fauna habitat assessment

Senex has committed to not clearing any areas confirmed as habitat for threatened species (ECPPFD), with the exception of Koala dispersal habitat and Echidna habitat. Fauna habitat baseline assessments have been conducted to an adequate level of detail to enable known, likely and potentially present species to be identified and a comprehensive Project impact assessment and constraints mapping has been completed (ECPPFD).

The pre-clearance surveys will reassess the habitat present (as mapped in the constraints mapping (ECPPFD)) or otherwise identified by the SQP during the pre-clearance surveys) in order to refine mapped habitat areas and survey and record micro-habitat features and breeding sites in the mapped constraint habitat to facilitate avoidance and minimisation of impacts to potentially utilised micro-habitat features and breeding sites.

Recorded micro-habitat features included:

- Hollow-bearing trees;
- Dead standing trees;
- Hollow logs;
- Termite mounds;
- Woody debris;
- Surface rocks;
- Gilgais;
- Soil cracks / cracking clay;
- Rocky outcrops, crevices, overhangs and caves;
- Mistletoes;
- Nests;
- Animal burrows;
- Watercourses, wetlands and dams (including proximity); and
- Any other significant habitat features, or values present, such as dense leaf litter, heavily decorticating bark, dense grass/shrub shelter, seeding grass cover, fruiting plants, nectar and pollen producing plants and koala food trees.

### 2.4 Threatened Fauna Surveys

As areas confirmed as habitat for threatened species have been effectively avoided by the footprint (with the exception of Koala dispersal habitat and Echidna habitat), the area required to be surveyed is minimal.

Active fauna surveys of all known, likely or potential threatened fauna species are to be undertaken where suitable potential habitat is mapped or found to be present within the proposed disturbance footprint (refer to the constraints mapping and the habitat features listed in Appendix A of the ECPPFD). Active fauna searches as per Table 1, Appendix A of the ECPPFD include scanning trees, the ground and habitat features; overturning rocks, logs and other woody debris; searching under peeling bark; raking leaf litter and soil at the base of trees; and flushing birds from dense shrubs and groundcover.

Invasive active searches were not undertaken in the 30m buffer of the disturbance footprint within mapped constraint areas, given no impact is expected and active searches outside of the footprint would be detrimental to the fauna species habitat. Instead of invasive searches in the 30m buffer, surveys included incidental observations and scat and sign searches.

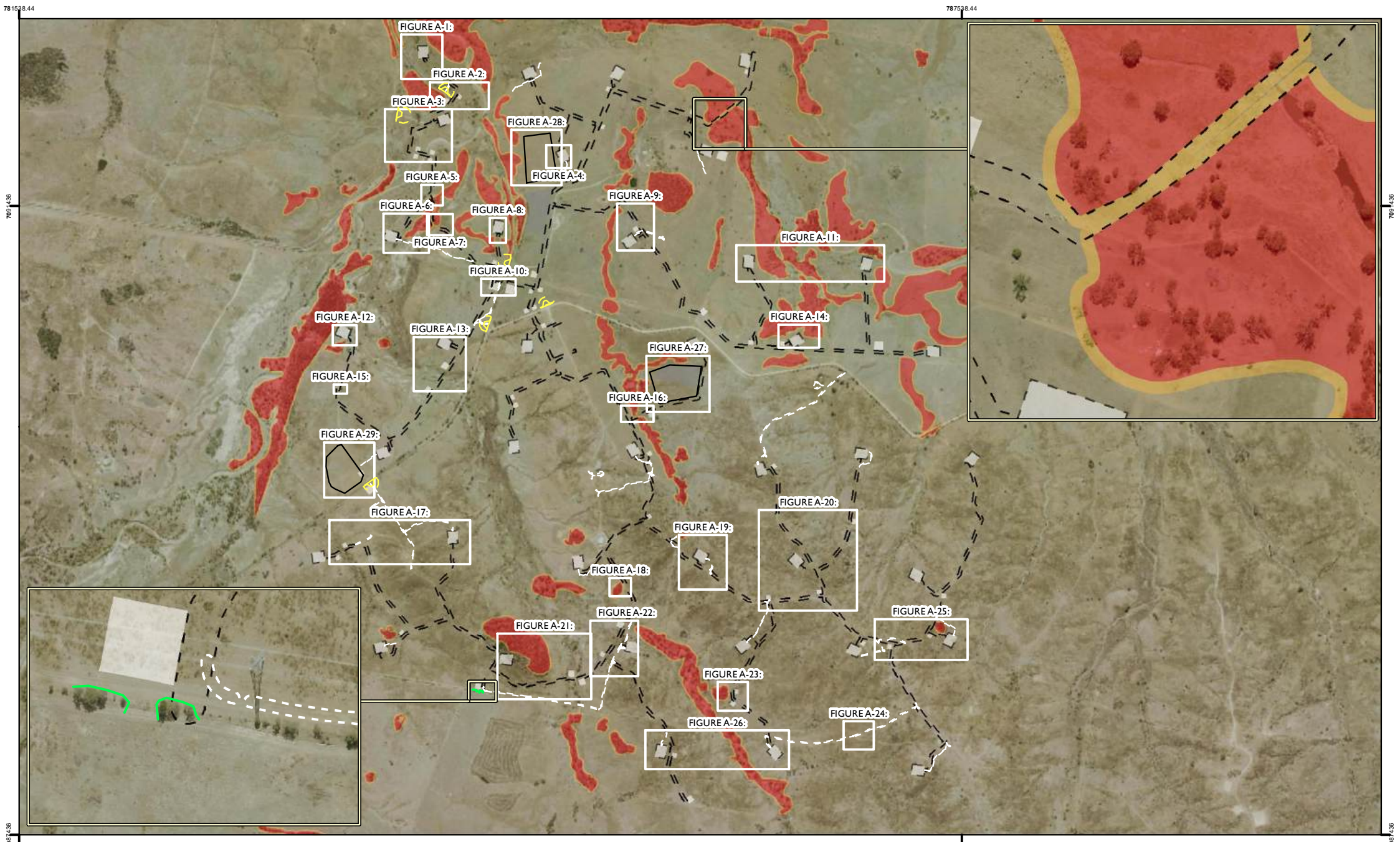
## 2.5 Koala dispersal habitat

An initial desktop survey was undertaken to analyse all previous ecology data collected in the field, analyse the ECPPFD and associated constraints mapping and to identify areas of mapped koala dispersal habitat that would require further ground verification.

Areas identified were highlighted on GIS mapping for further identification and field verification. Additional points were collected in the field where applicable. All tree ID numbers have been provided in individual maps of the area surveyed and Table 3-1 identifying each species in the results.

Canopy cover was measured by walking the dripline of trees located in koala dispersal areas using a sub-10cm accuracy handheld Trimble GPS unit. The diameter at breast height (DBH) and total height of each of the abovementioned trees were measured. Where denser regrowth was present and canopy cover of individual trees could not be distinguished, the canopy cover of the clump of trees was walked at the outer dripline and average height assessed. Thorny tree species which are not able to be climbed by Koala (i.e. desert lime (*Citrus glauca*)) were still recorded in the field but excluded from the final Koala tree canopy cover calculations.

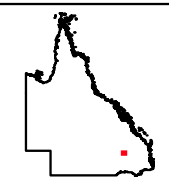




**FIGURE 2-1:**  
Bellaringa - Overview

- Vegetation Dripline Extent - Potential ROW Option
- Turnout Survey Area
- Turnout Impact Footprint
- Potential Landspray Areas
- Tree Verification Map Areas
- Priority Access Tracks
- Proposed Wellpads
- Proposed ROW
- Proposed Extra Workspaces
- Camp and Laydown Options
- No Go Area
- High Constraint Area

Data Accuracy Notes:  
Ground-Truthed data mapped  
using Fixed RTK GNSS Receivers  
with 1cm Accuracy



REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	LG	04/11/2024

COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:30,000

### 3 Results

The Bellaringa property has been historically cleared for cattle grazing and is dominated by cleared pasture lands of introduced pasture grasses. Large areas of the cleared areas on the property have dense regrowth of either *Acacia decora* or the invasive sweet acacia (*Vachellia farnsiana*). The property has scattered patches of remnant and regrowth vegetation including Brigalow (*Acacia harpophylla*) woodland (RE 11.9.5), as well as ironbark and callitris pine (*E. melanophloia* and *Callitris glaucophylla*) woodlands (RE 11.5.5, 11.5.1 and 11.3.19). Many creek lines around the property have disturbed and/or regrowth vegetation in along the drainage features, including riverine river red gum woodlands (RE 11.3.25), ironbark (*Eucalyptus melanophloia*) woodlands (RE 11.3.39), and poplar box (*Eucalyptus populnea*) woodlands (RE 11.3.2). Individual and small patches of paddock trees of various ages and species were also scattered across cleared pastures (Figure 3-1 to Figure 3-4).



Figure 3-1 Patches of remnant or old regrowth brigalow



Figure 3-2 Fragmented riverine eucalypt forest



Figure 3-3 Extensive cleared areas, often with dense young regrowth *Acacia decora*



Figure 3-4 Cleared grazing land with sparse paddock trees

#### 3.1 Regional Ecosystems and Threatened Ecological Communities

Where mapped constraints areas occurred within the disturbance footprint or 30m buffer these were assessed in the field to ensure they aligned with the mapping. No mapped constraints in the survey area were found to require changes. The survey also confirmed that the proposed disturbance areas do not contain any listed TECs.

### 3.2 Targeted threatened flora surveys

No threatened flora species were identified in the footprint or 30m buffer, within the areas mapped as constraints for these species.

### 3.3 Opportunistic fauna surveys and habitat assessment

Active searches were not required within the disturbance footprint as no searchable fauna habitat was present (Either mapped as constraints or identified during the survey). Apart from koala dispersal trees, several bird nests were identified during the surveys. The habitat features recorded are listed in Appendix C.

No threatened fauna species were observed in suitable potential habitat within 30 m of the proposed disturbance footprint. Some vegetation patches are located within 30m of the disturbance footprint, however, impacts to the patches have been avoided. Invasive searches were not undertaken in these patches since none of the coarse woody debris, trees with loose bark or areas with leaf litter will be impacted by the disturbance footprint.


Opportunistic sightings were recorded across the disturbance footprint and 30m buffer. Fifteen species of fauna were recorded during the surveys (Appendix B).

### 3.4 Ground-truthed koala dispersal trees






Table 3-1 provides the results including canopy cover, height and DBH of the trees assessed in the field in koala dispersal areas. All trees were assessed and where determined they could be avoided (through underground boring or realignment) they have been marked up as “retain” and will be avoided during construction. Trees unable to be avoided have had their canopy cover assessed and calculated under disturbance limits. Mapping of each location (Desktop ID) are shown in Appendix A.


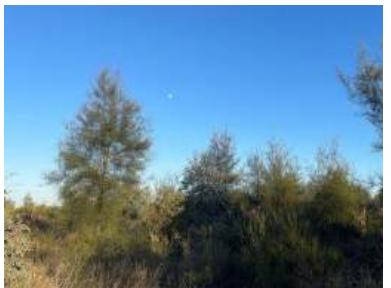

A limited number of trees will require removal. Most will be retained due to avoidance measures undertaken.






Table 3-1 Dispersal habitat trees






Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE01-03	110.47	<i>Acacia salicina</i>	23 23 23.5	11.2 12 11	Remove	

Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE04-005	75.21	<i>Acacia salicina</i>	25.3 10	8.7 4	Remove	
LE06	18.81	<i>Acacia salicina</i>	14	7.4	Remove	
LE08	42.64	<i>Eucalyptus melanophloia</i>	28	12.3	Retain	
LE09	8.46	<i>Acacia salicina</i>	7	4.5	Remove	
LE10	9.83	<i>Acacia excelsa</i>	7	7	Remove	






Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE11	28.35	<i>Geijera parviflora</i>	7	5.1	Retain	
LE12	19.02	<i>Geijera parviflora</i>	19	5.1	Remove	
LE13-14	98.56	<i>Geijera parviflora</i> <i>Notelaea microcarpa</i>	40.5 14	9.1 5.5	Remove	
LE15	27.20	<i>Geijera parviflora</i>	9	5.4	Remove	
LE16	107.56	<i>Eucalyptus camaldulensis</i>	33	17.5	Retain	

Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE17	586.88	<i>Acacia harpophylla</i>	22	10.3	Retain	
LE18	31.91	<i>Eucalyptus melanophloia</i>	7	4.5	Remove	
LE19	10.18	<i>Casuarina cristata</i>	9	4.4	Remove	
LE20	6.80	<i>Casuarina cristata</i>	7	4	Remove	
LE21	133.04	<i>Geijera parviflora</i>	50	11	Remove	






Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE22	60.98	<i>Acacia harpophylla</i>	15	6.1	Retain	
LE23	46.58	<i>Acacia harpophylla</i>	11.5	6.5	Retain	
LE24	32.38	<i>Acacia harpophylla</i>	5.9	13	Retain	
LE25	14.96	<i>Eucalyptus populnea</i>	7	4.2	Retain	
LE26-27	43.63	<i>Acacia salicina</i> <i>Eucalyptus camaldulensis</i>	13 15	5.6 5.8	Remove	






Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE28	18.57	<i>Eucalyptus camaldulensis</i>	10	5.3	Retain	
LE29	13.50	<i>Acacia salicina</i>	10	5.7	Retain	
LE30	248.91	<i>Eucalyptus camaldulensis</i>	59	21.5	Retain	
LE31	21.39	<i>Corymbia clarksoniana</i>	25	8.6	Remove	
LE32	127.84	<i>Owenia acidula</i>	47.5	10.7	Retain	










Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE33	60.75	<i>Acacia harpophylla</i>	47	12.7	Retain	
LE34	66.90	<i>Acacia harpophylla</i>	30	8.8	Retain	
LE35	97.42	<i>Acacia harpophylla</i>	22	7.4	Remove	
LE36	43.55	<i>Acacia salicina</i>	31.5	10.7	Retain	
LE37	74.57	<i>Geijera parviflora</i>	42	10.2	Retain	






Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE38	34.14	<i>Owenia acidula</i>	30.5	9.4	Retain	
LE39	90.96	<i>Acacia harpophylla</i>	16.5	7.6	Remove	
LE40	37.49	<i>Acacia harpophylla</i>	14	7.2	Remove	
LE41	10.67	<i>Acacia harpophylla</i>	19	4.6	Remove	
LE42	29.92	<i>Geijera parviflora</i>	23	5.2	Retain	






Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE43	20.14	<i>Geijera parviflora</i>	12	4.9	Retain	
LE44	164.44	<i>Geijera parviflora</i>	50	12.4	Remove	
LE45	24.54	<i>Owenia acidula</i>	25	7.6	Remove	
LE46	39.29	<i>Geijera parviflora</i>	20	5.1	Remove	
LE47	39.38	<i>Eucalyptus camaldulensis</i>	30.5	12	Remove	

Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE48	16.99	<i>Geijera parviflora</i>	16	5.1	Remove	
LE49	121.67	<i>Geijera parviflora</i>	47.5	8	Retain	
LE50	106.95	<i>Geijera parviflora</i>	35	8.1	Remove	
LE51	33.35	<i>Geijera parviflora</i>	38	10.4	Retain	
LE52	53.82	<i>Eucalyptus populnea</i>	25.5	13.4	Remove	






Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE53	62.04	<i>Acacia salicina</i>	40	11.6	Retain	
LE54	116.79	<i>Acacia salicina</i>	50.5	10.6	Retain	
LE55	118.28	<i>Acacia salicina</i>	59	12.5	Retain	
LE56-57	67.01	<i>Eucalyptus populnea</i>	34 47	10.7 14.7	Remove	
LE58	53.56	<i>Eucalyptus populnea</i>	28	15.5	Retain	

Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE59-61	330.33	<i>Eucalyptus camaldulensis</i> <i>Acacia salicina</i> <i>Eucalyptus populnea</i>	59 47 53	19.8 8.8 15.6	Remove	
LE62-63	131.57	<i>Acacia salicina</i> <i>Eucalyptus populnea</i>	60 19	10.6 8.8	Remove	
LE64	6.89	<i>Myoporum acuminatum</i>	11	4	Remove	
LE65	4.38	<i>Eucalyptus tereticornis</i>	6	3.9	Remove	
LE66	7.21	<i>Acacia salicina</i>	9	4.3	Remove	

Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE67	3.51	<i>Eucalyptus camaldulensis</i>	6	4.5	Remove	
LE68	37.29	<i>Pittosporum angustifolium</i>	29	7.2	Remove	
LE69	3.34	<i>Eucalyptus camaldulensis</i>	8	4.6	Remove	
LE70	89.61	<i>Eucalyptus populnea</i>	23	7.5	Retain	
LE71	26.43	<i>Eucalyptus populnea</i>	26.5	11.4	Remove	






Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE72	101.39	<i>Acacia salicina</i>	38	12.3	Retain	
LE73	129.50	<i>Acacia salicina</i>	0	8.7	Retain	
LE74	98.57	<i>Geijera parviflora</i>	53	9.2	Remove	
LE75	10.86	<i>Grevillea striata</i>	17	6.7	Remove	
LE76-78	37.44	<i>Corymbia tessellaris</i> <i>Geijera parviflora</i> <i>Geijera parviflora</i>	28 16 12	12.6 5.2 5.5	Remove	








Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE79	16.18	<i>Acacia salicina</i>	24	7.6	Retain	
LE80	45.15	<i>Eucalyptus populnea</i>	17.5	12.9	Retain	
LE81-82	58.13	<i>Eucalyptus populnea</i>	19 18	13.2 9	Retain	
LE83	7.15	<i>Eucalyptus populnea</i>	11.5	6.5	Remove	
LE84	16.42	<i>Acacia salicina</i>	16	6.2	Remove	






Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE85	44.04	<i>Eucalyptus populnea</i>	25	10.4	Remove	
LE86	31.85	<i>Acacia salicina</i>	25.5	8.5	Retain	
LE87-88	91.25	<i>Casuarina cristata</i>	22.5 29	9 11.1	Remove	
LE89	33.78	<i>Casuarina cristata</i>	49	11.6	Remove	
LE90	29.95	<i>Casuarina cristata</i>	27	7.3	Remove	

Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE91	46.04	<i>Casuarina cristata</i>	36.5	10.3	Remove	
LE92	29.10	<i>Casuarina cristata</i>	26	9.2	Remove	
LE93	10.41	<i>Eucalyptus populnea</i>	15	7.1	Remove	
LE94	65.93	<i>Casuarina cristata</i>	31	8	Retain	
LE95	84.05	<i>Casuarina cristata</i>	30	8.5	Remove	

Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE96	101.61	<i>Eucalyptus melanophloia</i>	1.04	20.4	Retain	
LE97	109.46	<i>Owenia acidula</i>	39	10	Remove	
LE98	47.60	<i>Geijera parviflora</i>	21.5	6.1	Remove	
LE99-100	56.93	<i>Atalaya hemiglauca</i>	29 37	9.9 11	Retain	
LE101	19.18	<i>Atalaya hemiglauca</i>	24	7.7	Retain	






Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE102	26.11	<i>Acacia excelsa</i>	31	7.8	Retain	
LE103	39.11	<i>Acacia salicina</i>	25.5	10	Retain	
LE104-106	99.83	<i>Petalostigma pubescens</i> <i>Geijera parviflora</i> <i>Acacia excelsa</i>	24 27 21	5.7 6 8.89	Retain	
LE107	38.06	<i>Brachychiton populneus</i>	21	8	Retain	
LE110	64.02	<i>Geijera parviflora</i>	28	7.2	Retain	






Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE113	20.00	<i>Acacia excelsa</i>	27	5.5	Retain	
LE114	11.63	<i>Acacia excelsa</i>	14	6.4	Retain	
LE115	16.81	<i>Geijera parviflora</i>	20	7	Retain	
LE116	95.62	<i>Santalum lanceolatum</i>	20	9	Retain	
LE117	81.10	<i>Eucalyptus camaldulensis</i>	12	6.1	Retain	






Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE118	70.30	<i>Acacia salicina</i>	15	7.6	Remove	 A photograph of a tall, slender tree with dense green foliage, identified as Acacia salicina. A white car and a person in an orange safety vest are visible in the background for scale.
LE119	15.58	<i>Eucalyptus populnea</i>	23	11.3	Remove	 A photograph of a large, bushy tree with dark green leaves, identified as Eucalyptus populnea, situated on a dirt road.
LE120	6.73	<i>Eucalyptus camaldulensis</i>	10	5	Remove	 A photograph of a medium-sized tree with green leaves, identified as Eucalyptus camaldulensis, located near a paved road.
LE121	42.65	<i>Geijera parviflora</i>	24	5	Retain	 A photograph of a tree with a rounded canopy and green leaves, identified as Geijera parviflora, in an open field.
LE122	24.80	<i>Corymbia tessellaris</i>	28	9.5	Retain	 A photograph of a tall, slender tree with a dense canopy of green leaves, identified as Corymbia tessellaris, in a field.


Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE123	214.11	<i>Eucalyptus camaldulensis</i>	57	23	Retain	
LE124	6.18	<i>Acacia salicina</i>	17	4	Remove	
LE125	4.46	<i>Eucalyptus populnea</i>	11	4	Remove	
LE126	76.28	<i>Eucalyptus populnea</i>	33	13.5	Remove	
LE127	9.66	<i>Eucalyptus populnea</i>	12	6.9	Remove	













Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE128	15.10	<i>Acacia excelsa</i>	13	5	Remove	
LE129	35.52	<i>Casuarina cristata</i>	41	6.1	Retain	
LE130	6.22	<i>Acacia salicina</i>	9	4.7	Retain	
LE131	9.72	<i>Eucalyptus populnea</i>	17.5	6.8	Retain	No photo
LE132	37.04	<i>Eucalyptus populnea</i>	26	9.5	Retain	
LE133	22.51	<i>Eucalyptus populnea</i>	21	7.6	Retain	






Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE134	7.66	<i>Eucalyptus populnea</i>	14	6	Retain	
LE135	10.07	<i>Eucalyptus populnea</i>	13.5	6.6	Retain	
LE136	58.54	<i>Eucalyptus populnea</i>	26.5	12	Retain	
LE137	20.22	<i>Eucalyptus populnea</i>	21	11	Retain	
LE138	110.63	<i>Eucalyptus populnea</i>	31	15.2	Retain	






Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE139	70.28	<i>Eucalyptus camaldulensis</i>	40.5	16.3	Retain	
LE140	6.59	<i>Eucalyptus populnea</i>	6	6.5	Retain	
LE141	8.37	<i>Eucalyptus populnea</i>	10	6	Remove	
LE142	15.81	<i>Acacia salicina</i>	19	6.8	Remove	
LE144-145	42.45	<i>Eucalyptus populnea</i>	14 23	8.9 12.2	Remove	

Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE146	109.02	<i>Geijera parviflora</i>	22	5.2	Retain	
LE147	45.82	<i>Eucalyptus populnea</i>	30	9.9	Remove	
LE148	48.40	<i>Eucalyptus camaldulensis</i>	35	15.5	Retain	
LE149	39.98	<i>Eucalyptus populnea</i>	23	9.9	Remove	
LE150	185.07	<i>Eucalyptus populnea</i>	74	15.6	Retain	





Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE151	43.44	<i>Eucalyptus populnea</i>	32	11.8	Retain	
LE152	251.97	<i>Eucalyptus populnea</i>	50	18	Retain	
LE153	15.74	<i>Eucalyptus populnea</i>	21	7	Retain	
LE154	59.90	<i>Eucalyptus populnea</i>	32	11	Retain	
LE155	7.55	<i>Eucalyptus camaldulensis</i>	9	6	Retain	






Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE156	5.21	<i>Eucalyptus camaldulensis</i>	8	5.3	Retain	
LE157	2.66	<i>Eucalyptus camaldulensis</i>	4	4	Retain	
LE158	3.44	<i>Eucalyptus camaldulensis</i>	5	4.2	Retain	
LE159	7.49	<i>Eucalyptus camaldulensis</i>	5	4.1	Retain	
LE160	3.42	<i>Eucalyptus camaldulensis</i>	4	4	Retain	




Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE161	6.88	<i>Eucalyptus populnea</i>	7	6.5	Retain	
LE162	9.18	<i>Eucalyptus camaldulensis</i>	11	5.5	Remove	
LE163	11.38	<i>Eucalyptus populnea</i>	9	4.2	Retain	No photo
LE164	12.45	<i>Eucalyptus camaldulensis</i>	10	4.5	Remove	
LE165	9.06	<i>Eucalyptus camaldulensis</i>	13	6.1	Remove	
LE166	10.99	<i>Eucalyptus camaldulensis</i>	9	4.5	Remove	

Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE167	145.32	<i>Eucalyptus populnea</i>	29	9.7	Retain	
LE168	123.55	<i>Eucalyptus populnea</i>	45	12.2	Retain	
LE169	6.49	<i>Eucalyptus populnea</i>	8	4	Retain	
LE170	32.35	<i>Acacia salicina</i>	27	6.8	Remove	
LE171	153.27	<i>Acacia salicina</i>	32	7.1	Retain	
LE172	85.70	<i>Eucalyptus populnea</i>	29	10	Retain	No photo



Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
LE173	325.83	<i>Acacia salicina</i>	32	12.3	Retain	
LE174	200.75	<i>Eucalyptus camaldulensis</i>	48	17.1	Retain	
LE175	68.34	<i>Eucalyptus populnea</i>	25	10	Retain	
LE176	9.90	<i>Eucalyptus camaldulensis</i>	8	4.5	Retain	No photo
LE177	300.67	<i>Eucalyptus camaldulensis</i>	37	22	Retain	No photo
RR100	491.6	<i>Acacia salicina</i>	30	10	Retain	

Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
RR101	268.2	<i>Acacia salicina</i>	45	12	Retain	
RR102	146.9	<i>Acacia salicina</i>	28	12	Retain	No Photo
RR103	10.3	<i>Acacia salicina</i>	13	5	Remove	
RR104	22.9	<i>Eucalyptus tereticornis</i>	14	6	Remove	
RR105	88.4	<i>Geijera parviflora</i>	33	8	Retain	
RR106	2.5	<i>Acacia excelsa</i>	10	5	Remove	

Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
RR107	56.4	<i>Geijera parviflora</i>	34	7	Retain	
RR108	27.5	<i>Owenia acidula</i>	22	6	Retain	
RR109	116.2	<i>Acacia salicina</i>	45	11	Retain	
<b>RETAIN</b>	<b>Total (sqm)</b>		<b>7,660.5</b>			
	<b>Total (ha)</b>		<b>0.77</b>			
<b>REMOVE</b>	<b>Total (sqm)</b>		<b>3,076.8</b>			
	<b>Total (ha)</b>		<b>0.31</b>			

### 3.5 Landspray Areas – September 2024

The landspray areas surveyed in September 2024 were characterised by cleared paddocks dominated by non-remnant pasture grasses (Figure 3-5 to Figure 3-7). The field surveys found the following in the landspray areas:

- No mapped constraints in the survey area were found to require changes. The survey also confirmed that the proposed disturbance areas do not contain any listed TEC or any TEC within the 50 m buffer area.
- No listed threatened flora were identified within the landspray areas or nearby mapped species habitat.
- One habitat feature was recorded in landspray area 2, a small log pile (Figure 3-8). This log pile will be avoided as landspray does not require clearing, works will be able to be undertaken around the habitat feature. No active searches were required within the disturbance footprint as no other searchable fauna habitat was present (mapped as constraints or identified during the survey).
- Hairyflower Lovegrass (*Eragrostis trichphora*) is widespread across the Bellaringa property, however there is a high coverage of the exotic grass in landspray area 3. Several velvety tree pears (*Opuntia tomentosa*) were also noted within the landspray areas.



Figure 3-5 Landspray Area 1



Figure 3-6 Landspray Area 2



Figure 3-7 Landspray Area 3








Figure 3-8 Log pile in Landspray Area 2

3.5.1 Ground-truthed koala dispersal trees

Table 3-2 provides the results including canopy cover, height and DBH of the trees assessed in the field in koala dispersal areas. All trees were marked, and all can be avoided as landspray does not require clearing, works will be able to be undertaken around the trees. All trees have been recorded as “retain” and will be avoided during landspray operations. Mapping of each location (Desktop ID) are shown in Appendix A.

Table 3-2 Dispersal habitat trees in proposed landspray areas

Location (Desktop ID)	Area (sqm)	Species	DBH (cm)	Height (m)	Action	Photo
AS01	22.4	<i>Brachychiton rupestris</i>	28	7	Retain	
AS02	5.9	<i>Eucalyptus populnea</i>	10	4	Retain	
AS05	5.6	<i>Eucalyptus melanophloia</i>	10	5	Retain	
AS06	19.6	<i>Acacia salicina</i>	17	4	Retain	
AS07	40.3	<i>Acacia salicina</i>	23	4	Retain	
Remove area:	Total (sqm)		0			
	Total (ha)		0			

## 4 Discussion

The surveys on the Bellaringa property found that the project impacts to koala dispersal habitat would be minimal, with a total of 0.31 ha (**3,076.80 m<sup>2</sup>**) to be potentially cleared. This impact is across the approximately 92 ha disturbance footprint on the property, including well pads, gathering, workspaces and laydowns. The majority of the impact footprint is located within predominantly cleared agricultural areas and Senex has actively avoided patches of remnant and regrowth vegetation, as well as individual paddock trees, resulting in retaining at least 0.77 ha (or **7,660.50 m<sup>2</sup>**) in close proximity to the alignment. In all cases, trees are retained within close proximity to those that are unable to be avoided, and the clearing of 0.40 ha is unlikely to have a significant effect on the ecological function of dispersal habitat on the property for koalas. Adjacent areas of dispersal habitat avoided are shown in Figure 4-1.

Threatened flora searches found no threatened species within or in proximity to the impact footprint. No threatened flora was encountered during the survey and no TECs are present within the disturbance footprint or the 30m buffer. No remnant or HVR regulated vegetation, potential threatened fauna habitat or environmentally sensitive areas (ESAs) are present within the disturbance footprint. The area is known echidna and koala dispersal area and other least concern species were observed in the area during the surveys. It is recommended that a qualified fauna spotter catcher should undertake a preclearance survey across the disturbance footprint to identify habitat features prior to clearing and be present during clearing works to check habitat features and relocate fauna, and where possible habitat features in order to minimise impacts to fauna.



Figure 4-1 Example images of retained dispersal habitat adjacent to the disturbance footprint

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#### 4.1 Landspray Areas – September 2024

The three landspray areas had minimal native trees, with only five koala habitat dispersal trees between 4 m – 7 m in height, being mapped. Area 3 was dominated by African lovegrass (*Eragrostis curvula*), which will need to be considered when using site for landspray to ensure the weed is not spread.

## Appendix A – Mapping

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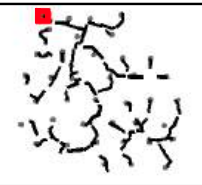




**FIGURE A-1:**  
Bellaringa Ground-Truthed Tree Extents

- |                                 |                      |
|---------------------------------|----------------------|
| Ground-Truthed Tree Centrepoint | Proposed Wellpads    |
| ■ Remove                        | Proposed ROW         |
| □ Retain                        | No Go Area           |
| Dripline Extent                 | High Constraint Area |
| ■ Remove                        |                      |
| □ Retain                        |                      |

Data Accuracy Notes:  
Ground-Truthed data mapped using Fixed RTK GNSS Receivers with 1cm Accuracy



REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

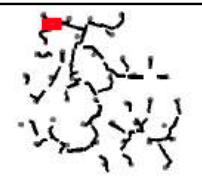
COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:1,250  
0 20  
Meters



**FIGURE A-2:**  
Belleringa Ground-Truthed Tree Extents

<p>Ground-Truthed Tree Centrepoint</p> <ul style="list-style-type: none"> <li><span style="color: red;">■</span> Remove</li> <li><span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Retain</li> </ul> <p>Dripline Extent</p> <ul style="list-style-type: none"> <li><span style="border: 2px solid red; display: inline-block; width: 10px; height: 10px;"></span> Remove</li> <li><span style="border: 2px solid grey; display: inline-block; width: 10px; height: 10px;"></span> Retain</li> </ul>	<ul style="list-style-type: none"> <li><span style="border: 1px dashed yellow; display: inline-block; width: 10px; height: 10px;"></span> Turnout Impact Footprint</li> <li><span style="border: 1px dashed yellow; display: inline-block; width: 10px; height: 10px;"></span> Turnout Survey Area</li> <li><span style="border: 1px dashed grey; display: inline-block; width: 10px; height: 10px;"></span> Priority Access Tracks</li> <li><span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Proposed ROW</li> <li><span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Proposed Extra Workspaces</li> <li><span style="background-color: red; display: inline-block; width: 10px; height: 10px;"></span> No Go Area</li> </ul>	<ul style="list-style-type: none"> <li><span style="background-color: yellow; display: inline-block; width: 10px; height: 10px;"></span> High Constraint Area</li> </ul>
--	--	--

Data Accuracy Notes:  
Ground-Truthed data mapped using Fixed RTK GNSS Receivers with 1cm Accuracy



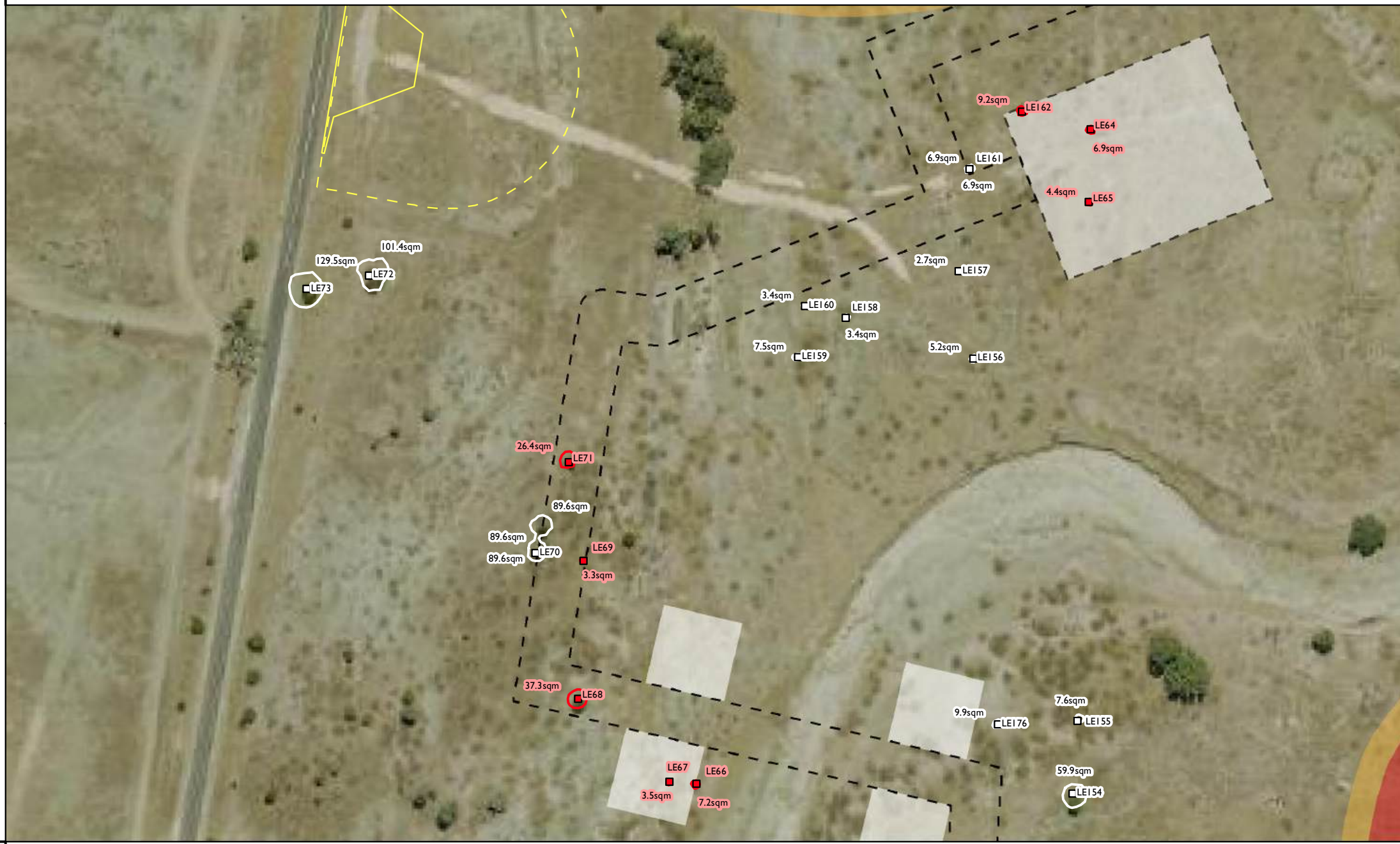
REVISION	AUTHOR	REVIEWER	DATE
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5	NC	RR	04/11/2024

COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:1,250

0 20  
Meters

70158.66

70158.66



**FIGURE A-3:**  
Bellaringa Ground-Truthed Tree Extents

Ground-Truthed Tree Centrepoint	Turnout Impact Footprint	High Constraint Area
Remove	Turnout Survey Area	
Retain	Proposed Wellpads	
Dripline Extent	Proposed ROW	
Remove	Proposed Extra Workspaces	
Retain	No Go Area	

Data Accuracy Notes:  
Ground-Truthed data mapped using Fixed RTK GNSS Receivers with 1cm Accuracy



REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:1,800

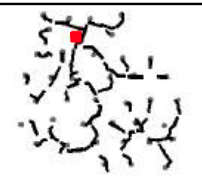
0 20 40  
Meters



**FIGURE-A-4:**  
Bellaringa Ground-Truthed Tree Extents

- Ground-Truthed Tree Centrepoint**
- Remove
  - Retain
- Dripline Extent**
- Remove
  - Retain
- Priority Access Tracks**
- Potential Landspray Areas
- Proposed Wellpads**
- Proposed Wellpads
- Proposed ROW**
- Proposed ROW

Data Accuracy Notes:  
Ground-Truthed data mapped  
using Fixed RTK GNSS Receivers  
with 1cm Accuracy



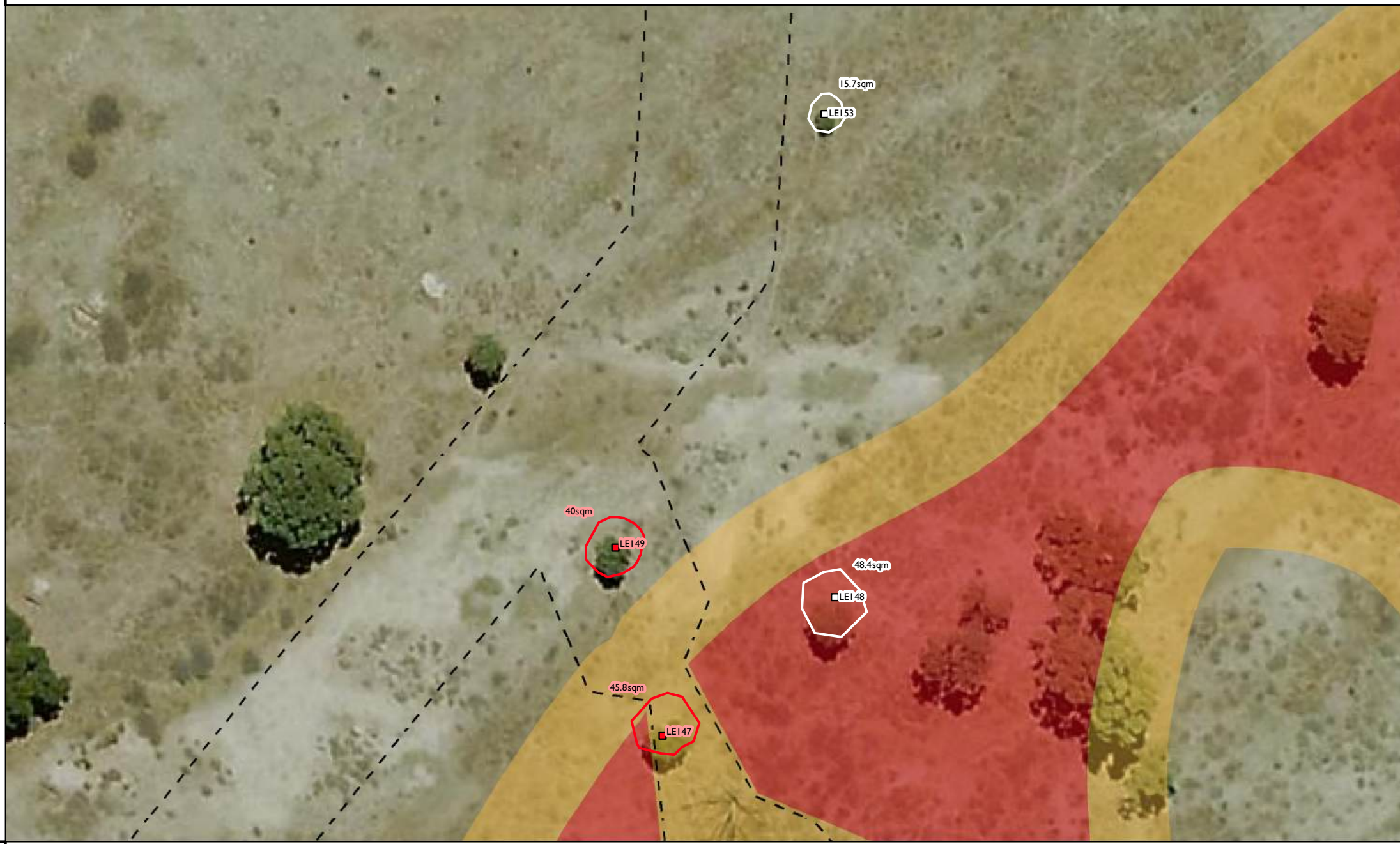
REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:1,000

N  
W—+—E  
S

0 20

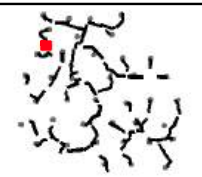
Meters



**FIGURE A-5:**  
Belleringa Ground-Truthed Tree Extents

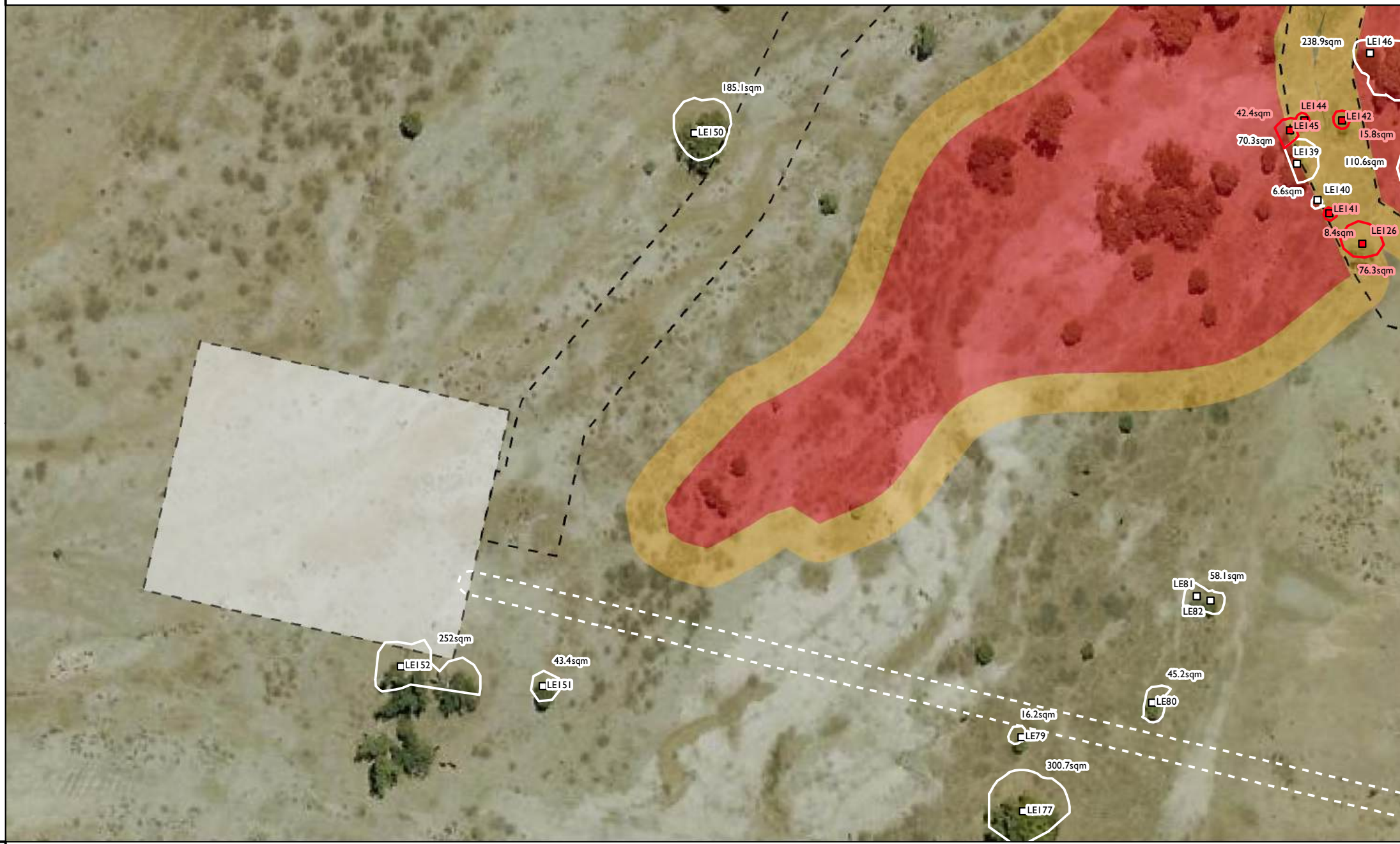
Ground-Truthed Tree Centrepoint	Proposed ROW
■ Remove	■ No Go Area
□ Retain	■ High Constraint Area
Dripline Extent	
■ Remove	
□ Retain	

Data Accuracy Notes:  
Ground-Truthed data mapped  
using Fixed RTK GNSS Receivers  
with 1cm Accuracy



REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:600



**FIGURE A-6:**  
Bellaringa Ground-Truthed Tree Extents

- |                                 |                        |
|---------------------------------|------------------------|
| Ground-Truthed Tree Centrepoint | Priority Access Tracks |
| Remove                          | Proposed Wellpads      |
| Retain                          | Proposed ROW           |
| Dripline Extent                 | No Go Area             |
| Remove                          | High Constraint Area   |
| Retain                          |                        |

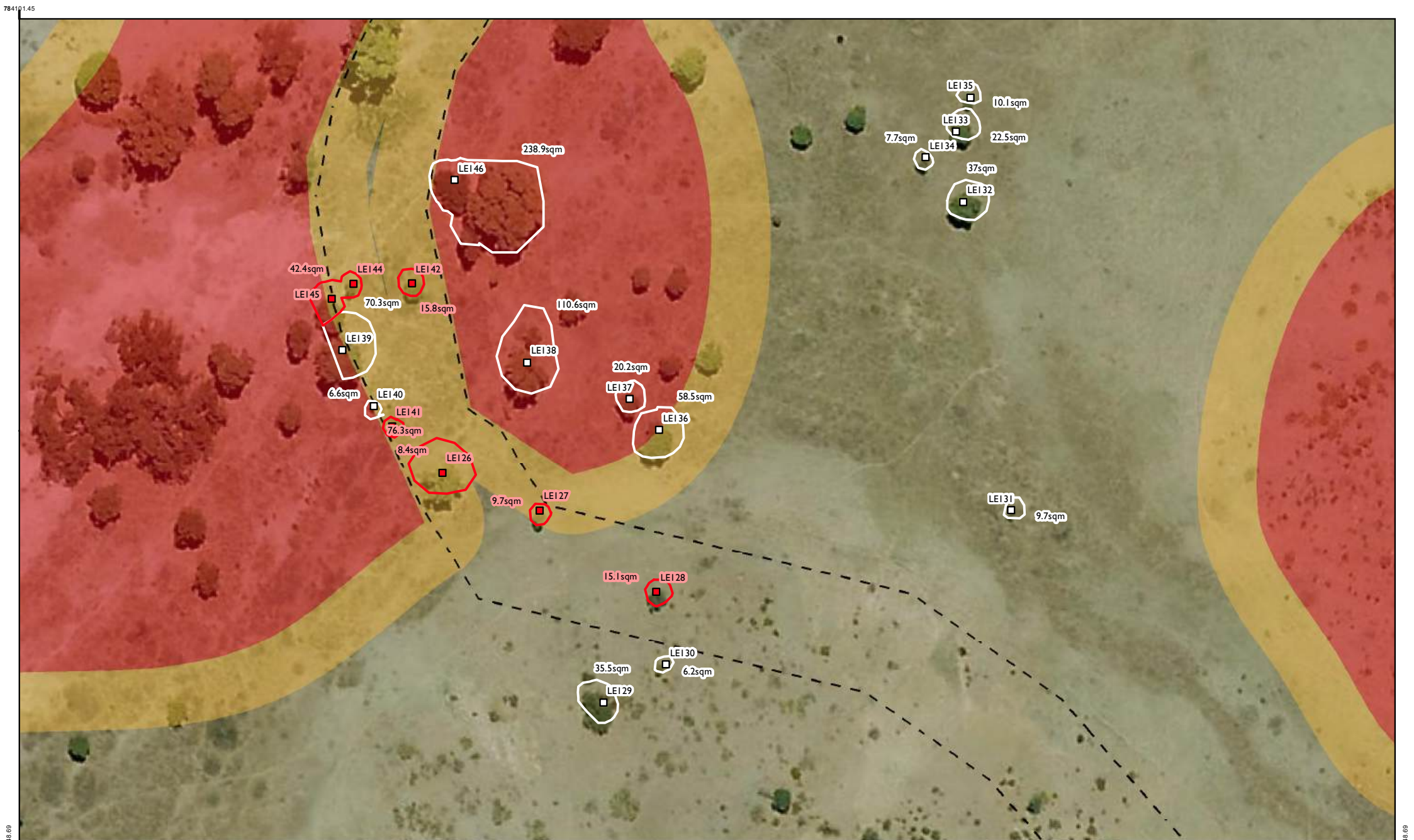
Data Accuracy Notes:  
Ground-Truthed data mapped  
using Fixed RTK GNSS Receivers  
with 1cm Accuracy



REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:1,250

0 20  
Meters



**FIGURE A-7:**  
Bellaringa Ground-Truthed Tree Extents

**Ground-Truthed Tree Centrepoint**

- Remove
- Retain

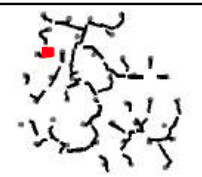
**Dripline Extent**

- Remove
- Retain

**Proposed ROW**

- No Go Area
- High Constraint Area

Data Accuracy Notes:  
Ground-Truthed data mapped  
using Fixed RTK GNSS Receivers  
with 1cm Accuracy

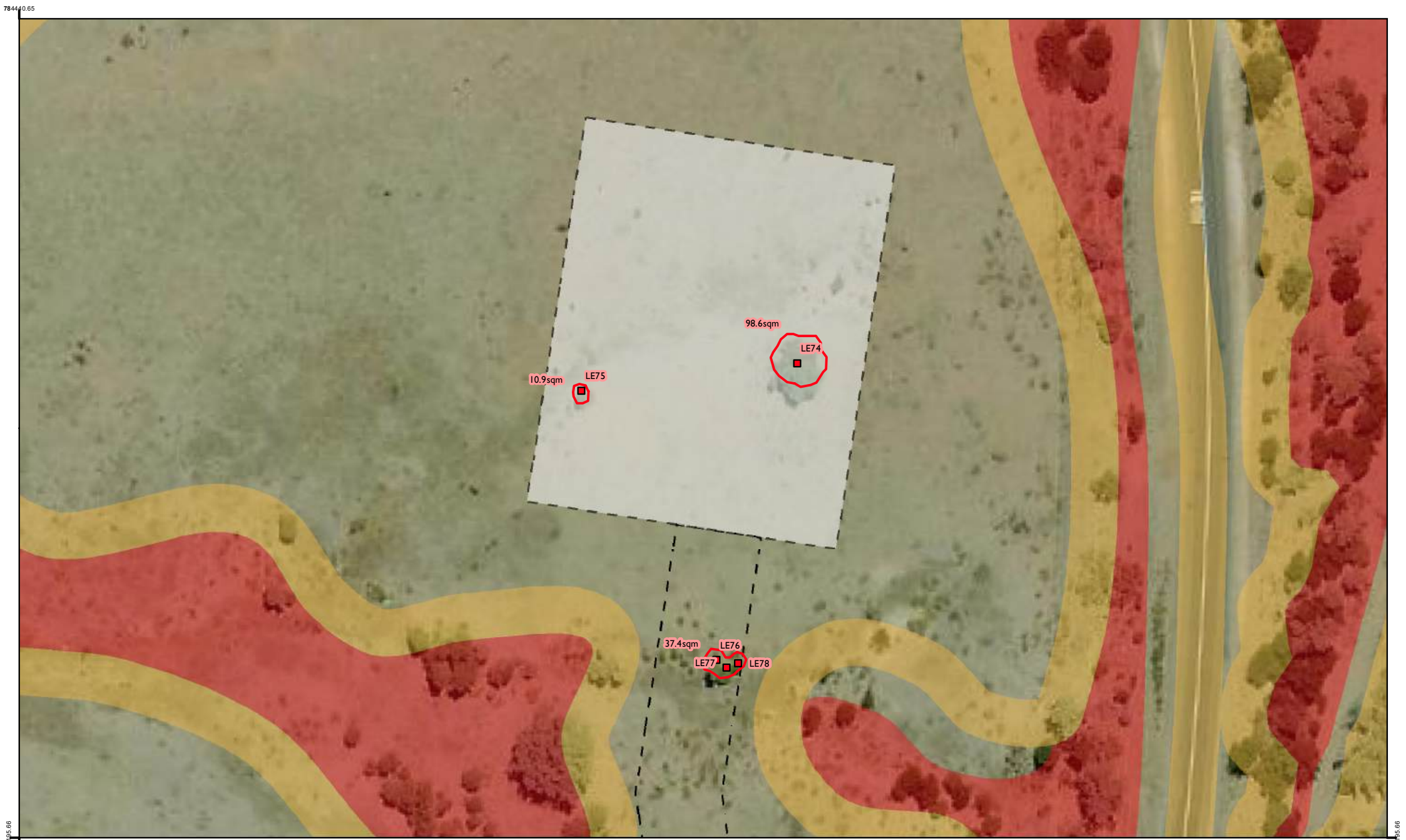


REVISION	AUTHOR	REVIEWER	DATE
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5	NC	RR	04/11/2024

COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:800

7051248.69

7051248.69



**FIGURE A-8:**  
Bellaringa Ground-Truthed Tree Extents

- Ground-Truthed Tree Centrepoint
- Remove
  - No Go Area
  - High Constraint Area
- Dripline Extent
- Remove
  - Proposed Wellpads
  - Proposed ROW

Data Accuracy Notes:  
Ground-Truthed data mapped  
using Fixed RTK GNSS Receivers  
with 1cm Accuracy



REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:1,000

0 20  
Meters





**FIGURE A-9:**  
Bellaringa Ground-Truthed Tree Extents

Ground-Truthed Tree Centrepoint	Priority Access Tracks
■ Remove	Proposed Wellpads
□ Retain	Proposed ROW
Dripline Extent	Proposed Extra Workspaces
■ Remove	No Go Area
□ Retain	High Constraint Area

Data Accuracy Notes:  
Ground-Truthed data mapped  
using Fixed RTK GNSS Receivers  
with 1cm Accuracy



REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

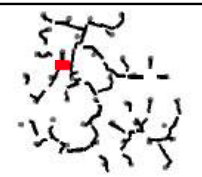
COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:2,000



- Ground-Truthed Tree Centrepoint  Proposed Extra Workspaces
- Remove
- Dripline Extent
- Remove
- Priority Access Tracks
- Proposed ROW

**FIGURE A-10:**  
Bellaringa Ground-Truthed Tree Extents

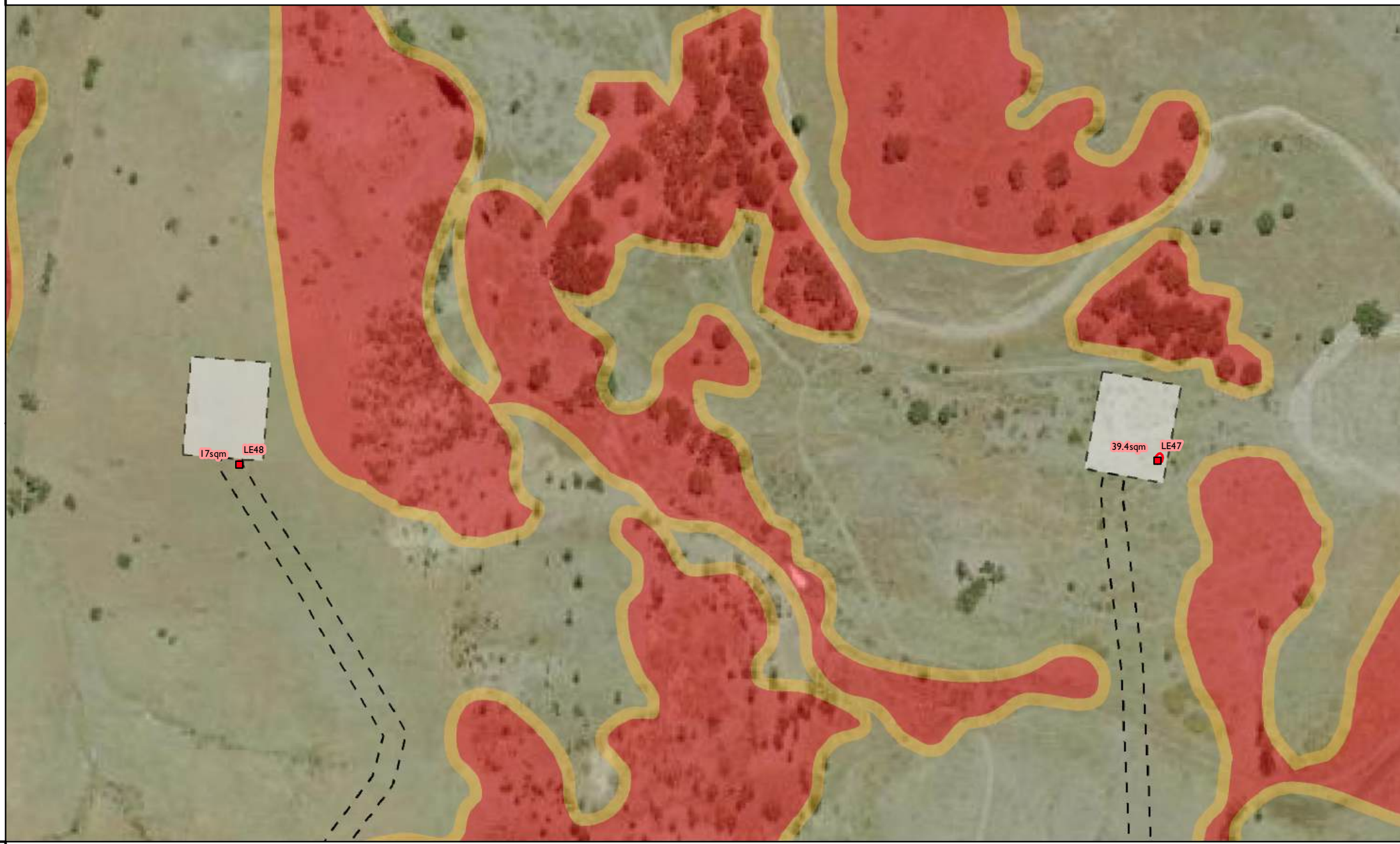
Data Accuracy Notes:  
Ground-Truthed data mapped  
using Fixed RTK GNSS Receivers  
with 1cm Accuracy



REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:1,000

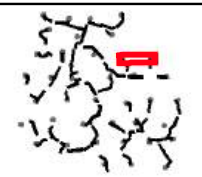
Meters



**FIGURE-11:**  
Bellaringa Ground-Truthed Tree Extents

- Ground-Truthed Tree Centrepoint
- Remove
- Dripline Extent
- Remove
- Proposed Wellpads
- Proposed ROW
- No Go Area
- High Constraint Area

Data Accuracy Notes:  
Ground-Truthed data mapped  
using Fixed RTK GNSS Receivers  
with 1cm Accuracy



REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:4,000

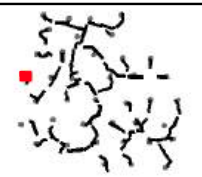
0 40 80 120  
Meters



**FIGURE A-12:**  
Bellaringa Ground-Truthed Tree Extents

- Ground-Truthed Tree Centrepoint
- Remove
  - Retain
- Dripline Extent
- Red outline Remove
  - White outline Retain
- Proposed Wellpads
  - - - Proposed ROW
  - Red fill No Go Area
  - Yellow fill High Constraint Area

Data Accuracy Notes:  
Ground-Truthed data mapped  
using Fixed RTK GNSS Receivers  
with 1cm Accuracy



REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:800



**FIGURE A-13:**  
Bellaringa Ground-Truthed Tree Extents

Ground-Truthed Tree Centrepoint

- Remove
- Retain

Dripline Extent

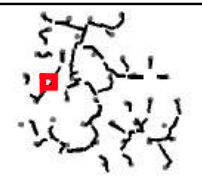
- Remove
- Retain

Proposed Wellpads

Proposed ROW

Proposed Extra Workspaces

Data Accuracy Notes:  
Ground-Truthed data mapped  
using Fixed RTK GNSS Receivers  
with 1cm Accuracy



REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:2,000

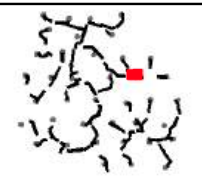
Meters



**FIGURE A-14:**  
Bellaringa Ground-Truthed Tree Extents

- Ground-Truthed Tree Centrepoint
- Retain
- Dripline Extent
- Retain
- Proposed Wellpads
- Proposed ROW
- Proposed Extra Workspaces
- No Go Area
- High Constraint Area

Data Accuracy Notes:  
Ground-Truthed data mapped  
using Fixed RTK GNSS Receivers  
with 1cm Accuracy



REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

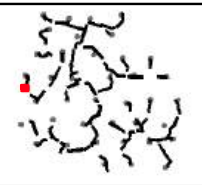
COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:700



**Ausecology**  
**FIGURE A-15:**  
 Bellaringa Ground-Truthed Tree Extents

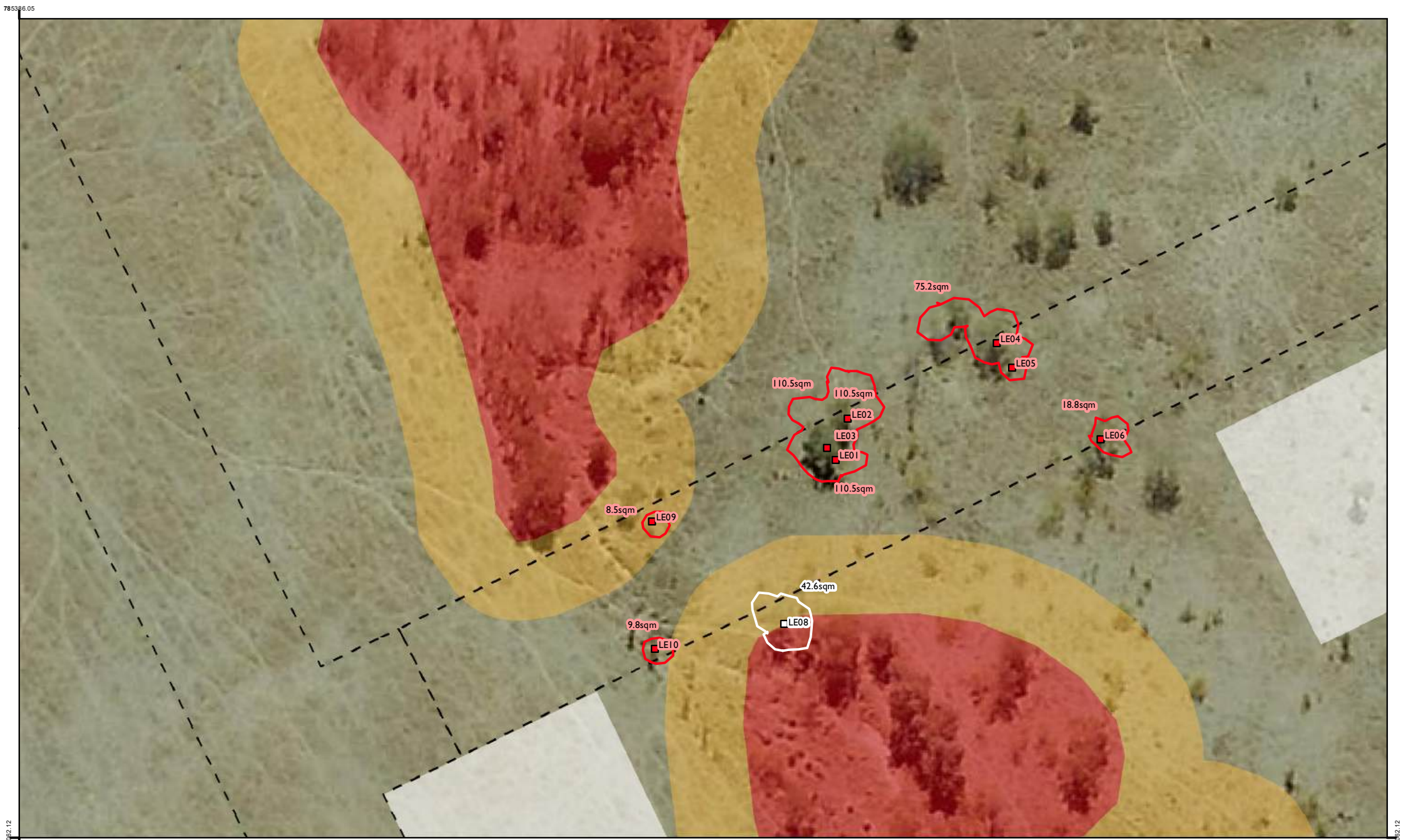
Ground-Truthed Tree Centrepoint  
 □ Retain  
 Dripline Extent  
 □ Retain  
 | Proposed ROW

Data Accuracy Notes:  
 Ground-Truthed data mapped  
 using Fixed RTK GNSS Receivers  
 with 1cm Accuracy



REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

COORDINATE SYSTEM: GDA2020 MGA Zone 55  
 SCALE: 1:1,000  
 0 20  
 Meters



**FIGURE A-16:**  
Bellaringa Ground-Truthed Tree Extents

Ground-Truthed Tree Centrepoint	█ Remove	▣ Retain	▬ Proposed ROW	▬ Proposed Extra Workspaces
Dripline Extent	▭ Remove	▭ Retain	█ No Go Area	█ High Constraint Area

Data Accuracy Notes:  
Ground-Truthed data mapped using Fixed RTK GNSS Receivers with 1cm Accuracy



REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:600

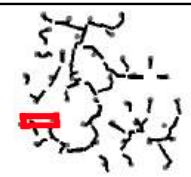




**FIGURE A-17:**  
Belleringa Ground-Truthed Tree Extents

- |  |                           |
|--|---------------------------|
| <b>Ground-Truthed Tree Centrepoint</b> | Turnout Survey Area       |
| Remove                                 | Priority Access Tracks    |
| Retain                                 | Potential Landspray Areas |
| <b>Dripline Extent</b>                 | Proposed Wellpads         |
| Remove                                 | Proposed ROW              |
| Retain                                 | Proposed Extra Workspaces |

Data Accuracy Notes:  
Ground-Truthed data mapped  
using Fixed RTK GNSS Receivers  
with 1cm Accuracy



REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

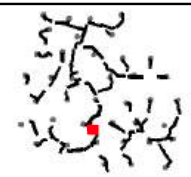
COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:4,000



**FIGURE A-18:**  
Bellaringa Ground-Truthed Tree Extents

- Flora Search Tracks
- Proposed ROW
- No Go Area
- High Constraint Area

Data Accuracy Notes:  
Ground-Truthed data mapped  
using Fixed RTK GNSS Receivers  
with 1cm Accuracy



REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:800

708643.06

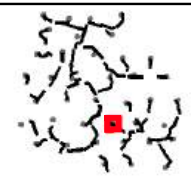
708643.06



**FIGURE A-19:**  
Bellaringa Ground-Truthed Tree Extents

- |                                 |                        |
|---------------------------------|------------------------|
| Ground-Truthed Tree Centrepoint | Priority Access Tracks |
| ■ Remove                        | Proposed Wellpads      |
| □ Retain                        | Proposed ROW           |
| Dripline Extent                 | No Go Area             |
| ■ Remove                        | High Constraint Area   |
| □ Retain                        |                        |

Data Accuracy Notes:  
Ground-Truthed data mapped  
using Fixed RTK GNSS Receivers  
with 1cm Accuracy



REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:2,000



**FIGURE A-20:**  
Bellaringa Ground-Truthed Tree Extents

- |                                 |                           |
|---------------------------------|---------------------------|
| Ground-Truthed Tree Centrepoint | Priority Access Tracks    |
| ■ Remove                        | Proposed Wellpads         |
| □ Retain                        | Proposed ROW              |
| Dripline Extent                 | Proposed Extra Workspaces |
| ■ Remove                        |                           |
| □ Retain                        |                           |

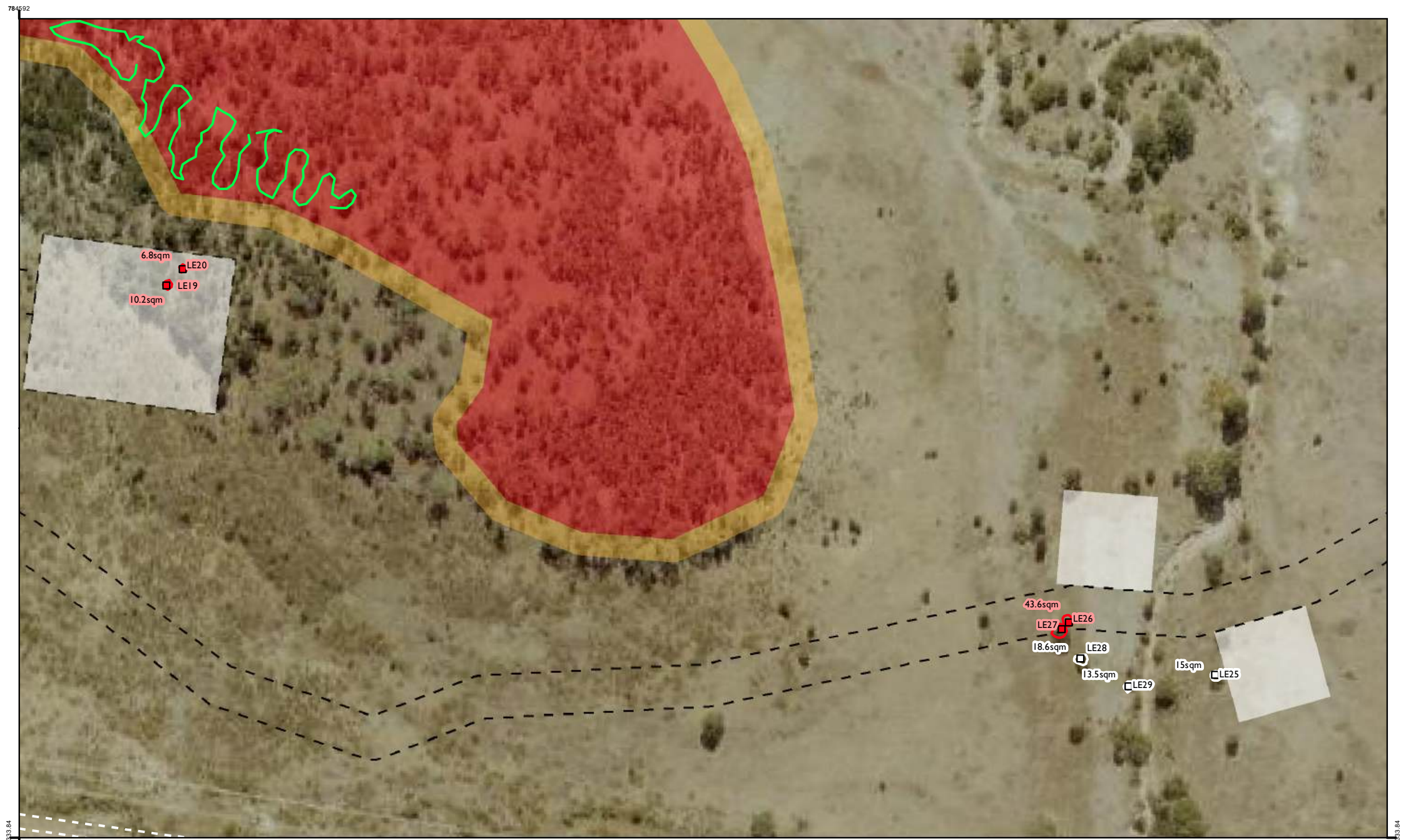
Data Accuracy Notes:  
Ground-Truthed data mapped  
using Fixed RTK GNSS Receivers  
with 1cm Accuracy



REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:4,000

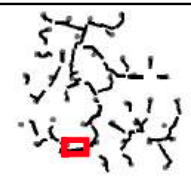
0 40 80 120  
Meters



**FIGURE A-21:**  
Bellaringa Ground-Truthed Tree Extents

- |                                 |                           |                        |
|---------------------------------|---------------------------|------------------------|
| Ground-Truthed Tree Centrepoint | Retain                    | High Constraint Area   |
| Remove                          | Retain                    | Priority Access Tracks |
| Retain                          | Proposed Wellpads         | Proposed ROW           |
| Flora Search Tracks             | Proposed Extra Workspaces | No Go Area             |
| Dripline Extent                 |                           |                        |
| Remove                          |                           |                        |

Data Accuracy Notes:  
Ground-Truthed data mapped  
using Fixed RTK GNSS Receivers  
with 1cm Accuracy

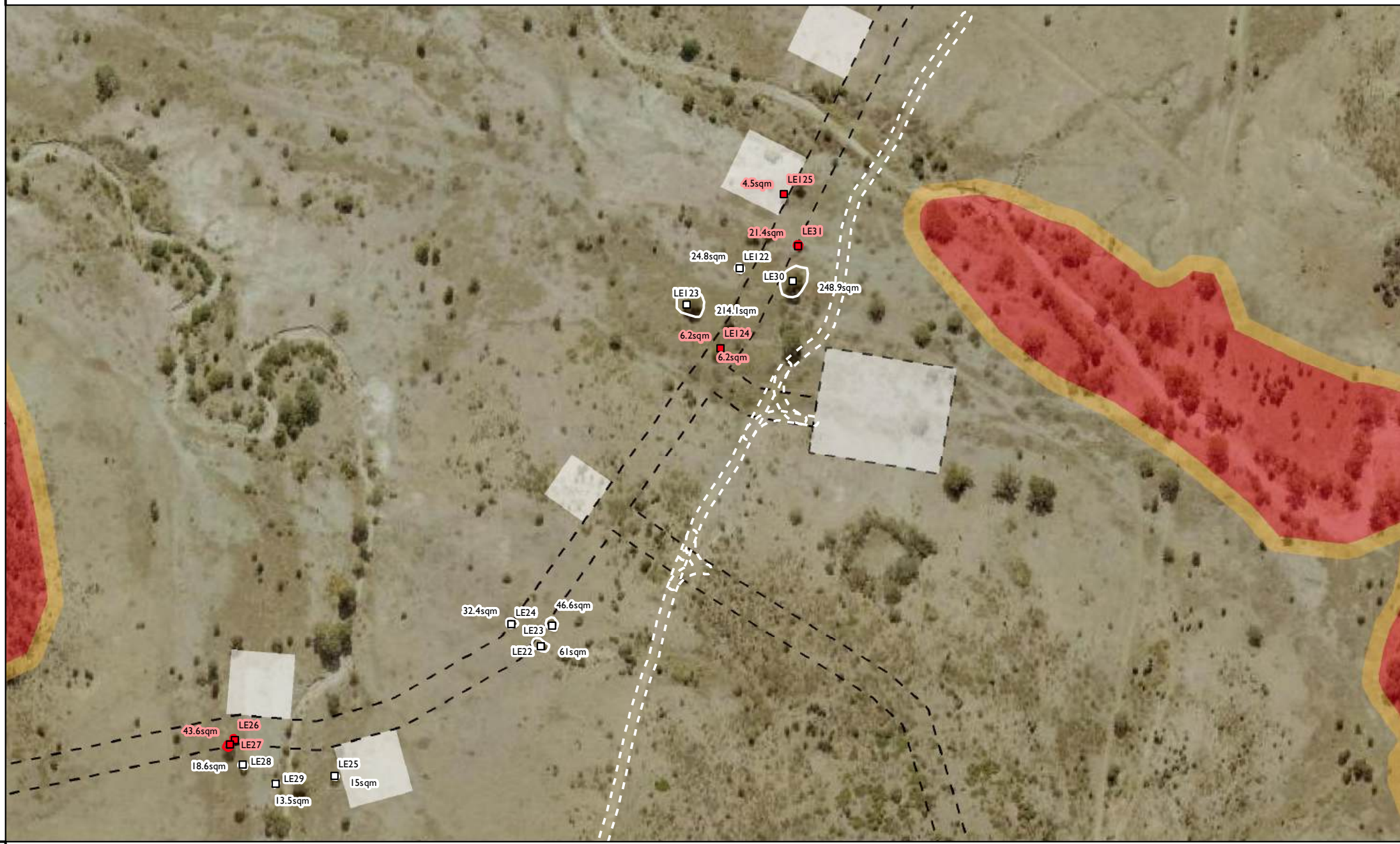


REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:2,000

7086533.84

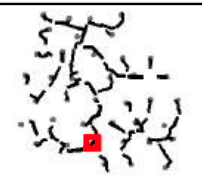
7086533.84



**FIGURE A-22:**  
Bellaringa Ground-Truthed Tree Extents

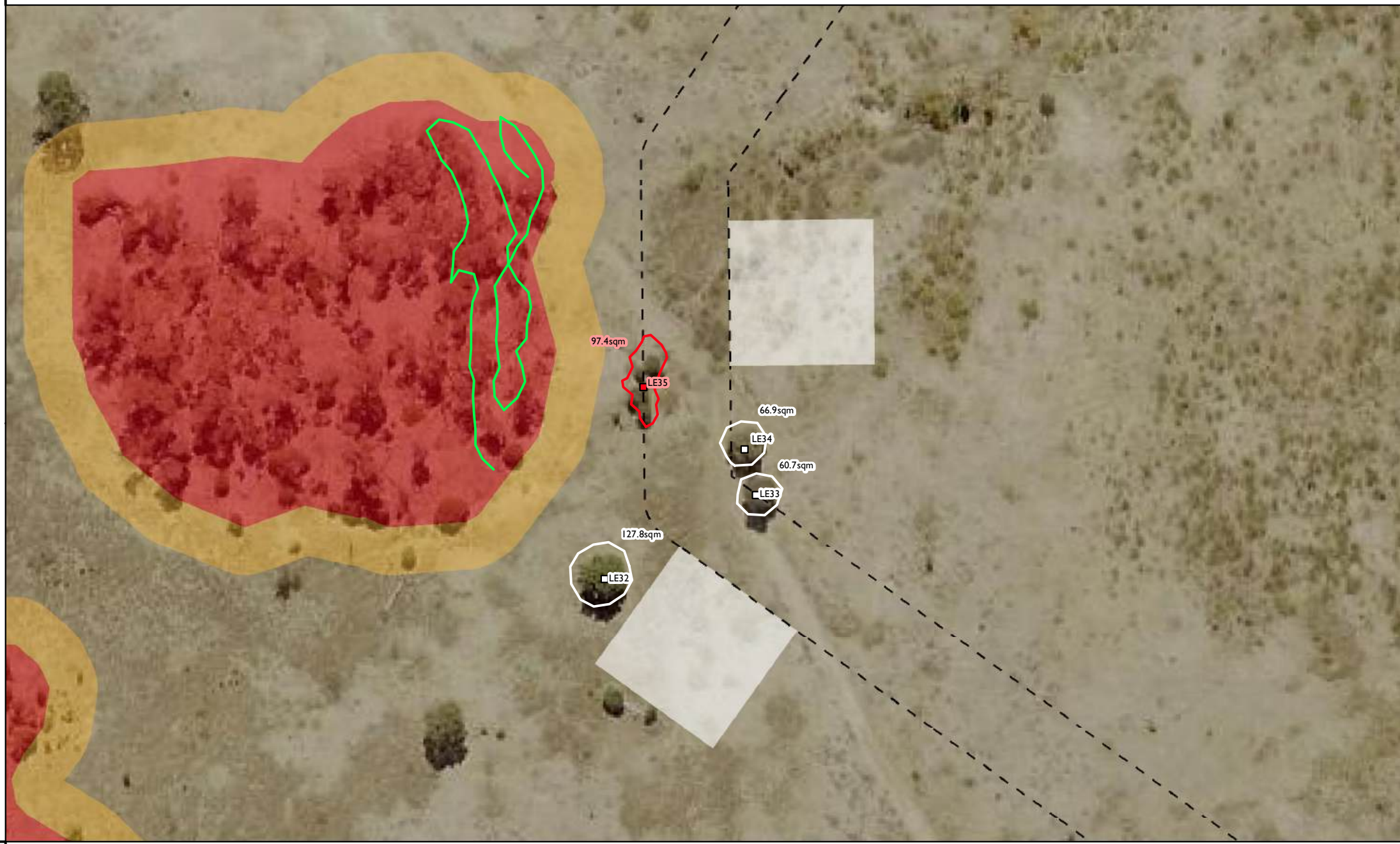
- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>■ Remove</li> <li>□ Retain</li> </ul> <p>Dripline Extent</p> <ul style="list-style-type: none"> <li>▭ Remove</li> <li>▭ Retain</li> </ul> | <ul style="list-style-type: none"> <li>□ Priority Access Tracks</li> <li>▭ Proposed Wellpads</li> <li>▭ Proposed ROW</li> <li>▭ Proposed Extra Workspaces</li> <li>▭ No Go Area</li> <li>▭ High Constraint Area</li> </ul> |
|--|--|

Data Accuracy Notes:  
Ground-Truthed data mapped using Fixed RTK GNSS Receivers with 1cm Accuracy



REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

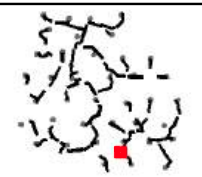
COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:3,000



**FIGURE A-23:**  
Bellaringa Ground-Truthed Tree Extents

- |                                 |                           |
|---------------------------------|---------------------------|
| Ground-Truthed Tree Centrepoint | Retain                    |
| Remove                          | Proposed ROW              |
| Retain                          | Proposed Extra Workspaces |
| Flora Search Tracks             | No Go Area                |
| Dripline Extent                 | High Constraint Area      |
| Remove                          |                           |

Data Accuracy Notes:  
Ground-Truthed data mapped  
using Fixed RTK GNSS Receivers  
with 1cm Accuracy



REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

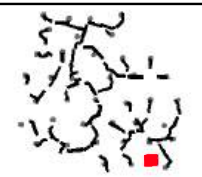
COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:1,000



Ground-Truthed Tree Centrepoint  
 □ Retain  
 Dripline Extent  
 □ Retain  
 - - - Priority Access Tracks

FIGURE A-24:  
 Bellaringa Ground-Truthed Tree Extents

Data Accuracy Notes:  
 Ground-Truthed data mapped  
 using Fixed RTK GNSS Receivers  
 with 1cm Accuracy

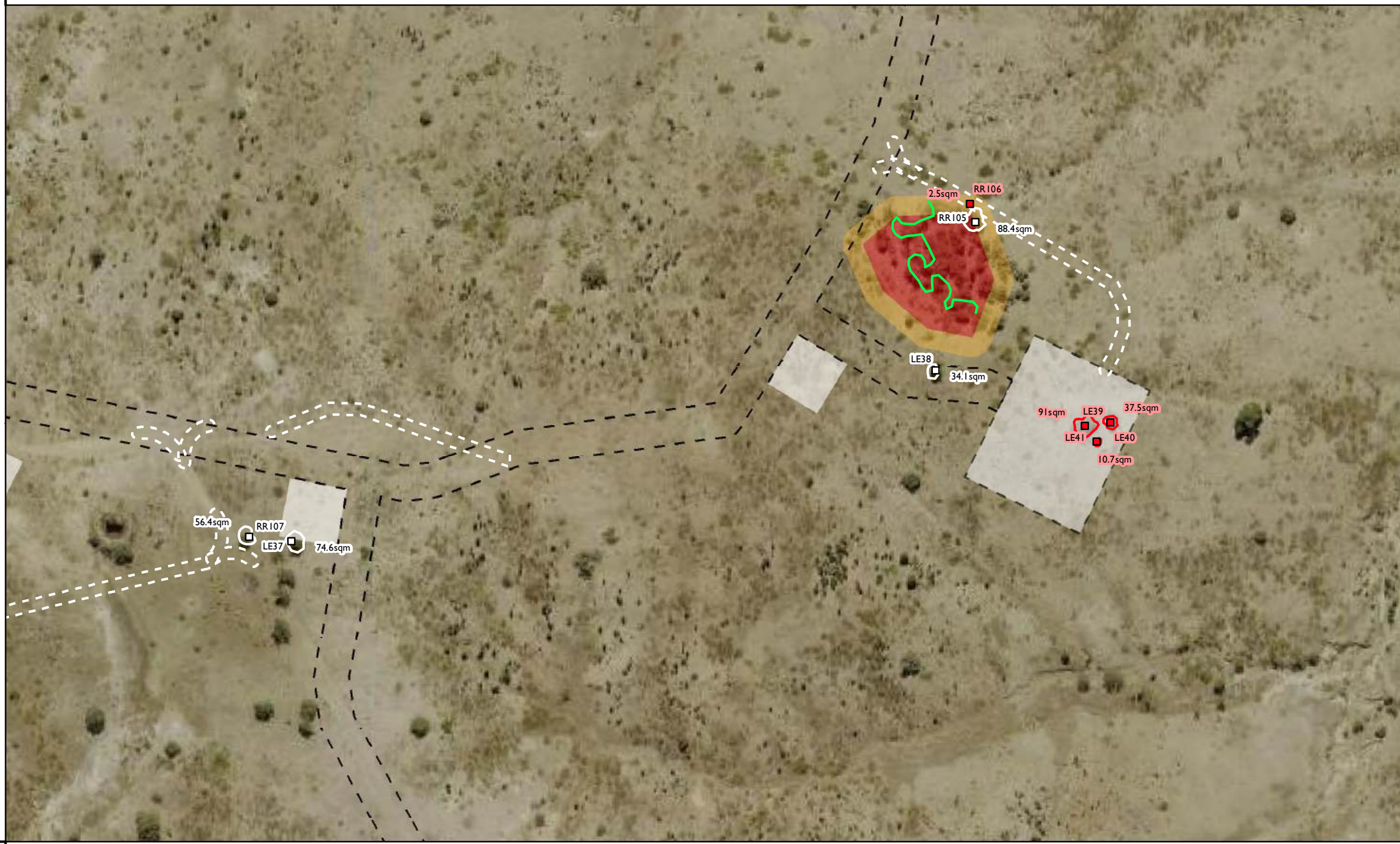


REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

COORDINATE SYSTEM: GDA2020 MGA Zone 55  
 SCALE: 1:1,000  
 0 20  
 Meters







**FIGURE A-25:**  
Bellaringa Ground-Truthed Tree Extents

Ground-Truthed Tree Centrepoint	Retain	High Constraint Area
Remove	Priority Access Tracks	
Retain	Proposed Wellpads	
Dripline Extent	Proposed ROW	
Remove	Proposed Extra Workspaces	
	No Go Area	

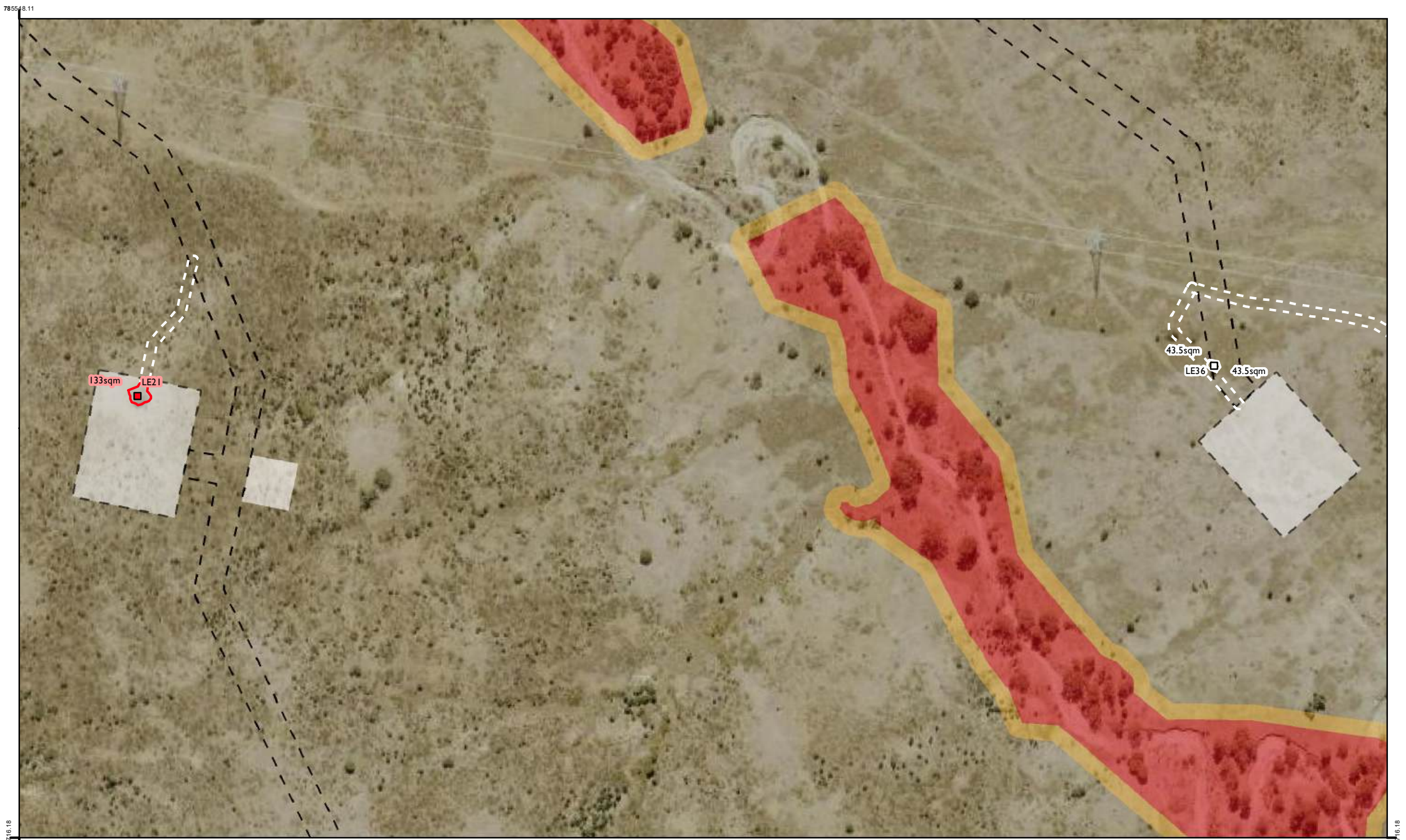
Data Accuracy Notes:  
Ground-Truthed data mapped using Fixed RTK GNSS Receivers with 1cm Accuracy



REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:2,500

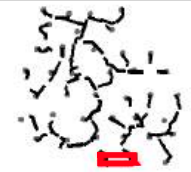
0 20 40 60  
Meters



**FIGURE A-26:**  
Bellaringa Ground-Truthed Tree Extents

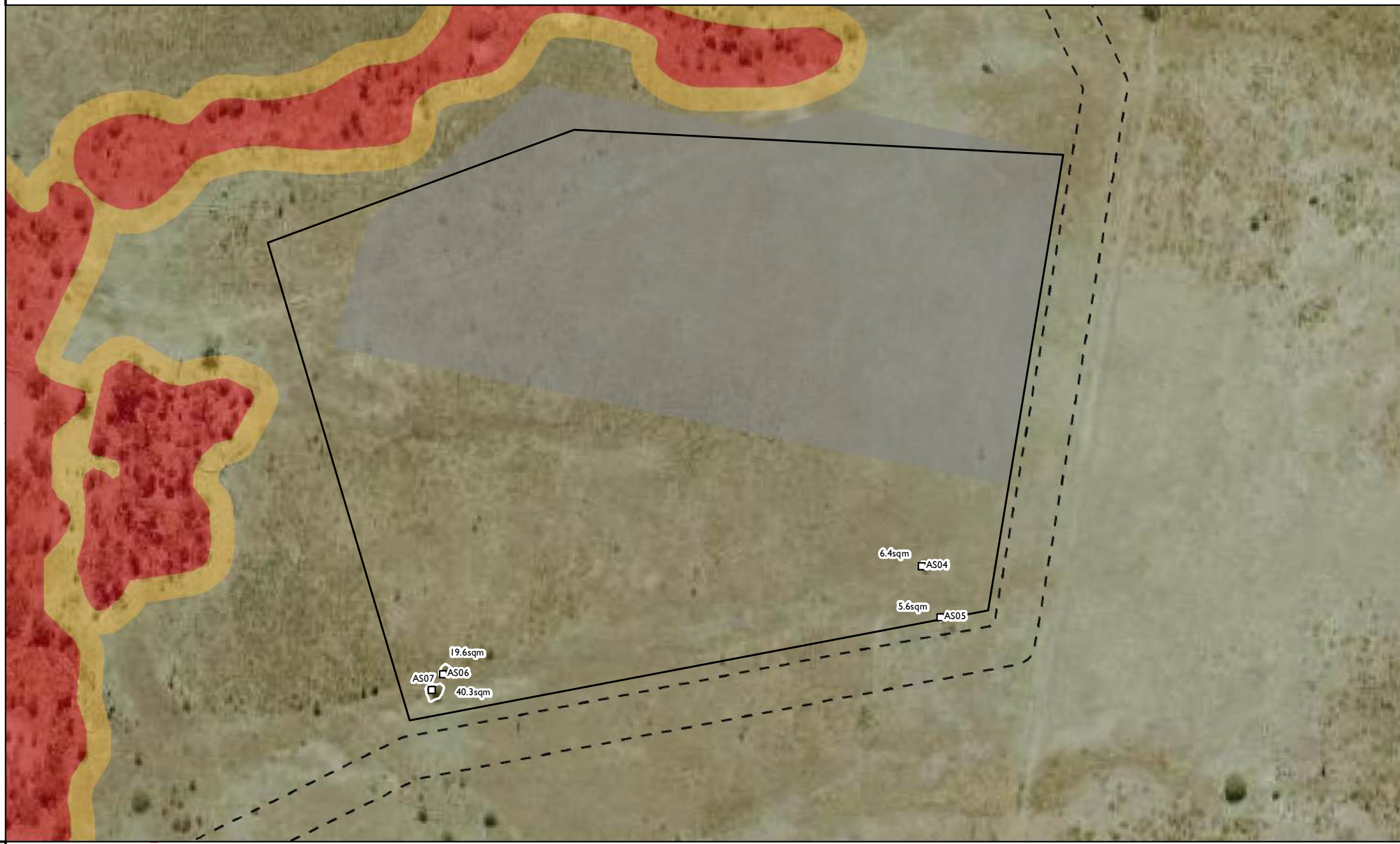
Ground-Truthed Tree Centrepoint		Priority Access Tracks
■ Remove	□ Retain	— Proposed Wellpads
Dripline Extent		— Proposed ROW
■ Remove	□ Retain	— Proposed Extra Workspaces
		■ No Go Area
		■ High Constraint Area

Data Accuracy Notes:  
Ground-Truthed data mapped  
using Fixed RTK GNSS Receivers  
with 1cm Accuracy



REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:3,000

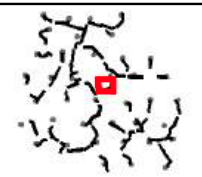


**Ausecology**

**FIGURE A-27:**  
Bellaringa Ground-Truthed Tree Extents

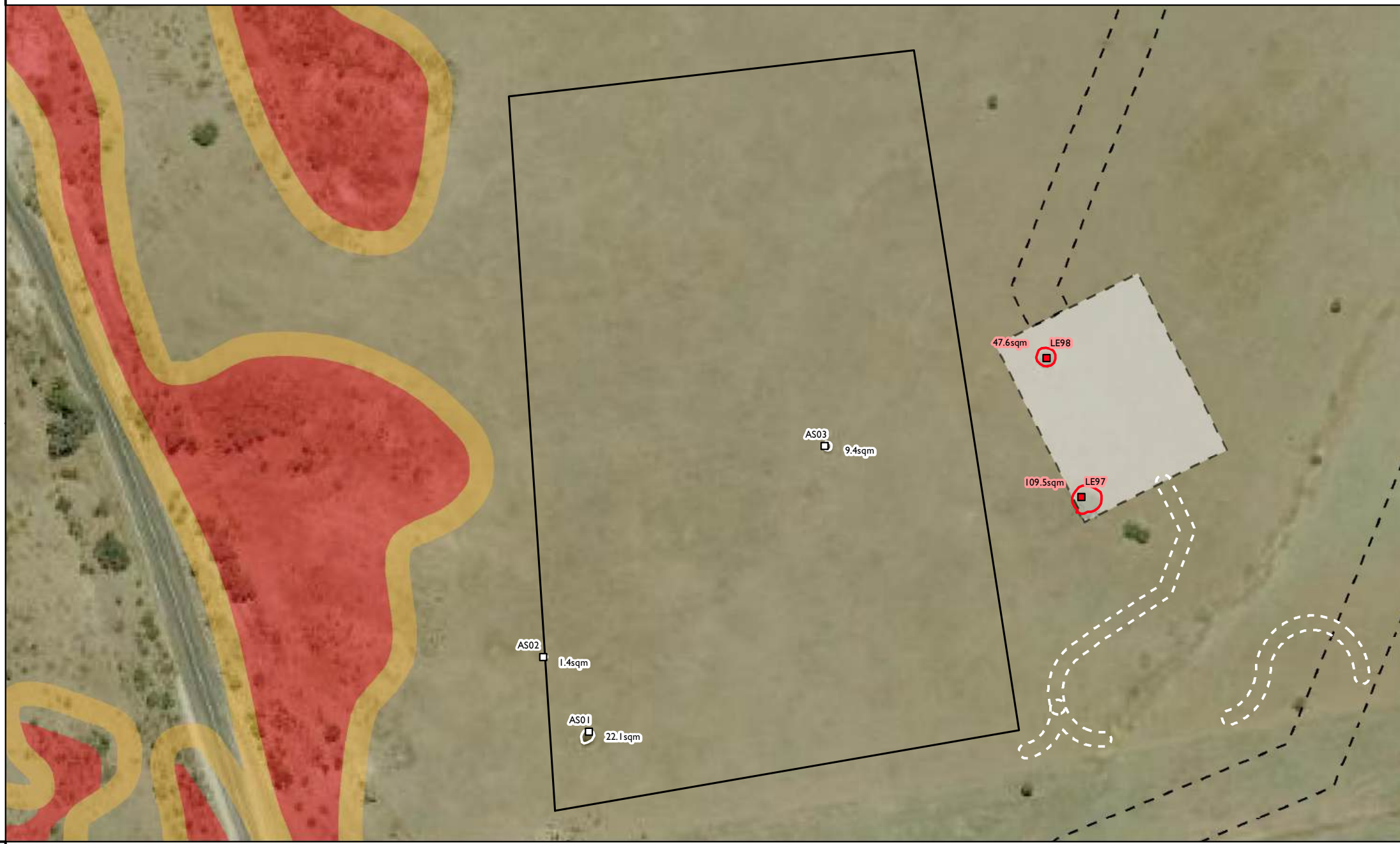
- Ground-Truthed Tree Centrepoint
- Retain
- Dripline Extent
- Retain
  - Potential Landspray Areas
  - Proposed ROW
- Camp and Laydown Options
- No Go Area
  - High Constraint Area

Data Accuracy Notes:  
Ground-Truthed data mapped  
using Fixed RTK GNSS Receivers  
with 1cm Accuracy



REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

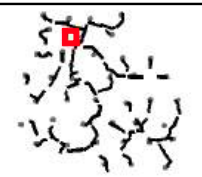
COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:2,000



**FIGURE A-28:**  
Bellaringa Ground-Truthed Tree Extents

- |                                 |                             |
|---------------------------------|-----------------------------|
| Ground-Truthed Tree Centrepoint | Priority Access Tracks      |
| ■ Remove                        | □ Potential Landspray Areas |
| □ Retain                        | --- Proposed Wellpads       |
| Dripline Extent                 | --- Proposed ROW            |
| ■ Remove                        | ■ No Go Area                |
| □ Retain                        | ■ High Constraint Area      |

Data Accuracy Notes:  
Ground-Truthed data mapped  
using Fixed RTK GNSS Receivers  
with 1cm Accuracy



REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

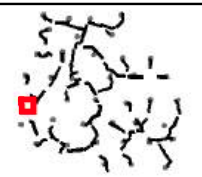
COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:2,000



**FIGURE A-29:**  
Bellaringa Ground-Truthed Tree Extents

- Turnout Impact Footprint
- Turnout Survey Area
- Priority Access Tracks
- Potential Landspray Areas
- Proposed Wellpads
- Proposed ROW
- Proposed Extra Workspaces

Data Accuracy Notes:  
Ground-Truthed data mapped  
using Fixed RTK GNSS Receivers  
with 1cm Accuracy



REVISION	AUTHOR	REVIEWER	DATE
4	NC	LG	31/10/2024
5	NC	RR	04/11/2024

COORDINATE SYSTEM: GDA2020 MGA Zone 55  
SCALE: 1:2,000

0 20 40 60  
Meters

## Appendix B – Fauna records

---

Results of the fauna spotted during the time surveying the property and the GPS location where spotted.

**Fauna species list**



Common Name	Scientific Name	Latitude, Longitude
striated pardalote	<i>Pardalotus striatus</i>	-26.264730, 149.845208
pieb currawong	<i>Strepera graculina</i>	-26.292307, 149.858135
brown falcon	<i>Falco berigora</i>	-26.294173, 149.850475
noisy miner	<i>Manorina melanocephala</i>	-26.261824, 149.845269
wedge-tailed eagle	<i>Aquila audax</i>	-26.261824, 149.845269
mistletoebird	<i>Dicaeum hirundinaceum</i>	-26.280372, 149.858808
rufous whistler	<i>Pachycephala rufiventris</i>	-26.294173, 149.850475
sulphur-crested cockatoo	<i>Cacatua galerita</i>	-26.294173, 149.850475
black-faced cuckoo-shrike	<i>Coracina novaehollandiae</i>	-26.292307, 149.858135
grey fantail	<i>Rhipidura albiscapa</i>	-26.280372, 149.858808
willie wagtail	<i>Rhipidura leucophrys</i>	-26.294173, 149.850475
little shrike-thrush	<i>Colluricincla megarrhyncha</i>	-26.294173, 149.850475
brown gerygone	<i>Gerygone mouki</i>	-26.275695, 149.868475
crested pigeon	<i>Ocyphaps lophotes</i>	-26.293241, 149.875135
eastern grey kangaroo	<i>Macropus giganteus</i>	-26.280372, 149.858808

## **Appendix C – Fauna habitat recorded**

---



**Habitat features located on site**

Habitat type	Latitude, Longitude	Photo
Stick nest	-26.28701785, 149.8471746	
Stick nest	-26.2711082, 149.8445483	No photo
Pardalote burrows in bank	-26.26478632, 149.8451892	
Stick nest	-26.27081501, 149.8429162	