SANCROX QUARRY EXPANSION PROJECT (SSD 7293)

Koala Survey and Assessment

Prepared for:

Hanson Heidelberg Cement Group
Level 8, 2-12 Macquarie Street PARRAMATTA NSW 2150

SLR Ref: 630.11478-R01
Version No: -v2.2
December 2020

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BASIS OF REPORT

This report has been prepared by SLR Consulting Australia Pty Ltd (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Hanson Heidelberg Cement Group (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

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DOCUMENT CONTROL

Reference	Date	Prepared	Checked	Authorised
630.11478-R01-v2.2	30 December 2020	Caitlin Cross and Amanda Lane (Biolink)	J Pepper	J Pepper

EXECUTIVE SUMMARY

Project Description and Background

Hanson Heidelberg Cement Group Pty Ltd (Hanson) is seeking project approval for the expansion of the existing Sancrox hard rock quarry. The Sancrox Quarry Expansion Project (SSD-7293) will involve extending the life of the quarry to 30 years and increasing approved extraction limits of 175, 00m^3. In their updated submission on the EIS, the Department of Planning, Industry and Environment requested the Biodiversity Assessment Report (BAR) should be amended to calculate required species credits for the Koala.

As part of the response to submissions on the EIS, Hanson has engaged SLR and Biolink to conduct supplementary surveys across the Sancrox project site to determine current Koala utilisation of the site and to update the assessment of impacts on the Koala. The aim of these surveys is to address the BCD concerns regarding impacts on the Koala and revaluate the ecological importance of the site for the local population of Koala.

Field Survey and results

Field surveys were conducted by SLR Consulting and Biolink on the 12-13 October 2020. These surveys included using RGb-SAT and nocturnal (spotlighting) surveys. Koala faecal pellets were recorded at eight of the 15 sampled field sites, and of the eight sites, four returned significant activity levels of 'medium' or 'high' use. One Koala was sighted during nocturnal spotlighting transects approximately 50 m west of the existing quarry wall. This is indicated the presence of one or more resident Koalas within the site.

Discussion

Ecological analysis of Koala activity levels identified two Koala activity cells adjoining the western edge of the quarry, reaching both the northern and southern boundary of the site, as well as another cell in the western portion of the site. Survey data implies the site as a high use area, with one or more resident Koalas within the study area.

Based on the current survey results and modelled activity levels, combined with previous Koala survey results, and the widespread occurrence of several Koala feed trees within the forested parts of the site, the site is considered to be habitat for the Koala, as a species credit species under the Framework for Biodiversity Assessment. The total area of Koala habitat within the site is estimated to be around 42.6 hectares.

The removal of Koala habitat associated with the proposed expansion of the Sancrox Quarry will reduce the availability of foraging and breeding habitat for the local Koala population and will increase barriers to local movement and dispersal of Koalas in the locality, particularly in a north-south direction.

Conclusion

On the basis of the current findings, and with reference to the procedures for calculating impacts on species credit species in the Framework for Biodiversity Assessment, a species polygon should be drawn for all areas of Koala habitat removal on the site and the associated species credits for the Koala calculated.

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1 Introduction

1.1 Background

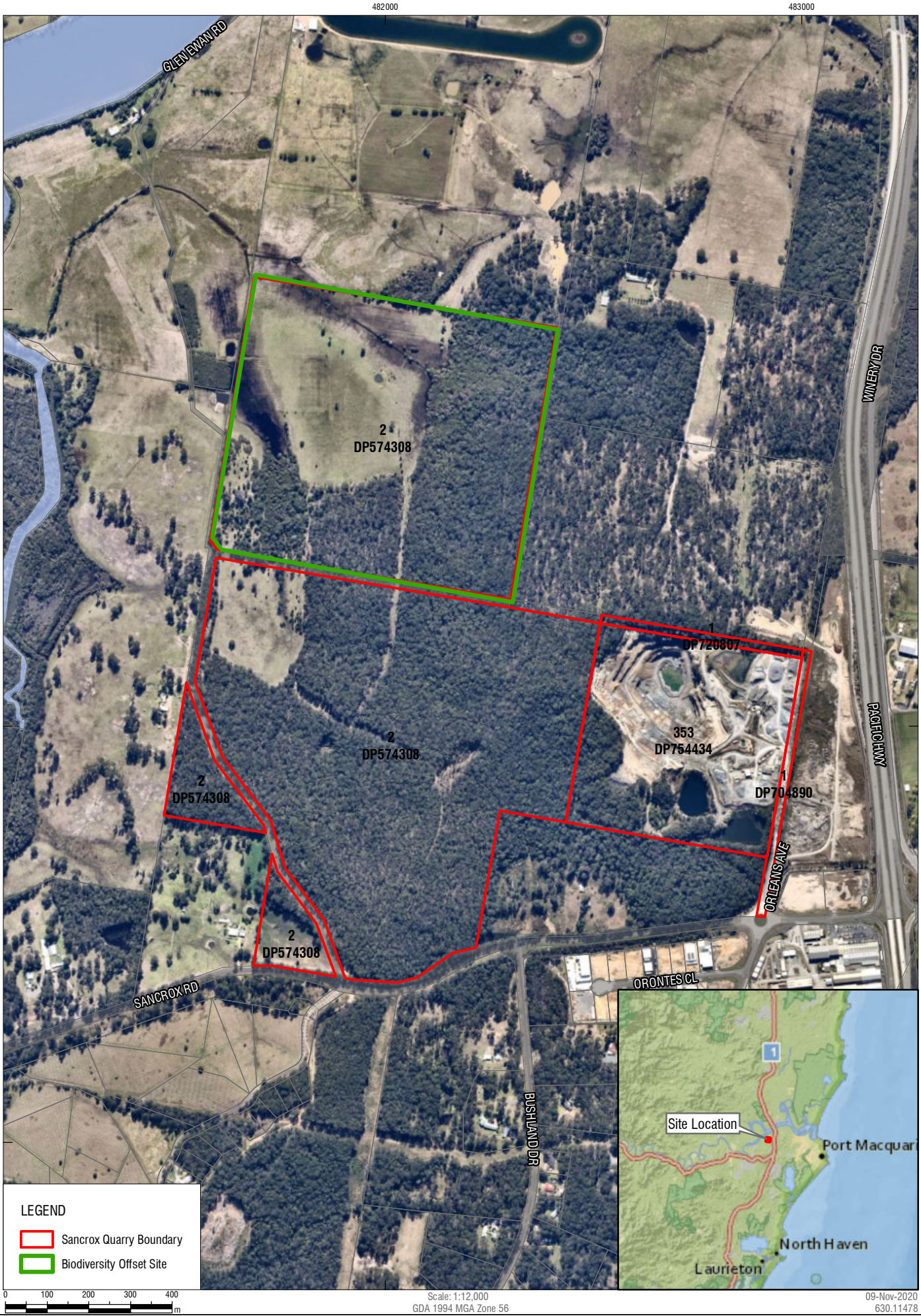
Hanson Heidelberg Cement Group Pty Ltd (Hanson) is seeking project approval for the expansion of the existing Sancrox hard rock quarry. The Sancrox Quarry Expansion Project will involve extending the life of the quarry to 30 years and increasing approved extraction limits by 175, 000 m^3. The Sancrox Quarry Expansion Project (SSD-7293) is a State Significant Development (SSD) as defined under *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP) and will require development consent under Part 4, Division 4.1 of the *NSW Environmental Planning and Assessment Act 1979* (EP&A Act). Hanson has prepared an environmental impact statement (EIS) according to the requirements for SSD projects and the EIS has been submitted and exhibited. As part of the preparation of the EIS, SLR prepared a Biodiversity Assessment Report in accordance with the *Framework for Biodiversity Assessment* (FBA, OEH 2014a).

In the updated submission on the EIS (see letter DOC20/211538, dated 3 April 2020), the Department of Planning, Industry and Environment (DPIE), Biodiversity Conservation Division (BCD) commented, *inter alia*, as follows: "As evidence of the koala has been previously recorded on site, the BAR should be amended to calculate the required species credits". In response to the BCD submission, Hanson has engaged SLR and Biolink to conduct supplementary surveys across the Sancrox project site ('the site') to determine current Koala utilisation of the site. The aim of these surveys is to address the BCD concerns regarding impacts and revaluate the ecological importance of the site for the local population of Koala. Subsequently, a determination can be made on whether the impacts of the project on Koala habitat will necessitate the generation and purchase of Koala species credits according to the FBA. The results and conclusions of the report are based on field surveys and data provided by Biolink in combination with the assistance of SLR ecology staff.

Several surveys targeting the Koala have been completed on the Sancrox site and within the wider Port Macquarie Hastings local government area over recent years (see **Section 3.1**). Most recently, Koala surveys were conducted by SLR in late 2015 as part of the Biodiversity Assessment Report (BAR) for the SSD application (see SLR 2019). The results of those surveys indicated that Koala activity levels were 'Low' according to the Spot Assessment Technique (SAT) criteria. On this basis, species credits for the Koala were not calculated (in accordance with the FBA) to address impacts on Koala habitat as a result of the proposed development.

1.2 Site Location and Description

Sancrox Quarry (the Study Area) is located on Lot 353 DP754434 and on Lot 2 DP574308, north-east of the Sancrox Road and Frogs Road intersection approximately 8 km west of Port Macquarie, in the Port Macquarie-Hastings Local Government Area (**Figure 1**). The majority of the study area is covered with natural forest vegetation that has been modified by past logging and grazing, with some cleared areas at the extremities of the study area. The proposed expansion of the quarry will result in the removal of approximately 42.6 ha of native vegetation.



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Study Area and Regional Location

FIGURE 1

1.3 Koala ecology and Habitat

The Koala (*Phascolarctos cinereus*) is listed as Vulnerable on both the NSW *Biodiversity Conservation Act 2016* (BC Act) and on the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The Koala has a fragmented distribution throughout eastern Australia from the inhabiting a range of eucalypt forest and woodland communities usually where preferred browse species of eucalypt occur, from north-eastern Queensland to south-eastern South Australia and to the west of the Great Dividing Range. Port Macquarie is considered one of the important population centres for Koalas (Ecotone 2013).

Koalas are fundamentally solitary animals that occupy a small home range that may overlap with other individuals. In preferred habitat female Koalas have a home range of approximately 1 hectare, whereas males have approximately 1 to 1.5 hectares, depending on their age and size. Koala home ranges will vary in size depending on the quality of the habitat and suitability, with home range size varying from less than two hectares, to several hundred hectares during breeding season (DPIE 2019). The breeding season for the Koala peaks between September and February. The young spend the first six months in the pouch and are then carried on the mothers back. At 12 months of age the young are independent, but do not reach sexual maturity until they are two years of age (DPIE 2019).

Koalas are known to use a variety of eucalyptus and non-eucalyptus species throughout NSW (DPIE 2020). A review of Koala tree use identified approximately 137 tree species in 2018, but following consultation with Koala experts, the list was refined to 123 species in the *Koala Habitat Information Base Technical Guide* (DPIE 2020). These 123 tree species were categorised into nine distinct regions, according to feed tree preferences in each region. Port Macquarie (and the subject site at Sancrox) is located within the North Coast region and contains a total of 42 Koala use tree species (DPIE 2020).

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2 Koala assessment methodology

2.1 Overall assessment methodology

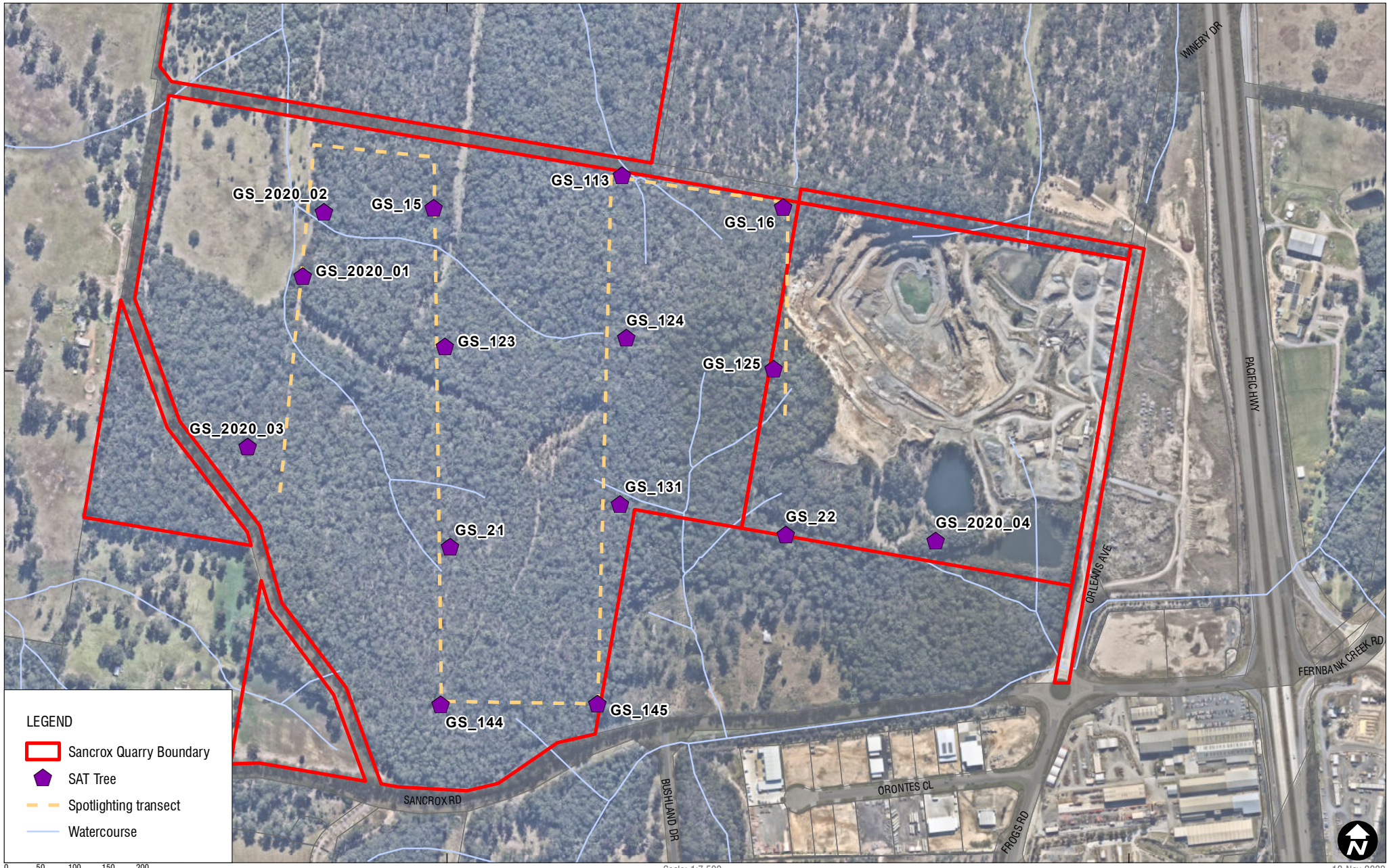
Field assessments were undertaken using RGb-SAT (Regularised Grid-based Spot Assessment Technique) underpinned by the protocols of Phillips and Callaghan (2011) and two consecutive nights of spotlight searches along a walking transect. Field transects were carried out by Biolink ecologists Dr. Amanda Lane and Kristen Wallis and SLR Ecologist Caitlin Cross.

Field survey assessments were undertaken across the study area on the 12-13 October 2020, during which time 15 SAT sites were assessed and a 3 km walking spotlight transect was undertaken on two consecutive nights.

2.2 SAT survey

The study area was initially overlain with a 250 m grid and aerial imagery to identify potential sampling points that are spatially independent and occur within an area of mapped eucalypt woodland/forest. Eleven of these 15 sites were previously surveyed by Biolink (2011). Coordinates (UTM) were determined for each corresponding sampling point and uploaded into a hand-held GPS to enable location in the field. Once a sampling point was located, Koala activity was measured using the SAT protocols of Phillips and Callaghan (2011). Koala activity (measured as a percentage, %) was determined based on the number of trees with Koala faecal pellets within a prescribed search area of 1 m around the base of a tree that has a stem diameter greater than 100 mm at breast height (DBH), accounting for the total number of trees sampled, up to a maximum of 30. By way of example, three positive trees (ie trees with scats present within 1 m of the base) out of 30 would yield a Koala activity score of 10 %.

The distribution of surveyed field sites (ie SAT sites) is illustrated in **Figure 2** and scanned copies of survey data sheets are provided in **Appendix A**.



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Koala Survey Locations

FIGURE 2

2.3 Nocturnal (spotlighting) surveys

Spotlighting was undertaken from 7:30 pm to 10:30 pm on 12 and 13 October 2020. Nocturnal surveys consisted of spotlighting transects that were designed to sample the variety of vegetation types and hence Koala habitat types across the site. A series of walked traverses was completed across the site over two nights, with the same transect alignment repeated on the second night. The transect alignment is shown in **Figure 2.** The length of the transect totalled approximately 3 km; the precise location of the centreline of the transect was subject to minor variations based on local topography.

2.4 Spatial modelling

Habitat utilisation / naïve occupancy was calculated by Biolink according to the number of active sites (ie SAT sites) divided by the total number of sites. This value is reported with a standard error (SE).

Koala activity data from all SAT sites were interpolated using regularised, thin-plate splining techniques using the spatial analyst extension in ArcGIS 10.5, performed by Biolink. Output from the splining process was used to produce an activity contour model to delineate areas occupied by resident Koala populations by identifying contours greater than 10 % indicating significant activity thresholds of Phillips and Callaghan (2011) as detailed in **Table 1**. Lower activity contours were included in the activity model to assist with interpretation of connectivity. This process produces a meta-population model (or contour map) that delineates important 'source' areas supporting established resident Koala populations. These modelled areas of significant Koala activity tend to encapsulate most contemporary Koala records including 100 % of breeding families (Biolink 2007).

Given the occurrence of Preferred Koala Food Trees (PKFTs) such as grey gum across the study area, Koala activity was interpreted in the terms of the East Coast (low) population density level of utilisation as defined by Phillips and Callaghan (2011).

Table 1 Categorisations of Koala activity[#]

Activity category	Low use	Medium (normal) use	High use
East Coast (low)	<9.97%	≥ 9.97% but ≤ 12.59%	>12.59%

Based on use of mean activity level ± 99% confidence intervals. Activity levels in the medium (normal) and High use range for East Coast (low) activity categories indicates occupancy by resident koala populations

3 Survey Results

3.1 Previous Surveys

Several surveys targeting the Koala have been completed on the Sancrox site and also within the wider Port Macquarie Hastings local government area over the last 10 years. The ecological assessment completed for the *Greater Sancrox Structure Plan* (Biolink 2011) identified two small areas of significant Koala activity, of which both are located within the site. Although no Koalas were recorded on the site, the recording of scats provided enough data to model the distribution of core Koala habitat. Two populations of less than 10 to 15 individuals were predicted to utilise the bushland within and around the site and were considered to be restricted to these areas by the Pacific Highway to the east and extensive clearing to the west and north. Accordingly, the Sancrox area was identified and mapped as an area of 'generational persistence', meaning that records extend beyond the lifespan of individual animals (Biolink, 2011).

Koala habitat mapping conducted by Biolink in 2013 identified the Port Macquarie-Hastings local government area in which the Sancrox Quarry is located as an area of high generational persistence and a high likelihood of Koalas occurring within the area (OEH 2014).

In a previous survey for Koalas on the Sancrox Quarry site, Ecotone (2013) recorded evidence of Koala activity in the form of scats and scratches on tree bark. However, no Koalas were sighted and no males were heard calling. Ecotone (2013) state that the evidence for the presence of Koalas (ie scratches on bark and scats) was not recent and was likely to be several months old. On this basis, Ecotone conclude that Koalas still utilise the habitats within the site for dispersal between other areas of habitat in the locality.

Similarly, SLR recorded evidence of Koala activity during field surveys in November 2015, being a small number of older scats and possible tree scratches (see SLR 2019). However, despite comprehensive searches for Koalas using visual inspection of feed trees, listening for male calls, spotlighting and the Spot Assessment Technique (10 SAT sites in total), no evidence via sightings or calls was recorded. The results of the SAT assessment indicated that Koala activity on the site at the time was 'Low'.

3.2 Koala Habitat

Fir the current survey, SAT surveys were conducted at 15 sites comprising of a total of 16 tree species during the surveys (**Table 2**). Of these, 15 species are listed as Koala feed trees (DPIE 2020). The full list of Koala feed trees for the North Coast Management Area, which incorporates the Sancrox locality, is listed in **Appendix B**.

Table 2 Tree species recorded as part of the SAT surveys within Sancrox Quarry

Scientific name	Common name	Koala use trees[#]
Allocasuarina torulosa	Forest Oak	Yes
Corymbia intermedia	Pink Bloodwood	Yes
Corymbia maculata	Spotted Gum	Yes
Eucalyptus sp.		Yes
Eucalyptus acmenoides	White Mahogany	Yes
Eucalyptus carnea	Thick-leaved Mahogany	Yes
Eucalyptus crebra	Narrow-leaved Ironbark	Yes

Scientific name	Common name	Koala use trees[#]
Eucalyptus glaucina	Slaty Red Gum	Yes
Eucalyptus globoidea	White Stringybark	Yes
Eucalyptus microcorys	Tallowwood	Yes
Eucalyptus pilularis	Blackbutt	Yes
Eucalyptus propinqua	Small-fruited Grey Gum	Yes
Eucalyptus robusta	Swamp Mahogany	Yes
Eucalyptus tereticornis	Forest Red Gum	Yes
Lophostemon confertus	Brush box	No
Melaleuca sp.		Yes

Koala use trees as defined by DPIE (2020)

Vegetation mapping conducted as part of the BAR indicates that the forested parts of the site are classified into three plant community types (PCTs), as listed in **Table 3**.

Table 3 Plant Community Types (PCTs) mapped within the study area

PCT Code	PCT Name	TEC	Area (ha)
686	Blackbutt - Pink Bloodwood shrubby open forest of the coastal lowlands of the NSW North Coast Bioregion	Yes	0.6
1215	Spotted Gum - Grey Ironbark open forest of the Macleay Valley lowlands of the NSW North Coast Bioregion	No	11.0
1262	Tallowwood - Small-fruited Grey Gum dry grassy open forest of the foothills of the NSW North Coast	No	31.0
	Total Native Vegetation		**42.6**

Koala feed trees are present in all three PCTs and are distributed widely across the site. According to DPIE (2020), and based on the results of the BAR surveys and the current Koala survey, the site contains 13 Koala feed trees, as follows:

- Spotted Gum *Corymbia maculata*;
- Pink Bloodwood *Corymbia intermedia*;
- Small-fruited Grey Gum *Eucalyptus propinqua*;
- Blackbutt *Eucalyptus pilularis*;
- Tallowwood *Eucalyptus microcorys*;
- Thick-leaved Mahogany *Eucalyptus carnea;*
- White Stringybark *Eucalyptus globoidea*;
- Grey Ironbark *Eucalyptus siderophloia*;
- Flooded Gum *Eucalyptus grandis* (in offset site);
- Broad-leaved Paperbark *Melaleuca quinquenervia*;
- Forest Red Gum *Eucalyptus tereticornis* (in offset site);

- Narrow-leaved Red Gum *Eucalyptus seeana* (in offset site); and
- Forest Oak *Allocasuarina torulosa*.

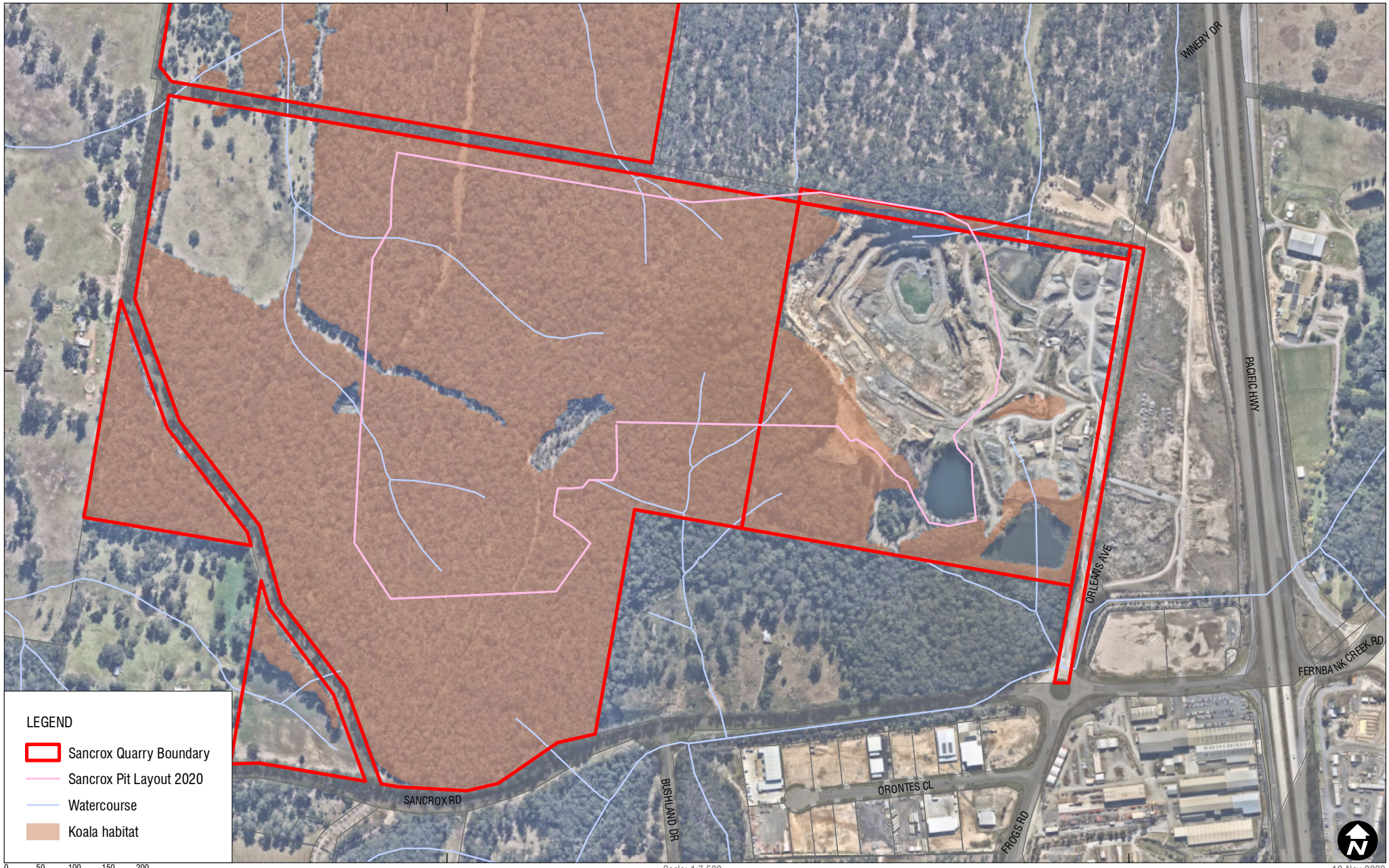
It is also noted that Koalas have been recorded feeding on Swamp Oak *Casuarina glauca* (which is more common in the offset site) at Bonville (G Leonard *pers. comm.* 2016), although Swamp Oak is not generally recognised as a Koala feed tree.

Given the widespread presence of Koala feed trees across the site, all PCTs mapped (in the BAR) as occurring on the site, comprising a total area of 42.6 hectares, are considered to constitute Koala habitat, in accordance with the methods for identification of species credits in the FBA. Consequently, a map of Koala habitat has been prepared by combining the PCTs mapped across the site, as shown **Figure 3**.

3.3 Koala Activity

Evidence of Koalas in the form of diagnostic faecal pellets was recorded at eight of the 15 sampled SAT sites (**Figure 4**) resulting in a habitat utilisation / naïve occupancy estimate of 53 % $\pm$ 13 % (SE) of the available habitat. Eight SAT sites yielded evidence of Koalas with activity levels ranging from 3.33% - 33.33% (**Table 4**). Three sites returned 'high' activity levels (13.33% - 33.33%) and one site returned 'medium' activity level (10.00%) in accordance with Phillips and Callaghan (2011) (**Table 1**). Four sites yielded 'low' activity levels (3.33% - 6.67%) and the remaining sites returned no activity levels.

Koala activity data collected from the current field survey was modelled by Biolink to produce a set of activity contours, which are displayed on **Figure 5**. The Koala activity contours show an activity cell adjoining the western edge of the quarry, reaching both the northern and southern boundary of the site, as well as another cell in the western portion of the site, centred around sampling point GS_2021 (see **Figure 2**). These cells indicate high use areas within Koala home ranges, which may extend beyond the bounds of the study area.



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Koala Habitat within Sancrox Quarry

FIGURE 3

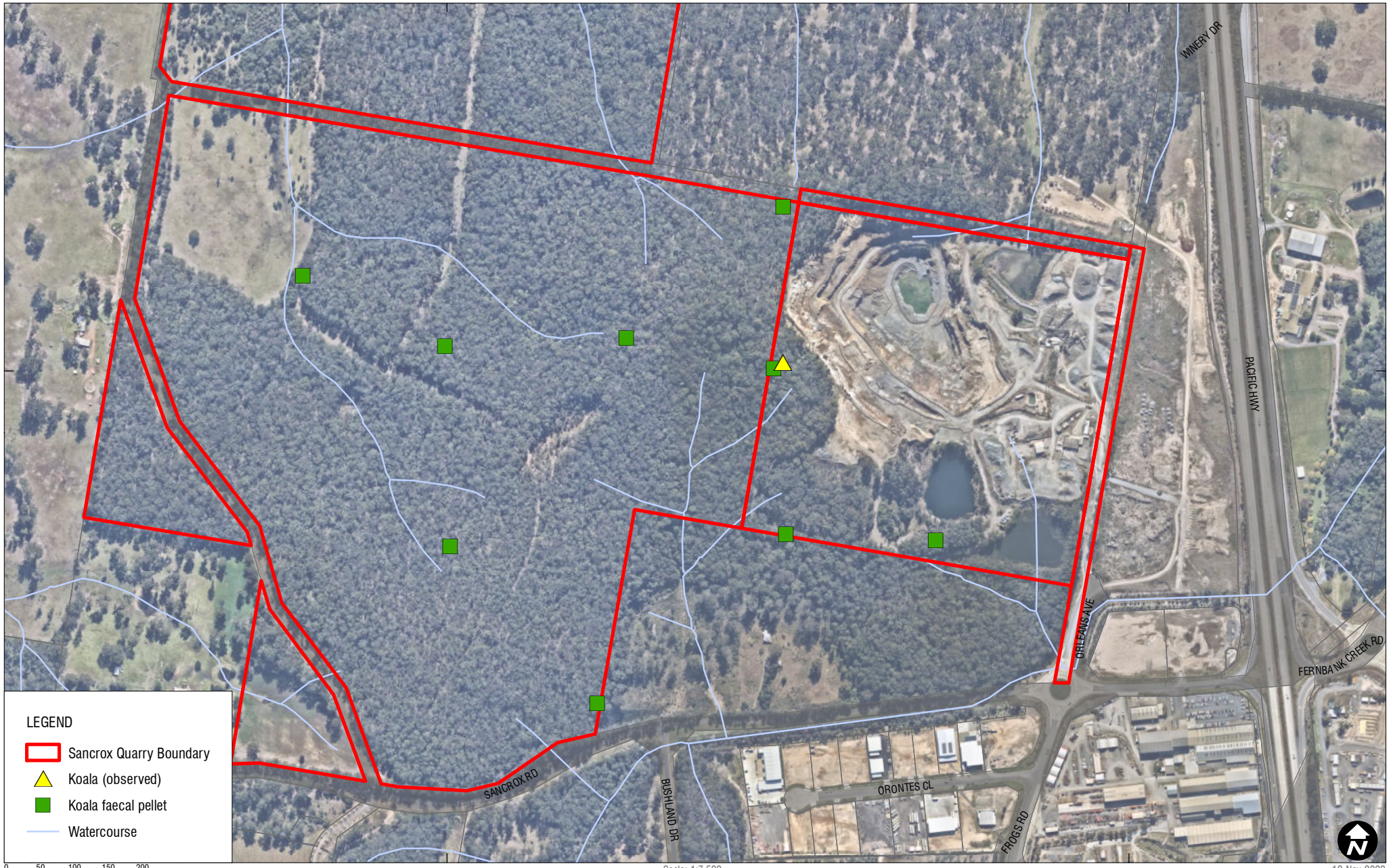
Table 4 Koala activity level amongst SAT sites

Site code	Total number of trees	Activity (as %)	Activity level	Easting	Northing
GS_113	30	0.00	Nil	482257	6522287
GS_123	30	10.00	Medium	481997	6522036
GS_124	31	6.45	Low	482263	6522048
GS_125	30	33.33	High	482479	6522003
GS_131	30	0.00	Nil	482254	6521805
GS_144	30	0.00	Nil	481991	6521511
GS_145	30	3.33	Low	482221	6521512
GS_15	30	0.00	Nil	481981	6522239
GS_16	30	13.33	High	482493	6522240
GS_2020_01	30	26.67	High	481789	6522139
GS_2020_02	30	0.00	Nil	481820	6522233
GS_2020_03	30	0.00	Nil	481708	6521889
GS_2020_04	30	3.33	Low	482717	6521751
GS_21	30	0.00	Nil	482005	6521742
GS_22	30	6.67	Low	482497	6521760

3.4 Koala Sightings

One Koala was sighted during nocturnal (spotlighting) surveys and the location of the sighting is shown in **Figure 4**. The young adult Koala sighted was found in a Spotted Gum *Corymbia maculata* approximately 50 m west of the existing pit wall.

No Koalas were sighted in previous surveys conducted by SLR in 2015 or by Ecotone in 2013.



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Locations of positive SAT sites and Koala sighting

FIGURE 4

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Koala activity contours

FIGURE 5

4 Discussion and Conclusion

The proposed expansion of the Sancrox quarry will remove approximately 42.6 ha of Koala habitat of the lands comprising of the Sancrox Quarry. Previous survey data conducted by SLR in 2015 and Ecotone in 2013 indicated that Koala activity levels on site were 'Low'. The ecological analysis of Koala activity levels during the current survey identified two Koala activity cells adjoining the western edge of the quarry, reaching both the northern and southern boundary of the site, as well as another cell in the western portion of the site.

Survey data of direct and indirect evidence of the site as defined by Phillips and Callaghan (2011) identified medium and high use SAT sites within the activity cells indicating the presence of one or more resident Koalas within the Sancrox quarry. Additionally, the site has previously been mapped as an area of 'generational persistence' by Port Macquarie Council (OEH 2014). Historical modelling indicates that two populations of less than 10 to 15 individuals have utilised the Sancrox locality; however, these populations are restricted to these areas by the Pacific Highway to the east and extensive clearing to the west and north (PMHC 2015). The current survey results combined with areas of modelled high Koala activity and widespread presence of several Koala feed trees across the site indicates that the forested parts of the site all qualify as Koala habitat within the meaning of the FBA.

The proposed expansion of the Sancrox quarry will require the removal of around 42 ha of Koala habitat and may have the potential to negatively impact on local Koala movements and the home ranges of resident Koalas within the Sancrox study area. The site is considered to provide habitat for Koalas, with the presence of one or more resident Koalas within the study area. On the basis of the current findings and following Section 6 of the FBA, a 'species polygon' is required to be drawn around all Koala habitat within the site and species credits calculated.

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APPENDIX A

Koala SAT Field Sheets

PROJECT: Sancrox Quarry Koala Surveys 2020 **FULL SAT DATA SHEET**

SAT No: __GS 145 **Staff:** Caitlin (SLR) Amanda Kirsty **Date:** 12 / 10/2020

SITE DATA

Datum	Zone		Easting						Northing							±
GDA 94	5	6	4	8	2	2	2	1	6	5	2	1	5	1	2	3
Elevation	Aspect								Slope							
18	N	NE	E	SE	(S)	SW	W	NW	(0 - 10)		10 - 30		>30			

SAT DATA

	Tree sp	DBH (mm)	K	FP
1 (CT)	E. Pro	288	—	
2	E. Pro	244	—	
3	E Cor	407	—	
4	E Pro	261	—	
5	E Pro	232	—	
6	E. Cor	<22	—	
7	E. Pro	346	—	
8	E. Cor	124	—	
9	Allo. cos	128	—	
10	Ironbark	460	—	
11	C. Cor	271	—	
12	C. Cor	244	—	
13	C. Inc	194	—	
14	E. Glo	348	—	
15	E. Glo	263	—	
16	E. Mic	133	—	
17	E. Mic	~~150~~ 550		X
18	E. Glo	400	—	
19	E. Glo	281	—	
20	E Pro	330	—	
21	E Glo	375	—	
22	E. Mic	255	—	
23	Ironbark	256	—	
24	E. Prop	330	—	
25	E. Pro	403	—	
26	C. Inc	218	—	
27	E. Glo	185	—	
28	E. Mic	295	—	
29	E Glo	468	—	
30	E. Mic	410	—	

1. **Soil Landscape:** _____

2. **SAT Criteria:** 1 2 (3)

3. **Age of pellets:** (Old) Mixed Fresh

4. **A/Level:** 1 / 30 = 3.3 %

5. **Mean % groundcover in search area:**
< 30% (30 – 70%) >70%

6. **Comments:**

7. **No Koalas within 25m of CT:** N/A

Checked by: Kirsty **Date:** 19/10/20 **Entered by:** Kirsty **Date:** 19/10/20

DATA Checklist: Database ☑ Scanned ☑ Filed ☐

PROJECT: Sancrox Quarry Koala Surveys 2020 **FULL SAT DATA SHEET**

SAT No: __GS 144___ **Staff:** Caitlin (SLR) Amanda Kirsty **Date:** 12 / 10 /2020

SITE DATA

Datum	Zone		Easting						Northing							±
GDA 94	5	6	4	8	1	9	9	1	6	5	2	1	5	1	1	3
Elevation	Aspect								Slope							
35	N	NE	E	SE	S	SW	W	(NW)	(0 - 10)		10 - 30		>30			

SAT DATA

	Tree sp	DBH (mm)	K	FP
1 (CT)	E. Glo	290		
2	E. Glo	275		
3	E. Glo	193		
4	E. Mic	145		
5	E. Glo	490		
6	E. Glo	321		
7	E. Glo	385		
8	E. Glo	175		
9	E. Glo	290		
10	E. Pro	298		
11	E. Glo	369		
12	E. Pro	255		
13	Ironbark	300		
14	E. Glo	513		
15	E. Glo	280		
16	E. Glo	436		
17	E. Intermedia	435		
18	E. Glo	267		
19	E. car	290		
20	E. Mic	217		
21	E. Pro	275		
22	Ironbark	243		
23	E. Glo	360		
24	E. Glo	273		
25	E. Glo	169		
26	E. Pro	360		
27	E. car	117		
28	E. Glo	338		
29	E Intermed	347		
30	E. Int	165		

1. Soil Landscape: _____

2. SAT Criteria: 1 2 (3)

3. Age of pellets: Old Mixed Fresh

4. A/Level: __0/30 = _0._ %

5. Mean % groundcover in search area:

< 30% (30 – 70%) >70%

6. Comments:

- Possum Scats present
- Large Macropod Scats present

7. No Koalas within 25m of CT: N/A

Checked by: Kirsty **Date:** 19/10/20 **Entered by:** Kirsty **Date:** 12/10/20

DATA Checklist: Database ☑ Scanned ☑ Filed ☐

PROJECT: Sancrox Quarry Koala Surveys 2020 **FULL SAT DATA SHEET**

SAT No: GS 21 **Staff:** Caitlin (SLR) Amanda Kirsty **Date:** 12/10/2020

SITE DATA

Datum	Zone		Easting						Northing							±
GDA 94	5	6	4	8	2	0	0	5	6	5	2	1	7	4	2	3

Elevation	Aspect								Slope		
28	(N)	NE	E	SE	S	SW	W	NW	0 - 10	(10 - 30)	>30

SAT DATA

	Tree sp	DBH (mm)	K	FP
1 (CT)	E.Glo	330		X
2	E.Glo	245	—	
3	E.car	350	—	
4	E Glo	328	—	
5	Ironbark	410	—	
6	Ironbark	508	—	
7	White Mahog	323	—	
8	White Mahogy	417	—	
9	E.Glo	228	—	
10	E.Glo	220	—	
11	~~C.tric~~ Cint	218	—	
12	E.Glo	192	—	
13	E.Glo	505	—	
14	~~C.tric~~ Cint	317	—	
15	E.Glo	430	—	
16	Gr Gum	350		X
17	E.Pio	427	—	
18	E Pio	190	—	
19	E.Car	487	—	
20	~~C.tric~~ Cint	343	—	
21	Ironbark	500	—	
22	E.Pio	223	—	
23	E.Glo	135	—	
24	E.Glo	198	—	
25	~~E.tereticornis~~ Cint	122.	—	
26	~~E.tereticornis~~ Cint	135	—	
27	Ironbark	405	—	
28	E.Glo	200	—	
29	White Mahogan	304	—	
30	~~E.tereticornis~~ Cint	113	—	
	E.Pio	280	—	

1. **Soil Landscape:** _____

2. **SAT Criteria:** 1 2 (3)

3. **Age of pellets:** (Old) Mixed Fresh

4. **A/Level:** 2 / 30 = 6.67%

5. **Mean % groundcover in search area:**
(< 30%) 30 – 70% >70%

6. **Comments:**
Large Marsupial Scats

7. **No Koalas within 25m of CT:** N/A

Checked by: Kirsty **Date:** 19/10/20 **Entered by:** Kirsty **Date:** 12/10/20.

DATA Checklist: Database ☑ Scanned ☑ Filed ☐

PROJECT: Sancrox Quarry Koala Surveys 2020 **FULL SAT DATA SHEET**

SAT No: __GS__15__ **Staff:** Caitlin (SLR) Amanda Kirsty **Date:** 12/10 /2020

SITE DATA

Datum	Zone		Easting						Northing							±
GDA 94	5	6	4	8	1	9	8	1	6	5	2	2	2	3	9	3
Elevation	Aspect								Slope							
11	N	NE	E	SE	S	SW	W	(NW)	(0 - 10)		10 - 30		>30			

SAT DATA

	Tree sp	DBH (mm)	K	FP
1 (CT)	Grey Gum	226	—	
2	E. Glo	283	—	
3	E. Glo	387	—	
4	Swamp Mahog	600		—
5	E. Glo	398	—	
6	Clac	240		—
7	E. Mic	604	—	
8	E. Car	400	—	
9	E. Car	180	—	
10	E. Pro	310	—	
11	E. Pa	1011 (2)	—	
12	Mel. spp	165	—	
13	Mel. Spp	161	—	
14	E. Lat	229	—	
15	E. Lat	303	—	
16	E. Mic	520	—	
17	E. Mic	312	—	
18	Ironbark	495	—	
19	E. Mic	152	—	
20	E. Mic	390	—	
21	E. Pa	286	—	
22	White Mahog	470	—	
23	Ironbark	174	—	
24	E. Mic Cint	147	—	
25	E. Cint	225	—	
26	E. Mic	245		—
27	White Mahog	326	—	
28	E. Mic	226	—	
29	White Mahog	442	—	
30	Ironbark	605	—	

1. **Soil Landscape:** _____

2. **SAT Criteria:** 1 2 (3)

3. **Age of pellets:** Old Mixed Fresh

4. **A/Level:** 0 / 30 = 0 %

5. **Mean % groundcover in search area:**
(< 30%) 30 – 70% >70%

6. **Comments:**
Brush tail Possum Scat

7. **No Koalas within 25m of CT:** N/A

Checked by: Kirsty **Date:** 19/10/20 **Entered by:** Kirsty **Date:** 12/10/20

DATA Checklist: Database ☑ Scanned ☑ Filed ☐

PROJECT: Sancrox Quarry Koala Surveys 2020 **FULL SAT DATA SHEET**

SAT No: GS 123 **Staff:** Caitlin (SLR), Amanda, Kirsty **Date:** 12 /10 /2020

SITE DATA

Datum	Zone		Easting						Northing							±
GDA 94	5	6	4	8	1	9	9	7	6	5	2	2	0	3	6	3

Elevation	Aspect								Slope		
18	N	(NE)	E	SE	S	SW	W	NW	(0 - 10)	10 - 30	>30

SAT DATA

	Tree sp	DBH (mm)	K	FP
1 (CT)	E. Glo	217	—	
2	E. cor	349	—	
3	Ironbark	384		X
4	E Glo	290	—	
5	E. Pro	260	—	
6	E. Glo	352 (2)	—	
7	E cor	380	—	
8	E Glo	198	—	
9	E cor	722 (2)		X
10	E Pro	337	—	
11	E. Pro	339	—	
12	C. int	560		X
13	E. Glo	224	—	
14	E Glo	356	—	
15	E Glo	202	—	
16	E Pro	294	—	
17	E Pro	220	—	
18	E. Pro	345 (2)	—	
19	E Pro	435	—	
20	E. Pro	403	—	
21	E. Glo	355	—	
22	E Pro	243	—	
23	C. int	227	—	
24	E Pro	162	—	
25	E Glo	241	—	
26	Ironbark	357	—	
27	E Glo	234	—	
28	E cor	410	—	
29	E. Pro	373	—	
30	E. Pro	447	—	

1. **Soil Landscape:** _____

2. **SAT Criteria:** 1 2 (3)

3. **Age of pellets:** (Old) Mixed Fresh

4. **A/Level:** 3/30 = 10.0 %

5. **Mean % groundcover in search area:**
(< 30%) 30 – 70% >70%

6. **Comments:**

7. **No Koalas within 25m of CT:** N/A

Checked by: Kirsty **Date:** 19/10/20 **Entered by:** Kirsty **Date:** 12/10/20

DATA Checklist: Database ☑ Scanned ☑ Filed ☐

PROJECT: Sancrox Quarry Koala Surveys 2020 **FULL SAT DATA SHEET**

SAT No: __GS-2020-02 **Staff:** Caitlin (SLE) Amanda Kirsty **Date:** 12 /10 /2020

SITE DATA

Datum	Zone		Easting						Northing							±
GDA 94	5	6	4	8	1	8	2	0	6	5	2	2	3	3	1	3
Elevation	Aspect								Slope							
8	N	NE	E	SE	S	SW	(W)	NW	(0 - 10)		10 - 30		>30			

SAT DATA

	Tree sp	DBH (mm)	K	FP
1 (CT)	E.mic	530	—	
2	Ironbark	188	—	
3	Ironbark	191	—	
4	E.mic	249	—	
5	E.mic	335	—	
6	Grey Gum	232	—	
7	C Gla	128	—	
8	C Int	162	—	
9	E. Car?	592	—	
10	~~C. Mac~~ Cint	167	—	
11	E. Car	494	—	
12	Grey Gum	175	—	
13	Grey Gum	471	—	
14	C. Int	186	—	
15	~~E. Thro~~ Eglo	420	—	
16	E.mic	207	—	
17	E.mic	177	—	
18	E. Car	255	—	
19	~~E. Thro~~ Eglo	234	—	
20	~~E. Thro~~ Eglo	198	—	
21	Grey Gum	441	—	
22	E.mic	312	—	
23	~~E. Thro~~ Eglo	406	—	
24	~~C. Mac~~ Cint	163	—	
25	Ironbark	339	—	
26	E. Mic	339	—	
27	Grey Gum	430		
28	Grey Gum	343	—	
29	Ironbark	167	—	
30	~~E. Pop~~ Epro	540 (2)	—	

1. **Soil Landscape:** _____

2. **SAT Criteria:** 1 2 (3)

3. **Age of pellets:** Old Mixed Fresh

4. **A/Level:** __0__/__30__ = __0__.__ %

5. **Mean % groundcover in search area:**

(<30%) 30 – 70% >70%

6. **Comments:**

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7. **No Koalas within 25m of CT:** N/A

Checked by: Kirsty **Date:** 19/10/20 **Entered by:** Kirsty **Date:** 12/10/20

DATA Checklist: Database ☑ Scanned ☑ Filed ☐

PROJECT: Sancrox Quarry Koala Surveys 2020 **FULL SAT DATA SHEET**

SAT No: __GS__2020-01 **Staff:** Caitlin (SLR) Amanda Kirsty **Date:** 12 / 10 /2020

SITE DATA

Datum	Zone		Easting						Northing							±
GDA 94	5	6	4	8	1	7	8	9	6	5	2	2	1	3	9	3
Elevation	Aspect								Slope							
8	N	NE	E	SE	S	SW	(W)	NW	(0 - 10)		10 - 30		>30			

SAT DATA

	Tree sp	DBH (mm)	K	FP
1 (CT)	E. ter	481		—
2	Ironbark	635		X
3	C. int	509 (3)		—
4	Ironbark	552		—
5	C. int	265		—
6	C. int	479		—
7	E. Mic	240		—
8	C int	271		—
9	Mel. Spp	317 (2)		—
10	E. car	378		—
11	C. int	442		—
12	Ironbark	130		X
13	~~C. Gla~~ Allo	239		X
14	~~C. Gla~~ Allo	125		X
15	Grey Gum	129		X
16	Ironbark	571	—	
17	E Mic	400 (3)		X
18	E. Mic	154	—	
19	E. ter	428		X
20	Ironbark	169	—	
21	C. int	485		X
22	E. Mic	511	—	
23	Ironbark	460	—	
24	Mel. Spp.	126	—	
25	Mel Spp	134	—	
26	Mel Spp.	118	—	
27	~~Cas Tit~~ Allt	174	—	
28	~~Cas Tit~~ Allt	280	—	
29	Grey Gum	220	—	
30	C int	345	—	
	C. Gla	189		

1. **Soil Landscape:** _____

2. **SAT Criteria:** 1 2 (3)

3. **Age of pellets:** (Old) Mixed Fresh

4. **A/Level:** __8/30 = 26.67%

5. **Mean % groundcover in search area:**
(< 30%) 30 – 70% >70%

6. **Comments:**
Collected Scats Bag 2020_01

7. **No Koalas within 25m of CT:** NIA

Checked by: Kirsty **Date:** 19/10/20 **Entered by:** Kirsty **Date:** 12/10/20

DATA Checklist: Database ☑ Scanned ☑ Filed ☐

PROJECT: Sancrox Quarry Koala Surveys 2020 **FULL SAT DATA SHEET**

SAT No: __GS 2020_3 **Staff:** Amanda Caitlin (SLR) Jade, Steve Kirsty **Date:** 12/10/2020

SITE DATA

Datum	Zone		Easting						Northing							±
GDA 94	5	6	4	8	1	7	0	8	6	5	2	1	3	8	9	3

Elevation	Aspect								Slope		
14	N	(NE)	E	SE	S	SW	W	NW	0 - 10	10 - 30	>30

SAT DATA

	Tree sp	DBH (mm)	K	FP
1 (CT)	410	E. mic	x	x
2	385	E. glo	x	x
3	170	ironbark	x	x
4	292	E. mic	x	x
5	388	ironbark	x	x
6	271	grey gum	x	x
7	610	E. glo	x	x
8	185	C. int	x	x
9	505(2)	E. car	x	x
10	135	C. lit	x	x
11	515	E. glo	x	x
12	330	C. int	x	x
13	295	E. mic	x	x
14	637	E glo	x	x
15	331	ironbark	x	x
16	640	E. glo	x	x
17	720	E glo	x	x
18	343	E. glo	x	x
19	690	E glo	x	x
20	180	greygum	x	x
21	428	E mic	x	x
22	188	E. mic	x	x
23	328	C. int	x	x
24	400	C. int	x	x
25	450	E. mic	x	x
26	175	C. int	x	x
27	178	C. int	x	x
28	232	C. int	x	x
29	557	E. mic	x	x
30	234	E. glo	x	x

1. **Soil Landscape:** _____

2. **SAT Criteria:** 1 2 3

3. **Age of pellets:** Old Mixed Fresh

4. **A/Level:** __0/30 = _0._ %

5. **Mean % groundcover in search area:**

< 30% 30 – 70% >70%

6. **Comments:**

_____

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7. **No Koalas within 25m of CT:** N/A

Checked by: Kirsty **Date:** 19/10/20 **Entered by:** Kirsty **Date:** 15/10/20

DATA Checklist: Database ☑ Scanned ☑ Filed ☐

PROJECT: ~~BRANDY HILL QUARRY~~ SANCROIX QUARRY

FULL SAT DATA SHEET

SAT No: ~~BHQ~~ GS 131

Recorder: Caitlin (SLR) Amanda Kirsty

Date: 13 / 10 /2020

SITE DATA

Datum	Zone		Easting						Northing							±
GDA	~~9~~ 55	~~47~~ 56	4	8	2	2	5	4	6	5	2	1	8	0	5	3

Elevation	Aspect								Slope		
29	N	(NE)	E	SE	S	SW	W	NW	(0 - 10)	10 - 30	>30

SAT DATA

	Tspp	DBH (mm)	K	FP
1 (CT)	E Mic	366		—
2	Ironbark	234		—
3	Alloca	110		—
4	L. Con	560 (2)		—
5	L. con	497 (2)		—
6	E. Glo	310		—
7	E Glo	212		—
8	Ironbark	362		—
9	E. Mic	334		—
10	E. Glo.	679		—
11	E. Mic	244		—
12	Ironbark	596		—
13	L. Con	153		—
14	E Glo	260		—
15	E Glo	224		—
16	E Glo	185		—
17	E. Glo	673		—
18	Ironbark	358		—
19	E Mic	387		—
20	L. Con	326		—
21	E. Mic	426		—
22	E Mic	468		—
23	E. Int	288		—
24	E. Mic	283		—
25	Ironbark	490		—
26	E. Glo	243		—
27	E Glo	115		—
28	E Glo	242		—
29	C. Int	163		—
30	E Mic	479		—

1. **Soil Landscape:** _____

2. **SAT Criteria:** 1 2 3

3. **Age of pellets:** Old Mixed Fresh

4. **A/Level:** 0 / 30 = 0. _ %

5. **Mean % groundcover in search area:**
(< 30%) 30 – 70% >70%

6. **Comments:**

7. **No Koalas within 25m of CT:** N/A

Checked by: Kirsty **Date:** 19/10/20 **Entered by:** Kirsty **Date:** 15/10/20

DATA Checklist: Entered ☑ Scanned ☑ Filed ☐

PROJECT: ~~BRANDY HILL QUARRY~~ SAN CROOC QUARRY

FULL SAT DATA SHEET

SAT No: ~~BHQ~~ GS 124

Recorder: Caitlin (SLR) Amanda Kirsty

Date: 13 / 10 /2020

SITE DATA

Datum	Zone		Easting						Northing							±
GDA	~~9~~ 55	46	4	8	2	2	6	3	6	5	2	2	0	4	8	3

Elevation	Aspect								Slope		
43	N	NE	(E)	SE	S	SW	W	NW	0 - 10	(10 - 30)	>30

SAT DATA

	Tspp	DBH (mm)	K	FP
1 (CT)	E. Pro	342		X
2	Allo.cas	160	—	
3	E.Glo	530	—	
4	Allocas	135	—	
5	E. pro	332		1
6	Allocas	140	—	
7	Allocas	110	—	
8	C.int	510	—	
9	C.int	235	—	
10	E Glo	219	—	
11	E. Glo	183	—	
12	Allocas	135	—	
13	C.cit	244	—	
14	E.Pro	358	—	
15	E Pro	323	—	
16	C.cit	197	—	
17	C.cit	466		—
18	C.int	255		—
19	Allocas	167		—
20	Allocas	214		—
21	Allocas	177		—
22	E.Pro	422		—
23	C.Cit	395		—
24	E.Glo	271		—
25	E. Glo	<20		—
26	E. Pro	464		—
27	Allocas	140		—
28	C. cit	256	—	
29	Allocas	140	—	
30	Allocas	200	—	

1. Soil Landscape: _____

2. SAT Criteria: 1 2 (3)

3. Age of pellets: Old Mixed Fresh

4. A/Level: 2 / 30 = 6.6 %

5. Mean % groundcover in search area:

(< 30%) 30 – 70% >70%

6. Comments:

_____

_____

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7. No Koalas within 25m of CT: N/A

Checked by: Kirsty Date: 19/10/20 Entered by: Kirsty Date: 15/10/20

DATA Checklist: Entered ☑ Scanned ☑ Filed ☐

PROJECT: Sancrox Quarry Koala Surveys 2020 **FULL SAT DATA SHEET**

SAT No: GS 113 **Staff:** Caitlin (SLR) Amanda Kirsty **Date:** 13 / 10 /2020

SITE DATA

Datum	Zone		Easting						Northing							±
GDA 94	5	6	4	8	2	2	5	7	6	5	2	2	2	8	7	3

Elevation	Aspect								Slope		
26	N	NE	E	SE	S	SW	(W)	NW	(0 - 10)	10 - 30	>30

SAT DATA

	Tree sp	DBH (mm)	K	FP
1 (CT)	E.Pro	274	✓	
2	E.Glo	316	✓	
3	E.Glo	776	✓	
4	L.con	101	✓	
5	E.Glo	530	✓	
6	E.Mic	303	✓	
7	C.int	263	✓	
8	E.Mic	554	✓	
9	E.Glo	575	✓	
10	L.con	176	✓	
11	E.Glo	445	✓	
12	C.int	243	✓	
13	Ironbark	600 (2)	✓	
14	E.Glo	239	✓	
15	C.int	235	✓	
16	E.Glo	180	✓	
17	E.Glo	895	✓	
18	E.Glo	340	✓	
19	E.Mic	388	✓	
20	E.Pro	417	✓	
21	E.Pro	417	✓	
22	E.Glo	620	✓	
23	Ironbark	385	✓	
24	E.Glo	522	✓	
25	Ironbark	444	✓	
26	E.Mic	270	✓	
27	E.Mic	380	✓	
28	Allo.cas	100	✓	
29	Md.sp	165	✓	
30	E.Mic	291	✓	

1. Soil Landscape: _____

2. SAT Criteria: 1 2 (3)

3. Age of pellets: Old Mixed Fresh

4. A/Level: 0 / 30 = 0.0 %

5. Mean % groundcover in search area:

< 30% (30 – 70%) >70%

6. Comments:

_____

_____

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7. No Koalas within 25m of CT: N/A

Checked by: Kirsty **Date:** 19/10/20 **Entered by:** Kirsty **Date:** 15/10/20.

DATA Checklist: Database ☑ Scanned ☑ Filed ☐

PROJECT: Sancrox Quarry Koala Surveys 2020 **FULL SAT DATA SHEET**

SAT No: GS 2020 04 **Staff:** Kirsty. W Caitlin (SLR) Amanda. **Date:** 13 / 10 /2020

SITE DATA

Datum	Zone		Easting						Northing							±
GDA 94	5	6	4	8	2	7	1	7	6	5	2	1	7	5	1	3

Elevation	Aspect								Slope		
26	N	NE	(E)	SE	S	SW	W	NW	(0 - 10)	10 - 30	>30

SAT DATA

	Tree sp	DBH (mm)	K	FP
1 (CT)	C. Int	299	—	
2	C Int	199	—	
3	E. Glo	160	—	
4	C Int	259	—	
5	Allo. cas	136	—	
6	E. Pro	279	—	
7	C. Int	308	—	
8	E. Mic	349	—	
9	C Int	363	—	
10	E. Glo	231	—	
11	C Pro	182	—	
12	Allo (c)	239	—	
13	E Glo	260	—	
14	Allo. cas	160	—	
15	E. Glo	205		X
16	E. Mic	190	—	
17	C. Car	344	—	
18	Ironbark	303	—	
19	E. Glo	558 (2)	—	
20	Allo. cas	280	—	
21	E Glo	393	—	
22	E. Glo	602 (2)	—	
23	E. Glo	356	—	
24	Ironbark	517	—	
25	E. Glo	130	—	
26	E. Glo	316	—	
27	C. Int	218	—	
28	E. Glo	175	—	
29	C Int	475 (2)	—	
30	C Int	143	—	

1. **Soil Landscape:** _____

2. **SAT Criteria:** 1 2 (3)

3. **Age of pellets:** (Old) Mixed Fresh

4. **A/Level:** 1 / 30 = 3.33%

5. **Mean % groundcover in search area:**
(< 30%) 30 – 70% >70%

6. **Comments:**

7. **No Koalas within 25m of CT:** N/A

Checked by: Kirsty **Date:** 19/10/20 **Entered by:** Jade. K **Date:** 15/10/20

DATA Checklist: Database ☑ Scanned ☑ Filed ☐

PROJECT: Sancrox Quarry Koala Surveys 2020 **FULL SAT DATA SHEET**

SAT No: __GS 22__ **Staff:** Kirsty. W, Amanda, Caitlin (SLR) **Date:** 13 / 10 /2020

SITE DATA

Datum	Zone		Easting						Northing							±
GDA 94	5	6	4	8	2	4	9	7	6	5	2	1	7	6	0	3

Elevation	Aspect								Slope		
31	N	NE	E	SE	S	SW	W	NW	0 - 10	10 - 30	>30

SAT DATA

	Tree sp	DBH (mm)	K	FP
1 (CT)	E.Glo	278		
2	Allo.cas	126		
3	E Glo	373		
4	C Int	215		
5	E Glo	690		
6	E.Glo	305		
7	C. Glo	216		
8	E Glo	351		
9	C.Int	400		
10	E.Car	242		
11	E Mic	127		
12	E.Glo	353		
13	E Glo	206		
14	E Pro	382		
15	E Glo	306		
16	Allo.Cas	158		
17	E.Glo	563		x
18	C.Int	787		x
19	Ironbark	324		
20	E.Glo	294		
21	Grey Gum	465		
22	E.Car	562		
23	C.Cit	219		
24	E.Glo	105		
25	E Glo	271		
26	E Glo	431		
27	E.Mic	124		
28	Ironbark	339		
29	E.Glo	623		
30	E.Mic	368		

1. **Soil Landscape:** _____

2. **SAT Criteria:** 1 2 (3)

3. **Age of pellets:** (Old) Mixed Fresh

4. **A/Level:** 2 / 30 = 6.67%

5. **Mean % groundcover in search area:**

(< 30%) 30 – 70% >70%

6. **Comments:**

7. **No Koalas within 25m of CT:** N/A

Checked by: Kirsty **Date:** 19/10/20 **Entered by:** Jade.K **Date:** 15/10/20

DATA Checklist: Database ☑ Scanned ☑ Filed ☐

PROJECT: Sancrox Quarry Koala Surveys 2020 **FULL SAT DATA SHEET**

SAT No: __GS 125 **Staff:** Kirsty . W, Amanda, Caitlin (SLR) **Date:** 13 /10 /2020

SITE DATA

Datum	Zone		Easting						Northing							±
GDA 94	5	6	4	8	2	4	7	9	6	5	2	2	0	0	3	3

Elevation	Aspect								Slope		
52	N	(NE)	E	SE	S	SW	W	NW	0 - 10	(10 - 30)	>30

SAT DATA

	Tree sp	DBH (mm)	K	FP
1 (CT)	C. Cit	532		—
2	Allo. con	132		—
3	C. Cit	278		—
4	E. Glo	246		—
5	C. Cit	283		—
6	L. con	387		X
7	E. Mic	399		X
8	C. Cit	352		+
9	C. Cit	255		+
10	E. Mic	462		X
11	E. Glo	240		—
12	Ironbark	393		X
13	Ironbark	205		—
14	E. Glo	277		—
15	C. Cit	271		—
16	E. Glo	233		—
17	C. Cit	370		—
18	E. Glo	167		—
19	C. Cit	321		—
20	C. Cit	220		X
21	C. Cit	222		—
22	E. Glo	190		—
23	C. Cit	284		—
24	E. Pil	593		X
25	C. Cit	235		—
26	E. Glo	339		X
27	Ironbark	423		X
28	C. Cit	142		—
29	E. Pil	526		—
30	E. mil	389		—

1. **Soil Landscape:** _____

2. **SAT Criteria:** 1 2 (3)

3. **Age of pellets:** Old Mixed (Fresh)

4. **A/Level:** 10 / 30 = 33.33%

5. **Mean % groundcover in search area:**

< 30% 30 – 70% >70%

6. **Comments:**

Next to Quarry walls
& Scats Still Glossy

7. **No Koalas within 25m of CT:** N/A

Checked by: _____ **Date:** _____ **Entered by:** Jade. K **Date:** 15/10/20

DATA Checklist: Database ☐ Scanned ☐ Filed ☐

NB Koala found near here in spotlighting transect!

PROJECT: Sancrox Quarry Koala Surveys 2020

FULL SAT DATA SHEET

SAT No: GS16 **Staff:** Kirsty W, Amanda, Caitlin (SLR) **Date:** 13/10/2020

SITE DATA

Datum	Zone		Easting						Northing							±
GDA 94	5	6	4	8	2	4	9	3	6	5	2	2	2	4	0	3

Elevation	Aspect								Slope		
32	N	NE	(E)	SE	S	SW	W	NW	0 - 10	(10 - 30)	>30

SAT DATA

	Tree sp	DBH (mm)	K	FP
1 (CT)	E. Pro	393		
2	Allocas	194		
3	E. Pro	385		
4	E Pro	288		
5	C. Int	147		
6	Allocas	143		
7	E Glo	820		
8	E Glo	454		
9	Ironbark	220		
10	E Pil	757		
11	Allocas	175		X
12	Allocas	195		
13	E. Pil	500		
14	Allocas	177		
15	E. Mic	570		X
16	E. Pil	720		
17	C. Int	268		X
18	Allo. cas	218		
19	Allo. Cas	115		
20	All cas	145		
21	Grey Gum	367		
22	E. Glo	185		
23	E. Pro	331		
24	E. Pro	516		
25	E Pil	600		
26	E. Pro	381		
27	E. Pil	1402 (3)		X
28	E. Pil	518		
29	Ironbark	352		
30	Allocas	135		

1. **Soil Landscape:** _____

2. **SAT Criteria:** 1 2 (3)

3. **Age of pellets:** Old (Mixed) Fresh

4. **A/Level:** 4 / 30 = 13.33%

5. **Mean % groundcover in search area:**

(< 30%) 30 – 70% >70%

6. **Comments:**

7. **No Koalas within 25m of CT:** NIL

Checked by: Kirsty **Date:** 19/10/20 **Entered by:** Jade K **Date:** 15/10/20

DATA Checklist: Database ☑ Scanned ☑ Filed ☐

APPENDIX B

Koala Feed Trees for the North Coast Area

Species Name	Common Name
Allocasuarina torulosa	Forest Oak
Angophora floribunda	Rough-barked Apple
Corymbia gummifera	Red Bloodwood
Corymbia henryi	Large-leaved Spotted Gum
Corymbia intermedia	Pink Bloodwood
Corymbia maculata	Spotted Gum
Eucalyptus acmenoides	White Mahogany
Eucalyptus amplifolia	Cabbage Gum
Eucalyptus bancroftii	Orange Gum
Eucalyptus biturbinata	Grey Gum
Eucalyptus campanulata	New England Blackbutt
Eucalyptus canaliculata	Large-fruited Grey Gum
Eucalyptus carnea	Thick-leaved Mahogany
Eucalyptus crebra	Narrow-leaved Ironbark
Eucalyptus eugenioides	Narrow-leaved Stringybark
Eucalyptus fibrosa	Board-leaved Red Ironbark
Eucalyptus glaucina	Slaty Red Gum
Eucalyptus globoidea	White Stringybark
Eucalyptus grandis	Flooded Gum
Eucalyptus laevopinea	Silver-top Stringybark
Eucalyptus largeana	Craven Grey Box
Eucalyptus microcorys	Tallowwood
Eucalyptus moluccana	Grey Box
Eucalyptus nobilis	Forest Ribbon Gum
Eucalyptus pilularis	Blackbutt
Eucalyptus placita	Grey Ironbark
Eucalyptus planchoniana	Bastard Tallowwood
Eucalyptus propinqua	Small-fruited Grey Gum
Eucalyptus psammitica	Bastard White Mahogany
Eucalyptus punctata	Grey Gum
Eucalyptus resinifera	Red Mahogany
Eucalyptus robusta	Swamp Mahogany
Eucalyptus rummeryi	Steel Box
Eucalyptus saligna	Sydney Blue Gum
Eucalyptus scias	Large-fruited Red Mahogany
Eucalyptus seeana	Narrow-leaved Red Gum
Eucalyptus siderophloia	Grey ironbark
Eucalyptus signata/ Eucalyptus racemose	Scribbly gum/ Narrow-leaved Scribbly Gum

Species Name	Common Name
Eucalyptus tereticornis	Forest Red Gum
Eucalyptus tindaliae	Stringybark
Eucalyptus umbra	Bastard White Mahogany
Melaleuca quinquenervia	Board-leaved paperbark

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