

MEMO

HUNTLY MINE
TARGETED FAUNA
SURVEY

PREPARED FOR: ALCOA





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Project ID: 2435	Huntly Mine Targeted Fauna Survey
Prepared for:	Alcoa
Date of issue:	17/12/2024
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1.1. Project Background

Alcoa of Australia Limited's (Alcoa) Western Australian (WA) mining operations comprise the Huntly and Willowdale bauxite mines, which are located in Alcoa's Mining Lease 1SA (ML1SA) within the Northern Jarrah Forest (NJF) IBRA subregion (Map 1.1).

Alcoa has approval to mine within ML1SA, subject to submitting draft five-year mine plans and associated environmental management programmes known as the Mining and Management Program (MMP). The MMP is submitted to the State's Mining and Management Program Liaison Group (MMPLG) on an annual basis.

1.2. Project Scope

Alcoa has committed to undertaking ecological surveys for the Huntly Mine, O'Neil region as part of its MMP assessment by the MMPLG. Spectrum Ecology and Spatial (Spectrum) completed a single season targeted fauna survey across ~650 ha of the Huntly Mine area (Survey Area). The survey will be used to:

- Amend the conceptual alignment to avoid significant fauna;
- Inform translocation and environmental management plans as required; and
- Assist Alcoa in preparing MMP submission to the MMPLG.

The targeted fauna survey comprises of:

- Targeted camera trap fauna survey for Chuditch (*Dasyurus geoffroii*, EPBC & BC Act Vulnerable), Woylie (*Bettongia penicillata*, EPBC Act Endangered & BC Act Critically Endangered), and Quokka (*Setonix brachyurus*, EPBC & BC Act Vulnerable).

The Survey Area covers 650.5 ha and is presented in Map 1.1.

1.3. Legislation & Guidelines

Fauna in Western Australia are protected by various legislation including:

- *Biodiversity Conservation Act 2016* (BC Act);
- *Environmental Protection Act 1986* (EP Act); and
- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The survey was compliant with survey guidelines, as outlined in:

- EPA Environmental Factor Guideline: Terrestrial Fauna (EPA, 2016);
- EPA Technical Guidance Technical Guidance – Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment (EPA, 2020).

In addition to the above, species-specific guidelines were also accessed:

- Survey Guidelines for Australia's Threatened Mammals (DSEWPoC, 2011).

1.3.1. Significant Fauna Definitions

Significant fauna can include (EPA, 2016):

- Being identified as a Threatened or Priority species;
- Species with restricted distribution;
- Degree of historical impact from threatening processes; or
- Providing an important function required to maintain the ecological integrity of a significant ecosystem.

The Chuditch, Woylie and Quokka are all considered to be a significant species as they have been identified as Threatened species under both the EPBC Act and BC Act. Significant species may also be listed under the Department of Biodiversity, Conservation and Attractions (DBCAs) priority fauna categories.

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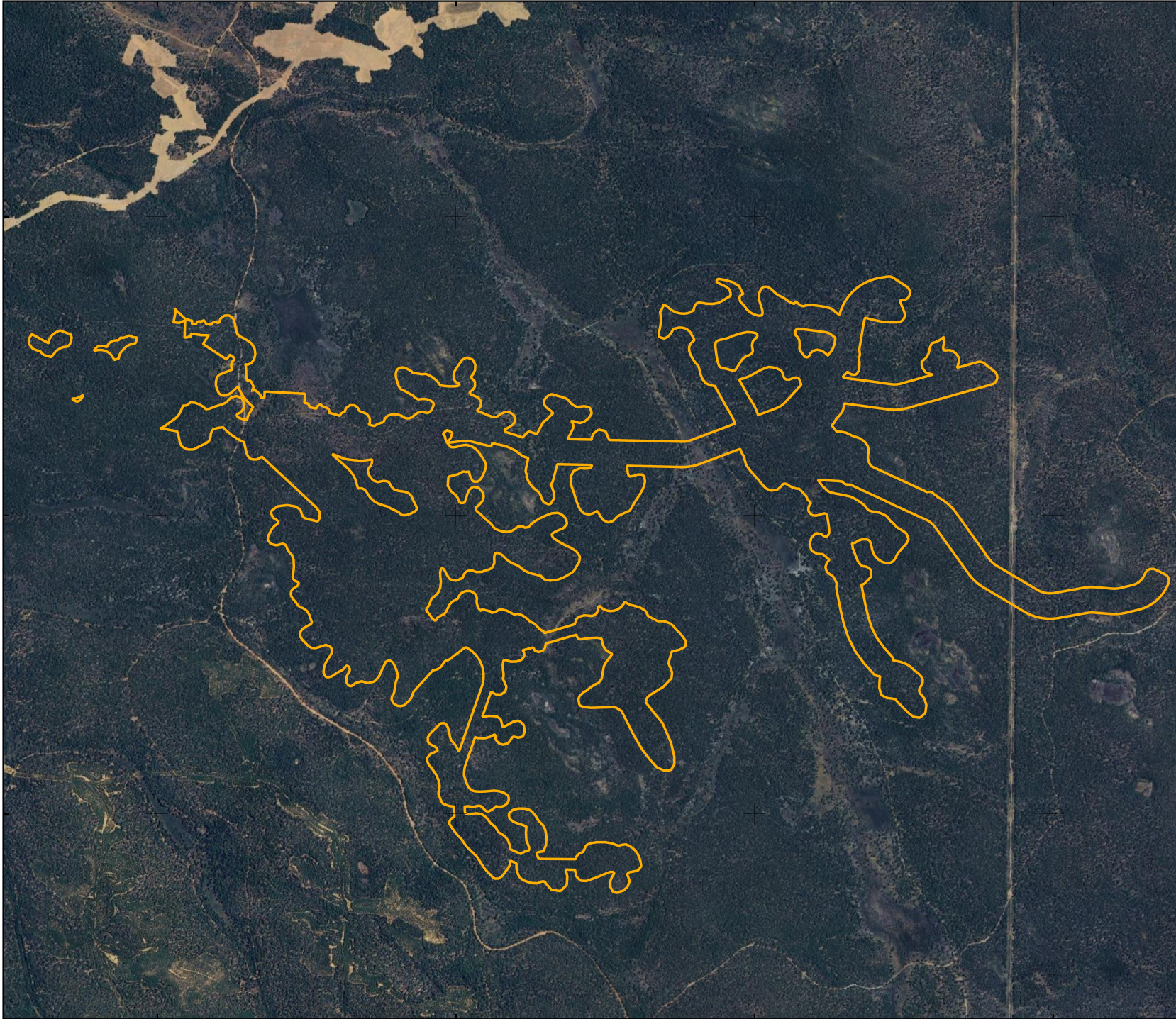
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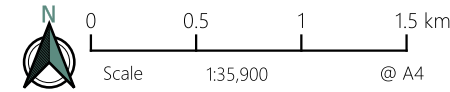
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Legend

 Survey Area



Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator
Units: Metre



Author: GF

Date: 17-12-2024

Survey Area

Alcoa Targeted Fauna Survey

MAP

Prepared for
Alcoa

1.1

2. METHODS

2.1. Motion Cameras

Forty camera traps baited with cotton rope soaked in fish oil were deployed throughout the Survey Area for a total of 2,470 trap nights (Table 2.1 and Map 2.1).

Table 2.1: Motion Camera Locations

Site	Easting (mE)	Northing (mN)	Date Deployed	Date Collected	Nights Deployed
ALC01	431801	6395546	10/09/2024	11/11/2024	62
ALC02	429706	6397116	10/09/2024	11/11/2024	62
ALC03	431459	6395881	12/09/2024	13/11/2024	62
ALC04	430477	6397210	10/09/2024	11/11/2024	62
ALC05	431606	6394791	10/09/2024	11/11/2024	62
ALC06	429330	6397169	10/09/2024	11/11/2024	62
ALC07	433952	6396983	11/09/2024	12/11/2024	62
ALC08	430423	6396604	9/09/2024	11/11/2024	63
ALC09	431010	6396500	9/09/2024	11/11/2024	63
ALC10	431809	6396827	11/09/2024	11/11/2024	61
ALC11	431807	6396418	11/09/2024	11/11/2024	61
ALC12	432699	6396772	11/09/2024	12/11/2024	62
ALC13	435015	6396136	12/09/2024	12/11/2024	61
ALC14	432581	6396427	11/09/2024	12/11/2024	62
ALC15	433451	6396471	11/09/2024	12/11/2024	62
ALC16	432022	6396046	11/09/2024	11/11/2024	61
ALC17	431008	6395770	10/09/2024	12/11/2024	63
ALC18	431205	6395220	10/09/2024	12/11/2024	63
ALC19	432209	6395048	10/09/2024	11/11/2024	62
ALC20	431910	6394459	10/09/2024	11/11/2024	62
ALC21	432069	6393935	10/09/2024	11/11/2024	62
ALC22	432707	6395233	10/09/2024	11/11/2024	62
ALC23	433342	6395068	13/09/2024	13/11/2024	61
ALC24	432545	6395648	11/09/2024	11/11/2024	61
ALC25	432936	6393724	10/09/2024	11/11/2024	62
ALC26	433501	6397313	11/09/2024	12/11/2024	62
ALC27	434036	6397460	12/09/2024	12/11/2024	61
ALC28	434581	6397253	12/09/2024	12/11/2024	61
ALC29	434329	6396513	11/09/2024	12/11/2024	62
ALC30	434014	6396357	11/09/2024	12/11/2024	62
ALC31	434481	6396151	12/09/2024	12/11/2024	61
ALC32	434576	6395659	12/09/2024	12/11/2024	61
ALC33	434959	6394850	12/09/2024	12/11/2024	61
ALC34	435471	6395656	12/09/2024	13/11/2024	62

Site	Easting (mE)	Northing (mN)	Date Deployed	Date Collected	Nights Deployed	
ALC35	434661	6395274	12/09/2024	12/11/2024	61	
ALC36	435913	6395406	12/09/2024	13/11/2024	62	
ALC37	433880	6396760	11/09/2024	12/11/2024	62	
ALC38	435280	6396863	12/09/2024	12/11/2024	61	
ALC39	434674	6396814	12/09/2024	12/11/2024	61	
ALC40	436547	6395486	12/09/2024	13/11/2024	62	
Datum: GDA94/MGA zone 50					Total	2,470

2.2. Targeted Searches

Searches for secondary evidence of target species including scats, tracks, dens/nests, tunnels, and remains were undertaken at 20 locations within the Survey Area (Table 2.2 and Map 2.1).

Table 2.2: Targeted Search Locations

Site	Easting (mE)	Northing (mN)	Date	Number of Personnel	Effort (minutes)	
ALCT01	433143	6394870	13/09/2024	2	54	
ALCT02	433628	6396397	13/09/2024	2	60	
ALCT03	433183	6396080	13/09/2024	2	29	
ALCT04	436033	6395380	13/11/2024	2	59	
ALCT05	434768	6395014	13/11/2024	2	33	
ALCT06	434376	6395812	13/11/2024	2	28	
ALCT07	434694	6397398	13/11/2024	2	25	
ALCT08	430750	6396679	14/11/2024	2	48	
ALCT09	432086	6396712	14/11/2024	2	31	
ALCT10	432099	6396729	14/11/2024	2	28	
ALCT11	433530	6396431	14/11/2024	2	53	
ALCT12	432867	6395316	14/11/2024	2	33	
ALCT13	432370	6395069	14/11/2024	2	40	
ALCT14	432001	6395245	14/11/2024	2	34	
ALCT15	432140	6393552	14/11/2024	2	25	
ALCT16	432236	6394955	14/11/2024	2	36	
ALCT17	430929	6395466	15/11/2024	2	74	
ALCT18	433106	6393488	15/11/2024	2	43	
ALCT19	432265	6395952	15/11/2024	2	52	
ALCT20	433730	6396455	15/11/2024	2	49	
Datum: GDA94/MGA zone 50					Total	834

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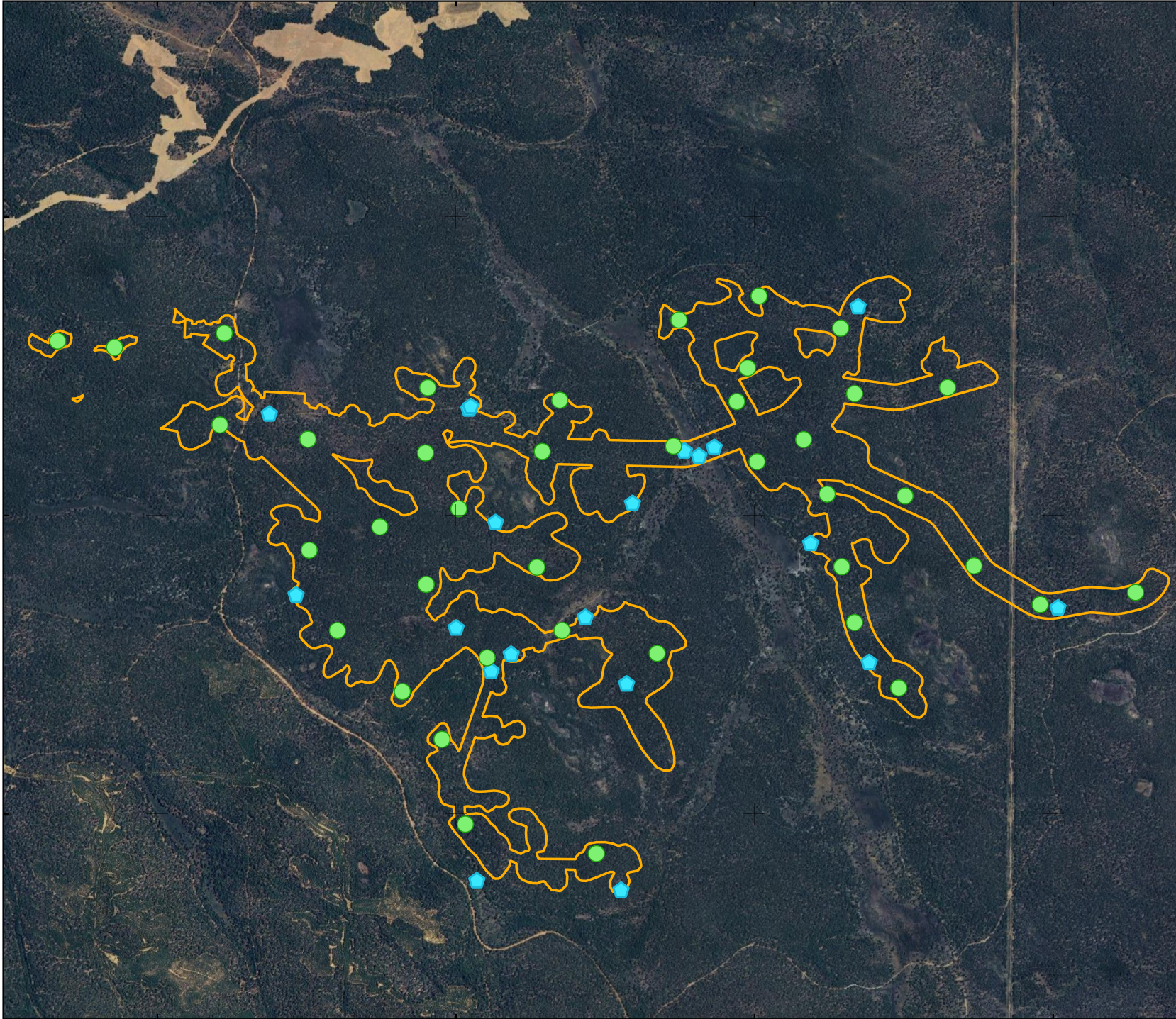
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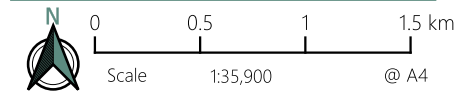
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Legend

- Survey Area
- Motion Camera
- ⬠ Targeted Search



Coordinate System: GDA 1994 MGA Zone 50
 Projection: Universal Transverse Mercator
 Units: Metre



Author: GF

Date: 17-12-2024

Survey Site Locations

Alcoa Targeted Fauna Survey

MAP

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2.1

3. RESULTS

Two of the targeted species were recorded on motion camera, the Chuditch (*Dasyurus geoffroii*, EPBC & BC Act Vulnerable) and Woylie (*Bettongia penicillata*, EPBC Act Endangered & BC Act Critically Endangered (Table 3.1, Map 3.1, Plate 3.1, and Plate 3.2).

Based on spot pattern comparison two individual Chuditch were recorded (Plate 3.1). It is not possible to determine whether the Woylie captured on motion camera is one individual or multiple (Plate 3.2). Woylie records were from a single location, recorded on three separate nights (Table 3.1). All records of Chuditch and Woylie are from Jarrah Forest habitat.

Table 3.1: Threatened Fauna Records

Species	Number of Recordings	Easting (mE)	Northing (mN)	Site	Date
Chuditch <i>Dasyurus geoffroii</i>	1	431801	6395546	ALC01	6/10/2024
	1	432022	6396046	ALC16	20/10/2024
	1	431205	6395220	ALC18	26/10/2024
	1	432707	6395233	ALC22	12/09/2024 24/09/2024
Woylie <i>Bettongia penicillata</i>	1	431010	6396500	ALC09	12/09/2024
	1				30/09/2024
	1				19/10/2024

Datum: GDA94/MGA zone 50

Four additional significant species were recorded during the survey:

- Wambenger Brush-tailed Phascogale (*Phascogale tapoatafa wambenger*, BC Act Conservation Dependent);
- Western Brush Wallaby (*Notamacropus Irma*, DBCA Priority 4);
- Forest Red-tailed Black Cockatoo (*Calyptorhynchus banksii naso*, EPBC & BC Act Vulnerable); and
- Carnaby's Black Cockatoo (*Zanda latirostris*, EPBC & BC Act Endangered) were opportunistically heard while traversing the Survey Area.

In addition to these listed species the following introduced species were recorded:

- Feral Cat (*Felis catus*) – exotic;
- Pig (*Sus scrofa*) – exotic;
- Rabbit (*Oryctolagus cuniculus*) – exotic (scat record only); and
- Laughing Kookaburra (*Dacelo novaeguineae*) – naturalised exotic.



Plate 3.1: Motion Camera images of Chuditch recorded during the survey



Plate 3.2: Motion Camera images of Woylie recorded during the survey

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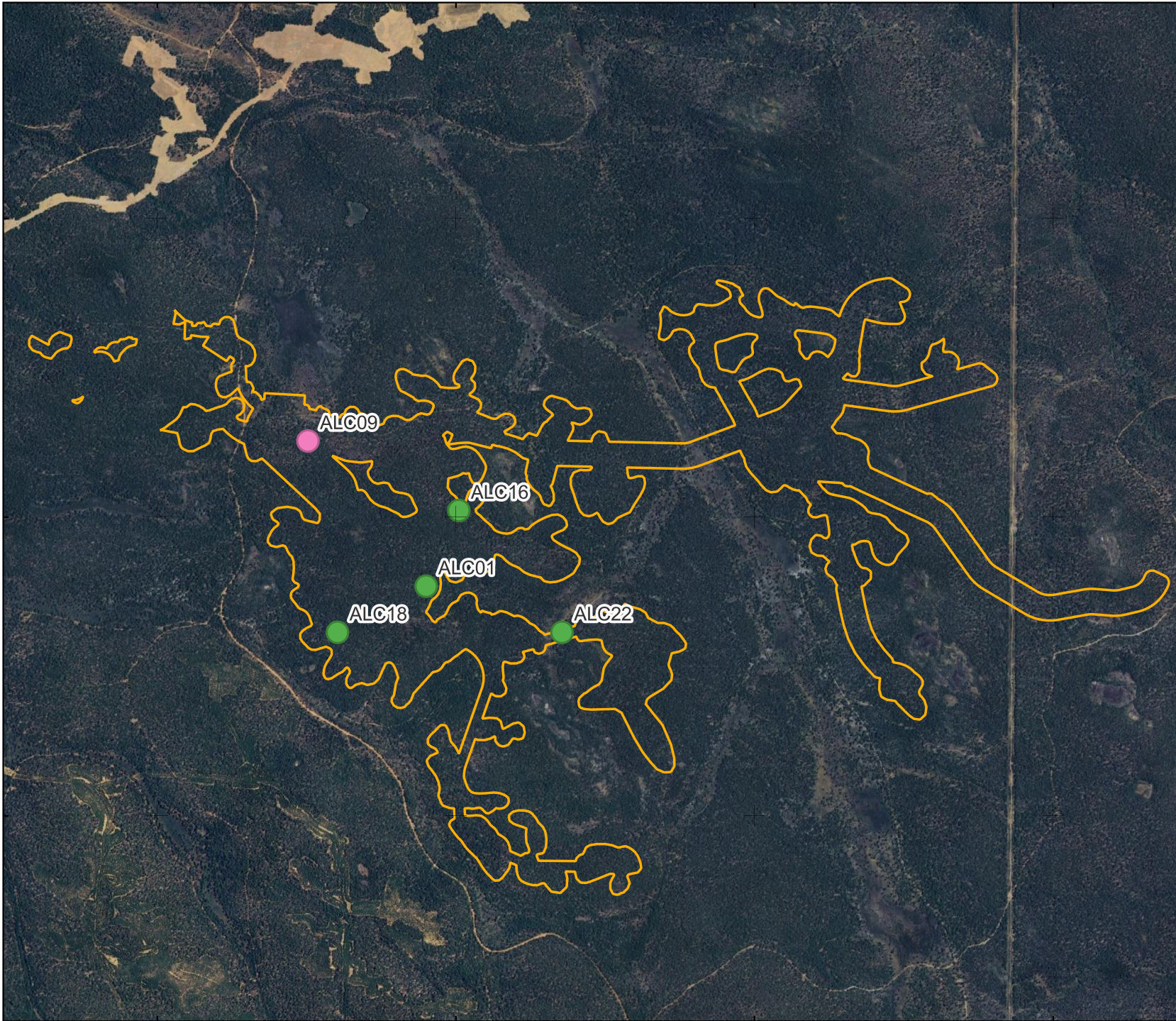
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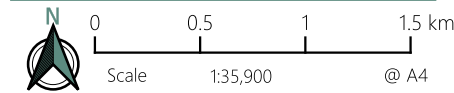
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Legend

- Survey Area
- Chuditch (*Dasyurus geoffroyi*, EPBC & BC Act Vulnerable)
- Woylie (*Bettongia penicillata*, EPBC Act Endangered & BC Act Critically Endangered)



Coordinate System: GDA 1994 MGA Zone 50
 Projection: Universal Transverse Mercator
 Units: Metre



Author: GF

Date: 17-12-2024

Woylie & Chuditch Records

Alcoa Targeted Fauna Survey

MAP

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3.1

4. RECOMMENDATIONS

In light of the recorded Woylie(s), Spectrum recommends that a follow up motion camera survey be conducted, comprising clusters of cameras (up to five cameras in each cluster) in the vicinity of site ALC09 and GHDs Woylie records, as well as between these records. This may further elucidate the distribution of Woylies within the Jarrah Forest.

Spectrum proposes to install these motion cameras over five days in January 2025. We propose motion cameras be deployed for one month and collected over five days in February 2025. Nocturnal searches for Woylie (subject to night-work approval) and opportunistic Woylie scat collection for subsequent DNA analysis (dependent on number of scats collected) will be undertaken during the install trip (five days) and the secondary camera collection trip (five days).

The proposed dates for the surveys are;

- 20 to 24 January 2025; and
- 24 to 28 February 2025.