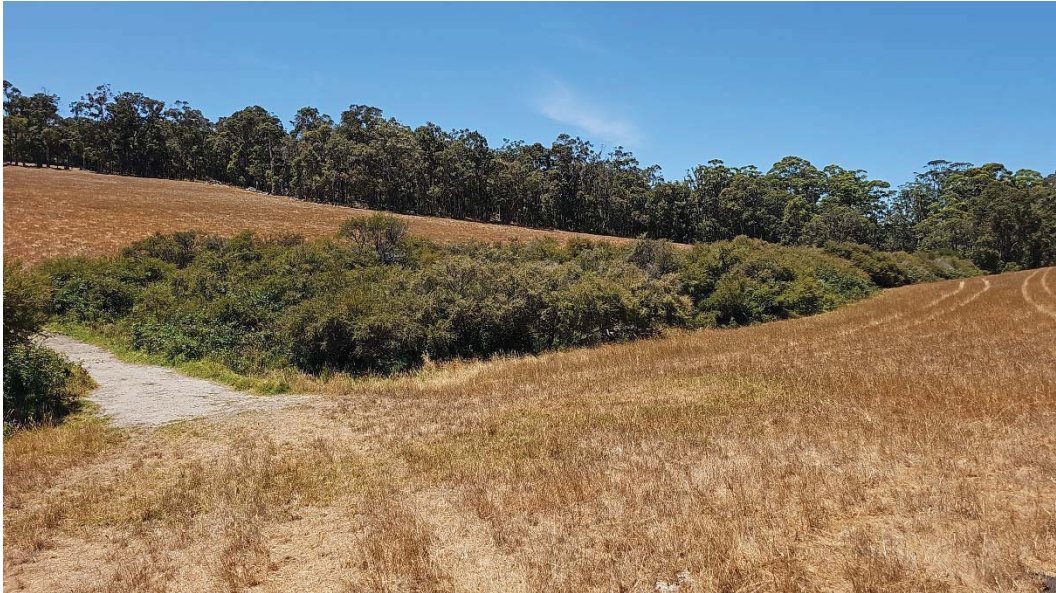


White Bellied Frog (*Anstisia alba*) Survey



Proposed Clearing Area (CPS 9395/1)

Lot 1002 Warner Glen Road Forest Grove

January 2024

V1

On behalf of:

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TABLE OF CONTENTS

SUMMARY

1.	INTRODUCTION	4
2.	SCOPE OF WORKS.....	4
3.	METHODS.....	4
3.1	HABITAT ASSESSMENT	5
3.2	WHITE BELLIED FROG SURVEY.....	5
4.	SURVEY LIMITATIONS	5
5.	RESULTS	6
5.1	HABITAT ASSESSMENT	6
5.2	WHITE BELLIED FROG SURVEY.....	8
6.	CONCLUSION.....	8
7.	REFERENCES	9

FIGURES

- FIGURE 1: Survey Area & Surrounds
- FIGURE 2: Survey Area – Aerial Photograph
- FIGURE 3: Recording Locations

TABLES

- TABLE 1: Example images of the fauna habitats along the permit area

SUMMARY

This report details the results of a targeted, white-bellied frog (*Anstisia alba*) survey over out over a section of Lot 1002 Warner Glen Road, Forest Grove (Figure 1). The landowners (Bradley Noakes and Steven Noakes) have applied for a permit to clear vegetation from within the Lot (CPS 9395/1 – Permit area) to create room for a centre pivot and a dam.

Upon review the Department of Water and Environmental Regulation (DWER) have advised the landowners that in order to determine the impacts to conservation significant fauna a targeted, white-bellied frog survey is required of the proposed 3.7 hectare clearing area as depicted on the attached figure (the survey area) (Figure 2).

The fauna assessment detailed in this report seeks to satisfy this requirement.

The assessment has included a three month long acoustic call survey targeting white bellied frogs and a series of daytime reconnaissance surveys. The acoustic surveys (utilising three autonomous recording units (ARU)) were carried out continuously between the 11 October 2023 and the 6 January 2024. The daytime field component of the fauna assessment was carried out on the 11 October & 10 November 2023 and 6 January 2024. All survey work and reporting has been carried out by Greg Harewood (Zoologist).

Key Findings

The western most section of the Permit area falls over a narrow, seasonal drainage line and contains a dense tall shrubland of various species over bracken and sedges on a sandy/clay loam. The natural vegetation is infested with blackberry (*Rubus ulmifolius*) making the entire area impenetrable. This section of the Permit area totals about 2.0 ha.

Superficially the soil and vegetation within the drainage line, at least in part, appears to represent habitat suitable for white-bellied frogs.

The eastern most section of the Permit area contains a woodland dominated by marri (*Corymbia calophylla*) (with occasional jarrah (*Eucalyptus marginata*) and karri (*E. diversicolor*) over grassland. This section of the Permit area totals about 1.7 ha.

The woodland habitat in the eastern section of the Permit area represents unsuitable habitat for white-bellied frogs.

Acoustic recordings made over a three-month period and several daytime reconnaissance surveys within the white-bellied frogs documented breeding season did not detect any calls or other evidence that could be attributed to the species.

The results suggest that at the time of the survey, white-bellied frogs were absent from the Permit area.

1. INTRODUCTION

This report details the results of a targeted, white-bellied frog (*Anstisia alba*) survey over out over a section of Lot 1002 Warner Glen Road, Forest Grove (Figure 1).

The landowners (Bradley Noakes and Steven Noakes) have applied for a permit to clear vegetation from within the Lot (CPS 9395/1 – Permit area) to create room for a centre pivot and a dam.

Upon review the Department of Water and Environmental Regulation (DWER) have advised the landowners that in order to determine the impacts to conservation significant fauna a targeted, white-bellied frog survey is required of the proposed 3.7 hectare clearing area as depicted on the attached figure (the survey area) (Figure 2).

The fauna assessment detailed in this report seeks to satisfy this requirement.

2. SCOPE OF WORKS

The request for additional information from DWER (2021) states:

- A *Geocrinia alba* (white-bellied frog) survey and habitat assessment is required for the area proposed to be cleared.
- The survey is to be carried out by a fauna specialist, and survey methodology must be consistent with Australian Government Survey guidelines for Australia's threatened frogs (Guidelines for detecting frogs listed as threatened under the Environment Protection and Biodiversity Conservation Act 1999) and the Environmental Protection Authority's (EPA) Technical Guidance: Terrestrial Fauna Surveys (December 2016).

Note: The white-bellied frog's scientific name has been revised to *Anstisia alba* since DWER's request. The EPA's Technical Guidance was updated in 2020 (EPA 2020).

3. METHODS

Daytime site reconnaissance surveys and habitat assessments were carried out on the 11 October 2023, the 10 November 2023 and the 6 January 2024.

Acoustic recording devices were deployed on the 11 October 2022 and retrieved on the 6 January 2024.

All field work and reporting has been carried out by Greg Harewood (Zoologist) using methods described in the sections below.

3.1 HABITAT ASSESSMENT

Vegetation units, landforms and soils observed during the site reconnaissance survey have been used to define broad fauna habitat types across the survey area.

3.2 WHITE BELLIED FROG SURVEY

The white-bellied frog (*Anstisia alba*) is most readily detected by calls made at night by male frogs during the breeding season. The breeding season typically takes place from about late August/September to early December (DPAW 2015, Antis 2013, Commonwealth of Australia 2010).

To assist in determining if white-bellied frogs are utilising suitable habitat within the survey area a three month (~87 day) acoustic recording survey was undertaken. This involved the deployment of three acoustic recording devices (Wildlife Acoustics SM4) at locations along the creek line within the period when the males were most likely to be calling. The location of the recording units along the creek line is shown in Figure 3.

The recording devices were set to record four hours of recording each night from sunset (two hours) and prior to sunrise (two hours). The units were initially set up on the 11 October 2023 and removed on the 6 January 2024.

It was not feasible to listen to all of the recordings obtained (~1,000 hrs) and so a subset of recordings from each day of the survey were replayed and the distinctive calls of the white-bellied frog listened for.

The creek line was also examined during site visits for evidence of the species (calling and individuals) and a habitat assessment was also undertaken.

4. SURVEY LIMITATIONS

The conclusions presented are based upon field data and the environmental monitoring and/or testing carried out over a limited period of time and are therefore merely indicative of the environmental condition of the site at the time of the field assessments. It should be recognised that site conditions can change with time.

Lack of observational data on some species should also not necessarily be taken as an indication that a species is absent from the site or does not utilise it for some purpose at times.

5. RESULTS

5.1 HABITAT ASSESSMENT

The Permit area has a total extent of about 3.7 ha and consist of two main habitat types.

The western most section of the Permit area falls over a narrow, seasonal drainage line and contains a dense tall shrubland of various species over bracken and sedges on a sandy/clay loam. The natural vegetation is infested with blackberry (*Rubus ulmifolius*) making the entire area impenetrable. This section of the Permit area totals about 2.0 ha.

The eastern most section of the Permit area contains a woodland dominated by marri (*Corymbia calophylla*) (with occasional jarrah (*Eucalyptus marginata*) and karri (*E. diversicolor*) over grassland. The southern section of this area has been fenced from livestock and contains a shrubland/low shrubland. This section of the Permit area totals about 1.7 ha.

The white-bellied frog survey reported on here concentrated on the drainage line in the western section if the Permit area. The woodland habitat in the eastern section of the Permit area represents unsuitable habitat for white-bellied frogs.

The drainage line has a total length of about 1,000 metres within Lot 1002, with about 350 metres being inside the current Permit area. The drainage line extends another 160 metres into the adjoining Blackwood River National Park before joining Chapman Brook. The drainage line has previously been dammed, slightly upstream of the current Permit area (Figures 1 and 2).

At the time of the survey (October 2023 to January 2024) the drainage line did not appear to contain flowing water. In October sections of the ground within the drainage line were damp/waterlogged and contained some small pools of water. This was much less evident by January 2024. As previously mentioned, the entire drainage line is infested with blackberry and it was not possible to access most sections beyond the vegetation line.



Published information on the white bellied frog (DPAW 2015, Conroy 2001, Conroy & Brooks 2003) states that the species “Inhabit swampy flows along drainage depressions in an area of subdued topography (relief < 80m).....Breeding sites are typically associated with sandy soils, dense overstorey vegetation dominated by *Homalospermum firmum*, *Agonis linearifolia*, *Astartea fascicularis*, and a dense ground layer of rhizomatous vegetation, usually composed of *Pseudoloxocarya* sp., *Loxocarya* sp. and *Tetrarrhena laevis*”.

DWER state that the soil type and vegetation present along the drainage line is consistent with the habitat requirements of the species i.e. “mapped soil type (Treeton wet valley Phase. Map Unit 214ThTRvw) and vegetation structure (dense overstorey vegetation)” (DWER 2021).

DWER (2021) report a single, white-bellied frog record upstream of the current Permit area, though it is unclear when this record was made and if it was before or after the construction of the existing dam.

Example images of the fauna habitats present are provided in Table 2.

Table 2: Example images of the fauna habitats within the permit area

Fauna Habitat Description	Example Image
<p>Seasonal drainage line containing a tall shrubland of various species over bracken and sedges. The natural vegetation is infested with blackberry (<i>Rubus ulmifolius</i>).</p> <p>Area = ~2.0 ha (~54%)</p> <p>Superficially appears, at least in part, to represent potential white-bellied frog habitat.</p>	 <p>71°NE (M) • 50S 331146 6227401 ±4 m 11 Oct 2023, 12:53:04 pm</p> <p>354°N (M) • 50S 331182 6227490 ±4 m 06 Jan 2024, 11:22:16 am</p>
<p>Woodland dominated by marri (<i>Corymbia calophylla</i>) (with occasional jarrah (<i>Eucalyptus marginata</i>) and karri (<i>E. diversicolor</i>) over grassland. The southern section of this area has been fenced from livestock and contains a shrubland/low shrubland.</p> <p>Area = ~1.7 ha (~46%)</p> <p>Does not represent potential white-bellied frog habitat.</p>	 <p>100°E (M) • 50S 331488 6227685 ±3 m 06 Jan 2024, 12:34:47 pm</p> <p>79°E (M) • 50S 331698 6227662 ±7 m 06 Jan 2024, 12:06:05 pm</p>

5.2 WHITE BELLIED FROG SURVEY

No calls of the white bellied frog were identified from the three month long acoustic survey and during the three day time reconnaissance surveys.

Two frog species were recorded, these being:

- Motorbike Frog – *Litoria moorei*
- Clicking Froglet - *Crinia glauerti*

The calls of several species of birds and numerous insects were also recorded.

It should be noted that no frog calls at all were detected in the two recording locations positioned at the lower end of the drainage line (i.e. ARU 4605 and ARU 5284 - Figure 3) suggesting this section of the drainage line, at least at the time of the acoustic survey was unsuitable for frogs of any species to utilise, presumably because this lower section of the drainage line was too dry.

6. CONCLUSION

The fauna assessment within the survey area was primarily undertaken to determine the presence/absence of the white-bellied frog in the Permit area.

The western most section of the Permit area falls over a narrow, seasonal drainage line and contains a dense tall shrubland of various species over bracken and sedges on a sandy/clay loam. The natural vegetation is infested with blackberry (*Rubus ulmifolius*) making the entire area impenetrable. This section of the Permit area totals about 2.0 ha.

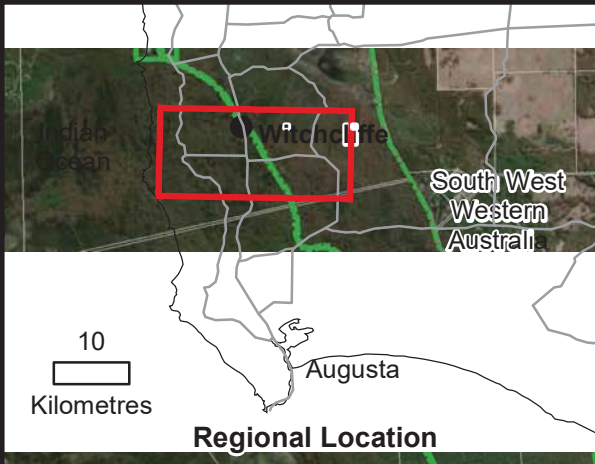
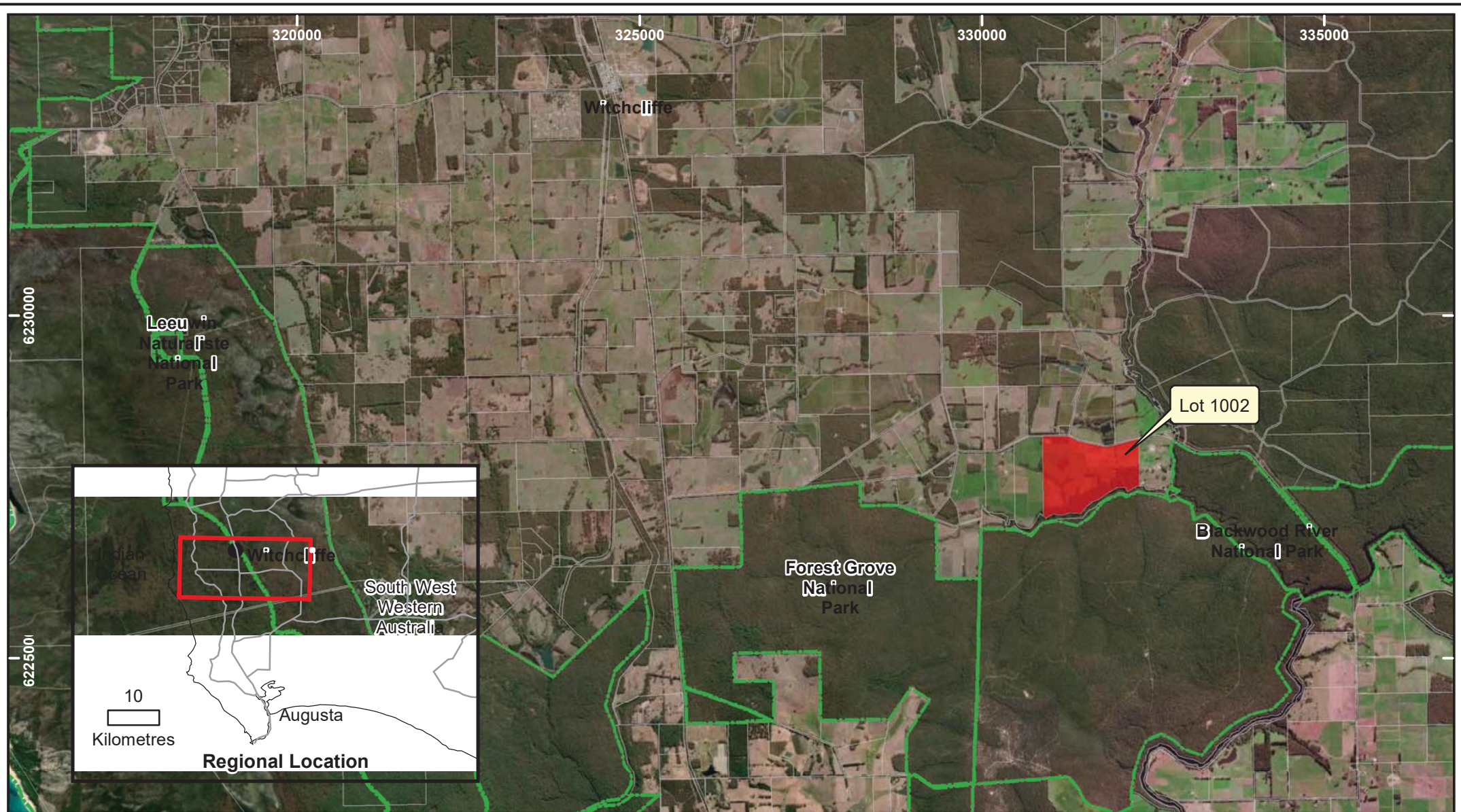
Superficially the soil and vegetation within the drainage line, at least in part appears to represent habitat suitable for white-bellied frogs. However, acoustic recordings made over a three-month period and several daytime reconnaissance surveys within the white-bellied frogs documented breeding season did not detect any calls or other evidence that could be attributed to the species.

The results suggest that at the time of the survey, white-bellied frogs were absent from the Permit area.

7. REFERENCES

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FIGURES



Legend

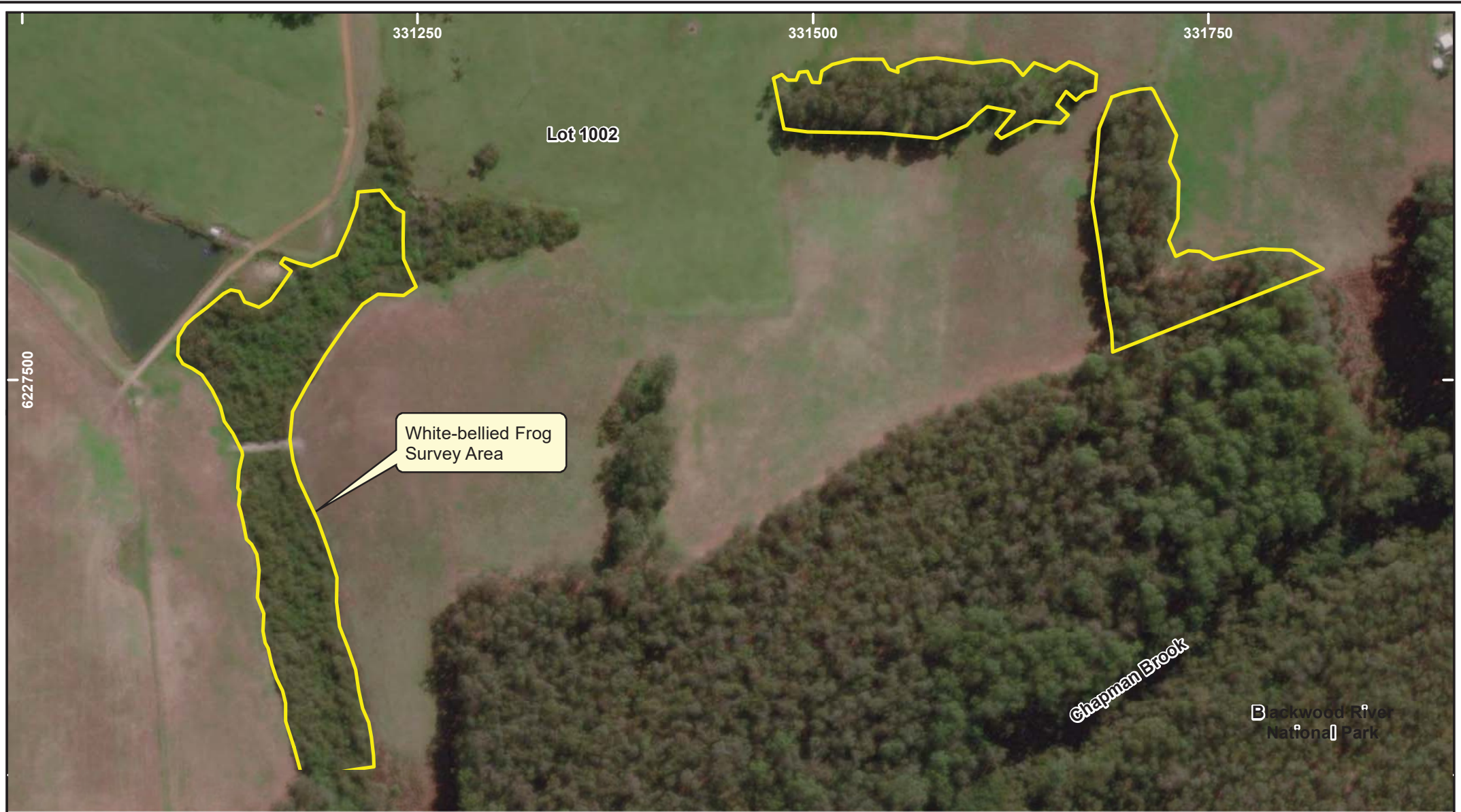
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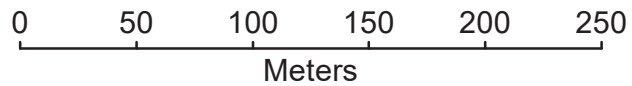
LOT 1002 WARNER GLEN ROAD
FOREST GROVE

**Survey Area
and
Surrounds**



Legend

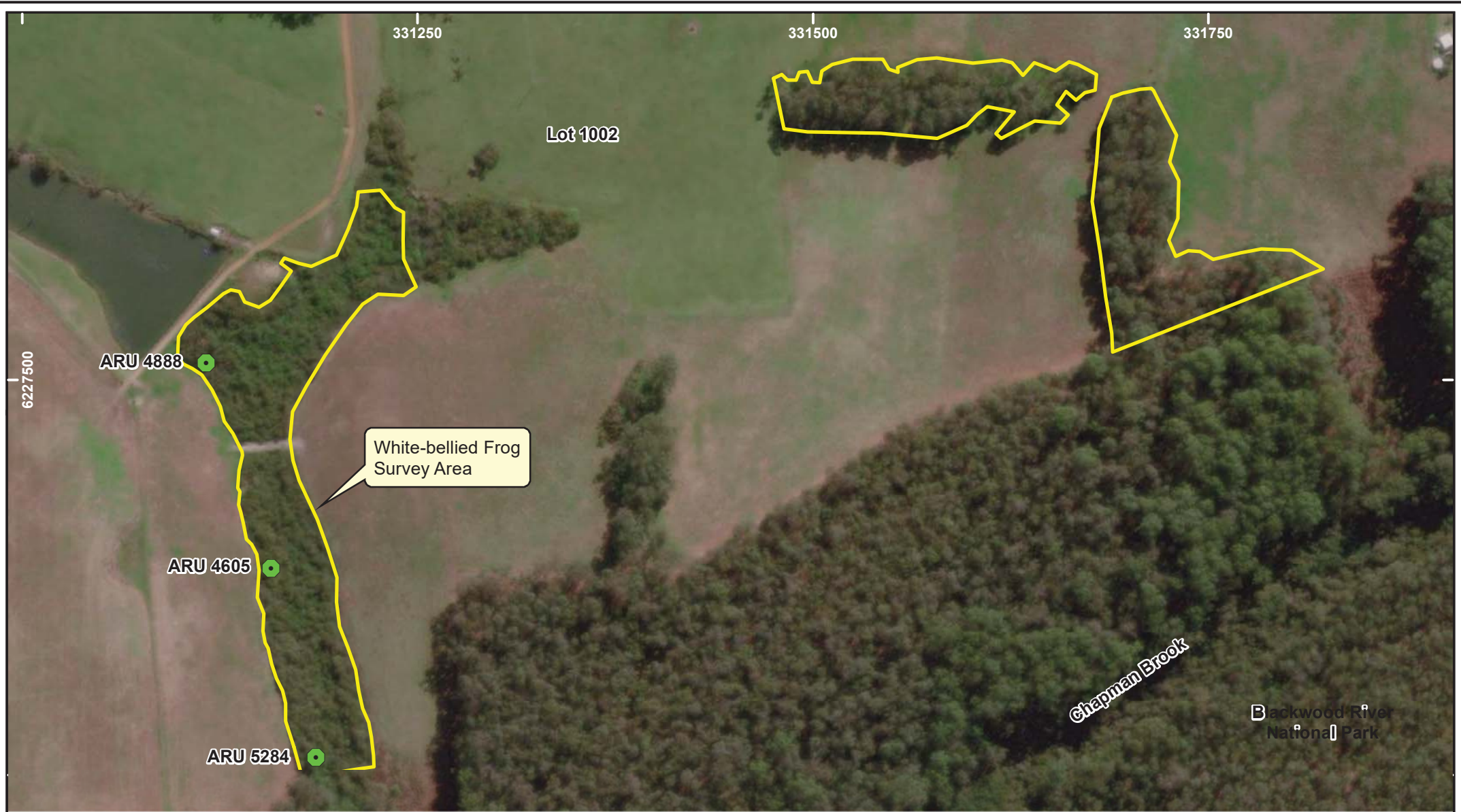
 CPS 9395/1 Boundary



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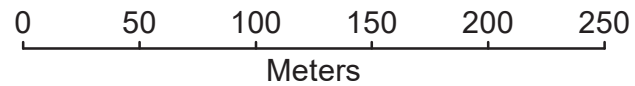
LOT 1002 WARNER GLEN ROAD
FOREST GROVE

**Survey Area
Aerial Photograph**



Legend

- ARU Locations
- CPS 9395/1 Boundary



Drawn: G Harewood
 Date: 09-Jan-24
 Scale: 1:3,250

LOT 1002 WARNER GLEN ROAD
 FOREST GROVE

Recording Locations

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The conclusions are based upon field data and the environmental monitoring and/or testing carried out over a limited period of time and are therefore merely indicative of the environmental condition of the site at the time of preparing the report. Also it should be recognised that site conditions, can change with time.

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