

Targeted Assessment for *Idiosoma* sp. for the Boolardy Airfield Upgrade.



Report by *Invertebrate Solutions Pty Ltd*
for CSIRO on behalf of Aurora
Environmental Pty Ltd

April 2025

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Invertebrate Solutions. (2025). Targeted Assessment for *Idiosoma* sp. for the Boolardy Airfield Upgrade. Unpublished report to CSIRO, April 2025.

Report Number 2025ISJ06_F01

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Frontispiece: Adult female of a Shield Backed Trapdoor spider (*Idiosoma* sp.).

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Executive Summary

The Square Kilometre Array Observatory (SKAO) is constructing a next generation radio telescope in the Murchison region of Western Australia. To support ongoing construction the existing Boolardy airfield (BAF) needs to be upgraded to allow larger planes and all weather access. The NVCP for the airstrip expansion (Figure 1) has been subject to (amongst others) the requirement by the Department of Water Environment Regulation (DWER) to conduct a targeted invertebrate fauna pre-clearance survey, specifically for the mygalomorph spider *Idiosoma* sp.

The NVCP and surrounding buffer area (survey area) was comprehensively searched between 1st and 3rd April 2025, Dr Timothy Moulds (Invertebrate Solutions). No burrows of *Idiosoma* sp., either active, or inactive were observed within the survey area.

1. Introduction

The Square Kilometre Array Observatory (SKAO) is constructing a next generation radio telescope in the Murchison region of Western Australia. To support ongoing construction the existing Boolardy airfield (BAF) needs to be upgraded to allow larger planes and all weather access. The native vegetation clearing permit (NVCP) and associated environmental approvals are being managed by Aurora Environmental Pty Ltd (Auora) on behalf of the CSIRO.

1.1 Scope of Works

The NVCP for the airstrip expansion (Figure 1) has been subject to (amongst others) the requirement by the Department of Water Environment Regulation (DWER) to conduct a targeted invertebrate fauna pre-clearance survey, specifically for the mygalomorph spider *Idiosoma* sp. CSIRO has requested Invertebrate Solutions undertake the following scope of works for the BAF Project, Murchison, Western Australia:

- A. Prior to undertaking any clearing authorised under this Permit, the permit holder shall engage a fauna specialist to undertake a fauna survey with the area (BAF clearing application area) to identify shield-back trapdoor spider (*Idiosoma* sp.), including burrows;
- B. Where active/potentially active burrows are identified under condition (A) of this permit within the area (BAF clearing application area) the permit holder shall:
 - (i) demarcate, and if possible, not clear within 50 metres of single active/potentially shield-backed trapdoor spider burrow (s);
 - (ii) demarcate, and if possible, not clear within 200 metres of matriarchal clusters of active/potentially actives shield-backed trapdoor spider burrow(s);

1.2 Project area

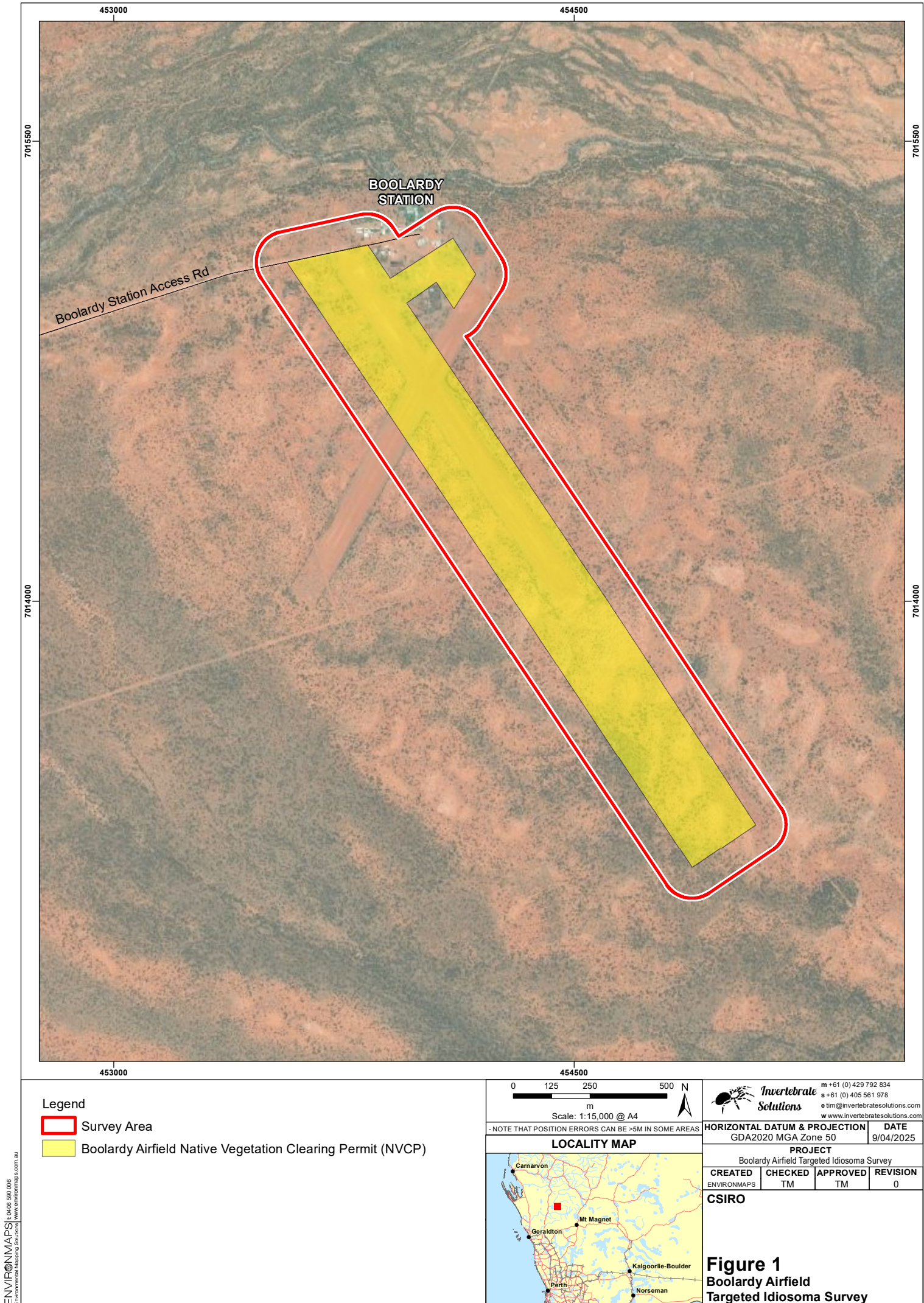
The Project area is the existing Boolardy station airfield and shown in in the southern Murchison Shire and is shown in Figure 1. The survey area encompasses the full extent of the native vegetation clearing permit area plus a buffer.

1.3 Survey Effort, Timing and Staff

Invertebrate Solutions completed the survey of the Shield Backed Trapdoor spiders and the targeted search of the Project Area between 1st and 3rd April 2025.

Field sampling for invertebrates was undertaken by an experienced ecologist and comprised of:

- Dr Timothy Moulds *BSc (Hons) Geol., PhD. Invert. Ecol.*



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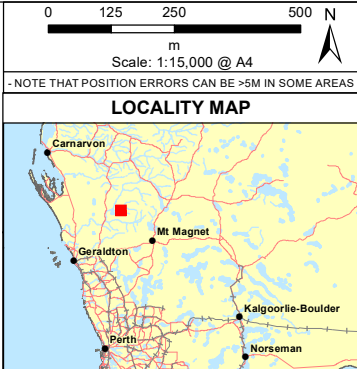
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- Legend
- Survey Area
 - Boolardy Airfield Native Vegetation Clearing Permit (NVCP)





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HORIZONTAL DATUM & PROJECTION		DATE	
GDA2020 MGA Zone 50		9/04/2025	
PROJECT			
Boolardy Airfield Targeted Idiosoma Survey			
CREATED	CHECKED	APPROVED	REVISION
ENVIRONMAPS	TM	TM	0

CSIRO

Figure 1
Boolardy Airfield
Targeted Idiosoma Survey

1.4 Report Limitations and Exclusions

This survey was limited to the written scope provided to the client by Invertebrate Solutions (20th March 2025) and in Section 1.1. This survey was limited to the extent of information made available to Invertebrate Solutions at the time of undertaking the work. Information not made available to this survey, or which subsequently becomes available may alter the conclusions made herein. The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. Invertebrate Solutions has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by Invertebrate Solutions described in this report (this section and throughout this report). Invertebrate Solutions disclaims liability arising from any of the assumptions being incorrect.

Invertebrate Solutions has prepared this report on the basis of information provided by CSIRO, Aurora Environmental Pty Ltd, SKAO and others (including Government authorities), which Invertebrate Solutions has not independently verified or checked beyond the agreed scope of work. Invertebrate Solutions does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

1.5 Field Sampling Limitations

Invertebrate Solutions notes the following field sampling limitations in the writing of this report and its subsequent conclusions:

- Field sampling for any site is never exhaustive and Invertebrate Solutions makes no warrant that further burrows of *Idiosoma* sp. remain to be documented within the defined survey area shown in Figure 1.

2. Methods

The desktop assessment and field survey program were undertaken with regard to Technical Guidance Sampling of short range endemic invertebrate fauna (EPA 2016).

2.1 Targeted Survey

Invertebrate Solutions staff undertook a targeted field assessment of the proposed clearing area including a grid search of all vegetated areas for the distinctive burrows of *Idiosoma*. Each burrow, or burrow cluster was recorded by GPS in GDA2020 datum and the number of burrows recorded.

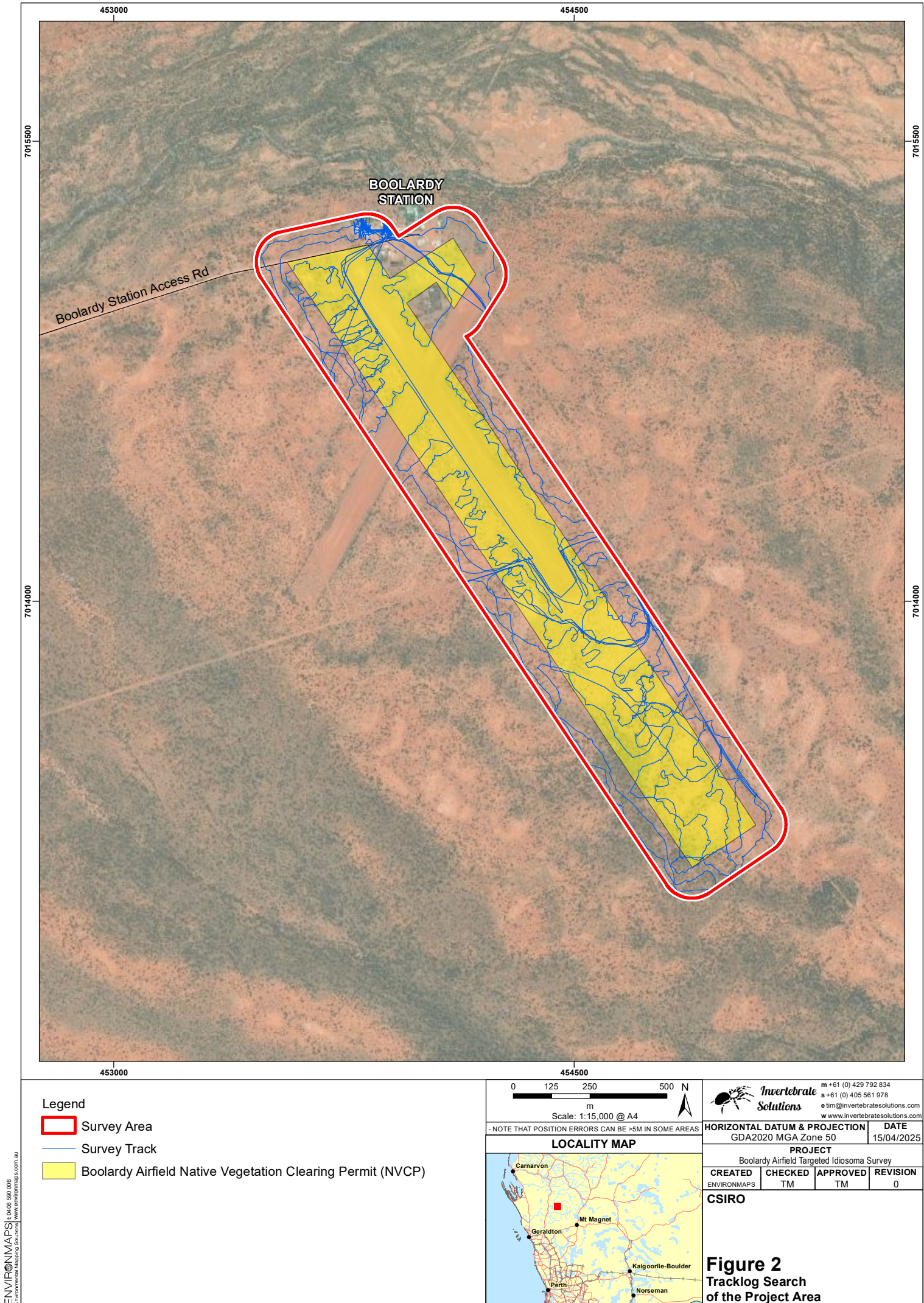
Idiosoma burrows are generally located beneath trees and shrubs and these areas will be thoroughly searched.

The survey program was undertaken with regard to the Technical Guidance Sampling of short range endemic invertebrate fauna (EPA 2016).

3. Results

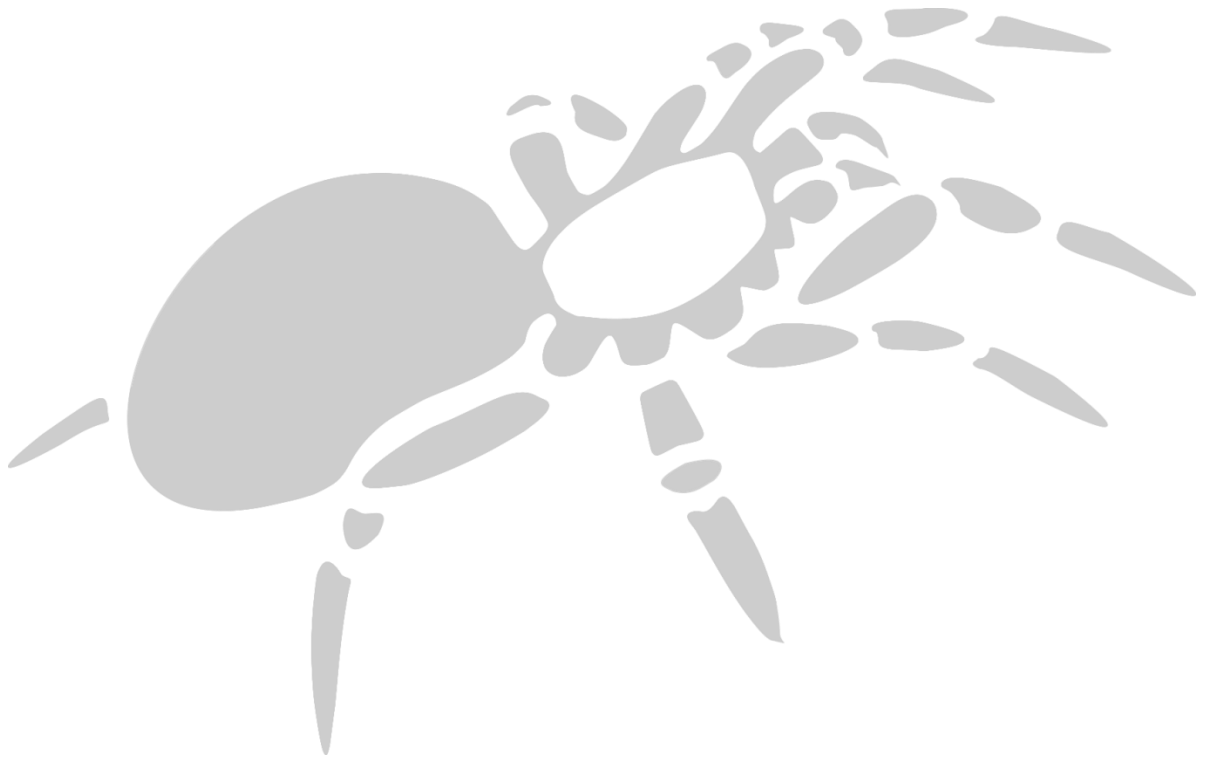
3.1 Targeted Search

The Project Area was comprehensively searched by Dr Timothy Moulds (Invertebrate Solutions) during the field survey. No burrows, either active, or inactive were observed within the survey area Figure 1. The tracklog of areas searched is shown in Figure 2.



4. Discussion and Conclusions

The results of the targeted survey for the Shield Backed trapdoor spider (*Idiosoma* sp.) of the BAF Project area located no *Idiosoma* burrows during the targeted search.



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