

Memorandum

To: Preston Consulting

From: Brian Morgan, Consultant Botanist

Date: 22/03/2023

Subject: Spring 2022 Flora of Conservation Significance Search

Introduction

A flora and vegetation survey was undertaken for the Atlas project between 2019 and 2022 which formed a component of the project proposal presented in the Atlas Project Environmental review document (Preston, 2022). The Atlas project flora and vegetation survey included large areas of *Banksia attenuata*, *Banksia menziesii* Low Woodlands (vegetation mapping unit 'BaBm') (Morgan, 2022). A total of 15 quadrats were recorded in 'BaBm' vegetation along with opportunistic walks. A likelihood-of-occurrence analysis found that seven Priority taxa were considered to be 'Moderate' to 'High' likelihood of occurrence in 'BaBm'. Four of those were subsequently recorded in 'BaBm' vegetation with what was described as a scattered distribution. On the basis of these findings, more intensive searching was not undertaken. However, some DBCA comments were made regarding the adequacy of searches for flora of conservation significance in the 'BaBm' vegetation unit.

Consequently Preston Consulting thought it would be appropriate to improve the coverage of searches in the Atlas 'BaBm' vegetation areas within the mining envelope by undertaking additional searches.

Methods

The Spring 2022 search for flora of conservation significance was undertaken on the 23rd and 24th of November, 2022.

The Spring 2022 search lines are shown in Figure 1. The aim of the survey was to add search coverage to areas of 'BaBm' vegetation where there were some gaps in the past search effort.

When any known Threatened or Priority flora were observed, the location coordinates (GDA94 datum) and the number of plants at that locality were recorded. If a plant species was of interest and was not known by the field botanists, a specimen was collected for subsequent identification.

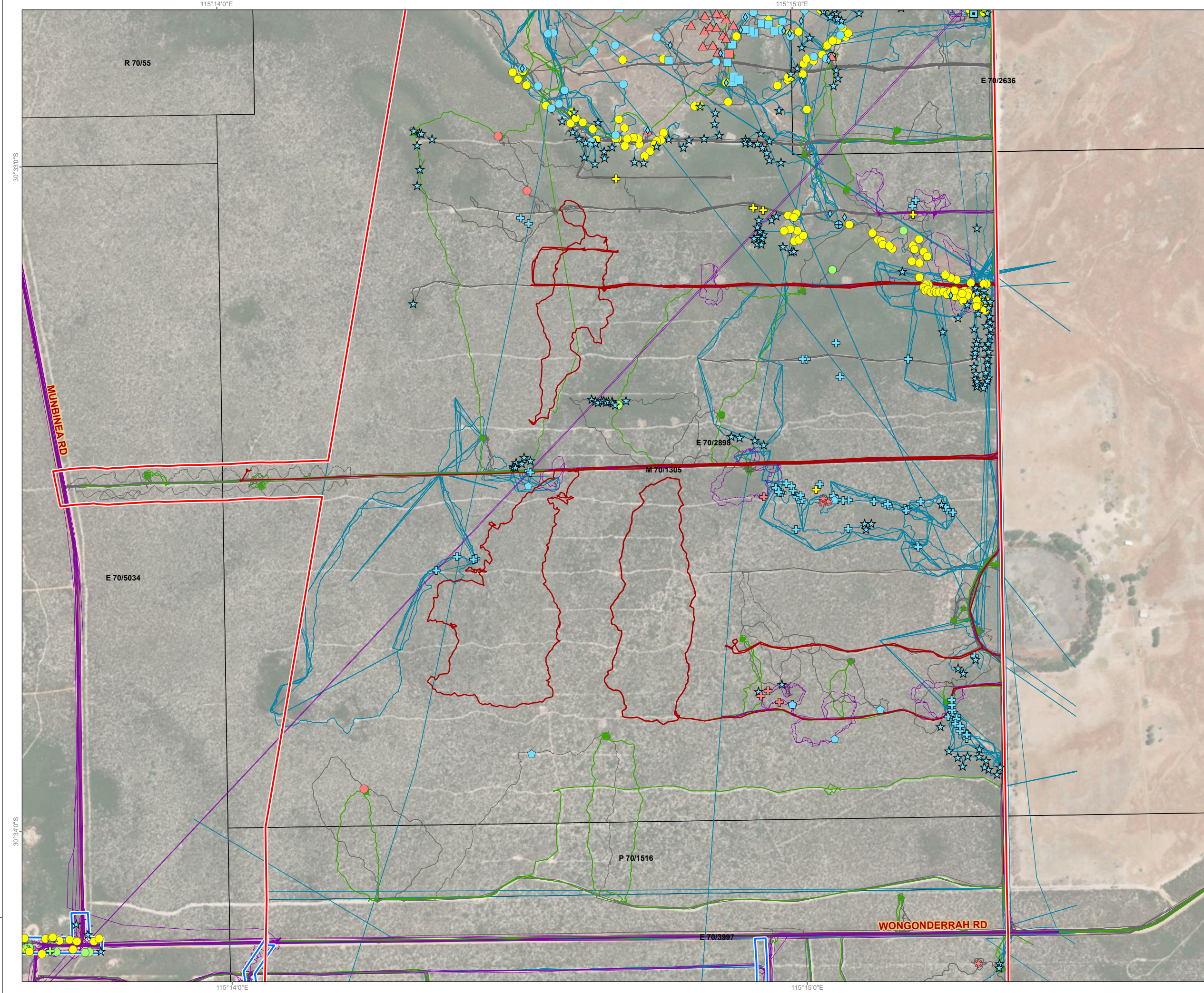
Results

Four Priority taxa were recorded during the survey: *Conospermum scaposum* (Priority 3) (Plate 1), *Hensmania stoniella* (Priority 3), *Schoenus griffinianus* (Priority 4) and *Thysanotus glaucus* (Priority 4) (Plate 2) (Figure 1, Table 1).

In addition, a *Jacksonia* sp. was also recorded and sampled (Plate 3). It had been previously recorded and collected south of Wongonderrah Rd, but those specimens were sterile and were determined to be most likely *Jacksonia floribunda* by the WA Herbarium Identification Service. The *Jacksonia* sp. shrubs were flowering at the time of the November 2022 survey and flowering material was collected. A specimen was again lodged with the WA Herbarium ID Service. While the specimen was considered to have some anomalous features, it was considered to be within the *Jacksonia floribunda* complex and was identified as *Jacksonia* aff. *floribunda* and noted as a population of taxonomic interest.

Table 1. Locations of flora of conservation significance and other flora taxa of interest recorded during the Spring 2022 survey

Taxa	Cons. Status	Numbers	Easting	Northing
<i>Conospermum scaposum</i>	Priority 3	1	331287	6617837
<i>Conospermum scaposum</i>	Priority 3	9	331301	6617850
<i>Conospermum scaposum</i>	Priority 3	2	331293	6617865
<i>Conospermum scaposum</i>	Priority 3	1	331509	6618836
<i>Conospermum scaposum</i>	Priority 3	2	331507	6618829
<i>Conospermum scaposum</i>	Priority 3	3	331499	6618820
<i>Conospermum scaposum</i>	Priority 3	40	331482	6618647
<i>Hensmania stoniella</i>	Priority 3	1	331615	6618615
<i>Schoenus griffinianus</i>	Priority 4	1	331192	6617659
<i>Schoenus griffinianus</i>	Priority 4	2	331270	6617803
<i>Schoenus griffinianus</i>	Priority 4	1	331275	6617807
<i>Schoenus griffinianus</i>	Priority 4	1	331258	6617811
<i>Thysanotus glaucus</i>	Priority 4	1	331511	6618013
<i>Thysanotus glaucus</i>	Priority 4	1	331523	6618011
<i>Thysanotus glaucus</i>	Priority 4	1	331521	6618006
<i>Thysanotus glaucus</i>	Priority 4	1	331477	6617981
<i>Thysanotus glaucus</i>	Priority 4	1	331487	6617981
<i>Thysanotus glaucus</i>	Priority 4	1	331270	6617803
<i>Thysanotus glaucus</i>	Priority 4	1	331283	6617804
<i>Thysanotus glaucus</i>	Priority 4	1	331249	6617806
<i>Thysanotus glaucus</i>	Priority 4	1	331257	6617808
<i>Thysanotus glaucus</i>	Priority 4	1	331310	6617936
<i>Jacksonia</i> aff. <i>floribunda</i>	Other	3	331495	6617663
<i>Jacksonia</i> aff. <i>floribunda</i>	Other	1	331493	6617652



Legend

Flora and Vegetation Study Areas

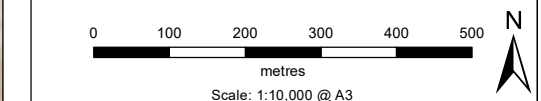
- Mine Envelope Study Area
- External Infrastructure Study Area
- Tenement
- 2022 November Track Log
- 2021 October Track Log
- 2021 June Track Logs
- 2020 Track Logs
- 2019 Track Logs

Priority Flora

- Priority 1: *Grevillea* sp. Cooljarloo (B.J. Keighery 28 B)
- + Priority 1: *Levenhookia preissii*
- + Priority 2: *Calectasia palustris*
- Priority 2: *Chordifex resemians*
- * Priority 2: *Lepyrodia curvescens*
- ★ Priority 2: *Schoenus badius*
- Priority 3: *Angianthus micropodioides*
- Priority 3: *Babingtonia urbana*
- + Priority 3: *Conospermum scaposum*
- ◆ Priority 3: *Desmocladus nodatus*
- ◇ Priority 3: *Eryngium pinnatifidum* subsp. *palustre* (G.J. Keighery 13459)
- ◇ Priority 3: *Hensmania stoniella*
- ★ Priority 3: *Isopogon panduratus* subsp. *palustris*
- ★ Priority 3: *Jacksonia carduacea*
- Priority 3: *Leucopogon* sp. *Yanchep* (M. Hislop 1986)
- Priority 3: *Schoenus pennisetis*
- + Priority 3: *Stylidium aceratum*
- Priority 3: *Stylidium hymenocraspedum*
- Priority 4: *Anigozanthos humilis* subsp. *chrysanthus*
- Priority 4: *Conostylis pauciflora* subsp. *euryrhypis*
- + Priority 4: *Schoenus griffinianus*
- ▲ Priority 4: *Stylidium longitubum*
- * Priority 4: *Thysanotus glaucus*

- NOTE THAT POSITION ERRORS CAN BE >5M IN SOME AREAS
 - TENURE SOURCED DMIRS - AERIAL PHOTOGRAPHY OPEN SOURCE

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CREATED BY	JOB	DATE	REVISION
ENVIRONMAPS	ATLASSPING22RFS	2/03/2023	0

Figure 1: Flora and conservation significance recorded during the Atlas survey

Figure 1: Tracks and significant flora recorded during the Atlas survey (1 of 2)

Acknowledgements

The GIS mapping was undertaken by Simon Crofts.

References

Morgan, B. R. (2022). Flora and vegetation survey for the Atlas Project. Report prepared for Image Resources.

Preston Consulting. (2022). Atlas Project Environmental Review Document. Prepared for Image Resources NL.

PLATES



Plate 1. *Conospermum scaposum*.



Plate 2. *Thysanotus glaucus*.



Plate 3. *Jacksonia* aff. *floribunda* shrub.