

Document Reference: EP23-073(01)—002 RAW

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6 October 2023

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Damian and Kirsty Forshaw
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Locked Bag 520
Broome WA 6725

Delivered by email to: nitadowns@outlook.com

Dear Damian and Kirsty

TARGETED FLORA AND FAUNA SURVEY – PROPOSED PIVOT IRRIGATION, NITA DOWNS STATION, EIGHTY MILE BEACH

1 BACKGROUND

Forshaw Pastoral Company Pty Ltd are proposing to undertake vegetation clearing within parts of Nita Downs Station to construct pivot irrigation systems. Specifically, eleven pivots are proposed to be installed within two areas of Nita Downs Station (hereafter referred to as the 'site'). The site extends over 935 hectares (ha) as shown in **Figure 1**.

Forshaw Pastoral Company Pty Ltd have submitted a clearing permit application to the Department of Water and Environmental Regulation (DWER) (reference number CPS 9686/1). DWER have requested additional information on flora within the site, stating that 'an appropriately timed flora and vegetation survey is required' for the site. DWER have advised that several priority flora species are known to occur in the local area, including:

- *Bonamia oblongifolia* (priority 3 (P3)¹)
- *Polymeria* sp. Broome (K.F. Kenneally 9759) (P3¹)
- *Seringia exastia* (threatened – critically endangered²)
- *Tephrosia andrewii* (P3¹)
- *Tephrosia pedleyi* (P3¹)
- *Terminalia kumpaja* (P3¹)
- *Tribulopsis marliesiae* (P3¹).

¹ On DBCA's Priority Flora List

² Listed under *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Note DWER's request for additional information states *Seringia exastia* is listed as threatened in Western Australia, which is incorrect. *S. exastia* is listed under the EPBC Act only.

2 SCOPE OF WORK

Emerge were engaged by Forshaw Pastoral Company Pty Ltd to undertake a targeted flora survey within the site to meet DWER's above request. The survey was undertaken in accordance with DWER's specifications outlined in the request for further information and the Environmental Protection Authority (EPA) *Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA 2016).

As part of this scope of work, the following tasks were undertaken:

- Desktop review of existing information on threatened and priority flora species which may occur, with particular focus on the targeted species.
- Field survey(s) to search for threatened and priority flora.
- Mapping of threatened and priority flora (if present).
- Documentation of the desktop review, methods, results and discussion.

3 METHODS

3.1 Desktop review

A search of DBCA's *Threatened and Priority Flora Database* and *WA Herbarium Database* was conducted using a 100 km radius of the site (ref. 74-0823FL).

3.2 Field survey

A botanist from EmERGE visited the site on 5 and 6 September 2023 to conduct the survey.

During the survey the site was traversed on foot and targeted searches were conducted for threatened and priority flora, with particular focus on species referred to by DWER (refer **Section 1**). Transects for flora were traversed within areas of suitable habitat and a track log was recorded using a hand-held GPS receiver (± 5 m accuracy). Threatened and priority flora occurrences were recorded using a hand-held GPS receiver (± 5 m accuracy).

Where plants were recorded that were considered likely to be a threatened species but unable to be confirmed, notes and photographs were collected. Where plants were considered to potentially represent a priority flora species, or the identity was unknown, a specimen was collected which was subsequently dried and pressed.

3.3 Data analysis and mapping

Plant specimens collected during the field survey were identified through comparison with named material and through the use of taxonomic keys and named in accordance with requirements of the Western Australian Herbarium (2023). Where they could not be identified, specimens were submitted to the WA Herbarium for identification by taxonomic experts.

Threatened and priority flora recorded in the site were mapped on aerial imagery.

3.4 Limitations

The survey was undertaken by an experienced botanist³ with more than 13 years experience undertaking flora and vegetation surveys (flora licence number FB62000614).

The site was surveyed adequately and all parts of the site could be accessed as required. The survey timing was considered appropriate as many plants were flowering.

³ Who meets DWER's definition of a botanist.

A handheld Garmin GPS receiver was used to record the location of track logs and priority flora. A handheld GPS receiver generally has a precision of ± 5 metres (m). Therefore, the locations of track log and priority flora shown in **Figure 2** may have some spatial deviation.

4 RESULTS AND DISCUSSION

The DBCA database search results indicate that one priority 1 (P1), two priority 2 (P2) and 11 P3 flora species occur within 100 km of the site. This includes the six priority flora species referred to in DWER's request for additional information. No DBCA records of *Seringia exastia* occur within 100 km of the site, likely because this species is not currently listed as threatened in Western Australia.

The site was traversed on foot and track logs are shown in **Figure 2**. The northern portion of the site supports a tall *Acacia* spp. shrubland over hummock grassland *Triodia* spp. The southern portion supports an open woodland of *Corymbia* spp. and *Owenia reticulata* over an open hummock grassland *Triodia* spp.

No threatened flora species were recorded in the site. Multiple individuals within the *Seringia* genus were recorded and specimens collected. Taxonomic identification by Emerge and confirmation from the Western Australian Herbarium⁴ showed that the plants are *Seringia nephrosperma*; a common species similar to *S. exastia*. Taxonomic research on the *Seringia* genus indicates that rather than being separate species, *S. exastia*, *S. katatona* and *S. nephrosperma* may actually be different phenotypes of the same species (pers. comms. Carolyn Wilkins, *Seringia* taxonomic expert). As a result *S. exastia* was repealed from the State threatened flora list (under the *Biodiversity Conservation Act 2016*) (DBCA 2022). However, it is still listed as threatened (critically endangered) under the EPBC Act.

One priority flora species, *Tribulopsis marliesiae* (P3) was recorded within the site⁴. A single sterile (non-flowering) individual of this species was recorded in the southern portion of the site, as shown in **Figure 2**. *T. marliesiae* is a slender perennial herb which occurs on red sands in heath and low pindan. It is known from five widely disjunct locations, but probably occurs in intervening locations as well (Barrett and Barrett 2015). It is likely that additional *T. marliesiae* individuals occur within the areas surrounding the site, due to presence of suitable habitat.

Summary and closing

We trust that this letter provides sufficient details on the flora within the site. Should you have any questions regarding the content of this letter, please do not hesitate to contact the undersigned.

Yours sincerely
Emerge Associates



Rachel Weber

SENIOR ENVIRONMENTAL CONSULTANT, TEAM LEADER – ECOLOGY

Encl: Figure 1: Site Location
Figure 2: Track Log and Priority Flora

⁴ Species confirmation provided by WA Herbarium (ACC/10407/E)

References

- Barrett, R. L. and Barrett, M. D. 2015, *Twenty-seven new species of vascular plants from Western Australia*, *Nuytsia*, 26: 21-87.
- Department of Biodiversity, Conservation and Attractions, (DBCA) 2022, *Summary of amendments to the Threatened and Extinct flora lists as of 30th September 2022*, Perth.
- Environmental Protection Authority (EPA) 2016, *Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment*, Perth.
- Western Australian Herbarium 2023, *Florabase*, Department of Biodiversity, Conservation and Attractions (DBCA), <<https://florabase.dpaw.wa.gov.au/>>.

Figures



Figure 1: Site Location

Figure 2: Track Log and Priority Flora

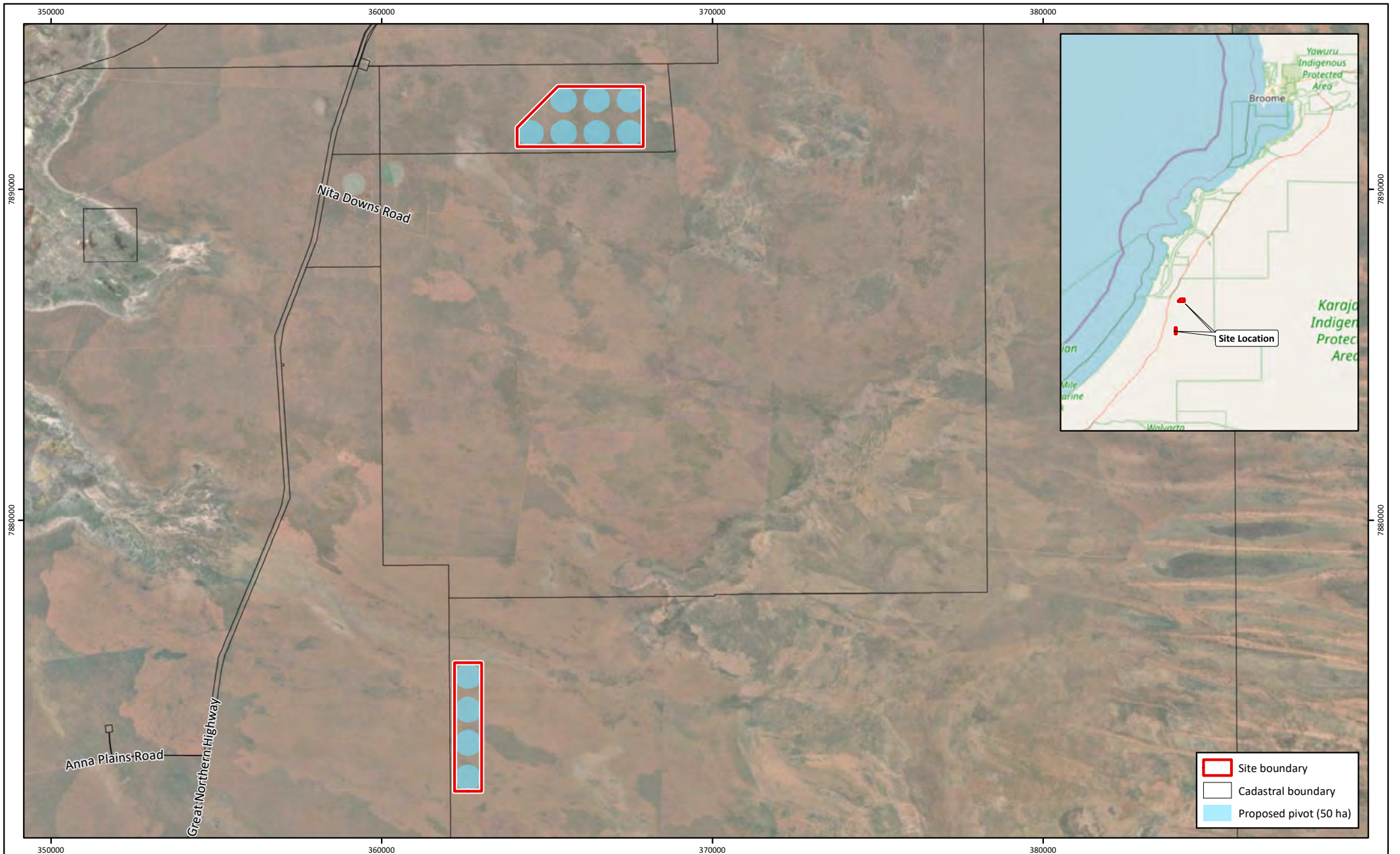


Figure 1: Site Location

Project: Targeted Flora Survey
Nita Downs Station
Client: Forshaw Pastoral Company

Plan Number:
EP23-073(02)--F05
Drawn: GAR
Date: 06/10/2023
Checked: RAW
Approved: TAA
Date: 06/10/2023



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Kilometers
Scale: 1:150,000@A4
GDA2020 MGA Zone 51



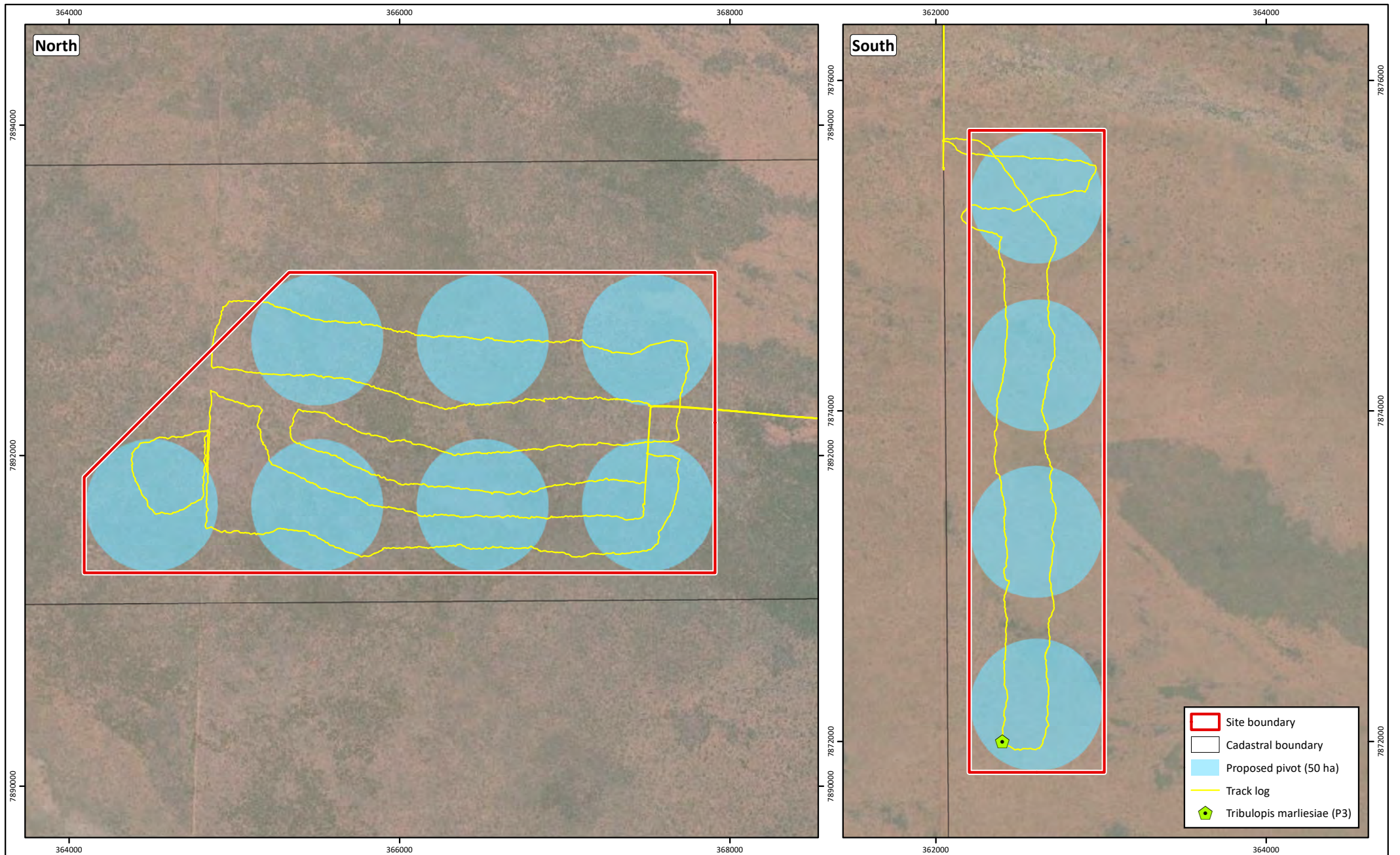


Figure 2: Track Log and Priority Flora

Project: Targeted Flora Survey
Nita Downs Station

Client: Forshaw Pastoral Company

Plan Number:
EP23-073(02)--F06

Drawn: GAR
Date: 06/10/2023

Checked: RAW
Approved: TAA
Date: 06/10/2023



0 50 100
Kilometers

Scale: 1:30,000@A4
GDA2020 MGA Zone 51

