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Reference: P-116633 / ADV-AU-00259

16 December 2021

Department of Mines, Industry Regulation and Safety
100 Plain Street
East Perth WA 6004

Attn: Richard Smetana, Native Vegetation Clearing Branch
Via Email: Richard.smetana@dmirs.wa.gov.au

Dear Richard

Re: Clearing of 0.0052 ha on L59/178 for Installation of Solar Panels to Support an Existing Telecommunications Tower

Background

Goldnet Pty Ltd (Goldnet) propose to install a series of solar panels to provide additional off-grid power supply to a permanent existing telecommunications tower which was installed on L59/178 in 2020.

The solar panels will require 0.0052 ha of clearing adjacent to the existing telecommunications tower, within a Purpose Permit area of 0.03 ha.

Flora surveys have identified a conservation significant flora species in the area, *Acacia imitans*, which is protected under the state *Biodiversity Conservation Act 2016* (BC Act) and federal *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Under the *Environmental Protection Act 1986* (EP Act) a 50 m buffer around this species is considered to be an Environmentally Sensitive Area (ESA), and any clearing requires a Native Vegetation Clearing Permit (NVCP).

A Threatened Flora Authorisation will be applied for from the Department of Biodiversity, Conservation and Attractions (DBCA) and a Mining Proposal for Small Mining Operations will be submitted to the Department of Mining, Industry Regulation and Safety (DMIRS) for approval prior to commencing the installation.

Location, Access and Tenure

The Mt Singleton Communications Site Project is located approximately 43 km southwest of Paynes Find in Western Australia on L59/178 which is 0.423 ha. It is situated within the Ningham Station pastoral lease, Yalgoo Shire and Land District of Ningham. The location of the proposal is shown in **Figure 1.**

Access to the tower is via designated pre-existing Pastoral access tracks which are accessed by many users including, but not limited to, the Ningham Pastoral Station Manager, Telstra, Australian Satellite Services, and the general public. Mt Singleton sits at an altitude of approximately 673 m above sea level and attracts the public due to its position as a lookout to Lake Moore and a public picnic area which is located to the south of L59/178.

The proposed panel layout and purpose permit boundary is shown in **Figure 2**.

Conservation Significant Flora – *Acacia imitans*

A targeted flora assessment of L59/178 and a surrounding 'flora census area' was completed by Woodgis in July 2020. The complete report is provided as Appendix A. An additional targeted flora survey was undertaken in November 2021 by Native Vegetation Solutions (NVS) to confirm the locations of *Acacia imitans* plants in the immediate area of the proposed solar panel bank extension and fence. The full report is provided in Appendix B.

Threatened and Priority Ecological Communities

The proposal is not located within any known Threatened Ecological Communities (TECs) or Priority Ecological Communities (PECs) (Woodgis 2020).

Conservation Significant Flora

A field survey of the wider area recorded two species protected under the EPBC Act and BC Act*; Acacia imitans* and *Acacia unguicula*, and four Priority 1 species; *Allocasuarina tessellata, Grevillea scabrida, Micromyrtus mucronulata and Micromyrtus ninghanensis* (Woodgis 2020). These species are listed and described in **Table 1,** and their distribution in the clearing area shown on **Figure 2.**

Table 1 Conservation Significant Flora Recorded in Field Surveys

Species (Conservation Status)	Population		Description	Image (Source: WAH, 1998)
	Clearing Area	Census Area		
Acacia imitans (BC Act –Critically Endangered *EPBC Act* – Endangered)	2	41	Low, dense, spreading, intricate & prickly shrub, 0.2-1 m high, to 2 m wide. Fl. yellow, Aug to Sep. Rocky red loam. Rocky hills.	
Acacia unguicula (BC Act – Critically Endangered *EPBC Act* – Critically Endangered)	0	1	Erect, open, pungent shrub, 0.75-2(-3) m high. Fl. yellow, Aug to Sep. Rocky clay or loam. Upper slopes and summit of mountain.	
Allocasuarina tessellata (DBCA – Priority 1)	0	14	Dioecious shrub or tree, 3-5 m high. Loam, sand. Greenstone and dolerite boulders.	
Grevillea scabrida (DBCA – Priority 1)	0	1	Densely and irregularly branched shrub, 0.6-1.5 m high. Fl. green-white/green-yellow/white, Jul. Red clay loam, stony loam.	
Micromyrtus mucronulata (DBCA – Priority 1)	0	32	Not available	Not available
Micromyrtus ninghanensis (DBCA – Priority 1)	0	37	Low and spreading shrub, to 0.4 m high. Fl. white, Sep to Oct. Reddish or brown clay, greenstone, granite. Hills.	Not available

Proposed Land Clearing

The proposed vegetation clearing is a total of 0.0052 ha on the boundary of an already cleared area as shown on **Figure 2**. The purpose of the clearing is to allow for the installation of additional solar panels to provide additional power supply to an existing telecommunications tower and a 63.1 m security fence to protect the infrastructure from the public. The Purpose Permit Envelope is 0.03 ha and is based on the proposed fence with a 0.5 m buffer. No threatened flora, *Acacia imitans* or *Acacia unguicula,* are located within the proposed clearing area.

Assessment of Clearing Principles

Clearing applications are assessed against 10 principles as outlined in Schedule 5 of the EP Act. These principles aim to ensure that all potential impacts resulting from the removal of native vegetation can be assessed in an integrated way and applied to all lands throughout Western Australia. The principles address the four main environmental areas of biodiversity significance, land degradation, conservation estate and ground and surface water quality. Information regarding the potential impact of clearing for mining activities on each of these principles for the Project area is provided in **Table 2.**

Table 2: Native Vegetation Clearing Principles

Clearing Principle	Assessment
Biodiversity Significance	
1. Native vegetation should not be cleared if it comprises a high level of biological diversity.	▪ The vegetation in the wider area supports a range of rare and Priority flora, with six conservation significant flora species recorded during a targeted flora survey (Woodgis 2020): – *Aacia imitans* (BC Act threatened Critically Endangered; EPBC Act Endangered). – *Acacia unguicula* (BC Act threatened Critically Endangered; EPBC Act Critically Endangered). – *Allocasuarina tessellata* (Priority 1). – *Grevillea scabrida* (Priority 1). – *Micromyrtus mucronulata* (Priority 1). – *Micromyrtus ninghanensis* (Priority 1). ▪ The locations of these species in close proximity to the proposal are shown on **Figure 2.** ▪ The proposed clearing is a small subset of the surveyed area, totaling 0.0052 ha (**Figure 2**). ▪ Flora survey conducted by WoodGIS in 2020 identified one conservation significant species, *Acacia imitans*, twice in the proposed clearing area (Appendix A). – One seedling was in a cleared area used as a road. – One plant was on the edge of some previous clearing. ▪ A second flora survey targeting the locations of *Acacia imitans* and *Acacia unguicula* identified no plants within the proposed clearing area (Appendix B). ▪ A Conservation Significant Flora Management Procedure has been developed and submitted with the Mining Proposal for Small Mining Operations. This has been provided as Appendix C.
2. Native vegetation should not be cleared if it comprises the whole or part of, or is necessary for the	▪ The area to be cleared is 0.0052 ha and will be a minor extension to an existing cleared area. ▪ The area is located at the top of Mt Singleton, where there is a small amount of disturbance for telecommunications towers, access tracks and public viewing

Clearing Principle	Assessment
Biodiversity Significance	
maintenance of, a significant habitat for fauna indigenous to Western Australia.	area/picnic spot, however it is overall an extensively uncleared landscape (Figure 1; Figure 2). ▪ There are no significant habitat features (no logs, trees, hollows, caves, rocks, or rocky outcrops) in the 0.0052 ha to be cleared (photographs in Appendix A). ▪ The area is not considered to be whole or part of or necessary for maintenance of significant habitat for Western Australian fauna. ▪ A Conservation Significant Flora Management Procedure has been developed and submitted with the Mining Proposal for Small Mining Operations, which is provided as Appendix C.
3. Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.	▪ Two *Acacia imitans* plants were recorded in the proposed clearing area during targeted surveys (Woodgis 2020) as shown on Figure 2. ▪ One plant, a seedling, was recorded in a completely cleared area which was open to the public as an access track, while the other was on the edge of the existing clearing in stockpiled vegetation. ▪ Neither plant was able to be located in recent searches (S. Morgan, pers. comm.), and may have succumbed to vehicle impacts, being located on a track open to the public. ▪ Survey by NVS in November 2021 confirmed that no *Acacia imitans* plants are within the proposed clearing area. ▪ 43 *Acacia imitans* were recorded in the wider area during the Targeted Flora Survey (Woodgis 2020). ▪ The 0.0052 ha of vegetation proposed to be cleared is not considered necessary of the continued existence of *Acacia imitans.*
4. Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a TEC.	The vegetation is not part of a TEC or PEC (Appendix A).
5. Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.	Vegetation of the area is not considered to be remnant, with limited clearing in a vastly uncleared environment (Figure 1).
6. Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.	The native vegetation is at the summit of Mt Singleton, and not associated with a watercourse or wetland.
Land Degradation	
7. Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.	The proposed area of clearing is considered minimal at 0.0052 ha. The proposed vegetation clearing, and exploration activity is not expected to cause any appreciable land degradation: **Waterlogging:** Unlikely - The proposal is small, in an arid area and located at the top of Mt Singleton on stony soils. **Acidification**: Unlikely - The area is small and located in an area of low ASS risk (CSIRO 2021). **Salinization**: Unlikely – The clearing area is small and located high in the landscape in a region which is predominantly native vegetation (Figure 2).

Clearing Principle	Assessment
Biodiversity Significance	
	Deep subsoil compaction: Possible - The infrastructure is permanent. Rehabilitation will include shallow ripping to relieve compaction. **Erosion**: Unlikely – The area is small and bordered by vegetation, there are no surface water features in the proposed clearing areas and mean annual rainfall is low at 285mm (BoM 2021). **Dieback**: Unlikely - Dieback is unlikely to spread due to the low rainfall of the area (<400 mm). Vehicle hygiene practices will be implemented to prevent introduction and spread of dieback (Appendix C). **Weeds**: Possible - Vehicle hygiene practices will be implemented to prevent introduction and spread of weeds (Appendix C).
Conservation Estate	
8. Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.	▪ The clearing area is not located in, or adjacent to any conservation estate. ▪ Due to the presence of *Acacia imitans* listed as Critically Endangered under the BC Act, the whole tenement is considered an ESA under the EP Act once 50 m buffers are applied to all plants. ▪ Another ESA also falls across the southwest corner of the tenement (Figure 2). ▪ The clearing is unlikely to have an impact on the environmental values of the area as: – The extent of the clearing is small at 0.0052 ha. – The area has experienced previous disturbance. – Operations will be completed in accordance with a Conservation Significance Flora Management Procedure (Appendix C).
Ground and Surface Water Quality	
9. Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.	▪ Surface Water: – There are no surface water receptors that may be impacted by the proposal. ▪ Groundwater: – Clearing of the small area of vegetation is unlikely to have an impact on the quality of groundwater. – There are no groundwater dependent vegetation units within the area.
10. Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding.	▪ The proposed clearing is unlikely to cause or exacerbate the incidence of flooding in the area due to: – The small scale of the clearing (0.0052 ha). – The natural vegetation of the surrounding area. – No alterations will be made to the surface water drainage system of the area.

References

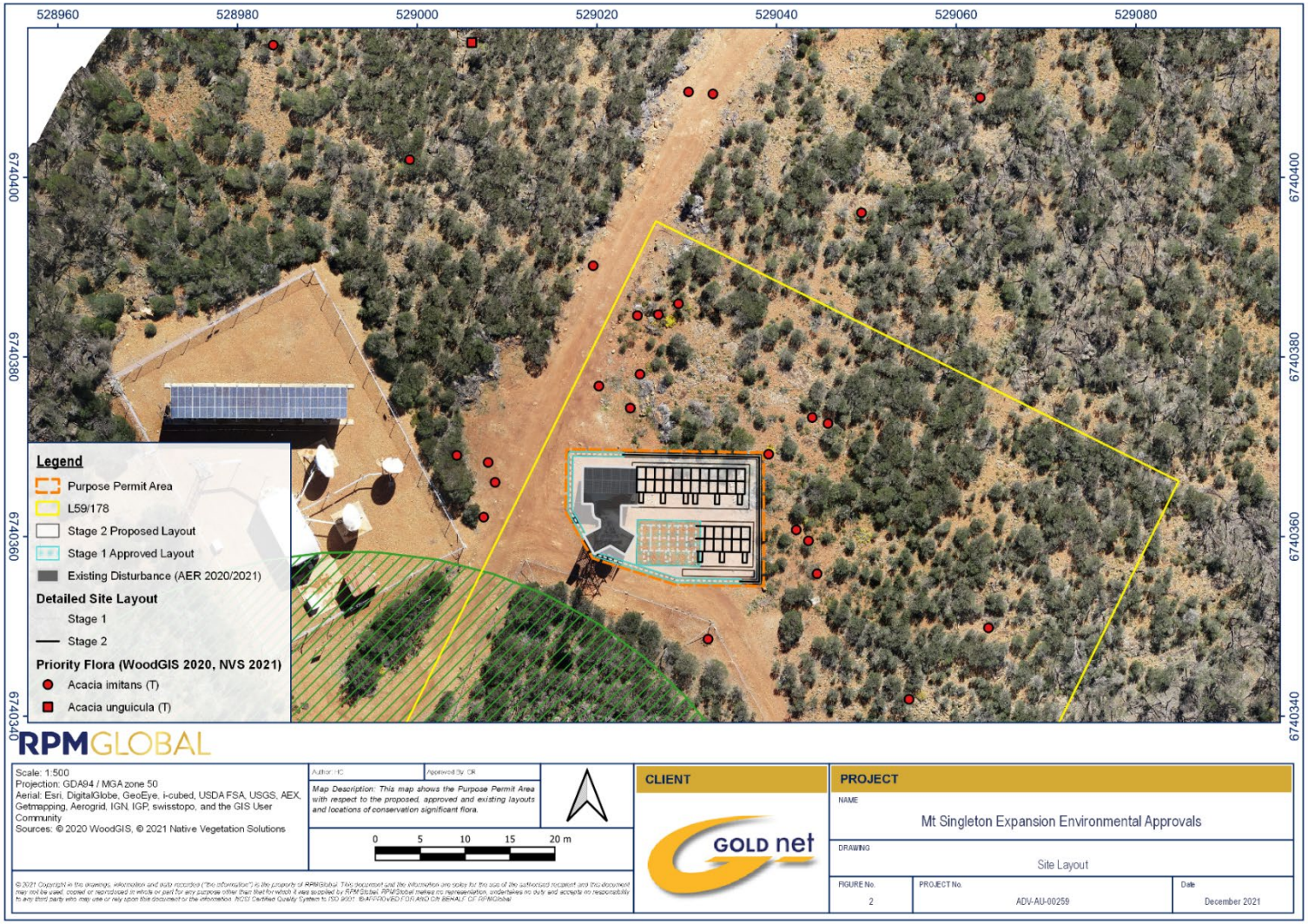
- Bureua of Meteorology (BoM) (2021). *Climate Statistics for Australian Locations: Paynes* Find. Available: http://www.bom.gov.au/climate/averages/tables/cw_007139.shtml. Accessed on: 29/09/2021.
- CSIRO (2021). *Acid Sulphate Soils Map Australia*. Available: https://www.asris.csiro.au/#. Accessed: 22 September 2021.
- Native Vegetation Solutions (NVS). *Targeted Threatened Flora Survey of the Mount Singleton Project Area – November 2021*. An unpublished report prepared for GoldNet Pty Ltd
- Woodgis. (2020). *Mount SingletonTargeted Flora Assessment*. An unpublished report prepared for GoldNet Pty Ltd

Yours Sincerely,

Craig Roberts
Principal Environmental Advisor
RPM Advisory Services Pty Ltd

Figure 1: Location Plan

Figure 2: Site Layout, Purpose Permit Area, and *Acacia imitans* Locations



Appendix A. Targeted Flora Survey (WoodGIS, 2020)

MOUNT SINGLETON
TARGETED FLORA SURVEY

FINAL

05 August 2020

PREPARED FOR

PREPARED BY

DISCLAIMER

This document was prepared in accordance with the scope of services set out in the contract, or as otherwise agreed, between Woodgis and the client, in a professional manner and in accordance with generally accepted practices, using the skill and care ordinarily exercised by reputable environmental consultants under similar circumstances. No other warranty, expressed or implied, is made, and Woodgis is not responsible for the application of its recommended strategies.

Any discussions regarding government legislation and policy are intended to provide context for recommendations and are for guidance only. They should not be relied upon to address every aspect of the relevant legislation or policy. Clients are advised to consult the actual legislation and seek legal advice, where and when necessary.

All of the information, interpretations, conclusions and recommendations included in this report were based on the site characteristics, and information available to Woodgis, at the time. Woodgis makes no claims as to the applicability or appropriateness of this report to any entities other than the client that commissioned this report, or in circumstances or at locations other than that specified in the contract. Any third parties that rely on or uses this document do so entirely at their own risk and Woodgis denies all liability in tort, contract or otherwise for any loss, damage or injury of any kind whatsoever (whether in negligence or otherwise) that may be suffered as a consequence. Instead, Woodgis can be contacted to provide services or advice specifically related to their needs.

DOCUMENT STATUS

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	Draft A – 28/07/2020
Other Related Documents:	-

RECOMMENDED REFERENCE

The recommended reference for this document is:

> Woodgis (2020) *Mount Singleton Targeted Flora Survey*, unpublished report by Woodgis Environmental Assessment and Management for GoldNet.

ACRONYMS AND ABBREVIATIONS

The following acronyms are used in this report for succinctness:

AHD	Australian Height Datum (height above mean sea level)
DBCA	(WA) Department of Biodiversity, Conservation and Attractions
DMIRS	Department of Mines, Industry Regulation and Safety
ha	hectares
km	kilometres
m	metres
Mt	Mount
PEC	Priority Ecological Community
TEC	Threatened Ecological Community
WA	Western Australia/n

CONFIDENTIALITY

The conditions for supply of datasets by the Department of Environment and Conservation, for Threatened and Priority Ecological Communities, and Rare Flora are similar and included:

- The data supplied may not be supplied to other organisations, nor be used for any purpose other than for the project for which they have been provided, without the prior written consent of the Director General, Department of Environment and Conservation; and
- Specific locality information for Declared Rare Flora is regarded as confidential, and should be treated as such by receiving organisations. Specific locality information for Threatened Flora (Declared Rare Flora – Extant) may not be used in public reports without the written permission of the Director General, Department of Environment and Conservation.

EXECUTIVE SUMMARY

This report provides the results of a targeted flora survey to facilitate the construction of a telecommunications tower (including the antenna/tower, solar panels and fencing) on the summit of Mount Singleton by GoldNet.

Mount Singleton peaks at 679 m AHD, more than 200 m above its surrounds. Mount Singleton is located on Ninghan Station in the Shire of Yalgoo, approximately:

- 300 km northeast of Perth and 270 km east-southeast of Geraldton;
- 100 km northeast of Wubin and 40 km west-southwest of Paynes Find;
- 30 km south of Karara Rangeland Park and 80 km northwest of Karroun Hill Nature Reserve; and
- 5 km south of Ninghan Station Homestead.

The targeted flora survey identified two threatened species (*Acacia imitans* T and *Acacia unguicula* T) and four priority species (*Allocasuarina tessellata* P1, *Grevillea scabrida* P1, *Micromyrtus mucronulata* P1 and *Micromyrtus ninghanensis* P1) in the immediate vicinity.

The proposal was reconfigured in view of the survey results. The finalised proposal is for an 18 metre high free-standing tower and solar panels with footings in an area of approximately 6 metres x 6 metres, and associated fencing approximately 11 metres long, in a previously cleared area.

This proposal requires **no** clearing of native vegetation, or threatened or priority flora. Whilst the finalised proposal will **not** require clearing of native flora, it will be in close proximity to threatened plants, including one *Acacia imitans* T seedling in a previously cleared area.

In addition to obtaining any required approvals, it is recommended that:

- GoldNet obtain Threatened Flora Authorisation for inadvertent or accidental impact to Threatened Flora, given:
    - *Acacia imitans* T is in the immediate vicinity and is listed under both the WA *Biodiversity Conservation Act 2016* and Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*
    - The need to periodically access/maintain the infrastructure
    - The potential for incidental damage to *Acacia imitans* T seedlings that germinate over time in cleared areas, including along tracks. Germination rates of 96.3% have been recorded and germination is likely triggered by natural disturbance events (physical or fire), which may explain why many plants are located in disturbed areas (DEC, 2009a)
- An appropriately qualified person be onsite during construction to ensure *Acacia imitans* T plants in close proximity are correctly identified and flagged to avoid damaging them;
- Surface hydrology is not altered by the construction of the proposed infrastructure (with the exception of removing/reducing bunding caused by pre-existing pushed up soil/vegetation); and
- When brought to site, machinery and vehicles are free of soil and vegetation debris to limit the introduction of weeds and pathogens to the site.

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TABLES

FIGURES

PHOTOGRAPHS

1. INTRODUCTION

1.1. Background and Objectives

GoldNet engaged Woodgis to undertake a targeted flora survey to facilitate impact assessments for several options of a telecommunications tower on Mount Singleton. The finalised proposal is for the an 18 metre high free-standing tower and solar panels with footings in an area of approximately 6 metres x 6 metres, and associated fencing approximately 11 metres long (Figure 1), in a previously cleared area (Figure 2).

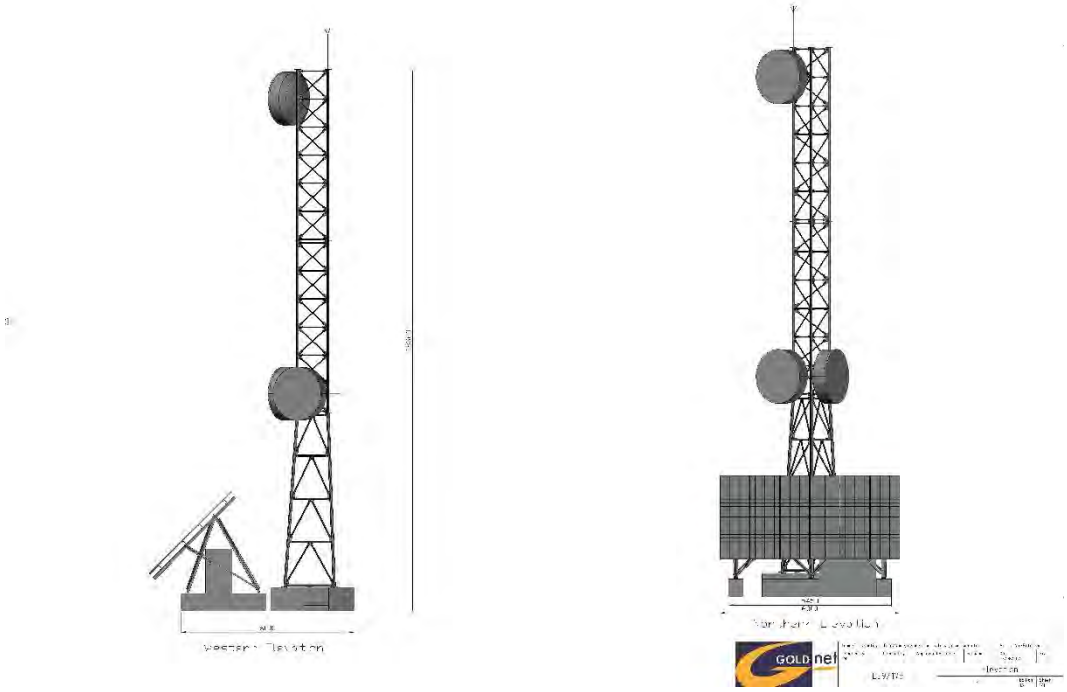

Figure 1: Infrastructure Diagrams

Figure 2: Infrastructure Footprint

1.2. Location

Mount Singleton peaks at 679 m AHD, more than 200 m above its surrounds. Mount Singleton is located on Ninghan Station in the Shire of Yalgoo, approximately:

- 300 km northeast of Perth and 270 km east-southeast of Geraldton;
- 100 km northeast of Wubin and 40 km west-southwest of Paynes Find;
- 30 km south of Karara Rangeland Park and 80 km northwest of Karroun Hill Nature Reserve; and
- 5 km south of Ninghan Station Homestead.

The location of Mount Singleton is shown in Figure 3.

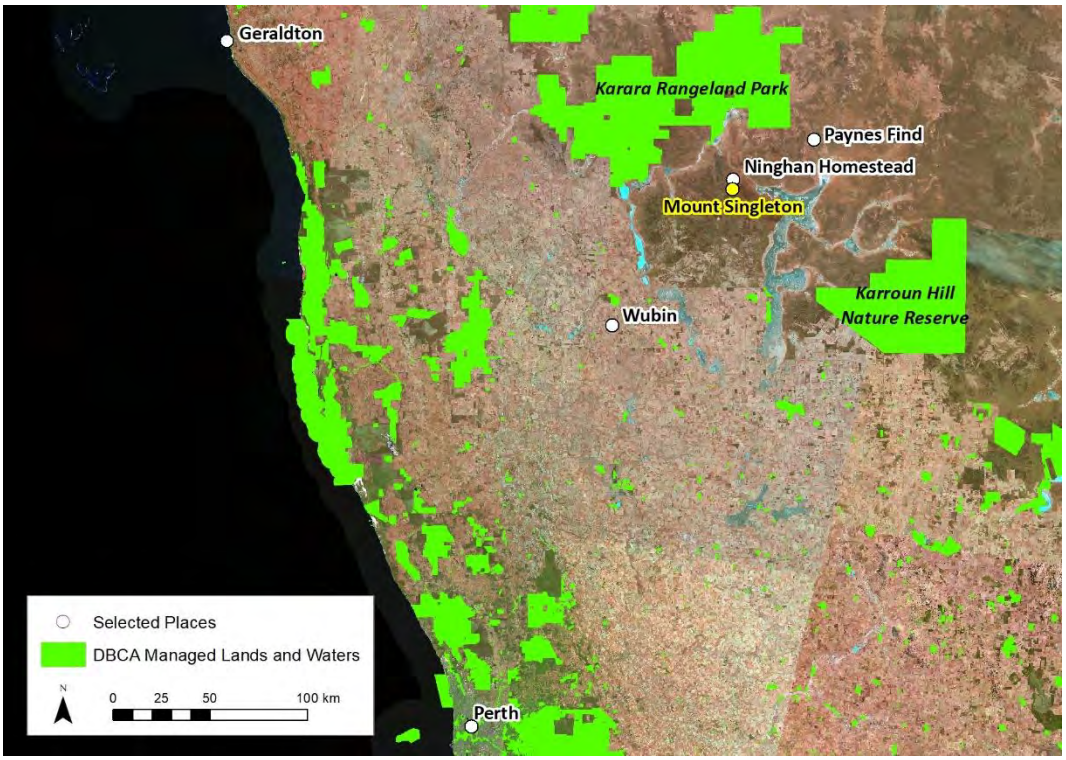

Figure 3: Location of Mount Singleton

Mount Singleton is **not** within a recorded Threatened or Priority Ecological Community (DBCA Database Ref:10-0720EC, 23/07/2020) and a vegetation assessment was outside the scope of works.

2. FIELD SURVEY

2.1. Timing

The field survey was conducted 21-22 July 2020, following rainfall of 20.8 mm and 20.4 mm during July and June 2020 respectively (as recorded by Bureau of Meteorology at Paynes Find 40 km ENE).

2.2. Personnel

The roles and experience of the personnel involved the production of this report are summarised in Table 1.

Table 1: Project Team

Team Member	Field Experience	Project Tasks
Andrew Waters Licence FB62000073 • Graduate Certificate in GIS • Bachelor of Science • Advanced Certificate of Horticulture • Certified Environmental Practitioner with EIANZ	Since 1997 worked in: • Avon Wheatbelt • Esperance Plains • Geraldton Sandplains • Great Sandy Desert • Jarrah Forest • Little Sandy Desert • Mallee • Murchison • Pilbara • Swan Coastal Plain • Yalgoo	• Report • Flora Survey
Frank Obbens • Bachelor of Science (Honours) • research associate with the WA Herbarium where he is the leading expert on the genus *Calandrinia*	Since 1993 worked in: • Avon Wheatbelt • Carnarvon • Coolgardie • Gascoyne • Geraldton Sandplains • Great Sandy Desert • Great Victoria Desert • Jarrah Forest • Little Sandy Desert • Mallee • Murchison • Pilbara • Swan Coastal Plain • Warren • Yalgoo	• Flora Survey

2.3. Targeted Flora Species

Priority flora species, are species that maybe threatened or near threatened but are data deficient, with status codes (P1, P2, P3 and P4) described in Appendix 1.

The 3 threatened and 7 priority flora species recorded on Mount Singleton according to DBCA Database Search 24-0620FL (24/06/2020) are listed in Table 2, and their distributions in the on Mount Singleton are shown in Figure 4, Figure 5 and Figure 6.

Table 2: Targeted Flora Lifeforms and Habitats

	Taxon	Lifeform	Associated Landforms and Soils	Photos (Appendix2)
T	*Acacia imitans*	Shrub	Rocky red loam. Rocky hills.	Photo 6
P1	*Acacia karina*		Red-brown silty clay loam with ironstone pebbles, banded ironstone, shalestone. Rocky slopes.	-
T	*Acacia unguicula*		Rocky clay or loam. Upper slopes & summit of mountain.	Photo 7
P1	*Allocasuarina tessellata*		Loam, sand. Greenstone & dolerite boulders.	Photo 8
P1	*Grevillea scabrida*		Red clay loam, stony loam.	Photo 9
P3	*Grevillea subtiliflora*		Red-brown loam.	Photo 10
T	*Hybanthus cymulosus*		Clay, rocky loam clay.	Photo 11
P1	*Micromyrtus mucronulata*		The summit or lower slopes of a hill.	Photo 12
P1	*Micromyrtus ninghanensis*		Reddish or brown clay, greenstone, granite. Hills.	Photo 13
P3	*Thryptomene* sp. Wandana		Yellow sand at the base of sand dunes	-

Sources: https://florabase.dpaw.wa.gov.au and Rye (2010) and GHD (2012)

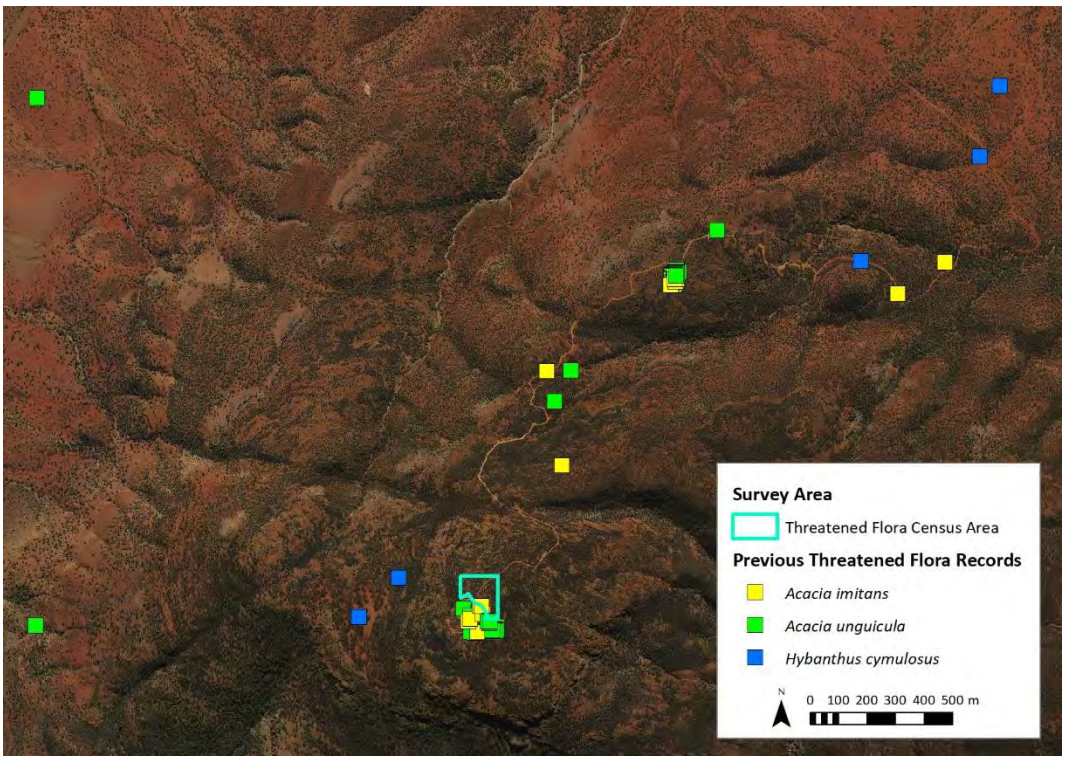

Figure 4: Threatened Flora Records on Mt Singleton

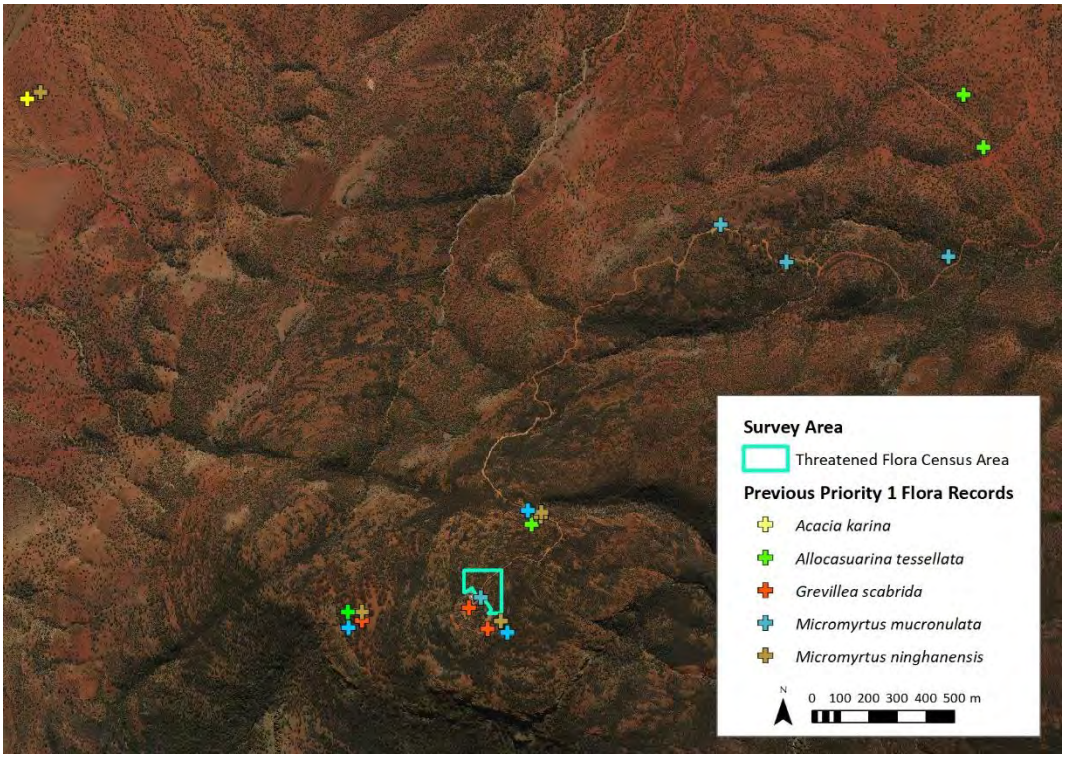

Figure 5: Priority 1 Flora Records on Mt Singleton

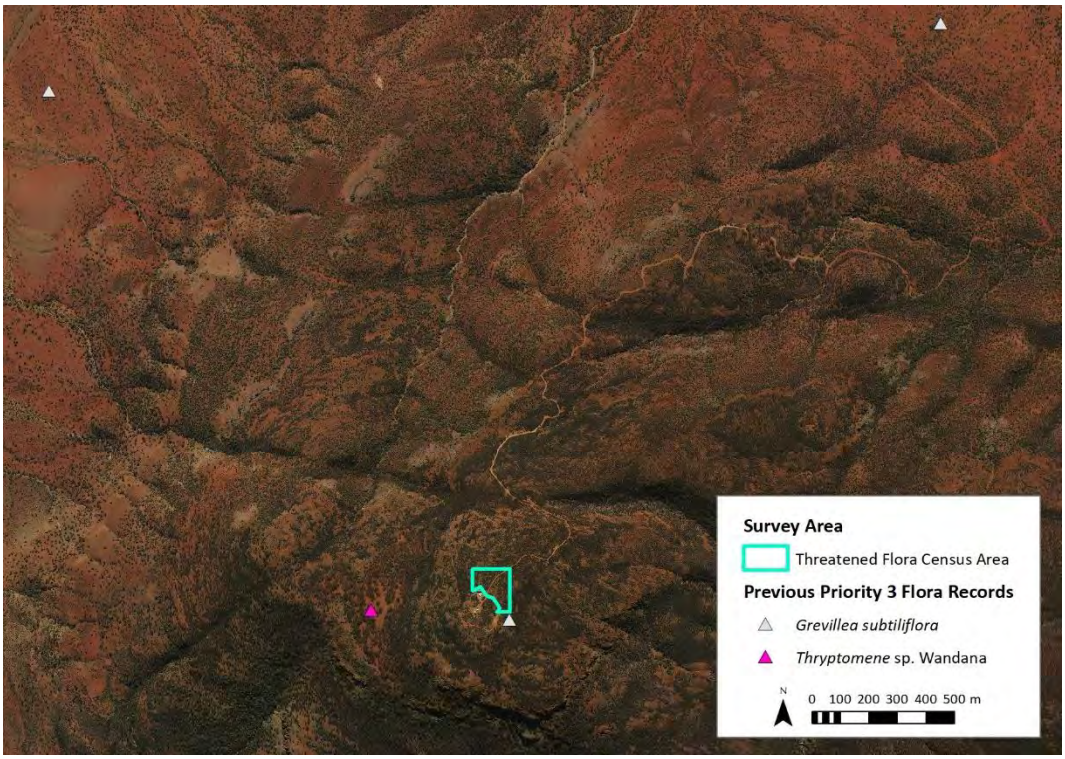

Figure 6: Priority 3 Flora Records on Mt Singleton

2.4. Consultation

The following personnel met onsite on 22 July 2020 (during the field survey):

- Andrew Waters, Ecologist, Woodgis Environmental;
- Frank Obbens, Botanist, Woodgis Environmental;
- Troy Jamieson, Construction Foreman (Advanced Rigging), GoldNet;
- Alanna Chant, Acting Environmental Officer (Midwest Region, Parks and Wildlife Service) DBCA; and
- John Coetsee, Operations Officer (Midwest Region, Parks and Wildlife Service) DBCA.

Prior to the meeting threatened flora in the vicinity of the proposed telecommunications tower were surveyed, and marked with yellow flags.

During the meeting:

- plants of threatened species (*Acacia imitans* and *Acacia unguicula*) that had been marked with yellow flags were inspected;
- the identification of target species, and survey areas and methods, were discussed;
- the proposed footprint was discussed; and
- a revised footprint was measured out and temporarily marked.

The meeting resulted in a consensus that a revised disturbance footprint would further reduce impacts, and the flora survey methods were appropriate. After the meeting, and in the absence of a finalised engineering, a comprehensive priority flora census was conducted in the immediate vicinity of the proposed tower, as characterised in Section 2.5. Correspondence with DBCA is included in Appendix 4.

Subsequent to the onsite meeting the proposal was further refined to reduce impacts, and no longer involves clearing of native vegetation, or threatened or priority flora.

2.5. Survey Site

The targeted flora survey allowed for consideration of several options of a telecommunications tower on Mount Singleton. The survey area shown in Figure 7 consisted of:

- The 1.4 hectare threatened flora census area (extending up to 130 metres east-west and 150 metres north-south), in which those species were searched for using traverses 5 metres apart. Typical vegetation is shown in Photo 14 and Photo 15 in Appendix 3; and
- The 350 m^2 priority flora census area (shown in Figure 7 and Figure 8), within the threatened plant census area, was additionally comprehensively searched for priority species. The priority flora census area, consisted of the following smaller areas (the extents of which were estimated due to the accuracy of handheld GPSs):
    - 200 m^2 (at least) of historic clearing that incorporates all the finalised telecommunications infrastructure footprint, and an existing vehicle track along its southern edge (abutting the existing east-west fence constructed by DBCA);
    - 75 m^2 of disturbance (cleared in 2017/2018 as per correspondence from DBCA in Appendix 4); and
    - 75 m^2 (at most) of native vegetation that extends out to (but excludes) threatened plants to the north.

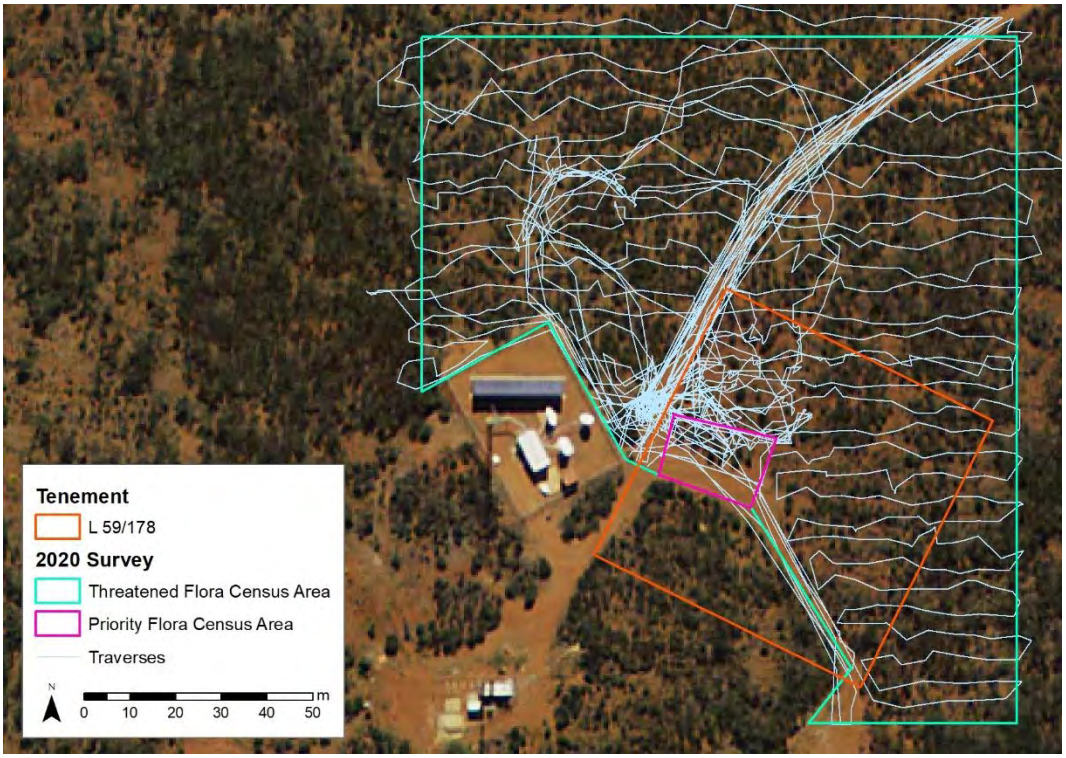

Figure 7: Boundaries of Survey Areas

Aerial imagery captured by Western Australian Land Information Authority 05/08/2014

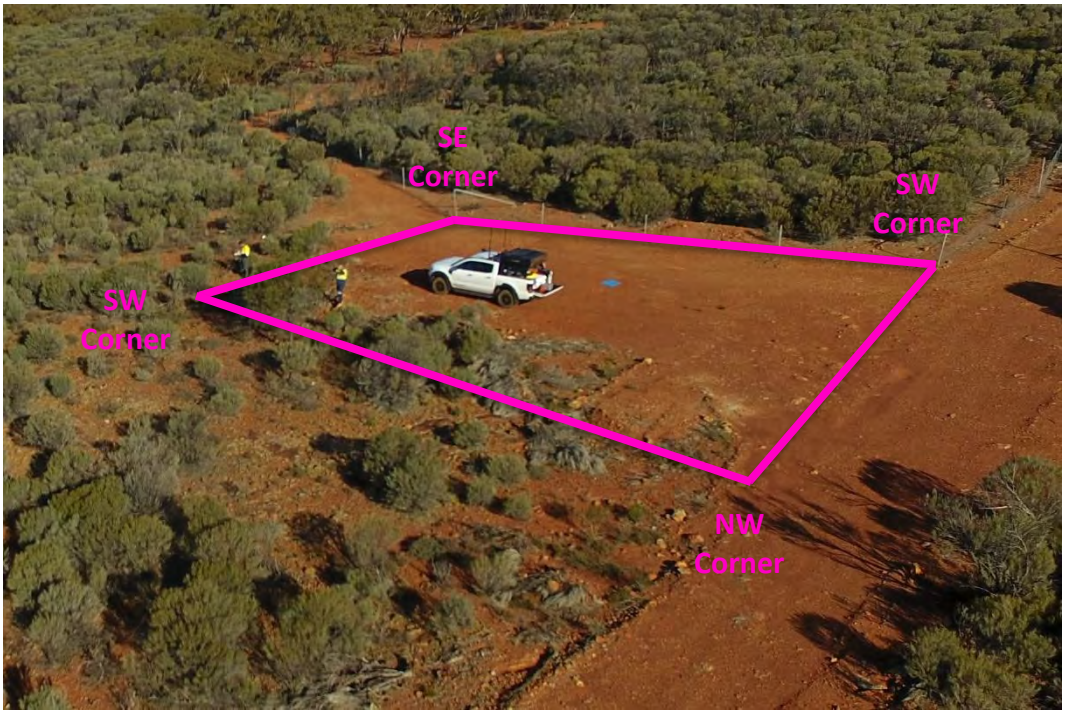

Figure 8: Boundaries of Priority Flora Census Area

Aerial imagery captured by Goldnet 19/06/2020

Photos from each of the corners of the Priority Flora Census Area are included in Appendix 3 (Photo 16 to Photo 23). In these photos yellow flags indicate *Acacia imitans* T plants, and orange poles indicate either the northwest or northeast corners.

3. RESULTS

3.1. Threatened and Priority Flora

The numbers of threatened and priority flora plants in the survey areas are listed in Table 3.

Table 3: Threatened and Priority Flora Counts

	Taxon	Plants in Priority Flora Census Area	Additional Plants in Threatened Flora Census Area Tracks/Disturbed Areas	Undisturbed Areas
T	*Acacia imitans*	1 Live	11 Live	29 Live + 2 Dead
T	*Acacia unguicula*	0	0	1 Live
P1	*Allocasuarina tessellata*	14 Live	Not Assessed	
P1	*Grevillea scabrida*	1 Live		
P1	*Micromyrtus mucronulata*	32 Live		
P1	*Micromyrtus ninghanensis*	37 Live		

Threatened flora observations are shown in conjunction with traverses in Figure 9.

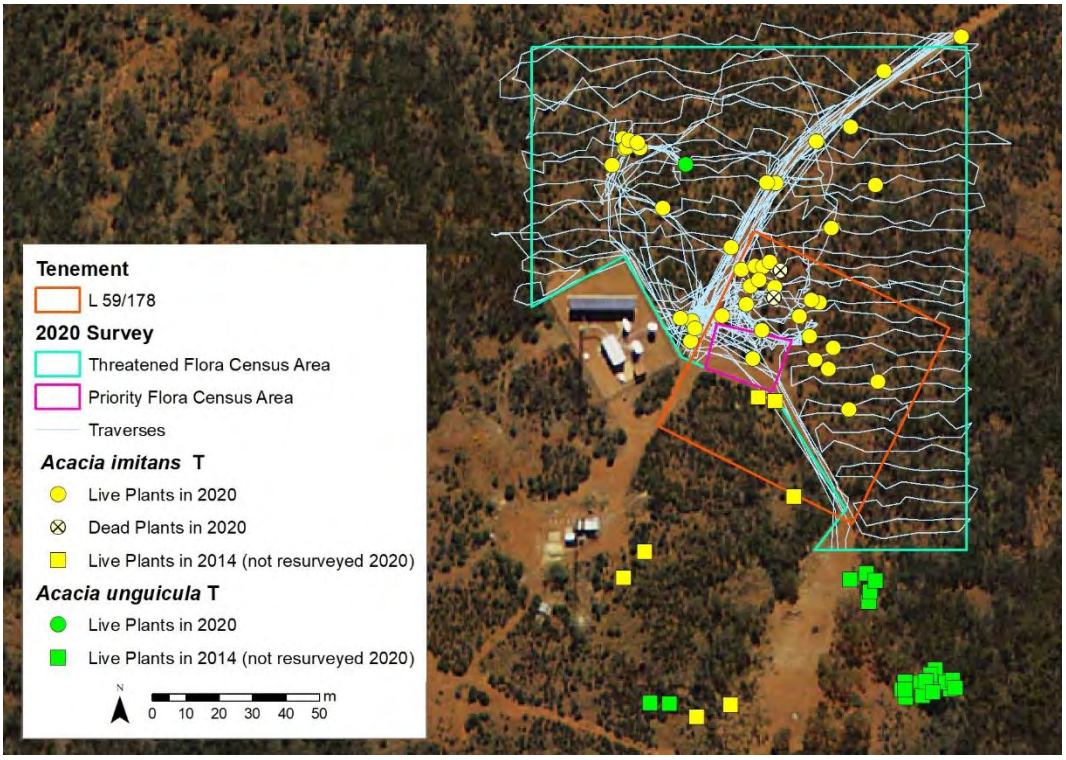

Figure 9: Threatened Species in Census Area

DBCA 2014 Survey Area and Method Not Documented (including whether survey was partial or comprehensive)

The Threatened and Priority Flora Report Forms for *Acacia imitans* T and *Acacia unguicula* T are attached in Appendix 5.

4. DISCUSSION

4.1. Survey Adequacy

During the onsite meeting on 22 July, Alanna Chant (Acting Environmental Officer, Midwest Region, Parks and Wildlife Service, DBCA) confirmed the survey method provided sufficient information for decision making.

It is highly unlikely any of the ten targeted flora species were present but undetected, given:

- The small survey area
- The high intensity of searches
- All ten species were shrubs
- Eight of the ten species recorded on Mount Singleton were confirmed present on Mount Singleton during the field survey. The two species for which WA Herbarium point records exist on Mount Singleton that were not searched for to confirm identifications/flowering were:
  - *Acacia karina* P1, the record for which was a 1992 specimen from 'Ninghan Station, Mount Singleton, mid-slope NW side' that was manually geocoded (i.e. **not** on the basis of typical methods such as GPS, nearest named place, topographic map etc); and
  - *Thryptomene* sp. Wandana P3, the record for which was a 1953 specimen from 'near Mount Singleton' that was automatically geocoded (on the basis of the nearest named place) and its typical sandy habitat does not occur on the summit of Mount Singleton
- Seven of the eight species confirmed on Mount Singleton during the field survey had flowers and/or fruit at the time (Appendix 2: Photo 6 to Photo 13)

4.2. Regional Context

Whilst no impacts are proposed (Section 4.3), regional context is documented for completeness.

Regional data suggest *Allocasuarina tessellata* P1 and *Grevillea scabrida* P3 are abundant local endemics that occur on DBCA-managed lands. No comprehensive threatened or priority surveys have been undertaken on Mount Singleton and there has been significant underreporting of the number of *Acacia imitans* T, *Micromyrtus mucronulata* P1, and *Micromyrtus ninghanensis* P1 plants. Despite the low number of recorded plants, *Micromyrtus mucronulata* P1 and *Micromyrtus ninghanensis* P1 have both been previously reported as 'common' at points along the track to the summit of Mount Singleton (DBCA Database Search 24-0620FL, 24/06/2020). Both appeared abundant in patches over several kilometres of observations along the track to the summit during the field survey, and the small shrubs occur at moderate-high densities (>0.5 plants/m^2 in the proposed disturbance footprint).

The context of the threatened and priority flora is established in Table 4 and the comments that follow.

Table 4: NatureMap Records of Significant Flora in Census Area

	Taxon	NatureMap Records	Western Australia Range (measured on NatureMap)	DBCA Managed Lands (containing NatureMap Records)
T	*Acacia imitans*	38 records 2 bioregions	20 km north-south 25 km east-west	None
T	*Acacia unguicula*	24 records 1 bioregion	<5 km north-south < 5 km east-west	None
P1	*Allocasuarina tessellata*	83 records 2 bioregions	80 km north-south 80 km east-west Single collections have been made from the Die Hardy Ranges (200 km SE) and a granite outcrop between Mullewa and Morawa (Meissner & Coppen, 2014)	Karara Rangeland Park (also in Charles Darwin Reserve managed by Bush Heritage Australia)
P1	*Grevillea scabrida*	91 records 2 bioregions	80 km north-south 80 km east-west	Karara Rangeland Park
P1	*Micromyrtus mucronulata*	26 records 2 bioregions	5 km north-south 5 km east-west 1 disjunct record 540 km NE	None
P1	*Micromyrtus ninghanensis*	8 records 1 bioregions	<5 km north-south < 5 km east-west	None

Acacia imitans T:

- +1,139 plants estimated on Mt Singleton (DBCA Database Search 24-0620FL, 24/06/2020)
- +661 plants documented in 7 populations in Interim Recovery Plan in 2009 (DEC, 2009a)
- + 100 plants on Mt Singleton and +10 plants southeast of Mt Singleton (Patrick, 2001)
- 11 of 41 plants on tracks and disturbed areas. Seedlings were observed on the track to the summit of Mt Singleton and other disturbed areas during the field survey
- Germination is likely to be triggered by natural disturbance events (physical or fire), which may explain why many plants are located in disturbed areas. Germination trials resulting in a 96.3% average germination rate indicates there are other factors inhibiting natural recruitment, such as grazing of new seedlings, or insufficient germination triggers such as fire or other natural disturbance events. All populations were seriously affected by grazing. Feral goat control has been implemented, with approximately 1,300 goats removed from Ninghan Station since the installation of a goat proof fence (DEC, 2009a).

Acacia unguicula T:

- 77 mature plants documented from 3 populations in 2007 (DEC, 2009b)
- The extent of occurrence is estimated to be approximately 1.0 km^2, and the area of occupancy is approximately 0.00048 km^2 (DEC, 2009b).
- It grows on the upper slopes and summit amongst open scrub, in rocky clay, brown clayey sand or brown loam with dolerite (DEC, 2009b).
- Germination is likely to be triggered by natural disturbance events (physical or fire). All populations were seriously affected by grazing. Feral goat control has been implemented, with approximately 1,300 goats removed from Ninghan Station since the installation of a goat proof fence (DEC, 2009b).

Allocasuarina tessellata P1:

- +2,200 plants estimated on Mt Singleton (DBCA Database Search 24-0620FL, 24/06/2020)
- Estimated 199,180 plants in Mummaloo survey area, 75 km northeast of Wubin (based on 222 plants per hectare in quadrats across 897 ha of one floristic community) (EnviroWorks Consulting, 2013)
- 26,695 plants were recorded across 354 point locations in 6 vegetation types in the Rothsay Gold Project Area, although a full census was not undertaken, and it was considered likely that the actual number of individuals was much greater, and it was also noted that there were also numerous additional known locations in the vicinity of the study area (Woodman Environmental, 2017)
- Recorded in 23 of 990 quadrats, in 3 of 33 Floristic Community Types in the *Regional Flora and Vegetation Survey of the Karara to Minjar Block* (Woodman Environmental, 2012)
- +500 plants on Mt Singleton and +500 plants Wylacoopin Hill and +30 plants northeast of Mt Gibson Homestead (Patrick, 2001)

Grevillea scabrida P1:

- Estimated 441,131 plants in Mummaloo survey area, 75 km northeast of Wubin (based on 324 plants per hectare in quadrats across 1,363 ha of three floristic communities) (EnviroWorks Consulting, 2013)
- Recorded in 30 of 990 quadrats, in 8 of 33 Floristic Community Types in the *Regional Flora and Vegetation Survey of the Karara to Minjar Block* (Woodman Environmental, 2012)
- Well represented on the Mulgine and Rothsay Hills (Meissner & Coppen, 2014)
- 4,320 plants were recorded across 177 point locations in 6 vegetation types the Rothsay Gold Project Area, although a full census was not undertaken, and it was considered likely that the actual number of individuals was much greater, and it was also noted that there were also numerous additional known locations in the vicinity of the study area (Woodman Environmental, 2017)
- Estimated +2,600 plants from 9 populations in Geraldton District (Patrick, 2001)

Micromyrtus mucronulata P1:

- Geographically restricted (Rye, 2010)
- +300 plants estimated on Mt Singleton and described as 'common' at one site along track to summit of Mt Singleton (DBCA Database Search 24-0620FL, 24/06/2020)
- + 100 plants southwest of Paynes Find (Patrick, 2001)
- As per correspondence in Appendix 4, DBCA agreed that *Micromyrtus mucronulata* P1 have not been fully surveyed on Mt Singleton and therefore under reported.
- 55,000-550,00 plants would be present, at densities of 0.5 plants/m^2 over 1-10% of Mount Singleton, which covers approximately 1,112 ha (11.1 million m^2) and extends over approximately 3 km north-south by 5 km east-west.

Micromyrtus ninghanensis P1:

- Known from only one locality (Rye, 2002)
- +100 plants on Mt Singleton and 'common' along track from summit of Mt Singleton to 'creek crossing' (DBCA Database Search 24-0620FL, 24/06/2020)
- As per correspondence in Appendix 4, DBCA agreed that *Micromyrtus ninghanensis* P1 have not been fully surveyed on Mt Singleton and therefore under reported.
- 55,000-550,00 plants would be present, at densities of 0.5 plants/m^2 over 1-10% of Mount Singleton, which covers approximately 1,112 ha (11.1 million m^2) and extends over approximately 3 km north-south by 5 km east-west.

4.3. Potential Impacts

The finalised proposal is for a free-standing tower and solar panels with footings in an area of approximately 6 metres x 6 metres, and associated fencing approximately 11 metres long in a previously cleared area. This proposal requires **no** clearing of native vegetation, or threatened or priority flora. Whilst the finalised proposal will not require clearing, it will be in close proximity to threatened plants, including one *Acacia imitans* T seedling in a previously cleared area (Figure 10, and Photo 1 to Photo 4), and another on the edge of the previously cleared area (Photo 5).

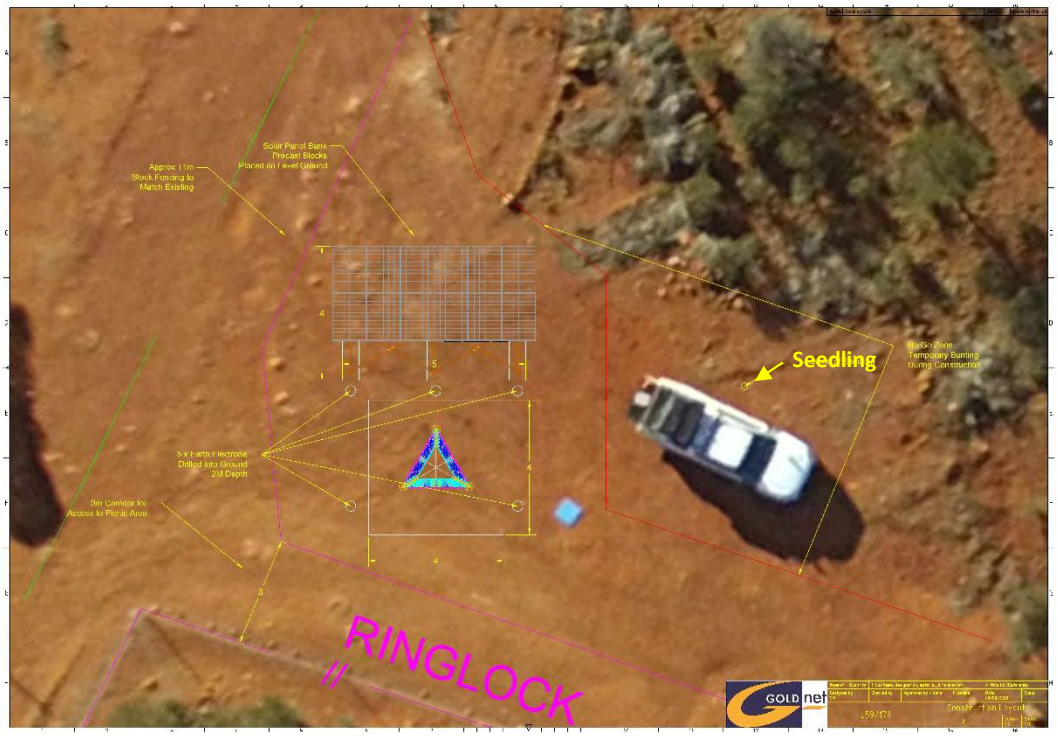

Figure 10: Approximate Location of *Acacia imitans* T seedling in Cleared Area

Photo 1: Size of *Acacia imitans* T seedling in clearing

Photo 2: *Acacia imitans* T seedling (yellow flag) in clearing viewed from West

Photo 3: *Acacia imitans* T seedling (yellow flag) in clearing viewed from South

Photo 4: *Acacia imitans* T seedling (yellow flag) in clearing viewed from Northeast

Photo 5: *Acacia imitans* T (yellow flag) near NW corner of clearing (orange pole)

5. CONCLUSIONS AND RECOMMENDATIONS

The targeted flora survey identified two threatened species (*Acacia imitans* T and Acacia unguicula T) and four priority species (*Allocasuarina tessellata* P1, *Grevillea scabrida* P1, *Micromyrtus mucronulata* P1 and *Micromyrtus ninghanensis* P1) in the immediate vicinity.

The proposal was reconfigured in view of the survey results. The finalised proposal is for a free-standing tower and solar panels with footings in an area of approximately 6 metres x 6 metres, and associated fencing approximately 11 metres long in a previously cleared area. This proposal requires **no** clearing of native vegetation, or threatened or priority flora. Whilst the finalised proposal will **not** require clearing of native flora, it will be in close proximity to threatened plants, including one *Acacia imitans* T seedling in a previously cleared area.

In addition to obtaining any required approvals, it is recommended that:

- GoldNet should consider obtaining Threatened Flora Authorisation for inadvertent or accidental impact to Threatened Flora, given:
    - *Acacia imitans* T is in the immediate vicinity and is listed under both the WA *Biodiversity Conservation Act 2016* and Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*
    - The need to periodically access/maintain the infrastructure
    - The potential for incidental damage to *Acacia imitans* T seedlings that germinate over time in cleared areas, including along tracks. Germination rates of 96.3% have been recorded and germination is likely triggered by natural disturbance events (physical or fire), which may explain why many plants are located in disturbed areas (DEC, 2009a)
- An appropriately qualified person be onsite during construction to ensure *Acacia imitans* T plants in close proximity are correctly identified and flagged to avoid damaging them;
- Surface hydrology is not altered by the construction of the proposed infrastructure (with the exception of removing/reducing bunding caused by pre-existing pushed up soil/vegetation); and
- When brought to site, machinery and vehicles are free of soil and vegetation debris to limit the introduction of weeds and pathogens to the site

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Rye, B. (2002). A revision of south-western Australian species of Micromyrtus (Myrtaceae) with five antisepalous ribs on the hypanthium. *Nuytsia*, 101-122.

Rye, B. (2010). A revision of the Micromyrtus racemosa complex (Myrtaceae: Chamelaucieae) of south-western Australia. *Nuytsia*, 37-56.

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APPENDIX 1: DBCA CONSERVATION CATEGORIES

Table 5: TEC and PEC Categories

Presumed Totally Destroyed (PD)

An ecological community that has been adequately searched for but for which no representative occurrences have been located. The community has been found to be totally destroyed or so extensively modified throughout its range that no occurrence of it is likely to recover its species composition and/or structure in the foreseeable future.

An ecological community will be listed as presumed totally destroyed if there are no recent records of the community being extant **and either** of the following applies (A or B):

A) Records within the last 50 years have not been confirmed despite thorough searches of known or likely habitats **or**

B) All occurrences recorded within the last 50 years have since been destroyed

Critically Endangered (CR)

An ecological community that has been adequately surveyed and found to have been subject to a major contraction in area and/or that was originally of limited distribution and is facing severe modification or destruction throughout its range in the immediate future, or is already severely degraded throughout its range but capable of being substantially restored or rehabilitated.

An ecological community will be listed as **Critically Endangered** when it has been adequately surveyed and is found to be facing an extremely high risk of total destruction in the immediate future. This will be determined on the basis of the best available information, by it meeting **any one or more of** the following criteria (A, B or C):

A) The estimated geographic range, and/or total area occupied, and/or number of discrete occurrences since European settlement have been reduced by at least 90% **and either or both** of the following apply (i or ii):

i) geographic range, and/or total area occupied and/or number of discrete occurrences are continuing to decline such that total destruction of the community is imminent (within approximately 10 years);

ii) modification throughout its range is continuing such that in the immediate future (within approximately 10 years) the community is unlikely to be capable of being substantially rehabilitated.

B) Current distribution is limited, **and one or more** of the following apply (i, ii or iii):

i) geographic range and/or number of discrete occurrences, and/or area occupied is highly restricted and the community is currently subject to known threatening processes which are likely to result in total destruction throughout its range in the immediate future (within approximately 10 years);

ii) there are very few occurrences, each of which is small and/or isolated and extremely vulnerable to known threatening processes;

iii) there may be many occurrences but total area is very small and each occurrence is small and/or isolated and extremely vulnerable to known threatening processes.

C) The ecological community exists only as highly modified occurrences that may be capable of being rehabilitated if such work begins in the immediate future (within approximately 10 years).

Endangered (EN)

An ecological community that has been adequately surveyed and found to have been subject to a major contraction in area and/or was originally of limited distribution and is in danger of significant modification throughout its range or severe modification or destruction over most of its range in the near future.

An ecological community will be listed as **Endangered** when it has been adequately surveyed and is not Critically Endangered but is facing a very high risk of total destruction in the near future. This will be determined on the basis of the best available information by it meeting **any one or more of** the following criteria (A, B, or C):

A) The geographic range, and/or total area occupied, and/or number of discrete occurrences have been reduced by at least 70% since European settlement **and either or both** of the following apply (i or ii):

i) the estimated geographic range, and/or total area occupied and/or number of discrete occurrences are continuing to decline such that total destruction of the community is likely in the short term future (within approximately 20 years);

ii) modification throughout its range is continuing such that in the short term future (within approximately 20 years) the community is unlikely to be capable of being substantially restored or rehabilitated.

B) Current distribution is limited, **and one or more** of the following apply (i, ii or iii):

i) geographic range and/or number of discrete occurrences, and/or area occupied is highly restricted and the community is currently subject to known threatening processes which are likely to result in total destruction throughout its range in the short term future (within approximately 20 years);

ii) there are few occurrences, each of which is small and/or isolated and all or most occurrences are very vulnerable to known threatening processes;

iii) there may be many occurrences but total area is small and all or most occurrences are small and/or isolated and very vulnerable to known threatening processes.

C) The ecological community exists only as very modified occurrences that may be capable of being substantially restored or rehabilitated if such work begins in the short-term future (within approximately 20 years).

Vulnerable (VU)
An ecological community that has been adequately surveyed and is found to be declining and/or has declined in distribution and/or condition and whose ultimate security has not yet been assured and/or a community that is still widespread but is believed likely to move into a category of higher threat in the near future if threatening processes continue or begin operating throughout its range.
An ecological community will be listed as **Vulnerable** when it has been adequately surveyed and is not Critically Endangered or Endangered but is facing a high risk of total destruction or significant modification in the medium to long-term future. This will be determined on the basis of the best available information by it meeting **any one or more of** the following criteria (A, B or C):
A) The ecological community exists largely as modified occurrences that are likely to be capable of being substantially restored or rehabilitated.
B) The ecological community may already be modified and would be vulnerable to threatening processes, is restricted in area and/or range and/or is only found at a few locations.
C) The ecological community may be still widespread but is believed likely to move into a category of higher threat in the medium to long term future because of existing or impending threatening processes.

Priority One: Poorly-known ecological communities
Ecological communities with apparently few, small occurrences, all or most not actively managed for conservation (e.g. within agricultural or pastoral lands, urban areas, active mineral leases) and for which current threats exist. Communities may be included if they are comparatively well-known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under immediate threat from known threatening processes across their range.

Priority Two: Poorly-known ecological communities
Communities that are known from few small occurrences, all or most of which are actively managed for conservation (e.g. within national parks, conservation parks, nature reserves, State forest, unallocated Crown land, water reserves, etc.) and not under imminent threat of destruction or degradation. Communities may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under threat from known threatening processes.

Priority Three: Poorly known ecological communities
(i) Communities that are known from several to many occurrences, a significant number or area of which are not under threat of habitat destruction or degradation or:
(ii) communities known from a few widespread occurrences, which are either large or within significant remaining areas of habitat in which other occurrences may occur, much of it not under imminent threat, or;
(iii) communities made up of large, and/or widespread occurrences, that may or not be represented in the reserve system, but are under threat of modification across much of their range from processes such as grazing by domestic and/or feral stock, and inappropriate fire regimes.
Communities may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and/or are not well defined, and known threatening processes exist that could affect them.

Priority Four: Ecological communities that are adequately known, rare but not threatened or meet criteria for Near Threatened, or that have been recently removed from the threatened list. These communities require regular monitoring.
(a) Rare. Ecological communities known from few occurrences that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These communities are usually represented on conservation lands.
(b) Near Threatened. Ecological communities that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.
(c) Ecological communities that have been removed from the list of threatened communities during the past five years.

Priority Five: Conservation Dependent ecological communities
Ecological communities that are not threatened but are subject to a specific conservation program, the cessation of which would result in the community becoming threatened within five years.

Table 6: Threatened and Priority Flora Categories

Threatened Flora (Declared Rare Flora - Extant Taxa)
Taxa which have been adequately searched for and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such.

Presumed Extinct Flora (Declared Rare Flora – Extinct)
Taxa which have been adequately searched for and there is no reasonable doubt that the last individual has died, and have been gazetted as such.

Priority One: Poorly-known taxa
Taxa that are known from one or a few collections or sight records (generally less than five), all on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, Shire, Westrail and Main Roads WA road, gravel and soil reserves, and active mineral leases and under threat of habitat destruction or degradation. Taxa may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes.

Priority Two: Poorly-known taxa
Taxa that are known from one or a few collections or sight records, some of which are on lands not under imminent threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. Taxa may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes.

Priority Three: Poorly Known taxa
Taxa that are known from collections or sight records from several localities not under imminent threat, or from few but widespread localities with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Taxa may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and known threatening processes exist that could affect them.

Priority Four: Rare, Near Threatened and other taxa in need of monitoring
(a) Rare. Taxa that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.
(b) Near Threatened. Taxa that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.
(c) Taxa that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

Priority Five: Conservation Dependent taxa
Taxa that are not threatened but are subject to a specific conservation program, the cessation of which would result in the taxa becoming threatened within five years.

APPENDIX 2: PRIORITY FLORA PHOTOGRAPHS

Photo 6: *Acacia imitans* T

Photo 7: *Acacia unguicula* T

Photo 8: *Allocasuarina tessellata* P1

Photo 9: *Grevillea scabrida P1*

Photo 10: *Grevillea subtiliflora* P3

Photo 11: *Hybanthus cymulosus* T

Photo 12: *Micromyrtus mucronulata* P1

Photo 13: *Micromyrtus ninghanensis* P1

APPENDIX 3: SURVEY AREA PHOTOGRAPHS

Photo 14: Sparser Vegetation in Threatened Flora Census Area

Photo 15: Denser Vegetation in Threatened Flora Census Area

Photo 16: Priority Flora Census Area (NW corner looking SW corner)

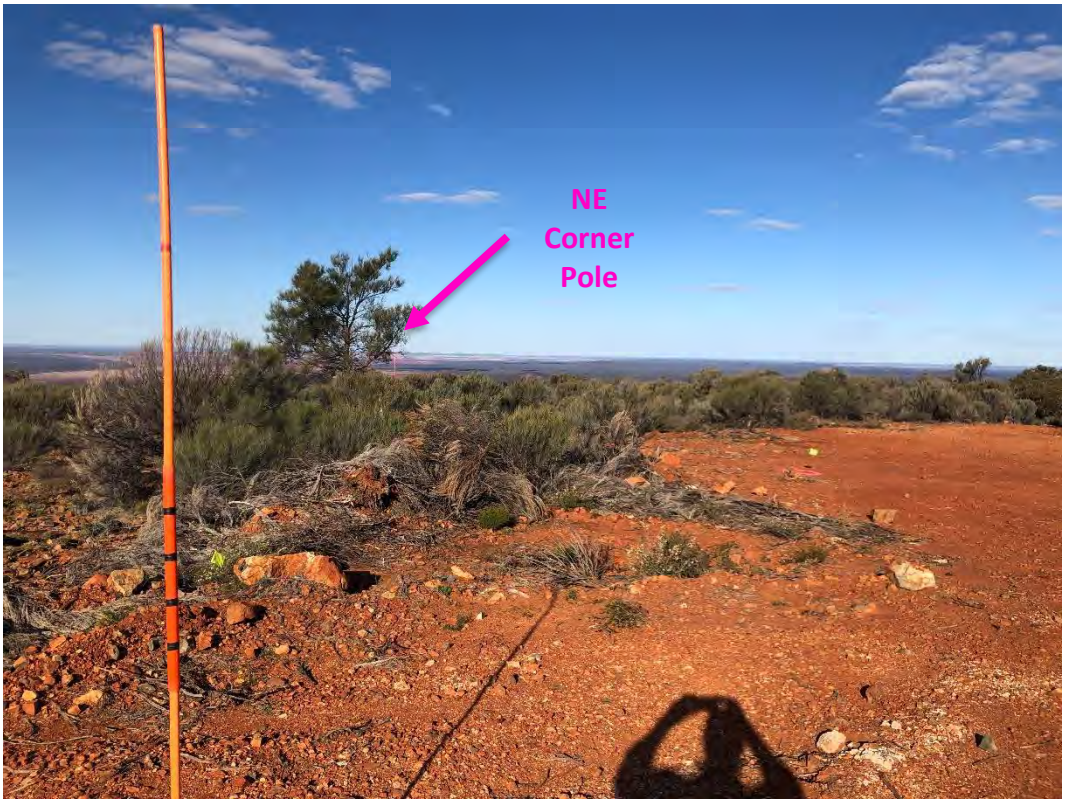


Photo 17: Priority Flora Census Area (NW corner looking NE corner)

Photo 18: Priority Flora Census Area (NE corner looking NW corner)

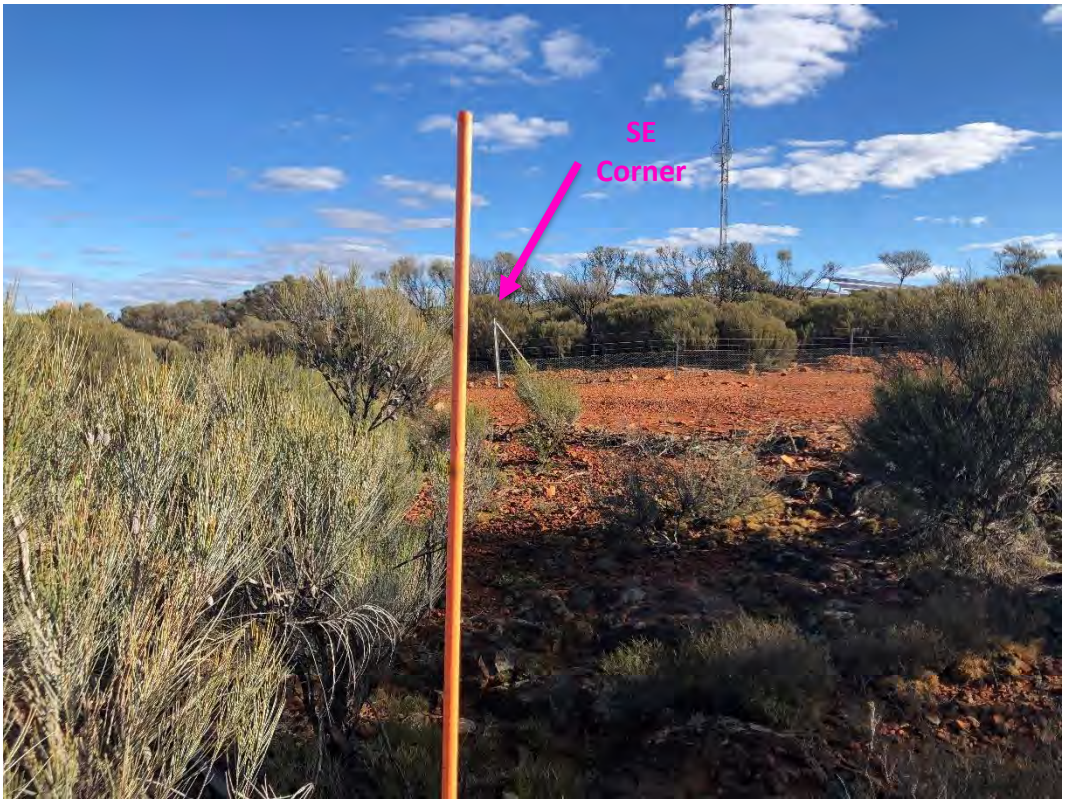


Photo 19: Priority Flora Census Area (NE corner looking to SE corner)

Photo 20: Priority Flora Census Area (SE corner looking to NE corner)

Photo 21: Priority Flora Census Area (SE corner looking to SW corner)

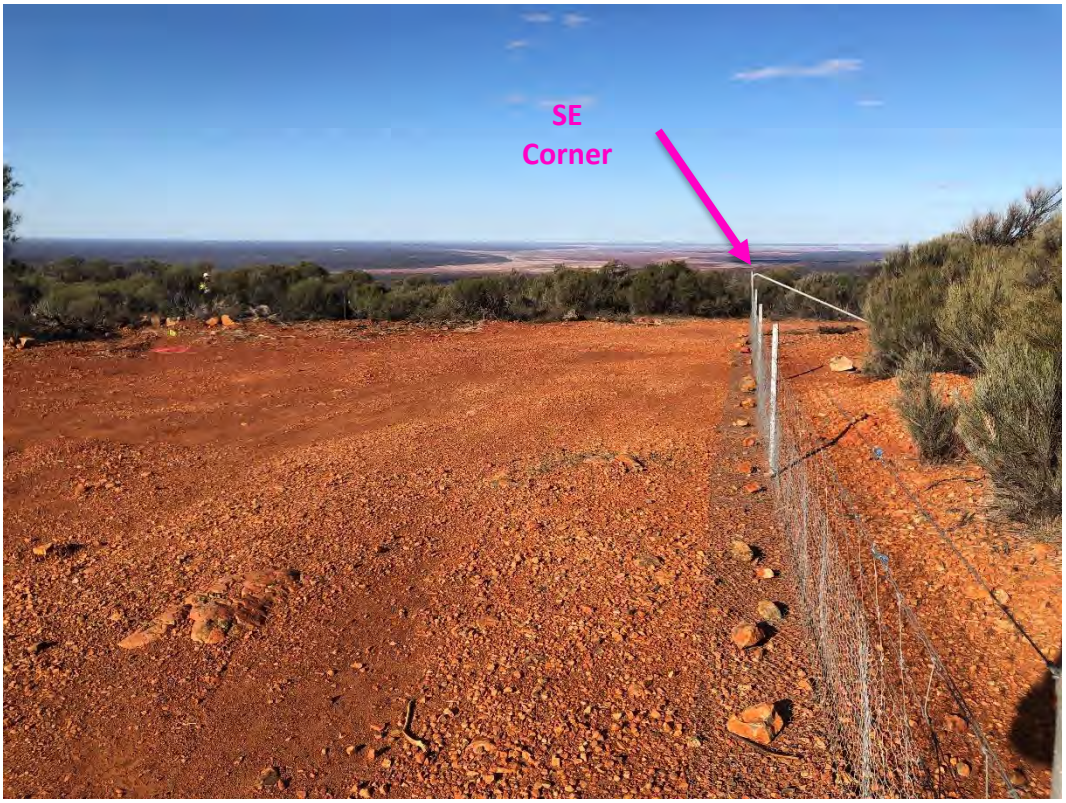


Photo 22: Priority Flora Census Area (SW corner looking to SE corner)

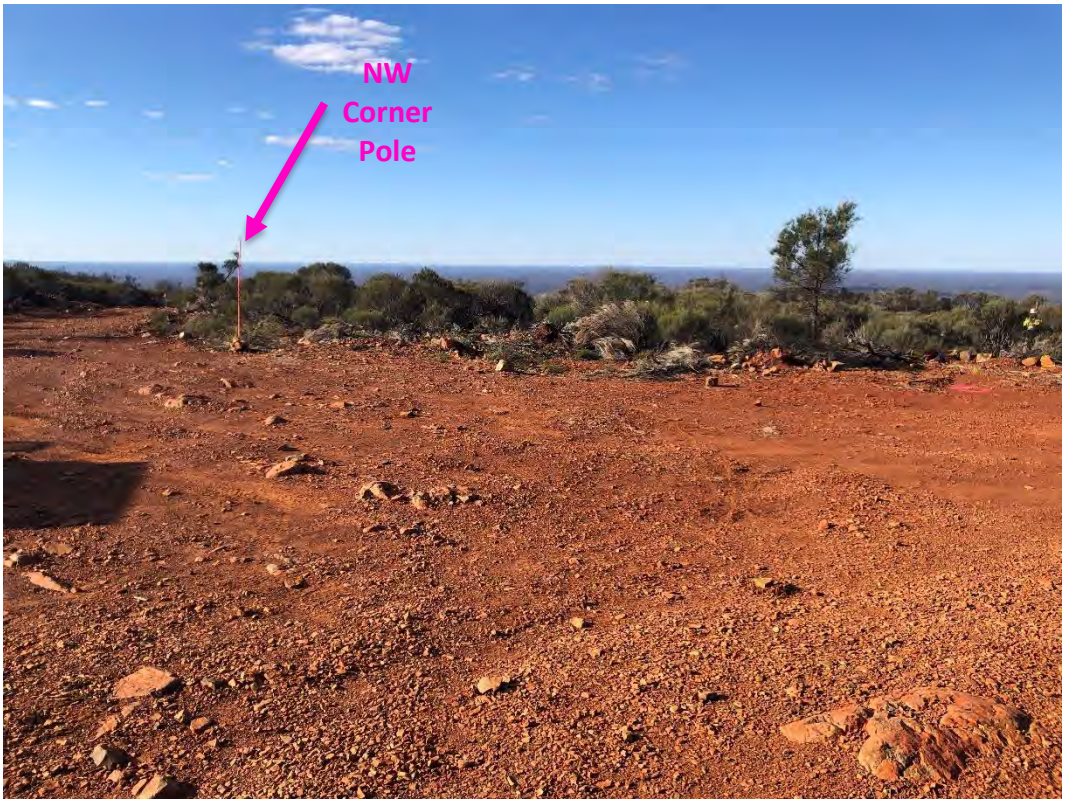


Photo 23: Priority Flora Census Area (SW corner looking to NW corner)

APPENDIX 4: DBCA CORRESPONDENCE

andrew@woodgis.com.au

From: Alanna Chant <alanna.chant@dbca.wa.gov.au>
Sent: Tuesday, 28 July 2020 9:50 PM
To: andrew@woodgis.com.au
Cc: 'Shaun Morgan'
Subject: Re: Mt Singleton

Andrew,

Thank you for your call to discuss the outcomes of our on site meeting at Mt Singleton in relation to the proposed GoldNet communications tower and impacts on biodiversity conservation values. I can confirm the following points from our site meeting:

1. Previous disturbance occurred at the site several years ago, probably 2017/18.
2. Micromyrtus muconulata P1 and Micromyrtus inghanensis P1 have not been fully surveyed on Mt Singleton and therefore populations are under reported. It is reasonable to conclude that clearing a small number of plants (<0.1%) is unlikely to be a significant impact on the conservation of these priority flora. Based on observations of abundance and extent of these species made during our site inspection on 22 July, it appears that the GoldNet communications tower construction (as described on site and shown in your email below) is not likely to have a significant impact on these priority flora.
3. DBCA recommends that GoldNet take all reasonable steps to avoid impacts to Threatened flora and avoid and minimise impacts to Priority Flora. DBCA therefore supports the recommendations outlined in your email below; in relation to an appropriately qualified person being on site during any disturbance, avoiding alteration of surface hydrology and appropriate hygiene measures to avoid the introduction of weeds and pathogens.

Please let me know if you wish to discuss further.

Kind regards, Alanna

From: andrew@woodgis.com.au <andrew@woodgis.com.au>
Sent: Tuesday, 28 July 2020 12:29 PM
To: Alanna Chant <alanna.chant@dbca.wa.gov.au>
Cc: 'Shaun Morgan' <smorgan@gold.net.au>
Subject: FW: Mt Singleton

[External Email] This email was sent from outside the department – be cautious, particularly with links and attachments.

Alanna

Following up from this morning's phone call

Prior to submitting my report (the draft of which is now complete) just wanted to confirm the following from the onsite meeting:

1. Previous disturbance at site was 2017/2018
2. *Micromyrtus mucronulata* P1 and *Micromyrtus ninghanensis* P1 are under reported on Mount Singleton and the plants to be cleared would not constitute a significant percentage of plants. To me it appears that this would constitute <0.1% of plants (and likely much lower than this conservative percentage). Can you confirm this is a reasonable conclusion/estimate.
    a. Despite the low number of recorded plants, *Micromyrtus mucronulata* P1 and *Micromyrtus ninghanensis* P1 have both been previously reported as 'common' at points along the track to the summit of Mount Singleton (DBCA Database Search 24-0620FL, 24/06/2020).
    b. Both appeared abundant in patches over several kilometres of observations along the track to the summit during the field survey, and the small shrubs occur at moderate-high densities (>0.5 plants/m^2 in the proposed disturbance footprint)
    c. 55,000-550,00 plants would be present, at densities of 0.5 plants/m^2 over 1-10% of Mount Singleton, which covers approximately 1,112 ha (11.1 million m^2) and extends over approximately 3 km north-south by 5 km east-west.

FYI
Regional data suggests the other impacted priority flora (*Allocasuarina tessellata P1* and *Grevillea scabrida P3*) are abundant local endemics that occur on DBCA-managed lands, both with hundreds of thousands of plants previously documented (sources are included in my report).
In addition to obtaining appropriate approvals, I've recommended that:

- An appropriately qualified person be onsite during any clearing to ensure *Acacia imitans* T plants in close proximity in bushland are correctly identified and flagged to avoid damaging them;
- Surface hydrology is not altered by the construction of the proposed infrastructure (with the exception of removing/reducing bunding caused by pre-existing pushed up soil/vegetation); and
- When brought to site, machinery and vehicles are free of soil and vegetation debris to limit the introduction of weeds and pathogens to the site.

The results of the comprehensive priority flora survey of the 'maximum potential disturbance footprint' (shown in figure below), after the onsite meeting were:

- 14 plants of *Allocasuarina tessellata P1*
- 1 plant of *Grevillea scabrida P1*
- 32 plants of *Micromyrtus mucronulata P1*
- 37 plants of *Micromyrtus ninghanensis P1*

Thanks
Andrew

Woodgis
ENVIRONMENTAL
ASSESSMENT &
MANAGEMENT

Andrew Waters
PRINCIPAL ECOLOGIST
Grad Cert GIS, BSc, Adv Cert Hort
Phone: 0403 318 284
Web: www.woodgis.com.au

APPENDIX 5: THREATENED AND PRIORITY FLORA REPORT FORMS

Department of Biodiversity, Conservation and Attractions

Threatened and Priority Flora Report Form

Version 1.3 August 2017

Please complete as much of the form as possible, with emphasis on those sections bordered in black. For information on how to complete the form please refer to the Threatened & Priority Flora Report Form (TPRF) manual on the DBCA website at http://dpaw.wa.gov.au/ under *Standard Report Forms*

TAXON: Acacia imitans **TPFL Pop. No:**

OBSERVATION DATE: 21/07/2020 **CONSERVATION STATUS:** T New population ☐

OBSERVER/S: Andrew Waters **PHONE:** 0403318284

ROLE: Ecologist **ORGANISATION:** Woodgis

DESCRIPTION OF LOCATION (Provide at least nearest town/named locality, and the distance and direction to that place):

Ninghan Station, Mount Singleton summit, near communications tower.

Reserve No:

DBCA DISTRICT: Midwest **LGA:** Shire of Yalgoo Land manager present: ☐

DATUM:
GDA94 / MGA94 ☒
AGD84 / AMG84 ☐
WGS84 ☐
Unknown ☐

COORDINATES: (If UTM coords provided, Zone is also required)
DecDegrees ☒ DegMinSec ☐ UTMs ☒
Lat / Northing: -29.465694
Long / Easting: 117.299379
ZONE:

METHOD USED:
GPS ☒ Differential GPS ☐ Map ☐
No. satellites: ___ Map used: _____
Boundary polygon captured: ☐ Map scale: _____

LAND TENURE:

Nature reserve ☐	Timber reserve ☐	Private property ☐	Rail reserve ☐	Shire road reserve ☐
National park ☐	State forest ☐	Pastoral lease ☒	MRWA road reserve ☐	Other Crown reserve ☐
Conservation park ☐	Water reserve ☐	UCL ☐	SLK/Pole _____ to _____	Specify other: _____

AREA ASSESSMENT: Edge survey ☐ Partial survey ☐ Full survey ☒ Area observed (m^2): 14,000

EFFORT: Time spent surveying (minutes): 360 No. of minutes spent / 100 m^2: ____

POP'N COUNT ACCURACY: Actual ☒ Extrapolation ☐ Estimate ☐ Count method: Actual - Individuals
(Refer to field manual for list)

WHAT COUNTED: Plants ☒ Clumps ☐ Clonal stems ☐

TOTAL POP'N STRUCTURE:	**Mature:**	**Juveniles:**	**Seedlings:**	**Totals:**
Alive				41
Dead				

Area of pop (m^2): _____
Note: Pls record count as numbers (not percentages) for database.

QUADRATS PRESENT: No. ___ Size _____ Data attached ☐ Total area of quadrats (m^2): _____

Summary Quad. Totals:				
Alive				

REPRODUCTIVE STATE: Clonal ☐ Vegetative ☐ Flowerbud ☐ Flower ☒
Immature fruit ☐ Fruit ☐ Dehisced fruit ☐ Percentage in flower: ____%

CONDITION OF PLANTS: Healthy ☒ Moderate ☐ Poor ☐ Senescent ☐

COMMENT:

THREATS - type, agent and supporting information: Eg clearing, too frequent fire, weed, disease. Refer to field manual for list of threats & agents. **Specify agent** where relevant. Rate current and potential threat impact: N=Nil, L=Low, M=Medium, H=High, E=Extreme Estimate time to potential impact: S=Short (<12mths), M=Medium (<5yrs), L=Long (5yrs+)	**Current Impact (N-E)**	**Potential Impact (L-E)**	**Potential Threat Onset (S-L)**
• Plants along and on track to summit at risk from being driven on / cleared	L	L	L
•			
•			

Please return completed form to **Species And Communities Branch** DBCA,
Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 **OR** email to: flora.data@dbca.wa.gov.au
RECORDS: Please forward to **Flora Administrative Officer**, Species and Communities Branch
Record entered by:_____ **Sheet No.:**_____ **Record Entered in Database** ❑

Department of Biodiversity, Conservation and Attractions

Threatened and Priority Flora Report Form

Version 1.3 August 2017

HABITAT INFORMATION:

LANDFORM:	ROCK TYPE:	LOOSE ROCK: (on soil surface; eg gravel, quartz fields)	SOIL TYPE:	SOIL COLOUR:	DRAINAGE:
Crest ☒	Granite ☐	0-10% ☐	Sand ☐	Red ☐	Well drained ☒
Hill ☐	Dolerite ☐	10-30% ☐	Sandy loam ☐	Brown ☐	Seasonally inundated ☐
Ridge ☐	Laterite ☐	30-50% ☐	Loam ☐	Yellow ☐	Permanently inundated ☐
Outcrop ☐	Ironstone ☐	50-100% ☐	Clay loam ☐	White ☐	Tidal ☐
Slope ☐	Limestone ☐		Light clay ☐	Grey ☐	
Flat ☐	Quartz ☐		Peat ☐	Black ☐	
Open depression ☐	Specify other:		Specify other:	Specify other:	
Drainage line ☐					
Closed depression ☐					
Wetland ☐					

Specific **Landform** Element (Refer to field manual for additional values) _____

CONDITION OF SOIL: Dry ☒ Moist ☐ Waterlogged ☐ Inundated ☐

VEGETATION CLASSIFICATION*:
Eg: 1. Banksia woodland (B. attenuata, B. ilicifolia); 2. Open shrubland (Hibbertia sp., Acacia spp.); 3. Isolated clumps of sedges (Mesomelaena tetragona)

1. Allocasuarina tessellata P1 Open Heathland
2.
3.
4.

ASSOCIATED SPECIES: Micromyrtus mucronulata P1, Micromyrtus ninghanensis P1

Other (non-dominant) spp

* Please record up to four of the most representative vegetation layers (with up to three dominant species in each layer). Structural Formations should follow 2009 *Australian Soil and Land Survey Field Handbook* guidelines – refer to field manual for further information and structural formation table.

CONDITION OF HABITAT: Pristine ☐ Excellent ☐ Very good ☒ Good ☐ Degraded ☐ Completely degraded ☐

COMMENT: Part of site cleared - 11 seedlings on tracks and disturbed areas

FIRE HISTORY: **Last Fire:** Season/Month: _____ Year: _____ **Fire Intensity:** High ☐ Medium ☐ Low ☐ No signs of fire ☒

FENCING: Not required ☒ Present ☐ Replace / repair ☐ Required ☐ Length req'd: _____

ROADSIDE MARKERS: Not required ☒ Present ☐ Replace / reposition ☐ Required ☐ Quantity req'd: _____

OTHER COMMENTS: (Please include recommended management actions and/or implemented actions - include date. Also include details of additional data available, and how to locate it.)

Previously recorded nearby plants in flowerbud

No Specimens Taken - Plants shown to Alanna Chant, Acting Environmental Officer, Midwest Region, DBCA

Report including map and photo attached

Refer to previous population records for rock/soil details

In addition to live plants, 2 dead plants onsite

11 of 41 plants on tracks and disturbed areas

DRF PERMIT/ LICENCE No: FB62000073 Note if only observing plants (i.e. no specimens or plant matieral is taken) then no permit/licence is required. For further information on permit and licening requirements see the Threatened Flora and Wildlife Licensing pages on DBCA's website. Any actions carried out under licence/permit should be recorded above in the OTHER COMMENTS section.

SPECIMEN: Collectors No: _____ WA Herb. ☐ Regional Herb. ☐ District Herb. ☐ Other: _____

ATTACHED: Map ☐ Mudmap ☐ Photo ☐ GIS data ☒ Field notes ☐ Other: _____

COPY SENT TO: Regional Office ☐ District Office ☐ Other:

Submitter of Record: Andrew Waters Role: Ecologist Signed: _____ Date: 27/07/2020

Please return completed form to **Species And Communities Branch** DBCA,
Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 **OR** email to: flora.data@dbca.wa.gov.au

RECORDS: Please forward to **Flora Administrative Officer**, Species and Communities Branch
Record entered by: _____ **Sheet No.:** _____ **Record Entered in Database** ❑

Department of Biodiversity, Conservation and Attractions

Threatened and Priority Flora Report Form

Version 1.3 August 2017

Please complete as much of the form as possible, with emphasis on those sections bordered in black. For information on how to complete the form please refer to the Threatened & Priority Flora Report Form (TPRF) manual on the DBCA website at http://dpaw.wa.gov.au/ under *Standard Report Forms*

TAXON: Acacia unguicula **TPFL Pop. No:** 1

OBSERVATION DATE: 21/07/2020 **CONSERVATION STATUS:** T New population ☐

OBSERVER/S: Andrew Waters **PHONE:** 0403318284

ROLE: Ecologist **ORGANISATION:** Woodgis

DESCRIPTION OF LOCATION (Provide at least nearest town/named locality, and the distance and direction to that place):

Ninghan Station, Mount Singleton summit, near communications tower.

Reserve No:

DBCA DISTRICT: Midwest **LGA:** Shire of Yalgoo Land manager present: ☐

DATUM: GDA94 / MGA94 ☒ AGD84 / AMG84 ☐ WGS84 ☐ Unknown ☐

COORDINATES: (If UTM coords provided, Zone is also required) DecDegrees ☒ DegMinSec ☐ UTMs ☒

Lat / Northing: -29.465382 **Long / Easting:** 117.299153 **ZONE:**

METHOD USED: GPS ☒ Differential GPS ☐ Map ☐

No. satellites: ___ Map used: _____

Boundary polygon captured: ☐ Map scale: _____

LAND TENURE:

Nature reserve ☐	Timber reserve ☐	Private property ☐	Rail reserve ☐	Shire road reserve ☐
National park ☐	State forest ☐	Pastoral lease ☒	MRWA road reserve ☐	Other Crown reserve ☐
Conservation park ☐	Water reserve ☐	UCL ☐	SLK/Pole _____ to _____	Specify other: _____

AREA ASSESSMENT: Edge survey ☐ Partial survey ☐ Full survey ☒ Area observed (m²): 14,000

EFFORT: Time spent surveying (minutes): 360 No. of minutes spent / 100 m²: _____

POP'N COUNT ACCURACY: Actual ☒ Extrapolation ☐ Estimate ☐ Count method: (Refer to field manual for list) Actual - Individuals

WHAT COUNTED: Plants ☒ Clumps ☐ Clonal stems ☐

TOTAL POP'N STRUCTURE:	Mature:	Juveniles:	Seedlings:	Totals:
Alive	1			1
Dead				

Area of pop (m²): _____

Note: Pls record count as numbers (not percentages) for database.

QUADRATS PRESENT: No. ___ Size _____ Data attached ☐ Total area of quadrats (m²): _____

Summary Quad. Totals: Alive				

REPRODUCTIVE STATE: Clonal ☐ Vegetative ☒ Flowerbud ☐ Flower ☐

Immature fruit ☐ Fruit ☐ Dehisced fruit ☐ Percentage in flower: ____ %

CONDITION OF PLANTS: Healthy ☒ Moderate ☐ Poor ☐ Senescent ☐

COMMENT:

THREATS - type, agent and supporting information: Eg clearing, too frequent fire, weed, disease. Refer to field manual for list of threats & agents. **Specify agent** where relevant. Rate current and potential threat impact: N=Nil, L=Low, M=Medium, H=High, E=Extreme Estimate time to potential impact: S=Short (<12mths), M=Medium (<5yrs), L=Long (5yrs+)	**Current Impact (N-E)**	**Potential Impact (L-E)**	**Potential Threat Onset (S-L)**
•			
•			
•			

Please return completed form to **Species And Communities Branch** DBCA,
Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 **OR** email to: flora.data@dbca.wa.gov.au

RECORDS: Please forward to **Flora Administrative Officer**, Species and Communities Branch

Record entered by: _____ **Sheet No.:** _____ **Record Entered in Database** ❑

Department of Biodiversity, Conservation and Attractions

Threatened and Priority Flora Report Form

Version 1.3 August 2017

HABITAT INFORMATION:

LANDFORM:	ROCK TYPE:	LOOSE ROCK: (on soil surface; eg gravel, quartz fields)	SOIL TYPE:	SOIL COLOUR:	DRAINAGE:
Crest ☒	Granite ☐	0-10% ☐	Sand ☐	Red ☐	Well drained ☒
Hill ☐	Dolerite ☐	10-30% ☐	Sandy loam ☐	Brown ☐	Seasonally inundated ☐
Ridge ☐	Laterite ☐	30-50% ☐	Loam ☐	Yellow ☐	Permanently inundated ☐
Outcrop ☐	Ironstone ☐	50-100% ☐	Clay loam ☐	White ☐	Tidal ☐
Slope ☐	Limestone ☐		Light clay ☐	Grey ☐	
Flat ☐	Quartz ☐		Peat ☐	Black ☐	
Open depression ☐	Specify other:		Specify other:	Specify other:	
Drainage line ☐					
Closed depression ☐					
Wetland ☐					

Specific **Landform** Element (Refer to field manual for additional values): _____

CONDITION OF SOIL: Dry ☒ Moist ☐ Waterlogged ☐ Inundated ☐

VEGETATION CLASSIFICATION*:
Eg: 1. Banksia woodland (B. attenuata, B. ilicifolia); 2. Open shrubland (Hibbertia sp., Acacia spp.) : 3. Isolated clumps of sedges (Mesomelaena tetragona)

1. Allocasuarina tessellata P1 Heathland
2.
3.
4.

ASSOCIATED SPECIES: Acacia imitans T, Micromyrtus mucronulata P1, Micromyrtus ninghanensis P1

Other (non-dominant) spp: _____

* Please record up to four of the most representative vegetation layers (with up to three dominant species in each layer). Structural Formations should follow 2009 *Australian Soil and Land Survey Field Handbook* guidelines – refer to field manual for further information and structural formation table.

CONDITION OF HABITAT: Pristine ☐ Excellent ☐ Very good ☒ Good ☐ Degraded ☐ Completely degraded ☐

COMMENT: _____

FIRE HISTORY: **Last Fire:** Season/Month: _____ Year: _____ **Fire Intensity:** High ☐ Medium ☐ Low ☐ No signs of fire ☒

FENCING: Not required ☒ Present ☐ Replace / repair ☐ Required ☐ Length req'd: _____

ROADSIDE MARKERS: Not required ☒ Present ☐ Replace / reposition ☐ Required ☐ Quantity req'd: _____

OTHER COMMENTS: (Please include recommended management actions and/or implemented actions - include date. Also include details of additional data available, and how to locate it.)

Previously recorded nearby plants in flowerbud

No Specimen Taken - Plant shown to Alanna Chant, Acting Environmental Officer, Midwest Region, DBCA

Report including map and photo attached

Refer to previous population records for rock/soil details

DRF PERMIT/ LICENCE No: FB62000073 Note if only observing plants (i.e. no specimens or plant material is taken) then no permit/licence is required. For further information on permit and licening requirements see the Threatened Flora and Wildlife Licensing pages on DBCA's website. Any actions carried out under licence/permit should be recorded above in the OTHER COMMENTS section.

SPECIMEN: Collectors No: _____ WA Herb. ☐ Regional Herb. ☐ District Herb. ☐ Other: _____

ATTACHED: Map ☐ Mudmap ☐ Photo ☐ GIS data ☒ Field notes ☐ Other: _____

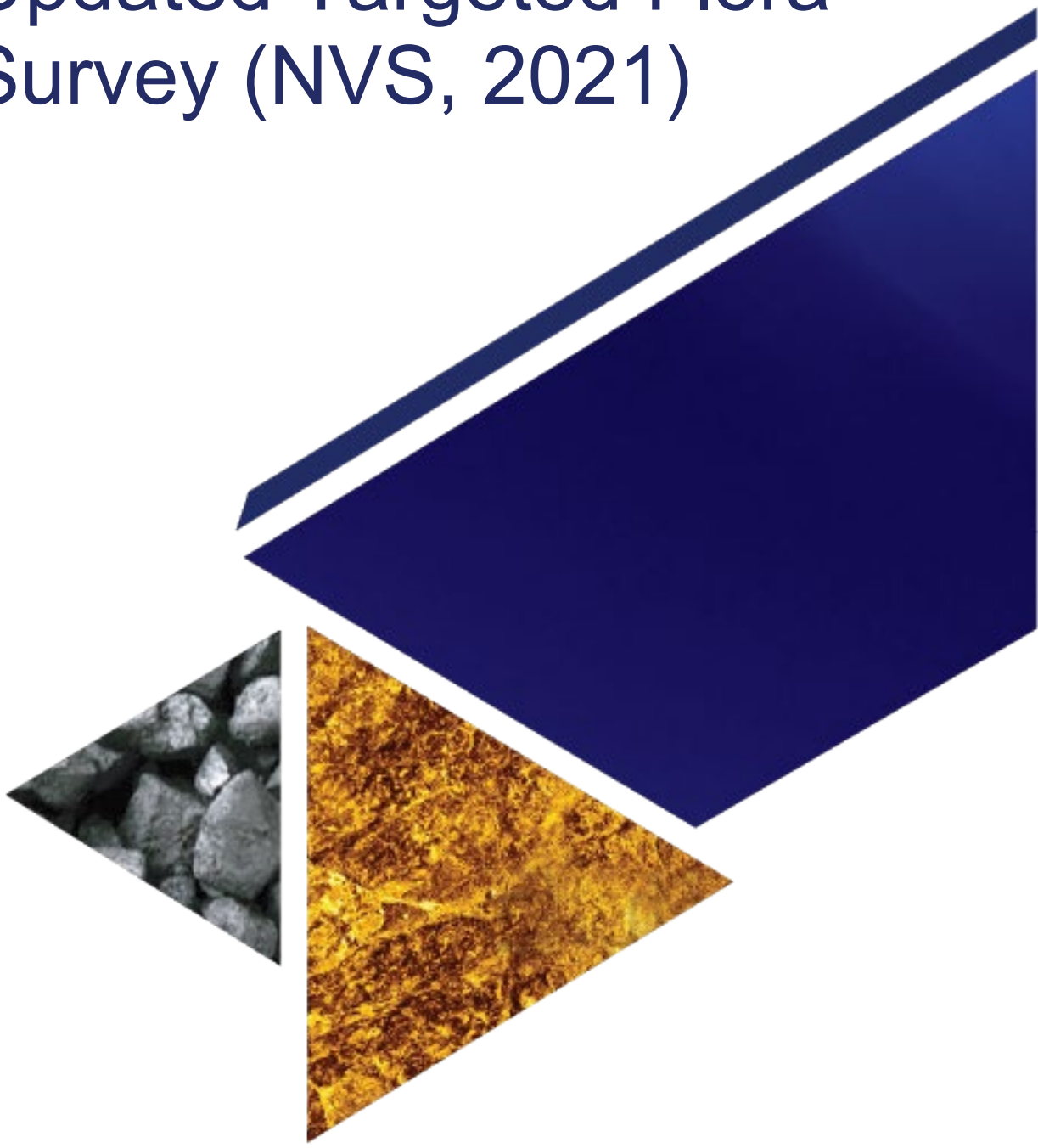
COPY SENT TO: Regional Office ☐ District Office ☐ Other: _____

Submitter of Record: Andrew Waters Role: Ecologist Signed: _____ Date: 27/07/2020

Please return completed form to **Species And Communities Branch** DBCA,
Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 **OR** email to: flora.data@dbca.wa.gov.au

RECORDS: Please forward to **Flora Administrative Officer**, Species and Communities Branch
Record entered by: _____ **Sheet No.:** _____ **Record Entered in Database** ❑

Appendix B. Updated Targeted Flora Survey (NVS, 2021)



Native Vegetation Solutions
ABN: 63 584 896 400

PO Box 41
KALGOORLIE
WA 6430

Ph: (08) 9021 5818
Mob: 0407 998 953

Siobhan Pelliccia
Manager – RPM ESG (West)
RPMGlobal
Level 2, 131 St Georges Terrace,
PERTH, WA, 6000
Email: spelliccia@rpmglobal.com

9th December 2021

TARGETED THREATENED FLORA SURVEY OF THE MOUNT SINGLETON PROJECT AREA- NOVEMBER 2021

Dear Siobhan,

GoldNet Pty Ltd (GoldNet) are proposing to install supporting solar panel infrastructure associated with their existing communications tower within Miscellaneous License L59/178. L59/178 is located on Mount Singleton, approximately 43.5 km southwest of Paynes Find in Western Australia.

A previous Targeted Threatened Flora Survey was completed by Woodgis Environmental Assessment and Management (Woodgis, 2020). Woodgis (2020) identified two Threatened Flora within the vicinity of the current solar panel installation area: *Acacia imitans* (T) and *Acacia unguicula* (T). Since this report was published, a communications tower has been installed under an Authority to Take permit from DBCA, which allowed the accidental disturbance to the Threatened Flora.

Native Vegetation Solutions (NVS) was commissioned by GoldNet to complete a Targeted Threatened Flora Survey in surrounding native vegetation near the area intended for solar panel installation. The solar panel installation area is approximately 300 m^2 and the survey area surrounded this area within 25 metres. This survey will provide an update to existing locations of Threatened Flora, specifically within the close vicinity of the proposed solar panel installation area.

NVS conducted the field assessment on the 18th November 2021. Two hours in total were spent covering the entire survey area on foot. During field work NVS confirmed the identity of *Acacia imitans* (T) in native vegetation surrounding the solar panel installation area, however no Threatened Flora were recorded in the area proposed for the solar panel installation.

A total of 14 plants of *Acacia imitans* (T) were recorded within 25 metres of the solar panel installation area, and locations are depicted in Appendix 1.

No plants of *Acacia unguicula* (T) were recorded in the survey area.

An IBSA Data Package has been provided as a separate attachment including the survey area, GPS Tracklog of the field survey and the locations of recorded *Acacia imitans* (T).

If you have any queries regarding this work completed, please do not hesitate to contact me on the above-mentioned contact details.

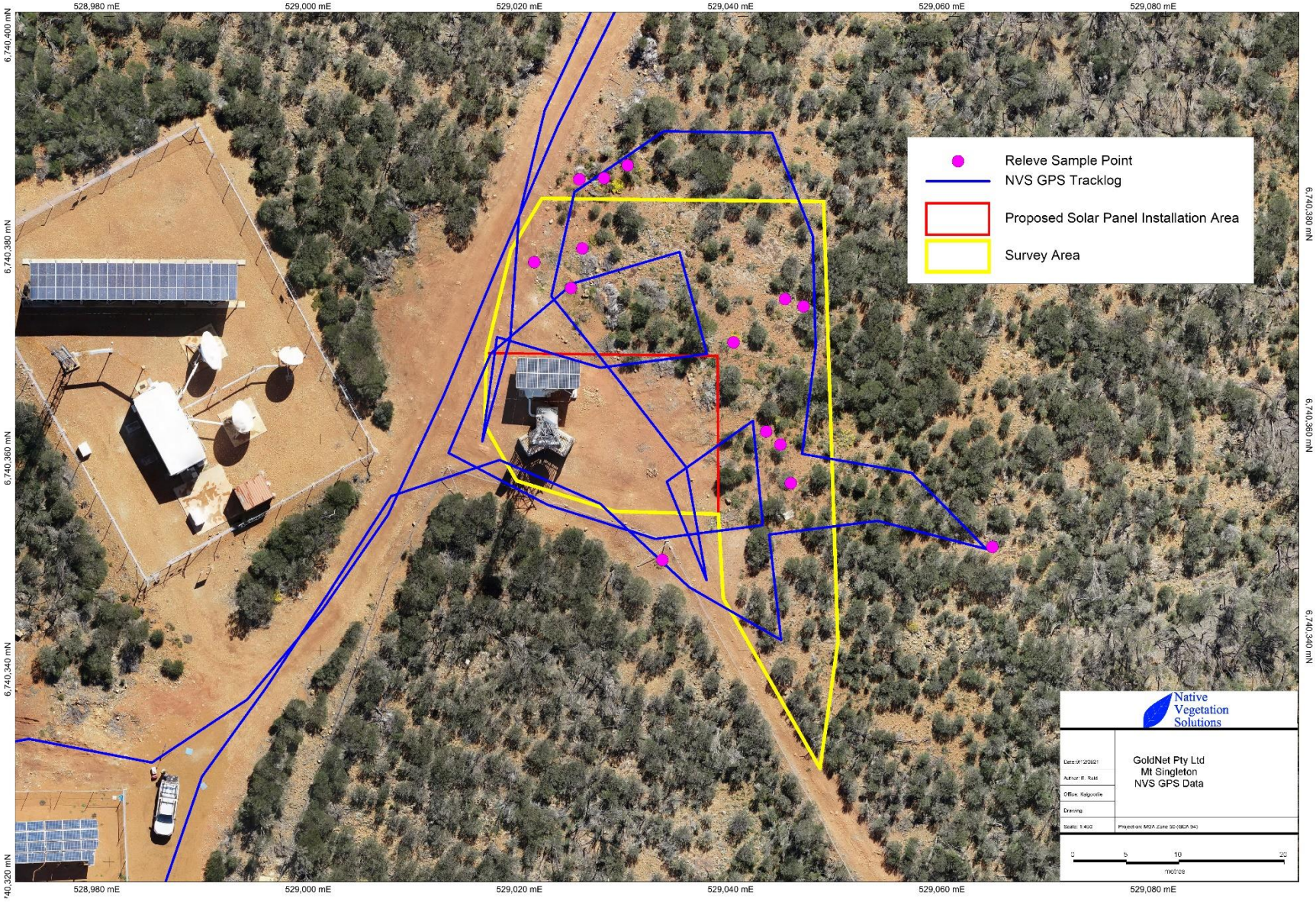
Kind Regards

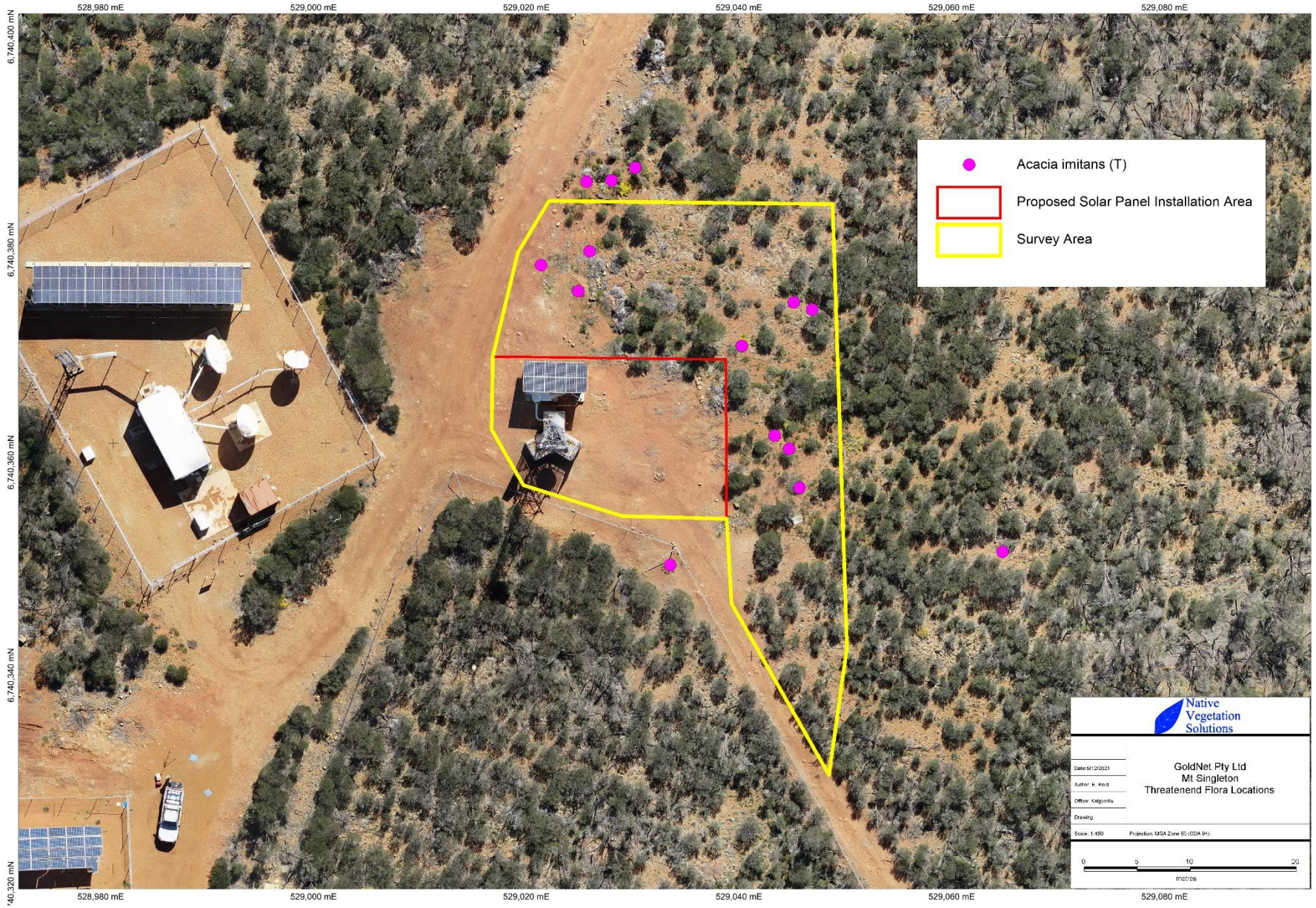
Eren Reid
Director/Botanist

References

Woodgis, (2020), *Mount Singleton Targeted Flora Survey*, unpublished report by Woodgis Environmental Assessment and Management for GoldNet.

Appendix 1: Maps


528,980 mE
529,000 mE
529,020 mE
529,040 mE
529,060 mE
529,080 mE
6,740,400 mN
6,740,380 mN
6,740,360 mN
6,740,340 mN
6,740,320 mN
Releve Sample Point
NVS GPS Tracklog
Proposed Solar Panel Installation Area
Survey Area
Native Vegetation Solutions
GoldNet Pty Ltd
Mt Singleton
NVS GPS Data
Author: R. Kidd
Office: Kalgoorlie
Drawing:
Scale: 1:492
Projection: MGA Zone 50 (GDA 94)
0
5
10
20
metres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529,020 mE
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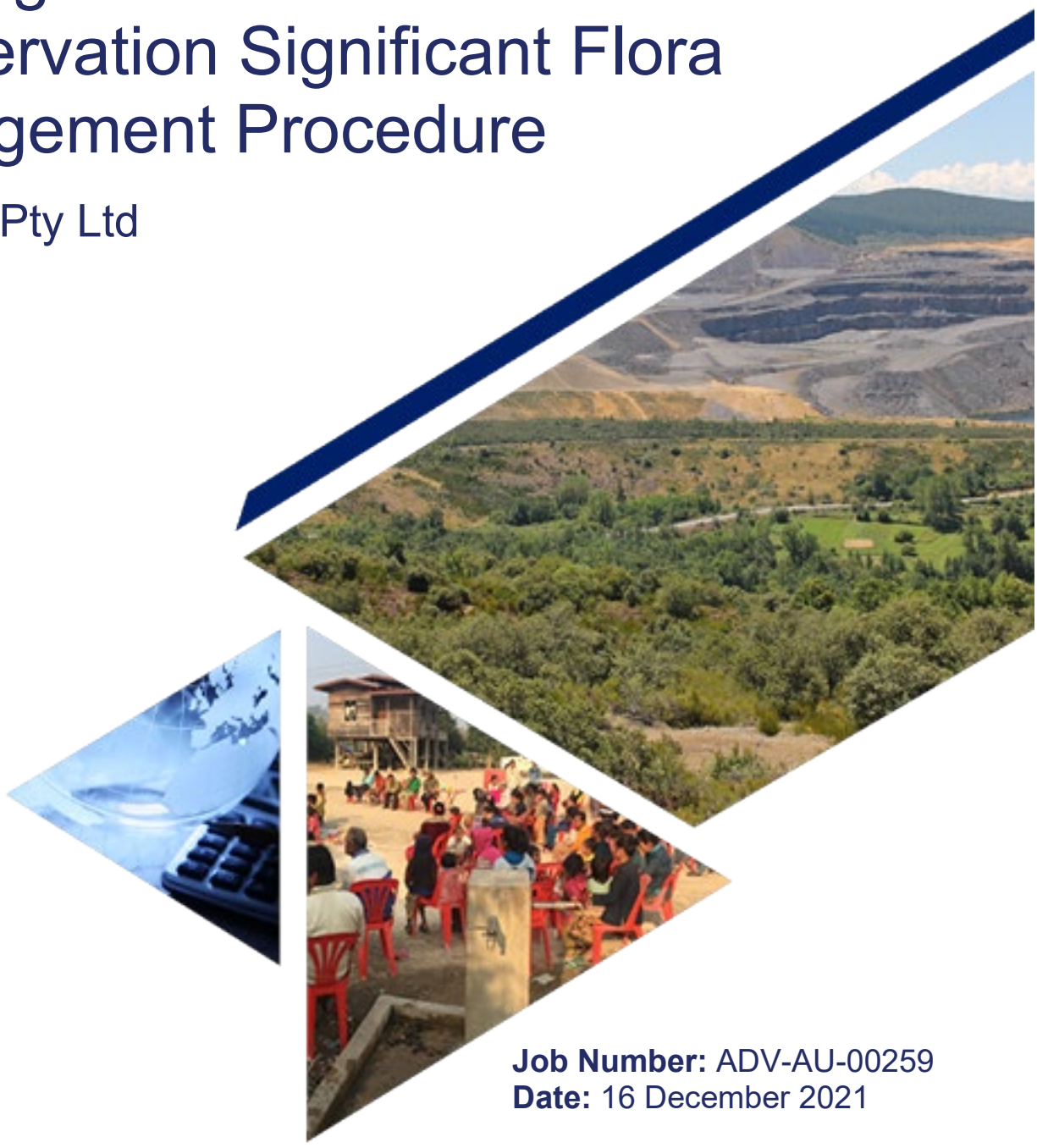
529,080 mE
6,740,400 mN
6,740,380 mN
6,740,360 mN
6,740,340 mN
6,740,320 mN
Acacia imitans (T)
Proposed Solar Panel Installation Area
Survey Area
Native Vegetation Solutions
GoldNet Pty Ltd
Mt Singleton
Threatenend Flora Locations
Drawing
0
5
10
20
metres

Appendix C. Conservation Significant Flora Management Procedure

RPMGLOBAL

Mt Singleton Communications Conservation Significant Flora Management Procedure

GoldNet Pty Ltd



Job Number: ADV-AU-00259
Date: 16 December 2021

DOCUMENT CONTROL SHEET

Client	
GoldNet Pty Ltd	
Report Name	**Date**
Mt Singleton Communications Conservation Significant Flora Management Procedure	16 December 2021
Job No.	**Revision No.**
ADV-AU-00259	3
File Name:	
2021 12 16_Flora Management Procedure Stage 2 Expansion	

Authorisations				
Name		**Position**	**Signature**	**Date**
Prepared By:	Erin Lee	Environmental Advisor		13/12/2021
Direct Supervision:	N/A			
Reviewed By	Craig Roberts	Principal Environmental Advisor		14/12/2021
Approved By	Craig Roberts	Principal Environmental Advisor		

Distribution				
Organisation	**Recipient**	**No. Of Hard Copies**	**No. Of Electronic Copies**	**Comment**
GoldNet Pty Ltd	Shaun Morgan	0	1	

IMPORTANT INFORMATION ABOUT THIS DOCUMENT

AUTHOR – This Supporting Document was prepared for and on behalf of Goldnet Pty Ltd ("Goldnet") by RPM Advisory Services Pty Ltd ("RPM") in accordance with the terms of its engagement.

RPM has prepared this Supporting Document having regard the particular needs and interests of Goldnet, and in accordance with Goldnet's instructions.

RPM did not draft this Supporting Document having regard to any other person or project's particular needs, or interests and the Supporting Document may not be sufficient, fit or appropriate for any use beyond what Goldnet requires.

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1. Background

The Mt Singleton Communications Site Project is located approximately 43 km southwest of the town of Paynes Find in Western Australia on L59/178 that an area of 0.423 ha (**Figure 1-1**). It is situated within the Ninghan Station pastoral lease, Yalgoo Shire and Land District of Ninghan.

GoldNet Pty Ltd (GoldNet) installed an 18 m high communications tower and solar panel bank in October 2020 within an existing cleared area on Mt Singleton. The communications tower is used to support Silver Lake Resources' Rothsay Project and other mining centres within the area. Stage 1 of the solar panel bank extension was approved on 29 November 2021.

Access to the tower is via pre-existing access tracks. Mt Singleton sits at an altitude of approximately 673 m above sea level. The communications tower infrastructure currently occupies an area of 0.01 ha. This is proposed to be expanded to accommodate additional solar panels to support increased communication requirements in the area. Stage 2 of the expansion will require 0.0052 ha of native vegetation clearing.

As per tenement endorsement 11, a '*Rare Flora site/s (including Rare Flora Site/s 89932) declared under the Biodiversity Conservation Act 2016'*, exists within L59/178. This Environmentally Sensitive Area (ESA) contains several conservation significant species i.e., Threatened and priority flora species, within a fenced area. Threatened flora species have also been recorded in the native vegetation adjacent to the communications tower. This Conservation Significant Species Management Procedure contains management measures which are designed to provide protection of these Priority and Threatened flora species during installation of the solar panel bank expansion and surrounding fence.

GoldNet commissioned a Botanist from WoodGIS to undertake a targeted flora survey in July 2020 of the Project area in association with the Department of Biodiversity, Conservation and Attractions (DBCA). This flora survey identified the distribution and abundance of conservation significant species. GoldNet has been in regular contact with DBCA and the Department of Mines, Industry Regulation and Safety (DMIRS) regarding conservation significant species and relevant regulatory approvals for the Project.

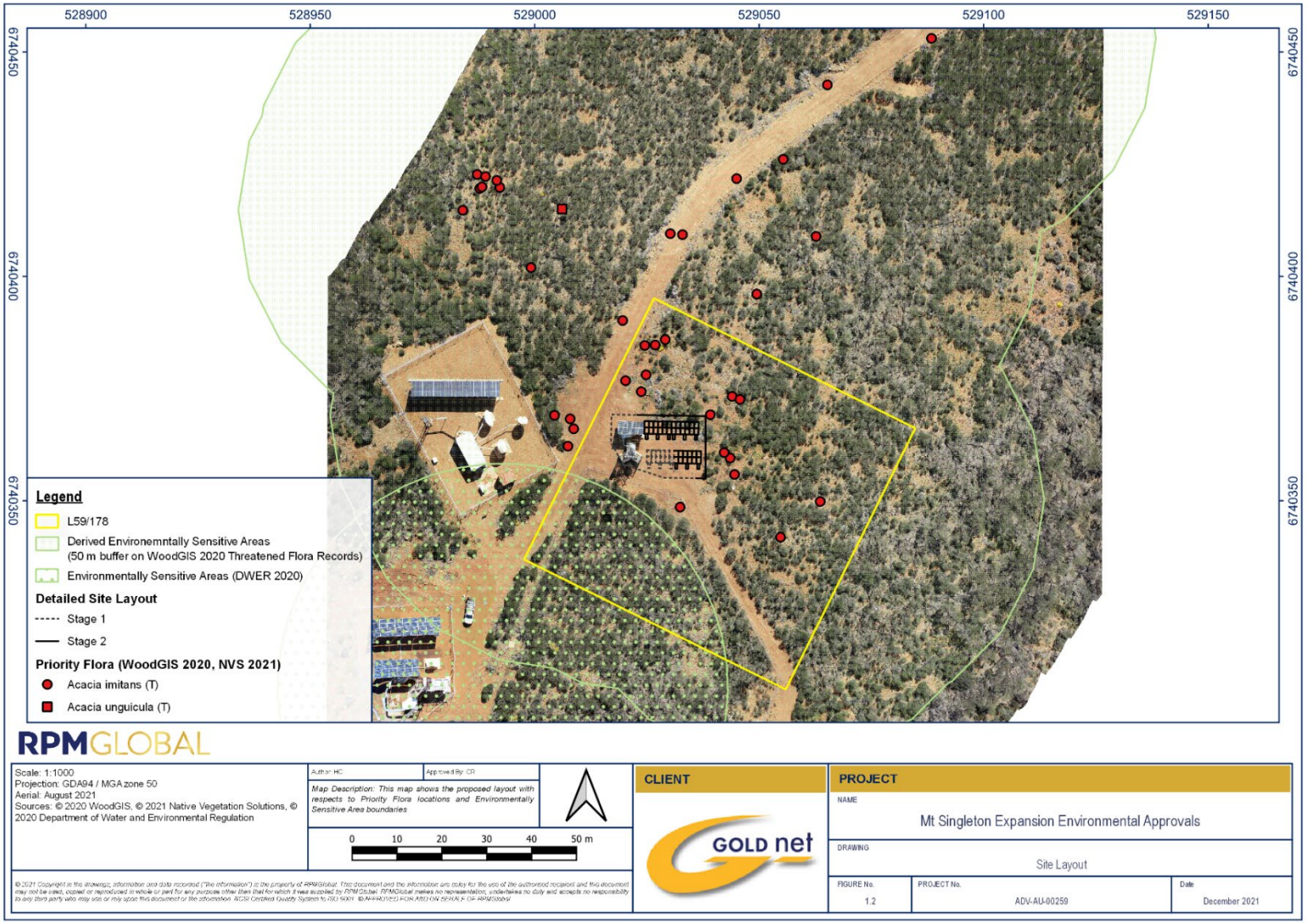
An updated targeted survey of the area scheduled for clearing as part of the Stage 2 expansion was undertaken by Native Vegetation Solutions (NVS) in November 2021. This survey confirmed reports from the site construction employees that two of the identified *Acacia imitans* seedlings were absent from the location identified by WoodGIS (2020) and are considered deceased.

The contact representative for this Management Procedure is:

Name: Mr Shaun Morgan
Phone: 61 08 6149 4101
Mobile: 0407 199 968
Fax: 61 08 6149 4141
Address: 11 Murphy St, O'Connor, WA 6163
Mail: PO Box 2080, Kardinya WA 6163
Email: smorgan@gold.net.au

Figure 1-1 Location Plan

Figure 1-2: Site Layout



2. Conservation Significant Flora Species

2.1 Desktop Search

A NatureMap search was undertaken 21 September 2021 for the Project area at a central coordinate of 29° 27' 57" S, 117° 17' 57" E with a 5 km buffer zone (DBCA 2021a). The results indicated the following Threatened and priority flora species could potentially be present within the Project area:

- *Acacia imitans* – Threatened.
- *Acacia unguicula* – Threatened.
- *Hybanthus cymulosus* – Threatened.
- *Acacia karina* – Priority 1.
- *Allocasuarina tessellata* – Priority 1 (Listed as Priority 3 on Florabase (DBCA 2021b)).
- *Grevillea scabrida* – Priority 1 (Listed as Priority 3 on Florabase (DBCA 2021b)).
- *Micromyrtus mucronulata* – Priority 1.
- *Micromyrtus ninghanensis* – Priority 1.
- *Grevillea subtiliflora* – Priority 3.
- *Thryptomene* sp. Wandana (M.E. Trudgen MET 22016) – Priority 3.

2.2 Flora Survey

A targeted flora survey over the Project area was undertaken in July 2020. The targeted flora survey identified two threatened species (*Acacia imitans* and *Acacia unguicula*) and four priority species (*Allocasuarina tessellata* P1, *Grevillea scabrida* P1, *Micromyrtus mucronulata* P1 and *Micromyrtus ninghanensis* P1) in the immediate vicinity of the Project area. These species are shown in **Table 2-1.**

A secondary survey was undertaken by Native Vegetation Solutions (NVS) in November 2021 focusing on the distribution of the threatened species *Acacia imitans* and *Acacia unguicula*. A total of 14 plants of *Acacia imitans* were identified within the survey area, however no plants were located within the proposed footprint of the extension to the communications tower. The were no plants of Acacia unguicula recorded within the survey area (NVS, 2021).

Table 2-1 Conservation Significant Flora Species of the Project Area

Family Name	Species Name	Conservation Listing Status (as of September 2021)	Species Description	Photo
Fabaceae	*Acacia imitans*	Threatened	A low, dense, spreading, intricate and prickly shrub. Grows 0.2 - 1 m high, to 2 m wide. Flowers are yellow, flowering from August to September. Growing in areas of rocky red loam and rocky hills. (DBCA 2021b)	
Fabaceae	*Acacia unguicula*	Threatened	Erect, open, pungent shrub. Grows 0.75 - 2(-3) m high. Flowers are yellow, flowering from August to September. Growing in areas of rocky clay or loam, upper slopes and summit of mountain. (DBCA 2021b)	
Violaceae	*Hybanthus cymulosus*	Threatened	Perennial, herb. Grows 0.15 - 0.9 m high. Flowers are blue-purple, flowering in May to July. Growing in areas of clay, rocky loam clay. (DBCA 2021b)	
Fabaceae	*Acacia karina*	Priority 1	Straggling, woody shrub. Grows to 1.5 m high. Growing in red-brown silty clay loam with ironstone pebbles, banded ironstone, shalestone and rocky slopes. (DBCA 2021b)	
Casuarinaceae	*Allocasuarina tessellata*	Priority 1 (Listed as Priority 3 on Florabase (DBCA 2021b))	Dioecious shrub or tree. Grows 3 - 5 m high. Growing in loam, sand, greenstone and dolerite boulders. (DBCA 2021b)	

Proteaceae	*Grevillea scabrida*	Priority 1 (Listed as Priority 3 on Florabase (DBCA 2021b))	Densely and irregularly branched shrub. Grows 0.6 - 1.5 m high. Flowers are green-white/green-yellow/white, flowering in July. Growing in red clay loam, stony loam. (DBCA 2021b)	
Myrtaceae	*Micromyrtus mucronulata*	Priority 1	Grows in sandy soils. (DBCA 2021b)	
Myrtaceae	*Micromyrtus ninghanensis*	Priority 1	Low and spreading shrub. Grows to 0.4 m high. Flowers are white, flowering in September to October. Growing in reddish or brown clay, greenstone, granite, hills. (DBCA 2021b)	
Proteaceae	*Grevillea subtiliflora*	Priority 3	Erect to spreading shrub. Grows 1 - 2.5 m high. Flowers are white, flowering in April or July to September. Growing in red-brown loam. (DBCA 2021b)	
Myrtaceae	*Thryptomene* sp. Wandana (M.E. Trudgen MET 22016)	Priority 3	Shrub. Grows 0.75 to 1.5 m high. Flowers are pink, white and red, flowering from July to September. Growing in yellow sand, red clay and sand dunes. (GHD 2012)	

**Conservation Code Definitions (DBCA 2019)*

T: Threatened species

Listed by order of the Minister as Threatened in the category of critically endangered, endangered or vulnerable under section 19(1), or is a rediscovered species to be regarded as threatened species under section 26(2) of the *Biodiversity Conservation Act 2016* (WA) (BC Act).

Threatened flora is that subset of 'Rare Flora' listed under schedules 1 to 3 of the Wildlife Conservation (Rare Flora) Notice 2018 for Threatened Flora.

Priority 1: Poorly known species

Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g., agricultural, or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.

Priority 3: Poorly known species

Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

**Photos referenced from Florabase 2021b and WoodGIS 2020.

3. Management Measures

The management measures presented in

Table 3-1 will be implemented by GoldNet during installation of the solar panel bank extension and fence to minimise potential impacts on conservation significant flora species (which include Threatened and Priority flora species)

Table 3-1 Management Measures to be Implemented

Aspect	Management Measure
Site Preparation and Installation	▪ Field personnel will be familiar with the conservation significant flora species identified in this Management Procedure. ▪ No clearing of Threatened species will be undertaken as part of the installation of the communications tower. ▪ Demarcating, with pegs and flagging tape, the *Acacia imitans* individual adjacent to northeast corner of the proposed fence. ▪ Clearing of native vegetation will be limited to the area marked in **Error! Reference source not found.**. ▪ All vehicles and equipment will be free of weeds and seeds prior to mobilisation to site. ▪ Existing roads, tracks and cleared areas will be utilised. ▪ The designated installation site will be clearly flagged and delineated in the field. ▪ A toolbox meeting will be held between all field personnel to ensure everyone is aware of the designated installation site, conservation significant flora species and any areas that need to be avoided.
Hydrocarbon Management	▪ All vehicles and other equipment will be regularly maintained to minimise the chance of leaks and breakdown related spills. ▪ Spill response kits and fire extinguishers will be available in all vehicles and all personnel will be trained in emergency response. ▪ Any spills will be contained and cleaned-up with contaminated material removed off site for disposal to an approved waste facility. ▪ Environmental incidents will be reported to the Project Manager and to the relevant regulatory agency as required.
Waste Management	▪ All rubbish generated on site will be placed in appropriate bags/containers within vehicles and removed offsite for disposal to an approved waste facility.
Dust	▪ Vehicles will travel at low speeds, to minimise potential generation of dust.

4. References

- Department of Biodiversity, Conservation and Attractions (DBCA) (2019). *Conservation Codes for Western Australian Flora and Fauna.* https://www.dpaw.wa.gov.au/images/documents/plants-animals/threatened-species/Listings/Conservation%20code%20definitions.pdf
- Department of Biodiversity, Conservation and Attractions (DBCA) (2021a). *NatureMap.* https://naturemap.dbca.wa.gov.au/
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- GHD (2012). *Main Roads Western Australia Report for Northwest Coastal Highway SLK 145.6 Targeted Flora and Fauna Survey*. https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Clearing_Permit_Annual_Reports/CPS_818/2012/Mid_West/North_West_Coastal_Hwy_Material_Source_SLK_145.8/Biological_Survey.PDF
- Native Vegetation Solutions (NVS) (2021). *Targeted Threatened Flora Survey of the Mount Singleton Project Area – November 2021.* An unpublished report for Goldnet Pty Ltd.
- Woodgis (2020). *Mount Singleton Targeted Flora Survey.* An unpublished report for GoldNet Pty Ltd.

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