Willowdale Targeted Flora Survey – Spring 2023

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Template 2.8.1

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Abbreviations

Abbreviation	Description
Alcoa	Alcoa of Australia Limited
BAM Act	State Biosecurity and Agriculture Management Act 2007
BC Act	State Biodiversity Conservation Act 2016
BoM	Bureau of Meteorology
DBCA	Department of Biodiversity, Conservation and Attractions
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DP	Declared Pest
DPIRD	Department of Primary Industries and Regional Development
DWER	Department of Water and Environmental Regulation
ELA	Eco Logical Australia
EPA	Environmental Protection Authority
EP Act	State Environmental Protection Act 1986
EPBC Act	Commonwealth Environment Protection and Biodiversity Conservation Act 1999
ESA	Environmentally Sensitive Area
IBRA	Interim Biogeographic Regionalisation for Australia
JAF01	Northern Jarrah Forest IBRA subregion
MMP	Mining and Management Program
PDWSA	Public Drinking Water Source Area
PMST	Protected Matters Search Tool
TEC	Threatened Ecological Community
WAH	Western Australian Herbarium
WoNS	Weed of National Significance

Executive Summary

Eco Logical Australia (ELA) was engaged by Alcoa of Australia Limited (Alcoa) to undertake pre-clearance flora surveys in the Larego region of Willowdale mine. The pre-clearance flora surveys comprise Threatened and Priority Flora and Key Weed species surveys conducted over three survey periods (Winter/Spring 2023, Summer/Autumn 2024 and Winter/Spring 2024). The results of these surveys will be used to: amend conceptual clearing alignments to avoid significant flora and vegetation; create management plans to ensure any identified Key Weeds are not spread; inform translocation and environmental management plans as required; and assist Alcoa in preparing its annual Mining and Management Program submission to the State's Mining and Management Program Liaison Group.

A total of 131 individual survey areas (the 'project area') were proposed to be covered in the Spring 2023 survey period, with total area of 818.5 ha. This technical report summarises results of the desktop assessment and Spring 2023 field survey and defines the conservation significant and introduced flora values of the project area.

A comprehensive desktop assessment was undertaken to assess the potential presence of conservation significant flora species listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), the State *Biodiversity Conservation Act 2016* (BC Act) and by Department of Biodiversity, Conservation and Attractions (DBCA). Prior to the field survey, two conservation significant flora species were considered as Likely to occur within the project area, namely *Actinotus repens* and *Netrostylis* sp. Blackwood River (A.R. Annels 3043; both listed as P3 by DBCA). A total of 20 species were considered to have Potential to occur and 54 species were assessed as Unlikely to occur.

The pre-clearance flora field survey was conducted by four personnel over 11 days from 22 to 27 October and 30 October to 03 November 2023 in accordance with the EPA *Technical Guidance: Flora and Vegetation Surveys for Environmental Impact Assessment* (2016). A total of 65 survey areas (comprising 801.0 ha) out of the proposed 131 survey areas (comprising 818.5 ha) were surveyed in the Spring 2023 field survey. All of the 38 Priority 1 survey areas (comprising 456.3 ha) and a total of 27 Priority 2 survey areas (comprising 344.7 ha) were surveyed in Spring 2023. Only 17.5 ha of Priority 2 survey areas (66 areas) remain to be surveyed. ELA will survey the 66 uncompleted areas in the Summer/Autumn 2024 and/or Spring 2024 survey periods.

No Threatened flora species listed under the EPBC Act or the BC Act were recorded within the project area.

Three Priority flora species listed by DBCA were recorded within the project area, namely: *Netrostylis* sp. Nannup (P.A. Jurjevich 1133), listed as P1 by DBCA; *Grevillea prominens*, listed as P3 by DBCA; and *Senecio leucoglossus*, listed as P4 by DBCA. One individual *Netrostylis* sp. Nannup (P.A. Jurjevich 1133) plant was recorded at one point location within survey area LR23_23. A total of 11 *Grevillea prominens* plants were recorded at 11 point locations within eight survey areas, with points generally occurring in the north and east of the project area. *Senecio leucoglossus* was broadly distributed across eastern and southern portions of the project area, with a total of 2,063 individual plants recorded at 348 point locations across 20 survey areas.

One flora species recorded within the project area, *Boronia stricta*, represented a northeast range extension of approximately 125 km. A total of 30 individual *B. stricta* plants were recorded across five point locations in survey area LR23_18, situated in the south of the project area.

Following the field survey, 69 of the 76 conservation significant flora species identified from the desktop assessment as possibly occurring were considered Unlikely to occur with the project area. This assessment is based on presence or absence of suitable habitat for the species, proximity to previous recent records, sufficient searches for the species and detectability of the species. Four conservation significant flora species were considered to have Potential to occur within the project area, namely: *Hibbertia acrotoma*, listed as P1 by DBCA; *Stylidium korijekup*, listed as P2 by DBCA; *Actinotus repens*, listed as P3 by DBCA; and *Eucalyptus* x *graniticola*, listed as P4 by DBCA.

Two Key weed species were recorded during the field survey, namely Blackberry (**Rubus* sp.) and Arum lily (**Zantedeschia aethiopica*). Blackberry is listed under the *Biosecurity and Agriculture Management Act 2007* as a Declared Pest and as a Weed of National Significance. Approximately 310 Blackberry plants were recorded at 31 points within the Hoffman Mill townsite Reserve survey area, and thickly infested both sides of the existing watercourse. One individual Arum lily plant was recorded within the same survey area.

1. Introduction

1.1. Project background

Alcoa of Australia Limited's (Alcoa) Western Australian mining operations includes the Willowdale bauxite mine, located in Alcoa's Mining Lease 1SA, east of Waroona, Western Australia. Alcoa has approval to mine within Mining Lease 1SA subject to submitting draft five-year mine plans and associated environmental management programmes known as the Mining and Management Program (MMP) to the State's Mining and Management Program Liaison Group on an annual basis. Alcoa has committed to undertaking pre-clearance ecological surveys for the Willowdale Mine (Larego region) as part of its MMP assessment.

Eco Logical Australia (ELA) was engaged by Alcoa to undertake pre-clearance flora surveys in the Larego region of Willowdale mine. The pre-clearance flora surveys comprise Threatened and Priority Flora and Key Weed species (Weeds of National Significance [WoNS] and Declared Pest plants [DP]) surveys conducted over three survey periods (Winter/Spring 2023, Summer/Autumn 2024 and Winter/Spring 2024). The results of these surveys will be used to: amend conceptual clearing alignments to avoid significant flora and vegetation; create management plans to ensure any identified WONS or DP and invasive weeds are not spread; inform translocation and environmental management plans as required; and assist Alcoa in preparing its MMP submission.

A total of 131 individual survey areas, comprising 38 Priority 1 areas and 93 Priority 2 areas, were proposed to be covered in the Spring 2023 survey period (Figure 1). Priority 1 areas include 2024 MMP submission areas, and Priority 2 areas include 2025 MMP submission areas. These survey areas are henceforth referred to as the 'project area', with total area of 818.5 ha (456.3 ha of which are Priority 1 and 362.2 ha are Priority 2). Survey areas are listed in Appendix A.

This technical report summarises results of the desktop assessment and Spring 2023 field survey and defines the conservation significant and introduced flora values of the project area.

1.2. Scope of works

This report addresses the Spring 2023 items in the Scope of Works listed below:

- A desktop assessment to determine the likelihood of finding threatened and priority species during different flowering seasons
- Field surveys to determine the presence and location of Threatened and Priority flora species and Key Weed species (WoNS, DP)
- Preparation of a technical survey report
- Provision of all spatial data recorded during the field surveys

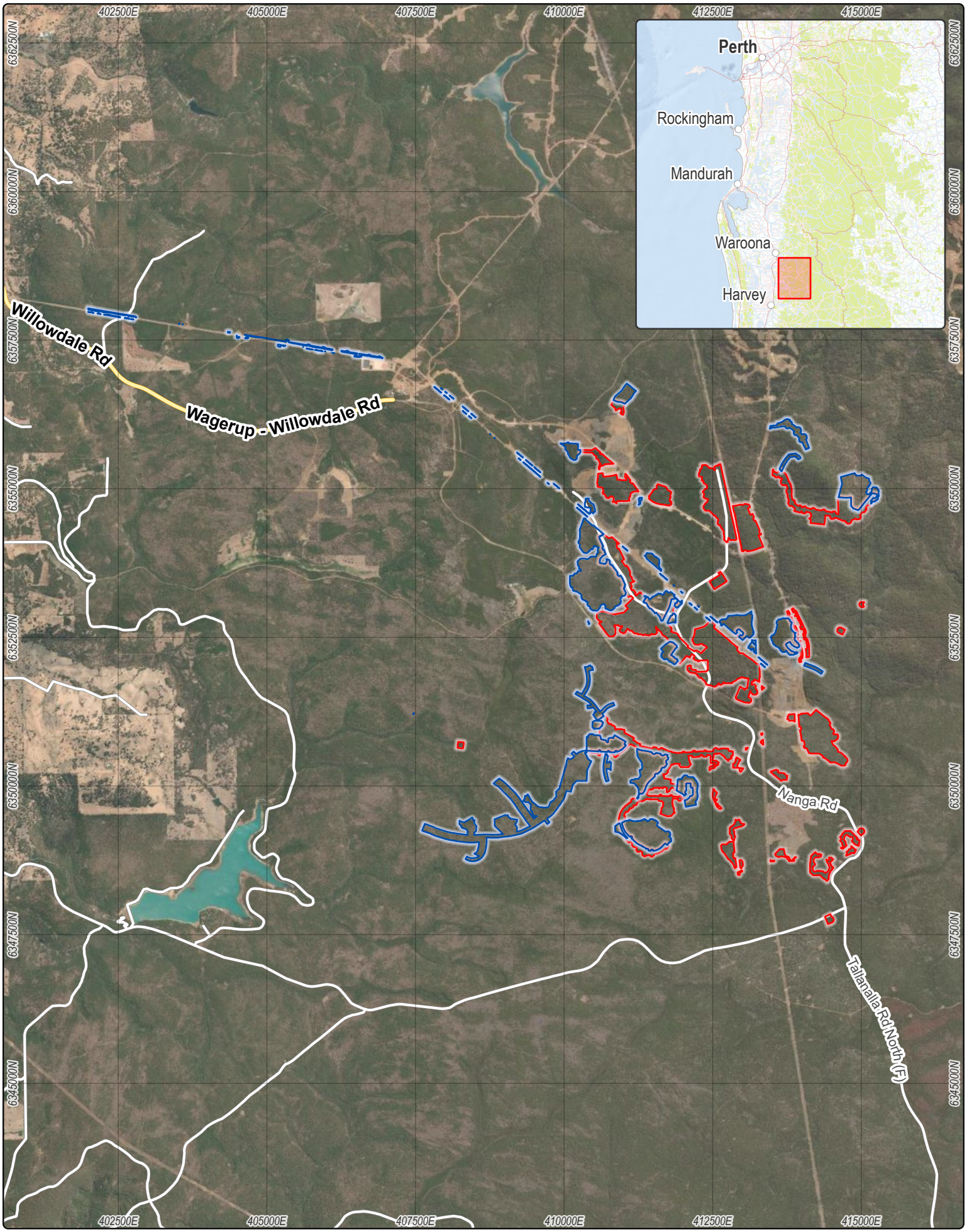

Figure 1: Project overview

Survey areas

- Priority 1
- Priority 2

N

0 0.75 1.5 3

Kilometres

Datum/Projection:
AGD 1984 AMG Zone 50

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2. Environmental setting

2.1. Bioregion

The Interim Biogeographic Regionalisation for Australia (IBRA) currently classifies 89 bioregions across Australia, based on a range of biotic and abiotic factors such as climate, vegetation, fauna, geology and landform (Thackway and Cresswell 1995; Department of Climate Change, Energy, the Environment and Water [DCCEEW] 2023a). These bioregions are currently further refined into 419 subregions representing more localised and homogenous geomorphological units in each bioregion (DCCEEW 2023a). IBRA divides Western Australia into 26 biogeographic regions and 53 subregions based on dominant landscape characteristics of climate, lithology, geology, landform and vegetation.

The project area is located in the Jarrah Forest bioregion, and more specifically the Northern Jarrah Forest subregion (JAF01). JAF01 is described as a plateau characterised by Jarrah-Marri forest on laterite gravels, woodlands of Wandoo - Marri on clayey soils in the east, *Agonis* shrublands on eluvial and alluvial deposits and Jarrah forests in a mosaic with a variety of species-rich shrublands in areas of Mesozoic sediments (Williams and Mitchell 2001).

2.2. Climate

The project area has a warm, Mediterranean climate with hot dry summers and mild wet winters (Williams and Mitchell 2001). Based on climate data from the nearby Bureau of Meteorology (BoM) Mt William weather station (station number 109501, rainfall data 2004-present, located less than 1 km from the conveyor in the west of the survey area), the project area receives an annual average rainfall of 1159 mm, with most of the rainfall occurring during the months of June, July and August (BoM 2023a; Figure 2). In the 12 months preceding the October-November 2023 field survey, the project area received a total of 1129 mm of rainfall, which is very similar to the long-term average (BoM 2023a). A total of 316 mm of rainfall was recorded in the three months prior to the field survey, which is lower than the long-term average for the same period (414 mm; BoM 2023a).

Temperature data for the project area was available from the Dwellingup weather station (station number 9538, temperature data 1935-present, located approximately 26 km north of the project area). Mean maximum air temperatures of the survey area range from 31.0°C in January to 15.8°C in July, while mean minimum temperatures of the survey area range from 15.4°C in February to 5.6°C in July (BoM 2023a; Figure 2).

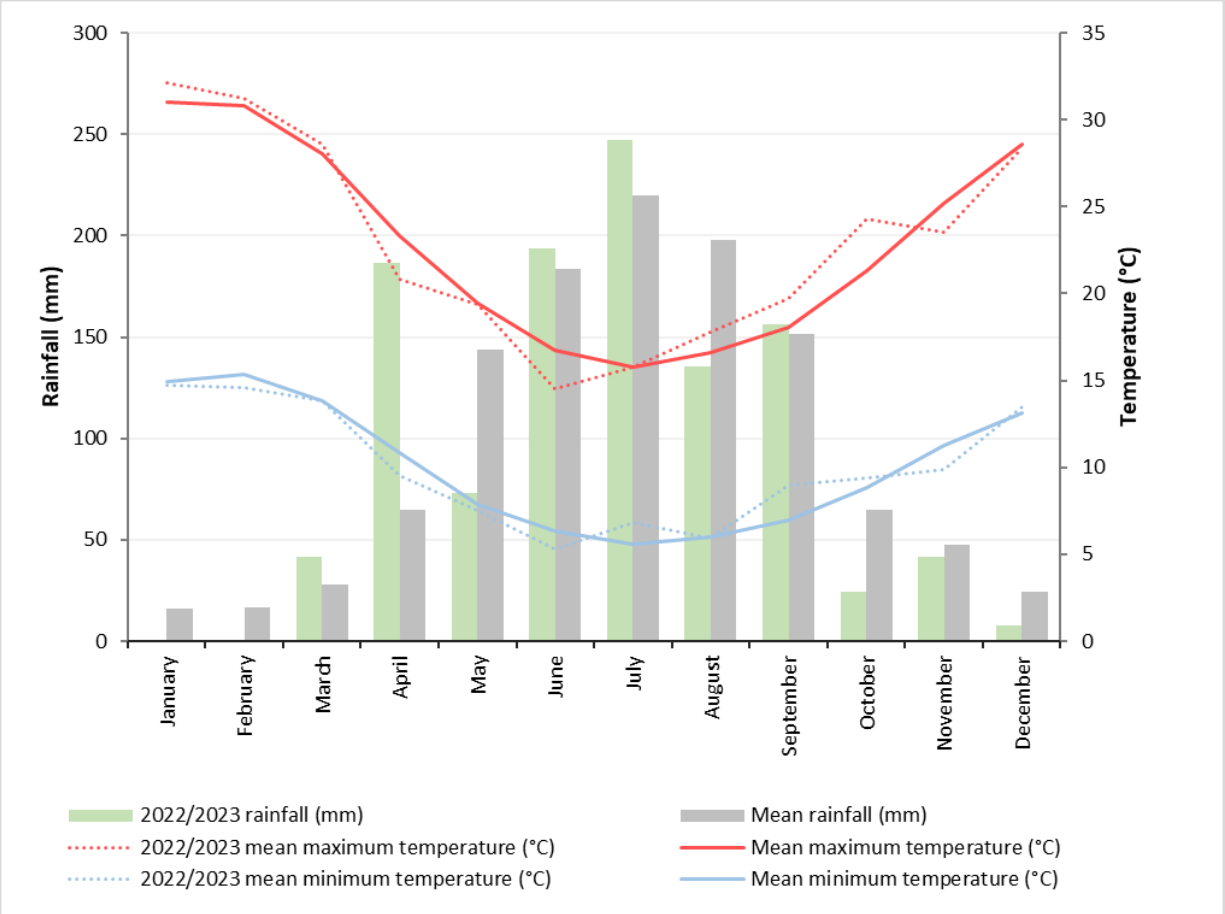


Figure 2: Climate data for the project area

2.3. Geology, landforms and soils

Soil-landscape mapping prepared by the Department of Primary Industries and Regional Development (DPIRD), provides an inventory and condition survey of lands at a 1: 250,000 scale (DPIRD 2022). The majority of the project area is situated on the Darling Plateau system, which comprises a lateritic plateau with gravelly soils and Jarrah-marri-wandoo forest and woodland (817.2 ha; 99.8% of the project area; Figure 3). The Murray Valleys System, which comprises deeply incised valleys with red loamy earths, shallow duplexes and rock outcrop and Jarrah-marri-wandoo forest and woodland with mixed shrubland is mapped over the heads of valleys in the west of the project area (1.5 ha; 0.2% of the project area; Figure 3).

Two soil units have been mapped across the project area, namely JZ1 and Mw31 (Australian Soil Resource Information System 2023). The soils of JZ1 underlie most of the project area (816.4 ha; 99.8% of the project area) and are underlain by a dissected plateau with strongly undulating relief and some moderately incised valleys. Soils are characterised by lateritic gravels and block laterite, with the chief soils being ironstone gravels with sandy and earthy matrices (DPIRD 2022). Unit Mw31 underlies the western portion of the conveyor (1.3 ha; 0.2% of the project area) and comprises deeply incised, steep scarp and valley side slopes of the Darling scarp and its more deeply incised tributary valleys; chief soils are red earths on the colluvial slope deposits, with massive rock outcrops a feature (DPIRD 2022).

2.4. Regional vegetation

Vegetation type and extent have been mapped at a regional scale by Beard (1979) who categorised vegetation into broad vegetation associations. Based on this mapping at a scale of 1:250,000, the DPIRD has compiled a list of vegetation extent and types across Western Australia (Shepherd et al. 2002).

There is one pre-European vegetation association mapped across the project area, namely West Darling 3, which is described as 'medium forest of jarrah and marri' (DPIRD 2019;Figure 4). This vegetation association has 86% of its pre-European extent remaining within the Northern Jarrah Forest subregion (Department of Biodiversity, Conservation and Attractions [DBCA] 2019a).

Regional Forest Agreement mapping within the southwest forest region of Western Australia covers the pre-1750 distribution of vegetation complexes (Mattiske and Havel 1998). Six vegetation complexes are mapped across the project area (DBCA 2018a; Figure 5), with Dwellingup 1 being the most extensive (673.1 ha; 82.2%). All these vegetation complexes have more than three-quarters of their pre-European extent remaining within the Darling Plateau subregion (DBCA 2019b; Table 1)

Table 1: Vegetation complexes of the Southwest forest region (Mattiske and Havel 1998)

Vegetation complex	Vegetation	Area within project area (ha)	Proportion of project area (%)	Area remaining within Darling Plateau subregion of SW forests (ha)	Proportion remaining within Darling Plateau subregion of SW forests (%)
Cooke	Mosaic of open forest of *Eucalyptus marginata* subsp. *marginata-Corymbia calophylla* (subhumid zone) and open forest of *Eucalyptus marginata* subsp. *thalassica-Corymbia calophylla* (semiarid and arid zones) and on deeper soils adjacent to outcrops, closed heath of Myrtaceae-Proteaceae species and lithic complex on granite rocks and associated soils in all climate zones, with some *Eucalyptus laeliae* (semiarid), and *Allocasuarina huegeliana* and *Eucalyptus wandoo* (mainly semiarid to perarid zones).	63.3	7.7	30,304.2	82.4
Dwellingup 1	Open forest of *Eucalyptus marginata* subsp. *marginata-Corymbia calophylla* on lateritic uplands in mainly humid and subhumid zones.	673.1	82.2	181,038.8	86.8
Murray 1	Open forest of *Eucalyptus marginata* subsp. *marginata-Corymbia calophylla-Eucalyptus patens* on valley slopes to woodland of *Eucalyptus rudis-Melaleuca rhaphiophylla* on the valley floors in humid and subhumid zones.	1.8	0.2	52,296.0	76.1
Swamp	Mosaic of low open woodland of *Melaleuca preissiana-Banksia littoralis*, closed scrub of Myrtaceae spp., closed heath of Myrtaceae spp. and sedgelands of *Baumea* and *Leptocarpus* spp. on seasonally wet or moist sand, peat and clay soils on valley floors in all climatic zones.	1.1	0.1	40,613.0	75.7
Yarragil 1	Open forest of *Eucalyptus marginata* subsp. *marginata-Corymbia calophylla* on slopes with mixtures of *Eucalyptus patens* and *Eucalyptus megacarpa* on the valley floors in humid and subhumid zones.	55.0	6.7	64,927.1	81.0
Yarragil 2	Open forest of *Eucalyptus marginata* subsp. *thalassica-Corymbia calophylla* on slopes, woodland of *Eucalyptus patens-Eucalyptus rudis* with *Hakea prostrata* and *Melaleuca viminea* on valley floors in subhumid and semiarid zones.	24.6	3.0	46,475.3	92.5
Total		*818.7*	*100.0*		

2.5. Hydrology

The project area is situated within two catchments, Harvey Diversion_Harvey River and Harvey Estuary_Harvey River (Department of Water and Environmental Regulation [DWER] 2018a; Figure 6). There are several subcatchments associated with the main watercourses that intersect the project area, all of which eventually flow into the Harvey River. The subcatchments (with associated watercourses; DWER 2018b) are Stirling Dam (Harvey River mainstream flows into Stirling Dam), Samson Brook (Samson Brook flows into Samson Brook Dam/Lake Kabbanup), Samson Drain (Black Tom Brook and another significant stream flow into Samson South Drain) and Logue Drain (a major tributary of the Harvey River flows into Logue Brook Dam/Lake Brockman).

Multiple local drainage lines run through the greater Larego area (Figure 6), although these only intersect the following survey areas: LR23_P2_62, LR23_35, LR23_26, LR23_23, LR23_28, LR23_15, Turbidity_a, Turbidity_b.

Most of the project area occurs within public drinking water source areas (PDWSA) Samson Brook Catchment and Stirling Dam Catchment, both of which are Priority 1 (P1) PDWSAs (Figure 6; DWER 2023). Samson Brook Catchment, via Samson Brook dam and Samson Brook pipehead dam supply drinking water for the Waroona and Hamel water supply scheme and the Integrated Water Supply System (DWER 2019). Stirling Dam Catchment, via Stirling dam, provides Harvey's town water supply and acts as a strategic supply to Perth Metropolitan Area (Waters and Rivers Commission 2000). P1 source protection areas are defined to ensure that there is no degradation of the water source and are declared over land where the provision of the highest quality public drinking water is the prime beneficial land use (Waters and Rivers Commission 2000).

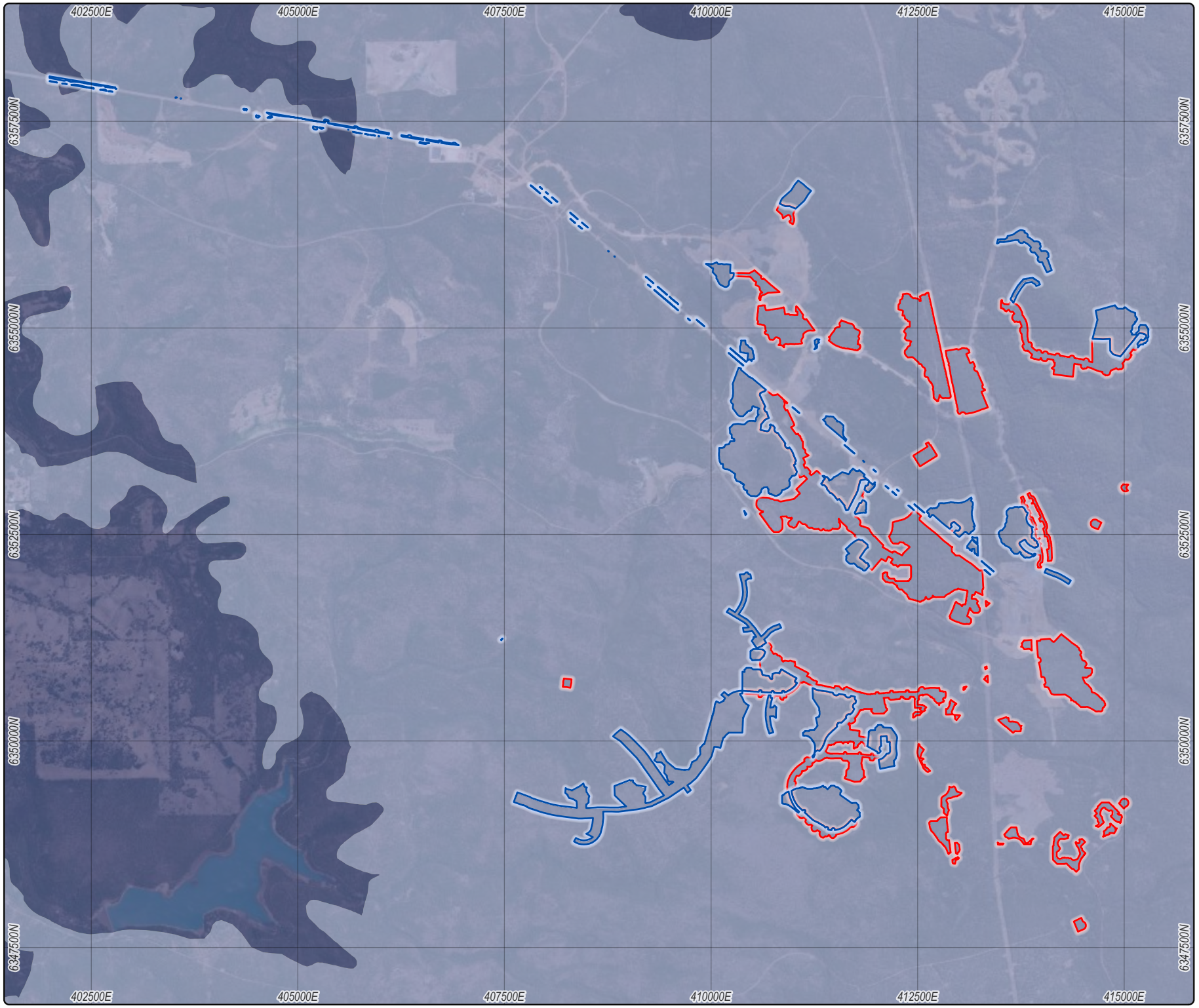
The project area does not lie within any mapped Groundwater Dependent Ecosystems or Inflow Dependent Ecosystems (BoM 2023b).

2.6. Areas of conservation significance

Environmentally Sensitive Areas (ESAs) are defined in the *Environmental Protection (Environmentally Sensitive Areas) Notice 2005* under s51B of the *Environmental Protection Act 1986* (EP Act). ESAs include areas declared as World Heritage, included on the Register of the National Estate, defined wetlands, Bush Forever sites, vegetation containing rare (Threatened) flora and/or Threatened Ecological Communities (TECs). There are 15 ESAs within 5 km of the project area (DWER 2021; Figure 7).

Most of the project area (except for survey areas LR23_P2_88, LR23_P2_95 and LR_P2_96) is located within Dwellingup State Forest, a Section 5(1)(a) reserve (DBCA 2023a; Figure 7). Protected areas within Dwellingup State Forest in the vicinity of the project area include: Lane Poole Reserve (a conservation park), located less than 500 m from survey areas LR23_P2_62, LR23_35 and LR23_P2_49; and an unnamed Section 5(1)(h) reserve at Mt William, located approximately 500 m from survey area LR23_P2_46 (DCCEEW 2023b).

There are no nationally or internationally important wetlands occurring within 20 km of the project area (DBCA 2018b). The nearest wetland listed in the Directory of Important Wetlands of Australia is Peel-Harvey Estuary, located approximately 29 km northwest of the project area; the Harvey River flows into this wetland. Peel-Harvey Estuary is part of the Ramsar listed Peel-Yalgorup System (DBCA 2017).



Legend

Survey areas

- Priority 1
- Priority 2

Land systems

- Darling Plateau System
- Murray Valleys System

Figure 3: Land systems

0 0.5 1 2

Kilometres

Datum/Projection:
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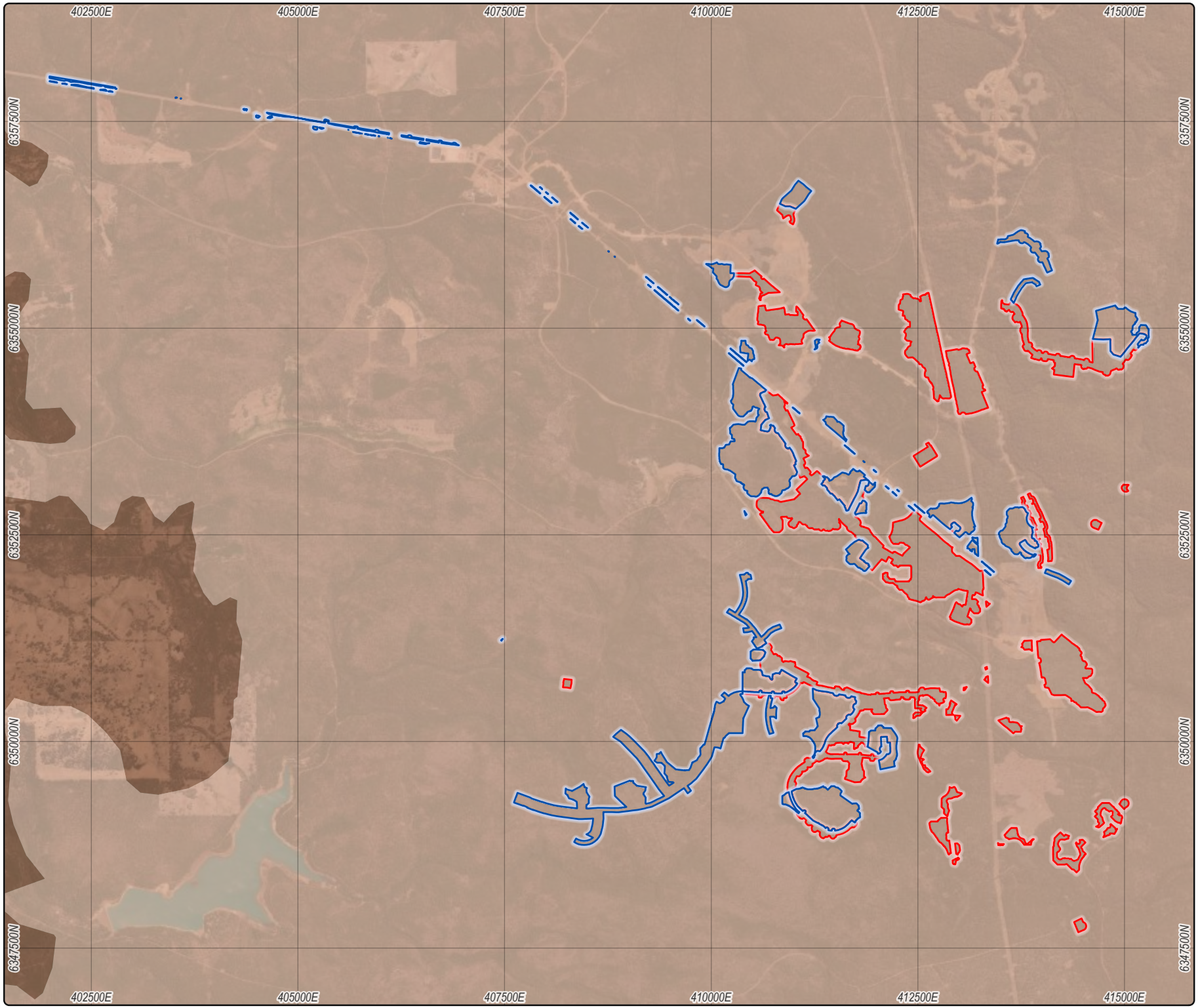

Legend

Survey areas

- Priority 1
- Priority 2

Pre-European vegetation associations

- WEST DARLING_3
- WEST DARLING_4

Figure 4: Broad-scale vegetation - Pre-European vegetation associations

0 0.5 1 2

Kilometres

Datum/Projection:
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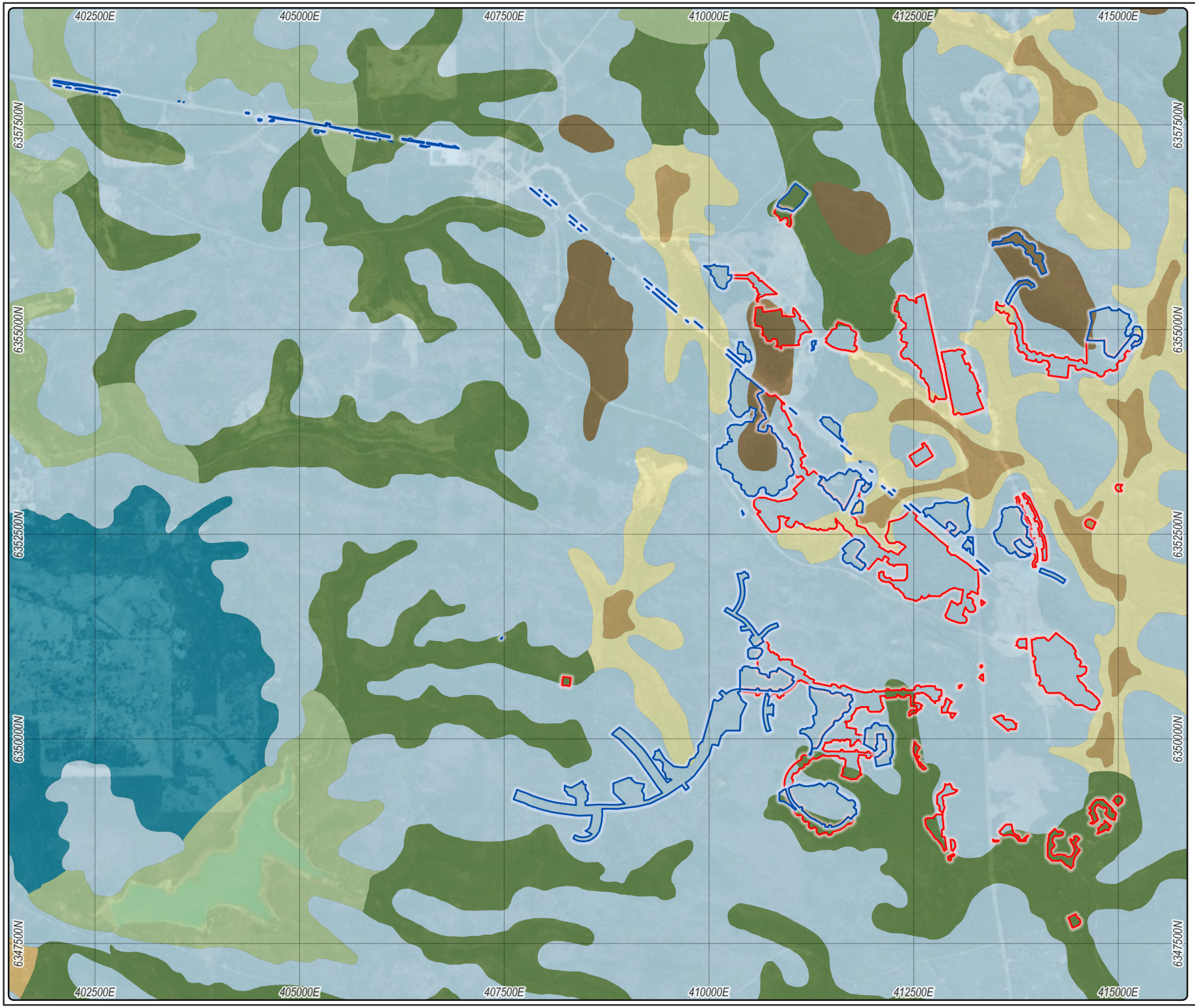

Legend

Survey areas

- Priority 1
- Priority 2

South West forest vegetation complexes

- Cooke
- Darling Scarp
- Dwellingup
- Helena 1
- Murray 1
- Swamp
- Yarragil 1
- Yarragil 2

Figure 5: Broad-scale vegetation mapping - South West forest vegetation complexes

0 0.5 1 2

Kilometres

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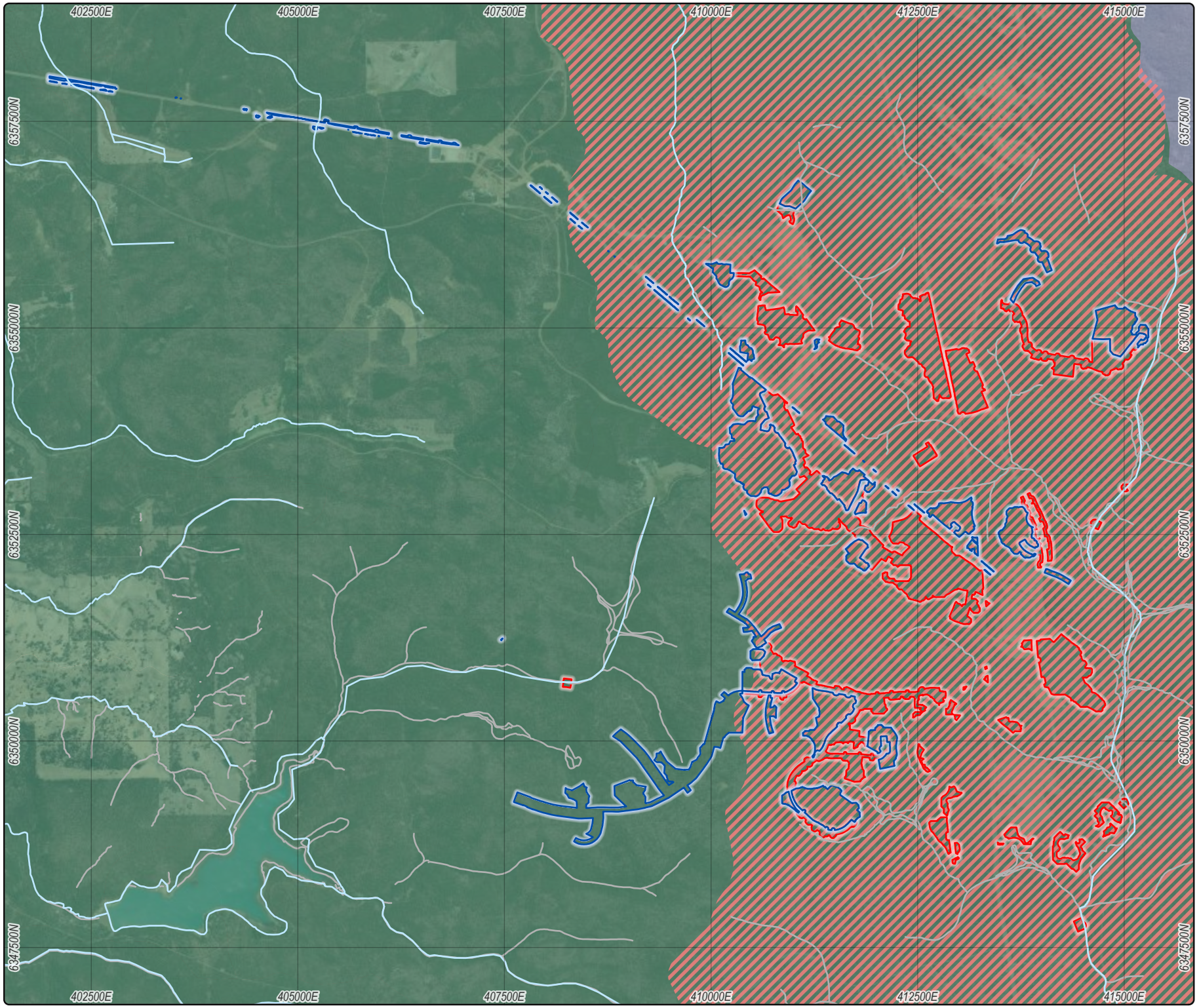

Legend

- Hydrography, linear
- Streams

Survey areas

- Priority 1
- Priority 2

Hydrographic catchments – subcatchments

- Harvey
- Murray River & Tributaries

Public drinking water source areas

- Protection Area - P1

Figure 6: Hydrology

0 0.5 1 2

Kilometres

Datum/Projection:
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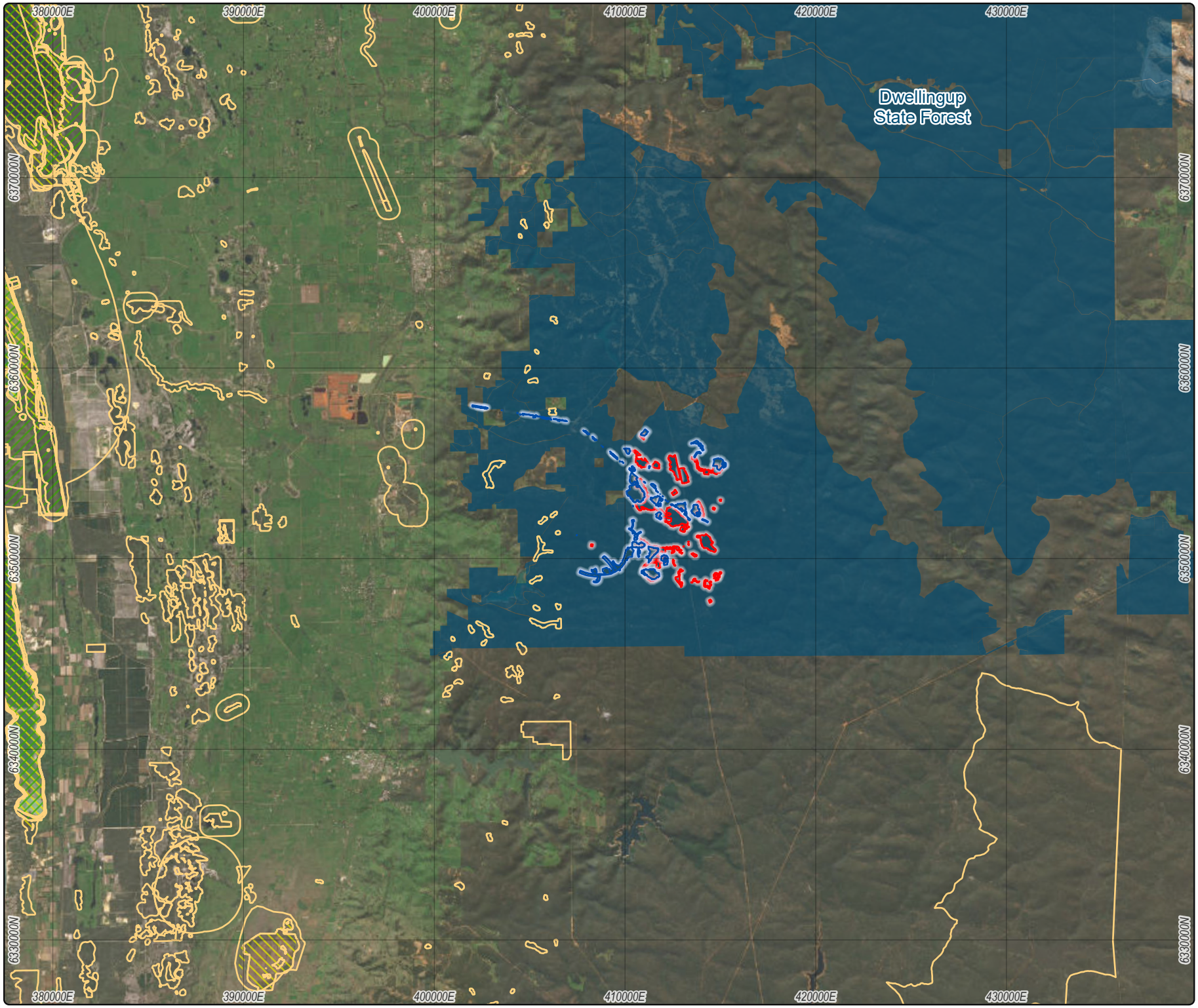

Legend

- Environmentally Sensitive Area (ESA)
- Ramsar sites
- Directory of Important Wetlands
- DBCA Legislated Lands and Waters

Survey areas

- Priority 1
- Priority 2

Figure 7: Areas of conservation significance

0 2.5 5 10

Kilometres

Datum/Projection:
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3. Methodology

3.1. Desktop review

An initial desktop assessment prior to the field survey was undertaken to determine environmental values and conservation significant flora, vegetation or other environmental features (such as riparian areas, wetlands) relating to the project area.

3.1.1. Database searches

The following Commonwealth and State databases were searched for information relating to conservation significant flora in order to inform the field survey. Applied search buffers used are considered suitable based on flora expected to occur within the project area (Table 2).

Table 2: Database searches undertaken for the survey areas

Database	Reference	Search area
Atlas of Living Australia Spatial search for records.	Atlas of Living Australia 2023	10 km buffer around project area envelope
Commonwealth EPBC Act Protected Matters Search Tool (PMST) for Matters of National Environmental Significance, including any Threatened species listed under the EPBC Act.	DCCEEW 2023c	10 km buffer around project area envelope
DBCA Threatened and Priority flora database searches for Declared Rare Flora listed under the latest WA Biodiversity Conservation (listing of native species) (flora) order and Priority Flora [ref# 64-0223FL]^	DBCA 2023b	Area ~150 km x 80 km covering Alcoa operations areas and buffer

^Supplied by Alcoa

Additionally, Commonwealth and State government spatial datasets for land system mapping, regional vegetation mapping and hydrology were reviewed, as described in sections 2.3, 2.4 and 0.

3.1.2. Literature review

The following publicly available literature and previous survey reports relevant to the project area were reviewed:

- *Flora and vegetation management plan (Draft) – Huntly and Willowdale mines* (Mattiske Consulting 2022)
- *Assessment of matters pertaining to the renewal of the Regional Forest Agreement for the South-West Forest Region of Western Australia* (Government of Western Australia 2019)

Aerial photography for the survey areas was reviewed to identify land use patterns, the extent of vegetation, relevant landscape/catchment matters and any other relevant issues where possible.

3.1.3. Likelihood of occurrence assessment

An assessment of the likelihood of Threatened and Priority flora species being present within the project area was carried out. The assessment is based on specific likelihood of occurrence criteria. The criteria include factors such as: location and recency of previous records in relation to the project area; suitable landforms, soils and habitat that appear to be present based on the desktop review and aerial imagery; and known flowering periods. In addition, Alcoa's location specific risk rating for Larego (Alcoa 2023) was considered during development of ELA's likelihood ratings.

Conservation codes, categories and criteria for flora protected under the EPBC Act and the State *Biodiversity Conservation Act 2016* (BC Act) are provided in Appendix B (DBCA 2023c, DBCA 2023d). Criteria used for this assessment are presented in Appendix C.

3.2. Field survey

3.2.1. Survey team and timing

The field survey was conducted by Emily Chetwin (Botanist), Dr Jeff Cargill (Principal Ecologist), Glenn Maslen (Ecologist) and Maitland Ely (Graduate Ecologist) over 11 days from 22 to 27 October and 30 October to 03 November 2023. Field staff had valid scientific licences to conduct flora and vegetation surveys and to take Threatened and Priority flora in WA at the time of the survey (Table 3).

The survey timing was consistent with the Environmental Protection Authority (EPA) recommendations for undertaking Detailed and flora and vegetation surveys in the South-west botanic region i.e., Spring (September to November; EPA 2016).

Table 3: Survey team

Staff	Project role	Licence
Emily Chetwin	Project management, Field survey, Taxonomic flora identification, Reporting	Flora scientific collection licence: FB62000026-3 Declared Rare Flora permit: TFL 124-2021 DRA Permit: 3296
Dr Jeff Cargill	Project and Technical oversight, Field survey	Flora scientific collection licence: FB62000138-2 Declared Rare Flora permit: TFL 2223-0115 Regulation 4 Authority: CE006933
Glenn Maslen	Field survey	Flora scientific collection licence: FB62000376
Maitland Ely	Field survey	Flora scientific collection licence: FB62000455

3.2.2. Survey areas

A total of 65 survey areas comprising 801.0 ha out of the proposed 131 survey areas comprising 818.5 ha were surveyed in the Spring 2023 field survey (Appendix A). All of the 38 Priority 1 survey areas (comprising 456.3 ha) and a total of 27 Priority 2 survey areas (comprising 344.7 ha) were surveyed in Spring 2023.

Only 17.5 ha of Priority 2 survey areas (66 areas) remain to be surveyed. Three of the remaining survey areas, L23_P2_12, L23_P2_47 and L23_P2_52 (total area 11.6 ha) are situated in the northeast portion of the project area. The other 63 remaining survey areas (total area 6.0 ha) are all small, narrow (<10 m wide) areas located adjacent to the conveyor belt west of the Larego site offices. ELA will survey the 66 uncompleted areas in the Summer/Autumn 2024 and/or Spring 2024 survey periods.

3.2.3. Targeted Threatened and Priority flora survey

A survey was undertaken to assess the presence of Threatened and Priority Flora species within the survey areas. Potentially occurring species and associated suitable habitat were determined during the desktop likelihood assessment. The Targeted flora survey involved personnel walking systematic

transects, spaced approximately 20 m apart, where terrain, vegetation and safe access allowed. All encountered conservation significant flora and vegetation were recorded by taking the coordinates of each individual and/or a centroid coordinate location for a group of individuals within a 20 m radius using a handheld GPS unit. The number of individuals and/or percentage covers for each location was recorded. Track logs as shown in Figure 8 attest to the time and effort expended.

3.2.4. Key Weed species survey

The locations of any WoNS and DP species encountered during the Targeted Threatened and Priority flora survey were recorded by taking the coordinates of each individual and/or a centroid coordinate location for a group of individuals within a 20 m radius. An estimate of the population size was also recorded.

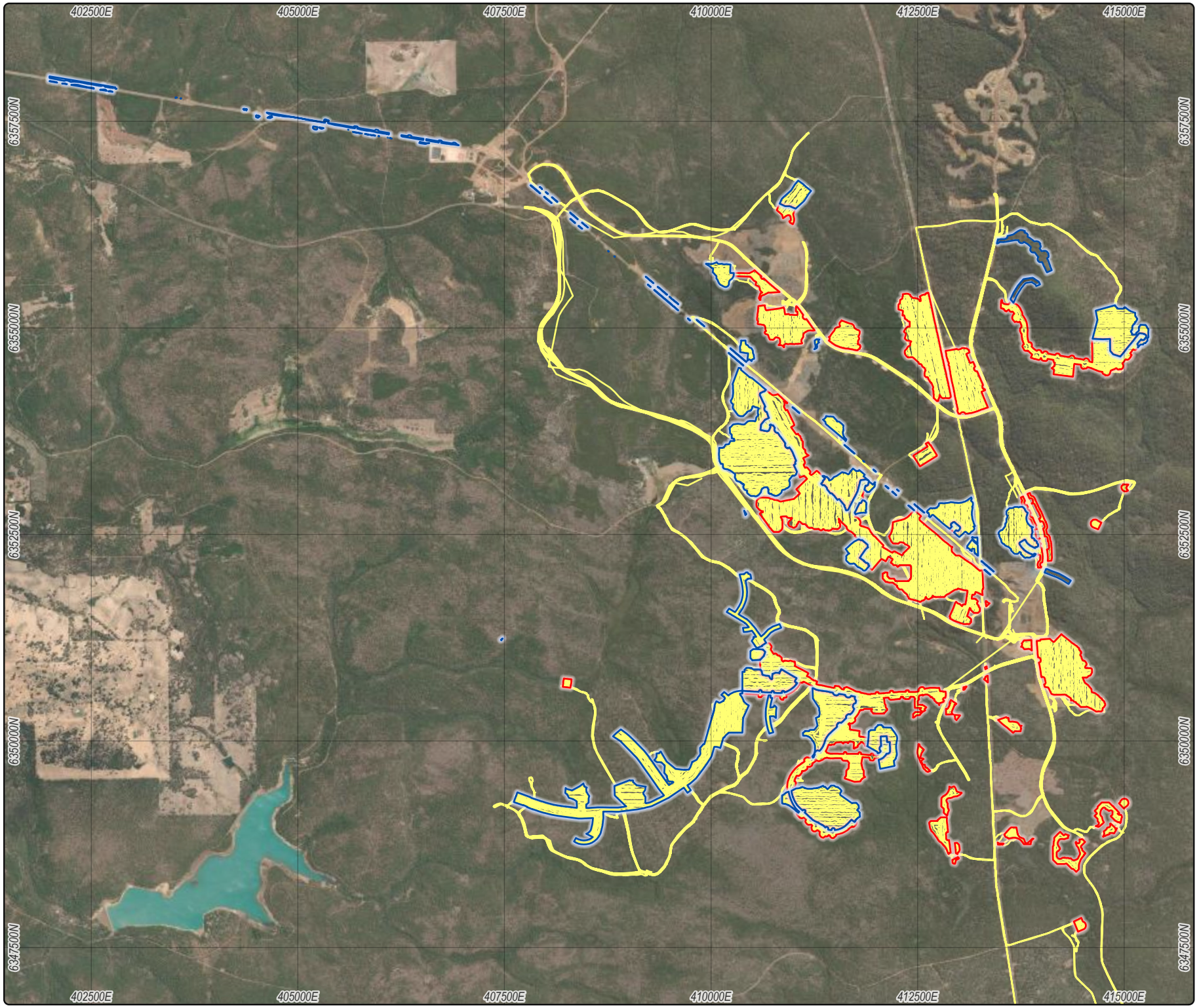
3.2.5. Flora identification and nomenclature

Representative specimens of all known and suspected conservation significant species were collected for verification/identification. All collections were assigned a unique collecting number. Subsequent occurrences of the collected representative specimens were recorded using unique GPS symbols. For all representative specimens collected of potential conservation significant flora, the following data were recorded:

- GPS location
- Time and date observed
- Observer details
- Population size estimate
- Location of population boundaries (if appropriate)
- Associated habitat/landscape element
- Associated vegetation
- A colour photograph

Flora specimen identification following the field survey was undertaken by ELA taxonomic specialists at the Western Australian Herbarium (WAH). Suitable material that meets WAH specimen lodgement requirements, such as flowering material and range extensions, will be submitted along with Threatened and Priority flora report forms to DBCA, as required by conditions of collection licences issued under the BC Act.

Nomenclature used for the flora species within this report follows the WA Plant Census as available on FloraBase (WAH 1998-).



Legend

Survey effort (tracks)

Survey areas

Priority 1

Priority 2

Figure 8A: Survey effort (Overview)

0 0.5 1 2

Kilometres

Datum/Projection:
AGD 1984 AMG Zone 50

23PER5309-JP Date: 22/03/2024

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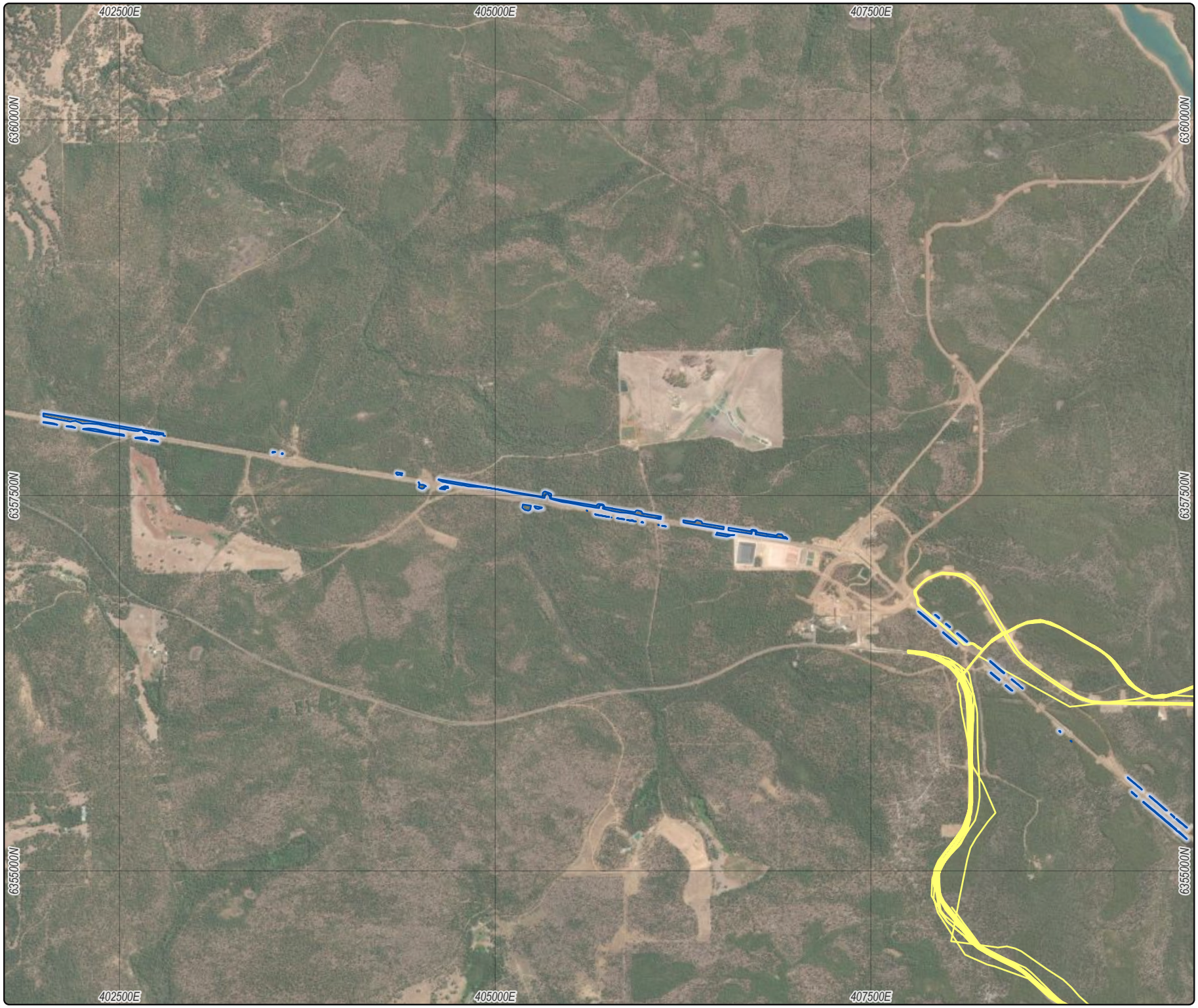

Legend

Survey effort (tracks)

Survey areas

Priority 2

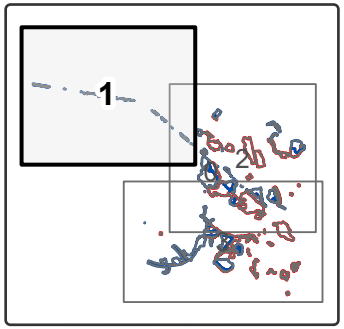

Figure 8B: Survey effort (Detailed Map 1 of 3)

0 0.25 0.5 1

Kilometres

Datum/Projection:
AGD 1984 AMG Zone 50

23PER5309-JP Date: 22/03/2024

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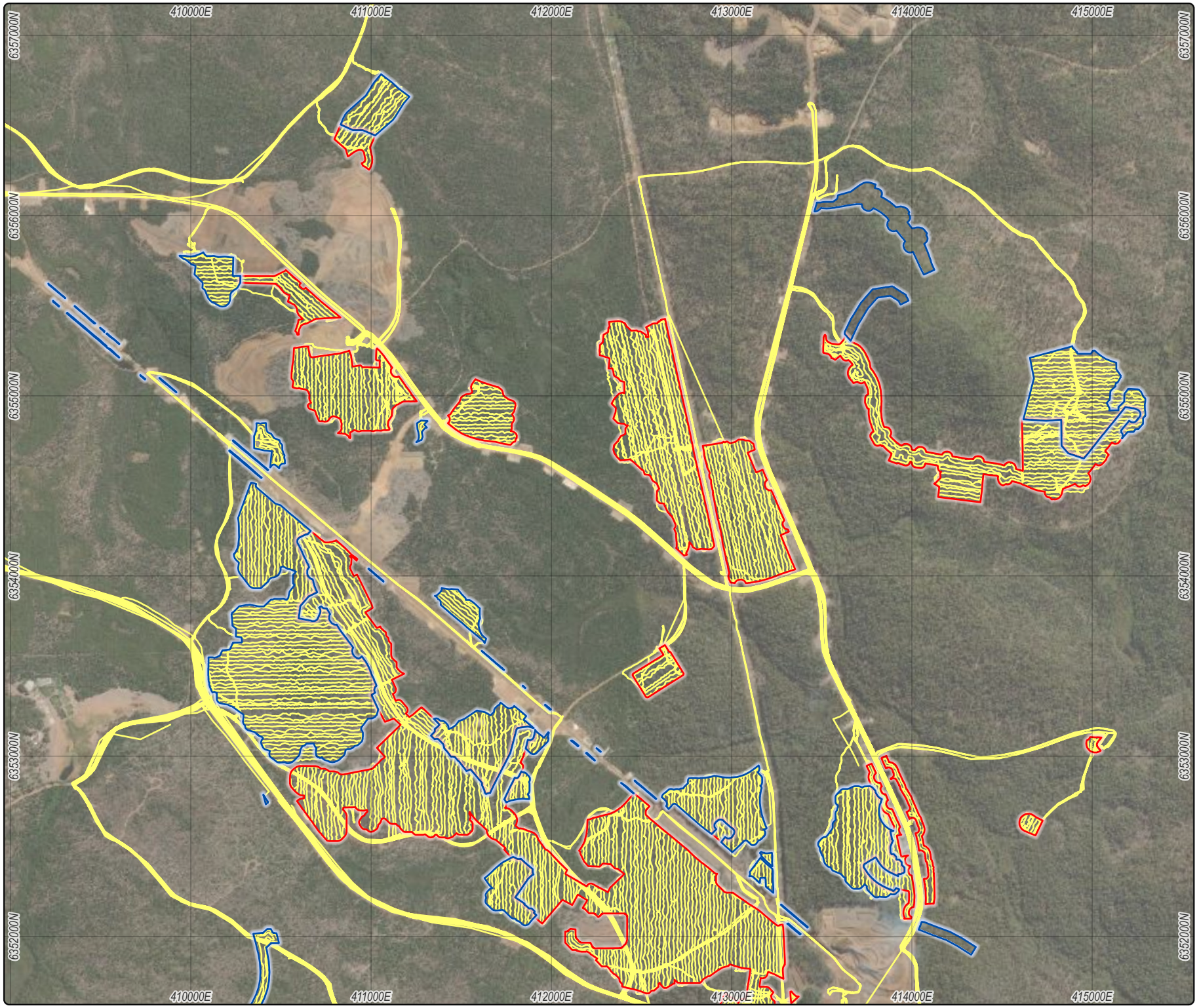

Legend

Survey effort (tracks)

Survey areas

Priority 1

Priority 2

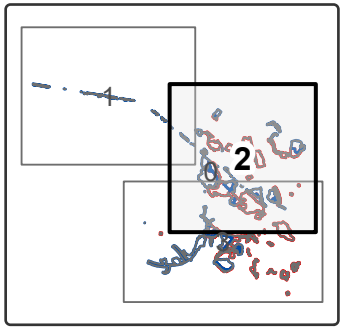

Figure 8C: Survey effort (Detailed Map 2 of 3)

0 0.25 0.5 1

Kilometres

Datum/Projection:
AGD 1984 AMG Zone 50

23PER5309-JP Date: 22/03/2024

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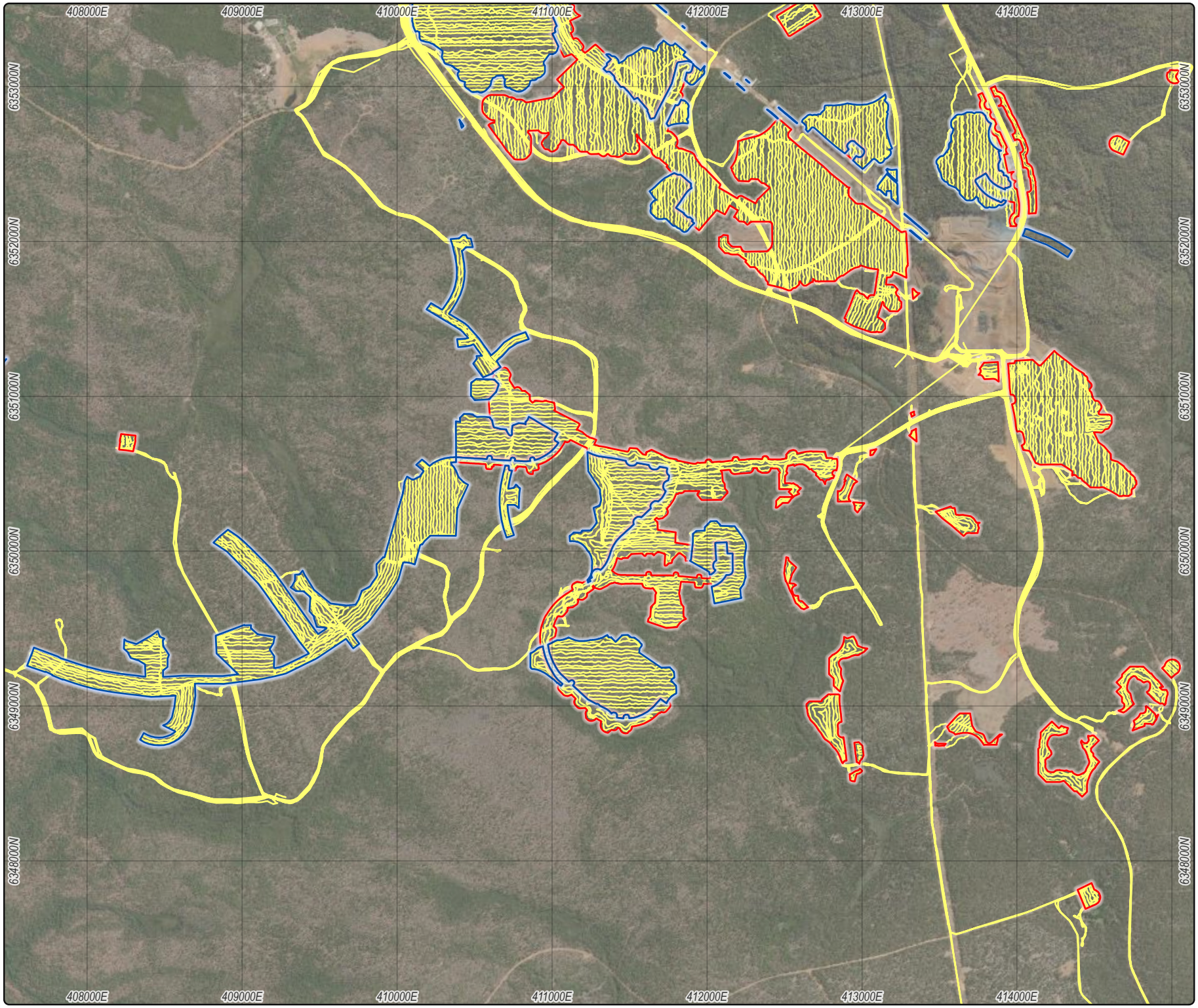

Legend

Survey effort (tracks)

Survey areas

Priority 1

Priority 2

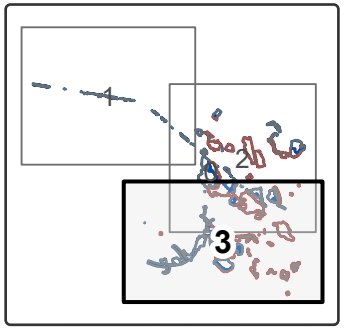

Figure 8D: Survey effort (Detailed Map 3 of 3)

0 0.25 0.5 1

Kilometres

Datum/Projection:
AGD 1984 AMG Zone 50

23PER5309-JP Date: 22/03/2024

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3.3. Limitations

The EPA Technical Guidance document (EPA 2016) recommends including a discussion of the constraints and limitations of the survey methods used. An assessment of potential constraints and limitations of this survey are summarised in Table 4 below. One potential limitation was identified, regarding difficulty in traversing small areas of particularly dense vegetation around creeklines.

Table 4: Survey limitations

Potential survey limitation	Impact on survey
Sources of information and availability of contextual information (i.e. pre-existing background versus new material).	**Not a limitation**. Land system mapping (DPIRD 2022) and broad-scale vegetation mapping (DPIRD 2019) were available at a scale of 1:250,000. Available information, including the Huntly and Willowdale mines' draft Flora and vegetation management plan (Mattiske Consulting 2022) was sufficient to provide context at varying scales and therefore was not considered a limitation.
Scope (i.e. what life forms, etc., were sampled).	**Not a limitation**. The survey requirement of a Targeted flora survey, in accordance with relevant State and Commonwealth legislation and EPA guidance was adequately met.
Proportion of flora collected and identified (based on sampling, timing and intensity).	**Not a limitation**. Where flora encountered in the field was suspected of being a conservation significant species, it was collected for later identification and given a unique identifying number. Populations in new survey areas of previously collected species were also collected to be verified later.
Completeness and further work which might be needed (i.e. was the relevant survey area fully surveyed).	**Not a limitation.** A total of 65 survey areas comprising 801.0 ha out of the proposed 131 survey areas comprising 818.5 ha were surveyed in the Spring 2023 field survey. All of the 38 Priority 1 survey areas (comprising 456.3 ha) and a total of 27 Priority 2 survey areas (comprising 344.7 ha) were surveyed in Spring 2023. Only 17.5 ha of Priority 2 survey areas (66 areas) remain to be surveyed. ELA will survey the 66 uncompleted areas in the Summer/Autumn 2024 and/or Spring 2024 survey periods.
Mapping reliability.	**Not a limitation**. Coverage of all survey areas was considered to be excellent. High quality aerial maps were used for the field survey.
Timing, weather, season, cycle.	**Not a limitation.** The survey was undertaken in the appropriate season for flora and vegetation surveys, i.e. Spring (September-November), as specified by the EPA Technical Guidance (EPA 2016). Rainfall over the 12 months preceding the field survey was similar to the long-term average; over the three months prior to the field survey rainfall was lower than the long-term average for the same period (316 mm compared with 414 mm; BoM 2023a). Conditions were favourable for flowering and fruiting of vascular plant species, allowing confident identification of conservation significant flora species.
Disturbances (fire, flood, accidental human intervention, etc.).	**Not a limitation.** Disturbances within survey areas included historical clearing, fire, vehicle tracks and weed invasion. This did not negatively impact the ability to meet objectives outlined in the scope of works.
Intensity (in retrospect, was the intensity adequate).	**Not a limitation**. The survey effort for the Targeted flora survey was adequately met. All survey areas covered were searched for conservation significant flora and key weed species by field staff undertaking systematic transects spaced approximately 20 m apart across the survey areas. This method provides an accurate assessment of habitat characteristics and likelihood of conservation significant species.
Resources (i.e. were there adequate resources to complete the survey to the required standard).	**Not a limitation**. The number of personnel conducting this field survey in the given time was adequate to undertake the required level of survey across the proposed survey areas. Only 17.5 ha of Priority 2 survey areas (66 areas) remain to be surveyed;

Potential survey limitation	Impact on survey
	these areas will be surveyed in the Summer/Autumn 2024 and/or Spring 2024 survey periods.
Access problems (i.e. ability to access survey area).	**Potential limitation**. Most parts of the survey areas completed in the Spring 2023 survey period were able to be accessed. However, in very small portions of the survey areas within creeklines (<10 ha of over 800 ha surveyed) extremely dense vegetation meant that 20 m spacing of systematic traverses was not always safely able to be adhered to.
Experience levels (e.g. degree of expertise in plant identification to taxon level).	**Not a limitation**. The personnel conducting this field survey were all suitably qualified to identify specimens, having previously undertaken multiple flora and vegetation surveys in the Jarrah Forest bioregion of Western Australia. Project Director Dr Jeff Cargill has over 15 years' experience working in the Jarrah Forest Bioregion, including extensive botanical and rehabilitation survey work within Alcoa lease areas. Project Manager Emily Chetwin has over 5 years' experience working in the Jarrah Forest Bioregion, including several botanical and rehabilitation surveys within Alcoa lease areas. Additional field personnel Glenn Maslen and Maitland Ely have previous experience working in the Jarrah Forest Bioregion, including dieback and rehabilitation surveys within Alcoa lease areas.

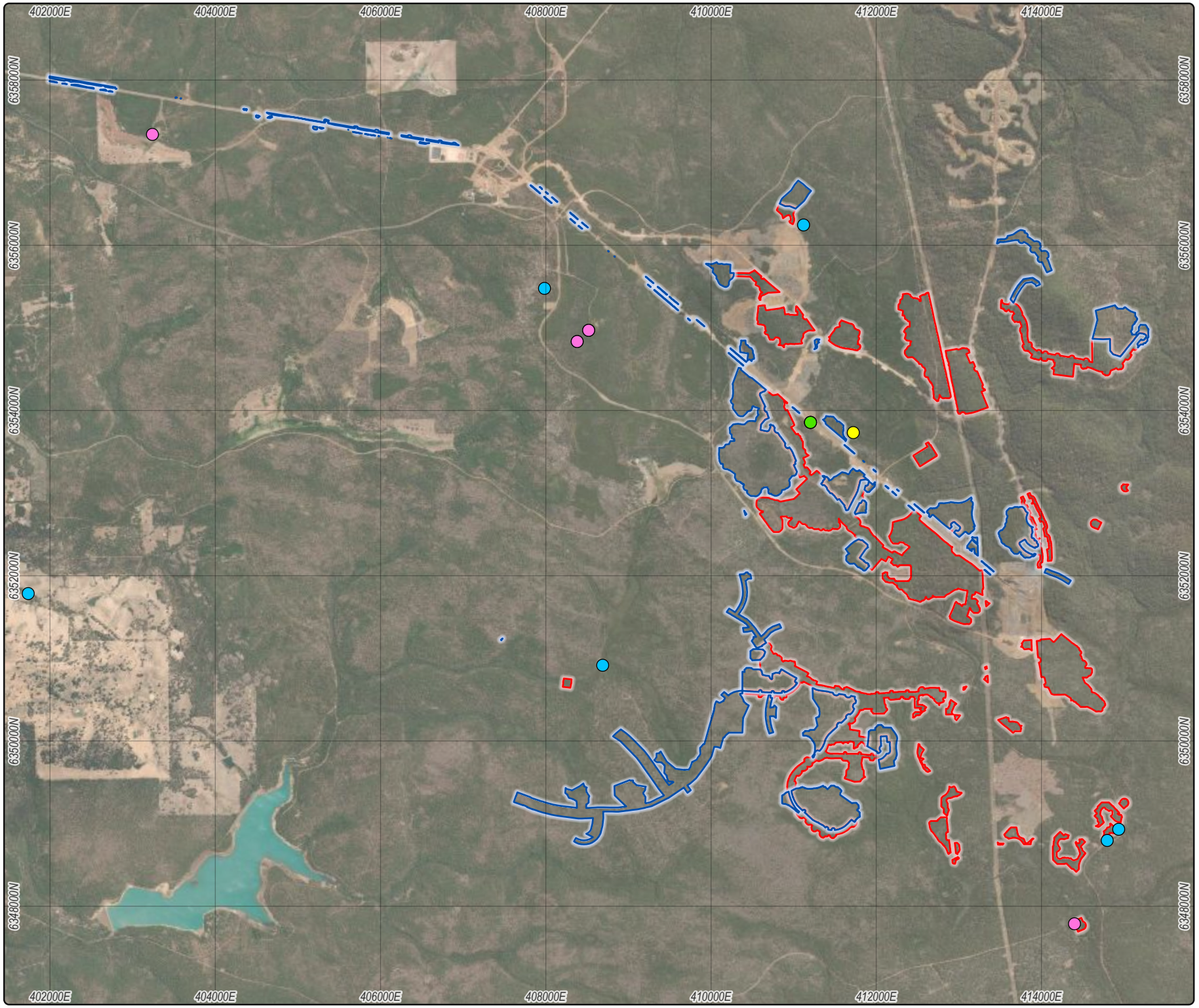
4. Results

4.1. Desktop assessment

The PMST search (DCCEEW 2023c) was undertaken to identify conservation significant flora species recorded within, or nearby to, the survey area (current and historic; Appendix D). A review of the DBCA Threatened and Priority flora database search (DBCA 2023b) was also undertaken. Conservation significant flora species previously recorded within, and in proximity to the project area are presented in Figure 9.

4.1.1. Conservation significant flora species

The pre-survey flora likelihood of occurrence assessment is provided in Appendix E. Prior to the field survey, two conservation significant flora species were considered as Likely to occur within the project area, namely *Actinotus repens* and *Netrostylis* sp. Blackwood River (A.R. Annels 3043; both listed as P3 by DBCA). A total of 20 species were considered to have Potential to occur and 54 species were assessed as Unlikely to occur. The full flora likelihood of occurrence assessment is given in Appendix E.



Legend

Survey areas

- Priority 1
- Priority 2

Conservation significant flora

- Priority 1
- Priority 2
- Priority 3
- Priority 4

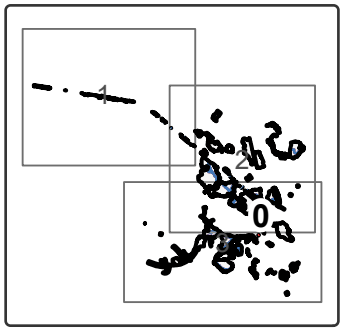


Figure 9A: Conservation significant flora previously recorded within and in the vicinity of the project area (Overview)

0 0.5 1 2

Kilometres

Datum/Projection:
AGD 1984 AMG Zone 50

23PER5309-JP Date: 4/04/2024

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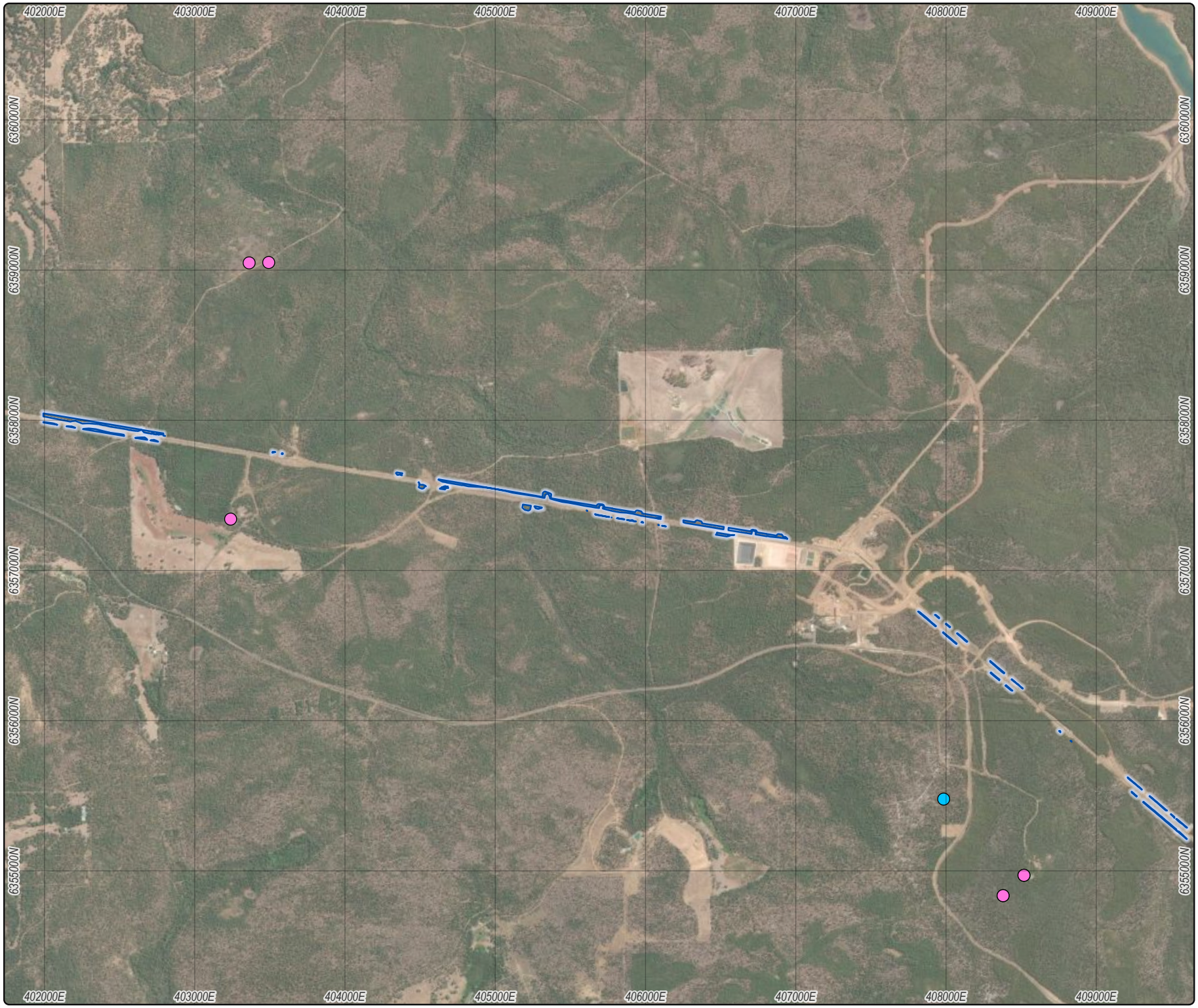

Legend

Survey areas

- Priority 2

Conservation significant flora

- Priority 3
- Priority 4

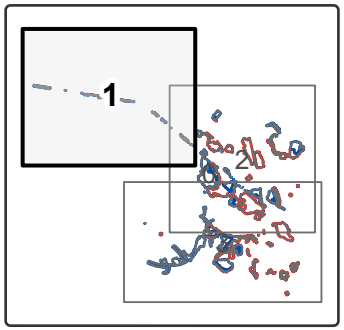

Figure 9B: Conservation significant flora previously recorded within and in the vicinity of the project area (Detailed Map 1 of 3)

0 0.25 0.5 1

Kilometres

Datum/Projection:
AGD 1984 AMG Zone 50

23PER5309-JP Date: 22/03/2024

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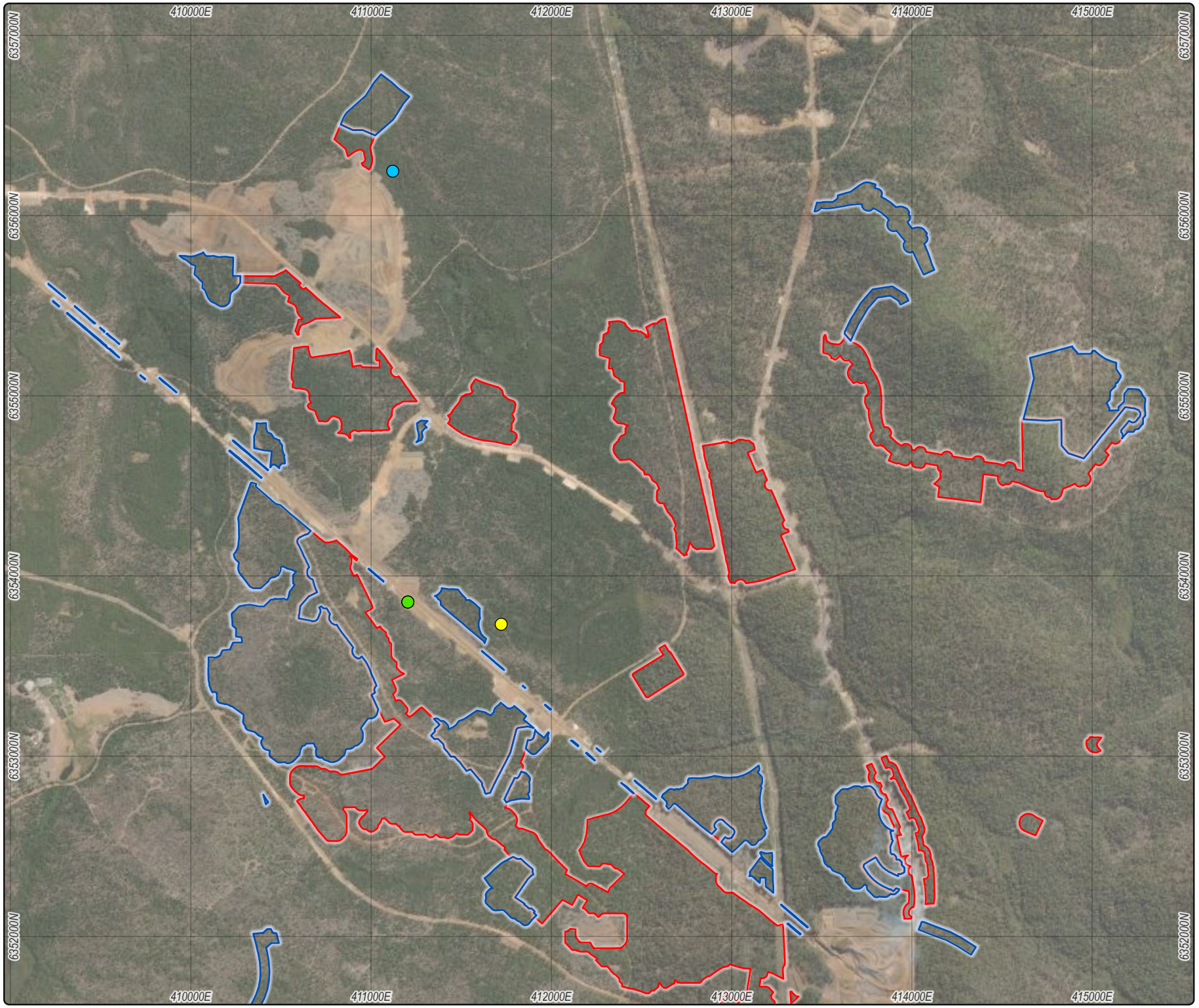

Legend

Survey areas

- Priority 1
- Priority 2

Conservation significant flora

- Priority 1
- Priority 2
- Priority 3

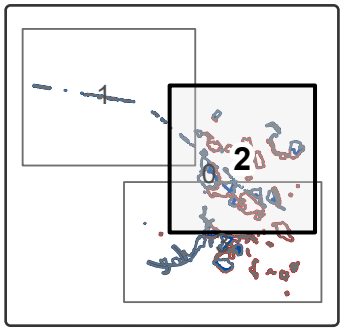

Figure 9C: Conservation significant flora previously recorded within and in the vicinity of the project area (Detailed Map 2 of 3)

0 0.25 0.5 1

Kilometres

Datum/Projection:
AGD 1984 AMG Zone 50

23PER5309-JP Date: 4/04/2024

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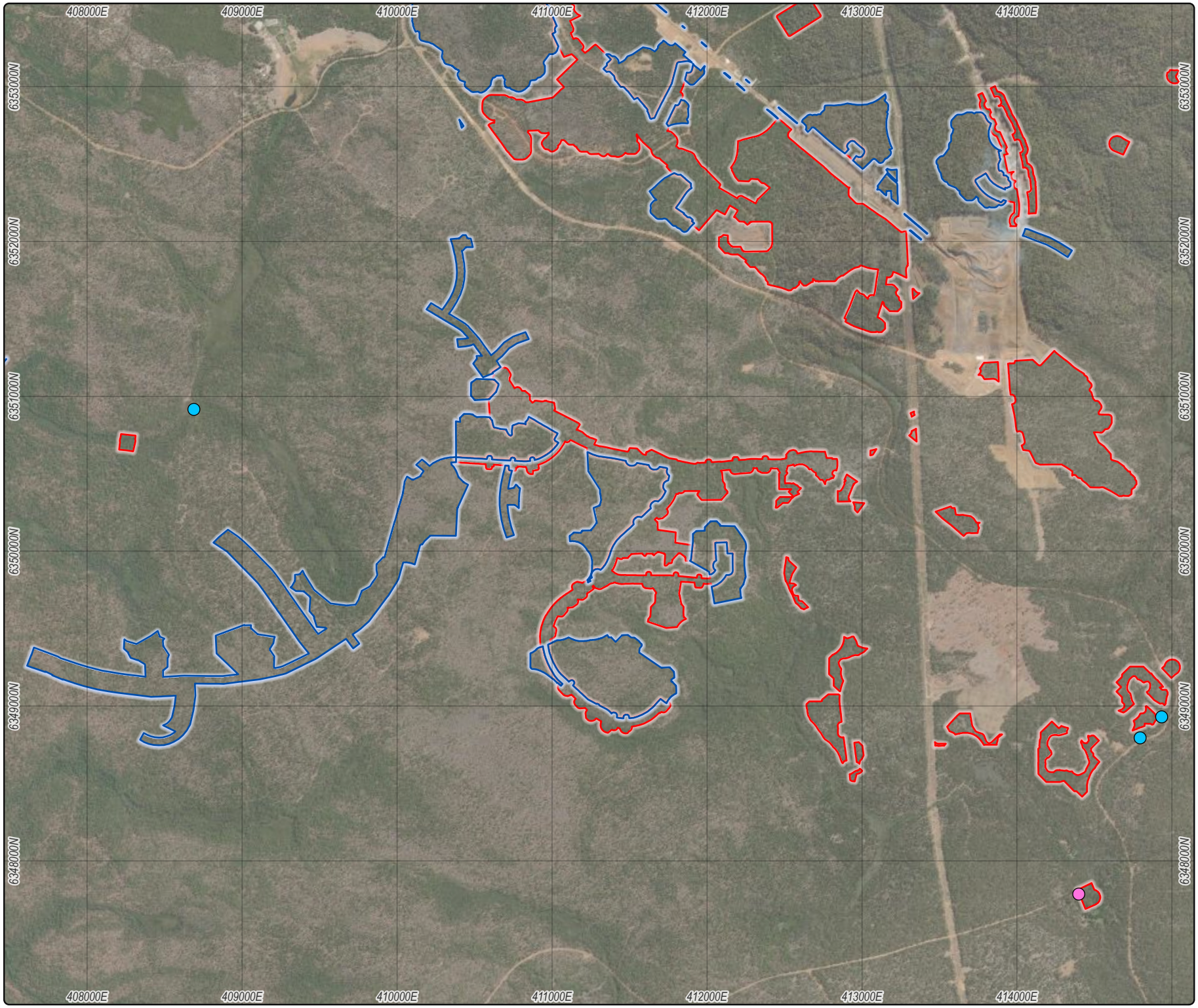

Legend

Survey areas

- Priority 1
- Priority 2

Conservation significant flora

- Priority 3
- Priority 4

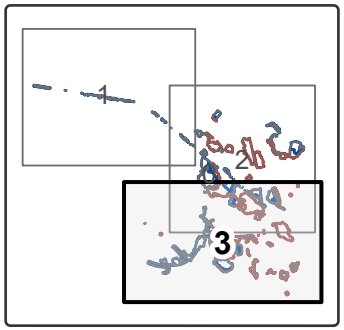

Figure 9D: Conservation significant flora previously recorded within and in the vicinity of the project area (Detailed Map 3 of 3)

0 0.25 0.5 1
Kilometres

Datum/Projection:
AGD 1984 AMG Zone 50

23PER5309-JP Date: 22/03/2024

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4.2. Flora and vegetation survey

4.2.1. Conservation significant flora species

No Threatened flora species listed under the EPBC Act or the BC Act were recorded within the project area.

Three Priority flora species listed by DBCA were recorded within the project area, namely:

- *Netrostylis* sp. Nannup (P.A. Jurjevich 1133; listed as P1 by DBCA)
- *Grevillea prominens* (P3)
- *Senecio leucoglossus* (P4)

One individual *Netrostylis* sp. Nannup (P.A. Jurjevich 1133; P1) plant was recorded within a creekline in survey area LR23_23 located approximately 2 km northeast of the Larego site offices.

A total of 11 individual *Grevillea prominens* (P3) plants were recorded at 11 point locations within eight survey areas (and one location just outside LR23_6, confirming a previous record), generally in the north and east of the project area.

Senecio leucoglossus (P4) was broadly distributed across eastern and southern portions of the project area, with a total of 2,063 individual plants recorded at 348 point locations across 20 survey areas.

One flora species recorded within the project area, *Boronia stricta*, represented a northeast range extension of approximately 125 km. A total of 30 individual *B. stricta* plants were recorded across five point locations (all within 50 m of a creekline) in survey area LR23_18, situated in the south of the project area.

DBCA Threatened and Priority flora report forms are provided in Appendix F. The locations of conservation significant flora recorded within the survey areas are given in Appendix G and shown in Figure 10.

Following the field survey, 68 of the 75 conservation significant flora species identified from the desktop assessment (see Section 4.1.1) as possibly occurring were considered Unlikely to occur with the project area. This assessment is based on presence or absence of suitable habitat for the species, proximity to previous recent records, sufficient searches for the species and detectability of the species.

Four conservation significant flora species were considered to have Potential to occur within the project area, namely:

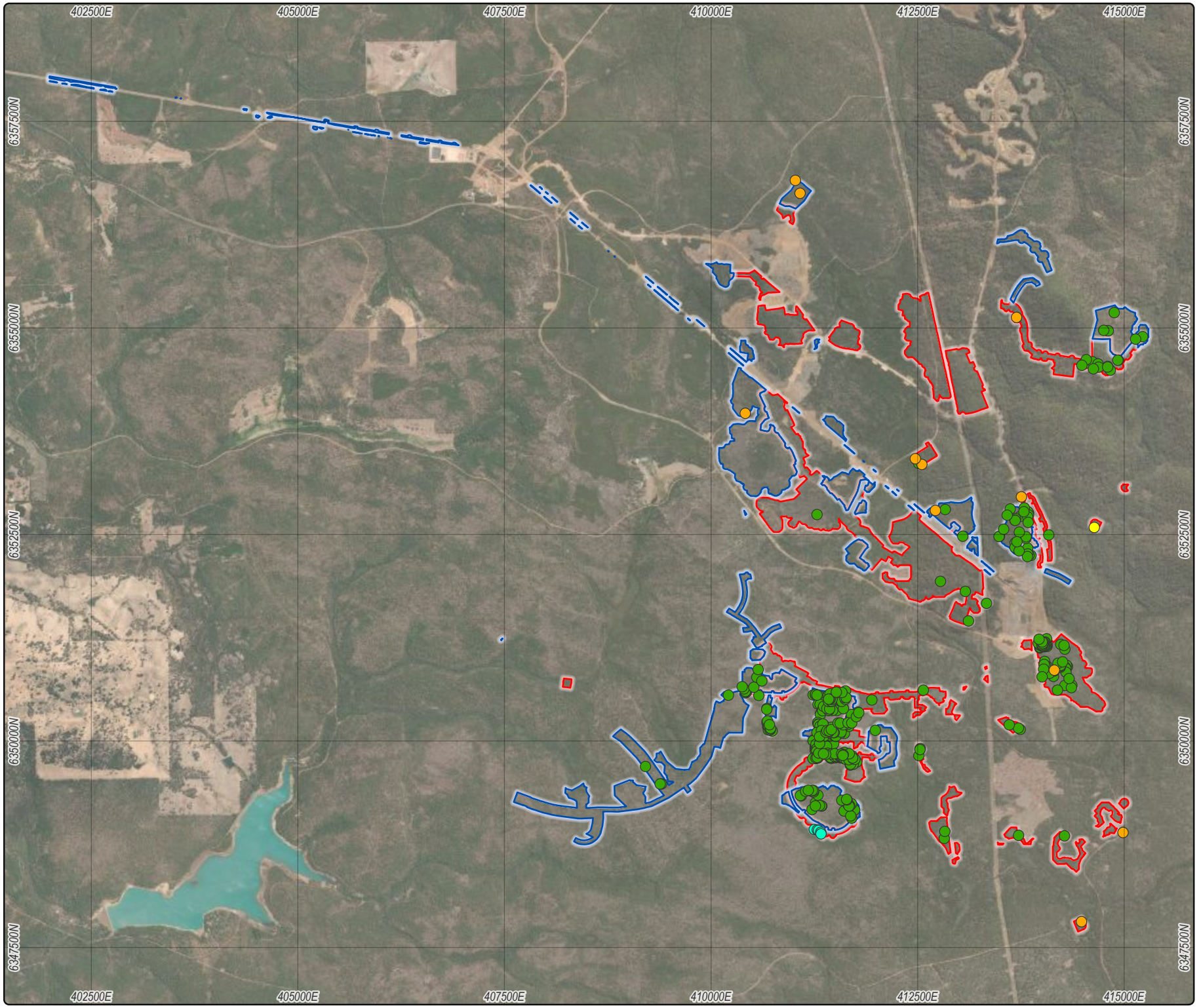
- *Hibbertia acrotoma* listed as P1 by DBCA
- *Stylidium korijekup*, listed as P2 by DBCA
- *Actinotus repens*, listed as P3 by DBCA
- *Eucalyptus* x *graniticola*, listed as P4 by DBCA

The complete flora likelihood of assessment is presented in Appendix E.

4.2.2. Key weed species

Two key weed species were recorded during the field survey, namely Blackberry (**Rubus* sp.) and Arum lily (**Zantedeschia aethiopica*). Blackberry is listed under the State *Biosecurity and Agriculture Management Act 2007* (BAM Act) as a DP, with control category C3 (Management) and Keeping category 'Exempt' (DPIRD 2023) and as a WoNS (as 'Rubus fruticosus aggregate'; Centre for Invasive Species Solutions 2021).

Approximately 310 Blackberry plants were recorded at 31 point locations within survey area Turbidity-b (Hoffman Mill townsite Reserve) and thickly infested both sides of the watercourse. One individual Arum lily plant was also recorded within the Turbidity-b survey area. Locations of the Key weed species are shown in Figure 11 and listed in Appendix H.



Legend

Survey areas

- Priority 1
- Priority 2

Conservation significant flora

- *Netrostylis* sp. Nannup (P.A. Jurjevich 1133) (P1)
- *Grevillea prominens* (P3)
- *Senecio leucoglossus* (P4)
- *Boronia stricta* (RE)

Figure 10A: Conservation significant flora recorded within and in the vicinity of the project area in Spring 2023 (Overview)

0 0.5 1 2

Kilometres

Datum/Projection:
AGD 1984 AMG Zone 50

23PER5309-JP Date: 22/03/2024

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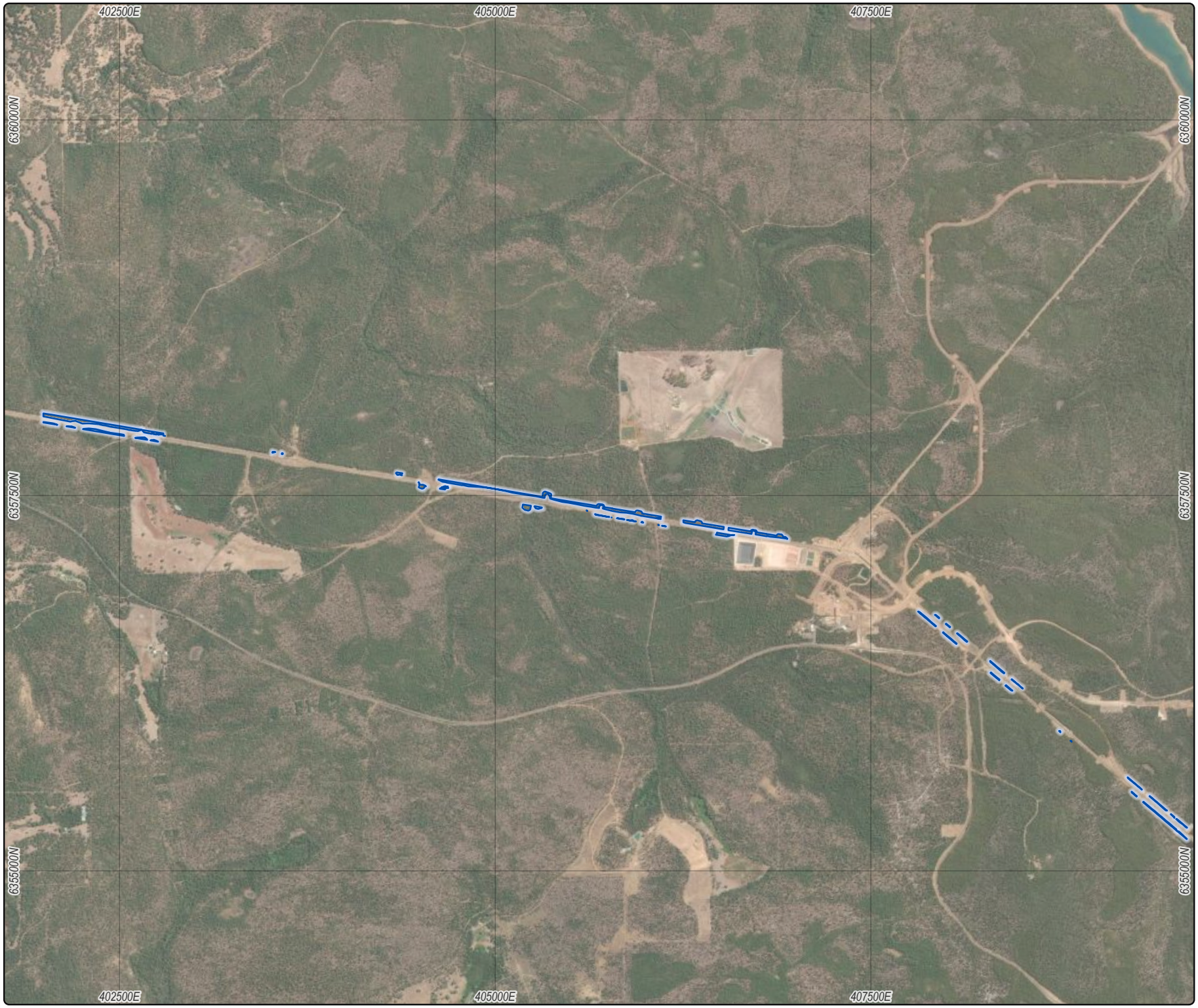

Legend

Survey areas

Priority 2

Figure 10B: Conservation significant flora recorded within and in the vicinity of the project area in Spring 2023 (Detailed Map 1 of 3)

0 0.25 0.5 1

Kilometres

Datum/Projection:
AGD 1984 AMG Zone 50

23PER5309-JP Date: 22/03/2024

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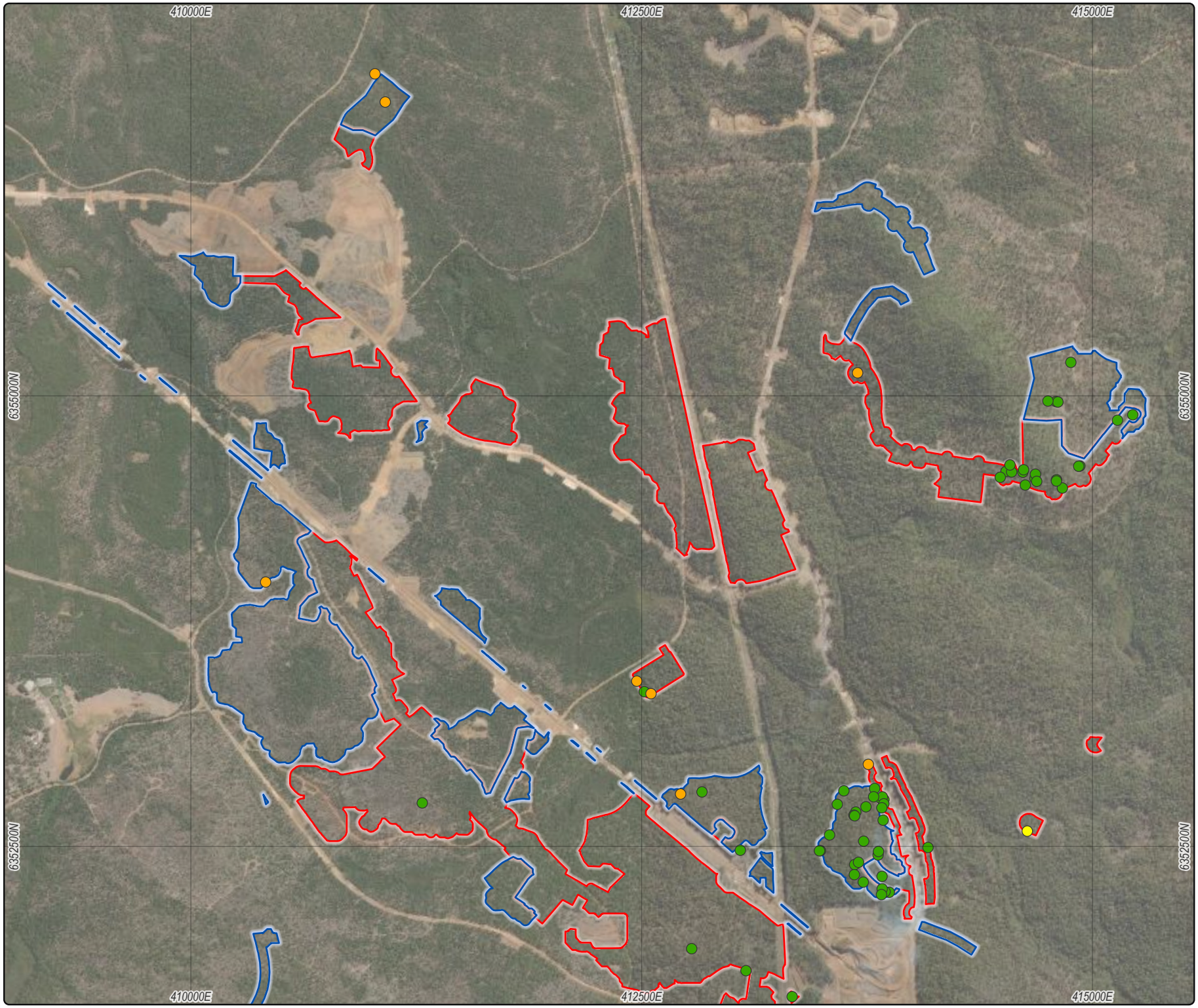

Legend

Survey areas

- Priority 1
- Priority 2

Conservation significant flora

- *Netrostylis* sp. Nannup (P.A. Jurjevich 1133) (P1)
- *Grevillea prominens* (P3)
- *Senecio leucoglossus* (P4)

Figure 10C: Conservation significant flora recorded within and in the vicinity of the project area in Spring 2023 (Detailed Map 2 of 3)

0 0.25 0.5 1
Kilometres

Datum/Projection:
AGD 1984 AMG Zone 50

23PER5309-JP Date: 22/03/2024

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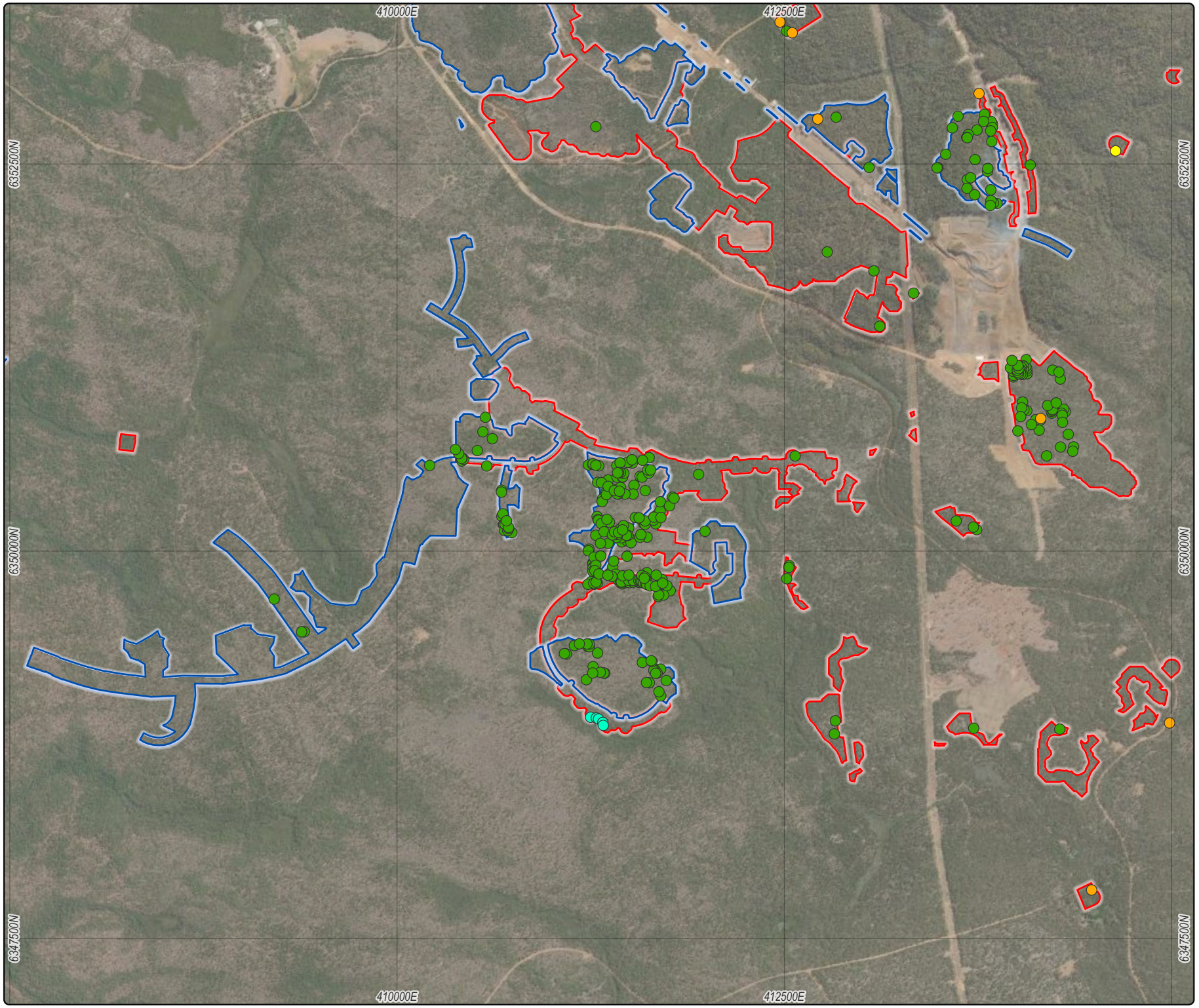

Legend

Survey areas

- Priority 1
- Priority 2

Conservation significant flora

- *Netrostylis* sp. Nannup (P.A. Jurjevich 1133) (P1)
- *Grevillea prominens* (P3)
- *Senecio leucoglossus* (P4)
- *Boronia stricta* (RE)

Figure 10D: Conservation significant flora recorded within and in the vicinity of the project area in Spring 2023 (Detailed Map 3 of 3)

0 0.25 0.5 1
Kilometres

Datum/Projection:
AGD 1984 AMG Zone 50

23PER5309-JP Date: 22/03/2024

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Legend

Survey areas

Priority 1

Weed records

**Rubus* sp.

**Zantedeschia aethiopica*

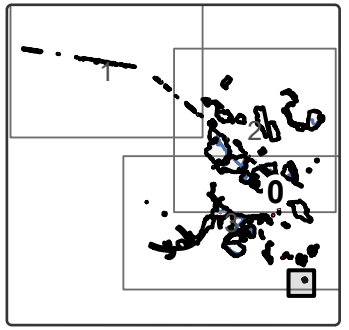

Figure 11: Key weed species recorded within and in the vicinity of the project area in Spring 2023

0 12.5 25 50

Metres

Datum/Projection:
AGD 1984 AMG Zone 50

23PER5309-JP Date: 22/03/2024

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5. Discussion

5.1. Flora and vegetation

5.1.1. Conservation significant flora species

Flora species recorded in the project area were typical of the central part of the Jarrah Forest IBRA bioregion (WAH 1998-).

No Threatened flora species listed under the EPBC Act or the BC Act were recorded within the project area. Three Priority flora species listed by DBCA were recorded within the project area:

- *Netrostylis* sp. Nannup (P.A. Jurjevich 1133; listed as P1 by DBCA)
- *Grevillea prominens* (P3)
- *Senecio leucoglossus* (P4)

The perennial, caespitose sedge *Netrostylis* sp. Nannup (P.A. Jurjevich 1133; Plate 1) grows in valley floor and creeklines on damp soils within woodland and tall shrubland (WAH 1998-). One occurrence of this species was recorded in 1997 between survey areas LR23_28 and LR23_P2_31 (DBCA 2023b) in a creekline with dense vegetation (now a cleared area immediately adjacent to a conveyor). In the current survey, one individual *Netrostylis* sp. Nannup (P.A. Jurjevich 1133) plant was recorded in a creekline within survey area LR23_23 (Figure 10; Appendix F; Appendix G).

Plate 1: *Netrostylis* sp. Nannup (P.A. Jurjevich 1133) (P1) (a) habit (b) culms, leaves and inflorescence ©ELA 2023

Grevillea prominens is a spreading shrub that grows up to 1.7 m high and 1 m wide and has cream-white flowers that appear from September to October (Plate 2). It grows in gravelly loam along creeklines in jarrah forest (WAH 1998-). Multiple historical records from 1979-1997 are located within 25 km to the west and southeast of the project area (DBCA 2023b). These include two records (both from 1996) less than 100 m southeast of survey area LR23_6, both occurring in jarrah forest on a slope above a creek. In the current survey, a total of 11 individual plant were recorded at 11 separate point locations within eight survey areas (and one location just outside LR23_6, confirming a previous record), generally in the north and east of the project area (Figure 10; Appendix F; Appendix G). Plants recorded within the project area were mostly growing on gentle slopes in loamy soils on laterite in jarrah-marri forest. The collected specimens could be distinguished from the similar, non-listed, species *G. trifida* by the combination their glabrous nature and having fruiting pedicels that extend beyond the leaves.

Plate 2: *Grevillea prominens* (P3) (a) habit (b) fruit and leaves ©ELA 2023

The annual herb *Senecio leucoglossus* grows to 1.3 m high and has distinctive toothed leaves and white flowers that appear from August to December (Plate 3). It grows on gravelly lateritic or granitic soils on slopes or granite outcrops in jarrah-marri forest (WAH 1998-). There are multiple historical records (1899-2009) of *S. leucoglossus* within 25 km of the project area, including one (from 1982) directly adjacent to Turbidity area b (DBCA 2023b). In the current survey, a total of 2,063 individual plants were recorded at 348 point locations across 20 survey areas; most records were located in the east and south of the project area (Figure 10; Appendix F; Appendix G). In the northwest corner of survey area LR23_20, located approximately 200 m east of the Larego sites offices, a dense population of 172 individuals of *S. leucoglossus* was clustered around several irrigation lines running through the vegetation (Figure 10), suggesting that the species responds well to regular watering.

Plate 3: *Senecio leucoglossus* (P4) (a) habit (b) flowers ©ELA 2023

Boronia stricta is an erect, slender shrub that grows 0.6-2 m high and has pink flowers from September to December or January to May (Plate 4). It grows in sand or sandy clay in seasonally swampy areas within tall myrtaceous shrubland or low woodland over low shrubland and sedgeland. *B. stricta* is known to occur from near Dunsborough south to Augusta and east to Cape Riche (WAH 1998-). A total of 30 individual *B. stricta* plants were recorded across five point locations (all within 50 m of a creekline) in survey area LR23_18, situated in the south of the project area. The records of *B. stricta* made in the current survey therefore represent a northeast extension to its known range by approximately 125 km.

Plate 4: *Boronia stricta* (a) habit (b) leaves and flowers ©ELA 2023

Following the field survey, four conservation significant flora species were considered to have Potential to occur within the project area:

- *Hibbertia acrotoma* listed as P1 by DBCA
- *Stylidium korijekup*, listed as P2 by DBCA
- *Actinotus repens*, listed as P3 by DBCA
- *Eucalyptus* x *graniticola*, listed as P4 by DBCA

Hibbertia acrotoma is an openly-branched, spreading shrub that grows to 0.5 m tall and produces yellow flowers in August to September. It grows on steep slopes with gravelly loam and granite boulders or outcrops in jarrah-marri forest (WAH 1998-). It is known to occur on the Darling Scarp, with the nearest record (from 2005) located approximately 16 km to the north of the project area (DBCA 2023b).

Eucalyptus x *graniticola* is an erect-stemmed mallee to 4 m tall that flowers from May to November. It is known to be a hybrid between *Eucalyptus rudis* and *E. drummondii,* and displays characteristics from both parent species. *Eucalyptus* x *graniticola* grows as an emergent from dense heath on granite outcrops on Darling Scarp (Threatened Species Scientific Committee 2006). It is known from five locations on the Darling Scarp (DBCA 2023b), with the most recent (2006) located 1.5 km north of survey area LR23_P2_88 towards the western end of the conveyor. Survey area LR23_P2_88 and other Priority 2 survey areas located on the Darling Scarp were not surveyed during the Spring 2023 survey period (these survey areas form part of the 17.5 ha remaining to be surveyed in the Summer/Autumn 2024 and/or Spring 2024 survey periods). Until the survey areas located on the Darling scarp are surveyed, both *Hibbertia acrotoma* and *Eucalyptus* x *graniticola* cannot be discounted as occurring within the project area.

Stylidium korijekup is a perennial herb with leaves 4-6 cm long growing in a basal rosette. The flowering scape is 18-34 cm tall and bears cream flowers in early October. It grows in well-drained grey-brown sandy loam with laterite on upland ridges within *Eucalyptus marginata* and *E. haematoxylon* woodland with *Xanthorrhoea acanthostachya* and *X. gracilis* (Wege et al. 2007). *S. korijekup* is known from three locations, the nearest (from 2005 and 2006) being 16 km southwest of the project area (WAH 1998-). *Stylidium* species can be challenging to survey as they are often difficult to find when they are not in flower, usually have narrow flowering windows, and different species can be easily confused with one another (Wege 2017). Given that suitable habitat was present in the project area and that this small, cryptic herb may not have been observable if not in flower, it cannot be ruled out as occurring with the project area.

Actinotus repens is a prostrate perennial herb that grows to 5 cm high and 20 cm wide. Its white flowers are present from January to March. It occurs on sandy clay and mud in valleys along creeklines and edges of watercourses in *Eucalyptus* or *Melaleuca* dominated woodland (Henwood 2013). There are three records (from 2000-2020) of *A. repens* within 10 km of the project area; one approximately 200 m east of survey area LR23_035, one 500 m northeast of LR23_15 and one approximate 9 km north of the project area (DBCA 2023b). Given that there was suitable habitat within the project area and that this small herb may not have been observed because it was not in flower during the time of the survey and the vegetation of its preferred habitat was often extremely dense, it cannot be ruled out as occurring with the project area.

5.1.2. Key weed species

Two Key weed species were recorded within the Turbidity b survey area, namely Blackberry and Arum lily. The Turbidity b survey area is located within Hoffman Mill townsite Reserve. Several factors within this survey area are vectors for spread of weeds and provide good conditions for growth, including historical clearing, vehicle and pedestrian tracks, and a creekline (Harvey River mainstream). The presence of weed species was, therefore, to be expected in this area. Historical clearing altered the native vegetation structure and allowed Blackberry to flourish within survey area Turbidity b. Blackberry grew extremely densely on both sides of the creekline, to the exclusion of native flora species.

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Appendix A Spring 2023 survey areas

Survey area	Area (ha)	Priority level	Completed in 2023	Centroid location (AGD 84; MGA zone 50)	
				mE	mN
L23_1	0.28	1	Y	412940	6348529
L23_2	0.56	1	Y	412980	6348692
L23_3	0.09	1	Y	413502	6348739
L23_4	6.36	1	Y	414335	6348519
L23_5	2.19	1	Y	413637	6348876
L23_6	1.16	1	Y	414827	6348904
L23_7	5.59	1	Y	412771	6348910
L23_8	3.96	1	Y	414806	6349195
L23_9	2.94	1	Y	412911	6349363
L23_10	1.23	1	Y	412614	6349639
L23_11	2.53	1	Y	413628	6350181
L23_12	0.25	1	Y	412975	6350277
L23_13	1.09	1	Y	412898	6350385
L23_14	0.08	1	Y	413068	6350627
L23_15	0.96	1	Y	408259	6350688
L23_16	0.21	1	Y	413334	6350738
L23_17	0.05	1	Y	413326	6350873
L23_18	72.44	1	Y	412226	6350533
L23_19	1.19	1	Y	413826	6351151
L23_19	1.19	1	Y	414308	6350818
L23_20	41.03	1	Y	413341	6351650
L23_21	0.14	1	Y	412951	6352574
L23_22	0.92	1	Y	414656	6352613
L23_23	1.02	1	Y	413802	6352355
L23_24	5.26	1	Y	414052	6352551
L23_25	3.19	1	Y	415005	6353052
L23_26	0.50	1	Y	412593	6353446
L23_27	3.94	1	Y	411236	6352890
L23_28	160.30	1	Y	413082	6354328
L23_29	24.61	1	Y	411632	6354882
L23_30	9.10	1	Y	410879	6355020
L23_31	20.38	1	Y	414828	6354645
L23_32	31.77	1	Y	412590	6354817

Survey area	Area (ha)	Priority level	Completed in 2023	Centroid location (AGD 84; MGA zone 50)	
				mE	mN
L23_33	39.87	1	Y	410584	6355534
L23_34	4.96	1	Y	410909	6356402
L23_35	2.66	1	Y	412940	6348529
L23_P2_1	1.74	2	Y	410911	6349291
L23_P2_2	28.26	2	Y	411398	6349194
L23_P2_3	10.46	2	Y	411980	6349996
L23_P2_4	3.13	2	Y	410714	6350314
L23_P2_5	84.03	2	Y	409035	6349329
L23_P2_6	21.88	2	Y	411429	6350300
L23_P2_7	14.85	2	Y	410544	6350719
L23_P2_8	2.00	2	Y	410558	6351034
L23_P2_10	8.89	2	Y	407465	6351214
L23_P2_11	0.05	2	Y	410354	6351479
L23_P2_12	1.64	2	n	413346	6352029
L23_P2_13	0.07	2	Y	414196	6351991
L23_P2_14	1.26	2	Y	413351	6352098
L23_P2_15	6.38	2	Y	413164	6352366
L23_P2_16	0.29	2	Y	411770	6352247
L23_P2_18	16.52	2	Y	413199	6352425
L23_P2_19	0.03	2	n	410416	6352742
L23_P2_20	0.05	2	n	413710	6352519
L23_P2_22	14.55	2	Y	412424	6352809
L23_P2_23	0.02	2	n	412520	6352802
L23_P2_24	0.01	2	n	411821	6352809
L23_P2_25	0.03	2	n	412958	6352715
L23_P2_26	0.90	2	Y	412214	6352987
L23_P2_27	0.02	2	n	412262	6353022
L23_P2_28	13.12	2	Y	412131	6353059
L23_P2_29	0.01	2	n	411918	6353060
L23_P2_30	0.03	2	n	411980	6353259
L23_P2_31	3.32	2	Y	411619	6353069
L23_P2_32	0.03	2	n	411848	6353372
L23_P2_33	74.95	2	Y	411684	6353511
L23_P2_34	0.11	2	Y	411502	6353801
L23_P2_35	0.11	2	Y	411025	6353994

Survey area	Area (ha)	Priority level	Completed in 2023	Centroid location (AGD 84; MGA zone 50)	
				mE	mN
L23_P2_36	2.17	2	Y	410568	6353444
L23_P2_37	0.35	2	Y	410297	6354613
L23_P2_38	0.03	2	n	410322	6354664
L23_P2_39	0.01	2	n	410433	6354715
L23_P2_40	0.03	2	n	411277	6354803
L23_P2_41	23.52	2	Y	409866	6355052
L23_P2_42	0.03	2	n	409734	6355089
L23_P2_43	0.01	2	n	409569	6355229
L23_P2_44	0.14	2	n	414925	6354978
L23_P2_45	0.04	2	n	409563	6355308
L23_P2_46	0.02	2	n	409510	6355353
L23_P2_47	2.40	2	n	409425	6355352
L23_P2_48	0.03	2	n	409416	6355433
L23_P2_49	5.22	2	Y	409251	6355498
L23_P2_50	0.01	2	n	413715	6355454
L23_P2_51	0.01	2	n	409251	6355573
L23_P2_52	7.53	2	n	410137	6355647
L23_P2_53	0.03	2	n	408832	6355851
L23_P2_54	0.01	2	n	408758	6355916
L23_P2_55	0.04	2	n	413791	6356094
L23_P2_56	0.06	2	n	408417	6356206
L23_P2_57	0.04	2	n	408465	6356239
L23_P2_58	0.04	2	n	408327	6356282
L23_P2_59	0.01	2	n	408340	6356343
L23_P2_60	0.01	2	n	408108	6356540
L23_P2_61	0.07	2	n	408026	6356536
L23_P2_62	6.54	2	Y	408012	6356622
L23_P2_63	0.01	2	n	407941	6356682
L23_P2_64	0.13	2	n	407873	6356667
L23_P2_65	0.60	2	n	411027	6356586
L23_P2_66	0.01	2	n	406583	6357224
L23_P2_67	0.01	2	n	406514	6357226
L23_P2_68	0.01	2	n	406748	6357233
L23_P2_69	0.01	2	n	406122	6357283
L23_P2_70	0.01	2	n	406087	6357290

Survey area	Area (ha)	Priority level	Completed in 2023	Centroid location (AGD 84; MGA zone 50)	
				mE	mN
L23_P2_71	0.50	2	n	406049	6357295
L23_P2_72	0.01	2	n	406252	6357305
L23_P2_73	0.01	2	n	405978	6357309
L23_P2_74	0.01	2	n	406386	6357292
L23_P2_75	0.02	2	n	405906	6357321
L23_P2_76	0.01	2	n	405847	6357330
L23_P2_77	0.05	2	n	405774	6357341
L23_P2_78	0.17	2	n	405706	6357353
L23_P2_79	0.03	2	n	405609	6357387
L23_P2_80	0.01	2	n	405285	6357405
L23_P2_81	0.01	2	n	405209	6357407
L23_P2_82	0.01	2	n	404654	6357534
L23_P2_83	0.08	2	n	404683	6357546
L23_P2_84	1.59	2	n	404659	6357547
L23_P2_85	0.01	2	n	404673	6357547
L23_P2_86	0.04	2	n	404512	6357547
L23_P2_87	0.01	2	n	405733	6357402
L23_P2_88	0.01	2	n	404377	6357623
L23_P2_89	0.02	2	n	404358	6357633
L23_P2_90	0.07	2	n	403583	6357765
L23_P2_91	0.01	2	n	403521	6357776
L23_P2_92	0.17	2	n	402731	6357853
L23_P2_93	0.25	2	n	402651	6357868
L23_P2_94	0.02	2	n	402797	6357884
L23_P2_95	0.04	2	n	402683	6357911
L23_P2_96	1.10	2	n	402388	6357912
Turbidity a	0.87	1	Y	402175	6357945
Turbidity b	1.46	1	Y	402036	6357968

Appendix B Framework for conservation significant flora and fauna ranking

CATEGORIES OF THREATENED SPECIES UNDER THE ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999 (EPBC ACT)

Threatened fauna and flora may be listed in any one of the following categories as defined in Section 179 of the EPBC Act. Species listed as 'conservation dependent' and 'extinct' are not Matters of National Environmental Significance and therefore do not trigger the EPBC Act.

Category	Definition
Extinct (EX)	There is no reasonable doubt that the last member of the species has died.
Extinct in the Wild (EW)	Taxa known to survive only in captivity or as a naturalised population well outside its past range; or taxa has not been recorded in its known and/or expected habitat at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.
Critically Endangered (CE)	Taxa considered to be facing an extremely high risk of extinction in the wild.
Endangered (EN)	Taxa considered to be facing a very high risk of extinction in the wild.
Vulnerable (VU)	Taxa considered to be facing a high risk of extinction in the wild.
Near Threatened (NT)	Taxa has been evaluated against the criteria but does not qualify for Critically Endangered, Endangered or Vulnerable now, but is close to qualifying for or is likely to qualify for a threatened category in the near future.
Least Concern (LC)	Taxa has been evaluated against the criteria and does not qualify for Critically Endangered, Endangered, Vulnerable or Near Threatened. Widespread and abundant taxa are included in this category.
Data Deficient (DD)	There is inadequate information to make a direct, or indirect, assessment of taxa's risk extinction based on its distribution and/or population status.
Not Evaluated (NE)	Taxa has not yet been evaluated against the criteria.
Migratory (MI)	Not an IUCN category. Species are defined as migratory if they are listed in an international agreement approved by the Commonwealth Environment Minister, including: • the Bonn Convention (Convention on the Conservation of Migratory Species of Wild Animal) for which Australia is a range state; • the agreement between the Government of Australian and the Government of the People's Republic of China for the Protection of Migratory Birds and their environment (CAMBA); • the agreement between the Government of Japan and the Government of Australia for the Protection of Migratory Birds and Birds in Danger of Extinction and their Environment (JAMBA); or • the agreement between Australia and the Republic of Korea to develop a bilateral migratory bird agreement similar to the JAMBA and CAMBA in respect to migratory bird conservation and provides a basis for collaboration on the protection of migratory shorebirds and their habitat (ROKAMBA).

CONSERVATION CODES FOR WESTERN AUSTRALIA FLORA AND FAUNA

The Wildlife Conservation (Specially Protected Fauna) Notice 2018 and the Wildlife Conservation (Rare Flora) Notice 2018 have been transitioned under regulations 170, 171 and 172 of the Biodiversity Conservation Regulations 2018 to be the lists of Threatened, Extinct and Specially Protected species under Part 2 of the *Biodiversity Conservation Act 2016*.

Specially protected fauna or flora are species which have been adequately searched for and are deemed to be, in the wild, threatened, extinct or in need of special protection, and have been gazetted as such.

Threatened species (T)

Threatened fauna is that subset of 'Specially Protected Fauna' listed under Schedule 2 of the Biodiversity Conservation (Listing of Native Species) (Fauna) Order 2022 made by the Minister under sections 13(1), 19(1) and 23(1) of the Act and regulation 174(1) of the *Biodiversity Conservation Regulations 2018*.

Threatened flora is that subset of 'Rare Flora' listed under Schedule 1 of the Biodiversity Conservation (Listing of Native Species) (Flora) Order 2022 made by the Minister under sections 19(1) and 23(1) of the BC Act and regulation 174(1) of the *Biodiversity Conservation Regulations 2018*.

The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.

Category	Code	Description
Critically Endangered species	CR	Threatened species considered to be "facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines". Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines. Published under Schedule 2-Division 1 of the Biodiversity Conservation (Listing of Native Species) (Fauna) Order 2022 for critically endangered fauna or Schedule 1-Division 1 of the Biodiversity Conservation (Rare Flora) Notice 2022 for critically endangered flora.
Endangered species	EN	Threatened species considered to be "facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines". Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines. Published under Schedule 2-Division 2 of the Biodiversity Conservation (Listing of Native Species) (Fauna) Order 2022 for endangered fauna or Schedule 1-Division 2 of the Biodiversity Conservation (Rare Flora) Notice 2022 for critically endangered flora.

Category	Code	Description
Vulnerable species	VU	Threatened species considered to be "facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines". Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines. Published under Schedule 2-Division 3 of the Biodiversity Conservation (Listing of Native Species) (Fauna) Order 2022 for endangered fauna or Schedule 1-Division 3 of the Biodiversity Conservation (Rare Flora) Notice 2022 for critically endangered flora.

Extinct species

Listed by order of the Minister as extinct under section 23(1) of the BC Act as extinct or extinct in the wild, as follows:

Category	Code	Description
Extinct species	EX	Species which have been adequately searched for and there is no reasonable doubt that the last individual has died. Published as Extinct Species under Schedule 3 of the Biodiversity Conservation (Listing of Native Species) (Fauna) Order 2022 for endangered fauna or Schedule 2 of the Biodiversity Conservation (Rare Flora) Notice 2022 for critically endangered flora.
Extinct in the wild species	EW	Species that "is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form", and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act). Currently there are no threatened fauna or threatened flora species listed as extinct in the wild. If listing of a species as extinct in the wild occurs, then a schedule will be added to the applicable notice.

Specially protected species

Listed by order of the Minister as specially protected under section 13(1) of the BC Act. These species meet one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.

Species that are listed as threatened species (critically endangered, endangered or vulnerable) or extinct species under the BC Act cannot also be listed as Specially Protected species.

Categories are detailed below.

Category	Code	Description
Migratory species	MI	Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act). Includes birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and fauna subject to the Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species. Published as migratory birds protected under an international agreement under Schedule 1-Division 2 of the 5 of the Biodiversity Conservation (Listing of Native Species) (Fauna) Order 2022.
Species of special conservation interest (conservation dependent fauna)	CD	Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened, and listing is otherwise in accordance with the ministerial guidelines (section 14 of the BC Act). Published as conservation dependent fauna under Schedule 1-Division 1 of the Biodiversity Conservation (Listing of Native Species) (Fauna) Order 2022.
Other specially protected species	OS	Fauna otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act). Published as other specially protected fauna under Schedule 1-Division 3 of the Biodiversity Conservation (Listing of Native Species) (Fauna) Order 2022.

Priority species (P)

Possibly threatened species that do not meet survey criteria, or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened fauna or flora.

Species that are adequately known, are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened species or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring.

Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

Category	Code	Definition
Priority 1	P1	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 2	P2	Poorly-known species Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. 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 threat from known threatening processes. Such species are in urgent need of further survey.
Priority 3	P3	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.
Priority 4	P4	Rare, Near Threatened and other species in need of monitoring (a) Rare. Species 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 species are usually represented on conservation lands. (b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as Conservation Dependent. (c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

Appendix C Likelihood of occurrence assessment criteria

Likelihood rating	Criteria
Recorded	The species has previously been recorded within the survey area from DBCA database search results and/or from previous surveys of the survey area, and/or the species has been confirmed through a current vouchered specimen at WA Herbarium.
Likely	The species has not previously been recorded from within the survey area. However, (to qualify requires one or more criteria to be met): • the species has been recorded in close proximity to the survey area, and occurs in similar habitat to that which occurs within the survey area; • core habitat and suitable landforms for the species occurs within the survey area either year-round or seasonally. In relation to fauna species, this could be that a host plant is seasonally present on site, or habitat features such as caves are present that may be used during particular times during its life cycle e.g. for breeding. In relation to both flora and fauna species, it may be there are seasonal wetlands present; and • there is a medium to high probability that a species uses the survey area.
Potential	The species has not previously been recorded from within the survey area. However, (one or more criteria requires to be met): • targeted surveys may locate the species based on records occurring in proximity to the survey area and suitable habitat occurring in the survey area; • the survey area has been assessed as having potentially suitable habitat through habitat modelling; • the species is known to be cryptic and may not have been detected despite extensive surveys; • the species is highly mobile and has an extensive foraging range so may not have been detected during previous surveys; The species has been recorded in the survey area by a previous consultant survey or there is historic evidence of species occurrence within the survey area. However, (one or more criteria requires to be met): • doubt remains over taxonomic identification, or the majority of habitat does not appear suitable (although presence cannot be ruled out due to factors such as species ecology or distribution); and • coordinates are doubtful.
Unlikely	The species has been recorded locally through DBCA database searches. However, it has not been recorded within the survey area and: • it is unlikely to occur due to the site lacking critical habitat, having at best marginally suitable habitat, and/or being severely degraded • it is unlikely to occur due to few historic record/s and no other current collections in the local area. The species has been recorded within the bioregion based on literature review but has not been recorded locally or within the survey area through DBCA database searches.The species has not been recorded in the survey area despite adequate survey efforts, such as a standardised methodology or targeted searching within potentially suitable habitat.
Does not occur (one or more criteria requires to be met).	The species is not known to occur within the IBRA bioregion based on current literature and distribution.The conspicuous species has not been recorded in the survey area despite adequate survey efforts at an appropriate time of year to detect the species within potentially suitable habitat.The survey area lacks important habitat for a species that has highly selective habitat requirements. The species has been historically recorded within survey area or locally; however, it is considered locally extinct due to significant habitat changes such as land clearing and/or introduced predators.

Appendix D PMST database search results

Appendix E Flora likelihood of occurrence assessment

Species	Conservation status		Source*	Description	Habitat	Likelihood Rating	
	EPBC Act	BC Act / DBCA				Pre-Survey	Post-Survey
Synaphea sp. Fairbridge Farm (D.Papenfus 696)	CR	CR	DCCEEW 2023	Dense, clumped shrub, to 0.3 m high, to 0.4 m wide. Fl. yellow, Oct.	Selena's Synaphea occurs on grey, clayey sand with lateritic pebbles in low woodland areas near winter-wet flats.	**Unlikely** Suitable habitat may be present but all records on SCP.	**Unlikely** Some suitable habitat present. This is a SCP species.
Caladenia bryceana subsp. *bryceana*	EN	EN	Alcoa 2023	Tuberous, perennial, herb, 0.05-0.1 m high. Fl. green-yellow, Aug to Oct.	Sand, loam. Adjacent to watercourses, winter-wet sites.	**Unlikely** Suitable habitat likely to be present. No nearby records.	**Unlikely** Some suitable habitat present. No nearby records; nearest record ~100km SE (1985), all other records NE of Albany.
Caladenia leucochila	EN	EN	Alcoa 2023	Perennial orchid which produces a single hirsute leaf from an underground tuber in late autumn and grows through winter and spring. The leaf dehisces at the end of spring and the plant spends summer and early autumn as a dormant tuber. Flower stem to 0.4m high, 1-2 flowers that are 5-10cm across. Fl. Cream-pale yellow-greenish yellow-maroon, mid Sep-late Oct.	Jarrah, Marri and Sheoak forest over Xanthorrhoea preissii and dwarf scrub of Bossiaea ornata, Banksia nivea and Lechenaultia biloba in well-drained sandy slopes. Frequently occur under Allocasuarina fraseriana in leaf litter. Found in open woodland, tends to be in the lower parts of the valley between 230-245m ASL and slightly upslope of seasonally damp areas.	**Unlikely** Suitable habitat likely to be present. No nearby records.	**Unlikely** Some suitable habitat present. No nearby records; all records ~55km SE (2008-2012) near Collie.
Diuris purdiei	EN	EN	DCCEEW 2023	Tuberous, perennial, herb, 0.15-0.35 m high. Fl. yellow, Sep to Oct.	Sand to sandy clay soils, in areas subject to winter inundation, and amongst native sedges and dense heath with scattered emergent Melaleuca preissiana, Eucalyptus calophylla, E. marginata and Nuytsia floribunda.	**Unlikely** Suitable habitat may be present. All nearby records on SCP.	**Unlikely** No suitable habitat present. This shrub is a SCP species.
Grevillea rara	EN	EN	Alcoa 2023	Dense, prickly shrub, to 2 m high. Fl. white-pink/white, Oct.	Lateritic loam. Creeklines.	**Unlikely** Suitable habitat may be present. No nearby (<25km) records. A cluster of recent records near Worsley refinery ~40km S.	**Unlikely** Some suitable habitat present. This shrub is of a size that it would have been observed if present.
Jacksonia velveta	EN	EN	Alcoa 2023	Open, upright, sometimes sprawling shrub, to 1.9 m high. Fl. yellow-orange, Dec.	Brown gravelly loam, dry grey sand, ironstone. Slight hillslopes, ridges.	**Unlikely** Suitable habitat may be present. No nearby (<25km) records. Nearest record ~30km E (2017).	**Unlikely** Suitable habitat was present. This shrub is of a size that it would have been observed if present.
Banksia mimica	EN	VU	DCCEEW 2023	Prostrate, lignotuberous shrub, 0.15-0.4 m high. Fl. yellow-brown, Dec or Jan to Feb.	Flat to gentle slopes, on grey and white sand in open woodlands.	**Unlikely** Suitable habitat may be present but all records on SCP.	**Unlikely** Some suitable habitat present. This shrub is a SCP species.
Anthocercis gracilis	VU	VU	DCCEEW 2023	Erect, spindly shrub, to 0.6(-1) m high. Fl. yellow-green, Sep to Oct.	Sandy or loamy soils. Granite outcrops.	**Unlikely** Suitable habitat likely to be present. No nearby records.	**Unlikely** Some suitable habitat present. This shrub is of a size that it would have been observed if present.
Diuris drummondii	VU	VU	DBCA 2023	Tuberous, perennial, herb, 0.5-1.05 m high. Fl. yellow, Nov to Dec or Jan.	Low-lying depressions and swamps.	**Unlikely** Suitable habitat may be present. All nearby records on SCP.	**Unlikely** No suitable habitat present. This shrub is a SCP species.
Diuris micrantha	VU	VU	Alcoa 2023, DCCEEW 2023	A tuberous, perennial herb that grows 0.3-0.6 m high. Fl. yellow and brown, Sep-Oct.	Brown loamy clay areas, Winter-wet swamps and in shallow water.	**Unlikely** Suitable habitat may be present. No nearby records - all within 100km are on SCP.	**Unlikely** No suitable habitat present. This shrub is a SCP species.
Eleocharis keigheryi	VU	VU	Alcoa 2023, DCCEEW 2023	Rhizomatous, clumped perennial, grass-like or herb (sedge), to 0.4 m high. Fl. green, Aug to Nov.	Small clumps in a substrate of clay or sandy loam. This species is emergent in freshwater creeks, and transient waterbodies such as drainage lines and claypans in water to approximately 15 cm deep.	**Unlikely** Suitable habitat may be present. All nearby records on SCP.	**Unlikely** Some suitable habitat present. This shrub is a SCP species.

Species	Conservation status		Source*	Description	Habitat	Likelihood Rating	
	EPBC Act	BC Act / DBCA				Pre-Survey	Post-Survey
Morelotia australiensis	VU	VU	DBCA 2023, DCCEEW 2023	Perennial sedge 0.3-1.3m high, 0.1-0.6m across. Rhizome short, thick, woody, 8-15mm diam. Culms terete, 2.0-5.5mm diam, multi-striate, glabrous. Leaves mostly basal and 3-4 cauline; lamina of basal leaves 12-18cm long, 2-6mm wide, linear, finely- multi-striate, pubescent when young, green to blue-green, margins sparsely scabrous. Inflor narrow panicle-like, 15-27cm long, 10-20mm wide. Fl. Oct-Feb, usually one year post-fire.	East side of SCP; historical populations near Armadale and Canning appraently now extinct. Usually in winter-wet swampy depressions, drainage lines or sandy rises adjacent swamps. Grey sand over clay or yellow and sandy or clayey lateritic soils. Open Corymbia calophylla oor Eucalyptus marginata woodland over low shrubs, herbs and sedges.	**Potential** Suitable habitat likely to be present. Several recent (2008-2010) nearby records 4-25km away in foothills.	**Unlikely** Some suitable habitat present. This sedge is of a size that it would have been observed if present.
Tribonanthes purpurea	VU	VU	Alcoa 2023	Tuberous, perennial, herb, 0.03-0.04 m high. Fl. pink-purple, Aug.	Seasonally wet soils in moss swards & herbfields among granite rocks.	**Unlikely** Suitable habitat may be present. No nearby (<25km) records. Nearest record ~85km SE (1999).	**Unlikely** No suitable habitat present. No nearby records.
Caladenia uliginosa subsp. *patulens*	-	P1	DBCA 2023	Tuberous, perennial, herb, 0.2-0.35 m high. Fl. green-cream, Sep to Oct.	Clay loam and gravel. Well drained soils amongst dense shrubs.	**Unlikely** Suitable habitat may be present but all nearby records on SCP.	**Unlikely** Some suitable habitat present. This herb is a SCP species.
Caladenia validinervia	-	P1	Alcoa 2023	Plants solitary. Leaf 5–16 cm long, 3–6 mm wide, linear, erect, incurved in cross section, pale green, the basal 1/5 irregularly blotched with red-purple. Scape 12–21 cm tall. Flowers 1 or 2, 5–8 cm across, pale yellow to pale creamy yellow with prominent, dull red stripes, Sep-early Oct.	Between Collie and Manjimup and eastward to near Rocky Gully, growing in sandy gravelly soil in Corymbia calophylla-E. marginata forest with Anigozanthos manglesii, Persoonia and Lechenaultia species.	**Unlikely** Suitable habitat likely to be present. No nearby records.	**Unlikely** Some suitable habitat present. No nearby records; nearest record ~45km SE (1965) near Collie.
Calytrix simplex subsp. *simplex*	-	P1	Alcoa 2023	Shrub, ca 0.2 m high. Fl. purple, Oct to Nov.	Jarrah woodland over heath. Slopes, flats. Granitic and lateritic soils.	**Unlikely** Suitable habitat likely to be present. No nearby records.	**Unlikely** Some suitable habitat present. Nearest record ~30km E (2020).
Deyeuxia inaequalis	-	P1	DBCA 2023	Erect, tufted annual, grass-like or herb, 0.75 m high. Leaves mostly basal. Leaf-sheaths scaberulous, glabrous on surface. Ligule an eciliate membrane, 3–5 mm long, membranous, lacerate, truncate. Leaf-blades linear, 5–12 cm long, 1–5 mm wide. Inflorescence solid, a panicle. Panicle linear or oblong, dense, 1–6 cm long.	Slopes, flats. Gravelly sandy loam. Forest of Eucalyptus marginata and Corymbia calophylla.	**Potential** Suitable habitat likely to be present. One recent record (2021) nearby (<25km) record to N. All other records S of Margaret River.	**Unlikely** Suitable habitat was present. This grass is of a size that it would have been observed if present.
Hemigenia rigida	-	P1	ALA 2023	Upright or spreading shrub, 0.1-0.6(-1) m high. Fl. blue-purple/violet, Aug to Dec or Jan.	Sandy soils, lateritic gravelly soils. Hillslopes, granite outcrops, flats, ironstone ridges.	**Unlikely** Suitable habitat may be present. No nearby (<25km) records. All records >100km to SE.	**Unlikely** Some suitable habitat present. This shrub is of a size that it would have been observed if present.
Hibbertia acrotoma	-	P1	DBCA 2023	Lax, openly-branched, spreading shrubs with stems to 0.5 m. Fl. Yellow, Aug-Sep.	Steep slopes, gravelly loam, granite boulders/outcrops. Jarrah-marri forest.	**Potential** Suitable habitat likely to be present. One recent (2005) nearby record 16km to N on scarp. All other records not nearby, on scarp.	**Potential** Some suitable habitat present. Given previous records are on scarp, and these survey areas were not covered in the Spring 2023 survey period, this species cannot be discounted as occurring within the project area.
Hibbertia ambita	-	P1	Alcoa 2023	Shrub to 80cm. Fl. Yellow, Aug-Oct.	Slopes. Lateritic soils. Jarrah-marri forest.	**Unlikely** Suitable habitat may be present. No nearby (<25km) records. All records ~40km NE.	**Unlikely** Suitable habitat was present. This shrub is of a size that it would have been observed if present.
Netrostylis sp. Nannup (P.A. Jurjevich 1133)	-	P1	DBCA 2023	Perennial, caespitose sedge to 0.9m.	Valley floors, creeklines. Damp sand, loam, clay. Woodland and tall shrubland.	**Potential** Suitable habitat likely to be present. 1 nearby record (1997) between areas L23-127 and L23_123. All other records S of Busselton.	**Recorded**

Species	Conservation status		Source*	Description	Habitat	Likelihood Rating	
	EPBC Act	BC Act / DBCA				Pre-Survey	Post-Survey
Cardamine paucijuga	-	P2	DBCA 2023	Slender erect annual, herb, to 0.4 m high. Usually glabrous; leaves petiolate, pinnate, with 1-4 pairs of pinnae, ovate to linear. Sepals 1.5-2 mm long, sometimes purple, margins white; petals 2.5-3.5 mm long, white, rarely pink; stamens 6. Siliqua linear, 10-30 mm long, 0.7-1 mm wide, erect; style slender or obtuse, to 1 mm long; pedicels in fruit spreading, 3-15 mm long. Fl. white, Sep to Oct.	Winter-wet depressions and flats, drainage lines. Rich soils in moist to dry habitats. Marri, karri forest. Eucalyptus rudis, Melaleuca rhaphiophylla. Melaleuca tall shrubland.	**Potential** Suitable habitat likely to be present. One recent (2016) nearby (<25km) record, at base of foothills.	**Unlikely** Very little suitable habitat present. Nearby record is on SCP.
Gonocarpus keigheryi	-	P2	Alcoa 2023, DBCA 2023	Erect or decumbent shrub to 20cm high. Fl. Green, Dec-Feb.	Watercourses, seasonally wet areas. Lateritic gravelly or clayey sand. Jarrah, Marri, Karri forest.	**Unlikely** Suitable habitat may be present. One nearby record ~21km SE but not recent (1997). All other records further S.	**Unlikely** Some suitable habitat present. No recent, nearby records.
Grevillea ornithopoda	-	P2	Alcoa 2023, DBCA 2023	Slender erect shrub to 3 m high by 2 m wide. Fl. cream-white, Jun-Oct.	Riverbanks. Eucalyptus rudis, E. patens.	**Potential** Suitable habitat likely to be present. Several recent (2017-2019) nearby (<25km) records to N.	**Unlikely** No suitable habitat present. This shrub is of a size that it would have been observed if present.
Leucopogon extremus	-	P2	Alcoa 2023	Low, spreading shrub to 40cm high. Fl. Greenish-white, Sep-Oct.	Valley bottoms, creeks. Sandy clay, sandy loam. Callitris pyramidalis tall shrubland over Myrtaceous mid shrubland and sedges.	**Unlikely** Suitable habitat may be present. No nearby (<25km) records. Nearest record ~35km SE (2006).	**Unlikely** Some suitable habitat present. This shrub is of a size that it would have been observed if present.
Logania sylvicola	-	P2	Alcoa 2023	Erect to spreading compact multi-branched shrub 50 cm high, up to 50 cm wide. Leaves opposite, subsessile; linear, 3–5 mm long, 0.5–0.6 mm wide. Fl. White-cream, Aug-Sep.	Woodland to open forest vegetation on the mid-slope of laterite rises associated with brown clay to clayey sand.	**Unlikely** Suitable habitat may be present. No nearby (<25km) records. Nearest recent record ~60km SE (2005).	**Unlikely** Suitable habitat was present. This shrub is of a size that it would have been observed if present.
Melaleuca viminalis	-	P2	Alcoa 2023	Small tree to 10 m with pendulous foliage. Fl. Red, Nov-May.	Watercourses. Sandy clay.	**Potential** Suitable habitat likely to be present. One recent (2005) nearby record 10km NW on scarp.	**Unlikely** Suitable habitat was present. This small tree is of a size that it would have been observed if present.
Millotia tenuifolia var. *laevis*	-	P2	Alcoa 2023, DBCA 2023	Ascending to erect annual, herb, 0.02-0.1 m high. Fl. yellow, Sep to Oct.	Granite or laterite soils. Jarrah and Allocasuarina woodland.	**Unlikely** Suitable habitat may be present. No nearby (<25km) recent records. Nearest record ~10km N (1965) on scarp.	**Unlikely** Some suitable habitat present. No nearby records.
Schizaea rupestris	-	P2	ALA 2023, Alcoa 2023, DBCA 2023	Rhizomatous, perennial, herb or grass-like or (fern), 0.1-0.2 m high, fronds simple, glossy; sporangia-bearing segments in pinnately arranged `cock's comb'.	Sand. Gullies, creek banks, shaded moist rock faces.	**Potential** Suitable habitat likely to be present. 1 recent (2000) nearby record 4km N. 1 older (1997) record immediately adjacent areas L23_127 and L23_123.	**Unlikely** Very little suitable habitat present. This fern is of a distinctive appearance that it would have been observed if present.
Stylidium acuminatum subsp. *acuminatum*	-	P2	Alcoa 2023	Perennial herb to 20cm high, scape to 40cm. Basal rosette. Fl. Pale yellow, Nov-Dec.	Disturbed areas, hillslopes. Lateritic gravelly loam. Jarrah-marri forest.	**Unlikely** Suitable habitat may be present. No nearby (<25km) records. Nearest record ~30km S (1967).	**Unlikely** Suitable habitat was present. No nearby records.
Stylidium korijekup	-	P2	DBCA 2023	Perennial, herb, 0.18-0.34 m high. Leaves in a spreading rosette, spathulate (lamina ovate–elliptic), apex obtuse–subacute, margin entire, 4–6 cm long (petioles 3–4 mm long, lamina 1.4–2 cm long), 9–16 mm wide, glabrous. Scape c. 18–34 cm high. Fl. Cream, Oct.	Well-drained grey-brown sandy loam with laterite. Upland ridges. Eucalyptus marginata and E. haematoxylon woodland with Xanthorrhoea acanthostachya and X. gracilis.	**Potential** Suitable habitat likely to be present. Two recent (2005-2006) nearby (<25km) records.	**Potential** Some suitable habitat present. This small, perennial herb with leaves in a basal rosette may not have been observable if not in flower.
Thysanotus sp. Badgingarra (E.A. Griffin 2511)	-	P2	Alcoa 2023	Perennial, herb (with tuberous roots), ca 0.35 m high. Fl. blue, Dec.	Gentle slopes and flats. Grey sand with lateritic gravel. Eucalypt woodland.	**Unlikely** Suitable habitat may be present. No nearby (<25km) records. Nearest record ~60km E (1960).	**Unlikely** Suitable habitat was present. No nearby records.

Species	Conservation status		Source*	Description	Habitat	Likelihood Rating	
	EPBC Act	BC Act / DBCA				Pre-Survey	Post-Survey
Acacia oncinophylla subsp. *oncinophylla*	-	P3	Alcoa 2023	Shrub, 0.9-2.5 m high, 'minni-ritchi' bark, phyllodes mostly 8-13 cm long, 1-2 mm wide. Fl. yellow, Aug to Oct.	Granitic soils, with boulders and outcrops. In heath and open woodland.	**Unlikely** Suitable habitat likely to be present. No nearby (<25km) records. Nearest recent record 75km N (2013).	**Unlikely** Some suitable habitat present. This shrub is of a size and distinctive appearance that it would have been observed if present.
Actinotus repens	-	P3	ALA 2023, DBCA 2023	Prostrate perennial herb to 5cm high, 20cm wide. Fl. White, Jan-Mar.	Sandy clay and mud in valleys along creeklines and edges of watercourses. Eucalyptus or Melaleuca dominated woodland.	**Likely** Suitable habitat likely to be present. 3 nearby records: one in area L23_039 (2020); one ~100m SE of L23_131 (2003); one ~7km N (2000).	**Potential** Some suitable habitat present. This very small herb may not have been observed because it was not in flower during the time of the survey and due to the extremely dense nature of the creekline vegetation within the survey areas.
Adenanthos cygnorum subsp. *chamaephyton*	-	P3	Alcoa 2023	Prostrate, mat-forming, non-lignotuberous shrub, to 0.3 m high. Fl. white-cream-pink-green/green, Jul or Sep to Dec or Jan.	Grey sand, lateritic gravel.	**Unlikely** Suitable habitat likely to be present. No nearby (<25km) records.	**Unlikely** Suitable habitat was present. This shrub is of a size that it would have been observed if present.
Angianthus drummondii	-	P3	ALA 2023, Alcoa 2023, DBCA 2023	Erect annual, herb, to 0.1 m high. Fl. yellow, Oct to Dec.	Grey or brown clay soils, ironstone. Seasonally wet flats.	**Unlikely** Suitable habitat likely to be present. All nearby (<25km) records on SCP and foothills.	**Unlikely** Some suitable habitat present. This herb is a SCP/foothills species.
Asteridea gracilis	-	P3	Alcoa 2023	Annual, herb, 0.15-0.35 m high. Fl. white-pink, Sep to Dec.	Slopes, flats. Sand, clay, gravelly soils. Eucalypt woodland over heath.	**Unlikely** Suitable habitat likely to be present. No nearby records.	**Unlikely** Some suitable habitat present. Nearest record ~30km E (1980), all recent records >100km N.
Calytrix pulchella	-	P3	Alcoa 2023	Shrub, 0.3-0.7(-1) m high. Fl. pink, Aug to Nov.	Grey or white sand over laterite. Ridges, flats.	**Unlikely** Suitable habitat likely to be present. No nearby records.	**Unlikely** Suitable habitat was present. This shrub is of a size that it would have been observed if present.
Carex tereticaulis	-	P3	DBCA 2023	Monoecious, rhizomatous, tufted perennial, grass-like or herb (sedge), 0.7 m high. Fl. brown, Sep to Oct.	Damp flats, edges of watercourses. Black peaty sand.	**Unlikely** Suitable habitat likely to be present. One recent (2005) nearby (<25km) record but is on SCP, as are all other records.	**Unlikely** Some suitable habitat present. This sedge is of a size that it would have been observed if present.
Chamaescilla gibsonii	-	P3	DBCA 2023	Clumped tuberous, herb. Fl. blue, Sep.	Clay to sandy clay. Winter-wet flats, shallow water-filled claypans.	**Unlikely** Suitable habitat likely to be present. One recent (2012) nearby (<25km) record but is on SCP, as are all other records.	**Unlikely** No suitable habitat present. This herb is a SCP species.
Cyathochaeta teretifolia	-	P3	ALA 2023, Alcoa 2023, DBCA 2023	Rhizomatous, clumped, robust perennial, grass-like or herb (sedge), to 2 m high, to 1.0 m wide. Fl. brown.	Grey sand, sandy clay. Swamps, creek edges.	**Potential** Suitable habitat likely to be present. One older (1997) nearby (<25km) record just outside L23_127.	**Unlikely** Some suitable habitat present. This sedge is of a size that it would have been observed if present.
Dillwynia dillwynioides	-	P3	DBCA 2023	Decumbent or erect, slender shrub, 0.3-1.2 m high. Fl. red & yellow/orange, Aug to Dec.	Sandy soils. Winter-wet depressions.	**Unlikely** Suitable habitat may be present. All nearby records on SCP.	**Unlikely** Some suitable habitat present. This shrub is a SCP species.
Eryngium sp. Ferox (G.J. Keighery 16034)	-	P3	Alcoa 2023	Perennial herb to 30cm high. Fl. Purple, blue, Dec-Jan	Winter-wet flats, clay. Eucalypt woodland, Melaleuca shrubland over herbs and sedges.	**Unlikely** Suitable habitat may be present. One nearby record but on SCP and not recent.	**Unlikely** Some suitable habitat present. This shrub is a SCP species.
Grevillea prominens	-	P3	ALA 2023, Alcoa 2023, DBCA 2023	Spreading shrub, 0.5-1.7 m high, 0.3-1 m wide. Fl. cream-white, Sep to Oct.	Gravelly loam. Along creeklines.	**Potential** Suitable habitat likely to be present. Multiple nearby (<25km) records to SE & SW, incl two ~1km S, but none are recent (1979-1997).	**Recorded**

Species	Conservation status		Source*	Description	Habitat	Likelihood Rating	
	EPBC Act	BC Act / DBCA				Pre-Survey	Post-Survey
Hakea oldfieldii	-	P3	Alcoa 2023	Open, straggling shrub, up to 2.5 m high. Fl. white-cream/yellow, Aug to Oct.	Red clay or sand over laterite. Seasonally wet flats.	**Unlikely** Suitable habitat may be present. No nearby (<25km) records. Three recent records ~35km NE.	**Unlikely** No suitable habitat present. This shrub is of a size that it would have been observed if present.
Hemigenia microphylla	-	P3	Alcoa 2023, DBCA 2023	Slender shrub, 0.4-1.8 m high. Fl. blue-purple, Sep to Dec.	Sandy clay, peaty clay, granite. Winter-wet depressions.	**Unlikely** Suitable habitat may be present. Several nearby (<25km) records but none recent. Nearest recent record ~35km NE.	**Unlikely** No suitable habitat present. This shrub is of a size that it would have been observed if present.
Juncus meianthus	-	P3	Alcoa 2023	Tufted perennial, herb, 0.05-0.2 m high, to 0.4 m wide. Fl. brown, Nov to Dec or Jan.	Black sand, sandy clay. Creeks, seepage areas.	**Unlikely** Suitable habitat may be present. No nearby (<25km) records. Nearest record ~35km S (2005).	**Unlikely** Some suitable habitat present. This sedge is of a size that it would have been observed if present.
Lepyrodia heleocharoides	-	P3	Alcoa 2023	Rhizomatous, slender, tufted perennial, herb (sedge-like), 0.15-0.25 m high. Fl. Dec.	Moist peaty sand. Dry or seasonally inundated heath or woodland, swamps.	**Unlikely** Suitable habitat may be present. No nearby (<25km) records. Nearest record ~70km N (2003).	**Unlikely** Suitable habitat was present. No nearby records.
Meionectes tenuifolia	-	P3	Alcoa 2023	Annual semi-aquatic herb. Flowering in October to December.	Seasonally wet poorly drained flat and granite flats, ironstone gravel, hilltop on grey sand, loam, clay.	**Unlikely** Suitable habitat may be present. No nearby (<25km) records. Nearest record ~27km NE (2007).	**Unlikely** Very little habitat present. No nearby records.
Netrostylis sp. Blackwood River (A.R. Annels 3043)	-	P3	Alcoa 2023	Sprawling sedge to 1.5m high.	Creeklines, swamps. Sandy or peaty clay loam. Eucalyptus patens, E. megacarpa woodand, Melaleuca tall shrubland.	**Likely** Suitable habitat likely to be present. 1 nearby record in area L23_039 (2020). Next nearest record ~27km NE (2018).	**Unlikely** Some suitable habitat present. This sedge is of a size that it would have been observed if present.
Stylidium aceratum	-	P3	Alcoa 2023, DBCA 2023	Fibrous rooted annual, herb, 0.05-0.09 m high, leaves spathulate. Fl. pink/white, Oct to Nov.	Sandy soils. Swamp heathland.	**Potential** Suitable habitat likely to be present. Two recent (2003-2013) nearby records 14km NW in foothills.	**Unlikely** No suitable habitat present.
Stylidium paludicola	-	P3	ALA 2023	Reed-like perennial, herb, 0.35-1 m high, Leaves tufted, linear or subulate or narrowly oblanceolate, 0.5-4 cm long, 0.5-1.5 mm wide, apex acute, margin entire, glabrous. Scape mostly glabrous, inflorescence axis glandular. Inflorescence racemose. Fl. pink, Oct to Dec.	Peaty sand over clay. Winter wet habitats. Marri and Melaleuca woodland, Melaleuca shrubland.	**Unlikely** Suitable habitat may be present but all records on SCP.	**Unlikely** No suitable habitat present. This is a SCP species.
Tetratheca parvifolia	-	P3	Alcoa 2023, DBCA 2023	Small shrub, 0.2-0.3 m high. Fl. pink, Oct.	Slopes. Gravelly, sandy loam over granite. Jarrah-Marri forest over heath.	**Potential** Suitable habitat likely to be present. 1 recent (2005) nearby record 10km S. All other records further S.	**Unlikely** Suitable habitat was present. This shrub is of a size and distinctive appearance that it would have been observed if present.
Tetratheca pilifera	-	P3	Alcoa 2023	Spreading shrub, 0.1-0.3 m high. Fl. purple, Aug to Oct.	Rocky slopes, rocky drainage lines. Gravelly and sandy loam. Eucalyptus wandoo woodland.	**Unlikely** Suitable habitat may be present. No nearby (<25km) recent records. Nearest record ~25km N (1997). All other records >100km N.	**Unlikely** No suitable habitat present. No nearby records.
Acacia oncinophylla subsp. *patulifolia*	-	P4	Alcoa 2023	Shrub, 0.5-2.5(-3) m high, 'minni-ritchi' bark, phyllodes 4-9 cm long, 3-6 mm wide. Fl. yellow, Aug to Nov or Nov to Dec.	Granitic soils, occasionally on laterite.	**Unlikely** Suitable habitat likely to be present. Only nearby (<25km) record from 1992 and on SCP. All recent records >100km N (2005-2015).	**Unlikely** Some suitable habitat present. This shrub is of a size and distinctive appearance that it would have been observed if present.
Acacia semitrullata	-	P4	ALA 2023, Alcoa 2023, DBCA 2023	Slender, erect, pungent shrub, (0.1-)0.2-0.7(-1.5) m high. Fl. cream-white, May to Oct.	White/grey sand in open heath, frequently fringing seasonally dry swamps, and in sand over laterite in shallow depressions in open Jarrah (Eucalyptus marginata) forest.	**Unlikely** Suitable habitat likely to be present. All nearby (<25km) records on SCP and foothills.	**Unlikely** Some suitable habitat present. This shrub is of a size that it would have been observed if present.

Species	Conservation status		Source*	Description	Habitat	Likelihood Rating	
	EPBC Act	BC Act / DBCA				Pre-Survey	Post-Survey
Calothamnus graniticus subsp. *leptophyllus*	-	P4	DBCA 2023	Erect, multi-stemmed shrub that grows 1-2 m high. Fl. red, Jun-Aug.	Clay over granite, lateritic soils. Hillsides.	**Potential** Suitable habitat likely to be present. One old (1979) nearby (<25km) record.	**Unlikely** Suitable habitat was present. This shrub is of a size that it would have been observed if present.
Chorizema ulotropis	-	P4	Alcoa 2023	Sprawling, open, semi-prostrate shrub, to 0.45 m high. Fl. orange-yellow, Jul to Sep.	Moist to dry soils, white sand with gravel, laterite, granite. Outcrops, winter damp to dry areas, flats.	**Unlikely** Suitable habitat likely to be present. No nearby (<25km) records.	**Unlikely** Some suitable habitat present. This shrub is of a size that it would have been observed if present.
Conostylis pauciflora subsp. *pauciflora*	-	P4	ALA 2023	Rhizomatous, stoloniferous perennial, grass-like or herb, 0.1-0.35 m high. Fl. yellow, Aug to Oct.	Grey sand, limestone. Hillslopes, consolidated dunes. SCP only.	**Unlikely** Suitable habitat unlikely to be present. All nearby records on SCP.	**Unlikely** No suitable habitat present. This herb is a SCP species.
Cyanothamnus tenuis	-	P4	ALA 2023, Alcoa 2023, DBCA 2023	Erect, slender shrub to 40cm high. Fl. Blue, pink, white, Aug-Nov.	Slopes, flats. Granitic or lateritic stony soils. Eucalypt woodland, Myrtaceous shrubland.	**Potential** Suitable habitat likely to be present. One recent (2005) nearby (<25km) record.	**Unlikely** Suitable habitat was present. This shrub is of a size that it would have been observed if present.
Drosera occidentalis	-	P4	Alcoa 2023	Fibrous-rooted, rosetted perennial, herb, to 0.025 m high. Fl. pink/white, Oct to Dec or Jan.	In swampy flats. White/black sand over yellow clay.	**Unlikely** Suitable habitat may be present. All nearby records on SCP, none recent.	**Unlikely** No suitable habitat present. This shrub is a SCP species.
Eucalyptus x graniticola	-	P4	ALA 2023, Alcoa 2023, DBCA 2023	Erect-stemmed lignotuberous mallee to 4 m tall; bark smooth, cream, powdery, sometimes rough–grey and flaky at base. Adult leaves petiolate, lanceolate with lamina averaging 11 cm long × 2.5 cm wide, alternate, concolorous, dull, grey-green. Inflorescence axillary, unbranched, 7-flowered. Buds pedicellate, ovoid to globular, to 9 mm long x 6 mm wide; operculum obtusely conical. Stamens erect of inflexed, all fertile, cream. Fruit pedicillate, subcampanulate, 6 mm long × 7 mm wide. Fl. May-Nov. Hybrid btween E. rudis and E. drummondii.	Granite outcrops on Darling Scarp. Soil pocket surrounded by westward sloping sheet granite rock as an isolated emergent mallee over closed shrubland/sedgeland.	**Potential** Suitable habitat likely to be present. One recent (2006) nearby record <2km to N. All other nearby (<25km) records historical.	**Potential** Some suitable habitat present, but on scarp at western end of project area - these survey areas were not covered in the Spring 2023 survey period so cannot be discounted as occurring within the project area.
Hydrocotyle lemnoides	-	P4	Alcoa 2023	Aquatic, floating annual, herb. Fl. purple, Aug to Oct.	Swamps.	**Unlikely** Suitable habitat may be present. No nearby (<25km) records. Nearest record ~45km SE (2011).	**Unlikely** No suitable habitat present. No nearby records.
Lasiopetalum bracteatum	-	P4	ALA 2023	Erect, open shrub, 0.4-1.5 m high. Fl. pink-purple, Aug to Nov.	Sandy clay, clay, lateritic gravel. Along drainage lines, creeks, gullies, granite outcrops.	**Unlikely** Suitable habitat likely to be present. No recent nearby (<25km) records.	**Unlikely** Some suitable habitat present. This shrub is of a size that it would have been observed if present.
Lasiopetalum cardiophyllum	-	P4	Alcoa 2023	Erect, multi-stemmed shrub, 0.2-0.5 m high. Fl. pink, Aug to Dec or Jan.	Lateritic gravelly soils, sandy clay. Flats, hillslopes.	**Unlikely** Suitable habitat may be present. No nearby (<25km) records. Nearest recent record ~35km E (2007).	**Unlikely** Suitable habitat was present. This shrub is of a size that it would have been observed if present.
Microtis quadrata	-	P4	Alcoa 2023	Orchid to 40cm high. Fl. Cream-white, Oct-Dec.	Winter-wet flats, drainage lines. Sand, loam, clay over laterite. Jarrah-Marri forest, Melaleuca shrubland.	**Unlikely** Suitable habitat may be present. No nearby (<25km) records. Nearest record ~40km NW (1984) on Swan Coastal Plain.	**Unlikely** Some suitable habitat present. No nearby records.
Ornduffia submersa	-	P4	Alcoa 2023	An aquatic herb growing in water 60 cm deep with leaves and flowers floating on the surface. Fl. White-cream-yellow, Oct-Nov.	Wetlands, open depressions, winter wet flats. Sandy clay. Melaleuca rhaphiophylla, M. preissiana, M. incana over sedges.	**Unlikely** Suitable habitat may be present. One nearby (~17km NW) recent (2000) record but on Swan Coastal Plain.	**Unlikely** No suitable habitat present. No nearby relevant records (nearest record in JAF ~40km SE).

Species	Conservation status		Source*	Description	Habitat	Likelihood Rating	
	EPBC Act	BC Act / DBCA				Pre-Survey	Post-Survey
Parsonsia diaphanophleba	-	P4	ALA 2023, Alcoa 2023, DBCA 2023	Woody climber, to 10 m high. Fl. white/cream & pink, Jan to Feb or Apr to Jun or Sep.	Alluvial soils. Along rivers.	**Potential** Suitable habitat likely to be present. 1 recent (2015) nearby records 20km N. Several older records in same area.	**Unlikely** Some suitable habitat present. This woody climber is of a size and appearance that it would have been observed if present.
Pimelea rara	-	P4	Alcoa 2023, DBCA 2023	Shrub, 0.2-0.35 m high. Glabrous except for inflorescence. Leaf lamina bluish-green (when dry). Fl. white, Dec or Jan.	Slopes. Lateritic soils. Jarrah-marri forest.	**Unlikely** Suitable habitat may be present. No nearby (<25km) recent records. Nearest record ~14km N (1998).	**Unlikely** Some suitable habitat present. This shrub is of a size that it would have been observed if present.
Pultenaea skinneri	-	P4	Alcoa 2023	Slender shrub, 1-2 m high. Fl. yellow/orange & red, Jul to Sep.	Sandy or clayey soils. Winter-wet depressions.	**Unlikely** Suitable habitat may be present. No nearby (<25km) records. Nearest record ~35km S (2006).	**Unlikely** No suitable habitat present. This shrub is of a size that it would have been observed if present.
Schoenus natans	-	P4	Alcoa 2023	Aquatic annual, grass-like or herb (sedge), 0.3 m high. Fl. brown, Oct.	Winter-wet depressions.	**Unlikely** Suitable habitat may be present. Nearest record ~14km NW (2012) but on Swan Coastal Plain. Nearest JAF records ~35km SE.	**Unlikely** No suitable habitat present. No relevant nearby records (nearest record in JAF ~35km SE).
Senecio leucoglossus	-	P4	ALA 2023, Alcoa 2023, DBCA 2023	Erect annual, herb, to 1.3 m high. Fl. white, Aug to Dec.	Gravelly lateritic or granitic soils. Granite outcrops, slopes.	**Potential** Suitable habitat likely to be present. 1 recent (2002) nearby record 14km SE. Several older (1967-1997) nearby records.	**Recorded**
Stylidium ireneae	-	P4	Alcoa 2023, DBCA 2023	Lax perennial, herb, (0.06-) 0.1-0.28 m high. Basal rosette of leaves, leaves oblanceolate, 0.4-2 cm long, 1-3 (-5) mm wide, apex subacute to acuminate, margin entire, glandular. Scape glandular. Inflorescence racemose. Fl. pink, Oct to Dec.	Sandy loam. Valleys near creek lines, woodland, often with Agonis.	**Potential** Suitable habitat likely to be present. Multiple recent (2000) nearby records 8-18km N.	**Potential** Some suitable habitat present. This small, perennial herb with leaves in a basal rosette may not have been observable if not in flower.
Stylidium longitubum	-	P4	ALA 2023	Erect annual (ephemeral), herb, 0.05-0.12 m high. Fl. pink, Oct to Dec.	Sandy clay, clay. Seasonal wetlands.	**Unlikely** Suitable habitat may be present but all records on SCP.	**Unlikely** No suitable habitat present. This is a SCP species.
Trithuria australis	-	P4	Alcoa 2023	Aquatic annual herb to 2cm high.	Edges of wetlands, seasonally wet flats. Silty clay. Melaleuca shrubland, sedgeland, herbland.	**Unlikely** Suitable habitat may be present. Nearest record ~14km NW (2004) but on Swan Coastal Plain.	**Unlikely** No suitable habitat present. This is a SCP species.

Appendix F DBCA Threatened and Priority Flora report forms

- *Netrostylis* sp. Nannup (P.A. Jurjevich 1133) (listed as P1 by DBCA)
- *Grevillea prominens* (P3)
- *Senecio leucoglossus* (P4)

Appendix G Locations of Conservation Significant Flora

Species	Status	Date	Survey area	# individuals	Easting*	Northing
Boronia stricta	Range extension	23/10/2023	LR23_18	4	411388.0	6349063.5
Boronia stricta	Range extension	23/10/2023	LR23_18	12	411424.9	6349058.6
Boronia stricta	Range extension	23/10/2023	LR23_18	5	411439.3	6349052.3
Boronia stricta	Range extension	23/10/2023	LR23_18	2	411466.9	6349029.8
Boronia stricta	Range extension	23/10/2023	LR23_18	7	411469.7	6349010.7
Grevillea prominens	P3	22/10/2023	outside LR23_6	1	415125.1	6349026.6
Grevillea prominens	P3	23/10/2023	LR23_20	1	414293.3	6350992.2
Grevillea prominens	P3	24/10/2023	LR23_24	1	413895.6	6353090.6
Grevillea prominens	P3	26/10/2023	LR23_32	1	413836.0	6355263.0
Grevillea prominens	P3	27/10/2023	LR23_27	1	412690.2	6353482.9
Grevillea prominens	P3	30/10/2023	LR23_27	1	412611.3	6353552.2
Grevillea prominens	P3	30/10/2023	outside LR23_P2_62	1	411159.3	6356922.1
Grevillea prominens	P3	30/10/2023	LR23_P2_62	1	411216.5	6356765.7
Grevillea prominens	P3	01/11/2023	LR23_P2_22	1	412854.5	6352925.9
Grevillea prominens	P3	02/11/2023	LR23_P2_33	1	410553.3	6354102.0
Grevillea prominens	P3	03/11/2023	Turbidity-b	1	414622.3	6347947.9
Netrostylis sp. Nannup (P.A. Jurjevich 1133)	P1	23/10/2023	LR23_23	1	414777.0	6352720.1
Senecio leucoglossus	P4	22/10/2023	LR23_20	5	414505.8	6350809.2
Senecio leucoglossus	P4	22/10/2023	LR23_4	1	414416.7	6348986.7
Senecio leucoglossus	P4	22/10/2023	LR23_11	1	413858.9	6350291.1
Senecio leucoglossus	P4	22/10/2023	LR23_11	1	413748.3	6350330.9
Senecio leucoglossus	P4	22/10/2023	LR23_P2_6	2	413880.5	6350274.7
Senecio leucoglossus	P4	22/10/2023	LR23_20	5	414500.6	6350781.1
Senecio leucoglossus	P4	23/10/2023	LR23_20	1	414452.7	6351035.7
Senecio leucoglossus	P4	23/10/2023	LR23_20	1	414441.2	6351052.2
Senecio leucoglossus	P4	23/10/2023	LR23_20	3	414420.4	6351247.1
Senecio leucoglossus	P4	23/10/2023	LR23_20	2	414429.1	6351026.3
Senecio leucoglossus	P4	23/10/2023	LR23_20	16	414433.2	6351012.9
Senecio leucoglossus	P4	23/10/2023	LR23_20	1	414434.3	6350967.6
Senecio leucoglossus	P4	23/10/2023	LR23_20	1	414421.4	6350808.1

Species	Status	Date	Survey area	# individuals	Easting*	Northing
Senecio leucoglossus	P4	23/10/2023	LR23_20	12	414365.1	6351026.9
Senecio leucoglossus	P4	23/10/2023	LR23_20	1	414363.0	6351038.1
Senecio leucoglossus	P4	23/10/2023	LR23_20	17	414369.8	6351044.6
Senecio leucoglossus	P4	23/10/2023	LR23_20	12	414369.4	6351050.3
Senecio leucoglossus	P4	23/10/2023	LR23_20	30	414370.8	6351304.5
Senecio leucoglossus	P4	23/10/2023	LR23_20	22	414338.1	6351076.0
Senecio leucoglossus	P4	23/10/2023	LR23_20	4	414283.5	6350917.2
Senecio leucoglossus	P4	23/10/2023	LR23_20	1	414293.1	6350983.3
Senecio leucoglossus	P4	23/10/2023	LR23_20	1	414262.4	6350985.0
Senecio leucoglossus	P4	23/10/2023	LR23_20	2	414203.9	6351043.3
Senecio leucoglossus	P4	23/10/2023	LR23_20	4	414205.5	6351281.5
Senecio leucoglossus	P4	23/10/2023	LR23_20	70	414204.5	6351298.9
Senecio leucoglossus	P4	23/10/2023	LR23_20	40	414203.1	6351314.4
Senecio leucoglossus	P4	23/10/2023	LR23_20	2	414197.4	6351327.5
Senecio leucoglossus	P4	23/10/2023	LR23_20	6	414199.9	6351371.8
Senecio leucoglossus	P4	23/10/2023	LR23_20	6	414180.2	6351333.1
Senecio leucoglossus	P4	23/10/2023	LR23_20	2	414181.9	6351329.5
Senecio leucoglossus	P4	23/10/2023	LR23_20	9	414180.7	6351307.5
Senecio leucoglossus	P4	23/10/2023	LR23_20	3	414175.6	6351276.4
Senecio leucoglossus	P4	23/10/2023	LR23_20	10	414176.6	6351098.6
Senecio leucoglossus	P4	23/10/2023	LR23_20	2	414185.4	6351048.5
Senecio leucoglossus	P4	23/10/2023	LR23_20	5	414117.7	6351261.2
Senecio leucoglossus	P4	23/10/2023	LR23_20	7	414119.1	6351271.2
Senecio leucoglossus	P4	23/10/2023	LR23_20	10	414113.0	6351298.0
Senecio leucoglossus	P4	23/10/2023	LR23_20	1	414122.4	6351311.8
Senecio leucoglossus	P4	23/10/2023	LR23_20	1	414121.6	6351311.8
Senecio leucoglossus	P4	23/10/2023	LR23_20	12	414118.1	6351341.4
Senecio leucoglossus	P4	23/10/2023	LR23_20	1	414111.9	6351348.8
Senecio leucoglossus	P4	23/10/2023	LR23_20	3	414098.3	6351319.1
Senecio leucoglossus	P4	23/10/2023	LR23_18	1	412708.4	6350750.2
Senecio leucoglossus	P4	23/10/2023	LR23_18	1	411766.2	6350740.1
Senecio leucoglossus	P4	23/10/2023	LR23_P2_62	1	411401.7	6350696.9
Senecio leucoglossus	P4	23/10/2023	LR23_P2_62	5	411404.1	6350699.8
Senecio leucoglossus	P4	23/10/2023	LR23_P2_62	1	411458.0	6350578.2
Senecio leucoglossus	P4	23/10/2023	LR23_P2_62	3	411487.3	6350513.5
Senecio leucoglossus	P4	23/10/2023	LR23_P2_62	1	411490.1	6350501.1

Species	Status	Date	Survey area	# individuals	Easting*	Northing
Senecio leucoglossus	P4	23/10/2023	LR23_P2_62	1	411421.7	6350238.5
Senecio leucoglossus	P4	23/10/2023	LR23_P2_62	1	411409.9	6350096.8
Senecio leucoglossus	P4	23/10/2023	LR23_P2_62	10	411421.8	6350044.6
Senecio leucoglossus	P4	23/10/2023	LR23_18	2	411415.6	6350010.6
Senecio leucoglossus	P4	23/10/2023	LR23_18	2	411391.8	6349939.1
Senecio leucoglossus	P4	23/10/2023	LR23_18	3	411371.1	6349922.1
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	2	411829.1	6349228.1
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	5	411817.9	6349348.3
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	5	411808.0	6349347.0
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	1	411479.5	6349347.7
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	1	411473.8	6349348.8
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	10	411451.2	6349353.6
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	3	411401.9	6349349.1
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	4	411721.9	6349417.3
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	3	411784.7	6349422.3
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	4	411779.1	6349428.2
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	10	411283.4	6349526.0
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	5	411369.7	6349519.6
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	5	411379.8	6349519.0
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	4	411379.3	6349535.5
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	1	411364.9	6349536.6
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	1	411315.5	6349537.6
Senecio leucoglossus	P4	23/10/2023	LR23_18	5	411408.6	6349929.5
Senecio leucoglossus	P4	23/10/2023	LR23_18	2	411423.8	6349935.7
Senecio leucoglossus	P4	23/10/2023	LR23_18	1	411441.6	6349988.8
Senecio leucoglossus	P4	23/10/2023	LR23_18	1	411702.1	6350349.3
Senecio leucoglossus	P4	23/10/2023	LR23_18	1	411837.9	6350454.7
Senecio leucoglossus	P4	23/10/2023	LR23_P2_6	1	411375.0	6350692.4
Senecio leucoglossus	P4	23/10/2023	LR23_P2_6	2	411433.3	6350580.1
Senecio leucoglossus	P4	23/10/2023	LR23_P2_6	5	411465.4	6350475.1
Senecio leucoglossus	P4	23/10/2023	LR23_P2_6	2	411462.6	6350455.8
Senecio leucoglossus	P4	23/10/2023	LR23_P2_6	1	411430.0	6350359.8
Senecio leucoglossus	P4	23/10/2023	LR23_P2_6	2	411435.3	6350339.5
Senecio leucoglossus	P4	23/10/2023	LR23_P2_6	5	411438.5	6350335.6
Senecio leucoglossus	P4	23/10/2023	LR23_P2_6	4	411377.7	6350148.7
Senecio leucoglossus	P4	23/10/2023	LR23_P2_6	1	411373.5	6350138.2

Species	Status	Date	Survey area	# individuals	Easting*	Northing
Senecio leucoglossus	P4	23/10/2023	LR23_P2_6	3	411403.9	6350063.0
Senecio leucoglossus	P4	23/10/2023	LR23_P2_6	5	411407.6	6350063.2
Senecio leucoglossus	P4	23/10/2023	LR23_P2_6	6	411402.8	6350058.2
Senecio leucoglossus	P4	23/10/2023	LR23_P2_6	10	411400.9	6350049.8
Senecio leucoglossus	P4	23/10/2023	LR23_P2_6	4	411405.4	6350033.3
Senecio leucoglossus	P4	23/10/2023	LR23_P2_6	7	411401.7	6350023.0
Senecio leucoglossus	P4	23/10/2023	LR23_18	8	411403.4	6350004.5
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	3	411841.1	6349201.2
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	4	411767.3	6349285.9
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	3	411748.9	6349287.4
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	11	411360.7	6349305.6
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	1	411876.7	6349300.4
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	4	411839.7	6349374.2
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	2	411803.7	6349367.8
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	1	411795.8	6349366.3
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	5	411404.3	6349390.3
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	2	411432.8	6349478.5
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	1	411232.3	6349471.7
Senecio leucoglossus	P4	23/10/2023	LR23_P2_2	6	411219.2	6349474.3
Senecio leucoglossus	P4	23/10/2023	LR23_18	2	411411.3	6349922.0
Senecio leucoglossus	P4	23/10/2023	LR23_18	3	411431.9	6349928.9
Senecio leucoglossus	P4	23/10/2023	LR23_18	6	411510.1	6349991.4
Senecio leucoglossus	P4	23/10/2023	LR23_18	2	411531.1	6350035.6
Senecio leucoglossus	P4	23/10/2023	LR23_18	6	411636.5	6350222.8
Senecio leucoglossus	P4	23/10/2023	LR23_18	1	411727.2	6350317.7
Senecio leucoglossus	P4	23/10/2023	LR23_18	5	411734.1	6350322.0
Senecio leucoglossus	P4	23/10/2023	LR23_18	8	411742.1	6350322.8
Senecio leucoglossus	P4	23/10/2023	LR23_18	4	411800.2	6350358.1
Senecio leucoglossus	P4	23/10/2023	LR23_18	1	411917.3	6350484.2
Senecio leucoglossus	P4	23/10/2023	LR23_18	7	412085.2	6350631.2
Senecio leucoglossus	P4	23/10/2023	LR23_20	18	414471.4	6350890.5
Senecio leucoglossus	P4	23/10/2023	LR23_20	6	414411.1	6351292.0
Senecio leucoglossus	P4	23/10/2023	LR23_20	8	414393.9	6351093.2
Senecio leucoglossus	P4	23/10/2023	LR23_20	3	414331.9	6350750.7
Senecio leucoglossus	P4	23/10/2023	LR23_20	5	414233.8	6350953.5
Senecio leucoglossus	P4	23/10/2023	LR23_20	94	414167.9	6351323.5

Species	Status	Date	Survey area	# individuals	Easting*	Northing
Senecio leucoglossus	P4	23/10/2023	LR23_20	77	414165.2	6351306.6
Senecio leucoglossus	P4	23/10/2023	LR23_20	23	414163.7	6351288.9
Senecio leucoglossus	P4	23/10/2023	LR23_20	13	414164.3	6351279.2
Senecio leucoglossus	P4	23/10/2023	LR23_20	13	414170.2	6351061.5
Senecio leucoglossus	P4	23/10/2023	LR23_20	1	414164.2	6351004.5
Senecio leucoglossus	P4	23/10/2023	LR23_20	20	414146.0	6350912.1
Senecio leucoglossus	P4	23/10/2023	LR23_20	4	414150.6	6351281.0
Senecio leucoglossus	P4	23/10/2023	LR23_20	34	414145.4	6351290.7
Senecio leucoglossus	P4	23/10/2023	LR23_20	26	414142.6	6351304.2
Senecio leucoglossus	P4	23/10/2023	LR23_20	8	414152.1	6351314.9
Senecio leucoglossus	P4	23/10/2023	LR23_20	3	414146.5	6351334.2
Senecio leucoglossus	P4	23/10/2023	LR23_20	2	414108.4	6351366.6
Senecio leucoglossus	P4	23/10/2023	LR23_21	1	413473.0	6351801.6
Senecio leucoglossus	P4	24/10/2023	LR23_25	1	414226.4	6352629.3
Senecio leucoglossus	P4	24/10/2023	LR23_24	22	413982.2	6352894.7
Senecio leucoglossus	P4	24/10/2023	LR23_P2_18	30	414011.6	6352380.9
Senecio leucoglossus	P4	24/10/2023	LR23_24	2	413969.0	6352897.9
Senecio leucoglossus	P4	24/10/2023	LR23_24	1	413973.4	6352910.0
Senecio leucoglossus	P4	24/10/2023	LR23_P2_18	1	413882.4	6352855.1
Senecio leucoglossus	P4	24/10/2023	LR23_P2_18	1	413826.0	6352826.3
Senecio leucoglossus	P4	24/10/2023	LR23_P2_18	21	413815.7	6352808.5
Senecio leucoglossus	P4	24/10/2023	LR23_P2_18	10	413819.7	6352805.3
Senecio leucoglossus	P4	24/10/2023	LR23_P2_18	4	413819.9	6352534.4
Senecio leucoglossus	P4	24/10/2023	LR23_P2_18	1	413817.9	6352478.4
Senecio leucoglossus	P4	24/10/2023	LR23_P2_18	17	413759.8	6352943.7
Senecio leucoglossus	P4	24/10/2023	LR23_P2_18	11	413723.4	6352868.9
Senecio leucoglossus	P4	24/10/2023	LR23_P2_18	2	413629.9	6352611.6
Senecio leucoglossus	P4	24/10/2023	LR23_P2_18	2	413624.7	6352611.0
Senecio leucoglossus	P4	24/10/2023	LR23_P2_4	1	410822.5	6350376.8
Senecio leucoglossus	P4	24/10/2023	LR23_P2_4	1	410836.2	6350308.2
Senecio leucoglossus	P4	24/10/2023	LR23_P2_4	3	410853.1	6350268.6
Senecio leucoglossus	P4	24/10/2023	LR23_P2_4	1	410859.9	6350281.1
Senecio leucoglossus	P4	24/10/2023	LR23_P2_4	4	410858.4	6350288.3
Senecio leucoglossus	P4	24/10/2023	LR23_P2_4	2	410845.5	6350331.9
Senecio leucoglossus	P4	24/10/2023	LR23_18	2	410717.4	6350685.6
Senecio leucoglossus	P4	24/10/2023	LR23_18	3	410568.8	6350729.2

Species	Status	Date	Survey area	# individuals	Easting*	Northing
Senecio leucoglossus	P4	24/10/2023	LR23_18	1	410558.5	6350736.7
Senecio leucoglossus	P4	24/10/2023	LR23_18	1	410555.5	6350734.7
Senecio leucoglossus	P4	24/10/2023	LR23_P2_7	10	410536.4	6350765.7
Senecio leucoglossus	P4	24/10/2023	LR23_P2_7	1	410656.7	6350785.5
Senecio leucoglossus	P4	24/10/2023	LR23_P2_7	5	410515.9	6350792.2
Senecio leucoglossus	P4	24/10/2023	LR23_P2_7	1	410753.8	6350862.1
Senecio leucoglossus	P4	24/10/2023	LR23_P2_4	2	410814.4	6350528.8
Senecio leucoglossus	P4	24/10/2023	LR23_P2_4	3	410812.9	6350517.3
Senecio leucoglossus	P4	24/10/2023	LR23_P2_4	3	410815.2	6350360.9
Senecio leucoglossus	P4	24/10/2023	LR23_P2_4	1	410825.8	6350308.2
Senecio leucoglossus	P4	24/10/2023	LR23_P2_4	1	410827.1	6350306.2
Senecio leucoglossus	P4	24/10/2023	LR23_P2_4	2	410833.6	6350268.0
Senecio leucoglossus	P4	24/10/2023	LR23_P2_4	4	410879.1	6350255.7
Senecio leucoglossus	P4	24/10/2023	LR23_18	2	410556.8	6350718.0
Senecio leucoglossus	P4	24/10/2023	LR23_P2_7	1	410692.7	6350906.7
Senecio leucoglossus	P4	24/10/2023	LR23_P2_7	3	410709.3	6351000.0
Senecio leucoglossus	P4	24/10/2023	LR23_28	2	411421.8	6352876.5
Senecio leucoglossus	P4	24/10/2023	LR23_24	7	413981.5	6352871.7
Senecio leucoglossus	P4	24/10/2023	LR23_P2_18	6	413988.1	6352383.9
Senecio leucoglossus	P4	24/10/2023	LR23_24	4	413970.4	6352849.4
Senecio leucoglossus	P4	24/10/2023	LR23_P2_18	1	413977.6	6352780.8
Senecio leucoglossus	P4	24/10/2023	LR23_24	11	413971.6	6352468.9
Senecio leucoglossus	P4	24/10/2023	LR23_P2_18	2	413972.3	6352399.6
Senecio leucoglossus	P4	24/10/2023	LR23_P2_18	5	413968.3	6352367.9
Senecio leucoglossus	P4	24/10/2023	LR23_P2_18	3	413949.5	6352587.7
Senecio leucoglossus	P4	24/10/2023	LR23_P2_18	2	413951.8	6352607.1
Senecio leucoglossus	P4	24/10/2023	LR23_24	2	413930.5	6352956.6
Senecio leucoglossus	P4	24/10/2023	LR23_P2_18	5	413924.8	6352910.6
Senecio leucoglossus	P4	24/10/2023	LR23_P2_18	3	413867.4	6352437.0
Senecio leucoglossus	P4	24/10/2023	LR23_P2_18	4	413869.7	6352664.0
Senecio leucoglossus	P4	24/10/2023	LR23_P2_18	3	413841.2	6352547.0
Senecio leucoglossus	P4	24/10/2023	LR23_P2_18	4	413680.6	6352698.7
Senecio leucoglossus	P4	25/10/2023	LR23_P2_41	1	415018.6	6355321.1
Senecio leucoglossus	P4	25/10/2023	LR23_32	1	415068.9	6354746.1
Senecio leucoglossus	P4	25/10/2023	LR23_32	1	414752.4	6354711.8
Senecio leucoglossus	P4	25/10/2023	LR23_32	21	414819.7	6354678.0

Species	Status	Date	Survey area	# individuals	Easting*	Northing
Senecio leucoglossus	P4	25/10/2023	LR23_32	1	414971.6	6354624.0
Senecio leucoglossus	P4	25/10/2023	LR23_32	8	415061.9	6354744.7
Senecio leucoglossus	P4	25/10/2023	LR23_7	1	412968.3	6349040.6
Senecio leucoglossus	P4	25/10/2023	LR23_5	1	413860.7	6348992.5
Senecio leucoglossus	P4	25/10/2023	LR23_32	1	414829.3	6354660.9
Senecio leucoglossus	P4	25/10/2023	LR23_32	1	414938.7	6354662.8
Senecio leucoglossus	P4	25/10/2023	LR23_32	1	414765.9	6354640.4
Senecio leucoglossus	P4	25/10/2023	LR23_18	3	412961.6	6348955.7
Senecio leucoglossus	P4	25/10/2023	LR23_P2_41	2	414936.9	6355103.3
Senecio leucoglossus	P4	25/10/2023	LR23_P2_41	3	414946.9	6355101.3
Senecio leucoglossus	P4	25/10/2023	LR23_P2_41	4	414891.4	6355106.6
Senecio leucoglossus	P4	25/10/2023	LR23_32	2	415362.0	6355030.1
Senecio leucoglossus	P4	25/10/2023	LR23_32	2	415277.2	6355000.1
Senecio leucoglossus	P4	25/10/2023	LR23_32	1	414756.5	6354725.1
Senecio leucoglossus	P4	25/10/2023	LR23_32	2	414822.3	6354700.6
Senecio leucoglossus	P4	25/10/2023	LR23_32	1	414939.3	6354669.6
Senecio leucoglossus	P4	26/10/2023	LR23_32	1	414659.1	6354716.1
Senecio leucoglossus	P4	26/10/2023	LR23_32	4	414690.2	6354712.9
Senecio leucoglossus	P4	26/10/2023	LR23_18	1	411566.6	6349951.6
Senecio leucoglossus	P4	26/10/2023	LR23_18	2	411581.2	6349944.1
Senecio leucoglossus	P4	26/10/2023	LR23_18	4	411589.8	6349940.9
Senecio leucoglossus	P4	26/10/2023	LR23_18	10	411586.5	6349937.2
Senecio leucoglossus	P4	26/10/2023	LR23_18	10	411634.0	6349947.1
Senecio leucoglossus	P4	26/10/2023	LR23_18	15	411663.8	6349946.2
Senecio leucoglossus	P4	26/10/2023	LR23_18	12	411699.7	6349944.7
Senecio leucoglossus	P4	26/10/2023	LR23_18	35	411710.7	6349942.1
Senecio leucoglossus	P4	26/10/2023	LR23_18	21	411719.7	6349939.4
Senecio leucoglossus	P4	26/10/2023	LR23_18	14	411728.5	6349931.5
Senecio leucoglossus	P4	26/10/2023	LR23_18	1	411743.8	6349926.3
Senecio leucoglossus	P4	26/10/2023	LR23_18	10	411749.1	6349921.5
Senecio leucoglossus	P4	26/10/2023	LR23_18	1	411772.5	6349911.7
Senecio leucoglossus	P4	26/10/2023	LR23_18	13	411830.5	6349857.0
Senecio leucoglossus	P4	26/10/2023	LR23_18	5	411824.4	6349843.3
Senecio leucoglossus	P4	26/10/2023	LR23_18	3	411859.3	6349852.7
Senecio leucoglossus	P4	26/10/2023	LR23_18	10	411827.9	6349853.7
Senecio leucoglossus	P4	26/10/2023	LR23_18	5	411807.3	6349908.3

Species	Status	Date	Survey area	# individuals	Easting*	Northing
Senecio leucoglossus	P4	26/10/2023	LR23_18	40	411861.7	6349918.8
Senecio leucoglossus	P4	26/10/2023	LR23_18	10	411880.5	6349913.1
Senecio leucoglossus	P4	26/10/2023	LR23_18	25	411853.2	6349929.6
Senecio leucoglossus	P4	26/10/2023	LR23_18	5	411751.7	6349996.9
Senecio leucoglossus	P4	26/10/2023	LR23_18	1	411811.7	6349980.8
Senecio leucoglossus	P4	26/10/2023	LR23_18	5	411550.5	6349987.0
Senecio leucoglossus	P4	26/10/2023	LR23_18	3	411595.3	6349976.9
Senecio leucoglossus	P4	26/10/2023	LR23_18	10	411635.3	6349981.3
Senecio leucoglossus	P4	26/10/2023	LR23_18	6	411718.7	6349979.3
Senecio leucoglossus	P4	26/10/2023	LR23_18	13	411738.7	6349968.7
Senecio leucoglossus	P4	26/10/2023	LR23_18	20	411734.4	6349960.5
Senecio leucoglossus	P4	26/10/2023	LR23_18	50	411525.8	6349972.1
Senecio leucoglossus	P4	26/10/2023	LR23_18	10	411499.5	6349980.2
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	1	411453.2	6350104.6
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	1	411421.6	6350690.6
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	5	411500.9	6350553.9
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	1	411493.3	6350341.2
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	1	411474.6	6350261.2
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	1	411452.0	6350186.6
Senecio leucoglossus	P4	26/10/2023	LR23_18	2	411712.7	6350242.8
Senecio leucoglossus	P4	26/10/2023	LR23_18	1	411629.2	6350237.1
Senecio leucoglossus	P4	26/10/2023	LR23_18	2	411619.7	6350237.9
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	10	411563.5	6350243.7
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	3	411536.9	6350242.6
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	1	411529.0	6350240.2
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	4	411542.3	6350260.7
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	50	411568.3	6350255.9
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	3	411594.4	6350273.1
Senecio leucoglossus	P4	26/10/2023	LR23_18	1	411793.8	6350335.7
Senecio leucoglossus	P4	26/10/2023	LR23_18	10	411740.5	6350330.8
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	1	411676.6	6350352.9
Senecio leucoglossus	P4	26/10/2023	LR23_18	1	411700.8	6350350.9
Senecio leucoglossus	P4	26/10/2023	LR23_18	5	411796.1	6350355.3
Senecio leucoglossus	P4	26/10/2023	LR23_18	3	411842.3	6350353.4
Senecio leucoglossus	P4	26/10/2023	LR23_18	1	411897.9	6350428.6
Senecio leucoglossus	P4	26/10/2023	LR23_18	1	411926.7	6350477.4

Species	Status	Date	Survey area	# individuals	Easting*	Northing
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	1	411662.8	6350504.2
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	1	411610.1	6350504.3
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	1	411564.6	6350504.8
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	30	411560.8	6350505.5
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	5	411541.0	6350527.2
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	1	411574.1	6350522.7
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	1	411741.0	6350526.8
Senecio leucoglossus	P4	26/10/2023	LR23_18	6	411572.6	6349941.9
Senecio leucoglossus	P4	26/10/2023	LR23_18	2	411580.9	6349931.9
Senecio leucoglossus	P4	26/10/2023	LR23_18	4	411594.3	6349924.5
Senecio leucoglossus	P4	26/10/2023	LR23_18	3	411595.2	6349932.7
Senecio leucoglossus	P4	26/10/2023	LR23_18	2	411629.6	6349937.5
Senecio leucoglossus	P4	26/10/2023	LR23_18	8	411639.2	6349932.7
Senecio leucoglossus	P4	26/10/2023	LR23_18	5	411663.8	6349935.5
Senecio leucoglossus	P4	26/10/2023	LR23_18	6	411696.6	6349935.0
Senecio leucoglossus	P4	26/10/2023	LR23_18	4	411707.0	6349933.1
Senecio leucoglossus	P4	26/10/2023	LR23_18	7	411726.6	6349932.3
Senecio leucoglossus	P4	26/10/2023	LR23_18	4	411902.2	6349880.6
Senecio leucoglossus	P4	26/10/2023	LR23_18	1	411848.8	6349953.3
Senecio leucoglossus	P4	26/10/2023	LR23_18	1	411746.9	6349954.4
Senecio leucoglossus	P4	26/10/2023	LR23_18	2	411729.6	6349960.4
Senecio leucoglossus	P4	26/10/2023	LR23_18	9	411740.1	6349960.8
Senecio leucoglossus	P4	26/10/2023	LR23_P2_33	1	412127.0	6350264.0
Senecio leucoglossus	P4	26/10/2023	LR23_18	10	411623.4	6350102.9
Senecio leucoglossus	P4	26/10/2023	LR23_18	5	411537.0	6350071.6
Senecio leucoglossus	P4	26/10/2023	LR23_18	4	411433.8	6349994.9
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	2	411440.8	6350687.1
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	3	411501.1	6350595.6
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	1	411529.4	6350536.6
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	2	411510.3	6350322.6
Senecio leucoglossus	P4	26/10/2023	LR23_18	6	411589.3	6350195.9
Senecio leucoglossus	P4	26/10/2023	LR23_18	4	411623.3	6350203.4
Senecio leucoglossus	P4	26/10/2023	LR23_18	7	411752.6	6350226.2
Senecio leucoglossus	P4	26/10/2023	LR23_18	2	411705.2	6350225.1
Senecio leucoglossus	P4	26/10/2023	LR23_18	9	411587.8	6350222.6
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	5	411555.8	6350224.3

Species	Status	Date	Survey area	# individuals	Easting*	Northing
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	3	411579.5	6350280.2
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	4	411634.0	6350285.8
Senecio leucoglossus	P4	26/10/2023	LR23_18	8	411808.6	6350312.3
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	5	411600.0	6350301.0
Senecio leucoglossus	P4	26/10/2023	LR23_18	2	411828.7	6350381.6
Senecio leucoglossus	P4	26/10/2023	LR23_18	10	411836.3	6350396.4
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	4	411581.5	6350547.1
Senecio leucoglossus	P4	26/10/2023	LR23_P2_6	7	411668.3	6350561.2
Senecio leucoglossus	P4	26/10/2023	LR23_10	2	412653.8	6349958.1
Senecio leucoglossus	P4	26/10/2023	LR23_32	1	414680.9	6354751.8
Senecio leucoglossus	P4	26/10/2023	LR23_32	1	414627.1	6354683.5
Senecio leucoglossus	P4	27/10/2023	LR23_P2_6	3	411559.6	6350613.4
Senecio leucoglossus	P4	27/10/2023	LR23_P2_6	1	411593.8	6350613.3
Senecio leucoglossus	P4	27/10/2023	LR23_P2_6	1	411595.4	6350615.6
Senecio leucoglossus	P4	27/10/2023	LR23_P2_6	4	411707.2	6350618.5
Senecio leucoglossus	P4	27/10/2023	LR23_P2_6	1	411721.1	6350613.8
Senecio leucoglossus	P4	27/10/2023	LR23_P2_6	1	411763.4	6350639.9
Senecio leucoglossus	P4	27/10/2023	LR23_P2_6	1	411602.5	6350638.1
Senecio leucoglossus	P4	27/10/2023	LR23_P2_6	1	411581.2	6350643.2
Senecio leucoglossus	P4	27/10/2023	LR23_P2_6	1	411569.0	6350642.5
Senecio leucoglossus	P4	27/10/2023	LR23_P2_6	3	411562.4	6350641.9
Senecio leucoglossus	P4	27/10/2023	LR23_P2_6	2	411756.7	6350659.5
Senecio leucoglossus	P4	27/10/2023	LR23_P2_6	3	411775.0	6350660.0
Senecio leucoglossus	P4	27/10/2023	LR23_18	3	411723.5	6350722.1
Senecio leucoglossus	P4	27/10/2023	LR23_18	5	411655.0	6350726.0
Senecio leucoglossus	P4	27/10/2023	LR23_10	1	412670.3	6350042.8
Senecio leucoglossus	P4	27/10/2023	LR23_10	8	412667.7	6350030.9
Senecio leucoglossus	P4	27/10/2023	LR23_P2_6	2	411457.0	6350313.5
Senecio leucoglossus	P4	27/10/2023	LR23_P2_6	4	411501.2	6350186.7
Senecio leucoglossus	P4	27/10/2023	LR23_18	1	411649.1	6350190.2
Senecio leucoglossus	P4	27/10/2023	LR23_18	3	411618.2	6350238.0
Senecio leucoglossus	P4	27/10/2023	LR23_18	5	411739.9	6350308.7
Senecio leucoglossus	P4	27/10/2023	LR23_P2_6	6	411557.6	6350689.5
Senecio leucoglossus	P4	27/10/2023	LR23_18	9	411657.5	6350704.2
Senecio leucoglossus	P4	27/10/2023	LR23_18	1	411631.7	6350707.5
Senecio leucoglossus	P4	27/10/2023	LR23_18	6	411625.1	6350708.8

Species	Status	Date	Survey area	# individuals	Easting*	Northing
Senecio leucoglossus	P4	27/10/2023	LR23_P2_6	11	411578.5	6350706.6
Senecio leucoglossus	P4	27/10/2023	LR23_27	1	412653.2	6353493.7
Senecio leucoglossus	P4	30/10/2023	outside LR23_28	1	413217.0	6351945.8
Senecio leucoglossus	P4	30/10/2023	LR23_28	1	412915.8	6352067.7
Senecio leucoglossus	P4	30/10/2023	LR23_28	2	413254.7	6351588.3
Senecio leucoglossus	P4	01/11/2023	LR23_P2_22	2	412973.0	6352937.5
Senecio leucoglossus	P4	01/11/2023	outside LR23_P2_22	1	413185.6	6352614.0
Senecio leucoglossus	P4	01/11/2023	LR23_P2_5	1	410349.4	6350689.4
Senecio leucoglossus	P4	02/11/2023	LR23_P2_5	1	409345.6	6349826.2
Senecio leucoglossus	P4	02/11/2023	LR23_P2_5	7	409539.6	6349614.9
Senecio leucoglossus	P4	02/11/2023	LR23_P2_5	2	409523.0	6349614.9
Senecio leucoglossus	P4	30/10/2023	outside LR23_28	1	413217.0	6351945.8
Senecio leucoglossus	P4	30/10/2023	LR23_28	1	412915.8	6352067.7
Senecio leucoglossus	P4	30/10/2023	LR23_28	2	413254.7	6351588.3
Senecio leucoglossus	P4	01/11/2023	LR23_P2_22	2	412973.0	6352937.5
Senecio leucoglossus	P4	01/11/2023	outside LR23_P2_22	1	413185.6	6352614.0
Senecio leucoglossus	P4	01/11/2023	LR23_P2_5	1	410349.4	6350689.4
Senecio leucoglossus	P4	02/11/2023	LR23_P2_5	1	409345.6	6349826.2
Senecio leucoglossus	P4	02/11/2023	LR23_P2_5	7	409539.6	6349614.9
Senecio leucoglossus	P4	02/11/2023	LR23_P2_5	2	409523.0	6349614.9

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Appendix H Locations of Key weed species

Species	Common Name	Status	Survey area	# individuals	Easting*	Northing
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414608	6347968
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414622	6347923
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414630	6347916
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414628	6347913
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414635	6347906
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414639	6347902
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414640	6347902
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414645	6347896
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414648	6347881
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414654	6347877
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414635	6347860
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414634	6347863
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414636	6347849
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414629	6347858
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414624	6347866
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414612	6347884
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414611	6347891
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414610	6347896
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414611	6347899
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414555	6347908

Species	Common Name	Status	Survey area	# individuals	Easting*	Northing
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414632	6347952
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414635	6347944
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414641	6347938
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414642	6347929
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414654	6347920
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414653	6347912
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414658	6347903
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414657	6347897
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414658	6347868
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414652	6347862
**Rubus sp.*	Blackberry	Declared Pest - s22(2) (C3 Exempt), WoNS	Turbidity b	10	414649	6347861
**Zantedeschia aethiopica*	Arum lily	Declared Pest - s22(2) (Exempt)	Turbidity b	1	414626	6347924

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