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MULGA DOWNS RAIL AND HUB – FLORA AND VEGETATION SURVEYS – SUPPLEMENTARY MEMORANDUM TO ATTEXO (2022a, b)

17 July 2023

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Via email: sarah.blake@hanroy.com.au

MEMORANDUM: MULGA DOWNS RAIL AND HUB – FLORA AND VEGETATION SURVEYS – SUPPLEMENTARY MEMORANDUM TO ATTEXO (2022a, b)

Dear Ms Blake,

This memorandum provides a summary of the survey effort undertaken for the Mulga Downs Hub and Rail Spur Proposal and is a supplement to the Attexo (2022a; b) flora and vegetation reports prepared for the Referral Supporting Document (PR-APP-0017). This memorandum provides the information required for the purpose of Environmental Impact Assessment (EIA) as per the EPA guidelines for flora and vegetation (EPA, 2016).

Background

The Mulga Downs Hub and Rail Spur (the Proposal) was referred under section 38 of the *Environmental Protection Act 1986* (EP Act) and the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The Proposal is being assessed as an accredited assessment, the assessment is on the referral information with additional information requested under s40(2)(a) of the EP Act.

The Proposal is located within a Development Envelope of 17,714.01 ha and will require clearing of no more than 2,304.74 ha of native vegetation. The Proposal comprises a Hub and one of two Rail Spur alignments - Alignment Option 8B or Alignment Option 1B. Only one rail alignment will be constructed and operated. The extent and components of the Proposal are provided in the Proposal Content Document which can be accessed from the EPA website and in the Referral Supporting Document (<https://www.epa.wa.gov.au/proposals/mulga-downs-hub-and-rail-spur>).

Flora and vegetation surveys were undertaken across the Proposal Development Envelope and extended across the Mulga Downs Iron Ore Project which includes the Mulga Downs Iron Ore Mine (MDIOM) tenements. Surveys were undertaken from 2012 through to 2022 by JBS&G Australia Pty Ltd (JBS&G) and Maia Environmental Consultancy (Maia) (Figure 1, Attachment 1).

Two reports were prepared by the Attexo Group Pty Ltd (Attexo):

Attexo (2022a). Mulga Downs Flora and Vegetation Consolidated Report Rail 8B Alignment and Hub. Unpublished report prepared by Attexo Group Pty Ltd.

Attexo (2022b). Mulga Downs Flora and Vegetation Consolidated Report Rail 1B Alignment and Hub. Unpublished report prepared for by Attexo Group Pty Ltd.

The Attexo (2022a; b) reports combined the data collected in the reconnaissance survey JBS&G (2022) and data collected from surveys Maia undertook in March 2022 and July 2022 and were provided as appendices for the Referral Supporting Document.

The survey information in Attexo (2022 a; b) was incomplete as data was omitted on transfer of the information. This memo provides an updated overview of the survey effort undertaken for the Proposal based on a review of the flora and vegetation data collected by JBS&G and Maia and supplements the Attexo (2022a; b) reports. This memo confirms that the survey effort for the Proposal is considered adequate for the purpose of EIA. It also includes:

- Quadrat and relevé data, as required by EPA (2016) guidance, which were not included in the Attexo (2022 a; b) reports;
- A comprehensive species list for the Development Envelope, as required by EPA (2016) guidance; and
- A species versus vegetation unit matrix, as required by EPA (2016) guidance.
- An updated summary of the conservation significant flora identified in the Development Envelope is also provided in this memo.

Survey Overview

The Proposal is located within a Development Envelope of 17,714.01 ha with two rail spur options – Alignment Option 1B and Alignment Option 8B; only one rail alignment will be implemented. The maximum extent of native vegetation clearing will be 2,304.74 ha.

The reports relevant to the Proposal are outlined in Table 1. Figure 1 shows the extent of the surveys completed to inform the EIA.

Table 1: Flora and Vegetation Survey Reports which inform the Mulga Downs Hub and Rail Spur Proposal.

Reference	Report Title	Survey Type	Survey Months	Survey Guidance
Maia (2013)	<i>HPPL Mulga Downs Project: Potential Transport Corridor. Detailed Flora and Vegetation Assessment, August 2012</i>	Level 2 (Detailed) Flora and Vegetation Survey	June 2012 (Dry) July 2012 (Dry) August 2012 (Dry)	<i>Guidance Statement 51 Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia (EPA, 2006)</i>
Maia (2014)	<i>HPPL Mulga Downs Project: Transport Corridor Options K and J Reconnaissance Flora and Vegetation and Targeted Flora Survey, August 2014</i>	Reconnaissance Survey	August 2014 (Dry)	

Reference	Report Title	Survey Type	Survey Months	Survey Guidance
Maia (2022)	<i>Mulga Downs Iron Ore Project, Mine and Borefield Study Area. Detailed Flora and Vegetation Survey Assessment 2019-2022</i>	Detailed Survey (Quadrats and Targeted searches) Mulga East, R47/12, L45/380	May 2017 (Wet) August 2019 (Dry) September 2019 (Dry) May 2020 (Wet) May 2021 (Wet) July 2021 (Dry) September 2021 (Dry)	<i>Environmental Factor Guideline: Flora and Vegetation (EPA 2016a).</i> <i>Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA 2016d).</i>
JBS&G (2022)	<i>Reconnaissance Flora and Vegetation Assessment – Mulga Downs Rail (8B)</i>	Reconnaissance Survey (Releves; targeted searches and mapping) Dry Season survey of accessible portions of alignment 8B from GNH to southern boundary of the Yandeyarra Reserve (Figure 1).	November 2021 (Dry)	<i>Matters of National Environmental Significance Significant Impact Guidelines 1.1 (DoE 2013).</i>
Attexo (2022a)	<i>Mulga Downs Flora and Vegetation Consolidated Report Rail 8B Alignment and Hub.</i>	Report on consolidated data from Detailed flora and vegetation surveys by Maia in 2022 (Quadrats, traverses, targeted searches and opportunistic sampling) in the 8B Alignment Option. (Figure 1). Includes data from JBS&G (2022) and from earlier surveys by Maia (2012-2022).	March 2022 (Wet) July 2022 (Dry)	
Attexo (2022b)	<i>Mulga Downs Flora and Vegetation Consolidated Report Rail 1B Alignment and Hub.</i>	Report on consolidated data from Detailed flora and vegetation surveys by Maia in 2022 (Quadrats, traverses, targeted searches and opportunistic sampling) in the 1B Alignment Option. (Figure 1) Includes data from JBS&G (2022) and from earlier surveys by Maia (2012-2022).	March 2022 (Wet) July 2022 (Dry)	

Adequacy of surveys

Key Flora and Vegetation Survey Guideline Requirements

The flora and vegetation surveys undertaken for the Proposal were all completed following the EPA (2016) *Technical Guidance Flora and Vegetation Surveys for Environmental Impact Assessment* as outlined in Table 2:. The survey timing and reference to either dry or wet phase is throughout this memo in tables 1 and 3.

Table 2: Flora and vegetation guidance requirements (EPA, 2016)

Survey Aspect	Overview of guideline requirement
Survey Timing	The recommended survey timing for surveys in the Eremaean botanical province is six to eight weeks post wet season (March to June), with supplementary survey in the dry season (after winter rainfall if possible)
Survey Width (linear)	Detailed surveys of linear infrastructure corridors should incorporate vegetation from 500 m to 1000 m either side of the corridor
Survey Effort	A detailed survey should include assessment of quadrats, multiple sampling periods and targeted surveys where appropriate A minimum of three quadrats should be sampled in each vegetation unit, with additional quadrats proportional to the size of the. To clarify vegetation unit boundaries, additional quadrats can be deployed.

Survey Timing

Table 3 outlines the timing of the flora and vegetation surveys completed for the Proposal. The meteorological station code is listed under the Pilbara rainfall peaks column for reference.

Table 3 Flora and vegetation survey timing

Survey Reference	Area surveyed	Pilbara Rainfall peaks:	Optimal Eremaean Province survey timing based on EPA (2016) guidance	Timing of completed survey (dry/wet)
Maia (2013) Level 2 (Detailed survey) (dry season)	Hub	January and March 2012 (Station 5073)	March and May	Jun-Aug 2012 (dry)
(Maia, 2022) Detailed survey - Phase 1 (dry season)	Hub	Late March & June 2019 (minimal June rainfall) (Station 5098)	May and August	August and September 2019 (dry)
(Maia, 2022) Detailed survey - Phase 2 (wet season)	Hub	Early February and May-July 2020 (Station 5098, data lacking for the second half of June and first half of July)	Late March-early April, and possibly August	May 2020 (wet)
Maia (2022) Targeted surveys (wet and dry season)	Hub	Early February and April-May 2021 (Station 5098)	Late March-early April, and June-July	May, July and September 2021 (wet and dry)
JBS&G (2022) Reconnaissance Survey (dry season)	Rail Alignment 8B (GNH to southern boundary of the	Early February and April-May 2021 (Station 5098)	Late March-early April, and June-July	November 2021 (dry)

Survey Reference	Area surveyed	Pilbara Rainfall peaks:	Optimal Eremaean Province survey timing based on EPA (2016) guidance	Timing of completed survey (dry/wet)
	Yandeyarra Reserve)			
Maia 2022 survey in Attexo (2022a and b) Detailed survey (wet and dry season)	Hub and Rail Alignments 1B and 8B	January-February and mid-late May 2022 (Station 5098)	March-April, and July	March and July 2022 (Phase 1 and 2 Detailed) (wet and dry)

Hub

Maia undertook several quadrat-based surveys of R47/12 (June-August 2012 [dry season], August 2019 [dry season], September 2019 [dry season] and May 2020 [wet season]) and L45/380 (August 2012 [dry season], May 2017 [wet season] and August 2019 [dry season]) which included the Hub portion of the Proposal (Figure 1). These surveys were undertaken in three phases spanning several years. Additional targeted surveys of the Hub area were undertaken in 2021.

Rail alignments

Maia undertook a quadrat-based wet season survey in March 2022. This was followed by a survey in July 2022 (dry season after winter rainfall) of the proposed rail alignments (Option 1B and Option 8B) (Figure 1). This was supplemented by data from the JBS&G dry season reconnaissance survey in November 2021 of the Alignment Option 8B (Figure 1).

Quadrats were rescored in July 2022 by Maia and additional quadrats added as infill to provide better information on vegetation unit boundaries and to ensure adequate sampling coverage. Targeted searches were completed along the rail alignments traversing on foot along the centre line (Figure 1).

Linear corridor surveys (1B and 8B)

Detailed surveys of Alignment Options 1B and 8B were undertaken with surveys of 500 m to 1000 m either side of the proposed rail corridors. The entire lengths of the rail alignments were completed on foot by Maia.

For the northern corridor of Alignment Option 8B, the width was less than 1,000 m due to tenure constraints from the FMG Rail alignment (Figure 1). Vegetation unit extrapolations were undertaken to increase the width to 1,000 m, using survey data and aerial imagery (Refer to Referral Supporting Document Section 7, Figure 14 and 15).

Survey Effort

From the JBS&G reconnaissance survey 19 relevés were assessed in the Alignment Option 8B (Figure 1). Maia assessed 65 quadrats during the wet season in March 2022, then resurveyed 55 of these quadrats and assessed an additional 27 infill quadrats during the dry season (July 2022) (Figure 1). Where possible, these infill quadrats were placed in areas where there were spatial gaps or in vegetation types where data was found to be deficient in Phase 1 (wet season, March 2022). Some sites were not resurveyed in July 2022 because they were in areas considered sensitive for cultural reasons (Maia pers comms).

Data from additional quadrats surveyed pre 2022 were included in the assessment for the Proposal (Table 1 and 2, Figure 1).

In total, 223 sample sites were assessed within twelve vegetation units across the 17,714.01 ha Development Envelope (approximately one site per square kilometre) (Figure 1). This is considered an adequate density for the Pilbara bioregion as per the EPA (2016).

More than three quadrats were assessed per vegetation unit, except for unit AxS. This unit occurred only in the southernmost 600 m of the southern rail option (Alignment Option 1B) and the limited distribution of this type of vegetation unit within the Development Envelope was too small to enable multiple sampling sites. This vegetation type is *Acacia xiphophylla* shrublands and only makes up 20.91 ha within the Wona PEC. It is widespread from Shark Bay through to Roy Hill.

A targeted flora survey was undertaken by traversing the centreline of Alignment Option 1B and the majority of Alignment Option 8B (Figure 1). The area which was not traversed was because of cultural sensitivity (Maia pers comm.).

A targeted survey was also undertaken along the Power Corridor which intersects the Wona Land system within the north-eastern portion (Figure 1). Conservation significant species were identified (Figure 2 and 3).

Species accumulation curves for the Development Envelope approached an asymptote at the conclusion of the surveys, with supplementary opportunistic sampling providing confidence that the majority of taxa occurring within the proposed alignments has been recorded (Attexo 2022 a; b).

The surveys undertaken for the Proposal meet the requirements of a detailed survey (refer to EPA 2016).

Limitations

The key limitations to the surveys have been identified in each of the previous survey reports.

A key constraint in the March 2022 survey (Phase 1) undertaken by Maia was due to the terrain and lack of access tracks. These sites were accessed via helicopter. However, during this survey the higher attendance than anticipated by the Traditional Owners requiring multiple helicopter trips between sites. The outcome was less time to complete the surveys in March. These areas were resampled in July 2022.

A culturally sensitive area along a section of Alignment Option 8B at the time of survey meant that quadrats were not placed in July 2022. Additionally, Alignment Option 8B aligns closely to the FMG rail lease (Miscellaneous Licence L1SA) and access was denied within this lease area.

Survey Data

The Development Envelope has had numerous flora and vegetation surveys between 2012 and 2022. Surveys have been conducted in both wet and dry seasons across multiple years with variable amounts of rainfall. While there are sections where only dry season quadrats have been surveyed, these are contiguous with areas in which surveys have been conducted after wet seasons. This is in line with EPA guidance (EPA 2016).

Independent of the year of survey, the approach to assessing the flora and vegetation has been consistent with EPA guidance for EIA (EPA 2016). Where quadrats have been established, they have all been 50 m by 50 m, with changes made to the shape of quadrats to better fit the distribution of vegetation in the landscape. Traverses and releves have also been completed to supplement quadrat-based data. Evidence of sampling effort has been provided in the form of a map documenting quadrat, releve and transect locations. All vegetation types within the alignments have had a minimum of three quadrats surveyed within them, with the exception of one where the limited distribution of this type was too small to enable multiple sampling sites. This all aligns with EPA (2016).

Sampling intensity was highest adjacent to Great Northern Highway and near the MDIOM, with less survey effort in the northeastern sections of the two Rail Spur alignments, which are linear and clearing at a lower intensity than in the Hub area. The distribution of quadrats on the northeastern section were located in such a way as to capture the variation in vegetation likely to occur within the Development Envelope. This is

considered to align with guidance from EPA (2016). It is noted that there are survey quadrats that fall outside of the alignments, and these can be considered supplementary to those within the alignments.

Local and regional vegetation data is comprehensive, with multiple surveys conducted for mining and mine-related infrastructure in addition to broadscale mapping. Reports make reference to soil and landform characteristics and hydrology as well as local disturbance histories, such as fires. The relationship between vegetation distribution patterns and abiotic factors is recognised and incorporated in both descriptive components of the vegetation as well as in the contextual information in reports. This meets EPA guidance (EPA, 2016).

Vegetation descriptive terminology has aligned with Native Vegetation Attribute Manual 6.0 (ESCAVI, 2003), which is consistent with the requirements of EPA (2016). Dendrograms have been completed on quadrat data, with some normalisation occurring in relation to some taxon being group and has been used to generate delineations for vegetation types. Summaries of each vegetation type are presented, with a representative photograph and relevant quadrats provided (refer to Attachment 2a and b). Quadrat summaries and species-association matrices are provided in the report appendices (Maia 2022, and Attachment 2a and b), which meets EPA (2016) requirements. The total area of each vegetation type within the proposed alignments is provided in the respective reports (Attexo 2022 a; b).

The relationship between local environmental factors, particularly hydrology, is evident in the description and mapping of vegetation the Development Envelope (Attexo 2022 a; b). The presence of potential groundwater dependent vegetation (GDV) (MSW – Mixed shrublands and woodlands of drainage lines) or sheet flow dependent vegetation (SDV) (AWL - *Acacia* low woodland or tall shrubland, ASL - *Acacia* tall shrubland and AaAxSL – *Acacia* tall sparse shrubland of *Acacia aneura* alliance) is presented in Attexo (2022 a; b).

The current mapping allows for the identification of the location of these in relation to the Conceptual Footprint. It is noted that the inferred SDV is only within the southwestern sections of the alignments. The inferred GDV unit (vegetation unit MSW – refer to Referral Supporting Document and Attexo 2022 a; b) is scattered along the Rail Spur alignments, a reflection on broader landscape drainage patterns associated with the catchment.

The consolidated census of the flora, which incorporates data from two survey programs included a total of 502 taxa from 53 families and 176 genera (Attexo, 2022a and 2022b). Maia (2022) recorded 749 taxa from 60 families from 206 genera during surveys of the proposed MDIOM area, which includes the southwestern ends of the proposed alignments. The flora was dominated by Fabaceae, Poaceae and Malvaceae, which is consistent with the region. Species accumulation curves were applied by Attexo (2022a; b) and Maia (2022), meeting the requirements of EPA (2016). Summaries of species collected during surveys, sorted by family, are provided in the appendices of the relevant reports.

Thirteen conservation significant flora were recorded during targeted searches within the Development Envelope (Table 4; Figure 2 and 3). One was an EPBC-listed species, *Seringia exastia*, recorded within the Development Envelope (Figure 2 and 3; Table 4).

Maia (2022) and JBS&G (2022) provided a summary of survey limitations. The summary of limitation is a key component of the assessment of site ecological values and is a requirement stated in EPA (2016). The identification of limitations provides insight into factors that can influence the confidence of the ecologists in the completeness of their work as well as their knowledge of the region in which they are working.

Overall, the surveys conducted within the Development Envelope meet the underlying requirements of the EPA (2016). Desktop assessments on flora, vegetation and restricted landform features were completed, with likelihood assessments generated. In addition to this, local and regional contextual information as detailed in Section 10.1 of EPA (2016) were provided, with these used to identify potentially significant environmental factors that require consideration as well as guiding interpretation of aerial imagery for survey site selection and mapping.

Survey effort aligned with EPA (2016) as far as is practicable, with reasons for non-compliance clearly identified. Sampling intensity was adequate with areas of greater significance such as where SDV or GDE may be present and PECs, targeted. Climatic variability is always a factor in the timing of survey. However, the breadth of work completed has ensured that sampling was conducted with a range of rainfall levels, including surveys after the wet season. Where an area was not surveyed due to cultural sensitivity at the time, information was extrapolated.

Reporting provided information consistent with requirements of the EPA (2016). Species association matrices that were not provided in the Attexo (2022 a; b) have been appended to this memo (Attachment 4). Beyond that, the reports provided adequate documentation of survey methods and results in the correct sections, with supporting tables, figures and maps as required. Maps were prepared in a manner that enables identification of the location of the survey site and legends providing required information.

Prior to the commencement of ground disturbing activities, the section of the Alignment Option 8B which could not be surveyed because of cultural sensitivity (refer to Figure 1 section to the east of the Great Northern Highway) may require surveys. However, the vegetation type was extrapolated and the location of the Wona land system is mapped near this area. Targeted surveys for the presence of conservation significant flora may be required in this unsurveyed area, however the Conceptual Footprint aligns closely to the edge of the Development Envelope and the existing FMG Rail line (Refer to PCD). The current reports provide sufficient information on the presence and distribution of both GDV and SDV such that an assessment of potential impacts can be made. The extent of these vegetation types is provided both graphically and as an area within the proposed alignments. The locations of priority flora have been provided, as has the presence of the PEC within the alignments.

Conservation significant flora

Targeted flora surveys, opportunistic collections and quadrat data identified 11 Priority flora species listed by Department of Biodiversity, Conservation and Attractions (DBCA), one threatened flora species listed under the EPBC Act as a Matter of National Environmental Significance (MNES) and one species listed as a controlled species under the *Biodiversity Conservation Act 2016* (BC Act) as being present in the Development Envelope (Table 4; Figure 2 and 3).

Note that *Seringia exastia*, recorded in the Development Envelope, has been delisted at a State level, although it remains listed as Critically Endangered under the EPBC Act (Binks, Wilkins, Markey, Lyons, & Byrne, 2020).

Table 4 Conservation significant flora within the Development Envelope

Species	Description and Habitat	Vegetation Type	No. of known Individuals in the Development Envelope	No. of known Populations in the Development Envelope ¹	Description of Known Range and Extent
MNES					
<i>Seringia exastia</i> (CE, EPBC Act)	Erect shrub. Purple flowers April – Dec.	AaAxSL THG	28	3	This species is distributed across much of WA. The Western Australia Herbarium (WAH) has 295 specimens lodged with records in 12 bioregions and 21 subregions (WAH, 1998-). It grows on pindan heathland.
Priority (BC Act; DBCA)					
<i>Dipteracanthus chichesterensis</i> (P1)	Spreading perennial shrub growing to 30 cm high. Flowers mauve and creamy yellow, March. Red-brown cracking clay soils associated with basalts.	MTGW	22	3	The WAH has 8 specimens lodged with records distributed from Millstream-Chichester National Park to north-west of the Fortescue Marsh. Specimen notes indicate at least 500 individuals across three of the collection locations (WAH, 1998-).
<i>Triodia veniciae</i> (P1)	Spinifex species. shale slopes and tops of low hills	TvHG THG ASL (2)	1,636	10	The WAH has 26 specimens lodged with records distributed in the Pilbara from west of Karijini National Park to east of the Fortescue Marsh (WAH, 1998-). Specimen notes indicate at least 16,395 individuals, with several sites described as having “hundreds” of plants. This species has been recorded across the broader MDIOM.
<i>Ipomoea racemigera</i> (P2)	Annual herb or climber. White flowers. Flats with brown silty loam soil, major drainage lines and creekbeds.	MSW	2	1	The WAH has 17 specimens lodged with records distributed in the Pilbara, Ord Victoria Plain and Gascoyne regions (WAH, 1998-). Specimen notes indicate at least 55 individuals. This species was recorded at Eliwana (FMG) and Carmulla (BHP). Distributed from the Pilbara to the northern Kimberley, a distance of over 1,300 km (Biota, 2018)

¹ Populations were determined based on the guidance from Stack (2017) Threatened and Priority flora report form –Field Manual, prepared for DBCA, Version 1.3 2017.

Species	Description and Habitat	Vegetation Type	No. of known Individuals in the Development Envelope	No. of known Populations in the Development Envelope1	Description of Known Range and Extent
<i>Pentalepis trichodesmoides</i> subsp. <i>hispida</i> (P2)	Upright shrub, 0.4 m-1 m tall. Flowers Aug-Sep. Found in <i>Triodia</i> hummock grassland, high landscape on gravelly loam.	THGB	1	1	<p>The WAH has 18 species lodged with records distributed across the Hammersley, Chichester, and Roebourne regions (WAH, 2022).</p> <p>This species was recorded at Eliwana and is found on <i>Triodia</i> hummock grasslands. Distribution spans over 280 km north south through the Pilbara, including records from Karijini National Park (Biota, 2018).</p> <p>This subspecies was only described in 2012 (Orchard and Cross 2012) and was subsequently listed as a Priority taxon.</p>
<i>Euphorbia inappendiculata</i> var. <i>inappendiculata</i> (P2)	Annual or perennial prostrate herb growing to 30 cm high. Flowers (inconspicuous) May and August. Heavy clay soils on open plains or gentle slopes.	MTGW	1	1	<p>The WAH has 14 specimens lodged with records distributed across the Pilbara and into the northern Gascoyne. Specimen notes indicate at least 70 individuals with one record describing it as locally abundant (WAH, 1998-).</p>
<i>Dolichocarpa</i> sp. Hamersley Station (A.A. Mitchell PRP 1479) (P3)	Prostrate annual herb, growing up to 0.01 m tall. Blue-mauve flowers. Gentle slope, plains, in claypan, red-brown sandy clay.	MTGW ASL THG (1)(2) AaAxSL	51	15	<p>The WAH has 38 specimens lodged with records distributed across the Pilbara region (WAH, 1998-). Specimen notes indicate at least 1,037 individuals with the taxon described as common at some locations and >1000 individuals estimated at one location.</p> <p>All records are in the Pilbara extending from the coast (Mardie Salt Project) with distribution across Millstream and Chichester Range.</p>
<i>Euphorbia stevenii</i> (P3)	Somewhat succulent perennial herb growing from 0.1 to 0.5 m high. Flowers inconspicuous, timing unknown. Clay, sandy soils.	MTGW	1	1	<p>The WAH has 17 specimens lodged, with records distributed across the Pilbara and also in the far northern Victoria Bonaparte bioregion. Specimen notes indicate the taxon is “common” at several of its collection locations (WAH, 1998-).</p>

Species	Description and Habitat	Vegetation Type	No. of known Individuals in the Development Envelope	No. of known Populations in the Development Envelope1	Description of Known Range and Extent
<i>Gymnanthera cunninghamii</i> (P3)	Erect shrub 1-2m high, cream-yellow flowers, Jan-Dec. Sandy clay loam and riverbeds / floodplains.	MSW THGG	2	2	The WAH has 40 specimens lodged with records distributed across the Pilbara, Great Sandy Desert, Carnarvon and Gascoyne regions (WAH, 1998-). Specimen notes indicate at least 207 individuals. Recorded at Eliwana (Biota, 2018).
<i>Nicotiana umbratica</i> (P3)	Erect, short-lived annual or perennial, herb growing from 0.3 to 0.7 m high. Flowers white from April to June. Shallow soils. Rocky outcrops.	THGG	1	1	The WAH has 18 specimens lodged, with records distributed across the Pilbara. Specimen notes indicate at least 30 individuals (WAH, 1998-).
<i>Swainsona thompsoniana</i> (P3)	Prostrate annual herb growing to 10 cm high. Flowers mauve and cream-yellow from August to September. Open flood plains on heavy clay soils.	MTGW	4	3	The WAH has 28 specimens lodged, with records distributed across the Pilbara. Specimen notes indicate at least 28 individuals, with the taxon described as common at some locations (WAH, 1998-).
<i>Themeda</i> sp. Hamersley Station (M.E. Trudgen 11431) (P3)	Tussocky perennial, grass growing from 0.9 to 1.8 m high. Flowers August. Red clay. Clay pan, grass plain	MTGW	3	3	The WAH has 60 specimens lodged with records distributed across the Pilbara (WAH, 1998-). Specimen notes indicate there are more than 1,002,384 individuals, with several records describing the taxon as abundant and one record estimating 1,000,000 individuals. Populations of this species have been recorded between Balla Balla River and Salt Creek on the Roebourne Plains. This species is recorded at Red Hill, Ashburton Infrastructure Project (Ashburton, 2021).
Controlled species under the BC Act					

Species	Description and Habitat	Vegetation Type	No. of known Individuals in the Development Envelope	No. of known Populations in the Development Envelope1	Description of Known Range and Extent
<i>Santalum spicatum</i>	A hemiparasitic shrub growing from 1 to 5 m high. Flowers green/red, February to June. Red sandy soils. Among rocks	THG	1	1	The WAH has 293 specimens lodged with records distributed throughout Western Australia (WAH, 1998-).

Summary/Conclusions

Timings for the surveys undertaken for the Proposal were considered adequate based on EPA guidance (EPA 2016), i.e. a primary survey during the wet season and a supplementary survey during the dry season were included. The surveys completed over the alignments were undertaken over multiple years and across a range of pre-survey rainfall events. While some areas have only had dry season surveys, they were located adjacent to areas that had been subject to both a wet season and a dry season survey.

The survey widths for linear infrastructure were considered adequate for both Alignment Option 1B and Option 8B because they meet EPA's (2016) guidelines which require linear infrastructure corridor surveys to include an area 500-1,000 m either side of the corridor. In addition to this, there were quadrats completed during surveys that were outside of these areas, providing further local information on the distribution of vegetation types.

The survey effort undertaken within the Development Envelope (Figure 1) is considered adequate based on EPA's (2016) guidance.

The Development Envelope has been surveyed with sufficient detail to characterise the receiving environment and to assess the vegetation condition, with targeted surveys undertaken to identify flora of conservation significance. In particular, the presence of a PEC within the alignments has been identified and inferred GDV and SDV have been identified. The extents of these have been mapped and information on the area of them is also provided.

An adequate number of quadrats have been undertaken within vegetation units (with the exception of vegetation unit AxS) i.e. a minimum of three quadrats have been sampled in each vegetation unit, with additional quadrats to account for the size of vegetation units; and a species accumulation analysis determined that the majority of flora in the Development Envelope have been recorded. Information on flora and vegetation has been provided in a report that aligns with the requirements of the EPA (2016). Desktop reviews and interrogation of recommended spatial data and existing ecological survey reports has been completed, with this information used to guide survey planning, with specific reference to determining the presence or absence of flora or ecological communities of conservation significance.

Surveys over the Development Envelope meet the requirements for a detailed survey, which should include the use of quadrats assessed over a minimum of two visits, with one during the primary season, and transects or relevés as required. Targeted searches for flora of conservation were completed. Information on survey effort and the location of quadrats is provided in all reports.

Thirteen conservation significant flora taxa were recorded in the Development Envelope, with their distribution mapped. Consistent with EPA (2016) requirements, the specific locations of these were not detailed in the report.

Quadrat and relevé data have been provided in Attachment 2 as required by EPA (2016) guidance.

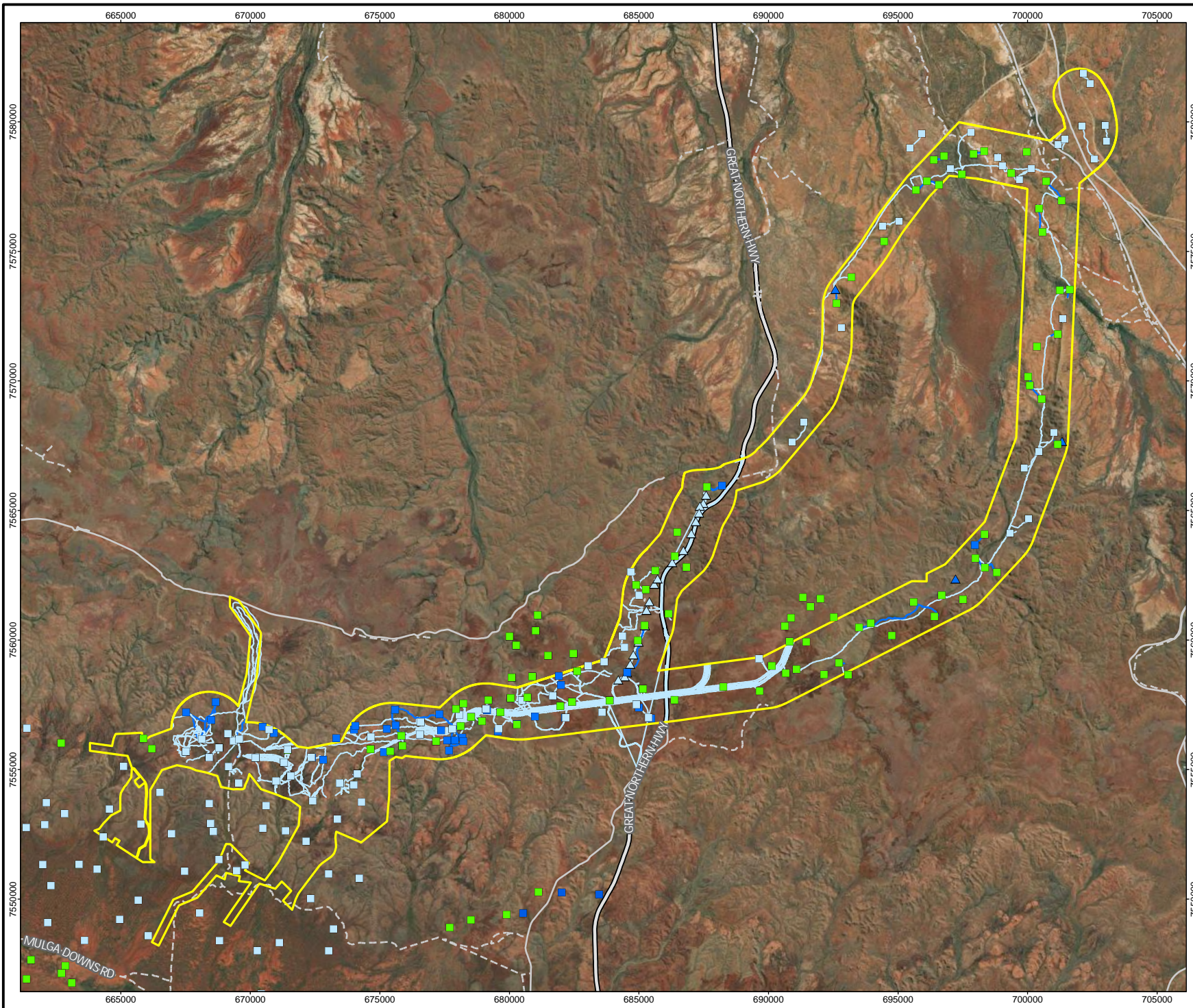
A comprehensive species list for the Development Envelope have been provided in Attachment 3 as required by EPA (2016) guidance.

A species versus vegetation unit matrix has been provided in Attachment 4 as required by EPA (2016) guidance.

References

- Attexo. (2022a). *Mulga Downs Flora and Vegetation Consolidated Report Rail 8B Alignment and Hub*. Unpublished report by Attexo Group Pty Ltd (Attexo).
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Attachment 1 – Figures 1-3



Legend

- Development Envelope
- Maia Environmental Consultancy Survey Effort (Seasons)**
- Quadrat (Dry)
- Quadrat (Wet)
- Quadrat (Wet and Dry)
- ▲ Relevés (Wet)
- Traverses (Dry)
- Traverses (Wet)
- JBS&G survey effort**
- △ Relevés (Dry)
- Traverses (Dry)



Job No: 54533

Client: Roy Hill Infrastructure Pty Ltd

Version: A	Date: 14/07/2023
Drawn By: jcrute	Checked By: VC

Scale 1:200,000 at A4



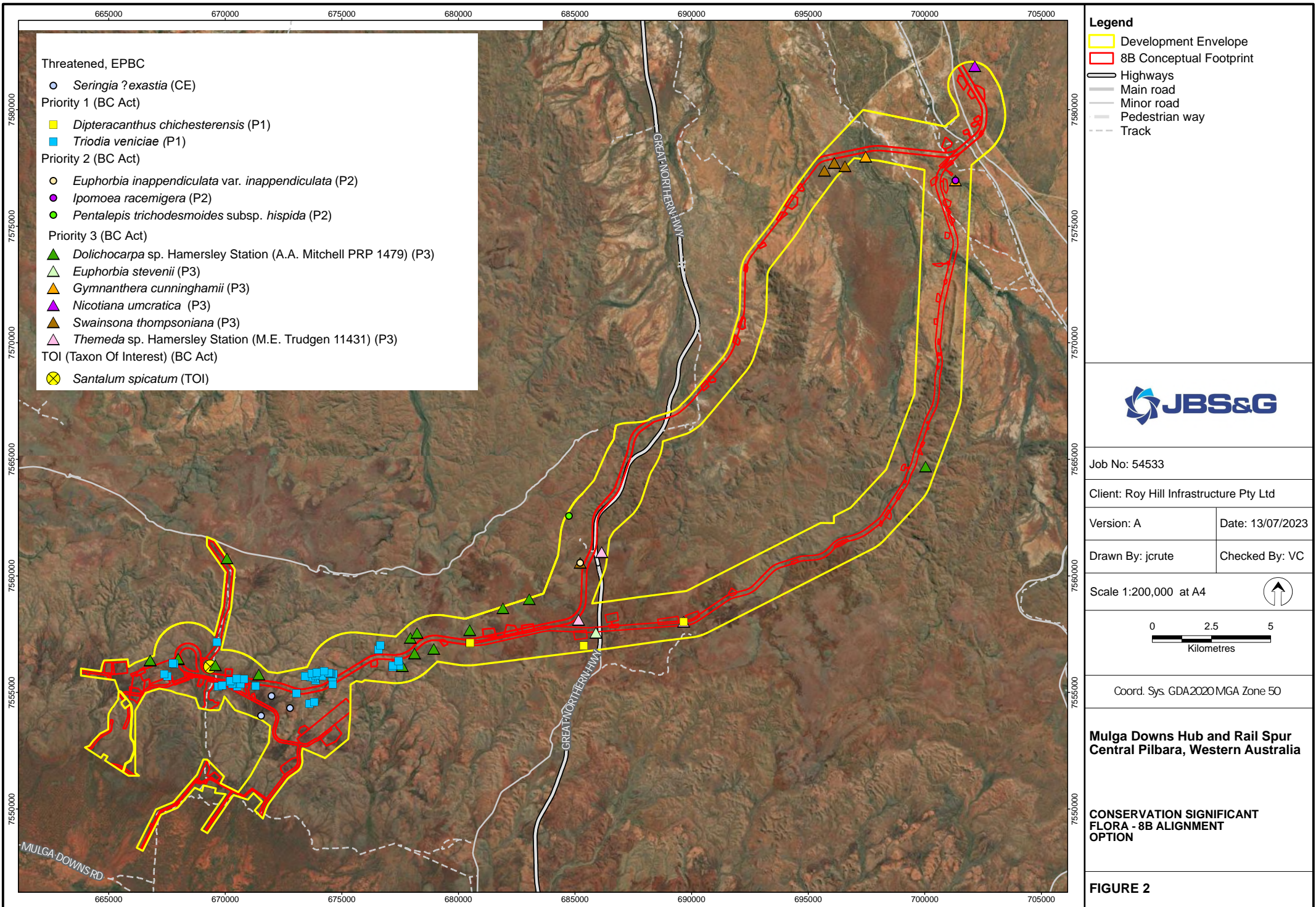


Coord. Sys: GDA2020 MGA Zone 50

**Mulga Downs Hub and Rail Spur
Central Pilbara, Western Australia**

**FLORA AND VEGETATION SURVEY
EFFORT (WET AND DRY SEASONS)**

FIGURE 1



- Threatened, EPBC**
- *Seringia ? exastia* (CE)
- Priority 1 (BC Act)**
- *Dipteracanthus chichesterensis* (P1)
 - *Triodia veniciae* (P1)
- Priority 2 (BC Act)**
- *Euphorbia inappendiculata* var. *inappendiculata* (P2)
 - *Ipomoea racemigera* (P2)
 - *Pentalepis trichodesmoides* subsp. *hispida* (P2)
- Priority 3 (BC Act)**
- ▲ *Dolichocarpa* sp. Hamersley Station (A.A. Mitchell PRP 1479) (P3)
 - ▲ *Euphorbia stevenii* (P3)
 - ▲ *Gymnanthera cunninghamii* (P3)
 - ▲ *Nicotiana umcratica* (P3)
 - ▲ *Swainsona thompsoniana* (P3)
 - ▲ *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) (P3)
- TOI (Taxon Of Interest) (BC Act)**
- ⊗ *Santalum spicatum* (TOI)

- Legend**
- Development Envelope
 - 8B Conceptual Footprint
 - Highways
 - Main road
 - Minor road
 - Pedestrian way
 - Track



Job No: 54533

Client: Roy Hill Infrastructure Pty Ltd

Version: A	Date: 13/07/2023
Drawn By: jcrute	Checked By: VC

Scale 1:200,000 at A4

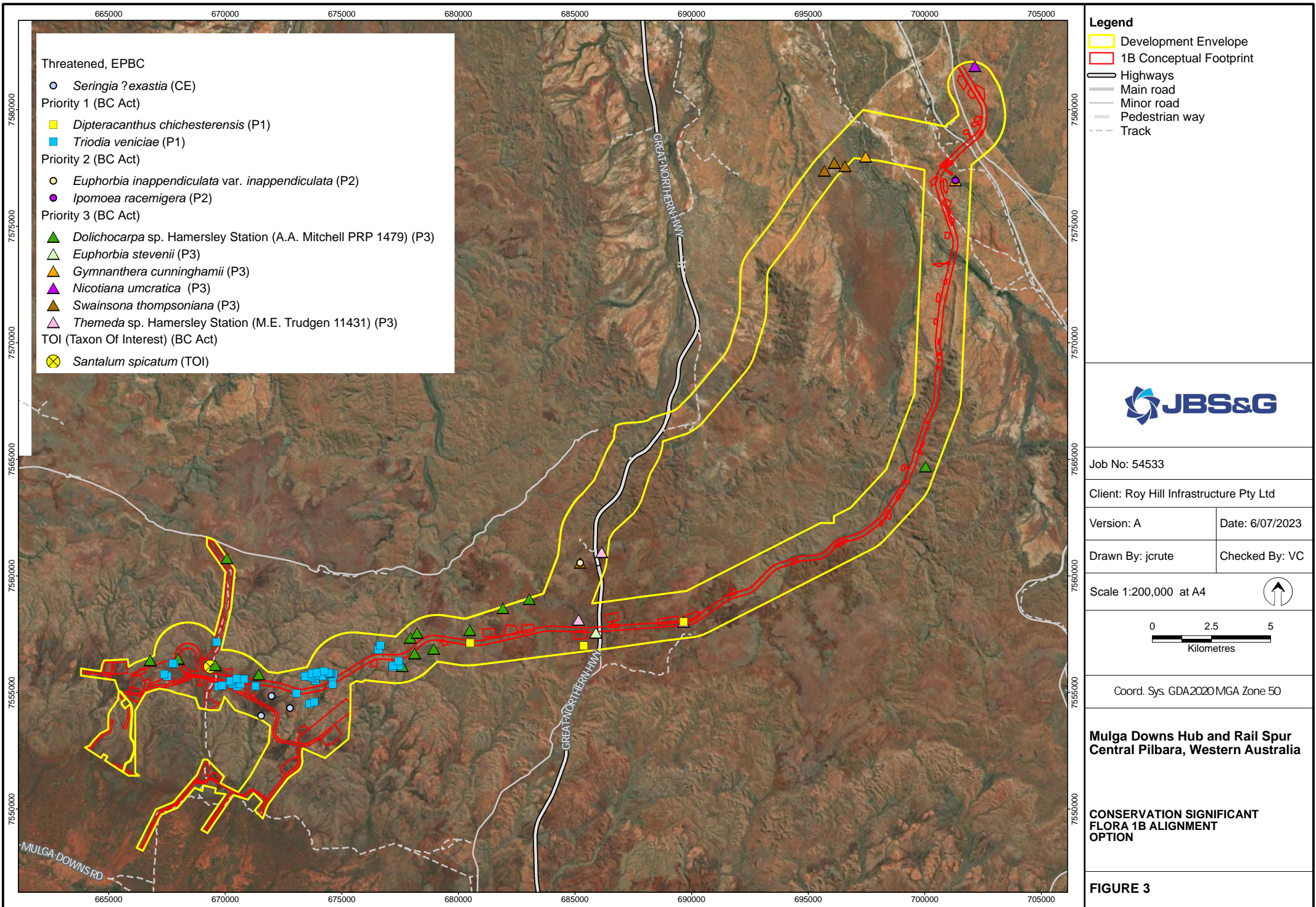
Coord. Sys. GDA2020 MGA Zone 50

**Mulga Downs Hub and Rail Spur
Central Pilbara, Western Australia**

**CONSERVATION SIGNIFICANT
FLORA - 8B ALIGNMENT
OPTION**

FIGURE 2

File Name: C:\Users\jcrute\JBS&G Australia\JBS&G - DCS - Internal - Documents\Projects\Hancock Prospecting\GIS\54533_Rail_Hub\GIS\02_MapProjects\54533_Hancock_Rail_Hub\54533_Hancock_Rail_Hub.aprx
Image Reference: World Imagery: Earthstar Geographics



- Threatened, EPBC**
- *Seringia ? exastia* (CE)
- Priority 1 (BC Act)**
- *Dipteracanthus chichesterensis* (P1)
 - *Triodia veniciae* (P1)
- Priority 2 (BC Act)**
- *Euphorbia inappendiculata* var. *inappendiculata* (P2)
 - *Ipomoea racemigera* (P2)
- Priority 3 (BC Act)**
- ▲ *Dolichocarpa* sp. Hamersley Station (A.A. Mitchell PRP 1479) (P3)
 - ▲ *Euphorbia stevenii* (P3)
 - ▲ *Gymnanthera cunninghamii* (P3)
 - ▲ *Nicotiana umcratica* (P3)
 - ▲ *Swainsona thompsoniana* (P3)
 - ▲ *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) (P3)
- TOI (Taxon Of Interest) (BC Act)**
- ⊗ *Santalum spicatum* (TOI)

- Legend**
- Development Envelope
 - 1B Conceptual Footprint
 - Highways
 - Main road
 - Minor road
 - Pedestrian way
 - Track



Job No: 54533

Client: Roy Hill Infrastructure Pty Ltd

Version: A	Date: 6/07/2023
Drawn By: jcrute	Checked By: VC

Scale 1:200,000 at A4

Coord. Sys. GDA2020 MGA Zone 50

**Mulga Downs Hub and Rail Spur
Central Pilbara, Western Australia**

**CONSERVATION SIGNIFICANT
FLORA 1B ALIGNMENT
OPTION**

FIGURE 3

Attachment 2 –Quadrat and relevé data sheets

2a – 2021

2b - 2022

Project: 8B Rail Alignment Reconnaissance

Date: 13/11/2021

Site: R01 **Coordinates:** -22.068997, 118.785153 **Datum:** WGS84

Site Type: Relevé

Site Size: n/a **Site Marker:** Nil (temporary site)

Photo Location: Centre

Landform: depression/ basin

Aspect: Slope:

Outcropping: no

Rock Type: Basalt

Soil Type: rocky clay

Soil Notes:

Surface: 1% bare ground, 0% outcropping, 10% litter

Years Since Fire: yrs

Large Trees Present (>500 mm DBH): no

Condition: Very Good

Disturbance Notes: Cattle

Vegetation Description: *Acacia xiphophylla* tall shrubland over *Senna* sp. over *Astrebla pectinata*



TAXA

Taxon	Height (cm)	Cover (%)	Dead Cover (%)	Comment
<i>Acacia synchronicia</i>	150	0.01		
<i>Acacia xiphophylla</i>	250	15		
<i>Astrebla pectinata</i>	40		5	
<i>Cleome viscosa</i>	20		0	
<i>Cucumis</i> sp. (dead)	5		0	
<i>Ptilotus exaltatus</i>	20	0.001		
<i>Senna</i> sp. ? <i>xsericea</i>	50	2		
<i>Sida</i> sp. ?Supplejack Station	30	0.1		

Project: 8B Rail Alignment Reconnaissance

Date: 13/11/2021

Site: R02 **Coordinates:** -22.067854, 118.787552 **Datum:** WGS84

Site Type: Relevé

Site Size: n/a **Site Marker:** Nil (temporary site)

Photo Location: Centre

Landform: plain,slope

Aspect: N **Slope:** 1

Outcropping: no

Rock Type: Basalt

Soil Type: rocky clay

Soil Notes:

Surface: 15% bare ground, 0% outcropping, 5% litter

Years Since Fire: yrs

Large Trees Present (>500 mm DBH): no

Condition: Good

Disturbance Notes: Cattle

Vegetation Description: Tussock grassland with sparse *Acacia synchronica*



TAXA

Taxon	Height (cm)	Cover (%)	Dead Cover (%)	Comment
<i>Acacia synchronica</i>	130	0.5		
<i>Aristida latifolia</i>	60		7	
<i>Cleome viscosa</i>	25		0	
<i>Cynodon convergens</i>	30		0	
<i>Rhynchosia minima</i>	2		0	
<i>Sida</i> sp. ?Supplejack Station	20		5	

Project: 8B Rail Alignment Reconnaissance

Date: 13/11/2021

Site: R03 **Coordinates:** -22.066479, 118.788428 **Datum:** WGS84

Site Type: Relevé

Site Size: n/a **Site Marker:** Nil (temporary site)

Photo Location: Centre

Landform: drainage line

Aspect: N **Slope:** 5

Outcropping: no

Rock Type: Basalt

Soil Type: rocky clay

Soil Notes:

Surface: 2% bare ground, 0% outcropping, 20% litter

Years Since Fire: yrs

Large Trees Present (>500 mm DBH): no

Condition: Good

Disturbance Notes: Cattle

Vegetation Description: Tall open shrubland of *Acacia xiphophylla* over *Acacia synchronicia* over *Triodia* sp. (RP009)



TAXA

Taxon	Height (cm)	Cover (%)	Dead Cover (%)	Comment
<i>Acacia bivenosa</i>	100	0.5		
<i>Acacia synchronicia</i>	120	1		
<i>Acacia xiphophylla</i>	300	30		
<i>Ptilotus exaltatus</i>	35	0		
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	150	0		
<i>Triodia</i> sp. (glabrous, non-resinous)	40	40		

Project: 8B Rail Alignment Reconnaissance

Date: 14/11/2021

Site: R04 **Coordinates:** -22.041589, 118.796421 **Datum:** WGS84

Site Type: Relevé

Site Size: n/a **Site Marker:** Nil (temporary site)

Photo Location: Centre

Landform: slope

Aspect: S **Slope:** 7

Outcropping: yes

Rock Type: Ironstone?

Soil Type: rocky clay

Soil Notes:

Surface: 60% bare ground, yes% outcropping, 0.5% litter

Years Since Fire: yrs

Large Trees Present (>500 mm DBH): no

Condition: Excellent

Disturbance Notes: Nil

Vegetation Description: *Acacia inaequilatera* with isolated *Corymbia aspera* and *Grevillea pyramidalis* subsp. *leucodendron* over *Triodia epactia* and *Corchorus lasiocarpus*



TAXA

Taxon	Height (cm)	Cover (%)	Dead Cover (%)	Comment
<i>Acacia inaequilatera</i>	300	0.5		
<i>Corchorus lasiocarpus</i>	35	0.01		
<i>Dampiera candidans</i>	45		0.001	
<i>Gomphrena cunninghamii</i>	10		0	
<i>Gomphrena cunninghamii</i>	7		0	
<i>Heliotropium</i> sp. (hairy)	20	0		
<i>Indigofera monophylla</i>	30		0.001	
<i>Ptilotus rotundifolius</i>	80	0.001		
<i>Triodia epactia</i>	30	30		

Project: 8B Rail Alignment Reconnaissance

Date: 14/11/2021

Site: R05 **Coordinates:** -22.044607, 118.795381 **Datum:** WGS84

Site Type: Relevé

Site Size: n/a **Site Marker:** Nil (temporary site)

Photo Location: Centre

Landform: depression/ basin, drainage line

Aspect: S **Slope:** 1

Outcropping: no

Rock Type: Ironstone

Soil Type: rocky clay

Soil Notes:

Surface: 40% bare ground, 0% outcropping, 30% litter

Years Since Fire: 2 yrs

Large Trees Present (>500 mm DBH): no

Condition: Very Good

Disturbance Notes: Fire

Vegetation Description: *Acacia ancistrocarpa* open shrubland with sparse *Corymbia ?hamersleyana* and *Acacia tumida* seedlings over *Senna* spp. and Malvaceae spp. over *Triodia wiseana*



TAXA

Taxon	Height (cm)	Cover (%)	Dead Cover (%)	Comment
? <i>Corymbia hamersleyana</i> (sapling)	300	1		
? <i>Cullen</i> sp. (dead)	15	1		
<i>Acacia ancistrocarpa</i>	80	2		
<i>Alternanthera nana</i>	25	0		
<i>Aristida</i> sp. (inaequal glumes)	20		0	
<i>Corchorus lasiocarpus</i>	70	10	1	
<i>Cynodon convergens</i>	40		1	
<i>Eriachne pulchella</i>	25		10	
<i>Gossypium australe</i>	65	0		
<i>Hibiscus sturtii</i>	25		0.5	
Indet.	50	1		
<i>Indigofera monophylla</i>	40		15	
<i>Ptilotus exaltatus</i>	25	0		
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	60	0		
<i>Senna notabilis</i>	65		0	
<i>Solanum</i> sp. (dead)	25		0	
<i>Sporobolus australasicus</i>	15		0	
<i>Tephrosia rosea</i>	80	5		
<i>Themeda triandra</i>	100	2		
<i>Triodia wiseana</i>	30	5		

Project: 8B Rail Alignment Reconnaissance

Date: 14/11/2021

Site: R06 **Coordinates:** -22.033618, 118.799403 **Datum:** WGS84

Site Type: Relevé

Site Size: n/a **Site Marker:** Nil (temporary site)

Photo Location: Centre

Landform: ridge

Aspect: NE **Slope:** 10

Outcropping: yes

Rock Type: Ironstone

Soil Type: clay,rocky clay

Soil Notes:

Surface: 50% bare ground, yes% outcropping, 1% litter

Years Since Fire: 2 yrs

Large Trees Present (>500 mm DBH): no

Condition: Excellent

Disturbance Notes:

Vegetation Description: *Acacia inaequilatera* and isolated *Grevillea pyramidalis* subsp. *leucodendron*, *Hakea lorea* and *Corymbia hamersleyana* over *Triodia epactia* and *Indigofera monophylla*



TAXA

Taxon	Height (cm)	Cover (%)	Dead Cover (%)	Comment
<i>Abutilon hannii</i>	200	0.5		
<i>Acacia adoxa</i> var. <i>adoxo</i>	40	1		
<i>Acacia holosericea</i>	110	0.5		
<i>Acacia holosericea</i>	30	50		
<i>Acacia inaequilatera</i>	300	1		
<i>Corchorus lasiocarpus</i>	50	0		
<i>Dampiera candicans</i>	50	1		
<i>Indigofera monophylla</i>	30		1	

Project: 8B Rail Alignment Reconnaissance

Date: 14/11/2021

Site: R07 **Coordinates:** -22.035489, 118.798181 **Datum:** WGS84

Site Type: Relevé

Site Size: n/a **Site Marker:** Nil (temporary site)

Photo Location: Centre

Landform: hill,slope

Aspect: E **Slope:** 7

Outcropping: yes

Rock Type: Ironstone

Soil Type: clay

Soil Notes:

Surface: 70% bare ground, yes% outcropping, 0.5% litter

Years Since Fire: 2 yrs

Large Trees Present (>500 mm DBH): no

Condition: Excellent

Disturbance Notes:

Vegetation Description: *Acacia inaequilatera* and isolated *Grevillea pyramidalis* subsp. *leucodendron* over *Corchorus lasiocarpus* over *Triodia epactia*



TAXA

Taxon	Height (cm)	Cover (%)	Dead Cover (%)	Comment
<i>Acacia inaequilatera</i>	300	0.5		
<i>Acacia</i> sp. (seedling)	30	0		
<i>Corchorus lasiocarpus</i>	60	0		
<i>Dodonaea coriacea</i>	65	0		
<i>Euphorbia ?boophthona</i>	100	0		
<i>Indigofera monophylla</i>	10		0	
<i>Triodia epactia</i>	30	20		

Project: 8B Rail Alignment Reconnaissance

Date: 14/11/2021

Site: R08 **Coordinates:** -22.02786, 118.804792 **Datum:** WGS84

Site Type: Relevé

Site Size: n/a **Site Marker:** Nil (temporary site)

Photo Location: Centre

Landform: slope

Aspect: E **Slope:** 5

Outcropping: no

Rock Type: Ironstone

Soil Type: rocky clay

Soil Notes:

Surface: 60% bare ground, 0% outcropping, 1% litter

Years Since Fire: 2 yrs

Large Trees Present (>500 mm DBH): no

Condition: Excellent

Disturbance Notes:

Vegetation Description: *Acacia inaequilatera* with isolated *Grevillea pyramidalis* subsp. *leucodendron* over *Triodia wiseana* and *Triodia epactia*



TAXA

Taxon	Height (cm)	Cover (%)	Dead Cover (%)	Comment
<i>Acacia inaequilatera</i>	400	0.1		
<i>Heliotropium</i> sp. (recurved)	20		0	
<i>Indigofera monophylla</i>	30		1	
<i>Tephrosia rosea</i>	50	0		
<i>Triodia wiseana</i>	30	40		

Project: 8B Rail Alignment Reconnaissance

Date: 14/11/2021

Site: R09 **Coordinates:** -22.023619, 118.808904 **Datum:** WGS84

Site Type: Relevé

Site Size: n/a **Site Marker:** Nil (temporary site)

Photo Location: Centre

Landform: slope

Aspect: E **Slope:** 5

Outcropping: no

Rock Type: Ironstone with BIF nearby

Soil Type: rocky clay

Soil Notes:

Surface: 75% bare ground, 0% outcropping, 1% litter

Years Since Fire: yrs

Large Trees Present (>500 mm DBH): no

Condition: Excellent

Disturbance Notes: Recent fire

Vegetation Description: *Acacia inaequilatera* over *Triodia epactia*, *Indigofera monophylla*, *?Tephrosia rosea* and *Heliotropium* sp.



TAXA

Taxon	Height (cm)	Cover (%)	Dead Cover (%)	Comment
<i>?Tephrosia rosea</i> (dead)	35		0	
<i>Acacia inaequilatera</i>	400	0.5		
<i>Corchorus lasiocarpus</i>	20	0		
<i>Heliotropium</i> sp. (recurved)	25		1	
<i>Indigofera monophylla</i>	25		0.5	
<i>Triodia epactia</i>	30	20		

Project: 8B Rail Alignment Reconnaissance

Date: 14/11/2021

Site: R10 **Coordinates:** -22.017717, 118.811791 **Datum:** WGS84

Site Type: Relevé

Site Size: n/a **Site Marker:** Nil (temporary site)

Photo Location: Centre

Landform: drainage line, gully

Aspect: **Slope:** 0

Outcropping: yes

Rock Type: Ironstone

Soil Type: rocky clay

Soil Notes: Gully in BIF

Surface: 50% bare ground, yes% outcropping, 5% litter

Years Since Fire: yrs

Large Trees Present (>500 mm DBH): no

Condition: Good

Disturbance Notes: Cattle

Vegetation Description: *Corymbia hamersleyana* and *Eucalyptus camaldulensis* over *Atalaya hemiglauca*, *Acacia monticola* and *Acacia pyrifolia* over *Themeda triandra*, *Triodia epactia* and **Cenchrus ciliaris*



TAXA

Taxon	Height (cm)	Cover (%)	Dead Cover (%)	Comment
? <i>Tephrosia rosea</i> (dead)	35	0.5		
<i>Abutilon</i> sp.	180	0		
<i>Acacia monticola</i>	200	1		
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>	150	1		
<i>Atalaya hemiglauca</i>	300	2		
* <i>Cenchrus ciliaris</i>	55		1	
<i>Corymbia hamersleyana</i>	500	5		
<i>Cymbopogon ambiguus</i>	120	2		
<i>Cyperus</i> sp.	80	0.1		
<i>Enneapogon lindleyanus</i>	55		0.1	
<i>Eucalyptus camaldulensis</i>	500	3		
<i>Euphorbia careyi</i>	25	0		
<i>Flueggea virosa</i> subsp. <i>melanthesoides</i>	250	0.5		
<i>Salsola australis</i>	50		0	
<i>Senna glutinosa</i>	65	0		
<i>Trichodesma zeylanicum</i>	25	0		
<i>Triodia epactia</i>	80	20		

Project: 8B Rail Alignment Reconnaissance

Date: 15/11/2021

Site: R11 **Coordinates:** -22.010496, 118.814637 **Datum:** WGS84

Site Type: Relevé

Site Size: n/a **Site Marker:** Nil (temporary site)

Photo Location: Centre

Landform: floodplain

Aspect: W **Slope:** 1

Outcropping: no

Rock Type: Ironstone

Soil Type: clay

Soil Notes:

Surface: 50% bare ground, 0% outcropping, 2% litter

Years Since Fire: yrs

Large Trees Present (>500 mm DBH): no

Condition: Good,Poor

Disturbance Notes: Cattle, buffel grass

Vegetation Description: *Corymbia hamersleyana* over *Atalaya hemiglauca*, *Acacia bivenosa*, *Acacia pyrifolia* and *Grevillea pyramidalis*, over **Cenchrus ciliaris* and *Triodia* sp. (RP062)



TAXA

Taxon	Height (cm)	Cover (%)	Dead Cover (%)	Comment
<i>Acacia bivenosa</i>	270	5		
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>	200	1		
* <i>Aerva javanica</i>	70	0		
<i>Aristida</i> sp. (inaequal glumes)	20		0	
<i>Atalaya hemiglauca</i>	250	0.5		
* <i>Cenchrus ciliaris</i>	50		50	
<i>Corymbia hamersleyana</i>	800	3		
<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>	300	0.1		
<i>Hakea lorea</i> subsp. <i>lorea</i>	300	0		
<i>Rhynchosia minima</i>	30		0	
<i>Senna artemisioides</i> subsp. <i>helmsii</i>	50	0.5		
<i>Senna glutinosa</i>	100	0		
<i>Themeda triandra</i>	80	0.5		
<i>Triodia</i> sp. (woolly, non-resinous)	40	2		

Project: 8B Rail Alignment Reconnaissance

Date: 15/11/2021

Site: R12 **Coordinates:** -22.008119, 118.814877 **Datum:** WGS84

Site Type: Relevé

Site Size: n/a **Site Marker:** Nil (temporary site)

Photo Location: Centre

Landform: slope

Aspect: SE **Slope:** 15

Outcropping: yes

Rock Type: Ironstone

Soil Type: rocky clay

Soil Notes:

Surface: 60% bare ground, yes% outcropping, 1% litter

Years Since Fire: yrs

Large Trees Present (>500 mm DBH): no

Condition: Very Good

Disturbance Notes: Fire

Vegetation Description: Isolated *Acacia inaequilatera* over *Triodia epactia* with sparse *Indigofera monophylla*



TAXA

Taxon	Height (cm)	Cover (%)	Dead Cover (%)	Comment
<i>Acacia inaequilatera</i>	150	0	0	
<i>Indigofera monophylla</i>	25		0.5	
<i>Triodia epactia</i>	40	30		

Project: 8B Rail Alignment Reconnaissance

Date: 15/11/2021

Site: R13 **Coordinates:** -22.007093, 118.816153 **Datum:** WGS84

Site Type: Relevé

Site Size: n/a **Site Marker:** Nil (temporary site)

Photo Location: Centre

Landform: BIF,slope

Aspect: NE **Slope:** 20

Outcropping: yes

Rock Type: BIF

Soil Type:

Soil Notes: Nil visible

Surface: 50% bare ground, yes% outcropping, 3% litter

Years Since Fire: yrs

Large Trees Present (>500 mm DBH): no

Condition: Excellent

Disturbance Notes:

Vegetation Description: Isolated *Acacia inaequilatera* over sparse *Acacia bivenosa* and ?*Triumfetta* sp. over *Triodia epactia* and *Indigofera monophylla*



TAXA

Taxon	Height (cm)	Cover (%)	Dead Cover (%)	Comment
? <i>Triumfetta</i> sp.	60	0.1		
<i>Acacia bivenosa</i>	100	0.1		
<i>Acacia inaequilatera</i>	400	0.5		
<i>Indigofera monophylla</i>	30		0.1	
<i>Polymeria ambigua</i>	40	0.5		
<i>Triodia epactia</i>	40	15		

Project: 8B Rail Alignment Reconnaissance

Date: 15/11/2021

Site: R14 **Coordinates:** -22.004221, 118.81714 **Datum:** WGS84

Site Type: Relevé

Site Size: n/a **Site Marker:** Nil (temporary site)

Photo Location: Centre

Landform: BIF ridge

Aspect: E **Slope:** 1

Outcropping: yes

Rock Type: BIF

Soil Type:

Soil Notes: Nil

Surface: 70% bare ground, yes% outcropping, 1% litter

Years Since Fire: yrs

Large Trees Present (>500 mm DBH): no

Condition: Excellent

Disturbance Notes: Nil

Vegetation Description: *Triodia epactia* open grassland with isolated *Acacia inaequilatera*, *Hakea lorea* and *Corymbia ?hamerselyana*



TAXA

Taxon	Height (cm)	Cover (%)	Dead Cover (%)	Comment
<i>Acacia inaequilatera</i>	300	1		
<i>Euphorbia</i> sp. (dead)	40		0	
<i>Indigofera monophylla</i>	20	0		
<i>Polymeria</i> sp. (dead)	10		0	
<i>Senna artemisioides</i> subsp. <i>helmsii</i>	45	0		
<i>Triodia epactia</i>	30	30		

Project: 8B Rail Alignment Reconnaissance

Date: 15/11/2021

Site: R15 **Coordinates:** -22.013488, 118.813439 **Datum:** WGS84

Site Type: Relevé

Site Size: n/a **Site Marker:** Nil (temporary site)

Photo Location: Centre

Landform: floodplain ,plain

Aspect: **Slope:** 0

Outcropping: no

Rock Type: Ironstone

Soil Type: rocky clay

Soil Notes:

Surface: 50% bare ground, 0% outcropping, 15% litter

Years Since Fire: yrs

Large Trees Present (>500 mm DBH): no

Condition: Good

Disturbance Notes: Cattle

Vegetation Description: *Triodia epactia* open grassland with isolated *Acacia inaequilatera*, *Grevillea pyramidalis* subsp. *leucodendron* and *Acacia bivenosa*



TAXA

Taxon	Height (cm)	Cover (%)	Dead Cover (%)	Comment
<i>Acacia inaequilatera</i>	350	0		
<i>Corymbia hamersleyana</i>	250	0.1		
<i>Gossypium australe</i>	150	0.1		
<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>	400	0.2		
<i>Senna glutinosa</i>	150	0		
<i>Triodia epactia</i>	30	40		

Project: 8B Rail Alignment Reconnaissance

Date: 16/11/2021

Site: R16 **Coordinates:** -22.063482, 118.789550 **Datum:** WGS84

Site Type: Relevé

Site Size: n/a **Site Marker:** Nil (temporary site)

Photo Location: Centre

Landform: plain

Aspect: SE **Slope:** 1

Outcropping: no

Rock Type: Basalt

Soil Type: clay

Soil Notes:

Surface: 75% bare ground, 0% outcropping, 1% litter

Years Since Fire: yrs

Large Trees Present (>500 mm DBH): no

Condition: Very Good

Disturbance Notes: Cattle

Vegetation Description: Mosaic grassland of *Themeda triandra* and sparse *Triodia ?epactia* with isolated *Acacia synchronicia* and *Senna artemisioides*



TAXA

Taxon	Height (cm)	Cover (%)	Dead Cover (%)	Comment
? <i>Abutilon</i> sp.	100		0	
<i>Acacia synchronicia</i>	200	0.2		
<i>Indigofera monophylla</i>	35	0.1		
<i>Senna artemisioides</i> subsp. <i>helmsii</i>	120	0		
<i>Themeda triandra</i>	80		25	
<i>Trichodesma zeylanicum</i>	100	0		
<i>Triodia ?epactia</i>	35	3		

Project: 8B Rail Alignment Reconnaissance

Date: 16/11/2021

Site: R17 **Coordinates:** -22.060192, 118.790662 **Datum:** WGS84

Site Type: Relevé

Site Size: n/a **Site Marker:** Nil (temporary site)

Photo Location: Centre

Landform: plain

Aspect: NE **Slope:** 0.5

Outcropping: no

Rock Type:

Soil Type: clay

Soil Notes:

Surface: 25% bare ground, 0% outcropping, 1% litter

Years Since Fire: yrs

Large Trees Present (>500 mm DBH): no

Condition: Excellent, Very Good

Disturbance Notes:

Vegetation Description: Closed grassland of *Tridodia wiseana* with isolated *Acacia inaequilatera*



TAXA

Taxon	Height (cm)	Cover (%)	Dead Cover (%)	Comment
<i>Acacia inaequilatera</i>	250	0.1		
<i>Gossypium australe</i>	110	0		
<i>Senna artemisioides</i> subsp. <i>helmsii</i>	55	0		
<i>Trichodesma zeylanicum</i>	150	0		
<i>Tridodia wiseana</i>	60	75		

Project: 8B Rail Alignment Reconnaissance

Date: 16/11/2021

Site: R18 **Coordinates:** -22.055710, 118.792566 **Datum:** WGS84

Site Type: Relevé

Site Size: n/a **Site Marker:** Nil (temporary site)

Photo Location: Centre

Landform: plain

Aspect: W **Slope:** 1

Outcropping: yes

Rock Type: Ironstone

Soil Type: rocky clay

Soil Notes:

Surface: 90% bare ground, yes% outcropping, 0% litter

Years Since Fire: yrs

Large Trees Present (>500 mm DBH): no

Condition: Very Good

Disturbance Notes: Fire, cattle tracks

Vegetation Description: *Triodia wiseana* open grassland with isolated *Hakea lorea* and *Acacia inaequilatera*



TAXA

Taxon	Height (cm)	Cover (%)	Dead Cover (%)	Comment
<i>Aristida</i> sp. (inaequal glumes)	20	0.5		
<i>Corchorus lasiocarpus</i>	270	0		
<i>Ptilotus aervoides</i>	3		0	
<i>Ptilotus clementii</i>	25		0	
<i>Ptilotus rotundifolius</i>	40	0		
<i>Triodia wiseana</i>	20	10		

Project: 8B Rail Alignment Reconnaissance

Date: 16/11/2021

Site: R19 **Coordinates:** -22.050009, 118.794896 **Datum:** WGS84

Site Type: Relevé

Site Size: n/a **Site Marker:** Nil (temporary site)

Photo Location: Centre

Landform: depression/ basin, plain

Aspect: NW **Slope:** 0.5

Outcropping: no

Rock Type:

Soil Type: clay

Soil Notes:

Surface: 95% bare ground, 0% outcropping, 2% litter

Years Since Fire: yrs

Large Trees Present (>500 mm DBH): no

Condition: Good

Disturbance Notes: Cattle

Vegetation Description: Low, sparse tussock grassland of *Eragrostis xerophylla*, *Eriachne pulchella* and *Astelba pectinata* with isolated *Acacia synchronicia* over *Sida* sp. ?Supplejack Station and *Portulaca* sp.



TAXA

Taxon	Height (cm)	Cover (%)	Dead Cover (%)	Comment
?Polygalaceae sp.	30		0	
<i>Aristida</i> sp. (inaequal glumes)	15	0		
<i>Astelba pectinata</i>	40		1	
<i>Eragrostis xerophylla</i>	20		1	
<i>Eriachne pulchella</i>	10		1	
<i>Eriachne pulchella</i> subsp. <i>dominii</i>	25		0	
<i>Portulaca</i> sp.	10	0.1		
<i>Sida</i> sp. ?Supplejack Station	15	1		
<i>Sporobolus australasicus</i>	15	0.1		

Attachment 2b – 2022 Quadrat and releve sheets

A.1 Cover classes used in data collection

Species Cover Class	Cover %	Equivalent area in a 50 x 50 m quadrat to contribute the cover %
n	n/a	Ten or fewer individuals that do not contribute to the vegetation community cover (e.g. a single outcropping tree in the quadrat which contributes to the vegetation community is given a cover, c.f. nine small herbs which do not contribute to overall cover are categorised as 'n')
1	< 2%	7x7 m
2	2-10%	7x7 to 15x15 m
3	10-30%	16x16 to 28x28 m
4	30-70%	28x28 to 40x40 m
5	>70%	42x42 to 50x50m

A.2 Height classes used in data collection

Original	Comment
cl	Climber
cr	Creeper
h	Herb
h	Herb
hg	Hummock Grass
m1	Mallee tree 10-30
m2	Mallee tree <10
m3	Mallee tree <3
s1	Tall shrub (>2m)
s2	Mid shrub 1-2m
s3	Low shrub <1m
sdg	Sedge
t2	Mid tree 10-30 m
t	Low tree <10m
tg	Tussock grass

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/17/2022, 7/21/2022

Site: C1b001 **Coordinates:** 691456 mE, 7559929 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q

Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Alluvial plain

Rock Type: Basalt gravel

Soil Type: Red-brown fine sand loose soil (30%)

Fire Age:

Condition:

Notes:

Vegetation Description: Open Hummock Grassland of *Triodia epactia* with Isolated Tussock Grasses of *Amphipogon sericeus*.



TAXA

Taxon	Height Code	Cover Code
<i>Amphipogon sericeus</i>	tg	2
<i>Bonamia erecta</i>	s3	1
<i>Bonamia pilbarensis</i>	s3	n
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	h	1
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	h	n
<i>Goodenia stobbsiana</i>	s3	n
<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>	s2	1
<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>	s3	n
<i>Ptilotus calostachyus</i>	s3	1
<i>Triodia epactia</i>	hg	3

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/18/2022, 7/21/2022
Site: C1B002 **Coordinates:** 692719 mE, 7559118 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 100x25 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Creek

Rock Type: Cobble gravel (30%)

Soil Type: Red-brown fine sand loose soil (40%)

Fire Age:

Condition: grazing, weeds

Notes:

Vegetation Description: Sedgeland of *Cyperus vaginatus* with Low Woodland of *Eucalyptus camaldulensis* with Open Tall Shrubland of *Acacia coriacea* subsp. *pendens*, *Melaleuca linophylla* and Sparse Mid Shrubland of *Melaleuca linophylla*.



TAXA

Taxon	Height Code	Cover Code
<i>?Ipomoea plebeia</i>	h	1
<i>Abutilon lepidum</i>	s3	n
<i>Acacia ampliceps</i>	s2	1
<i>Acacia coriacea</i> subsp. <i>pendens</i>	s1	2
<i>Acacia monticola</i>	s3	n
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>	s3	1
<i>Atalaya hemiglauca</i>	s3	1
* <i>Cenchrus ciliaris</i>	tg	2
<i>Crotalaria cunninghamii</i>	h	1
<i>Cucumis variabilis</i>	cr	n
<i>Cymbopogon ambiguus</i>	tg	1

<i>Cyperus vaginatus</i>	sdg	4
<i>Eucalyptus camaldulensis</i>	t 7m	4
<i>Euphorbia australis</i> var. <i>subtomentosa</i>	s3	1
<i>Euphorbia careyi</i>	s3	n
<i>Flueggea virosa</i> subsp. <i>melanthesoides</i>	s3	n
<i>Gossypium australe</i>	h	1
<i>Jasminum didymum</i> subsp. <i>lineare</i>	cr	n
<i>Malvastrum americanum</i>	s3	1
<i>Melaleuca glomerata</i>	s2s3	1
<i>Melaleuca linophylla</i>	s1s3	2
<i>Polymeria ambigua</i>	s3	1
<i>Polymeria ambigua</i>	s3	n
<i>Sesbania cannabina</i>	s3	1
<i>Stemodia grossa</i>	h	n
<i>Tephrosia densa</i>	s3	n
<i>Triodia wiseana</i>	hg	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/18/2022, 7/20/2022

Site: C1B003 **Coordinates:** 693945 mE, 7560650 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q

Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Alluvial plain (up from creek)

Rock Type: Basalt gravel (30%)

Soil Type: Brown fine sand loose soil (20%)

Fire Age: None evident

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia brizoides*, *T. wiseana* with Sparse Mid Shrubland of *Grevillea pyramidalis* subsp. *leucadendron* and *Acacia inaequilatera*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia inaequilatera</i>	s2s1	1
<i>Arivela viscosa</i>	h	n
<i>Corymbia hamersleyana</i>	m3	n
<i>Cymbopogon ambiguus</i>	tg	1
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>	s2	1
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>	s2	n
<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>	s2	1
<i>Jasminum didymum</i> subsp. <i>lineare</i>	s3	n
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s2	n
<i>Triodia brizoides</i>	hg	1
<i>Triodia wiseana</i>	hg	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy

Dates: 3/18/2022, 7/20/2022

Site: C1B004 **Coordinates:** 693500 mE, 7560486 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Hill (upperslope)

Rock Type: Basalt stones (30%)

Soil Type: Red-brown

Fire Age: None evident

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia brizoides*, *T. wiseana* with Sparse Mid Shrubland of *Grevillea pyramidalis* subsp. *leucadendron*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia inaequilatera</i>	s2	1
<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>	s2	1
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s2	1
<i>Solanum lasiophyllum</i>	s3	n
<i>Themeda triandra</i>	tg	1
<i>Themeda triandra</i>	s3	n
<i>Triodia brizoides</i>	hg	2
<i>Triodia wiseana</i>	hg	2

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy

Dates: 3/18/2022, 7/20/2022

Site: C1B005 **Coordinates:** 694757 mE, 7560173 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Basalt hill (upperslope)

Rock Type: Basalt stones (30%)

Soil Type: Red-brown fine sand surface crust (20%)

Fire Age: Moderate (1-5 yrs)

Condition: Excellent

Notes:

Vegetation Description: Open Hummock Grassland of *Triodia brizoides*, *T. epactia*, *T. wiseana* with Sparse Low Shrubland of *Acacia melleodora* and Isolated Mid Shrubs of *A. inaequilatera*.



TAXA

Taxon	Height Code	Cover Code
<i>Abutilon lepidum</i>	s3	n
<i>Acacia inaequilatera</i>	s2	1
<i>Acacia melleodora</i>	s3	2
<i>Bonamia pilbarensis</i>	s3	1
<i>Bonamia pilbarensis</i>	s3	1
<i>Corchorus lasiocarpus</i> subsp. <i>parvus</i>	s3	1
<i>Corchorus lasiocarpus</i> subsp. <i>parvus</i>	s3	1
<i>Crotalaria novae-hollandiae</i> subsp. <i>novae-hollandiae</i>	s3	1
<i>Cucumis variabilis</i>	cr	n
<i>Cymbopogon ambiguus</i>	tg	1
<i>Eriachne mucronata</i>	tg	1
<i>Euphorbia careyi</i>	s3	1

<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>	s2	1
<i>Goodenia stobbsiana</i>	s3	1
<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>	s3	1
<i>Hakea lorea</i> subsp. <i>lorea</i>	s3	n
<i>Hibiscus coatesii</i>	s3	1
<i>Hibiscus sturtii</i>	s3	1
<i>Indigofera monophylla</i>	s3	n
<i>Ptilotus calostachyus</i>	s3	n
<i>Ptilotus fusiformis</i>	s3	n
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s3	n
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s2	n
<i>Senna venusta</i>	s3	n
<i>Solanum diversiflorum</i>	s3	n
<i>Solanum lasiophyllum</i>	s3	n
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	s3	n
<i>Triodia basedowii</i>	hg	2
<i>Triodia brizoides</i>	hg	2
<i>Triodia epactia</i>	hg	2
<i>Triodia epactia</i>	hg	1
<i>Triodia wiseana</i>	hg	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy

Dates: 3/17/2022, 7/20/2022

Site: C1B006 **Coordinates:** 696684 mE, 7561728 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Creek (bed)

Rock Type: Cobble stones

Soil Type: Red-brown

Fire Age: None evident

Condition: Good

Notes: grazing

Vegetation Description: Open Low Forest of *Atalaya hemiglauca*, *Eucalyptus camaldulensis* with Open Tall Shrubland of *Melaleuca linophylla*, *M. glomerata*, *A. hemiglauca* and Sparse Tussock Grassland of *Eriachne tenuiculmis*.



TAXA

Taxon	Height Code	Cover Code
? <i>Acacia pyrifolia</i>	s3	n
? <i>Eragrostis setifolia</i>	tg	n
? <i>Eriachne</i> sp.	h	1
? <i>Ipomoea plebeia</i>	h	1
<i>Abutilon lepidum</i>	s3	1
<i>Acacia ampliceps</i>	s3	1
<i>Acacia colei</i> var. <i>colei</i>	s1	n
<i>Acacia coriacea</i> subsp. <i>pendens</i>	s1	1
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>	s2	1
<i>Acacia trachycarpa</i>	s3	1
* <i>Aerva javanica</i>	h	1

<i>Afrohybanthus aurantiacus</i>	h	1
<i>Arivela viscosa</i>	h	1
<i>Atalaya hemiglauca</i>	t2s1	2
<i>Boerhavia burbridgeana</i>	s3h	1
<i>Boerhavia gardneri</i>	h	1
* <i>Cenchrus ciliaris</i>	tg	4
* <i>Cenchrus setiger</i>	tg	2
<i>Corchorus lasiocarpus</i> subsp. <i>lasiocarpus</i>	s3	1
<i>Cucumis variabilis</i>	cr	n
<i>Cullen leucanthum</i>	s3	1
<i>Cullen leucanthum</i>	s1	1
<i>Cymbopogon obtectus</i>	tg	1
<i>Cyperus vaginatus</i>	sdg	1
<i>Enneapogon polyphyllus</i>	tg	n
<i>Eriachne tenuiculmis</i>	tg	2
<i>Eucalyptus camaldulensis</i>	t 5m	1
<i>Euphorbia australis</i> var. <i>subtomentosa</i>	h	n
<i>Euphorbia australis</i> var. <i>subtomentosa</i>	h	1
<i>Euphorbia careyi</i>	s3	1
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	s3	1
<i>Flueggea virosa</i> subsp. <i>melanthesoides</i>	s1	1
<i>Glycine canescens</i>	cl	n
<i>Gossypium robinsonii</i>	s3	n
<i>Hibiscus coatesii</i>	s3	1
<i>Indigofera monophylla</i>	s3	1
<i>Indigofera rugosa</i>	s2	1
<i>Jasminum didymum</i> subsp. <i>lineare</i>	cr	1
<i>Melaleuca glomerata</i>	s2	1
<i>Melaleuca linophylla</i>	s1	1
<i>Nellica maderaspatensis</i>	s3	n
<i>Nicotiana occidentalis</i>	h	n
<i>Polycarpaea longiflora</i>	h	1
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s2	n
<i>Sesbania cannabina</i>	s2	n
<i>Sida clementii</i>	s2	1
<i>Sorghum plumosum</i> var. <i>plumosum</i>	tg	1
<i>Stemodia viscosa</i>	h	1
<i>Triodia longiceps</i>	hg	1
<i>Triumfetta</i> sp.	s3	n

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy

Dates: 3/17/2022, 7/20/2022

Site: C1b-007 **Coordinates:** 696402 mE, 7560907 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Ridge gentle (midslope)

Rock Type: Basalt boulders (40%), stones (20%)

Soil Type: Red-orange sandy-loam loose soil (5%)

Fire Age: Recent (< 1 yr)

Condition: Excellent

Notes: None evident

Vegetation Description: Hummock Grassland of *Triodia epactia*, *T. brizoides* with Mid Shrubland of *Acacia inaequilatera* and Sparse Low Shrubland of *Acacia ptychophylla* and Isolated Low Trees of *Corymbia hamersleyana* and Tussock Grassland of *Cymbopogon ambiguus*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia inaequilatera</i>	s2	1
<i>Acacia ptychophylla</i>	hg	2
<i>Bonamia pilbarensis</i>	h	n
<i>Corchorus lasiocarpus</i> subsp. <i>lasiocarpus</i>	s3	1
<i>Corymbia hamersleyana</i>	t3	1
<i>Cucumis variabilis</i>	cr	n
<i>Cymbopogon ambiguus</i>	tg	1
<i>Eriachne mucronata</i>	tg	n
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>	s3	n
<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>	s3	n
<i>Hakea lorea</i> subsp. <i>lorea</i>	s3	n

<i>Hibiscus coatesii</i>	s3	1
<i>Hibiscus sturtii</i> var. <i>platyklamys</i>	s3	n
<i>Paraneurachne muelleri</i>	tg	1
<i>Ptilotus clementii</i>	s3	1
<i>Ptilotus fusiformis</i>	h	n
<i>Ptilotus obovatus</i>	s3	n
<i>Ptilotus calostachyus</i>	h	1
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s3	1
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s3	n
<i>Senna notabilis</i>	s3	n
<i>Senna venusta</i>	s3	n
<i>Solanum cleistogamum</i>	s3	n
<i>Solanum diversiflorum</i>	s3	n
<i>Solanum phlomoides</i>	s3	n
<i>Themeda triandra</i>	tg	1
<i>Themeda triandra</i>	tg	1
<i>Tribulus hirsutus</i>	s3	1
<i>Tribulus platypterus</i>	s3	1
<i>Triodia brizoides</i>	s3	2
<i>Triodia brizoides</i>	hg	1
<i>Triodia epactia</i>	hg	2

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy

Dates: 3/17/2022, 7/20/2022

Site: C1B008 **Coordinates:** 697503 mE, 7561567 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Basalt hill

Rock Type: Basalt gravel (15%), stones (15%)

Soil Type: Red-brown fine sand loose soil (30%)

Fire Age: None evident

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia epactia* and *Triodia wiseana* with Isolated Low Shrubs of *Euphorbia careyi*, *Indigofera rugosa*.



TAXA

Taxon	Height Code	Cover Code
<i>Boerhavia gardneri</i>	h	1
<i>Corchorus lasiocarpus</i> subsp. <i>lasiocarpus</i>	s3	1
<i>Cucumis variabilis</i>	cr	n
<i>Cymbopogon ambiguus</i>	tg	1
<i>Enneapogon caerulescens</i>	tg	n
<i>Eremophila longifolia</i>	s3	1
<i>Eremophila longifolia</i>	s3	n
<i>Euphorbia careyi</i>	s3	1
<i>Flueggea virosa</i> subsp. <i>melanthesoides</i>	s3	n
<i>Gomphrena cunninghamii</i>	h	1
<i>Goodenia stobbsiana</i>	s3	n
<i>Indigofera rugosa</i>	s3	1

<i>Rhynchosia minima</i>	s3	n
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	s3	n
<i>Sida clementii</i>	s3	1
<i>Solanum phlomoides</i>	s3	n
<i>Tinospora smilacina</i>	cr	n
<i>Tribulus suberosus</i>	s3	1
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	s3	n
<i>Triodia epactia</i>	hg	2
<i>Triodia epactia</i>	hg	1
<i>Triodia wiseana</i>	hg	1
<i>Zaleya galericulata</i> subsp. <i>galericulata</i>	h	n
<i>Zaleya galericulata</i> subsp. <i>galericulata</i>	h	n

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy

Dates: 3/18/2022, 7/20/2022

Site: C1b-009 **Coordinates:** 695599 mE, 7561465 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Range moderate east facing slope (footslope)

Rock Type: Basalt boulders (30%), Basalt stones (30%)

Soil Type: Red sandy-loam loose soil (2%)

Fire Age: Old (> 5yrs)

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia epactia* with Isolated Low Trees of *Corymbia hamersleyana*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia bivenosa</i>	s2	n
<i>Acacia inaequilatera</i>	s1	1
<i>Bonamia pilbarensis</i>	h	n
<i>Corymbia hamersleyana</i>	t3	1
<i>Cucumis variabilis</i>	cr	n
<i>Cymbopogon ambiguus</i>	tg	n
<i>Hakea lorea</i> subsp. <i>lorea</i>	s3	1
<i>Hakea lorea</i> subsp. <i>lorea</i>	s3	1
<i>Indigofera monophylla</i>	s3	n
<i>Leichhardtia australis</i>	cl	n
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s2	1
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s3	n
<i>Solanum phlomoides</i>	s3	n
<i>Triodia epactia</i>	hg	4

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy

Dates: 3/17/2022, 7/20/2022

Site: C1b-011 **Coordinates:** 697984 mE, 7563149 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Hill moderate east facing slope (upperslope)

Rock Type: Basalt boulders (40%), Basalt stones (10%)

Soil Type: Red-orange fine sand loose soil (1%)

Fire Age: Old (> 5yrs)

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia wiseana*, *Triodia epactia* with Isolated Tall Shrubs of *Acacia inaequilatera*.



TAXA

Taxon	Height Code	Cover Code
? <i>Indigofera</i> sp.	s3	n
<i>Acacia bivenosa</i>	s2	1
<i>Acacia inaequilatera</i>	s1	1
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>	s1	1
<i>Boerhavia coccinea</i>	h	n
<i>Corymbia hamersleyana</i>	t3	1
<i>Cucumis variabilis</i>	cr	1
<i>Cucumis variabilis</i>	h	1
<i>Cymbopogon ambiguus</i>	tg	n
<i>Euphorbia careyi</i>	s3	n
<i>Gossypium robinsonii</i>	s3	n
<i>Indigofera rugosa</i>	s3	n

<i>Rhynchosia minima</i>	cr	n
<i>Solanum phlomoides</i>	s3	n
<i>Tribulus suberosus</i>	s3	n
<i>Triodia epactia</i>	hg	2
<i>Triodia wiseana</i>	hg	1
<i>Triodia wiseana</i>	hg	3
<i>Triumfetta clementii</i>	s3	n

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy

Dates: 3/17/2022, 7/20/2022

Site: C1b012 **Coordinates:** 698336 mE, 7564076 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Basalt hill (hilltop)

Rock Type: Basalt stones

Soil Type: Red-orange fine sand loose soil (30%)

Fire Age: Old (> 5yrs)

Condition: Excellent

Notes:

Vegetation Description: Open Hummock Grassland of *Triodia brizoides*, *T. epactia* with Sparse Mid Shrubland of *Indigofera monophylla*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia inaequilatera</i>	s2	1
<i>Bonamia erecta</i>	s3	n
<i>Bonamia pilbarensis</i>	s3	n
<i>Dodonaea coriacea</i>	s3	n
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	h	n
<i>Hakea lorea</i> subsp. <i>lorea</i>	s2	1
<i>Hakea lorea</i> subsp. <i>lorea</i>	s2	1
<i>Indigofera monophylla</i>	s3	2
<i>Paraneurachne muelleri</i>	tg	n
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s2	1
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s3	1
<i>Sida clementii</i>	s2	1

<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)	s3	n
<i>Solanum lasiophyllum</i>	s3	1
<i>Solanum phlomoides</i>	s3	1
<i>Tribulus suberosus</i>	s3	n
<i>Triodia brizoides</i>	hg	1
<i>Triodia epactia</i>	hg	2

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/17/2022, 7/20/2022
Site: C1b-014 **Coordinates:** 698344 mE, 7562795 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Valley floor very gentle

Rock Type: Basalt rocks (10%)

Soil Type: Red-orange sandy-loam loose soil (10%)

Fire Age: Old (> 5yrs)

Condition: Moderate

Notes: Just upland from drainage line; grazing, weeds

Vegetation Description: Hummock Grassland of *Triodia pungens*, *T. epactia* with Open Low Woodland of *Corymbia hamersleyana*, *Grevillea pyramidalis* subsp. *leucodendron* and Isolated Mid Shrubs of *Grevillea pyramidalis* subsp. *leucodendron*.



TAXA

Taxon	Height Code	Cover Code
? <i>Triumfetta clementii</i>	s3	1
<i>Acacia colei</i> var. <i>colei</i>	s2	1
<i>Acacia coriacea</i> subsp. <i>pendens</i>	s1	1
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>	s1	1
<i>Afrohybanthus aurantiacus</i>	s3	n
<i>Atalaya hemiglauca</i>	s2	1
<i>Boerhavia coccinea</i>	h	1
<i>Bonamia alatisemina</i>	h	n
<i>Bonamia pilbarensis</i>		
* <i>Cenchrus ciliaris</i>	tg	2
<i>Chrysopogon fallax</i>	tg	1

<i>Corymbia hamersleyana</i>	t3	1
<i>Dichrostachys spicata</i>	s1	n
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>		
<i>Eremophila longifolia</i>	s2	n
<i>Euphorbia biconvexa</i>		
<i>Flueggea virosa</i> subsp. <i>melanthesoides</i>	s1	1
<i>Flueggea virosa</i> subsp. <i>melanthesoides</i>	s2	1
<i>Goodenia forrestii</i>		
<i>Gossypium australe</i>	s3	1
<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>	s3	n
<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>	t3	1
<i>Grevillea berryana</i>	t3	n
<i>Indigofera monophylla</i>	s3	n
<i>Jasminum didymum</i> subsp. <i>lineare</i>	s2	1
<i>Rhynchosia minima</i>	cr	n
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s1	1
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>		
<i>Solanum lasiophyllum</i>	s3	n
<i>Triodia epactia</i>	hg	2
<i>Triodia pungens</i>	hg	3

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/17/2022, 7/20/2022
Site: C1b-015 **Coordinates:** 698817 mE, 7562612 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Range gentle (upperslope)
Rock Type: Basalt surface plates (20%), Basalt rocks (40%)
Soil Type: Red sandy-loam loose soil (1%)
Fire Age: Moderate (1-5 yrs)
Condition: Excellent

Notes:

Vegetation Description: Open Hummock Grassland of *Triodia epactia* with Isolated Low Shrubs of *Indigofera monophylla*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia colei</i> var. <i>colei</i>	s3	n
<i>Acacia inaequilatera</i>	s1	n
<i>Arivela viscosa</i>	h	n
<i>Bonamia pilbarensis</i>	h	n
<i>Bonamia pilbarensis</i>	s3	n
<i>Corchorus lasiocarpus</i> subsp. <i>parvus</i>	s3	1
<i>Corymbia hamersleyana</i>	s3	n
<i>Eriachne mucronata</i>	tg	1
<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>	t3	n
<i>Hakea lorea</i> subsp. <i>lorea</i>	s2	n
<i>Hakea lorea</i> subsp. <i>lorea</i>	s2	1
<i>Hibiscus coatesii</i>	s3	n

<i>Indigofera monophylla</i>	s3	2
<i>Indigofera monophylla</i>	s3	1
<i>Ptilotus calostachyus</i>	h	n
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s3	1
<i>Senna glutinosa</i> subsp. <i>Pruinosa</i>	s3	1
<i>Solanum cleistogamum</i>	s3	n
<i>Solanum phlomoides</i>	s3	n
<i>Tribulus suberosus</i>	s3	n
<i>Trigastrotheca molluginea</i>	h	n
<i>Triodia epactia</i>	hg	3

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/16/2022, 7/22/2022
Site: C1b-020 **Coordinates:** 701159 mE, 7567550 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Hill steep (ridgetop)

Rock Type: Basalt rocks (60%), boulders (5%)

Soil Type: Red-orange sandy-loam surface crust (5%)

Fire Age: Moderate (1-5 yrs)

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia wiseana* with Isolated Mid Shrubs of *Senna glutinosa* subsp. *glutinosa* and *Senna glutinosa* subsp. *pruinosa*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia acradenia</i>	s3	1
<i>Acacia inaequilatera</i>	s2	1
<i>Boerhavia ?gardneri</i>	h	n
<i>Bonamia pilbarensis</i>	h	n
<i>Cymbopogon</i> sp.	tg	n
<i>Dodonaea coriacea</i>	s3	1
<i>Euphorbia careyi</i>	s3	1
<i>Indigofera monophylla</i>	s3	n
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	s3	n
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s3	1
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s3	1
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s3	1

<i>Triodia ?brizoides</i>	hg	1
<i>Triodia basedowii</i>	hg	1
<i>Triodia brizoides</i>	hg	2
<i>Triodia epactia</i>	hg	1
<i>Triodia wiseana</i>	hg	4
<i>Triodia wiseana</i>	hg	2

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/16/2022, 7/22/2022
Site: C1b-021 **Coordinates:** 701323 mE, 7567666 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 25 x 100 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Gully - minor (bed and bank)
Rock Type: Basalt surface plates (40%), Basalt boulders (30%)
Soil Type: Red-orange clay-loam loose soil (10%)
Fire Age: Old (> 5yrs)
Condition: Excellent

Notes:

Vegetation Description: Sparse Mid Shrubland of *Acacia pyrifolia*, *Grevillea wickhamii* with Low Sparse Shrubland of *Indigofera monophylla* and *Tephrosia rosea* var. *Fortescue* creeks (M.I.H. Brooker 2186) with Sparse Hummock Grassland of *Triodia epactia*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia acradenia</i>	s2	1
<i>Acacia pruinocarpa</i>	t3	1
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>	s2	2
<i>Corymbia hamersleyana</i>	t3	1
<i>Cymbopogon ambiguus</i>	tg	1
<i>Ehretia saligna</i>	s2	n
<i>Eriachne mucronata</i>	tg	1
<i>Gossypium australe</i>	s3	1
<i>Grevillea wickhamii</i>	s1	1
<i>Indigofera monophylla</i>	s3	1
<i>Isotropis atropurpurea</i>	s3	1

<i>Jasminum didymum</i> subsp. <i>lineare</i>	s1	1
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s2	1
<i>Sida</i> sp. Articulation below (A.A. Mitchell PRP 1605)	s2	1
<i>Tephrosia rosea</i> var. Fortescue creeks (M.I.H. Brooker 2186)	s3	2
<i>Tribulus suberosus</i>	s2	n
<i>Triodia epactia</i>	hg	2

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/14/2022, 7/22/2022

Site: C1b022 **Coordinates:** 700538 mE, 7569309 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q

Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Low rolling hill

Rock Type: Granite gravel (20%)

Soil Type: Orange-brown fine sand loose soil (30%)

Fire Age: Old (> 5yrs)

Condition: Excellent

Notes:

Vegetation Description: Mid Shrubland of *Senna glutinosa* subsp. *pruinosa* with Low Shrubland of *Acacia bivenosa*, *Indigofera monophylla* with Hummock Grassland of *Triodia epactia*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia bivenosa</i>	s3	2
<i>Acacia inaequilatera</i>	s2	1
<i>Alternanthera nana</i>	s3	n
<i>Bonamia pilbarensis</i>	s3	n
<i>Calocephalus beardii</i>	h	n
<i>Corymbia hamersleyana</i>	m3	1
<i>Goodenia muelleriana</i>	h	n
<i>Heliotropium tenuifolium</i>	s3	n
<i>Indigofera monophylla</i>	s3	2
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s2s3	1
<i>Trigastrotheca molluginea</i>	h	1
<i>Triodia epactia</i>	hg	4

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/14/2022, 7/22/2022

Site: C1b023 **Coordinates:** 700082 mE, 7569825 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q

Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Hill (hilltop)

Rock Type: Basalt gravel (25%)

Soil Type: Red fine sand loose soil (30%)

Fire Age: None evident

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia basedowii* with Open Mid Shrubland of *Acacia acradenia*



TAXA

Taxon	Height Code	Cover Code
? <i>Ptilotus fusiformis</i>	s3	n
<i>Acacia acradenia</i>	s2	3
<i>Acacia acradenia</i>	s2	3
<i>Acacia synchronicia</i>	s2	n
* <i>Aerva javanica</i>	s3	n
<i>Aristida contorta</i>	tg	1
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	h	n
<i>Eriachne pulchella</i> subsp. <i>dominii</i>	tg	n
<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>	s3	n
<i>Ptilotus calostachyus</i>	s2	1
<i>Senna artemisioides</i> subsp. <i>helmsii</i>	s2	n
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	s3	n

<i>Trianthema glossostigmum</i>	h	n
<i>Trigastrotheca molluginea</i>	h	n
<i>Triodia basedowii</i>	hg	4
<i>Triodia basedowii</i>	hg	4

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/14/2022, 7/22/2022
Site: C1b024 **Coordinates:** 700010 mE, 7570161 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 25x100 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Basalt hill (hillslope)

Rock Type: Basalt stones (30%)

Soil Type: Red-orange fine sand loose soil (20%)

Fire Age: None evident

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia basedowii* with Open Mid Shrubland of *Acacia acradenia*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia acradenia</i>	s2	3
<i>Acacia acradenia</i>	s2	1
<i>Acacia bivenosa</i>	s1	1
<i>Acacia synchronicia</i>	s2	n
<i>Corymbia hamersleyana</i>	t3	1
<i>Eriachne mucronata</i>	tg	1
<i>Goodenia stobbsiana</i>	h	1
<i>Goodenia stobbsiana</i>	h	n
<i>Ptilotus calostachyus</i>	s2	n
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s2	n
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s2	n
<i>Solanum lasiophyllum</i>	s3	n

<i>Triodia basedowii</i>	hg	4
<i>Triodia epactia</i>	hg	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/14/2022, 7/22/2022
Site: C1B-025 **Coordinates:** 700357 mE, 7571323 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Low rolling hill very gentle
Rock Type: Granite stones (30%), Granite rocks (30%)
Soil Type: Orange coarse sand loose soil
Fire Age: Recent (< 1 yr)
Condition: Good
Notes: Small drainage intersecting plot. Grazing.

Vegetation Description: Open Hummock Grassland of *Triodia epactia* with Sparse Mid Shrubland of *Acacia orthocarpa* and *Grevillea wickhamii* and Sparse Low Shrubland of *Acacia bivenosa*, *Indigofera monophylla*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia bivenosa</i>	s3	2
<i>Acacia inaequilatera</i>	s3	n
<i>Acacia maitlandii</i>	s3	n
<i>Acacia monticola</i>	s3	n
<i>Acacia orthocarpa</i>	s2	2
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>	s3	1
<i>Aristida contorta</i>	tg	n
<i>Bonamia pilbarensis</i>	h	n
<i>Fimbristylis dichotoma</i>	sdg	n
<i>Goodenia stobbsiana</i>	h	n
<i>Grevillea wickhamii</i>	s2	1
<i>Heliotropium</i> sp.	h	n

<i>Hibiscus sturtii</i> ?var. <i>campylochlamys</i>	s3	n
<i>Indigofera monophylla</i>	s3	3
<i>Scaevola browniana</i> subsp. <i>browniana</i>	s3	1
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s3	n
<i>Trigastrotheca molluginea</i>	h	1
<i>Triodia epactia</i>	hg	3

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/14/2022, 7/22/2022
Site: C1B-026 **Coordinates:** 701167 mE, 7571798 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Hill gentle (midslope)
Rock Type: Granite gravel (20%), stones (5%)
Soil Type: Brown fine sand loose soil (40%)
Fire Age: Moderate (1-5 yrs)
Condition: Excellent
Notes: Minor gully through centre of quadrat

Vegetation Description: Hummock Grassland of *Triodia epactia* with Sparse Mid Shrubland of *Acacia inaequilatera* and Sparse Low Shrubland of *Indigofera monophylla*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia bivenosa</i>	s3	n
<i>Acacia inaequilatera</i>	s2	2
<i>Acacia maitlandii</i>	s3	n
<i>Acacia maitlandii</i>	s3	n
<i>Acacia orthocarpa</i>	s3	n
<i>Corchorus tectus</i>	s3	1
<i>Corymbia hamersleyana</i>	m3	n
<i>Cymbopogon ambiguus</i>	tg	1
<i>Cymbopogon ambiguus</i>	tg	1
<i>Eremophila longifolia</i>	s3	n
<i>Indigofera monophylla</i>	s3	2
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s2	n

<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)	s3	n
<i>Solanum gabrielae</i>	s2	n
<i>Tephrosia rosea</i> var. Fortescue creeks (M.I.H. Brooker 2186)	s2	n
<i>Tribulus suberosus</i>	s3	1
<i>Trigastrotheca molluginea</i>	h	n
<i>Triodia epactia</i>	hg	4

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/14/2022, 7/22/2022
Site: C1b-027 **Coordinates:** 701626 mE, 7573524 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: River (bed)

Rock Type: Basalt and calcrete

Soil Type: Red-brown sandy-loam loose soil (10%)

Fire Age: None evident

Condition: Good

Notes: weeds

Vegetation Description: Tussock Grassland of **Cenchrus ciliaris* with Low Woodland of *Eucalyptus victrix* and *E. camaldulensis* with Open Tall Shrubland of *Atalaya hemiglauca* with Open Tall Shrubland of *Atalaya hemiglauca*, *Melaleuca glomerata* and Sparse Mid Shrubland of *M. glomerata*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia ampliceps</i>	s1	1
<i>Acacia ampliceps</i>	s2	1
<i>Acacia coriacea</i> subsp. <i>pendens</i>	s1	1
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>	s1s2	1
<i>Acacia trachycarpa</i>	s2	1
* <i>Aerva javanica</i>	s3	n
* <i>Aerva javanica</i>	h	1
<i>Atalaya hemiglauca</i>	t3	1
<i>Atalaya hemiglauca</i>	s1	2
<i>Atalaya hemiglauca</i>	t 6m	3
<i>Boerhavia paludosa</i>	h	n

<i>Calandrinia tepperiana</i>	s2	n
<i>Cassytha filiformis</i>	cr	1
* <i>Cenchrus ciliaris</i>	tg	4
<i>Corchorus ?laniflorus</i>	s3	1
<i>Crotalaria cunninghamii</i>	s3	n
<i>Cyperus vaginatus</i>	sdg	1
<i>Dichrostachys spicata</i>	s2	n
<i>Eragrostis tenellula</i>	tg	n
<i>Erythrina vespertilio</i> subsp. <i>biloba</i>	s3	n
<i>Eucalyptus ?camaldulensis</i>	t	3
<i>Eucalyptus camaldulensis</i>	t	1
<i>Eulalia aurea</i>	tg	1
<i>Flueggea virosa</i> subsp. <i>melanthesoides</i>	s2	n
<i>Melaleuca argentea</i>	t 8m	n
<i>Melaleuca glomerata</i>	s2s1	3
<i>Melaleuca linophylla</i>	s1	1
<i>Nellica maderaspatensis</i>	s3	n
<i>Nicotiana occidentalis</i>	h	n
<i>Sesbania cannabina</i>	s3	n
<i>Themeda triandra</i>	tg	1
<i>Tinospora smilacina</i>	cr	1
<i>Triodia longiceps</i>	hg	1
<i>Vigna lanceolata</i> var. <i>lanceolata</i>	cr	1
<i>Waltheria indica</i>	s3	n

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/15/2022, 7/22/2022
Site: C1B-028 **Coordinates:** 700432 mE, 7576661 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Hill gentle

Rock Type: Quartz stones (30%), Quartz fine gravel (20%), Granite boulders (10%)

Soil Type: Orange fine sand surface crust (5%), loose soil (20%)

Fire Age: Moderate (1-5 yrs)

Condition: Excellent

Notes:

Vegetation Description: Open Hummock Grassland of *Triodia basedowii* with Sparse Tall Shrubland of *Acacia inaequilatera* and Isolated Low Shrubs of *Indigofera monopylla*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia ancistrocarpa</i>	s3	1
<i>Acacia inaequilatera</i>	s2s1	2
<i>Acacia inaequilatera</i>	s1	2
<i>Acacia maitlandii</i>	s3	n
<i>Acacia orthocarpa</i>	s2	n
<i>Bonamia erecta</i>	s3	n
<i>Bonamia pilbarensis</i>	h	n
<i>Corchorus walcottii</i>	s3	n
<i>Corymbia hamersleyana</i>	t3	1
<i>Goodenia microptera</i>	h	n
<i>Goodenia stobbsiana</i>	s3	1
<i>Grevillea wickhamii</i>	s2	n

<i>Hakea chordophylla</i>	s3	n
<i>Heliotropium tenuifolium</i>	s3	1
<i>Indigofera monophylla</i>	s3	1
<i>Isotropis atropurpurea</i>	s3	1
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s3	n
<i>Solanum phlomoides</i>	s3	n
<i>Tephrosia rosea</i> var. <i>clementii</i>	s3	n
<i>Tephrosia rosea</i> var. <i>clementii</i>	s3	1
<i>Trigastrotheca molluginea</i>	h	n
<i>Triodia basedowii</i>	hg	3
<i>Triodia epactia</i>	hg	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy

Dates: 3/15/2022, 7/23/2022

Site: C1b-030 **Coordinates:** 701313 mE, 7576962 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: River (bed)

Rock Type: Quartz stones (15%)

Soil Type: Orange-white fine sand loose soil (20%)

Fire Age: None evident

Condition: Moderate

Notes: grazing, weeds

Vegetation Description: Low Woodland of *Eucalyptus camaldulensis* with Sparse Tall Shrubland of *Melaleuca linophylla*, *Acacia coriacea* subsp. *pendens* and Sparse Mid Shrubland of *M. linophylla*.



TAXA

Taxon	Height Code	Cover Code
? <i>Trigastrotheca molluginea</i>	h	n
<i>Acacia ampliceps</i>	s2	1
<i>Acacia coriacea</i> subsp. <i>pendens</i>	s2s3	1
<i>Acacia inaequilatera</i>	s3	n
<i>Acacia trachycarpa</i>	s2	1
* <i>Aerva javanica</i>	h	1
<i>Afrohybanthus aurantiacus</i>	s3	n
<i>Amaranthus undulatus</i>	h	n
<i>Amaranthus undulatus</i>	h	1
<i>Aristida holathera</i> var. <i>holathera</i>	tg	n
<i>Arivela viscosa</i>	h	n
<i>Atalaya hemiglauca</i>	s3	1

<i>Atalaya hemiglauca</i>	s3	n
<i>Bulbostylis barbata</i>	sdg	n
<i>Calandrinia tepperiana</i>	h	1
<i>Cassytha filiformis</i>	cr	2
* <i>Cenchrus ciliaris</i>	tg	4
<i>Corchorus incanus</i> subsp. <i>incanus</i>	s2	1
<i>Crotalaria cunninghamii</i>	h	1
<i>Cucumis variabilis</i>	h	1
<i>Cyperus bifax</i>	sdg	n
<i>Cyperus vaginatus</i>	tg	1
<i>Erythrina vespertilio</i> subsp. <i>biloba</i>	s3	1
<i>Erythrina vespertilio</i> subsp. <i>biloba</i>	h	1
<i>Eucalyptus camaldulensis</i>	t 5m	3
<i>Eulalia aurea</i>	tg	1
<i>Euphorbia australis</i> var. <i>subtomentosa</i>	h	n
<i>Euphorbia trigonosperma</i>	h	n
<i>Euphorbia trigonosperma</i>	h	1
<i>Euphorbia trigonosperma</i>	h	1
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	h	n
<i>Gossypium australe</i>	s3	n
<i>Gossypium robinsonii</i>	s3	1
<i>Gymnanthera cunninghamii</i>	s2	1
<i>Hibiscus austrinus</i> var. <i>austrinus</i>	h	n
<i>Ipomoea racemigera</i>	cr	n
<i>Ipomoea racemigera</i>	h	n
<i>Isotropis atropurpurea</i>	s3	n
<i>Melaleuca argentea</i>	t 8m	n
<i>Melaleuca glomerata</i>	s2	1
<i>Melaleuca glomerata</i>	s2	1
<i>Melaleuca linophylla</i>	s2s1	2
<i>Nellica maderaspatensis</i>	h	n
<i>Portulaca oleracea</i>	h	n
<i>Rhynchosia minima</i>	s3	n
<i>Sesbania cannabina</i>	h	1
<i>Themeda triandra</i>	tg	1
<i>Trachymene oleracea</i>	h	1
<i>Trigastrotheca molluginea</i>		n
<i>Triodia longiceps</i>	hg	n
<i>Triodia longiceps</i>	hg	n
<i>Vigna lanceolata</i> var. <i>lanceolata</i>	h	n

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/15/2022, 7/23/2022
Site: C1b-031 **Coordinates:** 699372 mE, 7578024 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 25x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Creek

Rock Type: Quartz stones (15%)

Soil Type: Orange-white coarse sand loose soil (40%)

Fire Age: Moderate (1-5 yrs)

Condition: Good

Notes: grazing

Vegetation Description: Sparse Tall Shrubland of *Melaleuca linophylla* with Sparse Tussock Grassland of *Eulalia aurea*, **Cenchrus ciliaris* and Isolated Low Trees of *Eucalyptus victix* and Sparse Mid Shrubland of *Acacia pyrifolia* var. *pyrifolia*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia bivenosa</i>	s3	1
<i>Acacia coriacea</i> subsp. <i>pendens</i>	s2	1
<i>Acacia monticola</i>	s3	n
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>	s2	1
<i>Acacia trachycarpa</i>	s2	2
<i>Acacia tumida</i>	s2	1
<i>Afrohybanthus aurantiacus</i>	h	n
<i>Afrohybanthus aurantiacus</i>	h s3	1
<i>Afrohybanthus aurantiacus</i>	s3	n
<i>Alternanthera nana</i>	h	1
<i>Arivela viscosa</i>	h	n

<i>**Bidens bipinnata</i>	h	n
<i>Bulbostylis barbata</i>	sdg	n
<i>Calandrinia tepperiana</i>	h	n
<i>*Cenchrus ciliaris</i>	tg	1
<i>Corchorus incanus</i> subsp. <i>incanus</i>	s3	2
<i>Cucumis variabilis</i>	cl	n
<i>Cymbopogon obtectus</i>	tg	1
<i>Cyperus vaginatus</i>	sdg	n
<i>Dactyloctenium radulans</i>	tg	n
<i>Eragrostis cumingii</i>	tg	1
<i>Eucalyptus victrix</i>	t3	1
<i>Eulalia aurea</i>	tg	2
<i>Euphorbia trigonosperma</i>	s3	n
<i>Goodenia lamprosperma</i>	h	1
<i>Gossypium australe</i>	s2	2
<i>Gossypium australe</i>	s3	n
<i>Grevillea wickhamii</i>	s2	1
<i>Hakea chordophylla</i>	s2	n
<i>Ipomoea polymorpha</i>	h	1
<i>Melaleuca linophylla</i>	s2	2
<i>Paspalidium rarum</i>	tg	n
<i>Paspalidium rarum</i>	tg	1
<i>Rhynchosia minima</i>	cr	n
<i>Senna venusta</i>	s3	n
<i>Sesbania cannabina</i>	s2	n
<i>Themeda triandra</i>	tg	1
<i>Trachymene oleracea</i>	h	n
<i>Triodia epactia</i>	hg	1
<i>Vigna lanceolata</i> var. <i>lanceolata</i>	cr	n

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/15/2022, 7/22/2022

Site: C1b032 **Coordinates:** 700719 mE, 7577707 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q

Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Basalt hill (hilltop)

Rock Type: Granite gravel (30%), granite stone (10%), Quartz stones (10%)

Soil Type: Red-orange fine sand surface crust (30%)

Fire Age: Moderate (1-5 yrs)

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia epactia* with Open Mid Shrubland of *Acacia orthocarpa* and Sparse Low Shrubland of *A. maitlandii* and *Acacia orthocarpa*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia maitlandii</i>	s3	2
<i>Acacia orthocarpa</i>	s2	3
<i>Acacia orthocarpa</i>	s3	1
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>	s3	n
<i>Afrohybanthus aurantiacus</i>	s3	1
<i>Corchorus tectus</i>	s3	1
<i>Corchorus walcottii</i>	s3	1
<i>Corchorus walcottii</i>	s3	1
<i>Corymbia hamersleyana</i>	t3	1
<i>Dampiera candidans</i>	s3	1
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	s3	n
<i>Goodenia microptera</i>	h	n

<i>Goodenia stobbsiana</i>	s3	1
<i>Grevillea wickhamii</i>	s3	n
<i>Heliotropium pachyphyllum</i>	s3	1
<i>Indigofera monophylla</i>	s3	1
<i>Ptilotus calostachyus</i>	s3	n
<i>Scaevola browniana</i> subsp. <i>browniana</i>	s3	1
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s2	1
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)	s3	1
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)	s2	1
<i>Solanum phlomoides</i>	s3	n
<i>Tephrosia rosea</i> var. Fortescue creeks (M.I.H. Brooker 2186)	s2	1
<i>Trigastrotheca molluginea</i>	h	n
<i>Triodia ?brizoides</i>	hg	1
<i>Triodia epactia</i>	hg	4

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/15/2022, 7/23/2022

Site: C1b033 **Coordinates:** 699963 mE, 7578845 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q

Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Low rolling hill

Rock Type: Quartz gravel (20%), stones (10%), Granite gravel (20%)

Soil Type: Orange-brown sandy-loam loose soil (20%)

Fire Age: Moderate (1-5 yrs)

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia basedowii*, *T. wiseana*, *T. epactia* with Open Low Shrubland of *Acacia maitlandii* and Sparse Mid Shrubland of *A. orthocarpa*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia bivenosa</i>	s3	1
<i>Acacia hilliana</i>	s3	1
<i>Acacia inaequilatera</i>	s3s2	1
<i>Acacia maitlandii</i>	s3	3
<i>Acacia orthocarpa</i>	s2	3
<i>Corymbia hamersleyana</i>	m3	1
<i>Goodenia stobbsiana</i>	s3	1
<i>Grevillea wickhamii</i>	s3	1
<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>	s3	1
<i>Indigofera monophylla</i>	s3	1
<i>Polymeria ambigua</i>	s3	n
<i>Scaevola browniana</i> subsp. <i>browniana</i>	s3	n

<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s2	n
<i>Triodia basedowii</i>	hg	2
<i>Triodia epactia</i>	hg	1
<i>Triodia wiseana</i>	hg	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/14/2022, 7/22/2022
Site: C1b-035 **Coordinates:** 701245 mE, 7573502 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Hill

Rock Type: Granite boulders (40%), Granite stones (30%)

Soil Type: Orange coarse sand loose soil (10%)

Fire Age: Old (> 5yrs)

Condition: Good

Notes: grazing

Vegetation Description: Hummock Grassland of *Triodia epactia* with Open Tall Shrubland of *Acacia orthocarpa* and Isolated Low Trees of *Corymbia hamersleyana*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia bivenosa</i>	s2	n
<i>Acacia coriacea</i> subsp. <i>pendens</i>	s1	n
<i>Acacia maitlandii</i>	s3	3
<i>Acacia orthocarpa</i>	s1	3
<i>Afrohybanthus aurantiacus</i>	s3	n
<i>Boerhavia ?gardneri</i>	h	n
<i>Boerhavia</i> sp.	h	n
<i>Bonamia pilbarensis</i>	h	n
* <i>Cenchrus ciliaris</i>	tg	1
<i>Corymbia hamersleyana</i>	t3	1
<i>Dampiera candidans</i>	s3	
<i>Euphorbia australis</i> var. <i>subtomentosa</i>	h	n

<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>	s3	1
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	h	n
<i>Grevillea wickhamii</i>	s2	1
<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>	s3	n
<i>Indigofera monophylla</i>	s3	n
<i>Paraneurachne muelleri</i>	tg	n
<i>Polymeria ?mollis</i>	s3	n
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s3	1
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s3	n
<i>Solanum phlomoides</i>	s3	n
<i>Stackhousia muricata</i> subsp. <i>annual</i> (W.R. Barker 2172)	h	n
<i>Trigastrotheca molluginea</i>	h	n
<i>Trigastrotheca molluginea</i>	h	1
<i>Triodia epactia</i>	hg	4

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/15/2022, 7/22/2022

Site: C1B-29 **Coordinates:** 700566 mE, 7575738 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q

Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Hill very gentle (midslope)

Rock Type: Granite stones (60%), Quartz gravel (10%)

Soil Type: Red-orange sandy-loam loose soil (15%)

Fire Age: Moderate (1-5 yrs)

Condition: Excellent

Notes:

Vegetation Description: Open Hummock Grassland of *Triodia epactia* with Sparse Tall Shrubland of *Acacia inaequilatera*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia bivenosa</i>	s3	n
<i>Acacia inaequilatera</i>	s1	2
<i>Acacia orthocarpa</i>	s3	n
<i>Aristida contorta</i>	tg	
<i>Boerhavia ?gardneri</i>	h	1
<i>Bonamia pilbarensis</i>	h	1
<i>Bonamia pilbarensis</i>	h	n
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	h	n
<i>Goodenia stobbsiana</i>	s3	1
<i>Hakea lorea</i> subsp. <i>lorea</i>	s1	n
<i>Hakea lorea</i> subsp. <i>lorea</i>	s2	n
<i>Hibiscus sturtii</i>	s3	n

<i>Indigofera monophylla</i>	s3	1
<i>Indigofera rugosa</i>	s3	1
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s2	n
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)	s3	n
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)	s3	n
<i>Solanum cleistogamum</i>	s3	
<i>Tephrosia rosea</i> var. Fortescue creeks (M.I.H. Brooker 2186)	s3	n
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	s3	n
<i>Trigastrotheca molluginea</i>	h	n
<i>Trigastrotheca molluginea</i>	h	n
<i>Triodia wiseana</i>	hg	n

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/17/2022, 7/20/2022

Site: C1bB10 **Coordinates:** 697212 mE, 7562353 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** R

Site Size: 25x100 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Gully - minor

Rock Type: Basalt stones, gravel

Soil Type: Red fine sand loose soil (5%)

Fire Age: none evident

Condition: Good

Notes: weeds

Vegetation Description: Mid Shrubland of *Ehretia saligna* var. *saligna*, *Dichrostachys spicata*, *Acacia pyrifolia* var. *pyrifolia* with Open Tussock Grassland of *Enneapogon caerulescens*, *Cymbopogon ambiguus* and Isolated Hummock Grasses of *Triodia epactia*.

PHOTO NOT AVAILABLE

TAXA

Taxon	Height Code	Cover Code
? <i>Eriachne</i> sp.	tg	1
? <i>Eriachne</i> sp.	s3	n
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>	s2	1
* <i>Aerva javanica</i>	h	1
<i>Afrohybanthus aurantiacus</i>	s3	1
<i>Alysicarpus muelleri</i>	s3	1
<i>Amphipogon sericeus</i>	tg	1
<i>Arivela viscosa</i>	h	n
<i>Arivela viscosa</i>	h	1
<i>Atalaya hemiglauca</i>	s3	1
<i>Atalaya hemiglauca</i>	s3	1
<i>Boerhavia gardneri</i>	h	1
* <i>Cenchrus ciliaris</i>	tg	1
<i>Cucumis variabilis</i>	h	1
<i>Cymbopogon ambiguus</i>	tg	1
<i>Dichrostachys spicata</i>	s2	1
<i>Ehretia saligna</i> var. <i>saligna</i>	s2s1	1
<i>Enneapogon caerulescens</i>	tg	2
<i>Eremophila longifolia</i>	s2	1
<i>Eriachne mucronata</i>	tg	1
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>	s2	1
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>	h	n
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	s3	1
<i>Flueggea virosa</i> subsp. <i>melanthesoides</i>	s2	1

<i>Flueggea virosa</i> subsp. <i>melanthesoides</i>	s2	n
<i>Gomphrena cunninghamii</i>	h	1
<i>Gomphrena cunninghamii</i>	h	1
<i>Gossypium australe</i>	s3	1
<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>	s1	n
<i>Hibiscus coatesii</i>	s3	1
<i>Indigofera monophylla</i>	s3	1
<i>Notoleptopus decaisnei</i>	h	n
<i>Paspalidium clementii</i>	tg	1
<i>Polycarpaea longiflora</i>	h	1
<i>Polymeria ambigua</i>	h	1
<i>Rhynchosia minima</i>	s3	1
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	s3	n
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s2	n
<i>Sida clementii</i>	s3	1
<i>Tephrosia densa</i>	h	1
<i>Tinospora smilacina</i>	cr	1
<i>Tribulus hirsutus</i>	s3	1
<i>Triodia epactia</i>	hg	1
<i>Triumfetta propinqua</i>	s2s3	1
<i>Triumfetta</i> sp.	s2s3	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/19/2022, 7/21/2022
Site: C1Bx001 **Coordinates:** 693078 mE, 7558652 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Hill (upperslope)

Rock Type: Basalt gravel (20%), stones (20%), Basalt boulder (10%)

Soil Type: Brown fine sand loose soil (10%), surface crust (20%)

Fire Age: Moderate (1-5 yrs)

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia epactia* and *T. wiseana*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia acradenia</i>	s3	n
<i>Bonamia pilbarensis</i>	h	n
<i>Corchorus lasiocarpus</i> subsp. <i>parvus</i>	s3	n
<i>Corymbia hamersleyana</i>	m3	n
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	h	n
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>	s3	n
<i>Hakea lorea</i> subsp. <i>lorea</i>	s3	n
<i>Indigofera monophylla</i>	s3	n
<i>Jasminum didymum</i> subsp. <i>lineare</i>	s3	n
No matching specimen name	s3	1
<i>Polymeria ambigua</i>	h	1
<i>Ptilotus auriculifolius</i>	h	n
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s3	n

<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s3	n
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s3	n
<i>Senna venusta</i>	s3	1
<i>Solanum diversiflorum</i>	s3	n
<i>Swainsona ?decurrens</i>	h	2
<i>Tinospora smilacina</i>	cr	n
<i>Triodia epactia</i>	hg	1
<i>Triodia wiseana</i>	hg	3

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/19/2022, 7/21/2022
Site: C1Bx002 **Coordinates:** 692141 mE, 7558670 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Hill (midslope)

Rock Type: Basalt stones (40%)

Soil Type: Dark red crackling clay loose soil (40%)

Fire Age: None evident

Condition: Good

Notes: animal tracks - trampled vegetation

Vegetation Description: Tall Shrubland of *Acacia xiphophylla* with Sparse Mid Shrubland of *Senna artemisioides* subsp. *oligophylla* and Sparse Low Shrubland of *S. artemisioides* subsp. *oligophylla*, *Sida* sp. L (A.M. Ashby 4202), *Senna artemisioides* ?subsp. x ?.



TAXA

Taxon	Height Code	Cover Code
? <i>Streptoglossa decurrens</i>	s3	n
<i>Acacia</i> ? <i>sericophylla</i>	s3	n
<i>Acacia sericophylla</i>	s3	1
<i>Acacia victoriae</i>	s3	n
<i>Acacia xiphophylla</i>	s1	4
<i>Crotalaria</i> ? <i>dissitiflora</i>	h	n
<i>Crotalaria dissitiflora</i> subsp. <i>benthamiana</i>	s3	n
<i>Eriachne mucronata</i>	tg	1
<i>Eriachne mucronata</i>	tg	n
<i>Goodenia muelleriana</i>	h	1
<i>Hibiscus brachysiphonius</i>	h	n

<i>Jasminum didymum</i> subsp. <i>lineare</i>	s3	1
<i>Jasminum didymum</i> subsp. <i>lineare</i>	s3	1
<i>Neptunia dimorphantha</i>	s3	1
<i>Neptunia dimorphantha</i>	s3	1
<i>Portulaca oleracea</i>	h	n
<i>Ptilotus carinatus</i>	h	n
<i>Ptilotus gomphrenoides</i>	h	1
<i>Senna artemisioides</i> ?subsp. x ?	s3	1
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	s3s2	3
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s3	n
<i>Senna glutinosa</i> subsp. <i>xluerssenii</i>	s2	n
<i>Senna</i> sp. Karijini (M.E. Trudgen 10392)	s3	1
<i>Sida</i> sp. L (A.M. Ashby 4202)	s3	2
<i>Solanum lasiophyllum</i>	s3	1
<i>Streptoglossa bubakii</i>	s3	1
<i>Triodia wiseana</i>	hg	n
<i>Triodia wiseana</i>	hg	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/19/2022, 7/21/2022

Site: C1Bx003 **Coordinates:** 691076 mE, 7558870 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q

Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Rolling hill

Rock Type: Basalt fine gravel (30%), Dolerite gravel (10%)

Soil Type: Brown fine sand loose soil (40%)

Fire Age: None evident

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia wiseana* with Sparse Upper Shrubland of *Acacia inaequilatera*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia inaequilatera</i>	s2	1
<i>Arivela viscosa</i>	h	1
<i>Boerhavia gardneri</i>	h	n
<i>Corchorus lasiocarpus</i> subsp. <i>lasiocarpus</i>	s3	1
<i>Corchorus lasiocarpus</i> subsp. <i>parvus</i>	s3	1
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	s3	1
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	h	n
<i>Hakea lorea</i> subsp. <i>lorea</i>	s3	n
<i>Heliotropium crispatum</i>	s3 h	n
No matching specimen name	s3	n
<i>Ptilotus auriculifolius</i>	h	n
<i>Senna notabilis</i>	s3	n

<i>Solanum diversiflorum</i>	s3	n
<i>Solanum lasiophyllum</i>	s3	n
<i>Swainsona decurrens</i>	h	1
<i>Triodia longiceps</i>	hg	4
<i>Triodia wiseana</i>	hg	1
<i>Triodia wiseana</i>	hg	3

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/19/2022, 7/21/2022

Site: C1bX-5 **Coordinates:** 692521 mE, 7560874 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q

Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Rolling hill gentle (midslope)

Rock Type: Basalt stones (60%)

Soil Type: Red-orange sandy-loam loose soil (1%)

Fire Age: Old (> 5yrs)

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia brizoides*, *T. epactia* with Sparse Low Shrubland of *Acacia ptychophylla* with Isolated Tall Shrubs of *Acacia inaequilatera* and Isolated Mid Shrubs of *A. ptychophylla*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia inaequilatera</i>	s1	2
<i>Acacia ptychophylla</i>	hg	2
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	h	n
<i>Goodenia stobbsiana</i>	s3	n
<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>	t3	1
<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>	s2	n
<i>Hakea lorea</i> subsp. <i>lorea</i>	s3	1
<i>Hakea lorea</i> subsp. <i>lorea</i>	hg	1
<i>Indigofera monophylla</i>	s3	1
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s2	1
<i>Tribulus suberosus</i>	s3	n

<i>Triodia brizoides</i>	hg	1
<i>Triodia brizoides</i>	hg	2
<i>Triodia brizoides</i>	hg	3
<i>Triodia epactia</i>	hg	3
<i>Triodia wiseana</i>	hg	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/15/2022, 7/23/2022
Site: C8b-004 **Coordinates:** 696772 mE, 7578683 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Hill gentle

Rock Type: Basalt rocks (40%), boulders (5%), Quartz stones (10%)

Soil Type: Red-orange coarse sand surface crust (10%)

Fire Age: Moderate (1-5 yrs)

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia wiseana* with Isolated Mid Shrubs of *Acacia bivenosa*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia bivenosa</i>	s2	1
<i>Bonamia pilbarensis</i>	h	n
<i>Corymbia hamersleyana</i>	t3	n
<i>Senna symonii</i>	s2	n
<i>Triodia wiseana</i>	hg	4

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/15/2022, 7/23/2022
Site: C8b-005 **Coordinates:** 696382 mE, 7578537 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Hill gentle (hilltop)

Rock Type: Calcrete rocks (30%), surface plates (20%)

Soil Type: Orange sandy-clay surface crust (10%), loose soil (10%), crackling clay (5%)

Fire Age: None evident

Condition: Moderate

Notes: Patches of crackling clay throughout; grazing, track

Vegetation Description: Hummock Grassland of *Triodia wiseana* with Sparse Upper Shrubland of *Acacia trachycarpa* with Isolated Mid Shrubland of *Acacia acradenia* and *Acacia bivenosa*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia acradenia</i>	s1	
<i>Acacia acradenia</i>	s2	1
<i>Acacia ancistrocarpa</i>	s2	n
<i>Acacia bivenosa</i>	s2	n
<i>Acacia trachycarpa</i>	s1	1
<i>Afrohybanthus aurantiacus</i>	s3	n
<i>Aristida latifolia</i>	tg	1
<i>Boerhavia paludosa</i>	h	1
* <i>Cenchrus setiger</i>	tg	n
<i>Chrysopogon fallax</i>	tg	1
<i>Corchorus lasiocarpus</i> subsp. <i>parvus</i>	s3	1
<i>Crotalaria dissitiflora</i> subsp. <i>benthamiana</i>	s3	1

<i>Crotalaria dissitiflora</i> subsp. <i>benthamiana</i>	h	n
<i>Cullen cinereum</i>	h	n
<i>Eragrostis xerophila</i>	tg	n
<i>Eremophila forrestii</i> subsp. <i>forrestii</i>	s3	1
<i>Eremophila forrestii</i> subsp. <i>forrestii</i>	s2	1
<i>Goodenia muelleriana</i>	h	1
<i>Hibiscus sturtii</i> var. <i>platychlamys</i>	s3	n
<i>Indigofera monophylla</i>	s3	1
<i>Rhynchosia minima</i>	cr	n
<i>Roepera eichleri</i>	h	n
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	s3	1
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s2	1
<i>Senna symonii</i>	s3	1
<i>Sida</i> sp. L (A.M. Ashby 4202)	s3	n
<i>Stackhousia muricata</i> subsp. <i>annual</i> (W.R. Barker 2172)	h	n
<i>Tephrosia</i> sp. clay soils (S. van Leeuwen et al. PBS 0273)	s3	n
<i>Triodia wiseana</i>	hg	3

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/16/2022, 7/23/2022
Site: C8b006 **Coordinates:** 696575 mE, 7577570 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Gravelly plain

Rock Type: Ironstone gravel (10%), Bassalt gravel (20%)

Soil Type: 'Red-orange fine sand loose soil (30%) sandy-clay shallow cracking clay (15%)

Fire Age: None evident

Condition: Good

Notes: Patches of cracking clay at the south end of the site; grazing

Vegetation Description: Open Mid Shrubland with *Acacia synchroica*, *Acacia glaucoaesia* and *Senna* sp. Karijini (M.E. Trudgen 10392) with Open Low Shrubland of *Acacia synchroica* and *Acacia glaucoaesia* with Open Hummock Grassland of *Triodia angusta* with Sparse Tussock Grassl



TAXA

Taxon	Height Code	Cover Code
<i>Acacia ?glaucoaesia</i>	s3s2	2
<i>Acacia glaucoaesia</i>	s2s3	2
<i>Acacia synchroica</i>	s3	n
<i>Acacia synchroica</i>	s3	1
* <i>Aerva javanica</i>	h	1
<i>Aristida latifolia</i>	tg	1
<i>Boerhavia paludosa</i>	h	n
<i>Boerhavia paludosa</i>	h	n
<i>Enneapogon caerulescens</i>	tg	n
<i>Eragrostis xerophila</i>	tg	2
<i>Gomphrena kanisii</i>	s3	1

<i>Gomphrena kanisii</i>	h	n
<i>Goodenia ?prostrata</i>	h	n
<i>Goodenia muelleriana</i>	h	n
<i>Hibiscus brachysiphonius</i>	s3	n
<i>Hibiscus brachysiphonius</i>	h	n
<i>Hibiscus brachysiphonius</i>	S2	1
<i>Iseilema dolichotrichum</i>	tg	1
<i>Nellica maderaspatensis</i>	h	n
<i>Nellica maderaspatensis</i>	h	n
<i>Neptunia dimorphantha</i>	s3	n
<i>Operculina aequisejala</i>	h	n
<i>Portulaca oleracea</i>	h	n
<i>Salsola australis</i>	s3	1
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	s3	n
<i>Senna</i> sp. Karijini (M.E. Trudgen 10392)	s3	1
<i>Sida</i> sp. L (A.M. Ashby 4202)	s3	1
<i>Solanum lasiophyllum</i>	s3	n
<i>Sporobolus australasicus</i>	tg	n
<i>Streptoglossa ?bubakii</i>		n
<i>Swainsona thompsoniana</i>	h	n
<i>Tephrosia</i> sp. clay soils (S. van Leeuwen et al. PBS 0273)	s3	1
<i>Triodia angusta</i>	hg	3

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/16/2022, 7/23/2022

Site: C8b008 **Coordinates:** 696115 mE, 7577714 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q

Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Low rise

Rock Type: Ironstone gravel (10%), Calcrete stones (20%)

Soil Type: Red-orange fine sand loose soil (30%), crackling clay (20%)

Fire Age: None evident

Condition: Good

Notes: Weeds

Vegetation Description: Open Mid Shrubland of *Senna artemisioides* subsp. *oligophylla* with Open Hummock Grassland of *Triodia wiseana* with Sparse Tussock Grassland of *Aristida latifolia* and Isolated Low Shrubs of *S. artemisioides* subsp. *oligophylla*, *Eremophila forrestii* subsp. *forrestii*



TAXA

Taxon	Height Code	Cover Code
<i>Alysicarpus muelleri</i>	h	n
<i>Aristida latifolia</i>	tg	2
<i>Boerhavia paludosa</i>	h	n
* <i>Cenchrus ciliaris</i>	tg	1
<i>Chrysopogon fallax</i>	tg	1
<i>Corchorus tectus</i>	s3	1
<i>Cucumis melo</i>	h	1
<i>Cullen cinereum</i>	hg	1
<i>Dichanthium sericeum</i> subsp. <i>humilis</i>	tg	1
<i>Dolichocarpa</i> sp. Hamersley Station (A.A. Mitchell PRP 1479)	hg	1
<i>Eremophila forrestii</i> subsp. <i>Forrestii</i>	s2s3	1

<i>Euphorbia australis</i> var. <i>subtomentosa</i>	h	n
<i>Euphorbia coghlanii</i>	h	n
<i>Goodenia</i> ? <i>prostrata</i>	h	n
<i>Goodenia forrestii</i>	h	n
<i>Goodenia muelleriana</i>	h	1
<i>Goodenia stobbsiana</i>	h	n
<i>Haloragis</i> sp.	h	n
<i>Hibiscus brachysiphonius</i>	h	1
<i>Hibiscus brachysiphonius</i>	s2	1
<i>Iseilema dolichotrichum</i>	tg	1
<i>Operculina aequisepala</i>	h	1
<i>Rhynchosia minima</i>	h	1
<i>Roepera eichleri</i>	h	1
<i>Scaevola spinescens</i>	s3	n
<i>Scaevola spinescens</i>	s2	n
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	s2s3	3
<i>Sida</i> sp. L (A.M. Ashby 4202)	s3	1
<i>Sida</i> sp. L (A.M. Ashby 4202)	h	2
<i>Solanum lasiophyllum</i>	s3	1
<i>Streptoglossa</i> ? <i>bubakii</i>	h	n
<i>Swainsona thompsoniana</i>	h	n
<i>Tephrosia</i> sp. clay soils (S. van Leeuwen et al. PBS 0273)	h	n
<i>Tephrosia</i> sp. clay soils (S. van Leeuwen et al. PBS 0273)	h	1
<i>Triodia wiseana</i>	hg	3
<i>Vigna</i> sp. Hamersley Clay (A.A. Mitchell PRP 113)	h	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/16/2022, 7/21/2022
Site: C8b009 **Coordinates:** 695693 mE, 7577377 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Upland cracking clay

Rock Type: Basalt stones (20%)

Soil Type: Red-orange sandy-clay loose soil (20%), crackling clay (20%)

Fire Age: Old (> 5yrs)

Condition: Good

Notes: grazing

Vegetation Description: Open Hummock Grassland of *Triodia angusta*, *T. longiceps* with Sparse Mid Shrubland of *Acacia ?glaucocaesia*, *A. bivenosa* and Isolated Low Shrubs of *A. ?glaucocaesia*, *A. bivenosa*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia ?glaucocaesia</i>	s2s3	1
<i>Acacia bivenosa</i>	s3s2	1
<i>Acacia synchronicia</i>	s3	n
<i>Acacia synchronicia</i>	s3s2	2
<i>Aristida latifolia</i>	tg	1
<i>Arivela viscosa</i>	h	n
<i>Boerhavia paludosa</i>	h	1
<i>Corchorus tectus</i>	s3	1
<i>Crotalaria dissitiflora</i> subsp. <i>benthamiana</i>	s3	n
<i>Crotalaria dissitiflora</i> subsp. <i>benthamiana</i>	s3	1
<i>Cucumis melo</i>	h	1
<i>Cullen cinereum</i>	h	2

<i>Cynodon convergens</i>	h	1
<i>Eragrostis xerophila</i>	tg	1
<i>Gomphrena kanisii</i>	h	n
<i>Goodenia muelleriana</i>	h	1
<i>Heliotropium crispatum</i>	s3	1
<i>Hibiscus brachysiphonius</i>	s3	n
<i>Hibiscus brachysiphonius</i>	h	1
<i>Iseilema vaginiflorum</i>	s3	1
<i>Operculina aequisejala</i>	h	1
<i>Ptilotus exaltatus</i>	h	1
<i>Rhynchosia minima</i>	cr	1
<i>Senna artemisioides</i> ?subsp. x ?	s3	1
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	s3	1
<i>Senna</i> sp. Karijini (M.E. Trudgen 10392)	s3	1
<i>Sida</i> sp. L (A.M. Ashby 4202)	s3	1
<i>Stemodia kingii</i>	h	1
<i>Swainsona thompsoniana</i>		
<i>Tephrosia</i> sp. clay soils (S. van Leeuwen et al. PBS 0273)	s3	n
<i>Triodia angusta</i>	hg	3
<i>Triodia longiceps</i>	hg	1
<i>Vigna</i> sp. Hamersley Clay (A.A. Mitchell PRP 113)	s3	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/15/2022, 7/23/2022

Site: C8b01 **Coordinates:** 698318 mE, 7578861 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Low rolling hill very gentle (hilltop)

Rock Type: Quartz gravel (20%)

Soil Type: Brown fine sand loose soil (5%), surface crust (40%)

Fire Age: Old (> 5yrs)

Condition: Excellent

Notes:

Vegetation Description: Open Hummock Grassland of *Triodia wiseana*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia bivenosa</i>	s3	n
<i>Acacia maitlandii</i>	s3	n
* <i>Aerva javanica</i>	s3	n
<i>Cassytha filiformis</i>	m3	n
<i>Corymbia hamersleyana</i>	m3	n
<i>Dysphania sphaerosperma</i>	h	n
<i>Enneapogon caerulescens</i>	tg	n
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	t3m	n
<i>Euploca chrysocarpa</i>	s3	1
<i>Heliotropium ?chrysocarpum</i>	s3	n
<i>Melaleuca eleuterostachya</i>	s3	n
<i>Pluchea ferdinandii-muelleri</i>	s3	n
<i>Salsola australis</i>	h	1

<i>Scaevola amblyanthera</i> var. <i>centralis</i>	s3	n
<i>Scaevola amblyanthera</i> var. <i>centralis</i>	h	n
<i>Sclerolaena lanicuspis</i>	s3	n
<i>Sclerolaena lanicuspis</i>	s3	n
<i>Sporobolus australasicus</i>	tg	n
<i>Stackhousia muricata</i> subsp. <i>annual</i> (W.R. Barker 2172)	h	n
<i>Trianthema triquetrum</i>	h	n
<i>Tribulus suberosus</i>	s3	n
<i>Triodia wiseana</i>	hg	3

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/14/2022, 7/23/2022
Site: C8b012 **Coordinates:** 694455 mE, 7575392 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Low rise

Rock Type: fine gravel (20%)

Soil Type: Brown coarse sand loose soil (20%)

Fire Age: Moderate (1-5 yrs)

Condition: Moderate

Notes: grazing, weeds

Vegetation Description: Open Hummock Grassland of *Triodia epactia* with Open Mid Shrubland of *Acacia ancistrocarpa* with Low Shrubland of *Sida clementii*, *Indigofera monophylla*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia ancistrocarpa</i>	s3	2
<i>Acacia bivenosa</i>	s2	n
<i>Acacia inaequilatera</i>	s2	1
<i>Acacia maitlandii</i>	s3	1
<i>Acacia maitlandii</i>	s3	1
<i>Acacia stellaticeps</i>	s3	n
<i>Acacia stellaticeps</i>	s3	1
<i>Acacia trachycarpa</i>	s2	n
<i>Alternanthera nana</i>	h	n
<i>Aristida holathera</i> var. <i>holathera</i>	tg	1
* <i>Cenchrus ciliaris</i>	tg	n
<i>Chrysopogon fallax</i>	tg	1

<i>Corchorus laniflorus</i>	s3	1
<i>Corymbia hamersleyana</i>	m3	n
<i>Eragrostis ?eriopoda</i>	tg	1
<i>Eragrostis eriopoda</i>	tg	1
<i>Euphorbia australis</i> var. <i>subtomentosa</i>	h	n
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	h	n
<i>Goodenia stobbsiana</i>	h	n
<i>Gossypium australe</i>	s3	n
<i>Hakea lorea</i> subsp. <i>lorea</i>	s2	n
<i>Hibiscus leptocladus</i>	s3	1
<i>Indigofera monophylla</i>	s3	1
<i>Indigofera monophylla</i>	s3	1
<i>Polymeria ambigua</i>	s3	n
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s2	1
<i>Senna notabilis</i>	s3	n
<i>Senna notabilis</i>	s3	1
<i>Sida clementii</i>	s3	2
<i>Sida</i> sp. L (A.M. Ashby 4202)	s3	1
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	s3	1
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	s3	1
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	s3	1
<i>Trigastrotheca molluginea</i>	h	n
<i>Triodia epactia</i>	hg	4

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/16/2022, 7/23/2022
Site: C8B-014 **Coordinates:** 693198 mE, 7574006 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Alluvial plain

Rock Type: Basalt stones (40%), Quartz stones (20%), Granite fine gravel (5%)

Soil Type: Red-orange fine sand loose soil (10%)

Fire Age: Moderate (1-5 yrs)

Condition: Excellent

Notes: Minor drainage through plot

Vegetation Description: Open Hummock Grassland of *Triodia basedowii* with Sparse Tall Shrubland of *Acacia inaequilatera* with Sparse Mid Shrubland of *A. ancistrocarpa* and Sparse Low Shrubland of *Indigofera monophylla*, *Senna glutinosa* subsp. *pruinosa*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia acradenia</i>	s3	n
<i>Acacia ancistrocarpa</i>	s2	2
<i>Acacia bivenosa</i>	s3	1
<i>Acacia inaequilatera</i>	s1	2
<i>Alternanthera nana</i>	h	n
<i>Aristida contorta</i>	tg	n
<i>Boerhavia ?gardneri</i>	h	n
<i>Bonamia alatisemina</i>	h	n
<i>Corchorus walcottii</i>	s2	1
<i>Corymbia hamersleyana</i>	m	n
<i>Gomphrena cunninghamii</i>	s3	n

<i>Goodenia stobbsiana</i>	s3	n
<i>Heliotropium tenuifolium</i>	s3	n
<i>Hibiscus sturtii</i> var. <i>platyklamys</i>	s3	1
<i>Indigofera monophylla</i>	s3	2
<i>Jasminum didymum</i> subsp. <i>lineare</i>	s3	n
<i>Polycarpaea corymbosa</i>	h	1
<i>Ptilotus calostachyus</i>	h	n
<i>Ptilotus astrolasius</i>	s3	1
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s3	n
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s3	n
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s2s3	1
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	s3	n
<i>Trigastrotheca molluginea</i>	h	n
<i>Trigastrotheca molluginea</i>	h	n
<i>Triodia basedowii</i>	hg	3
<i>Triodia epactia</i>	hg	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/16/2022, 7/23/2022
Site: C8B-016 **Coordinates:** 692576 mE, 7573531 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** R
Site Size: 25 x 100 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Minor channel (footslope)

Rock Type: Granite stones (40%), Granite rocks (20%)

Soil Type: Red-orange sandy-loam loose soil (2%)

Fire Age: Moderate (1-5 yrs)

Condition: Excellent

Notes: Large heritage site adjacent to plot. Moved off footslop to avoid.

Vegetation Description: Open Hummock Grassland of *Triodia basedowii*, *Triodia epactia* with Sparse Low Shrubland of *Acacia stellaticeps*, *A. acradenia* and Isolated Low Trees of *Corymbia hamersleyana*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia acradenia</i>	s3	1
<i>Acacia bivenosa</i>	s3	1
<i>Acacia stellaticeps</i>	s3	2
<i>Afrohybanthus aurantiacus</i>	s3	1
<i>Bonamia erecta</i>	s3	1
<i>Bonamia pilbarensis</i>	h	n
<i>Corymbia hamersleyana</i>	t3	n
<i>Dampiera candidans</i>	s3	1
<i>Gossypium australe</i>	s3	1
<i>Grevillea wickhamii</i>	s3	1
<i>Heliotropium tenuifolium</i>	s3	n
<i>Indigofera monophylla</i>	s3	2

<i>Indigofera monophylla</i>	s3	1
<i>Isotropis atropurpurea</i>	s3	n
<i>Pluchea rubelliflora</i>	s3	1
<i>Scaevola browniana</i> subsp. <i>browniana</i>	s3	n
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s3	1
<i>Senna symonii</i>	s3	n
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	s3	1
<i>Tephrosia virens</i>	s3	n
<i>Trigastrotheca molluginea</i>	h	n
<i>Triodia basedowii</i>	hg	3
<i>Triodia epactia</i>	hg	2

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/16/2022, 7/23/2022
Site: C8B-017 **Coordinates:** 692623 mE, 7572996 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Alluvial plain

Rock Type: Granite stones (40%), rocks (20%)

Soil Type: Red-orange sandy-loam loose soil (2%)

Fire Age: Moderate (1-5 yrs)

Condition: Excellent

Notes: Minor drainage through edge of plot

Vegetation Description: Open Hummock Grassland of *Triodia basedowii* with Sparse Tall Shrubland of *Acacia inaequilatera* and Sparse Low Shrubland of *Acacia stellaticeps* and *Acacia bivenosa*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia acradenia</i>	s3	1
<i>Acacia ancistrocarpa</i>	s2	1
<i>Acacia bivenosa</i>	s3	1
<i>Acacia inaequilatera</i>	s1	2
<i>Acacia maitlandii</i>	s3	n
<i>Acacia stellaticeps</i>	s3	2
<i>Bonamia pilbarensis</i>	h	n
<i>Corymbia hamersleyana</i>	t3	n
<i>Dampiera candidans</i>	s3	n
<i>Goodenia microptera</i>	h	n
<i>Grevillea wickhamii</i>	s2	n
<i>Heliotropium tenuifolium</i>	s3	n

<i>Hibiscus sturtii</i> var. <i>platyklamys</i>	s3	1
<i>Indigofera monophylla</i>	s3	2
<i>Isotropis atropurpurea</i>	s3	n
<i>Scaevola browniana</i> subsp. <i>browniana</i>	s3	n
<i>Senna symonii</i>	s3	n
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)	s3	n
<i>Solanum phlomoides</i>	s3	n
<i>Tephrosia virens</i>	s3	1
<i>Trigastrotheca molluginea</i>	h	n
<i>Triodia basedowii</i>	hg	3
<i>Triodia epactia</i>	hg	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/15/2022, 7/23/2022

Site: C8b02 **Coordinates:** 697918 mE, 7578754 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Low rolling hill

Rock Type: Basalt stones (10%), gravel (10%)

Soil Type: Red-brown fine sand loose soil (30%)

Fire Age: None evident

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia wiseana*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia bivenosa</i>	s2	n
<i>Bonamia pilbarensis</i>	s3	n
<i>Cassutha filiformis</i>	cr	n
<i>Senna artemisioides</i> subsp. <i>helmsii</i>	s3	n
<i>Triodia wiseana</i>	hg	2
<i>Triodia wiseana</i>	hg	2

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/15/2022, 7/23/2022
Site: C8B03 **Coordinates:** 697461 mE, 7577979 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Creek

Rock Type: stones (30%)

Soil Type: Red-brown (40%)

Fire Age: None evident

Condition: Moderate

Notes: grazing, weeds

Vegetation Description: Open Tall Shrubland of *Melaleuca glomerata*, *M. linophylla* with Open Tussock Grassland of **Cenchrus ciliaris* with Sparse Mid Shrubland of *M. glomerata* and Isolated Low Trees of *Eucalyptus camaldulensis*.



TAXA

Taxon	Height Code	Cover Code
? <i>Atalaya hemiglauca</i>	s3	n
<i>Acacia coriacea</i> subsp. <i>pendens</i>	s1	1
<i>Acacia inaequilatera</i>	s2	1
<i>Acacia trachycarpa</i>	s2	1
* <i>Aerva javanica</i>	h	n
* <i>Aerva javanica</i>	h	1
<i>Afrohybanthus aurantiacus</i>	s3	n
<i>Afrohybanthus aurantiacus</i>	s3	1
<i>Arivela viscosa</i>		
<i>Atalaya hemiglauca</i>	s1	1
<i>Atalaya hemiglauca</i>	m3 t 4m	1

<i>Calandrinia tepperiana</i>	h	1
<i>Cassytha filiformis</i>	cr	1
* <i>Cenchrus ciliaris</i>	tg	3
<i>Corchorus incanus</i> subsp. <i>incanus</i>	s2	1
<i>Crotalaria cunninghamii</i>	s3	1
<i>Cyperus vaginatus</i>	sdg	n
<i>Enneapogon caerulescens</i>	tg	n
<i>Eriachne obtusa</i>	tg	1
<i>Eriachne tenuiculmis</i>	tg	n
<i>Eucalyptus camaldulensis</i>	t 6m	2
<i>Eulalia aurea</i>		
<i>Euphorbia australis</i> var. <i>hispidula</i>	s3	n
<i>Euphorbia trigonosperma</i>		
<i>Euphorbia trigonosperma</i>	s3	1
<i>Euphorbia trigonosperma</i>	s3	n
<i>Gossypium robinsonii</i>	h	1
<i>Gymnanthera cunninghamii</i>	s2	1
<i>Indigofera monophylla</i>	s3	1
<i>Melaleuca argentea</i>	t 7m	1
<i>Melaleuca glomerata</i>	s2	1
<i>Melaleuca glomerata</i>	s1s2	3
<i>Melaleuca linophylla</i>	s1	2
<i>Portulaca oleracea</i>	h	n
<i>Ptilotus fusiformis</i>	s3	n
<i>Ptilotus obovatus</i>	s3	1
<i>Rhynchosia minima</i>	cr	1
<i>Triodia longiceps</i>	hg	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/19/2022, 7/21/2022
Site: C8B031 **Coordinates:** 686833 mE, 7562810 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Hill (upperslope)

Rock Type: Basalt stones (30%)

Soil Type: Red-brown fine sand loose soil (30%)

Fire Age: Moderate (1-5 yrs)

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia epactia* with Open Low Shrubland of *Heliotropium tenuifolium*, *Indigofera monophylla*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia inaequilatera</i>	s1s3	1
<i>Bonamia pilbarensis</i>	cr	n
<i>Bonamia pilbarensis</i>	h	n
<i>Corchorus lasiocarpus</i> subsp. <i>parvus</i>	s3	1
<i>Cucumis variabilis</i>	cr	n
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	h	n
<i>Gossypium australe</i>	s3	n
<i>Heliotropium tenuifolium</i>	s3	1
<i>Indigofera monophylla</i>	s3	2
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s3	n
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)	s3	n
<i>Tephrosia rosea</i> var. Fortescue creeks (M.I.H. Brooker 2186)	s3	1

<i>Tribulus platypterus</i>	s3	n
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	s3	1
<i>Triodia epactia</i>	hg	3

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/18/2022, 7/21/2022
Site: C8B032 **Coordinates:** 686140 mE, 7561015 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Cracking clay plain

Rock Type: Basalt stones (15%)

Soil Type: Red-brown clay-loam deep cracking clay (30%)

Fire Age: None evident

Condition: Moderate

Notes: The wona land system; grazing, weeds

Vegetation Description: Tussock Grassland of *Eriachne mucronata*, **Cenchrus* sp., *Aristida latifolia* with Sparse Low Shrubland of *Hibiscus sturtii* and *Sida fibulifera*



TAXA

Taxon	Height Code	Cover Code
* <i>Flaveria trinervia</i>	h	n
<i>Aristida latifolia</i>	tg	1
<i>Aristida latifolia</i>	tg	1
<i>Aristida latifolia</i>	tg	n
<i>Astrebla pectinata</i>	tg	1
<i>Astrebla pectinata</i>	tg	1
<i>Boerhavia paludosa</i>	h	1
<i>Boerhavia paludosa</i>	cr	1
<i>Boerhavia paludosa</i>	h	1
<i>Calocephalus pilbarensis</i>	h	1
<i>Calocephalus pilbarensis</i>	h	n
<i>Cenchrus</i> sp.	tg	3

<i>Commelina ensifolia</i>	h	n
<i>Crotalaria dissitiflora</i> subsp. <i>benthamiana</i>	h	1
<i>Dolichocarpa</i> sp. Hamersley Station (A.A. Mitchell PRP 1479)	h	1
<i>Enneapogon caeruleus</i>	h	n
<i>Eragrostis xerophila</i>	tg	1
<i>Eragrostis xerophila</i>	tg	1
<i>Eriachne mucronata</i>	tg	1
<i>Eriachne mucronata</i>	tg	1
<i>Euphorbia trigonosperma</i>	h	1
<i>Goodenia muelleriana</i>	h	1
<i>Goodenia muelleriana</i>	h	1
<i>Heliotropium crispatum</i>	h	n
<i>Heliotropium crispatum</i>	h	1
<i>Hibiscus sturtii</i>	s3	2
<i>Neptunia dimorphantha</i>	s3	1
<i>Operculina aequisejala</i>	h	1
<i>Operculina aequisejala</i>	cr	1
<i>Operculina aequisejala</i>	h	n
<i>Polygala glaucifolia</i>	h	n
<i>Ptilotus carinatus</i>	h	n
<i>Ptilotus gomphrenoides</i>	h	n
<i>Rhynchosia minima</i>	h	1
<i>Sida fibulifera</i>	h	1
<i>Tephrosia</i> sp. clay soils (S. van Leeuwen et al. PBS 0273)	h	1
<i>Tephrosia</i> sp. Newman (A.A. Mitchell PRP 29)	s3	1
<i>Themeda</i> sp. Hamersley Station (M.E. Trudgen 11431)	tg	1
<i>Vigna</i> sp. Hamersley Clay (A.A. Mitchell PRP 113)	cr	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/19/2022, 7/21/2022

Site: C8B-033 **Coordinates:** 686385 mE, 7563231 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q

Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Hill

Rock Type: Basalt gravel (20%), stones (10%)

Soil Type: Red-brown fine sand loose soil (40%)

Fire Age: Moderate (1-5 yrs)

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia epactia* with Open Mid Shrubland of *Acacia inaequilatera*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia inaequilatera</i>	s2	3
<i>Bonamia pilbarensis</i>	s3	n
<i>Calocephalus beardii</i>	h	n
<i>Corchorus lasiocarpus</i> subsp. <i>parvus</i>	s3	1
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	h	1
<i>Hakea lorea</i> subsp. <i>lorea</i>	s3	n
<i>Hakea lorea</i> subsp. <i>lorea</i>	s3	n
<i>Heliotropium tenuifolium</i>	s3	1
<i>Indigofera monophylla</i>	s3	1
<i>Jasminum didymum</i> subsp. <i>lineare</i>	s3	n
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s3	n
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s3	1

<i>Triodia epactia</i>	hg	4
<i>Triodia wiseana</i>	hg	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/18/2022, 7/21/2022
Site: C8B034 **Coordinates:** 685629 mE, 7562679 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Basalt hill

Rock Type: Basalt boulders (20%), stones (15%)

Soil Type: Red-brown fine sand loose soil (30%)

Fire Age: Old (> 5yrs)

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia epactia* with Sparse Low Shrubland of *Acacia adoxa* var. *adoxo*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia adoxa</i> var. <i>adoxo</i>	s3	2
<i>Acacia colei</i> var. <i>colei</i>	s3	1
<i>Acacia inaequilatera</i>	s1	1
<i>Acacia synchronicia</i>	s2	n
<i>Acacia tenuissima</i>	s3	1
<i>Acacia tenuissima</i>	s3	1
<i>Corymbia hamersleyana</i>	t3m	1
<i>Cucumis variabilis</i>	cr	n
<i>Dampiera candidans</i>	s3	n
<i>Dodonaea coriacea</i>	s3	1
<i>Euphorbia tannensis</i>	s2	n
<i>Indigofera monophylla</i>	s3	1

<i>Indigofera monophylla</i>	s3	1
<i>Paraneurachne muelleri</i>	tg	n
<i>Ptilotus calostachyus</i>	s3	n
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s3	n
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s3	1
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	h	n
<i>Triodia epactia</i>	hg	4
<i>Triodia epactia</i>	hg	1
<i>Triodia wiseana</i>	hg	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/18/2022, 7/21/2022
Site: C8B035 **Coordinates:** 684888 mE, 7562124 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Basalt hill

Rock Type: Basalt gravel (10%), stones (20%), Boulders (40%)

Soil Type: Red-brown fine sand loose soil (20%)

Fire Age: Moderate (1-5 yrs)

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia wiseana* with Isolated Mid Shrubs of *Acacia inaequilatera*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia adsurgens</i>	s3	n
<i>Acacia inaequilatera</i>	s3s2	1
<i>Corchorus lasiocarpus</i> subsp. <i>parvus</i>	s3	n
<i>Indigofera monophylla</i>	s3	1
<i>Polycarpaea longiflora</i>	h	n
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s3	1
<i>Themeda triandra</i>	tg	1
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	h	1
<i>Triodia wiseana</i>	hg	4

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/18/2022, 7/25/2022
Site: C8b-036 **Coordinates:** 685217 mE, 7560559 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Gilgai upland

Rock Type: Basalt rocks (20%)

Soil Type: Orange-brown clay-loam deep cracking clay (40%)

Fire Age: Moderate (1-5 yrs)

Condition: Good

Notes: grazing

Vegetation Description: Open Tussock Grassland of *Eragrostis xerophila* with Sparse Low Shrubland of *Sida* sp. L (A. M. Ashby 4202).



TAXA

Taxon	Height Code	Cover Code
<i>*Flaveria trinervia</i>	h	n
<i>Abutilon malvifolium</i>	h	n
<i>Aristida latifolia</i>	tg	1
<i>Astrebla pectinata</i>	tg	1
<i>Boerhavia paludosa</i>	h	1
<i>Calocephalus pilbarensis</i>	h	1
<i>Crotalaria dissitiflora</i> subsp. <i>benthamiana</i>	h	1
<i>Crotalaria medicaginea</i> var. <i>neglecta</i>	h	1
<i>Crotalaria medicaginea</i> var. <i>neglecta</i>	h	n
<i>Cucumis variabilis</i>	cr	1
<i>Dolichocarpa</i> sp. Hamersley Station (A.A. Mitchell PRP 1479)	h	n
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	h	1

<i>Enneapogon caerulescens</i>	tg	1
<i>Eragrostis xerophila</i>	tg	3
<i>Euphorbia coghlanii</i>	h	1
<i>Euphorbia inappendiculata</i> var. <i>inappendiculata</i>	h	n
<i>Goodenia muelleriana</i>	h	n
<i>Goodenia muelleriana</i>	h	1
<i>Goodenia muelleriana</i>	h	n
<i>Hibiscus brachysiphonius</i>	h	n
<i>Hibiscus brachysiphonius</i>	h	n
<i>Hibiscus brachysiphonius</i>	s3 pros	1
<i>Neptunia dimorphantha</i>	h	1
<i>Operculina aequisejala</i>	h	1
<i>Operculina aequisejala</i>	h	n
<i>Portulaca oleracea</i>	h	n
<i>Ptilotus aevroides</i>	h	n
<i>Ptilotus carinatus</i>	h	1
<i>Ptilotus gomphrenoides</i>	h	1
<i>Rhynchosia minima</i>	cr	n
<i>Roepera eichleri</i>	h	n
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	s3	n
<i>Sida</i> sp. L (A.M. Ashby 4202)	s3	2
<i>Solanum lasiophyllum</i>	s3	n
<i>Sporobolus australasicus</i>	tg	1
<i>Streptoglossa ?bubakii</i>	h	n
<i>Striga squamigera</i>	h	n
<i>Swainsona thompsoniana</i>	h	1
<i>Tephrosia</i> sp. clay soils (S. van Leeuwen et al. PBS 0273)	s3	1
<i>Tephrosia</i> sp. clay soils (S. van Leeuwen et al. PBS 0273)	h	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/18/2022, 7/25/2022
Site: C8b-037 **Coordinates:** 684957 mE, 7559984 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Rolling hill gentle

Rock Type: Basalt stones (60%), Ironstone stones (20%)

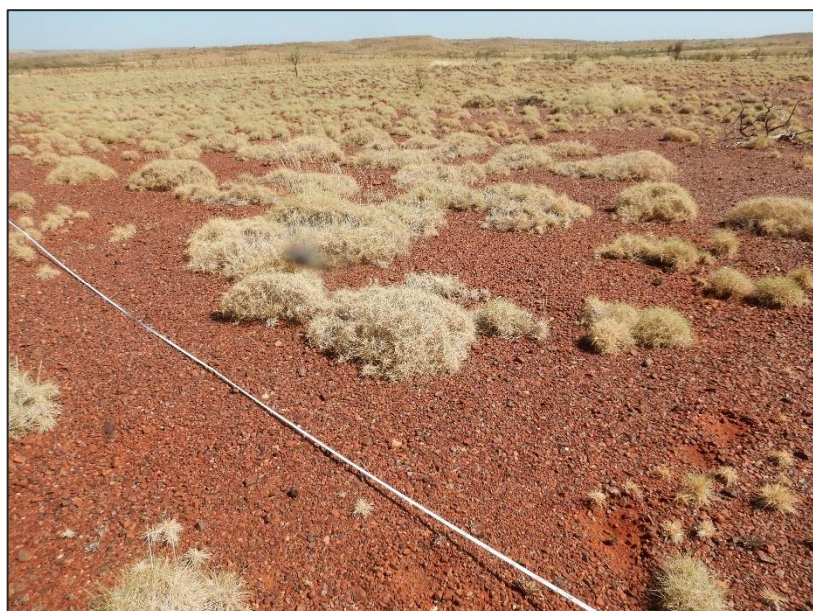
Soil Type: Red-orange sandy-loam loose soil (2%)

Fire Age: Moderate (1-5 yrs)

Condition: Good

Notes: Check geology, not basalt, not granite. there is some weathered basalt in site though; grazing

Vegetation Description: Open Hummock Grassland of *Triodia wiseana* with Isolated Tall Shrubs of *Acacia inaequilatera* and Forbland of *Ptilotus aervoides*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia inaequilatera</i>	s1	1
<i>Aristida contorta</i>	tg	1
<i>Bonamia pilbarensis</i>	s3	n
<i>Corchorus</i> sp.	s3	n
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	h	n
<i>Goodenia stobbsiana</i>	s3	1
<i>Grevillea wickhamii</i>	s2	n
<i>Hakea lorea</i> subsp. <i>lorea</i>	s3	n
<i>Hakea lorea</i> subsp. <i>lorea</i>	s3	n
<i>Indigofera monophylla</i>	s3	n
<i>Polycarpaea corymbosa</i>	h	1
<i>Ptilotus aervoides</i>	h	1

<i>Ptilotus rotundifolius</i>	s3	1
<i>Roepera eichleri</i>	h	n
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	s3	n
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s3	n
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s3	n
<i>Trigastrotheca molluginea</i>	h	n
<i>Triodia wiseana</i>	hg	3

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/18/2022,

Site: C8b-038 **Coordinates:** 684542 mE, 7558749 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 25x100 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Drainage line

Rock Type: Basalt boulders (30%), Basalt and calcrete stones (30%)

Soil Type: Red-brown sandy-clay loose soil (3%)

Fire Age: Old (> 5yrs)

Condition: Good

Notes: grazing

Vegetation Description:



TAXA

Taxon	Height Code	Cover Code
<i>Acacia bivenosa</i>	s2	1
<i>Acacia coriacea</i> subsp. <i>pendens</i>	s2s1	1
<i>Acacia glaucocaesia</i>	s2	1
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>	s2	1
<i>Acacia tumida</i>	s2	2
<i>Aristida latifolia</i>	tg	1
<i>Arivela viscosa</i>	h	n
<i>Astrebla pectinata</i>	h	1
* <i>Cenchrus ciliaris</i>	tg	1
<i>Cyperus vaginatus</i>	sdg	
<i>Cyperus vaginatus</i>	sdg	1
<i>Eragrostis xerophila</i>	tg	1
<i>Eulalia aurea</i>	tg	1

<i>Melaleuca bracteata</i>	t3	1
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	s2	n
<i>Sida</i> sp. L (A.M. Ashby 4202)	s3	n
<i>Stemodia viscosa</i>	h	1
<i>Triodia angusta</i>	hg	3

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/18/2022, 7/21/2022

Site: C8B039 **Coordinates:** 685263 mE, 7561950 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q

Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Rolling hill

Rock Type: Basalt and calcrete gravel (20%), stones (10%)

Soil Type: Red-brown fine sand loose soil (30%)

Fire Age: Moderate (1-5 yrs)

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia wiseana*, *T. epactia* with Isolated Mid Shrubs of *Acacia inaequilatera*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia ancistrocarpa</i>	s2	1
<i>Acacia inaequilatera</i>	s2	1
<i>Aristida contorta</i>	tg	1
<i>Calocephalus beardii</i>	h	n
<i>Corchorus lasiocarpus</i> subsp. <i>parvus</i>	s3	n
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	h	n
<i>Eremophila forrestii</i> subsp. <i>forrestii</i>	s2	1
<i>Euphorbia careyi</i>	s3	1
<i>Gossypium robinsonii</i>	s3	n
<i>Hibiscus sturtii</i> var. <i>platyklamys</i>	s3	n
<i>Indigofera monophylla</i>	s3	n
<i>Portulaca oleracea</i>	h	n

<i>Ptilotus exaltatus</i>	h	n
<i>Rhynchosia minima</i>	s3	1
<i>Rhynchosia minima</i>	cr	n
<i>Salsola australis</i>	h	1
<i>Sida echinocarpa</i>	s3	n
<i>Triodia epactia</i>	hg	1
<i>Triodia epactia</i>	hg	1
<i>Triodia epactia</i>	hg	1
<i>Triodia epactia</i>	hg	1
<i>Triodia wiseana</i>	hg	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/19/2022,
Site: C8bx-002 **Coordinates:** 688204 mE, 7565959 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Drainage line

Rock Type:

Soil Type: Orange-brown coarse sand loose soil (2%)

Fire Age: Old (> 5yrs)

Condition: Degraded

Notes: More of a pool than a drainage line; weeds, grazing, road

Vegetation Description: Low Woodland of *Eucalyptus camaldulensis*, *Corymbia hamersleyana* with Open Sedgeland of *Cyperus vaginatus* and Sparse Mid Shrubland of *Acacia pyrifolia*, *A. bivenosa*, *Flueggea virosa* subsp. *melanthesoides*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia bivenosa</i>	s1	2
<i>Acacia colei</i> var. <i>colei</i>	s1	1
<i>Acacia coriacea</i> subsp. <i>pendens</i>	s1	1
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>	s1	2
<i>Acacia trachycarpa</i>	s2	1
<i>Arivela viscosa</i>	h	n
<i>Boerhavia ?gardneri</i>	h	n
* <i>Cenchrus ciliaris</i>	tg	3
<i>Corymbia hamersleyana</i>	t3	2
<i>Cucumis variabilis</i>	cr	n
<i>Cymbopogon ambiguus</i>	tg	1

<i>Cyperus vaginatus</i>	sdg	2
<i>Eucalyptus camaldulensis</i>	t3	3
<i>Flueggea virosa</i> subsp. <i>melanthesoides</i>	s1	1
<i>Gossypium robinsonii</i>	s3	1
<i>Jasminum didymum</i> subsp. <i>lineare</i>	cl	n
<i>Melaleuca glomerata</i>	s3	1
<i>Polycarpaea longiflora</i>	h	n
<i>Santalum acuminatum</i>	s2	1
<i>Tephrosia rosea</i> var. Fortescue creeks (M.I.H. Brooker 2186)	s2	1
<i>Triodia epactia</i>	hg	1
<i>Triodia pungens</i>	hg	1
<i>Vachellia farnesiana</i>	s1	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/19/2022, 7/21/2022
Site: C8bX-030 **Coordinates:** 686478 mE, 7564162 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Range

Rock Type: Basalt boulders (20%), Basalt Stones (10%)

Soil Type: Red-orange sandy-loam loose soil (2%)

Fire Age: Old (> 5yrs)

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia wiseana*, *T. epactia* with Sparse Mid Shrubland of *Acacia inaequilatera* and Isolated Low Trees of *Corymbia hamersleyana*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia colei</i> var. <i>colei</i>	s3	n
<i>Acacia inaequilatera</i>	s2	1
<i>Acacia tenuissima</i>	s3	n
<i>Bonamia pilbarensis</i>	s3	n
<i>Calocephalus beardii</i>	h	n
<i>Corchorus lasiocarpus</i> subsp. <i>lasiocarpus</i>	s3	1
<i>Corchorus lasiocarpus</i> subsp. <i>lasiocarpus</i>	s3	1
<i>Corymbia hamersleyana</i>	m	1
<i>Dampiera candidans</i>	s3	1
<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>	s2	n
<i>Indigofera monophylla</i>	s3	1
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s2	1

<i>Streptoglossa ?decurrens</i>	h	n
<i>Tribulus suberosus</i>	s2	n
<i>Triodia epactia</i>	hg	4
<i>Triodia wiseana</i>	hg	2

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/19/2022, 7/21/2022

Site: C8bX-1 **Coordinates:** 687619 mE, 7565912 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q

Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Range gentle west facing slope (footslope)

Rock Type: Basalt boulders (40%), Basalt stones (30%)

Soil Type: Red sandy-loam loose soil (2%)

Fire Age: Old (> 5yrs)

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia epactia* with Sparse Tall Shrubland of *Acacia inaequilatera* and Isolated Low Shrubs of *Indigofera rugosa*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia bivenosa</i>	s2	n
<i>Acacia inaequilatera</i>	s1	2
<i>Boerhavia coccinea</i>	h	n
<i>Corymbia hamersleyana</i>	t3	n
<i>Gossypium australe</i>	s3	1
<i>Gossypium robinsonii</i>	s3	n
<i>Hakea lorea</i> subsp. <i>lorea</i>	s3	n
<i>Hakea lorea</i> subsp. <i>lorea</i>	s3	n
<i>Indigofera monophylla</i>	s3	1
<i>Indigofera rugosa</i>	s3	1
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s2	n
<i>Triodia epactia</i>	hg	4
<i>Triodia epactia</i>	hg	4

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy

Dates: 3/17/2022, 7/20/2022

Site: C1B013 **Coordinates:** mE, mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Basalt hill

Rock Type: Basalt gravel (20%), stones (10%)

Soil Type: Red-brown fine sand loose soil (20%)

Fire Age: Old (> 5yrs)

Condition: Excellent

Notes: EK78 for rock type

Vegetation Description: Open Hummock Grassland of *Triodia epactia* with Sparse Mid Shrubland of *Acacia inaequilatera*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia inaequilatera</i>	s2s3	2
<i>Arivela viscosa</i>	h	1
<i>Boerhavia gardneri</i>	h	1
<i>Bonamia pilbarensis</i>	s3	n
<i>Bulbostylis barbata</i>	h	n
<i>Dolichocarpa crouchiana</i>	h	n
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	h	2
<i>Enneapogon caerulescens</i>	tg	n
<i>Eriachne pulchella</i> subsp. <i>pulchella</i>	tg	1
<i>Euphorbia careyi</i>	s3	n
<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>	s2	1
<i>Indigofera monophylla</i>	s3	1

<i>Indigofera monophylla</i>	s3	1
<i>Poaceae</i> sp.	tg	1
<i>Portulaca oleracea</i>	h	n
<i>Ptilotus auriculifolius</i>	h	1
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	s3	1
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)	s3	n
<i>Solanum lasiophyllum</i>	s3	n
<i>Tribulus hirsutus</i>	s3	n
<i>Tribulus platypterus</i>	s3	n
<i>Tribulus suberosus</i>	s3	1
<i>Trigastrotheca molluginea</i>	h	n
<i>Triodia epactia</i>	hg	1
<i>Triodia epactia</i>	hg	3

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/11/2022,
Site: MEN-007 **Coordinates:** 675583 mE, 7557309 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Hill gentle north-west facing slope

Rock Type: Basalt stones (40%), Basalt boulders (30%)

Soil Type: Red-orange sandy-loam loose soil (2%)

Fire Age: Moderate (1-5 yrs)

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia brizoides* with Isolated Low Trees of *Eucalyptus leucophloia* subsp. *leucophloia* and Isolated Mid Shrubs of *Senna glutinosa* subsp. *glutinosa*, *S. glutinosa* subsp. *xluerssenii*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia adoxa</i> var. <i>adoxo</i>	s3	1
<i>Capparis spinosa</i>	s3	n
<i>Corchorus lasiocarpus</i>	s3	n
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	t3 4m	1
<i>Ptilotus obovatus</i>	s3	n
<i>Ptilotus rotundifolius</i>	s3	n
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s3	1
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s2	1
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s2	n
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)	s3	n
<i>Triodia brizoides</i>	hg	4

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/11/2022,

Site: MEN-008 **Coordinates:** 677666 mE, 7555735 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 25x100 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Creek (bank)

Rock Type: Basalt stones (30%)

Soil Type: Brown sandy-clay loose soil (10%)

Fire Age: None evident

Condition: Excellent

Notes:

Vegetation Description: Closed Hummock Grassland of *Triodia brizoides*, *T. epactia* with Low Shrubland of *Acacia arida*, *A. maitlandii* with Low Woodland of *Eucalyptus leucophloia* subsp. *leucophloia* with Open Tall Shrubland of *A. tumida* and Sparse Mid Shrubland of *A. tumida*.



TAXA

Taxon	Height Code	Cover Code
<i>Abutilon ?lepidum</i>	s3	1
<i>Acacia adoxa</i> var. <i>adoxo</i>	s3	1
<i>Acacia aptaneura</i>	s3	n
<i>Acacia arida</i>	s3	4
<i>Acacia bivenosa</i>	s2	1
<i>Acacia maitlandii</i>	s3	1
<i>Acacia tumida</i> var. <i>pilbarensis</i>	s2	2
<i>Afrohybanthus aurantiacus</i>	s3	1
<i>Bonamia erecta</i>	s3	1
<i>Capparis lasiantha</i>	s3	n
<i>Dampiera candidans</i>	h	1

<i>Dampiera candidans</i>	s3	1
<i>Ehretia saligna</i> var. <i>saligna</i>	s1	n
<i>Eriachne mucronata</i>	tg	1
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	t4 5m	3
<i>Grevillea wickhamii</i>	s2	2
<i>Indigofera monophylla</i>	s3	1
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	s3	n
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	s3	1
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s2	1
<i>Triodia brizoides</i>	hg	2
<i>Triodia epactia</i>	hg	4

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/11/2022,

Site: MEN-009 **Coordinates:** 677292 mE, 7557139 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Hill moderate south-west facing slope (midslope)

Rock Type: Basalt surface plates (20%), stones (40%)

Soil Type: Red-orange sandy-loam loose soil (5%)

Fire Age: Moderate (1-5 yrs)

Condition: Excellent

Notes: Footslope to midslope

Vegetation Description: Open Mid Shrubland of *Acacia maitlandii* with Open Hummock Grassland of *Triodia epactia* and Isolated Low Trees of *Eucalyptus leucophloia* subsp. *leucophloia*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia adoxa</i> var. <i>adoxo</i>	s3	n
<i>Acacia bivenosa</i>	s2	1
<i>Acacia maitlandii</i>	s2	3
<i>Acacia atkinsiana</i>	s2s3	2
<i>Eriachne lanata</i>	s3	n
<i>Eriachne mucronata</i>	tg	1
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	t3	1
<i>Goodenia stobbsiana</i>	s3	n
<i>Goodenia cusackiana</i>	s3	n
<i>Indigofera monophylla</i>	s3	1
<i>Psydrax suaveolens</i>	s3	1
<i>Ptilotus obovatus</i>	s3	1
<i>Triodia epactia</i>	hg	3

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/11/2022,
Site: MEN-011 **Coordinates:** 678224 mE, 7556092 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Hill (midslope)

Rock Type: Basalt cobble (30%)

Soil Type: Brown sandy-loam loose soil

Fire Age: Old (> 5yrs)

Condition: Excellent

Notes:

Vegetation Description: Closed Hummock Grassland of *Triodia brizoides*, *T. epactia* with Isolated Low Trees of *Eucalyptus leucophloia* subsp. *leucophloia*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia bivenosa</i>	s2	1
<i>Acacia maitlandii</i>	s3	1
<i>Bonamia pilbarensis</i>	h	n
<i>Eriachne mucronata</i>	tg	1
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	t 3-5m	1
<i>Goodenia cusackiana</i>	s3	n
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s3	1
<i>Sida</i> sp. <i>Excedentifolia</i> (J.L. Egan 1925)	s3	n
<i>Tephrosia</i> sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	s3	n
<i>Triodia brizoides</i>	hg	4
<i>Triodia epactia</i>	hg	2

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/12/2022,

Site: MEN-012 **Coordinates:** 668491 mE, 7556905 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Hill very gentle (midslope)

Rock Type: Basalt shale (60%)

Soil Type: Red-brown sandy-loam surface crust (10%)

Fire Age: Old (> 5yrs)

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia wiseana*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia ancistrocarpa</i>	s3	1
<i>Acacia bivenosa</i>	s3	1
<i>Capparis umbonata</i>	s2	n
<i>Eremophila longifolia</i>	s2	n
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	t3 4m	n
<i>Ptilotus obovatus</i>	s3	n
<i>Ptilotus rotundifolius</i>	s3	1
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s3	1
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	s3	n
<i>Triodia wiseana</i>	hg	4

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/12/2022,
Site: MEN-013 **Coordinates:** 668666 mE, 7557607 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Hill gentle

Rock Type: Basalt stones (40%), Ironstone stones (10%)

Soil Type: Red-orange sandy-loam loose soil (2%)

Fire Age: Moderate (1-5 yrs)

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia basedowii* with Isolated Low Trees of *Eucalyptus leucophloia* subsp. *leucophloia* with Isolated Tall Shrubs of *Hakea chordophylla* and Isolated Low Shrubs of *Gompholobium oreophilum*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia adoxa</i> var. <i>adoxo</i>	s3	n
<i>Acacia bivenosa</i>	s3	1
<i>Acacia maitlandii</i>	s3	n
<i>Dampiera candidans</i>	s3	1
<i>Dodonaea coriacea</i>	s3	1
<i>Eriachne ciliata</i>	tg	1
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	t3	1
<i>Gompholobium oreophilum</i>	s3	1
<i>Goodenia stobbsiana</i>	s3	n
<i>Hakea chordophylla</i>	s1	1
<i>Hibiscus sturtii</i> var. <i>platyklamys</i>	s3	1

<i>Indigofera monophylla</i>	s3	1
<i>Ptilotus calostachyus</i>	h	n
<i>Solanum lasiophyllum</i>	s3	n
<i>Triodia basedowii</i>		1
<i>Triodia basedowii</i>	HG	3

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/12/2022,
Site: MEN-014 **Coordinates:** 667517 mE, 7557208 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Hill gentle (lowerslope)

Rock Type: Basalt cobble (40%)

Soil Type: Red-brown clay-loam surface crust (10%)

Fire Age: Old (> 5yrs)

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia epactia*, *T. brizoides* with Open Low Woodland of *Eucalyptus leucophloia* subsp. *leucophloia* and Sparse Mid Shrubland of *Acacia bivenosa*.



TAXA

Taxon	Height Code	Cover Code
<i>Acacia acradenia</i>	s2	n
<i>Acacia adoxa</i> var. <i>adoxo</i>	s3	2
<i>Acacia bivenosa</i>	s2	2
<i>Bonamia pilbarensis</i>	h	n
<i>Eriachne lanata</i>	tg	1
<i>Eriachne lanata</i>	tg	1
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	T3 4m	2
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s2	1
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s2	1
<i>Senna glutinosa</i> subsp. <i>xluerssenii</i>	s2	1
<i>Triodia brizoides</i>	hg	3
<i>Triodia epactia</i>	hg	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 7/25/2022,

Site: C1B2X1 **Coordinates:** 699862 mE, 7566640 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Drainage line

Rock Type: Granite boulders (10%), Basalt cobble (30%)

Soil Type: Red-orange sandy-clay loose soil (20%)

Fire Age: Old (> 5yrs)

Condition: Good

Notes: grazing, weeds

Vegetation Description: Open Mid Shrubland of *Acacia pyrifolia*, *Corchorus lasiocarpus* subsp. *lasiocarpus* with Open Low Woodland of *Acacia coriacea* subsp. *pendens*, *Atalaya hemiglauca* with Sparse Sedgeland of *Cyperus vaginatus* and Isolated Tall Trees of *Eucalyptus camaldulensis*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia acradenia</i>	s1	n
<i>Acacia coriacea</i> subsp. <i>pendens</i>	t3	1
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>	s1	2
<i>Acacia trachycarpa</i>	s2	1
* <i>Aerva javanica</i>	s3	1
<i>Afrohybanthus aurantiacus</i>	s3	1
<i>Amaranthus undulatus</i>	h	n
<i>Arivela viscosa</i>	h	1
<i>Atalaya hemiglauca</i>	t3	1
<i>Boerhavia paludosa</i>	h	1
<i>Corchorus incanus</i> subsp. <i>incanus</i>	s2	n

<i>Corchorus lasiocarpus</i> subsp. <i>lasiocarpus</i>	s2	1
<i>Corchorus lasiocarpus</i> subsp. <i>lasiocarpus</i>	s3	2
<i>Corchorus lasiocarpus</i> subsp. <i>parvus</i>	s3	1
<i>Crotalaria medicaginea</i> var. <i>neglecta</i>	s3	n
<i>Cucumis variabilis</i>	cr	n
<i>Cymbopogon obtectus</i>	tg	2
<i>Cyperus vaginatus</i>	sdg	2
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	h	1
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	h	n
<i>Eremophila longifolia</i>	s2	1
<i>Eucalyptus camaldulensis</i>	t3t2	1
<i>Euphorbia careyi</i>	h	1
<i>Euphorbia trigonosperma</i>	h	1
<i>Flueggea virosa</i> subsp. <i>melanthesoides</i>	s2	1
<i>Gomphrena cunninghamii</i>	h	n
<i>Gossypium robinsonii</i>	s2	n
<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>	s3	1
<i>Grevillea wickhamii</i>	s2	1
<i>Hakea lorea</i> subsp. <i>lorea</i>	t3	1
<i>Indigofera monophylla</i>	s3	n
<i>Jasminum didymum</i> subsp. <i>lineare</i>	s3	n
<i>Nicotiana occidentalis</i>	h	n
<i>Polycarpaea longiflora</i>	h	1
<i>Polymeria ambigua</i>	s3	n
<i>Ptilotus clementii</i>	h	n
<i>Ptilotus exaltatus</i>	h	n
<i>Rhynchosia minima</i>	cr	n
<i>Stemodia grossa</i>	s3	1
<i>Tephrosia rosea</i> var. Fortescue creeks (M.I.H. Brooker 2186)	s3	1
<i>Trachymene oleracea</i>	h	n
<i>Triodia epactia</i>	hg	2
<i>Triumfetta propinqua</i>	s3	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 7/25/2022,

Site: C1B2X2 **Coordinates:** 701015 mE, 7568000 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Ridge

Rock Type: Basalt stones (60%)

Soil Type: Red-orange sandy-clay loose soil (10%)

Fire Age: Moderate (1-5 yrs)

Condition: Excellent

Notes: The hill to the north

Vegetation Description: Open Hummock Grassland of *Triodia epactia* with Sparse Low Shrubland of *Indigofera monophylla* with Isolated Low Trees of *Corymbia hamersleyana* and Isolated Tall Shrubs of *Acacia inaequilatera*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia acradenia</i>	s2	1
<i>Acacia bivenosa</i>	s3	n
<i>Acacia inaequilatera</i>	s1	2
<i>Corymbia hamersleyana</i>	t3	1
<i>Eriachne lanata</i>	tg	n
<i>Eriachne mucronata</i>	tg	
<i>Eremophila longifolia</i>	s2	1
<i>Gomphrena cunninghamii</i>	h	n
<i>Goodenia cusackiana</i>	h	1
<i>Indigofera monophylla</i>	s3	2
<i>Ptilotus calostachyus</i>	h	1

<i>Ptilotus clementii</i>	h	n
<i>Senna glutinosa</i> subsp. <i>x luerssenii</i>	s2	1
<i>Sida clementii</i> / <i>Sida arenicola</i>	s2	1
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)	s3	1
<i>Tephrosia rosea</i> var. Fortescue creeks (M.I.H. Brooker 2186)	s3	n
<i>Triodia epactia</i>	hg	3

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 7/26/2022,

Site: C1B2X5 **Coordinates:** 700032 mE, 7564690 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Basalt hill gentle (hilltop)

Rock Type: Basalt boulders (50%)

Soil Type: Red-brown clay-loam loose soil (10%)

Fire Age: Moderate (1-5 yrs)

Condition: Excellent

Notes: Deeply weathered basalt

Vegetation Description: Open Hummock Grassland of *Triodia epactia* with Sparse Tall Shrubland of *Acacia inaequilatera*, *Hakeae lorea* with Sparse Forbland of *Ptilotus clementii* and Isolated Low Trees of *Corymbia hamersleyana*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia bivenosa</i>	s3	n
<i>Acacia inaequilatera</i>	t3s1	1
<i>Acacia orthocarpa</i>	s3	1
<i>Aristida contorta</i>	tg	1
<i>Arivela viscosa</i>	h	n
<i>Boerhavia coccinea</i>	s3	1
<i>Boerhavia coccinea</i>	h	n
<i>Bonamia pilbarensis</i>	h	n
<i>Corchorus lasiocarpus</i> subsp. <i>parvus</i>	s3	1
<i>Corchorus tectus</i>	s3	n
<i>Corymbia hamersleyana</i>	t3	1

<i>Dolichocarpa</i> sp. Hamersley Station (A.A. Mitchell PRP 1479)	h	n
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	h	2
<i>Eriachne pulchella</i> subsp. <i>pulchella</i>	tg	n
<i>Euphorbia australis</i> var. <i>hispidula</i>	h	n
<i>Hakea lorea</i> subsp. <i>lorea</i>	t3s1	1
<i>Hibiscus sturtii</i> var. <i>platyklamys</i>	s3	n
<i>Indigofera monophylla</i>	s3	1
<i>Jasminum didymum</i> subsp. <i>lineare</i>	s3	n
<i>Ptilotus clementii</i>	h	2
<i>Sida echinocarpa</i>	s3	1
<i>Solanum phlomoides</i>	s3	n
<i>Tribulus hirsutus</i>	h	n
<i>Tribulus platypterus</i>	s3	n
<i>Triodia epactia</i>	hg	4

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 7/26/2022,

Site: C1B2X6 **Coordinates:** 699325 mE, 7564115 mN **Datum:** GDA95 MGA Zone 50

Site Type: R

Site Size: 10 x 250 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Gully - major gentle

Rock Type: Basalt boulders (60%)

Soil Type: Red-orange sandy-clay

Fire Age: Old (> 5yrs)

Condition: Excellent

Notes:

Vegetation Description: Open Tall Shrubland of *Acacia coriacea* subsp. *pendens* and *Flueggea virosa* subsp. *melanthesoides* with Open Mid Shrubland of *Acacia pyrifolia*, *Flueggea virosa* subsp. *melanthesoides* and *Corchorus lasiocarpus* subsp. *lasiocarpus* and Sparse Tussock Grassland of *Eriachne lanata* and *Enneapogon*



TAXA

Taxon	Height Code	Cover Code
<i>Abutilon</i> sp. <i>Dioicum</i> (A.A. Mitchell PRP 1618)	s3s2	2
<i>Acacia coriacea</i> subsp. <i>pendens</i>	t3s1	1
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>	s3	1
* <i>Aerva javanica</i>	s3	2
<i>Afrohybanthus aurantiacus</i>	s3	1
<i>Arivela viscosa</i>	h	1
<i>Atalaya hemiglauc</i>	t3	1
<i>Boerhavia paludosa</i>	s3	1
* <i>Cenchrus setiger</i>	tg	1
<i>Corchorus lasiocarpus</i> subsp. <i>lasiocarpus</i>	s2	1
<i>Corchorus lasiocarpus</i> subsp. <i>parvus</i>	s2	1

<i>Cucumis variabilis</i>	cr	1
<i>Cymbopogon oblectus</i>	tg	1
<i>Cyperus vaginatus</i>	sdg	1
<i>Dichrostachys spicata</i>	s2	1
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	h	n
<i>Enneapogon caerulescens</i>	tg	1
<i>Eriachne lanata</i>	tg	2
<i>Eriachne</i> sp.	tg	1
<i>Eucalyptus camaldulensis</i>	t3	1
<i>Euphorbia careyi</i>	h	1
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>	s3	1
<i>Euphorbia trigonosperma</i>	h	1
<i>Flueggea virosa</i> subsp. <i>melanthesoides</i>	s1	2
<i>Gomphrena cunninghamii</i>	h	1
<i>Gossypium robinsonii</i>	s2	1
<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>	s1	1
<i>Hakea lorea</i> subsp. <i>lorea</i>	t3	1
<i>Indigofera monophylla</i>	s3	1
<i>Indigofera rugosa</i>	s3	1
<i>Notoleptopus decaisnei</i>	h	n
<i>Polycarpaea longiflora</i>	h	n
<i>Polymeria ambigua</i>	s3h	1
<i>Rhynchosia minima</i>	cr	1
<i>Sida echinocarpa</i>	s3	n
<i>Stemodia grossa</i>	s3	1
<i>Tephrosia rosea</i> var. Fortescue creeks (M.I.H. Brooker 2186)	s3	1
<i>Tephrosia rosea</i> var. Fortescue creeks (M.I.H. Brooker 2186)	s3	n
<i>Tinospora smilacina</i>	cl	n
<i>Trachymene oleracea</i>	h	n
<i>Tribulus suberosus</i>	s2	1
<i>Triodia wiseana</i>	hg	1
<i>Triumfetta chaetocarpa</i>	s3	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 7/25/2022,

Site: C1B2XR1 **Coordinates:** 701358 mE, 7572401 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Ridge steep

Rock Type: Granite boulders (70%)

Soil Type: Orange sandy-clay loose soil

Fire Age: Old (> 5yrs)

Condition: Excellent

Notes:

Vegetation Description: Mid Shrubland of *Sida* sp. Articulation below (A.A. Mitchell PRP 1605) and *Corchorus parviflorus* with Tussock Grassland of *Eriachne mucronata* and Hussock Grassland of *Triodia epactia*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia pruinocarpa</i>	t3	1
<i>Corchorus parviflorus</i>	s2	1
<i>Cymbopogon ambiguus</i>	tg	n
<i>Cyperus hesperius</i>	sdg	n
<i>Eremophila longifolia</i>	s2	1
<i>Eriachne mucronata</i>	tg	2
<i>Gomphrena cunninghamii</i>	s3	n
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s2	1
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s2	1
<i>Sida clementii</i> / <i>Sida arenicola</i>	s2	2
<i>Solanum phlomoides</i>	h	1
<i>Tribulus suberosus</i>	s2	1

<i>Trigastrotheca molluginea</i>	h	1
<i>Triodia epactia</i>	hg	3
<i>Triodia epactia</i>	hg	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 7/25/2022,

Site: C1B2XR2 **Coordinates:** 700440 mE, 7567265 mN **Datum:** GDA95 MGA Zone 50

Site Type: R

Site Size: 15 x 50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Gully - minor

Rock Type: Basalt surface plates (30%), Basalt boulders (20%), Basalt stones (20%)

Soil Type: Red-orange sandy-clay loose soil (10%)

Fire Age: Old (> 5yrs)

Condition: Excellent

Notes: Gully but too small for a quadrat. Approx 15 x 70

Vegetation Description: Open Mid Shrubland of *Acacia pyrifolia* var. *pyrifolia*, *Acacia monticola* and *Flueggea virosa* subsp. *melanthesoides* with Open Hummock Grassland of *Triodia epactia* with Sparse Tall Shrubland of *Atalaya hemiglauca* and Sparse Low Shrubland of *Corchorus lasiocarpus*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia acradenia</i>	s2	1
<i>Acacia monticola</i>	s1	2
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>	s2	2
<i>Afrohybanthus aurantiacus</i>	h	1
<i>Amaranthus undulatus</i>	s3	n
<i>Atalaya hemiglauca</i>	t3	1
<i>Boerhavia coccinea</i>	h	n
<i>Boerhavia paludosa</i>	h	1
<i>Corchorus lasiocarpus</i> subsp. <i>lasiocarpus</i>	s3	1
<i>Cymbopogon obtectus</i>	tg	1
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	h	n

<i>Eriachne lanata</i>	tg	1
<i>Euphorbia trigonosperma</i>	h	n
<i>Flueggea virosa</i> subsp. <i>melanthesoides</i>	s1	1
<i>Grevillea wickhamii</i>	s2	1
<i>Indigofera monophylla</i>	s3	1
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	s3	1
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s3	1
<i>Tephrosia rosea</i> var. Fortescue creeks (M.I.H. Brooker 2186)	s3	1
<i>Trachymene oleracea</i>	h	n
<i>Triodia epactia</i>	hg	3

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 7/21/2022,

Site: C8B2X1 **Coordinates:** 692816 mE, 7572049 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 25x100 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Low rolling hill

Rock Type: Granite stones (30%), Quartz stones (20%)

Soil Type: Orange coarse sand loose soil (10%)

Fire Age: Moderate (1-5 yrs)

Condition: Excellent

Notes: Low rolling granitic foothills / pedislopes. Minor drainage channels are common and impossible to avoid in quadrat.

Vegetation Description: Hummock Grassland of *Triodia epactia* and *Triodia wiseana* with Isolated Tall Shrubs of *Acacia inaequilatera* and Isolated Low Shrubs of *Indigofera monophylla*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia acradenia</i>	s3s2	1
<i>Acacia ancistrocarpa</i>	s3s2	1
<i>Acacia inaequilatera</i>	s1	1
<i>Goodenia microptera</i>	h	1
<i>Hakea lorea</i> subsp. <i>lorea</i>	s1	n
<i>Indigofera monophylla</i>	s3	2
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s2s3	1
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)	s3	n
<i>Tephrosia rosea</i> var. <i>clementii</i>	s3	1
<i>Trigastrotheca molluginea</i>	h	n
<i>Triodia ?brizoides</i>	hg	1

<i>Triodia epactia</i>	hg	4
<i>Triodia wiseana</i>	hg	2

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 7/26/2022,

Site: C8B2X10 **Coordinates:** 694401 mE, 7575977 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Minor depression

Rock Type: Granite stones (5%)

Soil Type: Orange coarse sand loose soil (40%)

Fire Age: Moderate (1-5 yrs)

Condition: Very good

Notes: Low lying area between granite undulating plains; grazing, exploration activities

Vegetation Description: Open Low Shrubland of *Sida clementii*, *Bonamia erecta* with Open Tussock Grassland of *Aristida holathera* var. *holathera*, *Eragrostis eriopoda* and *Aristida contorta* and Sparse Tall Shrubland of *Acacia ancistrocarpa* and *Acacia inaequilatera*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia ancistrocarpa</i>	s1	2
<i>Acacia inaequilatera</i>	s2	1
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>	s2	1
<i>Acacia trachycarpa</i>	s3	1
<i>Afrohybanthus aurantiacus</i>	s3	n
<i>Aristida contorta</i>	tg	2
<i>Aristida holathera</i> var. <i>holathera</i>	tg	2
<i>Arivela viscosa</i>	h	n
<i>Boerhavia paludosa</i>	h	1
<i>Bonamia erecta</i>	s3	2
* <i>Cenchrus setiger</i>	tg	1

<i>Chrysopogon fallax</i>	tg	1
<i>Corchorus lasiocarpus</i> subsp. <i>parvus</i>	s2	1
<i>Corymbia hamersleyana</i>	t3	n
<i>Cullen stipulaceum</i>	s2	1
<i>Eragrostis eriopoda</i>	tg	3
<i>Euphorbia australis</i> var. <i>hispidula</i>	h	1
<i>Goodenia microptera</i>	h	1
<i>Gossypium robinsonii</i>	s2	1
<i>Hakea lorea</i> subsp. <i>lorea</i>	s3	n
<i>Indigofera monophylla</i>	s3	2
<i>Paraneurachne muelleri</i>	tg	1
<i>Senna artemisioides</i> subsp. <i>helmsii</i>	s2	1
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	s3	n
<i>Sida clementii</i>	s3	3
<i>Sida</i> sp. L (A.M. Ashby 4202)	s3	1
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)	s3	1
<i>Solanum phlomoides</i>	s3	n
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	s3	1
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	s3	1
<i>Tephrosia supina</i>	s3	1
<i>Trigastrotheca molluginea</i>	h	1
<i>Triodia epactia</i>	hg	1
<i>Zornia albiflora</i>	s3	n

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 7/25/2022,

Site: C8B2X11 **Coordinates:** 695037 mE, 7576172 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 25x100 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Drainage basin

Rock Type: Quartz stones (10%)

Soil Type: Orange-white fine sand loose soil (40%)

Fire Age: Old (> 5yrs)

Condition: Good

Notes: grazing, weeds

Vegetation Description: Sparse Mid Shrubland of *Acacia trachycarpa*, *Atalaya hemiglauca* and *Grevillea wickhamii* with Sparse Tussock Grassland of **Cenchrus setiger* with Isolated Low Trees of *Atalaya hemiglauca* and Isolated Tall Shrubs of *Acacia trachycarpa* and *Grevillea wickhamii*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia coriacea</i> subsp. <i>pendens</i>	s1	1
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>	s2	1
<i>Acacia trachycarpa</i>	s2s1	2
<i>Acacia trachycarpa</i>	s2	n
<i>Afrohybanthus aurantiacus</i>	s3	1
<i>Amaranthus undulatus</i>	h	n
<i>Arivela viscosa</i>	h	1
<i>Atalaya hemiglauca</i>	t3s1	2
<i>*Cenchrus setiger</i>	tg	2
<i>Corchorus lasiocarpus</i> subsp. <i>parvus</i>	s3	1
<i>Crotalaria cunninghamii</i>	s3s2	1

<i>Cucumis variabilis</i>	cr	n
<i>Cymbopogon obtectus</i>	tg	1
<i>Eriachne lanata</i>	tg	1
<i>Eucalyptus victrix</i>	t	1
<i>Euphorbia trigonosperma</i>	s3	n
<i>Grevillea wickhamii</i>	s1s2	2
<i>Melaleuca linophylla</i>	s3	1
<i>Nicotiana occidentalis</i>	h	1
<i>Ptilotus fusiformis</i>	h	1
<i>Rhynchosia minima</i>	s3	n
<i>Senna venusta</i>	s3	n
<i>Synaptantha tillaeacea</i> var. <i>tillaeacea</i>	h	n
<i>Tribulus astrocarpus</i>	h	n
<i>Triodia epactia</i>	hg	1
<i>Waltheria indica</i>	s3	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 7/27/2022,
Site: C8B2X12 **Coordinates:** 691368 mE, 7568408 mN **Datum:** GDA95 MGA Zone 50 **Site Type:** Q
Site Size: 50x50 **Site Marker:** Pegs removed **Photo Location:** NW Corner

Habitat: Hill gentle north facing slope (hilltop)

Rock Type: Basalt stones (40%), Basalt rocks (20%)

Soil Type: Red-brown clay-loam loose soil (5%)

Fire Age: Old (> 5yrs)

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia wiseana* and *Triodia epactia* with Isolated Mid Shrubs of *Acacia acradenia*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia acradenia</i>	s2	2
<i>Acacia trudgeniana</i>	s1	n
<i>Boerhavia coccinea</i>	s3	n
<i>Crotalaria medicaginea</i> var. <i>neglecta</i>	s3	n
<i>Cullen</i> sp.	h	n
<i>Polygala glaucifolia</i>	h	n
<i>Ptilotus clementii</i>	h	n
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s2	n
<i>Triodia epactia</i>	hg	2
<i>Triodia wiseana</i>	hg	3

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 7/27/2022,

Site: C8B2X13 **Coordinates:** 690918 mE, 7567634 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Basalt hill gentle south-east facing slope (midslope)

Rock Type: Basalt rocks (40%), Basalt boulders (10%)

Soil Type: Red-brown clay-loam loose soil (2%)

Fire Age: Old (> 5yrs)

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia epactia* and *Triodia wiseana*



TAXA

Taxon	Height Code	Cover Code
<i>Abutilon lepidum</i>	s3	n
<i>Acacia acradenia</i>	s2	1
<i>Boerhavia repleta</i>	h	n
<i>Bonamia erecta</i>	s3	n
<i>Bonamia pilbarensis</i>	h	n
<i>Cullen leucanthum</i>	s3	1
<i>Dampiera candidans</i>	s3	n
<i>Paraneurachne muelleri</i>	tg	n
<i>Ptilotus calostachyus</i>	h	1
<i>Ptilotus clementii</i>	h	1
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s3	1
<i>Solanum phlomoides</i>	s3	n
<i>Triodia epactia</i>	hg	4

Triodia wiseana

hg

2

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy

Dates: 7/24/2022,

Site: C8B2X2 **Coordinates:** 698839 mE, 7578629 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Creek (bed and bank)

Rock Type:

Soil Type: Orange-white coarse sand loose soil

Fire Age: None evident

Condition: Very good

Notes: weeds

Vegetation Description: Low Woodland of *Eucalyptus victrix* and *Acacia coriacea* subsp. *pendens* with Open Tall Shrubland of *Acacia trachycarpa*, *Melaleuca linophylla* and *Melaleuca glomerata* with Open Tussock Grassland of **Cenchrus ciliaris* and **Cenchrus setiger* and Sparse Mid Shrubland of *Acacia trachycarpa*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia coriacea</i> subsp. <i>pendens</i>	s1t3	2
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>	s2	1
<i>Acacia trachycarpa</i>	s2	2
<i>Afrohybanthus aurantiacus</i>	s3	1
<i>Afrohybanthus aurantiacus</i>	h	n
<i>Arivela viscosa</i>	h	n
<i>Atalaya hemiglauca</i>	t3	1
<i>Calandrinia ?tepperiana</i>	h	n
<i>*Cenchrus ciliaris</i>	tg	1
<i>*Cenchrus setiger</i>	tg	3

<i>Corchorus ?lasiocarpus</i>	h	1
<i>Corchorus ?tectus</i>	s3	n
<i>Crotalaria cunninghamii</i>	s3	n
<i>Cymbopogon obtectus</i>	tg	1
<i>Cyperus vaginatus</i>	sdg	1
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	h	1
<i>Erythrina vespertilio</i>	s3	n
<i>Eucalyptus victrix</i>	t3	2
<i>Eulalia aurea</i>	tg	1
<i>Euphorbia coghlanii</i>	h	n
<i>Euphorbia trigonosperma</i>	h	1
<i>Euploca tanythrix</i>	s3	n
<i>Gonocarpus ephemerus</i>	h	n
<i>Goodenia lamprosperma</i>	h	1
<i>Melaleuca glomerata</i>	s1	2
<i>Melaleuca linophylla</i>	s1	1
<i>Nicotiana occidentalis</i>	h	1
<i>Ptilotus fusiformis</i>	h	n
<i>Rhynchosia minima</i>	cr	1
<i>Trachymene oleracea</i>	h	1
<i>Triodia epactia</i>	hg	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 7/24/2022,

Site: C8B2X3 **Coordinates:** 699034 mE, 7578294 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Drainage basin very gentle

Rock Type: Quartz stones (40%), Calcrete stones (10%)

Soil Type: Orange-white coarse sand loose soil (20%)

Fire Age: Moderate (1-5 yrs)

Condition: Very good,

Notes: Depression up slope from creek; grazing

Vegetation Description: Open Hummock Grassland of *Triodia longiceps* and *Triodia wiseana* with Sparse Low Shrubland of *Acacia bivenosa* and *Acacia stellaticeps*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia bivenosa</i>	s3	1
<i>Acacia stellaticeps</i>	s3	1
<i>Bonamia pilbarensis</i>	h	n
<i>Corchorus lasiocarpus</i> subsp. <i>lasiocarpus</i>	s3	1
<i>Corymbia hamersleyana</i>	t3	1
<i>Cynodon prostratus</i>	tg	n
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	h	n
<i>Euploca chrysocarpa</i>	s3	1
<i>Goodenia microptera</i>	h	n
<i>Goodenia stobbsiana</i>	s3	1
<i>Paraneurachne muelleri</i>	tg	1
<i>Pluchea ferdinandi-muelleri</i>	s3	1

<i>Ptilotus exaltatus</i>	h	1
<i>Salsola australis</i>	s3	n
<i>Scaevola browniana</i> subsp. <i>browniana</i>	s3	n
<i>Sclerolaena lanicuspis</i>	h	1
<i>Senna artemisioides</i> subsp. <i>helmsii</i>	s2	n
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s3	1
<i>Senna symonii</i>	s3	1
<i>Solanum phlomoides</i>	s3	n
<i>Sporobolus actinocladius</i>	tg	1
<i>Streptoglossa bubakii</i>	h	n
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	s3	1
<i>Trianthema triquetrum</i>	h	n
<i>Trigastrotheca molluginea</i>	h	n
<i>Triodia epactia</i>	hg	1
<i>Triodia longiceps</i>	hg	3
<i>Triodia wiseana</i>	hg	2

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 7/24/2022,

Site: C8B2X4 **Coordinates:** 699678 mE, 7577761 mN **Datum:** GDA95 MGA Zone 50

Site Type: R

Site Size: 10×250 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Creek

Rock Type:

Soil Type: Orange-white coarse sand loose soil

Fire Age: None evident

Condition: Very good

Notes: weeds

Vegetation Description: Open Tussock Grassland of *Eulalia aurea*, **Cenchrus setiger* and *Cymbopogon obtectus* with Sparse Mid Shrubland of *Acacia trachycarpa*, *Acacia pyrifolia* var. *pyrifolia* and *Acacia tumida* var. *pilbarensis* and Isolated Low Trees of *Eucalyptus victrix*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia bivenosa</i>	s3	n
<i>Acacia coriacea</i> subsp. <i>pendens</i>	t3	1
<i>Acacia maitlandii</i>	s2	n
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i> var. <i>pyrifolia</i>	s2	1
<i>Acacia stellaticeps</i>	s3	n
<i>Acacia trachycarpa</i>	s2	1
<i>Acacia tumida</i> var. <i>pilbarensis</i>	s1	2
<i>Afrohybanthus aurantiacus</i>	h	n
<i>Alternanthera nana</i>	h	n
<i>Alternanthera nodiflora</i>	h	n
<i>Aristida contorta</i>	tg	n

<i>**Bidens bipinnata</i>	h	n
<i>Calandrinia ?tepperiana</i>	h	1
<i>*Cenchrus setiger</i>	tg	2
<i>Corymbia hamersleyana</i>	t3	n
<i>Crotalaria cunninghamii</i>	s3	1
<i>Cymbopogon obtectus</i>	tg	1
<i>Cyperus vaginatus</i>	sdg	1
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	h	n
<i>Eragrostis cumingii</i>	tg	1
<i>Eucalyptus victrix</i>	t	1
<i>Eulalia aurea</i>	tg	1
<i>Euphorbia australis</i> var. <i>hispidula</i>	h	n
<i>Euphorbia trigonosperma</i>	s3	n
<i>Euploca tanythrix</i>	s3	1
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	h	n
<i>Gonocarpus ephemerus</i>	h	1
<i>Goodenia lamprosperma</i>	h	1
<i>Gossypium australe</i>	s1	n
<i>Grevillea wickhamii</i>	s2	n
<i>Hibiscus burtonii</i>	s3	n
<i>Indigofera monophylla</i>	s3	1
<i>Nicotiana occidentalis</i>	h	n
<i>Pluchea dentex</i>	s3	1
<i>Ptilotus fusiformis</i>	h	n
<i>Rhynchosia minima</i>	cr	n
<i>Senna venusta</i>	s3	n
<i>Sida clementii</i>	s3	1
<i>Stemodia viscosa</i>	s3	n
<i>Tephrosia rosea</i> var. <i>clementii</i>	s3	n
<i>Tephrosia rosea</i> var. Fortescue creeks (M.I.H. Brooker 2186)	s3	n
<i>Trachymene oleracea</i>	h	n
<i>Triodia epactia</i>	hg	1
<i>Triodia longiceps</i>	hg	n
<i>Triumfetta chaetocarpa</i>	s3	n
<i>Waltheria indica</i>	s3	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 7/24/2022,

Site: C8B2X5 **Coordinates:** 700151 mE, 7578189 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Drainage basin very gentle

Rock Type: Quartz stones (40%), Calcrete stones (10%)

Soil Type: White coarse sand loose soil (20%), surface crust (10%)

Fire Age: Moderate (1-5 yrs)

Condition: Very good

Notes: Depression between rolling granite hills; grazing

Vegetation Description: Open Hummock Grassland of *Triodia longiceps* and *Triodia wiseana* with Sparse Low Shrubland of *Acacia stellaticeps* and Isolated Low Trees of *Corymbia hamersleyana* and *Eucalyptus leucophloia* subsp. *leucophloia*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia bivenosa</i>	s3	1
<i>Acacia maitlandii</i>	s2	n
<i>Acacia stellaticeps</i>	s3	2
<i>Corymbia hamersleyana</i>	t3	1
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	t3	1
<i>Goodenia stobbsiana</i>	s3	1
<i>Hakea lorea</i> subsp. <i>lorea</i>	s1	n
<i>Indigofera monophylla</i>	s3	1
<i>Paraneurachne muelleri</i>	tg	1
<i>Pluchea ferdinandi-muelleri</i>	s3	1
<i>Ptilotus axillaris</i>	h	n

<i>Ptilotus exaltatus</i>	h	1
<i>Santalum lanceolatum</i>	s2	n
<i>Sclerolaena lanicuspis</i>	h	1
<i>Sclerolaena lanicuspis</i>	h	n
<i>Senna symonii</i>	s3	1
<i>Streptoglossa bubakii</i>	h	n
<i>Trianthema triquetrum</i>	h	n
<i>Triodia longiceps</i>	hg	3
<i>Triodia wiseana</i>	hg	2

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 7/24/2022,

Site: C8B2X6 **Coordinates:** 695917 mE, 7579544 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Low rolling hill very gentle

Rock Type: Basalt rocks (40%), Quartz rocks (20%)

Soil Type: Red-brown sandy-clay loose soil (10%), shallow cracking clay (10%)

Fire Age: Moderate (1-5 yrs)

Condition: Very good

Notes: grazing

Vegetation Description: Open Hummock Grassland of *Triodia wiseana* with Isolated Low Trees of *Corymbia hamersleyana* and Isolated Mid Shrubs of *Senna glutinosa* subsp. *pruinosa* and Low Shrubs of *Corchorus tectus* and *Corchorus lasiocarpus* subsp. *parvus*



TAXA

Taxon	Height Code	Cover Code
<i>Abutilon lepidum</i>	s3	n
<i>Acacia acradenia</i>	s3	n
<i>Corchorus lasiocarpus</i> subsp. <i>parvus</i>	s3	1
<i>Corchorus tectus</i>	s3	1
<i>Corymbia hamersleyana</i>	t3	1
<i>Dysphania sphaerosperma</i>	h	n
<i>Enneapogon caeruleus</i>	tg	n
<i>Euphorbia australis</i> var. <i>hispidula</i>	h	n
<i>Euploca chrysocarpa</i>	s3	1
<i>Euploca pachyphylla</i>	s3	n
<i>Goodenia stobbsiana</i>	s3	n

<i>Goodenia triodiophila</i>	h	n
<i>Indigofera monophylla</i>	s3	1
<i>Iseilema vaginiflorum</i>	tg	n
<i>Jasminum didymum</i> subsp. <i>lineare</i>	s3	n
<i>Nicotiana occidentalis</i>	h	n
<i>Polymeria ambigua</i>	h	n
<i>Ptilotus clementii</i>	h	1
<i>Ptilotus exaltatus</i>	h	n
<i>Roepera eichleri</i>	h	1
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s3	n
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s3s2	1
<i>Tephrosia clementii</i>	s3	1
<i>Tribulus astrocarpus</i>	h	n
<i>Triodia wiseana</i>	hg	3

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 7/24/2022,

Site: C8B2X7 **Coordinates:** 695460 mE, 7578992 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Granite dome

Rock Type: Granite surface plates (40%), stones (20%)

Soil Type: Orange coarse sand loose soil (10%)

Fire Age: Moderate (1-5 yrs)

Condition: Very good

Notes: grazing, exploration activities

Vegetation Description: Open Mid Shrubland of *Acacia orthocarpa* and *Acacia inaequilatera* with Open Hummock Grassland of *Triodia epactia* and Sparse Low Shrubland of *Indigofera monophylla* and *Bonamia erecta*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia acradenia</i>	s1	1
<i>Acacia ancistrocarpa</i>	s3	1
<i>Acacia inaequilatera</i>	s1	1
<i>Acacia orthocarpa</i>	s1	2
<i>Bonamia erecta</i>	s3	1
<i>Corchorus ?tectus</i>	s3	n
<i>Corchorus walcottii</i>	s3	n
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	h	n
<i>Dysphania sphaerosperma</i>	h	n
<i>Fimbristylis dichotoma</i>	sdg	1
<i>Goodenia microptera</i>	h	n

<i>Goodenia stobbsiana</i>	s3	1
<i>Gossypium robinsonii</i>	s2	1
<i>Indigofera monophylla</i>	s3	1
<i>Sida echinocarpa</i>	s3	1
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)	s3	1
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	s3	n
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	s3	1
<i>Trigastrotheca molluginea</i>	h	n
<i>Triodia epactia</i>	hg	3

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 7/26/2022,

Site: C8B2X8 **Coordinates:** 697819 mE, 7579589 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Low rolling hill

Rock Type: Quartz fine gravel (30%), Quartz stones (20%), Granite surface plates (20%)

Soil Type: Grey sandy-clay loose soil (5%)

Fire Age: Old (> 5yrs)

Condition: Very good

Notes: Deeply weathered patches of granite throughout. Small drainage line through centre; exploration activities

Vegetation Description: Open Hummock Grassland of *Triodia wiseana* with Sparse Low Shrubland of *Acacia bivenosa* and *Corchorus lasiocarpus* subsp. *lasiocarpus* and Isolated Low Trees of *Eucalyptus leucophloia* subsp. *leucophloia*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia bivenosa</i>	s3	1
<i>Acacia maitlandii</i>	s3	n
<i>Afrohybanthus aurantiacus</i>	h	n
<i>Codonocarpus cotinifolius</i>	s2	n
<i>Corchorus lasiocarpus</i> subsp. <i>lasiocarpus</i>	s3	2
<i>Corchorus lasiocarpus</i> subsp. <i>lasiocarpus</i>	s3	n
<i>Dysphania sphaerosperma</i>	h	n
<i>Eriachne lanata</i>	tg	1
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	t3	1
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	t3	1
<i>Euploca chrysocharpa</i>	s3	1

<i>Euploca pachyphylla</i>	s3	1
<i>Goodenia microptera</i>	h	n
<i>Goodenia stobbsiana</i>	s3	n
<i>Grevillea wickhamii</i>	s3	n
<i>Hakea lorea</i> subsp. <i>lorea</i>	s3	n
<i>Melaleuca eleuterostachya</i>	s3	1
<i>Paraneurachne muelleri</i>	tg	n
<i>Pluchea ferdinandi-muelleri</i>	s3	n
<i>Roepera eichleri</i>	h	n
<i>Salsola australis</i>	s3	n
<i>Scaevola amblyanthera</i> subsp. <i>centralis</i>	s3	n
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s2	1
<i>Sida clementii</i>	s3	1
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)	s3	n
<i>Solanum phlomoides</i>	s3	n
<i>Stackhousia muricata</i> subsp. <i>annual</i> (W.R. Barker 2172)	h	1
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	h	n
<i>Triodia wiseana</i>	hg	3

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 7/26/2022,

Site: C8B2X9 **Coordinates:** 697022 mE, 7578186 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Alluvial plain

Rock Type: Calcrete gravel, Basalt gravel, Quartz gravel

Soil Type: Orange-white coarse sand loose soil

Fire Age: None evident

Condition: Excellent

Notes: Low lying area between hills and creek. small drainage running through

Vegetation Description: Closed Tussock Grassland of *Triodia longiceps* with Open Mid Shrubland of *Acacia stellaticeps*



TAXA

Taxon	Height Code	Cover Code
<i>Abutilon</i> sp. <i>Pilbara</i> (W.R. Barker 2025)	s3	1
<i>Acacia bivenosa</i>	s2	1
<i>Acacia coriacea</i> subsp. <i>pendens</i>	s2	1
<i>Acacia robeorum</i>	s2	1
<i>Acacia stellaticeps</i>	s2	3
* <i>Aerva javanica</i>	h	1
<i>Afrohybanthus aurantiacus</i>	h	1
* <i>Cenchrus setiger</i>	tg	1
<i>Corchorus lasiocarpus</i> subsp. <i>lasiocarpus</i>	s2	1
<i>Indigofera monophylla</i>	s3	1
<i>Pluchea ferdinandi-muelleri</i>	s2	1
<i>Pterocaulon sphacelatum</i>	h	n

<i>Senna symonii</i>	s2	n
<i>Sida</i> sp. L (A.M. Ashby 4202)	s3	1
<i>Streptoglossa bubakii</i>	h	n
<i>Triodia longiceps</i>	hg	5
<i>Triodia wiseana</i>	hg	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 7/27/2022,

Site: RH001 **Coordinates:** 702580 mE, 7578557 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Ridge moderate (upperslope)

Rock Type: Quartz boulders (40%), Quartz rocks (20%)

Soil Type: Orange coarse sand loose soil (5%)

Fire Age: None evident

Condition: Excellent

Notes: Check geology, Could be granitic

Vegetation Description: Open Hummock Grassland of *Triodia epactia* and *Triodia ?brizoides* with Open Low Woodland of *Eucalyptus leucophloia* subsp. *leucophloia* and *Corymbia hamersleyana* with Sparse Low Shrubland of *Indigofera monophylla* and *Dampiera candicans* and Isolated Mid Shrubs of *Senna glutinosa*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia bivenosa</i>	s3	1
<i>Acacia inaequilatera</i>	s2s3	1
<i>Acacia maitlandii</i>	s3	n
<i>Afrohybanthus aurantiacus</i>	s3	n
<i>Bonamia erecta</i>	s3	1
<i>Bonamia pilbarensis</i>	h	n
<i>Cajanus cinereus</i>	s3	n
<i>Corchorus lasiocarpus</i> subsp. <i>parvus</i>	s3	n
<i>Corymbia hamersleyana</i>	t3	1
<i>Dampiera candicans</i>	s3	2
<i>Dodonaea coriacea</i>	s3	n

<i>Eriachne lanata</i>	tg	2
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	t3	1
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	t3	1
<i>Goodenia stobbsiana</i>	s3	n
<i>Goodenia triodiophila</i>	h	1
<i>Hibiscus coatesii</i>	s3	n
<i>Hibiscus sturtii</i> var. <i>platychlamys</i>	s3	n
<i>Indigofera monophylla</i>	s3	2
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s3	1
<i>Senna symonii</i>	s3	1
<i>Sida clementii</i> / <i>Sida arenicola</i>	s2	1
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)	s3	1
<i>Tephrosia</i> sp. <i>Clay soils</i>	h	n
<i>Tribulus suberosus</i>	s2	1
<i>Triodia ?brizoides</i>	h	2
<i>Triodia epactia</i>	hg	3
<i>Triumfetta maconochieana</i>	s3	n

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 7/27/2022,

Site: RH002 **Coordinates:** 703035 mE, 7579256 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat:

Rock Type: Granite rocks (40%), Granite stones (20%)

Soil Type: Orange coarse sand loose soil (2%)

Fire Age: Recent (< 1 yr)

Condition: Good

Notes: Recently burnt and it looks like it is regularly burnt. At the foot of a granite spine. Mining activities.

Vegetation Description: Sparse Tall Shrubland of *Acacia inaequilatera* with Isolated Low Trees of *Eucalyptus leucophloia* subsp. *leucophloia* with Isolated Low Shrubs of *Indigofera monophylla* and Isolated Hummock Grasses of *Triodia epactia*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia inaequilatera</i>	s1	2
<i>Bonamia pilbarensis</i>	h	1
<i>Eriachne lanata</i>	tg	n
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	t3	n
<i>Gnephosis brevifolia</i>	h	1
<i>Goodenia microptera</i>	h	n
<i>Hibiscus coatesii</i>	s3	n
<i>Hibiscus sturtii</i> var. <i>platychlamys</i>	s3	n
<i>Indigofera monophylla</i>	s3	2
<i>Ptilotus clementii</i>	h	n
<i>Ptilotus fusiformis</i>	h	n

<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s3	1
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s3	1
<i>Senna notabilis</i>	s3	n
<i>Senna symonii</i>	s3	n
<i>Solanum phlomoides</i>	s3	1
<i>Trigastrotheca molluginea</i>	h	n
<i>Triodia epactia</i>	hg	3

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 7/27/2022,

Site: RH003 **Coordinates:** 701183 mE, 7579128 mN **Datum:** GDA95 MGA Zone 50

Site Type: R

Site Size: 250m **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Creek (bed)

Rock Type:

Soil Type: Orange-white coarse sand

Fire Age:

Condition: Very good

Notes: Weeds

Vegetation Description: Open Tussock Grassland of *Chrysopogon fallax* and **Cenchrus setiger* with Sparse Tall Shrubland of *Acacia coriacea* subsp. *pendens* and *Acacia trachycarpa* with Sparse Mid Shrubland of *Acacia trachycarpa*, *Acacia pyrifolia* var. *pyrifolia* and *Crotalaria cunninghamii*



TAXA

Taxon	Height Code	Cover Code
<i>*Flaveria trinervia</i>	h	n
<i>Acacia bivenosa</i>	s2	n
<i>Acacia coriacea</i> subsp. <i>pendens</i>	s1	1
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>	s2	1
<i>Acacia trachycarpa</i>	s2	1
<i>*Aerva javanica</i>	h	n
<i>Afrohybanthus aurantiacus</i>	s3	n

<i>Atalaya hemiglauca</i>	s2	n
* <i>Bidens bipinnata</i>	h	n
<i>Calandrinia ?tepperiana</i>	h	n
* <i>Cenchrus setiger</i>	tg	2
<i>Chrysopogon fallax</i>	tg	n
<i>Corchorus ?incanus</i> subsp. <i>incanus</i>	s3	1
<i>Crotalaria cunninghamii</i>	s2	1
<i>Cucumis variabilis</i>	cr	n
<i>Cynanchum floribundum</i>	cr	n
<i>Cyperus vaginatus</i>	sdg	1
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	h	n
<i>Eriachne obtusa</i>	tg	1
<i>Erythrina vespertilio</i>	t3	1
<i>Eucalyptus ?camaldulensis</i>	m	1
<i>Eulalia aurea</i>	tg	1
<i>Euphorbia trigonosperma</i>	h	n
<i>Goodenia lamprosperma</i>	h	n
<i>Melaleuca linophylla</i>	s2	n
<i>Pluchea dentex</i>	h	n
<i>Ptilotus fusiformis</i>	h	n
<i>Senna venusta</i>	s3	n
<i>Sesbania cannabina</i>	s3	n
<i>Triodia epactia</i>	hg	1
<i>Triumfetta chaetocarpa</i>	s2	1

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 7/27/2022,

Site: RH004 **Coordinates:** 701432 mE, 7579338 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Alluvial plain

Rock Type: Granite gravel, stones, boulders

Soil Type: Orange-brown coarse sand loose soil (10%)

Fire Age: Moderate (1-5 yrs)

Condition: Excellent

Notes: Granite outcrop

Vegetation Description: Open Tall Shrubland of *Acacia orthocarpa* with Open Hummock Grassland of *Triodia epactia* with Sparse Low Shrubland of *Indigofera monophylla* and *Acacia maitlandii* and Sparse Forbland of *Goodenia stobbsiana* and *Dampiera candidans*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia maitlandii</i>	s3s2	1
<i>Acacia orthocarpa</i>	s2	3
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>	s2	n
<i>Acacia stellaticeps</i>	s3	n
<i>Afrohybanthus aurantiacus</i>	h	n
<i>Bonamia pilbarensis</i>	s3	n
<i>Corchorus walcottii</i>	s3	1

<i>Dampiera candidans</i>	s3	1
<i>Euploca pachyphylla</i>	s3	1
<i>Goodenia stobbsiana</i>	s3	1
<i>Grevillea wickhamii</i>	s3s2	1
<i>Indigofera monophylla</i>	s3	2
<i>Ptilotus auriculifolius</i>	h	n
<i>Scaevola browniana</i> subsp. <i>browniana</i>	s3	1
<i>Senna symonii</i>	s2	n
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)	s3	n
<i>Trigastrotheca molluginea</i>	h	n
<i>Triodia ?basedowii</i>	hg	1
<i>Triodia epactia</i>	hg	3

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 7/27/2022,

Site: RH005 **Coordinates:** 702090 mE, 7579842 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Granite tor gentle

Rock Type: Granite surface plates (40%), Granite boulders (20%), Granite stones (10%)

Soil Type: Red-orange

Fire Age: Old (> 5yrs)

Condition: Excellent

Notes:

Vegetation Description: Open Hummock Grassland of *Triodia epactia* with Isolated Tall Shrubs of *Acacia tumida* var. *pilbarensis* and Isolated Low Shrubs of *Triumfetta propinqua*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia tumida</i> var. <i>pilbarensis</i>	s1	1
<i>Corchorus walcottii</i>	s3	n
<i>Eriachne lanata</i>	tg	n
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>	s2	n
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	s3	n
<i>Fimbristylis dichotoma</i>	sdg	1
<i>Gomphrena cunninghamii</i>	h	1
<i>Gomphrena leptoclada</i> subsp. <i>leptoclada</i>	s3	1
<i>Polycarpaea longiflora</i>	h	n
<i>Stemodia grossa</i>	s3	1
<i>Trachymene oleracea</i>	h	1
<i>Triodia epactia</i>	hg	3

<i>Triumfetta propinqua</i>	s3	1
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Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 7/27/2022,

Site: RH006 **Coordinates:** 702411 mE, 7581468 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Low rolling hill

Rock Type: Granite gravel, stones, boulders

Soil Type: Orange-brown coarse sand loose soil (20%)

Fire Age: Moderate (1-5 yrs)

Condition: Excellent

Notes:

Vegetation Description: Hummock Grassland of *Triodia epactia* with Open Mid Shrubland of *Indigofera rugosa* and *Acacia orthocarpa*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia maitlandii</i>	s3	n
<i>Acacia orthocarpa</i>	s2	2
<i>Aristida holathera</i> var. <i>holathera</i>	tg	n
<i>Bonamia alatisemina</i>	h	n
<i>Corchorus walcottii</i>	s3	1
<i>Dampiera candidans</i>	s3	n
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	h	n
<i>Goodenia stobbsiana</i>	s3	1

<i>Gossypium australe</i>	s2	n
<i>Grevillea wickhamii</i>	s2	1
<i>Indigofera monophylla</i>	s3	n
<i>Indigofera rugosa</i>	s2	2
<i>Nicotiana benthamiana</i>	h	n
<i>Paspalidium clementii</i>	tg	n
<i>Polycarpaea longiflora</i>	h	n
<i>Polycarpaea longiflora</i>	h	n
<i>Senna artemisioides</i> subsp. <i>helmsii</i>	s3	n
<i>Triodia epactia</i>	hg	4

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 3/27/2022,

Site: RH007 **Coordinates:** 702986 mE, 7579857 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 25x100 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Ridge moderate north facing slope (upperslope)

Rock Type: Granite boulders (40%), Granite stones (20%)

Soil Type: Red-orange sandy-clay loose soil (2%)

Fire Age: Moderate (1-5 yrs)

Condition: Very good

Notes: North south running ridge; exploration activities

Vegetation Description: Isolated Low Trees of *Eucalyptus leucophloia* subsp. *leucophloia* with Isolated Hummock Grasses of *Triodia epactia*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia retivenea</i> subsp. <i>clandestinus</i>	s2	1
<i>Amaranthus undulatus</i>	S2	1
<i>Arivela viscosa</i>	h	n
<i>Bulbostylis barbata</i>	h	1
<i>Cymbopogon ambiguus</i>	tg	1
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	h	n
<i>Eriachne lanata</i>	tg	1
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	t3	1
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	h	1
<i>Gomphrena cunninghamii</i>	h	1
<i>Hibiscus sturtii</i> var. <i>platyklamys</i>	s3	1
<i>Paspalidium clementii</i>	tg	n

<i>Polycarpaea longiflora</i>	h	1
<i>Ptilotus fusiformis</i>	h	1
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	s3	n
<i>Sida</i> ?sp. Articulation below (A.A. Mitchell PRP 1605)	s2	1
<i>Sida</i> sp. <i>Excedentifolia</i> (J.L. Egan 1925)	h	n
<i>Solanum phlomoides</i>	s3	2
<i>Tribulus platypterus</i>	s3	n
<i>Triodia epactia</i>	hg	1
<i>Triumfetta maconochieana</i>	s3	n

Project: 2204TC **Data Collected By:** Maia Environmental Consultancy **Dates:** 7/27/2022,

Site: RH008 **Coordinates:** 702143 mE, 7581864 mN **Datum:** GDA95 MGA Zone 50

Site Type: Q

Site Size: 50x50 **Site Marker:** Pegs removed

Photo Location: NW Corner

Habitat: Hill (hilltop)

Rock Type: Granite gravel (10%), boulders (20%)

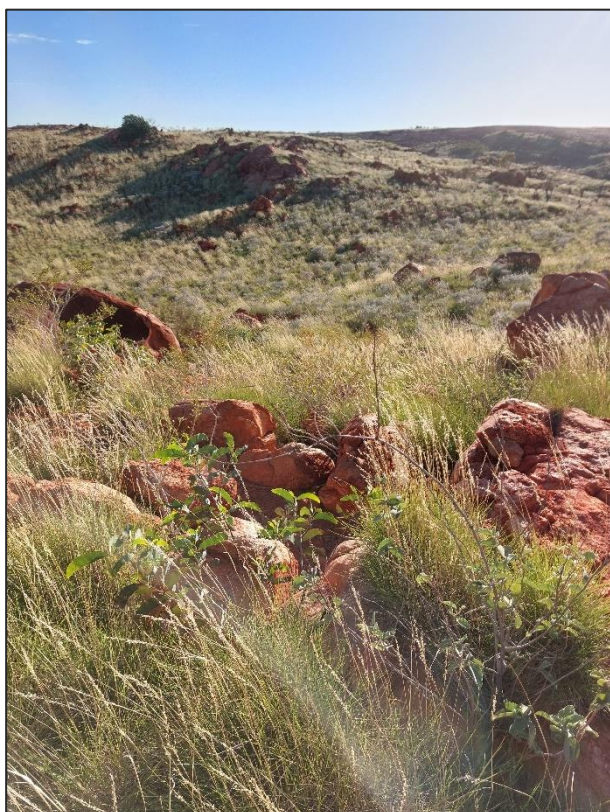
Soil Type: Orange-brown coarse sand loose soil (10%)

Fire Age: Old (> 5yrs)

Condition: Very good

Notes: weeds

Vegetation Description: Hummock Grassland of *Triodia epactia* with Open Mid Shrubland of *Indigofera rugosa* and *Acacia pyrifolia* var. *pyrifolia*



TAXA

Taxon	Height Code	Cover Code
<i>Acacia ?trudgeniana</i>	s3	n
<i>Acacia bivenosa</i>	s3	n
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>	s2	1
<i>Acacia retivenea</i> subsp. <i>clandestinus</i>	s3	1
<i>Acacia tumida</i> var. <i>pilbarensis</i>	s2	1
<i>Amaranthus undulatus</i>	h	n
<i>Bonamia pilbarensis</i>	s3	n
<i>Bonamia pilbarensis</i>	h	n

<i>Cajanus cinereus</i>	s2	n
* <i>Cenchrus setiger</i>	tg	1
<i>Clerodendrum tomentosum</i> var. <i>lanceolatum</i>	s2	1
<i>Corchorus walcottii</i>	s2	1
<i>Digitaria brownii</i>	tg	1
<i>Eremophila longifolia</i>	s2	1
<i>Euploca pachyphylla</i>	s3	n
<i>Gomphrena cunninghamii</i>	h	n
<i>Goodenia stobbsiana</i>	s3	n
<i>Gossypium australe</i>	s3	1
<i>Grevillea wickhamii</i>	s2	1
<i>Indigofera monophylla</i>	s3	1
<i>Indigofera rugosa</i>	s3s2	3
<i>Nicotiana umbratica</i>	h	n
<i>Rhynchosia minima</i>	cr	n
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	s3	n
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	s2	1
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)	s3	n
<i>Trachymene oleracea</i> subsp. <i>oleracea</i>	h	n
<i>Tribulus suberosus</i>	s2	1
<i>Triodia epactia</i>	hg	4

Attachment 3 – Comprehensive Species List for the Development Envelope

Attachment 3 - Combined Species List within the Development Envelope

FAMILY	Taxon	Listing	1B	8B
ACANTHACEAE				
	<i>Dipteracanthus australasicus</i>		+	+
	<i>Dipteracanthus chichesterensis</i>	Priority 1	+	+
AIZOACEAE	<i>Trianthema glossostigmum</i>		+	+
	<i>Trianthema triquetrum</i>		+	+
	<i>Zaleya galericulata</i>		+	+
	<i>Zaleya galericulata</i> subsp. <i>galericulata</i>		+	
AMARANTHACEAE	<i>Achyranthes aspera</i>		+	+
	<i>Aerva javanica</i>		+	+
	<i>Alternanthera denticulata</i>		+	+
	<i>Alternanthera nana</i>		+	+
	<i>Alternanthera nodiflora</i>		+	+
	<i>Amaranthus cuspidifolius</i>		+	+
	<i>Amaranthus undulatus</i>		+	+
	<i>Gomphrena canescens</i>		+	+
	<i>Gomphrena cunninghamii</i>		+	+
	<i>Gomphrena kanisii</i>		+	+
	<i>Gomphrena leptoclada</i> subsp. <i>leptoclada</i>		+	+
	<i>Ptilotus aevoides</i>		+	+
	<i>Ptilotus astrolasius</i>		+	+
	<i>Ptilotus auriculifolius</i>		+	+
	<i>Ptilotus axillaris</i>		+	+
	<i>Ptilotus calostachyus</i>		+	+
	<i>Ptilotus carinatus</i>		+	+
	<i>Ptilotus clementii</i>		+	+
	<i>Ptilotus exaltatus</i>		+	+
	<i>Ptilotus fusiformis</i>		+	+
	<i>Ptilotus gomphrenoides</i>		+	+
	<i>Ptilotus helipteroides</i>		+	+
	<i>Ptilotus nobilis</i>		+	+
	<i>Ptilotus obovatus</i>		+	+
	<i>Ptilotus obovatus</i> var. <i>obovatus</i>		+	+
	<i>Ptilotus polystachyus</i>		+	+
	<i>Ptilotus rotundifolius</i>		+	+
	? <i>Ptilotus fusiformis</i>		+	
APOCYNACEAE	<i>Cynanchum floribundum</i>		+	+
	<i>Gymnanthera cunninghamii</i>		+	+
	<i>Leichhardtia australis</i>		+	+

FAMILY	Taxon	Listing	1B	8B
	<i>Vincetoxicum lineare</i>		+	+
ARALIACEAE	<i>Trachymene oleracea</i>		+	+
	<i>Trachymene oleracea</i> subsp. <i>oleracea</i>		+	+
ASTERACEAE	<i>Bidens bipinnata</i>		+	+
	<i>Calocephalus beardii</i>		+	+
	<i>Calocephalus pilbarensis</i>			+
	<i>Centipeda minima</i>		+	+
	<i>Chrysocephalum apiculatum</i>		+	+
	<i>Flaveria trinervia</i>		2	+
	<i>Gnephosis brevifolia</i>		+	+
	<i>Minuria integerrima</i>		+	+
	<i>Olearia stuartii</i>		+	+
	<i>Pentalepis trichodesmoides</i> subsp. <i>hispida</i>	Priority 2	+	+
	<i>Pluchea dentex</i>		+	+
	<i>Pluchea ferdinandi-muelleri</i>		+	+
	<i>Pluchea rubelliflora</i>		+	+
	<i>Pluchea tetranthera</i>		+	+
	<i>Pterocaulon serrulatum</i>		+	+
	<i>Pterocaulon sphacelatum</i>		+	+
	<i>Pterocaulon sphaeranthoides</i>		+	+
	<i>Rutidosis helichrysoides</i>		+	+
	<i>Streptoglossa adscendens</i>		+	+
	<i>Streptoglossa bubakii</i>		+	+
	<i>Streptoglossa ?bubakii</i>			+
	<i>Streptoglossa decurrens</i>		+	+
	<i>Streptoglossa ?decurrens</i>			+
	<i>Streptoglossa liatroides</i>		+	+
	<i>Streptoglossa odora</i>		+	+
	<i>?Streptoglossa decurrens</i>		+	
BORAGINACEAE	<i>Ehretia saligna</i>		+	+
	<i>Ehretia saligna</i> var. <i>saligna</i>		+	+
	<i>Euploca chrysocarpa</i>			+
	<i>Euploca pachyphylla</i>		+	+
	<i>Euploca tanythrix</i>			+
	<i>Heliotropium ammophilum</i>		+	+
	<i>Heliotropium chrysocarpum</i>		+	+
	<i>Heliotropium ?chrysocarpum</i>			+
	<i>Heliotropium conocarpum</i>		+	+
	<i>Heliotropium crispatum</i>		+	+
	<i>Heliotropium heteranthum</i>		+	+
	<i>Heliotropium ovalifolium</i>		+	+
	<i>Heliotropium pachyphyllum</i>		+	+
	<i>Heliotropium tanythrix</i>		+	+

FAMILY	Taxon	Listing	1B	8B
	<i>Heliotropium tenuifolium</i>		+	+
	<i>Heliotropium</i> sp.		+	
	<i>Heliotropium</i> sp. (hairy)			+
	<i>Heliotropium</i> sp. (recurved)			+
	<i>Trichodesma zeylanicum</i>		+	+
	<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		+	+
BRASSICACEAE	<i>Lepidium echinatum</i>		+	+
	<i>Lepidium pedicellosum</i>		+	+
CAMPANULACEAE	<i>Wahlenbergia</i> sp.		+	+
CAPPARACEAE	<i>Capparis lasiantha</i>		+	+
	<i>Capparis spinosa</i>		+	+
	<i>Capparis umbonata</i>		+	+
CARYOPHYLLACEAE	<i>Polycarpaea corymbosa</i>		+	+
	<i>Polycarpaea holtzei</i>		+	+
	<i>Polycarpaea longiflora</i>		+	+
CELASTRACEAE	<i>Maytenus</i> sp. Mt Windell (S. van Leeuwen 846)		+	+
	<i>Stackhousia intermedia</i>		+	+
	<i>Stackhousia muricata</i> subsp. Annual (W.R. Barker 2172)		+	+
CHENOPODIACEAE	<i>Atriplex amnicola</i>		+	+
	<i>Atriplex bunburyana</i>		+	+
	<i>Dysphania kalpari</i>		+	+
	<i>Dysphania melanocarpa</i>		+	+
	<i>Dysphania rhadinostachya</i>		+	+
	<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>		+	+
	<i>Dysphania sphaerosperma</i>			+
	<i>Enchylaena tomentosa</i>		+	+
	<i>Maireana aphylla</i>		+	+
	<i>Maireana carnososa</i>		+	+
	<i>Maireana georgei</i>		+	+
	<i>Maireana melanocoma</i>		+	+
	<i>Maireana planifolia</i>		+	+
	<i>Maireana triptera</i>		+	+
	<i>Maireana villosa</i>		+	+
	<i>Rhagodia eremaea</i>		+	+
	<i>Salsola australis</i>		+	+
	<i>Sclerolaena bicornis</i>		+	+
	<i>Sclerolaena cornishiana</i>		+	+
	<i>Sclerolaena costata</i>		+	+
	<i>Sclerolaena cuneata</i>		+	+
	<i>Sclerolaena densiflora</i>		+	+
	<i>Sclerolaena eriacantha</i>		+	+

FAMILY	Taxon	Listing	1B	8B
	<i>Sclerolaena lanicuspis</i>		+	+
	<i>Sclerolaena tetragona</i>		+	+
	<i>Tecticornia halocnemoides</i>		+	+
	<i>Tecticornia indica</i>		+	+
	<i>Tecticornia verrucosa</i>		+	+
CLEOMACEAE	<i>Arivela viscosa</i>		+	+
COMMELINACEAE	<i>Commelina ensifolia</i>		+	+
CONVOLVULACEAE	<i>Bonamia alatisemina</i>		+	+
	<i>Bonamia erecta</i>		+	+
	<i>Bonamia media</i>		+	+
	<i>Bonamia pannosa</i>		+	+
	<i>Bonamia pilbarensis</i>		+	+
	<i>Convolvulus clementii</i>		+	+
	<i>Duperreya commixta</i>		+	+
	<i>Evolvulus alsinoides</i>		+	+
	<i>Evolvulus alsinoides</i> var. <i>decumbens</i>		+	+
	<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		+	+
	<i>Ipomoea muelleri</i>		+	+
	<i>Ipomoea pes-caprae</i>		+	+
	<i>Ipomoea polymorpha</i>		+	+
	<i>Ipomoea racemigera</i>	Priority 2	+	+
	? <i>Ipomoea plebeia</i>		+	
	<i>Operculina aequisepala</i>		+	+
	<i>Polymeria ambigua</i>		+	+
	<i>Polymeria calycina</i>		+	+
	<i>Polymeria</i> sp. (dead)			+
	<i>Polymeria</i> ? <i>mollis</i>		+	
CUCURBITACEAE	<i>Austrobryonia pilbarensis</i>		+	+
	<i>Citrullus amarus</i>		+	+
	<i>Citrullus colocynthis</i>		+	+
	<i>Citrullus lanatus</i>		+	+
	<i>Cucumis argenteus</i>		+	+
	<i>Cucumis melo</i>		+	+
	<i>Cucumis picrocarpus</i>		+	+
	<i>Cucumis variabilis</i>		+	+
	<i>Cucumis</i> sp. (dead)		+	+
CYPERACEAE	<i>Bulbostylis barbata</i>		+	+
	<i>Bulbostylis turbinata</i>		+	+
	<i>Cyperus bifax</i>		+	+
	<i>Cyperus bulbosus</i>		+	+
	<i>Cyperus hesperius</i>		+	
	<i>Cyperus iria</i>		+	+
	<i>Cyperus ixiocarpus</i>		+	+

FAMILY	Taxon	Listing	1B	8B
	<i>Cyperus macrostachyos</i>		+	+
	<i>Cyperus pulchellus</i>		+	+
	<i>Cyperus rigidellus</i>		+	+
	<i>Cyperus squarrosus</i>		+	+
	<i>Cyperus vaginatus</i>		+	+
	<i>Cyperus</i> sp.			+
	<i>Eleocharis pallens</i>		+	+
	<i>Fimbristylis dichotoma</i>		+	+
	<i>Fimbristylis dictyocolea</i>		+	+
	<i>Fimbristylis microcarya</i>		+	+
	<i>Lipocarpa microcephala</i>		+	+
	<i>Schoenoplectiella dissachantha</i>		+	+
	<i>Schoenoplectus laevis</i>		+	+
ELATINACEAE	<i>Bergia perennis</i>		+	+
EUPHORBIACEAE	<i>Euphorbia ?boophthona</i>			+
	<i>Euphorbia australis</i>		+	+
	<i>Euphorbia australis</i> var. <i>hispidula</i>		+	+
	<i>Euphorbia australis</i> var. <i>subtomentosa</i>		+	+
	<i>Euphorbia biconvexa</i>		+	+
	<i>Euphorbia boophthona</i>		+	+
	<i>Euphorbia careyi</i>		+	+
	<i>Euphorbia coghlanii</i>		+	+
	<i>Euphorbia inappendiculata</i> var. <i>inappendiculata</i>	Priority 2		+
	<i>Euphorbia stevenii</i>	Priority 3	+	+
	<i>Euphorbia tannensis</i>		+	+
	<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>		+	+
	<i>Euphorbia trigonosperma</i>		+	+
	<i>Euphorbia</i> sp. (dead)			+
FABACEAE	<i>Acacia acradenia</i>		+	+
	<i>Acacia adoxa</i>		+	+
	<i>Acacia adoxa</i> var. <i>adoxo</i>		+	+
	<i>Acacia adsurgens</i>		+	+
	<i>Acacia ampliceps</i>		+	+
	<i>Acacia ancistrocarpa</i>		+	+
	<i>Acacia aneura</i>		+	+
	<i>Acacia aneura</i> alliance		+	+
	<i>Acacia aptaneura</i>		+	+
	<i>Acacia arida</i>		+	+
	<i>Acacia arrecta</i>		+	+
	<i>Acacia atkinsiana</i>		+	+
	<i>Acacia ayersiana</i>		+	+
	<i>Acacia bivenosa</i>		+	+

FAMILY	Taxon	Listing	1B	8B
	<i>Acacia citrinoviridis</i>		+	+
	<i>Acacia colei</i>		+	+
	<i>Acacia colei</i> var. <i>colei</i>		+	+
	<i>Acacia coriacea</i>		+	+
	<i>Acacia coriacea</i> subsp. <i>pendens</i>		+	+
	<i>Acacia cowleana</i>		+	+
	<i>Acacia dictyophleba</i>		+	+
	<i>Acacia distans</i>		+	+
	<i>Acacia elachantha</i>		+	+
	<i>Acacia glaucocaesia</i>		+	+
	<i>Acacia hilliana</i>		+	+
	<i>Acacia holosericea</i>			+
	<i>Acacia inaequilatera</i>		+	+
	<i>Acacia incurvaneura</i>		+	+
	<i>Acacia ligulata</i>		+	+
	<i>Acacia macraneura</i>		+	+
	<i>Acacia maitlandii</i>		+	+
	<i>Acacia marramamba</i>		+	+
	<i>Acacia melleodora</i>		+	+
	<i>Acacia minyura</i>		+	+
	<i>Acacia monticola</i>		+	+
	<i>Acacia orthocarpa</i>		+	+
	<i>Acacia pachyacra</i>		+	+
	<i>Acacia pruinocarpa</i>		+	+
	<i>Acacia ptychophylla</i>		+	+
	<i>Acacia pyrifolia</i>		+	+
	? <i>Acacia pyrifolia</i>		+	
	<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>		+	+
	<i>Acacia pyrifolia</i> var. <i>pyrifolia</i> var. <i>pyrifolia</i>			+
	<i>Acacia retivenea</i> subsp. <i>clandestinus</i>		+	+
	<i>Acacia rhodophloia</i>		+	+
	<i>Acacia robeorum</i>			+
	<i>Acacia sclerosperma</i>		+	+
	<i>Acacia sericophylla</i>		+	+
	<i>Acacia ?sericophylla</i>		+	
	<i>Acacia sibirica</i>		+	+
	<i>Acacia</i> sp. (seedling)			+
	<i>Acacia spondylophylla</i>		+	+
	<i>Acacia stellaticeps</i>		+	+
	<i>Acacia stenophylla</i>		+	+
	<i>Acacia synchronicia</i>		+	+
	<i>Acacia tenuissima</i>		+	+
	<i>Acacia tetragonophylla</i>		+	+

FAMILY	Taxon	Listing	1B	8B
	<i>Acacia trachycarpa</i>		+	+
	<i>Acacia trudgeniana</i>		+	+
	<i>Acacia ?trudgeniana</i>		+	
	<i>Acacia tumida</i>		+	+
	<i>Acacia tumida</i> var. <i>pilbarensis</i>		+	+
	<i>Acacia victoriae</i>		+	+
	<i>Acacia xiphophylla</i>		+	+
	<i>Alysicarpus muelleri</i>		+	+
	<i>Cajanus cinereus</i>		+	+
	<i>Crotalaria cunninghamii</i>		+	+
	<i>Crotalaria dissitiflora</i>		+	+
	<i>Crotalaria ?dissitiflora</i>		+	
	<i>Crotalaria dissitiflora</i> subsp. <i>benthamiana</i>		+	+
	<i>Crotalaria medicaginea</i>		+	+
	<i>Crotalaria medicaginea</i> var. <i>neglecta</i>		+	+
	<i>Crotalaria novae-hollandiae</i>		+	+
	<i>Crotalaria novae-hollandiae</i> subsp. <i>novae-hollandiae</i>		+	
	<i>Cullen cinereum</i>		+	+
	<i>Cullen graveolens</i>		+	+
	<i>Cullen lachnostachys</i>		+	+
	<i>Cullen leucanthum</i>		+	+
	<i>Cullen leucochaites</i>		+	+
	<i>Cullen stipulaceum</i>			+
	<i>Cullen</i> sp.			+
	<i>Desmodium muelleri</i>		+	+
	<i>Dichrostachys spicata</i>		+	+
	<i>Erythrina vespertilio</i>		+	+
	<i>Erythrina vespertilio</i> subsp. <i>biloba</i>		+	
	<i>Gastrolobium grandiflorum</i>		+	+
	<i>Glycine canescens</i>		+	+
	<i>Glycine tomentella</i>		+	+
	<i>Gompholobium oreophilum</i>		+	+
	<i>Indigastrum parviflorum</i>		+	+
	<i>Indigofera colutea</i>		+	+
	<i>Indigofera linifolia</i>		+	+
	<i>Indigofera monophylla</i>		+	+
	<i>Indigofera rugosa</i>		+	+
	? <i>Indigofera</i> sp.		+	
	<i>Isotropis atropurpurea</i>		+	+
	<i>Kennedia prorepens</i>		+	+
	<i>Lotus cruentus</i>		+	+
	<i>Neptunia dimorphantha</i>		+	+

FAMILY	Taxon	Listing	1B	8B
	<i>Petalostylis labicheoides</i>		+	+
	<i>Rhynchosia australis</i>		+	+
	<i>Rhynchosia minima</i>		+	+
	<i>Senna artemisioides</i>		+	+
	<i>Senna artemisioides</i> ?subsp. x ?		+	+
	<i>Senna artemisioides</i> subsp. <i>helmsii</i>		+	+
	<i>Senna artemisioides</i> subsp. <i>oligophylla</i>		+	+
	<i>Senna ferraria</i>		+	+
	<i>Senna glaucifolia</i>		+	+
	<i>Senna glutinosa</i>		+	+
	<i>Senna glutinosa</i> subsp. <i>glutinosa</i>		+	+
	<i>Senna glutinosa</i> subsp. <i>pruinosa</i>		+	+
	<i>Senna glutinosa</i> subsp. x <i>luerssenii</i>		+	+
	<i>Senna hamersleyensis</i>		+	+
	<i>Senna notabilis</i>		+	+
	<i>Senna sericea</i>		+	+
	<i>Senna symonii</i>		+	+
	<i>Senna venusta</i>		+	+
	<i>Senna</i> sp. ?x <i>sericea</i>		+	+
	<i>Senna</i> sp. Karijini (M.E. Trudgen 10392)		+	+
	<i>Sesbania cannabina</i>		+	+
	<i>Swainsona decurrens</i>		+	+
	<i>Swainsona tanamiensis</i>		+	+
	<i>Swainsona thompsoniana</i>	Priority 3		+
	<i>Tephrosia densa</i>		+	+
	<i>Tephrosia rosea</i>		+	+
	<i>Tephrosia rosea</i> var. <i>clementii</i>		+	+
	<i>Tephrosia rosea</i> var. Fortescue creeks (M.I.H. Brooker 2186)		+	+
	<i>Tephrosia supina</i>		+	+
	<i>Tephrosia virens</i>			+
	<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)		+	+
	<i>Tephrosia</i> sp. Clay soils		+	+
	<i>Tephrosia</i> sp. Newman (A.A. Mitchell PRP 29)			+
	<i>Tephrosia</i> sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)		+	+
	<i>Vachellia farnesiana</i>		+	+
	<i>Vigna lanceolata</i>		+	+
	<i>Vigna lanceolata</i> var. <i>lanceolata</i>		+	+
	<i>Vigna</i> sp. Hamersley Clay (A.A. Mitchell PRP 113)			+
	<i>Zornia albiflora</i>			+
GOODENIACEAE	<i>Dampiera candidans</i>		+	+

FAMILY	Taxon	Listing	1B	8B
	<i>Goodenia cusackiana</i>		+	+
	<i>Goodenia forrestii</i>		+	+
	<i>Goodenia lamprosperma</i>		+	+
	<i>Goodenia microptera</i>		+	+
	<i>Goodenia muelleriana</i>		+	+
	<i>Goodenia stobbsiana</i>		+	+
	<i>Goodenia triodiophila</i>		+	+
	<i>Goodenia ?prostrata</i>			+
	<i>Scaevola amblyanthera</i>		+	+
	<i>Scaevola amblyanthera</i> subsp. <i>centralis</i>			+
	<i>Scaevola amblyanthera</i> var. <i>centralis</i>			+
	<i>Scaevola browniana</i>		+	+
	<i>Scaevola browniana</i> subsp. <i>browniana</i>		+	+
	<i>Scaevola parvifolia</i>		+	+
	<i>Scaevola spinescens</i>		+	+
GYROSTEMONACEAE	<i>Codonocarpus cotinifolius</i>		+	+
HALORAGACEAE	<i>Gonocarpus ephemerus</i>			+
	<i>Haloragis</i> sp.			+
LAMIACEAE	<i>Clerodendrum floribundum</i>		+	+
	<i>Clerodendrum tomentosum</i> var. <i>lanceolatum</i>		+	+
	<i>Dicrastylis cordifolia</i>		+	+
	<i>Teucrium pilbaranum</i>		+	+
	<i>Teucrium racemosum</i>		+	+
LAURACEAE	<i>Cassytha capillaris</i>		+	+
	<i>Cassytha filiformis</i>		+	+
LYTHRACEAE	<i>Ammannia multiflora</i>		+	+
MALVACEAE	<i>Abutilon ?lepidum</i>		+	
	<i>Abutilon lepidum</i>		+	
	<i>Abutilon otocarpum</i>		+	+
	<i>Abutilon</i> sp. <i>Dioicum</i> (A.A. Mitchell PRP 1618)		+	
	<i>Abutilon</i> sp. <i>Pilbara</i> (W.R. Barker 2025)		+	+
	<i>Androcalva luteiflora</i>		+	+
	<i>Corchorus crozophorifolius</i>		+	+
	<i>Corchorus incanus</i>		+	+
	<i>Corchorus incanus</i> subsp. <i>incanus</i>		+	+
	<i>Corchorus ?incanus</i> subsp. <i>incanus</i>		+	+
	<i>Corchorus laniflorus</i>		+	+
	<i>Corchorus ?laniflorus</i>		+	
	<i>Corchorus lasiocarpus</i>		+	+
	<i>Corchorus ?lasiocarpus</i>			+
	<i>Corchorus lasiocarpus</i> subsp. <i>lasiocarpus</i>		+	+
	<i>Corchorus lasiocarpus</i> subsp. <i>parvus</i>		+	+
	<i>Corchorus parviflorus</i>		+	+

FAMILY	Taxon	Listing	1B	8B
	<i>Corchorus sidoides</i>		+	+
	<i>Corchorus tectus</i>		+	+
	<i>Corchorus ?tectus</i>			+
	<i>Corchorus tridens</i>		+	+
	<i>Corchorus trilocularis</i>		+	+
	<i>Corchorus walcottii</i>		+	+
	<i>Corchorus</i> sp.			+
	<i>Corchorus</i> sp. Hamersley Range Hilltops (s. van leeuwen 3826)		+	+
	<i>Gossypium australe</i>		+	+
	<i>Gossypium robinsonii</i>		+	+
	<i>Hibiscus austrinus</i>		+	+
	<i>Hibiscus austrinus</i> var. <i>austrinus</i>		+	
	<i>Hibiscus brachysiphonius</i>		+	+
	<i>Hibiscus burtonii</i>		+	+
	<i>Hibiscus coatesii</i>		+	+
	<i>Hibiscus leptocladus</i>		+	+
	<i>Hibiscus sturtii</i>		+	+
	<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>		+	+
	<i>Hibiscus sturtii</i> ?var. <i>campylochlamys</i>		+	
	<i>Hibiscus sturtii</i> var. <i>platychlamys</i>		+	+
	<i>Hibiscus verdcourtii</i>		+	+
	<i>Malvastrum americanum</i>		+	+
	<i>Melhania oblongifolia</i>		+	+
	<i>Seringia exastia</i>	Critically Endangered (EPBC)	+	+
	<i>Seringia nephrosperma</i>		+	+
	<i>Sida arenicola</i>		+	+
	<i>Sida arsiniata</i>		+	+
	<i>Sida cardiophylla</i>		+	+
	<i>Sida clementii</i>		+	+
	<i>Sida clementii</i> / <i>Sida arenicola</i>		+	+
	<i>Sida echinocarpa</i>		+	+
	<i>Sida fibulifera</i>		+	+
	<i>Sida platycalyx</i>		+	+
	<i>Sida rohlenae</i>		+	+
	<i>Sida spinosa</i>		+	+
	<i>Sida trichopoda</i>		+	+
	<i>Sida</i> sp. Articulation below (A.A. Mitchell PRP 1605)		+	
	<i>Sida</i> ?sp. Articulation below (A.A. Mitchell PRP 1605)		+	+
	<i>Sida</i> sp. Excedentifolia (J.L. Egan 1925)		+	+

FAMILY	Taxon	Listing	1B	8B
	<i>Sida</i> sp. L (A.M. Ashby 4202)		+	+
	<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)		+	+
	<i>Sida</i> sp. ?Supplejack Station		+	+
	<i>Triumfetta chaetocarpa</i>		+	+
	<i>Triumfetta clementii</i>		+	+
	? <i>Triumfetta clementii</i>		+	
	<i>Triumfetta maconochieana</i>		+	+
	<i>Triumfetta propinqua</i>		+	+
	<i>Triumfetta</i> sp.		+	
	<i>Waltheria indica</i>		+	+
MARSILEACEAE	<i>Marsilea exarata</i>		+	+
	<i>Marsilea hirsuta</i>		+	+
MENISPERMACEAE	<i>Tinospora smilacina</i>		+	+
MOLLUGINACEAE	<i>Trigastrotheca molluginea</i>		+	+
	? <i>Trigastrotheca molluginea</i>		+	
MONTIACEAE	<i>Calandrinia tepperiana</i>		+	+
	<i>Calandrinia</i> ? <i>tepperiana</i>		+	+
MYRTACEAE	<i>Calytrix carinata</i>		+	+
	<i>Corymbia candida</i>		+	+
	<i>Corymbia deserticola</i>		+	+
	<i>Corymbia hamersleyana</i>		+	+
	<i>Eucalyptus aridimontana</i>		+	+
	<i>Eucalyptus camaldulensis</i>		+	+
	<i>Eucalyptus</i> ? <i>camaldulensis</i>		+	+
	<i>Eucalyptus gamophylla</i>		+	+
	<i>Eucalyptus leucophloia</i>		+	+
	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>		+	+
	<i>Eucalyptus victrix</i>		+	+
	<i>Eucalyptus xerothermica</i>		+	+
	<i>Melaleuca argentea</i>		+	+
	<i>Melaleuca bracteata</i>		+	+
	<i>Melaleuca eleuterostachya</i>		+	+
	<i>Melaleuca glomerata</i>		+	+
	<i>Melaleuca linophylla</i>		+	+
NYCTAGINACEAE	<i>Boerhavia burbidgeana</i>		+	+
	<i>Boerhavia coccinea</i>		+	+
	<i>Boerhavia gardneri</i>		+	+
	<i>Boerhavia</i> ? <i>gardneri</i>		+	+
	<i>Boerhavia paludosa</i>		+	+
	<i>Boerhavia repleta</i>		+	+
	<i>Boerhavia</i> sp.		+	
OLEACEAE	<i>Jasminum didymum</i>		+	+
	<i>Jasminum didymum</i> subsp. <i>lineare</i>		+	+

FAMILY	Taxon	Listing	1B	8B
OROBANCHACEAE	<i>Striga curviflora</i>		+	+
	<i>Striga squamigera</i>		+	+
PEDALIACEAE	<i>Josephinia eugeniae</i>		+	+
PHYLLANTHACEAE	<i>Flueggea virosa</i>		+	+
	<i>Flueggea virosa</i> subsp. <i>melanthesoides</i>		+	+
	<i>Nellica maderaspatensis</i>		+	+
	<i>Notoleptopus decaisnei</i>		+	+
	<i>Phyllanthus erwinii</i>		+	+
	<i>Phyllanthus exilis</i>		+	+
	<i>Phyllanthus maderaspatensis</i>		+	+
PLANTAGINACEAE	<i>Stemodia grossa</i>		+	+
	<i>Stemodia kingii</i>		+	+
	<i>Stemodia viscosa</i>		+	+
POACEAE	<i>Amphipogon caricinus</i>		+	+
	<i>Amphipogon sericeus</i>		+	+
	<i>Aristida burbidgeae</i>		+	+
	<i>Aristida contorta</i>		+	+
	<i>Aristida holathera</i>		+	+
	<i>Aristida holathera</i> var. <i>holathera</i>		+	+
	<i>Aristida inaequiglumis</i>		+	+
	<i>Aristida ingrata</i>		+	+
	<i>Aristida jerichoensis</i>		+	+
	<i>Aristida latifolia</i>		+	+
	<i>Aristida obscura</i>		+	+
	<i>Aristida pruinosa</i>		+	+
	<i>Aristida</i> sp. (inaequal glumes)			+
	<i>Astrebla lappacea</i>		+	+
	<i>Astrebla pectinata</i>		+	+
	<i>Bothriochloa bladhii</i>		+	+
	<i>Bothriochloa ewartiana</i>		+	+
	<i>Cenchrus ciliaris</i>		+	+
	<i>Cenchrus setiger</i>		+	+
	<i>Cenchrus</i> sp.			+
<i>Chloris pectinata</i>		+	+	
<i>Chrysopogon fallax</i>		+	+	
<i>Cymbopogon ambiguus</i>		+	+	
<i>Cymbopogon obtectus</i>		+	+	
<i>Cymbopogon procerus</i>		+	+	
<i>Cymbopogon</i> sp.		+		
<i>Cynodon convergens</i>		+	+	
<i>Cynodon prostratus</i>			+	
<i>Dactyloctenium radulans</i>		+	+	
<i>Dichanthium sericeum</i>		+	+	

FAMILY	Taxon	Listing	1B	8B
	<i>Dichanthium sericeum</i> subsp. <i>humilis</i>			+
	<i>Digitaria brownii</i>		+	+
	<i>Digitaria ctenantha</i>		+	+
	<i>Diplachne fusca</i>		+	+
	<i>Echinochloa colona</i>		+	+
	<i>Enneapogon caeruleus</i>		+	+
	<i>Enneapogon cylindricus</i>		+	+
	<i>Enneapogon intermedius</i>		+	+
	<i>Enneapogon lindleyanus</i>		+	+
	<i>Enneapogon pallidus</i>		+	+
	<i>Enneapogon polyphyllus</i>		+	+
	<i>Enneapogon robustissimus</i>		+	+
	<i>Enteropogon ramosus</i>		+	+
	<i>Eragrostis cumingii</i>		+	+
	<i>Eragrostis desertorum</i>		+	+
	<i>Eragrostis eriopoda</i>		+	+
	<i>Eragrostis ?eriopoda</i>			+
	<i>Eragrostis falcata</i>		+	+
	<i>Eragrostis leptocarpa</i>		+	+
	<i>Eragrostis setifolia</i>		+	+
	? <i>Eragrostis setifolia</i>		+	
	<i>Eragrostis tenellula</i>		+	+
	<i>Eragrostis xerophila</i>		+	
	<i>Eragrostis xerophylla</i>			+
	<i>Eriachne aristidea</i>		+	+
	<i>Eriachne benthamii</i>		+	+
	<i>Eriachne ciliata</i>		+	+
	<i>Eriachne helmsii</i>		+	+
	<i>Eriachne lanata</i>		+	+
	<i>Eriachne mucronata</i>		+	+
	<i>Eriachne obtusa</i>		+	+
	<i>Eriachne pulchella</i>		+	+
	<i>Eriachne pulchella</i> subsp. <i>dominii</i>		+	+
	<i>Eriachne pulchella</i> subsp. <i>pulchella</i>		+	
	<i>Eriachne</i> sp.		+	
	? <i>Eriachne</i> sp.		+	
	<i>Eriachne tenuiculmis</i>		+	+
	<i>Eriochloa pseudoacrotricha</i>		+	+
	<i>Eulalia aurea</i>		+	+
	<i>Heteropogon contortus</i>		+	
	<i>Iseilema dolichotrichum</i>		+	+
	<i>Iseilema eremaeum</i>		+	+
	<i>Iseilema macratherum</i>		+	+

FAMILY	Taxon	Listing	1B	8B
	<i>Iseilema vaginiflorum</i>		+	+
	<i>Leptochloa fusca</i>		+	+
	<i>Panicum decompositum</i>		+	+
	<i>Panicum laevinode</i>		+	+
	<i>Paraneurachne muelleri</i>		+	+
	<i>Paspalidium basicladum</i>		+	+
	<i>Paspalidium clementii</i>		+	+
	<i>Paspalidium jubiflorum</i>		+	+
	<i>Paspalidium rarum</i>		+	+
	<i>Paspalidium retiglume</i>		+	+
	<i>Pentameris airoides</i>		+	+
	<i>Perotis rara</i>		+	+
	<i>Schizachyrium fragile</i>		+	+
	<i>Setaria verticillata</i>		+	+
	<i>Sorghum plumosum</i>		+	+
	<i>Sorghum plumosum</i> var. <i>plumosum</i>		+	
	<i>Sorghum timorense</i>		+	+
	<i>Sporobolus actinocladus</i>		+	+
	<i>Sporobolus australasicus</i>		+	+
	<i>Sporobolus mitchellii</i>		+	+
	<i>Themeda triandra</i>		+	+
	<i>Themeda</i> sp. Hamersley Station (M.E. Trudgen 11431)	Priority 3	+	+
	<i>Tragus australianus</i>		+	+
	<i>Triodia angusta</i>		+	+
	<i>Triodia basedowii</i>		+	+
	<i>Triodia ?basedowii</i>		+	+
	<i>Triodia basitricha</i>		+	+
	<i>Triodia brizoides</i>		+	+
	<i>Triodia ?brizoides</i>		+	+
	<i>Triodia epactia</i>		+	+
	<i>Triodia ?epactia</i>			+
	<i>Triodia lanigera</i>		+	+
	<i>Triodia longiceps</i>		+	+
	<i>Triodia pungens</i>		+	+
	<i>Triodia vanleeuwenii</i>		+	+
	<i>Triodia veniciae</i>	Priority 1	+	+
	<i>Triodia wiseana</i>		+	+
	<i>Triodia</i> sp. (glabrous, non-resinous)			+
	<i>Triodia</i> sp. (woolly, non-resinous)			+
	<i>Tripogonella loliiformis</i>		+	+
	<i>Triraphis mollis</i>		+	+
POLYGALACEAE	<i>Polygala glaucifolia</i>		+	+

FAMILY	Taxon	Listing	1B	8B
	<i>Polygala isingii</i>		+	+
POLYGONACEAE	<i>Duma florulenta</i>		+	+
	<i>Portulaca oleracea</i>		+	+
	<i>Portulaca pilosa</i>		+	+
	<i>Portulaca</i> sp.			+
POTAMOGETONACEAE	<i>Potamogeton tricarinatus</i>		+	+
PROTEACEAE	<i>Grevillea berryana</i>		+	+
	<i>Grevillea pyramidalis</i>		+	+
	<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>		+	+
	<i>Grevillea wickhamii</i>		+	+
	<i>Hakea chordophylla</i>		+	+
	<i>Hakea lorea</i>		+	+
	<i>Hakea lorea</i> subsp. <i>lorea</i>		+	+
PTERIDACEAE	<i>Cheilanthes austrotenuifolia</i>		+	+
	<i>Cheilanthes sieberi</i>		+	+
RUBIACEAE	<i>Dolichocarpa crouchiana</i>		+	+
	<i>Dolichocarpa</i> sp. Hamersley Station (A.A. Mitchell PRP 1479)	Priority 3	+	+
	<i>Psyrdrax latifolia</i>		+	+
	<i>Psyrdrax rigidula</i>		+	+
	<i>Psyrdrax suaveolens</i>		+	+
	<i>Spermacoce brachystema</i>		+	+
	<i>Synaptantha tillaeacea</i> var. <i>tillaeacea</i>			+
SANTALACEAE	<i>Anthobolus leptomerioides</i>		+	+
	<i>Exocarpos sparteus</i>		+	+
	<i>Santalum acuminatum</i>		+	+
	<i>Santalum lanceolatum</i>		+	+
	<i>Santalum spicatum</i>	TOI	+	+
SAPINDACEAE	<i>Atalaya hemiglauca</i>		+	+
	<i>Dodonaea coriacea</i>		+	+
	<i>Dodonaea lanceolata</i>		+	+
	<i>Dodonaea pachyneura</i>		+	+
	<i>Dodonaea petiolaris</i>		+	+
SCROPHULARIACEAE	<i>Eremophila cuneifolia</i>		+	+
	<i>Eremophila forrestii</i>		+	+
	<i>Eremophila forrestii</i> subsp. <i>forrestii</i>			+
	<i>Eremophila lanceolata</i>		+	+
	<i>Eremophila latrobei</i>		+	+
	<i>Eremophila longifolia</i>		+	+
	<i>Eremophila maculata</i>		+	+
	<i>Eremophila spongiocarpa</i>		+	+
SOLANACEAE	<i>Nicotiana benthamiana</i>		+	+
	<i>Nicotiana heterantha</i>		+	+

FAMILY	Taxon	Listing	1B	8B
	<i>Nicotiana occidentalis</i>		+	+
	<i>Nicotiana umcratica</i>	Priority 3	+	+
	<i>Solanum cleistogamum</i>		+	+
	<i>Solanum diversiflorum</i>		+	+
	<i>Solanum elatius</i>		+	+
	<i>Solanum gabriellae</i>		+	+
	<i>Solanum horridum</i>		+	+
	<i>Solanum lasiophyllum</i>		+	+
	<i>Solanum morrisonii</i>		+	+
	<i>Solanum nummularium</i>		+	+
	<i>Solanum phlomoides</i>		+	+
	<i>Solanum sturtianum</i>		+	+
	<i>Solanum</i> sp. (dead)			+
SURIANACEAE	<i>Stylobasium spathulatum</i>		+	+
TYPHACEAE	<i>Typha domingensis</i>		+	+
VIOLACEAE	<i>Afrohybanthus aurantiacus</i>		+	+
ZYGOPHYLLACEAE	<i>Roepera eichleri</i>			+
	<i>Tribulus astrocarpus</i>		+	+
	<i>Tribulus hirsutus</i>		+	+
	<i>Tribulus platypterus</i>		+	+
	<i>Tribulus suberosus</i>		+	+

Attachment 4 – Species vs Vegetation Unit Matrix

Attachment 4. Species vs Vegetation Unit Matrix

Taxon	ASL (2)	AxS	MSW	MTGW	TbHG	THG	THGB	THGG	TvHG ¹	AaAxSL ²
? <i>Abutilon</i> sp.	+		+	+	+	+	+	+		
? <i>Acacia pyrifolia</i>	+					+		+		
? <i>Corymbia hamersleyana</i> (sapling)	+					+				
? <i>Cullen</i> sp. (dead)	+		+	+		+	+	+		
? <i>Eragrostis setifolia</i>	+									
? <i>Eriachne</i> sp.	+				+		+	+		
? <i>Indigofera</i> sp.	+									
? <i>Ipomoea plebeia</i>	+									
? <i>Polygalaceae</i> sp.	+									
? <i>Ptilotus fusiformis</i>	+									
? <i>Streptoglossa decurrens</i>	+		+				+	+		
? <i>Tephrosia rosea</i> (dead)	+				+		+	+		
? <i>Trigastrotheca molluginea</i>	+									
? <i>Triumfetta clementii</i>	+						+			
? <i>Triumfetta</i> sp.	+			+		+	+			
<i>Abutilon</i> ? <i>lepidum</i>	+						+			
<i>Abutilon hannii</i>	+									
<i>Abutilon lepidum</i>	+	+		+	+	+	+	+		
<i>Abutilon malvifolium</i>	+									
<i>Abutilon</i> sp.	+				+	+	+	+		

¹ TvHG was described and sampled by Maia (2022)

² AaAxSL was described and sampled by Maia (2022)

Taxon	ASL (2)	AxS	MSW	MTGW	TbHG	THG	THGB	THGG	TvHG ¹	AaAxSL ²
<i>Abutilon</i> sp. Dioicum (A.A. Mitchell PRP 1618)	+		+				+	+		
<i>Acacia</i> ? <i>glaucocaesia</i>	+							+		
<i>Acacia</i> ? <i>sericophylla</i>	+						+	+		
<i>Acacia acradenia</i>	+						+			
<i>Acacia adoxa</i> var. <i>adoxo</i>	+	+	+			+	+	+		
<i>Acacia adsurgens</i>	+	+		+	+		+			
<i>Acacia ampliceps</i>	+					+	+			
<i>Acacia ancistrocarpa</i>	+		+		+	+	+	+		
<i>Acacia aptaneura</i>	+					+			+	
<i>Acacia arida</i>	+					+				
<i>Acacia bivenosa</i>						+				1
<i>Acacia colei</i> var. <i>colei</i>				+						
<i>Acacia coriacea</i> subsp. <i>pendens</i>				+						
<i>Acacia glaucocaesia</i>			+							
<i>Acacia holosericea</i>			+							
<i>Acacia inaequilatera</i>			+							
<i>Acacia maitlandii</i>			+							
<i>Acacia melleodora</i>			+				+			
<i>Acacia monticola</i>							+			
<i>Acacia orthocarpa</i>			+							
<i>Acacia pruinocarpa</i>				+						
<i>Acacia ptychophylla</i>					+					
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>		+								
<i>Acacia sericophylla</i>			+				+			
<i>Acacia</i> sp. (seedling)			+							
<i>Acacia stellaticeps</i>							+			
<i>Acacia synchronica</i>							+			

Taxon	ASL (2)	AxS	MSW	MTGW	TbHG	THG	THGB	THGG	TvHG ¹	AaAxSL ²
<i>Acacia tenuissima</i>							+			
<i>Acacia trachycarpa</i>			+				+	+		
<i>Acacia trudgeniana</i>				+						
<i>Acacia tumida</i>			+							
<i>Acacia tumida</i> var. <i>pilbarensis</i>							+			
<i>Acacia victoriae</i>				+						
<i>Acacia xiphophylla</i>		+								
<i>Acacia atkinsiana</i>					+	+	+	+		
<i>Aerva javanica</i>							+			
<i>Afrohybanthus aurantiacus</i>			+							
<i>Alternanthera nana</i>			+			+	+	+		
<i>Alysicarpus muelleri</i>			+				+			
<i>Amaranthus undulatus</i>			+				+	+		
<i>Amphipogon sericeus</i>			+	+						
<i>Aristida contorta</i>							+			
<i>Aristida holathera</i> var. <i>holathera</i>			+				+	+		
<i>Aristida latifolia</i>							+			
<i>Aristida</i> sp. (inaequal glumes)			+				+	+		
<i>Arivela viscosa</i>							+	+		
<i>Arivela viscosa</i>							+	+		
<i>Astrebla pectinata</i>							+			
<i>Atalaya hemiglauca</i>			+				+	+		
<i>Boerhavia ?gardneri</i>		+								
<i>Boerhavia burbridgeana</i>							+			
<i>Boerhavia coccinea</i>								+		
<i>Boerhavia gardneri</i>			+	+	+		+			
<i>Boerhavia paludosa</i>							+			

Taxon	ASL (2)	AxS	MSW	MTGW	TbHG	THG	THGB	THGG	TvHG ¹	AaAxSL ²
<i>Boerhavia repleta</i>			+				+	+		
<i>Boerhavia</i> sp.								+		
<i>Bonamia alatisemina</i>			+							
<i>Bonamia erecta</i>		+								
<i>Bonamia pilbarensis</i>		+	+							
<i>Bulbostylis barbata</i>						+				
<i>Calandrinia tepperiana</i>			+		+		+			
<i>Calocephalus beardii</i>			+				+	+		
<i>Calocephalus pilbarensis</i>							+			
<i>Capparis lasiantha</i>			+				+			
<i>Capparis spinosa</i>					+		+			
<i>Capparis umbonata</i>					+		+	+		
<i>Cassytha filiformis</i>			+					+		
<i>Cenchrus ciliaris</i>			+	+						
<i>Cenchrus setiger</i>			+	+				+		
<i>Cenchrus</i> sp.			+				+	+		
<i>Cenchrus setiger</i>			+	+			+			
<i>Chrysopogon fallax</i>			+	+						
<i>Cleome viscosa</i>			+				+			
<i>Commelina ensifolia</i>			+				+	+		
<i>Corchorus ?laniflorus</i>			+							
<i>Corchorus incanus</i> subsp. <i>incanus</i>							+	+		
<i>Corchorus laniflorus</i>			+				+			
<i>Corchorus lasiocarpus</i>			+	+			+	+		
<i>Corchorus lasiocarpus</i> subsp. <i>lasiocarpus</i>								+		
<i>Corchorus lasiocarpus</i> subsp. <i>parvus</i>								+		
<i>Corchorus parviflorus</i>							+	+		

Taxon	ASL (2)	AxS	MSW	MTGW	TbHG	THG	THGB	THGG	TvHG ¹	AaAxSL ²
<i>Corchorus</i> sp.					+	+	+	+		
<i>Corchorus tectus</i>			+							
<i>Corchorus walcottii</i>			+							
<i>Corymbia hamersleyana</i>							+			
<i>Crotalaria ?dissitiflora</i>				+						
<i>Crotalaria cunninghamii</i>						+				
<i>Crotalaria dissitiflora</i> subsp. <i>benthamiana</i>						+				
<i>Crotalaria medicaginea</i> var. <i>neglecta</i>			+							
<i>Crotalaria novae-hollandiae</i> subsp. <i>novae-hollandiae</i>			+				+	+		
<i>Cucumis melo</i>			+				+	+		
<i>Cucumis</i> sp. (dead)				+						
<i>Cucumis variabilis</i>			+							
<i>Cucumis variabilis</i>							+	+		
<i>Cullen leucanthum</i>			+	+						
<i>Cullen</i> sp.				+						
<i>Cullen stipulaceum</i>			+							
<i>Cullen cinereum</i>			+				+			
<i>Cymbopogon ambiguus</i>								+		
<i>Cymbopogon obtectus</i>			+			+	+	+		
<i>Cymbopogon</i> sp.			+				+			
<i>Cynodon convergens</i>			+				+	+		
<i>Cyperus bifax</i>								+		
<i>Cyperus hesperius</i>								+		
<i>Cyperus</i> sp.				+			+	+		
<i>Cyperus vaginatus</i>								+		
<i>Dampiera candicans</i>			+		+		+	+		
<i>Dichrostachys spicata</i>		+								

Taxon	ASL (2)	AxS	MSW	MTGW	TbHG	THG	THGB	THGG	TvHG ¹	AaAxSL ²
<i>Dipteracanthus chichesterensis</i>			+							
<i>Dodonaea coriacea</i>		+		+						
<i>Dolichocarpa</i> sp. Hamersley Station (A.A. Mitchell PRP 1479)				+			+	+		
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>							+			
<i>Ehretia saligna</i>				+						
<i>Ehretia saligna</i> var. <i>saligna</i>			+							
<i>Enneapogon caerulescens</i>			+	+			+			
<i>Enneapogon lindleyanus</i>			+							
<i>Enneapogon polyphyllus</i>			+					+		
<i>Eragrostis ?eriopoda</i>								+		
<i>Eragrostis eriopoda</i>								+		
<i>Eragrostis tenellula</i>				+						
<i>Eragrostis xerophila</i>			+				+	+		
<i>Eragrostis xerophylla</i>			+				+			
<i>Eraichne lanata</i>							+			
<i>Eraichne mucronata</i>			+	+						
<i>Eremophila forrestii</i> subsp. <i>forrestii</i>			+							
<i>Eremophila longifolia</i>								+		
<i>Eriachne ciliata</i>			+							
<i>Eriachne lanata</i>			+				+			
<i>Eriachne mucronata</i>			+				+			
<i>Eriachne pulchella</i>				+						
<i>Eriachne pulchella</i> subsp. <i>dominii</i>				+	+		+	+		
<i>Eriachne pulchella</i> subsp. <i>pulchella</i>							+			
<i>Eriachne</i> sp.				+			+			
<i>Eriachne tenuiculmis</i>			+							

Taxon	ASL (2)	AxS	MSW	MTGW	TbHG	THG	THGB	THGG	TvHG ¹	AaAxSL ²
<i>Erythrina vespertilio</i> subsp. <i>biloba</i>			+							
<i>Eucalyptus</i> ? <i>camaldulensis</i>								+		
<i>Eucalyptus camaldulensis</i>								+		
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>			+							
<i>Eucalyptus victrix</i>			+	+						
<i>Eulalia aurea</i>				+						
<i>Euphorbia</i> ? <i>boophthona</i>							+			
<i>Euphorbia australis</i> var. <i>hispidula</i>							+			
<i>Euphorbia australis</i> var. <i>subtomentosa</i>							+			
<i>Euphorbia biconvexa</i>						+	+	+		
<i>Euphorbia careyi</i>			+			+	+			
<i>Euphorbia coghlanii</i>			+	+						
<i>Euphorbia inappendiculata</i> var. <i>inappendiculata</i>				+	+					
<i>Euphorbia</i> sp. Dead							+			
<i>Euphorbia stevenii</i>							+			
<i>Euphorbia tannensis</i>			+							
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>			+							
<i>Euphorbia trigonosperma</i>			+							
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>			+				+			
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>			+							
<i>Fimbristylis dichotoma</i>			+							
<i>Flaveria trinervia</i>	+					+	+			
<i>Flueggea virosa</i> subsp. <i>melanthesoides</i>							+			
<i>Glycine canescens</i>							+	+		
<i>Gompholobium oreophilum</i>			+					+		
<i>Gomphrena cunninghamii</i>							+			
<i>Gomphrena kanisii</i>			+				+			

Taxon	ASL (2)	AxS	MSW	MTGW	TbHG	THG	THGB	THGG	TvHG ¹	AaAxSL ²
<i>Goodenia cusackiana</i>				+						
<i>Goodenia forrestii</i>				+						
<i>Goodenia microptera</i>							+			
<i>Goodenia muelleriana</i>				+						
<i>Goodenia stobbsiana</i>							+			
<i>Goodenia cusackiana</i>							+	+		
<i>Gossypium australe</i>			+	+			+			
<i>Gossypium robinsonii</i>			+							
<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>							+	+		
<i>Grevillea wickhamii</i>								+		
<i>Grevillea berryana</i>			+				+			
<i>Gymnanthera cunninghamii</i>			+							
<i>Hakea chordophylla</i>							+	+		
<i>Hakea lorea</i> subsp. <i>lorea</i>				+		+	+			
<i>Heliotropium crispatum</i>							+			
<i>Heliotropium</i> sp.								+		
<i>Heliotropium</i> sp. (hairy)		+		+			+			
<i>Heliotropium</i> sp. (recurved)						+				
<i>Heliotropium tenuifolium</i>			+				+	+		
<i>Hibiscus austrinus</i> var. <i>austrinus</i>			+				+	+		
<i>Hibiscus brachysiphonius</i>			+		+		+			
<i>Hibiscus coatesii</i>							+			
<i>Hibiscus leptocladus</i>			+							
<i>Hibiscus sturtii</i>			+				+	+		
<i>Hibiscus sturtii</i> ?var. <i>campylochlamys</i>							+	+		
<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>				+			+			
<i>Hibiscus sturtii</i> var. <i>platyklamys</i>								+		

Taxon	ASL (2)	AxS	MSW	MTGW	TbHG	THG	THGB	THGG	TvHG ¹	AaAxSL ²
<i>Hibiscus brachysiphonius</i>							+			
Indet.							+			
<i>Indigofera monophylla</i>							+	+		
<i>Indigofera rugosa</i>			+							
<i>Ipomoea racemigera</i>		+		+						
<i>Iseilema vaginiflorum</i>			+				+			
<i>Isotropis atropurpurea</i>								+		
<i>Jasminum didymum</i> subsp. <i>lineare</i>			+	+			+	+		
<i>Leichhardtia australis</i>								+		
<i>Malvastrum americanum</i>						+		+		
<i>Melaleuca argentea</i>				+						
<i>Melaleuca bracteata</i>			+							
<i>Melaleuca glomerata</i>			+				+	+		
<i>Melaleuca linophylla</i>			+							
<i>Nellica maderaspatensis</i>				+						
<i>Neptunia dimorphantha</i>			+				+	+		
<i>Nicotiana occidentalis</i>		+	+				+	+		
<i>Nicotiana umbratica</i>							+			
<i>Notoleptopus decaisnei</i>			+							
<i>Operculina aequisejala</i>			+							
<i>Paraneurachne muelleri</i>			+							
<i>Paspalidium clementii</i>			+							
<i>Pentalepis trichodesmoides</i> subsp. <i>hispida</i>							+			
<i>Pluchea rubelliflora</i>			+							
<i>Polycarpaea longiflora</i>		+		+						
<i>Polycarpaea corymbosa</i>			+				+			
<i>Polycarpaea longiflora</i>								+		

Taxon	ASL (2)	AxS	MSW	MTGW	TbHG	THG	THGB	THGG	TvHG ¹	AaAxSL ²
<i>Polygala glaucifolia</i>							+			
<i>Polymeria ?mollis</i>							+			
<i>Polymeria ambigua</i>				+						
<i>Polymeria</i> sp. (dead)							+	+		
<i>Portulaca oleracea</i>							+			
<i>Portulaca</i> sp.								+		
<i>Psydrax suaveolens</i>							+			
<i>Ptilotus aervoides</i>								+		
<i>Ptilotus auriculifolius</i>			+				+			
<i>Ptilotus calostachyus</i>				+				+		
<i>Ptilotus carinatus</i>								+		
<i>Ptilotus clementii</i>			+				+	+		
<i>Ptilotus exaltatus</i>							+			
<i>Ptilotus fusiformis</i>		+	+	+			+			
<i>Ptilotus gomphrenoides</i>				+						
<i>Ptilotus obovatus</i>						+				
<i>Ptilotus obovatus</i> var. <i>obovatus</i>				+				+		
<i>Ptilotus rotundifolius</i>							+			
<i>Ptilotus astrolasius</i>					+		+	+		
<i>Ptilotus calostachyus</i>		+		+						
<i>Ptilotus rotundifolius</i>							+	+		
<i>Rhynchosia minima</i>			+	+			+			
<i>Roepera eichleri</i>			+				+			
<i>Salsola australis</i>		+		+						
<i>Santalum acuminatum</i>						+	+			
<i>Santalum spicatum</i>							+	+		
<i>Scaevola browniana</i> subsp. <i>browniana</i>								+		

Taxon	ASL (2)	AxS	MSW	MTGW	TbHG	THG	THGB	THGG	TvHG ¹	AaAxSL ²
<i>Senna artemisioides</i> ?subsp. x ?						+		+		
<i>Senna artemisioides</i> subsp. <i>helmsii</i>			+	+			+			
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>				+				+		
<i>Senna glutinosa</i>			+	+			+			
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>			+							
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>								+		
<i>Senna glutinosa</i> subsp. x <i>luerssenii</i>		+	+	+	+		+	+		
<i>Senna notabilis</i>		+	+	+	+		+	+		
<i>Senna</i> sp. ? <i>xsericea</i>			+							
<i>Senna</i> sp. Karijini (M.E. Trudgen 10392)			+		+	+	+	+		
<i>Senna symonii</i>							+			
<i>Senna venusta</i>		+				+				
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>			+				+	+		
<i>Seringia</i> ? <i>exastia</i>	+						+	+		
<i>Sesbania cannabina</i>			+							
<i>Sida clementii</i>		+		+						
<i>Sida clementii</i> / <i>Sida arenicola</i>								+		
<i>Sida echinocarpa</i>			+				+			
<i>Sida fibulifera</i>						+				
<i>Sida</i> sp. ?Supplejack Station			+							
<i>Sida</i> sp. Articulation below (A.A. Mitchell PRP 1605)			+				+	+		
<i>Sida</i> sp. Excedentifolia (J.L. Egan 1925)							+	+		
<i>Sida</i> sp. L (A.M. Ashby 4202)							+			
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)				+						
<i>Solanum cleistogamum</i>			+	+						
<i>Solanum diversiflorum</i>							+			
<i>Solanum gabrielae</i>						+				

Taxon	ASL (2)	AxS	MSW	MTGW	TbHG	THG	THGB	THGG	TvHG ¹	AaAxSL ²
<i>Solanum lasiophyllum</i>		+	+	+				+		
<i>Solanum phlomoides</i>						+	+	+		
<i>Solanum</i> sp. (dead)							+	+		
<i>Sorghum plumosum</i> var. <i>plumosum</i>							+			
<i>Sporobolus australasicus</i>								+		
<i>Stackhousia muricata</i> subsp. annual (W.R. Barker 2172)							+	+		
<i>Stemodia grossa</i>			+							
<i>Stemodia kingii</i>			+							
<i>Stemodia viscosa</i>			+	+						
<i>Streptoglossa ?bubakii</i>								+		
<i>Streptoglossa ?decurrens</i>			+				+			
<i>Streptoglossa bubakii</i>				+						
<i>Striga squamigera</i>			+							
<i>Swainsona decurrens</i>				+						
<i>Swainsona thompsoniana</i>							+			
<i>Synaptantha tillaeacea</i> var. <i>tillaeacea</i>		+								
<i>Tephrosia densa</i>				+						
<i>Tephrosia rosea</i>							+			
<i>Tephrosia rosea</i> var. <i>clementii</i>				+						
<i>Tephrosia rosea</i> var. Fortescue Creeks (M.I.H. Brooker 2186)			+							
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)			+				+			
<i>Tephrosia</i> sp. clay soils (S. van Leeuwen et al. PBS 0273)			+				+			
<i>Tephrosia</i> sp. Newman (A.A. Mitchell PRP 29)								+		
<i>Tephrosia</i> sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)			+				+	+		
<i>Tephrosia supina</i>								+		
<i>Tephrosia virens</i>				+						

Taxon	ASL (2)	AxS	MSW	MTGW	TbHG	THG	THGB	THGG	TvHG ¹	AaAxSL ²
<i>Themeda</i> sp. Hamersley Station (M.E. Trudgen 11431)				+						
<i>Themeda triandra</i>						+				
<i>Tinospora smilacina</i>								+		
<i>Trachymene oleracea</i>								+		
<i>Trachymene oleracea</i>				+						
<i>Trianthema glossostigmum</i>			+	+			+			
<i>Tribulus astrocarpus</i>			+				+			
<i>Tribulus hirsutus</i>							+			
<i>Tribulus platypterus</i>			+							
<i>Tribulus suberosus</i>						+				
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>			+							
<i>Trichodesma zeylanicum</i>							+			
<i>Trigastrotheca molluginea</i>							+			
<i>Triodia ?brizoides</i>							+	+		
<i>Triodia ?epactia</i>							+			
<i>Triodia angusta</i>			+	+				+		
<i>Triodia basedowii</i>			+			+	+	+		
<i>Triodia brizoides</i>							+	+		
<i>Triodia epactia</i>				+						
<i>Triodia longiceps</i>			+	+						
<i>Triodia pungens</i>			+	+			+			
<i>Triodia</i> sp. (glabrous, non-resinous)			+				+			
<i>Triodia</i> sp. (woolly, non-resinous)			+							
<i>Triodia veniciae</i>			+							
<i>Triodia wiseana</i>		+	+			+	+	+		
<i>Triumfetta chaetocarpa</i>							+			
<i>Triumfetta clementii</i>							+			

Taxon	ASL (2)	AxS	MSW	MTGW	TbHG	THG	THGB	THGG	TvHG ¹	AaAxSL ²
<i>Triumfetta propinqua</i>							+			
<i>Triumfetta</i> sp.			+				+			
<i>Vachellia farnesiana</i>			+							
<i>Vigna lanceolata</i> var. <i>lanceolata</i>			+							
<i>Vigna</i> sp. Hamersley Clay (A.A. Mitchell PRP 113)				+						
<i>Waltheria indica</i>			+							
<i>Zaleya galericulata</i> subsp. <i>galericulata</i>							+			
<i>Zornia albiflora</i>								+		