Central Pilbara Hub

Detailed and Targeted Flora Survey

Biologic Environmental Survey

Report to BHP Western Australia Iron Ore

August 2023

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3	K. Greenacre	C. van den Bergh	Alice Taysom	30/08/2023

EXECUTIVE SUMMARY

BHP Western Australia Iron Ore (BHP WAIO) commissioned Biologic Environmental Survey Pty Ltd (Biologic) to undertake a desktop assessment and a single season detailed and targeted flora survey of the Central Pilbara Hub (CPH). The CPH (hereafter, the Study Area), is located approximately 80 km northwest of Newman and covers approximately 60,000 hectares (ha). The Study Area comprises three separate areas: Pineapple Hill and Camp Hill, Mining Area C to Yandi Rail Corridor, and Mudlark Well.

The overarching objective of this survey was to assess the flora taxa present, or likely to be present, within the Study Area, and map the vegetation within. This objective was addressed with a single season detailed survey where previous surveys were more than five years old or non-existent. Targeted surveys were undertaken where surveys had occurred recently (within five years) and through the remainder of the Study Area.

The detailed and targeted field survey was undertaken by ten experienced botanists over five separate trips and 102 person days: comprising two trips in March 2022, one trip in April-May 2022, one trip in June 2022 and a targeted survey was conducted around the Pineapple Hill tenement in November 2021 for tenement expenditure. A total of 152 quadrats, 21 relevés, and 27 mapping notes were completed across 25,563 ha of the Study Area, as well as opportunistic sampling. There were no substantial limitations or constraints impacting the flora and vegetation survey, and the subsequent results.

A total of 516 confirmed vascular flora taxa, from 62 families and 190 genera were recorded in the Study Area, comprising 499 native and 17 introduced flora taxa. The desktop assessment identified 26 significant taxa confirmed to occur within the Study Area and a further 65 significant taxa which had potential to occur within the Study Area. Thirteen significant flora taxa were assessed as still Possible to occur within the Study Area, for the post-survey review of likelihood of occurrence. Twenty significant flora taxa were recorded within the Study Area, comprising of:

- Priority 1: *Triodia* sp. Karijini (S. van Leeuwen 4111);
- Priority 2: *Aristida lazaridis*, *Eragrostis* sp. Mt Robinson (S. van Leeuwen 4109), *Eremophila* sp. West Angelas (S. van Leeuwen 4068), *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708), *Ipomoea racemigera*, and *Oxalis* sp. Pilbara (M.E. Trudgen 12725);
- Priority 3: *Eremophila naaykensii*, *Indigofera gilesii*, *Aristida jerichoensis* var. *subspinulifera*, *Pilbara trudgenii*, *Rhagodia* sp. Hamersley (M. Trudgen 17794), *Rostellularia adscendens* var. *latifolia*, *Solanum kentrocaule*, *Themeda* sp. Hamersley Station (M.E. Trudgen 11431), *Triodia* sp. Mt Ella (M.E. Trudgen 12739), and *Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 4684); and
- Priority 4: *Eremophila magnifica* subsp. *magnifica*, *Lepidium catapycnon*, and *Sida* sp. Barlee Range (S. van Leeuwen 1642).

Seventeen confirmed introduced taxa were recorded within the Study Area. These taxa are not listed as Weeds of National Significance or Declared Pests under the *Biosecurity and Agriculture Management Act 2007*. Weeds were prevalent across the entire Study Area, with the most common

being **Bidens bipinnata*, and the introduced pasture grass **Cenchrus ciliaris* forming the dominant part of one vegetation type (MA CcCs Aci EcrEv).

A total of 77 vegetation types from 28 broad floristic formations were described and delineated within the Study Area. The dominant broad floristic formation was *Triodia* Hummock Grassland which supported 32 vegetation types (38,972.5 ha / 65.7 %). Vegetation types were found across ten landforms, with Stony Plains being the most dominant (15,002.7 ha / 25.31 %). Two mapping units, 'Cleared' and 'Rehabilitation', were also mapped within the Study Area.

The vegetation types sampled during the field survey are not considered to be analogous with the known Threatened and Priority Ecological Communities occurring in the Pilbara region. One vegetation type previously mapped may represent a sub-type of the 'Coolibah-Lignum Flats' PEC (P1), although, a vegetation mapping note only recorded the presence of *Eucalyptus victrix* and no other indicator species. This would indicate that the PEC is unlikely to occur, however, further on-ground work would be required to confirm. Several vegetation types throughout the Study Area were considered significant for other reasons. This included 30 vegetation types that hold local significance for supporting one or more of the priority flora recorded, 16 vegetation types considered to be 'ecosystems at risk' for the Hamersley subregion, five vegetation types considered to be Groundwater Dependent Vegetation, and three vegetation types considered to be sheet-flow dependent vegetation. It should be noted that not all vegetation types were sampled during the current survey, with the reliance on existing mapping and extrapolation to describe and delineate these under-sampled vegetation types. The assessment of vegetation significance for these areas is based upon existing vegetation mapping supplied by BHP WAIO.

The condition of the vegetation in the Study Area ranged from Completely Degraded to Excellent, with the majority (46,542 ha / 78.5 %) in Excellent condition. The most common impacts to the vegetation were from introduced flora, tracks, and cattle grazing. Introduced flora had higher numbers and cover alongside tracks and infrastructure and lower in the landscape (i.e., drainage features and floodplains).

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1.1 Background

BHP Western Australia Iron Ore (BHP WAIO) commissioned Biologic Environmental Survey Pty Ltd (Biologic) to undertake a desktop assessment and a single season detailed and targeted flora survey of the Central Pilbara Hub (CPH). The CPH (hereafter, the Study Area), is located approximately 80 km northwest of Newman and covers approximately 60,000 hectares (ha), surrounding the main mining hub of Mining Area C and South Flank. The Study Area comprises three separate areas: Pineapple Hill and Camp Hill, Mining Area C (MAC) to Yandi Rail Corridor, and Mudlark Well (Figure 1.1).

The Study Area may be subject to surplus water and potential options for management will require approvals under Part IV of the *Environment Protection Act 1986* (EP Act). The survey results will be used to inform future environmental approvals in the area; however, it does not assess any specific development proposed by BHP WAIO.

1.2 Objectives

The overarching objective of this survey was to assess the flora taxa present, or likely to be present, within the Study Area, and map the vegetation within. This objective was addressed with a single season detailed survey where previous surveys were more than five years old or non-existent. Targeted surveys were undertaken where surveys had occurred recently (within five years) and more broadly across the Study Area.

660000
680000
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Yandi Rail Spur Line
Yandi Rail
Mining Area C Railway
Yandicoogina Rail
MS1039
Pineapple Hill
and Camp Hill
Juna Downs Rd
Yandicoogina Rail
Packsaddle Rd
Juna Downs Junction Rail
West Angelas Rail
West Angelas Rd
MAC to Yandi
Rail Corridor
MS1072
Great Northern Hwy
Karijini
National Park
Mudlark Well

Legend

- Study Area
- Approval Boundary
- Local Road
- State Road
- Rail
- National Park
- Section 5(1)(g) Reserve

IBRA Region
- Pilbara

IBRA Subregion
- Chichester
- Fortescue
- Hamersley
- Roebourne

N

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Scale: 1:220,000

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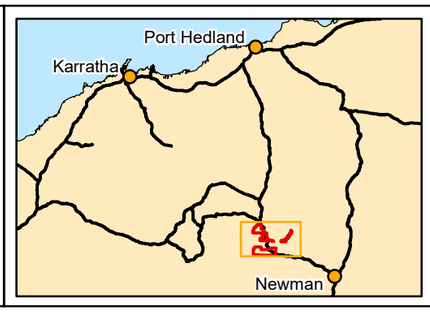
Coordinate System: GDA2020 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA2020 Created 17/04/2023



BHP WAIO

CPH Detailed and Targeted Flora Survey

Figure 1.1: Study Area and regional context

1.3 Legislation & Compliance

The Environmental Protection Authority (EPA) outline guidance for biological surveys in Western Australia. All aspects of botanical assessments at Biologic are compliant with the EPA Technical Guidance for Flora and Vegetation Surveys for Environmental Impact Assessment (EIA) (March–May, EPA, 2016b), this extends to preparation, survey design, personnel, data analysis, reporting and client data submission. Additionally, Biologic is consistent with the values presented in the Environmental Factor Guidelines for flora and vegetation (EPA, 2016b), intended to protect the biological diversity and ecological integrity of Western Australian flora and vegetation during the EIA.

In addition, this assessment was also carried out in a manner consistent with the following:

- BHP WAIO (2020) Biological survey spatial data requirements (SPR-IEN-EMS-015);
- BHP (2018b) Vegetation and Flora Survey Procedure (0124627);
- State *Biodiversity Conservation Act 2016* (BC Act);
- State EP Act; and
- Commonwealth *Environment Protection and Biodiversity Conservation Act* (EPBC Act).

1.3.1 Significant Flora & Vegetation

The state and commonwealth governments protect rare, endemic, new or special flora and vegetation communities at varying levels by classifying them under codes of conservation significance. These codes, jurisdiction and level of protection are detailed in Appendix A.

Conservation significant flora and vegetation includes:

- Taxa identified as Threatened, Critically Endangered, Endangered or Vulnerable species (State listed BC Act and/or commonwealth listed EPBC Act);
- Being identified as Threatened Ecological Community (TEC), Critically Endangered, Endangered or Vulnerable ecological community (State listed BC Act and/or commonwealth listed EPBC Act);
- Taxa listed as Priority flora species (DBCA, 2022); and
- Identified as a Priority Ecological Community (PEC) (DBCA, 2017).

Significant flora and vegetation may extend beyond the assigned threatened and priority codes and may include:

- Locally endemic or associated with a restricted habitat type (e.g., surface water or groundwater dependent ecosystems);
- New species or anomalous features that indicate a potential new species;
- Range extensions or representative of outer population extent (particularly at the extremes of range, recently discovered range extensions or isolated outliers of the main range);
- Unusual species; restricted subspecies, varieties, naturally occurring hybrids, or complex taxonomic groups;
- Relictual status, being representative of taxonomic groups that no longer occur widely in the broader landscape;

- Restricted or endemic distribution;
- Degree of historical impact from threatening processes (such as mining or agricultural);
- A role as a refuge for significant flora; or
- Providing an important function required to maintain ecological integrity of a significant ecosystem.

1.3.2 Introduced Flora

Introduced flora can pose a threat to native vegetation and biodiversity. They are carefully managed at both a state and commonwealth level and can be classified as either Weeds of National Significance (WoNS), Declared Pests (DPs) or according to the Department of Biodiversity, Conservation and Attractions (DBCA) Weed Prioritisation Process.

Weeds of National Significance

The Commonwealth Department of Agriculture, Water and the Environment (DAWE), in collaboration with the states and territories, has identified 32 WoNS based on an assessment process that prioritises these weeds according to their invasiveness, potential for spread, and environmental, social and economic impacts (DAWE, 2021a). A list of 20 WoNS was endorsed in 1999, and a further 12 were added in 2012.

Landowners and land managers at all levels are responsible for managing WoNS. State and territory governments are responsible for legislation, regulation, and administration of weeds. The WoNS were selected as they require coordination among all levels of government, organisations, and individuals with weed management responsibilities.

Declared Pests

To protect Western Australian agriculture the Department of Primary Industries and Regional Development (DPIRD) (formerly the Department of Agriculture and Food Western Australia, DAFWA) regulates harmful plants under the *Biosecurity and Agriculture Management Act 2007* (BAM Act). Plants that are prevented entry into the state or have control or keeping requirements within the state are known as DPs. The main purposes of the BAM Act and its regulations related to DPs are to prevent new plant pests from entering Western Australia, manage the impact and spread of those pests already present in the state and safely manage the use of agricultural chemicals.

The BAM Act has categorised the weeds of Western Australia into four main classifications:

- DPs (under Section 22 of the Act);
- Permitted (under Section 11 of the Act);
- Prohibited (under Section 12 of the Act); and
- Permitted requiring a permit (Section 73, BAM Regulations 2013).

Under the BAM Act, DPs mean prohibited pests (under Section 12 of the Act) and pests declared under Section 22 of the Act. All DPs listed under Section 22 (not including pests listed under Section 12 of the BAM Act; Prohibited Pests) are placed in one of three control categories:

- Category 1 (C1) – Exclusion: if in the opinion of the Minister introduction of the DP into an area or part of an area for which it is declared should be prevented;
- Category 2 (C2) – Eradication: if in the opinion of the Minister eradication of the DP from an area or part of an areas for which it is declared is feasible;
- Category 3 (C3) – Management: if in the opinion of the Minister eradication of the declared pest from an area or part of an area for which it is declared is not feasible but that it is necessary to:
    - Alleviate the harmful impact of the DP in the area; or
    - Reduce the number or distribution of the DP in the area; or
    - Prevent or contain the spread of the DP in the area.

Prohibited pests listed under Section 12 of the BAM Act are assigned separate control categories and include:

- Category 1 (C1) – Exclusion: if in the opinion of the Minister introduction of the prohibited organism into the State or a part of the State should be prevented; and
- Category 2 (C2) – Eradication: if in the opinion of the Minister eradication of the prohibited organism from the State or a part of the State is feasible.

Weed Prioritisation

In 2008, the former Department of Environment and Conservation (now DBCA) developed and implemented an integrated approach to weed management on DBCA-managed lands in WA, the Weed Prioritisation Process (Bettink & Keighery, 2008). It was updated in 2013 and further revised in 2016. DBCA prioritised weeds in each region, based on their:

- Invasiveness;
- Ecological impact;
- Potential and current distribution; and
- Feasibility of control.

The resulting priorities focus on weeds considered to be high impact, rapidly invasive and still at a population size that can feasibly be eradicated or contained to a manageable size. This means that weed species that are already widespread may not be ranked as a high priority. The key priorities are centred on ‘Priority Alert’ weeds and weeds that receive a rating for ‘ecological impact’ and ‘invasiveness’.

2 EXISTING ENVIRONMENT

2.1 Biogeography

The Study Area is located within the Hamersley (PIL03) subregion of the Pilbara bioregion, as defined by the Interim Biogeographic Regionalisation of Australia (IBRA; Thackway & Cresswell, 1995b) (Figure 1.1). The Pilbara bioregion is characterised by vast coastal plains and inland mountain ranges with cliffs and deep gorges (Thackway & Cresswell, 1995a). Vegetation is predominantly mulga low woodlands or snappy gum over bunch and hummock grasses (Bastin & ACRIS, 2008). The Hamersley subregion is characterised by mountainous areas of Proterozoic sedimentary ranges (ironstone ranges) and plateaux dissected by gullies and gorges (Kendrick, 2001). Vegetation comprises mulga low woodland over bunch grasses on fine-textured soils in valley floors, while skeletal soils of the ranges are dominated by snappy gum (*Eucalyptus leucophloia*) over *Triodia brizoides* (Kendrick, 2001). Drainage is typically into the Fortescue River to the north, the Ashburton River to the south, or the Robe River to the west (Kendrick, 2001).

The significant and dominant feature of this subregion is the Hamersley Range. This prominent range feature, 450 km long, is a mountainous plateau which receives significantly higher rainfall than the surrounding subregion giving rise to deeply incised gorges, up to 100 metres (m) deep, containing extensive permanent spring-fed streams and pools (Kendrick, 2001). The Hamersley Range (to the south) and Chichester Range (to the north) drain to give rise to the Fortescue Marsh and Fortescue River system (McKenzie *et al.*, 2009).

2.2 Climate

The Pilbara bioregion has a semi-desert to tropical climate, with rainfall occurring sporadically throughout the year, although mostly during summer (Thackway & Cresswell, 1995a). Summer rainfall is usually the result of tropical storms in the north or tropical cyclones that impact upon the coast and move inland (Leighton, 2004). The winter rainfall is generally lighter and is the result of cold fronts moving north easterly across the state (Leighton, 2004). The average annual rainfall ranges from 200–350 mm, although there are significant fluctuations between years, with some locations receiving up to 1,200 mm in some years (McKenzie *et al.*, 2009).

2.3 Geology

The Hamersley subregion contains Proterozoic sedimentary ranges and gorges of basalt, shale and dolerite. This subregion also contains calcrete deposits (Kendrick, 2001). The Study Area occurs across six broad (1:500,000) geological units, Wittenoom Formation (A-HAd-kd), Brockman Iron Formation (P_-HAb-cib), Mount McRae Shale and Mount Sylvia Formation (A-HAu-xsl-ci), Weeli Wolli Formation (P-Haj-xci-od), Marra Mamba Iron Formation (A-HAm-cib) and Jeerinah Formation (A-FOj-xs-b) (Figure 2.1, Table 2.1). The two dominant formations of the Study Area are Wittenoom Formation (17,521.6 ha, 29.6 %) and Brockman Iron Formation (17,413.6 ha, 29.4 %). The Wittenoom Formation is characterised by thinly bedded dolomite and dolomitic shale, with minor black chert, shale, banded

iron formation and sandstone and the Brockman Iron Formation is characterised by banded iron-formation, chert, mudstone, and siltstone.

Table 2.1: Geological formations of the Study Area.

Unit Name	Geological Unit	Description	Extent in Study Area	
			ha	%
Wittenoom Formation	A-HAd-kd	Thinly bedded dolomite and dolomitic shale, with minor black chert, shale, banded iron formation and sandstone	17522	29.6
Brockman Iron Formation	P_-HAb-cib	Banded iron-formation, chert, mudstone, and siltstone; metamorphosed	17414	29.4
Mount McRae Shale and Mount Sylvia Formation	A-HAu-xsl-ci	Mudstone, siltstone, chert, banded iron-formation, and dolomite; metamorphosed	8725	14.7
Weeli Wolli Formation	P_-HAj-xci-od	Banded iron-formation (commonly jaspilite), mudstone, siltstone, and numerous dolerite sills; metamorphosed	7636	12.9
Marra Mamba Iron Formation	A-HAm-cib	Chert, banded iron-formation, mudstone, and siltstone; minor carbonate; metamorphosed	7173	12.1
Jeerinah Formation	A-FOj-xs-b	Siliciclastic sedimentary rocks, mafic volcanic rocks and minor felsic volcanic rocks; local carbonate rocks, chert, and dolerite sills	815	1.4
Total			**59,285**	**100**

NB: hectare values have been rounded to the nearest whole number

660000
680000
700000
720000
7480000
7460000

Yandicoogina Rail
Yandi Rail Spur Line
Mining Area C Railway
MS1039
Juna Downs Rd
Juna Downs Junction Rail
Yandicoogina Rail
Packsaddle Rd
West Angelas Rail
West Angelas Rd
MS1072
Great Northern Hwy

Legend

- Study Area
- Approval Boundary
- Local Road
- State Road
- Rail

Bedrock Geology

- P_-HAw-fr; Woongarra Rhyolite
- P-HAj-xci-od; Weeli Wolli Formation
- P-HAb-cib; Brockman Iron Formation
- AP-HAu-xsl-ci; Mount McRae Shale and Mount Sylvia Formation
- A-HAd-kd; Wittenoom Formation
- A-HAm-cib; Marra Mamba Iron Formation
- A-FO-od; Fortescue Group
- A-FOj-xs-b; Jeerinah Formation

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Scale: 1:220,000

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Datum: GDA2020 Created 03/10/2022

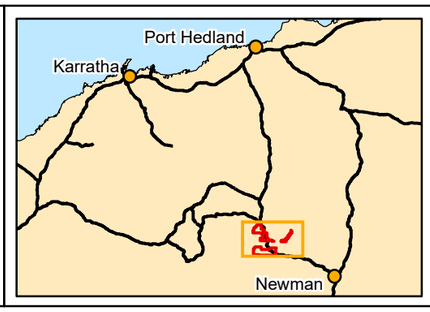

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Figure 2.1: Broad Geology of the Study Area

2.4 Soils

The Atlas of Australian Soils was compiled by the Commonwealth Scientific and Industrial Research Organisation in the 1960s to provide a consistent national description of Australia's soils (Northcote *et al.*, 1960-1968). It comprises of a series of ten maps and associated explanatory notes and is published at a scale of 1:2,000,000, but the original compilation was at scales from 1:250,000 to 1:500,000.

The broad soil landscape unit mapping shows the Study Area comprises units Fa13, Fa14 and Fb3 (Northcote *et al.*, 1960-1968) (Figure 2.2). The dominant soil type, Fa13 (28,112.1 ha / 47.4 %), is characterised by ranges of banded jaspilite and chert along with shales, dolomites, and iron ore formations; some areas of ferruginous duricrust as well as occasional narrow winding valley plains and steeply dissected pediments. This unit is largely associated with the Hamersley and Ophthalmia Ranges. The soils are frequently stony and shallow and there are extensive areas without soil cover: chief soils are shallow stony earthy loams (Um5.51) along with some (Uc5. 11) soils on the steeper slopes. Associated are (Dr2.33 and Dr2.32) (Bettany *et al.*, 1967).

The second most dominant soil type is Fb3 (19,247.9 ha / 32.5 %), which is characterised by high-level valley plains set in extensive areas of unit Fa13. There are extensive areas of pisolitic limonite deposits: principal soils are deep earthy loams (Um5.52) along with small areas of (Gn2.12) soils (Bettany *et al.*, 1967). The remainder of the Study Area is soil type Fa14 (11,924.7 ha / 20.1 %), characterised by steep hills and steeply dissected pediments on areas of banded jaspilite and chert along with shales, dolomite, and iron ore formations; some narrow winding valley plains: chief soils are shallow stony earthy loams (Um5.51) along with some (Uc5.11) soils on the steeper slopes. (Dr2.33 and Dr2.32) soils which occur on the pediments are more extensive than in unit Fa13. (Um5.52) and (Uf6.71) soils occur on the valley plains (Bettany *et al.*, 1967).

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7480000 7460000

Fb3 My55 Fb3 Fa13 Fa15 Ja2 Fb3 Fa14 Fa13 Fb3 Fa13 Fb3

Yandicoogina Rail
Yandi Rail Spur Line
Mining Area C Railway
MS1039
Packsaddle Rd
Yandicoogina Rail
Juna Downs Junction Rail
West Angelas Rail
West Angelas Rd
MS1072
Great Northern Hwy

Legend

Study Area
Approval Boundary
Local Road
State Road
Rail

Soil Unit

Fa13
Fa14
Fa15
Fb3
Ja2
My55

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Scale: 1:220,000

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Coordinate System: GDA2020 MGA Zone 50
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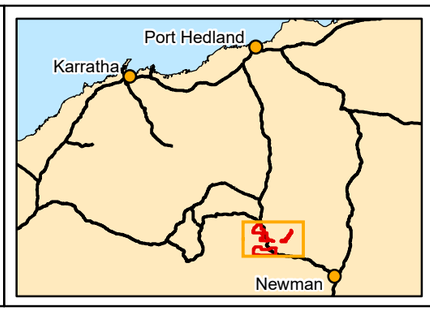

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CPH Detailed and Targeted Flora Survey

Figure 2.2: Soils of the Study Area

2.5 Land Systems

Van Vreeswyk *et al*. (2004) classified and mapped the land systems of the Pilbara bioregions according to similarities in landform, soil, vegetation, geology and geomorphology. An assessment of land systems provides an indication of the diversity and distribution of habitats in the Study Area.

Eleven land systems occur within the Study Area, the dominant being the Boolgeeda land system which covers 51.1% (30,285.2ha) of the Study Area (Figure 2.3, Table 2.2c). The Boolgeeda land system is defined as “stony lower slopes and plains below hill systems supporting hard and soft spinifex grasslands or mulga shrublands” (van Vreeswyk *et al.*, 2004). The second most dominant is the Newman land system, covering approximately 32.3 % (19,125.5 ha) of the Study Area, defined as “rugged jaspilite plateaux, ridges and mountains supporting hard spinifex grasslands”. Wannamunna land system accounts for 10.3 % (6,091.1 ha) of the Study Area and is characterised as “hardpan plains and internal drainage tracts supporting mulga shrublands and woodlands (and occasionally eucalypt woodlands)”. The remaining land systems account for the remaining 6.4% (Figure 2.3,Table 2.2).

Table 2.2: Land systems of the Study Area.

Land System	Land Type	Description	Extent in Study Area	
			ha	%
Boolgeeda (Bgd)	Stony plains with spinifex grasslands	Stony lower slopes and plains below hill systems supporting hard and soft spinifex grasslands or mulga shrublands.	30287	51.1
Newman (New)	Hills and ranges with spinifex grasslands	Rugged jaspilite plateaux, ridges and mountains supporting hard spinifex grasslands.	19124	32.3
Wannamunna (Wnm)	Wash plains on hardpan with mulga shrublands	Hardpan plains and internal drainage tracts supporting mulga shrublands and woodlands (and occasionally eucalypt woodlands).	6091	10.3
Platform (Pla)	Stony plains with spinifex grasslands	Dissected slopes and raised plains supporting hard spinifex grasslands.	3022	5.1
Robe (Rob)	Mesas, breakaways, and stony plains with spinifex grasslands	Low plateaux, mesas, and buttes of limonites supporting soft spinifex (and occasionally hard spinifex) grasslands.	302	0.5
Egerton (Ege)	Stony plains with spinifex grasslands	Highly dissected hardpan plains supporting mulga shrublands and hard spinifex hummock grasslands.	197	0.3
McKay (McK)	Hills and ranges with spinifex grasslands	Hills, ridges, plateaux remnants and breakaways of meta sedimentary and sedimentary rocks supporting hard spinifex grasslands.	87	0.1
Rocklea (Roc)	Hills and ranges with spinifex grasslands	Basalt hills, plateaux, lower slopes, and minor stony plains supporting hard spinifex (and occasionally soft spinifex) grasslands.	82	0.1
Calcrete (Cal)	Calcrete plains with spinifex grasslands	Low calcrete platforms and plains supporting shrubby hard spinifex grasslands.	57	0.1

Land System	Land Type	Description	Extent in Study Area	
			ha	%
River (Riv)	River plains with grassy woodlands and tussock grasslands	Active flood plains, major rivers and banks supporting grassy eucalypt woodlands, tussock grasslands and soft spinifex grasslands	31	0.1
Pindering (Pdg)	Wash plains on hardpan with mulga shrublands	Gravelly hardpan plains supporting groved mulga shrublands with hard and soft spinifex.	5	0.01
Total			**59,285**	**100**

NB: hectare values have been rounded to the nearest whole number

660000 680000 700000 720000

7480000 7460000

McKay System
Platform System
Pindering System
Calcrete System
Oakover System
Robe System
Yandi Rail
Yandi Rail Spur Line
Spur Line
Rocklea System
MS1039
Wannamunna System
Great Northern Hwy
Boolgeeda System
Yandicoogina Rail
Platform System
McKay System
River System
Newman System
Juna Downs Rd
Packsaddle Rd
Juna Downs Junction Rail
Yandicoogina Rail
Boolgeeda System
Paraburdoo System
Spearhole System
Elimunna System
West Angelas Rail
Newman System
Mining Area C Railway
MS1072
Platform System
Oakover System
Boolgeeda System
Calcrete System
Pindering System
Wannamunna System
Platform System
Egerton System
West Angelas Rd
Rocklea System
Newman System
Jamindie System
McKay System
Rocklea System
Spearhole System
Newman System

Legend

- Study Area
- Approval Boundary
- Local Road
- State Road
- Rail

Land System

- Boolgeeda System
- Calcrete System
- Egerton System
- Elimunna System
- Jamindie System
- McKay System
- Newman System
- Oakover System
- Paraburdoo System
- Pindering System
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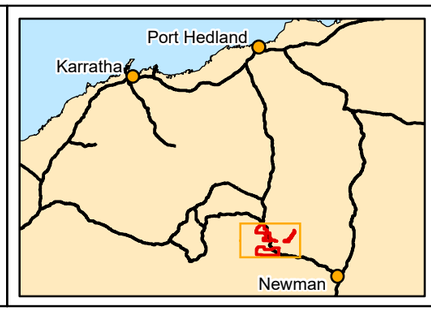
Projection: Transverse Mercator
Datum: GDA2020 Created 03/10/2022



BHP WAIO

CPH Detailed and Targeted Flora Survey

Figure 2.3: Land Systems of the Study Area

2.6 Hydrology and Surface Drainage

Three major watercourses are located either within the Study Area (Figure 2.4; Marillana Creek, in the northeast) or in close proximity (Weeli Wolli Creek and Turee Creek East approximately 2 km south). Yandicoogina Creek and un-named tributaries of Marillana Creek also intersect the northern portion of the Study Area. Marillana Creek flows in an easterly direction, running through the north-eastern tip of the Study Area towards Yandicoogina Creek and Weeli Wolli Creek (approximately 8–13 km east of the Study Area). Marillana Creek and Yandicoogina Creek (flows to the north) are important sources of surface water runoff to Weeli Wolli Creek, which flows to the north and discharges into the Fortescue River Valley. Both Marillana Creek and Yandicoogina Creek typically only flow during the wet season following significant rainfall and are periodically subject to major flooding as a result of cyclonic weather events in the region. Marillana Creek and Yandicoogina Creek are also influenced by dewatering discharge from BHP WAIO's Yandi operations and Rio Tinto Iron Ore's Yandicoogina operations downstream. Marillana Creek is a source of recharge to the Marillana Creek Channel Iron Deposit (CID) groundwater aquifer (WRC, 2003).

2.6.1 Groundwater Dependent Ecosystems

Groundwater Dependent Ecosystems (GDEs) are ecosystems that rely upon groundwater for their continued existence (BoM, 2021). GDEs can be represented by many different assemblages of biota which rely on groundwater, and as a result come in many forms. For terrestrial ecosystems there are three key types of GDE (BoM, 2021);

- Aquatic ecosystems: that rely on the surface expression of groundwater – this includes surface water ecosystems which may have a groundwater component, such as rivers, wetlands, and springs.
- Terrestrial ecosystems: that rely on the subsurface presence of groundwater – this includes all vegetation ecosystems or Groundwater Dependent Vegetation (GDV).
- Subterranean ecosystems: this includes cave and aquifer ecosystems.

Aboveground terrestrial GDEs are typically characterised by the presence of flora species that rely on groundwater, i.e., phreatophytes. Phreatophytes may be classified as either obligate or facultative phreatophytes depending on their reliance on groundwater (Eamus *et al.*, 2016):

- Obligate phreatophytes are flora species confined to habitats with access to groundwater.
- Facultative phreatophytes are flora species that can utilise groundwater to satisfy a proportion of their ecological water requirement (EWR) when it is available. However, some individuals may also satisfy their EWR by relying solely on uptake from upper unsaturated soils layers where groundwater is inaccessible.

The Bureau of Meteorology (BoM) has developed the Groundwater Dependent Ecosystems Atlas (GDE Atlas) as a national dataset of Australian GDEs to inform groundwater planning and management (BoM, 2021). It is the first and only national inventory of GDEs in Australia.

660000
680000
700000
720000
7480000
7460000
7440000
Yandi Rail Spur Line
Mining Area C Railway
MS1039
Marillana Creek
Yandicoogina Creek
Yandicoogina Rail
Juna Downs Rd
Juna Downs Junction Rail
Packsaddle Rd
West Angelas Rail
West Angelas Rd
MS1072
Weeli Wolli Creek
Pebble Mouse Creek
Weeli Wolli Creek
Great Northern Hwy

Legend

- Study Area
- Approval Boundary
- Local Road
- State Road
- Rail

Surface Hydrology

- Minor
- Major

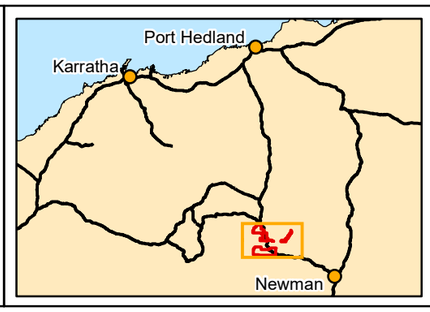
N

biologic Environmental Survey

Scale: 1:220,000

0 3 6 9 Km

Coordinate System: GDA2020 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA2020 Created 17/04/2023



BHP WAIO

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Figure 2.4: Surface hydrology of the Study Area

The GDE Atlas contains information about three key types of ecosystems: Aquatic ecosystems, Terrestrial ecosystems, and Subterranean ecosystems. Importantly, the GDE Atlas also includes the national inflow-dependent landscapes layer which is derived from remotely sensed data. This layer indicates the likelihood that a landscape is accessing water in addition to rainfall (such as soil moisture, surface water or groundwater), and generally represents a potential GDE dataset for all areas not yet studied or investigated in any detail.

The GDE mapping in the GDE Atlas comes from two broad sources:

- National assessment – national-scale analysis based on a set of rules that describe potential for groundwater/ ecosystem interaction and available geographic information systems (GIS) data.
- Regional studies – more detailed analysis undertaken by various state and regional agencies using a range of different approaches including field work, analysis of satellite imagery and application of rules/conceptual models.

The BoM GDE Atlas indicates that the Study Area has potential to support both terrestrial and aquatic GDEs (BoM, 2012). Approximately half of the MAC to Yandi Rail Corridor, as well as small areas at the southern end of Pineapple Hill and Camp Hill, have moderate potential to support terrestrial GDEs. MAC to Yandi Rail Corridor also has moderate potential to support aquatic GDEs where it overlaps with Marillana Creek in the north. The remainder of the Study Area has low or zero potential to support either terrestrial or aquatic GDEs.

2.6.2 Sheet-flow Dependent Ecosystems

Mulga is a large, variable and taxonomically complex group of plants allied to *Acacia aneura* that dominate significant areas of the vast Australian arid zone (Maslin *et al.*, 2012). The term Mulga is also used to describe vegetation communities in which these taxa predominate (Maslin *et al.*, 2012). A recent revision of the Mulga group (*Acacia aneura* and its close relatives) classified 12 separate entities, excluding informal variants, putative hybrids and intergrades (Maslin & Reid, 2012). The structure and patterning of mulga communities varies from strongly banded (groved) through to open shrublands and woodlands across the landscape (Page & Grierson, 2012). The bandings act as a sink for nutrients and water to infiltrate the soil and are readily available for uptake by the flora located within the banding. This banding and overland sheet-flow supports a diverse biota within the Mulga bands and plays an important ecological function which is well documented (Dawson & Ahern, 1973; Saco *et al.*, 2007; Winkworth, 1973).

The Study Area contains three Land Systems that have landforms subject to sheet-flow, with these being characterised by mulga groves within stony plains and hardpan plains (see Section 2.5 and Figure 2.3). The Boolgeeda Land System includes small groves up to 20 m long within stony lower plains which are subject to sheet flow. The Wannamunna supports sheet flow on hardpan plains, with groves up to 1.5 km long by 150 m wide. The Pindering Land System has groves up to 400 m long by 30 m wide situated on gravelly hardpan plains that are subject to sheet flow (van Vreeswyk *et al.*, 2004).

2.7 Vegetation

2.7.1 Pre-European Vegetation

Beard (1975) broadly (1:1,000,000) mapped the major structural vegetation types of Western Australia. Shepherd *et al.* (2002) reinterpreted and updated the vegetation association mapping to reflect the National Vegetation Information System (NVIS) standards (ESCAVI, 2003). This update also accounts for extensive clearing since Beard (1975) mapping.

Three vegetation associations occur within the Study Area, Hammersley-18, Hammersley-82, and Hammersley-29 (Table 2.3, Figure 2.5). Hammersley-18 and Hammersley-29 comprise low Mulga (*Acacia aneura*) woodland, while Hammersley-82 is largely hummock grasslands with *Eucalyptus leucophloia* (Table 2.3).

Table 2.3: Vegetation associations within the Study Area.

Vegetation Association	Description	Extent in Study Area	
		ha	%
HAMMERSLEY-18	Low woodland; mulga (*Acacia aneura*)	38291	64.6
HAMMERSLEY-82	Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana*	697	34.2
HAMMERSLEY-29	Sparse low woodland; mulga, discontinuous in scattered groups	20296	1.2
Total		**59,285**	**100**

NB: hectare values have been rounded to the nearest whole number

2.8 Land Use and Tenure

The Study Area is located on two pastoral leases, the northern portion occurring on Juna Downs Station and a small section in the north-east on Marillana Station. A small portion on the southern edge and eastern section occurs on Vacant Crown Land, with the north-west section adjacent to Juna Downs Station, designated as Unallocated Crown Land. Karijini National Park is situated adjacent to the Study Area's westernmost boundary, with a small section of the Study Area located within the boundary of Karijini National Park (7.2 ha) (Figure 1.1).

660000
680000
700000
720000
7480000
7460000

Juna Downs Rd
Juna Downs Junction Rail
Yandicoogina Rail
Packsaddle Rd
West Angelas Rail
Yandicoogina Rail
Yandi Rail Spur Line
Mining Area C Railway
MS1039
West Angelas Rd
MS1072
Great Northern Hwy

Legend

- Study Area
- Approval Boundary
- Local Road
- State Road
- Rail

Vegetation Association

- Hammersley 18
- Hammersley 29
- Hammersley 567
- Hammersley 82

N

biologic Environmental Survey

Scale: 1:220,000

0 3 6 9 Km

Coordinate System: GDA2020 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA2020 Created 03/10/2022

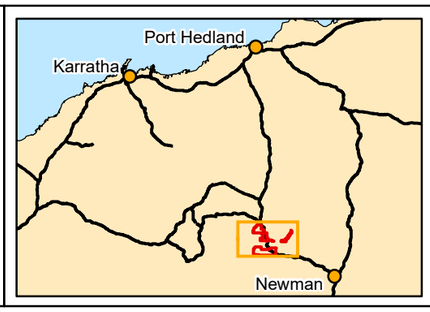

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Figure 2.5: Pre-European vegetation assocations of the Study Area

3 METHOD

3.1 Desktop Assessment

A desktop assessment, comprising database searches and a literature review, was undertaken prior to the field survey. The purpose of the desktop assessment was to identify flora taxa occurring, or potentially occurring, in the Study Area.

3.1.1 Database Searches

Eight database searches were undertaken to generate a list of vascular flora taxa previously recorded within, and near the Study Area, including introduced and significant taxa (Table 3.1). The database searches also identified ecological communities/ vegetation types of significance that occur, or may occur, within, and near the Study Area. Conservation codes for flora and vegetation of significance are provided in Appendix A.

Table 3.1: Details of database searches conducted.

Provider	Reference	Database	Parameters
Department of Biodiversity, Conservation and Attractions	DBCA (2021a)	NatureMap	50 km radius of Study Area
	DBCA (2021b)	Threatened and Priority Ecological Communities	50 km radius of Study Area
	DBCA (2021c)	Threatened and Priority Flora Database	50 km radius of Study Area
Western Australian Herbarium (WAH)	WAH (1998-)	WAH Specimen Database	50 km radius of Study Area
Department of Agriculture, Water and the Environment	DAWE (2021b)	Protected Matters Search (MNES)	Circle of radius 40 km centred on the coordinates: 50K 699401, 7462877
Atlas of Living Australia	ALA (2021)	Occurrence search	Circle of radius 40 km centred on the coordinates: 50K 699401, 7462877
Department of Primary Industry and Regional Development	DPIRD (2021)	Declared Pests Database (WAOL)	Search of the entire Shire of East Pilbara and Shire of Ashburton
BHP WAIO	BHP WAIO (2022)	BHP Internal Database	50 km radius of Study Area

3.1.2 Literature Review

A review of available literature relevant to the Study Area was undertaken to compile a list of significant flora species and vegetation communities of interest with the potential to occur within the Study Area. Twenty-seven assessments were reviewed, 17 overlapping or partially overlapping the Study Area, and 10 from within 100 km (Table 3.2, Appendix B).

Table 3.2: Reports used for the literature review.

Survey Title	Reference	Survey Type	Survey Area	Distance from Current Study Area (km)
Yandi, Ministers North, and MAC				
Mines, Port, Rail & NPI – Weed Mapping & Control – Area C, April 2017	(Astron, 2017a)	Weed mapping	Area C Mine	Specific Study Area not provided
Mines, Port, Rail & NPI – Weed Mapping & Control – Rail, June 2017	(Astron, 2017b)	Weed mapping	Rail Network	Specific Study Area not provided
Ministers North Miscellaneous Licence Area Amendment Surveys and Yandicoogina Creek – Detailed Flora and Vegetation Assessment	(Biologic, 2021)	Detailed	Ministers North and Yandi Creek	Overlaps
Ministers North and Yandi Vegetation Association and Condition Mapping	(Onshore, 2020)	Desktop assessment	Yandi	Overlaps
Flora and Vegetation Review – Yandi ML 270SA	(Onshore, 2011b)	Reconnaissance	Yandi	Overlaps
Two Phase Assessment of the Flora and Vegetation of the Proposed Marillana Creek (Yandi) Mine extension Areas	(Ecologia, 2008)	Detailed	Yandi	Overlaps
Area C to Jinayri to Mount Newman Railway Flora and Vegetation Survey	(Woodman, 2010)	Detailed	Area C to Jinayri and Mt Newman Railway	Overlaps
Flora and Vegetation Survey – Yandi Lease M47/292 and E4 Drill Lines	(Maunsell Australia, 2004)	Targeted Flora and Vegetation	Yandi M47/292 Lease & E4 Drill Lines	Overlaps
Ministers North Detailed Flora and Vegetation Survey	(Biota, 2017)	Detailed	Ministers North	Overlaps
Rapid Growth Project 5: M270SA Flora and Vegetation Assessment	(ENV, 2008b)	Detailed	Mining Lease M270SA	Overlaps
Mining Area C Review of Flora and Vegetation Baseline Information	(Onshore, 2014)	Desktop Review	Mining Area C	Overlaps
Yandi Mine Extension RGP5 - EIA Flora Survey Interim Report Post Phase 1 Survey	(ecologia, 2007)	Detailed Interim Report	Yandi Mine Extension RGP5	Overlaps
Ministers North to Yandi Corridor Single Phase Level 2 Fauna and Detailed Flora/Vegetation Survey	(Biologic, 2017)	Detailed	Ministers North to Yandi Corridor	Overlaps
Area C West to Yandi Flora and Vegetation Assessment	(Astron, 2018)	Reconnaissance	Area C West to Yandi	Overlaps
Area C and Surrounds Study Area Level 2 Flora and Vegetation Survey	(Onshore, 2011a)	Detailed	Area C and Surrounds	Overlaps
Marillana Creek: Riparian Flora and Vegetation Survey	(Onshore, 2015)	Detailed	Marillana Creek	~ 10 km N
Area C Mining Operations Environmental Management Plan (Revision 4) A, D, P1 and P3 Deposits Flora and Vegetation assessment	(Woodman, 2009)	Detailed and Gaps Analysis	Area C	~ 55 km NW

Survey Title	Reference	Survey Type	Survey Area	Distance from Current Study Area (km)
Mudlark Well (general locality)				
Level 2 Flora and Vegetation Survey – Mudlark Leases	(Onshore, 2013a)	Detailed	Mudlark	Overlaps
Alligator Jaws Exploration Lease Flora and Vegetation Assessment	(ENV, 2008a)	Detailed	Alligator Jaws Exploration Lease	~ 60 km WSW
CPH surrounds				
Level 2 Flora and Vegetation Survey – South Flank	(Onshore, 2012b)	Detailed	South Flank	Overlaps
Summary of Important Findings from Rapid Growth Project 5 Railway Project – Biological Assessments	(ENV, 2008c)	Detailed	Rapid Growth Project 5 Railway Project	Overlaps
Flora and Vegetation on the Hope Downs 4 Mine and Infrastructure Corridor	(Mattiske, 2008)	Detailed	Hope Downs 4 Infrastructure Corridor	Overlaps
Coondewanna Flats Flora and Vegetation Assessment	(Astron, 2011)	Detailed	Coondewanna Flats	Adjacent to the north of Mudlark Well
Flora and Vegetation Survey, Jinidi to Mainline Study Area	(Onshore, 2012a)	Detailed	Jinidi	~ 11 km E
UMC Area A and Additional Areas: Vegetation and Flora Survey	(ecologia, 2009)	Detailed	Tenement E47/1429	~ 25 km W
Targeted Survey for *Lepidium catapycnon* at Karijini National Park	(Onshore, 2013b)	Targeted	Karijini National Park	~ 75 km W
Fibre Optic Cable Flora and Fauna Assessment	(AECOM, 2020)	Reconnaissance	Fibre Optic Cable north of West Angelas mine	~ 100 km W

3.2 Field Survey

3.2.1 Survey Timing & Personnel

The field survey was undertaken over five trips from November 2021 to June 2022, by 10 botanists and one zoologist over 102 person days (not including mobilisation and demobilisation). The survey consisted of a single-season detailed assessment and an additional targeted survey around the Pineapple Hill tenement in November 2021, for tenement expenditure. Principal Botanist Clinton van den Bergh managed the overall project and led the field survey with assistance from Pierre-Louis de Kock, Sam Coultas, and Emily Eakin-Busher as required (Table 3.3). Biologic has a well-established and experienced botanical team with the project lead having over 15 years' experience in botanical surveys in WA. All personnel held the current and relevant licencing and had adequate experience for the bioregion. All team leads had over 5 years' experience as required by the technical guidance (EPA, 2016b). The field survey was split into five separate trips, with all trips completed during the recommended survey period for the Pilbara March–June (EPA, 2016b), excluding the targeted survey which was undertaken in November 2021. Although this survey occurred outside of the recommended survey period, the targeted survey concentrated on perennial taxa (i.e., *Eremophila naaykensii*) that could be identifiable during the month of November.

Table 3.3: Project team and licences.

Biologic Personnel	Project Involvement					Flora License	Relevant Botanical Experience
	Trip 1 Targeted Survey (November 2021)	Trip 2 Phase 1 (March 2022)	Trip 3 Phase 1 (March 2022)	Trip 4 Phase 1 (April-May 2022)	Trip 5 Phase 1 (June 2022)		
Principal Botanists							
Clinton van den Bergh		Field lead 9-15 March 2022	-	Field lead 27-28 April 2022	Field lead 13-20 June 2022	FB62000105, TFL 59-1819	15+ years
		Manager of Botany, quality control, project management					
Ryonen Butcher		Field lead 9-15 March 2022	Field lead 24-31 March 2022	Field team member 27-28 April 2022	-	FB62000405 TFL 145-2122	20+ years
Morgan O'Connell		-	S44, 24–28 March 2022	-	-	FB62000358	15+ years
Senior Botanists							
Sam Coultas		-	Field team member / S44 28-31 March 2022	-	-	FB62000017-2, TFL 60-1819	8+ years
Bethea Loudon		-	Field lead 24-31 March 2022	-	-	FB62000049-2 TFL 140-2122	20+ years
Pierre-Louis de Kock	Field lead 23-27 November 2021	-	-	Field lead 27 April – 4 May 2022	-	FB62000034	14+ years
Rachel Meissner (Taxonomist)	Specimen identifications					-	15+ years
Rachel Butler	Specimen identifications					-	14 years
Botanists							
Emily Eakin-Busher		Field team member 9-15 March 2022	Field team member 24-31 March 2022	-	Field lead 13-20 June 2022	FB62000160, TFL 53-1920	4 years
	Statistical analyses, vegetation/ condition mapping, reporting						
Emma Marsh		-	-	Field team member 27 April – 4 May 2022	Field team member 13-18 June 2022	FB62000233-4	2.5 years
	Desktop assessment, reporting						
Kaylin Geelhoed		-	Field team member 24-28 March 2022	-	-	FB62000238	2.5 years
Darcy Reith		Field team member 9-15 March 2022	-	-	-	FB62000359	2 years

Biologic Personnel	Project Involvement					Flora License	Relevant Botanical Experience
	Trip 1 Targeted Survey (November 2021)	Trip 2 Phase 1 (March 2022)	Trip 3 Phase 1 (March 2022)	Trip 4 Phase 1 (April-May 2022)	Trip 5 Phase 1 (June 2022)		
Botanists							
Che Parker		-	-	-	Field team member 13-18 June 2022	-	6 years
Clare Whyte		Reporting				-	4 years
Zoologist							
Sam Edwards	Field team member 23-27 November 2021						1 year

3.2.2 Weather & Climate

In the 12 months prior to the survey, mean minimum and maximum were comparable to long-term averages (LTA). Rainfall in the 12 months prior to the surveys was below long-term averages for most months, with the exception of April 2021 and May 2022, which recorded well above the long-term average for the month (Figure 3.1). This above average rainfall occurred as a result of multiple tropical cyclones and tropical lows off the coast of Western Australia during these months. Weather conditions before and during each trip are summarised in Table 3.4.

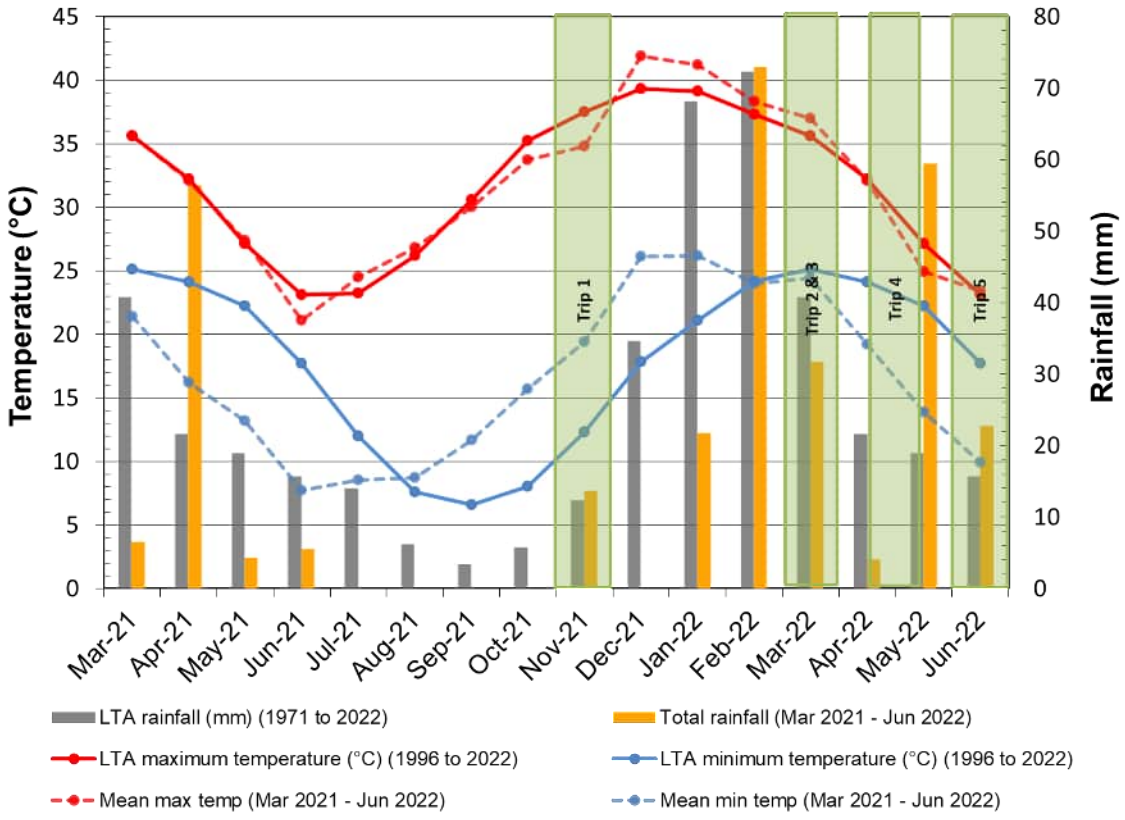


Figure 3.1: Long-term climatic data for Newman Airport (BoM, 2022) and current climatic data for MAC (data provided by BHP WAIO) with approximate survey timing shown in green.

Table 3.4: Summary of weather conditions prior to and during field trips.

Trip	Conditions Prior to Trip		Conditions During Trip
	Temperatures	**Rainfall**	
Trip 1 March 2022	Temperatures in the preceding dry season were similar to the LTA. Although temperatures were slightly higher over the summer period (December 2021 to March 2022). Maximum temperatures for this period ranged from 37.0°C to 41.9°C compared with the LTA which ranges between 35.6°C and 39.3°C. Overall temperatures in the 12 months prior to the beginning of the survey period were comparable to LTA data. Leading into the survey period, temperatures increased slightly above LTA, and continued this pattern over the course of the surveying period (March-June 2022). Pilbara temperatures are known to be widely variable during this period due to sporadic rainfall and cyclonic events.	Rainfall was lower than the LTA for most of the preceding dry and wet seasons, with the exception of April 2021. In the three months preceding the survey (December 2021 to February 2022) rainfall was substantially lower than the LTA, particularly for December (0 mm compared with the LTA of 34.6 mm). Conditions were still suitable for a wet season survey given the high rainfall received in February 2022, just prior to the survey period. However, it should be noted that rainfall for March 2022, at the onset of Trips 1 and 2, was lower than the LTA (31.8 mm compared to the LTA of 40.8 mm).	Days were hot and dry with maximum temperatures above the LTA for the month of March (ranging from 29.9°C to 41.9°C; LTA 35.6°C). Minimum temperatures were comparable, if not slightly above, the LTA for March (ranging from 17.9°C to 29.0°C; LTA 22.2°C). No rainfall was experienced during the Trip 1 survey.
Trip 2 March 2022			Days were hot and dry with maximum temperatures above the LTA for the month of March (ranging from 29.9°C to 41.9°C; LTA 35.6°C). Minimum temperatures were comparable, if not slightly above, the LTA for March (ranging from 17.9°C to 29.0°C; LTA 22.2°C). Rainfall during the Trip 2 survey was only experienced on the 29-30th of March (which was the resulting total precipitation for that month).
Trip 3 April-May 2022		The preceding months before Trip 3 (January – March 2022) received below rainfall 126.6 mm, compared with the LTA of 181.3 mm. Rainfall in February of 2022 was comparable to the LTA for the month. Low/sporadic rainfall is common for the Pilbara	Days were warm and dry with maximum temperatures comparable to the LTA for the month of April (ranging from 24.3°C to 36.6°C; LTA 32.2°C). Minimum temperatures were also comparable to the LTA for April (ranging from 13.0°C to 24.6°C; LTA 17.7°C).
Trip 4 June 2022		In the month (May 2022) prior to Trip 4 significantly higher rainfall was experienced. A total of 59.4 mm was received over the month compared to the LTA of 19.0 mm for May. This increased rainfall resulted in increased annual taxa presence, flowering of flora species and good conditions for the Trip 4 survey.	Days were cool and dry with maximum temperatures comparable to the LTA for the month of June (ranging from 14.6°C to 27.7°C; LTA 23.1°C). Minimum temperatures were also comparable, if not slightly above, the LTA for June (ranging from 5.0°C to 17.1°C; LTA 7.6°C).

Source: Data is from Newman Airport station no. 7176 (BoM, 2022) as this provides a longer dataset for comparison.

3.2.3 Detailed Flora Survey

A single-phase detailed and targeted flora and vegetation assessment was carried out, across the survey area (25,563 ha of the 60,000 ha Study Area). Detailed surveys require quadrat data for replicated and delineated representation of vegetation composition to support statistical analysis. A combination of quadrats, relevés, meandering traverses, and opportunistic sampling is appropriate for a detailed flora survey (EPA, 2016b). These techniques are described in Table 3.5. A total of 152 quadrats, 21 relevés, and 27 mapping notes were sampled (Figure 3.2). In addition to the quadrat sampling, targeted searches for significant flora was also undertaken across the survey area.

Biologic utilised a helicopter to access areas with limited vehicle tracks. Survey effort was focused on the priority areas that had either previously not been surveyed or where historical quadrat data was greater than 5 years old.

Prior to field mobilisation, site locations were selected using a combination of aerial imagery, surface geology layers, contour mapping and specialist knowledge of Pilbara vegetation communities. These sites were selected to be representative of the vegetation in the Study Area. Parts of the Study Area that looked unusual from the aerial imagery or appeared to represent potential habitat for significant flora and vegetation were also targeted. Where possible, a minimum of three quadrats were established and sampled within each vegetation unit, with additional quadrats assigned to larger units to ensure spatial coverage. Survey effort is presented in Figure 3.2, quadrat site data presented in Appendix C and Site by Species Matrix included as Appendix D.

Table 3.5: Detailed field survey techniques

Approach	Description
Quadrat	A comprehensive and replicable survey technique for gathering information during a detailed flora and vegetation assessment. A clearly defined area of set proportions, giving a consistent assessment of flora and vegetation across the Study Area. Each quadrat represents a vegetation type, and each vegetation type must be represented by a minimum of three quadrat sites. Information collected at each quadrat includes: • Site code, date, location, botanist; • Four photographs, one from each corner of the site; • Soil characteristics (texture and colour); • Geology (type, size and nature of any rocks, stones, gravel, or outcropping); • Topography (landform type and aspect); • Brief description of the vegetation structure in line with NVIS classifications (NVIS Technical Working Group, 2017) (Appendix E); • Vegetation condition (Appendix F); • Disturbances (including fire); • Flora and vegetation information (including dominant cover, structure); and • Comprehensive recording of every vascular flora species within the quadrat boundary (including overhang from plants rooted outside the quadrat boundary), along with their height and cover and number of individuals where necessary (50 x 50 m for a Pilbara botanical survey).

Approach	Description
Relevé	Relevés used in a detailed survey are employed to support the vegetation mapping and survey effort. They are a lower intensity survey technique or sampled where quadrats are too dangerous to set up (such as steep gorges or embankments) or the landform does not support adequate area for a detailed quadrat. Information collected at each relevé is the same as that of a quadrat site, excluding the comprehensive collection of every species within the quadrat boundary.
Traverse/ Meandering Traverse	A traverse is an unmarked route along which data is collected. Traverses are useful for identifying the boundaries and characteristics of vegetation types, selecting sites for detailed survey, and targeting significant flora or vegetation. Information recorded along a traverse is the same as a relevé, with the addition of noting vegetation changes and relationships between vegetation and substrate.
Opportunistic (Supplementary) Sampling	Flora and vegetation not recorded through other sampling methods are opportunistically sampled as encountered in the survey. Opportunistic sampling also included recording locations of significant, introduced (weed) and unknown species.
Targeted Sampling	Areas likely to support significant flora or vegetation are targeted during the survey. Including areas with existing records of significant flora. Areas are selected based on existing records from database searches, geology, vegetation mapping and known Environmentally Sensitive Areas (ESAs; such as PEC/ TEC or GDE). Where possible, unusual, and restricted geological features are sampled. When potentially significant flora taxa are encountered during a survey, sufficient information is recorded in compliance with a Threatened and Priority Flora Report Form (TPRF) pursuant to the conditions of the flora taking licencing and authorisation to collect threatened flora.

3.2.4 Groundwater Dependent Vegetation

The survey included an assessment of vegetation that may be reliant on groundwater for part or all of their lifecycle. The determination of groundwater dependency was undertaken by reviewing the flora assemblage present within the Study Area in combination with relevant literature on groundwater dependent vegetation. For areas that were not sampled during the current field survey, the GDV assessment relied upon existing vegetation mapping and BHP flora records. The review concentrated on the presence of flora species that are determined to be:

- Phreatophytic: four key species in the Pilbara, *Melaleuca argentea* (obligate phreatophyte), *Eucalyptus camaldulensis* (facultative phreatophyte), *Eucalyptus victrix* (facultative phreatophyte to vadophyte) and *Sesbania formosa* (obligate to facultative phreatophyte).
- Hydrophytic: flora species that are wholly reliant on the permanent to semi-permanent presence of water at or just below the surface; for example: *Phragmites karka*, *Cladium procerum*, *Livistona alfredii*.
- Mesophytic: flora species that have an increased reliance on consistent subsurface soil moisture for extended periods; for example: *Imperata cylindrica*, *Acacia ampliceps*, *Cullen leucanthum*.

The dependence of each vegetation type on groundwater presence was assessed based on the dependence rating in Table 3.6. This dependence rating was based on a five-point scale; High, Moderate, Low, Negligible and None. The assessment on dependence was determined via:

- The presence, density and maturity of obligate phreatophytes (i.e., *Melaleuca argentea*);

- The presence and density of hydrophytes and mesophytes and their relative reliance on groundwater;
- The structure of the vegetation with respect to obligate phreatophytes, facultative phreatophytes, hydrophytes and mesophytes. For example, a woodland of *Eucalyptus camaldulensis* is more dependent on groundwater presence (the woodland structure requires more groundwater for persistence) compared to scattered trees;
- The presence of water bodies and an assessment of their permanence; and
- Broad understanding on the geology and creek morphology (i.e., presence of calcrete which may be slowly leaking groundwater into the creek).

Table 3.6: Groundwater dependence rating scale.

Scale	Comment
High	Presence of mature obligate phreatophytes (i.e., *Melaleuca argentea*) with permanent to semi-permanent water bodies present. A high diversity and density of mesophytic and hydrophytic taxa.
Moderate	Presence of mature facultative phreatophytes (with potential for semi-mature to young obligate phreatophytes). Semi-permanent water bodies may be present. A moderate diversity and density of mesophytic and hydrophytic taxa.
Low	Scattered presence of facultative and/or presence of mature vadophytes (i.e., *Eucalyptus victrix*). Ephemeral to semi-permanent water bodies may be present. Low diversity and density of mesophytic and hydrophytic taxa.
Negligible	Mostly mature vadophytic taxa, with riparian tree species (i.e., *Eucalyptus xerothermica*, *Corymbia hamersleyana*). Mostly inflow dependent and have limited to no mesophytic and hydrophytic taxa. Riparian species (i.e., *Acacia tumida* var. *pilbarensis*) are prevalent and dominant.
None	No phreatophytes, vadophytes or mesophytic/ hydrophytic taxa occur. Generally mapped on upland habitats (i.e., hummock grassland on stony hills and slopes) that are highly unlikely to have access to or be reliant on groundwater presence.

NB: Scale has been developed by Biologic based on our experience and expertise.

3.2.5 Sheet-flow Dependent Vegetation

The survey delineated and described communities that are, or could potentially be, sheet-flow dependent. Land system units with potential to support sheet-flow (Boolgeeda, Wannamunna, and Pindering) was reviewed for the Study Area prior to the field survey. Post-survey assessment of sheet-flow dependent ecosystems was determined via presence or absence of:

- Landform position (i.e., hardpan and stony plains);
- Vegetation patterning (i.e., groves/ intergroves, banding at right angles to slope); and
- Species composition (i.e., mulga (*Acacia aneura* and related taxa) over tussock grasses such as *Eriachne* spp., *Eragrostis* spp., *Themeda* spp.).

3.2.6 Targeted Flora Survey

Prior to the survey, a list of conservation significant flora known to, with the likelihood to, or potential to occur within the Study Area was compiled. Field personnel familiarised themselves with photographs, reference samples and descriptions of these taxa before conducting the survey. Once on the ground,

personnel actively searched while traversing the Study Area and in known locations or preferred habitat encountered in the field.

Targeted searching was undertaken for flora of conservation significance, as identified during the desktop assessment. Taxa that were confirmed or considered Very Likely, Likely or Possible to occur within the Study Area were targeted. The meandering targeted searches while traversing the Study Area focussed on habitat considered likely to support conservation significant flora.

If a conservation significant taxon was identified, a GPS coordinate of the individual was taken when occurring in isolation, or a central GPS coordinate was taken for a small population (central coordinate with an approximate 20 m radius). Information collected at each location comprised:

- Number of individuals, for a small population;
- Condition and reproductive status of the plants in each population;
- Photographs and description of vegetation habitat;
- Broad information on vegetation type and condition; and
- Coordinates of either each plant (if few) or the extent of the population (if many) using a GPS.

Threatened and Priority Flora Report Forms will be provided to the Parks and Wildlife Division (Parks and Wildlife) of DBCA, as required under the flora collecting permits. Conservation significant flora specimens will be vouchered with the Western Australian Herbarium (WAH), where required and appropriate.

Introduced Taxa

While completing the detailed flora assessment and targeted searches, any significant environmental weeds were noted. Significant environmental weeds refer to any plant listed in the WoNS, and DPs listed under Section 12 and Section 22 of the BAM Act. Records of any introduced species identified in the Study Area were recorded and searched with a minimum 20 m radius to establish population density and extent. Each record noted the number of individual plants and map the spatial extent of the infestation. Weed classification definitions are provided in Section 1.3.2.

Flora Specimen Identification

Flora nomenclature used in this report is consistent with the Western Australian Herbarium's plant census, provided on Florabase (WAH, 1998-). All species nomenclature is current at the time of report preparation.

Specimens were identified by Dr Rachel Meissner and Senior Botanist Sam Coultas supported by the Biologic botanical team using the appropriate taxonomic keys, Western Australian reference herbarium and, where required, relevant taxonomic experts at the Western Australian Herbarium.

Significant flora specimens or new introduced species for the region were submitted to the Western Australian Herbarium for confirmation. The submitted specimens list and their confirmed identification is provided in Appendix G.

660000 670000 680000 690000 700000

7480000

7470000

Great Northern Hwy

Packsaddle Rd

Yandicoogina Rail

West Angelas Rail

West Angelas Rd

MS1072

CPH-090 CPH-091 CPH-092 CPH-072 CPH-069 CPH-068 CPH-071 CPH-070 CPH-066 CPH-067 CPH-064 CPHR-065 CPH-089 CPH-082 CPH-076 CPH-078 CPH-079 CPH-077 CPH-074 CPH-080 CPH-081 CPH-062 CPH-075 CPH-084 CPH-061 CPH-099 CPH-094 CPH-096 CPH-097 CPH-093 CPH-098 CPH-095 CPH-100 CPH-085 CPH-088 CPH-087 CPH-086 CPH-060 CPH-063 CPH-059 CPH-058 CPH-056 CPH-501 CPH-057 CPH-049 CPH-048 CPH-054 CPH-050 CPH-051 CPH-199 CPH-044 CPH-168 CPH-055 CPH-167 CPH-047 CPH-179 CPH-176 CPH-174 CPH-173 CPH-170 CVR-01 CPH-178 EMR-01 CPH-172 CPH-171 CPH-169 CPH-166 CPH-043 CPH-175 CPH-180 CPHR-177 CPH-042 CPH-045 CPH-046 CPH-041

Legend

- Study Area
- Approval Boundary
- Local Road
- State Road
- Rail
- Traverse

Sampling Type

- Mapping Note
- Quadrat
- Relevé

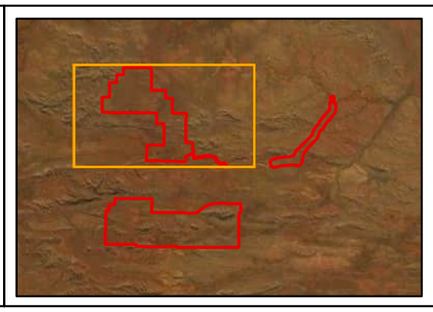
N

biologic Environmental Survey

Scale: 1:110,000

0 2 4 6 Km

Coordinate System: GDA2020 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA2020 Created 09/10/2022



BHP WAIO

CPH Detailed and Targeted Flora Survey

Figure 3.2a: Flora sample sites and traverses - Pineapple Hill and Camp Hill

700000
710000
720000
7480000
7470000
Yandicoogina Rail
MS1039
MS1072
West Angelas Rd
Mining Area C Railway
Mining Area C Railway
CPH-040
CPH-032
CPH-038
CPH-039
CPHR-003
CPH-004
CPH-019
CPH-003
CPH-005
CPH-001
CPH-006
CPH-002
CPH-037
CPH-018
CPH-007
CPH-010
CPH-011
CPH-008
CPH-013
CPH-012
CPH-009
CPH-020
CPH-014
CPH-025
CPH-015
CPH-016
CPHR-002
CPH-017
CPH-035
CPH-024
CPH-023
CPH-022
CPH-026
CPH-021
CPH-027
CPH-036
CPH-034
CPH-028
CPHR-001
CPH-033
CPH-030
CPH-031
CPH-029

Legend

- Study Area
- Approval Boundary
- Local Road
- Rail
- Traverse

Sampling Type

- Mapping Note
- Quadrat
- Relevé

N

biologic Environmental Survey

Scale: 1:80,000

0 2 4 Km

Coordinate System: GDA2020 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA2020 Created 09/10/2022

BHP WAIO

CPH Detailed and Targeted Flora Survey

Figure 3.2b: Flora sample sites and traverses
- MAC to Yandi Rail Corridor

670000
680000
690000
7450000
7440000
Great Northern Hwy
MS1072
CPHR-162
CPH-165
CPH-161
CPH-164
CPH-157
CPH-160
CPH-163
CPH-159
CPH-156
CPH-158
CPH-154
CPH-155
CPH-151
CPH-150
CPH-149
CPH-152
CPH-143
CPH-188
CPH-184
CPH-183
CPH-186
CPH-185
CPH-101
CPH-181
CPH-182
CPH-187
CPH-104
CPHR-102
CPHR-103
CPHR-106
CPH-105
CPH-107
CPH-108
CPHR-109
CPHR-110
CPH-113
CPH-111
CPH-112
CPHR-114
CPH-115
CPH-116
CPH-117
CPH-121
CPH-118
CPH-119
CPH-122
CPH-124
CPH-125
CPH-123
CPH-129
CPH-130
CPHR-125
CPH-127
CPH-128

Legend

- Study Area
- Approval Boundary
- State Road
- Rail
- Traverse

Sampling Type

- Mapping Note
- Quadrat
- Relevé

N

biologic Environmental Survey

Scale: 1:90,000

0 2 4 Km

Coordinate System: GDA2020 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA2020 Created 09/10/2022

BHP WAIO

CPH Detailed and Targeted Flora Survey

Figure 3.2c: Flora sample sites and traverses - Mudlark Well

3.2.7 Vegetation

Vegetation was sampled using quadrats, relevés, and vegetation mapping notes, including information on disturbance and condition. The sampling methods were carried out in accordance with EPA guidelines (EPA, 2016c).

Vegetation Mapping

The current nationally adopted classification system for vegetation descriptions is the Native Vegetation Information System (NVIS) (NVIS Technical Working Group, 2017). NVIS seeks to manage national vegetation data to help improve vegetation planning and management within Australia including standardising scale and technical wording for vegetation associations. Vegetation types and condition is mapped in accordance with the scale for NVIS level V. Vegetation descriptions and nomenclature followed BHP guidance (BHP, 2018b).

Vegetation assemblages were ground truthed during the survey, with site photographs and full descriptions recorded at each sampling site. The floristic data collected from the quadrats was statistically analysed (see Section 3.2.8) and new vegetation units were determined based on these statistics. Biologic based any new vegetation units on the BHP WAIO geodatabase of previous vegetation mapping. For areas that were not sampled (i.e., outside of the priority areas), existing BHP WAIO vegetation units and mapping linework was used. These areas included Minister North and Yandicoogina Creek, where the existing mapping and survey work was sufficient.

Vegetation Condition

Vegetation condition was defined within the Study Area using the vegetation condition scale for the Eremaean Botanical Province in EPA (2016a), which has been adapted from Keighery (1994) and Trudgen (1988) (Appendix F). The vegetation condition was determined based on the level of disturbance observed in the sampling area. Condition was recorded at each quadrat and relevé, while additional notes were taken while traversing the Study Area to broadly map vegetation condition boundaries. The vegetation condition mapping was then digitised using GIS software.

3.2.8 Floristic Data Analysis

Data Reconciliation

All statistics were carried out using R version 4.1.1 (R Core Team, 2022). During the survey, flora taxa were recorded using an estimate of the foliage cover of each species within each quadrat. Following the survey, the flora taxa list was reconciled to amalgamate selected taxa, e.g., varieties of the same species (Appendix H). During reconciliation of the dataset, weeds and unconfirmed taxa (i.e., ?*Aristida inaequiglumis*) were removed. Where removal of a dominant taxon could change the vegetation unit, unconfirmed taxa were included (e.g., *Acacia* ?*aneura* was included as *Acacia aneura*).

Relevé sites were excluded from the analyses as records from these comprise presence/ absence data only. The final dataset used in the analyses comprised 420 flora taxa from 151 sample sites (Appendix D).

Hierarchical Clustering

To allow for differences in cover and potential differences between observers, the cover values were transformed based on an adapted Braun-Blanquet method (1 = <1 %; 2 = 1–5 %; 3 = 6–25 %; 4 = 26–50 %; 5 = 51–75 %; and 6 = >75 %). Singletons (taxa which were only recorded once) were removed from the dataset. The cover code values for the floristic data recorded for each quadrat were compiled in R before a resemblance matrix and dendrogram were created. The similarity testing was undertaken using the Bray Curtis coefficient. Vegetation units were defined based on 40–80 % similarity and distinguished visually in a dendrogram (Appendix I).

Species Accumulation Curve

Species accumulation curves provide a visual overview of the observed number of flora taxa as the number of sample sites (quadrats) increases. When a curve approaches an asymptote (i.e., flattens), it suggests that sampling effort has been sufficient to collect the taxa comprising the floral assemblage at the locations sampled (Thompson *et al.*, 2003). The value at which the curve reaches an asymptote can also be used as an approximate measure of the total size of the species complement at that location (Thompson *et al.*, 2003). The species accumulation curves were created using the reconciled native flora taxa list for each quadrat sampled during the current survey (Figure 4.8). These curves were based on presence absence data, with a random sample order and a maximum 999 permutations. Estimator curves (Chao, Jackknife 1, Jackknife 2 and Bootstrap) were also used to predict the number of taxa that may have actually been present. If there is a substantial difference in number of species observed to that estimated by the curve, or if the curve does not approach asymptote, discussion around survey effort is encouraged.

3.2.9 Assessment of Occurrence

Significant flora species identified in the database searches and previous reports are assessed per taxa for their likelihood of occurrence in the Study Area. Prior to field mobilisation, Biologic utilises botanical expertise and a decision matrix to guide a preliminary occurrence assessment for likely presence of significant flora. Following the field assessment, ground-truthing of existing significant flora records and presence of potential habitat is reviewed to revise the occurrence assessment per taxa.

The occurrence assessment decision matrix is outlined below (Table 3.7). A summary of the preliminary occurrence assessment is provided in the desktop assessment flora results, Section 4.1.1 in Table 4.1. The detailed survey flora results section presents a summary of the revised occurrence assessment in Section 4.3, Table 4.14. The full detail of the preliminary and revised occurrence assessment is presented in Appendix J for each significant taxa returned in the database searches.

Table 3.7: Occurrence assessment decision matrix.

Known Record's Proximity to the Study Area	Habitat Categories within the Study Area			
	Core/ Critical Habitat Present	**Suitable Habitat Present/ within Known Distribution**	**Marginal Habitat Present/ Adjacent to Known Distribution**	**Not Present/ Outside of Known Distribution**
Within the Study Area	Confirmed	Confirmed	Confirmed	Confirmed
Within <5 km	Highly Likely	Likely	Possible	Possible
Within 5-15 km	Likely	Possible	Possible	Unlikely
Within 15-40 km	Possible	Possible	Unlikely	Unlikely
Greater than 40 km	Possible	Unlikely	Unlikely	Highly Unlikely
Taxa Considered Locally/ Regionally Extinct	Unlikely	Unlikely	Highly Unlikely	Highly Unlikely

4 RESULTS AND DISCUSSION

4.1 Desktop Assessment

A total of 1,277 vascular flora taxa from 95 families and 348 genera were identified by the database searches as occurring within the 50 km search radius and have potential to occur within the Study Area (Appendix K). Seventy-nine flora taxa had known distributions several hundred kilometres away or were excluded names not known to occur in Western Australia. These taxa were assumed to be mis-identifications or a result of taxonomic revisions and have been removed from the desktop assessment. The desktop assessment covered a wide range of landforms, habitats and vegetation types, resulting in a high number of potential flora species occurring within the Study Area.

4.1.1 Significant Flora

A total of 91 significant flora taxa (those listed under the EPBC Act, BC Act, or DBCA's Priority List) were identified from the desktop assessment (Figure 4.1, Table 4.1, Appendix B, Appendix J). Of the 91 taxa, two, *Thryptomene wittweri* and *Androcalva adenothalia,* were listed as Threatened under the BC Act, along with 12 Priority 1 taxa, 22 Priority 2 taxa, 48 Priority 3 taxa and seven Priority 4 taxa. The literature review identified 35 significant taxa with potential to occur within the Study Area (Appendix B). Two of these 35 taxa (*Nicotiana umbratica* and *Eremophila forrestii* subsp. *viridis*, both P3) were not identified by any of the database searches (Mattiske, 2008; Onshore, 2014). However, both these taxa are not known from the Hamersley subregion, and thus have not been included in the likelihood assessment.

Thryptomene wittweri (T), a species only known from high mountains peaks, is a spreading conifer-like, aromatic shrub with small, white flowers. Due to the possibility of suitable habitats occurring within the Study Area and known locations 5 km west-northwest of the taxa, *Thryptomene wittweri* (T), is considered to be Possible to occur within the Study Area.

Androcalva adenothalia (T), is a prostrate shrub to 0.03 m high and to 0.25 m wide and is only known from two locations in the wheatbelt (near Morawa and Canna). As this species is only known from these specific locations, more than 700 km from the Study Area *Androcalva adenothalia* (T) was determined to be Highly Unlikely to occur within the Study Area.

Twenty-six of the 91 flora taxa identified by the desktop assessment were Confirmed to occur within the Study Area. Three taxa were considered Highly Likely to occur within the Study Area, six were considered to be Likely to occur and 22 taxa were considered Possible to occur (Table 4.1). The remaining taxa considered either Unlikely (18) or Highly Unlikely (16) to occur (Appendix J).

Table 4.1: Significant flora taxa Confirmed, Highly Likely, Likely or Possible to occur within the Study Area.

Taxon	Status	Description	Approximate Distance from Study Area
Confirmed			
Triodia sp. Karijini (S. van Leeuwen 4111)	P1	Hummock grass to 0.9 m high. Steep hillslopes, hillcrests, ironstone outcrops on grey-brown silty loam.	Within
Aristida lazaridis	P2	Tufted perennial, grass-like or herb, 0.4-1.5 m high. Fl. green/purple, Apr. Sand or loam.	Within
Eragrostis sp. Mt Robinson (S. van Leeuwen 4109)	P2	Tussock-forming perennial, grass-like or herb, to 0.3 m high. Fl. Sep. Red-brown skeletal soils, ironstone. Steep slopes, summits.	Within
Eremophila sp. West Angelas (S. van Leeuwen 4068)	P2	Spindly shrub, 0.4-3 m high. Skeletal brown-red soil or loam. Hill slopes and summits.	Within
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	P2	Erect slender shrub, 1-3 m high. Fl. pale purple. Loamy skeletal soils. Gorge with ironstone outcropping, gullies, drainage line.	Within
Oxalis sp. Pilbara (M.E. Trudgen 12725)	P2	Annual herb, 0.1-0.3 m high. Fl. Yellow. Brown sandy loam or clay. Gorge, ironstone outcrops, gully, shaded areas, creeklines.	Within
Aristida jerichoensis var. *subspinulifera*	P3	Compactly tufted perennial, grass-like or herb, 0.3-0.8 m high, lemma groove muricate. Hardpan plains.	Within
Dampiera metallorum	P3	Rounded, multistemmed perennial, herb, to 0.5 m high. Fl. blue, Apr or Jun to Oct. Skeletal red-brown gravelly soil over banded ironstone. Steep slopes, summits of hills.	Within
Eremophila naaykensii	P3	Erect shrub, 1-3 m high. Fl. White/pale blue. Red brown sandy clay loam. Upper slopes, gullies, gorges.	Within
Goodenia lyrata	P3	Prostrate herb, with lyrate leaves. Fl. yellow, Aug. Red sandy loam. Near claypans.	Within
Goodenia sp. East Pilbara (A.A. Mitchell PRP 727)	P3	Open, erect annual or biennial, herb, to 0.2 m high. Fl. yellow. Red-brown clay soil, calcrete pebbles. Low undulating plain, swampy plains.	Within
Grevillea saxicola	P3	Tree or shrub, to 8 m high, rough bark on trunks and stems. Fl. creamy white. Skeletal red brown sandy loam with ironstone pebble cover. Rocky gully, drainage lines, steep cliff, low rocky hills.	Within
Indigofera gilesii	P3	Shrub, to 1.5 m high. Fl. purple-pink, May or Aug. Pebbly loam. Amongst boulders & outcrops, hills.	Within
Pilbara trudgenii	P3	Gnarled, aromatic shrub, to 1 m high. Fl. Sep. Skeletal, red stony soil over ironstone. Hill summits, steep slopes, screes, cliff faces.	Within
Rhagodia sp. Hamersley (M. Trudgen 17794)	P3	Tall spindly shrub, 1.5-4 m high. Fl. yellow. Red brown sandy loam or clay, ironstone plain. Undulating plains, floodplain.	Within
Rostellularia adscendens var. *latifolia*	P3	Herb or shrub, 0.1-0.3 m high. Fl. blue-purple-violet, Apr to May. Ironstone soils. Near creeks, rocky hills.	Within

Taxon	Status	Description	Approximate Distance from Study Area
Solanum kentrocaule	P3	Spiny, erect perennial shrub, to 0.7 m high. Fl. purple. Steep rocky gullies, gorges, outcrops, cliffs.	Within
Themeda sp. Hamersley Station (M.E. Trudgen 11431)	P3	Tussocky perennial, grass-like or herb, 0.9-1.8 m high. Fl. Aug. Red clay. Clay pan, grass plain.	Within
Triodia sp. Mt Ella (M.E. Trudgen 12739)	P3	Perennial, grass-like or herb, 0.4 m high. Light orange-brown, pebbly loam. Amongst rocks & outcrops, gully slopes.	Within
Vittadinia sp. Coondewanna Flats (S. van Leeuwen 4684)	P3	Erect annual herb, 0.3-1 m high. Fl. cream. Red-brown sandy loam. Drainage areas, floodplains, flat and/or stony plains.	Within
Xerochrysum boreale	P3	Perennial, erect shrub, 0.15-1 m high. Flowers yellow. Red-brown clay loam. Stony plain.	Within
Acacia bromilowiana	P4	Tree or shrub, to 12 m high, bark dark grey, fibrous; inflorescence in spikes. Fl. yellow/pink, Jul to Aug. Red skeletal stony loam, orange-brown pebbly, gravel loam, laterite, banded ironstone, basalt. Rocky hills, breakaways, scree slopes, gorges, creek beds.	Within
Eremophila magnifica subsp. *magnifica*	P4	Shrub, 0.5-1.5 m high. Fl. blue, Aug to Nov. Skeletal soils over ironstone. Rocky screes.	Within
Lepidium catapycnon	P4	Open, woody perennial, herb or shrub, 0.2-0.3 m high, stems zigzag. Fl. white, Oct. Skeletal soils. Hillsides.	Within
Ptilotus mollis	P4	Compact, perennial shrub, to 0.5 m high, soft grey foliage. Fl. white/pink, May or Sep. Stony hills and screes.	Within
Sida sp. Barlee Range (S. van Leeuwen 1642)	P4	Spreading shrub, to 0.5 m high. Fl. yellow, Aug. Skeletal red soils pockets. Steep slope.	Within
Highly Likely			
Dolichocarpa sp. Hamersley Station (A.A. Mitchell PRP 1479)	P3	Spreading annual, herb, 0.05-0.1 m high. Fl. blue, Mar, May-Jul, Sep. Cracking clay, basalt. Gently undulating plain with large surface rocks, flat crabholed plain.	0.7 km S
Olearia mucronata	P3	Densely branched, unpleasantly aromatic shrub, 0.6-1 m high. Fl. white & yellow, Aug to Dec or Jan. Schistose hills, along drainage channels.	0.4 km S
Triodia basitricha	P3	Hummock grass to 0.8 m high, non-resinous. Fl, Mar-Jul. Red/brown clay loam over ironstone. Floodplains, flat hill crest, lower slopes.	1.2 km NNW
Likely			
Arthropodium vanleeuwenii	P2	Perennial herb, 0.3-0.9 m high. Fl. mauve, Sep. Red-brown loam soil. Moderately steep, south facing slopes of banded and Brockman iron formations.	2.1 km W
Eremophila pusilliflora	P2	Low spreading shrub, to 0.8 m high. Fl. Purple, Mar-Jul. Red/brown loam or clay. Drainage lines, broad depressions, flood plains.	5.3 km W

Taxon	Status	Description	Approximate Distance from Study Area
Isotropis parviflora	P2	Shrub, 0.1 m high. Fl. white/pink, Mar. Valley slope of ironstone plateau.	1.2 km NNW
Acacia effusa	P3	Low, dense, spreading, somewhat viscid shrub, 0.3-1 m high, bark 'minni-ritchi'. Fl. yellow, May to Aug. Stony red loam. Scree slopes of low ranges.	2.2 km N
Eremophila magnifica subsp. *velutina*	P3	Shrub, 0.5-1.5 m high. Fl. blue-purple, Aug to Sep. Skeletal soils over ironstone. Summits.	0.5 km N
Streptoglossa sp. Cracking clays (S. van Leeuwen et al. PBS 7353)	P3	Erect annual herb. Fl. pink, Jun or Sep. Red/brown cracking clays. Colluvial and alluvial gravels in floodplains.	1.1 km S
Possible			
Euphorbia inappendiculata var. *queenslandica*	P1	Spreading, procumbent herb, to 0.4 m high. Fl. pink, Aug. Clay soils. Among broken rocky screes.	12.3 km SSW
Rhodanthe ascendens	P1	Ascending annual, herb, to 0.1 m high. Fl. yellow, Aug. Clay. Roadside verge.	4.4 km W
Synostemon hamersleyensis	P1	Shrub, 0.5-1 m high. Fl. yellow-green, red, Aug or Oct-Nov. Red sandy loam. Steep slopes, ironstone gorges.	13.4 km NNE
Cladium procerum	P2	Densely tufted perennial, grass-like or herb (sedge), 2 m high. Fl. Nov. Perennial pools.	11.1 km ESE
Gompholobium karijini	P2	Shrub, to 1 m high. Fl. yellow/green. Aug-Sep. Red/brown gravelly loam or clay. Undulating hills, hilltops, drainage lines.	27 km WNW
Ipomoea racemigera	P2	Creeping annual, herb or climber. Fl. white.	14.2 km W
Tetratheca fordiana	P2	Dwarf shrub, 0.2-0.4 m high. Fl. dark pink or lilac, Apr-May or Jul. Skeletal soils/ironstone. Vertical cliff face and upper rocky ridgelines, breakaways.	6.7 km S
Teucrium pilbaranum	P2	Upright shrub, 0.2 m high. Fl. white, May or Sep. Clay. Crab hole plain in a river floodplain, margin of calcrete table.	0.1 km N
Acacia daweana	P3	Spreading shrub, 0.3-1.5(-2) m high. Fl. yellow, Jul to Sep. Stony red loamy soils. Low rocky rises, along drainage lines.	18.6 km W
Acacia subtiliformis	P3	Spindly, slender, erect shrub, to 3.5 m high, phyllodes green; inflorescence in heads to 6 mm diameter; peduncles red. Fl. yellow, Jun. On rocky calcrete plateau.	8.5 km ESE
Amaranthus centralis	P3	Erect, annual herb (with pink stems), to 0.6 m high. Fl. green/white, Apr-Aug. Red sandy clay. Sand plains, granite outcrops.	1.4 km WNW
Eragrostis crateriformis	P3	Annual, grass-like or herb, 0.1-0.5 m high. Fl. Jan to May or Jul. Clayey loam or clay. Creek banks, depressions.	13.3 km NNE
Euphorbia clementii	P3	Erect herb, to 0.6 m high. Fl, white, May-Jul. Gravelly hillsides, stony grounds.	5.6 km S
Euphorbia stevenii	P3	Somewhat succulent perennial, herb, 0.1-0.5 m high. Clay, sandy soils.	5.6 km S
Fimbristylis sieberiana	P3	Shortly rhizomatous, tufted perennial, grass-like or herb (sedge), 0.25-0.6 m high. Fl. brown, May to Jun. Mud, skeletal soil pockets. Pool edges, sandstone cliffs.	0.4 km SE

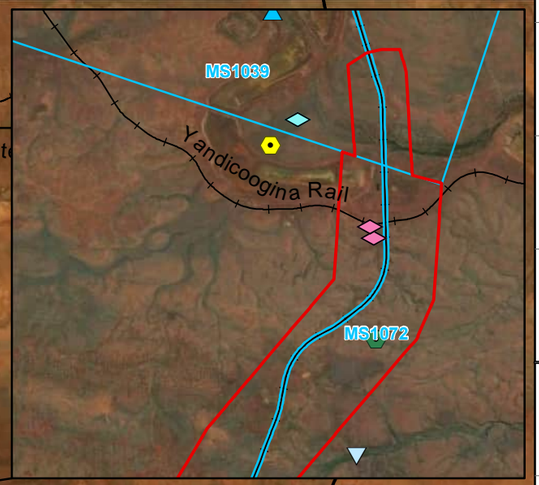
Taxon	Status	Description	Approximate Distance from Study Area
Gymnanthera cunninghamii	P3	Erect shrub, 1-2 m high. Fl. cream-yellow-green, Jan to Dec. Sandy soils.	10.9 km ESE
Iotasperma sessilifolium	P3	Erect herb. Fl. pink-mauve, yellow, Jul-Sep. Cracking clay, black loam. Edges of waterholes, plains.	15.5 km NNE
Sida sp. Hamersley Range (K. Newbey 10692)	P3	Low, spreading shrub, to 0.5 m high. Fl. yellow, May or Aug-Oct. Brown loamy soil. Base of breakaways, gullies, hill summits.	12.8 km S
Stackhousia clementii	P3	Dense broom-like perennial, herb, to 0.45 m high. Fl. green/yellow/brown, Feb-Apr, Jun, Aug-Sep, Nov. Skeletal soils. Sandstone hills.	10 km NNW
Stylidium weeliwolli	P3	Annual, herb, 0.1-0.25 m high, throat appendages 4, rod-shaped. Fl. pink & red, Aug to Sep. Gritty sand soil, sandy clay. Edge of watercourses.	10.5 km ESE
Swainsona thompsoniana	P3	Prostrate annual herb, to 0.2m high, Fl. blue, Apr-Aug. Higher altitude floodplains, top of hilltops and cracking clays on red-brown clay.	5.6 km S
Thryptomene wittweri	T	Spreading or rounded shrub, 0.5-1.5(-2.1) m high. Fl. white-cream, Apr or Jul or Aug. Skeletal red stony soils. Breakaways, stony creek beds.	5 km WNW

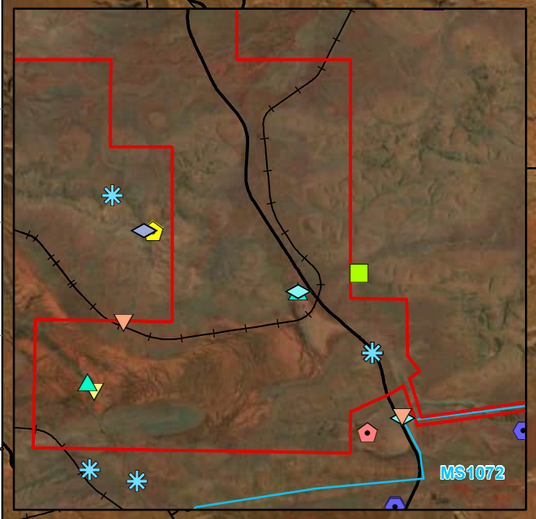
580000 640000 700000 760000 820000

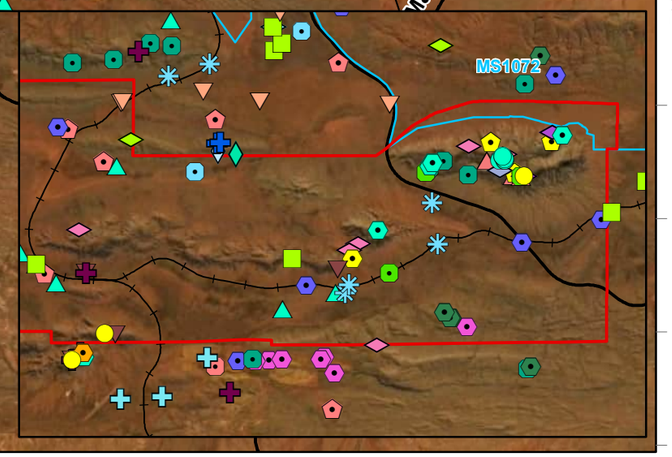
7500000 7440000

Nanutarra Munjina Rd
Nanutarra Munjina Rd
Mt Tom Price Railway
Marandoo Rail
Karijini Dr
Tom Price
Roy Hill Railway
Christmas Creek Ext
Yandicoogina Rail
Port Hedland Newman Railway
Great Northern Hwy
Marble Bar Rd

MS1039
MS1072







Legend

- Study Area
- Approval Boundary
- State Road
- Rail

N

biologic Environmental Survey

Scale: 1:650,000

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Projection: Transverse Mercator
Datum: GDA2020 Created 03/10/2022

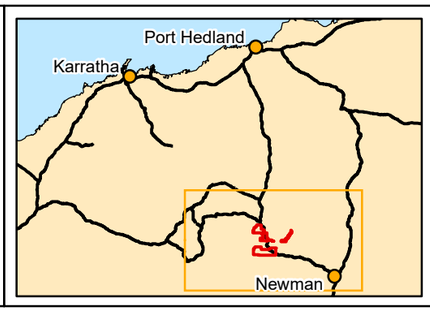

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Figure 4.1: Significant flora records from the desktop assessment

Significant Species

Threatened

- *Seringia exastia*
- *Thryptomene wittweri*

Priority 1

- *Barbula ehrenbergii*
- *Calotis squamigera*
- *Dicrastylis mitchellii*
- *Eragrostis* sp. Mt Robinson (S. van Leeuwen 4109)
- *Eremophila* sp. West Angelas (S. van Leeuwen 4068)
- *Hibiscus* sp. Mt Brockman (E. Thoma ET 1354)
- *Lindernia* sp. Pilbara (M.N. Lyons & L. Lewis FV 1069)
- *Paranotis* sp. Pilbara (H. Ajduk HAOP04a)
- *Rhodanthe ascendens*
- *Samolus* sp. Fortescue Marsh (A. Markey & R. Coppen FM 9702)
- *Synostemon hamersleyensis*
- *Tecticornia globulifera*
- *Tecticornia* sp. Christmas Creek (K.A. Shepherd & T. Colmer *et al.* KS 1063)
- *Triodia* sp. Karijini (S. van Leeuwen 4111)
- *Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 4684)

Priority 2

- *Adiantum capillus-veneris*
- *Aristida lazaridis*
- *Arthropodium vanleeuwenii*
- *Cladium procerum*
- *Eremophila pusilliflora*
- *Euphorbia inappendiculata* var. *inappendiculata*
- *Euphorbia inappendiculata* var. *queenslandica*
- *Gompholobium karijini*
- *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)
- *Indigofera ixocarpa*
- *Ipomoea racemigera*
- *Isotropis parviflora*
- *Kohautia australiensis*
- *Oxalis* sp. Pilbara (M.E. Trudgen 12725)
- *Pentalepis trichodesmoides* subsp. *hispida*
- *Scaevola* sp. Hamersley Range basalts (S. van Leeuwen 3675)
- *Tetratheca fordiana*
- *Teucrium pilbaranum*

Priority 3

- *Acacia daweana*
- *Acacia effusa*
- *Acacia subtiliformis*
- *Amaranthus centralis*
- *Ampelopteris prolifera*
- *Aristida jerichoensis* var. *subspinulifera*
- *Atriplex flabelliformis*
- *Dampiera anonyma*
- *Dampiera metallorum*
- *Dolichocarpa* sp. Hamersley Station (A.A. Mitchell PRP 1479)
- *Dysphania congestiflora*
- *Eleocharis papillosa*
- *Eragrostis crateriformis*
- *Eragrostis* sp. Erect spikelets (P.K. Latz 2122)
- *Eremophila magnifica* subsp. *velutina*
- *Eremophila rigida*
- *Eremophila* sp. Hamersley Range (K. Walker KW 136)
- *Eremophila spongiocarpa*
- *Euphorbia australis* var. *glabra*
- *Euphorbia clementii*
- *Euphorbia stevenii*
- *Fimbristylis sieberiana*
- *Geijera salicifolia*
- *Glycine falcata*
- *Goodenia lyrata*
- *Goodenia* sp. East Pilbara (A.A. Mitchell PRP 727)
- *Grevillea saxicola*
- *Gymnanthera cunninghamii*
- *Indigofera gilesii*
- *Iotasperma sessilifolium*
- *Olearia mucronata*
- *Pilbara trudgenii*
- *Rhagodia* sp. Hamersley (M. Trudgen 17794)
- *Rostellularia adscendens* var. *latifolia*
- *Sida* sp. Barlee Range (S. van Leeuwen 1642)
- *Sida* sp. Hamersley Range (K. Newbey 10692)
- *Solanum kentrocaule*
- *Stackhousia clementii*
- *Streptoglossa* sp. Cracking clays (S. van Leeuwen *et al.* PBS 7353)
- *Stylidium weeliwolli*
- *Swainsona thompsoniana*
- *Tecticornia medusa*
- *Themeda* sp. Hamersley Station (M.E. Trudgen 11431)
- *Triodia basitricha*
- *Triodia* sp. Mt Ella (M.E. Trudgen 12739)
- *Xerochrysum boreale*

Priority 4

- *Acacia bromilowiana*
- *Eremophila magnifica* subsp. *magnifica*
- *Eremophila youngii* subsp. *lepidota*
- *Goodenia nuda*
- *Lepidium catapycnon*
- *Ptilotus mollis*
- *Rhynchosia bungarensis*

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4.1.2 Significant Vegetation

Two TECs listed under the BC Act are recognised for the Pilbara region of Western Australia (DBCA, 2018). These TECs are not listed under the commonwealth EPBC Act. The database searches indicated that no TECs occur within and surrounding (within 50 km) the Study Area.

A total of 43 PECs are recognised for the Pilbara region, of which 34 are relevant for terrestrial vegetation. Buffers for two Priority 1 PECs overlap with the Study Area; 'Coolibah - Lignum Flats: sub type 2' and 'West Angelas Cracking-Clays' (Figure 4.2). An additional seven PECs are known to occur within 50 km of the Study Area (Table 4.2).

4.1.3 Introduced Flora

The NatureMap (DBCA, 2021a), Protected Matters (DAWE, 2021b), ALA (ALA, 2021), WAOL (DPIRD, 2021), and BHP (BHP WAIO, 2022) database searches identified a list of 95 introduced taxa that may potentially occur within the Study Area. The list of introduced taxa known to occur or potentially occur within the Study Area (Appendix L) was reviewed to identify WoNS and DPs.

Weeds of National Significance

Of the list of introduced taxa identified during the desktop assessment as occurring in or near the Study Area, 30 are listed as WoNS (Appendix L). The 30 WoNS were identified from the WAOL database search for the Shire of Ashburton and Shire of East Pilbara and occur or may potentially occur within the shire boundaries. No other database search or literature review identified any WoNS. The WoNS taxa include numerous *Opuntia*, *Austrocylindropuntia*, and *Cylindropuntia* species that are grouped together in the WoNS listing.

Declared Pests

The desktop assessment identified 49 DPs (Appendix L), previously recorded or potentially located within either the Shire of Ashburton or the Shire of East Pilbara. The database searches and literature review did not identify any DPs as occurring within the Study Area.

Weed Prioritisation

Parks and Wildlife have identified 'Priority Alert' weeds for each of their management regions. Seven introduced taxa have been identified for the Midwest region, and fifteen introduced taxa have been identified for the Pilbara region (DBCA, 2014a, 2014b). Three 'Priority Alert' weeds were identified from the WAOL database searches (**Calotropis procera*, **Jatropha gossypiifolia*, and **Xanthium strumarium*) but are not expected to occur within the Study Area.

Table 4.2: Priority Ecological Communities (PECs) within the vicinity of the Study Area.

Priority Ecological Community (PEC)	Description	Priority Status	Distance from Study Area (km)
Coolibah - Lignum Flats: sub type 2	Woodland or forest of *Eucalyptus victrix* (coolibah) over thicket of *Duma florulenta* (lignum) on red clays in run-on zones. Associated species include *Eriachne benthamii*, *Themeda triandra*, *Aristida latifolia*, *Eulalia aurea* and *Acacia aneura*. Sub-type 2: Coolibah (*Eucalyptus victrix*) woodlands over lignum (*Duma florulenta*) over swamp wanderrie (*Eriachne benthamii*) (Lake Robinson is the only known occurrence).	P1	Buffer overlaps
West Angelas Cracking-Clays	Open tussock grasslands of *Astrebla pectinata*, *A. elymoides*, *Aristida latifolia*, in combination with low scattered shrubs of *Sida fibulifera*, on basalt (Jerrinah formation) derived cracking-clay loam depressions and flowlines.	P1	Buffer overlaps
Brockman Iron cracking clay communities of the Hamersley Range	Rare tussock grassland dominated by *Astrebla lappacea* in the Hamersley Range, on the Brockman land system. Tussock grassland on cracking clays - derived in valley floors, depositional floors. This is a rare community and the landform is rare.	P1	3.5 km W
Weeli Wolli Spring Community	Unique sedge and herbfield communities that fringe many of the pools and associated water bodies along the main channels of Weeli Wolli Creek.	P1	4.4 km W
Riparian flora and plant communities of springs and river pools with high water permanence of the Pilbara Region	The community includes flora with restricted distributions or populations that are highly disjunct or are major range extensions from northern and eastern Australia. These include *Imperata cylindrica*, *Cladium procerum*, *Schoenus falcatus* and *Fimbristylis sieberiana* (P3), almost exclusively restricted to the riparian zones of permanent wetlands with high soil moisture maintained by groundwater flows.	P2	17.2 km N / 31.8 km W
Kumina Land System	Ferricrete duricrust plains, uplands and plateaux remnants, relief up to 15 m. Duricrust plains and plateau remnants support hard spinifex grasslands.	P3	21.5 km N
Fortescue Marsh (Marsh Land System)	Highly diverse ecosystem with fringing mulga woodlands (on the northern side), samphire shrublands and groundwater dependant riparian ecosystems. Endemic *Eremophila* species, populations of priority flora and several near-endemic and novel samphires.	P1	24 km N
Coolibah - Lignum Flats: sub type 3	Woodland or forest of *Eucalyptus victrix* (coolibah) over thicket of *Duma florulenta* (lignum) on red clays in run-on zones. Associated species include *Eriachne benthamii*, *Themeda triandra*, *Aristida latifolia*, *Eulalia aurea* and *Acacia aneura*. Sub-type 3: Coolibah (*Eucalyptus victrix*) woodland over lignum over silky browntop (*Eulalia aurea*) (Mt Bruce flats).	P1	37 km WNW
Freshwater claypans downstream of the Fortescue Marsh - Goodiadarrie Hills.	Freshwater claypans downstream of the Fortescue Marsh - Goodiadarrie Hills on Mulga Downs Station. Larger claypans contain most of the restricted elements of the Pilbara riparian flora. *Eriachne* spp., *Eragrostis* spp. grasslands. Unique community, has few Coolibah.	P1	46 km NNE
Vegetation of sand dunes of the Hamersley Range/Fortescue Valley	A small number of these red linear iron-rich sand dunes are vegetated with *Acacia dictyophleba* scattered tall shrubs over *Crotalaria cunninghamii*, *Trichodesma zeylanicum* var. *grandiflorum* open shrubland. They are regionally rare, small and fragile and highly susceptible to threatening processes.	P3	~40 km W

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7480000

7440000

MS1039

MS1072

Community - State Category

- Brockman Iron cracking clay communities of the Hamersley Range - Priority 1
- Coolibah - Lignum Flats: sub type 2: Coolibah woodlands over lignum (Duma florulenta) over swamp wanderrie (Lake Robinson) - Priority 1
- Coolibah - Lignum Flats: sub type 3. Coolibah woodland over lignum over silky browntop (Mt Bruce flats) - Priority 1
- Fortescue Marsh (Marsh Land System) - Priority 1
- Freshwater claypans downstream of the Fortescue Marsh - Goodiadarrie Hills on Mulga Downs Station - Priority 1
- Kumina Land System - Priority 3
- Riparian flora and plant communities of springs and river pools with high water permanence of the Pilbara Region - Priority 2
- Vegetation of sand dunes of the Hamersley Range/Fortescue Valley - Priority 3
- Weeli Wolli Spring Community - Priority 1
- West Angelas Cracking-Clays - Priority 1

Legend

- Study Area
- Approval Boundary

N

biologic Environmental Survey

Scale: 1:500,000

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Coordinate System: GDA2020 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA2020 Created 03/10/2022

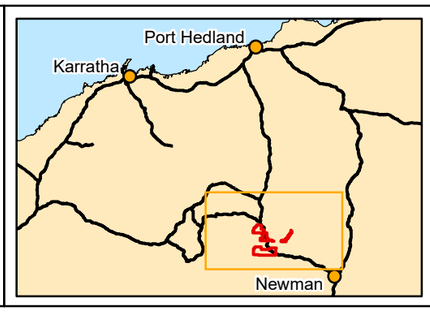

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Figure 4.2: Threatened and Priority Ecological Communities identified in the desktop assessment

4.2 Field Assessment

4.2.1 Flora

Species Richness

A total of 516 confirmed vascular flora taxa from 62 families and 190 genera were recorded from the Study Area during the field survey (Table 4.3, Appendix M). The total number of vascular flora taxa recorded comprised 499 native taxa and 17 introduced taxa (Appendix M). Flora composition varied across the three separate areas, reflecting the size and the variety of landforms present within each area (Table 4.3).

The dominant families equate to 50.4 % of the total taxa recorded and comprised Fabaceae (wattle family, 85), Poaceae (grass family, 84), Malvaceae (hibiscus family, 61), and Asteraceae (daisy family, 30). Of the 62 families recorded, 22 were represented by one taxon, which equates to 4.3 % of the total taxa recorded. The dominant genera make up 18.4 % of the total taxa recorded and comprised *Acacia* (40), *Eremophila* (19), *Senna* (18), and *Sida* (18). Of the 190 genera recorded, 99 were represented by only one taxon, which equates to 19.2 % of the total taxa recorded.

Table 4.3: Flora composition across the Study Area.

Flora Composition	Priority Area			
	Pineapple Hill and Camp Hill	Mudlark Well	MAC to Yandi Rail Corridor	Combined
Confirmed Vascular Flora Taxa	407	371	213	516
Families	54	52	37	62
Genera	161	156	98	190
Native taxa	394	361	207	499
Introduced Flora Taxa	13	10	6	17

Seventy-two taxa observed and/ or collected from the field were difficult to confidently identify to species or infraspecies level, equating to approximately 12.2 %. This was mainly due to the taxa lacking suitable flowering and fruiting material for confident taxonomic identification. A total of 27 taxa were tentatively identified to species or infraspecies level (e.g., *Cyperus* ?*squarrosus*). Twenty-six taxa were only identified down to genus level (e.g., *Acacia* sp. indet). Eight taxa were only identified down to family level (e.g., *Celastraceae* sp. indet). A further nine taxa superficially resembled a particular species or genus but could potentially be from a different genus (e.g., ?*Bothriochloa ewartiana* and ?*Dodonaea* sp. indet).

Twenty-eight of the unconfirmed specimens are from genera of significant taxa identified by the desktop assessment. Thirteen of these significant taxa remain Possible to occur post-survey (see Section 4.3) and the unconfirmed taxa recorded from the Study Area may represent one or more of these significant taxa. All unconfirmed taxa are displayed as Genus sp. indet (e.g., *Acacia* ?*aptaneura* is *Acacia* sp. indet) or Family sp. indet (e.g., Asteraceae sp. indet), in line with BHP data standards and naming registers (BHP, 2018a).

Significant Flora

The desktop assessment identified 92 priority listed taxa as potentially occurring within the Study Area (Section 4.1.1). During the field survey, 20 priority listed taxa were recorded from the Study Area (Figure 4.3). Nineteen were previously known to occur within the Study Area, and one (*Ipomoea racemigera* (P2) had not previously been recorded from the Study Area (Table 4.1). All priority-listed specimens were submitted to the WAH for formal identification by taxonomic experts.

Triodia sp. Karijini (S. van Leeuwen 4111) (P1)

Triodia sp. Karijini (S. van Leeuwen 4111) is a perennial grass forming lax hummocks up to 1 m tall (Plate 4.1). Leaves are soft, recurved to sinuous with sparse (or absent) to moderate resin present on some leaf blades. The inflorescense is a panicle with spikelets (flowers) 6.8 – 8 mm long (Rio Tinto & WAH, 2015).

Triodia sp. Karijini (S. van Leeuwen 4111) has been recorded in stony soils from the upper slopes and summits of hills within Karijini National Park and surrounds (Rio Tinto & WAH, 2015). There are currently 12 records for this species (each of which has a corresponding specimen held at WAH) (WAH, 1998-). A total of 68 individuals of *Triodia* sp. Karijini (S. van Leeuwen 4111) were recorded during the survey at nine locations. This taxon was recorded on hillcrests outside of the Study Area, near Pineapple Hill (Figure 4.3).

Source: Photo (L) taken by Biologic staff during current survey; Photo (R) from Rare and Priority Plants of the Pilbara app (Rio Tinto & WAH, 2015).

Plate 4.1: *Triodia* sp. Karijini (S. van Leeuwen 4111) (P1).

***Aristida lazaridis* (P2)**

Aristida lazaridis is a tufted perennial, grass-like or herb, growing to 1.5 m in height and produces green/purple flowers in April (WAH, 1998-) (Plate 4.2). The leaf blade surface of *A. lazaridis* are characteristically scaberulous, rough on both sides and panicles are loose and branching. This taxon is confined to sandy or loamy soils (Rio Tinto & WAH, 2015). *Aristida lazaridis* is widspread and distributed in tropical Queensland, the Northern Territory and Western Austalia, where it is known from the Kimberley and the Pilbara; between Newman and Karijini. There are currently 22 records for this species (each of which has a corresponding specimen held at WAH) (WAH, 1998-). A total of 261 individuals of *A. lazaridis* were recorded during the survey at 54 locations (Figure 4.3). This taxon was found across a variety of landforms (floodplains, gorge gullies, hillslopes, medium drainage lines, and stony plains). Associated vegetation included mulga woodland/ forest, hummock and tussock grasslands and *Callitris*/ *Corymbia* woodland.

Source: Photos taken by Biologic staff during current survey.

Plate 4.2: *Aristida lazaridis* (P2).

***Eragrostis* sp. Mt Robinson (S. van Leeuwen 4109) (P2)**

Eragrostis sp. Mt Robinson (S. van Leeuwen 4109) is a tussock-forming grass growing up to 0.3 m in height, producing red-brown flowers during September (WAH, 1998-) (Plate 4.3). It has a woolly base with wiry, scabrous culms and stiff, involute leaf blades (Rio Tinto & WAH, 2015). This taxon is restricted to hill summits and steep slopes on skeletal soil over banded ironstone, and is found northeast of Newman on Mt Meharry, Mt Robinson and Rhodes Ridge (WAH, 1998-). There are currently seven known records for *Eragrostis* sp. Mt Robinson (S. van Leeuwen 4109) (each of which has a corresponding specimen held at WAH) (WAH, 1998-). One individual was recorded during the survey in vegetation type HC TpTvTw EllCh Sgg (Figure 4.3).

Source: Photos taken by Biologic staff during current survey.

Plate 4.3: *Eragrostis* sp. Mt Robinson (S. van Leeuwen 4109) (P2).

Eremophila sp. West Angelas (S. van Leeuwen 4068) (P2)

Eremophila sp. West Angelas (S. van Leeuwen 4068) is an erect-branched or tall spindly shrub with narrow leaves and purple flowers and growing to 3 m in height (WAH, 1998-) (Plate 4.4). Branches can be either drooping or upright, sometimes pendulous, filiform, non-tuberculate, sparsely pubescent at first and glandular when mature. Flowers of *Eremophila* sp. West Angelas (S. van Leeuwen 4068) are purple/ white with the corolla medial lobe of the lower lip completely closing over the throat (fruiting and flowering in September to October) (Rio Tinto & WAH, 2015).

Eremophila sp. West Angelas (S. van Leeuwen 4068) is recorded from scattered localities in the Pilbara near West Angelas and is known to grow on rocky hills or ridges, but also from mulga bands in clay soil between rocky ridges. There are currently eight records for this species (each of which has a corresponding specimen held at WAH) (WAH, 1998-). A total of 72 individuals of *Eremophila* sp. West Angelas (S. van Leeuwen 4068) were recorded during the survey at seven locations (Figure 4.3). This taxon occurred within vegetation type GG AaAcaoEll DopErtiErjp TpTw.

Source: Rare and Priority Plants of the Pilbara app (Rio Tinto & WAH, 2015).

Plate 4.4: *Eremophila* sp. West Angelas (S. van Leeuwen 4068) (P2).

Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (P2)

Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708) is a large perennial shrub growing to 2.5 m in height, with cream-brown to rusty brown, erect, stellate hairs densely covering all vegetative parts (appearing woolly in texture) (Plate 4.5). Flowers are 5-petaled, pale mauve in colour with darker mauve marking at the base, and has been recorded flowering from March through to August (Rio Tinto & WAH, 2015; WAH, 1998-).

Hibiscus sp. Gurinbiddy (M.E. Trudgen MET 15708) is known to occur in sheltered or rocky drainage lines below associated cliff-lines or rocky ridges and has been recorded from only ranges in the south-east of the Pilbara region (Rio Tinto & WAH, 2015). There are currently 24 records for this species (each of which has a corresponding specimen held at WAH) (WAH, 1998-). A total of 955 individuals of *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) were recorded during the survey at 131 locations (Figure 4.3). This taxon was recorded in gorge gullies, hillcrests, hillslopes, and minor and medium drainage lines. Associated vegetation included *Triodia* hummock grassland, *Themeda* tussock grassland, *Callitris* low open forest, *Corymbia* low woodland, mulga low woodland, and *Acacia* open scrub.


Source: Photos taken by Biologic staff during current and previous Pilbara surveys.

Plate 4.5: *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (P2).

***Ipomoea racemigera* (P2)**

Ipomoea racemigera is a creeping annual, herb or climber with twining stems (WAH, 1998-) (Plate 4.6). Leaves of *I. racemigera* are ovate to ovate-elliptic, with a distinctly glabrous upper surface and sparsely hairy lower surface. This species produces small (12-20 mm wide), white, funnel-shaped flowers throughout the year, mainly during March to August (Rio Tinto & WAH, 2015).

Ipomoea racemigera is known to occur on sandy soils along watercourses in Western Australia, the Northern Territory and Queensland. There are currently 14 records for this species (each of which has a corresponding specimen held at WAH) (WAH, 1998-). A total of 177 individuals of *I. racemigera* were recorded during the survey at 13 locations (Figure 4.3). All individuals were found within medium drainage lines in vegetation type ME TtEuaCya ExCh AnlApyErlo.


Source: Photos taken by Biologic staff during a previous Pilbara field survey.

Plate 4.6: *Ipomoea racemigera* (P2).

Oxalis sp. Pilbara (M.E. Trudgen 12725) (P2)

Oxalis sp. Pilbara (M.E. Trudgen 12725) is a small, trailing or tufted, three-leaved herb growing to 0.3 m in height (Rio Tinto & WAH, 2015) (Plate 4.7). Branches of this species are either erect or ascending, sometimes creeping and are sparsely to densely hairy. *Oxalis* sp. Pilbara (M.E. Trudgen 12725) produces small yellow flowers with triangular sepals (Rio Tinto & WAH, 2015). Flowering of this species has previously been recorded in May - June and September (WAH, 1998-).

This species has been found to occur in shaded areas around rock outcrops and gullies and its distribution is restricted to the southern Pilbara to the west of Newman (Rio Tinto & WAH, 2015). There are currently 15 records for this species (each of which has a corresponding specimen held at WAH) (WAH, 1998-). A total of four individuals of *Oxalis* sp. Pilbara (M.E. Trudgen 12725) were recorded during the survey at three locations (Figure 4.3). All individuals of this taxon were recorded in vegetation type GG CcolCfEll ErmuThmbCya, with *Callitris columellaris*, *Corymbia ferriticola* and *Eucalyptus leucophloia* subsp. *leucophloia* forming the dominant vegetation layer.

Source: Photos taken by Biologic staff during a previous Pilbara field survey.

Plate 4.7: _Oxalis_ sp. Pilbara (M.E. Trudgen 12725) (P2).

Aristida jerichoensis var. _subspinulifera_ (P3)

Aristida jerichoensis var. *subspinulifera* is a compactly tufted perennial tussock grass, growing to 0.8 m in height (WAH, 1998-) (Plate 4.8). Leaves are 10-25 cm long, 1-2 mm wide and can be flat, folded together lengthwise, rolled, or with the edges rolled inwards. Leaves are bristly on the upper surface, more or less hairless on the lower surface and have a hairless sheath at the base (Wood, 2022). The plant produce a 100-350 mm long panicle bearing spikelets (flowers) almost to the base, with muricate lemma furrows (Rio Tinto & WAH, 2015).

Aristida jerichoensis var. *subspinulifera* is known to occur on hardpan plains with deep soil in open *Acacia* woodlands over *Triodia* species and other grasses. This taxon has been recorded in all mainland Australian states; currently it is known to occur in WA across the H(WAH, 1998-) A total of 43 records are recognised, each of which has a corresponding specimen held by the WA Herbarium (WAH, 1998-

). A total of 1,419 individuals of *A. jerichoensis* var. *subspinulifera* were recorded during the survey at 46 locations (Figure 4.3). This taxon was found across floodplains and stony plains in mulga woodland/ forest and *Triodia* hummock grassland.

Source: Photos taken by Biologic staff during current survey.

Plate 4.8: *Aristida jerichoensis* var. *subspinulifera* (P3).

***Eremophila naaykensii* (P3)**

Eremophila naaykensii was previously known as *Eremophila* sp. Hamersley Range (K. Walker KW 136) before being formally described in 2022 (Curtis *et al.*, 2022). *Eremophila naaykensii* is an erect shrub growing to 3.5 m in height with young stems having an indumentum of fine, grey to yellowish simple hairs (Plate 4.9). Older stems are grey to very pale grey, with slightly fissured bark, with prominently raised and knob-like leaf scars (Curtis *et al.*, 2022). Leaves are pale green/ grey-blue with a covering of velutinous white-grey hairs. Flowers of *E. naaykensii* can be cream, pale blue, lilac, pale yellow, pink or purple, sometimes with spots on the upper lobe; flowering and fruiting from June to October (Curtis *et al.*, 2022; Rio Tinto & WAH, 2015).

The species is known to occur on open rocky slopes, gullies and rock faces associated with large hills and cliffs (WAH, 1998-). *E. naaykensii* has been recorded within the southern central area of the Pilbara region and is often found occurring in high abundance. There are currently 21 records for this species (each of which has a corresponding specimen held at WAH) (WAH, 1998-). A total of 1,367 individuals of *E. naaykensii* were recorded during the survey at 135 locations (Figure 4.3). This taxon was found across several landforms, including gorge gully, hillcrest, hillslope, and medium drainage lines. The dominant vegetation layer associated with *E. naaykensii* was *Triodia* hummock grassland but it was also associated with woodland/ forest of *Corymbia ferriticola*, *Callitris columellaris*, *Eucalyptus leucophloia* subsp. *leucophloia* and *Ficus brachypoda*.


Source: Photo (L) taken by Biologic staff during current survey; Photo (R) is from Curtis *et al.* (2022).

Plate 4.9: *Eremophila naaykensii* (P3).

***Indigofera gilesii* (P3)**

Indigofera gilesii was formally described in 2015, having been previously known as *Indigofera* sp. Gilesii (M.E. Trudgen 15869) (Wilson & Rowe, 2015). *Indigofera gilesii* is a sparsely branched, open shrub, growing to 1.5 m in height (Plate 4.10). Leaflets of this taxa are grey, slightly discolourous and have small, persistent stipules. *Indigofera gilesii* has been recorded as flowering and fruiting from June to October; flowers are dull dark pink with a white centre (Rio Tinto & WAH, 2015).

Indigofera gilesii is known from open mallee shrublands on pebbly loam, amongst boulders and outcrops/hill on skeletal soils (more specifically on soils overlaying ironstone geologies of the Brockman Iron Formation) (Rio Tinto & WAH, 2015). It has been recorded from the south-eastern Pilbara around Newman, Giles and Rhodes Ridge in Western Australia, as well as most other mainland states. There are currently 39 records for this species (each of which has a corresponding specimen held at WAH) (WAH, 1998-). A total of two individuals of *Indigofera gilesii* were recorded during the survey at two locations (Figure 4.3). This taxon was found in vegetation types HC TpTvTw EllCh Sgg and HC TwTvTp EllCh Ah, within *Triodia* hummock grassland. Other associated flora included *Acacia hamersleyensis*, *Eucalyptus leucophloia* subsp. *leucophloia*, *E. kingsmillii* subsp. *kingsmillii*, *Eucalyptus gamophylla*, and *Corymbia hamersleyana*.

Source: Photos taken by Biologic staff during a previous Pilbara field survey.

Plate 4.10: *Indigofera gilesii* (P3).

***Pilbara trudgenii* (P3)**

Pilbara trudgenii is a gnarled, aromatic shrub in the Daisy family growing to 1 m in height (WAH, 1998-) (Plate 4.11). The bark is fissured and fibrous, mottled cream and grey becoming dark grey. Leaves are crowded apically, with distinct reticulate venation, pustulate surfaces, and a prominent midvein (Rio Tinto & WAH, 2015). *Pilbara trudgenii* produces white flowers during September (WAH, 1998-).

This species has been recorded sporadically from cliff faces, steep rocky slopes and rock screes; it is usually found on skeletal red and stony soils over Brockman Ironstone. *Pilbara trudgenii* is distributed within the central Pilbara between Mt. Robinson and Paraburdoo (Rio Tinto & WAH, 2015). There are currently 12 records for this species (each of which has a corresponding specimen held at WAH) (WAH, 1998-). A total of 73 individuals of *P. trudgenii* were recorded during the survey at seven locations (Figure 4.3). This taxon was found in three different vegetation types on gorge gullies and hillcrests. Associated flora included *Acacia aptaneura* (mulga), *Acacia hamersleyensis*, *Triodia wiseana*, *Callitris columellaris*, *Corymbia ferriticola*, *Dodonaea pachyneura*, and *Eriachne mucronata*.


Source: Photo (L) taken by Biologic staff during current survey; Photo (R) from Rare and Priority Plants of the Pilbara app (Rio Tinto & WAH, 2015).

Plate 4.11: *Pilbara trudgenii* (P3).

***Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3)**

Rhagodia sp. Hamersley (M. Trudgen 17794) is a scrambling shrub with small lanceolate leaves (not aromatic, unlike that of the visually similar and co-occurring species *Rhagodia eremaea*), growing to 4 m in height (Plate 4.12). Branches of this taxon are slender, ribbed-striate and white-furfuraceous. *Rhagodia* sp. Hamersley (M. Trudgen 17794) produces white flowers (both male and female flowers) and small red drupelets (fruit) from March to May or September and November (Rio Tinto & WAH, 2015; WAH, 1998-).

Rhagodia sp. Hamersley (M. Trudgen 17794) is known from mulga woodlands and on cracking clays; and has been recorded within the Pilbara from the northwest of Tom Price to Jigalong (east of Newman) (Rio Tinto & WAH, 2015; WAH, 1998-). There are currently 72 records for this species (each of which has a corresponding specimen held at WAH) (WAH, 1998-). A total of 273 individuals of *Rhagodia.* sp. Hamersley *(M. Trudgen 17794)* were recorded during the survey at 96 locations (Figure 4.3). This taxon was recorded across many landforms and vegetation types, including floodplains (seven vegetation types), stony plains (five vegetation types), gorge gullies (two vegetation types), and one vegetation type on both hillslopes and medium drainage lines. Associated vegetation was primarily mulga woodland/ forest and *Triodia* hummock grassland.

Source: Photos taken by Biologic staff during a previous Pilbara field survey.

Plate 4.12: *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3).

***Rostellularia adscendens* var. *latifolia* (P3)**

Rostellularia adscendens var. *latifolia* is a small herb or shrub with hairy to glabrous leaves, angular stems, and grows to 0.4 m in height (Rio Tinto & WAH, 2015) (Plate 4.13). It produces small blue-purple-violet flowers from April to May, which are covered by conspicuous bracts (Rio Tinto & WAH, 2015; WAH, 1998-).

This species is found in protected areas near watercourses, or along shaded rocky ridges, often in dry gullies and gorges on ironstones soils. *Rostellularia adscendens* var. *latifolia* is known to be heavily grazed at times. Whilst *R. adscendens* is found across Australia as well as Africa, India, and South-East Asia, this variant (var. *latifolia*) is restricted to the Pilbara region of WA (Rio Tinto & WAH, 2015). There are currently 42 records for this species (each of which has a corresponding specimen held at WAH) (WAH, 1998-). A total of 573 individuals of *R. adscendens* var. *latifolia* were recorded during the survey at 94 locations (Figure 4.3). This taxon was found on gorge gullies, hillcrests, hillslopes, and medium drainage lines, in *Triodia* hummock grassland, *Callitris columellaris* woodland/ forest, and *Acacia aptaneura* (mulga) forest.

Source: Photo (L) taken by Biologic staff during current survey; Photo (R) is from Rare and Priority Plants of the Pilbara app (Rio Tinto & WAH, 2015).

Plate 4.13: *Rostellularia adscendens* var. *latifolia* (P3).

***Solanum kentrocaule* (P3)**

Solanum kentrocaule was formally described in 2013, previously having been known as *Solanum* sp. Gurinbiddy Range (M.E. Trudgen & M. Trudgen MET 12775) (Bean, 2013). *Solanum kentrocaule* is a shrub growing to 1.5 m in height (Plate 4.14). Branchlets are terete or ridged, white to yellow brown, with a dense to very dense prickly indumentum. Prickles are long, slender, to 12 mm in length, with between 200 – 1,000 prickles per 10 cm of stem. The upper leaf surface is green to grey-green with prickles present on the midvein and lateral veins (Bean, 2013). *Solanum kentrocaule* flowers from July to October, producing mauve or purple flowers, and fruits in September (Rio Tinto & WAH, 2015).

Solanum kentrocaule is found on hillsides and mountains, or occasionally in creek-beds. It occurs in skeletal red-brown soil over ironstone or on basalt scree (Rio Tinto & WAH, 2015). The species is known only from the Hamersley Range in the Pilbara. There are currently 21 records for this species (each of which has a corresponding specimen held at WAH) (WAH, 1998-). A total of 27 individuals of *Solanum kentrocaule* were recorded during the survey at 15 locations (Figure 4.3). This taxon was recorded across gorge gullies and hillcrests. Associated vegetation was *Triodia* hummock grassland, and forest/ woodland of either *Callitris columellaris*, *Corymbia ferriticola*, or *Acacia aptaneura* (mulga).

Source: Photos taken by Biologic staff during a previous Pilbara field survey.

Plate 4.14: *Solanum kentrocaule* (P3).

Themeda sp. Hamersley Station (M.E. Trudgen 11431) (P3)

Themeda sp. Hamersley Station (M.E. Trudgen 11431) is a robust perennial tussock grass growing to 1.8 m in height and is described as having a 'bluish tinge' to the vegetated tussock (Plate 4.15). The species is known to flower in August and fruit after rains, usually late in the season (Rio Tinto & WAH, 2015). It has been recorded from drainage lines, grass plains, clay flats, crabhole flats and dark, self-mulching clay soils; distributed only within the Pilbara of Western Australia (Rio Tinto & WAH, 2015). There are currently 59 records for this species (each of which has a corresponding specimen held at WAH) (WAH, 1998-). A total of 105 individuals of *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) were recorded during the survey at four locations (Figure 4.3). This taxon was found on floodplains and stony plains within vegetation types dominated by *Acacia aptaneura* (mulga) or *Triodia melvillei*.

Source: Rare and Priority Plants of the Pilbara app (Rio Tinto & WAH, 2015).

Plate 4.15 *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) (P3).

***Triodia* sp. Mt Ella (M.E. Trudgen 12739) (P3)**

Triodia sp. Mt Ella (M.E. Trudgen 12739) is a diffuse and loose, hard perennial hummock grass growing to 0.4 m in height and to 1.5 m in width (WAH, 1998-) (Plate 4.16). Leaves are a bright mid-green, shiny, very resinous and distinctively aromatic. The flowering and fruiting period for this species has been recorded as between May and August (Rio Tinto & WAH, 2015).

Triodia sp. Mt Ella (M.E. Trudgen 12739) has been recorded from hillslopes and crests as well as occasionally ephemeral creek banks, flow lines and rocky gullies. This species prefers skeletal light orange-brown pebbly, loam soils over ironstone amongst rocks and outcrops within its habitats. Its distribution is restricted to a small area between Newman and West Angelas and also Rhodes Ridge (Rio Tinto & WAH, 2015; WAH, 1998-). There are currently 38 records for this species (each of which has a corresponding specimen held at WAH) (WAH, 1998-). A total of 8,895 individuals of *Triodia* sp. Mt Ella (M.E. Trudgen 12739) were recorded during the survey at 191 locations (Figure 4.3). This taxon was found across a variety of landforms, including gorge gullies, hillcrests, hillslopes, and medium drainage lines. It mainly occurred within *Triodia* hummock grassland, but was also found within *Themeda* tussock grassland, *Callitris* forest/ woodland, and mulga woodland.


Source: Photos taken by Biologic staff during current survey (L) and during a previous Pilbara field survey (R).

Plate 4.16: *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (P3).

***Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 4684) (P3)**

Vittadinia sp. Coondewanna Flats (S. van Leeuwen 4684) is an erect, branched (somewhat woody) herb growing up to 1 m in height with scabrous hairs and bright light green stems. This taxon produces daisy flowers with white ray florets and light yellow disc florets, from May to September (Rio Tinto & WAH, 2015) (Plate 4.17).

This taxon has been recorded from clay-loam soils, clays, cracking-clays and gilgai, usually in association with low open woodlands and frequently with mulga (Rio Tinto & WAH, 2015). *Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 4684) is endemic to the Pilbara and is found primarily from Tom Price to Newman (WAH, 1998-). There are currently 26 records for this species (each of which has a corresponding specimen held at WAH) (WAH, 1998-). One individual of *Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 4684) was recorded during the survey (Figure 4.3). This taxon was found in vegetation type FP Aa TtAri Pto (Low Open Forest of *Acacia aptaneura* over Tussock Grassland of *Themeda triandra* and *Aristida inaequiglumis* with Low Open Shrubland of *Ptilotus obovatus* on drainage zones).

Source: Rare and Priority Plants of the Pilbara app (Rio Tinto & WAH, 2015).

Plate 4.17: *Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 4684) (P3).

***Eremophila magnifica* subsp. *magnifica* (P4)**

Eremophila magnifica subsp. *magnifica* is an erect aromatic shrub growing to 1.5 m in height and produces pale whiteish lilac, lilac or pinkish lilac, from August to November (WAH, 1998-) (Plate 4.18). The leaves of this taxa are glabrous except for prominently ciliate margins (Rio Tinto & WAH, 2015).

Eremophila magnifica subsp. *magnifica* has previously recorded as growing on rocky slopes in open *Eucalyptus* and *Acacia* shrublands often associated with species of *Triodia*, *Ptilotus* and *Dodonaea* and is restricted to the Hamersley Range in the Pilbara. There are currently 46 records for this species (each of which has a corresponding specimen held at WAH) (WAH, 1998-). A total of 109 individuals of *E. magnifica* subsp. *magnifica* were recorded during the survey at 44 locations (Figure 4.3). This taxon

was found on either hillslopes, hillcrests or gully gorges, in *Triodia* hummock grassland with *Corymbia* spp., *Eucalyptus* spp. and *Acacia* spp.

Source: Photos taken by Biologic staff during current survey.

Plate 4.18: *Eremophila magnifica* subsp. *magnifica* (P4).

***Lepidium catapycnon* (P4)**

Lepidium catapycnon is an open, woody perennial, herb or shrub growing to 0.3 m in height (Plate 4.19). Stems are bent at the nodes in a characteristic zigzag manner, and leaves are succulent. *L. catapycnon* produces white flowers and has been recorded flowering from August to November (WAH, 1998-). This taxon is a pioneer ephemeral, making way for *Triodia* as the vegetation matures, and then re-appearing after fires (Rio Tinto & WAH, 2015).

Lepidium catapycnon is known to occur in skeletal soils on hillsides, frequently on south-facing slopes (Rio Tinto & WAH, 2015; WAH, 1998-). *Lepidium catapycnon* is restricted to the Pilbara from Tom Price to Newman. There are currently 39 records for this species (each of which has a corresponding specimen held at WAH) (WAH, 1998-). A total of 50 individuals of *L. catapycnon* were recorded during the survey at one location (Figure 4.3). This taxon was recorded on a hillcrest in *Triodia* hummock grassland (vegetation type HC TwTvTp EllCh Ah).

Source: Photos taken by Biologic staff during a previous Pilbara field survey.

Plate 4.19: *Lepidium catapycnon* (P4).

***Sida* sp. Barlee Range (S. van Leeuwen 1642) (P4).**

Sida sp. Barlee Range is a spreading shrub, growing to 0.5 m in height (WAH, 1998-) (Plate 4.20). This species is described as being a rounded, densely woolly to velvety and somewhat woody shrub, with ovate, deeply-veined leaves and yellow flowers (flowering occurring in August; has been recorded flowering/fruiting from May to September) (Rio Tinto & WAH, 2015).

Sida sp. Barlee Range is known to grow in skeletal soils (particularly red soil pockets) in rocky areas, especially scree slopes and rock piles in full sun to afternoon shade, or in small chines and gullies. It has been recorded widely in the southern Pilbara and northern Gascoyne, especially common in the Brockman area west of Tom Price (Rio Tinto & WAH, 2015). There are currently 60 records for this species (each of which has a corresponding specimen held at WAH) (WAH, 1998-). A total of 144 individuals of *Sida* sp. Barlee Range were recorded during the survey at 58 locations (Figure 4.3). This taxon occurred across gorge gullies, hillcrests, hillslopes, and floodplains, within *Triodia* hummock grassland, *Themeda* tussock grassland, and mulga low open forest.

Source: Photos taken by Biologic staff during current survey.

Plate 4.20: *Sida* sp. Barlee Range (S. van Leeuwen 1642) (P4).

660000 670000 680000 690000 700000

7480000

7470000

Great Northern Hwy

Packsaddle Rd

Yandicoogina Rail

West Angelas Rail

MS1072

West Angelas Rd

Legend

- Study Area
- Approval Boundary
- Local Road
- State Road
- Rail

Priority 1

- *Eremophila* sp. West Angelas (S. van Leeuwen 4068)
- *Triodia* sp. Karijini (S. van Leeuwen 4111)
- *Vittadinia* sp. Coondewanna Flats

Priority 2

- *Aristida lazaridis*
- *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)
- *Ipomoea racemigera*
- *Oxalis* sp. Pilbara (M.E. Trudgen 12725)

Priority 3

- *Aristida jerichoensis* var. *subspinulifera*
- *Eremophila naaykensii*
- *Rhagodia* sp. Hamersley (M. Trudgen 17794)
- *Rostellularia adscendens* var. *latifolia*
- *Sida* sp. Barlee Range (S. van Leeuwen 1642)
- *Themeda* sp. Hamersley Station (M.E. Trudgen 11431)
- *Triodia* sp. Mt Ella (M.E. Trudgen 12739)

Priority 4

- *Eremophila magnifica* subsp. *magnifica*

N

biologic Environmental Survey

Scale: 1:110,000

0 2 4 6 Km

Coordinate System: GDA2020 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA2020 Created 04/10/2022

BHP WAIO

CPH Detailed and Targeted Flora Survey

Figure 4.3a: Significant flora recorded in the Study Area - Pineapple Hill and Camp Hill

700000
710000
720000
7480000
7470000
Yandicoogina Rail
MS1039
MS1072
Mining Area C Railway
West Angelas Rd
Mining Area C Railway

Legend

- Study Area
- Approval Boundary
- Local Road
- Rail

Priority 2

- *Aristida lazaridis*

Priority 3

- *Indigofera gilesii*
- *Sida* sp. Barlee Range (S. van Leeuwen 1642)

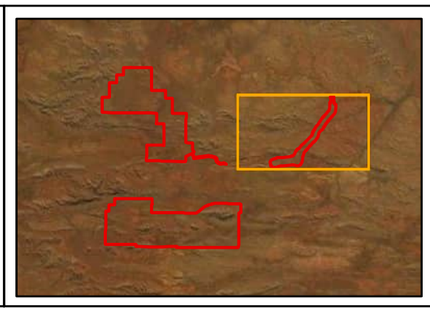
N

biologic Environmental Survey

Scale: 1:80,000

0 2 4 Km

Coordinate System: GDA2020 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA2020 Created 04/10/2022



BHP WAIO

CPH Detailed and Targeted Flora Survey

Figure 4.3b: Significant flora recorded in the Study Area - MAC to Yandi Rail Corridor

670000
680000
690000
7450000
7440000
Great Northern Hwy
MS1072

Legend

- Study Area
- Approval Boundary
- State Road
- Rail

Priority 1

- *Eragrostis* sp. Mt Robinson (S. van Leeuwen 4109)
- *Eremophila* sp. West Angelas (S. van Leeuwen 4068)

Priority 2

- *Aristida lazaridis*
- *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)
- *Oxalis* sp. Pilbara (M.E. Trudgen 12725)

Priority 3

- *Aristida jerichoensis* var. *subspinulifera*
- *Eremophila naaykensii*
- *Indigofera gilesii*
- *Pilbara trudgenii*
- *Rhagodia* sp. Hamersley (M. Trudgen 17794)
- *Rostellularia adscendens* var. *latifolia*
- *Sida* sp. Barlee Range (S. van Leeuwen 1642)
- *Solanum kentrocaule*
- *Triodia* sp. Mt Ella (M.E. Trudgen 12739)

Priority 4

- *Eremophila magnifica* subsp. *magnifica*
- *Lepidium catapycnon*

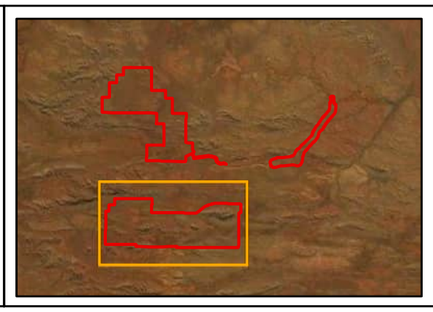
N

biologic Environmental Survey

Scale: 1:90,000

0 2 4 Km

Coordinate System: GDA2020 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA2020 Created 04/10/2022



BHP WAIO

CPH Detailed and Targeted Flora Survey

Figure 4.3c: Significant flora recorded in the Study Area - Mudlark Well

Flora of Other Significance

Six taxa recorded from the Study Area during the Survey are considered to represent flora of "other" significance (see Section 1.3.1), including four range extensions (RE), and two taxa of 'other' significance (Table 4.4).

Table 4.4: Flora of 'other' significance recorded in the Study Area.

Family	Taxon	Significance	Comments
Fabaceae	*Acacia rhodophloia* x *sibirica*	Other	Hybridisation is a common occurrence for many Fabaceae genera. These taxa are not recognised hybrids by WAH, nor are they considered to be locally or regionally significant.
	Senna artemisioides subsp. *helmsii* x *oligophylla*		
	Tephrosia sp. deserts (J.R. Maconochie 1403)	RE	Represents a range extension of approximately 93 km to the northwest. This taxon is distributed across the central deserts of WA and NT. The closest known record is located 24 km northeast of Newman. *Tephrosia* sp. deserts was recorded twice, from mapping note CPHM-01 and opportunistically.
Oxalidaceae	*Oxalis perennans*	RE	Represents a range extension of approximately 175 km to the west of the closest known WAH record. There is another record within 5 km of the Study Area, however this specimen is held at the Northern Territory herbarium and has not been verified. In WA, *Oxalis perennans* is primarily distributed in the south-west, with scattered records further north, with only one record known from the Pilbara. This taxon was recorded once within quadrat CPH-128.
Poaceae	**Bothriochloa pertusa*	RE	Represents a range extension of approximately 131 km to the southeast. **Bothriochloa pertusa* is a weed distributed across Northern Australia and tropical/ coastal QLD, with only two records known for the Pilbara. This taxon was recorded once in quadrat CPH-167. The specimen collected may represent a new weed for the area or may have been present for many years but under collected.
	Thyridolepis mitchelliana	RE	Represents a slight range extension of 47 km to the west. *Thyridolepis mitchelliana* is a common grass throughout central Australia, but only one record is known for the Pilbara, close to Rhodes Ridge Airport. *Thyridolepis mitchelliana* was recorded twice, from quadrats CPH-128 and CPH-175.

Introduced Flora

Seventeen confirmed introduced taxa were recorded from the Study Area (Figure 4.4). None of the 17 introduced flora are listed as WoNS, a DP under the BAM Act, or as 'Priority Alert' weeds by Parks and Wildlife. Introduced flora were distributed primarily within drainage line, floodplain, and stony plain vegetation types, while the upper landscapes (i.e., hillcrests, summits, upper hillslopes) had lower introduced flora presence. Introduced flora are known to be more prevalent along drainage lines and floodplains, due to dispersal of seeds by water movement as well as the higher water availability these

landforms provide for germination and growth (Hill *et al.*, 2005; van der Meulen & Sindel, 2008). Furthermore, spread via cattle is more prevalent on the lower landforms, compared to rocky, breakaway country and large hills and ranges.

The most frequently observed introduced flora were **Bidens bipinnata* (110 occurrences), **Malvastrum americanum* (17 occurrences), and **Chloris virgata* (14 occurrences). **Bidens bipinnata* had in excess of 18,000 individuals and was distributed throughout the entire Study Area. Cover was generally less than 2 % in quadrats, but many occurrences extended outside of quadrat boundaries. The size of individual locations reached 5,000 for **B. bipinnata*, up to 195 for **M. americanum*, and up to 115 for **C. virgata*. **Cenchrus ciliaris* and **Cenchrus setiger* were recorded less frequently with 198 individuals for **C. ciliaris* and 168 individuals for **C. setiger*, although these are an under representation of both taxa in the Study Area. **Cenchrus ciliaris* was commonly aerial seeded as a fodder crop for pastures and has since spread throughout arid and tropical regions of Australia (Hussey *et al.*, 2007). Spread occurs mainly by seeds transported through waterways and roads. **Cenchrus ciliaris* was a dominant understorey component of vegetation type MA CcCs Aci EcrEv (see Table 4.7). The remaining 12 introduced flora taxa were present in lower numbers (from 1 – 60 individuals) and lower covers (≤ 0.1 %).

660000 670000 680000 690000 700000

7480000

7470000

Great Northern Hwy

Packsaddle Rd

Yandicoogina Rail

West Angelas Rail

MS1072

West Angelas Rd

Legend

- Study Area
- Approval Boundary
- Local Road
- State Road
- Rail

Introduced Species

- **Bidens bipinnata*
- **Bothriochloa pertusa*
- **Cenchrus ciliaris*
- **Cenchrus setiger*
- **Chloris virgata*
- **Erigeron bonariensis*
- **Malvastrum americanum*
- **Melinis repens*
- **Portulaca pilosa*
- **Setaria verticillata*
- **Solanum nigrum*
- **Sonchus oleraceus*
- **Tribulus*

N

biologic Environmental Survey

Scale: 1:110,000

0 2 4 6 Km

Coordinate System: GDA2020 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA2020 Created 04/10/2022

BHP WAIO

CPH Detailed and Targeted Flora Survey

Figure 4.4a: Introduced flora recorded in the Study Area - Pineapple Hill and Camp Hill

700000
710000
720000
7480000
7470000
Yandicoogina Rail
MS1039
MS1072
West Angelas Rd
Mining Area C Railway
Mining Area C Railway

Legend

- Study Area
- Approval Boundary
- Local Road
- Rail

Introduced Species

- *Aerva javanica
- *Bidens bipinnata
- *Cenchrus ciliaris
- *Digitaria ciliaris
- *Malvastrum americanum
- *Setaria verticillata

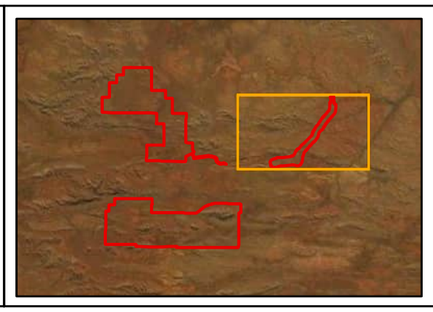
N

biologic Environmental Survey

Scale: 1:80,000

0 2 4 Km

Coordinate System: GDA2020 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA2020 Created 04/10/2022



BHP WAIO

CPH Detailed and Targeted Flora Survey

Figure 4.4b: Introduced flora recorded in the Study Area - MAC to Yandi Rail Corridor

670000

680000

690000

7450000

7440000

Great Northern Hwy

MS1072

Legend

- Study Area
- Approval Boundary
- State Road
- Rail

Introduced Species

- **Bidens bipinnata*
- **Cenchrus ciliaris*
- **Chloris virgata*
- **Digitaria ciliaris*
- **Malvastrum americanum*
- **Melinis repens*
- **Sigesbeckia orientalis*
- **Sonchus oleraceus*
- **Stylosanthes hamata*
- **Tribulus*

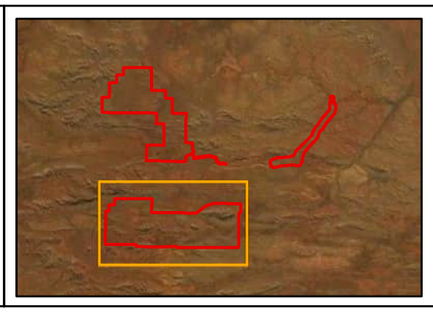
N

biologic Environmental Survey

Scale: 1:90,000

0 2 4 Km

Coordinate System: GDA2020 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA2020 Created 04/10/2022



BHP WAIO

CPH Detailed and Targeted Flora Survey

Figure 4.4c: Introduced flora recorded in the Study Area - Mudlark Well

4.2.2 Vegetation

A total of 77 vegetation types were described from the Study Area, based on the dendrogram and hierarchical cluster analysis (Appendix I), review of floristic assemblages, review of aerial imagery, and the consolidation and incorporation of previous vegetation mapping for the Study Area (Figure 4.5). Native vegetation (including rehabilitated areas) covered the majority of the Study Area (57,989.1 ha / 97.8 %), with the remaining area mapped as 'Cleared' due to mining and mining related disturbances.

The vegetation types were described from 26 broad floristic formations in the Study Area (Table 4.5). Broad floristic formations are based on the dominant growth form and land cover genus for the dominant stratum. The dominant broad floristic formation based on extent across the Study Area was *Triodia* Hummock Grassland (70.8 %). *Triodia* Hummock Grassland also supported the highest number of vegetation types (34), followed by *Acacia* Low Open Woodland (five or 8.5 % in extent), *Acacia* Low Open Forest (five or 5.2 % in extent), and *Themeda* Tussock Grassland (five or 2.7 % in extent).

The 77 vegetation types were recorded from ten broad landforms (Table 4.6). The dominant landform was Stony Plains (15,002.7 ha / 25.31 %), followed by Footslope (12,658 ha / 21.4 %) and Floodplains (9,477.5 ha / 16 %). Floodplains supported the highest number of vegetation types (14), with Stony Plains supporting 12 and Hillslopes supporting 11 vegetation types.

Table 4.5: Broad Floristic Formations Recorded from the Study Area.

Broad Category	Broad Floristic Formation	Number of Vegetation Types	Extent within Study Area (ha)	Extent within Study Area (%)
Acacia-dominated	Acacia Low Open Forest	5	3,100.50	5.2
	Acacia Low Open Woodland	5	5,032.40	8.5
	Acacia Low Woodland	3	1,537.60	2.6
	Acacia Mid Open Shrubland	1	153.6	0.3
	Acacia Open Scrub	2	795.4	1.3
	Acacia Shrubland	1	33.2	0.1
Subtotal		17	10,652.80	18
Callitris-dominated	Callitris Low Open Forest	1	317.8	0.5
	Callitris Low Open Woodland	1	9.6	0.02
Subtotal		2	327.4	0.6
Eucalyptus-Corymbia dominated	Corymbia Low Scattered Trees	1	0.6	0.001
	Corymbia Low Woodland	1	426.8	0.7
	Eucalyptus Low Open Forest	1	188.8	0.3
	Eucalyptus Open Forest	1	10.4	0.02
	Eucalyptus Woodland	3	32.7	0.1
Subtotal		7	659.3	1.1
Hummock grassland	Triodia Closed Hummock Grassland	1	62	0.1
	Triodia Hummock Grassland	34	41965.8	70.8
	Triodia Mid Open Hummock Grassland	1	750.1	1.3
	Triodia Open Hummock Grassland	1	54.1	0.1

Broad Category	Broad Floristic Formation	Number of Vegetation Types	Extent within Study Area (ha)	Extent within Study Area (%)
Subtotal		37	42,831.90	72.3
Tussock grassland	Enneapogon Tussock Grassland	1	159.8	0.3
	Eriachne Tussock Grassland	1	64.5	0.1
	Eulalia Tussock Grassland	1	10.9	0.02
	Themeda Closed Tussock Grassland	1	63.4	0.1
	Themeda Mid Tussock Grassland	2	997.1	1.7
	Themeda Open Tussock Grassland	1	576.9	1
	Themeda Tussock Grassland	5	1621.9	2.7
Subtotal		12	3,494.50	5.9
Cenchrus-dominated	Cenchrus Closed Tussock Grassland	1	12.5	0.02
Typha-dominated	Typha Tall Thicket	1	1	0.002
Cleared and Rehabilitation Mapping Units	N/A	-	1,305.20	2.2
Total		**77**	**59,284.6**	**100**

Table 4.6: Landforms Recorded from the Study Area.

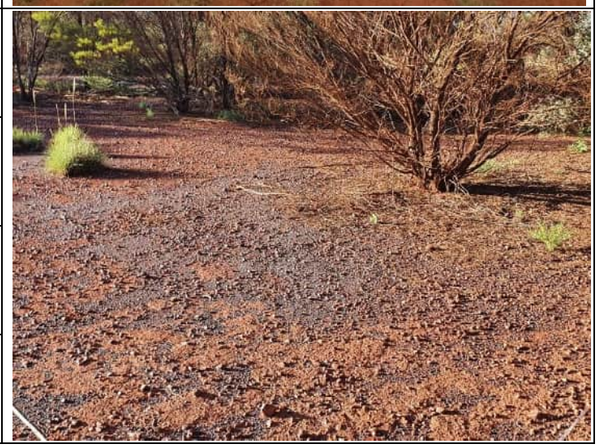
Landform	Number of Vegetation Types	Extent in Study Area (ha)	Extent in Study Area (%)
Claypan	1	127.3	0.2
Floodplain	14	9,477.50	16
Footslope	8	12,658	21.4
Hillslope	11	8,984.90	15.2
Hillcrest	6	6,594.50	11.1
Gorge Gully	5	1,562.20	2.6
Major Drainage Line	6	244.4	0.4
Medium Drainage Line	7	2,435.80	4.1
Minor Drainage Line	7	892.1	1.5
Stony Plain	12	15,002.70	25.31
Rehabilitation / Cleared	n/a	1,305.10	2.2
Total	**77**	**59284.6**	**100**

Two additional mapping categories were delineated from the Study Area: “Cleared” and “Rehabilitation”. They are defined as follows:

- Cleared – cleared areas coinciding with roads and tracks; and
- Rehabilitation – areas undergoing rehabilitation in close proximity to Mining Area C; contained native vegetation but did not resemble any of the native vegetation types.

Table 4.7: Vegetation and mapping units within the Study Area.

Vegetation Code	Description	Study Area	Extent (ha/%)	Sample Sites	Features of Interest	Site Attributes - Condition	Photo
Calcrete Plains							
CP TwTa Ese AbPlApyp	Hummock Grassland of *Triodia wiseana* and *Triodia angusta* with Open Mallee of *Eucalyptus socialis* subsp. *eucentrica* and Open Shrubland of *Acacia bivenosa*, *Petalostylis labicheoides* and *Acacia pyrifolia* var. *pyrifolia* on light brown clay loam on calcrete plains	MAC to Yandi Rail Corridor	28.1 / 0.7	Not sampled in current survey	-	Good - Excellent	-
		Mudlark Well	90.2 / 0.3			Excellent	
		Pineapple Hill & Camp Hill	9.1 / 0.04			Excellent	
		Overall	127.3 / 0.2				
Floodplains							
FP Aa TtAri Pto	Low Open Forest of *Acacia aptaneura* over Tussock Grassland of *Themeda triandra* and *Aristida inaequiglumis* with Low Open Shrubland of *Ptilotus obovatus* on drainage zones	MAC to Yandi Rail Corridor	Not present	N/A	• *Aristida lazaridis* (P2) • *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) (P3) • *Vittadinia* sp. Coondewanna Flats (P3)	-	
		Mudlark Well	Not present	N/A		-	
		Pineapple Hill & Camp Hill	366.6 / 1.6	CPH-092		Very Good - Excellent	
		Overall	366.6 / 0.6				
FP AaAcaoAp ErInSolPto ArcErdiArj	Low Open Woodland of *Acacia aptaneura*, *Acacia catenulata* subsp. *occidentalis* and *Acacia paraneura* over Low Open Shrubland of *Eremophila lanceolata*, *Solanum lasiophyllum* and *Ptilotus obovatus* over	MAC to Yandi Rail Corridor	Not present	N/A	• *Aristida jerichoensis* var. *subspinulifera* (P3) • *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3)	-	
		Mudlark Well	1655.1 / 5.1	CPH-159		Good - Excellent	
		Pineapple Hill & Camp Hill	1067.2 / 4.7	CPH-170, CPH-172, CPH-180		Good - Excellent	
		Overall	2722.2 / 4.6				

Vegetation Code	Description	Study Area	Extent (ha/%)	Sample Sites	Features of Interest	Site Attributes - Condition	Photo
FP AaAp Po Tt	Low Open Woodland of *Acacia aptaneura*, *Acacia pruinocarpa* over Low Open Shrubland of *Ptilotus obovatus* var. *obovatus* over Tussock Grassland of *Themeda triandra*	MAC to Yandi Rail Corridor	Not present	N/A	• *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3)		
		Mudlark Well	426.8 / 1.3	CPH-118, CPH-119, CPH-121		Very Good	
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	426.8 / 0.7				
FP AaAp TmTp ArcTtCf	Low Open Woodland of *Acacia aptaneura* and *Acacia pruinocarpa* over Sparse Hummock Grassland of *Triodia melvillei* (*Triodia pungens*) over Tussock Grassland of *Aristida contorta*, *Themeda triandra*, *Chrysopogon fallax* on red brown loam on floodplains.	MAC to Yandi Rail Corridor	Not present	N/A	• *Aristida jerichoensis* var. *subspinulifera* (P3) • *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3) • *Sida* sp. Barlee Range (S. van Leeuwen 1642) (P4)		
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	774.4 / 3.4	CPH-169, CPH-171, CPH-173, CPH-174, CPH-175, CPH-176, CPH-178, CPH-179, CPH-199		Very Good - Excellent	
		Overall	774.4 / 1.3				
FP AaApApt TtChfErb	Low Open Forest of *Acacia aptaneura*, *Acacia paraneura* and *Acacia pteraneura* over Open Tussock Grassland of *Themeda triandra*, *Chrysopogon fallax* and *Eriachne benthamii* on red brown clay loam on floodplains.	MAC to Yandi Rail Corridor	Not present	N/A	• *Aristida jerichoensis* var. *subspinulifera* (P3) • *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3)		
		Mudlark Well	432.3 / 1.3	CPH-128		Very Good	
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	432.3 / 0.7				

Vegetation Code	Description	Study Area	Extent (ha/%)	Sample Sites	Features of Interest	Site Attributes - Condition	Photo
FP AaApr PtoErln ArcArobTt	Low Woodland of *Acacia aptaneura* and *Acacia pruinocarpa* over Low Shrubland of *Ptilotus obovatus* and *Eremophila lanceolata* over Open Tussock Grassland of *Aristida contorta*, *Aristida obscura* and *Themeda triandra* on plains	MAC to Yandi Rail Corridor	Not present	N/A	-		-
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	768.6 / 3.4	Not sampled in current survey		Excellent	
		Overall	768.6 / 1.3				
FP AaApt SaaPoSsL Ac	Low Open Woodland of *Acacia aptaneura*, *Acacia pteraneura* over Low Open Shrubland of *Senna artemisioides* subsp. x *artemisioides*, *Ptilotus obovatus* var. *obovatus*, *Sida* sp. L (A.M. Ashby 4202) over Open Tussock Grassland of *Aristida contorta*	MAC to Yandi Rail Corridor	Not present	N/A	• *Aristida jerichoensis* var. *subspinulifera* (P3) • *Aristida lazaridis* (P2) • *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3)		
		Mudlark Well	483.3 / 1.5	CPH-124, CPH-125, CPH-127, CPH-129, CPH-143, CPH-156, CPHR-125		Very Good - Excellent	
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	483.3 / 0.8				
FP AaCa Mav Tm	Low Open Forest of *Acacia aptaneura* and *Corymbia aspera* over Low Open Shrubland of *Maireana villosa* over Open Hummock Grassland of *Triodia melvillei* on red brown cracking clays and alluvial loams on floodplains	MAC to Yandi Rail Corridor	Not present	N/A	-		
		Mudlark Well	459.3 / 1.4	Not sampled in current survey		Excellent	
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	459.3 / 0.8				
FP AcaoAaEx Erff Tp	Low Woodland of *Acacia catenulata* subsp. *occidentalis*, *Acacia aptaneura* and *Eucalyptus xerothermica* over Open Shrubland of *Eremophila forrestii* subsp. *forrestii* over Open Hummock Grassland of *Triodia pungens* on red sandy loam on floodplains	MAC to Yandi Rail Corridor	3.6 / 0.1	Not sampled in current survey	-	Poor	-
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	3.6 / 0.01				
FP ErbEuaTt Ev Duf	Tussock Grassland of *Eriachne benthamii*, *Eulalia aurea* and *Themeda triandra* with Woodland of *Eucalyptus victrix* over Open Shrubland of *Duma florulenta* on orange brown loamy clay on alluvial plains	MAC to Yandi Rail Corridor	Not present	N/A	-		-
		Mudlark Well					
		Pineapple Hill & Camp Hill	64.5 / 0.3	Not sampled in current survey		Very Good	
		Overall	64.5 / 0.1				

Vegetation Code	Description	Study Area	Extent (ha/%)	Sample Sites	Features of Interest	Site Attributes - Condition	Photo
FP Thhs Ca PtoSaa	Closed Tussock Grassland of *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) with Low Open Woodland of *Corymbia aspera* over Low Open Shrubland of *Ptilotus obovatus* and *Salsola australis* on orange light clay on flood plains	MAC to Yandi Rail Corridor	Not present	N/A	-		
		Mudlark Well	63.4 / 0.2	Not sampled in current survey		Very Good	
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	63.4 / 0.1				
FP TpTm AaptApaAco	Hummock Grassland of *Triodia pungens* and *Triodia melvillei* with Low Open Woodland of *Acacia aptaneura*, *Acacia pachyacra*, *Acacia catenulata* subsp. *occidentalis*	MAC to Yandi Rail Corridor	Not present	N/A	• *Aristida jerichoensis* var. *subspinulifera* (P3) • *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3)		
		Mudlark Well	1894.6 / 5.9	CPH-122, CPH-123, CPH-151, CPH-155, CPH-157, CPH-158		Excellent	
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	1894.6 / 3.2				
FP TtAsp AmaAinApr PoAff	Mid tussock grassland of *Themeda triandra*, *Aristida* spp., with *Acacia macraneura*, *Acacia incurvaneura*, *Acacia pruinocarpa* low open woodland over *Ptilotus obovatus* subsp. *obovatus*, *Abutilon fraseri* subsp. *fraseri* low shrubs	MAC to Yandi Rail Corridor	Not present	N/A	• *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) (P3)		
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	639.8 / 2.8	CPH-059, CPH-066		Very Good	
		Overall	639.8 / 1.1				
FP TtEua ExAa AprAtpErlo	Tussock Grassland of *Themeda triandra* and *Eulalia aurea* with Low Woodland of *Eucalyptus xerothermica* and *Acacia aptaneura* over Open Shrubland of *Acacia pruinocarpa*, *Acacia tumida* var. *pilbarensis* and *Eremophila longifolia* on red brown clay loam on uninci	MAC to Yandi Rail Corridor	Not present	N/A	-		-
		Mudlark Well	378.2 / 1.2	Not sampled in current survey		Very Good	
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	378.2 / 0.6				

Vegetation Code	Description	Study Area	Extent (ha/%)	Sample Sites	Features of Interest	Site Attributes - Condition	Photo
Footslopes							
FS Tp EgEll Aatk	Hummock Grassland of *Triodia pungens* with *Eucalyptus gamophylla* and *Eucalyptus leucophloia* subsp. *leucophloia*	MAC to Yandi Rail Corridor	Not present	N/A	-		
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	182.1 / 0.8	CPH-049, CPH-057		Excellent	
		Overall	182.1 / 0.3				
FS TpTv Eg AceAcd Se	Mid to Low Hummock Grassland of *Triodia pungens* (+/- *Triodia vanleeuwenii*) with *Eucalyptus gamophylla* low mallee trees over tall shrubs of *Acacia elachanth*a and *Acacia dictyophleba* with low shrubs of *Seringia exastia*	MAC to Yandi Rail Corridor	Not present	N/A	-		
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	1032.7 / 4.6	CPH-051, CPH-076, CPH-079, CPH-094, CPH-096		Very Good - Excellent	
		Overall	1032.7 / 1.7				
FS Tv CdHc AancAiGrwh	Hummock Grassland of *Triodia vanleeuwenii* with Low Open Woodland of *Corymbia deserticola* subsp. *deserticola* and *Hakea chordophylla* over Open Shrubland of *Acacia ancistrocarpa*, *Acacia inaequilatera* and *Grevillea wickhamii* subsp	MAC to Yandi Rail Corridor	462.7 / 10.9	Not sampled in current survey	• *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3)	Degraded - Excellent	
		Mudlark Well	1891.4 / 5.8	Not sampled in current survey		Excellent	
		Pineapple Hill & Camp Hill	1808.6 / 8	CPH-046, CPH-053, CPH-056, CPH-166		Cleared-Excellent	
		Overall	4162.7 / 7				

Vegetation Code	Description	Study Area	Extent (ha/%)	Sample Sites	Features of Interest	Site Attributes - Condition	Photo
FS Tv Eg AatAtenAanc	Low Open Hummock Grassland of *Triodia vanleeuwenii* (+/- *Triodia pungens*) with +/- *Eucalyptus gamophylla* / *Acacia* spp. tall shrubs	MAC to Yandi Rail Corridor	Not present	N/A	-		
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	1781.1 / 7.9	CPH-060, CPH-063, CPH-075, CPH-081, CPH-501		Excellent	
		Overall	1781.1 / 3				
FS Tv EllCdd Ac	Hummock Grassland of *Triodia vanleeuwenii* with scattered *Eucalyptus leucophloia* subsp. *leucophloia* and *Corymbia deserticola* subsp. *deserticola* over Open Shrubland of *Acacia bivenosa*, *Solanum lasiophyllum*, *Acacia* spp. mid to tall shrubs	MAC to Yandi Rail Corridor	Not present	N/A	-		
		Mudlark Well	4935 / 15.2	CPH-101, CPH-104, CPH-111, CPH-113, CPH-115, CPH-116, CPH-181, CPH-182, CPH-184, CPH-186, CPHR-109		Excellent	
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	4935 / 8.3				
FS TvTp Eg Ell	Hummock Grassland of *Triodia vanleeuwenii* (+/- *Triodia pungens*) with Open Mallee of *Eucalyptus gamophylla* and Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia*	MAC to Yandi Rail Corridor	Not present	N/A	-		
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	540.9 / 2.4	CPH-054, CPH-069, CPH-095		Excellent	
		Overall	540.9 / 0.9				

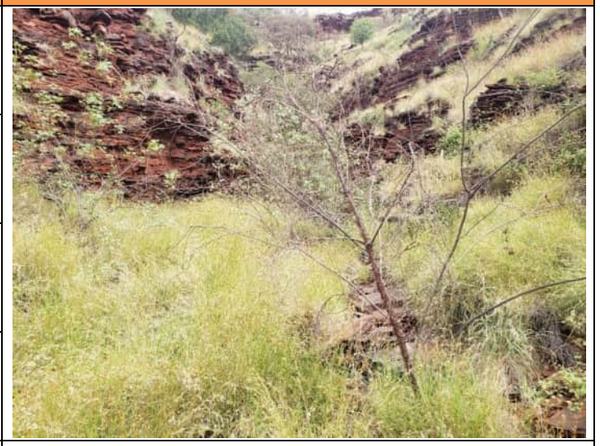
Vegetation Code	Description	Study Area	Extent (ha/%)	Sample Sites	Features of Interest	Site Attributes - Condition	Photo
FS TvTpTw Ell AbApaAanc	Hummock Grassland of *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835), *Triodia pungens* and *Triodia wiseana* with Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia* and Open Shrubland of *Acacia bivenosa*, *Acacia pachyacra* and *Acacia ancistrocarpa*	MAC to Yandi Rail Corridor	13.7 / 0.3	Not sampled in current survey	-	Poor-Very Good	-
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	13.7 / 0.02				
FS Tw Ell	Hummock Grassland of *Triodia wiseana* with Scattered Low Trees of *Eucalyptus leucophloia* subsp. *leucophloia* on red silty clay on hill slopes and footslopes	MAC to Yandi Rail Corridor	9.9 / 0.2	Not sampled in current survey	-	Very Good	-
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	9.9 / 0.02				
Hillslopes							
HS EnlCya ErfrAte InmDiau	Tussock Grassland of *Enneapogon lindleyanus* and *Cymbopogon ambiguus* with Shrubland of *Eremophila fraseri* and *Acacia tetragonophylla* over Low Shrubland of *Indigofera monophylla* and *Dipteracanthus australasicus* on brown sandy clay loam on mudstone outcrops	MAC to Yandi Rail Corridor	Not present	N/A	-		-
		Mudlark Well	159.8 / 0.5	Not sampled in current survey		Very Good	
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	159.8 / 0.3				
HS Tbr Ell Er	Hummock Grassland of *Triodia brizoides* with Scattered Low Trees of *Eucalyptus leucophloia* subsp. *leucophloia* over Open Mallee of *Eucalyptus repullulans* on red brown sandy loam on hill slopes and breakaway scree slopes	MAC to Yandi Rail Corridor	Not present	N/A	-		-
		Mudlark Well	26.1 / 0.1	Not sampled in current survey		Excellent	
		Pineapple Hill & Camp Hill	3.7 / 0.02	Not sampled in current survey		Excellent	
		Overall	29.8 / 0.1				
HS TbrTw Ell	Hummock Grassland of *Triodia brizoides* and/or *Triodia wiseana* with Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia* on brown sandy loam on steep hill slopes	MAC to Yandi Rail Corridor	106.1 / 2.5	Not sampled in current survey	• *Eremophila naaykensii* (P3) • *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (P2) • *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3) • *Sida* sp. Barlee Range (S. van Leeuwen 1642) (P4) • *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (P3)	Good - Excellent	
		Mudlark Well	2350.3 / 7.3	CPHR-103		Very Good - Excellent	
		Pineapple Hill & Camp Hill	155.6 / 0.7	Not sampled in current survey		Excellent	
		Overall	2612 / 4.4				
HS TbrTw Ell CyaThmbErmu	Hummock Grassland of *Triodia brizoides* and *Triodia wiseana* with Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia* and Very Open Tussock Grassland of *Cymbopogon ambiguus*, *Themeda* sp. Mt Barricade (M.E. Trudgen 2471) and *Eriachne mucronata* on	MAC to Yandi Rail Corridor	Not present	N/A	-		-
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	148.3 / 0.7	Not sampled in current survey		Excellent	
		Overall	148.3 / 0.3				

Vegetation Code	Description	Study Area	Extent (ha/%)	Sample Sites	Features of Interest	Site Attributes - Condition	Photo
HS Tv Ell AcbAancSgg	Hummock Grassland of *Triodia vanleeuwenii* (*Triodia wiseana*) with Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia* over Open Shrubland of *Acacia bivenosa*, *Acacia ancistrocarpa*, *Senna glutinosa subsp*. glutinosa with *Hakea* spp. scattered low trees.	MAC to Yandi Rail Corridor	274.6 / 6.5	CPH-002, CPH-010, CPH-015, CPH-017, CPH-018, CPH-023, CPH-025, CPH-026	-	Poor - Excellent	
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	274.6 / 0.5				
HS Tv EllCd AhiAaa	Hummock Grassland of *Triodia vanleeuwenii* (+/- *Triodia wiseana*) with Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia* and *Corymbia deserticola* subsp. *deserticola* over Low Open Shrubland of *Acacia hilliana* and *Acacia adoxa* var. *adoxa*	MAC to Yandi Rail Corridor	838 / 19.7	CPH-003, CPH-007, CPH-009, CPH-013, CPH-019, CPH-020, CPH-027, CPH-029, CPH-038, CPH-039	-	Completely Degraded - Excellent	
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	838 / 1.4				
HS TvTwTp EllCh AhiAaa	Hummock Grassland of *Triodia vanleeuwenii*, *Triodia wiseana* and *Triodia pungens* with Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia* and *Corymbia hamersleyana* over Low Open Shrubland of *Acacia hilliana* and *Acacia*	MAC to Yandi Rail Corridor	237.7 / 5.6	Not sampled in current survey		Good - Excellent	-
		Mudlark Well	666.9 / 2.1			Excellent	
		Pineapple Hill & Camp Hill	53.2 / 0.2			Excellent	
		Overall	957.9 / 1.6				

Vegetation Code	Description	Study Area	Extent (ha/%)	Sample Sites	Features of Interest	Site Attributes - Condition	Photo
HS Tw EllCh AaaAhi	Hummock Grassland of *Triodia wiseana* (*Triodia vanleeuwenii*) with Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia* and *Corymbia hamersleyana* and Low Open Shrubland of *Acacia adoxa* var. *adoxa*, *Acacia hilliana*, *Acacia* spp. on ironstone hills	MAC to Yandi Rail Corridor	Not present	N/A	• *Aristida lazaridis* (P2) • *Eremophila magnifica* subsp. *magnifica* (P4) • *Eremophila naaykensii* (P3) • *Rostellularia adscendens* var. *latifolia* (P3) • *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (P3)		
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	2582.1 / 11.4	CPH-047, CPH-070, CPH-077, CPH-082, CPH-084, CPH-085, CPH-087, CPH-089, CPH-090, CPH-093		Very Good - Excellent	
		Overall	2582.1 / 4.4				
HS TwTbr Ai Inr	Hummock Grassland of *Triodia wiseana* with Mid shrubs (*Acacia* spp.) over Low Open Shrubland of *Indigofera rugosa*	MAC to Yandi Rail Corridor	Not present	N/A	• *Rostellularia adscendens* var. *latifolia* (P3)		
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	648.1 / 2.9	CPH-086, CPH-088		Excellent	
		Overall	648.1 / 1.1				
HS TwTpTbr Ell Ep	Hummock Grassland of *Triodia wiseana*, *Triodia pungens* and *Triodia brizoides* with Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia* over Open Mallee of *Eucalyptus pilbarensis* on red brown loam on steep hill slopes	MAC to Yandi Rail Corridor	Not present	N/A	-		-
		Mudlark Well	335.6 / 1	Not sampled in current survey		Excellent	
		Pineapple Hill & Camp Hill	37.9 / 0.2	Not sampled in current survey		Excellent	
		Overall	373.5 / 0.6				
HS TwTpTv Ell AprAaAanc	Hummock Grassland of *Triodia wiseana*, *Triodia pungens* and *Triodia vanleeuwenii* with Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia* over Open Shrubland of *Acacia pruinocarpa*, *Acacia aptaneura* and *Acacia ancistr*	MAC to Yandi Rail Corridor	30.2 / 0.7	Not sampled in current survey	-	Very Good	-
		Mudlark Well	330.6 / 1	Not sampled in current survey		Very Good - Excellent	
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	360.8 / 0.6				

Vegetation Code	Description	Study Area	Extent (ha/%)	Sample Sites	Features of Interest	Site Attributes - Condition	Photo
Hillcrests							
HC TpTvTw EllCh Sgg	*Triodia pungens* (*Triodia vanleeuwenii*, *Triodia wiseana*) hummock grassland with *Eucalyptus leucophloia* subsp. *leucophloia* low isolated trees over *Senna glutinosa* subsp. *glutinosa* mid to low shrubs.	MAC to Yandi Rail Corridor	Not present	N/A	• *Eragrostis* sp. Mt Robinson (S. van Leeuwen 4109) (P2) • *Eremophila naaykensii* (P3) • *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (P2) • *Indigofera gilesii* (P3) • *Pilbara trudgenii* (P3) • *Rostellularia adscendens* var. *latifolia* (P3) • *Sida* sp. Barlee Range (S. van Leeuwen 1642) (P4) • *Solanum kentrocaule* (P3) • *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (P3)		
		Mudlark Well	104.2 / 0.3	CPH-107, CPH-108, CPH-150, CPH-152		Excellent	
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	104.2 / 0.2				
HC TpTw Ell NehrOls	Closed Hummock Grassland of *Triodia pungens* and *Triodia wiseana* with Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia* over Scattered Shrubs of *Newcastelia* sp. Hamersley Range (S. van Leeuwen 4264) and *Olearia stuartii* on brown silty loam on	MAC to Yandi Rail Corridor	Not present	N/A	-		-
		Mudlark Well	62 / 0.2	Not sampled in current survey		Excellent	
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	62 / 0.1				
HC Tw Ah EkkEgCh	Hummock Grassland of *Triodia wiseana* with Shrubland of *Acacia hamersleyensis* and Open Mallee of *Eucalyptus kingsmillii* subsp. *kingsmillii*, *Eucalyptus gamophylla* and *Corymbia hamersleyana* (mallee form) on red brown loam and silty loam on hill crests	MAC to Yandi Rail Corridor	Not present	N/A	• *Eremophila magnifica* subsp. *magnifica* (P4) • *Eremophila naaykensii* (P3) • *Solanum kentrocaule* (P3) • *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (P3)		-
		Mudlark Well	2109.3 / 6.5	Not sampled in current survey		Excellent	
		Pineapple Hill & Camp Hill	70.9 / 0.3	Not sampled in current survey		Excellent	
		Overall	2180.2 / 3.7				
HC Tw AiAb InrSeao	Hummock Grassland of *Triodia wiseana* with High Open Shrubland of *Acacia inaequilatera* and *Acacia bivenosa* over Low Open Shrubland of *Indigofera rugosa* and *Senna artemisioides* subsp. *oligophylla* on red silty loam on dolerite hill crests	MAC to Yandi Rail Corridor	226.2 / 5.3	CPH-006, CPH-032, CPH-037, CPH-040	-	Very Good - Excellent	
		Mudlark Well	422.9 / 1.3	Not sampled in current survey		Excellent	
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	649.2 / 1.1				

Vegetation Code	Description	Study Area	Extent (ha/%)	Sample Sites	Features of Interest	Site Attributes - Condition	Photo
HC TwTbrTp EllCh AmaGrwhAb	Hummock Grassland of *Triodia wiseana*, *Triodia brizoides* and *Triodia pungens* with Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia* and *Corymbia hamersleyana* over High Open Shrubland of *Acacia maitlandii*, *Grevillea wickhamii* subsp. *hispidula*	MAC to Yandi Rail Corridor	Not present	N/A	-		-
		Mudlark Well	692.3 / 2.1	Not sampled in current survey		Excellent	
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	692.3 / 1.2				
HC TwTvTp EllCh Ah	Hummock Grassland of *Triodia wiseana*, *Triodia vanleeuwenii* and *Triodia pungens* with Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia* and *Corymbia hamersleyana* over Open Shrubland of *Acacia hamersleyensis* on red	MAC to Yandi Rail Corridor	426.4 / 10	Not sampled in current survey	• *Indigofera gilesii* (P3) • *Lepidium catapycnon* (P4) • *Sida* sp. Barlee Range (S. van Leeuwen 1642) (P4) • *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (P3)	Cleared-Excellent	
		Mudlark Well	1315 / 4.1	CPHR-106		Excellent	
		Pineapple Hill & Camp Hill	1165.2 / 5.1	Not sampled in current survey		Excellent	
		Overall	2906.6 / 4.9				
Gorge Gullies							
GG AaAcaoEll DopErtiErjp TpTw	Low Woodland of *Acacia aptaneura*, *Acacia catenulata* subsp. *occidentalis* and *Eucalyptus leucophloia* subsp. *leucophloia* over Open Shrubland of *Dodonaea pachyneura*, *Eremophila tietkensii* and *Eremophila jucunda* subsp. *pulcherrima* over Open Hummock Grassland	MAC to Yandi Rail Corridor	Not present	N/A	• *Eremophila* sp. West Angelas (S. van Leeuwen 4068) (P2) • *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (P2) • *Pilbara trudgenii* (P3) • *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3) • *Sida* sp. Barlee Range (S. van Leeuwen 1642) (P4) • *Solanum kentrocaule* (P3) • *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (P3)		
		Mudlark Well	704.5 / 2.2	CPH-105, CPH-149, CPHR-110		Excellent	
		Pineapple Hill & Camp Hill	60.8 / 0.3	Not sampled in current survey		Very Good	
		Overall	765.3 / 1.3				
GG CcolCfEll ErmuThmbCya	Low Open Forest of *Callitris columellaris*, *Corymbia ferriticola* and *Eucalyptus leucophloia* subsp. *leucophloia* over Open Tussock Grassland of *Eriachne mucronata*, *Themeda* sp. Mt Barricade (M.E. Trudgen 2471) and *Cymbopogon ambiguus* and Very Open Hummock	MAC to Yandi Rail Corridor	Not present	N/A	• *Eremophila naaykensii* (P3) • *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (P2) • *Oxalis* sp. Pilbara (M.E. Trudgen 12725) (P2) • *Pilbara trudgenii* (P3) • *Rostellularia adscendens* var. *latifolia* (P3) • *Solanum kentrocaule* (P3) • *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (P3)		-
		Mudlark Well	317.8 / 1	Not sampled in current survey		Excellent	
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	317.8 / 0.5				

Vegetation Code	Description	Study Area	Extent (ha/%)	Sample Sites	Features of Interest	Site Attributes - Condition	Photo
GG CcolICfFib ErtiDopDov CyaTtErmu	Low Open Woodland of *Callitris columellaris*, *Corymbia ferriticola* and *Ficus brachypoda* over High Open Shrubland of *Eremophila* sp. Hamersley Range (K. Walker KW136), *Dodonaea pachyneura* and *Dodonaea viscosa* subsp. *mucronata* over Very Open Tussock Grassland	MAC to Yandi Rail Corridor	Not present	N/A	• *Aristida lazaridis* (P2) • *Rostellularia adscendens* var. *latifolia* (P3) • *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (P3)		
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	9.6 / 0.04	CPH-071		Excellent	
		Overall	9.6 / 0.02				
GG CfEllFib AhDovmAsha CyaErmuThmb	Low Woodland of *Corymbia ferriticola*, *Eucalyptus leucophloia* subsp. *leucophloia* and *Ficus brachypoda* over Open Shrubland of *Acacia hamersleyensis*, *Dodonaea viscosa* subsp. *mucronata* and *Astrotricha hamptonii* over Open Tussock Grassland of *Cymbopogon ambiguus*	MAC to Yandi Rail Corridor	6.2 / 0.1	Not sampled in current survey	• *Eremophila magnifica* subsp. *magnifica* (P4) • *Eremophila naaykensii* (P3) • *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (P2) • *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3) • *Solanum kentrocaule* (P3)	Excellent	-
		Mudlark Well	411.9 / 1.3	Not sampled in current survey		Excellent	
		Pineapple Hill & Camp Hill	8.7 / 0.04	Not sampled in current survey		Excellent	
		Overall	426.8 / 0.7				
GG TtErmuThmb EllChCf AtpGoroPl	Tussock Grassland of *Themeda triandra*, *Eriachne mucronata* and *Themeda* sp. Mt Barricade with Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia*, *Corymbia hamersleyana* and *Corymbia ferriticola* over High Shrubland of *Acacia tumida* var. *pilbarensis*	MAC to Yandi Rail Corridor	32.6 / 0.8	CPHR-003	• *Sida* sp. Barlee Range (S. van Leeuwen 1642) (P4)	Very Good - Excellent	
		Mudlark Well	10 / 0.03	Not sampled in current survey		Excellent	
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	42.6 / 0.1				
Major Drainage Lines							
MA CcCs Aci EcrEv	Closed Tussock Grassland of **Cenchrus ciliaris* and **Cenchrus setiger* with Low Open Forest of *Acacia citrinoviridis* and Scattered Low Trees of *Eucalyptus camaldulensis* and *Eucalyptus victrix* on banks and floodplains of major drainage line with brown sandy	MAC to Yandi Rail Corridor	12.5 / 0.3	Not sampled in current survey	-	Poor	-
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	12.5 / 0.02				

Vegetation Code	Description	Study Area	Extent (ha/%)	Sample Sites	Features of Interest	Site Attributes - Condition	Photo
MA EcrEv AciApypMg CcEuaTt	Woodland of *Eucalyptus camaldulensis* subsp. *refulgens* and *Eucalyptus victrix* over High Open Shrubland of *Acacia citrinoviridis*, *Acacia pyrifolia* var. *pyrifolia* and *Melaleuca glomerata* over Tussock Grassland of **Cenchrus ciliaris*, *Eulalia aurea* and *Themed*	MAC to Yandi Rail Corridor	0.9 / 0.02	Not sampled in current survey	-	Good	-
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	0.9 / 0.002				
MA EcrEv AcpAtheEv TpTl	Woodland to Open Woodland of *Eucalyptus camaldulensis* and *Eucalyptus victrix* over Low Woodland of *Acacia coriacea* subsp. pendens, Atalaya hemiglauca and *Eucalyptus victrix* over Open Hummock Grassland of *Triodia pungens* and *Triodia longiceps* on brown sand	MAC to Yandi Rail Corridor	6.5 / 0.2	Not sampled in current survey	-	Good	-
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	6.5 / 0.01				
MA EcrEvEx ApypAtpGoro TtEuaCyp	Low Open Forest of *Eucalyptus camaldulensis* subsp. *refulgens*, *Eucalyptus victrix* and *Eucalyptus xerothermica* over High Shrubland of *Acacia pyrifolia* var. *pyrifolia*, *Acacia tumida* var. *pilbarensis* and *Gossypium robinsonii* over Open Tussock Grassland of The	MAC to Yandi Rail Corridor	12.4 / 0.3	Not sampled in current survey	-	Good - Excellent	-
		Mudlark Well	176.5 / 0.5	Not sampled in current survey		Very Good	
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	188.8 / 0.3				
MA EcrEvMa AcpAamAthe TydCyv	Open Forest of *Eucalyptus camaldulensis* var. *refulgens*, *Eucalyptus victrix* and *Melaleuca argentea* over Low Open Forest of *Acacia coriacea* subsp. *pendens*, *Acacia ampliceps* and *Atalaya hemiglauca* over Open Sedges of *Typha domingensis* and *Cyperus vaginatus*	MAC to Yandi Rail Corridor	10.4 / 0.2	Not sampled in current survey	-	Good	-
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	10.4 / 0.02				
MA EvAciEcr TercCocrApyp CcEuaTt	Woodland of *Eucalyptus victrix*, *Acacia citrinoviridis* and *Eucalyptus camaldulensis* subsp. *refulgens* over Low Open Shrubland of *Tephrosia rosea* var. *clementii*, *Corchorus crozophorifolius* and *Acacia pyrifolia* var. *pyrifolia* over Very Open Tussock Grassland	MAC to Yandi Rail Corridor	25.2 / 0.6	Not sampled in current survey	-	Good - Excellent	-
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	25.2 / 0.04				
Medium Drainage Lines							
ME AtpAcmAm TtEua Tp ChEllEx	Mid Open Shrubland of *Acacia tumida* var. *pilbarensis*, *Acacia monticola*, *Acacia maitlandii* over Open Tussock Grassland of *Themeda triandra* and *Eulalia aurea* with *Triodia pungens* hummock grasses with Low *Corymbia hamersleyana*, *Eucalyptus leucophloia* subsp. *leucophloia* and *Eucalyptus xerothermica* trees	MAC to Yandi Rail Corridor	153.6 / 3.6	CPH-011, CPH-024, CPH-028, CPH-035, CPHR-001, CPHR-002	-	Good - Excellent	
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	153.6 / 0.3				

Vegetation Code	Description	Study Area	Extent (ha/%)	Sample Sites	Features of Interest	Site Attributes - Condition	Photo
ME EuaTtErt EvEx GoroAeAma	Tussock Grassland of *Eulalia aurea*, *Themeda triandra* and *Eriachne tenuiculmis* with Low Open Woodland of *Eucalyptus victrix* and *Eucalyptus xerothermica* and High Open Shrubland of *Gossypium robinsonii*, *Acacia elachantha* and *Acacia maitlandii* in medium drainage	MAC to Yandi Rail Corridor	Not present	N/A	-		-
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	10.9 / 0.05	Not sampled in current survey		Excellent	
		Overall	10.9 / 0.02				
ME Tp AaptAprEx Pl	Hummock Grassland of *Triodia pungens* (+/- *Triodia vanleeuwenii,* Tussock Grasses) with Low Woodland of *Acacia aptaneura*, *Acacia pruinocarpa*, *Eucalyptus xerothermica* over Tall Open Shrubland of *Petalostylis labicheoides*	MAC to Yandi Rail Corridor	161.8 / 3.8	CPH-022, CPH-030, CPH-031, CPH-033	-	Good - Very Good	
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	161.8 / 0.3				
ME TpTlo ExAciCh PlApypGoro	Hummock Grassland of *Triodia pungens* and *Triodia longiceps* with Low Woodland of *Eucalyptus xerothermica*, *Acacia citrinoviridis* and *Corymbia hamersleyana* over High Shrubland of *Petalostylis labicheoides*, *Acacia pyrifolia* var. *pyrifolia* and *Gossypium robinsonii*	MAC to Yandi Rail Corridor	36.9 / 0.9	Not sampled in current survey	-	Good - Very Good	-
		Mudlark Well	302.2 / 0.9	Not sampled in current survey		Very Good - Excellent	
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	339.1 / 0.6				
ME TtAriCya ChEll AmPlAnl	Open Tussock Grassland of *Themeda triandra*, *Aristida inaequiglumis* and *Cymbopogon ambiguus* with Low Open Woodland of *Corymbia hamersleyana* and *Eucalyptus leucophloia* subsp. *leucophloia* over Open Shrubland of *Acacia monticola*, *Petalostylis labicheoides* an	MAC to Yandi Rail Corridor	5.7 / 0.1	Not sampled in current survey	• *Eremophila naaykensii* (P3) • *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (P2) • *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (P3)	Very Good - Excellent	
		Mudlark Well	395.1 / 1.2	CPH-112		Excellent	
		Pineapple Hill & Camp Hill	176.1 / 0.8	Not sampled in current survey		Excellent	
		Overall	576.9 / 1				

Vegetation Code	Description	Study Area	Extent (ha/%)	Sample Sites	Features of Interest	Site Attributes - Condition	Photo
ME TtChfEua ExEvCh PlApaApyp	Tussock Grassland of *Themeda triandra*, *Chrysopogon fallax* and *Eulalia aurea* with Low Open Woodland of *Eucalyptus xerothermica*, *Eucalyptus victrix* and *Corymbia hamersleyana* and Shrubland of *Petalostylis labicheoides*, *Acacia pachyacra* and *Acacia pyrifolia*	MAC to Yandi Rail Corridor	51 / 1.2	CPH-001, CPH-021	• *Aristida lazaridis* (P2)	Very Good	
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	51 / 0.1				
ME TtEuaCya ExCh AnlApyErlo	Tussock Grassland of *Themeda triandra*, *Eulalia aurea* and *Cymbopogon ambiguus* with Low Open Woodland of *Eucalyptus xerothermica* and *Corymbia hamersleyana* and High Open Shrubland of *Androcalva luteiflora*, *Acacia pyrifolia* and *Eremophila longifolia* in medium	MAC to Yandi Rail Corridor	Not present	N/A	• *Aristida lazaridis* (P2) • *Ipomoea racemigera* (P2) • *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3) • *Rostellularia adscendens* var. *latifolia* (P3) • *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (P3)		
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	1142.4 / 5	CPH-058, CPH-062, CPH-091, CPH-097, CPH-098, CPH-100		Very Good - Excellent	
		Overall	1142.4 / 1.9				
Minor Drainage Lines							
MI AbAdAma Tp TtPamuEua	Shrubland of *Acacia bivenosa*, *Acacia dictyophleba* and *Acacia maitlandii* over Open Hummock Grassland of *Triodia pungens* over Open Tussock Grassland of *Themeda triandra*, *Paraneurachne muelleri* and *Eulalia aurea* on brown sandy loam on minor drainage lines	MAC to Yandi Rail Corridor	Not present	N/A	-		-
		Mudlark Well	33.2 / 0.1	Not sampled in current survey		Excellent	
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	33.2 / 0.1				
MI AmAancAe TpTw TtPamuEua	Open Scrub of Acacia monticola, Acacia ancistrocarpa and Acacia elachantha over Open Hummock Grassland of Triodia pungens and Triodia wiseana over Open Tussock Grassland of Themeda triandra, Paraneurachne muelleri and Eulalia aurea in minor drainage line	MAC to Yandi Rail Corridor	Not present	N/A	-		-
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	126.6 / 0.6	Not sampled in current survey		Excellent	
		Overall	126.6 / 0.2				

Vegetation Code	Description	Study Area	Extent (ha/%)	Sample Sites	Features of Interest	Site Attributes - Condition	Photo
MI AtpPlAm TpTv ChEll	Open Scrub of *Acacia tumida* var. *pilbarensis*, *Petalostylis labicheoides* and *Acacia monticola* over Open Hummock Grassland of *Triodia pungens* and *Triodia vanleeuwenii* with Low Open Woodland of *Corymbia hamersleyana* and *Eucalyptus*	MAC to Yandi Rail Corridor	155.6 / 3.7	CPH-008, CPH-012, CPH-014, CPH-016, CPH-034, CPH-036	• *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (P2)	Good - Excellent	
		Mudlark Well	502.2 / 1.6	CPH-183, CPH-187, CPH-188, CPHR-102, CPHR-114		Excellent	
		Pineapple Hill & Camp Hill	11 / 0.05	Not sampled in current survey		Excellent	
		Overall	668.8 / 1.1				
MI ChExEv AtpAppPl AlTrfMa CcTtCam Tp	*Corymbia hamersleyana* and *Eucalyptus xerothermica* low scattered trees, with occasional *Eucalyptus victrix* mid scattered trees over *Acacia tumida* var. *pilbarensis*, *A. pyrifolia* var. *pyrifolia* and *Petalostylis labicheoides* tall shrubland over *Androcalva luteiflora*, *Tephrosia rosea* var. Fortescue creeks (M.I.H. Brooker 2186) and **Malvastrum americanum* mid to low scattered shrubs over **Cenchrus ciliaris*, *Themeda triandra* and *Cymbopogon ambiguus* tussock grassland over *Triodia pungens* low scattered hummock grasses	MAC to Yandi Rail Corridor	0.6 / 0.02	Not sampled in current survey	-	Very Good	-
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	0.6 / 0.001				
MI Td Ac Sg ExAapt	*Typha domingensis* tall thicket with *Acacia cowleana* tall sparse shrubland over *Stemodia grossa* low sparse shrubs with *Eucalyptus xerothermica*, *Acacia aptaneura*, *Acacia pruinocarpa* low scattered trees	MAC to Yandi Rail Corridor	Not present	N/A	Mine water discharge		
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	1 / 0.005	CPH-045		Good	
		Overall	1 / 0.002				
MI Tp TtCya Ch	Open Hummock Grassland of *Triodia pungens* with Open Tussock Grassland of *Themeda triandra* and *Cymbopogon ambiguus* and Low Open Woodland of *Corymbia hamersleyana* in minor drainage lines	MAC to Yandi Rail Corridor	Not present	N/A	-		-
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	54.1 / 0.2	Not sampled in current survey		Excellent	
		Overall	54.1 / 0.1				

Vegetation Code	Description	Study Area	Extent (ha/%)	Sample Sites	Features of Interest	Site Attributes - Condition	Photo
MI TtrEmu ChEll AmAmoAnl	Tussock Grassland of *Themeda triandra*, *Eriachne mucronata* with Low Open Woodland of *Corymbia hamersleyana* and *Eucalyptus leucophloia* subsp. *leucophloia* over Low Open Shrubland of *Acacia maitlandii*, *Acacia monticola*, *Androcalva luteiflora*	MAC to Yandi Rail Corridor	7.7 / 0.2	CPH-004, CPH-005	-	Very Good - Excellent	
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	7.7 / 0.01				
Stony Plains							
SP Aa ArcCfTt AoSsL	Low Open Woodland of *Acacia aptaneura* over Open Tussock Grassland of *Aristida contorta* (*Chrysopogon fallax*, *Themeda triandra*) with Low Open Shrubs of *Abutilon otocarpum*, *Sida* sp. L (A.M. Ashby 4202)	MAC to Yandi Rail Corridor	Not present	N/A	• *Aristida jerichoensis* var. *subspinulifera* (P3) • *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3)		
		Mudlark Well	625.8 / 1.9	CPH-154, CPH-160, CPH-161, CPH-163, CPH-164, CPH-165		Good - Very Good	
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	625.8 / 1.1				
SP AaApr TmTwTp TtChfAri	Low Open Forest of *Acacia aptaneura* and *Acacia pruinocarpa* over Open Hummock Grassland of *Triodia melvillei*, *Triodia wiseana* and *Triodia pungens* over Tussock Grassland of *Themeda triandra*, *Chrysopogon fallax* and *Aristida inaequiglumis* on red brown loam o	MAC to Yandi Rail Corridor	16.5 / 0.4	Not sampled in current survey	• *Aristida lazaridis* (P2) • *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3)	Good - Very Good	
		Mudlark Well	1377.8 / 4.3	CPH-130		Very Good	
		Pineapple Hill & Camp Hill	423.3 / 1.9	CPHR-177		Cleared-Excellent	
		Overall	1817.6 / 3.1				

Vegetation Code	Description	Study Area	Extent (ha/%)	Sample Sites	Features of Interest	Site Attributes - Condition	Photo
SP AcaoAa ArobDiaChf	Low Open Forest of *Acacia catenulata* subsp. *occidentalis* and *Acacia aptaneura* over Very Open Tussock Grassland of *Aristida obscura*, *Digitaria ammophila* and *Chrysopogon fallax* on red brown clay loam on lower stony plains	MAC to Yandi Rail Corridor	Not present	N/A	-		-
		Mudlark Well	24.6 / 0.1	Not sampled in current survey		Excellent	
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	24.6 / 0.04				
SP TbTp HlAancAi Ch	Hummock Grassland of *Triodia basedowii* and *Triodia pungens* with High Open Shrubland of *Hakea lorea* subsp. *lorea*, *Acacia ancistrocarpa* and *Acacia inaequilatera* and Scattered Low Trees of *Corymbia hamersleyana* on red brown loamy sand on stony plains	MAC to Yandi Rail Corridor	17.1 / 0.4	Not sampled in current survey	-	Good - Very Good	-
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	17.1 / 0.03				
SP Tm Tt AaptApr	Mid Open Hummock Grassland of *Triodia melvillei* (+/- *Aristida contorta*, *Themeda triandra* tussock grasses) with *Acacia aptaneura*, *Acacia pruinocarpa* low isolated clumps of trees	MAC to Yandi Rail Corridor	Not present	N/A	• *Aristida lazaridis* (P2) • *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3)		
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	750.1 / 3.3	CPH-041, CPH-044, CPH-050, CPH-072, CPH-167, CPH-168		Completely Degraded - Excellent	
		Overall	750.1 / 1.3				
SP TmTp AatAk AaCdApr	Hummock Grassland of *Triodia melvillei* and *Triodia pungens* with High Shrubland of *Acacia atkinsiana* and *Acacia kempeana* and Low Open Woodland of *Acacia aptaneura*, *Corymbia deserticola* and *Acacia pruinocarpa* on stony plains	MAC to Yandi Rail Corridor	Not present	N/A	-		
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	680.8 / 3	CPH-061		Very Good - Excellent	
		Overall	680.8 / 1.1				
SP TmTp EtEg AtenAmiAd	Hummock Grassland of *Triodia melvillei* and *Triodia pungens* with Open Mallee of *Eucalyptus trivalva* and *Eucalyptus gamophylla* and High Open Shrubland of *Acacia tenuissima*, *Acacia minyura* and *Acacia dictyophleba* on stony plains	MAC to Yandi Rail Corridor	Not present	N/A	-		-
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	68.4 / 0.3	Not sampled in current survey		Excellent	
		Overall	68.4 / 0.1				

Vegetation Code	Description	Study Area	Extent (ha/%)	Sample Sites	Features of Interest	Site Attributes - Condition	Photo
SP TpTb Eg PlAbAanc	Hummock Grassland of *Triodia pungens* and *Triodia basedowii* with Open Mallee of *Eucalyptus gamophylla* and Shrubland of *Petalostylis labicheoides*, *Acacia bivenosa* and *Acacia ancistrocarpa* on red brown loamy sand on stony plains and footslopes	MAC to Yandi Rail Corridor	Not present	N/A	-		-
		Mudlark Well	130.7 / 0.4	Not sampled in current survey		Very Good - Excellent	
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	130.7 / 0.2				
SP TpTm AaExAcao ApaErffAads	Hummock Grassland of *Triodia pungens* and *Triodia melvillei* with Low Open Woodland of *Acacia aptaneura*, *Eucalyptus xerothermica* and *Acacia catenulata* subsp. *occidentalis* and Open Shrubland of *Acacia pachyacra*, *Eremophila forrestii* subsp. *forrestii* and *Aca*	MAC to Yandi Rail Corridor	Not present	N/A	• *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3)		
		Mudlark Well	5592.2 / 17.3	CPH-117, CPHR-162		Very Good - Excellent	
		Pineapple Hill & Camp Hill	1856.7 / 8.2	CPH-048		Very Good - Excellent	
		Overall	7448.8 / 12.6				
SP TpTm EgEx AceAapt	Hummock Grassland of *Triodia pungens* (+/-*Triodia melvillei*) with low Open Mallee woodland *Eucalyptus gamophylla* (*Eucalyptus xerothermica*) and High Open Shrubland of *Acacia elachantha* and *Acacia aptaneura* on plains	MAC to Yandi Rail Corridor	Not present	N/A	• *Aristida lazaridis* (P2) • *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) (P3)		
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	2840.3 / 12.5	CPH-064, CPH-067, CPH-068, CPH-074, CPH-078, CPH-080, CPHR-065		Excellent	
		Overall	2840.3 / 4.8				

Vegetation Code	Description	Study Area	Extent (ha/%)	Sample Sites	Features of Interest	Site Attributes - Condition	Photo
SP TtArcEua AanHll	Mid Tussock Grassland of *Themeda Triandra* (+/- *Aristida contorta*, *Eulalia aurea*) with Low Isolated clumps of (+/- *Acacia aneura* group) *Hakea loreus* subsp. *loreus* trees.	MAC to Yandi Rail Corridor	Not present	N/A	• *Aristida jerichoensis* var. *subspinulifera* (P3) • *Aristida lazaridis* (P2) • *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3)		
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	357.3 / 1.6	CPH-042, CPH-043, CPH-055		Very Good - Excellent	
		Overall	357.3 / 0.6				
SP TvTwTp EgEt AbApaApr	Hummock Grassland of *Triodia vanleeuwenii*, *Triodia wiseana* and *Triodia pungens* with Very Open Mallee of *Eucalyptus gamophylla* and *Eucalyptus trivalva* over Open Shrubland of *Acacia bivenosa*, *Acacia pachyacra* and *Acacia pruinoc*	MAC to Yandi Rail Corridor	84.2 / 2	Not sampled in current survey	-	Excellent	-
		Mudlark Well	122.1 / 0.4			Excellent	
		Pineapple Hill & Camp Hill	34.7 / 0.2			Excellent	
		Overall	241 / 0.4				
Mapping Units							
Cleared	Cleared areas – tracks and drilling pads	MAC to Yandi Rail Corridor	785.2 / 18.5	N/A	• *Sida* sp. Barlee Range (S. van Leeuwen 1642) (P4) • *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (P3)	Cleared	-
		Mudlark Well	352.1 / 1.1	N/A		Cleared	
		Pineapple Hill & Camp Hill	158.2 / 0.7	N/A		Cleared	
		Overall	1295.5 / 2.2				
Rehabilitation	Rehabilitation – areas undergoing rehabilitation from mining-related vegetation clearing	MAC to Yandi Rail Corridor	9.7 / 0.2	Not sampled in current survey	-	Degraded	-
		Mudlark Well	Not present	N/A			
		Pineapple Hill & Camp Hill	Not present	N/A			
		Overall	9.7 / 0.02				
Total			**59,284.7 / 100**				

660000 670000 680000 690000 700000

7480000

7470000

Great Northern Hwy

Packsaddle Rd

Yandicoogina Rail

West Angelas Rail

West Angelas Rd

MS1072

Vegetation Type

- CP TwTa Ese AbPlApyp
- Cleared
- FP Aa TtAri
- FP AaAcaoAp ErlnSolPto ArcErdiArj
- FP AaAp TmTp ArcTtCf
- FP AaApr PtoErln ArcArobTt
- FP ErbEuaTt Ev Duf
- FP TtAsp AmaAinApr PoAff
- FS Tp EgEll
- FS TpTv Eg AceAcd Se
- FS Tv CdHc AancAiGrwh
- FS Tv Eg AatAtenAanc
- FS TvTp Eg Ell
- GG AaAcaoEll DopErtiErjp TpTw
- GG CcollCfFib ErtiDopDov CyaTtErmu
- GG CfEllFib AhDovmAsha CyaErmuThmb
- HC Tw Ah EkkEgCh
- HC TwTvTp EllCh Ah
- HS Tbr Ell Er
- HS TbrTw Ell
- HS TbrTw Ell CyaThmbErmu
- HS TvTwTp EllCh AhiAaa
- HS Tw EllCh AaaAhi
- HS TwTbr Ai
- HS TwTpTbr Ell Ep
- ME EuaTtErt EvEx GoroAeAma
- ME TtAriCya ChEll AmPlAnl
- ME TtEuaCya ExCh AnlApyErlo
- MI AmAancAe TpTw TtPamuEua
- MI AtpPlAm TpTv ChEll
- MI Td Ac Sg ExAapt
- MI Tp TtCya Ch
- SP AaApr TmTwTp TtChfAri
- SP Tm Tt
- SP TmTp AatAk AaCdApr
- SP TmTp EtEg AtenAmiAd
- SP TpTm AaExAcao ApaErffAads
- SP TpTm EgEx AceAapt
- SP TtArcEua AanHll
- SP TvTwTp EgEt AbApaApr

Legend

- Study Area
- Approval Boundary
- Local Road
- State Road
- Rail

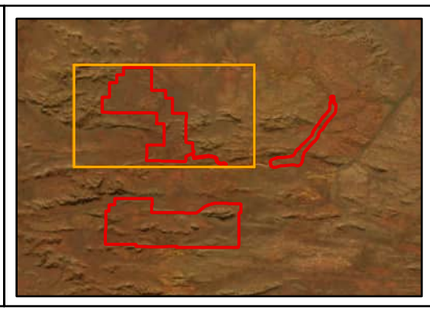
N

biologic Environmental Survey

Scale: 1:110,000

0 2 4 6 Km

Coordinate System: GDA2020 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA2020 Created 11/05/2023



BHP WAIO

CPH Detailed and Targeted Flora Survey

Figure 4.5a: Vegetation types in the Study Area - Pineapple Hill and Camp Hill

700000 710000 720000

7480000 7470000

Vegetation Type

- CP TwTa Ese AbPlApyp
- Cleared
- FP AcaoAaEx Erff Tp
- FS Tv CdHc AancAiGrwh
- FS TvTpTw Ell AbApaAanc
- FS Tw Ell
- GG CfEllFib AhDovmAsha CyaErmuThmb
- GG TtErmuThmb EllChCf AtpGoroPl
- HC Tw AiAb InrSeao
- HC TwTvTp EllCh Ah
- HS TbrTw Ell
- HS Tv Ell AcbAancSgg
- HS Tv EllCd AhiAaa
- HS TvTwTp EllCh AhiAaa
- HS TwTpTv Ell AprAaAanc
- MA CcCs Aci EcrEv
- MA EcrEv AciApypMg CcEuaTt
- MA EcrEv AcpAtheEv TpTl
- MA EcrEvEx ApypAtpGoro TtEuaCyp
- MA EcrEvMa AcpAamAthe TydCyv
- MA EvAciEcr TercCocrApyp CcEuaTt
- ME AtpAcmAm TtEua Tp ChEllEx
- ME Tp AaptAprEx Pl
- ME TpTlo ExAciCh PlApypGoro
- ME TtAriCya ChEll AmPlAnl
- ME TtChfEua ExEvCh PlApaApyp
- MI AtpPlAm TpTv ChEll
- MI ChExEv AtpAppPl AlTrfMa CcTtCam Tp
- MI TtrEmu ChEll AmAmoAnl
- Rehabilitation
- SP AaApr TmTwTp TtChfAri
- SP TbTp HlAancAi Ch
- SP TvTwTp EgEt AbApaApr

Yandicoogina Rail

MS1039

MS1072

Mining Area C Railway

West Angelas Rd

Mining Area C Railway

Legend

- Study Area
- Approval Boundary
- Local Road
- Rail

N

biologic Environmental Survey

Scale: 1:80,000

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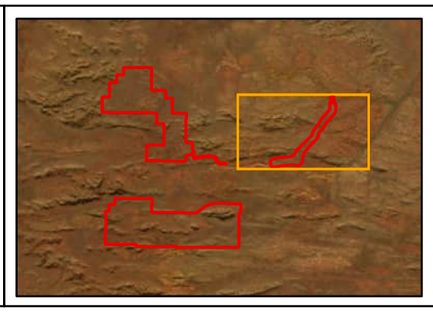
Coordinate System: GDA2020 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA2020 Created 11/05/2023



BHP WAIO

CPH Detailed and Targeted Flora Survey

Figure 4.5b: Vegetation types in the Study Area - MAC to Yandi Rail Corridor

670000 680000 690000

7450000

7440000

Vegetation Type

- CP TwTa Ese AbPlApyp
- Cleared
- FP AaAcaoAp ErInSolPto ArcErdiArj
- FP AaAp Po
- FP AaApApt TtChfErb
- FP AaApt SaaPoSsL Ac
- FP AaCa Mav
- FP Thhs Ca PtoSaa
- FP TpTm AaptApaAco
- FP TtEua ExAa AprAtpErlo
- FS Tv CdHc AancAiGrwh
- FS Tv EllCdd
- GG AaAcaoEll DopErtiErjp TpTw
- GG CcolCfEll ErmuThmbCya
- GG CfEllFib AhDovmAsha CyaErmuThmb
- GG TtErmuThmb EllChCf AtpGoroPl
- HC TpTvTw EllCh Sgg
- HC TpTw Ell NehrOls
- HC Tw Ah EkkEgCh
- HC Tw AiAb InrSeao
- HC TwTbrTp EllCh AmaGrwhAb
- HC TwTvTp EllCh Ah
- HS EnlCya ErfrAte InmDiau
- HS Tbr Ell Er
- HS TbrTw Ell
- HS TvTwTp EllCh AhiAaa
- HS TwTpTbr Ell Ep
- HS TwTpTv Ell AprAaAanc
- MA EcrEvEx ApypAtpGoro TtEuaCyp
- ME TpTlo ExAciCh PlApypGoro
- ME TtAriCya ChEll AmPlAnl
- MI AbAdAma Tp TtPamuEua
- MI AtpPlAm TpTv ChEll
- SP Aa ArcCfTt AoSsL
- SP AaApr TmTwTp TtChfAri
- SP AcaoAa ArobDiaChf
- SP TpTb Eg PlAbAanc
- SP TpTm AaExAcao ApaErffAads
- SP TvTwTp EgEt AbApaApr

Legend

- Study Area
- Approval Boundary
- State Road
- Rail

N

biologic Environmental Survey

Scale: 1:90,000

0 2 4 Km

Coordinate System: GDA2020 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA2020 Created 11/05/2023

BHP WAIO

CPH Detailed and Targeted Flora Survey

Figure 4.5c: Vegetation types in the Study Area - Mudlark Well

Significant Vegetation

None of the vegetation types described and delineated from the Study Area are considered to be analogous with any TECs known to occur in the Pilbara region. Two PECs, 'Coolibah - Lignum Flats: sub type 2' (P1) and 'West Angelas Cracking-Clays' (P1), have buffers overlapping with the Study Area, but the location of these PECs are not directly within the Study Area. 'Coolibah – Lignum Flats' sub-type 2 and 3 may occur within the Study Area, but further assessment is required (see Table 4.8). It is unlikely that any other PECs occur within the Study Area (Table 4.8).

Table 4.8: Assessment of PEC occurrence within Study Area.

Priority Ecological Community (PEC)	Priority Status	Present in Study Area?	Reasoning
Coolibah - Lignum Flats: sub type 2	P1	Possible	One vegetation type (FP ErbEuaTt Ev Duf) previously mapped within the Study Area contained key indicator taxa for both PEC sub-types: *Eucalyptus victrix*, *Duma florulenta*, *Eriachne benthamii*, and *Eulalia aurea*. This vegetation type occurred within a narrow floodplain/ drainage area in the southwestern corner of Pineapple Hill & Camp Hill and was approximately 2.3 km northwest of the buffer for Coolibah – Lignum Flats sub type 2. FP ErbEuaTt Ev Duf was sampled via a mapping note during the current survey, and only *E. victrix* was recorded. Additionally, there are no BHP flora records for *D. florulenta* within this vegetation type. Further assessment is required to determine the presence of these PECs within the Study Area. The occurrence of this PEC in the Study Area remains as Possible based on the previous survey work, however, the limited sampling completed by Biologic indicates that it is unlikely as only one of the key indicator species was present.
Coolibah - Lignum Flats: sub type 3	P1		
West Angelas Cracking-Clays	P1	No	Only one indicator taxon, *Sida fibulifera*, was recorded. *S. fibulifera* is common and was found throughout multiple landforms. The Jerrinah formation (associated with this PEC) overlaps the south-eastern boundary of Mudlark Well, but the vegetation, soils and landforms in this area do not match the PEC description.
Brockman Iron cracking clay communities of the Hamersley Range	P1	No	Cracking clay and *Astrebla lappacea* not present.
Fortescue Marsh (Marsh Land System)	P1	No	This Land System does not occur within the Study Area.
Freshwater claypans downstream of the Fortescue Marsh - Goodiadarrie Hills on Mulga Downs Station.	P1	No	There were three vegetation types with *Eriachne* spp. as part of the dominant tussock grassland layer (GG TtErmuThmb EllChCf AtpGoroPl, ME EuaTtErt EvEx GoroAeAma, MI TtrEmu ChEll AmAmoAnl), but none of these occurred on claypans.
Weeli Wolli Spring Community	P1	No	There were no permanent pools or springs recorded during the current survey, but they may occur in areas that were not sampled by Biologic. This PEC is restricted to permanent springs along Weeli Wolli Creek to the east of the Study Area. It is unlikely to occur within the Study Area.

Priority Ecological Community (PEC)	Priority Status	Present in Study Area?	Reasoning
Riparian flora and plant communities of springs and river pools with high water permanence of the Pilbara Region	P2	No	This PEC was identified by Biologic (2021) within Yandicoogina Gorge approx. 0.4 km east of the Study Area. Vegetation type MA EcrEvMa AcpAamAthe TydCyv overlaps with the gorge and also extends into parts of the Study Area. This vegetation type was not visited during the current survey, however, previous survey work completed by Biologic (2021) suggests that permanent pools do not occur within the portion of the PEC occurring in the Study Area. Although the PEC does occur adjacent to the Study Area, it is likely only the extremities of the PEC would overlap with the Study Area, or an area representing a buffer zone for the PEC. None of the other drainage lines traversed during the current survey contained permanent water. Indicator understorey flora taxa (*Imperata cylindrica*, *Fimbristylis sieberiana*) were not recorded within the Study Area by either the current survey or any previous survey. It should be noted that the upstream and downstream extents of this vegetation was not considered to represent this PEC (Biologic, 2021). This PEC is unlikely to occur within the Study Area.
Kumina Land System	P3	No	This Land System does not occur within the Study Area.
Vegetation of sand dunes of the Hamersley Range/Fortescue Valley	P3	No	There were no sand dunes present within the Study Area.

Vegetation of Other Significance

Thirty vegetation types (out of a total of 78) from eight of the ten landforms across the Study Area, supported one or more priority plants (Table 4.9). These vegetation types provide some limited local significance due to suitable habitat presence, however, the priority flora can occur across numerous habitats and are known to occur relatively extensively across the Pilbara (see Section 4.2.1).

Table 4.9: Vegetation types supporting priority flora.

Landform	Vegetation type	Taxon	Number of point-locations	Number of individuals
Floodplain	FP Aa TtAri Pto	*Aristida lazaridis* (P2)	2	2
		Themeda sp. Hamersley Station (M.E. Trudgen 11431) (P3)	1	40
		Vittadinia sp. Coondewanna Flats (P1)	1	1
	FP AaAcaoAp ErlnSolPto ArcErdiArj	*Aristida jerichoensis* var. *subspinulifera* (P3)	6	400
		Rhagodia sp. Hamersley (M. Trudgen 17794) (P3)	13	36
	FP AaAp Po Tt	*Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3)	6	28
	FP AaAp TmTp ArcTtCf	*Aristida jerichoensis* var. *subspinulifera* (P3)	1	3
		Rhagodia sp. Hamersley (M. Trudgen 17794) (P3)	14	38
		Sida sp. Barlee Range (S. van Leeuwen 1642) (P3)	1	1
		Aristida jerichoensis var. *subspinulifera* (P3)	1	1

Landform	Vegetation type	Taxon	Number of point-locations	Number of individuals
	FP AaApApt TtChfErb	*Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3)	3	13
Floodplain cont.	FP AaApt SaaPoSsL Ac	*Aristida jerichoensis* var. *subspinulifera* (P3)	6	43
		Aristida lazaridis (P2)	1	6
		Rhagodia sp. Hamersley (M. Trudgen 17794) (P3)	8	20
	FP TpTm AaptApaAco	*Aristida jerichoensis* var. *subspinulifera* (P3)	11	411
		Rhagodia sp. Hamersley (M. Trudgen 17794) (P3)	15	42
	FP TtAsp AmaAinApr PoAff	*Themeda* sp. Hamersley Station (M.E. Trudgen 11431) (P3)	2	35
Footslope	FS Tv CdHc AancAiGrwh	*Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3)	1	1
Gorge Gully	GG AaAcaoEll DopErtiErjp TpTw	*Eremophila* sp. West Angelas (S. van Leeuwen 4068) (P1)	5	21
		Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (P2)	6	168
		Pilbara trudgenii (P3)	4	42
		Rhagodia sp. Hamersley (M. Trudgen 17794) (P3)	3	17
		Sida sp. Barlee Range (S. van Leeuwen 1642) (P3)	1	1
		Solanum kentrocaule (P3)	4	11
		Triodia sp. Mt Ella (M.E. Trudgen 12739) (P3)	3	80
	GG CcolCfEll ErmuThmbCya	*Eremophila naaykensii* (P3)	12	112
		Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (P2)	37	433
		Oxalis sp. Pilbara (M.E. Trudgen 12725) (P2)	2	3
		Pilbara trudgenii (P3)	1	25
		Rostellularia adscendens var. *latifolia* (P3)	2	21
		Solanum kentrocaule (P3)	4	9
		Triodia sp. Mt Ella (M.E. Trudgen 12739) (P3)	2	70
	GG CcollCfFib ErtiDopDov CyaTtErmu	*Aristida lazaridis* (P2)	11	121
		Rostellularia adscendens var. *latifolia* (P3)	2	19
		Triodia sp. Mt Ella (M.E. Trudgen 12739) (P3)	54	769
	GG CfEllFib AhDovmAsha CyaErmuThmb	*Eremophila magnifica* subsp. *magnifica* (P4)	8	30
		Eremophila naaykensii (P3)	12	117
		Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (P2)	11	100
		Rhagodia sp. Hamersley (M. Trudgen 17794) (P3)	1	2
		Solanum kentrocaule (P3)	3	3
	GG TtErmuThmb EllChCf AtpGoroPl	*Sida* sp. Barlee Range (S. van Leeuwen 1642) (P3)	21	41
Hillcrest	HC TpTvTw EllCh Sgg	*Eragrostis* sp. Mt Robinson (S. van Leeuwen 4109) (P1)	1	1
		Eremophila naaykensii (P3)	1	1
		Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (P2)	6	135
		Indigofera gilesii (P3)	1	1
		Pilbara trudgenii (P3)	2	6
		Rostellularia adscendens var. *latifolia* (P3)	1	4
		Sida sp. Barlee Range (S. van Leeuwen 1642) (P3)	1	1

Landform	Vegetation type	Taxon	Number of point-locations	Number of individuals
		Solanum kentrocaule (P3)	1	1
		Triodia sp. Mt Ella (M.E. Trudgen 12739) (P3)	7	145
Hillcrest cont.	HC Tw Ah EkkEgCh	*Eremophila magnifica* subsp. *magnifica* (P4)	3	7
		Eremophila naaykensii (P3)	18	373
		Solanum kentrocaule (P3)	3	3
		Triodia sp. Mt Ella (M.E. Trudgen 12739) (P3)	2	230
	HC TwTvTp EllCh Ah	*Indigofera gilesii* (P3)	1	1
		Lepidium catapycnon (P4)	1	50
		Sida sp. Barlee Range (S. van Leeuwen 1642) (P3)	12	52
		Triodia sp. Mt Ella (M.E. Trudgen 12739) (P3)	1	200
Hillslope	HS TbrTw Ell	*Eremophila naaykensii* (P3)	2	2
		Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (P2)	6	41
		Rhagodia sp. Hamersley (M. Trudgen 17794) (P3)	1	1
		Sida sp. Barlee Range (S. van Leeuwen 1642) (P3)	10	17
		Triodia sp. Mt Ella (M.E. Trudgen 12739) (P3)	2	25
	HS Tw EllCh AaaAhi	*Aristida lazaridis* (P2)	6	27
		Eremophila magnifica subsp. *magnifica* (P4)	33	72
		Eremophila naaykensii (P3)	1	2
		Rostellularia adscendens var. *latifolia* (P3)	7	49
		Triodia sp. Mt Ella (M.E. Trudgen 12739) (P3)	72	1804
	HS TwTbr Ai Inr	*Rostellularia adscendens* var. *latifolia* (P3)	1	4
Medium Drainage Line	ME TtAriCya ChEll AmPlAnl	*Eremophila naaykensii* (P3)	8	351
		Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (P2)	2	5
		Triodia sp. Mt Ella (M.E. Trudgen 12739) (P3)	4	170
	ME TtChfEua ExEvCh PlApaApyp	*Aristida lazaridis* (P2)	19	83
	ME TtEuaCya ExCh AnlApyErlo	*Aristida lazaridis* (P2)	15	66
		Ipomoea racemigera (P2)	13	177
		Rhagodia sp. Hamersley (M. Trudgen 17794) (P3)	1	1
		Rostellularia adscendens var. *latifolia* (P3)	55	252
		Triodia sp. Mt Ella (M.E. Trudgen 12739) (P3)	11	236
Minor Drainage Line	MI AtpPlAm TpTv ChEll	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (P2)	1	2
Stony Plain	SP Aa ArcCfTt AoSsL	*Aristida jerichoensis* var. *subspinulifera* (P3)	19	310
		Rhagodia sp. Hamersley (M. Trudgen 17794) (P3)	19	45
	SP AaApr TmTwTp TtChfAri	*Aristida lazaridis* (P2)	2	2
		Rhagodia sp. Hamersley (M. Trudgen 17794) (P3)	5	6
	SP Tm Tt AaptApr	*Aristida lazaridis* (P2)	13	54
		Rhagodia sp. Hamersley (M. Trudgen 17794) (P3)	4	17
	SP TpTm AaExAcao ApaErffAads	*Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3)	1	5

Landform	Vegetation type	Taxon	Number of point-locations	Number of individuals
Stony Plain cont.	SP TpTm EgEx AceAapt	*Aristida lazaridis* (P2)	1	25
		Themeda sp. Hamersley Station (M.E. Trudgen 11431) (P3)	1	30
	SP TtArcEua AanHll	*Aristida jerichoensis* var. *subspinulifera* (P3)	2	251
		Aristida lazaridis (P2)	1	5
		Rhagodia sp. Hamersley (M. Trudgen 17794) (P3)	1	1

Fifteen vegetation types within the Study Area are analogous with 'ecosystems at risk' for the Hamersley IBRA subregion (Kendrick, 2001) (Table 4.10). Vegetation types containing mulga species as the most dominant components (*Acacia aptaneura*, *Acacia paraneura* and/ or *Acacia pteraneura*) of either open forest, woodland, open woodland, are considered to be 'valley floor mulga', totalling nine vegetation types. Three of these are also considered to be 'grove/ inter-grove mulga' (see Section 4.1.2). The 'valley floor mulga' vegetation types also contained tussock/ bunch grasses as the grassland layer[1]. These mulga over tussock grass ecosystems occur on loamy, friable soils susceptible to erosion, and are open to heavy grazing and fire, making them vulnerable to ecosystem degradation/ alteration (van Vreeswyk *et al.*, 2004). All 'major ephemeral water courses' are described as being at risk by Kendrick (2001) and include the six vegetation types occurring on major drainage lines across the Study Area. Threatening processes for these ecosystems include stock, weeds, frequent fires, and mining (Kendrick, 2001).

Table 4.10: 'Ecosystems at Risk' within the Study Area.

Ecosystem at Risk	Analogous Vegetation Types	Landform(s)	Extent within the Survey Area (ha)	Extent within the Survey Area (%)
Valley floor mulga	• FP Aa TtAri Pto • FP AaAcaoAp ErlnSolPto ArcErdiArj • FP AaAp Po Tt • FP AaAp TmTp ArcTtCf • FP AaApApt TtChfErb • FP AaApr PtoErln ArcArobTt • FP AaApt SaaPoSsL Ac • FP AaCa Mav Tm • SP Aa ArcCfTt AoSsL	Floodplains, stony plains	17,262.70	29.1
Grove/ inter-grove mulga	• FP AaApApt TtChfErb • FP AaAcaoAp ErlnSolPto ArcErdiArj • FP AaAp TmTp ArcTtCf	Floodplains	2,456.20	4.1

[1] Mulga vegetation types with hummock grasses (*Triodia* spp.) present were excluded (SP AaApr TmTwTp TtChfAri)

Ecosystem at Risk	Analogous Vegetation Types	Landform(s)	Extent within the Survey Area (ha)	Extent within the Survey Area (%)
Major ephemeral water courses	• MA CcCs Aci EcrEv • MA EcrEv AciApypMg CcEuaTt • MA EcrEv AcpAtheEv TpTl • MA EcrEvEx ApypAtpGoro TtEuaCyp • MA EcrEvMa AcpAamAthe TydCyv • MA EvAciEcr TercCocrApyp CcEuaTt	Major drainage lines	1,513	2.6

Groundwater Dependant Ecosystems

Drainage lines occurring throughout the Study Area have the potential to support phreatophytic flora, or GDV. Drainage Line vegetation types were assessed for their level of groundwater dependence based on the vegetation description, as well as presence or absence of riparian flora taxa. Eight drainage line vegetation types were rated across three groundwater dependence ratings (low to high) (Table 4.12 and Figure 4.6). The remaining ten drainage line vegetation types were rated as negligible or none. The remainder of the Study Area occurring on other landforms is assumed to be negligible or none.

The field survey recorded one key riparian tree species (*Eucalyptus victrix*). *Eucalyptus victrix* is primarily a vadophyte and generally occurs in drier areas than *E. camaldulensis*. Groundwater studies by Loomes (2010) have shown that the mean minimum water level depth occurring under *E. victrix* populations was somewhat greater than that for *E. camaldulensis*. The water use strategy of *E. victrix* appears to be highly plastic and opportunistic, enabling survival in a wide range of ecohydrological settings (Pfautsch *et al.*, 2014). Key riparian taxon *Eucalyptus camaldulensis* subsp. *refulgens* was present in the Study Area but was not recorded by the current survey (records were derived from BHPs geodatabase). *Eucalyptus camaldulensis* is primarily a facultative phreatophyte and is generally found near rivers and major creek systems with a shallow water table (2 – 5 m below ground) (Landman, 2001). In some locations, however, where soil moisture is consistently recharged by streamflow, *Eucalyptus camaldulensis* may not require groundwater at all and would be termed a vadophyte (SKM, 2012). *Melaleuca argentea* is a dominant overstorey taxon of vegetation type MA EcrEvMa AcpAamAthe TydCyv which has previously been mapped where Yandicoogina Creek and Marillana Creek intersect with MAC to Yandi Railway Corridor. *Melaleuca argentea* is an obligate phreatophyte, uses groundwater almost exclusively, and is confined to the wettest positions in the landscape (McLean, 2014; O'Grady *et al.*, 2006). BHP records for this taxon are located outside of the Study Area, primarily within Yandicoogina Gorge to the east, and hence it is not listed in Table 4.11.

660000 670000 680000 690000 700000

7480000

Great Northern Hwy

Packsaddle Rd

Yandicoogina Rail

West Angelas Rail

MS1072

West Angelas Rd

7470000

Legend

- Study Area
- Approval Boundary
- Local Road
- State Road
- Rail

Groundwater Dependent Vegetation

- ME EuaTtErt EvEx GoroAeAma

N

biologic Environmental Survey

Scale: 1:110,000

0 2 4 6 Km

Coordinate System: GDA2020 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA2020 Created 11/05/2023

BHP WAIO

CPH Detailed and Targeted Flora Survey

Figure 4.6a: Groundwater dependent vegetation in the Study Area - Pineapple Hill and Camp Hill

700000
710000
720000
7480000
7470000
Yandicoogina Rail
MS1039
MS1072
West Angelas Rd
Mining Area C Railway
Mining Area C Railway

Legend

- Study Area
- Approval Boundary
- Local Road
- Rail

Groundwater Dependent Vegetation

- MA CcCs Aci EcrEv
- MA EcrEv AciApypMg CcEuaTt
- MA EcrEv AcpAtheEv TpTl
- MA EcrEvEx ApypAtpGoro TtEuaCyp
- MA EcrEvMa AcpAamAthe TydCyv
- MA EvAciEcr TercCocrApyp CcEuaTt
- ME TtChfEua ExEvCh PlApaApyp

N

biologic Environmental Survey

Scale: 1:80,000

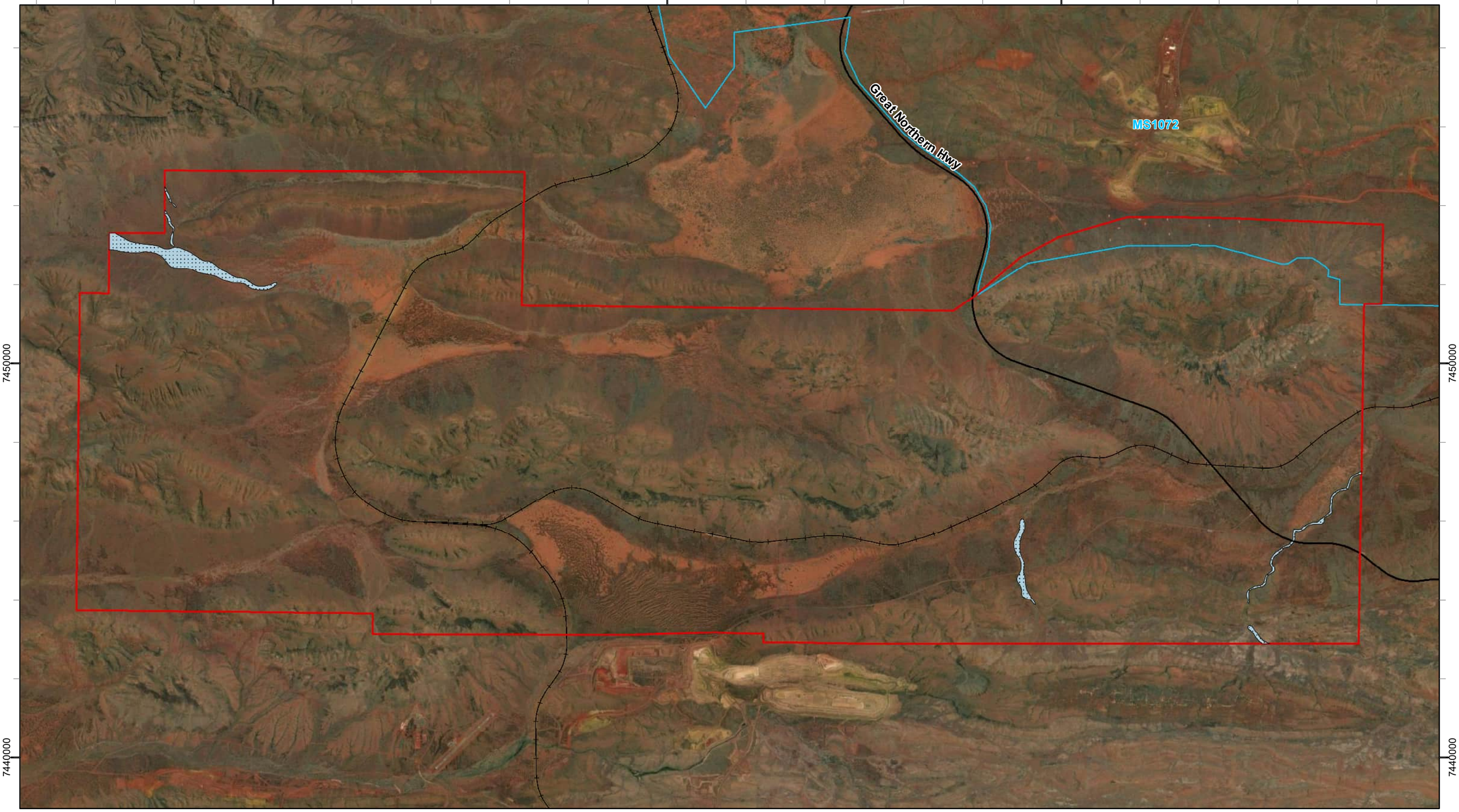
0 2 4 Km

Coordinate System: GDA2020 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA2020 Created 11/05/2023

BHP WAIO

CPH Detailed and Targeted Flora Survey

Figure 4.6b: Groundwater dependent vegetation in the Study Area - MAC to Yandi Rail Corridor



Legend

- Study Area
- Approval Boundary
- State Road
- Rail

Groundwater Dependent Vegetation

- MA EcrEvEx ApypAtpGoro TtEuaCyp

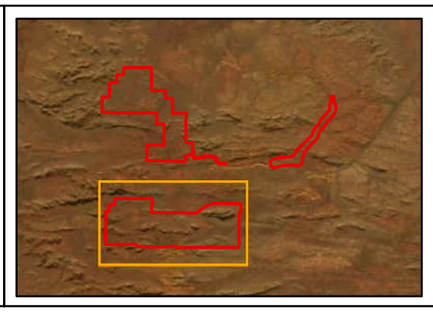
N

biologic Environmental Survey

Scale: 1:90,000

0 2 4 Km

Coordinate System: GDA2020 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA2020 Created 11/05/2023



BHP WAIO

CPH Detailed and Targeted Flora Survey

Figure 4.6c: Groundwater dependent vegetation in the Study Area - Mudlark Well

Several other riparian taxa which indicate persistent (at varying levels) soil moisture presence were found during the field survey (Table 4.11). Trees and larger shrubs may be dependent upon access to groundwater for part of the year, but smaller shrubs, herbs and sedges are unlikely to be groundwater dependent. These species readily grow in areas of the landscape which receive seasonal throughflow and focusing of surface runoff (i.e., minor creeklines) following rainfall events. They are, therefore, reliant on varying degrees of water available within the riparian zone. Some of these mesophytic indicator species were annual herbs, grasses, and sedges e.g., *Ammannia multiflora*, *Cyperus difformis*, and *Dactyloctenium radulans*. These annual flora germinate and grow after rainfall but die off as surface water dries out. No obligate phreatophytes (e.g., *Melaleuca argentea* or *Sesbania formosa*) were found in the Study Area.

Vegetation types with a moderate or high groundwater dependence are considered to represent GDV (Table 4.12). Vegetation with high dependence overlapped with Marillana Creek at the north of MAC to Yandi Railway Corridor, where the potential for aquatic GDEs was mapped as moderate by the BOM GDE Atlas (see Section 2.6.1). There was also a small occurrence along Yandicoogina Creek approximately 5 km south-southwest of Marillana Creek. It should be noted that there were no obligate phreatophytes or taxa indicative of permanent pools present within the Study Area. These occurrences may have been extrapolated from nearby occurrences outside the Study Area. Vegetation with moderate dependence occurred within and adjacent to Marillana, Yandicoogina Creek, and other minor non-perennial watercourses throughout MAC to Yandi Railway Corridor and Mudlark Well. None of these vegetation types were sampled or visited during the current survey, hence the assessment for these occurrences relied upon existing BHP flora records and vegetation mapping. Other contextual information such as presence of permanent water bodies and maturity of riparian tree taxa was not available. As such, the assessment of presence and dependence on groundwater for each of the vegetation types is preliminary with more detailed ecohydrological studies required to better understand ecological water requirements. The actual usage of groundwater for the GDV, is dependent upon the underlying geology, hydrogeology, aquifer levels and characteristics, seasonal climatic fluctuations, as well as other riparian flora taxa that may be present.

The five GDV vegetation types (MA EcrEvMa AcpAamAthe TydCyv, MA EcrEv AciApypMg CcEuaTt, MA EcrEv AcpAtheEv TpTl, MA EcrEvEx ApypAtpGoro TtEuaCyp, and MA EvAciEcr TercCocrApyp CcEuaTt) are locally significant and these and the remaining major drainage line vegetation type (MA CcCs Aci EcrEv) are also considered ‘ecosystems at risk’ on a subregional scale, as previously discussed. However, their presence and coverage within the Study Area are minimal, at approximately 2,501.2 ha or 4.2 %.

Table 4.11: Riparian taxa recorded from drainage line vegetation the Study Area.

Source: information collated from (Cook & Eamus, 2018; Masini, 1988; SKM, 2012; WAH, 1998-)

Taxon	Lifeform	Ecohydrological Category/ Interpretation	Ecohydrological Notes	Level of Groundwater Dependence				
				High (GDV)	Moderate GDV)	Low	Negligible	None
Eucalyptus camaldulensis	Tree	Facultative phreatophyte/ Vadophyte	Moderate to High groundwater dependence	✓	✓			
Eucalyptus victrix		Vadophyte / Facultative phreatophyte	Moderate groundwater dependence	✓	✓	✓		
Eucalyptus xerothermica			Low to Moderate groundwater dependence			✓	✓	✓
Melaleuca glomerata	Shrub or Tree	Vadophyte/ Facultative phreatophyte (inferred)	Moderate to high groundwater dependence	✓	✓			
Acacia aptaneura			Potentially dependent on groundwater				✓	✓
Acacia coriacea subsp. pendens			Potentially dependent on groundwater		✓	✓	✓	
Schoenoplectus subulatus	Perennial Sedge	Emergent macrophyte	Taxon grows in swamps and pools. May be indirectly groundwater-dependent if growing in spring-fed pools.		✓			
Typha domingensis					✓	✓		
Acacia ampliceps	Shrub or Tree	Mesic indicator - high level	Potentially dependent on groundwater		✓			
Cyperus vaginatus	Perennial Sedge	Mesic indicator - moderate level	Not groundwater dependent.		✓	✓		
Marsilea hirsuta	Perennial Fern				✓		✓	
Schoenoplectiella dissachantha	Annual Sedge						✓	
Abutilon amplum	Shrub	Mesic indicator - low level	Potentially dependent on groundwater		✓			
Cyperus ixiocarpus	Perennial Sedge		Not groundwater dependent.				✓	
Alternanthera nana	Perennial Herb or Shrub						✓	✓

Taxon	Lifeform	Ecohydrological Category/ Interpretation	Ecohydrological Notes	Level of Groundwater Dependence				
				High (GDV)	Moderate GDV)	Low	Negligible	None
Alternanthera denticulata	Annual/ Perennial Herb	Mesic indicator - low level	Dependent on seasonal surface water flows for germination and growth. Dependent on groundwater when present, although most are annuals so will appear when sufficient recharge of subsurface water has occurred.				✓	
Alternanthera angustifolia	Annual Herb							✓
Ammannia baccifera					✓			
Ammannia multiflora					✓			✓
Bergia pedicellaris					✓		✓	
Centipeda minima subsp. macrocephala					✓			✓
Bulbostylis barbata	Annual Sedge				✓			✓
Cyperus difformis					✓			
Cyperus iria					✓			✓
Fimbristylis microcarya					✓			
Dactyloctenium radulans	Annual Grass							✓
Setaria dielsii								✓
Acacia bivenosa	Shrub	Riparian taxon	Potentially dependent on groundwater (dependent on context).			✓	✓	✓
Acacia maitlandii						✓	✓	✓
Eremophila latrobei							✓	✓

Note: Boxes shaded grey indicate taxa that were present in the Study Area but not recorded during the current survey (i.e., data was from BHP flora records).

Table 4.12: Groundwater dependence ratings of drainage line vegetation types

Groundwater Dependence	Reasoning	Vegetation Types	Extent within the Study Area (ha)	Extent within the Study Area (%)
High (GDV)	• Presence of mature obligate phreatophyte (*Melaleuca argentea*) and several taxa dependent upon permanent surface water (*Eleocharis geniculata*, *Fimbristylis sieberiana* (P3), *Imperata cylindrica*)[2] • Major drainage line landform	• MA EcrEvMa AcpAamAthe TydCyv	24.6	0.04
Moderate (GDV)	• Obligate phreatophytes absent • Presence of mature facultative phreatophyte *Eucalyptus camaldulensis* subsp. *refulgens* • Mesic indicator taxa more prevalent • Major drainage line landform	• MA EcrEv AciApypMg CcEuaTt • MA EcrEv AcpAtheEv TpTl • MA EcrEvEx ApypAtpGoro TtEuaCyp • MA EvAciEcr TercCocrApyp CcEuaTt	2,476.60	4.2
Low	• Obligate phreatophytes absent • Scattered presence of *Eucalyptus camaldulensis* subsp. *refulgens* (in one vegetation type only) • Mature *Eucalyptus victrix* present, but not dominant • Vadophytes more prevalent e.g., *Eucalyptus xerothermica* • Major and medium drainage line landforms	• MA CcCs Aci EcrEv • ME EuaTtErt EvEx GoroAeAma • ME TtChfEua ExEvCh PlApaApyp	862.5	1.5
Negligible	• Obligate/ facultative phreatophytes absent • Scattered/ occasional presence of *Eucalyptus victrix* (in one vegetation type only) • Other vadophytes present e.g., *Eucalyptus xerothermica*, *Corymbia hamersleyana* • Medium and minor drainage line landforms	• ME AtpAcmAm TtEua Tp ChEllEx • ME Tp AaptAprEx Pl • ME TpTlo ExAciCh PlApypGoro • ME TtAriCya ChEll AmPlAnl • ME TtEuaCya ExCh AnlApyErlo • MI AtpPlAm TpTv ChEll • MI ChExEv AtpAppPl AlTrfMa CcTtCam Tp • MI Td Ac Sg ExAapt • MI Tp TtCya Ch • MI TtrEmu ChEll AmAmoAnl	7,096.20	12

[2] It should be noted that these taxa were recorded just outside of the Study Area within Yandicoogina Gorge, but within the mapped vegetation type MA EcrEvMa AcpAamAthe TydCyv.

Sheet-flow Dependent Ecosystems

Mulga banding is observable on aerial imagery in two general areas within the Study Area, coinciding with the Wannamunna Land System which is known to support groving and sheet flow. There was a small area on the southern boundary of Mudlark Well, coinciding with vegetation type FP AaApApt TtChfErb, with three mulga species present (*Acacia aptaneura*, *Acacia paraneura* and *Acacia pteraneura*). This vegetation type had been previously mapped but was also sampled by the current survey (quadrat CPH-128). There was only one occurrence of this vegetation type, with strong banding across its entire extent. Mulga groving was also present in the south-western section of Pineapple Hill and Camp Hill, coinciding with vegetation types FP AaAcaoAp ErlnSolPto ArcErdiArj and FP AaAp TmTp ArcTtCf. These vegetation types were dominated by *Acacia aptaneura* and other non-mulga *Acacia* spp. The banding in this area was weaker, more scattered, and did not occur across the entire extent of the two vegetation types. This vegetation was sampled by several sites during the current survey but only one of these was placed within groving/ intergroving (quadrat CPH-175). There were several other vegetation types on stony plains and floodplains dominated by mulga, but this vegetation did not exhibit banding and is not likely to be subject to sheet flow.

Vegetation Condition

The condition of the vegetation within the Study Area ranged from Completely Degraded to Excellent (Table 4.13, Figure 4.7). The majority of the mapped vegetation was in Good or higher condition (57,918.7 ha / 97.7 %), with most of this being in Excellent condition (46,542 ha / 78.5 %). The main disturbances observed were associated with pastoralism, mining and infrastructure, with the most common disturbance types being mining exploration (at 28 sites) and weed invasion (at 26 sites).

Roads and tracks provide a pathway for weed seeds being introduced into new areas, via vehicle and machinery movement (Khan *et al.*, 2012; van der Meulen & Sindel, 2008). Extensive areas within Pineapple Hill & Camp Hill, and Mudlark Well were lacking tracks and were only accessible via helicopter. Although weeds were spread relatively uniformly throughout the entire Study Area, cover and number of individuals was substantially lower in the remote, inaccessible areas, and was more extensive along tracks and drainage lines.

Table 4.13: Vegetation condition and extent in the Study Area.

Condition	Extent			Comment
	Study Area	ha	%	
Excellent	Pineapple Hill & Camp Hill	19,506.70	86	Excellent vegetation was distributed across the entire Study Area but was most widespread across the more remote parts of Pineapple Hill & Camp Hill, and Mudlark Well. In these areas, even the drainage lines were in Excellent condition, and only contained minor weeds in small numbers/ cover.
	Mudlark Well	25,554.50	79	
	MAC to Yandi Rail Corridor	1,480.70	34.8	
	Overall	46,542	78.5	
Very Good	Pineapple Hill & Camp Hill	2,767.10	12.2	Vegetation in Very Good condition was found across all

Condition	Extent			Comment
	Study Area	ha	%	
	Mudlark Well	5,846	18.1	three Study Areas but was most prevalent in MAC to Yandi Rail Corridor, and along drainage lines where weeds were more common. Vegetation structure (i.e., understorey, mid-storey and overstorey) was intact, but some minor disturbances were present.
	MAC to Yandi Rail Corridor	1,504.90	35.4	
	Overall	10,118	17.1	
Good	Pineapple Hill & Camp Hill	233.5	1	Good vegetation was found across each Study Area, in areas closer to infrastructure and tracks, as well as along drainage lines which were more weed infested. Vegetation structure was intact (i.e., understorey, mid-storey and overstorey) but disturbances were prevalent and clearly observable.
	Mudlark Well	610.5	1.9	
	MAC to Yandi Rail Corridor	414.8	9.8	
	Overall	1,258.70	2.1	
Poor	Pineapple Hill & Camp Hill	-		Vegetation in poor condition was found only in the MAC to Yandi Railway Corridor, in areas where vegetation structure had been impacted by tracks, infrastructure and weed invasion.
	Mudlark Well	-		
	MAC to Yandi Rail Corridor	36.3	0.9	
	Overall	36.3	0.1	
Degraded	Pineapple Hill & Camp Hill	-		Two small Degraded polygons were located adjacent to the north of Mining Area C and were undergoing rehabilitation.
	Mudlark Well	-		
	MAC to Yandi Rail Corridor	19.2	0.5	
	Overall	19.2	0.03	
Completely Degraded	Pineapple Hill & Camp Hill	1.2	0.01	Two small Completely Degraded polygons were within weedy cattle yards with only scattered native shrubs.
	Mudlark Well	-		
	MAC to Yandi Rail Corridor	8.4	0.2	
	Overall	9.6	0.02	
Cleared	Pineapple Hill & Camp Hill	163.3	0.7	The cleared mapping unit was associated with roads, tracks, drill lines/ pads, and mining infrastructure.
	Mudlark Well	352.1	1.1	
	MAC to Yandi Rail Corridor	785.5	18.5	
	Overall	1,300.80	2.2	
TOTAL		**59,284.6**	**100**	

660000 670000 680000 690000 700000

7480000

7470000

Great Northern Hwy

Packsaddle Rd

Yandicoogina Rail

West Angelas Rail

West Angelas Rd

MS1072

Legend

- Study Area
- Approval Boundary
- Local Road
- State Road
- Rail

Vegetation Condition

- Excellent
- Very Good
- Good
- Cleared

N

biologic Environmental Survey

Scale: 1:110,000

0 2 4 6 Km

Coordinate System: GDA2020 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA2020 Created 11/05/2023

BHP WAIO

CPH Detailed and Targeted Flora Survey

Figure 4.7a: Vegetation condition in the Study Area - Pineapple Hill and Camp Hill

700000
710000
720000
7480000
7470000
Yandicoogina Rail
MS1039
MS1072
Mining Area C Railway
West Angelas Rd
Mining Area C Railway

Legend

- Study Area
- Approval Boundary
- Local Road
- Rail

Vegetation Condition

- Excellent
- Very Good
- Good
- Poor
- Degraded
- Cleared

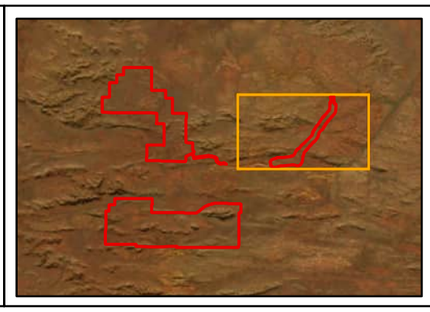
N

biologic Environmental Survey

Scale: 1:80,000

0 2 4 Km

Coordinate System: GDA2020 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA2020 Created 11/05/2023



BHP WAIO

CPH Detailed and Targeted Flora Survey

Figure 4.7b: Vegetation condition in the Study Area - MAC to Yandi Rail Corridor

670000
680000
690000
7450000
7440000
Great Northern Hwy
MS1072

Legend

- Study Area
- Approval Boundary
- State Road
- Rail

Vegetation Condition

- Excellent
- Very Good
- Good
- Cleared

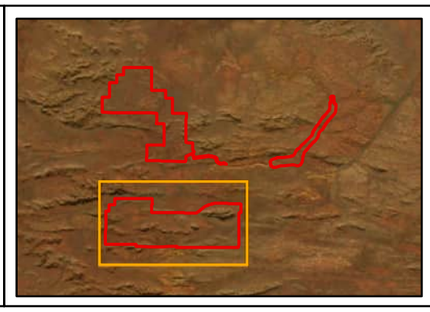
N

biologic Environmental Survey

Scale: 1:90,000

0 2 4 Km

Coordinate System: GDA2020 MGA Zone 50
Projection: Transverse Mercator
Datum: GDA2020 Created 11/05/2023



BHP WAIO

CPH Detailed and Targeted Flora Survey

Figure 4.7c: Vegetation condition in the Study Area - Mudlark Well

4.3 Review of Occurrence Assessment

Likelihoods for most of the potential significant flora taxa have been downgraded post-survey. Likelihoods were downgraded if species would have been flowering during survey times (March, April, and/ or June), were medium-large shrubs/ trees that were easily observable and identifiable without flowering or fruiting material, or where limited or no suitable habitat was present within the Study Area (Table 4.14, Appendix J). Survey effort was focused on the priority areas within the large Study Area. There is the potential that not all landforms, habitats, and vegetation were traversed. Determination of post-survey likelihood took this into account.

Twenty-six significant flora taxa were confirmed to occur within the Study Area pre-survey by the desktop assessment. Nineteen of these taxa were recorded during the current field survey and their likelihoods remain Confirmed (see Section 4.2.1). *Ipomoea racemigera* (P2) (assessed as Possible to occur pre-survey) was also recorded, with its likelihood upgraded to Confirmed. The remaining seven were not recorded by the current field survey, but it is assumed that the records are accurate and still exist; thus, their likelihoods also remain Confirmed.

Of those taxa considered Highly Likely, Likely or Possible to occur pre-survey, thirteen remain Possible to occur (for the reasons outlined in Table 4.14 below). The remaining 51 taxa have post-survey likelihoods of Unlikely (23) or Highly Unlikely (28) (Appendix J).

Table 4.14: Post-survey likelihood assessment.

Taxon	Pre-survey Likelihood	Post-survey Likelihood	Reasoning
19 taxa recorded during the current survey (see Section 4.2.1).	Confirmed	Confirmed – during current survey	-
Ipomoea racemigera (P2)	Possible	Confirmed – during current survey	
Dampiera metallorum (P3)	Confirmed	Confirmed	All records occurred outside of the priority areas and so were not visited during the current survey. It is assumed that previous records are accurate and are still confirmed within the Study Area.
Goodenia lyrata (P3)	Confirmed	Confirmed	
Goodenia sp. East Pilbara (A.A. Mitchell PRP 727) (P3)	Confirmed	Confirmed	
Xerochrysum boreale (P3)	Confirmed	Confirmed	
Ptilotus mollis (P4)	Confirmed	Confirmed	
Grevillea saxicola (P3)	Confirmed	Confirmed	
Acacia bromilowiana (P4)	Confirmed	Confirmed	DBCA records occurred outside of priority areas, so were not visited. Two BHP records fell within Biologic walking traverses but there were no individuals recorded in the vicinity of these records during the current survey. It is assumed that other previous records occurring within the Study Area are still present, and so the likelihood remains Confirmed.

Taxon	Pre-survey Likelihood	Post-survey Likelihood	Reasoning
Dolichocarpa sp. Hamersley Station (A.A. Mitchell PRP 1479) (P3)	Highly Likely	Possible	May or may not have been present at time of survey. Taxon is best known from cracking-clays, which were not present in the Study Area.
Olearia mucronata (P3)	Highly Likely	Possible	Taxon would not have been flowering but is a distinctively aromatic medium-sized shrub and is easily recognisable.
Triodia basitricha (P3)	Highly Likely	Unlikely	Taxon would have been flowering at time of survey. Forms a dominant part of the vegetation and has distinctive curly leaves and would have been easily noticed.
Arthropodium vanleeuwenii (P2)	Likely	Possible	Taxon would not have been flowering but is distinctive (no other *Arthropodium* is known from the Pilbara).
Eremophila pusilliflora (P2)	Likely	Possible	Taxon would have been flowering at time of survey and is a conspicuous medium-sized shrub.
Isotropis parviflora (P3)	Likely	Possible	Taxon is a small shrub which would have been flowering during Trips 1 and 2. Limited suitable habitat present within the priority areas. Is more prevalent following fires.
Acacia effusa (P3)	Likely	Possible	Taxon would have been flowering (or fruiting) during survey and is a medium shrub with distinctive 'minni-ritchi' bark.
Eremophila magnifica subsp. *velutina* (P3)	Likely	Possible	Taxon would not have been flowering but is a medium-large conspicuous shrub. Limited suitable habitat present within the priority areas. However, taxon could potentially occur on summits/ hills not surveyed, particularly in the Mudlark Well and Pineapple Hill areas.
Streptoglossa sp. Cracking clays (S. van Leeuwen et al. PBS 7353) (P3)	Likely	Possible	Taxon is unlikely to have been present at time of survey, but there was a lack of suitable habitat (cracking-clay).
Rhodanthe ascendens (P1)	Possible	Possible	Taxon is a small annual herb which would not have been present at time of survey.
Euphorbia inappendiculata var. *queenslandica* (P2)	Possible	Possible	Taxon is a small and inconspicuous herb and would not have been flowering at time of survey. An indeterminate *Euphorbia* specimen was collected.
Tetratheca fordiana (P2)	Possible	Possible	Limited suitable habitat traversed during the survey. This taxon could potentially occur on ridges and large rock faces that were not surveyed, particularly in the Mudlark Well and Pineapple Hill areas.

Taxon	Pre-survey Likelihood	Post-survey Likelihood	Reasoning
Eragrostis crateriformis (P3)	Possible	Possible	Taxon may or may not have been present and flowering at time of survey. Suitable habitat present within Study Area.
Euphorbia stevenii (P3)	Possible	Possible	Taxon is a small and inconspicuous herb, may not have been flowering at time of survey. Suitable habitat was present. An indeterminate *Euphorbia* specimen was collected.
Synostemon hamersleyensis (P1)	Possible	Unlikely	Taxon would not have been flowering but is a medium-sized shrub and is easily recognisable. Predominantly occurs north of Yandi, near Gudai-Darri.
Teucrium pilbaranum (P2)	Possible	Unlikely	Taxon may have been flowering during Trip 3 but only limited suitable habitat present (no calcrete or cracking clay, but some clay floodplain).
Acacia daweana (P3)	Possible	Unlikely	Taxon would not have been flowering, but is a distinctive medium-large shrub and easily recognisable
Acacia subtiliformis (P3)	Possible	Unlikely	Taxon may have been flowering during Trip 4 and is also easily recognisable without flowers and/ or fruit. Limited suitable habitat present (calcrete).
Amaranthus centralis (P3)	Possible	Unlikely	Taxon may have been present and flowering at time of survey, but only marginal habitat was present.
Euphorbia clementii (P3)	Possible	Unlikely	Taxon is a small-medium annual herb which is likely to have been present and flowering at time of survey.
Fimbristylis sieberiana (P3)	Possible	Unlikely	Taxon would have been flowering and is known from pool edges and sandstone cliffs (not present in Study Area). An indeterminate *Fimbristylis* was collected but this is most likely the common *F. dichotoma*.
Gymnanthera cunninghamii (P3)	Possible	Unlikely	Taxon is a large conspicuous shrub and is easily recognisable.
Iotasperma sessilifolium (P3)	Possible	Unlikely	Taxon would not have been flowering but there was a lack of suitable habitat in the Study Area.
Sida sp. Hamersley Range (K. Newbey 10692) (P3)	Possible	Unlikely	Taxon may have been flowering during Trip 3. Some suitable habitat present. Most records are known from further west (>60 km).
Stackhousia clementii (P3)	Possible	Unlikely	Taxon likely to have been flowering and is an uncommon genus in the Pilbara.
Stylidium weeliwolli (P3)	Possible	Unlikely	Taxon would not have been flowering but there is limited suitable habitat present.
Swainsona thompsoniana (P3)	Possible	Unlikely	Taxon may have been present and flowering at time of survey. Limited suitable habitat traversed during the survey. This taxon occurs primarily on cracking-clay which was not present in Study Area.

Taxon	Pre-survey Likelihood	Post-survey Likelihood	Reasoning
Thryptomene wittweri (T)	Possible	Unlikely	Taxon may have been flowering during Trip 3 and is a distinctive medium-large shrub. No other *Thryptomene* is known from the Pilbara.
Cladium procerum (P2)	Possible	Highly Unlikely	Taxon is a large perennial sedge known from perennial pools, which were not present in the Study Area.
Gompholobium karijini (P2)	Possible	Highly Unlikely	Taxon would not have been flowering but is a medium-sized shrub and is easily recognisable. Mostly restricted to the northern ranges of Karijini National Park.

4.4 Constraints and Limitations

The EPA (2016d) outlines several potential limitations to flora surveys. These aspects are assessed and discussed in Table 4.15. No major limitations or constraints were identified for the survey.

Table 4.15: Survey limitations and constraints.

Potential Limitation or Constraint	Applicability to this Survey	Limitation to Survey
Availability of contextual information at a regional and local scale	Sufficient contextual information was available for the Study Area, including broad information on land systems and vegetation associations. The Study Area is located in the central Pilbara where an extensive amount of biological survey work has occurred. A comprehensive literature review was completed. Numerous flora and vegetation records were available through the eight databases reviewed as part of the desktop assessment.	None
Competency/ experience of the team carrying out the survey, including experience in the bioregion surveyed	Each survey trip was led by a Senior Botanist who met or exceeded the minimum requirements (i.e., five years field experience in the Pilbara region) to manage a flora and vegetation field survey in the Pilbara bioregion (EPA, 2016b). The survey trips were affected by early demobilisation and survey team changes due to injury/ personal issues. These changes did not affect the overall experience of the team, with replacement members all having Pilbara field experience (with >5 years' experience in the case of field leads).	None
Proportion of flora recorded and/or collected, any identification issues	The survey intensity (detailed and targeted) was designed to capture most of the flora within the Study Area. A moderate number of taxa (72 taxa or 12.2 %) observed and collected from the field were difficult to confidently identify to species or infraspecies level. These unconfirmed taxa were from many different genera and families, as well as different lifeforms (annual/ perennial, tree/ shrub/ herb/ grass/ sedge). It is unlikely (but still possible) that any of these unconfirmed taxa represent significant flora.	None

Potential Limitation or Constraint	Applicability to this Survey	Limitation to Survey
Was the appropriate area fully surveyed (effort and extent)	Sampling was limited to the priority areas in line with the scope of the survey (i.e., areas that had either previously not been surveyed or where historical quadrat data was greater than 5 years old). Forty-two out of a total of 78 vegetation types were visited during the current survey, most of which were sampled with a minimum of three sites (with additional sites assigned to larger units to ensure spatial coverage). Vegetation types not visited or which contained less than three sites had been sampled by previous flora and vegetation surveys (as detailed in Appendix B). The current survey aligns with the EPA's guidance for a detailed survey and species accumulation curves suggest that the survey captured up to 104 % of the expected native species richness (see Section 4.5). Survey trips were interrupted by personnel changes and early demobilisation, but the anticipated coverage was still achieved, and thus is not considered to be a constraint.	None
Access restrictions within the survey area	The Study Area was accessed via mining, exploration and pastoral tracks which provided access across much of the Study Area. Walking traverses were limited to a maximum distance of 2 km from the vehicle for safety reasons. Helicopter access was used for the more remote inaccessible areas.	None
Survey timing, rainfall, season of survey	The field survey was conducted over four separate trips, all of which were within the optimal survey period for the Eremaean (March – June) (EPA, 2016b). Conditions were variable prior to and during each survey trip (see Section 3.2.2 and Figure 3.1). Rainfall for MAC was substantially higher than the LTA for Newman Airport between Jan-2022 and May-2022, and conditions were adequate for wet season sampling for all four trips.	None
Disturbance that may have affected the results of the survey such as fire, flood or clearing	Disturbances within the Study Area included were mainly associated with mining and pastoralism, such as tracks, weeds, and cattle grazing. There was a small area on the south side of Mt Robinson showing recent signs of fire. These disturbances are typical for the central Pilbara and did not affect the results.	None

4.5 Survey Adequacy

A total of 200 sites were sampled across the priority areas of Study Area (152 quadrats, 21 relevés, and 27 mapping notes), totalling 0.008 sites sampled per hectare of native vegetation. BHP (2018b) suggest that the intensive sampling of quadrats (i.e., during detailed surveys) shall allow for a minimum of one quadrat per square kilometre (km^2). The establishment and sampling of 152 quadrats equates to approximately 0.6 quadrats per km^2 which is less than the BHP recommendation (using the 25,563 ha or 256 km^2 of priority areas). This is acceptable in this instance, as there were substantial portions of the priority areas that were only required to be sampled via targeted flora traverses and as such did not contain any quadrats.

The sampling intensity of 0.008 sites per ha is consistent with the flora and vegetation surveys reviewed in the desktop assessment, ranging from 0.003 to 0.37 sites per ha (Table 4.16). Not all the reports reviewed in the desktop assessment are included due to survey type (i.e., desktop or targeted surveys) and missing information in the reports (i.e., size of the study areas).

Table 4.16: Comparison of survey intensity and effort.

Survey	Study Area Size (ha)	Number of Taxa Recorded	Number of Sampling Sites	Sites / ha
AECOM (2020)	21.7	52	8	0.37
Onshore (2015)	1,028	399	277	0.27
ENV (2008b)	106	114	8	0.08
ecologia (2009)	3,310	353	132	0.04
ecologia (2007)	2,400	212	60	0.03
Onshore (2011b)	13,210	452	325	0.02
ENV (2008a)	2,035	264	46	0.02
Woodman (2010)	19,020	203	379	0.02
Astron (2018)	3,729	102	67	0.02
Onshore (2011a)	29,411	497	510	0.02
Biologic (2017)	2,025	260	32	0.02
Ecologia (2008)	7,200	333	102	0.01
Biota (2017)	3,030	361	37	0.01
Onshore (2012b)	18,627	386	220	0.01
Biologic (2021)	3,756	279	34	0.009
Current survey	**25,562.71**	**516**	**200**	**0.008**
Astron (2011)	6,756	308	43	0.006
ENV (2008c)	31,110	n/a	159	0.005
Mattiske (2008)	29,700	392	139	0.005
Woodman (2009)	17,800	262	62	0.003

The species accumulation curve for the Study Area produced a curve that steadily increases, with estimators starting to plateau, with Chao 1 estimator starting to reach asymptote (Figure 4.8). Richness estimators indicated that the survey was approximately 83.4 % (Jacknife 1) to 91.4 % (Bootstrap)

adequate, with an observed value of 420 vascular flora taxa (confirmed native vascular flora taxa recorded from quadrats and used in statistical analyses) (Table 4.17). The survey adequacy exceeds expected native species richness (based on Bootstrap estimate with 103.6%) when the 56 additional observations (not observed from the quadrats) are included in the assessment (Table 4.17).

Table 4.17: Expected native species richness for the Study Area.

Treatment	Results	Richness Estimates	
		Based on SOBS (420)	Based on Total# (476)
Chao 1	491.52 ± 20.48	85.4%	96.8%
Jacknife 1	503.44 ± 15.36	83.4%	94.5%
Bootstrap	459.45 ± 9.35	91.4%	103.6%
SOBS^	420		

^Species observed. #Total includes opportunistic and relevé taxa not found in quadrats

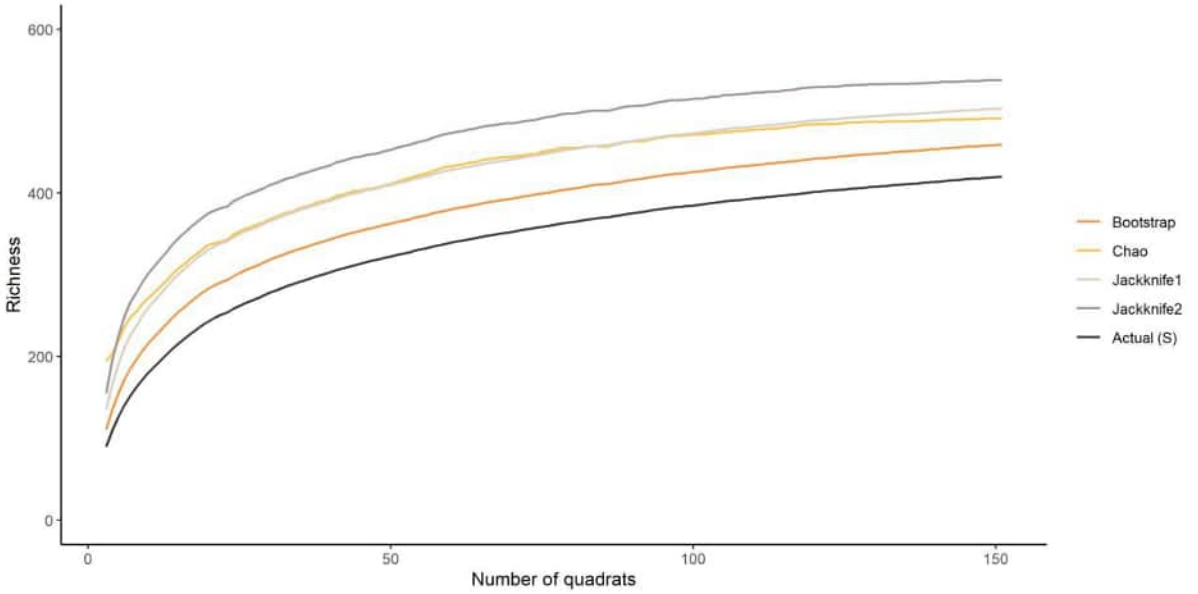


Figure 4.8: Species accumulation curves.

5 CONCLUSION

A single season detailed flora and vegetation survey was completed for the CPH, where previous surveys were more than five years old or non-existent. Targeted flora surveys were undertaken where surveys had occurred recently (within five years). Four separate trips were conducted between March 2022 and June 2022, over a total of 92 person days. There were no substantial limitations to any of the four survey trips. The survey and reporting have been completed in line with EPA and BHP WAIO guidelines, with survey adequacy being consistent with the level of a detailed survey. The key findings of the survey are:

- A total of 152 quadrats, 21 relevés, 27 mapping notes, opportunistic sampling, and targeted searches were sampled across the entire Study Area;
- A total of 516 confirmed vascular flora taxa from 64 families and 192 genera, comprising 499 native and 17 introduced taxa;
- Twenty significant flora taxa were recorded from the Study Area:
    - *Triodia* sp. Karijini (S. van Leeuwen 4111) (P1) - 68 individuals from nine point-locations;
    - *Aristida lazaridis* (P2) - 261 individuals from 54 point-locations;
    - *Eragrostis* sp. Mt Robinson (S. van Leeuwen 4109) (P2) - one individual from one point-location;
    - *Eremophila* sp. West Angelas (S. van Leeuwen 4068) (P2) - 72 individuals from seven point-locations;
    - *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (P2) - 955 individuals from 131 point-locations;
    - *Ipomoea racemigera* (P2) - 177 individuals from 13 point-locations;
    - *Oxalis* sp. Pilbara (M.E. Trudgen 12725) (P2) - four individuals from three point-locations;
    - *Aristida jerichoensis* var. *subspinulifera* (P3) – 1,419 individuals from 46 point-locations;
    - *Eremophila naaykensii* (P3) - 1,367 individuals from 135 point-locations;
    - *Indigofera gilesii* (P3) - two individuals from two point-locations;
    - *Pilbara trudgenii* (P3) - 73 individuals from seven point-locations;
    - *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3) - 273 individuals from 96 point-locations;
    - *Rostellularia adscendens* var. *latifolia* (P3) - 573 individuals from 94 point-locations;
    - *Solanum kentrocaule* (P3) - 27 individuals from 15 point-locations;
    - *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) (P3) - 105 individuals from four point-locations;
    - *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (P3) – 8,895 individuals from 191 point-locations;

  - *Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 4684) (P3) - one individual from one point-location;
  - *Eremophila magnifica* subsp. *magnifica* (P4) - 109 individuals from 44 point-locations;
  - *Lepidium catapycnon* (P4) - 50 individuals from one point-location; and
  - *Sida* sp. Barlee Range (S. van Leeuwen 1642) (P4) - 144 individuals from 58 point-locations.
- Six taxa considered to be flora of "other" significance, including four range extensions, and two hybrids;
- Seventeen confirmed introduced taxa were recorded within the Study Area, with none of these listed as WoNS, DPs or 'Priority Alert' weeds;
- Post-survey review of the likelihood of significant flora occurring in the Study Area assessed thirteen taxa as still being Possible to occur within the Study Area;
- 78 vegetation types were described and delineated from 28 broad floristic formations across ten landforms. The most dominant vegetation type was SP TpTm AaExAcao ApaErffAads (7448.8 ha / 12.6 %) which occurred on Stony Plains;
- There were no confirmed TECs or PECs recorded from the Study Area during the current survey;
- One vegetation type, FP ErbEuaTt Ev Duf, shared affinities with two sub-types of the Priority 1 'Coolibah - Lignum Flats' PEC. The occurrence of the PEC is based on previous survey work, while this survey only recorded the presence of *Eucalyptus victrix* from a vegetation mapping note. This suggests that the PEC may not actually occur, but further on-ground work would be required;
- Thirty vegetation types, supported one or more of the priority taxa found, and thus hold local significance in providing habitat for these taxa;
- Fifteen vegetation types are considered an 'ecosystem at risk' for the Hamersley subregion;
- Drainage line vegetation types were assessed for their level of dependence upon groundwater, with five considered to be groundwater dependent vegetation (MA EcrEvMa AcpAamAthe TydCyv, MA EcrEv AciApypMg CcEuaTt, MA EcrEv AcpAtheEv TpTl, MA EcrEvEx ApypAtpGoro TtEuaCyp, and MA EvAciEcr TercCocrApyp CcEuaTt));
- Three vegetation types were considered to be dependent upon overland sheet-flow of water (sheet-flow dependent ecosystems): FP AaApApt TtChfErb, FP AaAcaoAp ErlnSolPto ArcErdiArj and FP AaAp TmTp ArcTtCf;
- The vegetation condition ranged from Completely Degraded to Excellent, with the majority (97.7 %) of vegetation considered to be in Good or higher condition.

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7 APPENDICES

Appendix A: State and federal conservation codes.

Environment Protection and Biodiversity Conservation Act 1999

Category	Definition
Threatened Flora Species	
Extinct (EX)	A native species is eligible to be included in the Extinct category at a particular time if, at that time, there is no reasonable doubt that the last member of the species has died.
Extinct in the Wild (EW)	A native species is eligible to be included in the Extinct in the Wild category at a particular time if, at that time: (a) it is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or (b) it has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.
Critically Endangered (CR)	A native species is eligible to be included in the critically endangered category at a particular time if, at that time, it is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.
Endangered (EN)	A native species is eligible to be included in the endangered category at a particular time if, at that time: (a) it is not critically endangered; and (b) it is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.
Vulnerable (VU)	A native species is eligible to be included in the vulnerable category at a particular time if, at that time: (a) it is not critically endangered or endangered; and (b) it is facing a high risk of extinction in the wild in the medium term future, as determined in accordance with the prescribed criteria.
Conservation Dependent (CD)	A native species is eligible to be included in the Conservation Dependent category at a particular time if, at that time: (a) the species is the focus of a specific conservation program the cessation of which would result in the species becoming Vulnerable, Endangered or Critically Endangered; or (b) the following subparagraphs are satisfied (i) the species is a species of fish; (ii) the species is the focus of a plan of management that provides for management actions necessary to stop the decline of, and support the recovery of, the species so that its chances of long term survival in nature are maximised; (iii) the plan of management is in force under a law of the Commonwealth or of a State or Territory; and (iv) cessation of the plan of management would adversely affect the conservation status of the species.

Category	Definition
Threatened Ecological Communities	
Critically Endangered	An ecological community is eligible to be included in the critically endangered category at a particular time if, at that time, it is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.
Endangered	An ecological community is eligible to be included in the endangered category at a particular time if, at that time: (a) it is not critically endangered; and (b) it is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.
Vulnerable	An ecological community is eligible to be included in the vulnerable category at a particular time if, at that time: (a) it is not critically endangered nor endangered; and (b) it is facing a high risk of extinction in the wild in the medium term future, as determined in accordance with the prescribed criteria.

Biodiversity Conservation Act 2016

Category	Definition
Threatened Flora Species	
Critically Endangered (CR)	Threatened species considered to be "facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines". Published under schedule 1 of the *Wildlife Conservation (Rare Flora) Notice 2018* for critically endangered flora.
Endangered (EN)	Threatened species considered to be "facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines". Published under schedule 2 of the *Wildlife Conservation (Rare Flora) Notice 2018* for endangered flora.
Vulnerable (VU)	Threatened species considered to be "facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines". Published under schedule 3 of the Wildlife Conservation (Rare Flora) Notice 2018 for vulnerable flora.
Extinct (EX)	Species where "there is no reasonable doubt that the last member of the species has died", and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act). Published as presumed extinct under schedule 4 of the Wildlife Conservation (Rare Flora) Notice 2018 for extinct flora.
Extinct in the Wild (EW)	Species that "is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form", and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act). Currently there are no threatened flora species listed as extinct in the wild.

Category	Definition
Threatened Ecological Communities	
Critically Endangered (CR)	An ecological community is eligible for listing in the category of critically endangered ecological community at a particular time if, at that time — (a) it is facing an extremely high risk of becoming eligible for listing as a collapsed ecological community in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines; and (b) listing in that category is otherwise in accordance with the ministerial guidelines.
Endangered (EN)	An ecological community is eligible for listing in the category of endangered ecological community at a particular time if, at that time — (a) it is not a critically endangered ecological community; and (b) it is facing a very high risk of becoming eligible for listing as a collapsed ecological community in the near future, as determined in accordance with criteria set out in the ministerial guidelines; and (c) listing in that category is otherwise in accordance with the ministerial guidelines.
Vulnerable (VU)	An ecological community is eligible for listing in the category of vulnerable ecological community at a particular time if, at that time — (a) it is not a critically endangered ecological community or an endangered ecological community; and (b) it is facing a high risk of becoming eligible for listing as a collapsed ecological community in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines; and (c) listing in that category is otherwise in accordance with the ministerial guidelines.
Collapsed	An ecological community is eligible for listing as a collapsed ecological community at a particular time if, at that time — (a) there is no reasonable doubt that the last occurrence of the ecological community has collapsed; or (b) the ecological community has been so extensively modified throughout its range that no occurrence of it is likely to recover — (i) its species composition or structure; or (ii) its species composition and structure.

Department of Biodiversity, Conservation and Attractions Priority Definitions

Category	Definition
Threatened Flora Species	
Priority 1 (P1)	**Poorly-known Species** Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g., agricultural, or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.
Priority 2 (P2)	**Poorly-known Species** Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g., national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.
Priority 3 (P3)	**Poorly-known Species** Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.
Priority 4 (P4)	**Rare, Near Threatened and other species in need of monitoring** (a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These species are usually represented on conservation lands. (b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as Conservation Dependent. (c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

Category	Definition
Threatened Ecological Communities	
Priority 1 (P1)	**Poorly-known Ecological Communities** Ecological communities that are known from very few occurrences with a very restricted distribution (generally ≤5 occurrences or a total area of ≤ 100ha). Occurrences are believed to be under threat either due to limited extent, or being on lands under immediate threat (e.g., within agricultural or pastoral lands, urban areas, active mineral leases) or for which current threats exist. May include communities with occurrences on protected lands. Communities may be included if they are comparatively well-known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under immediate threat from known threatening processes across their range.
Priority 2 (P2)	**Poorly-known Ecological Communities** Communities that are known from few occurrences with a restricted distribution (generally ≤10 occurrences or a total area of ≤200ha). At least some occurrences are not believed to be under immediate threat (within approximately 10 years) of destruction or degradation. Communities may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under threat from known threatening processes.
Priority 3 (P3)	**Poorly-known Ecological Communities** (i) Communities that are known from several to many occurrences, a significant number or area of which are not under threat of habitat destruction or degradation or: (ii) communities known from a few widespread occurrences, which are either large or with significant remaining areas of habitat in which other occurrences may occur, much of it not under imminent threat (within approximately 10 years), or; (iii) communities made up of large, and/or widespread occurrences, that may or may not be represented in the reserve system, but are under threat of modification across much of their range from processes such as grazing by domestic and/or feral stock, inappropriate fire regimes, clearing, hydrological change etc. Communities may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and/or are not well defined, and known threatening processes exist that could affect them.

Category	Definition
Priority 4 (P4)	**Ecological communities that are adequately known, rare but not threatened or meet criteria for Near Threatened, or that have been recently removed from the threatened list. These communities require regular monitoring.** (i) Rare. Ecological communities known from few occurrences that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These communities are usually represented on conservation lands. (ii) Near Threatened. Ecological communities that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for a higher threat category. (iii) Ecological communities that have been removed from the list of threatened communities during the past five years.
Priority 5 (P5)	**Conservation Dependent Ecological Communities** Ecological communities that are not threatened but are subject to a specific conservation program, the cessation of which would result in the community becoming threatened within five years.

Appendix B: Literature Review.

Yandi, Ministers North, and MAC		Mines, Port, Rail & NPI – Weed Mapping & Control – Area C, April 2017	Mines, Port, Rail &NPI – Weed Mapping & Control – Rail, June 2017	Ministers North and Yandi Vegetation Association and Condition Mapping	Flora and Vegetation Review – Yandi ML 270SA	Two Phase Assessment of the Flora and Vegetation of the Proposed Marillana Creek (Yandi) Mine extension Areas	Area C to Jinayri to Mount Newman Railway Flora and Vegetation Survey
Survey Details	**Reference**	(Astron, 2017a)	(Astron, 2017b)	(Onshore, 2020)	(Onshore, 2011b)	(Ecologia, 2008)	(Woodman, 2010)
	Type	Weed mapping survey	Weed mapping survey	Desktop assessment	Reconnaissance and desktop	Detailed flora and vegetation	Detailed flora and vegetation
	Client	BHP Billiton Iron Ore	BHP Billiton Iron Ore	BHP Billiton Iron Ore	BHP Billiton Iron Ore	BHP Billon Iron Ore	BHP Billiton Iron Ore
	Location	Area C Mine	Rail Network (Yandi and Mac corridor)	Ministers North & Yandi	Yandi	Yandi	Area C to Jinayri and Mt Newman Railway
	Size (ha)	~ 117 ha	~ 340 ha	~ 19,300 ha	~ 13,210 ha	3 polygons of approx. 2,400 ha	~ 19,020 ha
	Survey Timing	April and June 2017	June 2017	June 2020	December 2010	November 2007 and March 2008	May, June, and September 2009
Methods	**Desktop Assessment (Yes/No)**	Yes	Yes	Yes	Yes	Yes	Yes
	Quadrat #	n/a	n/a	n/a	Desktop review of 210 quadrats	102	203
	Relevé #	n/a	n/a	n/a	115	n/a	n/a
	Targeted Searching (Yes/No)	Yes –weed species only (to record and chemically treat)	Yes –weed species only (to record and chemically treat)	n/a	Yes	Yes	Yes
	Other Methods	Weed mapping via field notes	Weed mapping via field notes	n/a	n/a	Opportunistic collections	n/a
Results	**Taxa**	7	12	n/a	452	333	379
	Families	6	8	n/a	56	52	53
	Genera	7	12	n/a	178	138	149
	Vegetation Types	n/a	n/a	40	24	10	19
	Vegetation Condition	n/a	n/a	Completely degraded to excellent (majority Very good – Excellent)	Good to excellent	Not specified	Good to excellent
	Weeds #	7	12	n/a	21	10	10
Significant Findings	**Threatened/ Priority Flora**	None recorded	None recorded	*Fimbristylis sieberiana* (P3)	*Lepidium catapycnon* (P4) *Acacia subtiliformis* (P3) *Rostellularia adscendens* var. *latifolia* (P3) *Goodenia nuda* (P4 at time of survey) *Isotropis parviflora* (P2)	Recorded one species (*Tephrosia* sp. Cathedral Gorge (F.H. Mollemans 2420)) which is no longer of conservation significance	*Lepidium catapycnon* (P4) *Goodenia* sp. East Pilbara (A.A. Mitchell PRP 727) (P3) *Stylidium weeliwolli* (P3) *Acacia subtiliformis* (P3) *Fimbristylis sieberiana* (P3) *Goodenia nuda* (P4 at time of survey) *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3) *Rostellularia adscendens* var. *latifolia* (P3)
	Threatened/ Priority Ecological Communities	None recorded	None recorded	None recorded	None recorded	None recorded	None recorded
	WoNS and DPP Weeds	None recorded	None recorded	None recorded	None recorded	None recorded	None recorded
	Range Extensions	None recorded	None recorded	None recorded	None recorded	*Paspalidium reflexum* *Melaleuca leucadendra*	Three locality holes and one range extension (*Halgania cyanea* var. Allambi Stn (B.W. Strong 676), 100 km north)
	Other significant findings	**Aerva javanica* had previously not been recorded within the survey area by Astron	**Melinis repens* was a new weed species, previously not recorded within the corridor	Feature of vegetation association MA EcrEvMa AcpAamAthe TydCyv is the occurrence of semi-permanent and/or permanent water bodies, and contains species, *Fimbristylis sieberiana* (P3) Four vegetation associations noted as being potentially significant	The Priority 1 PEC Weeli Wolli Spring occurs approximately 9 km south-east of the Yandi Study area, but did not occur within the desktop survey area	*Sida* sp. – possible new species as could not be identified beyond genus level Flowering specimen of *Maytenus* sp. Mt Windell (S. van Leeuwen 846) to be used to write a formal description of this taxon	One undescribed and potentially conservation significant flora species recorded, described as *Grevillea* aff. *nematophylla*
Other	**Limitations of survey**	Insufficient time to survey all weeds of concern and restricted access	None recorded	None recorded	None recorded	Access issues	Some access issues

Yandi, Ministers North, and MAC		Flora and Vegetation Survey – Yandi Lease M47/292 and E4 Drill Lines	Ministers North Detailed Flora and Vegetation Survey	Area C Mining Operations Environmental Management Plan (Revision 4) A, D, P1 and P3 Deposits Flora and Vegetation assessment	Rapid Growth Project 5: M270SA Flora and Vegetation Assessment	Mining Area C Review of Flora and Vegetation Baseline Information	Yandi Mine Extension RGP5 - EIA Flora Survey Interim Report Post Phase 1 Survey	Ministers North Miscellaneous Licence Area Amendment Surveys and Yandicoogina Creek Detailed Flora and Vegetation Assessment
Survey Details	**Reference**	(Maunsell Australia, 2004)	(Biota, 2017)	(Woodman, 2009)	(ENV, 2008b)	(Onshore, 2014)	(ecologia, 2007)	(Biologic, 2021)
	Type	Targeted vegetation and flora	Detailed flora and vegetation	Detailed flora and vegetation and gaps analysis	Detailed	Desktop Review	Detailed flora and vegetation Interim review	Detailed flora and vegetation assessment
	Client	BHP Billiton Iron Ore	BHP Billiton Iron Ore	BHP Billiton Iron Ore	Calibre Engenium Joint Venture	BHP Billiton Iron Ore	BHP Billiton Iron Ore	BHP WAIO
	Location	Yandi M47/292 Lease & E4 Drill Lines	Ministers North	Area C	Mining Lease M270SA	Mining Area C	Yandi Mine Extension RGP5	Ministers North, Yandi Creel
	Size (ha)	~ 13,160 ha	~ 3,030 ha	~ 17,800 ha	106 ha	~ 25,815 ha	~2,400 ha	3,756
	Survey Timing	December 2003	September 2016, May and July 2017	April, May and June 2008	April 2008	2008	November 2007	September 2019, March-April 2020
Methods	**Desktop Assessment (Yes/No)**	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Quadrat #	n/a	22	62	7	n/a	60	34
	Relevé #	n/a	15	n/a	1	n/a	n/a	6
	Targeted Searching (Yes/No)	Yes	Yes	Yes	Yes	n/a	Yes	Yes
	Other Methods	Opportunistic collections	Opportunistic collections	n/a	n/a	n/a	Opportunistic collections	22 mapping notes
Results	**Taxa**	n/a	361	262	114	n/a	212	279
	Families	n/a	53	44	30	n/a	38	51
	Genera	n/a	142	120	58	n/a	93	141
	Vegetation Types	7	10	15	5	28	n/a	35
	Vegetation Condition	Good to excellent	Pristine to completely degraded	Pristine to excellent	Very good to poor	n/a	n/a	Degraded to excellent
	Weeds #	n/a	16	5	3	10	4	17
Significant Findings	**Threatened/ Priority Flora**	One previously listed priority species (*Olearia fluvialis*)	*Fimbristylis sieberiana* (P3) *Sida* sp. Barlee Range (S. van Leeuwen 1642) (P4) *Acacia bromilowiana* (P4)	*Eremophila magnifica* subsp. *magnifica* (P4) *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3) *Rostellularia adscendens* var. *latifolia* (P3)	None recorded	*Acacia bromilowiana* (P4) *Aristida jerichoensis* var. *subspinulifera* (P3) *Aristida lazaridis* (P2) *Eremophila magnifica* subsp. *magnifica* (P4) *Nicotiana umbratica* (P3) *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3) *Rostellularia adscendens* var. *latifolia* (P3)	None recorded	*Aristida lazaridis* (P2) *Fimbristylis sieberiana* (P3) *Gymnanthera cunninghamii* (P3) *Sida* sp. Barlee Range (S. van Leeuwen 1642) *Rostellularia adscendens* var. *latifolia* (P3) *Sida* sp. Barlee Range (S. van Leeuwen 1642) (P3)
	Threatened/ Priority Ecological Communities	None recorded	None recorded	None recorded	None recorded	None recorded	None recorded	PEC: Riparian flora and plant communities of springs and river pools with high water permanence of the Pilbara (P2)
	WoNS and DPP Weeds	None recorded	None recorded	None recorded	None recorded	None recorded	None recorded	None recorded
	Range Extensions	None recorded	*Imperata cylindrica* *Peripleura hispidula* var. *hispidula*	None recorded	None recorded	None recorded	None recorded	*Imperata cylindrica* *Dodonaea viscosa* subsp. *angustissima* *Triodia biflora*
	Other significant findings	None recorded	Three vegetation associations are considered to be of local importance	None recorded	Quite high species richness for the small size of the survey area (106 ha)	None recorded	None recorded	Groundwater dependent vegetation and permanent pools
Other	**Limitations of survey**	Sub-optimal survey timing	No substantial limitations	No substantial limitations	No substantial limitations	No substantial limitations	Recent fires in the area	Access restrictions, recent fires

Mudlark		Ministers North to Yandi Corridor Single Phase Level 2 Fauna and Detailed Flora and Vegetation Survey	Area C West to Yandi Flora and Vegetation Assessment	Marillana Creek Riparian Flora and Vegetation Survey	Area C and Surrounds Study Area Level 2 Flora and Vegetation Survey	Level 2 Flora and Vegetation Survey Mudlark Leases	Alligator Jaws Exploration Lease Flora and Vegetation Assessment
Survey Details	**Reference**	(Biologic, 2017)	(Astron, 2018)	(Onshore, 2015)	(Onshore, 2011a)	(Onshore, 2013a)	(ENV, 2008a)
	Type	Detailed Flora and Vegetation	Reconnaissance Flora and Vegetation	Detailed flora and vegetation	Detailed flora and vegetation	Detailed	Detailed
	Client	BHP Billiton Iron Ore	BHP Billiton Iron Ore	BHP Billiton Iron Ore	BHP Billiton Iron Ore	BHP Billiton Iron Ore	BHP Billiton Iron Ore
	Location	Ministers North to Yandi Corridor	Area C West to Yandi	Marillana Creek	Area C and Surrounds	Mudlark Leases	Alligator Jaws Exploration Lease
	Size (ha)	2,025 ha	3,729 ha	~1,028 ha	29,411 ha	Not specified	~ 2,035 ha
	Survey Timing	October 2017	November 2018	June 2015	November and December 2009, and February and June 2010	2011 – 2012 (over 5 months)	July 2007
Methods	**Desktop Assessment (Yes/No)**	Yes	Yes	Yes	Yes	Yes	Yes
	Quadrat #	32	n/a	40	510	259	46
	Relevé #	n/a	67	237	n/a	n/a	n/a
	Targeted Searching (Yes/No)	Yes	n/a	Yes	Yes	Yes	Yes
	Other Methods	n/a	Mapping notes	n/a	Weed Survey and Mapping	Vegetation mapping notes and opportunistic collections	Traversing of proposed drill pads
Results	**Taxa**	260	102	399	497	534	264
	Families	44	21	58	53	61	48
	Genera	127	54	186	166	191	109
	Vegetation Types	12	38	22	37	38	10
	Vegetation Condition	Very good to excellent	Poor to excellent	Degraded to excellent	Degraded to excellent	Very good to excellent	Good to excellent
	Weeds #	8	3	22	11	12	5
Significant Findings	**Threatened/ Priority Flora**	*Rostellularia adscendens* var. *latifolia* (P3) *Sida* sp. Barlee Range (S. van Leeuwen 1642) (P4) *Goodenia nuda* (P4 at time of survey)	*Eremophila naaykensii* (P3)	*Aristida lazaridis* (P2) *Ipomoea racemigera* (P2) *Amaranthus centralis* (P3) *Goodenia* sp. East Pilbara (A.A. Mitchell PRP 727) (P3) *Rostellularia adscendens* var. *latifolia* (P3) *Goodenia nuda* (P4 at time of survey)	*Aristida jerichoensis* subsp. *subspinulifera* (P1) *Aristida lazaridis* (P2) *Acacia subtiliformis* (P3) *Fimbristylis sieberiana* (P3) *Goodenia* sp. East Pilbara (A.A. Mitchell PRP 727) (P3) *Nicotiana umbratica* (P3) *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3) *Rostellularia adscendens* var. *latifolia* (P3) *Sida* sp. Barlee Range (S. van Leeuwen 1642) (P4) *Eremophila magnifica* subsp. *magnifica* (P4) *Lepidium catapycnon* (P4)	24 species including three Priority 1 taxa, three Priority 2 species, 13 Priority 3 taxa, and five Priority 4 taxa	*Eremophila magnifica* subsp. *magnifica* (P4) Three other species were recorded as conservation significant, however, these are now excluded or no longer priority species.
	Threatened/ Priority Ecological Communities	None recorded	None recorded	None recorded	PEC: Weeli Wolli Spring Community (P1)	None recorded	None recorded
	WoNS and DPP Weeds	None recorded	None recorded	None recorded	None recorded	None recorded	None recorded
	Range Extensions	None recorded	None recorded	None recorded	12 taxa represent extensions *Aristida jerichoensis* var. *subspinulifera*, *Eremophila clarkei*, *Grevillea* aff. *berryana*, *Halgania cyanea* var. Allambi Stn (B.W. Strong 676), *Hannafordia bissillii* subsp. *bissillii*, *Lamarchea sulcata*, *Nicotiana umbratica*, *Peripleura obovata*, *Phyllanthus baccatus*, *Sida arsiniata*, and *Ventilago viminalis*	None recorded	None recorded
	Other significant findings	*Hibiscus* cf. *campanulatus* (potential P1)	Eight vegetation types likely to be groundwater dependent due to the presence of obligate phreatophytes	None recorded	None recorded	n/a	n/a
Other	**Limitations of survey**	No substantial limitations	Poor seasonal conditions Limited access in some areas	No substantial limitations	Recent fire in the area	None recorded	No substantial limitations

CPH surrounds		Coondewanna Flats Flora and Vegetation Assessment	Summary of Important Findings from Rapid Growth Project 5 Railway Project – Biological Assessments	Flora and Vegetation on the Hope Downs 4 Mine and Infrastructure Corridor	UMC Area A and Additional Areas: Vegetation and Flora Survey
Survey Details	**Reference**	(Astron, 2011)	(ENV, 2008c)	(Mattiske, 2008)	(ecologia, 2009)
	Type	Detailed flora and vegetation	Detailed flora and vegetation	Detailed flora and vegetation	Detailed flora and vegetation
	Client	BHP Billiton Iron Ore	Calibre Engenium Joint Venture	Pilbara Iron	United Minerals Corporation NL
	Location	Coondewanna Flats	Rapid Growth Project 5 Railway Project	Hope Downs 4 Infrastructure Corridor	Tenement E47/1429
	Size (ha)	6,756 ha	~ 31,110 ha	~29,700 ha	~3,310 ha
	Survey Timing	September 2010 and May 2011	April 2008	April, May & September 2008	May & September 2008
Methods	**Desktop Assessment (Yes/No)**	Yes	Yes	Yes	Yes
	Quadrat #	40	141	139	132
	Relevé #	3	18	n/a	n/a
	Targeted Searching (Yes/No)	Yes	Yes	Yes	Yes
	Other Methods	Opportunistic collections	n/a	Foot and vehicle traverses	Opportunistic collections
Results	**Taxa**	308	n/a	392	353
	Families	48	n/a	54	47
	Genera	132	n/a	155	145
	Vegetation Types	17	n/a	25	6
	Vegetation Condition	Good to excellent	Completely Degraded to very good	Degraded to good	Poor to excellent
	Weeds #	6	10	9	11
Significant Findings	**Threatened/ Priority Flora**	*Aristida lazaridis* (P2) *Goodenia nuda* (P4 at time of survey) *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3) *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) (P3)	*Rostellularia adscendens* var. *latifolia* (P3)	*Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3) *Stylidium weeliwolli* (P3) *Eremophila youngii* subsp. *lepidota* (P4) *Eremophila forrestii* subsp. *viridis* (P3)	*Aristida jerichoensis* var. *subspinulifera* (P3) *Rostellularia adscendens* var. *latifolia* (P3) *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3) *Goodenia nuda* (P4 at time of survey)
	Threatened/ Priority Ecological Communities	P1 PEC sub-type “Coolibah woodlands over lignum (*Muehlenbeckia florulenta*) over swamp wanderrie” P3 PEC sub-type “Coolibah and Mulga (*Acacia aneura)* woodland over lignum and tussock grasses on clay plains”	None recorded	None recorded	None recorded
	WoNS and DPP Weeds	None recorded	None recorded	None recorded	None recorded
	Range Extensions	None recorded	None recorded	*Atriplex vesicaria* *Eucalyptus? sheathiana* *Frankenia? magnifica* *Sclerolaena eriacantha*	None recorded
	Other significant findings	12 vegetation associations analogous to ‘Ecosystems at Risk’ for the broader Pilbara, including Valley floor Mulga, Hill-top floras of the Hamersley Range, and one major ephemeral watercourse.	None recorded	None recorded	None recorded
Other	**Limitations of survey**	Sub-optimal seasonal conditions prior to the survey, some access issues	No substantial limitations	Recent fires in the area Some access limitations	No substantial limitations

CPH surrounds		Fibre Optic Cable Flora and Fauna Assessment	Level 2 Flora and Vegetation Survey – South Flank	Flora and Vegetation Survey, Jinidi to Mainline Study Area	Targeted Survey for Lepidium catapycnon at Karijini National Park
Survey Details	**Reference**	(AECOM, 2020)	(Onshore, 2012b)	(Onshore, 2012a)	(Onshore, 2013b)
	Type	Reconnaissance flora and vegetation	Detailed flora and vegetation	Detailed flora and vegetation	Targeted flora
	Client	Pilbara Iron	BHP Billiton Iron Ore	BHP Billiton Iron Ore	BHP Billiton Iron Ore
	Location	Fibre Optic Cable north of West Angelas mine	South Flank	Jinidi	Karijini National Park
	Size (ha)	21.7 ha	18,627 ha	n/a	n/a
	Survey Timing	November 2019	March, April, May and September 2010, and June 2011	February, March, April and September 2011	November 2011
Methods	**Desktop Assessment (Yes/No)**	Yes	Yes	Yes	Yes
	Quadrat #	n/a	220	395	n/a
	Relevé #	8	n/a	n/a	n/a
	Targeted Searching (Yes/No)	Yes	Yes	Yes	Yes
	Other Methods	Opportunistic collections/records	Opportunistic collections/records	Weed Survey and Mapping	n/a
Results	**Taxa**	52	386	471	n/a
	Families	18	50	59	n/a
	Genera	30	160	178	n/a
	Vegetation Types	4	34	28	n/a
	Vegetation Condition	Excellent	Degraded to excellent	Degraded to excellent	n/a
	Weeds #	0	8	20	n/a
Significant Findings	**Threatened/ Priority Flora**	*Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3)	*Aristida lazaridis* (P2) *Pilbara trudgenii* (P2) *Aristida jerichoensis* var. *subspinulifera* (P3) *Dampiera metallorum* (P3) *Grevillea saxicola* (P3) *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3) *Rostellularia adscendens* var. *latifolia* (P3) *Sida* sp. Barlee Range (S van Leeuwen 1642) (P4) *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) (P3) *Triodia* sp. Mt. Ella (ME Trudgen 12739) (P3) *Acacia bromilowiana* (P4) *Lepidium catapycnon* (P4) *Eremophila magnifica* subsp. *magnifica* (P4) *Ptilotus mollis* (P4)	*Rostellularia adscendens* var. *latifolia* (P3) *Fimbristylis sieberiana* (P3) *Sida* sp. Barlee Range (S. van Leeuwen 1642) (P4) *Stylidium weeliwolli* (P3) *Goodenia nuda* (P4 at time of survey)	Eight populations of *Lepidium catapycnon* (P4) from 42 point locations
	Threatened/ Priority Ecological Communities	None recorded	PEC: Coolibah-lignum flats: Eucalyptus victrix over *Muehlenbeckia florulenta* • Coolibah woodland over Lignum over Swamp Wandiree (*Eriachne benthamii*) (P1) • Coolibah and Mulga (*Acacia aneura*) woodland over Lignum and tussock grasses on clay plains (P3)	PECs • Weeli Wolli Spring Community (P1) • Vegetation of sand dunes of the Hamersley Range/Fortescue Valley (previously 'Fortescue Valley Sand Dunes') (P3)	None recorded
	WoNS and DPP Weeds	None recorded	None recorded	None recorded	None recorded
	Range Extensions	None recorded	**Stylosanthes hamata*	None recorded	None recorded
	Other significant findings	None recorded	None recorded	None recorded	None recorded
Other	**Limitations of survey**	Not ideal survey timing	Poor seasonal conditions	No substantial limitations	No substantial limitations

Appendix C: Floristic site data.

Central Pilbara Hub Site CPH-001

Date	13/03/2022		
Described by	R. Butcher, E. Eakin-Busher		
Type	Quadrat	100m x 25m	
Location	MGA Zone 50		
	mE;		mN
	E		S
Veg Condition	Very Good		
Soil	Sandy Loam		
Rock Type	None Discernible		
Fire Age	Old (6+ yr)		
Habitat	Drainage Area/ Floodplain		
Vegetation	*Themeda triandra*, *Eulalia aurea* low open tussock grassland with *Eucalyptus victrix* low scattered trees over *Senna artemisioides* subsp. *artemisioides*, *Eremophila longifolia* mid shrubs.		

SPECIES LIST

Name	Specimen
Abutilon sp. Indet	
Acacia coriacea subsp. *pendens*	
Acacia dictyophleba	
Acacia maitlandii	
Acacia tumida var. *pilbarensis*	
Afrohybanthus aurantiacus	
Alternanthera nana	
Androcalva luteiflora	
Aristida inaequiglumis	
Aristida lazaridis	
Arivela viscosa	
Bidens bipinnata	
Boerhavia coccinea	
Chrysopogon fallax	
Corchorus tridens	
Corymbia hamersleyana	
Cucumis variabilis	
Cymbopogon ambiguus	
Digitaria brownii	
Duperreya commixta	
Enneapogon lindleyanus	
Eremophila longifolia	
Eriachne benthamii	
Eucalyptus victrix	
Eulalia aurea	
Euphorbia australis	
Euphorbia biconvexa	
Evolvulus alsinoides var. *villosicalyx*	

Central Pilbara Hub

SiteCPH-001

Fabaceae sp. *Indet*
Glycine canescens
Goodenia muelleriana
Gossypium australe
Gossypium robinsonii
Grevillea berryana
Hibiscus sturtii var. *platychlamys*
Indigofera rugosa
Isotropis iophyta
Jasminum didymum subsp. *lineare*
Paraneurachne muelleri
Pterocaulon sphacelatum
Rhynchosia minima
Santalum lanceolatum
Senna artemisioides subsp. *X artemisioides*

Central Pilbara Hub Site CPH-002

Date	13/03/2022
Described by	C. van den Bergh, D. Reith
Type	Quadrat 100m x 25m
Location	MGA Zone 50 715159 mE; 7469474 mN 119.0971 E -22.868793 S
Veg Condition	Very Good
Soil	Silty Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Hillcrest/ Upper Hillslope
Vegetation	*Triodia vanleeuwenii* low hummock grassland with *Senna glutinosa* subsp. *glutinosa* mid scattered shrubs.

SPECIES LIST

Name	Specimen
Acacia adoxa var. *adoxa*	
Acacia ancistrocarpa	
Acacia bivenosa	
Acacia dictyophleba	
Acacia hilliana	
Acacia monticola	
Acacia pruinocarpa	
Aristida contorta	
Cheilanthes sieberi subsp. *sieberi*	CPH022.05
Eriachne mucronata	
Eriachne pulchella subsp. *pulchella*	CPH-02-01
Eucalyptus leucophloia subsp. *leucophloia*	
Evolvulus alsinoides	
Fimbristylis dichotoma	CPH-02-02
Goodenia muelleriana	
Ptilotus rotundifolius	
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *pruinosa*	
Stemodia sp. Indet	
Triodia vanleeuwenii	
Triodia wiseana	

Central Pilbara Hub Site CPH-003

Date	13/03/2022
Described by	E. Eakin-Busher, R. Butcher
Type	Quadrat 50m x 50m
Location	MGA Zone 50 716024 mE; 7470676 mN 119.1053 E -22.857827 S
Veg Condition	Excellent
Soil	Silty Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Undulating Low Hills
Vegetation	*Triodia vanleeuwenii* low hummock grassland with *Eucalyptus leucophloia* subsp. *leucophloia*, *Corymbia deserticola* low isolated clumps of trees over *Senna ferraria*, *Acacia hilliana* open low shrubs.

SPECIES LIST

Name	Specimen
Acacia adoxa var. *adoxa*	
Acacia hilliana	
Corymbia deserticola subsp. *deserticola*	
Eremophila latrobei	
Eucalyptus leucophloia subsp. *leucophloia*	
Fimbristylis dichotoma	CPH 003-02
Goodenia stobbsiana	
Goodenia triodiophila	
Ptilotus calostachyus	
Santalum lanceolatum	
Senna ferraria	
Senna glutinosa subsp. *pruinosa*	
Themeda triandra	
Triodia vanleeuwenii	CPH 003-01

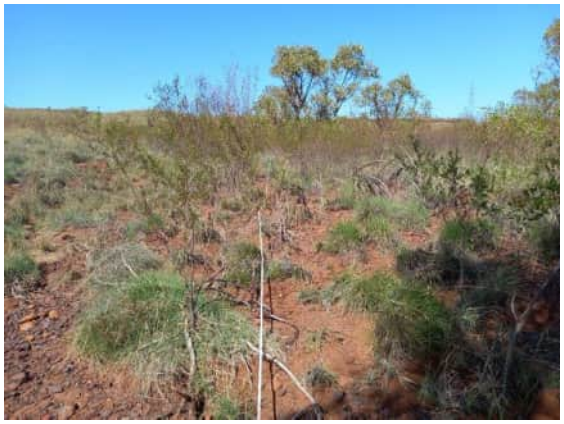
Central Pilbara Hub Site CPH-004

Date	13/03/2022
Described by	R. Butcher, E. Eakin-Busher
Type	Quadrat 100m x 25m
Location	MGA Zone 50 715903 mE; 7471176 mN 119.1041 E -22.853329 S
Veg Condition	Excellent
Soil	Sandy Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Gully
Vegetation	*Triodia wiseana* low hummock grassland with *Eucalyptus leucophloia* subsp. *leucophloia* (*Corymbia hamersleyana*) low open woodland over *Acacia hilliana* isolated shrubs.

SPECIES LIST

Name	Specimen
Acacia adoxa var. *adoxa*	
Acacia hamersleyensis	
Acacia hilliana	
Acacia maitlandii	
Arivela viscosa	
Avicennia marina	
Bidens bipinnata	
Cheilanthes sp. Indet	
Clerodendrum tomentosum var. *lanceolatum*	CPH012-08
Corchorus lasiocarpus	
Corymbia hamersleyana	
Duperreya commixta	
Eremophila sp. Indet.	CPH004-01
Eriachne lanata	CPH012-09
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Euphorbia biconvexa	
Fimbristylis dichotoma	CPH 003-02
Gomphrena cunninghamii	CPH004-02
Hakea chordophylla	
Hibiscus coatesii	CPH024-01
Jasminum didymum subsp. *lineare*	
Polycarpaea longiflora	
Ptilotus astrolasius	
Rubiaceae sp. Indet	
Senna glutinosa subsp. *glutinosa*	
Solanum lasiophyllum	CPH-034-03
Solanum sp. Indet	CPH001-04
Themeda triandra	
Triodia wiseana	

Central Pilbara Hub Site CPH-005



Date	13/03/2022
Described by	C. van den Bergh, D. Reith
Type	Quadrat 100m x 25m
Location	MGA Zone 50 715242 mE; 7470067 mN 119.0978 E -22.863427 S
Veg Condition	Very Good
Soil	Sandy Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Minor Drainage Line
Vegetation	*Themeda triandra* mid tussock grassland with *Acacia maitlandii* mid open shrubland with *Corymbia hamersleyana* open woodland with *Triodia wiseana*, *Triodia pungens* sparse hummock grassland.

.

SPECIES LIST

Name	Specimen	Notes
Acacia bivenosa		
Acacia dictyophleba		
Acacia inaequilatera		
Acacia maitlandii		
Acacia pachyacra		
Alternanthera denticulata	CPH031.06	
Androcalva luteiflora		
Bidens bipinnata		
Boerhavia coccinea	CPHr001.07	
Corchorus tridens		
Cucumis variabilis		
Cymbopogon ambiguus		
Duperreya commixta		
Eremophila longifolia		
Eriachne mucronata		
Eucalyptus xerothermica		
Evolvulus alsinoides		
Goodenia microptera		
Goodenia muelleriana		
Gossypium australe		
Jasminum didymum subsp. *lineare*		
Melhania oblongifolia	CPH021.01	
Nellica maderaspatensis		
Pterocaulon sphacelatum	CPH031.09	
Ptilotus calostachyus		
Ptilotus exaltatus		
Ptilotus obovatus var. *obovatus*		
Rhynchosia minima		
Senna artemisioides subsp. *oligophylla*		
Sida fibulifera		
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	CPH-30-05	
Solanum cleistogamum		
Solanum lasiophyllum		
Themeda triandra		
Trigastrotheca molluginea		
Triodia pungens		
Triodia wiseana		
Vigna lanceolata		

Central Pilbara Hub Site CPH-006

Date	13/03/2022
Described by	C. van den Bergh, D. Reith
Type	Quadrat 50m x 50m
Location	MGA Zone 50 715341 mE; 7469683 mN 119.0988 E -22.866887 S
Veg Condition	Excellent
Soil	Silty Clay Loam
Rock Type	Dolerite
Fire Age	Old (6+ yr)
Habitat	Basalt Outcrops
Vegetation	*Triodia wiseana* mid hummock grassland with *Acacia inaequilatera*, *Hakea loreus* subsp*. loreus* tall scattered shrubs.
Notes	

SPECIES LIST

Name	Specimen	Notes
Acacia inaequilatera		
Acacia maitlandii		
Aristida contorta		
Cheilanthes brownii	CPH-14-02	
Corymbia hamersleyana		
Cymbopogon sp. Indet		
Eucalyptus leucophloia subsp. *leucophloia*		
Indigofera rugosa		
Paraneurachne muelleri		
Rhynchosia minima		
Senna artemisioides subsp. *oligophylla*		
Senna glutinosa subsp. *glutinosa*		
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	CPH-015.03	
Triodia wiseana		

Central Pilbara Hub Site CPH-007

Date	13/03/2022
Described by	R. Butcher, E. Eakin-Busher
Type	Quadrat 50m x 50m
Location	MGA Zone 50 715228 mE; 7469050 mN 119.0978 E -22.872611 S
Veg Condition	Excellent
Soil	Silty Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Undulating Low Hills
Vegetation	*Triodia vanleeuwenii* low hummock grassland with *Eucalyptus leucophloia* subsp. *leucophloia*, *Corymbia hamersleyana* open woodland over scattered *Senna glutinosa* subsp. *glutinosa*, *Senna glutinosa* subsp. *pruinosa*, *Hakea chordophylla* mid shrubs over *Acacia adoxa* var *adoxa*, *Acacia hilliana* low open shrubland.

SPECIES LIST

Name	Specimen
Acacia adoxa var. *adoxa*	
Acacia hilliana	
Acacia pruinocarpa	
Corchorus lasiocarpus	
Corymbia hamersleyana	
Eremophila latrobei	CPH 007-01
Eucalyptus leucophloia subsp. *leucophloia*	
Gompholobium oreophilum	CPH020-02
Goodenia triodiophila	
Grevillea wickhamii	
Hakea chordophylla	
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Senna artemisioides subsp. *helmsii*	
Senna glutinosa subsp. *glutinosa*	CPH 033-3
Senna glutinosa subsp. *pruinosa*	
Solanum lasiophyllum	CPH-034-03
Triodia pungens	
Triodia vanleeuwenii	CPH007-02
Triodia wiseana	

Central Pilbara Hub Site CPH-008

Date	12/03/2022
Described by	R. Butcher, E. Eakin-Busher
Type	Quadrat 100m x 25m
Location	MGA Zone 50 714033 mE; 7467752 mN 119.0864 E -22.884481 S
Veg Condition	Excellent
Soil	Silty Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Medium Drainage Line
Vegetation	*Acacia tumida* var. *pilbarensis*, *Grevillea wickhamii*, *Gossypium robinsonii* mid to tall shrubland over *Acacia maitlandii* low scattered shrubs over *Themeda triandra* low open tussock grassland.

SPECIES LIST

Name	Specimen
Acacia ancistrocarpa	CPH024-03
Acacia maitlandii	CPH036-01
Acacia tumida var. *pilbarensis*	CPH008-05
Afrohybanthus aurantiacus	
Androcalva luteiflora	
Aristida holathera var. *holathera*	
Corymbia hamersleyana	
Cymbopogon ambiguus	
Dodonaea lanceolata var. *lanceolata*	CPH028.03
Duperreya commixta	
Eriachne benthamii	CPH008-01
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Eulalia aurea	
Evolvulus alsinoides var. *villosicalyx*	
Gastrolobium grandiflorum	CPH008-04
Gossypium robinsonii	
Grevillea wickhamii	
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Petalostylis labicheoides	
Pluchea dentex	CPH-35-0-1
Sida sp. Indet	CPH008-02
Sida sp. Supplejack Station (T.S. Henshall 2345)	CPH008-03
Themeda triandra	
Triodia pungens	

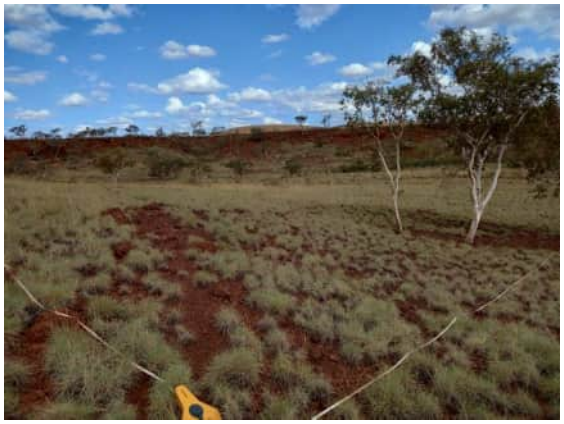
Central Pilbara Hub Site CPH-009

Date	12/03/2022
Described by	R. Butcher, E. Eakin-Busher
Type	Quadrat 50m x 50m
Location	MGA Zone 50 714008 mE; 7467324 mN 119.0862 E -22.888349 S
Veg Condition	Excellent
Soil	Silty Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Undulating Low Hills
Vegetation	*Triodia vanleeuwenii* open low hummock grassland with *Corymbia deserticola* subsp. *deserticola* open woodland over *Grevillea wickhamii* sparse shrubland with *Acacia ancistrocarpa*, *Hakea chordophylla* mid shrubs over *Acacia adoxa* var. *adoxa* low isolated clumps of shrubs.

SPECIES LIST

Name	Specimen
Acacia adoxa var. *adoxa*	
Acacia ancistrocarpa	CPH024-03
Acacia pruinocarpa	
Acacia tenuissima	
Amphipogon sericeus	CPH 009-1
Aristida inaequiglumis	CPH036-08
Corchorus lasiocarpus	
Eriachne mucronata	
Goodenia stobbsiana	
Goodenia triodiophila	
Grevillea wickhamii	
Hakea chordophylla	
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Peripleura obovata	CPH 009-2
Ptilotus calostachyus	
Ptilotus obovatus var. *obovatus*	
Sida calyxhymenia	CPH 009-03
Triodia vanleeuwenii	

Central Pilbara Hub Site CPH-010



Date	12/03/2022
Described by	C. van den Bergh, D. Reith
Type	Quadrat 50m x 50m
Location	MGA Zone 50 713880 mE; 7468191 mN 119.0848 E -22.880538 S
Veg Condition	Very Good
Soil	Silty Clay Loam
Rock Type	Detritals
Fire Age	Old (6+ yr)
Habitat	Hillslope
Vegetation	*Triodia vanleeuwenii* low hummock grassland with *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland.

SPECIES LIST

Name	Specimen
Acacia bivenosa	
Acacia tumida var. *pilbarensis*	
Eriachne ciliata	
Eriachne lanata	
Eucalyptus leucophloia subsp. *leucophloia*	
Senna glutinosa subsp. *glutinosa*	
Triodia vanleeuwenii	

Central Pilbara Hub Site CPH-011

Date	12/03/2022
Described by	C. van den Bergh, D. Reith
Type	Quadrat 100m x 25m
Location	MGA Zone 50 712986 mE; 7467474 mN 119.0762 E -22.887123 S
Veg Condition	Very Good
Soil	Silty Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Minor Drainage Line
Vegetation	*Acacia tumida* var. *pilbarensis*, *Dodonaea lanceolata* var. *lanceolata*, *Acacia monticola* shrubland over *Themeda triandra*, *Eulalia aurea* mid open tussock grassland with *Corymbia hamersleyana* low woodland.

SPECIES LIST

Name	Specimen
Abutilon otocarpum	CPH031.05
Acacia adoxa var. *adoxa*	
Acacia monticola	
Acacia pachyacra	
Acacia tumida var. *pilbarensis*	
Afrohybanthus aurantiacus	
Androcalva luteiflora	
Bonamia erecta	
Corchorus lasiocarpus subsp. *lasiocarpus*	CPH-35-02
Corymbia hamersleyana	
Cymbopogon sp. Indet	
Dodonaea lanceolata var. *lanceolata*	CPH028.03
Duperreya commixta	
Eremophila latrobei	
Eucalyptus gamophylla	
Eulalia aurea	
Gastrolobium grandiflorum	
Gossypium robinsonii	
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Paraneurachne muelleri	
Petalostylis labicheoides	
Ptilotus exaltatus	
Ptilotus obovatus var. *obovatus*	
Santalum lanceolatum	
Scaevola parvifolia subsp. *pilbarae*	
Senna artemisioides subsp. *helmsii*	
Seringia exastia	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	CPH-30-05
Themeda triandra	
Triodia pungens	
Triodia vanleeuwenii	

Central Pilbara Hub Site CPH-012

Date	12/03/2022			
Described by	R. Butcher, E. Eakin-Busher			
Type	Quadrat	100m x 25m		
Location	MGA Zone 50			
	714308	mE;	7467431	mN
	119.0891	E	-22.887341	S
Veg Condition	Excellent			
Soil	Silty Loam			
Rock Type	Quartz			
Fire Age	Recent (0 to 2 yr)			
Habitat	Gully			
Vegetation	*Acacia tumida* var. *pilbarensis*, *Petalostylis labicheoides* mid to tall shrubland with *Corymbia hamersleyana* low scattered trees over *Grevillea wickhamii*, *Acacia monticola* mid scattered shrubs over *Eriachne mucronata* low isolated clumps of tussock grasses.			

SPECIES LIST

Name	Specimen
Acacia adoxa var. *adoxa*	
Acacia maitlandii	CPH036-01
Acacia monticola	
Acacia tumida var. *pilbarensis*	CPH008-05
Afrohybanthus aurantiacus	
Androcalva luteiflora	
Aristida holathera var. *holathera*	
Bonamia pilbarensis	CPH017-07
Clerodendrum floribundum var. *angustifolium*	CPH012-06
Clerodendrum tomentosum var. *lanceolatum*	CPH012-08
Corchorus lasiocarpus	
Corymbia hamersleyana	
Cucumis variabilis	
Cymbopogon ambiguus	
Duperreya commixta	
Eragrostis olida	CPH012-02
Eriachne lanata	CPH012-09
Eriachne mucronata	
Euphorbia sp. *Ind*et	
Ficus brachypoda	CPH012-05
Gossypium robinsonii	
Grevillea wickhamii	
Grevillea wickhamii subsp. *aprica*	CPH012-03
Hibiscus sturtii var. *campylochlamys*	CPH012-04
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Mirbelia viminalis	
Paraneurachne muelleri	
Petalostylis labicheoides	
Santalum lanceolatum	
Sida sp. Supplejack Station (T.S. Henshall 2345)	CPH008-03
Tephrosia densa	
Tephrosia virens	
Themeda triandra	
Triodia pungens	
Triodia wiseana	
Vincetoxicum lineare	CPH012-01

Central Pilbara Hub Site CPH-013

Date	12/03/2022
Described by	C. van den Bergh, D. Reith
Type	Quadrat 50m x 50m
Location	MGA Zone 50 712673 mE; 7467093 mN 119.0732 E -22.890604 S
Veg Condition	Excellent
Soil	Silty Loam
Rock Type	BIF
Fire Age	Moderate (3 to 5 yr)
Habitat	Undulating Low Hills
Vegetation	*Triodia vanleeuwenii*, *Triodia wiseana* low open hummock grassland with *Acacia hilliana*, *Acacia adoxa* var. *adoxa*, *Eremophila latrobei* low sparse shrubland with *Corymbia deserticola* subsp. *deserticola* low scattered

SPECIES LIST

Name	Specimen
Acacia hilliana	
Acacia pruinocarpa	
Aristida sp. Indet	
Calytrix carinata	
Corymbia deserticola subsp. *deserticola*	
Corymbia hamersleyana	
Cymbopogon sp. Indet	
Eremophila latrobei	
Euploca pachyphylla	CPH013.01
Goodenia stobbsiana	
Goodenia triodiophila	
Hakea loreus subsp. *loreus*	
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Ptilotus calostachyus	
Senna artemisioides subsp. *oligophylla*	
Senna glaucifolia	CPH013.02
Solanum cleistogamum	
Solanum lasiophyllum	
Triodia vanleeuwenii	
Triodia wiseana	

Central Pilbara Hub Site CPH-014

Date	12/03/2022
Described by	C. van den Bergh, D. Reith
Type	Quadrat 100m x 25m
Location	MGA Zone 50 712390 mE; 7466402 mN 119.0705 E -22.896883 S
Veg Condition	Very Good
Soil	Silty Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Gully
Vegetation	*Acacia tumida* var. *pilbarensis*, *Acacia monticola*, *Grevillea wickhamii* mid to tall shrubland with *Corymbia ferriticola*, *Corymbia hamersleyana* low open woodland over *Eriachne mucronata*, *Cymbopogon ambiguus* low tussock grasses.

SPECIES LIST

Name	Specimen
Acacia hamersleyensis	
Acacia maitlandii	
Acacia monticola	
Acacia tumida var. *pilbarensis*	
Aerva javanica	
Afrohybanthus aurantiacus	
Androcalva luteiflora	
Arivela viscosa	
Astrotricha hamptonii	
Cheilanthes brownii	CPH-14-02
Clerodendrum floribundum	
Corymbia ferriticola	
Corymbia hamersleyana	
Cymbopogon ambiguus	
Dodonaea lanceolata var. *lanceolata*	CPH028.03
Duperreya commixta	
Eriachne ciliata	
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Euphorbia trigonosperma	CPH-30-03
Ficus brachypoda	CPH-14-01
Gastrolobium grandiflorum	
Gompholobium oreophilum	
Gossypium robinsonii	
Grevillea wickhamii subsp. *hispidula*	
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Melhania oblongifolia	CPH021.01
Paraneurachne muelleri	
Petalostylis labicheoides	
Psydrax latifolia	
Senna glutinosa subsp. *glutinosa*	
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	CPH-30-05
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	
Themeda triandra	

Central Pilbara Hub Site CPH-015

Date	12/03/2022
Described by	C. van den Bergh, D. Reith
Type	Quadrat 50m x 50m
Location	MGA Zone 50 712113 mE; 7466025 mN 119.0679 E -22.900316 S
Veg Condition	Excellent
Soil	Silty Loam
Rock Type	BIF
Fire Age	Moderate (3 to 5 yr)
Habitat	Hillcrest/ Upper Hillslope
Vegetation	Triodia vanleeuwenii, Triodia wiseana low open hummock grassland with Acacia bivenosa, Dodonaea coriacea, Senna glutinosa subsp. glutinosa, Senna glutinosa subsp. pruinosa mid to tall scattered to sparse shrubland with Eucalyptus leucophloia subsp. leucophloia low scattered trees.

SPECIES LIST

Name	Specimen
Acacia ancistrocarpa	
Acacia bivenosa	
Acacia hilliana	
Capparis lasiantha	
Corchorus lasiocarpus subsp. *lasiocarpus*	CPH-35-02
Cymbopogon sp. Indet	
Dodonaea coriacea	CPH015.01
Eremophila latrobei	
Eremophila longifolia	
Eriachne lanata	CPH-015.02
Eucalyptus leucophloia subsp. *leucophloia*	
Goodenia triodiophila	
Hakea loreus subsp. *loreus*	
Ptilotus calostachyus	
Ptilotus exaltatus	
Ptilotus rotundifolius	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *pruinosa*	
Senna glutinosa subsp. *x luerssenii*	
Sida sp. Golden calyces glabrous (H.N. Foote 32)	CPH015.05
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	CPH-015.04
Tephrosia oxalidea	
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	CPH-015.03
Triodia vanleeuwenii	
Triodia wiseana	

Central Pilbara Hub Site CPH-016

Date	12/03/2022
Described by	R. Butcher, E. Eakin-Busher
Type	Quadrat 50m x 50m
Location	MGA Zone 50 713345 mE; 7466368 mN 119.0798 E -22.897066 S
Veg Condition	Excellent
Soil	Silty Loam
Rock Type	None Discernible
Fire Age	Moderate (3 to 5 yr)
Habitat	Hillcrest/ Upper Hillslope
Vegetation	*Acacia tumida* var. *pilbarensis* mid to low open shrubland (in patches) over *Acacia adoxa* var. *adoxa*, *Acacia hilliana*, *Gompholobium oreophilum* over *Triodia wiseana* low isolated clumps of hummock

SPECIES LIST

Name	Specimen
Acacia adoxa var. *adoxa*	
Acacia hilliana	CPH024-06
Acacia monticola	
Acacia pruinocarpa	
Acacia tumida var. *pilbarensis*	CPH008-05
Afrohybanthus aurantiacus	
Amphipogon sericeus	CPH 009-1
Androcalva luteiflora	
Aristida holathera var. *holathera*	
Corchorus lasiocarpus	
Corymbia hamersleyana	
Dampiera candicans	
Eremophila latrobei subsp. *latrobei*	
Eriachne lanata	CPH012-09
Gompholobium oreophilum	CPH020-02
Goodenia triodiophila	
Grevillea wickhamii	
Hibiscus coatesii	CPH024-01
Hibiscus sturtii var. *campylochlamys*	CPH012-04
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Mirbelia viminalis	
Petalostylis labicheoides	
Ptilotus astrolasius	
Ptilotus calostachyus	
Santalum lanceolatum	CPH016-01
Scaevola browniana subsp. *browniana*	EERBOPP-01
Sida calyxhymenia	CPH 009-03
Sida sp. Supplejack Station (T.S. Henshall 2345)	CPH008-03
Themeda triandra	
Triodia vanleeuwenii	
Triodia wiseana	

Central Pilbara Hub Site CPH-017

Date	11/03/2022
Described by	R. Butcher, E. Eakin-Busher
Type	Quadrat 100m x 25m
Location	MGA Zone 50 712823 mE; 7465604 mN 119.0749 E -22.904028 S
Veg Condition	Excellent
Soil	Silty Clay Loam
Rock Type	None Discernible
Fire Age	Moderate (3 to 5 yr)
Habitat	Hillcrest/ Upper Hillslope
Vegetation	*Triodia vanleeuwenii* low open hummock grassland with *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Acacia bivenosa* mid shrubs.

SPECIES LIST

Name	Specimen
Acacia bivenosa	
Capparis lasiantha	
Cheilanthes sp. Indet	
Cymbopogon ambiguus	
Duperreya commixta	
Eremophila sp. Indet.	CPH 017-02
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Hibiscus burtonii	CPH 033-1
Jasminum didymum subsp. *lineare*	
Ptilotus astrolasius	
Ptilotus calostachyus	
Ptilotus exaltatus	
Ptilotus obovatus var. *obovatus*	
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *pruinosa*	
Senna glutinosa subsp. *x luerssenii*	
Sida sp. Golden calyces glabrous (H.N. Foote 32)	CPH17-01
Tephrosia densa	
Triodia pungens	
Triodia vanleeuwenii	

Central Pilbara Hub Site CPH-018

Date	12/03/2022
Described by	C. van den Bergh, D. Reith
Type	Quadrat 50m x 50m
Location	MGA Zone 50 714287 mE; 7469010 mN 119.0887 E -22.873090 S
Veg Condition	Excellent
Soil	Silty Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Undulating Low Hills
Vegetation	*Triodia vanleeuwenii* low hummock grassland *with Eucalyptus leucophloia* subsp. *leucophloia* low scattered to open woodland over *Acacia bivenosa*, *Senna sericea*, *Senna glutinosa* subsp. x *luerssenii* mid

SPECIES LIST

Name	Specimen
Acacia ancistrocarpa	
Acacia bivenosa	
Acacia maitlandii	
Acacia tenuissima	CPH-27-01
Capparis lasiantha	
Eucalyptus leucophloia subsp. *leucophloia*	
Ptilotus rotundifolius	
Senna glutinosa subsp. *pruinosa*	
Senna glutinosa subsp. *x luerssenii*	
Senna sericea	CPH08.01
Triodia vanleeuwenii	

Central Pilbara Hub Site CPH-019

Date	13/03/2022
Described by	C. van den Bergh, D. Reith
Type	Quadrat 50m x 50m
Location	MGA Zone 50 716463 mE; 7470997 mN 119.1096 E -22.854879 S
Veg Condition	Excellent
Soil	Silty Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Hillslope
Vegetation	*Triodia vanleeuwenii*, *Triodia wiseana* low hummock grassland with *Acacia hilliana* low scattered shrubs with *Eucalyptus leucophloia* subsp. *leucophloia* low scattered trees.

SPECIES LIST

Name	Specimen
Acacia adoxa var. *adoxa*	
Acacia hilliana	
Corymbia hamersleyana	
Eucalyptus leucophloia subsp. *leucophloia*	
Goodenia stobbsiana	
Goodenia triodiophila	
Hakea chordophylla	
Melhania oblongifolia	CPH021.01
Mirbelia viminalis	
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *pruinosa*	
Triodia vanleeuwenii	
Triodia wiseana	

Central Pilbara Hub Site CPH-020

Date	12/03/2022			
Described by	R. Butcher, E. Eakin-Busher			
Type	Quadrat	50m x 50m		
Location	MGA Zone	50		
	713263	mE;	7466970	mN
	119.0790	E	-22.891638	S
Veg Condition	Excellent			
Soil	Silty Clay Loam			
Rock Type	None Discernible			
Fire Age	Old (6+ yr)			
Habitat	Undulating Low Hills			

Vegetation *Triodia vanleeuwenii* low hummock grassland with *Corymbia deserticola* subsp. *deserticola* low sparse trees over *Hakea chordophylla* tall sparse shrubs over *Acacia adoxa* var. *adox*a, *Acacia ancistrocarpa* low isolated clumps of shrubs.

SPECIES LIST

Name	Specimen
Acacia adoxa var. *adoxa*	
Acacia hilliana	CPH024-06
Amphipogon sericeus	CPH 009-1
Corchorus lasiocarpus	
Gompholobium oreophilum	CPH020-02
Goodenia triodiophila	
Hakea chordophylla	
Indigofera monophylla	
Paraneurachne muelleri	CPH020-03
Ptilotus calostachyus	
Scaevola browniana subsp. *browniana*	EERBOPP-01
Senna ferraria	CPH020-01
Sida calyxhymenia	CPH 009-03
Triodia vanleeuwenii	

Central Pilbara Hub Site CPH-021

Date	11/03/2022
Described by	C. van den Bergh, D. Reith
Type	Quadrat 50m x 50m
Location	MGA Zone 50 712564 mE; 7464725 mN 119.0725 E -22.911996 S
Veg Condition	Very Good
Soil	Clay Loam
Rock Type	Conglomerate
Fire Age	Old (6+ yr)
Habitat	Drainage Area/ Floodplain
Vegetation	*Enneapogon polyphyllus*, *Themeda triandra*, *Chrysopogon fallax* mid open tussock grassland with *Petalostylis labicheoides*, *Acacia pyrifolia* var. *pyrifolia*, *Stylobasium spathulatum* mid to tall open shrubland over *Triodia pungens* low sparse hummock grassland with *Eucalyptus xerothermica*, *Corymbia hamersleyana* low scattered trees.

SPECIES LIST

Name	Specimen
Abutilon otocarpum	CPH031.05
Acacia bivenosa	
Acacia maitlandii	
Acacia pyrifolia var. *pyrifolia*	
Acacia tumida var. *pilbarensis*	
Afrohybanthus aurantiacus	
Alternanthera denticulata	CPH031.06
Androcalva luteiflora	
Aristida contorta	
Aristida holathera var. *holathera*	CPH021.06
Arivela viscosa	
Bidens bipinnata	
Boerhavia coccinea	CPHr001.07
Bonamia erecta	
Chrysopogon fallax	
Corchorus tridens	
Corymbia hamersleyana	
Cucumis variabilis	
Digitaria brownii	CPH031.07
Duperreya commixta	
Enneapogon lindleyanus	CPH028.05
Eragrostis cumingii	CPH021.02
Eragrostis olida	CPH021.05
Eremophila longifolia	
Eriachne sp. Indet	CPH022.04
Euphorbia australis var. *subtomentosa*	CPH021.04
Euphorbia trigonosperma	CPH-30-03
Evolvulus alsinoides var. *decumbens*	
Evolvulus alsinoides var. *villosicalyx*	
Gossypium robinsonii	
Grevillea wickhamii subsp. *hispidula*	
Hibiscus sturtii var. *campylochlamys*	CPH-30-01
Indigofera georgei	
Isotropis iophyta	
Malvastrum americanum	
Melhania oblongifolia	CPH021.01
Nellica maderaspatensis	
Paraneurachne muelleri	
Perotis rara	
Petalostylis labicheoides	
Pterocaulon sphacelatum	CPH031.09

Central Pilbara Hub Site CPH-021

Ptilotus astrolasius	
Ptilotus calostachyus	
Ptilotus obovatus var. *obovatus*	
Rhagodia eremaea	
Rhynchosia minima	
Salsola australis	
Santalum lanceolatum	
Scaevola parvifolia subsp. *pilbarae*	
Senna artemisioides subsp. *X artemisioides*	CPH021.07
Setaria surgens	
Sida fibulifera	
Sida sp. Indet	CPH021.03
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	CPH-30-05
Stylobasium spathulatum	
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	
Themeda triandra	
Trichodesma zeylanicum var. *zeylanicum*	
Triodia wiseana	

Central Pilbara Hub Site CPH-022

Date	11/03/2022
Described by	C. van den Bergh, D. Reith
Type	Quadrat 50m x 50m
Location	MGA Zone 50 712587 mE; 7464903 mN 119.0727 E -22.910383 S
Veg Condition	Very Good
Soil	Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Drainage Area/ Floodplain
Vegetation	*Triodia pungens* low open hummock grassland with *Acacia aptaneura, Acacia aneura*, *Acacia pruinocarpa* tall open shrubland (to dense patches) over sparse to scattered tussock grassland *with Eucalyptus xerothermica* low scattered trees.

SPECIES LIST

Name	Specimen
Abutilon fraseri subsp. *fraseri*	CPH028.02
Acacia adsurgens	CPH031.04
Acacia ancistrocarpa	
Acacia aneura	CPH022.01
Acacia aptaneura	
Acacia bivenosa	
Acacia pruinocarpa	
Afrohybanthus aurantiacus	
Alternanthera denticulata	CPH031.06
Aristida contorta	
Aristida inaequiglumis	
Atalaya hemiglauca	
Bidens bipinnata	
Boerhavia coccinea	CPHR001.07
Capparis lasiantha	
Cheilanthes sieberi subsp. *sieberi*	CPH022.05
Chrysopogon fallax	
Digitaria brownii	CPH031.07
Duperreya commixta	
Enchylaena tomentosa var. *tomentosa*	
Enneapogon lindleyanus	CPH028.05
Eragrostis sp. Indet	
Eremophila forrestii subsp. *forrestii*	
Eremophila longifolia	
Eriachne sp. Indet	CPH022.04
Eucalyptus xerothermica	
Gossypium robinsonii	

Central Pilbara Hub

Site CPH-022

Hibiscus burtonii	CPH031.03
Hibiscus sturtii var. *campylochlamys*	CPH-30-01
Indigofera georgei	CPH-022.03
Jasminum didymum subsp. *lineare*	
Paraneurachne muelleri	
Poaceae sp. Indet	CPHR001.04
Ptilotus exaltatus	
Ptilotus obovatus var. *obovatus*	
Rhagodia eremaea	
Rhynchosia minima	
Senna artemisioides subsp. *helmsii*	
Senna artemisioides subsp. *oligophylla*	
Sida fibulifera	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	CPH-30-05
Solanum cleistogamum	
Solanum lasiophyllum	
Tribulus macrocarpus	CPH-022.02
Trigastrotheca molluginea	
Triodia pungens	
Triodia wiseana	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-023

Date	11/03/2022
Described by	C. van den Bergh, D. Reith
Type	Quadrat 50m x 50m
Location	MGA Zone 50 712825 mE; 7465261 mN
	119.0749 E -22.907127 S
Veg Condition	Very Good
Soil	Silty Loam
Rock Type	Dolerite
Fire Age	Old (6+ yr)
Habitat	Undulating Low Hills
Vegetation	*Triodia vanleeuwenii* (*Triodia wiseana*) low hummock grassland with *Eucalyptus leucophloia* subsp. *leucophloia* low scattered trees over *Acacia ancistrocarpa*, *Hakea loreus* subsp. *loreus* mid to tall scattered

SPECIES LIST

Name	Specimen
Acacia adoxa var. *adoxa*	
Acacia adsurgens	
Acacia ancistrocarpa	
Acacia bivenosa	
Acacia monticola	
Acacia pachyacra	
Aristida contorta	
Eremophila latrobei	
Eriachne ciliata	
Eriachne mucronata	CPH023.01
Eucalyptus leucophloia subsp. *leucophloia*	
Goodenia stobbsiana	
Goodenia triodiophila	
Gossypium robinsonii	
Hakea loreus subsp. *loreus*	
Ptilotus calostachyus	
Ptilotus obovatus var. *obovatus*	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *x luerssenii*	
Solanum lasiophyllum	
Themeda triandra	
Triodia vanleeuwenii	
Triodia wiseana	

Central Pilbara Hub Site CPH-024

Date	11/03/2022
Described by	R. Butcher, E. Eakin-Busher
Type	Quadrat 100m x 25m
Location	MGA Zone 50 712021 mE; 7465105 mN 119.0671 E -22.908631 S
Veg Condition	Excellent
Soil	Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Drainage Area/ Floodplain
Vegetation	*Acacia ancistrocarpa*, *Acacia monticola* mid shrubland with *Eucalyptus gamophylla* low scattered mallee trees with *Eucalyptus leucophloia* subsp. *leucophloia* over *Acacia adoxa* var. *adoxa*, *Seringia exastia* isolated clumps of shrubs over *Triodia pungens* mid open hummock grassland.

SPECIES LIST

Name	Specimen
Acacia adoxa var. *adoxa*	
Acacia adsurgens	CPH024-07
Acacia ancistrocarpa	CPH024-03
Acacia bivenosa	
Acacia hilliana	CPH024-06
Acacia inaequilatera	
Acacia monticola	
Acacia pachyacra	
Acacia tenuissima	CPH024-05
Afrohybanthus aurantiacus	
Corchorus lasiocarpus	
Corymbia hamersleyana	
Cymbopogon ambiguus	
Duperreya commixta	
Enneapogon lindleyanus	CPH036-10
Eriachne mucronata	
Eucalyptus gamophylla	
Eucalyptus leucophloia subsp. *leucophloia*	
Grevillea wickhamii	
Hakea chordophylla	
Hibiscus coatesii	CPH024-01
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Paraneurachne muelleri	
Plantaginaceae sp. Indet	CPH024-04
Ptilotus calostachyus	
Ptilotus obovatus var. *obovatus*	
Rhagodia eremaea *grassland.*	
Sapindaceae sp. Indet	CPH024-02
Scaevola parvifolia subsp. *Pilbarae*	CPH036-03
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *glutinosa*	CPH 033-3
Seringia exastia	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	CPH036-09
Themeda triandra	
Triodia pungens	
Triodia vanleeuwenii	

Central Pilbara Hub Site CPH-025

Date	12/03/2022
Described by	C. van den Bergh, D. Reith
Type	Quadrat 50m x 50m
Location	MGA Zone 50 711663 mE; 7465899 mN 119.0635 E -22.901515 S
Veg Condition	Very Good
Soil	Silty Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Hillslope
Vegetation	*Triodia wiseana*, *Triodia vanleeuwenii* open hummock grassland with scattered *Eucalyptus leucophloia* subsp. *leucophloia* low trees with *Acacia bivenosa* mid scattered shrubs.

SPECIES LIST

Name	Specimen
Acacia ancistrocarpa	
Acacia bivenosa	
Eucalyptus leucophloia subsp. *leucophloia*	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *pruinosa*	
Themeda triandra	
Triodia vanleeuwenii	

Central Pilbara Hub Site CPH-026

Date	11/03/2022
Described by	R. Butcher, E. Eakin-Busher
Type	Quadrat 50m x 50m
Location	MGA Zone 50 711668 mE; 7464893 mN 119.0637 E -22.910596 S
Veg Condition	Very Good
Soil	Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Hillcrest/ Upper Hillslope
Vegetation	*Triodia vanleeuwenii* low open hummock grassland with *Eucalyptus leucophloia* subsp*. leucophloia* isolated clumps of trees over *Hakea chordophylla*, *Acacia inaequilatera* tall isolated clumps of shrubs over *Senna glutinosa* subsp. *glutinosa*, *Senna glutinosa* subsp. X *luerssenii*, *Ptilotus rotundifolius* mid to low shrubs.

SPECIES LIST

Name	Specimen
Acacia adsurgens	CPH024-07
Acacia aptaneura	
Acacia bivenosa	
Acacia inaequilatera	
Acacia maitlandii	CPH036-01
Acacia pruinocarpa	
Acacia sibirica	CPH026-01
Acacia tenuissima	CPH024-05
Afrohybanthus aurantiacus	
Aristida inaequiglumis	CPH036-08
Corymbia deserticola subsp. *deserticola*	
Duperreya commixta	
Eremophila sp. Indet.	
Eriachne mucronata	
Eriachne sp. Indet	
Eucalyptus gamophylla	
Eucalyptus leucophloia subsp. *leucophloia*	
Hakea chordophylla	
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Paraneurachne muelleri	
Paspalidium sp. Indet	
Ptilotus calostachyus	
Ptilotus obovatus var. *obovatus*	
Ptilotus rotundifolius	
Senna artemisioides subsp. *oligophylla*	CPH034-09
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *pruinosa*	
Senna glutinosa subsp. *x luerssenii*	
Sida sp. Indet	CPH034-X
Solanum lasiophyllum	
Themeda triandra	
Triodia pungens	
Triodia vanleeuwenii	

Central Pilbara Hub Site CPH-027

Date	11/03/2022			
Described by	C. van den Bergh, D. Reith			
Type	Quadrat	50m x 50m		
Location	MGA Zone	50		
	712345	mE;	7464328	mN
	119.0704	E	-22.915608	S
Veg Condition	Very Good			
Soil	Silty Clay Loam			
Rock Type	BIF			
Fire Age	Old (6+ yr)			
Habitat	Undulating Low Hills			
Vegetation	*Triodia vanleeuwenii* low hummock grassland with *Hakea chordophylla*, *Hakea loreus* subsp. *loreus*, *Acacia adsurgens*, *Acacia ancistrocarpa* mid to tall scattered shrubland over *Acacia adoxa* var. *adoxa* low scattered low shrubs with *Corymbia deserticola* subsp. *deserticola*, *Eucalyptus leucophloia* subsp. *leucophloia* low scattered trees.			

SPECIES LIST

Name	Specimen
Acacia adoxa var. *adoxa*	
Acacia adsurgens	
Acacia ancistrocarpa	
Acacia bivenosa	
Acacia colei var. *colei*	
Acacia inaequilatera	
Acacia tenuissima	CPH-27-01
Corymbia deserticola subsp. *deserticola*	
Eucalyptus leucophloia subsp. *leucophloia*	
Goodenia stobbsiana	
Goodenia triodiophila	
Hakea chordophylla	
Hakea loreus subsp. *loreus*	
Indigofera monophylla	
Ptilotus calostachyus	
Triodia vanleeuwenii	

Central Pilbara Hub Site CPH-028

Date	10/03/2022
Described by	C. van den Bergh, D. Reith
Type	Quadrat 100m x 25m
Location	MGA Zone 50 710461 mE; 7463679 mN 119.0521 E -22.921704 S
Veg Condition	Very Good
Soil	Clayey Sand
Rock Type	Detritals
Fire Age	Old (6+ yr)
Habitat	Minor Drainage Line
Vegetation	*Corymbia hamersleyana*, *Eucalyptus xerothermica*, *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Acacia dictyophleba*, *Acacia maitlandii*, *Acacia adsurgens* tall to mid sparse shrubland over *Themeda triandra* low sparse tussock grassland with *Triodia pungens* low scattered hummock grasses.

SPECIES LIST

Name	Specimen
Abutilon fraseri subsp. fraseri	CPH028.02
Acacia adsurgens	CPH031.04
Acacia ancistrocarpa	
Acacia aptaneura	
Acacia bivenosa	
Acacia dictyophleba	
Acacia maitlandii	
Acacia pruinocarpa	
Acacia pyrifolia var. *pyrifolia*	
Afrohybanthus aurantiacus	
Androcalva luteiflora	
Capparis lasiantha	
Corymbia hamersleyana	
Cymbopogon ambiguus	CPH028.01
Digitaria brownii	CPH031.07
Dipteracanthus australasicus subsp. *australasicus*	
Dodonaea lanceolata var. *lanceolata*	CPH028.03
Duperreya commixta	
Enneapogon lindleyanus	CPH028.05
Eucalyptus leucophloia subsp. *leucophloia*	
Eucalyptus xerothermica	
Eulalia aurea	
Gossypium robinsonii	
Indigofera georgei	
Isotropis iophyta	
Jasminum didymum subsp. *lineare*	
Paraneurachne muelleri	
Petalostylis labicheoides	
Pterocaulon sphacelatum	
Ptilotus astrolasius	
Ptilotus exaltatus	
Ptilotus obovatus var. *obovatus*	
Santalum lanceolatum	
Scaevola parvifolia subsp. *pilbarae*	
Sclerolaena cornishiana	CPH028.04
Senna artemisioides subsp. *oligophylla*	
Seringia exastia	
Sida fibulifera	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	
Themeda triandra	
Triodia pungens	

Vigna lanceolata

Central Pilbara Hub Site CPH-029

Date	10/03/2022			
Described by	E. Eakin-Busher, D. Reith			
Type	Quadrat	50m x 50m		
Location	MGA Zone	50		
	712365	mE;	7463422	mN
	119.0707	E	-22.923782	S
Veg Condition	Excellent			
Soil	Sandy Clay Loam			
Rock Type	BIF			
Fire Age	Old (6+ yr)			
Habitat	Undulating Low Hills			
Vegetation	Triodia vanleeuwenii low hummock grassland with Corymbia deserticola subsp. deserticola low scattered trees over Hakea loreus subsp. loreus, Grevillea berryana, Acacia ancistrocarpa mid to tall scattered shrubs over Ptilotus rotundifolius, Acacia adoxa var. adoxa low scattered shrubs.			

SPECIES LIST

Name	Specimen
Acacia adoxa var. *adoxa*	
Acacia adsurgens	CPH-029-02
Corymbia deserticola subsp. *deserticola*	
Grevillea berryana	CPH-029-01
Hakea loreus subsp. *loreus*	
Jasminum didymum subsp. *lineare*	
Ptilotus rotundifolius	
Triodia vanleeuwenii	

Central Pilbara Hub Site CPH-030

Date	10/03/2022
Described by	C. van den Bergh, D. Reith
Type	Quadrat 50m x 50m
Location	MGA Zone 50 710953 mE; 7463564 mN 119.0569 E -22.922682 S
Veg Condition	Very Good
Soil	Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Drainage Area/ Floodplain
Vegetation	*Acacia aptaneura*, *Eucalyptus xerothermica*, *Eucalyptus gamophylla* low woodland over *Chrysopogon fallax*, *Themeda triandra* sparse tussock grassland with *Triodia pungens* low sparse hummock grassland.

SPECIES LIST

Name	Specimen
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	CPH-30-02
Acacia aptaneura	
Acacia dictyophleba	
Acacia pruinocarpa	
Acacia pyrifolia var. *pyrifolia*	
Aristida contorta	
Bidens bipinnata	
Capparis lasiantha	
Cheilanthes sp. Indet	
Chrysopogon fallax	
Digitaria ciliaris	
Dipteracanthus australasicus subsp. australasicus	
Duperreya commixta	
Enneapogon polyphyllus	
Eragrostis sp. indet	
Eremophila forrestii subsp. *forrestii*	
Eriachne mucronata	
Eucalyptus gamophylla	
Eucalyptus xerothermica	
Eulalia aurea	
Euphorbia trigonosperma	CPH-30-03
Goodenia microptera	
Goodenia stellata	
Hibiscus burtonii	
Hibiscus sturtii var. *campylochlamys*	CPH-30-01
Jasminum didymum subsp. *lineare*	
Paraneurachne muelleri	
Peripleura obovata	CPH-30-06
Petalostylis labicheoides	
Pterocaulon sphacelatum	
Ptilotus calostachyus	
Ptilotus obovatus var. *obovatus*	
Rhagodia eremaea	
Scaevola parvifolia subsp. *pilbarae*	
Senna artemisioides subsp. *x sturtii*	CPH-30-04
Sida fibulifera	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	CPH-30-05
Solanum cleistogamum	
Themeda triandra	
Triodia pungens	

Central Pilbara Hub Site CPH-031

Date	10/03/2022
Described by	C. van den Bergh, D. Reith
Type	Quadrat 50m x 50m
Location	MGA Zone 50 711680 mE; 7463307 mN 119.0640 E -22.924911 S
Veg Condition	Very Good
Soil	Silty Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Triodia vanleeuwenii*, *Triodia pungens* mid to low hummock grassland with *Acacia pruinocarpa*, *Eucalyptus leucophloia* subsp. *leucophloia, Eucalyptus gamophylla* low open woodland over *Acacia bivenosa*, *Acacia maitlandii, Acacia adsurgens* tall to mid sparse shrubland.

SPECIES LIST

Name	Specimen
Abutilon otocarpum	CPH031.05
Acacia adsurgens	CPH031.04
Acacia aptaneura	
Acacia bivenosa	
Acacia maitlandii	
Acacia pruinocarpa	
Acacia tenuissima	CPH031.09
Alternanthera denticulata	CPH031.06
Androcalva luteiflora	
Aristida contorta	
Aristida holathera var. holathera	
Aristida inaequiglumis	
Chrysopogon fallax	
Codonocarpus cotinifolius	
Digitaria brownii	CPH031.07
Duperreya commixta	
Enchylaena tomentosa var. tomentosa	
Enneapogon polyphyllus	CPH31.01
Eremophila forrestii subsp. forrestii	
Eriachne mucronata	
Eucalyptus leucophloia subsp. leucophloia	
Goodenia microptera	
Goodenia stobbsiana	
Hakea chordophylla	
Hibiscus burtonii	CPH031.03
Jasminum didymum subsp. lineare	
Paraneurachne muelleri	
Petalostylis labicheoides	
Pterocaulon sp. Indet	CPH031.09
Ptilotus astrolasius	
Ptilotus calostachyus	
Salsola australis	
Sida fibulifera	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	CPH031.08
Sida sp. Supplejack Station (T.S. Henshall 2345)	CPH031.02
Solanum cleistogamum	
Solanum lasiophyllum	
Triodia pungens	
Triodia vanleeuwenii	

Central Pilbara Hub Site CPH-032

Date	14/03/2022
Described by	R. Butcher, E. Eakin-Busher
Type	Quadrat 50m x 50m
Location	MGA Zone 50 719595 mE; 7475988 mN 119.1394 E -22.809409 S
Veg Condition	Excellent
Soil	Silty Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Hillcrest/ Upper Hillslope
Vegetation	*Triodia wiseana* low open hummock grassland with *Eucalyptus leucophloia* subsp. *leucophloia* low isolated trees over *Acacia inaequilatera, Senna glutinosa* subsp. *glutinosa* mid to low scattered

SPECIES LIST

Name	Specimen
Acacia ancistrocarpa	CPH024-03
Acacia bivenosa	
Acacia inaequilatera	
Cheilanthes sp. Indet	
Eucalyptus leucophloia subsp. *leucophloia*	
Fimbristylis dichotoma	CPH 003-02
Hakea chordophylla	
Ptilotus astrolasius	
Senna glutinosa subsp. *glutinosa*	
Triodia wiseana	

Central Pilbara Hub Site CPH-033

Date	10/03/2022			
Described by	R. Butcher, E. Eakin-Busher			
Type	Quadrat	50m x 50m		
Location	MGA Zone 50			
	709698	mE;	7463441	mN
	119.0447	E	-22.923946	S
Veg Condition	Very Good			
Soil	Clayey Sand			
Rock Type	BIF			
Fire Age	Old (6+ yr)			
Habitat	Undulating Low Hills			
Vegetation	*Triodia pungens* low open hummock grassland with *Acacia ancistrocarpa*, *Acacia tumida* var. *pilbarensis* sparse shrubs with *Eucalyptus leucophloia* subsp. *leucophloia*, *Eucalyptus xerothermica*, *Acacia aptaneura* low trees.			

SPECIES LIST

Name	Specimen
Abutilon otocarpum	
Acacia adsurgens	CPH036-11
Acacia aptaneura	CPH 033-2
Acacia inaequilatera	
Acacia pruinocarpa	
Acacia tumida var. *pilbarensis*	CPH034-10
Afrohybanthus aurantiacus	
Amphipogon sericeus	CPH 033-4
Aristida contorta	
Aristida holathera var. *holathera*	
Aristida inaequiglumis	CPH033-05
Aristida sp. Indet	
Duperreya commixta	
Enneapogon lindleyanus	
Enneapogon polyphyllus	
Eriachne helmsii	CPH036-17
Eriachne lanata	
Eriachne mucronata	
Eucalyptus gamophylla	
Eucalyptus xerothermica	
Eulalia aurea	
Goodenia microptera	
Goodenia stobbsiana	
Hibiscus burtonii	CPH 033-1
Hibiscus sturtii var. *platychlamys*	CPH036-16
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Maireana villosa	
Paraneurachne muelleri	
Pterocaulon sphacelatum	
Ptilotus astrolasius	
Ptilotus calostachyus	
Ptilotus exaltatus	
Ptilotus obovatus var. *obovatus*	
Rhagodia eremaea	
Santalum lanceolatum	
Scaevola parvifolia subsp. *pilbarae*	CPH036-03
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa	CPH 033-3
Senna glutinosa subsp. *x luerssenii*	
Solanum lasiophyllum	CPH-034-03
Triodia pungens	
Triodia vanleeuwenii	
Waltheria indica	

Central Pilbara Hub Site CPH-034

Date	10/03/2022
Described by	R. Butcher, E. Eakin-Busher
Type	Quadrat 50m x 50m
Location	MGA Zone 50 708061 mE; 7464134 mN 119.0287 E -22.917900 S
Veg Condition	Very Good
Soil	
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Drainage Area/ Floodplain
Vegetation	*Triodia pungens*, *Triodia vanleeuwenii* low open hummock grassland with *Acacia pruinocarpa, Corymbia hamersleyana*, *Eucalyptus gamophylla* low scattered trees over *Acacia pyrifolia* var. *pyrifolia*, *Androcalva luteiflora* mid to low shrubs.

SPECIES LIST

Name	Specimen
Abutilon fraseri subsp. fraseri	CPH036-14
Abutilon otocarpum	
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	CPH-034-02
Abutilon sp. Indet	
Acacia adoxa var. *adoxa*	
Acacia adsurgens	CPH036-11
Acacia bivenosa	
Acacia maitlandii	CPH036-01
Acacia monticola	
Acacia pruinocarpa	
Acacia pyrifolia var. *pyrifolia*	
Acacia tenuissima	
Acacia tumida var. *pilbarensis*	CPH034-10
Acrachne racemosa	CPH034-07
Afrohybanthus aurantiacus	
Androcalva luteiflora	
Anthobolus leptomerioides	CPH034-04
Aristida contorta	
Aristida inaequiglumis	CPH036-08
Arivela viscosa	
Bidens bipinnata	
Boerhavia coccinea	CPH034-01
Capparis lasiantha	
Chrysocephalum gilesii	CPH036-18
Corchorus lasiocarpus	
Corymbia hamersleyana	
Cymbopogon ambiguus	
Digitaria brownii	CPH036-12
Digitaria ctenantha	
Dodonaea viscosa subsp. *mucronata*	CPH036-02
Duperreya commixta	
Enchylaena tomentosa var. *tomentosa*	CPH034-12
Enneapogon polyphyllus	
Eremophila longifolia	
Eriachne mucronata	
Eucalyptus gamophylla	
Eucalyptus leucophloia subsp. *leucophloia*	
Eucalyptus xerothermica	
Eulalia aurea	
Euphorbia australis var. *subtomentosa*	CPH034-06
Evolvulus alsinoides var. *villosicalyx*	
Gossypium robinsonii	

Central Pilbara Hub Site CPH-034

Hakea chordophylla	
Hibiscus sturtii var. *platychlamys*	CPH036-16
Indigofera georgei	
Indigofera monophylla	
Iseilema membranaceum	CPH034-08
Jasminum didymum subsp. *lineare*	
Maireana sp. Indet	
Malvastrum americanum	
Melhania oblongifolia	
Nellica sp. Indet	CPH034-11
Paraneurachne muelleri	
Perotis rara	
Ptilotus calostachyus	
Ptilotus exaltatus	
Ptilotus obovatus var. *obovatus*	
Rhagodia eremaea	
Rhynchosia minima	
Salsola australis	
Santalum lanceolatum	
Scaevola parvifolia subsp. *pilbarae*	CPH036-03
Senna artemisioides subsp. *oligophylla*	CPH034-09
Senna notabilis	
Setaria verticillata	
Sida sp. Indet	CPH034-X
Sida sp. L (A.M. Ashby 4202)	CPH036-13
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	CPH036-09
Solanum lasiophyllum	CPH-034-03
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	
Themeda triandra	
Trichodesma zeylanicum var. *zeylanicum*	
Triodia pungens	
Triodia vanleeuwenii	

Central Pilbara Hub Site CPH-035

Date	11/03/2022
Described by	C. van den Bergh, D. Reith
Type	Quadrat 100m x 25m
Location	MGA Zone 50 710992 mE; 7465136 mN 119.0571 E -22.908487 S
Veg Condition	Very Good
Soil	Silty Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Drainage Area/ Floodplain
Vegetation	*Triodia pungens* low open hummock grassland with *Acacia maitlandii*, *Acacia bivenosa, Petalostylis labicheoides* mid sparse shrubland with *Eucalyptus xerothermica* low open woodland.

SPECIES LIST

Name	Specimen
Acacia adsurgens	
Acacia ancistrocarpa	
Acacia aptaneura	
Acacia bivenosa	
Acacia maitlandii	
Acacia pruinocarpa	
Acacia pyrifolia var. *pyrifolia*	
Afrohybanthus aurantiacus	
Alternanthera denticulata	CPH031.06
Androcalva luteiflora	
Capparis lasiantha	
Cassytha filiformis	CPH-35-03
Corchorus lasiocarpus subsp. *lasiocarpus*	CPH-35-02
Dodonaea lanceolata var. *lanceolata*	CPH028.03
Duperreya commixta	
Enneapogon lindleyanus	CPH028.05
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Eucalyptus xerothermica	
Euphorbia trigonosperma	CPH-30-03
Evolvulus alsinoides var. *decumbens*	
Goodenia stobbsiana	
Gossypium robinsonii	
Indigofera georgei	
Iseilema membranaceum	CPH-35-04
Jasminum didymum subsp. *lineare*	
Nellica maderaspatensis	
Paraneurachne muelleri	
Petalostylis labicheoides	
Pluchea dentex	CPH-35-0-1
Pterocaulon sp. *Indet*	
Ptilotus astrolasius	
Ptilotus calostachyus	
Ptilotus exaltatus	
Ptilotus obovatus var. *obovatus*	
Santalum lanceolatum	
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *x luerssenii*	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	CPH-30-05
Stylobasium spathulatum	
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	
Themeda triandra	
Triodia pungens	

Central Pilbara Hub Site CPH-036

Date	9/03/2022
Described by	E. Eakin-Busher, D. Reith
Type	Quadrat 100m x 25m
Location	MGA Zone 50 706924 mE; 7464385 mN 119.0175 E -22.915775 S
Veg Condition	Very Good
Soil	Silty Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Drainage Area/ Floodplain
Vegetation	*Corymbia hamersleyana, Eucalyptus leucophloia* subsp. *leucophloia* low scattered trees (in landscape) with *Acacia pruinocarpa* over *Acacia aptaneura* tall shrubs over *Petalostylis labicheoides*, *Sida* sp. spiciform panicles (E. Leyland s.n. 14/8/90) mid to tall open shrubland over *Triodia pungens*, *Eulalia aurea*, *Themeda triandra* low open hummock and tussock grassland.

SPECIES LIST

Name	Specimen
Abutilon fraseri subsp. *fraseri*	CPH036-14
Abutilon otocarpum	
Acacia adsurgens	CPH036-11
Acacia aptaneura	CPH036-04
Acacia colei var. *colei*	
Acacia dictyophleba	CPH036-06
Acacia maitlandii	CPH036-01
Acacia pruinocarpa	
Afrohybanthus aurantiacus	
Androcalva luteiflora	
Aristida inaequiglumis	CPH036-08
Capparis lasiantha	
Chrysocephalum gilesii	CPH036-18
Chrysopogon fallax	
Corymbia hamersleyana	
Digitaria brownii	CPH036-12
Dipteracanthus australasicus subsp. *australasicus*	CPH036-05
Dodonaea viscosa subsp. *mucronata*	CPH036-02
Duperreya commixta	
Dysphania sp. Indet	
Enneapogon lindleyanus	CPH036-10
Eragrostis cumingii	
Eragrostis sp. Indet	
Eriachne helmsii	CPH036-17
Eucalyptus gamophylla	
Eulalia aurea	
Evolvulus alsinoides	
Hibiscus sturtii var. *platychlamys*	CPH036-16
Indigofera georgei	
Jasminum didymum subsp. *lineare*	
Paraneurachne muelleri	
Petalostylis labicheoides	
Psydrax latifolia	
Pterocaulon sphacelatum	
Ptilotus obovatus var. *obovatus*	
Santalum lanceolatum	
Scaevola amblyanthera var. *centralis*	CPH036-07
Scaevola parvifolia subsp. *pilbarae*	CPH036-03
Senna artemisioides subsp. X artemisioides	
Setaria sp. Indet	
Sida sp. L (A.M. Ashby 4202)	CPH036-13

Central Pilbara Hub — Site CPH-036

Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	CPH036-09
Themeda triandra	
Triodia pungens	

Central Pilbara Hub Site CPH-037

Date	13/03/2022
Described by	C. van den Bergh, D. Reith
Type	Quadrat 100m x 25m
Location	MGA Zone 50 715709 mE; 7469560 mN 119.1024 E -22.867942 S
Veg Condition	Excellent
Soil	Sandy Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Minor Drainage Line
Vegetation	*Themeda triandra*, *Eriachne mucronata* mid tussock grassland with *Acacia maitlandii, Acacia monticola*, *Androcalva luteiflora* tall sparse shrubland with *Corymbia hamersleyana* low scattered trees with emergent *Eucalyptus victrix*

SPECIES LIST

Name	Specimen
Acacia inaequilatera	
Acacia maitlandii	
Acacia monticola	
Alternanthera denticulata	CPH031.06
Androcalva luteiflora	
Boerhavia coccinea	CPHR001.07
Clerodendrum floribundum	
Corymbia hamersleyana	
Cymbopogon ambiguus	CPH028.01
Eriachne mucronata	
Evolvulus alsinoides	
Goodenia muelleriana	
Gossypium australe	
Gossypium robinsonii	
Hibiscus coatesii	CPH-37-01
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Melhania oblongifolia	CPH021.01
Paraneurachne muelleri	
Rhynchosia minima	
Santalum lanceolatum	
Senna artemisioides subsp. *oligophylla*	
Senna notabilis	
Sida fibulifera	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	CPH-30-05
Solanum cleistogamum	
Solanum lasiophyllum	
Themeda triandra	
Trichodesma zeylanicum var. *zeylanicum*	
Triodia pungens	
Triodia wiseana	

Central Pilbara Hub Site CPH-038

Date	14/03/2022
Described by	C. van den Bergh, D. Reith
Type	Quadrat 50m x 50m
Location	MGA Zone 50 720021 mE; 7475477 mN 119.1436 E -22.813968 S
Veg Condition	Very Good
Soil	Clay Loam
Rock Type	BIF
Fire Age	Moderate (3 to 5 yr)
Habitat	Hillslope
Vegetation	*Triodia vanleeuwenii* open hummock grassland with *Hakea* loreus subsp. *loreus*, *Grevillea wickhamii* subsp. *hispidula*, *Senna glutinosa* subsp. *glutinosa* mid to tall scattered shrubs with *Eucalyptus leucophloia* subsp. *leucophloia* low scattered trees.

SPECIES LIST

Name	Specimen
Acacia adoxa var. adoxa	
Acacia hilliana	
Acacia inaequilatera	
Bonamia pilbarensis	
Eriachne mucronata	
Fimbristylis sp. Indet	
Grevillea wickhamii subsp. hispidula	
Hakea loreus subsp. loreus	
Senna glutinosa subsp. glutinosa	
Senna glutinosa subsp. pruinosa	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	CPH015.04
Triodia vanleeuwenii	
Triodia wiseana	

Central Pilbara Hub Site CPH-039

Date	14/03/2022
Described by	C. van den Bergh, D. Reith
Type	Quadrat 50m x 50m
Location	MGA Zone 50
	719858 mE; 7474607 mN
	119.1421 E -22.821849 S
Veg Condition	Excellent
Soil	Silty Loam
Rock Type	BIF
Fire Age	Moderate (3 to 5 yr)
Habitat	Undulating Low Hills
Vegetation	*Triodia vanleeuwenii* low open hummock grassland with *Acacia inaequilatera*, *Grevillea wickhamii* subsp. *hispidula*, *Hakea loreus* subsp. *loreus* mid to tall scattered shrubs over *Acacia adoxa* var. *adoxa*, *Acacia hilliana* low scattered shrubs with *Eucalyptus leucophloia* subsp. *leucophloia* low scattered trees (in landscape).

SPECIES LIST

Name	Specimen
Acacia adoxa var. adoxa	
Acacia hilliana	
Bonamia pilbarensis	CPH039.01
Corchorus lasiocarpus subsp. lasiocarpus	CPH-35-02
Dampiera candicans	
Goodenia stobbsiana	
Goodenia triodiophila	
Grevillea wickhamii subsp. hispidula	
Hakea loreus subsp. loreus	
Indigofera monophylla	
Scaevola browniana subsp. browniana	
Senna glaucifolia	CPH013.02
Triodia vanleeuwenii	

Central Pilbara Hub Site CPH-040

Date	14/03/2022			
Described by	R. Butcher, E. Eakin-Busher			
Type	Quadrat	50m x 50m		
Location	MGA Zone 50			
	720243	mE;	7476800	mN
	119.1456	E	-22.802000	S
Veg Condition	Excellent			
Soil	Silty Loam			
Rock Type	BIF			
Fire Age	Old (6+ yr)			
Habitat	Hillcrest/ Upper Hillslope			
Vegetation	*Triodia wiseana* low hummock grassland with *Acacia maitlandii*, *Acacia bivenosa*, *Acacia inaequilatera* mid to low shrubs.			

SPECIES LIST

Name	Specimen
Acacia adoxa var. adoxa	
Acacia ancistrocarpa	CPH024-03
Acacia bivenosa	
Acacia inaequilatera	
Acacia maitlandii	
Acacia pruinocarpa	
Corymbia hamersleyana	
Cymbopogon ambiguus	
Eremophila latrobei	CPH 007-01
Eriachne lanata	CPH012-09
Fimbristylis dichotoma	CPH 003-02
Grevillea wickhamii	
Hakea chordophylla	
Senna artemisioides subsp. oligophylla	CPH034-09
Senna glutinosa subsp. glutinosa	CPH 033-3
Senna glutinosa subsp. pruinosa	
Triodia wiseana	

Central Pilbara Hub Site CPH-041

Date	15/06/2022
Described by	C. van den Bergh, E. Eakin-Busher
Type	Quadrat 50m x 50m
Location	MGA Zone 50 687400 mE; 7464843 mN 118.8272 E -22.913943 S
Veg Condition	Excellent
Soil	Sandy Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Themeda triandra*, *Triodia melvillei* low open tussock and hummock grassland with *Acacia pruinocarpa*, *Acacia aptaneura* low isolated clumps of trees over *Hakea loreus* subsp. *loreus, Psydrax latifolia* low isolated shrubs.

SPECIES LIST

Name	Specimen
Abutilon otocarpum	
Acacia aptaneura	
Acacia dictyophleba	
Acacia pruinocarpa	
Alternanthera nana	
Aristida contorta	
Aristida inaequiglumis	
Aristida obscura	
Cheilanthes sieberi subsp. sieberi	
Chrysopogon fallax	
Cucumis variabilis	
Digitaria ammophila	
Digitaria brownii	CPH048.02
Duperreya commixta	
Enneapogon polyphyllus	
Eragrostis eriopoda	CPH-51-10
Eremophila latrobei subsp. filiformis	
Eulalia aurea	
Euphorbia drummondii	CPH041-02
Euphorbia tannensis subsp. eremophila	
Evolvulus alsinoides var. villosicalyx	
Fimbristylis dichotoma	CPH060-01
Goodenia sp. Indet	
Hakea loreus subsp. loreus	
Hibiscus burtonii	
Hibiscus sturtii var. platychlamys	CPH036-16
Maireana villosa	CPH041-03
Ophioglossum lusitanicum	
Panicum decompositum	
Paraneurachne muelleri	
Psydrax latifolia	
Psydrax suaveolens	
Pterocaulon sphacelatum	
Ptilotus exaltatus	
Ptilotus obovatus var. obovatus	
Rhagodia sp. Hamersley (M. Trudgen 17794)	
Salsola australis	
Sclerolaena cornishiana	
Senna pleurocarpa var. angustifolia	
Sida fibulifera	
Sida sp. L (A.M. Ashby 4202)	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	

Central Pilbara Hub

SiteCPH-041

Solanum lasiophyllum
Teucrium teucriiflorum
Themeda triandra
Triodia melvillei
Triodia pungens
Tripogonella loliiformis
Vincetoxicum lineare

Central Pilbara Hub Site CPH-042

Date	13/06/2022
Described by	E. Eakin-Busher
Type	Quadrat 50m x 50m
Location	MGA Zone 50 686504 mE; 7465305 mN 118.8184 E -22.909873 S
Veg Condition	Very Good
Soil	Medium Heavy Clay
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Claypan
Vegetation	Aristida contorta, Digitaria ammophila, Aristida inaequiglumis, Aristida jerichoensis var. subspinulifera low closed tussock grassland with Fimbristylis dichotoma low sedges.

SPECIES LIST

Name	Specimen
Acacia aptaneura	CPH042.07
Acacia sp. Indet	
Alternanthera angustifolia	CPH042-07
Alternanthera nana	
Ammannia multiflora	CPH042-27
Ammannia sp. Indet	
Aristida contorta	
Aristida holathera var. *holathera*	
Aristida inaequiglumis	
Aristida jerichoensis var. *subspinulifera*	CPH042.21
Aristida obscura	
Bidens bipinnata	
Blumea tenella	CPH042.09
Calandrinia sp. Indet	CPH042-18
Calandrinia sp. Indet	CPH042-19
Centipeda minima subsp. *macrocephala*	
Cheilanthes sieberi subsp. *sieberi*	
Chrysopogon fallax	
Cymbopogon ambiguus	
Cymbopogon obtectus	CPH094-03
Cyperus iria	CPH042-16
Dactyloctenium radulans	
Digitaria ammophila	
Duperreya commixta	
Eragrostis cumingii	CPH042.20
Eragrostis leptocarpa	CPH042-16
Eragrostis pergracilis	CPH042.24
Eragrostis tenellula	CPH042-12
Eragrostis xerophila	CPH042.22
Eremophila lanceolata	
Eremophila longifolia	
Eriachne flaccida	CPH042.24
Eriachne mucronata	
Erigeron bonariensis	
Eulalia aurea	
Fimbristylis dichotoma	CPH042-14
Goodenia prostrata	
Grevillea berryana	
Hakea loreus subsp. *loreus*	
Lysiana murrayi	CPH042-17
Maireana villosa	CPH042-25
Malvastrum americanum	
Mimulus gracilis	CPH042-10
Ophioglossum lusitanicum	
Panicum effusum	

Central Pilbara Hub — Site CPH-042

Perotis rara	
Pluchea dentex	CPH042-13
Pluchea rubelliflora	CPH042-11
Portulaca oleracea	
Pterocaulon sphacelatum	
Ptilotus calostachyus	
Ptilotus gaudichaudii	CPH042-02
Ptilotus obovatus *var.* obovatus	
Ptilotus schwartzii *var.* schwartzii	
Rhagodia eremaea	
Sida platycalyx	
Solanum nigrum	
Sonchus oleraceus	
Stemodia grossa	
Themeda triandra	
Trichodesma zeylanicum *var*. zeylanicum	
Typha domingensis	
Vittadinia *sp. Indet*	
Wahlenbergia tumidifructa	CPH042-26

Central Pilbara Hub Site CPH-043

Date	24/03/2022
Described by	E. Eakin-Busher, B. Loudon
Type	Quadrat 50m x 50m
Location	MGA Zone 50 686044 mE; 7466175 mN 118.8138 E -22.902068 S
Veg Condition	Very Good
Soil	Sandy Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Drainage Area/ Floodplain
Vegetation	Themeda triandra mid tussock grassland with Acacia macraneura, Hakea loreus subsp. loreus low isolated clumps of trees.

SPECIES LIST

Name	Specimen
Acacia macraneura	CPH043-07
Acacia tumida var. *pilbarensis*	CPH008-05
Alternanthera nana	
Aristida contorta	
Aristida jerichoensis var. *subspinulifera*	CPH043-02
Bidens bipinnata	
Chrysopogon fallax	
Cucumis variabilis	
Dactyloctenium radulans	
Digitaria ammophila	
Eragrostis cumingii	
Eragrostis tenellula	
Eucalyptus xerothermica	
Eulalia aurea	
Euphorbia drummondii	CPH043-05
Euphorbia tannensis subsp. *eremophila*	
Evolvulus alsinoides	
Fimbristylis dichotoma	CPH043-03
Hakea loreus subsp. *loreus*	
Jasminum didymum subsp. *lineare*	
Olearia stuartii	CPH043-06
Panicum decompositum	
Perotis rara	
Pterocaulon sphacelatum	
Sida platycalyx	EBBLOPP-01
Sida sp. L (A.M. Ashby 4202)	
Solanum ferocissimum	
Stemodia viscosa	
Themeda triandra	CPH043-01
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)	
Wahlenbergia tumidifructa	

Central Pilbara Hub Site CPH-044

Date	15/03/2022
Described by	C. van den Bergh, D. Reith
Type	Quadrat 50m x 50m
Location	MGA Zone 50 685891 mE; 7467496 mN 118.8122 E -22.890158 S
Veg Condition	Very Good
Soil	Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Drainage Area/ Floodplain
Vegetation	*Triodia melvillei* low open hummock grassland with *Acacia aptaneura*, *Hakea loreus* subsp*. loreus* low scattered trees with *Aristida ?inaequiglumis*, *Themeda triandra* low tussock open grassland with Hibiscus spp., Sida spp. low scattered shrubs.

SPECIES LIST

Name	Specimen
Acacia aneura	CPH-44-03
Acacia aptaneura	
Acacia ayersiana	CPH-44-04
Acacia pruinocarpa	
Aristida contorta	
Cheilanthes sieberi subsp. *sieberi*	CPH022.05
Chrysopogon fallax	
Cucumis variabilis	
Digitaria brownii	CPH-51-05
Duperreya commixta	
Enneapogon lindleyanus	CPH028.05
Eremophila longifolia	
Eriachne helmsii	CPH-44-02
Eulalia aurea	
Hakea loreus subsp*. loreus*	
Hibiscus burtonii	CPH031.03
Hibiscus sturtii var. *campylochlamys*	CPH-44-07
Indigofera georgei	CPH-51-02
Jasminum didymum subsp*. lineare*	
Panicum sp. Indet	
Paraneurachne muelleri	
Poaceae sp. Indet	CPH-44-01
Psydrax latifolia	
Pterocaulon sphacelatum	CPH031.09
Ptilotus obovatus var. *obovatus*	
Senna pleurocarpa var. *angustifolia*	CPH-44-05
Sida fibulifera	
Sida sp. dark green fruits (S. van Leeuwen 2260)	CPH-44-08
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	CPH031.08
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	CPH-30-05
Solanum lasiophyllum	
Solanum sp. Indet	CPH-44-06
Themeda triandra	
Triodia melvillei	
Triodia pungens	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-045

Date	15/06/2022
Described by	C. van den Bergh, E. Eakin-Busher
Type	Relevé
Location	MGA Zone 50 688575 mE; 7465052 mN 118.8386 E -22.911923 S
Veg Condition	Degraded
Soil	Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Minor Drainage Line
Vegetation	*Typha domingensis* tall thicket with *Acacia cowleana* tall parse shrubland over *Stemodia grossa* low sparse shrubs with *Eucalyptus xerothermica*, *Acacia aptaneura*, *Acacia pruinocarpa* low scattered trees over *Themeda triandra* mid open tussock grassland (along the edges of the Typha strips). Discharge location down a minor drainage line so now results in flowing water and Typha thickets. Vegetation altered from discharge with weeds present

SPECIES LIST

Name	Specimen
Typha domingensis	

Central Pilbara Hub Site CPH-046

Date	15/06/2022
Described by	C. van den Bergh, E. Eakin-Busher
Type	Quadrat 50m x 50m
Location	MGA Zone 50 690685 mE; 7465285 mN 118.8592 E -22.909583 S
Veg Condition	Excellent
Soil	Sandy Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Triodia pungens* mid to low open hummock grassland with *Acacia cowleana, Acacia tenuissima* tall sparse shrubland with *Corymbia deserticola* subsp. *deserticola* low isolated trees.

SPECIES LIST

Name	Specimen
Abutilon fraseri subsp. *fraseri*	
Abutilon otocarpum	
Acacia adsurgens	
Acacia aptaneura	
Acacia cowleana	
Acacia dictyophleba	
Acacia inaequilatera	
Acacia pachyacra	
Alternanthera nana	
Aristida contorta	
Aristida holathera var. *holathera*	
Aristida inaequiglumis	
Bidens bipinnata	
Brachychiton acuminatus	
Cheilanthes sieberi subsp. *sieberi*	
Chrysopogon fallax	
Codonocarpus cotinifolius	
Corymbia deserticola subsp. *deserticola*	
Cucumis variabilis	
Cymbopogon ambiguus	
Digitaria brownii	CPH048.02
Duperreya commixta	
Enneapogon lindleyanus	
Enneapogon polyphyllus	
Eragrostis olida	CPH021.05
Eremophila forrestii subsp. *forrestii*	
Eremophila fraseri subsp. *fraseri*	
Eremophila longifolia	
Eriachne mucronata	CPH048-07
Eulalia aurea	
Euphorbia australis var. *hispidula*	CPH046-01
Euphorbia tannensis subsp. *eremophila*	
Euploca sp. Indet	
Evolvulus alsinoides var. *villosicalyx*	
Glycine canescens	
Goodenia triodiophila	
Gossypium australe	
Gossypium robinsonii	
Hakea chordophylla	
Hakea loreus subsp. *loreus*	
Hibiscus sturtii var. *platychlamys*	CPH036-16
Isotropis iophyta	
Jasminum didymum subsp. *lineare*	
Maireana villosa	CPH041-03
Malvastrum americanum	
Melhania oblongifolia	

Central Pilbara Hub

SiteCPH-046

Panicum decompositum	
Paraneurachne muelleri	
Peripleura obovata	
Psydrax latifolia	
Pterocaulon sphacelatum	
Ptilotus calostachyus	
Ptilotus exaltatus	
Ptilotus obovatus var. *obovatus*	
Ptilotus rotundifolius	
Santalum lanceolatum	
Scaevola parvifolia subsp. *pilbarae*	
Senna artemisioides subsp. *helmsii*	
Senna artemisioides subsp. *oligophylla*	
Senna artemisioides subsp. *X artemisioides*	
Senna glutinosa subsp. *glutinosa*	
Setaria surgens	CPH048-12
Sida fibulifera	
Sida sp. L (A.M. Ashby 4202)	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	
Solanum cleistogamum	
Solanum lasiophyllum	
Themeda triandra	
Triodia pungens	

Central Pilbara Hub Site CPH-047

Date	13/06/2022
Described by	E. Eakin-Busher
Type	Quadrat 50m x 50m
Location	MGA Zone 50 685215 mE; 7466667 mN 118.8057 E -22.897715 S
Veg Condition	Very Good
Soil	Silty Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Footslope
Vegetation	*Triodia wiseana* low hummock grassland with *Acacia monticola*, *Acacia maitlandii*, *Acacia atkinsiana* mid sparse shrubland with *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland.

SPECIES LIST

Name	Specimen
Acacia ancistrocarpa	
Acacia atkinsiana	
Acacia bivenosa	
Acacia dictyophleba	
Acacia maitlandii	
Acacia monticola	
Acacia pruinocarpa	
Acacia tenuissima	
Amphipogon sericeus	
Aristida inaequiglumis	
Codonocarpus cotinifolius	
Corchorus lasiocarpus	
Cucumis variabilis	
Eragrostis setifolia	CPH47.01
Eremophila longifolia	
Eriachne mucronata	
Eriachne pulchella	
Eucalyptus leucophloia subsp. *leucophloia*	
Euploca sp. Indet	
Gompholobium oreophilum	
Goodenia microptera	
Goodenia stobbsiana	
Hibiscus sturtii var. *campylochlamys*	
Indigofera monophylla	
Paraneurachne muelleri	
Polycarpaea holtzei	
Ptilotus calostachyus	
Ptilotus exaltatus	
Ptilotus rotundifolius	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *pruinosa*	
Senna glutinosa subsp. *x luerssenii*	
Seringia exastia	
Sida sp. Golden calyces glabrous (H.N. Foote 32)	CPH17-01
Solanum lasiophyllum	
Tribulus suberosus	
Triodia wiseana	

Central Pilbara Hub Site CPH-048

Date	14/06/2022
Described by	E. Eakin-Busher, E. Marsh
Type	Quadrat 50m x 50m
Location	MGA Zone 50 684169 mE; 7468808 mN 118.7952 E -22.878505 S
Veg Condition	Very Good
Soil	Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Drainage Area/ Floodplain
Vegetation	*Themeda triandra, Aristida inaequiglumis, Eulalia aurea* mid to low open tussock grassland with *Acacia aptaneura*, *Acacia pruinocarpa* tall sparse shrubs over *Acacia dictyophleba*, *Gossypium robinsonii* mid to tall shrubs over *Ptilotus obovatus* var *obovatus*, *Maireana villosa* low isolated clumps of shrubs.

SPECIES LIST

Name	Specimen
Abutilon fraseri subsp. *fraseri*	
Abutilon lepidum	
Abutilon macrum	
Abutilon otocarpum	
Abutilon sp. Indet	
Acacia aptaneura	
Acacia dictyophleba	
Acacia elachantha	CPH048-10
Acacia pruinocarpa	
Alternanthera nana	
Anthobolus leptomerioides	
Aristida contorta	
Aristida inaequiglumis	CPH048-11
Arivela viscosa	
Bidens bipinnata	
Boerhavia repleta	
Cenchrus ciliaris	
Chrysopogon fallax	
Corchorus tridens	
Corymbia deserticola subsp. *deserticola*	
Crotalaria medicaginea var. *neglecta*	
Cucumis variabilis	
Dactyloctenium radulans	
Dendrophyllanthus erwinii	
Digitaria brownii	CPH048.02
Digitaria ctenantha	
Duperreya commixta	
Enneapogon caerulescens	
Enneapogon polyphyllus	
Enneapogon robustissimus	
Eriachne mucronata	CPH048-07
Eulalia aurea	
Euphorbia biconvexa	CPH048-01
Evolvulus alsinoides var. *villosicalyx*	
Glycine canescens	CPH048-05
Gomphrena canescens	
Goodenia stellata	CPH048-06
Gossypium australe	
Gossypium robinsonii	
Hibiscus burtonii	
Hibiscus sturtii var. *platychlamys*	CPH036-16
Isotropis iophyta	
Maireana villosa	
Malvastrum americanum	

Central Pilbara Hub Site CPH-048

Melhania oblongifolia	
Paraneurachne muelleri	
Paspalidium rarum	CPH048-08
Perotis rara	
Pterocaulon sphacelatum	
Ptilotus astrolasius	
Ptilotus clementii	
Ptilotus exaltatus	
Ptilotus obovatus var. *obovatus*	
Ptilotus polystachyus	CPH048-13
Rhagodia eremaea	
Rhynchosia minima	
Salsola australis	
Senna artemisioides subsp. *helmsii*	
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *x luerssenii*	
Setaria surgens	CPH048-12
Sida platycalyx	
Sida sp. L (A.M. Ashby 4202)	CPH036-13
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	
Solanum lasiophyllum	
Sporobolus australasicus	
Stylobasium spathulatum	
Tephrosia sp. Newman (A.A. Mitchell PRP 29)	CPH001-
Themeda triandra	
Tragus australianus	
Tribulus sp. Indet	CPH048-03
Trichodesma zeylanicum var. *zeylanicum*	
Triodia pungens	

Central Pilbara Hub Site CPH-049

Date	14/06/2022				
Described by	E. Eakin-Busher, E. Marsh				
Type	Quadrat	50m x 50m			
Location	MGA Zone	50			
	683293	mE;	7469896	mN	
	118.7866	E	-22.868775	S	
Veg Condition	Excellent				
Soil	Clay Loam				
Rock Type	BIF				
Fire Age	Old (6+ yr)				
Habitat	Stony Plain				
Vegetation	*Triodia pungens* hummock grassland with *Eucalyptus gamophylla* low open woodland over *Acacia atkinsiana*, *Acacia bivenosa* tall sparse shrubs over *Ptilotus rotundifolius* mid shrubs.				

SPECIES LIST

Name	Specimen
Abutilon fraseri subsp. *fraseri*	
Acacia atkinsiana	
Acacia bivenosa	
Acacia pruinocarpa	
Alternanthera nana	
Aristida inaequiglumis	
Cenchrus ciliaris	
Crotalaria medicaginea var. *neglecta*	
Cymbopogon ambiguus	
Dendrophyllanthus erwinii	
Duperreya commixta	
Enneapogon caerulescens	
Enneapogon polyphyllus	
Eriachne mucronata	
Eriachne pulchella	
Eucalyptus gamophylla	
Eucalyptus leucophloia subsp. *leucophloia*	
Eulalia aurea	
Euphorbia biconvexa	
Evolvulus alsinoides var. *villosicalyx*	
Fimbristylis dichotoma	CPH049-01
Gossypium robinsonii	
Hibiscus sturtii var. *platychlamys*	CPH036-16
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Maireana villosa	
Melhania oblongifolia	
Paraneurachne muelleri	
Ptilotus astrolasius	
Ptilotus calostachyus	
Ptilotus clementii	
Ptilotus exaltatus	
Ptilotus obovatus var. obovatus	
Ptilotus rotundifolius	
Rhagodia eremaea	
Rhynchosia minima	
Schizachyrium fragile	
Senna artemisioides subsp. *helmsii*	
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *x luerssenii*	
Seringia exastia	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	
Solanum lasiophyllum	
Themeda triandra	
Triodia pungens	
Vincetoxicum lineare	CPH012-01

Central Pilbara Hub Site CPH-050

Date	15/03/2022
Described by	R. Butcher, E. Eakin-Busher
Type	Quadrat 50m x 50m
Location	MGA Zone 50 685217 mE; 7468152 mN 118.8055 E -22.884307 S
Veg Condition	Very Good
Soil	Silty Loam
Rock Type	None Discernible
Fire Age	Moderate (3 to 5 yr)
Habitat	Stony Plain
Vegetation	*Triodia melvillei*, *Eulalia aurea* mid open hummock and tussock grassland with *Acacia aptaneura, Acacia pruinocarpa*, *Hakea loreus subsp. loreus* low open woodland over *Anthobolus leptomerioides* mid isolated clumps shrubs over *Ptilotus astrolasius* low isolated clumps shrubs.

SPECIES LIST

Name	Specimen
Abutilon sp. Indet	
Acacia aptaneura	CPH 033-2
Acacia pachyacra	CPH050-04
Acacia pruinocarpa	
Alternanthera nana	
Anthobolus leptomerioides	CPH034-04
Aristida contorta	
Aristida holathera var. *holathera*	
Aristida inaequiglumis	CPH036-08
Boerhavia coccinea	CPH034-01
Chrysopogon fallax	
Cucumis variabilis	
Digitaria ammophila	CPH050-02
Digitaria brownii	CPH036-12
Duperreya commixta	
Enchylaena tomentosa var. *tomento*sa	CPH034-12
Eremophila latrobei subsp. *filiformis*	
Eriachne helmsii	CPH036-17
Eulalia aurea	
Evolvulus alsinoides var. *villosicalyx*	
Hakea loreus subsp. *loreus*	
Hibiscus burtonii	CPH 033-1
Hibiscus sturtii var. *platychlamys*	CPH036-16
Indigofera georgei	
Isotropis iophyta	
Paraneurachne muelleri	
Psydrax latifolia	
Ptilotus astrolasius	CPH050-03
Ptilotus obovatus var. *obovatus*	
Sida sp. L (A.M. Ashby 4202)	CPH036-13
Solanum lasiophyllum	
Themeda triandra	
Triodia melvillei	CPH050-01

Central Pilbara Hub Site CPH-051

Date	15/03/2022
Described by	C. van den Bergh, D. Reith
Type	Quadrat 50m x 50m
Location	MGA Zone 50 686042 mE; 7467992 mN 118.8136 E -22.885660 S
Veg Condition	Very Good
Soil	Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Drainage Area/ Floodplain
Vegetation	*Triodia pungens* low hummock grassland with *Acacia pruinocarpa*, *Eucalyptus gamophylla* low open woodland with *Ptilotus rotundifolius*, *Senna glutinosa* subsp. *glutinosa*, *Hakea loreus* subsp. *loreus* mid to tall scattered shrubs.

SPECIES LIST

Name	Specimen
Abutilon sp. Indet	
Acacia ancistrocarpa	
Acacia aptaneura	CPH-51-06
Acacia atkinsiana	CPH-51-03
Acacia dictyophleba	
Acacia elachantha	CPH-51-01
Acacia pruinocarpa	
Amphipogon sericeus	CPH-51-07
Aristida holathera var. *holathera*	CPH021.06
Cassytha filiformis	CPH-35-03
Chrysopogon fallax	
Corymbia deserticola subsp. *deserticola*	
Digitaria brownii	CPH-51-05
Duperreya commixta	
Eragrostis eriopoda	CPH-51-10
Eremophila forrestii subsp. *forrestii*	
Eremophila longifolia	
Eriachne mucronata	
Eucalyptus gamophylla	
Euphorbia tannensis subsp. *eremophila*	CPH-51-08
Gompholobium oreophilum	
Hakea loreus subsp. *loreus*	
Hibiscus burtonii	CPH031.03
Hibiscus coatesii	CPH-51-09
Hibiscus sturtii var. *campylochlamys*	CPH-30-01
Indigofera georgei	CPH-51-02
Jasminum didymum subsp. *lineare*	
Paraneurachne muelleri	
Peripleura obovata	CPH-30-06
Pterocaulon sphacelatum	CPH031.09
Ptilotus calostachyus	
Ptilotus rotundifolius	
Scaevola parvifolia subsp. *pilbarae*	
Senna artemisioides subsp. *helmsii*	
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *glutinosa*	CPH-51-11
Seringia exastia	
Sida fibulifera	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	CPH031.08
Sida sp. Supplejack Station (T.S. Henshall 2345)	CPH-51-04
Solanum lasiophyllum	
Trachymene oleracea subsp. *oleracea*	
Triodia pungens	

Central Pilbara Hub Site CPH-054

Date	15/03/2022
Described by	R. Butcher, E. Eakin-Busher
Type	Quadrat 50m x 50m
Location	MGA Zone 50 685496 mE; 7468454 mN 118.8082 E -22.881552 S
Veg Condition	Excellent
Soil	Silty Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Triodia pungens* low hummock grassland with *Eucalyptus leucophloia* subsp. *leucophloia* low isolated trees over *Eucalyptus gamophylla* mid to tall shrubs over *Seringia exastia* low isolated clumps of shrubs.

SPECIES LIST

Name	Specimen
Acacia adsurgens	CPH024-07
Acacia ancistrocarpa	CPH024-03
Acacia bivenosa	
Acacia colei var. *colei*	
Acacia dictyophleba	
Acacia tenuissima	CPH054-03
Amphipogon sericeus	CPH 009-1
Aristida sp. Indet	
Duperreya commixta	
Eragrostis eriopoda	CPH054-01
Eriachne lanata	CPH012-09
Eucalyptus gamophylla	
Eucalyptus leucophloia subsp. *leucophloia*	
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Ptilotus calostachyus	
Ptilotus obovatus var. *obovatus*	
Ptilotus rotundifolius	
Santalum lanceolatum	
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *pruinosa*	
Senna glutinosa subsp. *x luerssenii*	
Seringia exastia	
Sida sp. Indet	CPH054-02
Triodia pungens	

Central Pilbara Hub Site CPH-055

Date 24/03/2022
Described by R. Butcher, K. Geelhoed
Type Quadrat 50m x 50m
Location MGA Zone 50
685300 mE; 7467279 mN
118.8064 E -22.892179 S
Veg Condition Very Good
Soil Silty Clay Loam
Rock Type None Discernible
Fire Age Moderate (3 to 5 yr)
Habitat Drainage Area/ Floodplain
Vegetation *Themeda triandra* mid to low tussock grassland with *Hakea loreus* subsp. *loreus* low trees.

SPECIES LIST

Name	Specimen
Acacia aneura	CPH55-19
Acacia colei var. *colei*	
Alternanthera nana	CPH55-09
Aristida contorta	CPH55-17
Aristida inaequiglumis	CPH55-10
Aristida lazaridis	CPH55-01
Arivela viscosa	
Boerhavia repleta	CPH55-20
Chrysopogon fallax	
Cucumis variabilis	
Dichanthium sericeum subsp. *humilius*	CPH55-11
Duperreya commixta	
Enneapogon polyphyllus	CPH55-12
Eremophila lanceolata	CPH55-05
Eremophila longifolia	CPH55-06
Eulalia aurea	
Euphorbia drummondii	CPH55-08
Euphorbia sp. Indet	CPH55-07
Evolvulus alsinoides var. *villosicalyx*	
Goodenia prostrata	CPH55-04
Hakea loreus subsp. *loreus*	
Ipomoea polymorpha	CPH55-22
Maireana villosa	CPH55-13
Perotis rara	
Pluchea dunlopii	CPH55-02
Pterocaulon sphacelatum	
Ptilotus obovatus var. *obovatus*	CPH55-16
Sclerolaena sp. Indet	CPH55-14
Senna notabilis	
Sida platycalyx	CPH55-03
Sida sp. L (A.M. Ashby 4202)	CPH55-18
Themeda triandra	
Trichodesma zeylanicum var. *zeylanicum*	

Central Pilbara Hub Site CPH-056

Date	14/06/2022			
Described by	C. van den Bergh, C. Parker			
Type	Quadrat	50m x 50m		
Location	MGA Zone	50		
	682284	mE;	7472724	mN
	118.7764	E	-22.843352	S
Veg Condition	Excellent			
Soil	Sandy Clay Loam			
Rock Type	Dolerite			
Fire Age	Old (6+ yr)			
Habitat	Drainage Area/ Floodplain			
Vegetation	*Themeda triandra*, *Paraneurachne muelleri*, *Aristida inaequiglumis*, *Eulalia aurea* mid tussock grassland with *Eucalyptus xerothermica*, *Eucalyptus gamophylla* low open woodland over *Acacia cowleana*, *Acacia steedmanii* subsp. *borealis*, *Acacia ancistrocarpa* mid to tall sparse shrubland over *Triodia pungens* low sparse hummock grassland.			

SPECIES LIST

Name	Specimen
Abutilon cryptopetalum	
Abutilon macrum	
Acacia ancistrocarpa	
Acacia cowleana	
Acacia dictyophleba	
Acacia monticola	
Acacia pruinocarpa	
Acacia steedmanii subsp. *borealis*	CPH056.01
Afrohybanthus aurantiacus	
Alternanthera nana	
Aristida contorta	
Aristida inaequiglumis	
Arivela viscosa	
Blumea tenella	CPH042.09
Bonamia erecta	
Chrysopogon fallax	
Corymbia deserticola subsp. *deserticola*	
Crotalaria medicaginea var. *neglecta*	
Dactyloctenium radulans	
Digitaria brownii	CPH-51-05
Duperreya commixta	
Enneapogon lindleyanus	CPH028.05
Enneapogon polyphyllus	CPH056.08
Eragrostis olida	CPH021.05
Eremophila longifolia	
Eucalyptus gamophylla	
Eucalyptus leucophloia subsp. *leucophloia*	
Eucalyptus xerothermica	
Eulalia aurea	
Euphorbia australis var. *subtomentosa*	
Euphorbia sp. Indet	
Euploca tenuifolia	CPHr001.06
Evolvulus alsinoides var. *villosicalyx*	
Gomphrena canescens	
Goodenia microptera	
Hibiscus burtonii	CPH056.03
Hibiscus sturtii var. *campylochlamys*	CPH-30-01
Indigofera georgei	
Indigofera monophylla	
Isotropis iophyta	
Jasminum didymum subsp. *lineare*	
Maireana planifolia	CPH056.05
Paraneurachne muelleri	
Perotis rara	

Central Pilbara Hub Site CPH-056

Portulaca oleracea	
Pterocaulon sphacelatum	
Ptilotus astrolasius	
Ptilotus calostachyus	
Ptilotus exaltatus	
Ptilotus helipteroides	CVT4.01
Ptilotus obovatus var. *obovatus*	
Ptilotus polystachyus	CPH056.06
Rhynchosia minima	
Scaevola parvifolia subsp. *pilbarae*	
Sclerolaena cornishiana	CPH056.04
Senna artemisioides subsp. *oligophylla*	
Senna artemisioides subsp. *X artemisioides*	CPH021.07
Senna notabilis	
Senna pleurocarpa var. *angustifolia*	
Seringia exastia	
Setaria surgens	CPH056.07
Sida fibulifera	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	CPH015.04
Solanum lasiophyllum	
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	CPH056.02
Themeda triandra	
Tribulus hirsutus	
Triodia pungens	
Vigna lanceolata	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-057

Date	14/06/2022
Described by	E. Eakin-Busher, E. Marsh
Type	Quadrat 50m x 50m
Location	MGA Zone 50 683007 mE; 7470260 mN 118.7837 E -22.865520 S
Veg Condition	Excellent
Soil	Sandy Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Triodia pungens* low hummock grassland with *Eucalyptus gamophylla*, *Acacia atkinsiana* tall isolated clumps of shrubs with *Eucalyptus leucophloia* subsp. *leucophloia* low isolated trees.

SPECIES LIST

Name	Specimen
Abutilon macrum	
Acacia adoxa var. *adoxa*	
Acacia atkinsiana	
Acacia bivenosa	
Acacia steedmanii subsp. *borealis*	
Acacia tenuissima	
Aristida sp. Indet	
Capparis lasiantha	
Duperreya commixta	
Enneapogon polyphyllus	
Eucalyptus gamophylla	
Eucalyptus leucophloia subsp. *leucophloia*	
Euphorbia tannensis subsp. *eremophila*	
Evolvulus alsinoides var. *villosicalyx*	
Gompholobium oreophilum	
Gossypium robinsonii	
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Melhania oblongifolia	
Paraneurachne muelleri	
Ptilotus calostachyus	
Ptilotus clementii	
Ptilotus exaltatus	
Ptilotus obovatus var. *obovatus*	
Ptilotus rotundifolius	
Scaevola parvifolia subsp. *pilbarae*	
Schizachyrium fragile	
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *x luerssenii*	
Senna notabilis	
Themeda triandra	
Triodia pungens	
Vincetoxicum lineare	CPH012-01

Central Pilbara Hub Site CPH-058

Date	14/06/2022
Described by	E. Eakin-Busher, E. Marsh
Type	Quadrat 100m x 25m
Location	MGA Zone 50 678676 mE; 7475012 mN 118.7410 E -22.823078 S
Veg Condition	Very Good
Soil	Sandy Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Medium Drainage Line
Vegetation	*Tephrosia rosea* var. Fortescue creeks (M.I.H. Brooker 2186), *Acacia pyrifolia* var. *pyrifolia*, *Androcalva luteiflora* open shrubland over *Themeda triandra*, *Cymbopogon ambiguus* mid to low sparse grassland with *Eucalyptus xerothermica* low isolated trees.

SPECIES LIST

Name	Specimen
Abutilon amplum	
Abutilon lepidum	CPH058-03
Abutilon otocarpum	
Acacia maitlandii	
Acacia pyrifolia var. *pyrifolia*	
Afrohybanthus aurantiacus	
Alternanthera nana	
Androcalva luteiflora	
Aristida holathera var. *holathera*	
Aristida inaequiglumis	
Arivela viscosa	
Bidens bipinnata	
Boerhavia coccinea	
Cenchrus ciliaris	
Cenchrus setiger	
Chrysocephalum apiculatum	
Corchorus crozophorifolius	
Corchorus sidoides subsp. *sidoides*	CPH058-02
Corchorus tridens	
Corymbia hamersleyana	
Crotalaria medicaginea var. *neglecta*	
Cucumis variabilis	
Cymbopogon ambiguus	
Digitaria ctenantha	
Enneapogon lindleyanus	
Eucalyptus victrix	
Eucalyptus xerothermica	
Eulalia aurea	
Euphorbia biconvexa	
Euphorbia sp. Indet	
Euploca tenuifolia	
Evolvulus alsinoides var. *decumbens*	
Evolvulus alsinoides var. *villosicalyx*	
Gomphrena canescens	
Gossypium australe	
Gossypium robinsonii	
Hibiscus burtonii	
Isotropis iophyta	
Malvastrum americanum	
Melhania oblongifolia	
Notoleptopus decaisnei var. orbicularis (A.B. Craig 428)	
Paraneurachne muelleri	

Central Pilbara Hub Site CPH-058

Paspalidium rarum	CPH048-08
Polycarpaea longiflora	
Pterocaulon sphacelatum	
Ptilotus obovatus var. *obovatus*	
Rhynchosia minima	
Rostellularia adscendens var. *latifolia*	CPH058-01
Setaria surgens	CPH048-12
Sida sp. Indet	CPH058-04
Sida sp. L (A.M. Ashby 4202)	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	
Solanum lasiophyllum	
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	
Themeda triandra	
Trichodesma zeylanicum var. *zeylanicum*	
Triodia pungens	

Central Pilbara Hub Site CPH-059

Date	31/03/2022
Described by	E. Eakin-Busher, B. Loudon
Type	Quadrat 50m x 50m
Location	MGA Zone 50 679410 mE; 7475829 mN 118.7481 E -22.815621 S
Veg Condition	Very Good
Soil	Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Other
Vegetation	*Acacia incurvaneura*, *Acacia macraneura*, *Acacia pruinocarpa* low woodland (patches) over *Aristida contorta*, *Triodia melvillei*, *Aristida obscura* low open tussock and hummock grassland (patches).

SPECIES LIST

Name	Specimen
Abutilon cryptopetalum	
Abutilon fraseri subsp. *fraseri*	CPH036-14
Abutilon otocarpum	
Acacia incurvaneura	CPH059-06
Acacia macraneura	CPH064-03
Acacia pachyacra	
Acacia pruinocarpa	
Acacia sibirica	CPH059-06
Alternanthera nana	
Aristida contorta	
Aristida inaequiglumis	
Aristida obscura	
Arivela viscosa	
Bidens bipinnata	
Boerhavia coccinea	
Boerhavia repleta	
Capparis lasiantha	
Cheilanthes sieberi subsp. *sieberi*	
Chrysopogon fallax	
Convolvulus remotus	
Cucumis variabilis	
Cymbopogon ambiguus	
Dichanthium sericeum subsp. *humilius*	
Digitaria ammophila	
Digitaria brownii	
Digitaria ctenantha	
Duperreya commixta	
Enneapogon lindleyanus	
Enneapogon polyphyllus	
Eremophila forrestii	
Eremophila lanceolata	
Eremophila latrobei subsp. *filiformis*	
Eulalia aurea	
Euphorbia biconvexa	
Evolvulus alsinoides var. *villosicalyx*	
Goodenia muelleriana	CPH066-07
Goodenia prostrata	CPH059-04
Gossypium australe	
Grevillea berryana	
Hibiscus sturtii var. *platychlamys*	CPH094-01
Iseilema eremaeum	CPH071-01
Maireana planifolia	CPH059-05
Maireana villosa	CPH066-02
Panicum decompositum	
Paraneurachne muelleri	

Central Pilbara Hub Site CPH-059

Perotis rara	
Portulaca oleracea	
Ptilotus helipteroides	
Ptilotus obovatus var. *obovatus*	
Rhagodia eremaea	
Senna artemisioides subsp. *helmsii*	
Senna glaucifolia	
Senna glutinosa subsp. *glutinosa*	CPH059-01
Senna notabilis	
Sida fibulifera	
Sida sp. L (A.M. Ashby 4202)	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	
Themeda sp. Hamersley Station (M.E. Trudgen 11431)	CPH066-01
Themeda triandra	
Tragus australianus	
Triodia melvillei	
Tripogonella loliiformis	CPH059-02
Urochloa subquadripara	CPH059-03

Central Pilbara Hub Site CPH-060

Date	14/06/2022
Described by	E. Eakin-Busher, E. Marsh
Type	Quadrat 50m x 50m
Location	MGA Zone 50 677596 mE; 7477378 mN 118.7302 E -22.801825 S
Veg Condition	Excellent
Soil	Sandy Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Triodia vanleeuwenii* open hummock grassland with *Corymbia deserticola* subsp. *deserticola* low sparse woodland over *Acacia tenuissima*, *Acacia hilliana* isolated clumps of shrubs.

SPECIES LIST

Name	Specimen
Acacia adoxa var. *adoxa*	
Acacia elachantha	CPH048-10
Acacia hilliana	
Acacia tenuissima	
Amphipogon sericeus	
Aristida holathera var. *holathera*	
Bonamia erecta	
Codonocarpus cotinifolius	
Corchorus lasiocarpus subsp. *lasiocarpus*	
Corymbia deserticola subsp. *deserticola*	
Cymbopogon obtectus	
Duperreya commixta	
Fimbristylis dichotoma	CPH060-01
Gompholobium oreophilum	
Goodenia stobbsiana	
Goodenia triodiophila	
Hakea loreus subsp. *loreus*	
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Panicum effusum	
Paraneurachne muelleri	
Pterocaulon sphacelatum	
Senna artemisioides subsp. *oligophylla*	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	
Solanum lasiophyllum	
Themeda triandra	
Triodia vanleeuwenii	

Central Pilbara Hub Site CPH-061

Date	31/03/2022
Described by	R. Butcher, S. Coultas
Type	Quadrat 50m x 50m
Location	MGA Zone 50 679050 mE; 7478154 mN 118.7443 E -22.794666 S
Veg Condition	Very Good
Soil	Clay Loam
Rock Type	Dolerite
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Triodia pungens*, *Triodia melvillei* open hummock grassland over *Eucalyptus gamophylla*, *Acacia aptaneura*, *Acacia pruinocarpa* low open woodland over *Acacia atkinsiana* tall sparse shrubland.

SPECIES LIST

Name	Specimen
Abutilon otocarpum	
Acacia aptaneura	CPH61-01
Acacia atkinsiana	
Acacia bivenosa	
Acacia pruinocarpa	
Acacia sibirica	
Anthobolus leptomerioides	
Aristida contorta	
Aristida inaequiglumis	
Bidens bipinnata	
Cheilanthes sieberi subsp. *sieberi*	
Corchorus sidoides subsp. *sidoides*	
Cucumis variabilis	
Cymbopogon ambiguus	
Digitaria brownii	
Duperreya commixta	
Enchylaena tomentosa var. *tomentosa*	
Enneapogon polyphyllus	
Eremophila forrestii subsp. *forrestii*	
Eremophila latrobei	
Eremophila longifolia	
Eriachne pulchella	
Eucalyptus gamophylla	
Eulalia aurea	
Euphorbia sp. Indet	
Evolvulus alsinoides var. *villosicalyx*	
Goodenia muelleriana	
Hakea chordophylla	
Hibiscus burtonii	

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SiteCPH-061

Hibiscus coatesii	CPH61-01
Hibiscus sturtii var. *platychlamys*	
Indigofera georgei	
Indigofera monophylla	
Leichhardtia australis	
Maireana villosa	CPH61-02
Panicum decompositum	
Paraneurachne muelleri	
Psydrax latifolia	
Pterocaulon sphacelatum	
Ptilotus astrolasius	
Ptilotus calostachyus	
Ptilotus obovatus var. *obovatus*	
Scaevola parvifolia subsp. *pilbarae*	
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *glutinosa*	
Senna notabilis	
Sida sp. L (A.M. Ashby 4202)	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	
Solanum ferocissimum	
Solanum lasiophyllum	
Themeda triandra	
Triodia melvillei	
Triodia pungens	

Central Pilbara Hub Site CPH-062

Date	31/03/2022
Described by	R. Butcher, S. Coultas
Type	Quadrat 100m x 25m
Location	MGA Zone 50 677979 mE; 7479367 mN 118.7337 E -22.783830 S
Veg Condition	Excellent
Soil	Light Medium Clay
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Drainage Area/ Floodplain
Vegetation	*Themeda triandra*, *Triodia pungens* mid tussock and hummock grassland with *Eucalyptus xerothermica*, *Corymbia hamersleyana* low open woodland over *Acacia maitlandii*, *Acacia tenuissima*, *Acacia pyrifolia* var. pyrifolia mid to tall shrubs.

SPECIES LIST

Name	Specimen
Acacia bivenosa	
Acacia maitlandii	
Acacia pruinocarpa	
Acacia pyrifolia var. *pyrifolia*	
Acacia sibirica	CPH 062-01
Acacia tenuissima	
Alternanthera nana	
Androcalva luteiflora	
Aristida contorta	
Aristida inaequiglumis	CPH 062-03
Boerhavia coccinea	
Bonamia erecta	
Bothriochloa ewartiana	
Chrysocephalum gilesii	
Chrysopogon fallax	
Corchorus sidoides subsp. *sidoides*	CPH 062-02
Corymbia hamersleyana	
Cymbopogon ambiguus	
Duperreya commixta	
Eragrostis eriopoda	CPH 062-04
Eriachne mucronata	
Eucalyptus xerothermica	
Eulalia aurea	
Euploca tenuifolia	
Evolvulus alsinoides var. *decumbens*	
Evolvulus alsinoides var. *villosicalyx*	
Glycine canescens	

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Goodenia microptera	
Goodenia stellata	
Gossypium australe	
Gossypium robinsonii	
Hakea chordophylla	
Hibiscus sturtii var. *campylochlamys*	
Indigofera georgei	
Isotropis iophyta	
Jasminum didymum subsp. *lineare*	
Leichhardtia australis	
Paraneurachne muelleri	
Pluchea dentex	
Polymeria ambigua	
Pterocaulon sphacelatum	
Ptilotus astrolasius	
Ptilotus obovatus var. *obovatus*	
Rhynchosia minima	
Santalum lanceolatum	
Scaevola amblyanthera var. *centralis*	CPH 062-05
Senna artemisioides subsp. *oligophylla*	
Senna ferraria	COH 062-06
Senna sp. Indet	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	
Themeda triandra	
Triodia pungens	
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)	

Central Pilbara Hub Site CPH-063

Date	31/03/2022
Described by	E. Eakin-Busher, B. Loudon
Type	Quadrat 50m x 50m
Location	MGA Zone 50 679397 mE; 7476592 mN 118.7478 E -22.808731 S
Veg Condition	Excellent
Soil	Sandy Clay Loam
Rock Type	BIF
Fire Age	Moderate (3 to 5 yr)
Habitat	Undulating Low Hills
Vegetation	*Triodia vanleeuwenii* low open hummock grassland with *Acacia sibirica*, *Acacia kempeana* tall isolated clumps of shrubs with *Eucalyptus leucophloia* subsp. *leucophloia, Corymbia deserticola* subsp. *deserticola* low isolated trees.

SPECIES LIST

Name	Specimen
Acacia ancistrocarpa	CPH063-01
Acacia bivenosa	
Acacia kempeana	CPH063-03
Acacia sibirica	CPH059-04
Amphipogon sericeus	
Anthobolus leptomerioides	
Aristida contorta	
Aristida holathera var. *holathera*	
Aristida inaequiglumis	
Corchorus sidoides subsp. *sidoides*	CPH079-02
Corymbia deserticola subsp. *deserticola*	
Cymbopogon ambiguus	
Dodonaea coriacea	
Duperreya commixta	
Enneapogon polyphyllus	
Eragrostis eriopoda	
Eremophila forrestii subsp. *forrestii*	
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Eulalia aurea	
Evolvulus alsinoides var. *villosicalyx*	
Goodenia stobbsiana	
Goodenia triodiophila	
Hakea chordophylla	
Indigofera monophylla	
Paraneurachne muelleri	
Psydrax latifolia	

Central Pilbara Hub

SiteCPH-063

Pterocaulon sphacelatum	
Ptilotus calostachyus	
Ptilotus rotundifolius	
Senna artemisioides subsp. *helmsii*	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *x luerssenii*	
Seringia exastia	
Sida arenicola	
Sida cardiophylla	CPH094-02
Sida fibulifera	
Solanum lasiophyllum	
Triodia melvillei	
Triodia pungens	
Triodia vanleeuwenii	
Waltheria indica	

Central Pilbara Hub Site CPH-064

Date	27/03/2022
Described by	E. Eakin-Busher, B. Loudon
Type	Quadrat 50m x 50m
Location	MGA Zone 50 670758 mE; 7483234 mN 118.6630 E -22.749661 S
Veg Condition	Very Good
Soil	Sandy Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Drainage Area/ Floodplain
Vegetation	*Triodia melvillei*, *Triodia pungens*, *Themeda triandra* mid hummock and tussock grassland with *Acacia kempeana*, *Acacia macraneura* tall sparse shrubland with *Eucalyptus xerothermica* low isolated clumps of trees and Seringia exastia low shrubs.

SPECIES LIST

Name	Specimen
Abutilon cunninghamii	CPH064-01
Abutilon otocarpum	
Acacia bivenosa	
Acacia dictyophleba	
Acacia elachantha	CPH088-07
Acacia kempeana	CPH064-02
Acacia macraneura	CPH064-03
Acacia pachyacra	
Alternanthera nana	
Aristida contorta	
Aristida holathera var. *holathera*	
Aristida inaequiglumis	
Bidens bipinnata	
Boerhavia coccinea	
Bonamia erecta	
Capparis lasiantha	
Cymbopogon ambiguus	
Digitaria ammophila	
Digitaria brownii	
Duperreya commixta	
Enneapogon caerulescens	
Enneapogon polyphyllus	
Eremophila longifolia	
Eucalyptus gamophylla	
Eucalyptus xerothermica	
Eulalia aurea	
Evolvulus alsinoides var. *villosicalyx*	
Goodenia microptera	

Central Pilbara Hub — Site CPH-064

Hakea loreus subsp. *loreus*	
Hibiscus burtonii	
Hibiscus sturtii var. *platychlamys*	CPH094-01
Indigofera georgei	
Jasminum didymum subsp. *lineare*	
Malvastrum americanum	
Panicum decompositum	
Paraneurachne muelleri	
Ptilotus obovatus var. *obovatus*	
Rhagodia eremaea	
Scaevola parvifolia subsp. *pilbarae*	
Senna artemisioides subsp. *oligophylla*	
Senna notabilis	
Senna pleurocarpa var. *angustifolia*	
Seringia exastia	
Sida cardiophylla	CPH094-02
Sida sp. L (A.M. Ashby 4202)	
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	CPH064-04
Teucrium teucriiflorum	
Themeda triandra	
Triodia melvillei	
Triodia pungens	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-066

Date	27/03/2022
Described by	E. Eakin-Busher, B. Loudon
Type	Quadrat 50m x 50m
Location	MGA Zone 50 668561 mE; 7483253 mN 118.6416 E -22.749709 S
Veg Condition	Very Good
Soil	Silty Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Other
Vegetation	*Themeda triandra, Themeda* sp. Hamersley Station (M.E. Trudgen 11431) tussock grassland with *Acacia macraneura* low isolated clumps of trees with *Eucalyptus xerothermica*, *Corymbia deserticola* subsp. *deserticola* low isolated clumps of trees with *Ptilotus obovatus*, *Sida* sp. L low isolated clumps of shrubs.

SPECIES LIST

Name	Specimen
Abutilon fraseri subsp. *fraseri*	
Acacia macraneura	CPH066-04
Acacia pruinocarpa	
Alternanthera nana	
Aristida contorta	
Aristida inaequiglumis	
Aristida obscura	
Arivela viscosa	
Bidens bipinnata	
Boerhavia coccinea	
Boerhavia repleta	
Chrysopogon fallax	
Convolvulus remotus	
Corymbia deserticola subsp. *deserticola*	
Digitaria ammophila	
Digitaria brownii	
Digitaria ctenantha	
Duperreya commixta	
Enneapogon lindleyanus	
Enneapogon polyphyllus	
Eremophila lanceolata	
Eremophila longifolia	
Eucalyptus xerothermica	
Eulalia aurea	
Euphorbia biconvexa	
Euphorbia drummondii	

Central Pilbara Hub Site CPH-066

Euphorbia tannensis subsp. *eremophila*	
Evolvulus alsinoides var. *villosicalyx*	
Goodenia muelleriana	CPH066-07
Goodenia stellata	CPH066-05
Hakea loreus subsp. *loreus*	
Hibiscus burtonii	
Hibiscus sturtii	
Iseilema eremaeum	CPH066-03
Jasminum didymum subsp. *lineare*	
Maireana villosa	CPH066-02
Malvastrum americanum	
Perotis rara	
Ptilotus exaltatus	
Ptilotus obovatus var. *obovatus*	
Rhagodia eremaea	
Sclerolaena cornishiana	CPH066-06
Senna notabilis	
Setaria surgens	
Sida fibulifera	
Sida sp. L (A.M. Ashby 4202)	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	
Solanum lasiophyllum	
Streptoglossa decurrens	
Swainsona kingii	
Themeda sp. Hamersley Station (M.E. Trudgen 11431)	CPH066-01
Themeda triandra	
Tragus australianus	

Central Pilbara Hub Site CPH-067

Date	29/03/2022
Described by	R. Butcher, S. Coultas
Type	Quadrat 50m x 50m
Location	MGA Zone 50 669582 mE; 7483030 mN 118.6515 E -22.751621 S
Veg Condition	Excellent
Soil	Silty Clay Loam
Rock Type	Dolerite
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Triodia pungens* mud hummock grassland with *Eucalyptus gamophylla*, *Corymbia deserticola* subsp. *deserticola*, *Eucalyptus xerothermica*, *Corymbia hamersleyana* low open woodland over mid to low scattered shrubs.

SPECIES LIST

Name	Specimen
Abutilon cunninghamii	CPH095-01
Acacia ancistrocarpa	
Acacia aptaneura	
Acacia bivenosa	
Acacia cowleana	CPH68-01
Acacia dictyophleba	
Acacia inaequilatera	
Acacia pachyacra	
Acacia sibirica	
Acacia steedmanii subsp. *borealis*	
Acacia tenuissima	
Alternanthera nana	
Bonamia erecta	
Capparis lasiantha	
Corymbia deserticola subsp. *deserticola*	
Corymbia hamersleyana	
Cymbopogon ambiguus	
Duperreya commixta	
Eremophila longifolia	
Eucalyptus gamophylla	
Eucalyptus xerothermica	
Eulalia aurea	
Hakea chordophylla	
Indigofera georgei	
Jasminum didymum subsp. *lineare*	
Leichhardtia australis	
Maytenus sp. Mt Windell (S. van Leeuwen 846)	
Paraneurachne muelleri	
Ptilotus obovatus var. *obovatus*	
Rhynchosia minima	
Scaevola parvifolia subsp. *pilbarae*	
Senna artemisioides subsp. *oligophylla*	
Senna artemisioides subsp. *X artemisioides*	
Seringia exastia	
Themeda triandra	
Triodia pungens	

Central Pilbara Hub Site CPH-068

Date	29/03/2022
Described by	R. Butcher, S. Coultas
Type	Quadrat 50m x 50m
Location	MGA Zone 50 670851 mE; 7483708 mN 118.6638 E -22.745370 S
Veg Condition	Excellent
Soil	Clay Loam
Rock Type	Dolerite
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Triodia melvillei* mid hummock grassland with *Eucalyptus xerothermica* low scattered trees over *Acacia elachantha* tall scattered shrubs over *Seringia exastia* low scattered shrubs

SPECIES LIST

Name	Specimen
Acacia aptaneura	
Acacia bivenosa	
Acacia cowleana	CPH68-01
Acacia pachyacra	
Acacia steedmanii subsp. *borealis*	
Acacia tenuissima	
Alternanthera nana	
Anthobolus leptomerioides	
Aristida contorta	
Aristida holathera var. *holathera*	
Aristida pruinosa	CPH68-04
Bidens bipinnata	
Boerhavia coccinea	
Capparis lasiantha	
Cymbopogon ambiguus	
Digitaria brownii	
Eremophila longifolia	
Eucalyptus gamophylla	
Eucalyptus xerothermica	
Eulalia aurea	
Goodenia microptera	
Goodenia stellata	
Hakea chordophylla	
Hibiscus burtonii	
Indigofera georgei	
Jasminum didymum subsp. *lineare*	
Leichhardtia australis	
Paraneurachne muelleri	
Peripleura arida	CPH68-02
Ptilotus obovatus var. *obovatus*	
Scaevola parvifolia subsp. *pilbarae*	
Senna artemisioides subsp. *oligophylla*	CPH68-03
Senna pleurocarpa var. *angustifolia*	
Seringia exastia	
Themeda triandra	
Triodia melvillei	

Central Pilbara Hub Site CPH-069

Date	27/03/2022
Described by	R. Butcher, K. Geelhoed
Type	Quadrat 50m x 50m
Location	MGA Zone 50 668978 mE; 7483974 mN 118.6456 E -22.743155 S
Veg Condition	Excellent
Soil	Silty Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Triodia vanleeuwenii*, *Triodia pungens* low hummock grassland with *Eucalyptus gamophylla, Eucalyptus leucophloia* subsp. *leucophloia* mid to low woodland.

SPECIES LIST

Name	Specimen
Abutilon cunninghamii	CPH069-02
Acacia bivenosa	
Acacia cowleana	
Acacia inaequilatera	
Acacia sericophylla	
Acacia steedmanii subsp. *borealis*	
Anthobolus leptomerioides	
Aristida holathera var. *holathera*	
Bonamia erecta	
Corymbia hamersleyana	
Cymbopogon ambiguus	
Dicrastylis cordifolia	
Duperreya commixta	
Eremophila platycalyx	CPH069-01
Eriachne lanata	CPH012-09
Eriachne mucronata	
Eucalyptus gamophylla	
Eucalyptus leucophloia subsp. *leucophloia*	
Eulalia aurea	
Gompholobium oreophilum	
Goodenia triodiophila	
Hakea chordophylla	
Indigofera monophylla	
Jasminum didymum subsp. lineare	
Maytenus sp. Mt Windell (S. van Leeuwen 846)	
Paraneurachne muelleri	
Ptilotus polystachyus	
Ptilotus rotundifolius	
Scaevola parvifolia subsp. *pilbarae*	
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *x luerssenii*	
Senna pleurocarpa var. *angustifolia*	
Seringia exastia	
Solanum lasiophyllum	
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	
Themeda triandra	
Triodia pungens	
Triodia vanleeuwenii	

Central Pilbara Hub Site CPH-070

Date	27/03/2022
Described by	R. Butcher, K. Geelhoed
Type	Quadrat 50m x 50m
Location	MGA Zone 50 668400 mE; 7483554 mN 118.6400 E -22.747004 S
Veg Condition	Excellent
Soil	Silty Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Hillslope
Vegetation	*Triodia wiseana*, *Themeda triandra* low open hummock and tussock grassland with *Corymbia hamersleyana* low open woodland over *Gossypium robinsonii*, *Acacia marramamba* mid to tall open shrubs over *Acacia adoxa* var. *adoxa*, *Tephrosia densa* low sparse shrubs.

SPECIES LIST

Name	Specimen
Acacia adoxa var. *adoxa*	
Acacia hamersleyensis	
Acacia maitlandii	
Acacia marramamba	
Acacia monticola	
Corchorus lasiocarpus subsp. *parvus*	
Corymbia hamersleyana	
Cymbopogon ambiguus	
Dampiera candicans	
Duperreya commixta	
Enneapogon lindleyanus	
Enneapogon polyphyllus	
Eremophila latrobei	CPH 070-01
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Eulalia aurea	
Evolvulus alsinoides var. *villosicalyx*	
Gompholobium oreophilum	
Goodenia triodiophila	
Gossypium robinsonii	
Grevillea wickhamii	
Hibiscus sturtii var. *campylochlamys*	
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Paraneurachne muelleri	
Ptilotus calostachyus	
Ptilotus obovatus var. *obovatus*	
Santalum lanceolatum	
Scaevola browniana subsp. *browniana*	
Senna artemisioides subsp. *oligophylla*	
Senna glaucifolia	
Senna glutinosa subsp. *glutinosa*	
Senna symonii	
Sida arenicola	
Solanum cleistogamum	
Solanum lasiophyllum	
Tephrosia densa	
Tephrosia oxalidea	
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	
Themeda triandra	
Triodia vanleeuwenii	
Triodia wiseana	
Triumfetta maconochieana	

Central Pilbara Hub Site CPH-071

Date	27/03/2022
Described by	E. Eakin-Busher, B. Loudon
Type	Quadrat 100m x 25m
Location	MGA Zone 50 667916 mE; 7483573 mN 118.6353 E -22.746886 S
Veg Condition	Very Good
Soil	Silty Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Gorge
Vegetation	*Themeda triandra* mid tussock grassland with *Gossypium robinsonii*, *Acacia pruinocarpa* tall isolated clumps of shrubs with *Ficus platypoda*, *Acacia incurvaneura*, *Acacia pruinocarpa* low isolated trees.

SPECIES LIST

Name	Specimen
Abutilon fraseri subsp. fraseri	
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	
Acacia incurvaneura	CPH071-03
Acacia maitlandii	
Acacia monticola	
Acacia pruinocarpa	
Achyranthes aspera	
Afrohybanthus aurantiacus	
Alternanthera nana	
Amaranthus undulatus	
Aristida burbidgeae	
Aristida lazaridis	EBBLOPP-06
Arivela viscosa	
Bidens bipinnata	
Capparis lasiantha	
Cheilanthes brownii	
Cheilanthes sieberi subsp. *sieberi*	CPH071-05
Crotalaria medicaginea var. *neglecta*	
Cucumis variabilis	
Cymbopogon ambiguus	
Digitaria ctenantha	
Dipteracanthus australasicus	CPH097-05
Dodonaea lanceolata	
Duperreya commixta	
Enneapogon lindleyanus	
Enneapogon polyphyllus	
Eremophila latrobei subsp. *latrobei*	
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Euphorbia trigonosperma	
Evolvulus alsinoides var. *villosicalyx*	
Ficus platypoda	
Glycine canescens	
Gomphrena cunninghamii	
Goodenia muelleriana	
Gossypium robinsonii	
Iseilema eremaeum	CPH071-01
Jasminum didymum subsp. *lineare*	
Maireana planifolia	CPH071-02
Melhania oblongifolia	
Pellaea reynoldsii	CPH071-04
Plumbago zeylanica	
Polycarpaea longiflora	

Central Pilbara Hub — Site CPH-071

Prostanthera albiflora	
Pterocaulon serrulatum	
Pterocaulon sphacelatum	
Pterocaulon sphaeranthoides	
Ptilotus obovatus var. *obovatus*	
Rhagodia eremaea	
Rhynchosia minima	
Rostellularia adscendens var. *latifolia*	EBBLOPP-02
Santalum lanceolatum	
Senna ferraria	
Senna glutinosa subsp. *glutinosa*	
Solanum lasiophyllum	
Tephrosia densa	
Themeda triandra	
Tinospora smilacina	
Trachymene oleracea subsp. *oleracea*	
Triodia brizoides	
Triumfetta leptacantha	CPH071-06
Triumfetta maconochieana	

Central Pilbara Hub Site CPH-072

Date	28/03/2022
Described by	E. Eakin-Busher, B. Loudon
Type	Quadrat 50m x 50m
Location	MGA Zone 50 674118 mE; 7484345 mN 118.6956 E -22.739284 S
Veg Condition	Excellent
Soil	Silty Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Drainage Area/ Floodplain
Vegetation	Triodia melvillei mid open hummock grassland with Acacia aptaneura tall sparse shrubland with Corymbia hamersleyana low isolated clumps of trees over Seringia exastia low isolated clumps of shrubs.

SPECIES LIST

Name	Specimen
Acacia aptaneura	
Acacia dictyophleba	
Acacia pachyacra	
Acacia tenuissima	
Aristida contorta	
Aristida inaequiglumis	
Chrysopogon fallax	
Corymbia hamersleyana	
Cucumis variabilis	
Duperreya commixta	
Enneapogon lindleyanus	
Eriachne mucronata	
Eucalyptus xerothermica	
Eulalia aurea	
Evolvulus alsinoides var. *villosicalyx*	
Hibiscus burtonii	
Paraneurachne muelleri	
Ptilotus obovatus var. *obovatus*	
Scaevola parvifolia subsp. *pilbarae*	
Senna pleurocarpa var. *angustifolia*	
Seringia exastia	
Solanum lasiophyllum	
Teucrium teucriiflorum	
Themeda triandra	
Triodia melvillei	

Central Pilbara Hub Site CPH-074

Date	29/03/2022
Described by	R. Butcher, S. Coultas
Type	Quadrat 50m x 50m
Location	MGA Zone 50 668363 mE; 7480378 mN 118.6400 E -22.775690 S
Veg Condition	Excellent
Soil	Silty Clay Loam
Rock Type	Dolerite
Fire Age	Old (6+ yr)
Habitat	Drainage Area/ Floodplain
Vegetation	*Themeda triandra*, *Eulalia aurea* mid tussock grassland with *Eucalyptus gamophylla*, *Eucalyptus xerothermica* mid open woodland over *Acacia elachantha*, *Acacia aptaneura* mid to tall isolated shrubs over *Seringia exastia* low open shrubland.

SPECIES LIST

Name	Specimen
Abutilon cunninghamii	CPH095-01
Acacia adsurgens	COH 076-04
Acacia aptaneura	
Acacia dictyophleba	
Acacia elachantha	
Acacia steedmanii subsp. *borealis*	
Acacia tenuissima	
Alternanthera nana	
Aristida holathera var. *holathera*	
Aristida inaequiglumis	CPH 074-02
Boerhavia coccinea	
Chrysopogon fallax	
Codonocarpus cotinifolius	
Duperreya commixta	
Eremophila longifolia	
Eucalyptus gamophylla	
Eucalyptus xerothermica	
Eulalia aurea	
Goodenia stellata	
Goodenia triodiophila	
Indigofera georgei	
Jasminum didymum subsp. lineare	
Maytenus sp. Mt Windell (S. van Leeuwen 846)	
Panicum decompositum	
Paraneurachne muelleri	
Peripleura obovata	
Pterocaulon sphacelatum	
Ptilotus obovatus var. *obovatus*	
Santalum lanceolatum	
Scaevola parvifolia subsp. *pilbarae*	
Senna artemisioides subsp. *X artemisioides*	CPH 074-01
Senna notabilis	
Senna pleurocarpa var. *angustifolia*	
Seringia exastia	
Sida echinocarpa	
Sida sp. L (A.M. Ashby 4202)	CPH 074-03
Themeda sp. Hamersley Station (M.E. Trudgen 11431)	
Themeda triandra	
Triodia melvillei	
Triodia pungens	

Central Pilbara Hub Site CPH-075

Date	27/03/2022			
Described by	R. Butcher, K. Geelhoed			
Type	Quadrat	50m x 50m		
Location	MGA Zone 50			
	672147	mE;	7478771	mN
	118.6770	E	-22.789817	S
Veg Condition	Excellent			
Soil	Silty Loam			
Rock Type	BIF			
Fire Age	Old (6+ yr)			
Habitat	Undulating Low Hills			
Vegetation	*Triodia vanleeuwenii* low hummock grassland with *Corymbia deserticola* subsp. *deserticola*, *Eucalyptus gamophylla* low open woodland over *Seringia exastia*, *Gompholobium oreophilum*, *Mirbelia viminalis* low open shrubland with *Themeda triandra*, *Amphipogon sericeus* low tussock grassland.			

SPECIES LIST

Name	Specimen
Acacia ancistrocarpa	CPH024-03
Acacia cowleana	
Acacia pachyacra	
Amphipogon sericeus	CPH 075-01
Aristida holathera var. *holathera*	
Aristida pruinosa	CPH 075-02
Corymbia deserticola subsp. *deserticola*	
Cymbopogon ambiguus	
Duperreya commixta	
Eriachne mucronata	
Eucalyptus gamophylla	
Eulalia aurea	
Gompholobium oreophilum	
Goodenia stobbsiana	
Goodenia triodiophila	
Hakea chordophylla	
Hakea loreus subsp. *loreus*	
Indigofera monophylla	
Mirbelia viminalis	
Paraneurachne muelleri	
Ptilotus calostachyus	
Scaevola parvifolia subsp. *pilbarae*	
Seringia exastia	
Sida arenicola	CPH 075-06
Solanum lasiophyllum	
Themeda triandra	
Triodia pungens	
Triodia vanleeuwenii	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-076

Date	29/03/2022			
Described by	R. Butcher, S. Coultas			
Type	Quadrat	50m x 50m		
Location	MGA Zone 50			
	666183	mE;	7481347	mN
	118.6186	E	-22.767153	S
Veg Condition	Excellent			
Soil	Silty Clay Loam			
Rock Type	Dolerite			
Fire Age	Old (6+ yr)			
Habitat	Stony Plain			
Vegetation	*Triodia pungens* low hummock grassland with *Eucalyptus gamophylla* mid open mallee woodland with *Hakea loreus* subsp. *loreus*, *Acacia elachantha* isolated tall shrubs over *Acacia ancistrocarpa* mid open shrubs			

SPECIES LIST

Name	Specimen
Acacia adsurgens	COH 076-04
Acacia ancistrocarpa	CPH024-03
Acacia bivenosa	
Acacia dictyophleba	
Acacia elachantha	
Acacia kempeana	CPH 076-02
Acacia pachyacra	
Acacia pruinocarpa	
Acacia sibirica	CPH 076-01
Acacia tenuissima	
Alternanthera nana	
Anthobolus leptomerioides	
Aristida holathera var. holathera	
Bonamia erecta	
Capparis lasiantha	
Cassytha capillaris	COH 076-03
Corymbia deserticola subsp. deserticola	
Cymbopogon ambiguus	
Digitaria brownii	
Diplopeltis stuartii var. stuartii	
Duperreya commixta	
Eucalyptus gamophylla	
Eulalia aurea	
Gompholobium oreophilum	
Hakea loreus subsp. loreus	
Hibiscus burtonii	
Hibiscus sturtii var. campylochlamys	
Indigofera monophylla	
Jasminum didymum subsp. lineare	
Maytenus sp. Mt Windell (S. van Leeuwen 846)	.
Paraneurachne muelleri	
Peripleura obovata	
Pterocaulon sphacelatum	
Ptilotus rotundifolius	
Santalum lanceolatum	
Scaevola parvifolia subsp. pilbarae	
Senna artemisioides subsp. helmsii x oligophylla	CPH 076-05
Senna artemisioides subsp. oligophylla	
Senna pleurocarpa var. angustifolia	
Seringia exastia	
Triodia pungens	
Triodia wiseana	

Central Pilbara Hub Site CPH-077

Date	29/03/2022
Described by	E. Eakin-Busher, B. Loudon
Type	Quadrat 50m x 50m
Location	MGA Zone 50 666318 mE; 7480369 mN 118.6200 E -22.775972 S
Veg Condition	Excellent
Soil	Sandy Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Footslope
Vegetation	*Triodia wiseana* mid hummock grassland with *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Acacia monticola* tall isolated clumps of shrubs.

SPECIES LIST

Name	Specimen
Acacia adoxa var. *adoxa*	
Acacia adsurgens	CPH024-07
Acacia elachantha	CPH088-07
Acacia hamersleyensis	
Acacia hilliana	
Acacia monticola	
Acacia sericophylla	
Acacia trudgeniana	
Aristida contorta	
Aristida holathera var. *holathera*	
Capparis lasiantha	
Cassytha capillaris	CPH093-02
Clerodendrum floribundum var. *angusti*folium	
Corchorus lasiocarpus subsp. *parvus*	
Cymbopogon ambiguus	
Duperreya commixta	
Enneapogon polyphyllus	
Eremophila latrobei subsp. *latrobei*	
Eriachne mucronata	
*Eucalyptus leucophloia subsp. leucophl*oia	
Eulalia aurea	
Exocarpos sparteus	
Fimbristylis dichotoma	CPH088-01
Goodenia triodiophila	
Gossypium robinsonii	
Hakea chordophylla	
Hibiscus sturtii var. campylochlamys	CPH082-04
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Paraneurachne muelleri	
Ptilotus calostachyus	
Ptilotus exaltatus	
Ptilotus rotundifolius	
Senna glaucifolia	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *pruinosa*	
Seringia exastia	
Sida sp. L (A.M. Ashby 4202)	CPH-077
Triodia vanleeuwenii	
Triodia wiseana	

Central Pilbara Hub Site CPH-078

Date	29/03/2022
Described by	E. Eakin-Busher, B. Loudon
Type	Quadrat 50m x 50m
Location	MGA Zone 50 667457 mE; 7481012 mN 118.6311 E -22.770053 S
Veg Condition	Excellent
Soil	Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Drainage Area/ Floodplain
Vegetation	*Triodia melvillei, Themeda triandra*, *Triodia pungens* mid hummock and tussock grassland with Acacia aptaneura isolated clumps of tall shrubs with *Corymbia deserticola* subsp. *deserticola* low trees.

SPECIES LIST

Name	Specimen
Acacia adsurgens	CPH024-07
Acacia aptaneura	CPH078-01
Acacia dictyophleba	
Acacia elachantha	CPH088-07
Acacia pachyacra	
Acacia pruinocarpa	
Acacia sibirica	CPH078-02
Acacia steedmanii subsp. *borealis*	
Acacia tenuissima	
Aristida contorta	
Aristida holathera var. *holathera*	
Aristida inaequiglumis	
Cheilanthes sieberi subsp. *sieberi*	
Chrysopogon fallax	
Codonocarpus cotinifolius	
Corymbia deserticola subsp. *deserticola*	
Cucumis variabilis	
Cymbopogon ambiguus	
Digitaria ammophila	
Digitaria brownii	
Duperreya commixta	
Enneapogon lindleyanus	
Enneapogon polyphyllus	
Eremophila longifolia	
Eriachne mucronata	
Eucalyptus gamophylla	
Eucalyptus repullulans	CPH078-03
Eulalia aurea	
Goodenia stellata	CPH066-05
Hibiscus burtonii	
Hibiscus coatesii	
Hibiscus sturtii var. *campylochlamys*	
Indigofera georgei	
Jasminum didymum subsp. *lineare*	
Maireana villosa	CPH066-02
Maytenus sp. Mt Windell (S. van Leeuwen 846)	CPH087-02
Panicum decompositum	
Paraneurachne muelleri	
Peripleura obovata	
Psydrax rigidula	CPH093-01
Pterocaulon sphacelatum	
Ptilotus obovatus var. *obovatus*	
Scaevola parvifolia subsp. *pilbarae*	

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SiteCPH-078

Senna artemisioides subsp. *helmsii*	
Senna notabilis	
Senna pleurocarpa var. *angustifolia*	
Seringia exastia	
Sida cardiophylla	CPH078-04
Sida sp. L (A.M. Ashby 4202)	
Solanum ferocissimum	
Solanum lasiophyllum	
Teucrium teucriiflorum	
Themeda triandra	
Triodia melvillei	
Triodia pungens	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-079

Date	29/03/2022
Described by	E. Eakin-Busher, B. Loudon
Type	Quadrat 50m x 50m
Location	MGA Zone 50 669852 mE; 7480897 mN 118.6544 E -22.770853 S
Veg Condition	Excellent
Soil	Sandy Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Sandy/ Stony Plain
Vegetation	*Triodia pungens*, *Triodia vanleeuwenii* mid to low hummock grassland with *Eucalyptus repullulans*, *Eucalyptus gamophylla* mid isolated clumps of mallee trees with *Seringia exastia* low isolated clumps of shrubs with *Acacia tenuissima* mid isolated clumps of shrubs with *Acacia elachantha* tall isolated shrubs.

SPECIES LIST

Name	Specimen
Abutilon cunninghamii	CPH064-01
Acacia aptaneura	CPH082-05
Acacia bivenosa	
Acacia dictyophleba	
Acacia elachantha	CPH088-07
Acacia kempeana	CPH064-02
Acacia pruinocarpa	
Acacia rhodophloia	CPH079-01
Acacia rhodophloia x sibirica	CPH096-01
Acacia steedmanii subsp. *borealis*	
Acacia tenuissima	
Alternanthera nana	
Anthobolus leptomerioides	
Aristida holathera var. *holathera*	
Aristida inaequiglumis	CPH079-03
Corchorus sidoides subsp. *sidoides*	CPH079-02
Corymbia deserticola subsp. *deserticola*	
Cymbopogon ambiguus	
Digitaria brownii	
Duperreya commixta	
Enneapogon polyphyllus	
Eragrostis eriopoda	
Eucalyptus gamophylla	
Eucalyptus repullulans	CPH078-03
Eucalyptus xerothermica	
Eulalia aurea	
Goodenia microptera	
Hibiscus sturtii var. *platychlamys*	CPH094-01
Jasminum didymum subsp. *lineare*	
Maytenus sp. Mt Windell (S. van Leeuwen 846)	CPH087-02
Panicum decompositum	
Paraneurachne muelleri	
Peripleura obovata	
Psydrax rigidula	CPH093-01
Scaevola parvifolia subsp. *pilbarae*	
Senna artemisioides subsp. *helmsii*	
Senna artemisioides subsp. *oligophylla*	
Seringia exastia	
Teucrium teucriiflorum	
Themeda triandra	
Triodia pungens	
Triodia vanleeuwenii	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-080

Date	27/03/2022
Described by	E. Eakin-Busher, B. Loudon
Type	Quadrat 50m x 50m
Location	MGA Zone 50 672364 mE; 7480195 mN 118.6789 E -22.776940 S
Veg Condition	Excellent
Soil	Sandy Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Triodia pungens*, *Triodia melvillei* hummock grassland with *Acacia tenuissima*, *Acacia adsurgens* tall isolated clumps of shrubs with *Eucalyptus gamophylla*, *Eucalyptus trivalva* mid isolated clumps of mallee trees with *Seringia exastia* low open woodland isolated clumps of shrubs.

SPECIES LIST

Name	Specimen
Abutilon sp. Indet	
Acacia adsurgens	CPH024-07
Acacia aneura	CPH080-03
Acacia aptaneura	CPH080-04
Acacia dictyophleba	
Acacia elachantha	CPH088-07
Acacia pruinocarpa	
Acacia sibirica	
Acacia steedmanii subsp. *borealis*	
Acacia tenuissima	
Amphipogon sericeus	
Aristida contorta	
Aristida holathera var. *holathera*	
Aristida inaequiglumis	
Cymbopogon obtectus	CPH094-03
Digitaria ammophila	
Digitaria brownii	
Duperreya commixta	
Enneapogon polyphyllus	
Eucalyptus gamophylla	
Eucalyptus trivalva	CPH080-02
Eulalia aurea	
Goodenia stellata	CPH080-01
Hibiscus coatesii	
Hibiscus sturtii var. *platychlamys*	CPH094-01
Maytenus sp. Mt Windell (S. van Leeuwen 846)	CPH087-02
Panicum decompositum	
Paraneurachne muelleri	
Pterocaulon serrulatum	
Pterocaulon sphacelatum	
Ptilotus calostachyus	
Ptilotus obovatus var. *obovatus*	
Scaevola parvifolia subsp. *pilbarae*	
Seringia exastia	
Triodia melvillei	
Triodia pungens	
Triodia vanleeuwenii	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-081

Date	29/03/2022
Described by	E. Eakin-Busher, B. Loudon
Type	Quadrat 50m x 50m
Location	MGA Zone 50 674765 mE; 7480055 mN 118.7023 E -22.777949 S
Veg Condition	Excellent
Soil	Sandy Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Undulating Low Hills
Vegetation	*Triodia vanleeuwenii* low hummock grassland with *Acacia ancistrocarpa* mid to tall isolated clumps of shrubs with *Eucalyptus gamophylla*, *Eucalyptus leucophloia* subsp. *leucophloia* (in landscape) low isolated clumps of trees

SPECIES LIST

Name	Specimen
Acacia adsurgens	CPH081-01
Acacia ancistrocarpa	
Acacia atkinsiana	
Acacia elachantha	CPH088-07
Acacia sibirica	
Acacia tenuissima	
Amphipogon sericeus	
Aristida contorta	
Aristida holathera var. *holathera*	
Aristida inaequiglumis	
Cymbopogon obtectus	CPH094-03
Duperreya commixta	
Eragrostis eriopoda	
Eriachne mucronata	
Eucalyptus gamophylla	
Goodenia stobbsiana	
Goodenia triodiophila	
Indigofera monophylla	
Paraneurachne muelleri	
Ptilotus calostachyus	
Senna glutinosa subsp. *glutinosa*	
Seringia exastia	
Sida arenicola	
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	CPH094-05
Solanum lasiophyllum	
Triodia melvillei	
Triodia vanleeuwenii	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-082

Date	28/03/2022
Described by	E. Eakin-Busher, B. Loudon
Type	Quadrat 50m x 50m
Location	MGA Zone 50 675677 mE; 7481830 mN 118.7110 E -22.761833 S
Veg Condition	Excellent
Soil	Sandy Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Hillcrest/ Upper Hillslope
Vegetation	*Triodia wiseana*, *Triodia vanleeuwenii* mid to low sparse hummock grassland with *Acacia hilliana*, *Seringia exastia* low sparse shrubland with *Eucalyptus leucophloia* subsp. *leucophloia* low isolated clumps of trees with *Acacia maitlandii* tall isolated clumps of shrubs.

SPECIES LIST

Name	Specimen
Acacia adoxa var. *adoxa*	
Acacia aptaneura	CPH082-05
Acacia atkinsiana	
Acacia elachantha	CPH088-07
Acacia hilliana	
Acacia maitlandii	
Acacia monticola	
Acacia tenuissima	
Amphipogon sericeus	
Aristida contorta	
Aristida holathera var. *holathera*	
Aristida inaequiglumis	
Capparis lasiantha	
Corchorus lasiocarpus subsp. *parvus*	
Cymbopogon ambiguus	
Digitaria ammophila	
Digitaria brownii	
Dodonaea coriacea	
Duperreya commixta	
Enneapogon lindleyanus	
Enneapogon polyphyllus	
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Eulalia aurea	
Euphorbia australis var. *hispidula*	
Fimbristylis dichotoma	CPH088-01
Goodenia microptera	
Goodenia muelleriana	
Goodenia stobbsiana	
Goodenia triodiophila	
Hakea chordophylla	
Hibiscus burtonii	
Hibiscus coatesii	
Hibiscus sturtii var. *campylochlamys*	CPH082-04
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Paraneurachne muelleri	
Ptilotus astrolasius	
Ptilotus calostachyus	
Ptilotus clementii	
Ptilotus exaltatus	
Ptilotus obovatus var. *obovatus*	
Ptilotus rotundifolius	
Schizachyrium fragile	

Central Pilbara Hub Site CPH-082

Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *pruinosa*	
Seringia exastia	
Sida echinocarpa	
Sida sp. Excedentifolia (J.L. Egan 1925)	CPH082-03
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	CPH082-01
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	
Sida sp. Supplejack Station (T.S. Henshall 2345)	CPH082-02
Solanum cleistogamum	
Solanum lasiophyllum	
Themeda triandra	
Trichodesma zeylanicum var. *zeylanicum*	
Triodia vanleeuwenii	
Triodia wiseana	

Central Pilbara Hub Site CPH-084

Date	25/03/2022
Described by	E. Eakin-Busher, B. Loudon
Type	Quadrat 50m x 50m
Location	MGA Zone 50 674581 mE; 7478364 mN 118.7007 E -22.793241 S
Veg Condition	Excellent
Soil	Silty Clay Loam
Rock Type	Dolerite
Fire Age	Old (6+ yr)
Habitat	Basalt Outcrops
Vegetation	*Triodia wiseana*, *Triodia vanleeuwenii* mid to low hummock grassland with *Eucalyptus leucophloia* subsp. *leucophloia* low isolated clumps of trees over *Acacia tenuissima* tall shrubs.

SPECIES LIST

Name	Specimen
Acacia adoxa var. *adoxa*	
Acacia bivenosa	
Acacia dictyophleba	
Acacia elachantha	
Acacia maitlandii	
Acacia pachyacra	
Acacia pruinocarpa	
Acacia sp. Indet	CPH084-01
Acacia tenuissima	
Amphipogon sericeus	
Aristida holathera var. *holathera*	
Corymbia hamersleyana	
Cymbopogon ambiguus	
Cynanchum pedunculatum	
Dampiera candicans	
Dodonaea coriacea	
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Eulalia aurea	
Goodenia stobbsiana	
Goodenia triodiophila	
Grevillea wickhamii subsp. *aprica*	CPH012-03
Hakea loreus subsp. loreus	
Hibiscus sturtii var. *campylochlamys*	
Indigofera monophylla	
Paraneurachne muelleri	
Ptilotus obovatus var. *obovatus*	
Ptilotus rotundifolius	
Schizachyrium fragile	
Senna artemisioides subsp. *oligophylla*	
Senna ferraria	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *pruinosa*	
Seringia exastia	
Sida arenicola	
Solanum phlomoides	
Tephrosia oxalidea	
Triodia vanleeuwenii	
Triodia wiseana	

Central Pilbara Hub Site CPH-085

Date	25/03/2022
Described by	R. Butcher, K. Geelhoed
Type	Quadrat 50m x 50m
Location	MGA Zone 50 673633 mE; 7477591 mN 118.6916 E -22.800317 S
Veg Condition	Excellent
Soil	Silty Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Hillcrest/ Upper Hillslope
Vegetation	*Triodia wiseana*, *Eriachne mucronata* low hummock and tussock grassland with *Eucalyptus leucophloia* subsp. *leucophloia*, *Corymbia hamersleyana* low open woodland over *Mirbelia viminalis*, *Acacia adoxa* var. *adoxa* low open shrubland.

SPECIES LIST

Name	Specimen
Acacia adoxa *var.* adoxa	
Acacia bivenosa	
Acacia elachantha	
Acacia hilliana	
Acacia inaequilatera	
Acacia maitlandii	
Acacia monticola	
Acacia pachyacra	
Acacia *sp. Indet*	CPH 085-02
Aristida inaequiglumis	
Capparis lasiantha	
Celastraceae *sp. Indet*	CPH 085-01
Corymbia hamersleyana	
Cymbopogon ambiguus	
Dodonaea coriacea	
Enneapogon lindleyanus	
Enneapogon polyphyllus	
Eremophila longifolia	
Eriachne mucronata	
Eucalyptus leucophloia *subsp*. leucophloia	
Eulalia aurea	
Goodenia triodiophila	
Gossypium australe	
Hakea chordophylla	
Hibiscus burtonii	
Indigofera monophylla	
Maytenus *sp. Mt Windell (S. van Leeuwen 846)*	
Mirbelia viminalis	
Paraneurachne muelleri	
Psydrax latifolia	
Ptilotus obovatus *var.* obovatus	
Santalum lanceolatum	
Senna artemisioides *subsp.* oligophylla	CPH 085-03
Senna ferraria	
Senna glutinosa *subsp.* glutinosa	
Seringia exastia	
Solanum cleistogamum	
Solanum lasiophyllum	
Tephrosia densa	
Tephrosia oxalidea	
Themeda triandra	
Triodia wiseana	

Central Pilbara Hub Site CPH-086

Date	25/03/2022
Described by	R. Butcher, K. Geelhoed
Type	Quadrat 100m x 25m
Location	MGA Zone 50 673971 mE; 7476639 mN 118.6950 E -22.808885 S
Veg Condition	Excellent
Soil	Clay Loam
Rock Type	Dolerite
Fire Age	Old (6+ yr)
Habitat	Hillslope
Vegetation	*Themeda triandra*, *Cymbopogon ambiguus*, *Triodia wiseana* low tussock and hummock grassland with *Indigofera rugosa*, *Corchorus lasiocarpus*, *Senna glutinosa* subsp. *glutinosa* low shrubland with *Eucalyptus leucophloia* subsp. *leucophloia*, *Acacia inaequilatera* low scattered trees.

SPECIES LIST

Name	Specimen
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	
Acacia dictyophleba	
Acacia inaequilatera	
Acacia pachyacra	
Aristida contorta	
Aristida holathera var. *holathera*	
Aristida inaequiglumis	CPH086-01
Clerodendrum floribundum var. *angustifolium*	
Corchorus lasiocarpus subsp. *parvus*	
Cucumis variabilis	
Cymbopogon ambiguus	
Dodonaea viscosa	CPH086-02
Duperreya commixta	
Enneapogon lindleyanus	
Enneapogon polyphyllus	
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Eulalia aurea	
Goodenia microptera	
Goodenia muelleriana	
Goodenia stobbsiana	
Goodenia triodiophila	
Gossypium australe	
Hakea loreus subsp. *loreus*	
Hibiscus coatesii	
Hibiscus sturtii var. *platychlamys*	
Indigofera rugosa	
Jasminum didymum subsp. *lineare*	
Paraneurachne muelleri	
Ptilotus obovatus var. *obovatus*	
Ptilotus rotundifolius	
Rhynchosia minima	
Senna artemisioides subsp. *helmsii*	
Senna artemisioides subsp. *oligophylla*	
Senna ferraria	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *pruinosa*	
Sida echinocarpa	
Solanum cleistogamum	
Solanum lasiophyllum	

Central Pilbara Hub Site CPH-086

Solanum phlomoides
Tephrosia densa
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)
Themeda triandra
Tribulus platypterus
Trichodesma zeylanicum var. *zeylanicum*
Tricoryne sp. Hamersley Range (S. van Leeuwen 915)
Triodia wiseana

Central Pilbara Hub Site CPH-087

Date	25/03/2022
Described by	E. Eakin-Busher, B. Loudon
Type	Quadrat 50m x 50m
Location	MGA Zone 50 673929 mE; 7477055 mN 118.6945 E -22.805126 S
Veg Condition	Excellent
Soil	Sandy Clay Loam
Rock Type	Dolerite
Fire Age	Moderate (3 to 5 yr)
Habitat	Basalt Outcrops
Vegetation	*Triodia wiseana*, *Eriachne mucronata* mid to low hummock and tussock grassland with *Seringia exastia*, *Acacia adoxa* var. *adoxa* low isolated clumps of shrubs with *Grevillea wickhamii* mid to tall scattered shrubs with *Eucalyptus leucophloia* subsp. *leucophloia* low isolated trees.
Notes	Previous burn / some of quadrat in fire scar.

SPECIES LIST

Name	Specimen
Acacia adoxa var. *adoxa*	
Acacia atkinsiana	
Acacia ayersiana	
Acacia dictyophleba	
Acacia elachantha	
Acacia maitlandii	
Acacia pachyacra	
Acacia pruinocarpa	
Acacia tenuissima	
Acacia trudgeniana	
Aristida contorta	
Aristida holathera var. *holathera*	
Aristida inaequiglumis	
Bonamia erecta	
Calytrix carinata	
Codonocarpus cotinifolius	
Corchorus lasiocarpus subsp. *parvus*	
Corymbia deserticola subsp. *deserticola*	CPH087-01
Corymbia hamersleyana	
Cymbopogon ambiguus	
Dampiera candicans	
Dodonaea coriacea	
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Eulalia aurea	
Fimbristylis dichotoma	CPH088-01
Goodenia stobbsiana	
Goodenia triodiophila	
Gossypium australe	
Gossypium robinsonii	
Grevillea wickhamii subsp. *aprica*	CPH012-03
Hakea chordophylla	
Hakea loreus subsp. *loreus*	
Hibiscus coatesii	
Hibiscus sturtii var. *campylochlamys*	
Indigofera monophylla	
Maytenus sp. Mt Windell (S. van Leeuwen 846)	CPH087-02
Mirbelia viminalis	CPH087-03
Paraneurachne muelleri	
Ptilotus obovatus var. *obovatus*	
Ptilotus rotundifolius	
Schizachyrium fragile	

Central Pilbara Hub

SiteCPH-087

Senna artemisioides subsp. *oligophylla*
Senna ferraria
Senna glutinosa subsp. *glutinosa*
Senna glutinosa subsp. *pruinosa*
Seringia exastia
Sida sp. Excedentifolia (J.L. Egan 1925)
Solanum phlomoides
Themeda triandra
Triodia melvillei
Triodia wiseana

Central Pilbara Hub Site CPH-088

Date	25/03/2022
Described by	E. Eakin-Busher, B. Loudon
Type	Quadrat 50m x 50m
Location	MGA Zone 50 674395 mE; 7477483 mN 118.6990 E -22.801215 S
Veg Condition	Excellent
Soil	Silty Clay Loam
Rock Type	Shale
Fire Age	Old (6+ yr)
Habitat	Hillcrest/ Upper Hillslope
Vegetation	*Triodia wiseana* mid to low hummock grassland *with Acacia inaequilatera* tall shrubs.

SPECIES LIST

Name	Specimen
Abutilon lepidum	CPH088-03
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	
Acacia dictyophleba	
Acacia elachantha	CPH088-07
Acacia inaequilatera	
Acacia maitlandii	
Acacia tenuissima	
Amaranthus cuspidifolius	CPH088-04
Aristida contorta	
Aristida holathera var. *holathera*	
Aristida inaequiglumis	
Arivela viscosa	
Bidens bipinnata	
Cheilanthes sieberi subsp. *sieberi*	
Corchorus lasiocarpus subsp. *parvus*	
Crotalaria medicaginea var. *neglecta*	
Cucumis variabilis	
Cymbopogon ambiguus	
Cynanchum pedunculatum	
Digitaria ctenantha	
Enneapogon lindleyanus	
Enneapogon polyphyllus	
Eremophila longifolia	
Eriachne mucronata	
Eulalia aurea	
Evolvulus alsinoides	
Fimbristylis dichotoma	CPH088-01
Gossypium australe	
Hakea loreus subsp. *loreus*	
Hibiscus coatesii	
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Polycarpaea longiflora	
Ptilotus exaltatus	
Rhynchosia minima	
Rostellularia adscendens var. *latifolia*	CPH088-05
Schizachyrium fragile	
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *pruinosa*	
Sida echinocarpa	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	
Solanum sp. Indet	CPH088-02
Swainsona sp. Indet	CPH088-06

Central Pilbara Hub Site CPH-088

Tephrosia densa
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)
Themeda triandra
Trichodesma zeylanicum var. *zeylanicum*
Triodia brizoides
Triodia wiseana
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)

Central Pilbara Hub Site CPH-089

Date	28/03/2022
Described by	R. Butcher, S. Coultas
Type	Quadrat 50m x 50m
Location	MGA Zone 50 675035 mE; 7482651 mN 118.7047 E -22.754485 S
Veg Condition	Excellent
Soil	Silty Clay Loam
Rock Type	Dolerite
Fire Age	Old (6+ yr)
Habitat	Undulating Low Hills
Vegetation	*Triodia vanleeuwenii*, *Triodia wiseana* hummock grassland with *Acacia hamersleyensis* tall open shrubland over *Seringia exastia*, *Acacia hilliana* low sparse shrubland with *Eucalyptus leucophloia* subsp. *leucophloia*, Corymbia hamersleyana low open woodland.

SPECIES LIST

Name	Specimen
Acacia adoxa var. *adoxa*	
Acacia aptaneura	
Acacia hamersleyensis	
Acacia hilliana	
Acacia maitlandii	
Acacia monticola	
Acacia tenuissima	
Amphipogon sericeus	
Aristida contorta	
Aristida holathera var. *holathera*	
Aristida inaequiglumis	CPH89-01
Corchorus lasiocarpus subsp. *parvus*	
Corymbia hamersleyana	
Cymbopogon ambiguus	
Digitaria brownii	
Duperreya commixta	
Enneapogon polyphyllus	
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Eulalia aurea	
Evolvulus alsinoides var. *villosicalyx*	
Fimbristylis dichotoma	
Goodenia microptera	
Goodenia stobbsiana	
Goodenia triodiophila	
Hakea chordophylla	
Hibiscus sturtii var. *campylochlamys*	
Indigofera monophylla	
Paraneurachne muelleri	
Ptilotus calostachyus	
Ptilotus rotundifolius	
Scaevola parvifolia subsp. *pilbarae*	
Senna artemisioides subsp. *oligophylla*	CPH89-02
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *pruinosa*	
Senna symonii	CPH89-03
Seringia exastia	
Sida arenicola	
Solanum cleistogamum	
Solanum lasiophyllum	
Themeda triandra	
Triodia melvillei	
Triodia vanleeuwenii	
Triodia wiseana	

Central Pilbara Hub Site CPH-090

Date	28/03/2022
Described by	R. Butcher, E. Eakin-Busher, B. Loudon
Type	Quadrat 50m x 50m
Location	MGA Zone 50 674885 mE; 7486085 mN 118.7028 E -22.723496 S
Veg Condition	Excellent
Soil	Sandy Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Hillcrest/ Upper Hillslope
Vegetation	*Triodia wiseana* mid open hummock grassland with *Eriachne mucronata* low isolated clumps of tussock grasses with *Corymbia hamersleyana*, *Acacia hamersleyensis* low trees, tall shrubs over *Seringia exastia* low isolated clumps of shrubs.

SPECIES LIST

Name	Specimen
Acacia adoxa var. *adoxa*	
Acacia hamersleyensis	
Acacia maitlandii	
Afrohybanthus aurantiacus	
Amphipogon sericeus	
Aristida holathera var. *holathera*	
Aristida inaequiglumis	
Cassytha capillaris	CPH093-02
Corchorus lasiocarpus subsp. *parvus*	
Corymbia hamersleyana	
Cymbopogon ambiguus	
Dampiera candicans	
Duperreya commixta	
Eremophila latrobei	
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Eulalia aurea	
Fimbristylis dichotoma	CPH088-01
Gompholobium oreophilum	
Goodenia stobbsiana	
Goodenia triodiophila	
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Paraneurachne muelleri	
Polygala glaucifolia	
Ptilotus calostachyus	
Scaevola browniana subsp. *browniana*	
Schizachyrium fragile	
Senna artemisioides subsp. *oligophylla*	
Seringia exastia	
Tricoryne sp. Hamersley Range (S. van Leeuwen 915)	
Triodia wiseana	

Central Pilbara Hub Site CPH-091

Date	28/03/2022
Described by	R. Butcher, E. Eakin-Busher, B. Loudon
Type	Quadrat 50m x 50m
Location	MGA Zone 50 675868 mE; 7485979 mN 118.7124 E -22.724349 S
Veg Condition	Very Good
Soil	Silty Clay Loam
Rock Type	None Discernible
Fire Age	Moderate (3 to 5 yr)
Habitat	Drainage Area/ Floodplain
Vegetation	*Acacia aptaneura* tall sparse shrubland over *Chrysopogon fallax* mid isolated clumps of tussock grasses with *Maireana villosa*, *Ptilotus obovatus* var. *obovatus* low isolated clumps of shrubs with *Eucalyptus xerothermica*, *Corymbia deserticola* subsp. *deserticola* low isolated trees.

SPECIES LIST

Name	Specimen
Abutilon fraseri subsp. *fraseri*	
Acacia aptaneura	CPH091-07
Alternanthera nana	
Amaranthus cuspidifolius	CPH091-05
Aristida contorta	
Aristida obscura	
Arivela viscosa	
Bidens bipinnata	
Boerhavia coccinea	
Boerhavia repleta	
Bothriochloa ewartiana	CPH091-04
Cheilanthes sieberi subsp. *sieberi*	
Chloris virgata	CPH091-02
Chrysopogon fallax	
Commelina ensifolia	
Convolvulus remotus	
Corchorus tridens	
Corymbia deserticola subsp. *deserticola*	
Cucumis variabilis	
Dactyloctenium radulans	
Digitaria ctenantha	
Duperreya commixta	
Dysphania melanocarpa forma melanocarpa	
Enneapogon polyphyllus	
Eragrostis cumingii	
Eremophila lanceolata	
Eriachne mucronata	CPH091-06
Eucalyptus xerothermica	
Eulalia aurea	
Euphorbia biconvexa	
Evolvulus alsinoides var. *villosicalyx*	
Gomphrena canescens	
Goodenia stellata	CPH066-05
Hibiscus burtonii	
Ipomoea polymorpha	
Iseilema eremaeum	CPH066-03
Maireana villosa	CPH066-02
Nicotiana sp. Indet	
Paraneurachne muelleri	
Paspalidium clementii	
Paspalidium rarum	
Perotis rara	
Portulaca oleracea	
Ptilotus exaltatus	
Ptilotus gaudichaudii	
Ptilotus helipteroides	

Central Pilbara Hub — Site CPH-091

Ptilotus obovatus var. obovatus	
Salsola australis	
Senna notabilis	
Setaria surgens	
Sida sp. Indet	
Sida sp. L (A.M. Ashby 4202)	
Solanum ferocissimum	
Spermacoce brachystema	CPH091-03
Sporobolus australasicus	
Teucrium teucriiflorum	
Themeda triandra	
Tragus australianus	
Tribulopis angustifolia	
Tribulus astrocarpus	
Tribulus terrestris	CPH091-01

Central Pilbara Hub Site CPH-092

Date	28/03/2022
Described by	R. Butcher, S. Coultas
Type	Quadrat 50m x 50m
Location	MGA Zone 50 675632 mE; 7484931 mN 118.7102 E -22.733838 S
Veg Condition	Very Good
Soil	Silty Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Drainage Area/ Floodplain
Vegetation	*Themeda triandra*, *Themeda*. sp. Hamersley Station, *Chrysopogon fallax* mid tussock grassland with *Acacia aptaneura* low open woodland open woodland over *Ptilotus obovatus* low open woodland open shrubland over Boerhavia coccinea low open woodland open herbland.

SPECIES LIST

Name	Specimen
Abutilon fraseri subsp. *fraseri*	CPH 092-03
Abutilon otocarpum	
Acacia aptaneura	
Aristida contorta	
Aristida obscura	
Arivela viscosa	
Bidens bipinnata	
Boerhavia coccinea	
Chrysopogon fallax	
Commelina ensifolia	
Dactyloctenium radulans	
Dichanthium sericeum subsp. *humilius*	
Digitaria brownii	
Duperreya commixta	
Enneapogon lindleyanus	
Enneapogon polyphyllus	
Eremophila latrobei	
Eucalyptus xerothermica	
Eulalia aurea	
Euphorbia drummondii	COH 092-07
Euphorbia sp. Indet	
Evolvulus alsinoides var. *villosicalyx*	
Goodenia stellata	
Hibiscus burtonii	
Iseilema eremaeum	COH092-02
Maireana villosa	
Paspalidium constrictum	CPH 092-04
Paspalidium rarum	CPH92-06
Perotis rara	
Portulaca oleracea	
Ptilotus helipteroides	
Ptilotus obovatus var. *obovatus*	
Senna notabilis	
Sida sp. L (A.M. Ashby 4202)	
Solanum ferocissimum	
Spermacoce brachystema	CPH 092-01
Sporobolus australasicus	
Themeda sp. Hamersley Station (M.E. Trudgen 11431)	
Themeda triandra	
Tribulopis angustifolia	CPH 092-05

Central Pilbara Hub Site CPH-093

Date	26/03/2022
Described by	E. Eakin-Busher, B. Loudon
Type	Quadrat 50m x 50m
Location	MGA Zone 50 665534 mE; 7476762 mN 118.6128 E -22.808626 S
Veg Condition	Excellent
Soil	Sandy Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Hillcrest/ Upper Hillslope
Vegetation	*Triodia wiseana* closed hummock grassland with *Acacia hilliana*, *Acacia adoxa* var. *adoxa* low isolated shrubs with *Grevillea wickhamii* tall isolated clumps of shrubs with *Eucalyptus leucophloia* subsp. l*eucophloia*.
Notes	Eastern half of hill burnt 2-3yrs

SPECIES LIST

Name	Specimen
Acacia adoxa var. *adoxa*	
Acacia hilliana	
Afrohybanthus aurantiacus	
Amphipogon sericeus	
Cassytha capillaris	CPH093-02
Corymbia hamersleyana	
Eremophila latrobei	
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Fimbristylis dichotoma	CPH088-01
Goodenia stobbsiana	
Goodenia triodiophila	
Grevillea wickhamii subsp. *hispidula*	
Hakea chordophylla	
Indigofera monophylla	
Petalostylis labicheoides	
Psydrax rigidula	CPH093-01
Scaevola browniana subsp. *browniana*	
Senna ferraria	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *pruinosa*	
Senna symonii	
Solanum phlomoides	
Triodia vanleeuwenii	
Triodia wiseana	

Central Pilbara Hub Site CPH-094

Date	26/03/2022
Described by	E. Eakin-Busher, B. Loudon
Type	Quadrat 50m x 50m
Location	MGA Zone 50 666526 mE; 7477457 mN 118.6224 E -22.802245 S
Veg Condition	Excellent
Soil	Silty Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Triodia vanleeuwenii*, *Triodia pungens* open hummock grassland with *Eucalyptus gamophylla*, *Eucalyptus leucophloia* subsp. *leucophloia* low isolated clumps of trees with *Acacia steedmanii* subsp. *borealis* tall isolated clumps of shrubs with *Senna artemisioides* subsp. *helmsii*, *Senna artemisioides* subsp. *oligophylla* mid isolated shrubs.

SPECIES LIST

Name	Specimen
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	
Acacia adsurgens	CPH024-07
Acacia bivenosa	
Acacia dictyophleba	
Acacia elachantha	CPH088-07
Acacia sericophylla	
Acacia sp. Indet	CPH084-01
Acacia steedmanii subsp. *borealis*	
Acacia tenuissima	
Amphipogon sericeus	
Anthobolus leptomerioides	
Aristida contorta	
Aristida holathera var. *holathera*	
Aristida inaequiglumis	
Bonamia erecta	
Capparis lasiantha	
Cassytha capillaris	CPH093-02
Corchorus lasiocarpus subsp. *parvus*	
Corymbia hamersleyana	
Cymbopogon ambiguus	
Cymbopogon obtectus	CPH094-03
Diplopeltis stuartii var. *stuartii*	EBBLOPP-05
Duperreya commixta	
Eragrostis eriopoda	EBBLOPP-04
Eremophila longifolia	
Eucalyptus gamophylla	
Eucalyptus leucophloia subsp. *leucophloia*	
Eulalia aurea	
Euphorbia tannensis subsp. eremophila	
Gompholobium oreophilum	
Goodenia microptera	
Goodenia muelleriana	
Goodenia stobbsiana	
Goodenia triodiophila	
Grevillea wickhamii	
Hibiscus burtonii	
Hibiscus coatesii	
Hibiscus sturtii var. *platychlamys*	CPH094-01
Indigofera monophylla	
Isotropis atropurpurea	
Jasminum didymum subsp. *lineare*	

Central Pilbara Hub Site CPH-094

Maytenus sp. Mt Windell (S. van Leeuwen 846)	CPH087-02
Panicum decompositum	
Paraneurachne muelleri	
Peripleura obovata	
Pterocaulon serrulatum	
Pterocaulon sphacelatum	
Ptilotus calostachyus	
Ptilotus exaltatus	
Ptilotus rotundifolius	
Scaevola parvifolia subsp. *pilbarae*	
Senna artemisioides subsp. *helmsii*	
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *glutinosa*	
Senna pleurocarpa var. *angustifolia*	
Seringia exastia	
Sida cardiophylla	CPH094-02
Sida echinocarpa	
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	CPH094-05
Solanum sp. Indet	CPH093-04
Themeda triandra	
Triodia pungens	
Triodia vanleeuwenii	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-095

Date	26/03/2022
Described by	R. Butcher, K. Geelhoed
Type	Quadrat 50m x 50m
Location	MGA Zone 50 665773 mE; 7476119 mN 118.6152 E -22.814404 S
Veg Condition	Excellent
Soil	Silty Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Triodia vanleeuwenii*, *Triodia pungens* low hummock grassland with *Eucalyptus trivalva*, *Eucalyptus gamophylla* mid to low open mallee woodland over *Acacia inaequilatera* mid open shrubland.

SPECIES LIST

Name	Specimen
Abutilon cunninghamii	CPH095-01
Acacia bivenosa	
Acacia cowleana	CPH095-05
Acacia dictyophleba	
Acacia inaequilatera	
Acacia pachyacra	
Acacia steedmanii subsp. *borealis*	
Acacia synchronicia	CPH095-06
Aristida holathera var. *holathera*	
Duperreya commixta	
Enneapogon polyphyllus	
Eucalyptus gamophylla	
Eucalyptus leucophloia subsp. *leucophloia*	
Eucalyptus trivalva	CPH095-04
Eulalia aurea	
Euphorbia tannensis subsp. *eremophila*	
Gompholobium oreophilum	
Halgania gustafsenii var. Mid West (G. Perry 370)	RBOpp-260322-01
Indigofera monophylla	
Isotropis atropurpurea	
Jasminum didymum subsp. *lineare*	
Maytenus sp. Mt Windell (S. van Leeuwen 846)	CPH087-02
Paraneurachne muelleri	
Ptilotus rotundifolius	
Scaevola parvifolia subsp. *pilbarae*	
Senna artemisioides subsp. *oligophylla*	
Senna artemisioides subsp. *X artemisioides*	CPH095-02
Senna glutinosa subsp. *pruinosa*	
Senna glutinosa subsp. *x luerssenii*	
Themeda triandra	
Triodia pungens	
Triodia vanleeuwenii	

Central Pilbara Hub Site CPH-096

Date	29/03/2022
Described by	E. Eakin-Busher, B. Loudon
Type	Quadrat 50m x 50m
Location	MGA Zone 50 668101 mE; 7477885 mN 118.6377 E -22.798227 S
Veg Condition	Excellent
Soil	Sandy Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Triodia pungens* mid hummock grassland with *Eucalyptus gamophylla* mid isolated clumps of mallee trees with *Acacia elachantha* tall isolated shrubs.

SPECIES LIST

Name	Specimen
Acacia ancistrocarpa	
Acacia aptaneura	CPH082-05
Acacia bivenosa	
Acacia dictyophleba	
Acacia elachantha	CPH088-07
Acacia rhodophloia x sibirica	CPH096-01
Acacia steedmanii subsp. *borealis*	
Acacia tenuissima	
Anthobolus leptomerioides	
Aristida holathera var. *holathera*	
Aristida inaequiglumis	
Corymbia deserticola subsp. *deserticola*	
Cymbopogon ambiguus	
Duperreya commixta	
Enneapogon polyphyllus	
Eragrostis eriopoda	
Eucalyptus gamophylla	
Eulalia aurea	
Goodenia microptera	
Hakea chordophylla	
Indigofera georgei	
Jasminum didymum subsp. lineare	
Maytenus sp. Mt Windell (S. van Leeuwen 846)	CPH087-02
Peripleura obovata	
Ptilotus calostachyus	
Ptilotus obovatus var. *obovatus*	
Ptilotus rotundifolius	
Scaevola parvifolia subsp. *pilbarae*	
Senna artemisioides subsp. *helmsii*	
Senna artemisioides subsp. *oligophylla*	
Senna pleurocarpa var. *angustifolia*	
Seringia exastia	
Teucrium teucriiflorum	
Triodia melvillei	
Triodia pungens	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-097

Date	26/03/2022
Described by	E. Eakin-Busher, B. Loudon
Type	Quadrat 100m x 25m
Location	MGA Zone 50 664676 mE; 7476908 mN 118.6044 E -22.807386 S
Veg Condition	Excellent
Soil	Sandy Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Gorge
Vegetation	*Triodia pungens*, *Triodia* sp. Mt Ella (M.E. Trudgen 12739), *Themeda triandra* hummock and tussock with *Eucalyptus leucophloia* subsp. *leucophloia*, *Corymbia hamersleyana* low isolated clumps of trees with *Acacia hamersleyensis*, *Gossypium robinsonii* tall isolated clumps of shrubs.

SPECIES LIST

Name	Specimen
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	
Acacia adoxa var. *adoxa*	
Acacia hamersleyensis	
Acacia maitlandii	
Acacia pruinocarpa	
Achyranthes aspera	
Afrohybanthus aurantiacus	
Alternanthera nana	
Aristida burbidgeae	
Aristida holathera var. *holathera*	
Astrotricha hamptonii	
Bidens bipinnata	
Boerhavia coccinea	
Capparis lasiantha	
Cheilanthes brownii	
Cheilanthes sieberi subsp. *sieberi*	
Clerodendrum floribundum var. *angustifolium*	
Corchorus lasiocarpus subsp. *parvus*	
Corymbia ferriticola	CPH097-03
Corymbia hamersleyana	
Cucumis variabilis	
Cymbopogon ambiguus	
Digitaria brownii	
Dipteracanthus australasicus	CPH097-05
Dodonaea lanceolata var. *lanceolata*	
Dodonaea pachyneura	
Duperreya commixta	
Enneapogon polyphyllus	
Eremophila sp. Indet.	CPH004-01
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Eulalia aurea	
Euphorbia trigonosperma	
Ficus brachypoda	CPH012-05
Gastrolobium grandiflorum	CPH097-01
Gossypium robinsonii	
Hibiscus coatesii	
Hibiscus sturtii var. campylochlamys	
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Panicum decompositum	
Paraneurachne muelleri	

Central Pilbara Hub Site CPH-097

Petalostylis labicheoides	
Prostanthera albiflora	
Psydrax latifolia	
Pterocaulon serrulatum	
Ptilotus obovatus var. *obovatus*	
Rhagodia eremaea	
Rostellularia adscendens var. *latifolia*	EBBLOPP-02
Santalum lanceolatum	
Schizachyrium fragile	
Senna glutinosa subsp. *glutinosa*	
Sida sp. Articulation below (A.A. Mitchell PRP 1605)	
Solanum ferocissimum	
Tephrosia densa	
Themeda triandra	
Tinospora smilacina	
Triodia pungens	
Triodia sp. Mt Ella (M.E. Trudgen 12739)	
Vincetoxicum flexuosum	CPH097-04
Vincetoxicum lineare	
Waltheria virgata	

Central Pilbara Hub Site CPH-098

Date	26/03/2022
Described by	R. Butcher, K. Geelhoed
Type	Quadrat 100m x 25m
Location	MGA Zone 50 664744 mE; 7476598 mN 118.6051 E -22.810184 S
Veg Condition	Very Good
Soil	Silty Loam
Rock Type	Dolerite
Fire Age	Old (6+ yr)
Habitat	Medium Drainage Line
Vegetation	*Themeda triandra*, *Cymbopogon ambiguus*, *Enneapogon lindleyanus* low to mid tussock grassland with *Corymbia hamersleyana* mid isolated trees over *Acacia pyrifolia* subsp. *pyrifolia*, *Petalostylis labicheoides* tall to mid shrubs.

SPECIES LIST

Name	Specimen
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	
Acacia pyrifolia var. *pyrifolia*	
Afrohybanthus aurantiacus	
Alternanthera nana	
Amaranthus cuspidifolius	CPH098-02
Aristida contorta	
Aristida holathera var. *holathera*	
Aristida inaequiglumis	
Arivela viscosa	
Bidens bipinnata	
Boerhavia coccinea	
Chrysocephalum gilesii	
Corymbia hamersleyana	
Cucumis variabilis	
Cymbopogon ambiguus	
Cyperus cunninghamii	CPH098-05
Digitaria ctenantha	
Dodonaea viscosa subsp. *mucronata*	
Duperreya commixta	
Enneapogon lindleyanus	
Enneapogon polyphyllus	
Eriachne mucronata	
Eulalia aurea	
Euphorbia trigonosperma	
Euploca tenuifolia	CPH098-04
Gomphrena canescens	
Gomphrena cunninghamii	
Goodenia microptera	
Gossypium robinsonii	
Jasminum didymum subsp. *lineare*	
Melinis repens	
Notoleptopus decaisnei var. *orbicularis (A.B. Craig 428)*	
Paraneurachne muelleri	
Petalostylis labicheoides	
Polycarpaea longiflora	
Ptilotus calostachyus	
Ptilotus exaltatus	
Ptilotus obovatus var. *obovatus*	
Rostellularia adscendens	CPH098-03
Santalum lanceolatum	
Seringia exastia	

Central Pilbara Hub Site CPH-098

Seringia nephrosperma	CPH098-01
Setaria surgens	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	
Solanum lasiophyllum	
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	
Themeda triandra	
Trichodesma zeylanicum var. *zeylanicum*	
Triodia pungens	

Central Pilbara Hub Site CPH-099

Date	26/03/2022
Described by	R. Butcher, K. Geelhoed
Type	Quadrat 100m x 25m
Location	MGA Zone 50 664510 mE; 7477369 mN 118.6028 E -22.803238 S
Veg Condition	Excellent
Soil	Silty Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Breakaway
Vegetation	*Triodia brizoides* open hummock grassland with *Corymbia hamersleyana*, *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees *over Senna glutinosa* subsp. *glutinosa*, *Acacia adoxa* var. *adoxa* low shrubs.

SPECIES LIST

Name	Specimen
Acacia adoxa var. *adoxa*	
Acacia aptaneura	
Acacia maitlandii	
Acacia monticola	
Acacia pachyacra	
Acacia pruinocarpa	
Afrohybanthus aurantiacus	
Astrotricha hamptonii	
Corymbia hamersleyana	
Cymbopogon ambiguus	
Duperreya commixta	
Enneapogon lindleyanus	
Eremophila magnifica subsp. *magnifica*	
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Eulalia aurea	
Evolvulus alsinoides var. *villosicalyx*	
Ficus brachypoda	CPH099-03
Goodenia stobbsiana	
Goodenia triodiophila	
Hakea chordophylla	
Hakea loreus subsp. *loreus*	
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Paraneurachne muelleri	
Polycarpaea longiflora	
Prostanthera albiflora	
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *glutinosa*	
Seringia exastia	
Sida sp. L (A.M. Ashby 4202)	
Tephrosia densa	
Themeda triandra	
Trichodesma zeylanicum var. *zeylanicum*	
Triodia brizoides	
Triodia sp. Mt Ella (M.E. Trudgen 12739)	
Triumfetta leptacantha	CPH099-02
Triumfetta maconochieana	

Central Pilbara Hub Site CPH-100

Date	29/03/2022
Described by	R. Butcher, S. Coultas
Type	Quadrat 100m x 25m
Location	MGA Zone 50 668050 mE; 7476172 mN 118.6374 E -22.813699 S
Veg Condition	Very Good
Soil	Sandy Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Medium Drainage Line
Vegetation	*Cymbopogon ambiguus*, *Themeda triandra*, *Eulalia aurea* mid tussock grassland with *Corymbia hamersleyana*, *Eucalyptus xerothermica* low open woodland over *Gossypium robinsonii*, *Androcalva luteiflora*, *Grevillea wickhamii* tall open shrubland over *Tephrosia rosea* var. Fortescue creeks (M.I.H. Brooker 2186) low sparse shrubland.

SPECIES LIST

Name	Specimen
Acacia ancistrocarpa	
Acacia bivenosa	
Acacia maitlandii	
Acacia monticola	
Acacia pruinocarpa	
Acacia pyrifolia var. *pyrifolia*	
Afrohybanthus aurantiacus	
Alternanthera nana	
Androcalva luteiflora	
Aristida contorta	
Aristida holathera var. *holathera*	
Aristida inaequiglumis	
Boerhavia coccinea	
Capparis lasiantha	
Cenchrus ciliaris	
Cenchrus setiger	
Corchorus lasiocarpus subsp. *parvus*	
Corymbia hamersleyana	
Cucumis variabilis	
Cymbopogon ambiguus	
Digitaria brownii	
Dodonaea viscosa subsp. *mucronata*	
Duperreya commixta	
Enneapogon lindleyanus	
Enneapogon polyphyllus	
Eremophila longifolia	
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Eucalyptus xerothermica	
Eulalia aurea	
Euphorbia australis var. *subtomentosa*	CPH100-02
Euploca tenuifolia	
Evolvulus alsinoides var. *decumbens*	
Glycine canescens	
Gossypium robinsonii	
Gossypium sturtianum var. *sturtianum*	
Grevillea wickhamii	
Hibiscus burtonii	
Hibiscus sturtii var. *campylochlamys*	
Jasminum didymum subsp. *lineare*	
Nellica maderaspatensis	
Paraneurachne muelleri	
Peripleura obovata	
Petalostylis labicheoides	
Polycarpaea longiflora	
Pterocaulon sphacelatum	

Central Pilbara Hub Site CPH-100

Ptilotus astrolasius	
Ptilotus obovatus var. *obovatus*	
Ptilotus rotundifolius	
Rhynchosia minima	
Rostellularia adscendens var. *latifolia*	CPH100-01
Santalum lanceolatum	
Scaevola amblyanthera var. *centralis*	
Scaevola spinescens	
Senna artemisioides subsp. *helmsii*	
Senna artemisioides subsp. *oligophylla*	CPH68-03
Sida arenicola	
Sida echinocarpa	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	
Sida sp. Supplejack Station (T.S. Henshall 2345)	CPH100-03
Streptoglossa decurrens	
Tephrosia densa	
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	
Themeda triandra	
Trichodesma zeylanicum var. *zeylanicum*	
Triodia pungens	
Waltheria indica	

Central Pilbara Hub Site CPH-101

Date	4/05/2022
Described by	E. Marsh, P-L. de Kock
Type	Quadrat 50m x 50m
Location	MGA Zone 50 690510 mE; 7452662 mN 118.8590 E -23.023569 S
Veg Condition	Excellent
Soil	Clay Loam
Rock Type	BIF
Fire Age	Moderate (3 to 5 yr)
Habitat	Footslope
Vegetation	*Triodia vanleeuwenii* hummock grassland over *Eucalyptus gamophylla* low open mallee woodland over *Acacia bivenosa*, *Ptilotus rotundifolius* scattered low shrubs.

SPECIES LIST

Name	Specimen
Acacia adsurgens	
Acacia bivenosa	
Acacia elachantha	
Acacia tenuissima	
Acacia trudgeniana	
Afrohybanthus aurantiacus	
Cymbopogon obtectus	
Duperreya commixta	
Enneapogon polyphyllus	
Eremophila longifolia	
Eucalyptus gamophylla	
Hakea chordophylla	
Halgania gustafsenii var. *gustafsenii*	
Hibiscus sturtii var. campylochlamys	
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Panicum effusum	
Paraneurachne muelleri	
Ptilotus astrolasius	
Ptilotus calostachyus	
Ptilotus rotundifolius	
Scaevola parvifolia subsp. *pilbarae*	
Senna artemisioides subsp. *helmsii*	
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *pruinosa*	
Senna glutinosa subsp. *x luerssenii*	
Sida echinocarpa	
Solanum lasiophyllum	
Triodia pungens	
Triodia vanleeuwenii	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-104

Date	4/05/2022
Described by	E. Marsh, P-L. de Kock
Type	Quadrat 50m x 50m
Location	MGA Zone 50 688990 mE; 7452249 mN 118.8442 E -23.027470 S
Veg Condition	Excellent
Soil	Clay Loam
Rock Type	BIF
Fire Age	Moderate (3 to 5 yr)
Habitat	Footslope
Vegetation	*Triodia vanleeuwenii* open hummock grassland *over Eucalyptus gamophylla* low open mallee woodland over *Acacia tenuissima* scattered tall shrubs over *Acacia trudgeniana*, *Scaevola spinescens*, *Acacia bivenosa* shrubs.

SPECIES LIST

Name	Specimen
Acacia adsurgens	
Acacia ancistrocarpa	
Acacia bivenosa	
Acacia dictyophleba	
Acacia pruinocarpa	
Acacia tenuissima	
Acacia trudgeniana	
Amphipogon sericeus	
Aristida holathera var. *holathera*	
Corchorus lasiocarpus subsp. *parvus*	
Cymbopogon obtectus	
Duperreya commixta	
Enneapogon polyphyllus	
Eriachne mucronata	
Eucalyptus gamophylla	
Grevillea wickhamii subsp. *hispidula*	
Hibiscus sturtii var. campylochlamys	
Indigofera monophylla	
Paraneurachne muelleri	
Ptilotus astrolasius	
Ptilotus calostachyus	
Scaevola spinescens	
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *pruinosa*	
Senna glutinosa subsp. *x luerssenii*	
Seringia exastia	
Sida sp. Supplejack Station (T.S. Henshall 2345)	
Solanum lasiophyllum	
Themeda triandra	
Triodia pungens	
Triodia vanleeuwenii	

Central Pilbara Hub Site CPH-105

Date	3/05/2022
Described by	E. Marsh, P-L. de Kock
Type	Relevé
Location	MGA Zone 50 688008 mE; 7451228 mN 118.8348 E -23.036800 S
Veg Condition	Very Good
Soil	Sandy Clay Loam
Rock Type	BIF
Fire Age	Moderate (3 to 5 yr)
Habitat	Breakaway
Vegetation	*Eucalyptus leucophloia* subsp. *leucophloia* low isolated clumps of trees over *Acacia catenulata* subsp. *occidentalis* open woodland over Eremophila jucunda subsp. pulcherrima mid open shrubland over *Triodia pungens* hummock grassland with *Eriachne helmsii* tussock grasses.

SPECIES LIST

Name	Specimen
Abutilon fraseri subsp. *fraseri*	
Abutilon macrum	
Abutilon otocarpum	
Acacia aptaneura	
Acacia catenulata subsp. *occidentalis*	
Acacia dictyophleba	
Acacia tenuissima	
Afrohybanthus aurantiacus	
Amaranthus cuspidifolius	
Aristida inaequiglumis	CPH105-01
Bidens bipinnata	
Cheilanthes sieberi subsp. *sieberi*	
Codonocarpus cotinifolius	
Corchorus lasiocarpus subsp. *parvus*	
Cymbopogon ambiguus	
Cynanchum floribundum	
Digitaria ammophila	
Digitaria brownii	
Dipteracanthus australasicus subsp. *australasicus*	
Dodonaea petiolaris	
Duperreya commixta	
Enneapogon polyphyllus	
Eremophila forrestii	
Eremophila jucunda subsp. *pulcherrima*	
Eriachne helmsii	CPH105-03
Eucalyptus leucophloia subsp. *leucophloia*	
Euphorbia drummondii	CPH105-02
Gomphrena cunninghamii	
Goodenia stobbsiana	
Hibiscus burtonii	
Hibiscus coatesii	
Maireana villosa	
Panicum effusum	
Paraneurachne muelleri	
Perotis rara	
Rhodanthe margarethae	
Senna glaucifolia	
Senna glutinosa subsp. *pruinosa*	
Senna glutinosa subsp. *x luerssenii*	
Sida echinocarpa	
Sida ectogama	
Sida sp. dark green fruits (S. van Leeuwen 2260)	

Central Pilbara Hub

SiteCPH-105

Sida sp. Excedentifolia (J.L. Egan 1925)
Sida sp. L (A.M. Ashby 4202)
Sida sp. Pilbara (A.A. Mitchell PRP 1543)
Solanum horridum
Solanum lasiophyllum
Tribulus suberosus
Triodia pungens

Central Pilbara Hub Site CPH-107

Date	1/05/2022
Described by	E. Marsh, P-L. de Kock
Type	Quadrat 50m x 50m
Location	MGA Zone 50 688809 mE; 7451069 mN 118.8426 E -23.038145 S
Veg Condition	Excellent
Soil	Silty Loam
Rock Type	BIF
Fire Age	Moderate (3 to 5 yr)
Habitat	Hillcrest/ Upper Hillslope
Vegetation	*Triodia pungens*, *Triodia wiseana* open hummock grassland with *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Senna glutinosa* subsp. *glutinosa*, *Sida* sp. Excedentifolia (J.L. Egan 1925) mid to low shrubs.

SPECIES LIST

Name	Specimen
Abutilon lepidum	
Abutilon otocarpum	
Acacia ancistrocarpa	
Acacia aptaneura	
Acacia dictyophleba	
Acacia hamersleyensis	
Acacia kempeana	
Acacia maitlandii	
Acacia marramamba	
Acacia pyrifolia var. *pyrifolia*	
Acacia tenuissima	
Amphipogon sericeus	
Aristida contorta	
Aristida holathera var. holathera	
Aristida inaequiglumis	CPH107-02
Codonocarpus cotinifolius	
Corchorus lasiocarpus subsp. *parvus*	
Corymbia hamersleyana	
Cymbopogon ambiguus	
Cymbopogon obtectus	
Dampiera candicans	
Digitaria ammophila	
Dolichocarpa crouchiana	
Enneapogon polyphyllus	
Eragrostis sp. Mt Robinson (S. van Leeuwen 4109)	CPH107-01
Eremophila jucunda subsp. *pulcherrima*	
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Eulalia aurea	
Goodenia stobbsiana	
Goodenia triodiophila	
Grevillea wickhamii subsp. *hispidula*	
Hakea chordophylla	
Hibiscus burtonii	
Hibiscus coatesii	
Jasminum didymum subsp. *lineare*	
Panicum effusum	
Paraneurachne muelleri	
Paspalidium clementii	
Ptilotus calostachyus	
Ptilotus exaltatus	

Central Pilbara Hub — Site CPH-107

Schizachyrium fragile
Senna artemisioides subsp. *helmsii*
Senna artemisioides subsp. *oligophylla*
Senna glutinosa subsp. *glutinosa*
Senna glutinosa subsp. *x luerssenii*
Senna notabilis
Sida arenicola
Sida cardiophylla
Sida echinocarpa
Sida sp. Excedentifolia (J.L. Egan 1925)
Sida sp. Pilbara (A.A. Mitchell PRP 1543)
Solanum horridum
Solanum lasiophyllum
Sporobolus australasicus
Themeda sp. Mt Barricade (M.E. Trudgen 2471)
Trichodesma zeylanicum var. *zeylanicum*
Triodia pungens
Triodia wiseana

Central Pilbara Hub Site CPH-108

Date	30/04/2022
Described by	E. Marsh, P-L. de Kock
Type	Relevé
Location	MGA Zone 50 mE; mN E S
Veg Condition	Excellent
Soil	Sandy Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Gorge
Vegetation	*Callitris columellaris*, *Corymbia ferriticola* mid woodland *over Ficus brachypoda* open woodland over *Abutilon* sp. Dioicum (A.A. Mitchell PRP 1618) sparse tall shrubland *Triumfetta chaetocarpa*, *Ptilotus incanus* scattered low shrubs over Aristida burbidgeae low open tussock grasses.

SPECIES LIST

Name	Specimen
Abutilon amplum	CPHR108-03
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	
Acacia pruinocarpa	
Afrohybanthus aurantiacus	
Amaranthus undulatus	CPH1R08-01
Aristida burbidgeae	
Arivela viscosa	
Bidens bipinnata	
Brachychiton acuminatus	
Callitris columellaris	
Capparis mitchellii	
Cheilanthes austrotenuifolia	
Cheilanthes brownii	CPHR108-02
Cheilanthes sieberi subsp. *sieberi*	
Clerodendrum floribundum var. *angustifolium*	
Corymbia ferriticola	
Cucumis variabilis	
Cymbopogon ambiguus	
Cynanchum floribundum	
Cyperus cunninghamii subsp. *cunninghamii*	
Dodonaea pachyneura	
Dodonaea viscosa subsp. *mucronata*	
Duperreya commixta	
Enchylaena tomentosa var. *tomentosa*	
Enneapogon robustissimus	
Eremophila jucunda subsp. *pulcherrima*	
Eremophila latrobei subsp. *glabra*	
Eremophila naaykensii	
Eriachne mucronata	
Euphorbia trigonosperma	
Ficus brachypoda	
Glycine canescens	
Hibiscus coatesii	
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	
Hibiscus sp. Mt Robinson (G. Byrne 3537)	
Jasminum didymum subsp. lineare	
Olearia stuartii	
Oxalis sp. Pilbara (M.E. Trudgen 12725)	CPHR108-05
Pellaea reynoldsii	
Pilbara trudgenii	
Psydrax latifolia	
Psydrax suaveolens	
Pterocaulon sphacelatum	

Central Pilbara Hub Site CPH-108

Ptilotus incanus	
Ptilotus obovatus var. *obovatus*	
Rhagodia eremaea	
Rhodanthe margarethae	
Rhynchosia minima	
Rostellularia adscendens var. *latifolia*	CPHR108-07
Senna venusta	
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	
Sigesbeckia orientalis	
Solanum cleistogamum	CPHR108-04
Solanum ferocissimum	
Solanum kentrocaule	
Teucrium disjunctum	CPHR108-06
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	
Tinospora smilacina	
Triumfetta chaetocarpa	

Central Pilbara Hub Site CPH-111

Date	28/04/2022
Described by	R. Butcher, P-L. de Kock
Type	Quadrat 50m x 50m
Location	MGA Zone 50 689744 mE; 7450165 mN 118.8519 E -23.046204 S
Veg Condition	Very Good
Soil	Silty Loam
Rock Type	BIF
Fire Age	Recent (0 to 2 yr)
Habitat	Sandy/ Stony Plain
Vegetation	*Triodia vanleeuwenii* low hummock grassland with *Eucalyptus gamophylla* low open woodland (resprouting) over *Ptilotus rotundifolius* mid to low isolated clumps of shrubs.

SPECIES LIST

Name	Specimen
Abutilon otocarpum	
Amphipogon sericeus	
Aristida contorta	
Aristida holathera var. *holathera*	
Digitaria brownii	
Duperreya commixta	
Enneapogon lindleyanus	CPH 111-03
Eragrostis eriopoda	CPH 111-02
Eucalyptus gamophylla	
Euploca sp. Indet	CPH 111-01
Goodenia microptera	
Hakea chordophylla	
Hibiscus burtonii	
Indigofera monophylla	
Paraneurachne muelleri	
Ptilotus exaltatus	
Ptilotus obovatus var. *obovatus*	
Ptilotus rotundifolius	
Scaevola parvifolia subsp. *pilbarae*	
Senna artemisioides subsp. *helmsii*	
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *x luerssenii*	
Sida arenicola	
Sida cardiophylla	
Sida echinocarpa	
Solanum centrale	COH 111-04
Solanum horridum	
Solanum lasiophyllum	
Triodia pungens	
Triodia vanleeuwenii	

Central Pilbara Hub Site CPH-112

Date	28/04/2022
Described by	B. Loudon, E. Marsh
Type	Relevé
Location	MGA Zone 50 690968 mE; 7449780 mN 118.8638 E -23.049539 S
Veg Condition	Excellent
Soil	Sandy Clay Loam
Rock Type	Ironstone,Dolerite,Quartz
Fire Age	3-5 yrs
Habitat	Minor Drainage Line
Vegetation	*Triodia pungens* low open hummock grassland (*Themeda triandra* tussock grasses) with *Corymbia hamersleyana*, *Eucalyptus gamophylla* low isolated clumps of trees over *Tephrosia rosea* var. Fortescue creeks (M.I.H. Brooker 2186) low open shrubland.

SPECIES LIST

Name	Specimen
Abutilon macrum	
Acacia bivenosa	
Acacia pyrifolia var. *pyrifolia*	
Afrohybanthus aurantiacus	
Arivela viscosa	
Boerhavia coccinea	
Capparis lasiantha	
Corchorus crozophorifolius	
Corchorus lasiocarpus subsp. *parvus*	
Corymbia hamersleyana	
Crotalaria medicaginea var. *neglecta*	
Cucumis variabilis	
Digitaria brownii	
Enneapogon lindleyanus	
Eremophila longifolia	
Eriachne mucronata	
Eucalyptus gamophylla	
Euploca tanythrix	CPHR112-01
Goodenia microptera	
Gossypium robinsonii	
Hibiscus burtonii	
Hibiscus sturtii var. *campylochlamys*	
Hibiscus sturtii var. *platychlamys*	
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Leiocarpa semicalva subsp. *semicalva*	CPHR112-02
Melhania oblongifolia	
Nellica maderaspatensis	
Notoleptopus decaisnei var. orbicularis (A.B. Craig 428)	
Paraneurachne muelleri	
Ptilotus astrolasius	
Ptilotus calostachyus	
Ptilotus exaltatus	
Ptilotus obovatus var. *obovatus*	
Ptilotus rotundifolius	
Rhynchosia minima	
Scaevola spinescens	
Senna artemisioides subsp. *helmsii*	
Senna artemisioides subsp. *helmsii x oligophylla*	
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *glutinosa*	
Sida echinocarpa	
Sida fibulifera	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	

Central Pilbara Hub Site CPH-112

Streptoglossa decurrens
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)
Themeda triandra
Trichodesma zeylanicum var. *zeylanicum*
Triodia pungens

Central Pilbara Hub Site CPH-113

Date	29/04/2022
Described by	E. Marsh, P-L. de Kock
Type	Quadrat 50m x 50m
Location	MGA Zone 50 691748 mE; 7449986 mN 118.8714 E -23.047584 S
Veg Condition	Excellent
Soil	Clay Loam
Rock Type	BIF
Fire Age	Moderate (3 to 5 yr)
Habitat	Footslope
Vegetation	*Triodia vanleeuwenii* open hummock grassland with *Eucalyptus gamophylla* low open mallee woodland over *Indigofera monophylla* scattered low shrubs over *Amphipogon sericeus* sparse tussock grassland.
Notes	Site patchily burnt.

SPECIES LIST

Name	Specimen
Acacia aptaneura	
Acacia bivenosa	
Acacia maitlandii	
Acacia tenuissima	
Amphipogon sericeus	
Aristida contorta	
Aristida inaequiglumis	CPH113-01
Clerodendrum floribundum var. *angustifolium*	
Codonocarpus cotinifolius	
Cymbopogon ambiguus	
Enneapogon polyphyllus	
Eucalyptus gamophylla	
Goodenia microptera	
Goodenia stobbsiana	
Goodenia triodiophila	
Hakea loreus subsp. *loreus*	
Indigofera monophylla	
Paraneurachne muelleri	
Ptilotus calostachyus	
Ptilotus rotundifolius	
Scaevola parvifolia subsp. *pilbarae*	
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *pruinosa*	
Sida arenicola	
Sida sp. Excedentifolia (J.L. Egan 1925)	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	
Solanum horridum	
Solanum lasiophyllum	
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	
Triodia vanleeuwenii	

Central Pilbara Hub Site CPH-115

Date	4/05/2022
Described by	E. Marsh, P-L. de Kock
Type	Quadrat 50m x 50m
Location	MGA Zone 50 693083 mE; 7449472 mN 118.8845 E -23.052071 S
Veg Condition	Excellent
Soil	Clay Loam
Rock Type	BIF
Fire Age	Recent (0 to 2 yr)
Habitat	Footslope
Vegetation	*Triodia vanleeuwenii* sparse hummock grassland with *Eucalyptus leucophloia* subsp. *leucophloia* low isolated clumps of trees over *Eucalyptus gamophylla* low mallee trees over *Amphipogon sericeous* grasses

SPECIES LIST

Name	Specimen
Acacia bivenosa	
Acacia pachyacra	
Acacia tenuissima	
Amphipogon sericeus	
Aristida contorta	
Codonocarpus cotinifolius	
Cymbopogon obtectus	
Dodonaea coriacea	
Eucalyptus gamophylla	
Eucalyptus leucophloia subsp. *leucophloia*	
Euploca inexplicita	
Gompholobium oreophilum	
Goodenia triodiophila	
Hakea chordophylla	
Hibiscus sturtii var. campylochlamys	
Indigofera monophylla	
Mirbelia viminalis	
Paraneurachne muelleri	
Ptilotus calostachyus	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *pruinosa*	
Sida sp. Excedentifolia (J.L. Egan 1925)	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	
Solanum horridum	
Solanum lasiophyllum	
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	
Triodia vanleeuwenii	
Triodia wiseana	

Central Pilbara Hub Site CPH-116

Date	28/04/2022			
Described by	C. van den Bergh, E. Marsh			
Type	Quadrat	50m x 50m		
Location	MGA Zone 50			
	693093	mE; 7448671		mN
	118.8847	E	-23.059303	S
Veg Condition	Very Good			
Soil	Silty Loam			
Rock Type	BIF			
Fire Age	Moderate (3 to 5 yr)			
Habitat	Hillslope			
Vegetation	*Triodia vanleeuwenii* (*Triodia pungens*) low open hummock grassland with *Eucalyptus leucophloia* subsp. *leucophloia*, *Eucalyptus gamophylla* low open woodland to scattered trees over *Ptilotus rotundifolius*, *Gompholobium oreophilum*, *Indigofera monophylla* low scattered shrubs with patches of tussock grasses dominated by *Amphipogon sericeus*.			

SPECIES LIST

Name	Specimen
Abutilon otocarpum	CPH116.03
Acacia adsurgens	CPH-029-02
Acacia aptaneura	CPH116.07
Acacia bivenosa	
Acacia hamersleyensis	CPH116.01
Amphipogon sericeus	
Androcalva luteiflora	
Codonocarpus cotinifolius	
Duperreya commixta	
Eucalyptus gamophylla	
Eucalyptus leucophloia subsp. *leucophloia*	
Gompholobium oreophilum	
Goodenia stobbsiana	
Hakea loreus subsp. *loreus*	
Hibiscus sturtii var. *campylochlamys*	
Indigofera monophylla	
Paraneurachne muelleri	
Petalostylis labicheoides	
Psydrax rigidula	
Ptilotus calostachyus	
Ptilotus clementii	CPH116.06
Ptilotus obovatus var. *obovatus*	
Ptilotus rotundifolius	
Scaevola parvifolia subsp. *pilbarae*	
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *x luerssenii*	
Seringia exastia	
Sida arenicola	CPH116.02
Sida sp. Golden calyces glabrous (H.N. Foote 32)	CPHR02.02
Sida sp. Supplejack Station (T.S. Henshall 2345)	CPH-51-04
Solanum sp. Indet	CPH116.04
Solanum sp. Indet	CPH116.05
Triodia pungens	
Triodia vanleeuwenii	

Central Pilbara Hub Site CPH-117

Date	29/04/2022
Described by	E. Marsh, P-L. de Kock
Type	Quadrat 50m x 50m
Location	MGA Zone 50 693928 mE; 7447609 mN 118.8930 E -23.068797 S
Veg Condition	Very Good
Soil	Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Acacia aptaneura* tall shrubland over *Sida ectogama*, *Eremophila forrestii* subsp. *forrestii* open shrubland over *Maireana villosa* low shrubs with Triodia pungens sparse hummock grassland.

SPECIES LIST

Name	Specimen
Abutilon cryptopetalum	CPH117-03
Acacia aptaneura (short/broad phyllode variant)	CPH117-01
Bidens bipinnata	
Cheilanthes sieberi subsp. *sieberi*	
Chrysopogon fallax	
Digitaria ammophila	
Digitaria brownii	
Enchylaena tomentosa var. *tomentosa*	
Enneapogon caerulescens	
Enneapogon polyphyllus	
Enneapogon robustissimus	
Eremophila forrestii subsp. *forrestii*	
Evolvulus alsinoides var. *villosicalyx*	
Gomphrena affinis subsp. *pilbarensis*	
Hibiscus burtonii	
Hibiscus coatesii	
Maireana planifolia x villosa	CPH117-02
Maireana villosa	
Paspalidium clementii	
Psydrax suaveolens	
Ptilotus obovatus var. *obovatus*	
Rhagodia sp. Hamersley (M. Trudgen 17794)	
Sida ectogama	
Sida sp. dark green fruits (S. van Leeuwen 2260)	
Sida sp. L (A.M. Ashby 4202)	
Solanum horridum	
Triodia pungens	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-118

Date	29/04/2022
Described by	E. Marsh, P-L. de Kock
Type	Quadrat 50m x 50m
Location	MGA Zone 50 693373 mE; 7447129 mN 118.8876 E -23.073189 S
Veg Condition	Very Good
Soil	Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Eucalyptus xerothermica* low isolated clumps of trees over *Acacia aptaneura*, *Acacia pruinocarpa* tall shrubs over *Ptilotus obovatus* var. *obovatus*, *Eremophila forrestii* subsp. *forrestii* open shrubland over *Maireana villosa* low shrubs with *Themeda triandra*, *Chrysopogon fallax*, *Triodia pungens* sparse tussock and hummock grassland.

SPECIES LIST

Name	Specimen
Abutilon macrum	
Abutilon otocarpum	
Acacia aptaneura	CPH117-01
Acacia dictyophleba	
Acacia pachyacra	
Acacia pruinocarpa	
Alternanthera nana	
Aristida obscura	
Arivela viscosa	
Bidens bipinnata	
Boerhavia coccinea	
Boerhavia repleta	
Chrysopogon fallax	
Cymbopogon obtectus	
Digitaria ammophila	
Digitaria brownii	
Duperreya commixta	
Enneapogon polyphyllus	
Enneapogon robustissimus	
Eremophila forrestii subsp. *forrestii*	
Eriachne mucronata	
Eucalyptus xerothermica	
Euphorbia australis var. *hispidula*	CPH118-01
Euphorbia biconvexa	CPH118-03
Evolvulus alsinoides var. *villosicalyx*	
Hibiscus burtonii	
Hibiscus coatesii	
Maireana planifolia	CPH118-02
Maireana villosa	
Paraneurachne muelleri	
Portulaca oleracea	
Psydrax rigidula	
Ptilotus astrolasius	
Ptilotus helipteroides	
Ptilotus obovatus var. *obovatus*	
Rhagodia eremaea	
Rhagodia sp. Hamersley (M. Trudgen 17794)	
Salsola australis	
Sclerolaena cornishiana	
Sida echinocarpa	
Sida sp. dark green fruits (S. van Leeuwen 2260)	
Sida sp. L (A.M. Ashby 4202)	
Solanum lasiophyllum	
Teucrium teucriiflorum	
Themeda triandra	
Triodia pungens	

Vincetoxicum lineare

Central Pilbara Hub Site CPH-119

Date	29/04/2022
Described by	E. Marsh, P-L. de Kock
Type	Quadrat 50m x 50m
Location	MGA Zone 50 692863 mE; 7446851 mN 118.8827 E -23.075762 S
Veg Condition	Very Good
Soil	Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Other
Vegetation	*Acacia aptaneura* tall shrubland over *Ptilotus obovatus* var. *obovatus* (*Sida* sp. L (A.M. Ashby 4202)) low open shrubland over *Chrysopogon fallax*, *Themeda triandra* open tussock grassland.

SPECIES LIST

Name	Specimen
Abutilon cryptopetalum	CPH117-03
Abutilon fraseri subsp. *fraseri*	
Abutilon otocarpum	
Acacia aptaneura	CPH117-01
Aristida contorta	
Aristida obscura	
Arivela viscosa	
Bidens bipinnata	
Boerhavia coccinea	
Boerhavia repleta	
Cheilanthes sieberi subsp. *sieberi*	
Chloris virgata	CPH119-08
Chrysopogon fallax	
Commelina ensifolia	
Convolvulus clementii	
Corchorus tridens	CPH119-07
Cucumis variabilis	
Dactyloctenium radulans	
Dichanthium sericeum subsp. *humilius*	
Digitaria ctenantha	
Enneapogon polyphyllus	
Enneapogon robustissimus	
Eremophila lanceolata	
Euphorbia biconvexa	
Evolvulus alsinoides var. *villosicalyx*	
Goodenia muelleriana	
Iseilema eremaeum	CPH119-02
Lepidium phlebopetalum	CPH119-04
Maireana planifolia	CPH119-06
Maireana planifolia	
Maireana villosa	
Melhania oblongifolia	
Perotis rara	
Portulaca filifolia	
Portulaca oleracea	
Ptilotus astrolasius	
Ptilotus exaltatus	
Ptilotus gaudichaudii	
Ptilotus helipteroides	
Ptilotus obovatus var. *obovatus*	
Rhagodia eremaea	
Rhagodia sp. Hamersley (M. Trudgen 17794)	CPH119-03
Salsola australis	
Sclerolaena cornishiana	
Sida fibulifera	

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Sida sp. L (A.M. Ashby 4202)	
Solanum ferocissimum	CPH119-05
Sonchus oleraceus	
Swainsona kingii	
Teucrium teucriiflorum	
Themeda triandra	
Tragus australianus	
Tribulus astrocarpus	
Tribulus terrestris	
Tripogonella loliiformis	
Urochloa occidentalis var. *ciliata*	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-121

Date	29/04/2022
Described by	E. Marsh, P-L. de Kock
Type	Quadrat 50m x 50m
Location	MGA Zone 50 690623 mE; 7447070 mN 118.8608 E -23.074048 S
Veg Condition	Very Good
Soil	Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Other
Vegetation	*Themeda triandra* tussock grassland with *Triodia pungens* hummock grassland with *Eucalyptus xerothermica* low open woodland over *Acacia aptaneura*, *Eremophila longifolia, Senna artemisioides* subsp. x *artemisioides* tall shrubs.

SPECIES LIST

Name	Specimen
Abutilon fraseri subsp. *fraseri*	
Abutilon otocarpum	
Acacia aptaneura	
Alternanthera nana	
Aristida contorta	
Arivela viscosa	
Bidens bipinnata	
Boerhavia coccinea	
Boerhavia repleta	
Cheilanthes sieberi subsp. *sieberi*	
Chrysocephalum gilesii	CPH131-06
Chrysopogon fallax	
Commelina ensifolia	
Convolvulus clementii	
Corchorus tridens	
Cucumis variabilis	
Dactyloctenium radulans	
Digitaria ctenantha	
Dipteracanthus australasicus subsp. *australasicus*	
Duperreya commixta	
Enneapogon polyphyllus	
Enneapogon robustissimus	
Eremophila forrestii subsp. *forrestii*	
Eremophila longifolia	
Eriachne mucronata	
Eucalyptus xerothermica	
Euphorbia biconvexa	
Euphorbia sp. Indet	CPH121-05
Evolvulus alsinoides var. *villosicalyx*	
Goodenia muelleriana	
Goodenia stellata	
Haloragis sp. Indet	CPH121-07
Hibiscus sturtii var. *grandiflorus*	
Indigofera georgei	
Isotropis iophyta	
Malvastrum americanum	
Paraneurachne muelleri	
Perotis rara	
Polymeria ambigua	CPH121-02
Pterocaulon sphacelatum	
Ptilotus astrolasius	
Ptilotus obovatus var. obovatus	
Rhagodia sp. Hamersley (M. Trudgen 17794)	
Rhynchosia minima	

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Streptoglossa decurrens	
Themeda triandra	
Triodia pungens	
Urochloa piligera	CPH121-08
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)	CPH121-03
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-122

Date	30/04/2022
Described by	E. Marsh, P-L. de Kock
Type	Quadrat 50m x 50m
Location	MGA Zone 50 688054 mE; 7445255 mN 118.8360 E -23.090723 S
Veg Condition	Excellent
Soil	Sandy Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Acacia aneura*, *Acacia pruinocarpa*, *Acacia kempeana* tall open shrubland over *Triodia pungens* low hummock grassland.

SPECIES LIST

Name	Specimen
Abutilon otocarpum	
Acacia aneura	CPH122-01
Acacia aptaneura	CPH117-01
Acacia bivenosa	
Acacia kempeana	
Acacia pruinocarpa	
Anthobolus leptomerioides	
Aristida obscura	
Codonocarpus cotinifolius	
Dactyloctenium radulans	
Duperreya commixta	
Enneapogon polyphyllus	
Eremophila forrestii	
Eriachne mucronata	
Grevillea berryana	
Hakea loreus subsp. *loreus*	
Hibiscus burtonii	
Panicum effusum	
Polygala glaucifolia	
Psydrax suaveolens	
Ptilotus calostachyus	
Ptilotus obovatus var. *obovatus*	
Ptilotus rotundifolius	
Rhagodia sp. Hamersley (M. Trudgen 17794)	
Sida ectogama	
Sida sp. dark green fruits (S. van Leeuwen 2260)	
Solanum ferocissimum	
Solanum lasiophyllum	
Triodia melvillei	
Triodia pungens	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-123

Date	30/04/2022
Described by	E. Marsh, P-L. de Kock
Type	Quadrat 50m x 50m
Location	MGA Zone 50 686744 mE; 7444860 mN 118.8232 E -23.094442 S
Veg Condition	Excellent
Soil	Sandy Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Acacia aptaneura*, *Acacia ayersiana*, *Acacia pruinocarpa* tall shrubland over *Hibiscus burtonii*, *Sida* sp. dark green fruits (S. van Leeuwen 2260) low open shrubland over *Triodia pungens*, *Triodia melvillei* low hummock grassland.

SPECIES LIST

Name	Specimen
Acacia aptaneura	
Acacia ayersiana	
Acacia pruinocarpa	
Anthobolus leptomerioides	
Aristida obscura	
Bidens bipinnata	
Boerhavia coccinea	
Cheilanthes sieberi subsp. *sieberi*	
Chrysopogon fallax	
Corymbia deserticola subsp. *deserticola*	
Cucumis variabilis	
Digitaria ammophila	
Enneapogon polyphyllus	CPH-PL008
Eremophila clarkei	
Eremophila forrestii	
Euphorbia australis var. *hispidula*	
Evolvulus alsinoides var. *villosicalyx*	
Goodenia muelleriana	
Hibiscus burtonii	
Hibiscus sturtii var. *grandiflorus*	CPH123-02
Iseilema eremaeum	
Maireana planifolia	
Maireana villosa	
Paspalidium clementii	
Perotis rara	
Polygala glaucifolia	
Psydrax latifolia	
Psydrax suaveolens	
Ptilotus exaltatus	
Ptilotus helipteroides	
Ptilotus obovatus var. *obovatus*	
Ptilotus rotundifolius	
Rhagodia sp. Hamersley (M. Trudgen 17794)	
Senna artemisioides subsp. oligophylla	
Senna glutinosa subsp. glutinosa	
Senna notabilis	
Sida sp. dark green fruits (S. van Leeuwen 2260)	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	
Solanum ferocissimum	
Solanum lasiophyllum	
Teucrium teucriiflorum	
Triodia melvillei	
Triodia pungens	

Central Pilbara Hub Site CPH-124

Date	30/04/2022
Described by	E. Marsh, P-L. de Kock
Type	Quadrat 50m x 50m
Location	MGA Zone 50 683788 mE; 7444824 mN 118.7944 E -23.095098 S
Veg Condition	Excellent
Soil	Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Claypan
Vegetation	*Acacia pteraneura*, *Acacia aptaneura* tall open shrubland over *Aristida contorta* open tussock grassland over *Goodenia prostrata* herbland.

SPECIES LIST

Name	Specimen
Abutilon otocarpum	
Abutilon oxycarpum subsp. *Prostrate (a.A. Mitchell PRP 1266)*	
Acacia aptaneura	
Acacia pteraneura	CPH124-03
Alternanthera angustifolia	
Aristida contorta	
Bidens bipinnata	
Boerhavia coccinea	
Boerhavia repleta	
Calandrinia sp. Indet	CPH127-12
Cheilanthes sieberi subsp. *sieberi*	
Chloris virgata	CPH127-15
Cleome arenitensis	
Dactyloctenium radulans	
Dichanthium sericeum subsp. *humilius*	
Digitaria ammophila	
Digitaria ctenantha	
Dysphania kalpari	
Enneapogon polyphyllus	
Eragrostis pergracilis	
Eremophila flaccida	
Eriachne pulchella	
Euphorbia drummondii	CPH127-08
Euphorbia ferdinandi var. *ferdinandi*	CPH-127
Euploca tanythrix	CPH124-02
Evolvulus alsinoides var. *villosicalyx*	
Fimbristylis dichotoma	CPH127-04
Gomphrena cunninghamii	CPH-PL009
Goodenia nuda	
Goodenia prostrata	
Iseilema membranaceum	CPH127-05
Lepidium echinatum	
Maireana planifolia	
Paspalidium rarum	
Peplidium muelleri	CPH124-01
Perotis rara	
Polygala isingii	CPH127-09
Portulaca oleracea	
Ptilotus calostachyus	
Ptilotus exaltatus	
Ptilotus gaudichaudii	
Ptilotus roei	
Ptilotus schwartzii var. *schwartzii*	
Rhagodia sp. Hamersley (M. Trudgen 17794)	0.7
Roebuckiella similis	CPH127-03
Sclerolaena costata	

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SiteCPH-124

Senna notabilis	
Sida fibulifera	
Sida sp. L (A.M. Ashby 4202)	
Solanum horridum	
Solanum lasiophyllum	
Stenopetalum nutans	CPH127-02
Swainsona kingii	
Tribulus astrocarpus	
Triodia pungens	
Tripogonella loliiformis	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-125

Date	30/04/2022
Described by	E. Marsh, P-L. de Kock
Type	Relevé
Location	MGA Zone 50 684390 mE; 7444872 mN 118.8003 E -23.094595 S
Veg Condition	Excellent
Soil	Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Other
Vegetation	*Acacia aptaneura*, *Acacia pruinocarpa* low woodland over *Eriachne benthamii* scattered tussock grasses.

SPECIES LIST

Name	Specimen
Abutilon fraseri subsp. *fraseri*	
Abutilon otocarpum	
Acacia aptaneura	
Acacia pruinocarpa	
Anthobolus leptomerioides	
Aristida contorta	
Aristida obscura	
Bidens bipinnata	
Cheilanthes sieberi subsp. *sieberi*	
Chrysopogon fallax	
Enneapogon polyphyllus	
Eriachne benthamii	
Euphorbia drummondii	CPH127-08
Evolvulus alsinoides var. *villosicalyx*	
Goodenia nuda	
Goodenia prostrata	
Maireana planifolia	
Perotis rara	
Ptilotus gaudichaudii	
Ptilotus obovatus var. *obovatus*	
Rhagodia sp. Hamersley (M. Trudgen 17794)	
Roebuckiella similis	CPH127-03
Sida ectogama	
Sida fibulifera	
Solanum ferocissimum	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-127

Date	30/04/2022
Described by	E. Marsh, P-L. de Kock
Type	Quadrat 50m x 50m
Location	MGA Zone 50 683609 mE; 7444401 mN 118.7927 E -23.098932 S
Veg Condition	Excellent
Soil	Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Claypan
Vegetation	*Acacia aptaneura*, *Acacia pteraneura* tall open shrubland over *Sida* sp. L (A.M. Ashby 4202) low open shrubland over *Aristida contorta* tussock grassland.

SPECIES LIST

Name	Specimen
Abutilon otocarpum	
Abutilon oxycarpum subsp. Prostrate (a.A. Mitchell PRP 1266)	
Acacia aptaneura	
Acacia pteraneura	CPH124-03
Alternanthera angustifolia	CPH127-06
Areocleome oxalidea	
Aristida contorta	
Bidens bipinnata	
Boerhavia repleta	
Calandrinia pumila	CPH127-13
Calandrinia sp. Indet	CPH127-12
Cheilanthes sieberi subsp. *sieberi*	
Chloris pectinata	
Chloris virgata	CPH127-15
Chrysocephalum gilesii	CPH127-14
Codonocarpus cotinifolius	
Convolvulus clementii	
Dichanthium sericeum subsp. *humilius*	
Dysphania glomulifera subsp. *eremaea*	CPH127-07
Dysphania kalpari	
Dysphania rhadinostachya	
Enneapogon polyphyllus	
Eragrostis cumingii	
Eragrostis pergracilis	
Eremophila lanceolata	
Eriachne flaccida	
Eriachne pulchella	
Euphorbia drummondii	CPH127-08
Euphorbia ferdinandi var. *ferdinandi*	CPH-127
Evolvulus alsinoides var. *villosicalyx*	
Fimbristylis dichotoma	CPH127-04
Gomphrena cunninghamii	CPH127-10
Goodenia nuda	
Goodenia prostrata	
Hibiscus burtonii	
Iseilema membranaceum	CPH127-05
Lepidium echinatum	
Ophioglossum lusitanicum	CPH127-11
Panicum effusum	
Paspalidium rarum	
Perotis rara	
Polygala isingii	CPH127-09

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Portulaca oleracea	
Pterocaulon serrulatum	
Ptilotus exaltatus	
Ptilotus gaudichaudii	
Ptilotus helipteroides	
Ptilotus roei	
Ptilotus schwartzii var. *schwartzii*	
Roebuckiella similis	CPH127-03
Salsola australis	
Senna notabilis	
Sida cardiophylla	
Sida fibulifera	
Sida platycalyx	
Sida sp. L (A.M. Ashby 4202)	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	
Solanum lasiophyllum	
Sporobolus australasicus	
Stenopetalum nutans	CPH127-02
Streptoglossa bubakii	
Swainsona kingii	
Synaptantha tillaeacea var. *tillaeacea*	
Tribulus astrocarpus	
Tripogonella loliiformis	

Central Pilbara Hub Site CPH-128

Date	20/06/2022
Described by	C. van den Bergh, E. Eakin-Busher
Type	Quadrat 50m x 50m
Location	MGA Zone 50 680863 mE; 7444023 mN 118.7659 E -23.102652 S
Veg Condition	Good
Soil	Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Acacia catenulata* subsp. *occidentalis*, *Acacia aneura*, *Acacia pruinocarpa* low woodland over *Triodia melvillei* low sparse hummock grassland to scattered hummock grasses over mixed scattered herbs and shrubs dominated by *Maireana villosa*, *Cheilanthes sieberi* subsp. *sieberi*, **Bidens bipinnata*, *Sida ectogama* with scattered tussock grasses.

SPECIES LIST

Name	Specimen
Acacia aneura	
Acacia catenulata subsp. *occidentalis*	
Acacia pruinocarpa	
Areocleome oxalidea	
Aristida contorta	
Aristida jerichoensis var. *subspinulifera*	CPH128.06
Bidens bipinnata	
Boerhavia coccinea	
Calandrinia sp. Indet	
Cheilanthes sieberi subsp. *sieberi*	
Crassula tetramera	CPH128.01
Cucumis variabilis	
Digitaria ammophila	
Digitaria brownii	
Duperreya commixta	
Dysphania kalpari	
Dysphania melanocarpa	CPH169.10
Enneapogon polyphyllus	
Eragrostis pergracilis	CPH156.06
Eragrostis xerophila	CPH-161
Eremophila latrobei subsp. *filiformis*	
Eriachne helmsii	CPH128.07
Eriachne pulchella subsp. *pulchella*	
Euphorbia drummondii	CPH041-02
Evolvulus alsinoides var. *villosicalyx*	
Gomphrena canescens	
Grevillea berryana	
Hibiscus burtonii	
Maireana villosa	
Nicotiana rosulata	CPH128.05
Ophioglossum lusitanicum	
Oxalis perennans	CPH128.04
Paspalidium clementii	CPH169.06
Perotis rara	
Polycarpaea corymbosa var. *corymbosa*	
Portulaca oleracea	
Psydrax latifolia	
Psydrax suaveolens	
Pterocaulon sphacelatum	
Ptilotus calostachyus	

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Ptilotus exaltatus	
Ptilotus gaudichaudii	
Ptilotus polystachyus	CPH056.06
Ptilotus roei	
Ptilotus schwartzii var. *schwartzii*	
Rhagodia sp. Hamersley (M. Trudgen 17794)	
Roebuckiella similis	
Senna notabilis	
Sida ectogama	
Sida platycalyx	
Sida sp. L (A.M. Ashby 4202)	
Solanum ferocissimum	
Stenopetalum sp. Indet	CPH128.03
Thyridolepis mitchelliana	CPH128.02
Triodia melvillei	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-129

Date	30/04/2022
Described by	E. Marsh, P-L. de Kock
Type	Quadrat 50m x 50m
Location	MGA Zone 50 682417 mE; 7444591 mN 118.7810 E -23.097347 S
Veg Condition	Excellent
Soil	Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Other
Vegetation	*Acacia aneura* low open woodland over *Aristida contorta* open tussock grassland.

SPECIES LIST

Name	Specimen
Abutilon oxycarpum subsp. *Prostrate (a.A. Mitchell PRP 1266)*	
Acacia aneura	CPH129-03
Alternanthera angustifolia	
Areocleome oxalidea	
Aristida contorta	
Bidens bipinnata	
Boerhavia repleta	
Calandrinia pumila	CPH127-13
Calandrinia sp. Indet	CPH127-12
Calotis hispidula	CPH129-07
Calotis plumulifera	CPH129-06
Cheilanthes sieberi subsp. *sieberi*	
Chloris pectinata	
Chloris virgata	CPH127-15
Codonocarpus cotinifolius	
Convolvulus clementii	
Corymbia candida	
Dactyloctenium radulans	
Dichanthium sericeum subsp. *humilius*	
Digitaria ammophila	
Digitaria ctenantha	
Dysphania glomulifera subsp. *eremaea*	CPH127-07
Dysphania kalpari	
Enneapogon polyphyllus	
Eragrostis cumingii	
Eragrostis pergracilis	
Eriachne benthamii	
Eriachne pulchella	
Euphorbia drummondii	CPH127-08
Euphorbia ferdinandi var. *ferdinandi*	CPH-127
Evolvulus alsinoides var. *villosicalyx*	
Fimbristylis dichotoma	CPH127-04
Gomphrena cunninghamii	CPH-PL009
Goodenia nuda	
Goodenia prostrata	
Grevillea berryana	
Iseilema eremaeum	CPH129-05
Lepidium phlebopetalum	CPH119-04
Menkea villosula	CPH129-01
Paspalidium clementii	
Perotis rara	
Polygala isingii	CPH127-09
Portulaca oleracea	
Pterocaulon sphacelatum	
Ptilotus exaltatus	
Ptilotus gaudichaudii	
Ptilotus helipteroides	

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Rhodanthe propinqua	CPH129-02
Roebuckiella similis	CPH127-03
Salsola australis	
Sida sp. L (A.M. Ashby 4202)	
Solanum lasiophyllum	
Sporobolus australasicus	
Stenopetalum nutans	CPH127-02
Swainsona canescens	CPH129-04
Tribulus astrocarpus	
Tribulus terrestris	

Central Pilbara Hub Site CPH-130

Date	20/06/2022
Described by	C. van den Bergh, E. Eakin-Busher
Type	Quadrat 50m x 50m
Location	MGA Zone 50 682160 mE; 7444455 mN 118.7785 E -23.098606 S
Veg Condition	Poor
Soil	Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Hardpan Plain
Vegetation	*Acacia aneura* low woodland over mixed scattered herbs, tussock grasses and chenopod shrubs.

SPECIES LIST

Name	Specimen
Acacia aneura	
Amaranthus cuspidifolius	CPH091-05
Aristida contorta	
Aristida holathera var. *holathera*	
Aristida obscura	
Asteraceae sp. Indet	CPH130.04
Bidens bipinnata	
Boerhavia coccinea	
Brunonia sp. Long hairs (D.E. Symon 2440)	CPH130.03
Calotis hispidula	CPH130.0
Cheilanthes sieberi subsp. *sieberi*	
Chloris virgata	CPH165-05
Digitaria ammophila	
Digitaria ctenantha	
Dysphania kalpari	
Dysphania melanocarpa forma melanocarpa	
Enneapogon polyphyllus	
Eremophila latrobei subsp. *filiformis*	
Euphorbia drummondii	CPH041-02
Fimbristylis dichotoma	CPH043-03
Iseilema membranaceum	CPH175.01
Maireana villosa	
Nicotiana rosulata	CPH128.05
Paspalidium rarum	CPH048-08
Portulaca oleracea	
Psydrax latifolia	
Psydrax rigidula	
Ptilotus calostachyus	
Ptilotus exaltatus	
Ptilotus gaudichaudii	
Ptilotus obovatus var. *obovatus*	
Rhagodia sp. Hamersley (M. Trudgen 17794)	
Roebuckiella similis	
Sida sp. L (A.M. Ashby 4202)	
Sonchus oleraceus	
Swainsona canescens	CPH130.02
Swainsona sp. Indet	
Tripogonella loliiformis	CPH041-01
Vincetoxicum carnosum	

Central Pilbara Hub Site CPH-143

Date	2/05/2022
Described by	E. Marsh, P-L. de Kock
Type	Quadrat 50m x 50m
Location	MGA Zone 50 677245 mE; 7446353 mN 118.7303 E -23.082003 S
Veg Condition	Excellent
Soil	Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Claypan
Vegetation	*Acacia aptaneura* tall open shrubland over *Senna artemisioides* subsp. x *artemisioides*, *Ptilotus obovatus* low shrubs over *Aristida contorta* (*Eragrostis pergracilis*) low tussock grassland.

SPECIES LIST

Name	Specimen
Abutilon otocarpum	
Abutilon oxycarpum subsp. Prostrate (a.A. Mitchell PRP 1266)	
Acacia aptaneura	
Alternanthera angustifolia	CPH143-10
Aristida contorta	
Aristida jerichoensis var. *subspinulifera*	CPH143-12
Bidens bipinnata	
Boerhavia repleta	
Bulbostylis turbinata	CPH143-07
Calandrinia ptychosperma	CPH143-09
Calandrinia pumila	CPH127-13
Cheilanthes sieberi subsp. *sieberi*	
Chloris virgata	CPH143-05
Cyperus sp. Indet	CPH143-06
Dactyloctenium radulans	
Digitaria ammophila	
Digitaria ctenantha	
Dysphania glomulifera subsp. *eremaea*	CPH143-01
Dysphania kalpari	
Enneapogon polyphyllus	
Eragrostis cumingii	
Eragrostis leptocarpa	
Eragrostis pergracilis	
Eremophila lanceolata	
Eriachne flaccida	
Eriachne pulchella	
Euphorbia drummondii	CPH127-08
Euphorbia ferdinandi var. *ferdinandi*	CPH143-02
Evolvulus alsinoides var. *villosicalyx*	
Fimbristylis dichotoma	CPH127-04
Gomphrena cunninghamii	CPH143-08
Gomphrena kanisii	
Goodenia nuda	
Goodenia prostrata	
Grevillea berryana	
Hibiscus burtonii	
Maireana villosa	
Panicum effusum	
Paspalidium clementii	
Paspalidium rarum	
Perotis rara	

Central Pilbara Hub Site CPH-143

Polycarpaea corymbosa var. *corymbosa*		
Polygala isingii	CPH143-03	
Portulaca oleracea		
Psydrax suaveolens		
Pterocaulon sphacelatum		
Ptilotus calostachyus		
Ptilotus exaltatus		
Ptilotus gaudichaudii		
Ptilotus helipteroides		
Ptilotus obovatus var. *obovatus*		
Ptilotus polystachyus		
Ptilotus schwartzii var. *schwartzii*		
Rhodanthe propinqua	CPH129-02	
Roebuckiella similis	CPH127-03	
Senna artemisioides subsp. *X artemisioides*	CPH143-11	
Senna notabilis		
Sida platycalyx		
Sida sp. L (A.M. Ashby 4202)		
Solanum lasiophyllum		
Stenopetalum nutans	CPH127-02	
Synaptantha tillaeacea var. *tillaeacea*	CPH143-13	.
Tripogonella loliiformis		

Central Pilbara Hub Site CPH-149

Date	19/06/2022
Described by	C. van den Bergh, E. Eakin-Busher
Type	Quadrat 100m x 25m
Location	MGA Zone 50 670117 mE; 7446389 mN 118.6608 E -23.082428 S
Veg Condition	Excellent
Soil	Silty Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Gully
Vegetation	*Triodia pungens* mid open hummock grassland with *Acacia aptaneura* low sparse woodland with *Eucalyptus leucophloia* subsp. *leucophloia* low isolated trees over *Senna glutinosa* subsp. *glutinosa* tall shrubs.

SPECIES LIST

Name	Specimen
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	
Acacia aptaneura	
Acacia bivenosa	
Acacia catenulata subsp. *occidentalis*	CPH149-04
Acacia marramamba	CPH149-03
Acacia pruinocarpa	
Acacia pyrifolia var. *morrisonii*	CPH149-01
Amyema hilliana	
Aristida holathera var. *holathera*	
Aristida inaequiglumis	
Aristida obscura	
Bidens bipinnata	
Capparis lasiantha	
Cheilanthes brownii	
Cheilanthes sieberi subsp. *sieberi*	
Codonocarpus cotinifolius	
Corymbia ferriticola	
Cucumis variabilis	
Cymbopogon ambiguus	
Digitaria ammophila	
Digitaria brownii	CPH048.02
Dodonaea pachyneura	
Duperreya commixta	
Dysphania sp. Indet	
Enchylaena tomentosa var. *tomentosa*	
Enneapogon caerulescens	
Enneapogon polyphyllus	
Eremophila latrobei subsp. *latrobei*	
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Euphorbia drummondii	CPH041-02
Evolvulus alsinoides var. *villosicalyx*	
Hibiscus burtonii	
Hibiscus coatesii	
Maireana villosa	
Paraneurachne muelleri	
Paspalidium rarum	CPH048-08
Psydrax suaveolens	
Pterocaulon sphacelatum	

Central Pilbara Hub SiteCPH-149

Ptilotus obovatus var. *obovatus*	
Ptilotus polystachyus	CPH056.06
Rhagodia sp. Hamersley (M. Trudgen 17794)	
Salsola australis	
Santalum lanceolatum	
Senna ferraria	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *x luerssenii*	
Sida sp. Barlee Range (S. van Leeuwen 1642)	
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	
Solanum cleistogamum	
Solanum lasiophyllum	
Teucrium teucriiflorum	
Triodia pungens	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-150

Date	19/06/2022
Described by	C. van den Bergh, E. Eakin-Busher
Type	Quadrat 50m x 50m
Location	MGA Zone 50 670117 mE; 7446389 mN 118.6608 E -23.082428 S
Veg Condition	Excellent
Soil	Silty Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Hillcrest/ Upper Hillslope
Vegetation	*Triodia pungens* low hummock grassland with *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Acacia arida*, *Senna glutinosa* subsp. *glutinosa*, *Acacia pyrifolia* var. *morrisonii* mid to low sparse shrubland to scattered shrubs.

SPECIES LIST

Name	Specimen
Acacia arida	
Acacia bivenosa	
Acacia pruinocarpa	
Acacia pyrifolia var. *morrisonii*	
Amphipogon sericeus	
Aristida contorta	
Dodonaea coriacea	
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Goodenia microptera	
Goodenia stobbsiana	
Goodenia triodiophila	
Hakea loreus subsp. *loreus*	
Paraneurachne muelleri	
Ptilotus calostachyus	
Ptilotus exaltatus	
Schizachyrium fragile	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *pruinosa*	
Senna glutinosa subsp. *x luerssenii*	
Sida sp. Golden calyces glabrous (H.N. Foote 32)	CPH17-01
Sida sp. Indet	CPH150.01
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	CPH082-01
Solanum lasiophyllum	
Triodia pungens	
Triodia sp. Mt Ella (M.E. Trudgen 12739)	
Triodia vanleeuwenii	

Central Pilbara Hub Site CPH-151

Date	19/06/2022
Described by	C. van den Bergh, E. Eakin-Busher
Type	Quadrat 50m x 50m
Location	MGA Zone 50 670760 mE; 7447740 mN 118.6669 E -23.070158 S
Veg Condition	Excellent
Soil	Clay Loam
Rock Type	Dolerite
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Triodia melvillei* mid hummock grassland with *Acacia aptaneura*, *Acacia pruinocarpa* low open woodland over *Acacia catenulata* subsp. *occidentalis*, *Acacia tenuissima* tall scattered shrubs on stony plains with brown clay loam soils.

SPECIES LIST

Name	Specimen
Abutilon otocarpum	
Acacia aptaneura	
Acacia catenulata subsp. *occidentalis*	
Acacia pruinocarpa	
Acacia tenuissima	
Aristida contorta	
Aristida inaequiglumis	
Aristida obscura	
Cheilanthes sieberi subsp. *sieberi*	
Digitaria ammophila	
Digitaria brownii	CPH048.02
Duperreya commixta	
Enneapogon polyphyllus	
Eriachne pulchella subsp. *dominii*	
Fimbristylis dichotoma	CPH043-03
Hibiscus burtonii	
Maireana villosa	
Panicum effusum	
Paraneurachne muelleri	
Paspalidium clementii	CPH169.06
Perotis rara	
Psydrax suaveolens	
Ptilotus obovatus var. obovatus	
Rhagodia sp. Hamersley (M. Trudgen 17794)	
Sida sp. L (A.M. Ashby 4202)	
Solanum ferocissimum	
Solanum lasiophyllum	
Teucrium teucriiflorum	
Themeda triandra	
Triodia melvillei	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-152

Date	19/06/2022
Described by	C. van den Bergh, E. Eakin-Busher
Type	Quadrat 50m x 50m
Location	MGA Zone 50 671383 mE; 7446269 mN 118.6731 E -23.083379 S
Veg Condition	Excellent
Soil	Silty Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Undulating Low Hills
Vegetation	*Triodia vanleeuwenii*, *Triodia pungens* low hummock grassland with *Acacia marramamba*, *Eremophila lachnocalyx* mid to low isolated clumps of shrubs with *Eucalyptus leucophloia* subsp. *leucophloia* low isolated trees.

SPECIES LIST

Name	Specimen
Acacia adsurgens	
Acacia aptaneura	
Acacia bivenosa	
Acacia dictyophleba	
Acacia kempeana	
Acacia maitlandii	
Acacia marramamba	CPH149-03
Acacia pruinocarpa	
Acacia tenuissima	
Aristida contorta	
Aristida inaequiglumis	
Cheilanthes sieberi subsp. *sieberi*	
Codonocarpus cotinifolius	
Cymbopogon ambiguus	
Digitaria ammophila	
Dodonaea coriacea	
Duperreya commixta	
Enneapogon polyphyllus	
Eremophila lachnocalyx	
Eremophila latrobei subsp. *filiformis*	
Eremophila latrobei subsp. *latrobei*	
Eriachne mucronata	
Eriachne pulchella subsp. *dominii*	
Eucalyptus leucophloia subsp. *leucophloia*	
Evolvulus alsinoides var. *villosicalyx*	
Goodenia stobbsiana	
Goodenia triodiophila	
Indigofera monophylla	
Maireana villosa	
Maytenus sp. Mt Windell (S. van Leeuwen 846)	
Paraneurachne muelleri	
Ptilotus calostachyus	
Ptilotus exaltatus	
Ptilotus obovatus var. *obovatus*	
Ptilotus rotundifolius	
Scaevola acacioides	CPH152-02
Schizachyrium fragile	
Senna artemisioides subsp. oligophylla	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *pruinosa*	
Senna glutinosa subsp. *x luerssenii*	
Senna stricta	CPH152-01
Sida sp. Indet	
Solanum cleistogamum	
Solanum lasiophyllum	
Themeda triandra	
Triodia pungens	
Triodia vanleeuwenii	

Vincetoxicum lineare

Central Pilbara Hub Site CPH-154

Date	17/06/2022
Described by	C. van den Bergh, C. Parker
Type	Quadrat 50m x 50m
Location	MGA Zone 50 672027 mE; 7450070 mN 118.6790 E -23.048986 S
Veg Condition	Very Good
Soil	Light Medium Clay
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Hardpan Plain
Vegetation	*Aristida contorta*, *Chrysopogon fallax*, *Aristida inaequiglumis* low open tussock grassland with *Acacia aptaneura* low scattered trees over *Sida* sp. L (A.M. Ashby 4202), *Sida fibulifera*, *Sida platycarpa* low scattered shrubs.

SPECIES LIST

Name	Specimen
Abutilon otocarpum	
Acacia aptaneura	
Alternanthera nana	
Aristida contorta	
Aristida inaequiglumis	
Aristida jerichoensis var. *subspinulifera*	
Aristida obscura	
Bidens bipinnata	
Calandrinia sp. Indet	
Cheilanthes sieberi subsp. *sieberi*	
Chloris virgata	
Chrysopogon fallax	
Cucumis variabilis	
Dactyloctenium radulans	
Dichanthium sericeum	CPH154.02
Digitaria ammophila	
Dysphania glomulifera subsp. *eremaea*	CPH154.06
Enneapogon caerulescens	
Enneapogon polyphyllus	
Eragrostis pergracilis	CPH169.12
Eremophila lanceolata	
Eremophila longifolia	
Eriachne mucronata	CPH048-07
Euphorbia biconvexa	
Euphorbia ferdinandi var. *ferdinandi*	CPH169.07
Evolvulus alsinoides var. *villosicalyx*	
Fimbristylis dichotoma	CPH043-03
Gomphrena kanisii	
Gomphrena lanata	CPH169.08
Goodenia nuda	
Goodenia prostrata	
Hakea loreus subsp. *loreus*	
Ophioglossum lusitanicum	
Panicum decompositum	
Panicum effusum	CPH154.01
Paspalidium rarum	CPH154.05
Perotis rara	
Portulaca oleracea	
Pterocaulon sphacelatum	
Ptilotus exaltatus	
Ptilotus gaudichaudii	

Central Pilbara Hub Site CPH-154

Rhagodia sp. Hamersley (M. Trudgen 17794)	
Roebuckiella similis	
Salsola australis	
Sclerolaena tetragona	CPH154.03
Senna notabilis	
Sida fibulifera	
Sida platycalyx	
Sida sp. L (A.M. Ashby 4202)	
Solanum ferocissimum	
Stenopetalum nutans	CPH154.04
Teucrium teucriiflorum	
Themeda triandra	
Tribulus terrestris	
Tripogonella loliiformis	CPH041-01
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-155

Date	17/06/2022
Described by	C. van den Bergh, C. Parker
Type	Quadrat 50m x 50m
Location	MGA Zone 50 671119 mE; 7449523 mN 118.6702 E -23.054022 S
Veg Condition	Excellent
Soil	Light Clay
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Triodia melvillei*, *Triodia pungens* hummock grassland with *Acacia aptaneura*, *Acacia pachyacra*, *Acacia pruinocarpa* mid to tall open shrubland.

SPECIES LIST

Name	Specimen
Abutilon otocarpum	
Acacia aneura	CPH155-02
Acacia aptaneura	CPH155-01
Acacia dictyophleba	
Acacia pachyacra	
Acacia pruinocarpa	
Alternanthera nana	
Aristida contorta	
Aristida inaequiglumis	
Aristida jerichoensis var. *subspinulifera*	
Aristida obscura	
Bidens bipinnata	
Cheilanthes sieberi subsp. *sieberi*	
Cymbopogon obtectus	
Digitaria ammophila	
Digitaria ciliaris	
Duperreya commixta	
Enchylaena tomentosa var. *tomentosa*	
Enneapogon polyphyllus	
Eriachne mucronata	CPH048-07
Evolvulus alsinoides var. *villosicalyx*	
Goodenia microptera	
Hibiscus burtonii	
Hibiscus coatesii	CPH155-04
Maireana villosa	
Paraneurachne muelleri	
Psydrax suaveolens	
Ptilotus exaltatus	
Ptilotus obovatus var. *obovatus*	
Rhagodia sp. Hamersley (M. Trudgen 17794)	
Salsola australis	
Senna notabilis	
Seringia exastia	
Sida platycalyx	
Sida sp. L (A.M. Ashby 4202)	CPH155-03
Solanum ferocissimum	
Solanum lasiophyllum	
Teucrium teucriiflorum	
Themeda triandra	
Triodia melvillei	
Triodia pungens	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-156

Date	17/06/2022
Described by	C. van den Bergh, C. Parker
Type	Quadrat 50m x 50m
Location	MGA Zone 50 672238 mE; 7450636 mN 118.6810 E -23.043854 S
Veg Condition	Excellent
Soil	Light Medium Clay
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Claypan
Vegetation	*Aristida contorta*, *Eriachne flaccida*, *Digitaria ammophila* low sparse tussock grassland with *Fimbristylis dichotoma* low sparse sedgeland with *Acacia aptaneura* low scattered trees.

SPECIES LIST

Name	Specimen
Abutilon otocarpum	
Acacia aptaneura	
Alternanthera nana	
Areocleome oxalidea	
Aristida contorta	
Aristida inaequiglumis	
Bergia perennis	CPH156.02
Boerhavia repleta	CPH159.01
Calandrinia sp. Indet	
Chloris virgata	
Chrysopogon fallax	
Convolvulus clementii	CPH156.03
Dactyloctenium radulans	
Dichanthium sericeum	CPH154.02
Digitaria ammophila	
Dysphania glomulifera subsp. *eremaea*	CPH143-01
Enneapogon polyphyllus	
Enteropogon ramosus	
Eragrostis pergracilis	CPH156.06
Eriachne flaccida	CPH156.01
Euphorbia drummondii	CPH041-02
Evolvulus alsinoides var. *villosicalyx*	
Fimbristylis dichotoma	CPH043-03
Gomphrena kanisii	
Goodenia nuda	
Goodenia prostrata	
Ipomoea muelleri	
Iseilema eremaeum	CPH066-03
Josephinia eugeniae	CPH156.08
Lepidium echinatum	
Marsilea sp. Indet	
Ophioglossum lusitanicum	
Paspalidium rarum	CPH154.05
Peripleura arida	CPH156.04
Pluchea dunlopii	CPH156.07
Portulaca oleracea	
Ptilotus exaltatus	
Ptilotus gaudichaudii	
Ptilotus helipteroides	CVT4.01
Ptilotus polystachyus	CPH056.06
Ptilotus roei	
Senna notabilis	
Sida fibulifera	CPH156.05
Sida sp. L (A.M. Ashby 4202)	
Stenopetalum nutans	CPH154.04
Themeda triandra	

Central Pilbara Hub Site CPH-157

Date	1/05/2022
Described by	E. Marsh, P-L. de Kock
Type	Quadrat 50m x 50m
Location	MGA Zone 50 672358 mE; 7451251 mN 118.6821 E -23.038292 S
Veg Condition	Excellent
Soil	Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Acacia aptaneura* low open woodland over *Ptilotus obovatus* var. *obovatus*, *Maireana planifolia* x *villosa* low shrubs over *Aristida obscura* (*Chrysopogon fallax*) sparse tussock grassland.

SPECIES LIST

Name	Specimen
Abutilon otocarpum	
Acacia aptaneura	
Alternanthera nana	
Aristida contorta	
Aristida inaequiglumis	CPH157-03
Aristida obscura	
Cheilanthes sieberi subsp. *sieberi*	
Chrysopogon fallax	
Cucumis variabilis	
Digitaria ammophila	
Dysphania kalpari	
Enneapogon polyphyllus	
Eremophila lanceolata	
Eulalia aurea	
Euphorbia drummondii	CPH157-02
Fimbristylis dichotoma	CPH127-04
Hibiscus burtonii	
Maireana planifolia x villosa	CPH-157-01
Maireana villosa	
Nicotiana sp. Indet	
Panicum effusum	
Peripleura sp. Indet	
Polycarpaea corymbosa var. *corymbosa*	
Psydrax suaveolens	
Pterocaulon sphacelatum	
Ptilotus exaltatus	
Ptilotus obovatus var. *obovatus*	
Rhagodia sp. Hamersley (M. Trudgen 17794)	
Sida sp. L (A.M. Ashby 4202)	
Solanum horridum	
Streptoglossa sp. Indet	
Teucrium teucriiflorum	
Themeda triandra	CPH157-01
Triodia melvillei	

Central Pilbara Hub Site CPH-158

Date	17/06/2022
Described by	C. van den Bergh, C. Parker
Type	Quadrat 50m x 50m
Location	MGA Zone 50 671083 mE; 7450196 mN 118.6698 E -23.047948 S
Veg Condition	Excellent
Soil	Silty Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Triodia pungens* hummock grassland with *Acacia aptaneura*, *Acacia pachyacra* mid to tall scattered shrubs with *Themeda triandra*, *Aristida inaequiglumis* scattered mid tussock grasses.

SPECIES LIST

Name	Specimen
Abutilon otocarpum	
Acacia aneura	CPH155-02
Acacia aptaneura	CPH155-01
Acacia bivenosa	
Acacia dictyophleba	
Acacia pachyacra	
Acacia pruinocarpa	
Alternanthera nana	
Aristida contorta	
Aristida holathera var. *holathera*	
Aristida inaequiglumis	
Aristida obscura	
Chrysopogon fallax	
Codonocarpus cotinifolius	
Cymbopogon ambiguus	
Digitaria ammophila	
Digitaria brownii	
Duperreya commixta	
Enchylaena tomentosa var. *tomentosa*	
Enneapogon polyphyllus	
Eremophila latrobei subsp. *filiformis*	
Eucalyptus leucophloia subsp. *leucophloia*	
Eulalia aurea	
Evolvulus alsinoides var. *villosicalyx*	
Hibiscus burtonii	
Maireana villosa	
Panicum effusum	CPH154.01
Paraneurachne muelleri	
Psydrax rigidula	
Pterocaulon serrulatum	
Ptilotus exaltatus	
Ptilotus gaudichaudii	
Ptilotus obovatus var. *obovatus*	
Ptilotus polystachyus	CPH056.06
Senna notabilis	
Seringia exastia	
Sida sp. L (A.M. Ashby 4202)	
Solanum cleistogamum	
Solanum ferocissimum	
Solanum lasiophyllum	
Themeda triandra	
Triodia melvillei	
Triodia pungens	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-159

Date	17/06/2022
Described by	C. van den Bergh, C. Parker
Type	Relevé
Location	MGA Zone 50 672731 mE; 7451556 mN 118.6857 E -23.035495 S
Veg Condition	Very Good
Soil	Medium Clay
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Claypan
Vegetation	*Aristida inaequiglumis*, *Aristida contorta*, *Aristida jerichoensis* var. *subspinulifera*, *Digitaria ammophila* low scattered tussock grasses with *Sclerolaena tetragona*, *Maireana villosa* low scattered chenopod shrubs with Acacia aptaneura mid to tall scattered shrubs.

SPECIES LIST

Name	Specimen
Areocleome oxalidea	
Aristida contorta	
Aristida jerichoensis var. *subspinulifera*	CPH169.01
Boerhavia repleta	CPH159.01
Cheilanthes sieberi subsp. *sieberi*	
Digitaria ammophila	
Enneapogon polyphyllus	
Eremophila lanceolata	
Euphorbia ferdinandi var. *ferdinandi*	CPH169.07
Evolvulus alsinoides var. *villosicalyx*	
Goodenia prostrata	
Hibiscus burtonii	
Maireana villosa	
Perotis rara	
Ptilotus exaltatus	
Ptilotus obovatus var. *obovatus*	
Sclerolaena tetragona	CPH176.04
Solanum lasiophyllum	

Central Pilbara Hub Site CPH-160

Date	17/06/2022			
Described by	E. Eakin-Busher, E. Marsh			
Type	Quadrat	50m x 50m		
Location	MGA Zone	50		
	673250	mE;	7452964	mN
	118.6906	E	-23.022732	S
Veg Condition	Excellent			
Soil	Light Medium Clay			
Rock Type	None Discernible			
Fire Age	Old (6+ yr)			
Habitat	Hardpan Plain			
Vegetation	*Themeda triandra* mid to low tussock grassland with *Acacia aptaneura* low sparse woodland.			

SPECIES LIST

Name	Specimen
Abutilon otocarpum	
Acacia aptaneura	
Alternanthera nana	
Aristida contorta	
Aristida jerichoensis var. *subspinulifera*	
Aristida obscura	
Bidens bipinnata	
Boerhavia sp. Indet	
Cheilanthes sieberi subsp. *sieberi*	
Chrysopogon fallax	
Codonocarpus cotinifolius	
Convolvulus clementii	CPH160-02
Cucumis variabilis	
Dactyloctenium radulans	
Dichanthium sericeum	CPH160-01
Digitaria ammophila	
Enneapogon polyphyllus	
Eremophila lanceolata	
Eriachne sp. Indet	
Euphorbia biconvexa	
Euphorbia ferdinandi var. *ferdinandi*	CPH199-]1
Evolvulus alsinoides var. *villosicalyx*	
Fimbristylis dichotoma	CPH060-01
Goodenia prostrata	
Hakea loreus subsp. *loreus*	
Iseilema membranaceum	CPH199-02
Maireana villosa	
Ophioglossum lusitanicum	
Perotis rara	
Pterocaulon sphacelatum	
Ptilotus astrolasius	
Ptilotus exaltatus	
Ptilotus fusiformis	
Ptilotus roei	
Rhagodia sp. Hamersley (M. Trudgen 17794)	
Roebuckiella similis	CPH179.04
Salsola australis	
Sida fibulifera	
Sida platycalyx	
Sida sp. L (A.M. Ashby 4202)	
Solanum ferocissimum	
Teucrium teucriiflorum	CPH179.07
Themeda triandra	
Tripogonella loliiformis	CPH041-01

Central Pilbara Hub Site CPH-161

Date	17/06/2022
Described by	E. Eakin-Busher, E. Marsh
Type	Quadrat 50m x 50m
Location	MGA Zone 50 671849 mE; 7452417 mN 118.6770 E -23.027820 S
Veg Condition	Very Good
Soil	Medium Clay
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Hardpan Plain
Vegetation	Acacia aptaneura low sparse woodland over Aristida contorta low isolated clumps of tussock grasses with Maireana planifolia low isolated shrubs.

SPECIES LIST

Name	Specimen
Abutilon otocarpum	
Acacia aptaneura	
Aristida contorta	
Aristida inaequiglumis	
Aristida jerichoensis var. *subspinulifera*	
Bidens bipinnata	
Boerhavia repleta	
Cheilanthes sieberi subsp. *sieberi*	
Chrysopogon fallax	
Dactyloctenium radulans	
Dichanthium sericeum	CPH160-01
Digitaria ammophila	
Enneapogon polyphyllus	
Eragrostis xerophila	CPH-161
Eremophila lanceolata	
Eriachne benthamii	CPH165-04
Eulalia aurea	
Euphorbia biconvexa	
Euphorbia ferdinandi var. *ferdinandi*	CPH199-]1
Evolvulus alsinoides var. *villosicalyx*	
Fimbristylis dichotoma	CPH060-01
Goodenia nuda	
Goodenia prostrata	
Hakea loreus subsp. *loreus*	
Hibiscus burtonii	
Iseilema membranaceum	CPH199-02
Maireana planifolia	
Maireana sp. Indet	CPH178-02
Maireana villosa	
Malvastrum americanum	
Melhania oblongifolia	
Ophioglossum lusitanicum	
Panicum effusum	
Paspalidium rarum	CPH048-08
Perotis rara	
Portulaca oleracea	
Ptilotus exaltatus	
Ptilotus fusiformis	
Ptilotus obovatus var. *obovatus*	

Central Pilbara Hub Site CPH-161

Ptilotus roei	
Rhagodia eremaea	
Rhagodia sp. Hamersley (M. Trudgen 17794)	
Roebuckiella similis	CPH179.04
Salsola australis	
Sclerolaena cornishiana	CPH178-04
Sida sp. L (A.M. Ashby 4202)	
Solanum lasiophyllum	
Teucrium teucriiflorum	
Themeda triandra	
Tragus australianus	
Tribulus astrocarpus	
Tribulus sp. Indet	CPH178-03
Tripogonella loliiformis	CPH041-01
Urochloa occidentalis var. *ciliata*	CPH168-01
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-163

Date	17/06/2022
Described by	E. Eakin-Busher, E. Marsh
Type	Quadrat 50m x 50m
Location	MGA Zone 50 672704 mE; 7452283 mN 118.6854 E -23.028934 S
Veg Condition	Excellent
Soil	Light Clay
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Hardpan Plain
Vegetation	*Acacia aptaneura* open woodland over *Aristida contorta*, *Chrysopogon fallax* sparse tussock grasses.

SPECIES LIST

Name	Specimen
Abutilon cryptopetalum	CPH163-02
Abutilon otocarpum	
Acacia aptaneura	
Aristida contorta	
Aristida inaequiglumis	
Aristida jerichoensis var. *subspinulifera*	CPH163-01
Bidens bipinnata	
Boerhavia sp. Indet	
Cheilanthes sieberi subsp. *sieberi*	
Chloris virgata	CPH165-05
Chrysopogon fallax	
Dactyloctenium radulans	
Digitaria ammophila	
Enneapogon polyphyllus	
Eremophila lanceolata	
Eriachne pulchella	
Euphorbia drummondii	CPH041-02
Euphorbia ferdinandi var. *ferdinandi*	CPH199-]1
Euphorbia sp. Indet	
Evolvulus alsinoides var. *villosicalyx*	
Fimbristylis dichotoma	CPH060-01
Goodenia nuda	
Goodenia prostrata	
Iseilema membranaceum	CPH199-02
Maireana planifolia	
Maireana villosa	
Ophioglossum lusitanicum	
Panicum effusum	
Paspalidium rarum	CPH048-08
Peplidium sp. C Evol. Fl. Fauna Arid Aust. (N.T. *Burbidge & A. Kanis 8*	CPH165-02
Perotis rara	
Ptilotus exaltatus	
Ptilotus fusiformis	
Ptilotus obovatus var. *obovatus*	
Rhagodia eremaea	
Roebuckiella similis	CPH179.04
Sclerolaena cornishiana	CPH066-06
Sida sp. L (A.M. Ashby 4202)	
Solanum ferocissimum	
Stenopetalum nutans	CPH165-01
Tragus australianus	
Tribulus astrocarpus	CPH176.05
Tribulus sp. Indet	CPH178-03
Tripogonella loliiformis	CPH041-01
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-164

Date	17/06/2022
Described by	E. Eakin-Busher, E. Marsh
Type	Quadrat 50m x 50m
Location	MGA Zone 50 672127 mE; 7451948 mN 118.6798 E -23.032020 S
Veg Condition	Excellent
Soil	Medium Clay
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Hardpan Plain
Vegetation	*Aristida contorta* low isolated clumps of grasses with *Acacia aptaneura* low isolated trees (in landscape) over *Acacia aptaneura* low isolated shrubs.

SPECIES LIST

Name	Specimen
Abutilon otocarpum	
Acacia aptaneura	
Aristida contorta	
Aristida inaequiglumis	
Aristida jerichoensis var. *subspinulifera*	
Boerhavia sp. Indet	
Cheilanthes sieberi subsp. *sieberi*	
Chrysopogon fallax	
Convolvulus clementii	CPH164-02
Dactyloctenium radulans	
Digitaria ammophila	
Enneapogon caerulescens	
Enneapogon polyphyllus	
Eremophila lanceolata	
Eriachne pulchella subsp. *dominii*	
Euphorbia ferdinandi var. *ferdinandi*	CPH199-]1
Fimbristylis dichotoma	CPH060-01
Goodenia prostrata	
Hibiscus burtonii	
Lepidium echinatum	CPH164-01
Maireana sp. Indet	CPH178-02
Maireana villosa	
Ophioglossum lusitanicum	
Panicum effusum	
Paspalidium rarum	CPH048-08
Perotis rara	
Portulaca oleracea	
Pterocaulon sphacelatum	
Ptilotus exaltatus	
Ptilotus gaudichaudii	
Ptilotus obovatus var. *obovatus*	
Ptilotus roei	
Salsola australis	
Sclerolaena tetragona	CPH176.04
Sida fibulifera	
Sida sp. L (A.M. Ashby 4202)	
Tragus australianus	
Tribulus astrocarpus	CPH176.05
Tribulus sp. Indet	CPH178-03
Tripogonella loliiformis	CPH041-01
Vittadinia eremaea	CPH164-01

Central Pilbara Hub Site CPH-165

Date	17/06/2022
Described by	E. Eakin-Busher, E. Marsh
Type	Quadrat 50m x 50m
Location	MGA Zone 50 672145 mE; 7453125 mN 118.6798 E -23.021392 S
Veg Condition	Excellent
Soil	Light Medium Clay
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Hardpan Plain
Vegetation	*Themeda triandra* closed tussock grassland with *Hakea loreus* subsp. *loreus*, *Eucalyptus xerothermica* low isolated clumps of trees.

SPECIES LIST

Name	Specimen
Abutilon otocarpum	
Acacia aptaneura	
Alternanthera nana	
Amaranthus cuspidifolius	CPH180.01
Aristida contorta	
Aristida jerichoensis var. *subspinulifera*	
Aristida obscura	
Arivela viscosa	
Bidens bipinnata	
Blumea tenella	CPH165-03
Boerhavia sp. Indet	
Cheilanthes sieberi subsp. *sieberi*	
Chloris virgata	CPH165-05
Chrysopogon fallax	
Convolvulus clementii	CPH160-02
Cucumis variabilis	
Dactyloctenium radulans	
Dendrophyllanthus erwinii	
Dichanthium sericeum	CPH160-01
Digitaria ammophila	
Digitaria ctenantha	
Dysphania glomulifera subsp. *eremaea*	CPH165-06
Dysphania melanocarpa forma melanocarpa	
Enneapogon polyphyllus	
Eragrostis cumingii	
Eremophila lanceolata	
Eriachne benthamii	CPH165-04
Eriachne pulchella	
Euphorbia biconvexa	
Euphorbia drummondii	CPH041-02
Euphorbia tannensis subsp. *eremophila*	
Evolvulus alsinoides var. *villosicalyx*	
Fimbristylis dichotoma	CPH060-01
Goodenia nuda	
Goodenia prostrata	
Hakea loreus subsp. *loreus*	
Iseilema membranaceum	CPH199-02
Ophioglossum lusitanicum	
Panicum effusum	
Paspalidium rarum	CPH048-08
Peplidium sp. C Evol. Fl. Fauna Arid Aust. (N.T. Burbidge & A. Kanis 8	CPH165-02

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Perotis rara	
Polycarpaea longiflora	
Portulaca oleracea	
Pterocaulon sphacelatum	
Ptilotus exaltatus	
Ptilotus gaudichaudii	
Ptilotus obovatus var. *obovatus*	
Roebuckiella similis	CPH179.04
Salsola australis	
Senna notabilis	
Sida fibulifera	
Sida sp. L (A.M. Ashby 4202)	
Stenopetalum nutans	CPH165-01
Themeda triandra	
Tribulus astrocarpus	CPH176.05
Triodia pungens	

Central Pilbara Hub Site CPH-166

Date	18/06/2022
Described by	C. van den Bergh, E. Eakin-Busher
Type	Quadrat 50m x 50m
Location	MGA Zone 50 684343 mE; 7466716 mN 118.7972 E -22.897372 S
Veg Condition	Excellent
Soil	Silty Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Triodia melvillei*, *Triodia pungens* mid hummock grassland with *Acacia adsurgens*, *Acacia ancistrocarpa*, *Acacia tenuissima* mid to tall scattered shrubs (to isolated patches) with *Corymbia deserticola* subsp. *deserticola* low scattered trees on stony plain with brown silty clay loam soil.

SPECIES LIST

Name	Specimen
Acacia adsurgens	
Acacia ancistrocarpa	
Acacia aptaneura	
Acacia dictyophleba	
Acacia pruinocarpa	
Acacia tenuissima	
Aristida contorta	
Aristida holathera var. *holathera*	
Aristida inaequiglumis	
Corymbia deserticola subsp. *deserticola*	
Cymbopogon ambiguus	
Dendrophyllanthus erwinii	
Digitaria ammophila	
Digitaria brownii	CPH048.02
Duperreya commixta	
Eragrostis eriopoda	CPH166.01
Eriachne mucronata	
Eulalia aurea	
Evolvulus alsinoides var. *villosicalyx*	
Goodenia microptera	
Goodenia stobbsiana	
Grevillea berryana	
Hakea chordophylla	
Hibiscus burtonii	
Hibiscus sturtii	
Indigofera georgei	
Indigofera monophylla	
Panicum effusum	
Paraneurachne muelleri	
Psydrax suaveolens	
Ptilotus obovatus var. *obovatus*	
Scaevola parvifolia subsp. *pilbarae*	
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *x luerssenii*	
Seringia exastia	
Sida cardiophylla	
Solanum lasiophyllum	
Themeda triandra	
Triodia melvillei	
Triodia pungens	
Triodia wiseana	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-167

Date	18/06/2022
Described by	E. Eakin-Busher, E. Marsh
Type	Quadrat 50m x 50m
Location	MGA Zone 50 684034 mE; 7467203 mN 118.7941 E -22.893005 S
Veg Condition	Excellent
Soil	Sandy Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Sandy/ Stony Plain
Vegetation	*Acacia aptaneura*, *Acacia pruinocarpa* low sparse woodland over *Ptilotus obovatus* var. *obovatus*, *Sida* sp. L (A.M. Ashby 4202), *Sida platycalyx* low isolated clumps of shrubs.

SPECIES LIST

Name	Specimen
Acacia aneura	CPH155-02
Acacia aptaneura	
Acacia pruinocarpa	
Acacia tenuissima	
Alternanthera nana	
Aristida contorta	
Aristida inaequiglumis	
Aristida obscura	
Boerhavia coccinea	
Bothriochloa pertusa	CPH167-01
Cheilanthes sieberi subsp. *sieberi*	
Chrysopogon fallax	
Digitaria ammophila	
Digitaria brownii	CPH048.02
Duperreya commixta	
Enneapogon lindleyanus	
Enneapogon polyphyllus	
Eremophila latrobei subsp. *filiformis*	
Eriachne helmsii	CPH167-02
Evolvulus alsinoides var. *villosicalyx*	
Fimbristylis dichotoma	CPH060-01
Goodenia prostrata	
Hakea loreus subsp. *loreus*	
Hibiscus burtonii	
Hibiscus sturtii	
Maireana villosa	
Paraneurachne muelleri	
Psydrax latifolia	
Psydrax rigidula	
Ptilotus obovatus var. *obovatus*	
Rhagodia sp. Hamersley (M. Trudgen 17794)	
Sida platycalyx	
Sida sp. L (A.M. Ashby 4202)	
Solanum ferocissimum	
Teucrium teucriiflorum	
Triodia melvillei	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-168

Date	16/06/2022
Described by	E. Eakin-Busher, E. Marsh
Type	Quadrat 50m x 50m
Location	MGA Zone 50 683312 mE; 7467285 mN 118.7871 E -22.892345 S
Veg Condition	Very Good
Soil	Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Hardpan Plain
Vegetation	*Themeda triandra* tussock grassland with *Acacia aptaneura*, *Eucalyptus xerothermica* open woodland over shrubland of *Ptilotus astrolasius*.

SPECIES LIST

Name	Specimen
Abutilon fraseri subsp. *fraseri*	
Abutilon otocarpum	
Acacia aptaneura	
Acacia incurvaneura	
Alternanthera nana	
Amyema sp. Indet	
Aristida inaequiglumis	
Aristida lazaridis	
Aristida obscura	
Bidens bipinnata	
Boerhavia sp. Indet	
Cheilanthes sieberi subsp. *sieberi*	
Chrysopogon fallax	
Commelina ensifolia	
Digitaria ammophila	
Duperreya commixta	
Enneapogon caerulescens	
Enneapogon polyphyllus	
Eremophila longifolia	
Eucalyptus xerothermica	
Eulalia aurea	
Evolvulus alsinoides var. *villosicalyx*	
Grevillea berryana	
Hibiscus burtonii	
Isotropis iophyta	
Maireana planifolia	
Maireana villosa	
Malvastrum americanum	
Panicum effusum	
Paraneurachne muelleri	
Psydrax latifolia	
Psydrax rigidula	
Ptilotus astrolasius	
Ptilotus obovatus var. *obovatus*	
Rhagodia sp. Hamersley (M. Trudgen 17794)	
Setaria dielsii	CPH168-02
Sida sp. L (A.M. Ashby 4202)	
Solanum lasiophyllum	
Themeda triandra	
Urochloa occidentalis var. *ciliata*	CPH168-01

Central Pilbara Hub — Site CPH-169

Date	16/06/2022
Described by	C. van den Bergh, C. Parker
Type	Quadrat 50m x 50m
Location	MGA Zone 50
	682786 mE; 7466603 mN
	118.7820 E -22.898560 S
Veg Condition	Very Good
Soil	Light Clay
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Hardpan Plain
Vegetation	*Acacia aptaneura*, *Acacia pruinocarpa* low open woodland over *Sida ectogama*, *Psydrax latifolia*, *Grevillea berryana* mid to tall scattered shrubs over *Fimbristylis dichotoma*, *Aristida contorta*, *Eragrostis olida* isolated clumps of sedges and tussock grasses.

SPECIES LIST

Name	Specimen
Abutilon otocarpum	
Acacia aptaneura	
Acacia pruinocarpa	
Areocleome oxalidea	
Aristida contorta	
Aristida inaequiglumis	
Aristida jerichoensis var. *subspinulifera*	CPH169.01
Aristida obscura	
Arivela viscosa	
Bidens bipinnata	
Boerhavia coccinea	
Cheilanthes sieberi subsp. *sieberi*	
Chrysopogon fallax	
Dactyloctenium radulans	
Digitaria ctenantha	CPH169.02
Dysphania melanocarpa	CPH169.10
Enneapogon polyphyllus	
Eragrostis olida	CPH021.05
Eragrostis pergracilis	CPH169.12
Eremophila latrobei subsp. *filiformis*	
Eriachne mucronata	CPH048-07
Eriachne pulchella subsp. *pulchella*	CPH169.04
Euphorbia ferdinandi var. *ferdinandi*	CPH169.07
Evolvulus alsinoides var. *villosicalyx*	
Fimbristylis dichotoma	CPH043-03
Gomphrena lanata	CPH169.08
Goodenia nuda	CPH169.03
Goodenia prostrata	
Grevillea berryana	
Hibiscus burtonii	
Iseilema membranaceum	CPH169.11
Maireana planifolia	
Maireana villosa	CPH041-03
Ophioglossum lusitanicum	
Paspalidium clementii	CPH169.06
Perotis rara	
Portulaca oleracea	
Psydrax latifolia	
Ptilotus gaudichaudii	
Ptilotus obovatus var. *obovatus*	
Ptilotus polystachyus	CPH056.06
Ptilotus roei	
Ptilotus schwartzii var. *schwartzii*	

Central Pilbara Hub Site CPH-169

Rhagodia sp. Hamersley (M. Trudgen 17794)	
Rhodanthe propinqua	CPH169.05
Roebuckiella similis	
Sida ectogama	
Sida platycalyx	
Sida sp. L (A.M. Ashby 4202)	
Solanum ferocissimum	
Solanum lasiophyllum	
Spermacoce brachystema	CPH169.09
Teucrium teucriiflorum	
Tribulus astrocarpus	
Triodia melvillei	
Tripogonella loliiformis	CPH041-01
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-170

Date 16/06/2022
Described by C. van den Bergh, C. Parker

Type Quadrat 50m x 50m
Location MGA Zone 50
681813 mE; 7466670 mN
118.7725 E -22.898062 S
Veg Condition Very Good
Soil Light Clay
Rock Type None Discernible
Fire Age Old (6+ yr)
Habitat Hardpan Plain
Vegetation *Acacia aptaneura* low woodland over *Triodia melvillei* low open hummock grassland.

SPECIES LIST

Name	Specimen
Abutilon otocarpum	
Acacia aptaneura	
Bidens bipinnata	
Cheilanthes sieberi subsp. *sieberi*	
Enneapogon polyphyllus	
Eremophila latrobei subsp. *filiformis*	
Euphorbia drummondii	CPH041-02
Evolvulus alsinoides var. *villosicalyx*	
Grevillea berryana	
Hibiscus burtonii	
Maireana villosa	
Ophioglossum lusitanicum	
Paspalidium clementii	CPH169.06
Portulaca oleracea	
Psydrax latifolia	
Psydrax rigidula	
Psydrax suaveolens	
Ptilotus exaltatus	
Ptilotus gaudichaudii	
Ptilotus obovatus var. obovatus	
Rhagodia sp. Hamersley (M. Trudgen 17794)	
Seringia exastia	
Sida sp. L (A.M. Ashby 4202)	
Solanum ferocissimum	
Triodia melvillei	
Tripogonella loliiformis	CPH041-01
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-171

Date	16/06/2022			
Described by	C. van den Bergh, C. Parker			
Type	Quadrat	50m x 50m		
Location	MGA Zone 50			
	681308	mE;	7466425	mN
	118.7676	E	-22.900328	S
Veg Condition	Very Good			
Soil	Light Clay			
Rock Type	BIF			
Fire Age	Old (6+ yr)			
Habitat	Hardpan Plain			
Vegetation	*Acacia aptaneura* tall open shrubland over *Triodia melvillei* low sparse hummock grassland.			

SPECIES LIST

Name	Specimen
Abutilon otocarpum	
Acacia aptaneura	
Aristida contorta	
Cheilanthes sieberi subsp. *sieberi*	
Euphorbia drummondii	CPH041-02
Euphorbia tannensis subsp. *eremophila*	CPH-51-08
Fimbristylis dichotoma	CPH043-03
Goodenia prostrata	
Hibiscus burtonii	
Maireana villosa	
Ophioglossum lusitanicum	
Perotis rara	
Psydrax suaveolens	
Ptilotus exaltatus	
Ptilotus gaudichaudii	
Ptilotus obovatus var. *obovatus*	
Ptilotus roei	
Ptilotus schwartzii var. *schwartzii*	
Roebuckiella similis	
Senna notabilis	
Seringia exastia	
Sida sp. L (A.M. Ashby 4202)	
Solanum cleistogamum	
Solanum ferocissimum	
Triodia melvillei	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-172

Date	16/06/2022
Described by	E. Eakin-Busher, E. Marsh
Type	Quadrat 50m x 50m
Location	MGA Zone 50 680064 mE; 7466532 mN 118.7555 E -22.899502 S
Veg Condition	Excellent
Soil	Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Hardpan Plain
Vegetation	*Acacia aptaneura* low woodland over *Triodia melvillei* hummock grassland.

SPECIES LIST

Name	Specimen
Abutilon sp. Indet	CPH173-02
Acacia aptaneura	
Cheilanthes sieberi subsp. *sieberi*	
Codonocarpus cotinifolius	
Enneapogon polyphyllus	
Eremophila latrobei subsp. *filiformis*	
Euphorbia biconvexa	
Fimbristylis dichotoma	CPH060-01
Hibiscus burtonii	
Maireana planifolia	
Maireana villosa	
Ophioglossum lusitanicum	
Psydrax latifolia	
Psydrax rigidula	
Psydrax suaveolens	
Ptilotus obovatus var. *obovatus*	
Ptilotus roei	
Rhagodia sp. Hamersley (M. Trudgen 17794)	
Solanum ferocissimum	
Teucrium teucriiflorum	
Triodia melvillei	
Tripogonella loliiformis	CPH041-01
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-173

Date	16/06/2022
Described by	E. Eakin-Busher, E. Marsh
Type	Quadrat 50m x 50m
Location	MGA Zone 50 680913 mE; 7466732 mN 118.7637 E -22.897598 S
Veg Condition	Excellent
Soil	Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Acacia aptaneura* low sparse woodland over *Triodia melvillei* mid sparse hummock grassland with *Ptilotus obovatus* var. *obovatus*, *Seringia exastia* low isolated clumps of shrubs.

SPECIES LIST

Name	Specimen
Acacia aptaneura	
Acacia tenuissima	
Areocleome oxalidea	
Aristida contorta	
Aristida inaequiglumis	
Bidens bipinnata	
Cheilanthes sieberi subsp. *sieberi*	
Cymbopogon ambiguus	
Digitaria ammophila	
Dysphania kalpari	CPH173-01
Eremophila longifolia	
Eriachne mucronata	
Eriachne pulchella	
Euphorbia sp. Indet	CPH174-01
Euphorbia tannensis subsp. *eremophila*	
Evolvulus alsinoides var. *villosicalyx*	
Fimbristylis dichotoma	CPH060-01
Goodenia prostrata	
Hibiscus burtonii	
Maireana villosa	
Panicum effusum	
Paraneurachne muelleri	
Paspalidium rarum	CPH048-08
Psydrax rigidula	
Psydrax suaveolens	
Ptilotus exaltatus	
Ptilotus obovatus var. *obovatus*	
Ptilotus roei	

Central Pilbara Hub Site CPH-173

Ptilotus schwartzii var. schwartzii	CPH176.07
Rhagodia sp. Hamersley (M. Trudgen 17794)	
Roebuckiella similis	CPH179.04
Senna notabilis	
Seringia exastia	
Sida sp. indet	CPH173-02
Sida sp. L (A.M. Ashby 4202)	
Solanum ferocissimum	
Solanum lasiophyllum	
Triodia melvillei	
Tripogonella loliiformis	CPH041-01
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-174

Date	16/06/2022
Described by	E. Eakin-Busher, E. Marsh
Type	Quadrat 50m x 50m
Location	MGA Zone 50 679254 mE; 7466525 mN 118.7476 E -22.899653 S
Veg Condition	Excellent
Soil	Sandy Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Acacia aptaneura*, *Grevillea berryana* low sparse woodland over *Triodia melvillei* mid sparse hummock grassland with *Grevillea berryana*, *Acacia aptaneura* mid isolated shrubs.

SPECIES LIST

Name	Specimen
Acacia aptaneura	
Areocleome oxalidea	
Aristida contorta	
Aristida inaequiglumis	
Aristida obscura	
Cheilanthes sieberi subsp. *sieberi*	
Digitaria ammophila	
Eremophila lanceolata	
Eremophila latrobei subsp. *filiformis*	
Eriachne mucronata	
Euphorbia sp. Indet	CPH174-01
Fimbristylis dichotoma	CPH060-01
Goodenia prostrata	
Grevillea berryana	
Hakea loreus subsp. *loreus*	
Hibiscus burtonii	
Maireana planifolia	
Maireana villosa	
Ophioglossum lusitanicum	
Panicum effusum	
Perotis rara	
Psydrax rigidula	
Ptilotus exaltatus	
Ptilotus obovatus var. *obovatus*	
Ptilotus roei	
Ptilotus schwartzii var. *schwartzii*	CPH176.07
Roebuckiella similis	
Sida sp. L (A.M. Ashby 4202)	
Solanum ferocissimum	
Teucrium teucriiflorum	
Triodia melvillei	
Tripogonella loliiformis	CPH041-01
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-175

Date	15/06/2022
Described by	E. Marsh, C. Parker
Type	Quadrat 50m x 50m
Location	MGA Zone 50 678371 mE; 7466003 mN 118.7391 E -22.904461 S
Veg Condition	Excellent
Soil	Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Hardpan Plain
Vegetation	*Acacia aptaneura*, *Grevillea berryana* woodland over isolated clumps of *Triodia pungens* hummock grasses with *Aristida obscura*, *Chrysopogon fallax* isolated clumps of tussock grasses.

SPECIES LIST

Name	Specimen
Abutilon cunninghamii	CPH069-02
Acacia aptaneura	
Alternanthera nana	
Aristida obscura	
Arivela uncifera	
Bidens bipinnata	
Boerhavia repleta	
Calandrinia sp. Indet	CPH175-04
Cheilanthes sieberi subsp. *sieberi*	
Chrysopogon fallax	
Commelina ensifolia	CPH179.06
Duperreya commixta	
Dysphania melanocarpa	CPH175-03
Dysphania rhadinostachya	
Eremophila latrobei subsp. *filiformis*	CPH176.01
Eriachne mucronata	
Eriachne pulchella	
Euphorbia australis	
Euphorbia biconvexa	
Evolvulus alsinoides var. *villosicalyx*	
Goodenia prostrata	
Grevillea berryana	
Hibiscus burtonii	
Iseilema membranaceum	CPH175.01
Maireana planifolia	
Maireana villosa	
Panicum effusum	
Paraneurachne muelleri	
Paspalidium rarum	
Perotis rara	
Portulaca oleracea	
Portulaca pilosa	
Psydrax latifolia	
Psydrax suaveolens	
Ptilotus auriculifolius	
Ptilotus exaltatus	
Ptilotus gaudichaudii	CPH175.03
Ptilotus obovatus var. *obovatus*	
Ptilotus roei	
Ptilotus schwartzii var. *schwartzii*	CPH176.07
Rhagodia sp. Hamersley (M. Trudgen 17794)	

Central Pilbara Hub	Site CPH-175
Roebuckiella similis	CPH179.04
Senna notabilis	
Seringia exastia	
Sida ectogama	CPH176.03
Sida sp. L (A.M. Ashby 4202)	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	
Sida sp. Supplejack Station (T.S. Henshall 2345)	CPH-51-04
Solanum ferocissimum	
Teucrium teucriiflorum	CPH179.07
Thyridolepis mitchelliana	CPH175-02
Triodia pungens	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-176

Date	15/06/2022
Described by	E. Marsh, C. Parker
Type	Quadrat 50m x 50m
Location	MGA Zone 50 678175 mE; 7466641 mN 118.7371 E -22.898717 S
Veg Condition	Very Good
Soil	Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Hardpan Plain
Vegetation	*Acacia aptaneura* sparse woodland over *Grevillea berryana* isolated clumps of shrubs over *Triodia pungens* isolated clumps of hummock grasses.

SPECIES LIST

Name	Specimen
Abutilon lepidum	
Acacia aptaneura	
Acacia minyura	CPH176.06
Aristida contorta	
Aristida inaequiglumis	
Arivela uncifera	
Cheilanthes sieberi subsp. *sieberi*	
Cymbopogon ambiguus	
Enneapogon polyphyllus	
Eremophila latrobei subsp. *filiformis*	CPH176.01
Eremophila sp. Indet.	
Eriachne mucronata	
Eriachne pulchella	
Euphorbia trigonosperma	
Fimbristylis dichotoma	CPH060-01
Goodenia prostrata	
Grevillea berryana	
Hibiscus burtonii	
Maireana planifolia	
Maireana sp. Indet	CPH176.02
Ptilotus calostachyus	
Ptilotus exaltatus	
Ptilotus obovatus var. *obovatus*	
Ptilotus roei	
Ptilotus schwartzii var. *schwartzii*	CPH176.07
Sclerolaena tetragona	CPH176.04
Sida ectogama	CPH176.03
Sida sp. Barlee Range (S. van Leeuwen 1642)	CVOpp.06
Sida sp. Supplejack Station (T.S. Henshall 2345)	CPH-51-04
Solanum ferocissimum	
Solanum lasiophyllum	
Tribulus astrocarpus	CPH176.05
Triodia pungens	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-178

Date	15/06/2022
Described by	E. Marsh, C. Parker
Type	Quadrat 50m x 50m
Location	MGA Zone 50 677082 mE; 7466149 mN 118.7265 E -22.903276 S
Veg Condition	Very Good
Soil	Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Hardpan Plain
Vegetation	*Goodenia prostrata* sparse herbland with *Ptilotus schwartzii* with scattered *Aristida contorta*, *Eriachne mucronata* low grasses.

SPECIES LIST

Name	Specimen
Abutilon otocarpum	
Acacia aptaneura	
Aristida contorta	
Aristida inaequiglumis	
Calandrinia sp. Indet	CPH175-04
Dactyloctenium radulans	
Eremophila lanceolata	
Eriachne pulchella	
Euphorbia australis	
Goodenia prostrata	
Maireana planifolia	
Maireana sp. Indet	CPH178-02
Maireana villosa	
Portulaca oleracea	
Ptilotus calostachyus	
Ptilotus clementii	
Ptilotus exaltatus	
Ptilotus obovatus var. *obovatus*	
Ptilotus roei	
Ptilotus schwartzii var. *schwartzii*	
Salsola australis	
Sclerolaena cornishiana	CPH178-04
Sclerolaena tetragona	CPH176.04
Sida fibulifera	CPH178.01
Sida platycalyx	
Solanum lasiophyllum	
Tragus australianus	
Tribulus astrocarpus	CPH176.05
Tribulus sp. Indet	CPH178-03

Central Pilbara Hub Site CPH-179

Date	15/06/2022
Described by	E. Marsh, C. Parker
Type	Quadrat 50m x 50m
Location	MGA Zone 50 677369 mE; 7466502 mN 118.7292 E -22.900057 S
Veg Condition	Very Good
Soil	Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Hardpan Plain
Vegetation	*Acacia incurvaneura*, *Acacia aptaneura* tall open woodland over isolated clumps of *Triodia pungens* hummock grasses over scattered *Cheilanthes sieberi* subsp. *sieberi*, *Bidens bipinnata* herbs over *Chrysopogon fallax*, *Enneapogon polyphyllus* isolated clumps of tussock grasses.

SPECIES LIST

Name	Specimen
Abutilon cunninghamii	CPH095-01
Abutilon otocarpum	CPH031.05
Acacia aptaneura	
Acacia tetragonophylla	
Alternanthera nana	
Aristida contorta	
Aristida obscura	
Arivela viscosa	
Bidens bipinnata	
Boerhavia repleta	
Cheilanthes sieberi subsp. *sieberi*	
Chloris virgata	
Chrysopogon fallax	
Clerodendrum floribundum var. *floribundum*	
Commelina ensifolia	CPH179.06
Convolvulus clementii	CPH179.02
Crotalaria medicaginea var. *neglecta*	
Dactyloctenium radulans	
Digitaria brownii	
Enneapogon polyphyllus	
Eriachne mucronata	
Eriachne pulchella	
Eulalia aurea	
Euphorbia trigonosperma	
Evolvulus alsinoides var. *villosicalyx*	
Fimbristylis dichotoma	CPH060-01
Goodenia microptera	
Goodenia prostrata	
Maireana planifolia	
Maireana villosa	
Nicotiana rosulata	CPH179.05
Paspalidium rarum	
Perotis rara	
Polygala glaucifolia	
Portulaca oleracea	
Psydrax suaveolens	
Ptilotus clementii	
Ptilotus exaltatus	

Central Pilbara Hub Site CPH-179

Ptilotus gaudichaudii	CPH179.01
Ptilotus helipteroides	
Ptilotus obovatus var. *obovatus*	
Rhagodia sp. Hamersley (M. Trudgen 17794)	
Rhynchosia minima	
Roebuckiella similis	CPH179.04
Sclerolaena cornishiana	CPH056.04
Senna notabilis	
Setaria surgens	CPH048-12
Sida sp. L (A.M. Ashby 4202)	
Sida sp. Supplejack Station (T.S. Henshall 2345)	CPH-51-04
Stenopetalum nutans	CPH179.03
Teucrium teucriiflorum	CPH179.07
Themeda triandra	
Tribulus astrocarpus	CPH176.05
Triodia pungens	
Urochloa occidentalis var. *ciliata*	CPH179.01

Central Pilbara Hub Site CPH-180

Date	16/06/2022
Described by	C. van den Bergh, C. Parker
Type	Quadrat 50m x 50m
Location	MGA Zone 50 679689 mE; 7466136 mN 118.7519 E -22.903110 S
Veg Condition	Good
Soil	Light Clay
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Hardpan Plain
Vegetation	*Acacia aptaneura*, *Eucalyptus xerothermica* low woodland over *Acacia aptaneura* (immature) mid to tall sparse shrubland over *Triodia melvillei* low scattered hummock grasses over isolated clumps of herbs dominated by **Bidens bipinnata*

SPECIES LIST

Name	Specimen
Abutilon fraseri subsp. *fraseri*	
Acacia aptaneura	
Amaranthus cuspidifolius	CPH180.01
Aristida obscura	
Arivela viscosa	
Bidens bipinnata	
Boerhavia coccinea	
Cheilanthes sieberi subsp. *sieberi*	
Chloris virgata	
Chrysopogon fallax	
Commelina ensifolia	
Dactyloctenium radulans	
Digitaria ctenantha	CPH169.02
Duperreya commixta	
Echinochloa colona	
Enneapogon lindleyanus	
Enneapogon polyphyllus	
Eremophila latrobei subsp. *filiformis*	
Eucalyptus xerothermica	
Evolvulus alsinoides var. *villosicalyx*	
Hibiscus burtonii	
Ipomoea muelleri	
Maireana planifolia	
Maireana villosa	
Malvastrum americanum	
Paspalidium clementii	CPH169.06
Portulaca oleracea	
Psydrax latifolia	
Psydrax rigidula	
Psydrax suaveolens	
Ptilotus exaltatus	
Ptilotus gaudichaudii	
Ptilotus obovatus var. *obovatus*	
Ptilotus roei	
Rhagodia eremaea	
Rhagodia sp. Hamersley (M. Trudgen 17794)	
Salsola australis	
Setaria surgens	
Sida sp. L (A.M. Ashby 4202)	
Solanum ferocissimum	
Teucrium teucriiflorum	
Themeda triandra	
Tragus australianus	
Tribulus astrocarpus	
Triodia melvillei	
Vincetoxicum lineare	

Central Pilbara Hub Site CPH-181

Date	3/05/2022
Described by	E. Marsh, P-L. de Kock
Type	Quadrat 50m x 50m
Location	MGA Zone 50 692182 mE; 7452694 mN 118.8753 E -23.023089 S
Veg Condition	Excellent
Soil	Sandy Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Footslope
Vegetation	*Triodia vanleeuwenii* low open hummock grassland with *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Acacia trudgeniana* scattered tall shrubs.

SPECIES LIST

Name	Specimen
Acacia bivenosa	
Acacia cowleana	
Acacia elachantha	
Acacia tenuissima	
Acacia trudgeniana	
Aristida holathera var. *holathera*	
Cymbopogon ambiguus	
Cymbopogon obtectus	
Enneapogon polyphyllus	
Euphorbia australis var. *hispidula*	
Hakea chordophylla	
Hakea loreus subsp. *loreus*	
Hibiscus sturtii var. *campylochlamys*	
Jasminum didymum subsp. *lineare*	
Paraneurachne muelleri	
Paspalidium clementii	
Ptilotus calostachyus	
Ptilotus obovatus var. *obovatus*	
Ptilotus rotundifolius	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *pruinosa*	
Sida arenicola	
Solanum lasiophyllum	
Triodia vanleeuwenii	

Central Pilbara Hub Site CPH-182

Date	3/05/2022
Described by	E. Marsh, P-L. de Kock
Type	Quadrat 50m x 50m
Location	MGA Zone 50 692866 mE; 7452819 mN 118.8820 E -23.021883 S
Veg Condition	Excellent
Soil	Sandy Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Footslope
Vegetation	*Triodia vanleeuwenii* low hummock grassland with *Eucalyptus leucophloia* subsp. *leucophloia* scattered trees over *Acacia dictyophleba*, *Acacia tenuissima* mid to tall scattered shrubs.

SPECIES LIST

Name	Specimen
Acacia adoxa var. *adoxa*	
Acacia bivenosa	
Acacia dictyophleba	
Acacia elachantha	
Acacia tenuissima	
Amphipogon sericeus	
Corchorus lasiocarpus subsp. *parvus*	
Dampiera candicans	
Eucalyptus leucophloia subsp. *leucophloia*	
Hakea chordophylla	
Indigofera monophylla	
Maireana villosa	
Ptilotus calostachyus	
Ptilotus rotundifolius	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *pruinosa*	
Senna sp. Meekatharra (E. Bailey 1-26)	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	
Solanum lasiophyllum	
Triodia vanleeuwenii	

Central Pilbara Hub Site CPH-183

Date	3/05/2022
Described by	E. Marsh, P-L. de Kock
Type	Quadrat 100m x 25m
Location	MGA Zone 50 693727 mE; 7453023 mN 118.8904 E -23.019943 S
Veg Condition	Excellent
Soil	Sandy Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Minor Drainage Line
Vegetation	*Corymbia hamersleyana* low woodland over *Eucalyptus gamophylla* low open woodland over *Acacia monticola*, *Gossypium robinsonii* tall shrubland over *Dodonaea lanceolata* open shrubland over *Scaevola spinescens* scattered shrubs over *Themeda triandra*, *Triodia pungens* open tussock and hummock grassland.

SPECIES LIST

Name	Specimen
Abutilon cunninghamii	
Abutilon macrum	
Abutilon otocarpum	
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	
Acacia adoxa var. *adoxa*	
Acacia bivenosa	
Acacia cowleana	
Acacia maitlandii	
Acacia monticola	
Acacia pruinocarpa	
Acacia sp. Indet	CPH183-03
Acacia tenuissima	
Afrohybanthus aurantiacus	
Amaranthus cuspidifolius	
Androcalva luteiflora	
Aristida burbidgeae	
Aristida sp. Indet	CPH183-02
Arivela viscosa	
Bidens bipinnata	
Boerhavia coccinea	
Cheilanthes brownii	
Chrysopogon fallax	
Clerodendrum floribundum var. *angustifolium*	
Corchorus lasiocarpus subsp. *parvus*	
Corymbia hamersleyana	
Cymbopogon ambiguus	
Cynanchum floribundum	
Dactyloctenium radulans	
Dampiera candicans	
Dodonaea lanceolata	
Duperreya commixta	
Enneapogon polyphyllus	
Enneapogon robustissimus	
Eriachne mucronata	
Eucalyptus gamophylla	
Eucalyptus leucophloia subsp. *leucophloia*	
Euphorbia biconvexa	CPH183-01
Evolvulus alsinoides var. *villosicalyx*	
Gompholobium oreophilum	
Gomphrena cunninghamii	
Goodenia stobbsiana	
Gossypium robinsonii	

Central Pilbara Hub

SiteCPH-183

Halgania gustafsenii var. *gustafsenii*	
Hibiscus sturtii var. *campylochlamys*	
Hibiscus sturtii var. *platychlamys*	
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Melhania oblongifolia	
Nellica maderaspatensis	
Notoleptopus decaisnei var. *orbicularis (A.B. Craig 428)*	
Panicum effusum	
Paraneurachne muelleri	
Peripleura obovata	
Ptilotus exaltatus	
Ptilotus obovatus var. *obovatus*	
Rhagodia eremaea	
Rhynchosia minima	
Santalum lanceolatum	
Scaevola spinescens	
Senna artemisioides subsp. *helmsii*	
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *x luerssenii*	
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	
Solanum horridum	
Solanum lasiophyllum	
Streptoglossa decurrens	
Tephrosia densa	CPH183-04
Themeda triandra	
Trichodesma zeylanicum var. *zeylanicum*	
Triodia pungens	

Central Pilbara Hub Site CPH-184

Date	3/05/2022
Described by	E. Marsh, P-L. de Kock
Type	Quadrat 50m x 50m
Location	MGA Zone 50 691405 mE; 7452913 mN 118.8677 E -23.021198 S
Veg Condition	Excellent
Soil	Sandy Clay Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Footslope
Vegetation	*Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Ptilotus rotundifolius* sparse mid shrubland over *Triodia vanleeuwenii* low hummock grassland.

SPECIES LIST

Name	Specimen
Abutilon lepidum	
Acacia bivenosa	
Acacia dictyophleba	
Acacia elachantha	
Aristida contorta	
Aristida holathera var. *holathera*	
Cymbopogon obtectus	
Eucalyptus leucophloia subsp. *leucophlo*ia	
Evolvulus alsinoides var. *villosicalyx*	
Hibiscus sturtii var. *campylochlamys*	
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Paraneurachne muelleri	
Ptilotus astrolasius	
Ptilotus calostachyus	
Ptilotus rotundifolius	
Scaevola parvifolia subsp. *pilbarae*	
Senna artemisioides subsp. *helmsii*	
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *x luerssenii*	
Sida arenicola	
Sida echinocarpa	
Solanum lasiophyllum	
Triodia vanleeuwenii	
Triodia wiseana	

Central Pilbara Hub Site CPH-185

Date	3/05/2022
Described by	E. Marsh, P-L. de Kock
Type	Quadrat 50m x 50m
Location	MGA Zone 50 696678 mE; 7452942 mN 118.9191 E -23.020327 S
Veg Condition	Excellent
Soil	Sandy Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Footslope
Vegetation	*Triodia vanleeuwenii* low hummock grassland with *Corymbia deserticola* low isolated trees over *Eucalyptus gamophylla* low mallee shrubs.

SPECIES LIST

Name	Specimen
Acacia adoxa var. *adoxa*	
Acacia adsurgens	
Acacia bivenosa	
Acacia cowleana	
Acacia dictyophleba	
Acacia elachantha	
Acacia maitlandii	
Acacia sp. Indet	CPHW04-01
Acacia tenuissima	
Acacia trudgeniana	
Afrohybanthus aurantiacus	
Aristida inaequiglumis	CPHW04-02
Capparis lasiantha	
Corymbia deserticola subsp. *deserticola*	
Cymbopogon obtectus	
Digitaria ammophila	
Duperreya commixta	
Eremophila longifolia	
Eucalyptus gamophylla	
Eucalyptus leucophloia subsp. *leucophloia*	
Gompholobium oreophilum	
Halgania gustafsenii var. *gustafsenii*	
Hibiscus sturtii var. *campylochlamys*	
Hibiscus sturtii var. *platychlamys*	
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Paraneurachne muelleri	
Ptilotus rotundifolius	
Scaevola parvifolia subsp. *pilbarae*	
Senna artemisioides subsp. *helmsii*	
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *x luerssenii*	
Seringia exastia	
Sida arenicola	
Solanum centrale	
Solanum lasiophyllum	
Themeda triandra	
Triodia vanleeuwenii	

Central Pilbara Hub Site CPH-186

Date	3/05/2022
Described by	E. Marsh, P-L. de Kock
Type	Quadrat 50m x 50m
Location	MGA Zone 50 696333 mE; 7453144 mN 118.9158 E -23.018536 S
Veg Condition	Excellent
Soil	Sandy Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Footslope
Vegetation	*Corymbia deserticola* subsp. *deserticola* low isolated trees over *Eucalyptus gamophylla* low mallee trees over *Acacia cowleana* tall open shrubland over *Halgania gustafsenii* low open shrubland over *Triodia vanleeuwenii* low hummock grassland.

SPECIES LIST

Name	Specimen
Abutilon macrum	
Abutilon otocarpum	
Acacia adoxa var. *adoxa*	
Acacia adsurgens	
Acacia bivenosa	
Acacia cowleana	
Acacia dictyophleba	
Acacia elachantha	
Acacia tenuissima	
Acacia trudgeniana	
Afrohybanthus aurantiacus	
Amphipogon sericeus	
Aristida contorta	
Aristida inaequiglumis	CPH185-02
Bonamia erecta	
Codonocarpus cotinifolius	
Corchorus lasiocarpus subsp. *parvus*	
Corymbia deserticola subsp. *deserticola*	
Cymbopogon ambiguus	
Cymbopogon obtectus	
Digitaria brownii	
Duperreya commixta	
Eragrostis eriopoda	
Eriachne mucronata	
Eucalyptus gamophylla	
Eulalia aurea	
Evolvulus alsinoides var. *villosicalyx*	
Goodenia microptera	
Goodenia stobbsiana	
Gossypium robinsonii	
Halgania gustafsenii var. *gustafsenii*	
Hibiscus burtonii	
Hibiscus coatesii	
Hibiscus sturtii var. *campylochlamys*	
Hibiscus sturtii var. *platychlamys*	
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Muelleranthus obovatus	
Paraneurachne muelleri	
Ptilotus astrolasius	
Ptilotus calostachyus	
Scaevola parvifolia subsp. *pilbarae*	
Senna artemisioides subsp. *helmsii*	
Senna artemisioides subsp. *oligophylla*	
Senna notabilis	

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Sida arenicola	
Solanum horridum	
Solanum lasiophyllum	
Themeda triandra	
Triodia melvillei	CPH186-01
Triodia pungens	
Triodia vanleeuwenii	

Central Pilbara Hub Site CPH-187

Date	3/05/2022
Described by	E. Marsh, P-L. de Kock
Type	Quadrat 100m x 25m
Location	MGA Zone 50 694386 mE; 7452873 mN 118.8968 E -23.021211 S
Veg Condition	Excellent
Soil	Sandy Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Minor Drainage Line
Vegetation	*Corymbia hamersleyana* low woodland over *Eucalyptus gamophylla* open mallee woodland over *Acacia monticola*, *Androcalva luteiflora*, *Gossypium robinsonii* tall shrubland over *Themeda triandra* open tussock grassland over *Triodia pungens* hummock grassland.

SPECIES LIST

Name	Specimen
Abutilon cunninghamii	
Abutilon macrum	
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	
Acacia adoxa var. *adoxa*	
Acacia bivenosa	
Acacia coriacea subsp. *pendens*	
Acacia cowleana	
Acacia elachantha	
Acacia monticola	
Acacia tenuissima	
Afrohybanthus aurantiacus	
Alternanthera nana	
Amaranthus cuspidifolius	
Androcalva luteiflora	
Aristida inaequiglumis	CPH185-02
Arivela viscosa	
Bidens bipinnata	
Boerhavia repleta	
Clerodendrum floribundum	
Corchorus lasiocarpus subsp. *parvus*	
Corymbia hamersleyana	
Cucumis variabilis	
Cymbopogon ambiguus	
Cynanchum floribundum	
Digitaria brownii	
Duperreya commixta	
Enchylaena tomentosa var. *tomentosa*	
Enneapogon lindleyanus	
Enneapogon robustissimus	
Eriachne mucronata	
Eucalyptus gamophylla	
Eucalyptus leucophloia subsp. *leucophloia*	
Euphorbia biconvexa	CPH183-01
Evolvulus alsinoides var. *villosicalyx*	
Glycine canescens	
Gompholobium oreophilum	
Gomphrena cunninghamii	
Goodenia microptera	
Goodenia stobbsiana	
Gossypium robinsonii	
Hakea chordophylla	
Halgania gustafsenii var. *gustafsenii*	
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	CPH187-01

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Hibiscus sturtii var. *campylochlamys*
Indigofera monophylla
Jasminum didymum subsp. *lineare*
Melhania oblongifolia
Nellica maderaspatensis
Paraneurachne muelleri
Polycarpaea longiflora
Ptilotus calostachyus
Ptilotus exaltatus
Ptilotus obovatus var. *obovatus*
Rhagodia eremaea
Rhynchosia minima
Santalum lanceolatum
Scaevola parvifolia subsp. *pilbarae*
Scaevola spinescens
Senna artemisioides subsp. *helmsii*
Senna artemisioides subsp. *oligophylla*
Senna glutinosa subsp. *glutinosa*
Senna glutinosa subsp. *pruinosa*
Seringia exastia
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)
Solanum horridum
Solanum lasiophyllum
Tephrosia densa
Themeda triandra
Trichodesma zeylanicum var. *zeylanicum*
Triodia pungens
Triodia wiseana
Vincetoxicum lineare

Central Pilbara Hub Site CPH-188

Date	3/05/2022
Described by	E. Marsh, P-L. de Kock
Type	Quadrat 100m x 25m
Location	MGA Zone 50 691102 mE; 7452832 mN 118.8648 E -23.021963 S
Veg Condition	Excellent
Soil	Sandy Loam
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Minor Drainage Line
Vegetation	*Corymbia hamersleyana*, *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Acacia monticola*, *Gossypium robinsonii*, *Androcalva luteiflora* tall shrubland over *Themeda triandra* tussock grassland over *Triodia pungens* hummock grassland.

SPECIES LIST

Name	Specimen
Abutilon cunninghamii	
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	
Acacia adsurgens	
Acacia bivenosa	
Acacia elachantha	
Acacia monticola	
Acacia tenuissima	
Afrohybanthus aurantiacus	
Alternanthera nana	
Androcalva luteiflora	
Arivela viscosa	
Bidens bipinnata	
Boerhavia coccinea	
Clerodendrum floribundum var. *angustifolium*	
Corchorus lasiocarpus subsp. *parvus*	
Corymbia hamersleyana	
Crotalaria medicaginea var. *neglecta*	
Cymbopogon ambiguus	
Cymbopogon obtectus	
Dicrastylis cordifolia	
Dodonaea lanceolata	
Dodonaea viscosa subsp. *mucronata*	
Duperreya commixta	
Enneapogon robustissimus	
Eremophila longifolia	
Eriachne mucronata	
Eucalyptus gamophylla	
Eucalyptus leucophloia subsp. *leucophloia*	
Evolvulus alsinoides var. *villosicalyx*	
Gomphrena cunninghamii	
Goodenia stobbsiana	
Gossypium robinsonii	
Halgania gustafsenii var. *gustafsenii*	
Hibiscus sturtii var. *campylochlamys*	
Hibiscus sturtii var. *platychlamys*	
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Melhania oblongifolia	
Nellica maderaspatensis	

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Paraneurachne muelleri
Polycarpaea longiflora
Ptilotus astrolasius
Ptilotus calostachyus
Ptilotus obovatus var. *obovatus*
Rhynchosia minima
Santalum lanceolatum
Scaevola parvifolia subsp. *pilbarae*
Senna artemisioides subsp. *helmsii*
Senna artemisioides subsp. *oligophylla*
Senna glutinosa subsp. *glutinosa*
Solanum horridum
Tephrosia densa
Themeda triandra
Trichodesma zeylanicum var. *zeylanicum*
Triodia pungens

Central Pilbara Hub Site CPH-199

Date	16/06/2022			
Described by	E. Eakin-Busher, E. Marsh			
Type	Quadrat	50m x 50m		
Location	MGA Zone	50		
	683607	mE;	7467386	mN
	118.7899	E	-22.891399	S
Veg Condition	Very Good			
Soil	Light Clay			
Rock Type	None Discernible			
Fire Age	Old (6+ yr)			
Habitat	Stony Plain			
Vegetation	*Aristida contorta* low sparse tussock grassland with *Acacia aptaneura* low isolated trees over *Ptilotus obovatus* var. *obovatus, Ptilotus gaudichaudii* low isolated shrubs.			

SPECIES LIST

Name	Specimen
Abutilon fraseri subsp. *fraseri*	
Abutilon otocarpum	
Acacia aptaneura	
Alternanthera nana	
Areocleome oxalidea	
Aristida contorta	
Aristida inaequiglumis	
Bidens bipinnata	
Boerhavia sp. Indet	
Cheilanthes sieberi subsp. *sieberi*	
Digitaria ammophila	
Enneapogon polyphyllus	
Eremophila lanceolata	
Eremophila latrobei subsp. *filiformis*	
Euphorbia ferdinandi var. *ferdinandi*	CPH199-]1
Evolvulus alsinoides var. *villosicalyx*	
Fimbristylis dichotoma	CPH060-01
Goodenia nuda	
Goodenia prostrata	
Hibiscus burtonii	
Iseilema membranaceum	CPH199-02
Maireana villosa	
Ophioglossum lusitanicum	
Paspalidium rarum	CPH048-08
Perotis rara	
Portulaca oleracea	
Ptilotus gaudichaudii	
Ptilotus helipteroides	
Ptilotus obovatus var. *obovatus*	
Ptilotus roei	
Ptilotus schwartzii var. *schwartzii*	
Roebuckiella similis	CPH179.04
Senna notabilis	
Sida platycalyx	
Sida sp. L (A.M. Ashby 4202)	
Solanum lasiophyllum	
Tripogonella loliiformis	CPH041-01

Central Pilbara Hub Site CPH-501

Date	14/06/2022
Described by	C. van den Bergh, C. Parker
Type	Quadrat 50m x 50m
Location	MGA Zone 50 682514 mE; 7471492 mN 118.7788 E -22.854449 S
Veg Condition	Excellent
Soil	Clay Loam
Rock Type	Dolerite
Fire Age	Old (6+ yr)
Habitat	Stony Plain
Vegetation	*Triodia vanleeuwenii*, *Triodia pungens* low hummock grassland with *Acacia atkinsiana*, *Senna glutinosa* subsp. *glutinosa* mid to tall sparse shrubland with *Eucalyptus leucophloia* subsp. *leucophloia*, *Eucalyptus gamophylla* low scattered trees.

SPECIES LIST

Name	Specimen
Acacia atkinsiana	
Acacia pachyacra	
Acacia pteraneura	CPH501.01
Acacia sibirica	
Amphipogon sericeus	
Aristida contorta	
Aristida holathera var. *holathera*	
Duperreya commixta	
Eragrostis eriopoda	CPH-51-10
Eucalyptus gamophylla	
Eucalyptus leucophloia subsp. *leucophloia*	
Euphorbia boophthona	
Goodenia stobbsiana	
Ptilotus calostachyus	
Ptilotus obovatus var. *obovatus*	
Ptilotus rotundifolius	
Ptilotus sp. Indet	
Scaevola parvifolia subsp. *pilbarae*	
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *x luerssenii*	
Sida sp. Indet	
Solanum lasiophyllum	
Triodia pungens	
Triodia vanleeuwenii	
Vincetoxicum lineare	

Central Pilbara Hub 001 Site CPHR-

Date	10/03/2022
Described by	C. van den Bergh, D. Reith
Type	Relevé
Location	MGA Zone 50 711821 mE; 7463353 mN 119.0654 E -22.924478 S
Veg Condition	Very Good
Soil	Clay Loam
Rock Type	Detritals
Fire Age	Old (6+ yr)
Habitat	Drainage Area/ Floodplain
Vegetation	*Eucalyptus xerothermica*, *Acacia pruinocarpa*, *Acacia aptaneura* low woodland over *Themeda triandra*, *Eriachne mucronata* low to mid open tussock grassland with *Eremophila longifolia*, *Acacia pyrifolia* var. *pyrifolia*, *Petalostylis labicheoides* mid to tall sparse shrubland.

SPECIES LIST

Name	Specimen
Acacia aptaneura	
Acacia pruinocarpa	
Acacia pyrifolia var. *pyrifolia*	
Afrohybanthus aurantiacus	
Bidens bipinnata	
Boerhavia coccinea	CPHr001.07
Capparis lasiantha	
Chrysocephalum gilesii	CPHR001.02
Chrysopogon fallax	
Dipteracanthus australasicus subsp. *australasicus*	
Duperreya commixta	
Eremophila longifolia	
Eucalyptus xerothermica	
Euploca tenuifolia	CPHr001.06
Evolvulus alsinoides var. *decumbens*	
Goodenia stellata	CPHr001.03
Indigofera georgei	
Isotropis iophyta	
Malvastrum americanum	
Poaceae sp. Indet	CPHr001.04
Pterocaulon sphacelatum	CPH031.09
Ptilotus obovatus var. *obovatus*	
Scaevola amblyanthera var. *centralis*	CPHr001.05
Sida fibulifera	
Themeda triandra	

Central Pilbara Hub Site CPHR-002

Date	12/03/2022
Described by	C. van den Bergh, D. Reith
Type	Relevé
Location	MGA Zone 50 711644 mE; 7465810 mN 119.0633 E -22.902315 S
Veg Condition	Excellent
Soil	Silty Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Breakaway
Vegetation	*Triodia pungens* mid hummock grassland with *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Acacia hamersleyensis*, *Grevillea wickhamii* subsp. *hispidula* mid to tall scattered shrubs over *Eriachne mucronata* low scattered tussock grasses.

SPECIES LIST

Name	Specimen
Acacia hamersleyensis	CPHR02.01
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Grevillea wickhamii subsp. *hispidula*	
Sida sp. Golden calyces glabrous (H.N. Foote 32)	CPHr02.02
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	CPHR02.03
Triodia pungens	
Vincetoxicum flexuosum	CPHR02.04

Central Pilbara Hub Site CPHR-003

Date	14/03/2022
Described by	C. van den Bergh, D. Reith
Type	Relevé
Location	MGA Zone 50 719191 mE; 7473889 mN 119.1357 E -22.828411 S
Veg Condition	Excellent
Soil	Sandy Clay Loam
Rock Type	BIF
Fire Age	Moderate (3 to 5 yr)
Habitat	Minor Drainage Line
Vegetation	*Acacia tumida* var. *pilbarensis*, *Grevillea wickhamii* subsp. *hispidula*, *Gossypium robinsonii* tall open shrubland over *Themeda triandra*, *Eriachne mucronata*, *Cymbopogon ambiguus* low sparse tussock grassland with *Triodia pungens* low scattered hummock grasses with *Eucalyptus leucophloia* subsp. *leucophloia*, *Corymbia hamersleyana* low scattered

SPECIES LIST

Name	Specimen
Acacia tumida var. *pilbarensis*	
Afrohybanthus aurantiacus	
Androcalva luteiflora	
Arivela viscosa	
Corymbia hamersleyana	
Cymbopogon ambiguus	
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Goodenia stobbsiana	
Gossypium robinsonii	
Grevillea wickhamii subsp. *hispidula*	
Nellica maderaspatensis	
Petalostylis labicheoides	
Themeda triandra	
Triodia pungens	

Central Pilbara Hub Site CPHR-065

Date	28/03/2022
Described by	E. Eakin-Busher, B. Loudon
Type	Relevé
Location	MGA Zone 50 671349 mE; 7482862 mN 118.6688 E -22.752962 S
Veg Condition	Very Good
Soil	Sandy Clay Loam
Rock Type	None Discernible
Fire Age	Recent (0 to 2 yr)
Habitat	Drainage Area/ Floodplain
Vegetation	*Triodia pungens* low open hummock grassland with *Eucalyptus gamophylla* low mallee trees.

SPECIES LIST

Name	Specimen
Acacia ancistrocarpa	
Acacia aptaneura	CPH080-04
Acacia bivenosa	
Acacia dictyophleba	
Acacia elachantha	CPH088-07
Acacia pachyacra	
Acacia steedmanii subsp. *borealis*	
Acacia tenuissima	
Bothriochloa ewartiana	CPH091-04
Capparis lasiantha	
Chrysopogon fallax	
Duperreya commixta	
Eremophila longifolia	
Eucalyptus gamophylla	
Eucalyptus xerothermica	
Eulalia aurea	
Evolvulus alsinoides	
Gompholobium oreophilum	
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Melhania oblongifolia	
Paraneurachne muelleri	
Ptilotus obovatus var. *obovatus*	
Ptilotus rotundifolius	
Senna artemisioides subsp. *oligophylla*	
Senna artemisioides subsp. *X artemisioides*	CPH095-02
Senna pleurocarpa var. *angustifolia*	
Seringia exastia	
Themeda triandra	
Triodia pungens	

Central Pilbara Hub Site CPHR-102

Date	4/05/2022
Described by	E. Marsh, P-L. de Kock
Type	Relevé
Location	MGA Zone 50 689251 mE; 7452319 mN 118.8468 E -23.026815 S
Veg Condition	Excellent
Soil	Sandy Clay Loam
Rock Type	BIF
Fire Age	Moderate (3 to 5 yr)
Habitat	Minor Drainage Line
Vegetation	*Corymbia hamersleyana* low open woodland over *Acacia monticola* (*Gossypium robinsonii*) tall open shrubland over *Santalum lanceolatum*, *Androcalva luteiflora* open shrubland over *Themeda triandra* sparse tussock grassland with *Triodia pungens* open hummock grassland.

SPECIES LIST

Name	Specimen
Abutilon cunninghamii	
Abutilon lepidum	
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	
Acacia adsurgens	
Acacia monticola	
Acacia pruinocarpa	
Acacia tenuissima	
Acacia trudgeniana	
Afrohybanthus aurantiacus	
Androcalva luteiflora	
Arivela viscosa	
Bidens bipinnata	
Cenchrus ciliaris	
Corchorus lasiocarpus subsp. *parvus*	
Corymbia hamersleyana	
Cucumis variabilis	
Cymbopogon ambiguus	
Cynanchum floribundum	
Dodonaea viscosa subsp. *mucronata*	
Duperreya commixta	
Enneapogon lindleyanus	
Enneapogon polyphyllus	
Enneapogon robustissimus	
Eremophila longifolia	
Eriachne mucronata	
Eriachne pulchella	
Eucalyptus leucophloia subsp. *leucophloia*	
Glycine canescens	
Gomphrena cunninghamii	
Goodenia stobbsiana	
Gossypium robinsonii	
Hibiscus coatesii	
Hibiscus sturtii var. *campylochlamys*	
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Melhania oblongifolia	
Paraneurachne muelleri	
Polycarpaea longiflora	
Ptilotus astrolasius	
Ptilotus calostachyus	
Ptilotus exaltatus	

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Ptilotus obovatus var. *obovatus*
Rhynchosia minima
Santalum lanceolatum
Scaevola spinescens
Senna artemisioides subsp. *oligophylla*
Senna glutinosa subsp. *glutinosa*
Senna glutinosa subsp. *x luerssenii*
Sida sp. Pilbara (A.A. Mitchell PRP 1543)
Solanum horridum
Solanum lasiophyllum
Tephrosia densa
Themeda triandra
Triodia pungens

Central Pilbara Hub Site CPHR-103

Date	1/05/2022
Described by	E. Marsh, P-L. de Kock
Type	Relevé
Location	MGA Zone 50 688585 mE; 7451508 mN 118.8404 E -23.034205 S
Veg Condition	Excellent
Soil	Sandy Clay Loam
Rock Type	BIF
Fire Age	Moderate (3 to 5 yr)
Habitat	Hillslope
Vegetation	*Triodia brizoides* open hummock grassland with *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland.

SPECIES LIST

Name	Specimen
Acacia bivenosa	
Capparis lasiantha	
Cymbopogon ambiguus	
Enneapogon polyphyllus	
Eremophila naaykensii	
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Goodenia stobbsiana	
Hibiscus burtonii	
Maireana villosa	
Olearia stuartii	
Ptilotus exaltatus	
Ptilotus obovatus var. *obovatus*	
Ptilotus rotundifolius	
Senna ferraria	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *pruinosa*	
Senna glutinosa subsp. *x luerssenii*	
Solanum horridum	
Solanum lasiophyllum	
Tribulus suberosus	
Triodia brizoides	
Triodia pungens	

Central Pilbara Hub Site CPHR-106

Date	1/05/2022
Described by	E. Marsh, P-L. de Kock
Type	Relevé
Location	MGA Zone 50 688459 mE; 7451239 mN 118.8392 E -23.036649 S
Veg Condition	Very Good
Soil	Silty Clay Loam
Rock Type	BIF
Fire Age	Moderate (3 to 5 yr)
Habitat	Breakaway
Vegetation	*Eucalyptus leucophloia* subsp. *leucophloia* low isolated clumps of trees over *Acacia aptaneura*, *Acacia catenulata* subsp. *occidentalis* tall shrubland over *Rhagodia eremaea*, *Abutilon leucopetalum*, *Sida* sp. L (A.M. Ashby 4202), (*Ptilotus obovatus* var. *obovatus*) mid to low shrubs over *Eriachne mucronata*, *Triodia pungens* sparse tussock and hummock grassland.

SPECIES LIST

Name	Specimen
Abutilon leucopetalum	
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	
Acacia aptaneura	
Acacia bivenosa	
Acacia catenulata subsp. *occidentalis*	
Afrohybanthus aurantiacus	
Amyema fitzgeraldii	
Aristida burbidgeae	
Aristida obscura	
Bidens bipinnata	
Capparis lasiantha	
Cheilanthes austrotenuifolia	
Cheilanthes sieberi subsp. *sieberi*	
Codonocarpus cotinifolius	
Cucumis variabilis	
Digitaria brownii	
Dipteracanthus australasicus subsp. *australasicus*	
Dodonaea pachyneura	
Duperreya commixta	
Enneapogon lindleyanus	
Enneapogon polyphyllus	
Enneapogon robustissimus	
Eremophila jucunda subsp. *pulcherrima*	
Eremophila latrobei subsp. *glabra*	
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Hibiscus burtonii	
Lepidium catapycnon	
Maireana planifolia	
Olearia stuartii	
Pterocaulon sphaeranthoides	
Ptilotus exaltatus	
Ptilotus obovatus var. *obovatus*	
Rhagodia eremaea	
Rhodanthe margarethae	
Rhynchosia minima	
Senna ferraria	
Senna glutinosa subsp. *glutinosa*	
Senna pleurocarpa var. *angustifolia*	
Sida cardiophylla	
Sida sp. Excedentifolia (J.L. Egan 1925)	
Sida sp. L (A.M. Ashby 4202)	
Solanum horridum	

Central Pilbara Hub Site CPHR-106

Solanum lasiophyllum
Teucrium teucriiflorum
Themeda sp. Mt Barricade (M.E. Trudgen 2471)
Tribulus suberosus
Triodia pungens
Vincetoxicum lineare

Central Pilbara Hub Site CPHR-109

Date	29/04/2022
Described by	E. Marsh, P-L. de Kock
Type	Relevé
Location	MGA Zone 50 688872 mE; 7450290 mN 118.8433 E -23.045177 S
Veg Condition	Excellent
Soil	Clay Loam
Rock Type	BIF
Fire Age	Recent (0 to 2 yr)
Habitat	Footslope
Vegetation	*Triodia vanleeuwenii* (*Triodia pungens*) sparse hummock grassland with *Eucalyptus gamophylla* low open woodland over *Indigofera monophylla* sparse low shrubs.

SPECIES LIST

Name	Specimen
Abutilon otocarpum	
Acacia atkinsiana	
Afrohybanthus aurantiacus	
Amphipogon sericeus	
Corchorus lasiocarpus subsp. *parvus*	
Digitaria brownii	
Eucalyptus gamophylla	
Goodenia microptera	
Hibiscus coatesii	
Hibiscus sturtii var. *campylochlamys*	
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Paraneurachne muelleri	
Ptilotus astrolasius	
Ptilotus obovatus var. *obovatus*	
Ptilotus rotundifolius	
Senna artemisioides subsp. *oligophylla*	
Senna glutinosa subsp. *pruinosa*	
Senna glutinosa subsp. *x luerssenii*	CPHR109-01
Sida arenicola	
Sida cardiophylla	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	
Solanum lasiophyllum	
Triodia pungens	
Triodia vanleeuwenii	
Vincetoxicum lineare	

Central Pilbara Hub Site CPHR-110

Date	28/04/2022
Described by	R. Butcher, P-L. de Kock
Type	Relevé
Location	MGA Zone 50 689986 mE; 7450464 mN 118.8542 E -23.043470 S
Veg Condition	Very Good
Soil	Silty Clay Loam
Rock Type	BIF
Fire Age	Moderate (3 to 5 yr)
Habitat	Breakaway
Vegetation	Themeda sp. Mt Barricade (M.E. Trudgen 2471), Eriachne mucronata open tussock grassland over Eucalyptus leucophloia subsp. leucophloia low woodland over Abutilon sp. Dioicum (A.A. Mitchell PRP 1618), Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708) shrubland over Olearia stuartii low herbs.

SPECIES LIST

Name	Specimen
Abutilon amplum	CPHR110-10
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	
Acacia cowleana	
Acacia hamersleyensis	
Afrohybanthus aurantiacus	
Amaranthus undulatus	
Aristida burbidgeae	
Aristida inaequiglumis	CPHR110-03
Astrotricha hamptonii	
Boerhavia coccinea	CPHR110-11
Capparis mitchellii	
Cheilanthes austrotenuifolia	
Corymbia ferriticola	
Cymbopogon ambiguus	
Digitaria ammophila	CPHR110-08
Digitaria brownii	
Dodonaea viscosa subsp. *mucronata*	
Duperreya commixta	
Enchylaena tomentosa var. *tomentosa*	
Enneapogon polyphyllus	
Eremophila sp. West Angelas (S. van Leeuwen 4068)	CPHR110-02
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Euphorbia trigonosperma	
Evolvulus alsinoides var. *villosicalyx*	
Gomphrena cunninghamii	
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	CPHR110-01
Jasminum didymum subsp. *lineare*	
Lobelia heterophylla subsp. *pilbarensis*	
Olearia stuartii	
Panicum decompositum	CPHR110-09
Pellaea reynoldsii	
Pilbara trudgenii	
Prostanthera albiflora	
Ptilotus calostachyus	
Ptilotus obovatus var. *obovatus*	
Rhagodia eremaea	
Rhodanthe margarethae	
Santalum lanceolatum	

Central Pilbara Hub Site CPHR-110

Senna glutinosa subsp. glutinosa	
Senna notabilis	
Sida sp. Excedentifolia (J.L. Egan 1925)	
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	
Solanum ferocissimum	CPHR110-06
Solanum kentrocaule	CPHR110-04
Solanum lasiophyllum	
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	

Central Pilbara Hub Site CPHR-114

Date	29/04/2022
Described by	E. Marsh, P-L. de Kock
Type	Relevé
Location	MGA Zone 50 692027 mE; 7449622 mN 118.8742 E -23.050842 S
Veg Condition	Excellent
Soil	Sandy Clay Loam
Rock Type	BIF
Fire Age	Moderate (3 to 5 yr)
Habitat	Minor Drainage Line
Vegetation	*Corymbia hamersleyana* (*Eucalyptus leucophloia* subsp. *leucophloia*) low woodland over *Acacia monticola* (*Gossypium robinsonii*, *Androcalva luteiflora*) mid to tall shrubs over *Indigofera monophylla*, *Corchorus lasiocarpus* subsp. *parvus* low open shrubland over *Themeda triandra* open tussock grassland with *Triodia pungens* hummock grasses.

SPECIES LIST

Name	Specimen
Abutilon cunninghamii	
Abutilon fraseri subsp. fraseri	
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	
Acacia maitlandii	
Acacia monticola	
Acacia pyrifolia var. *pyrifolia*	
Acacia tenuissima	
Afrohybanthus aurantiacus	
Androcalva luteiflora	
Arivela viscosa	
Capparis lasiantha	
Clerodendrum floribundum var. *floribundum*	
Codonocarpus cotinifolius	
Corchorus lasiocarpus subsp. *parvus*	
Corymbia hamersleyana	
Cymbopogon ambiguus	
Duperreya commixta	
Eriachne mucronata	
Eucalyptus leucophloia subsp. *leucophloia*	
Evolvulus alsinoides var. *villosicalyx*	
Gompholobium oreophilum	
Gossypium robinsonii	
Hibiscus coatesii	
Hibiscus sturtii var. *campylochlamys*	
Indigofera monophylla	
Jasminum didymum subsp. *lineare*	
Melhania oblongifolia	
Nellica maderaspatensis	
Paraneurachne muelleri	
Ptilotus calostachyus	
Ptilotus exaltatus	
Ptilotus rotundifolius	
Rhynchosia minima	
Santalum lanceolatum	
Scaevola acacioides	
Senna artemisioides subsp. *oligophylla*	
Senna ferraria	
Senna glutinosa subsp. *glutinosa*	
Senna glutinosa subsp. *x luerssenii*	
Senna notabilis	
Seringia exastia	

Central Pilbara Hub Site CPHR-114

Sida arenicola	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	
Sida sp. Supplejack Station (T.S. Henshall 2345)	
Solanum horridum	
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	CPH113-02
Themeda triandra	
Trichodesma zeylanicum var. *zeylanicum*	
Triodia pungens	

Central Pilbara Hub Site CPHR-125

Date	30/04/2022
Described by	P-L. de Kock
Type	Relevé
Location	MGA Zone 50 684376 mE; 7444858 mN 118.8001 E -23.094720 S
Veg Condition	Excellent
Soil	Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Claypan
Vegetation	*Acacia aptaneura* tall open shrubland over *Ptilotus roei* sparse low shrubland over *Aristida contorta* tussock grasses.

SPECIES LIST

Name	Specimen
Acacia aptaneura	
Acacia pruinocarpa	
Areocleome oxalidea	
Aristida contorta	
Aristida obscura	
Digitaria ammophila	
Evolvulus alsinoides var. *villosicalyx*	
Goodenia prostrata	
Lepidium echinatum	
Maireana villosa	
Paspalidium rarum	
Perotis rara	
Ptilotus roei	
Ptilotus schwartzii var. *schwartzii*	
Rhagodia sp. Hamersley (M. Trudgen 17794)	
Tribulus astrocarpus	

Central Pilbara Hub Site CPHR-162

Date	17/06/2022
Described by	E. Eakin-Busher, E. Marsh
Type	Relevé
Location	MGA Zone 50 672929 mE; 7453241 mN 118.6875 E -23.020267 S
Veg Condition	Very Good
Soil	Sandy Clay Loam
Rock Type	BIF
Fire Age	Moderate (3 to 5 yr)
Habitat	Stony Plain
Vegetation	Triodia melvillei, Triodia pungens open hummock grassland with *Paraneurachne muelleri*, *Themeda triandra* open tussock grassland with low sparse shrubland of *Indigofera georgei*, *Sida* spp., *Acacia pachyacra* scattered shrubs.

SPECIES LIST

Name	Specimen
Abutilon otocarpum	
Acacia dictyophleba	
Acacia pachyacra	
Aristida contorta	
Aristida inaequiglumis	
Digitaria ammophila	
Hibiscus burtonii	
Indigofera georgei	
Indigofera monophylla	
Paraneurachne muelleri	
Perotis rara	
Ptilotus calostachyus	
Ptilotus exaltatus	
Senna notabilis	
Sida cardiophylla	
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	
Themeda triandra	
Tragus australianus	
Triodia melvillei	
Triodia pungens	

Central Pilbara Hub Site CPHR-177

Date	15/06/2022
Described by	E. Marsh, C. Parker
Type	Relevé
Location	MGA Zone 50 677576 mE; 7465854 mN 118.7313 E -22.905891 S
Veg Condition	Poor
Soil	Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Hardpan Plain
Vegetation	*Acacia aptaneura*, *Acacia incurvaneura* scattered trees (many dead) over *Iseilema membranaceum*, *Eriachne mucronata*, *Enneapogon polyphyllus* low isolated clumps of tussock grasses.

SPECIES LIST

Name	Specimen
Abutilon otocarpum	
Acacia aptaneura	
Acacia incurvaneura	
Aristida contorta	
Arivela viscosa	
Bidens bipinnata	
Boerhavia repleta	
Clerodendrum floribundum	
Commelina ensifolia	CPH179.06
Convolvulus clementii	CPH179.02
Corchorus tridens	
Cucumis variabilis	
Dactyloctenium radulans	
Digitaria brownii	
Enneapogon polyphyllus	
Euphorbia trigonosperma	
Iseilema membranaceum	CPH175.01
Maireana planifolia	
Malvastrum americanum	
Polygala glaucifolia	
Portulaca oleracea	
Ptilotus exaltatus	
Rhagodia sp. Hamersley (M. Trudgen 17794)	
Sclerolaena cornishiana	CPH056.04
Senna notabilis	
Sida sp. L (A.M. Ashby 4202)	
Solanum lasiophyllum	
Swainsona sp. Indet	

Central Pilbara Hub Site CVR-01

Date	16/06/2022
Described by	C. van den Bergh, C. Parker
Type	Relevé
Location	MGA Zone 50 682778 mE; 7466845 mN 118.7819 E -22.896376 S
Veg Condition	Very Good
Soil	Light Medium Clay
Rock Type	None Discernible
Fire Age	Old (6+ yr)
Habitat	Hardpan Plain
Vegetation	*Acacia aptaneura* low scattered trees to isolated patches of trees over *Aristida contorta*, *Fimbristylis dichotoma* mixed scattered tussock grassland, sedgeland with scattered herbland.

SPECIES LIST

Name	Specimen

Central Pilbara Hub Site EMR-01

Date	15/06/2022
Described by	E. Marsh, C. Parker
Type	Relevé
Location	MGA Zone 50 677182 mE; 7466155 mN 118.7275 E -22.903210 S
Veg Condition	Very Good
Soil	Clay Loam
Rock Type	BIF
Fire Age	Old (6+ yr)
Habitat	Hardpan Plain
Vegetation	*Acacia aptaneura* open woodland over *Chrysopogon fallax*, *Enneapogon polyphyllus* open tussock grassland with *Maireana planifolia*, *Mariana villosa* scattered low shrubs.

SPECIES LIST

Name	Specimen
Abutilon otocarpum	
Acacia aptaneura	
Acacia incurvaneura	
Aristida contorta	
Aristida inaequiglumis	
Bidens bipinnata	
Boerhavia sp. Indet	
Cheilanthes sieberi subsp. *sieberi*	
Chloris virgata	
Chrysopogon fallax	
Commelina ensifolia	CPH179.06
Convolvulus clementii	CPH179.02
Dactyloctenium radulans	
Dysphania rhadinostachya	
Eremophila lanceolata	
Eriachne mucronata	
Evolvulus alsinoides var. *villosicalyx*	
Goodenia prostrata	
Iseilema membranaceum	CPH175.01
Maireana planifolia	
Maireana villosa	
Malvastrum americanum	
Perotis rara	
Polygala glaucifolia	
Portulaca oleracea	
Ptilotus roei	
Rhagodia eremaea	
Roebuckiella similis	CPH179.04
Salsola australis	
Sclerolaena cornishiana	CPH178-04
Sida platycalyx	
Sida sp. L (A.M. Ashby 4202)	
Solanum lasiophyllum	
Tragus australianus	
Tribulus astrocarpus	CPH176.05

Appendix D: Site by species matrix.

Taxon	CPH-058	CPH-056	CPH-059	CPH-117	CPH-119	CPH-163	CPH-064	CPH-067	CPH-069	CPH-074	CPH-079	CPH-095	CPH-175	CPH-179	CPH-183	CPH-187	CPH-188	CPH-022	CPH-028	CPH-034	CPH-036	CPH-046	CPH-048	CPH-049	CPH-066	CPH-071	CPH-091	CPH-092	CPH-121	CPH-168	CPH-180	CPH-199	CPH-088	CPH-107	CPH-176	CPH-184	CPH-057	CPH-118
Abutilon amplum	x																																					
Abutilon cryptopetalum		x	x	x	x	x																																
Abutilon cunninghamii							x	x	x	x	x	x	x	x	x	x	x																					
Abutilon fraseri subsp. *fraseri*			x		x													x	x	x	x	x	x	x	x	x	x	x	x	x	x						
Abutilon lepidum	x																						x									x	x	x	x		
Abutilon macrum		x													x	x							x													x	x
Abutilon otocarpum	x		x		x	x	x							x	x					x	x	x	x					x	x	x		x		x			x
Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)																																					
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)															x	x	x			x						x							x				
Acacia aneura																		x																			
Acacia aptaneura	x			x	x	x		x		x	x		x	x				x	x		x	x	x				x	x	x	x	x	x		x	x			x
Acacia adoxa var. *adoxa*															x	x				x																x	
Acacia adsurgens										x							x	x	x	x	x	x															
Acacia ancistrocarpa		x						x										x	x															x			
Acacia arida																																					
Acacia atkinsiana																								x												x	
Acacia ayersiana																																					
Acacia bivenosa							x	x	x		x	x			x	x	x	x	x	x				x											x	x	
Acacia catenulata subsp. *occidentalis*																																					
Acacia colei var. *colei*																					x																
Acacia coriacea subsp. *pendens*																x																					
Acacia cowleana		x						x	x			x			x	x						x															
Acacia dictyophleba		x					x	x		x	x	x							x		x	x	x										x	x		x		x
Acacia elachantha							x			x	x					x	x						x										x			x		
Acacia hamersleyensis																																		x				
Acacia hilliana																																						
Acacia inaequilatera								x	x			x										x											x					
Acacia incurvaneura			x											x												x			x								
Acacia kempeana							x				x																							x				
Acacia macraneura			x				x																		x												
Acacia maitlandii	x														x				x	x	x					x						x	x				
Acacia marramamba																																		x				
Acacia minyura											x																								x			
Acacia monticola		x													x	x	x			x						x											
Acacia pachyacra			x				x	x				x										x																x
Acacia pruinocarpa		x	x								x				x			x	x	x	x		x	x	x	x											x
Acacia pteraneura																																						
Acacia pyrifolia var. *morrisonii*																																						
Acacia pyrifolia var. *pyrifolia*	x																		x	x														x			
Acacia rhodophloia											x																											
Acacia sericophylla									x																													
Acacia sibirica			x					x																														
Acacia steedmanii subsp. *borealis*		x						x	x	x	x	x																								x	
Acacia synchronicia												x																										
Acacia tenuissima								x		x	x				x	x	x			x													x	x			x	
Acacia tetragonophylla														x																								
Acacia trudgeniana																																						
Acacia tumida var. *pilbarensis*																				x																	
Achyranthes aspera																										x											
Acrachne racemosa																				x																	
Afrohybanthus aurantiacus	x	x													x	x	x	x	x	x	x					x											
Alternanthera angustifolia																																						
Alternanthera denticulata																		x																				
Alternanthera nana	x	x	x				x	x		x	x		x	x		x	x					x	x	x	x	x	x		x	x		x						x
Amaranthus cuspidifolius															x	x											x				x		x				
Amaranthus undulatus																										x											
Ammannia multiflora																																						
Amphipogon sericeus																																		x				
Amyema hilliana																																						
Androcalva luteiflora	x														x	x	x		x	x	x																

Taxon	CPH-186	CPH-011	CPH-021	CPH-031	CPH-033	CPH-041	CPH-061	CPH-111	CPH-116	CPH-122	CPH-124	CPH-127	CPH-143	CPH-151	CPH-154	CPH-155	CPH-156	CPH-157	CPH-158	CPH-160	CPH-161	CPH-164	CPH-165	CPH-169	CPH-170	CPH-171	CPH-178	CPH-129	CPH-030	CPH-086	CPH-094	CPH-097	CPH-098	CPH-149	CPH-042	CPH-084	CPH-085	CPH-002
Abutilon amplum																																						
Abutilon cryptopetalum																																						
Abutilon cunninghamii																																						
Abutilon fraseri subsp. *fraseri*																																						
Abutilon lepidum																																						
Abutilon macrum	x																																					
Abutilon otocarpum	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x											
Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)											x	x	x															x											
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)																													x	x	x	x	x	x				
Acacia aneura										x						x			x									x			x				x	x		
Acacia aptaneura				x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x					x	x		x	
Acacia adoxa var. *adoxa*	x	x																														x				x	x	x
Acacia adsurgens	x			x	x				x																						x							
Acacia ancistrocarpa																																						x
Acacia arida																																						
Acacia atkinsiana							x																															
Acacia ayersiana																																						
Acacia bivenosa	x		x	x			x		x	x									x												x			x		x	x	x
Acacia catenulata subsp. *occidentalis*														x																				x				
Acacia colei var. *colei*																																						
Acacia coriacea subsp. *pendens*																																						
Acacia cowleana	x																																					
Acacia dictyophleba	x					x										x			x										x	x	x					x		x
Acacia elachantha	x																														x					x	x	
Acacia hamersleyensis									x																							x							
Acacia hilliana																																					x	x
Acacia inaequilatera					x																									x						x	
Acacia incurvaneura																																						
Acacia kempeana										x																												
Acacia macraneura																																						
Acacia maitlandii			x	x																											x				x	x	
Acacia marramamba																																	x					
Acacia minyura																																						
Acacia monticola		x																																		x	x
Acacia pachyacra		x														x			x											x					x	x	
Acacia pruinocarpa				x	x	x	x			x				x		x			x					x				x			x		x		x		x
Acacia pteraneura											x	x																										
Acacia pyrifolia var. *morrisonii*																																		x				
Acacia pyrifolia var. *pyrifolia*			x																									x				x					
Acacia rhodophloia																																						
Acacia sericophylla																															x							
Acacia sibirica							x																															
Acacia steedmanii subsp. *borealis*																															x							
Acacia synchronicia																																						
Acacia tenuissima	x			x										x																	x					x		
Acacia tetragonophylla																																						
Acacia trudgeniana	x																																					
Acacia tumida var. *pilbarensis*		x	x		x																																	
Achyranthes aspera																																x						
Acrachne racemosa																																						
Afrohybanthus aurantiacus	x	x	x		x																											x	x					
Alternanthera angustifolia											x	x	x															x							x			
Alternanthera denticulata			x	x																																		
Alternanthera nana						x										x	x	x	x	x	x			x								x	x		x			
Amaranthus cuspidifolius																								x									x					
Amaranthus undulatus																																						
Ammannia multiflora																																			x			
Amphipogon sericeus	x				x			x	x																						x				x			
Amyema hilliana																																		x				
Androcalva luteiflora		x	x	x					x																													

Taxon	CPH-003	CPH-004	CPH-007	CPH-009	CPH-012	CPH-016	CPH-019	CPH-020	CPH-023	CPH-024	CPH-027	CPH-029	CPH-038	CPH-039	CPH-040	CPH-060	CPH-070	CPH-077	CPH-082	CPH-087	CPH-089	CPH-090	CPH-093	CPH-182	CPH-185	CPH-099	CPH-026	CPH-035	CPH-054	CPH-076	CPH-078	CPH-080	CPH-081	CPH-101	CPH-104	CPH-152	CPH-166	CPH-006
Abutilon amplum																																						
Abutilon cryptopetalum																																						
Abutilon cunninghamii																																						
Abutilon fraseri subsp. *fraseri*																																						
Abutilon lepidum																																						
Abutilon macrum																																						
Abutilon otocarpum																																						
Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)																																						
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)																																						
Acacia aneura																																x						
Acacia aptaneura																			x		x					x	x	x			x	x				x	x	
Acacia adoxa var. *adoxa*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x												
Acacia adsurgens									x	x	x	x						x							x		x	x	x	x	x	x	x		x			
Acacia ancistrocarpa				x					x	x	x				x													x	x	x			x		x		x	x
Acacia arida																																						
Acacia atkinsiana																			x	x													x					
Acacia ayersiana																				x																		
Acacia bivenosa									x	x	x				x									x	x		x	x	x	x				x	x			
Acacia catenulata subsp. *occidentalis*																																						
Acacia colei var. *colei*											x																		x									
Acacia coriacea subsp. *pendens*																																						
Acacia cowleana																									x													
Acacia dictyophleba																				x				x	x				x	x	x	x			x	x	x	
Acacia elachantha																x		x	x	x				x	x					x	x	x	x	x				
Acacia hamersleyensis		x															x	x			x	x																
Acacia hilliana	x	x	x			x	x	x		x			x	x		x		x	x		x		x													x		
Acacia inaequilatera										x	x		x		x												x										x	
Acacia incurvaneura																																						
Acacia kempeana																														x						x		
Acacia macraneura																																						
Acacia maitlandii		x			x										x		x		x	x	x	x			x	x	x	x							x		x
Acacia marramamba																	x																			x		
Acacia minyura																																						
Acacia monticola					x	x			x	x						x	x	x			x					x											
Acacia pachyacra									x	x										x						x			x	x							
Acacia pruinocarpa			x	x		x									x					x						x	x	x		x	x	x			x	x	x	
Acacia pteraneura																																						
Acacia pyrifolia var. *morrisonii*																																						
Acacia pyrifolia var. *pyrifolia*																												x									
Acacia rhodophloia																																						
Acacia sericophylla																		x																			
Acacia sibirica																											x			x	x	x	x					
Acacia steedmanii subsp. *borealis*																															x	x						
Acacia synchronicia																																						
Acacia tenuissima				x						x	x					x			x	x	x			x	x		x		x	x	x	x	x	x	x	x	
Acacia tetragonophylla																																						
Acacia trudgeniana																		x		x					x										x	x		
Acacia tumida var. *pilbarensis*					x	x																																
Achyranthes aspera																																						
Acrachne racemosa																																						
Afrohybanthus aurantiacus					x	x				x												x	x		x	x	x	x							x		
Alternanthera angustifolia																																						
Alternanthera denticulata																												x									
Alternanthera nana																														x								
Amaranthus cuspidifolius																																						
Amaranthus undulatus																																						
Ammannia multiflora																																						
Amphipogon sericeus				x		x		x								x			x		x	x	x	x					x			x	x		x			
Amyema hilliana																																						
Androcalva luteiflora					x	x																						x									

Taxon	CPH-008	CPH-015	CPH-018	CPH-025	CPH-032	CPH-047	CPH-051	CPH-063	CPH-075	CPH-096	CPH-100	CPH-044	CPH-055	CPH-128	CPH-130	CPH-167	CPH-050	CPH-068	CPH-072	CPH-113	CPH-123	CPH-172	CPH-173	CPH-174	CPH-150	CPH-501	CPH-005	CPH-010	CPH-017	CPH-062	CPH-115	CPH-181	CPH-001	CPH-014	CPH-013	CPH-037	CPH-043
Abutilon amplum																																					
Abutilon cryptopetalum																																					
Abutilon cunninghamii																																					
Abutilon fraseri subsp. *fraseri*																																					
Abutilon lepidum																																					
Abutilon macrum																																					
Abutilon otocarpum																																					
Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)																																					
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)																																					
Acacia aneura												x	x	x	x	x																					
Acacia aptaneura							x			x		x				x	x	x	x	x	x	x	x	x														
Acacia adoxa var. *adoxa*																																					
Acacia adsurgens																																					
Acacia ancistrocarpa	x	x	x	x	x	x	x	x	x	x	x														x												
Acacia arida																									x												
Acacia atkinsiana						x	x																			x											
Acacia ayersiana												x									x																
Acacia bivenosa		x	x	x	x	x		x		x	x							x		x					x		x	x	x	x	x	x					
Acacia catenulata subsp. *occidentalis*														x																							
Acacia colei var. *colei*													x																								
Acacia coriacea subsp. *pendens*																																	x				
Acacia cowleana									x									x														x				
Acacia dictyophleba						x	x			x									x								x						x				
Acacia elachantha							x			x																						x					
Acacia hamersleyensis																																		x			
Acacia hilliana		x																																	x		
Acacia inaequilatera					x																						x									x	
Acacia incurvaneura																																					
Acacia kempeana								x																													
Acacia macraneura																																					x
Acacia maitlandii	x		x			x					x									x						x				x			x	x		x	
Acacia marramamba																																					
Acacia minyura																																					
Acacia monticola						x					x																							x		x	
Acacia pachyacra									x								x	x	x							x	x				x					
Acacia pruinocarpa						x	x				x	x		x		x	x				x				x					x				x		
Acacia pteraneura																										x											
Acacia pyrifolia var. *morrisonii*																									x												
Acacia pyrifolia var. *pyrifolia*											x																			x			x				
Acacia rhodophloia										x																											
Acacia sericophylla																																					
Acacia sibirica								x																		x				x							
Acacia steedmanii subsp. *borealis*										x								x																			
Acacia synchronicia																																					
Acacia tenuissima			x			x				x						x		x	x				x				x			x	x	x					
Acacia tetragonophylla																																	x				
Acacia trudgeniana																																x					
Acacia tumida var. *pilbarensis*	x																											x				x	x			x
Achyranthes aspera																																					
Acrachne racemosa																																					
Afrohybanthus aurantiacus	x										x																					x	x			
Alternanthera angustifolia																																					
Alternanthera denticulata																											x									x	
Alternanthera nana											x		x			x	x	x												x			x				x
Amaranthus cuspidifolius															x																						
Amaranthus undulatus																																					
Ammannia multiflora																																					
Amphipogon sericeus						x	x	x	x																x	x				x							
Amyema hilliana																																					
Androcalva luteiflora	x										x																x			x			x	x		x	

Taxon	CPH-058	CPH-056	CPH-059	CPH-117	CPH-119	CPH-163	CPH-064	CPH-067	CPH-069	CPH-074	CPH-079	CPH-095	CPH-175	CPH-179	CPH-183	CPH-187	CPH-188	CPH-022	CPH-028	CPH-034	CPH-036	CPH-046	CPH-048	CPH-049	CPH-066	CPH-071	CPH-091	CPH-092	CPH-121	CPH-168	CPH-180	CPH-199	CPH-088	CPH-107	CPH-176	CPH-184	CPH-057	CPH-118
Anthobolus leptomerioides									x		x									x			x															
Areocleome oxalidea																																x						
Aristida inaequiglumis	x	x	x			x	x			x	x				x	x		x		x	x	x	x	x	x					x		x	x	x	x			
Aristida burbidgeae															x											x												
Aristida contorta		x	x		x	x	x							x				x		x		x	x		x		x	x	x			x	x	x	x	x		
Aristida holathera var. *holathera*	x						x		x	x	x	x										x											x	x		x		
Aristida jerichoensis var. *subspinulifera*						x																																
Aristida lazaridis																										x				x								
Aristida obscura			x		x								x	x											x		x	x		x	x							x
Aristida pruinosa																																						
Arivela uncifera													x																						x			
Arivela viscosa	x	x	x		x									x	x	x	x			x			x		x	x	x	x	x		x		x					x
Astrotricha hamptonii																																						
Atalaya hemiglauca																		x																				
Avicennia marina																																						
Bergia perennis																																						
Blumea tenella		x																																				
Boerhavia coccinea	x		x		x		x			x					x		x	x		x					x		x	x	x		x							x
Boerhavia repleta			x		x								x	x		x							x		x		x		x									x
Bonamia erecta		x					x	x	x																													
Bonamia pilbarensis																																						
Bothriochloa ewartiana																											x											
Brachychiton acuminatus																						x																
Brunonia sp. Long hairs (D.E. Symon 2440)																																						
Bulbostylis turbinata																																						
Calandrinia ptychosperma																																						
Calandrinia pumila																																						
Calotis hispidula																																						
Calotis plumulifera																																						
Calytrix carinata																																						
Capparis mitchellii																																						
Capparis lasiantha			x				x	x										x	x	x	x					x										x		
Cassytha capillaris																																						
Cassytha filiformis																																						
Centipeda minima subsp. *macrocephala*																																						
Cheilanthes brownii															x											x												
Cheilanthes sieberi subsp. *sieberi*			x		x	x							x	x				x				x				x	x		x	x	x	x	x		x			
Chloris pectinata																																						
Chrysocephalum apiculatum	x																																					
Chrysocephalum gilesii																				x	x								x									
Chrysopogon fallax		x	x		x	x				x			x	x	x			x			x	x	x		x		x	x	x	x	x							x
Clerodendrum floribundum														x	x	x	x																					
Clerodendrum tomentosum var. *lanceolatum*																																						
Codonocarpus cotinifolius										x												x												x				
Commelina ensifolia					x								x	x													x	x	x	x	x							
Convolvulus clementii					x									x															x									
Convolvulus remotus			x																						x		x											
Corchorus crozophorifolius	x																																					
Corchorus lasiocarpus															x	x	x			x													x	x				
Corchorus sidoides subsp. *sidoides*	x										x																											
Corchorus tridens	x				x																		x				x		x									
Corymbia candida																																						
Corymbia deserticola subsp. *deserticola*		x						x			x											x	x		x		x											
Corymbia ferriticola																																						
Corymbia hamersleyana	x							x	x						x	x	x		x	x	x													x				
Crassula tetramera																																						
Crotalaria medicaginea var. *neglecta*	x	x												x			x						x	x		x							x					
Cucumis variabilis	x		x		x											x						x	x			x	x		x				x					
Cymbopogon ambiguus	x		x				x	x	x		x				x	x	x		x	x		x		x		x							x	x	x			
Cymbopogon obtectus																	x																	x		x		x

Taxon	CPH-186	CPH-011	CPH-021	CPH-031	CPH-033	CPH-041	CPH-061	CPH-111	CPH-116	CPH-122	CPH-124	CPH-127	CPH-143	CPH-151	CPH-154	CPH-155	CPH-156	CPH-157	CPH-158	CPH-160	CPH-161	CPH-164	CPH-165	CPH-169	CPH-170	CPH-171	CPH-178	CPH-129	CPH-030	CPH-086	CPH-094	CPH-097	CPH-098	CPH-149	CPH-042	CPH-084	CPH-085	CPH-002
Anthobolus leptomerioides							x			x																					x							
Areocleome oxalidea											x	x					x							x				x										
Aristida inaequiglumis	x			x	x	x	x							x	x	x	x	x	x		x	x		x			x			x	x		x	x	x		x	
Aristida burbidgeae																																x						
Aristida contorta	x		x	x	x	x	x	x			x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x		x		x			x
Aristida holathera var. *holathera*			x	x	x			x											x											x	x	x	x	x	x	x		
Aristida jerichoensis var. *subspinulifera*													x		x	x				x	x	x	x	x											x			
Aristida lazaridis																																						
Aristida obscura						x				x				x	x	x		x	x	x			x	x										x	x			
Aristida pruinosa																																						
Arivela uncifera																																						
Arivela viscosa			x																				x	x								x					
Astrotricha hamptonii																																x						
Atalaya hemiglauca																																						
Avicennia marina																																						
Bergia perennis																	x																					
Blumea tenella																							x												x			
Boerhavia coccinea			x								x													x								x	x					
Boerhavia repleta											x	x	x				x				x							x										
Bonamia erecta	x	x	x																												x							
Bonamia pilbarensis																																						
Bothriochloa ewartiana																																						
Brachychiton acuminatus																																						
Brunonia sp. Long hairs (D.E. Symon 2440)																																						
Bulbostylis turbinata													x																									
Calandrinia ptychosperma													x																									
Calandrinia pumila												x	x															x										
Calotis hispidula																												x										
Calotis plumulifera																												x										
Calytrix carinata																																						
Capparis mitchellii																																x						
Capparis lasiantha																													x		x	x		x			x	
Cassytha capillaris																															x							
Cassytha filiformis																																						
Centipeda minima subsp. *macrocephala*																																			x			
Cheilanthes brownii																																x		x				
Cheilanthes sieberi subsp. *sieberi*						x	x				x	x	x	x	x	x		x		x	x	x	x	x	x	x		x				x		x	x			x
Chloris pectinata												x																x										
Chrysocephalum apiculatum																																						
Chrysocephalum gilesii												x																					x					
Chrysopogon fallax			x	x		x									x		x	x	x	x	x	x	x	x					x					x				
Clerodendrum floribundum																														x		x						
Clerodendrum tomentosum var. *lanceolatum*																																						
Codonocarpus cotinifolius	x			x					x	x		x							x	x								x						x				
Commelina ensifolia																																						
Convolvulus clementii												x					x			x		x	x					x										
Convolvulus remotus																																						
Corchorus crozophorifolius																																						
Corchorus lasiocarpus	x	x																												x	x	x						
Corchorus sidoides subsp. *sidoides*							x																															
Corchorus tridens			x																																			
Corymbia candida																												x										
Corymbia deserticola subsp. *deserticola*	x																																					
Corymbia ferriticola																																x		x				
Corymbia hamersleyana		x	x																												x	x	x			x	x	
Crassula tetramera																																						
Crotalaria medicaginea var. *neglecta*																																						
Cucumis variabilis			x			x	x								x			x		x			x							x		x	x	x				
Cymbopogon ambiguus	x						x												x											x	x	x	x	x	x	x	x	
Cymbopogon obtectus	x															x															x				x			

Taxon	CPH-003	CPH-004	CPH-007	CPH-009	CPH-012	CPH-016	CPH-019	CPH-020	CPH-023	CPH-024	CPH-027	CPH-029	CPH-038	CPH-039	CPH-040	CPH-060	CPH-070	CPH-077	CPH-082	CPH-087	CPH-089	CPH-090	CPH-093	CPH-182	CPH-185	CPH-099	CPH-026	CPH-035	CPH-054	CPH-076	CPH-078	CPH-080	CPH-081	CPH-101	CPH-104	CPH-152	CPH-166	CPH-006
Anthobolus leptomerioides																														x								
Areocleome oxalidea																																						
Aristida inaequiglumis				x															x	x	x	x			x		x				x	x	x			x	x	
Aristida burbidgeae																																						
Aristida contorta									x									x	x	x	x										x	x	x			x	x	x
Aristida holathera var. *holathera*					x	x										x		x	x	x	x	x								x	x	x	x		x		x	
Aristida jerichoensis var. *subspinulifera*																																						
Aristida lazaridis																																						
Aristida obscura																																						
Aristida pruinosa																																						
Arivela uncifera																																						
Arivela viscosa		x																																				
Astrotricha hamptonii																										x												
Atalaya hemiglauca																																						
Avicennia marina		x																																				
Bergia perennis																																						
Blumea tenella																																						
Boerhavia coccinea																																						
Boerhavia repleta																																						
Bonamia erecta																x				x										x								
Bonamia pilbarensis					x								x	x																								
Bothriochloa ewartiana																																						
Brachychiton acuminatus																																						
Brunonia sp. Long hairs (D.E. Symon 2440)																																						
Bulbostylis turbinata																																						
Calandrinia ptychosperma																																						
Calandrinia pumila																																						
Calotis hispidula																																						
Calotis plumulifera																																						
Calytrix carinata																				x																		
Capparis mitchellii																																						
Capparis lasiantha																		x	x						x					x		x						
Cassytha capillaris																		x				x	x							x								
Cassytha filiformis																														x								
Centipeda minima subsp. *macrocephala*																																						
Cheilanthes brownii																																						x
Cheilanthes sieberi subsp. *sieberi*																															x					x		
Chloris pectinata																																						
Chrysocephalum apiculatum																																						
Chrysocephalum gilesii																																						
Chrysopogon fallax																															x							
Clerodendrum floribundum					x													x																				
Clerodendrum tomentosum var. *lanceolatum*		x			x																																	
Codonocarpus cotinifolius																x				x											x					x		
Commelina ensifolia																																						
Convolvulus clementii																																						
Convolvulus remotus																																						
Corchorus crozophorifolius																																						
Corchorus lasiocarpus		x	x	x	x	x		x		x				x		x	x	x	x	x	x	x		x				x						x			
Corchorus sidoides subsp. *sidoides*																																						
Corchorus tridens																																						
Corymbia candida																																						
Corymbia deserticola subsp. *deserticola*	x							x			x	x				x				x					x		x			x	x					x		
Corymbia ferriticola																																						
Corymbia hamersleyana		x	x		x	x	x			x					x		x			x	x	x	x			x												x
Crassula tetramera																																						
Crotalaria medicaginea var. *neglecta*																																						
Cucumis variabilis					x																										x							
Cymbopogon ambiguus					x					x					x		x	x	x	x	x	x				x				x	x				x	x		
Cymbopogon obtectus																x									x							x	x	x	x			

Taxon	CPH-008	CPH-015	CPH-018	CPH-025	CPH-032	CPH-047	CPH-051	CPH-063	CPH-075	CPH-096	CPH-100	CPH-044	CPH-055	CPH-128	CPH-130	CPH-167	CPH-050	CPH-068	CPH-072	CPH-113	CPH-123	CPH-172	CPH-173	CPH-174	CPH-150	CPH-501	CPH-005	CPH-010	CPH-017	CPH-062	CPH-115	CPH-181	CPH-001	CPH-014	CPH-013	CPH-037	CPH-043
Anthobolus leptomerioides								x		x							x	x			x																
Areocleome oxalidea														x									x	x													
Aristida inaequiglumis						x		x		x	x		x			x	x		x	x			x	x						x			x				
Aristida burbidgeae																																					
Aristida contorta								x			x	x	x	x	x	x	x	x	x	x			x	x	x	x				x	x						x
Aristida holathera var. *holathera*	x						x	x	x	x	x				x		x	x								x						x					
Aristida jerichoensis var. *subspinulifera*														x																							x
Aristida lazaridis													x																				x				
Aristida obscura															x	x					x			x													
Aristida pruinosa									x									x																			
Arivela uncifera																																					
Arivela viscosa													x																				x	x			
Astrotricha hamptonii																																		x			
Atalaya hemiglauca																																					
Avicennia marina																																					
Bergia perennis																																					
Blumea tenella																																					
Boerhavia coccinea											x			x	x	x	x	x			x						x			x			x			x	
Boerhavia repleta													x																								
Bonamia erecta																														x							
Bonamia pilbarensis																																					
Bothriochloa ewartiana																														x							
Brachychiton acuminatus																																					
Brunonia sp. Long hairs (D.E. Symon 2440)															x																						
Bulbostylis turbinata																																					
Calandrinia ptychosperma																																					
Calandrinia pumila																																					
Calotis hispidula															x																						
Calotis plumulifera																																					
Calytrix carinata																																			x		
Capparis mitchellii																																					
Capparis lasiantha		x	x								x							x												x							
Cassytha capillaris																																					
Cassytha filiformis							x																														
Centipeda minima subsp. *macrocephala*																																					
Cheilanthes brownii																																		x			
Cheilanthes sieberi subsp. *sieberi*												x		x	x	x					x	x	x	x													
Chloris pectinata																																					
Chrysocephalum apiculatum																																					
Chrysocephalum gilesii																														x							
Chrysopogon fallax							x					x	x			x	x		x		x									x			x				x
Clerodendrum floribundum																				x														x		x	
Clerodendrum tomentosum var. *lanceolatum*																																					
Codonocarpus cotinifolius						x														x		x									x					
Commelina ensifolia																																					
Convolvulus clementii																																					
Convolvulus remotus																																					
Corchorus crozophorifolius																																					
Corchorus lasiocarpus		x				x					x																										
Corchorus sidoides subsp. *sidoides*								x																						x							
Corchorus tridens																											x						x				
Corymbia candida																																					
Corymbia deserticola subsp. *deserticola*							x	x	x	x											x														x		
Corymbia ferriticola																																		x			
Corymbia hamersleyana	x										x								x										x			x	x	x	x	
Crassula tetramera														x																							
Crotalaria medicaginea var. *neglecta*																																					
Cucumis variabilis						x					x	x	x	x			x		x		x						x						x				x
Cymbopogon ambiguus	x							x	x	x	x							x		x			x				x		x	x		x	x	x		x	
Cymbopogon obtectus																																x	x				

Taxon	CPH-058	CPH-056	CPH-059	CPH-117	CPH-119	CPH-163	CPH-064	CPH-067	CPH-069	CPH-074	CPH-079	CPH-095	CPH-175	CPH-179	CPH-183	CPH-187	CPH-188	CPH-022	CPH-028	CPH-034	CPH-036	CPH-046	CPH-048	CPH-049	CPH-066	CPH-071	CPH-091	CPH-092	CPH-121	CPH-168	CPH-180	CPH-199	CPH-088	CPH-107	CPH-176	CPH-184	CPH-057	CPH-118
Cynanchum floribundum															x	x																						
Cynanchum pedunculatum																																	x					
Cyperus cunninghamii																																						
Cyperus iria																																						
Dactyloctenium radulans		x			x	x								x	x								x				x	x	x		x							
Dampiera candicans															x																			x					
Dendrophyllanthus erwinii																							x	x														
Dichanthium sericeum			x		x																							x										
Dicrastylis cordifolia									x								x																					
Digitaria ammophila			x			x	x																		x					x		x		x				x
Digitaria brownii		x	x				x				x			x		x		x	x	x	x	x	x		x			x									x
Digitaria ctenantha	x		x		x															x			x		x	x	x		x		x		x					
Diplopeltis stuartii var. *stuartii*																																						
Dipteracanthus australasicus																			x		x					x			x									
Dodonaea coriacea																																						
Dodonaea lanceolata															x		x		x							x												
Dodonaea pachyneura																																						
Dodonaea viscosa																	x			x	x																	
Dolichocarpa crouchiana																																		x				
Duperreya commixta		x	x				x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x						x	x
Dysphania glomulifera subsp. *eremaea*																																						
Dysphania kalpari																																						
Dysphania melanocarpa													x														x											
Dysphania rhadinostachya													x																									
Dysphania glomulifera subsp. *eremaea*																																						
Enchylaena tomentosa var. *tomentosa*																x		x		x																		
Enneapogon caerulescens							x																x	x					x									
Enneapogon lindleyanus	x	x	x													x		x	x		x	x			x	x		x			x		x					
Enneapogon polyphyllus		x	x		x	x	x				x	x		x	x					x		x	x	x	x	x	x	x	x	x	x	x	x	x		x	x
Enneapogon robustissimus					x										x	x	x						x						x									x
Enteropogon ramosus																																						
Eragrostis cumingii																					x						x											
Eragrostis eriopoda											x																											
Eragrostis leptocarpa																																						
Eragrostis olida		x																				x															
Eragrostis pergracilis																																						
Eragrostis setifolia																																						
Eragrostis sp. Mt Robinson (S. van Leeuwen 4109)																																		x				
Eragrostis tenellula																																						
Eragrostis xerophila																																						
Eremophila clarkei																																						
Eremophila flaccida																																						
Eremophila forrestii			x															x					x						x									x
Eremophila fraseri subsp. *fraseri*																							x															
Eremophila jucunda subsp. *pulcherrima*																																		x				
Eremophila lachnocalyx																																						
Eremophila lanceolata			x		x	x																			x		x					x						
Eremophila latrobei			x										x													x		x			x	x			x				
Eremophila longifolia		x					x	x		x							x	x		x		x			x				x	x			x					
Eremophila magnifica subsp. *magnifica*																																						
Eremophila platycalyx									x																													
Eriachne benthamii																		x																				
Eriachne ciliata																																						
Eriachne flaccida																																						
Eriachne helmsii																					x																	
Eriachne lanata									x																													
Eriachne mucronata									x				x	x	x	x	x			x		x	x	x		x	x		x				x	x	x			x
Eriachne pulchella						x							x	x										x					x						x			
Eucalyptus gamophylla		x					x	x	x	x	x	x			x	x	x			x	x			x											x		
Eucalyptus leucophloia subsp. *leucophloia*		x							x			x			x	x	x		x	x				x		x							x		x	x	

Taxon	CPH-186	CPH-011	CPH-021	CPH-031	CPH-033	CPH-041	CPH-061	CPH-111	CPH-116	CPH-122	CPH-124	CPH-127	CPH-143	CPH-151	CPH-154	CPH-155	CPH-156	CPH-157	CPH-158	CPH-160	CPH-161	CPH-164	CPH-165	CPH-169	CPH-170	CPH-171	CPH-178	CPH-129	CPH-030	CPH-086	CPH-094	CPH-097	CPH-098	CPH-149	CPH-042	CPH-084	CPH-085	CPH-002
Cynanchum floribundum																																						
Cynanchum pedunculatum																																				x		
Cyperus cunninghamii																																x						
Cyperus iria																																			x			
Dactyloctenium radulans										x	x		x		x		x			x	x	x	x	x			x	x						x				
Dampiera candicans																																				x		
Dendrophyllanthus erwinii																							x															
Dichanthium sericeum											x	x			x		x			x	x		x					x										
Dicrastylis cordifolia																																						
Digitaria ammophila						x					x		x	x	x	x	x	x	x	x	x	x	x					x						x	x			
Digitaria brownii	x		x	x		x	x	x						x					x													x		x				
Digitaria ctenantha											x		x										x	x				x					x					
Diplopeltis stuartii var. *stuartii*																															x							
Dipteracanthus australasicus																													x			x						
Dodonaea coriacea																																				x	x	
Dodonaea lanceolata		x																														x						
Dodonaea pachyneura																																x		x				
Dodonaea viscosa																														x			x					
Dolichocarpa crouchiana																																						
Duperreya commixta	x	x	x	x	x	x	x	x	x	x				x		x			x									x	x	x	x	x	x	x			
Dysphania glomulifera subsp. *eremaea*															x								x															
Dysphania kalpari											x	x	x					x										x										
Dysphania melanocarpa																							x	x														
Dysphania rhadinostachya												x																										
Dysphania glomulifera subsp. *eremaea*												x	x				x											x										
Enchylaena tomentosa var. *tomentosa*				x			x									x			x														x					
Enneapogon caerulescens															x							x												x				
Enneapogon lindleyanus			x		x			x																						x			x			x		
Enneapogon polyphyllus				x	x	x	x			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x		x	x	x			x	
Enneapogon robustissimus																																						
Enteropogon ramosus																	x																					
Eragrostis cumingii			x									x	x										x					x							x			
Eragrostis eriopoda	x					x		x																							x							
Eragrostis leptocarpa													x																						x				
Eragrostis olida			x																				x															
Eragrostis pergracilis											x	x	x		x		x						x					x							x			
Eragrostis setifolia																																						
Eragrostis sp. Mt Robinson (S. van Leeuwen 4109)																																						
Eragrostis tenellula																																			x			
Eragrostis xerophila																					x														x			
Eremophila clarkei																																						
Eremophila flaccida											x																											
Eremophila forrestii				x			x			x																			x									
Eremophila fraseri subsp. *fraseri*																																						
Eremophila jucunda subsp. *pulcherrima*																																						
Eremophila lachnocalyx																																						
Eremophila lanceolata												x	x		x			x		x	x	x	x				x								x			
Eremophila latrobei		x				x	x												x				x	x									x					
Eremophila longifolia			x				x								x															x				x		x		
Eremophila magnifica subsp. *magnifica*																																						
Eremophila platycalyx																																						
Eriachne benthamii			x																		x		x					x										
Eriachne ciliata																																						
Eriachne flaccida												x	x				x																		x				
Eriachne helmsii					x																																	
Eriachne lanata					x																																	
Eriachne mucronata	x			x	x					x					x	x								x					x	x		x	x	x	x	x	x	x
Eriachne pulchella							x				x	x	x	x								x	x	x			x	x										x
Eucalyptus gamophylla	x	x			x		x	x	x																				x		x							
Eucalyptus leucophloia subsp. *leucophloia*				x					x										x											x	x	x		x		x	x	x

Taxon	CPH-003	CPH-004	CPH-007	CPH-009	CPH-012	CPH-016	CPH-019	CPH-020	CPH-023	CPH-024	CPH-027	CPH-029	CPH-038	CPH-039	CPH-040	CPH-060	CPH-070	CPH-077	CPH-082	CPH-087	CPH-089	CPH-090	CPH-093	CPH-182	CPH-185	CPH-099	CPH-026	CPH-035	CPH-054	CPH-076	CPH-078	CPH-080	CPH-081	CPH-101	CPH-104	CPH-152	CPH-166	CPH-006
Cynanchum floribundum																																						
Cynanchum pedunculatum																																						
Cyperus cunninghamii																																						
Cyperus iria																																						
Dactyloctenium radulans																																						
Dampiera candicans						x								x			x			x		x		x														
Dendrophyllanthus erwinii																																					x	
Dichanthium sericeum																																						
Dicrastylis cordifolia																																						
Digitaria ammophila																			x						x						x	x				x	x	
Digitaria brownii										x									x		x									x	x	x					x	
Digitaria ctenantha																																						
Diplopeltis stuartii var. *stuartii*																														x								
Dipteracanthus australasicus																																						
Dodonaea coriacea																			x	x																x		
Dodonaea lanceolata																												x										
Dodonaea pachyneura																																						
Dodonaea viscosa																																						
Dolichocarpa crouchiana																																						
Duperreya commixta		x			x					x						x	x	x	x		x	x			x	x	x	x	x	x	x	x	x	x	x	x	
Dysphania glomulifera subsp. *eremaea*																																						
Dysphania kalpari																																						
Dysphania melanocarpa																																						
Dysphania rhadinostachya																																						
Dysphania glomulifera subsp. *eremaea*																																						
Enchylaena tomentosa var. *tomentosa*																																						
Enneapogon caerulescens																																						
Enneapogon lindleyanus										x							x		x							x		x			x							
Enneapogon polyphyllus																	x	x	x		x										x	x		x	x	x		
Enneapogon robustissimus																																						
Enteropogon ramosus																																						
Eragrostis cumingii																																						
Eragrostis eriopoda																													x				x				x	
Eragrostis leptocarpa																																						
Eragrostis olida					x																																	
Eragrostis pergracilis																																						
Eragrostis setifolia																																						
Eragrostis sp. Mt Robinson (S. van Leeuwen 4109)																																						
Eragrostis tenellula																																						
Eragrostis xerophila																																						
Eremophila clarkei																																						
Eremophila flaccida																																						
Eremophila forrestii																																						
Eremophila fraseri subsp. *fraseri*																																						
Eremophila jucunda subsp. *pulcherrima*																																						
Eremophila lachnocalyx																																				x		
Eremophila lanceolata																																						
Eremophila latrobei	x		x			x			x						x		x	x				x	x													x		
Eremophila longifolia																									x						x			x				
Eremophila magnifica subsp. *magnifica*																										x												
Eremophila platycalyx																																						
Eriachne benthamii																																						
Eriachne ciliata									x																													
Eriachne flaccida																																						
Eriachne helmsii																																						
Eriachne lanata		x			x	x									x														x									
Eriachne mucronata		x		x	x				x	x			x				x	x	x	x	x	x	x			x	x	x			x		x		x	x	x	
Eriachne pulchella																																					x	
Eucalyptus gamophylla										x															x		x		x	x	x	x	x	x	x			
Eucalyptus leucophloia subsp. *leucophloia*	x	x	x				x		x	x	x		x				x	x	x	x	x	x	x	x	x	x	x	x	x							x		x

Taxon	CPH-008	CPH-015	CPH-018	CPH-025	CPH-032	CPH-047	CPH-051	CPH-063	CPH-075	CPH-096	CPH-100	CPH-044	CPH-055	CPH-128	CPH-130	CPH-167	CPH-050	CPH-068	CPH-072	CPH-113	CPH-123	CPH-172	CPH-173	CPH-174	CPH-150	CPH-501	CPH-005	CPH-010	CPH-017	CPH-062	CPH-115	CPH-181	CPH-001	CPH-014	CPH-013	CPH-037	CPH-043
Cynanchum floribundum																																					
Cynanchum pedunculatum																																					
Cyperus cunninghamii																																					
Cyperus iria																																					
Dactyloctenium radulans																																					x
Dampiera candicans																																					
Dendrophyllanthus erwinii																																					
Dichanthium sericeum													x																								
Dicrastylis cordifolia																																					
Digitaria ammophila														x	x	x	x				x		x	x													x
Digitaria brownii							x				x	x		x		x	x	x															x				
Digitaria ctenantha															x																						
Diplopeltis stuartii var. *stuartii*																																					
Dipteracanthus australasicus																																					
Dodonaea coriacea		x						x																	x						x						
Dodonaea lanceolata	x																																	x			
Dodonaea pachyneura																																					
Dodonaea viscosa											x																										
Dolichocarpa crouchiana																																					
Duperreya commixta	x						x	x	x	x	x	x	x	x		x	x		x							x	x		x	x			x	x			
Dysphania glomulifera subsp. *eremaea*																																					
Dysphania kalpari														x	x								x														
Dysphania melanocarpa														x	x																						
Dysphania rhadinostachya																																					
Dysphania glomulifera subsp. *eremaea*																																					
Enchylaena tomentosa var. *tomentosa*																	x																				
Enneapogon caerulescens																																					
Enneapogon lindleyanus											x	x				x			x														x				
Enneapogon polyphyllus								x		x	x		x	x	x	x				x	x	x										x					
Enneapogon robustissimus																																					
Enteropogon ramosus																																					
Eragrostis cumingii																																					x
Eragrostis eriopoda							x	x		x															x				x							
Eragrostis leptocarpa																																					
Eragrostis olida																																					
Eragrostis pergracilis														x																							
Eragrostis setifolia						x																															
Eragrostis sp. Mt Robinson (S. van Leeuwen 4109)																																					
Eragrostis tenellula																																					x
Eragrostis xerophila														x																							
Eremophila clarkei																					x																
Eremophila flaccida																																					
Eremophila forrestii							x	x													x																
Eremophila fraseri subsp. *fraseri*																																					
Eremophila jucunda subsp. *pulcherrima*																																					
Eremophila lachnocalyx																																					
Eremophila lanceolata													x											x													
Eremophila latrobei		x												x	x	x	x					x		x										x			
Eremophila longifolia		x				x	x				x	x	x					x					x				x						x				
Eremophila magnifica subsp. *magnifica*																																					
Eremophila platycalyx																																					
Eriachne benthamii	x																																x				
Eriachne ciliata																					x													x			
Eriachne flaccida																																					
Eriachne helmsii												x		x		x	x																				
Eriachne lanata		x																											x								
Eriachne mucronata	x					x	x	x	x		x								x				x	x	x		x		x	x				x		x	
Eriachne pulchella						x								x									x			x											
Eucalyptus gamophylla							x		x	x								x		x						x					x						
Eucalyptus leucophloia subsp. *leucophloia*	x	x	x	x	x	x		x			x														x	x		x	x		x	x		x			

Taxon	CPH-058	CPH-056	CPH-059	CPH-117	CPH-119	CPH-163	CPH-064	CPH-067	CPH-069	CPH-074	CPH-079	CPH-095	CPH-175	CPH-179	CPH-183	CPH-187	CPH-188	CPH-022	CPH-028	CPH-034	CPH-036	CPH-046	CPH-048	CPH-049	CPH-066	CPH-071	CPH-091	CPH-092	CPH-121	CPH-168	CPH-180	CPH-199	CPH-088	CPH-107	CPH-176	CPH-184	CPH-057	CPH-118
Eucalyptus repullulans											x																											
Eucalyptus trivalva												x																										
Eucalyptus victrix	x																																				
Eucalyptus xerothermica	x	x					x	x		x	x							x	x	x					x		x	x	x	x	x							x
Eulalia aurea	x	x	x				x	x	x	x	x	x		x					x	x	x	x	x	x	x		x	x		x			x	x				
Euphorbia australis		x											x							x		x																x
Euphorbia biconvexa	x		x		x								x		x	x							x	x	x		x		x									x
Euphorbia boophthona																																						
Euphorbia drummondii						x																			x			x										
Euphorbia ferdinandi var. *ferdinandi*						x																										x						
Euphorbia tannensis subsp. *eremophila*												x										x			x											x		
Euphorbia trigonosperma														x												x									x			
Euploca inexplicita																																						
Euploca pachyphylla																																						
Euploca tanythrix																																						
Euploca tenuifolia	x	x																																				
Evolvulus alsinoides	x	x	x		x	x	x						x	x	x	x	x			x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x
Exocarpos sparteus																																						
Ficus brachypoda																																						
Ficus platypoda																										x												
Fimbristylis dichotoma						x								x										x							x	x		x			
Gastrolobium grandiflorum																																						
Glycine canescens																x						x	x			x												
Gompholobium oreophilum									x			x			x	x																					x	
Gomphrena canescens	x	x																					x				x											
Gomphrena cunninghamii															x	x	x									x												
Gomphrena kanisii																																						
Gomphrena lanata																																						
Gomphrena cunninghamii																																						
Goodenia microptera		x					x				x			x		x																						
Goodenia muelleriana			x		x																				x	x			x									
Goodenia nuda						x																										x						
Goodenia prostrata			x			x							x	x																		x			x			
Goodenia stellata										x													x		x		x	x	x									
Goodenia stobbsiana															x	x	x																	x				
Goodenia triodiophila									x	x												x												x				
Gossypium australe	x		x																			x	x										x					
Gossypium robinsonii	x														x	x	x	x	x	x		x	x	x		x										x		
Gossypium sturtianum var. *sturtianum*																																						
Grevillea berryana			x										x																	x					x			
Grevillea wickhamii																																		x				
Hakea chordophylla								x	x							x				x		x												x				
Hakea loreus subsp. *loreus*							x															x			x								x					
Halgania gustafsenii												x			x	x	x																						
Hibiscus burtonii	x	x					x						x					x					x		x		x	x		x	x	x		x	x			x
Hibiscus coatesii																																	x	x				x
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)																x																						
Hibiscus sturtii		x	x				x				x				x	x	x	x		x	x	x	x	x	x				x							x		
Indigofera georgei		x					x	x		x								x	x	x	x								x									
Indigofera monophylla		x							x			x			x	x	x			x				x								x			x	x		
Indigofera rugosa																																						
Ipomoea muelleri																															x							
Ipomoea polymorpha																											x											
Iseilema eremaeum			x		x																				x	x	x	x										
Iseilema membranaceum						x							x							x												x						
Isotropis atropurpurea												x																										
Isotropis iophyta	x	x																	x			x	x						x	x								
Jasminum didymum subsp. *lineare*		x					x	x	x	x	x	x			x	x	x	x	x	x	x	x		x	x	x							x	x		x	x	
Josephinia eugeniae																																						
Leichhardtia australis								x																														

Taxon	CPH-186	CPH-011	CPH-021	CPH-031	CPH-033	CPH-041	CPH-061	CPH-111	CPH-116	CPH-122	CPH-124	CPH-127	CPH-143	CPH-151	CPH-154	CPH-155	CPH-156	CPH-157	CPH-158	CPH-160	CPH-161	CPH-164	CPH-165	CPH-169	CPH-170	CPH-171	CPH-178	CPH-129	CPH-030	CPH-086	CPH-094	CPH-097	CPH-098	CPH-149	CPH-042	CPH-084	CPH-085	CPH-002
Eucalyptus repullulans																																						
Eucalyptus trivalva																																						
Eucalyptus victrix																																						
Eucalyptus xerothermica					x														x				x						x								
Eulalia aurea	x	x			x	x	x											x	x		x								x	x	x	x	x		x	x	x	
Euphorbia australis			x																							x											
Euphorbia biconvexa															x					x	x		x															
Euphorbia boophthona																																						
Euphorbia drummondii						x					x	x	x				x	x					x		x	x		x						x				
Euphorbia ferdinandi var. *ferdinandi*											x	x	x		x					x	x	x		x				x										
Euphorbia tannensis subsp. *eremophila*						x																	x			x					x							
Euphorbia trigonosperma			x																									x			x	x					
Euploca inexplicita																																						
Euploca pachyphylla																																						
Euploca tanythrix											x																											
Euploca tenuifolia																																x						
Evolvulus alsinoides	x		x			x	x				x	x	x		x	x	x		x	x	x		x	x	x			x					x					x
Exocarpos sparteus																																						
Ficus brachypoda																																x						
Ficus platypoda																																						
Fimbristylis dichotoma						x					x	x	x	x	x		x	x		x	x	x	x	x		x		x							x			x
Gastrolobium grandiflorum		x																														x						
Glycine canescens																																						
Gompholobium oreophilum									x																						x							
Gomphrena canescens																																x						
Gomphrena cunninghamii																																x						
Gomphrena kanisii													x		x		x																						
Gomphrena lanata															x									x														
Gomphrena cunninghamii											x	x	x															x										
Goodenia microptera	x			x	x			x								x													x	x	x		x					
Goodenia muelleriana							x																							x	x							x
Goodenia nuda											x	x	x		x		x				x		x	x				x										
Goodenia prostrata											x	x	x		x		x			x	x	x	x	x		x	x	x						x				
Goodenia stellata																													x									
Goodenia stobbsiana	x			x	x				x																					x	x							
Goodenia triodiophila																														x	x					x	x	
Gossypium australe																														x							x	
Gossypium robinsonii	x	x	x																													x	x					
Gossypium sturtianum var. *sturtianum*																																						
Grevillea berryana										x			x											x	x			x							x				
Grevillea wickhamii			x																												x				x			
Hakea chordophylla				x			x	x																													x	
Hakea loreus subsp. *loreus*						x			x	x					x					x	x		x							x				x	x		
Halgania gustafsenii	x																																					
Hibiscus burtonii	x			x	x	x	x	x		x		x	x	x		x		x	x		x	x		x	x	x			x		x			x			x	
Hibiscus coatesii	x						x									x														x	x	x		x				
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)																																						
Hibiscus sturtii	x		x		x	x	x		x																				x	x	x	x				x		
Indigofera georgei			x				x																															
Indigofera monophylla	x	x			x		x	x	x																						x	x				x	x	
Indigofera rugosa																															x							
Ipomoea muelleri																	x																					
Ipomoea polymorpha																																						
Iseilema eremaeum																	x											x									
Iseilema membranaceum											x	x								x	x		x	x														
Isotropis atropurpurea																															x							
Isotropis iophyta			x																																			
Jasminum didymum subsp. *lineare*	x	x		x	x																								x	x	x	x	x					
Josephinia eugeniae																	x																					
Leichhardtia australis							x																															

Taxon	CPH-003	CPH-004	CPH-007	CPH-009	CPH-012	CPH-016	CPH-019	CPH-020	CPH-023	CPH-024	CPH-027	CPH-029	CPH-038	CPH-039	CPH-040	CPH-060	CPH-070	CPH-077	CPH-082	CPH-087	CPH-089	CPH-090	CPH-093	CPH-182	CPH-185	CPH-099	CPH-026	CPH-035	CPH-054	CPH-076	CPH-078	CPH-080	CPH-081	CPH-101	CPH-104	CPH-152	CPH-166	CPH-006
Eucalyptus repullulans																															x							
Eucalyptus trivalva																																x						
Eucalyptus victrix																																						
Eucalyptus xerothermica																												x										
Eulalia aurea																	x	x	x	x	x	x				x				x	x	x				x		
Euphorbia australis																			x																			
Euphorbia biconvexa		x																																				
Euphorbia boophthona																																						
Euphorbia drummondii																																						
Euphorbia ferdinandi var. *ferdinandi*																																						
Euphorbia tannensis subsp. *eremophila*																																						
Euphorbia trigonosperma																												x										
Euploca inexplicita																																						
Euploca pachyphylla																																						
Euploca tanythrix																																						
Euploca tenuifolia																																						
Evolvulus alsinoides																	x				x					x		x								x	x	
Exocarpos sparteus																		x																				
Ficus brachypoda					x																					x												
Ficus platypoda																																						
Fimbristylis dichotoma	x	x													x	x		x	x	x	x	x	x															
Gastrolobium grandiflorum																																						
Glycine canescens																																						
Gompholobium oreophilum			x			x		x								x	x					x			x					x								
Gomphrena canescens																																						
Gomphrena cunninghamii		x																																				
Gomphrena kanisii																																						
Gomphrena lanata																																						
Gomphrena cunninghamii																																						
Goodenia microptera																			x	x	x																x	
Goodenia muelleriana																			x																			
Goodenia nuda																																						
Goodenia prostrata																																						
Goodenia stellata																															x	x						
Goodenia stobbsiana	x			x			x		x		x			x		x			x	x	x	x	x			x		x					x			x	x	
Goodenia triodiophila	x		x	x		x	x	x	x		x			x		x	x	x	x	x	x	x	x			x							x			x		
Gossypium australe																				x																		
Gossypium robinsonii					x				x								x	x		x							x	x										
Gossypium sturtianum var. *sturtianum*																																						
Grevillea berryana												x																									x	
Grevillea wickhamii			x	x	x	x				x			x	x	x		x			x			x												x			
Hakea chordophylla		x	x	x			x	x		x	x				x			x	x	x	x	x	x	x		x	x							x		x	
Hakea loreus subsp. *loreus*									x		x	x	x	x		x				x						x				x								
Halgania gustafsenii																									x									x				
Hibiscus burtonii																			x											x	x					x	
Hibiscus coatesii		x				x				x									x	x											x	x					
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)																																						
Hibiscus sturtii					x	x											x	x	x	x	x				x					x	x	x		x	x		x	
Indigofera georgei																												x			x						x	
Indigofera monophylla			x	x	x	x		x		x	x			x		x	x	x	x	x	x	x	x	x	x	x	x		x	x			x	x	x	x	x	
Indigofera rugosa																																						x
Ipomoea muelleri																																						
Ipomoea polymorpha																																						
Iseilema eremaeum																																						
Iseilema membranaceum																												x										
Isotropis atropurpurea																																						
Isotropis iophyta																																						
Jasminum didymum subsp. *lineare*		x	x	x	x	x				x		x				x	x	x	x			x			x	x	x	x	x	x	x			x				
Josephinia eugeniae																																						
Leichhardtia australis																																						

Taxon	CPH-008	CPH-015	CPH-018	CPH-025	CPH-032	CPH-047	CPH-051	CPH-063	CPH-075	CPH-096	CPH-100	CPH-044	CPH-055	CPH-128	CPH-130	CPH-167	CPH-050	CPH-068	CPH-072	CPH-113	CPH-123	CPH-172	CPH-173	CPH-174	CPH-150	CPH-501	CPH-005	CPH-010	CPH-017	CPH-062	CPH-115	CPH-181	CPH-001	CPH-014	CPH-013	CPH-037	CPH-043
Eucalyptus repullulans																																					
Eucalyptus trivalva																																					
Eucalyptus victrix																																	x				
Eucalyptus xerothermica											x							x	x								x				x						x
Eulalia aurea	x							x	x	x	x	x	x				x	x	x											x			x				x
Euphorbia australis											x										x												x	x			
Euphorbia biconvexa																						x											x				
Euphorbia boophthona																										x											
Euphorbia drummondii													x	x	x																						x
Euphorbia ferdinandi var. *ferdinandi*																																					
Euphorbia tannensis subsp. *eremophila*							x																x														x
Euphorbia trigonosperma																																		x			
Euploca inexplicita																															x						
Euploca pachyphylla																																			x		
Euploca tanythrix																																					
Euploca tenuifolia									x		x																			x							
Evolvulus alsinoides	x							x			x		x	x		x	x		x		x		x				x			x			x			x	x
Exocarpos sparteus																																					
Ficus brachypoda																																		x			
Ficus platypoda																																					
Fimbristylis dichotoma					x										x	x						x	x	x												x
Gastrolobium grandiflorum	x																																	x			
Glycine canescens											x																			x			x				
Gompholobium oreophilum						x	x		x																						x			x			
Gomphrena canescens														x																							
Gomphrena cunninghamii																																					
Gomphrena kanisii																																					
Gomphrena lanata																																					
Gomphrena cunninghamii																																					
Goodenia microptera						x				x								x		x					x		x			x							
Goodenia muelleriana																					x					x						x			x		
Goodenia nuda																																					
Goodenia prostrata													x			x							x	x													
Goodenia stellata																		x												x							
Goodenia stobbsiana						x		x	x																x	x									x		
Goodenia triodiophila		x						x	x																						x				x		
Gossypium australe																											x			x			x			x	
Gossypium robinsonii	x										x																			x			x	x		x	
Gossypium sturtianum var. *sturtianum*											x																										
Grevillea berryana														x										x									x				
Grevillea wickhamii	x										x																							x			
Hakea chordophylla					x			x	x	x								x												x	x	x				
Hakea loreus subsp. *loreus*		x					x		x			x	x			x	x			x					x	x						x			x		x
Halgania gustafsenii																																					
Hibiscus burtonii							x				x	x		x		x	x	x	x		x	x	x	x					x							
Hibiscus coatesii							x																														x
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)																																					
Hibiscus sturtii						x	x				x	x				x	x				x								x	x	x	x				
Indigofera georgei							x			x		x					x	x												x							
Indigofera monophylla	x					x		x	x											x											x			x	x	x	
Indigofera rugosa																																	x				
Ipomoea muelleri																																					
Ipomoea polymorpha													x																								
Iseilema eremaeum																					x																
Iseilema membranaceum															x																						
Isotropis atropurpurea																																					
Isotropis iophyta																	x													x			x				
Jasminum didymum subsp. *lineare*	x						x			x	x	x						x									x		x	x		x	x	x	x	x	x
Josephinia eugeniae																																					
Leichhardtia australis																		x												x							

Taxon	CPH-058	CPH-056	CPH-059	CPH-117	CPH-119	CPH-163	CPH-064	CPH-067	CPH-069	CPH-074	CPH-079	CPH-095	CPH-175	CPH-179	CPH-183	CPH-187	CPH-188	CPH-022	CPH-028	CPH-034	CPH-036	CPH-046	CPH-048	CPH-049	CPH-066	CPH-071	CPH-091	CPH-092	CPH-121	CPH-168	CPH-180	CPH-199	CPH-088	CPH-107	CPH-176	CPH-184	CPH-057	CPH-118
Lepidium echinatum																																						
Lepidium phlebopetalum					x																																	
Lysiana murrayi																																						
Maireana planifolia		x	x		x	x							x	x												x				x	x				x			
Maireana villosa			x		x	x							x	x								x	x	x	x		x	x		x	x	x						x
Maireana planifolia					x																																	x
Maytenus sp. Mt Windell (S. van Leeuwen 846)								x	x	x	x	x																										
Melhania oblongifolia	x				x										x	x	x			x		x	x	x		x											x	
Menkea villosula																																						
Mimulus gracilis																																						
Mirbelia viminalis																																						
Muelleranthus obovatus																																						
Nellica maderaspatensis															x	x	x			x																		
Nicotiana rosulata														x																								
Notoleptopus decaisnei var. Orbicularis (A.B. Craig 428)	x														x																							
Olearia stuartii																																						
Ophioglossum lusitanicum						x																										x						
Oxalis perennans																																						
Panicum decompositum			x				x			x	x											x																
Panicum effusum						x							x		x															x				x				
Paraneurachne muelleri	x	x	x				x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x			x		x	x				x		x	x	x
Paspalidium clementii																											x				x			x				
Paspalidium constrictum																												x										
Paspalidium rarum	x					x							x	x									x				x	x				x						
Pellaea reynoldsii																										x												
Peplidium muelleri																																						
Peplidium sp. C Evol. Fl. Fauna Arid Aust. (N.T. Burbidge & A. Kanis 8158)						x																																
Peripleura arida																																						
Peripleura obovata										x	x				x							x																
Perotis rara		x	x		x	x							x	x						x			x		x		x	x	x			x						
Petalostylis labicheoides																			x		x																	
Pluchea dentex																																						
Pluchea dunlopii																																						
Pluchea rubelliflora																																						
Plumbago zeylanica																										x												
Polycarpaea corymbosa var. *corymbosa*																																						
Polycarpaea holtzei																																						
Polycarpaea longiflora	x															x	x									x						x						
Polygala glaucifolia														x																								
Polygala isingii																																						
Polymeria ambigua																													x									
Portulaca filifolia					x																																	
Portulaca oleracea		x	x		x								x	x													x	x			x	x						x
Prostanthera albiflora																										x												
Psydrax latifolia													x								x	x								x	x							
Psydrax rigidula											x																			x	x							x
Psydrax suaveolens													x	x																	x							
Pterocaulon serrulatum																										x												
Pterocaulon sphacelatum	x	x								x										x		x	x	x			x			x								
Pterocaulon sphaeranthoides																										x												
Ptilotus astrolasius		x			x												x		x				x	x					x	x					x		x
Ptilotus auriculifolius													x																										
Ptilotus calostachyus		x														x	x			x		x		x										x	x	x	x	
Ptilotus clementii														x									x	x													x	
Ptilotus exaltatus		x			x	x							x	x	x	x		x	x	x		x	x	x	x		x				x		x	x	x		x	
Ptilotus fusiformis						x																																
Ptilotus gaudichaudii					x								x	x													x				x	x						
Ptilotus helipteroides		x	x		x									x													x	x				x						x
Ptilotus obovatus var. *obovatus*	x	x	x		x	x	x	x		x			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x	x
Ptilotus polystachyus		x							x														x															

Taxon	CPH-186	CPH-011	CPH-021	CPH-031	CPH-033	CPH-041	CPH-061	CPH-111	CPH-116	CPH-122	CPH-124	CPH-127	CPH-143	CPH-151	CPH-154	CPH-155	CPH-156	CPH-157	CPH-158	CPH-160	CPH-161	CPH-164	CPH-165	CPH-169	CPH-170	CPH-171	CPH-178	CPH-129	CPH-030	CPH-086	CPH-094	CPH-097	CPH-098	CPH-149	CPH-042	CPH-084	CPH-085	CPH-002
Lepidium echinatum											x	x					x					x															
Lepidium phlebopetalum																												x									
Lysiana murrayi																																			x			
Maireana planifolia											x										x			x			x											
Maireana villosa					x	x	x						x	x		x		x	x	x	x	x		x	x	x	x							x	x			
Maireana planifolia																																						
Maytenus sp. Mt Windell (S. van Leeuwen 846)																															x						x	
Melhania oblongifolia			x																		x																	
Menkea villosula																												x										
Mimulus gracilis																																			x			
Mirbelia viminalis																																					x	
Muelleranthus obovatus	x																																					
Nellica maderaspatensis			x																																			
Nicotiana rosulata																																						
Notoleptopus decaisnei var. Orbicularis (A.B. Craig 428)																																x						
Olearia stuartii																																						
Ophioglossum lusitanicum						x						x			x		x			x	x	x	x	x	x	x								x				
Oxalis perennans																																						
Panicum decompositum						x	x								x																x	x						
Panicum effusum										x		x	x	x	x			x	x		x	x	x												x			
Paraneurachne muelleri	x	x	x	x	x	x	x	x	x					x		x			x										x	x	x	x	x	x		x	x	
Paspalidium clementii													x	x										x	x			x										
Paspalidium constrictum																																						
Paspalidium rarum											x	x	x		x		x				x	x	x											x				
Pellaea reynoldsii																																						
Peplidium muelleri											x																											
Peplidium sp. C Evol. Fl. Fauna Arid Aust. (N.T. Burbidge & A. Kanis 8158)																							x															
Peripleura arida																	x																					
Peripleura obovata																												x		x							
Perotis rara			x								x	x	x	x	x					x	x	x	x	x		x		x							x			
Petalostylis labicheoides		x	x	x					x																				x			x	x					
Pluchea dentex																																			x			
Pluchea dunlopii																	x																					
Pluchea rubelliflora																																			x			
Plumbago zeylanica																																						
Polycarpaea corymbosa var. *corymbosa*													x					x																				
Polycarpaea holtzei																																						
Polycarpaea longiflora																							x									x						
Polygala glaucifolia										x																												
Polygala isingii											x	x	x															x										
Polymeria ambigua																																						
Portulaca filifolia																																						
Portulaca oleracea											x	x	x		x		x				x	x	x	x	x		x	x							x			
Prostanthera albiflora																																x						
Psydrax latifolia						x	x																	x	x							x					x	
Psydrax rigidula									x										x						x													
Psydrax suaveolens						x				x			x	x		x		x							x	x								x				
Pterocaulon serrulatum												x							x												x	x						
Pterocaulon sphacelatum			x		x	x	x						x		x			x		x		x	x					x	x		x			x	x			
Pterocaulon sphaeranthoides																																						
Ptilotus astrolasius	x		x	x	x		x													x																		
Ptilotus auriculifolius																																						
Ptilotus calostachyus	x		x	x	x		x		x	x	x		x														x		x		x		x		x			
Ptilotus clementii									x																		x											
Ptilotus exaltatus		x			x	x		x			x	x	x		x	x	x	x	x	x	x	x	x		x	x	x	x			x		x					
Ptilotus fusiformis																				x	x																	
Ptilotus gaudichaudii											x	x	x		x		x		x			x	x	x	x	x		x							x			
Ptilotus helipteroides												x	x				x											x										
Ptilotus obovatus var. *obovatus*		x	x		x	x	x	x	x	x			x	x		x		x	x		x	x	x	x	x	x	x		x	x		x	x	x	x	x	x
Ptilotus polystachyus													x				x		x					x										x				

Taxon	CPH-003	CPH-004	CPH-007	CPH-009	CPH-012	CPH-016	CPH-019	CPH-020	CPH-023	CPH-024	CPH-027	CPH-029	CPH-038	CPH-039	CPH-040	CPH-060	CPH-070	CPH-077	CPH-082	CPH-087	CPH-089	CPH-090	CPH-093	CPH-182	CPH-185	CPH-099	CPH-026	CPH-035	CPH-054	CPH-076	CPH-078	CPH-080	CPH-081	CPH-101	CPH-104	CPH-152	CPH-166	CPH-006
Lepidium echinatum																																						
Lepidium phlebopetalum																																						
Lysiana murrayi																																						
Maireana planifolia																																						
Maireana villosa																								x							x				x			
Maireana planifolia																																						
Maytenus sp. Mt Windell (S. van Leeuwen 846)																				x										x	x	x				x		
Melhania oblongifolia							x																															
Menkea villosula																																						
Mimulus gracilis																																						
Mirbelia viminalis					x	x	x													x		x																
Muelleranthus obovatus																																						
Nellica maderaspatensis																												x										
Nicotiana rosulata																																						
Notoleptopus decaisnei var. Orbicularis (A.B. Craig 428)																																						
Olearia stuartii																																						
Ophioglossum lusitanicum																																						
Oxalis perennans																																						
Panicum decompositum																															x	x						
Panicum effusum																x																	x			x		
Paraneurachne muelleri					x			x		x						x	x	x	x	x	x	x			x	x	x	x		x	x	x	x	x	x	x	x	x
Paspalidium clementii																																						
Paspalidium constrictum																																						
Paspalidium rarum																																						
Pellaea reynoldsii																																						
Peplidium muelleri																																						
Peplidium sp. C Evol. Fl. Fauna Arid Aust. (N.T. Burbidge & A. Kanis 8158)																																						
Peripleura arida																																						
Peripleura obovata				x																										x	x						
Perotis rara																																						
Petalostylis labicheoides					x	x																	x					x									
Pluchea dentex																												x									
Pluchea dunlopii																																						
Pluchea rubelliflora																																						
Plumbago zeylanica																																						
Polycarpaea corymbosa var. *corymbosa*																																						
Polycarpaea holtzei																																						
Polycarpaea longiflora		x																								x											
Polygala glaucifolia																						x															
Polygala isingii																																						
Polymeria ambigua																																						
Portulaca filifolia																																						
Portulaca oleracea																																						
Prostanthera albiflora																										x												
Psydrax latifolia																																						
Psydrax rigidula																							x								x							
Psydrax suaveolens																																					x	
Pterocaulon serrulatum																																x						
Pterocaulon sphacelatum																x														x	x	x						
Pterocaulon sphaeranthoides																																						
Ptilotus astrolasius		x				x													x									x					x	x			
Ptilotus auriculifolius																																						
Ptilotus calostachyus	x			x		x		x	x	x	x						x	x	x		x	x		x			x	x	x			x	x	x	x	x		
Ptilotus clementii																			x																			
Ptilotus exaltatus																		x	x									x							x		
Ptilotus fusiformis																																						
Ptilotus gaudichaudii																																						
Ptilotus helipteroides																																						
Ptilotus obovatus var. *obovatus*				x					x	x							x		x	x							x	x	x		x	x				x	x	
Ptilotus polystachyus																																						

Taxon	CPH-008	CPH-015	CPH-018	CPH-025	CPH-032	CPH-047	CPH-051	CPH-063	CPH-075	CPH-096	CPH-100	CPH-044	CPH-055	CPH-128	CPH-130	CPH-167	CPH-050	CPH-068	CPH-072	CPH-113	CPH-123	CPH-172	CPH-173	CPH-174	CPH-150	CPH-501	CPH-005	CPH-010	CPH-017	CPH-062	CPH-115	CPH-181	CPH-001	CPH-014	CPH-013	CPH-037	CPH-043
Lepidium echinatum																																					
Lepidium phlebopetalum																																					
Lysiana murrayi																																					
Maireana planifolia																					x	x		x													
Maireana villosa													x	x	x	x					x	x	x	x													
Maireana planifolia																																					
Maytenus sp. Mt Windell (S. van Leeuwen 846)										x																											
Melhania oblongifolia																											x							x		x	
Menkea villosula																																					
Mimulus gracilis																																					
Mirbelia viminalis									x																						x						
Muelleranthus obovatus																																					
Nellica maderaspatensis											x																x										
Nicotiana rosulata														x	x																						
Notoleptopus decaisnei var. Orbicularis (A.B. Craig 428)																																					
Olearia stuartii																																					x
Ophioglossum lusitanicum														x								x		x													
Oxalis perennans														x																							
Panicum decompositum																																					x
Panicum effusum									x														x	x													
Paraneurachne muelleri						x	x	x	x		x	x				x	x	x	x	x			x		x						x	x	x	x	x		x	
Paspalidium clementii														x							x												x				
Paspalidium constrictum																																					
Paspalidium rarum															x								x														
Pellaea reynoldsii																																					
Peplidium muelleri																																					
Peplidium sp. C Evol. Fl. Fauna Arid Aust. (N.T. Burbidge & A. Kanis 8158)																																					
Peripleura arida																		x																			
Peripleura obovata							x			x	x																										
Perotis rara													x	x							x			x													x
Petalostylis labicheoides	x										x																							x			
Pluchea dentex	x																													x						
Pluchea dunlopii													x																								
Pluchea rubelliflora																																					
Plumbago zeylanica																																					
Polycarpaea corymbosa var. *corymbosa*														x																							
Polycarpaea holtzei						x																															
Polycarpaea longiflora											x																										
Polygala glaucifolia																					x																
Polygala isingii																																					
Polymeria ambigua																														x							
Portulaca filifolia																																					
Portulaca oleracea														x	x																						
Prostanthera albiflora																																					
Psydrax latifolia								x				x		x	x	x	x				x	x												x			
Psydrax rigidula															x	x						x	x	x													
Psydrax suaveolens														x							x	x	x														
Pterocaulon serrulatum																																					
Pterocaulon sphacelatum							x	x			x	x	x	x			x										x			x			x				x
Pterocaulon sphaeranthoides																																					
Ptilotus astrolasius					x						x						x													x	x						
Ptilotus auriculifolius																																					
Ptilotus calostachyus		x				x	x	x	x	x				x	x										x	x	x		x		x	x			x		
Ptilotus clementii																																					
Ptilotus exaltatus		x				x								x	x						x		x	x	x		x		x							
Ptilotus fusiformis																																					
Ptilotus gaudichaudii														x	x																						
Ptilotus helipteroides																					x																
Ptilotus obovatus var. *obovatus*										x	x	x	x		x	x	x	x	x		x	x	x	x		x	x		x	x		x				
Ptilotus polystachyus														x																							

Taxon	CPH-058	CPH-056	CPH-059	CPH-117	CPH-119	CPH-163	CPH-064	CPH-067	CPH-069	CPH-074	CPH-079	CPH-095	CPH-175	CPH-179	CPH-183	CPH-187	CPH-188	CPH-022	CPH-028	CPH-034	CPH-036	CPH-046	CPH-048	CPH-049	CPH-066	CPH-071	CPH-091	CPH-092	CPH-121	CPH-168	CPH-180	CPH-199	CPH-088	CPH-107	CPH-176	CPH-184	CPH-057	CPH-118
Ptilotus roei													x																		x	x			x			
Ptilotus rotundifolius									x			x										x		x												x	x	
Ptilotus schwartzii var. *schwartzii*													x																			x			x			
Rhagodia eremaea			x		x	x	x								x	x		x		x			x	x	x	x					x						x
Rhagodia sp. Hamersley (M. Trudgen 17794)					x								x	x															x	x	x						x
Rhodanthe propinqua																																						
Rhynchosia minima	x	x						x						x	x	x	x	x		x			x	x		x			x			x					
Roebuckiella similis						x							x	x																		x						
Rostellularia adscendens	x																									x							x					
Salsola australis					x															x			x				x		x		x						x
Santalum lanceolatum										x					x	x	x		x	x	x	x				x												
Scaevola acacioides																																						
Scaevola amblyanthera var. *centralis*																					x								x									
Scaevola browniana subsp. *browniana*																																						
Scaevola parvifolia subsp. *pilbarae*		x					x	x	x	x	x	x				x	x		x	x	x	x													x	x	
Scaevola spinescens															x	x																						
Schizachyrium fragile																								x									x	x			x	
Sclerolaena cornishiana		x			x	x								x					x						x												x
Sclerolaena costata																																						
Sclerolaena tetragona																																			x			
Senna artemisioides subsp. *helmsii*			x								x				x	x	x	x				x	x	x										x		x		
Senna artemisioides subsp. *oligophylla*		x					x	x	x		x	x			x	x	x	x	x	x		x	x	x									x	x		x	x	
Senna artemisioides subsp. x *artemisioides*		x						x		x		x									x	x							x								
Senna artemisioides subsp. x *sturtii*																																						
Senna ferraria																										x												
Senna glaucifolia			x																																			
Senna glutinosa subsp. *glutinosa*			x						x						x	x	x					x				x							x	x		x	x	
Senna glutinosa subsp. *pruinosa*												x				x																x						
Senna glutinosa subsp. x *luerssenii*									x			x			x								x	x									x		x	x	
Senna notabilis		x	x				x			x			x	x						x					x		x	x	x			x		x			x	
Senna pleurocarpa var. *angustifolia*		x					x		x	x																												
Senna sericea																																						
Senna sp. Meekatharra (E. Bailey 1-26)																																						
Senna stricta																																						
Senna symonii																																						
Seringia exastia		x					x	x	x	x	x		x			x			x					x														
Seringia nephrosperma																																						
Setaria dielsii																														x								
Setaria surgens	x	x												x								x	x		x		x				x							
Sida arenicola																																		x		x		
Sida calyxhymenia																																						
Sida cardiophylla							x																											x				
Sida echinocarpa										x																							x	x		x		x
Sida ectogama													x																						x				
Sida fibulifera		x	x		x													x	x			x			x				x								
Sida platycalyx																							x									x						
Sida sp. Articulation below (A.A. Mitchell PRP 1605)																																						
Sida sp. Barlee Range (S. van Leeuwen 1642)																																			x			
Sida sp. dark green fruits (S. van Leeuwen 2260)																																						x
Sida sp. Excedentifolia (J.L. Egan 1925)																																		x				
Sida sp. Golden calyces glabrous (H.N. Foote 32)																																						
Sida sp. L (A.M. Ashby 4202)	x		x		x	x	x			x			x	x						x	x	x	x		x		x	x	x	x	x	x					x
Sida sp. Pilbara (A.A. Mitchell PRP 1543)		x													x																			x				
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)							x																															
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	x		x										x		x	x		x	x	x	x	x	x	x	x								x					
Sida sp. Supplejack Station (T.S. Henshall 2345)													x	x																						x			
Solanum centrale																																						
Solanum cleistogamum																		x				x																
Solanum ferocissimum					x	x							x														x	x	x		x				x			
Solanum horridum															x	x	x																	x					

Taxon	CPH-186	CPH-011	CPH-021	CPH-031	CPH-033	CPH-041	CPH-061	CPH-111	CPH-116	CPH-122	CPH-124	CPH-127	CPH-143	CPH-151	CPH-154	CPH-155	CPH-156	CPH-157	CPH-158	CPH-160	CPH-161	CPH-164	CPH-165	CPH-169	CPH-170	CPH-171	CPH-178	CPH-129	CPH-030	CPH-086	CPH-094	CPH-097	CPH-098	CPH-149	CPH-042	CPH-084	CPH-085	CPH-002
Ptilotus roei											x	x					x			x	x	x		x		x	x											
Ptilotus rotundifolius								x	x	x																			x	x				x		x	
Ptilotus schwartzii var. *schwartzii*											x	x	x											x		x	x							x				
Rhagodia eremaea			x		x																x								x		x			x			
Rhagodia sp. Hamersley (M. Trudgen 17794)						x				x	x			x	x	x		x		x	x			x	x								x				
Rhodanthe propinqua													x											x				x										
Rhynchosia minima			x																										x								
Roebuckiella similis											x	x	x		x					x	x		x	x		x		x										
Rostellularia adscendens																																x	x					
Salsola australis			x	x		x						x			x	x				x	x	x	x				x	x					x					
Santalum lanceolatum		x	x		x																									x	x	x	x			x	
Scaevola acacioides																																						
Scaevola amblyanthera var. *centralis*																																						
Scaevola browniana subsp. *browniana*																																						
Scaevola parvifolia subsp. *pilbarae*	x	x	x		x		x	x	x																			x		x								
Scaevola spinescens																																						
Schizachyrium fragile																																x				x		
Sclerolaena cornishiana						x															x					x									x			
Sclerolaena costata											x																												
Sclerolaena tetragona															x							x				x												
Senna artemisioides subsp. *helmsii*	x	x						x																						x	x							
Senna artemisioides subsp. *oligophylla*	x				x		x	x	x																					x	x				x	x	x	
Senna artemisioides subsp. x *artemisioides*			x										x																									
Senna artemisioides subsp. x *sturtii*																												x										
Senna ferraria																														x				x		x	x	
Senna glaucifolia																																						
Senna glutinosa subsp. *glutinosa*					x		x	x	x																					x	x	x		x		x	x	x
Senna glutinosa subsp. *pruinosa*																														x						x		x
Senna glutinosa subsp. x *luerssenii*					x			x	x																									x				
Senna notabilis	x						x				x	x	x		x	x	x		x				x			x												
Senna pleurocarpa var. *angustifolia*						x																									x							
Senna sericea																																						
Senna sp. Meekatharra (E. Bailey 1-26)																																						
Senna stricta																																						
Senna symonii																																						
Seringia exastia		x							x							x			x					x	x					x		x			x	x	
Seringia nephrosperma																																x						
Setaria dielsii																																						
Setaria surgens			x																													x					
Sida arenicola	x							x	x																										x			
Sida calyxhymenia																																						
Sida cardiophylla								x				x																			x							
Sida echinocarpa								x																						x	x							
Sida ectogama										x														x														
Sida fibulifera			x	x		x					x	x			x		x			x		x	x				x		x									
Sida platycalyx												x	x		x	x				x				x			x								x			
Sida sp. Articulation below (A.A. Mitchell PRP 1605)																																	x					
Sida sp. Barlee Range (S. van Leeuwen 1642)																																		x				
Sida sp. dark green fruits (S. van Leeuwen 2260)										x																												
Sida sp. Excedentifolia (J.L. Egan 1925)																																						
Sida sp. Golden calyces glabrous (H.N. Foote 32)									x																													
Sida sp. L (A.M. Ashby 4202)						x	x				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x										
Sida sp. Pilbara (A.A. Mitchell PRP 1543)				x																																		
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)																															x			x				
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)		x	x			x	x					x																x				x						
Sida sp. Supplejack Station (T.S. Henshall 2345)				x					x																								x					
Solanum centrale								x																														
Solanum cleistogamum				x																x						x			x	x				x			x	
Solanum ferocissimum							x			x				x	x	x				x	x			x	x	x						x						
Solanum horridum	x							x			x							x																				

Taxon	CPH-003	CPH-004	CPH-007	CPH-009	CPH-012	CPH-016	CPH-019	CPH-020	CPH-023	CPH-024	CPH-027	CPH-029	CPH-038	CPH-039	CPH-040	CPH-060	CPH-070	CPH-077	CPH-082	CPH-087	CPH-089	CPH-090	CPH-093	CPH-182	CPH-185	CPH-099	CPH-026	CPH-035	CPH-054	CPH-076	CPH-078	CPH-080	CPH-081	CPH-101	CPH-104	CPH-152	CPH-166	CPH-006
Ptilotus roei																																						
Ptilotus rotundifolius												x						x	x	x	x			x	x		x		x	x				x		x		
Ptilotus schwartzii var. *schwartzii*																																						
Rhagodia eremaea										x																												
Rhagodia sp. Hamersley (M. Trudgen 17794)																																						
Rhodanthe propinqua																																						
Rhynchosia minima																																						x
Roebuckiella similis																																						
Rostellularia adscendens																																						
Salsola australis																																						
Santalum lanceolatum	x				x	x											x											x	x	x							
Scaevola acacioides																																				x		
Scaevola amblyanthera var. *centralis*																																						
Scaevola browniana subsp. *browniana*						x		x						x			x					x	x															
Scaevola parvifolia subsp. *pilbarae*										x											x				x					x	x	x		x			x	
Scaevola spinescens																																			x			
Schizachyrium fragile																			x	x		x														x		
Sclerolaena cornishiana																																						
Sclerolaena costata																																						
Sclerolaena tetragona																																						
Senna artemisioides subsp. *helmsii*			x																						x					x	x			x			
Senna artemisioides subsp. *oligophylla*							x			x					x	x	x			x	x	x			x	x	x	x	x	x				x	x	x	x	x
Senna artemisioides subsp. x *artemisioides*																																						
Senna artemisioides subsp. x *sturtii*																																						
Senna ferraria	x							x												x			x														
Senna glaucifolia														x			x	x																				
Senna glutinosa subsp. *glutinosa*		x	x				x		x	x			x		x		x	x	x	x	x		x	x		x	x	x					x	x		x		x
Senna glutinosa subsp. *pruinosa*	x		x				x						x		x			x	x	x	x		x	x			x		x					x	x	x		
Senna glutinosa subsp. x *luerssenii*									x																x		x	x	x					x	x	x	x	
Senna notabilis																															x							
Senna pleurocarpa var. *angustifolia*																														x	x							
Senna sericea																																						
Senna sp. Meekatharra (E. Bailey 1-26)																								x														
Senna stricta																																				x		
Senna symonii																	x				x		x															
Seringia exastia										x								x	x	x	x	x			x	x			x	x	x	x	x		x		x	
Seringia nephrosperma																																						
Setaria dielsii																																						
Setaria surgens																																						
Sida arenicola																	x				x				x								x					
Sida calyxhymenia				x		x		x																														
Sida cardiophylla																															x						x	
Sida echinocarpa																			x															x				
Sida ectogama																																						
Sida fibulifera																																						
Sida platycalyx																																						
Sida sp. Articulation below (A.A. Mitchell PRP 1605)																																						
Sida sp. Barlee Range (S. van Leeuwen 1642)																																						
Sida sp. dark green fruits (S. van Leeuwen 2260)																																						
Sida sp. Excedentifolia (J.L. Egan 1925)																			x	x																		
Sida sp. Golden calyces glabrous (H.N. Foote 32)																																						
Sida sp. L (A.M. Ashby 4202)																		x								x					x							
Sida sp. Pilbara (A.A. Mitchell PRP 1543)													x						x						x													
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)																																		x				
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)										x						x			x									x									
Sida sp. Supplejack Station (T.S. Henshall 2345)					x	x													x																x			
Solanum centrale																									x													
Solanum cleistogamum																	x		x		x															x		
Solanum ferocissimum																															x							
Solanum horridum																																						

Taxon	CPH-008	CPH-015	CPH-018	CPH-025	CPH-032	CPH-047	CPH-051	CPH-063	CPH-075	CPH-096	CPH-100	CPH-044	CPH-055	CPH-128	CPH-130	CPH-167	CPH-050	CPH-068	CPH-072	CPH-113	CPH-123	CPH-172	CPH-173	CPH-174	CPH-150	CPH-501	CPH-005	CPH-010	CPH-017	CPH-062	CPH-115	CPH-181	CPH-001	CPH-014	CPH-013	CPH-037	CPH-043
Ptilotus roei														x								x	x	x													
Ptilotus rotundifolius		x	x			x	x	x		x	x										x					x						x				
Ptilotus schwartzii var. *schwartzii*														x									x	x													
Rhagodia eremaea																																					
Rhagodia sp. Hamersley (M. Trudgen 17794)														x	x	x					x	x	x														x
Rhodanthe propinqua																																					
Rhynchosia minima											x																x			x			x			x	
Roebuckiella similis														x	x								x	x													
Rostellularia adscendens											x																										
Salsola australis																																					
Santalum lanceolatum											x																		x			x			x	
Scaevola acacioides																																					
Scaevola amblyanthera var. *centralis*											x																		x							
Scaevola browniana subsp. *browniana*																																					
Scaevola parvifolia subsp. *pilbarae*							x		x	x								x	x							x										
Scaevola spinescens											x																										
Schizachyrium fragile																									x												
Sclerolaena cornishiana																																					
Sclerolaena costata																																					
Sclerolaena tetragona																																					
Senna artemisioides subsp. *helmsii*							x	x		x	x																										
Senna artemisioides subsp. *oligophylla*							x			x	x							x		x	x					x	x		x	x			x		x	x	
Senna artemisioides subsp. x *artemisioides*																																	x				
Senna artemisioides subsp. x *sturtii*																																					
Senna ferraria																														x							
Senna glaucifolia																																			x		
Senna glutinosa subsp. *glutinosa*		x		x	x	x	x	x												x	x				x	x		x	x		x	x		x		
Senna glutinosa subsp. *pruinosa*		x	x	x		x																			x				x		x	x				
Senna glutinosa subsp. x *luerssenii*		x	x			x		x																	x	x			x							
Senna notabilis													x	x							x		x									x			x	
Senna pleurocarpa var. *angustifolia*										x		x						x	x																	
Senna sericea			x																																	
Senna sp. Meekatharra (E. Bailey 1-26)																																					
Senna stricta																																					
Senna symonii																																					
Seringia exastia						x	x	x	x	x								x	x				x													
Seringia nephrosperma																																					
Setaria dielsii																																					
Setaria surgens																																					
Sida arenicola								x	x		x									x												x				
Sida calyxhymenia																																					
Sida cardiophylla								x																													
Sida echinocarpa											x																										
Sida ectogama														x																							
Sida fibulifera							x	x				x															x						x			x	
Sida platycalyx													x	x		x																				x
Sida sp. Articulation below (A.A. Mitchell PRP 1605)																																					
Sida sp. Barlee Range (S. van Leeuwen 1642)																																					
Sida sp. dark green fruits (S. van Leeuwen 2260)												x									x															
Sida sp. Excedentifolia (J.L. Egan 1925)																															x						
Sida sp. Golden calyces glabrous (H.N. Foote 32)		x				x																			x				x							
Sida sp. L (A.M. Ashby 4202)													x	x	x	x	x						x	x									x				x
Sida sp. Pilbara (A.A. Mitchell PRP 1543)		x					x					x													x						x					
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)																																		x			
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)											x	x								x	x						x			x			x		x	
Sida sp. Supplejack Station (T.S. Henshall 2345)	x						x				x																										
Solanum centrale																																					
Solanum cleistogamum																											x								x	x	
Solanum ferocissimum														x		x					x	x	x	x													x
Solanum horridum																				x											x					

Taxon	CPH-058	CPH-056	CPH-059	CPH-117	CPH-119	CPH-163	CPH-064	CPH-067	CPH-069	CPH-074	CPH-079	CPH-095	CPH-175	CPH-179	CPH-183	CPH-187	CPH-188	CPH-022	CPH-028	CPH-034	CPH-036	CPH-046	CPH-048	CPH-049	CPH-066	CPH-071	CPH-091	CPH-092	CPH-121	CPH-168	CPH-180	CPH-199	CPH-088	CPH-107	CPH-176	CPH-184	CPH-057	CPH-118
Solanum lasiophyllum	x	x							x						x	x		x		x		x	x	x	x	x			x	x		x		x	x	x		x
Solanum phlomoides																																						
Spermacoce brachystema																											x	x										
Sporobolus australasicus																							x				x	x						x				
Stemodia grossa																																						
Stemodia viscosa																																						
Stenopetalum nutans						x								x																								
Streptoglossa bubakii																																						
Streptoglossa decurrens															x										x				x									
Stylobasium spathulatum																							x															
Swainsona canescens																																						
Swainsona kingii					x																				x													
Synaptantha tillaeacea var. *tillaeacea*																																						
Tephrosia densa															x	x	x									x							x						
Tephrosia oxalidea																																						
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	x																		x	x													x					
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)									x																													
Tephrosia sp. Newman (A.A. Mitchell PRP 29)																							x															
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)		x																																				
Tephrosia virens																																						
Teucrium teucriiflorum					x		x				x		x	x													x				x							x
Themeda sp. Hamersley Station (M.E. Trudgen 11431)			x							x															x			x										
Themeda sp. Mt Barricade (M.E. Trudgen 2471)																																		x				
Themeda triandra	x	x	x		x		x	x	x	x	x	x		x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x		x				x	x
Thyridolepis mitchelliana													x																										
Tinospora smilacina																										x												
Trachymene oleracea subsp. *oleracea*																										x												
Tragus australianus			x		x	x																	x		x		x			x								
Tribulopis angustifolia																											x	x										
Tribulus astrocarpus					x	x								x													x			x				x				
Tribulus hirsutus		x																																				
Tribulus macrocarpus																		x																				
Tribulus platypterus																																						
Tribulus suberosus																																						
Trichodesma zeylanicum var. *zeylanicum*	x														x	x	x			x			x										x	x				
Tricoryne sp. Hamersley Range (S. van Leeuwen 915)																																						
Trigastrotheca molluginea																		x																				
Triodia brizoides																										x							x					
Triodia melvillei			x				x			x																				x								
Triodia pungens	x	x					x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x					x					x	x		x	x
Triodia sp. Mt Ella (M.E. Trudgen 12739)																																						
Triodia vanleeuwenii									x		x	x								x																x		
Triodia wiseana																x		x															x	x		x		
Tripogonella loliiformis			x		x	x																										x						
Triumfetta leptacantha																										x												
Triumfetta maconochieana																										x												
Typha domingensis																																						
Urochloa occidentalis var. *ciliata*					x									x																x								
Urochloa piligera																													x									
Urochloa subquadripara			x																																			
Vigna lanceolata		x																	x																			
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)																													x				x					
Vigna triodiophila																																						
Vincetoxicum carnosum																																						
Vincetoxicum flexuosum																																						
Vincetoxicum lineare		x			x	x	x				x		x			x		x						x		x			x						x		x	x
Vittadinia eremaea																																						
Wahlenbergia tumidifructa																																						
Waltheria indica																																						
Waltheria virgata																																						

Taxon	CPH-186	CPH-011	CPH-021	CPH-031	CPH-033	CPH-041	CPH-061	CPH-111	CPH-116	CPH-122	CPH-124	CPH-127	CPH-143	CPH-151	CPH-154	CPH-155	CPH-156	CPH-157	CPH-158	CPH-160	CPH-161	CPH-164	CPH-165	CPH-169	CPH-170	CPH-171	CPH-178	CPH-129	CPH-030	CPH-086	CPH-094	CPH-097	CPH-098	CPH-149	CPH-042	CPH-084	CPH-085	CPH-002
Solanum lasiophyllum	x			x	x	x	x	x		x	x	x	x	x		x			x		x			x			x	x		x			x	x			x	
Solanum phlomoides																														x						x		
Spermacoce brachystema																								x														
Sporobolus australasicus												x																x										
Stemodia grossa																																			x			
Stemodia viscosa																																						
Stenopetalum nutans											x	x	x		x		x						x					x										
Streptoglossa bubakii												x																										
Streptoglossa decurrens																																						
Stylobasium spathulatum			x																																		
Swainsona canescens																												x										
Swainsona kingii											x	x																										
Synaptantha tillaeacea var. *tillaeacea*												x	x																									
Tephrosia densa																														x		x					x	
Tephrosia oxalidea																																				x	x	
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)			x																											x			x				
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)																														x								
Tephrosia sp. Newman (A.A. Mitchell PRP 29)																																						
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)																																						
Tephrosia virens																																						
Teucrium teucriiflorum						x								x	x	x		x		x	x			x										x				
Themeda sp. Hamersley Station (M.E. Trudgen 11431)																																						
Themeda sp. Mt Barricade (M.E. Trudgen 2471)																																						
Themeda triandra	x	x	x			x	x							x	x	x	x	x	x	x	x		x						x	x	x	x	x		x		x	
Thyridolepis mitchelliana																																						
Tinospora smilacina																																x						
Trachymene oleracea subsp. *oleracea*																																						
Tragus australianus																					x	x					x											
Tribulopis angustifolia																																						
Tribulus astrocarpus											x	x									x	x	x	x			x	x										
Tribulus hirsutus																																						
Tribulus macrocarpus																																						
Tribulus platypterus																														x								
Tribulus suberosus																																						
Trichodesma zeylanicum var. *zeylanicum*			x																											x			x		x		
Tricoryne sp. Hamersley Range (S. van Leeuwen 915)																														x								
Trigastrotheca molluginea																																						
Triodia brizoides																																						
Triodia melvillei	x					x	x			x				x		x		x	x					x	x	x												
Triodia pungens	x	x		x	x	x	x	x	x	x	x					x			x				x						x		x	x	x	x				
Triodia sp. Mt Ella (M.E. Trudgen 12739)																																x						
Triodia vanleeuwenii	x	x		x	x			x	x																						x				x		x	
Triodia wiseana			x																											x					x	x	x	
Tripogonella loliiformis						x					x	x	x		x					x	x	x		x	x													
Triumfetta leptacantha																																						
Triumfetta maconochieana																																						
Typha domingensis																																			x			
Urochloa occidentalis var. *ciliata*																					x																	
Urochloa piligera																																						
Urochloa subquadripara																																						
Vigna lanceolata																																						
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)																																						
Vigna triodiophila																																						
Vincetoxicum carnosum																																						
Vincetoxicum flexuosum																																x						
Vincetoxicum lineare						x				x	x			x	x	x			x		x			x	x	x					x	x		x				
Vittadinia eremaea																						x																
Wahlenbergia tumidifructa																																			x			
Waltheria indica					x																																	
Waltheria virgata																																x						

Taxon	CPH-003	CPH-004	CPH-007	CPH-009	CPH-012	CPH-016	CPH-019	CPH-020	CPH-023	CPH-024	CPH-027	CPH-029	CPH-038	CPH-039	CPH-040	CPH-060	CPH-070	CPH-077	CPH-082	CPH-087	CPH-089	CPH-090	CPH-093	CPH-182	CPH-185	CPH-099	CPH-026	CPH-035	CPH-054	CPH-076	CPH-078	CPH-080	CPH-081	CPH-101	CPH-104	CPH-152	CPH-166	CPH-006
Solanum lasiophyllum		x	x						x							x	x		x		x			x	x		x				x		x	x	x	x	x	
Solanum phlomoides																				x			x															
Spermacoce brachystema																																						
Sporobolus australasicus																																						
Stemodia grossa																																						
Stemodia viscosa																																						
Stenopetalum nutans																																						
Streptoglossa bubakii																																						
Streptoglossa decurrens																																						
Stylobasium spathulatum																												x										
Swainsona canescens																																						
Swainsona kingii																																						
Synaptantha tillaeacea var. *tillaeacea*																																						
Tephrosia densa					x												x								x												
Tephrosia oxalidea																	x																					
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)																												x										
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)																	x																					
Tephrosia sp. Newman (A.A. Mitchell PRP 29)																																						
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)																																						
Tephrosia virens					x																																	
Teucrium teucriiflorum																															x							
Themeda sp. Hamersley Station (M.E. Trudgen 11431)																																						
Themeda sp. Mt Barricade (M.E. Trudgen 2471)																																						x
Themeda triandra	x	x			x	x			x	x						x	x		x	x	x				x	x	x	x			x				x	x	x	
Thyridolepis mitchelliana																																						
Tinospora smilacina																																						
Trachymene oleracea subsp. *oleracea*																																						
Tragus australianus																																						
Tribulopis angustifolia																																						
Tribulus astrocarpus																																						
Tribulus hirsutus																																						
Tribulus macrocarpus																																						
Tribulus platypterus																																						
Tribulus suberosus																																						
Trichodesma zeylanicum var. *zeylanicum*																			x							x												
Tricoryne sp. Hamersley Range (S. van Leeuwen 915)																						x																
Trigastrotheca molluginea																																						
Triodia brizoides																										x												
Triodia melvillei																				x	x										x	x	x				x	
Triodia pungens			x		x					x																	x	x	x	x	x	x		x	x	x	x	
Triodia sp. Mt Ella (M.E. Trudgen 12739)																										x												
Triodia vanleeuwenii	x		x	x		x	x	x	x	x	x	x	x	x		x	x	x	x		x		x	x	x		x					x	x	x	x	x		
Triodia wiseana		x	x		x	x	x		x				x		x		x	x	x	x	x	x	x							x						x	x
Tripogonella loliiformis																																						
Triumfetta leptacantha																										x												
Triumfetta maconochieana																	x									x												
Typha domingensis																																						
Urochloa occidentalis var. *ciliata*																																						
Urochloa piligera																																						
Urochloa subquadripara																																						
Vigna lanceolata																																						
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)																																						
Vigna triodiophila																																						
Vincetoxicum carnosum																																						
Vincetoxicum flexuosum																																						
Vincetoxicum lineare					x																										x	x	x	x		x	x	
Vittadinia eremaea																																						
Wahlenbergia tumidifructa																																						
Waltheria indica																																						
Waltheria virgata																																						

Taxon	CPH-008	CPH-015	CPH-018	CPH-025	CPH-032	CPH-047	CPH-051	CPH-063	CPH-075	CPH-096	CPH-100	CPH-044	CPH-055	CPH-128	CPH-130	CPH-167	CPH-050	CPH-068	CPH-072	CPH-113	CPH-123	CPH-172	CPH-173	CPH-174	CPH-150	CPH-501	CPH-005	CPH-010	CPH-017	CPH-062	CPH-115	CPH-181	CPH-001	CPH-014	CPH-013	CPH-037	CPH-043
Solanum lasiophyllum						x	x	x	x			x					x		x	x	x		x		x	x	x				x	x	x		x	x	
Solanum phlomoides																																					
Spermacoce brachystema																																					
Sporobolus australasicus																																					
Stemodia grossa																																					
Stemodia viscosa																																					x
Stenopetalum nutans																																					
Streptoglossa bubakii																																					
Streptoglossa decurrens											x																										
Stylobasium spathulatum																																					
Swainsona canescens															x																						
Swainsona kingii																																					
Synaptantha tillaeacea var. *tillaeacea*																																					
Tephrosia densa											x																		x								
Tephrosia oxalidea		x																																			
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)											x																			x			x			
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)																																					
Tephrosia sp. Newman (A.A. Mitchell PRP 29)																																	x				
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)																																					
Tephrosia virens																																					
Teucrium teucriiflorum										x						x			x		x	x		x												
Themeda sp. Hamersley Station (M.E. Trudgen 11431)																																					
Themeda sp. Mt Barricade (M.E. Trudgen 2471)		x																		x											x					
Themeda triandra	x			x					x		x	x	x				x	x	x								x			x			x	x		x	x
Thyridolepis mitchelliana														x																							
Tinospora smilacina																																					
Trachymene oleracea subsp. *oleracea*							x																														
Tragus australianus																																					
Tribulopis angustifolia																																					
Tribulus astrocarpus																																					
Tribulus hirsutus																																					
Tribulus macrocarpus																																					
Tribulus platypterus																																					
Tribulus suberosus						x																															
Trichodesma zeylanicum var. *zeylanicum*											x		x																				x			x	
Tricoryne sp. Hamersley Range (S. van Leeuwen 915)																																					
Trigastrotheca molluginea																				x																	
Triodia brizoides																																					
Triodia melvillei								x		x		x		x		x	x	x	x		x	x	x	x													
Triodia pungens	x						x	x	x	x	x	x									x				x	x	x			x	x		x			x	
Triodia sp. Mt Ella (M.E. Trudgen 12739)																									x												
Triodia vanleeuwenii		x	x	x				x	x											x					x	x		x	x		x	x			x	
Triodia wiseana		x		x	x	x																					x					x				x	x	
Tripogonella loliiformis															x							x	x	x													
Triumfetta leptacantha																																					
Triumfetta maconochieana																																					
Typha domingensis																																					
Urochloa occidentalis var. *ciliata*																																					
Urochloa piligera																																					
Urochloa subquadripara																																					
Vigna lanceolata																											x										
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)																														x							x
Vigna triodiophila																									x												
Vincetoxicum carnosum															x																						
Vincetoxicum flexuosum																																					
Vincetoxicum lineare									x	x		x		x		x			x		x	x	x	x		x											
Vittadinia eremaea																																					
Wahlenbergia tumidifructa																																					x
Waltheria indica								x			x																										
Waltheria virgata																																					

Appendix E: Vegetation structural definition.

NVIS Vegetation Structural Classifications

Cover Characteristics							
Foliage cover *	70-100	30-70	10-30	<10	≈0	0-5	unknown
Crown cover **	>80	50-80	20-50	0.25-20	<0.25	0-5	unknown
% Crown cover ***	>80	50-80	20-50	0.25-20	<0.25	0-5	unknown
Cover code	d	c	i	r	bi	bc	unknown

Growth Form	Height ranges (m)	Structural Formation Classes						
tree, palm	>30 Tall 10-30 Mid <10 Low	closed forest	open forest	woodland	open woodland	isolated trees	isolated clumps of trees	trees
tree mallee	10-30 Tall <10 Mid <3 Low	closed mallee forest	open mallee forest	mallee woodland	open mallee woodland	isolated mallee trees	isolated clumps of mallee trees	mallee trees
shrub, cycad, grass-tree, fern	>2 Tall 1-2 Mid <1 Low	closed shrubland	shrubland	open shrubland	sparse shrubland	isolated shrubs	isolated clumps of shrubs	shrubs
mallee shrub	10-30 Tall <10 Mid <3 Low	closed mallee shrubland	mallee shrubland	open mallee shrubland	sparse mallee shrubland	isolated mallee shrubs	isolated clumps of mallee shrubs	mallee shrubs

Growth Form	Height ranges (m)	Structural Formation Classes						
heath shrub	>2 Tall 1-2 Mid <1 Low	closed heathland	heathland	open heathland	sparse heathland	isolated heath shrubs	isolated clumps of heath shrubs	heath shrubs
chenopod shrub	>2 Tall 1-2 Mid <1 Low	closed chenopod shrubland	chenopod shrubland	open chenopod shrubland	sparse chenopod shrubland	isolated chenopod shrubs	isolated clumps of chenopod shrubs	chenopod shrubs
samphire shrub	>0.5 Low <0.5 Low	closed samphire shrubland	samphire shrubland	open samphire shrubland	sparse samphire shrubland	isolated samphire shrubs	isolated clumps of samphire shrubs	samphire shrubs
hummock grass	>2 Tall <2 Tall	closed hummock grassland	hummock grassland	open hummock grassland	sparse hummock grassland	isolated hummock grasses	isolated clumps of hummock grasses	hummock grasses
tussock grass	>0.5 Mid <0.5 Low	closed tussock grassland	tussock grassland	open tussock grassland	sparse tussock grassland	isolated tussock grasses	isolated clumps of tussock grasses	tussock grasses
other grass	>0.5 Mid <0.5 Low	closed grassland	grassland	open grassland	sparse grassland	isolated grasses	isolated clumps of grasses	other grasses
sedge	>0.5 Mid <0.5 Low	closed sedgeland	sedgeland	open sedgeland	sparse sedgeland	isolated sedges	isolated clumps of sedges	sedges
rush	>0.5 Mid <0.5 Low	closed rushland	rushland	open rushland	sparse rushland	isolated rushes	isolated clumps of rushes	rushes
forb	>0.5 Mid <0.5 Low	closed forbland	forbland	open forbland	sparse forbland	isolated forbs	isolated clumps of forbs	forbs

Growth Form	Height ranges (m)	Structural Formation Classes						
fern	>2 Tall 1-2 Tall <1 Low	closed fernland	fernland	open fernland	sparse fernland	isolated ferns	isolated clumpsof ferns	ferns
bryophyte	<0.5	closed bryophyte land	bryophyte land	open bryophyte land	sparse bryophyte land	isolated bryophytes	isolated clumps of bryophytes	bryophytes
lichen	<0.5	closed lichenland	lichenland	open lichenland	sparse lichenland	isolated lichens	isolated clumps of lichens	lichens
vine	>30 Tall 10-30 Med <10 Low	closed vineland	vineland	open vineland	sparse vineland	isolated vines	isolated clumps of vines	vines
aquatic	<1 Tall 0-0.5 Low	closed aquatic bed	aquatic bed	open aquatic bed	sparse aquatics	isolated aquatics	isolated clumps of aquatics	aquatics
seagrass	<1 Tall 0-0.5 Low	closed seagrass bed	Seagrass bed	open seagrass bed	sparse seagrass bed	isolated seagrasses	isolated clumps of seagrasses	seagrasses

From: NVIS Structural Formation Terminology (Australian Vegetation Attribute Manual Version 7.0 November 2017 https://www.environment.gov.au/land/publications/australian-vegetation-attribute-manual-version-7)

* Foliage Cover is defined for each stratum as 'the proportion of the ground, which would be shaded if sunshine came from directly overhead'. It includes branches and leaves and is obtained by multiplying Crown Cover with Crown type (Hnatiuk *et al.*, 2009). It is applied to a stratum in a plot, rather than an individual crown, with the NVIS measure for a vegetation type ideally being a summary of several plots. Foliage Projective Cover, which considers only the vertical projection of photosynthetic components (generally leaves), can be measured by line interception methods for tree, shrub and ground layer vegetation (Specht & Specht, 1999).

** Crown Cover (canopy cover) as per Hnatiuk *et al.* (2009). Although relationships between this attribute and Foliage Cover are dependent on season, species, species age etc., the crown cover category classes have been adopted as the defining measure.

*** The percentage cover is defined as the percentage of a strictly defined plot area, covered by vegetation. This can be an estimate and is a less precise measure than using, for example, a point intercept transect method on ground layer, or overstorey vegetative cover. That is, for precisely measured values (e.g., crown densitometer or point intercept transects) the value measured would be 'foliage' cover. Where less precise or qualitative measures are used these will most probably be recorded as 'percentage' cover.

Appendix F: Vegetation condition rating scale.

Vegetation Condition	Eremaean & Northern Botanical Province
Excellent	Pristine or nearly so, no obvious signs of disturbance or damage caused by human activities since European settlement
Very Good	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.
Good	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds.
Poor	Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.
Degraded	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species.
Completely Degraded	Areas that are completely or almost completely without native species in the structure of their vegetation; i.e., areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs.

Appendix G: WAH Formal Identifications.

Coll #	Field Name	WA Herbarium ID
CPH-PL019	Acacia ? Hamersleyensis	*Acacia hamersleyensis*
CPH128-06	Aristida blue delicate	*Aristida jerichoensis* var. *subspinulifera* (P3)
EMEB-op01	Aristida pale curly	*Aristida jerichoensis* var. *subspinulifera* (P3)
CVOpp.04	Aristida lazaridis	*Aristida lazaridis* (P2)
CPH012-08	Flueggea ziggy leaves	*Clerodendrum tomentosum* var. *lanceolatum*
CPH107-01	Eragrostis sp. MR	*Eragrostis* sp. Mt Robinson (S. van Leeuwen 4109) (P2)
CPH-PL021	Eremophila magnifica subsp. magnifica	*Eremophila magnifica* subsp. *magnifica* (P4)
EBBLOPP-03	Eremophila magnifica	*Eremophila magnifica* subsp. *magnifica* (P4)
CPH-PL012	Eremophila sp. Hamersley Range (K. Walker KW 136)	*Eremophila naaykensii*
CPHR110-02	Eremophila sp. West Angelas	*Eremophila* sp. West Angelas (S. van Leeuwen 4068) (P2)
RBSC-Opp-02	Hibiscus sp.	*Hibiscus* sp.
CPH187-01	Hibiscus sp. Mt Brock	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (P2)
CPH-PL001	Hibiscus sp. m Brockman	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (P2)
CVT4.03	Hibiscus ? coatesii	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (P2)
Cph022.03	Indigofera grey small	*Indigofera georgei* sens lat
CPH-PL014	Indigofera AFF. Fractiflexa	*Indigofera gilesii* (P3)
EEBOPP-01	Indigofera iron	*Indigofera gilesii* (P3)
opp/targeted	Ipomoea racemigera	*Ipomoea racemigera* (P2)
CPH-087-03	Jacksonia aculeata	*Mirbelia viminalis*
CPHR108-05	Oxalis sp. Pilbara (M.E. Trudgen 12725)	*Oxalis* sp. Pilbara (M.E. Trudgen 12725) (P2)
EBBLOpp07	Fake fern climber	*Pandorea doratoxylon*
CPH-098-03	?Dipteracanthus australasicus	*Rostellularia adscendens*
CPH-088-05	Rostellularia adscendens var. clementii	*Rostellularia adscendens* var. *latifolia* (P3)
CPH-PL022	Sida ?sp. Hamersley Range	*Sida ectogama*
CVOpp.06	Sida barlee circle	*Sida* sp. Barlee Range (S. van Leeuwen 1642) (P4)
CPHR110-04	Solanum ? Kent	*Solanum kentrocaule* (P3)
CPH066-01	Themeda sp. Hamersley Station (M.E. Trudgen 11431)	*Themeda* sp. Hamersley Station (M.E. Trudgen 11431) (P3)
RBKGOpp-01	Triodia ? Sp. Mt Ella	*Triodia* sp. Mt Ella (M.E. Trudgen 12739) (P3)

Appendix H: Reconciled species list.

Taxon	Reconciled Taxon
?Aristida inaequiglumis	Remove
?Blumea tenella	Remove
?Bothriochloa ewartiana	Remove
?Crotalaria medicaginea	Remove
?Dodonaea sp. indet	Remove
?Dolichocarpa crouchiana	Remove
?Maytenus sp. Mt Windell (S. van Leeuwen 846)	Remove
?Stemodia sp. indet	Remove
Abutilon amplum	*Abutilon amplum*
Abutilon cryptopetalum	*Abutilon cryptopetalum*
Abutilon cunninghamii	*Abutilon cunninghamii*
Abutilon fraseri subsp. *fraseri*	*Abutilon fraseri* subsp. *fraseri*
Abutilon lepidum	*Abutilon lepidum*
Abutilon leucopetalum	*Abutilon leucopetalum*
Abutilon macrum	*Abutilon macrum*
Abutilon otocarpum	*Abutilon otocarpum*
Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)	*Abutilon oxycarpum* subsp. Prostrate (A.A. Mitchell PRP 1266)
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	*Abutilon* sp. Dioicum (A.A. Mitchell PRP 1618)
Abutilon sp. indet	Remove
Acacia ?aneura	*Acacia aneura*
Acacia ?aptaneura	*Acacia aptaneura*
Acacia ?rhodophloia x sibirica	Remove
Acacia ?sibirica	Remove
Acacia adoxa var. adoxa	*Acacia adoxa* var. *adoxa*
Acacia adsurgens	*Acacia adsurgens*
Acacia ancistrocarpa	*Acacia ancistrocarpa*
Acacia aneura	*Acacia aneura*
Acacia aptaneura	*Acacia aptaneura*
Acacia arida	*Acacia arida*
Acacia atkinsiana	*Acacia atkinsiana*
Acacia ayersiana	*Acacia ayersiana*
Acacia bivenosa	*Acacia bivenosa*
Acacia catenulata subsp. *occidentalis*	*Acacia catenulata subsp. occidentalis*
Acacia colei var. *colei*	*Acacia colei* var. *colei*
Acacia coriacea subsp. *pendens*	*Acacia coriacea* subsp. *pendens*
Acacia cowleana	*Acacia cowleana*
Acacia dictyophleba	*Acacia dictyophleba*
Acacia elachantha	*Acacia elachantha*
Acacia hamersleyensis	*Acacia hamersleyensis*
Acacia hilliana	*Acacia hilliana*
Acacia inaequilatera	*Acacia inaequilatera*
Acacia incurvaneura	*Acacia incurvaneura*
Acacia kempeana	*Acacia kempeana*
Acacia macraneura	*Acacia macraneura*
Acacia maitlandii	*Acacia maitlandii*
Acacia marramamba	*Acacia marramamba*
Acacia minyura	*Acacia minyura*
Acacia monticola	*Acacia monticola*
Acacia pachyacra	*Acacia pachyacra*
Acacia pruinocarpa	*Acacia pruinocarpa*
Acacia pteraneura	*Acacia pteraneura*
Acacia pyrifolia var. *morrisonii*	*Acacia pyrifolia* var. *morrisonii*
Acacia pyrifolia var. *pyrifolia*	*Acacia pyrifolia* var. *pyrifolia*
Acacia rhodophloia	*Acacia rhodophloia*
Acacia rhodophloia x sibirica	*Acacia rhodophloia*
Acacia sericophylla	*Acacia sericophylla*
Acacia sibirica	*Acacia sibirica*
Acacia steedmanii subsp. *borealis*	*Acacia steedmanii* subsp. *borealis*
Acacia synchronicia	*Acacia synchronicia*
Acacia tenuissima	*Acacia tenuissima*
Acacia tetragonophylla	*Acacia tetragonophylla*
Acacia trudgeniana	*Acacia trudgeniana*

Taxon	Reconciled Taxon
Acacia tumida var. *pilbarensis*	*Acacia tumida* var. *pilbarensis*
Achyranthes aspera	*Achyranthes aspera*
Acrachne racemosa	*Acrachne racemosa*
Aerva javanica	*Aerva javanica*
Afrohybanthus aurantiacus	*Afrohybanthus aurantiacus*
Alternanthera angustifolia	*Alternanthera angustifolia*
Alternanthera denticulata	*Alternanthera denticulata*
Alternanthera nana	*Alternanthera nana*
Amaranthus cuspidifolius	*Amaranthus cuspidifolius*
Amaranthus undulatus	*Amaranthus undulatus*
Ammannia multiflora	*Ammannia multiflora*
Ammannia sp. indet	Remove
Amphipogon sericeus	*Amphipogon sericeus*
Amyema fitzgeraldii	*Amyema fitzgeraldii*
Amyema hilliana	*Amyema hilliana*
Amyema sp. indet	Remove
Androcalva luteiflora	*Androcalva luteiflora*
Anthobolus leptomerioides	*Anthobolus leptomerioides*
Areocleome oxalidea	*Areocleome oxalidea*
Aristida ?inaequiglumis	*Aristida inaequiglumis*
Aristida burbidgeae	*Aristida burbidgeae*
Aristida contorta	*Aristida contorta*
Aristida holathera var. *holathera*	*Aristida holathera* var. *holathera*
Aristida inaequiglumis	*Aristida inaequiglumis*
Aristida jerichoensis var. *subspinulifera*	*Aristida jerichoensis* var. *subspinulifera*
Aristida lazaridis	*Aristida lazaridis*
Aristida obscura	*Aristida obscura*
Aristida pruinosa	*Aristida pruinosa*
Aristida sp. indet	Remove
Arivela uncifera	*Arivela uncifera*
Arivela viscosa	*Arivela viscosa*
Astrotricha hamptonii	*Astrotricha hamptonii*
Atalaya hemiglauca	*Atalaya hemiglauca*
Avicennia marina	*Avicennia marina*
Bergia perennis	*Bergia perennis*
Bidens bipinnata	*Bidens bipinnata*
Blumea tenella	*Blumea tenella*
Boerhavia coccinea	*Boerhavia coccinea*
Boerhavia repleta	*Boerhavia repleta*
Boerhavia sp. indet	Remove
Bonamia erecta	*Bonamia erecta*
Bonamia pilbarensis	*Bonamia pilbarensis*
Bothriochloa ewartiana	*Bothriochloa ewartiana*
Bothriochloa pertusa	*Bothriochloa pertusa*
Brachychiton acuminatus	*Brachychiton acuminatus*
Brunonia sp. Long hairs (D.E. Symon 2440)	*Brunonia* sp. Long hairs (D.E. Symon 2440)
Bulbostylis turbinata	*Bulbostylis turbinata*
Calandrinia ?ptychosperma	Remove
Calandrinia ?pumila	Remove
Calandrinia pumila	*Calandrinia pumila*
Calandrinia ptychosperma	*Calandrinia ptychosperma*
Calandrinia sp. indet	Remove
Callitris columellaris	*Callitris columellaris*
Calotis hispidula	*Calotis hispidula*
Calotis plumulifera	*Calotis plumulifera*
Calytrix carinata	*Calytrix carinata*
Capparis ?mitchellii	*Capparis mitchellii*
Capparis lasiantha	*Capparis lasiantha*
Capparis mitchellii	*Capparis mitchellii*
Cassytha capillaris	*Cassytha capillaris*
Cassytha filiformis	*Cassytha filiformis*
Cenchrus ciliaris	*Cenchrus ciliaris*
Cenchrus setiger	*Cenchrus setiger*

Taxon	Reconciled Taxon
Centipeda minima subsp. *macrocephala*	*Centipeda minima* subsp. *macrocephala*
Cheilanthes austrotenuifolia	*Cheilanthes austrotenuifolia*
Cheilanthes brownii	*Cheilanthes brownii*
Cheilanthes sieberi subsp. *sieberi*	*Cheilanthes sieberi* subsp. *sieberi*
Cheilanthes sp. indet	Remove
Chloris pectinata	*Chloris pectinata*
Chloris virgata	*Chloris virgata*
Chrysocephalum apiculatum	*Chrysocephalum apiculatum*
Chrysocephalum gilesii	*Chrysocephalum gilesii*
Chrysopogon fallax	*Chrysopogon fallax*
Clerodendrum floribundum	*Clerodendrum floribundum*
Clerodendrum floribundum var. *angustifolium*	*Clerodendrum floribundum*
Clerodendrum floribundum var. *floribundum*	*Clerodendrum floribundum*
Clerodendrum tomentosum var. *lanceolatum*	*Clerodendrum tomentosum* var. *lanceolatum*
Codonocarpus cotinifolius	*Codonocarpus cotinifolius*
Commelina ensifolia	*Commelina ensifolia*
Convolvulus clementii	*Convolvulus clementii*
Convolvulus remotus	*Convolvulus remotus*
Corchorus crozophorifolius	*Corchorus crozophorifolius*
Corchorus lasiocarpus	*Corchorus lasiocarpus*
Corchorus lasiocarpus subsp. *lasiocarpus*	*Corchorus lasiocarpus*
Corchorus lasiocarpus subsp. *parvus*	*Corchorus lasiocarpus*
Corchorus sidoides subsp. *sidoides*	*Corchorus sidoides* subsp. *sidoides*
Corchorus tridens	*Corchorus tridens*
Corymbia candida	*Corymbia candida*
Corymbia deserticola subsp. *deserticola*	*Corymbia deserticola* subsp. *deserticola*
Corymbia ferriticola	*Corymbia ferriticola*
Corymbia hamersleyana	*Corymbia hamersleyana*
Crassula tetramera	*Crassula tetramera*
Crotalaria medicaginea var. *neglecta*	*Crotalaria medicaginea* var. *neglecta*
Cucumis variabilis	*Cucumis variabilis*
Cymbopogon ambiguus	*Cymbopogon ambiguus*
Cymbopogon obtectus	*Cymbopogon obtectus*
Cymbopogon sp. indet	Remove
Cynanchum floribundum	*Cynanchum floribundum*
Cynanchum pedunculatum	*Cynanchum pedunculatum*
Cyperus ?squarrosus	Remove
Cyperus cunninghamii	*Cyperus cunninghamii*
Cyperus cunninghamii subsp. *cunninghamii*	*Cyperus cunninghamii*
Cyperus iria	*Cyperus iria*
Dactyloctenium radulans	*Dactyloctenium radulans*
Dampiera candicans	*Dampiera candicans*
Dendrophyllanthus erwinii	*Dendrophyllanthus erwinii*
Dichanthium sericeum	*Dichanthium sericeum*
Dichanthium sericeum subsp. *humilius*	*Dichanthium sericeum*
Dicrastylis cordifolia	*Dicrastylis cordifolia*
Digitaria ammophila	*Digitaria ammophila*
Digitaria brownii	*Digitaria brownii*
Digitaria ciliaris	*Digitaria ciliaris*
Digitaria ctenantha	*Digitaria ctenantha*
Diplopeltis stuartii var. *stuartii*	*Diplopeltis stuartii* var. *stuartii*
Dipteracanthus australasicus	*Dipteracanthus australasicus*
Dipteracanthus australasicus subsp. *australasicus*	*Dipteracanthus australasicus*
Dodonaea coriacea	*Dodonaea coriacea*
Dodonaea lanceolata	*Dodonaea lanceolata*
Dodonaea lanceolata var. *lanceolata*	*Dodonaea lanceolata*
Dodonaea pachyneura	*Dodonaea pachyneura*
Dodonaea petiolaris	*Dodonaea petiolaris*
Dodonaea viscosa subsp. *?mucronata*	*Dodonaea viscosa*
Dodonaea viscosa subsp. *mucronata*	*Dodonaea viscosa*
Dolichocarpa crouchiana	*Dolichocarpa crouchiana*
Duperreya commixta	*Duperreya commixta*
Dysphania glomulifera subsp. *eremaea*	*Dysphania glomulifera* subsp. *eremaea*

Taxon	Reconciled Taxon
Dysphania kalpari	*Dysphania kalpari*
Dysphania melanocarpa	*Dysphania melanocarpa*
Dysphania melanocarpa forma melanocarpa	*Dysphania melanocarpa*
Dysphania rhadinostachya	*Dysphania rhadinostachya*
Dysphania sp. indet	Remove
Dysphania glomulifera subsp. *eremaea*	*Dysphania glomulifera* subsp. *eremaea*
Echinochloa colona	*Echinochloa colona*
Enchylaena tomentosa var. *tomentosa*	*Enchylaena tomentosa* var. *tomentosa*
Enneapogon caerulescens	*Enneapogon caerulescens*
Enneapogon lindleyanus	*Enneapogon lindleyanus*
Enneapogon polyphyllus	*Enneapogon polyphyllus*
Enneapogon robustissimus	*Enneapogon robustissimus*
Enteropogon ramosus	*Enteropogon ramosus*
Eragrostis cumingii	*Eragrostis cumingii*
Eragrostis eriopoda	*Eragrostis eriopoda*
Eragrostis leptocarpa	*Eragrostis leptocarpa*
Eragrostis olida	*Eragrostis olida*
Eragrostis pergracilis	*Eragrostis pergracilis*
Eragrostis setifolia	*Eragrostis setifolia*
Eragrostis sp. indet	Remove
Eragrostis sp. Mt Robinson (S. van Leeuwen 4109)	*Eragrostis* sp. Mt Robinson (S. van Leeuwen 4109)
Eragrostis tenellula	*Eragrostis tenellula*
Eragrostis xerophila	*Eragrostis xerophila*
Eremophila ?jucunda	Remove
Eremophila clarkei	*Eremophila clarkei*
Eremophila flaccida	*Eremophila flaccida*
Eremophila forrestii	*Eremophila forrestii*
Eremophila forrestii subsp. *forrestii*	*Eremophila forrestii*
Eremophila fraseri subsp. *fraseri*	*Eremophila fraseri* subsp. *fraseri*
Eremophila jucunda subsp. *pulcherrima*	*Eremophila jucunda* subsp. *pulcherrima*
Eremophila lachnocalyx	*Eremophila lachnocalyx*
Eremophila lanceolata	*Eremophila lanceolata*
Eremophila latrobei	*Eremophila latrobei*
Eremophila latrobei subsp. *filiformis*	*Eremophila latrobei*
Eremophila latrobei subsp. *glabra*	*Eremophila latrobei*
Eremophila latrobei subsp. *latrobei*	*Eremophila latrobei*
Eremophila longifolia	*Eremophila longifolia*
Eremophila naaykensii	*Eremophila naaykensii*
Eremophila magnifica subsp. *magnifica*	*Eremophila magnifica* subsp. *magnifica*
Eremophila platycalyx	*Eremophila platycalyx*
Eremophila sp. indet	Remove
Eremophila sp. West Angelas (S. van Leeuwen 4068)	*Eremophila* sp. West Angelas (S. van Leeuwen 4068)
Eriachne ?benthamii	*Eriachne benthamii*
Eriachne benthamii	*Eriachne benthamii*
Eriachne ciliata	*Eriachne ciliata*
Eriachne flaccida	*Eriachne flaccida*
Eriachne helmsii	*Eriachne helmsii*
Eriachne lanata	*Eriachne lanata*
Eriachne mucronata	*Eriachne mucronata*
Eriachne pulchella	*Eriachne pulchella*
Eriachne pulchella subsp. *dominii*	*Eriachne pulchella*
Eriachne pulchella subsp. *pulchella*	*Eriachne pulchella*
Eriachne sp. indet	Remove
Erigeron bonariensis	*Erigeron bonariensis*
Eucalyptus gamophylla	*Eucalyptus gamophylla*
Eucalyptus leucophloia subsp. *leucophloia*	*Eucalyptus leucophloia* subsp. *leucophloia*
Eucalyptus repullulans	*Eucalyptus repullulans*
Eucalyptus trivalva	*Eucalyptus trivalva*
Eucalyptus victrix	*Eucalyptus victrix*
Eucalyptus xerothermica	*Eucalyptus xerothermica*
Eulalia aurea	*Eulalia aurea*
Euphorbia ?biconvexa	Remove
Euphorbia ?drummondii	Remove

Taxon	Reconciled Taxon
Euphorbia ?trigonosperma	Remove
Euphorbia australis	*Euphorbia australis*
Euphorbia australis var. *hispidula*	*Euphorbia australis*
Euphorbia australis var. *subtomentosa*	*Euphorbia australis*
Euphorbia biconvexa	*Euphorbia biconvexa*
Euphorbia boophthona	*Euphorbia boophthona*
Euphorbia drummondii	*Euphorbia drummondii*
Euphorbia ferdinandi var. *ferdinandi*	*Euphorbia ferdinandi* var. *ferdinandi*
Euphorbia sp. indet	Remove
Euphorbia tannensis subsp. *eremophila*	*Euphorbia tannensis* subsp. *eremophila*
Euphorbia trigonosperma	*Euphorbia trigonosperma*
Euploca ?inexplicita	Remove
Euploca inexplicita	*Euploca inexplicita*
Euploca pachyphylla	*Euploca pachyphylla*
Euploca sp. indet	Remove
Euploca tanythrix	*Euploca tanythrix*
Euploca tenuifolia	*Euploca tenuifolia*
Evolvulus alsinoides	*Evolvulus alsinoides*
Evolvulus alsinoides var. *decumbens*	*Evolvulus alsinoides*
Evolvulus alsinoides var. *villosicalyx*	*Evolvulus alsinoides*
Exocarpos sparteus	*Exocarpos sparteus*
Ficus brachypoda	*Ficus brachypoda*
Ficus platypoda	*Ficus platypoda*
Fimbristylis dichotoma	*Fimbristylis dichotoma*
Fimbristylis sp. indet	Remove
Gastrolobium grandiflorum	*Gastrolobium grandiflorum*
Glycine canescens	*Glycine canescens*
Gompholobium oreophilum	*Gompholobium oreophilum*
Gomphrena affinis subsp. *pilbarensis*	*Gomphrena affinis* subsp. *pilbarensis*
Gomphrena canescens	*Gomphrena canescens*
Gomphrena cunninghamii	*Gomphrena cunninghamii*
Gomphrena kanisii	*Gomphrena kanisii*
Gomphrena lanata	*Gomphrena lanata*
Gomphrena cunninghamii	*Gomphrena cunninghamii*
Goodenia microptera	*Goodenia microptera*
Goodenia muelleriana	*Goodenia muelleriana*
Goodenia nuda	*Goodenia nuda*
Goodenia prostrata	*Goodenia prostrata*
Goodenia sp. indet	Remove
Goodenia stellata	*Goodenia stellata*
Goodenia stobbsiana	*Goodenia stobbsiana*
Goodenia triodiophila	*Goodenia triodiophila*
Gossypium australe	*Gossypium australe*
Gossypium robinsonii	*Gossypium robinsonii*
Gossypium sturtianum var. *sturtianum*	*Gossypium sturtianum* var. *sturtianum*
Grevillea berryana	*Grevillea berryana*
Grevillea wickhamii	*Grevillea wickhamii*
Grevillea wickhamii subsp. *aprica*	*Grevillea wickhamii*
Grevillea wickhamii subsp. *hispidula*	*Grevillea wickhamii*
Hakea chordophylla	*Hakea chordophylla*
Hakea loreus subsp. *loreus*	*Hakea loreus subsp. loreus*
Halgania gustafsenii var. *gustafsenii*	*Halgania gustafsenii*
Halgania gustafsenii var. *Mid West (G. Perry 370)*	*Halgania gustafsenii*
Haloragis sp. indet	Remove
Hibiscus burtonii	*Hibiscus burtonii*
Hibiscus coatesii	*Hibiscus coatesii*
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)
Hibiscus sp. Mt Brockman (E. Thoma ET 1354)	*Hibiscus* sp. Mt Brockman (E. Thoma ET 1354)
Hibiscus sp. Mt Robinson (G. Byrne 3537)	*Hibiscus* sp. Mt Robinson (G. Byrne 3537)
Hibiscus sturtii	*Hibiscus sturtii*
Hibiscus sturtii var. *campylochlamys*	*Hibiscus sturtii*
Hibiscus sturtii var. *grandiflorus*	*Hibiscus sturtii*

Taxon	Reconciled Taxon
Hibiscus sturtii var. *platychlamys*	*Hibiscus sturtii*
Indigofera georgei	*Indigofera georgei*
Indigofera monophylla	*Indigofera monophylla*
Indigofera rugosa	*Indigofera rugosa*
Ipomoea muelleri	*Ipomoea muelleri*
Ipomoea polymorpha	*Ipomoea polymorpha*
Iseilema eremaeum	*Iseilema eremaeum*
Iseilema membranaceum	*Iseilema membranaceum*
Isotropis atropurpurea	*Isotropis atropurpurea*
Isotropis iophyta	*Isotropis iophyta*
Jasminum didymum subsp. *lineare*	*Jasminum didymum* subsp. *lineare*
Josephinia eugeniae	*Josephinia eugeniae*
Leichhardtia australis	*Leichhardtia australis*
Leiocarpa semicalva subsp. *semicalva*	*Leiocarpa semicalva* subsp. *semicalva*
Lepidium catapycnon	*Lepidium catapycnon*
Lepidium echinatum	*Lepidium echinatum*
Lepidium phlebopetalum	*Lepidium phlebopetalum*
Lobelia heterophylla subsp. *pilbarensis*	*Lobelia heterophylla* subsp. *pilbarensis*
Lysiana murrayi	*Lysiana murrayi*
Maireana ?tomentosa	Remove
Maireana planifolia	*Maireana planifolia*
Maireana sp. indet	Remove
Maireana villosa	*Maireana villosa*
Maireana planifolia	*Maireana planifolia*
Maireana planifolia x *villosa*	Remove
Malvastrum americanum	*Malvastrum americanum*
Marsilea sp. indet	Remove
Maytenus sp. Mt Windell (S. van Leeuwen 846)	*Maytenus* sp. Mt Windell (S. van Leeuwen 846)
Melhania oblongifolia	*Melhania oblongifolia*
Melinis repens	*Melinis repens*
Menkea villosula	*Menkea villosula*
Mimulus gracilis	*Mimulus gracilis*
Mirbelia viminalis	*Mirbelia viminalis*
Muelleranthus obovatus	*Muelleranthus obovatus*
Nellica ?maderaspatensis	*Nellica maderaspatensis*
Nellica maderaspatensis	*Nellica maderaspatensis*
Nicotiana rosulata	*Nicotiana rosulata*
Nicotiana sp. indet	Remove
Notoleptopus decaisnei var. *Orbicularis* (A.B. Craig 428)	*Notoleptopus decaisnei* var. *Orbicularis* (A.B. Craig 428)
Olearia stuartii	*Olearia stuartii*
Ophioglossum lusitanicum	*Ophioglossum lusitanicum*
Oxalis perennans	*Oxalis perennans*
Oxalis sp. Pilbara (M.E. Trudgen 12725)	*Oxalis* sp. Pilbara (M.E. Trudgen 12725)
Panicum decompositum	*Panicum decompositum*
Panicum effusum	*Panicum effusum*
Panicum sp. indet	*Remove*
Paraneurachne muelleri	*Paraneurachne muelleri*
Paspalidium clementii	*Paspalidium clementii*
Paspalidium constrictum	*Paspalidium constrictum*
Paspalidium rarum	*Paspalidium rarum*
Paspalidium sp. indet	Remove
Pellaea reynoldsii	*Pellaea reynoldsii*
Peplidium muelleri	*Peplidium muelleri*
Peplidium sp. C Evol. Fl. Fauna Arid Aust. (N.T. Burbidge & A. Kanis 8158)	*Peplidium* sp. C Evol. Fl. Fauna Arid Aust. (N.T. Burbidge & A. Kanis 8158)
Peripleura arida	*Peripleura arida*
Peripleura obovata	*Peripleura obovata*
Peripleura sp. indet	Remove
Perotis rara	*Perotis rara*
Petalostylis labicheoides	*Petalostylis labicheoides*
Pilbara trudgenii	*Pilbara trudgenii*
Pluchea dentex	*Pluchea dentex*

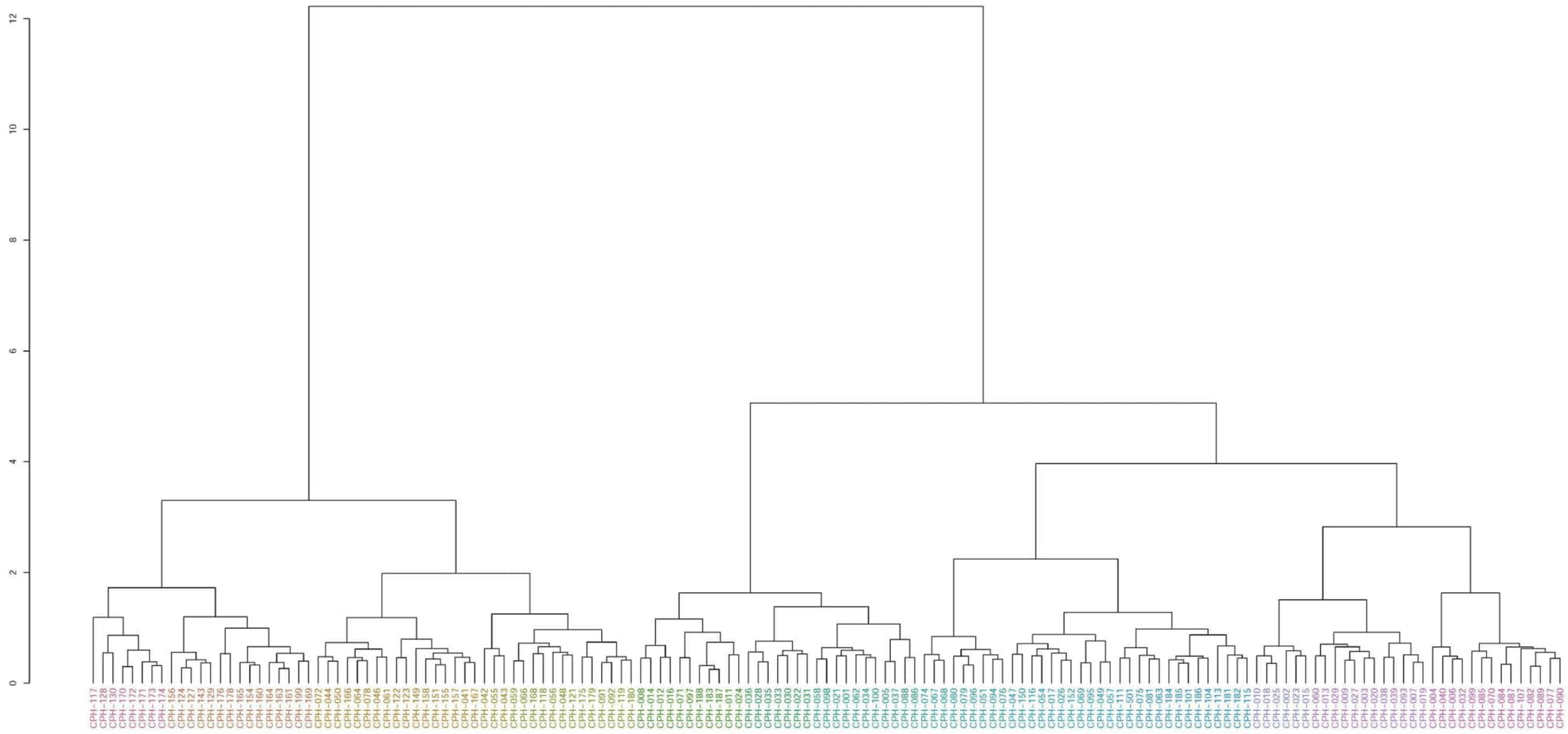
Taxon	Reconciled Taxon
Pluchea dunlopii	*Pluchea dunlopii*
Pluchea rubelliflora	*Pluchea rubelliflora*
Plumbago zeylanica	*Plumbago zeylanica*
Polycarpaea corymbosa var. *corymbosa*	*Polycarpaea corymbosa* var. *corymbosa*
Polycarpaea holtzei	*Polycarpaea holtzei*
Polycarpaea longiflora	*Polycarpaea longiflora*
Polygala glaucifolia	*Polygala glaucifolia*
Polygala isingii	*Polygala isingii*
Polymeria ambigua	*Polymeria ambigua*
Portulaca filifolia	*Portulaca filifolia*
Portulaca oleracea	*Portulaca oleracea*
Portulaca pilosa	*Portulaca pilosa*
Prostanthera albiflora	*Prostanthera albiflora*
Psydrax latifolia	*Psydrax latifolia*
Psydrax rigidula	*Psydrax rigidula*
Psydrax suaveolens	*Psydrax suaveolens*
Pterocaulon serrulatum	*Pterocaulon serrulatum*
Pterocaulon sp. indet	Remove
Pterocaulon sphacelatum	*Pterocaulon sphacelatum*
Pterocaulon sphaeranthoides	*Pterocaulon sphaeranthoides*
Ptilotus astrolasius	*Ptilotus astrolasius*
Ptilotus auriculifolius	*Ptilotus auriculifolius*
Ptilotus calostachyus	*Ptilotus calostachyus*
Ptilotus clementii	*Ptilotus clementii*
Ptilotus exaltatus	*Ptilotus exaltatus*
Ptilotus fusiformis	*Ptilotus fusiformis*
Ptilotus gaudichaudii	*Ptilotus gaudichaudii*
Ptilotus helipteroides	*Ptilotus helipteroides*
Ptilotus incanus	*Ptilotus incanus*
Ptilotus obovatus var. *obovatus*	*Ptilotus obovatus* var. *obovatus*
Ptilotus polystachyus	*Ptilotus polystachyus*
Ptilotus roei	*Ptilotus roei*
Ptilotus rotundifolius	*Ptilotus rotundifolius*
Ptilotus schwartzii var. *schwartzii*	*Ptilotus schwartzii* var. *schwartzii*
Ptilotus sp. indet	Remove
Rhagodia eremaea	*Rhagodia eremaea*
Rhagodia sp. Hamersley (M. Trudgen 17794)	*Rhagodia* sp. Hamersley (M. Trudgen 17794)
Rhodanthe margarethae	*Rhodanthe margarethae*
Rhodanthe propinqua	*Rhodanthe propinqua*
Rhynchosia minima	*Rhynchosia minima*
Roebuckiella similis	*Roebuckiella similis*
Rostellularia adscendens	*Rostellularia adscendens*
Rostellularia adscendens var. *latifolia*	*Rostellularia adscendens*
Salsola australis	*Salsola australis*
Santalum lanceolatum	*Santalum lanceolatum*
Scaevola acacioides	*Scaevola acacioides*
Scaevola amblyanthera var. *centralis*	*Scaevola amblyanthera* var. *centralis*
Scaevola browniana subsp. *browniana*	*Scaevola browniana* subsp. *browniana*
Scaevola parvifolia subsp. *pilbarae*	*Scaevola parvifolia* subsp. *pilbarae*
Scaevola spinescens	*Scaevola spinescens*
Schizachyrium fragile	*Schizachyrium fragile*
Sclerolaena ?cornishiana	Remove
Sclerolaena cornishiana	*Sclerolaena cornishiana*
Sclerolaena costata	*Sclerolaena costata*
Sclerolaena tetragona	*Sclerolaena tetragona*
Senna artemisioides subsp. *helmsii*	*Senna artemisioides* subsp. *helmsii*
Senna artemisioides subsp. *helmsii x oligophylla*	*Senna artemisioides* subsp. *helmsii*
Senna artemisioides subsp. *oligophylla*	*Senna artemisioides* subsp. *oligophylla*
Senna artemisioides subsp. *x artemisioides*	*Senna artemisioides* subsp. *x artemisioides*
Senna artemisioides subsp. *x sturtii*	*Senna artemisioides* subsp. *x sturtii*
Senna ferraria	*Senna ferraria*
Senna glaucifolia	*Senna glaucifolia*
Senna glutinosa	*Senna glutinosa* subsp. *glutinosa*

Taxon	Reconciled Taxon
Senna glutinosa subsp. *glutinosa*	*Senna glutinosa* subsp. *glutinosa*
Senna glutinosa subsp. *pruinosa*	*Senna glutinosa* subsp. *pruinosa*
Senna glutinosa subsp. *x luerssenii*	*Senna glutinosa* subsp. *x luerssenii*
Senna notabilis	*Senna notabilis*
Senna pleurocarpa var. angustifolia	*Senna pleurocarpa* var. *angustifolia*
Senna sericea	*Senna sericea*
Senna sp. indet	Remove
Senna sp. Meekatharra (E. Bailey 1-26)	*Senna* sp. Meekatharra (E. Bailey 1-26)
Senna stricta	*Senna stricta*
Senna symonii	*Senna symonii*
Senna venusta	*Senna venusta*
Seringia exastia	*Seringia exastia*
Seringia nephrosperma	*Seringia nephrosperma*
Setaria dielsii	*Setaria dielsii*
Setaria sp. indet	Remove
Setaria surgens	*Setaria surgens*
Setaria verticillata	*Setaria verticillata*
Sida ?echinocarpa	Remove
*Sida ?*sp. Golden calyces glabrous (H.N. Foote 32)	Remove
*Sida ?*sp. Supplejack Station (T.S. Henshall 2345)	Remove
Sida arenicola	*Sida arenicola*
Sida calyxhymenia	*Sida calyxhymenia*
Sida cardiophylla	*Sida cardiophylla*
Sida echinocarpa	*Sida echinocarpa*
Sida ectogama	*Sida ectogama*
Sida fibulifera	*Sida fibulifera*
Sida platycalyx	*Sida platycalyx*
Sida sp. Articulation below (A.A. Mitchell PRP 1605)	*Sida* sp. Articulation below (A.A. Mitchell PRP 1605)
Sida sp. Barlee Range (S. van Leeuwen 1642)	*Sida* sp. Barlee Range (S. van Leeuwen 1642)
Sida sp. dark green fruits (S. van Leeuwen 2260)	*Sida* sp. dark green fruits (S. van Leeuwen 2260)
Sida sp. Excedentifolia (J.L. Egan 1925)	*Sida* sp. Excedentifolia (J.L. Egan 1925)
Sida sp. Golden calyces glabrous (H.N. Foote 32)	*Sida* sp. Golden calyces glabrous (H.N. Foote 32)
Sida sp. indet	Remove
Sida sp. L (A.M. Ashby 4202)	*Sida* sp. L (A.M. Ashby 4202)
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	*Sida* sp. Pilbara (A.A. Mitchell PRP 1543)
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	*Sida* sp. Shovelanna Hill (S. van Leeuwen 3842)
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	*Sida* sp. spiciform panicles (E. Leyland s.n. 14/8/90)
Sida sp. Supplejack Station (T.S. Henshall 2345)	*Sida* sp. Supplejack Station (T.S. Henshall 2345)
Sigesbeckia orientalis	*Sigesbeckia orientalis*
Solanum ?ferocissimum	Remove
Solanum centrale	*Solanum centrale*
Solanum cleistogamum	*Solanum cleistogamum*
Solanum ferocissimum	*Solanum ferocissimum*
Solanum horridum	*Solanum horridum*
Solanum kentrocaule	*Solanum kentrocaule*
Solanum lasiophyllum	*Solanum lasiophyllum*
Solanum nigrum	*Solanum nigrum*
Solanum phlomoides	*Solanum phlomoides*
Solanum sp. indet	Remove
Solanum ?cleistogamum	Remove
Sonchus oleraceus	*Sonchus oleraceus*
Spermacoce brachystema	*Spermacoce brachystema*
Sporobolus australasicus	*Sporobolus australasicus*
Stemodia grossa	*Stemodia grossa*
Stemodia sp. indet	Remove
Stemodia viscosa	*Stemodia viscosa*
Stenopetalum ?anfractum	Remove
Stenopetalum nutans	*Stenopetalum nutans*
Streptoglossa bubakii	*Streptoglossa bubakii*
Streptoglossa decurrens	*Streptoglossa decurrens*
Streptoglossa sp. indet	Remove
Stylobasium spathulatum	*Stylobasium spathulatum*
Swainsona canescens	*Swainsona canescens*

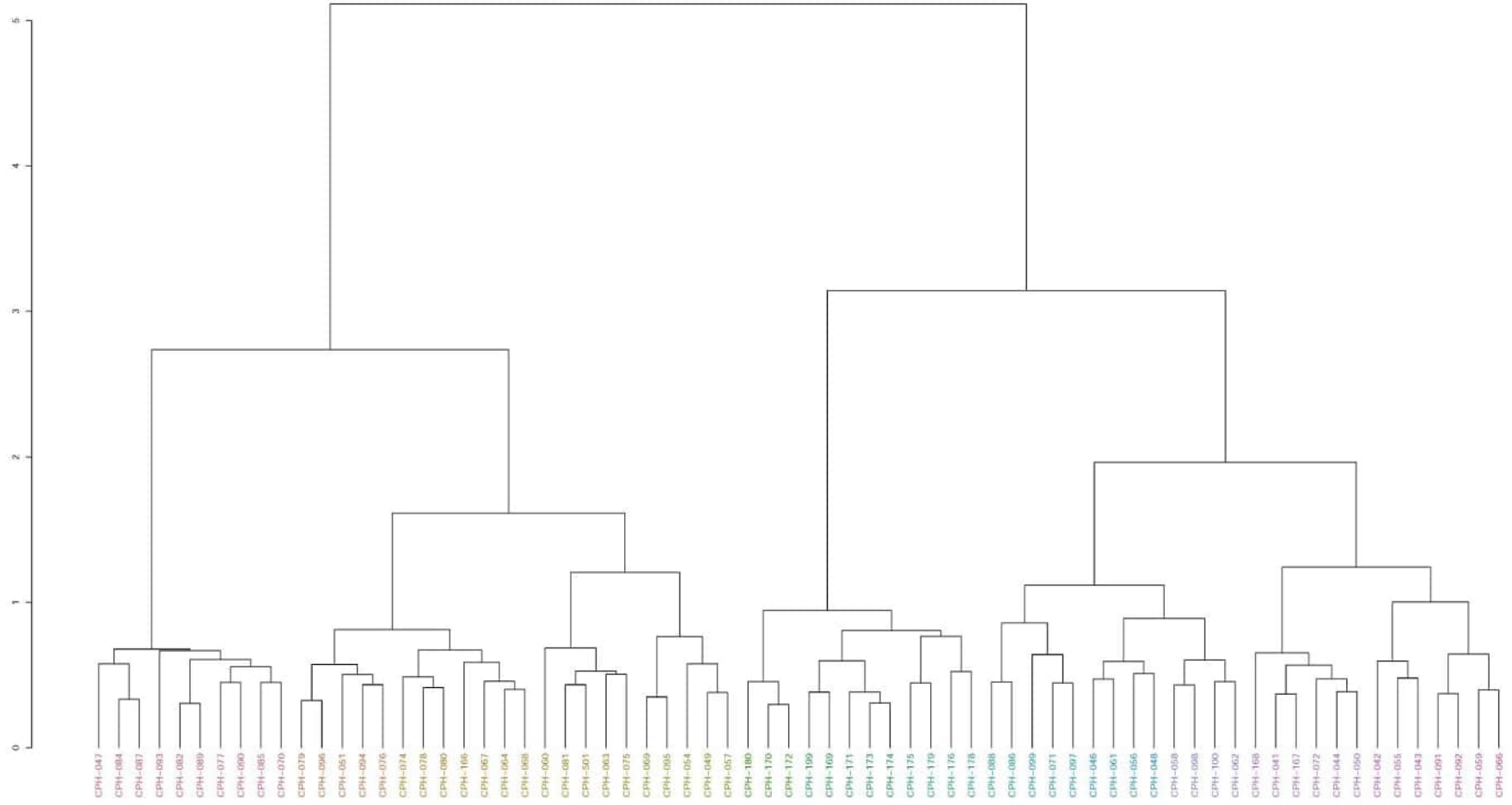
Taxon	Reconciled Taxon
Swainsona kingii	*Swainsona kingii*
Swainsona sp. indet	Remove
Synaptantha tillaeacea var. *tillaeacea*	*Synaptantha tillaeacea* var. *tillaeacea*
Tephrosia densa	*Tephrosia densa*
Tephrosia oxalidea	*Tephrosia oxalidea*
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	*Tephrosia rosea* var. Fortescue creeks (M.I.H. Brooker 2186)
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	*Tephrosia* sp. Bungaroo Creek (M.E. Trudgen 11601)
Tephrosia sp. Newman (A.A. Mitchell PRP 29)	*Tephrosia* sp. Newman (A.A. Mitchell PRP 29)
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	*Tephrosia* sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)
Tephrosia virens	*Tephrosia virens*
Teucrium disjunctum	*Teucrium disjunctum*
Teucrium teucriiflorum	*Teucrium teucriiflorum*
Themeda sp. Hamersley Station (M.E. Trudgen 11431)	*Themeda* sp. Hamersley Station (M.E. Trudgen 11431)
Themeda sp. Mt Barricade (M.E. Trudgen 2471)	*Themeda* sp. Mt Barricade (M.E. Trudgen 2471)
Themeda triandra	*Themeda triandra*
Thyridolepis mitchelliana	*Thyridolepis mitchelliana*
Tinospora smilacina	*Tinospora smilacina*
Trachymene oleracea subsp. *oleracea*	*Trachymene oleracea* subsp. *oleracea*
Tragus australianus	*Tragus australianus*
Tribulopis angustifolia	*Tribulopis angustifolia*
Tribulus ?hirsutus	Remove
Tribulus astrocarpus	*Tribulus astrocarpus*
Tribulus hirsutus	*Tribulus hirsutus*
Tribulus macrocarpus	*Tribulus macrocarpus*
Tribulus platypterus	*Tribulus platypterus*
Tribulus sp. indet	Remove
Tribulus suberosus	*Tribulus suberosus*
Tribulus terrestris	*Tribulus terrestris*
Trichodesma zeylanicum var. *zeylanicum*	*Trichodesma zeylanicum* var. *zeylanicum*
Tricoryne sp. Hamersley Range (S. van Leeuwen 915)	*Tricoryne* sp. Hamersley Range (S. van Leeuwen 915)
Trigastrotheca molluginea	*Trigastrotheca molluginea*
Triodia brizoides	*Triodia brizoides*
Triodia melvillei	*Triodia melvillei*
Triodia pungens	*Triodia pungens*
Triodia sp. Mt Ella (M.E. Trudgen 12739)	*Triodia* sp. Mt Ella (M.E. Trudgen 12739)
Triodia vanleeuwenii	*Triodia vanleeuwenii*
Triodia wiseana	*Triodia wiseana*
Tripogonella loliiformis	*Tripogonella loliiformis*
Triumfetta chaetocarpa	*Triumfetta chaetocarpa*
Triumfetta leptacantha	*Triumfetta leptacantha*
Triumfetta maconochieana	*Triumfetta maconochieana*
Typha domingensis	*Typha domingensis*
Urochloa occidentalis var. *ciliata*	*Urochloa occidentalis* var. *ciliata*
Urochloa piligera	*Urochloa piligera*
Urochloa subquadripara	*Urochloa subquadripara*
Vigna lanceolata	*Vigna lanceolata*
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)	*Vigna* sp. Hamersley Clay (A.A. Mitchell PRP 113)
Vigna triodiophila	*Vigna triodiophila*
Vincetoxicum carnosum	*Vincetoxicum carnosum*
Vincetoxicum flexuosum	*Vincetoxicum flexuosum*
Vincetoxicum lineare	*Vincetoxicum lineare*
Vittadinia eremaea	*Vittadinia eremaea*
Vittadinia sp. indet	Remove
Wahlenbergia tumidifructa	*Wahlenbergia tumidifructa*
Waltheria indica	*Waltheria indica*
Waltheria virgata	*Waltheria virgata*

Appendix I: Dendrogram & cluster analysis.

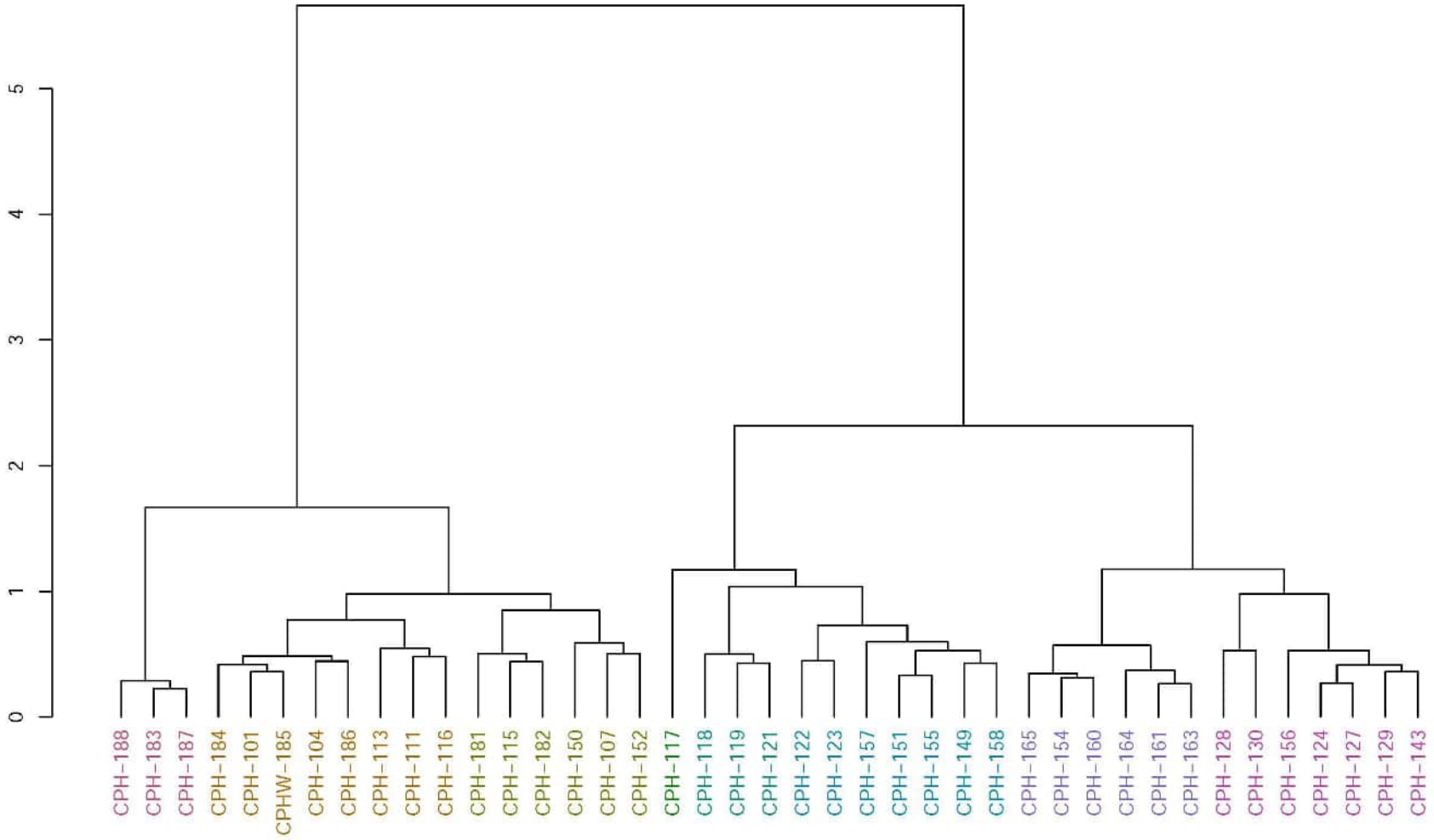
Dendrogram (All sites): Weeds and singletons removed, Braun-Blanquet transformed, Bray-Curtis coefficient



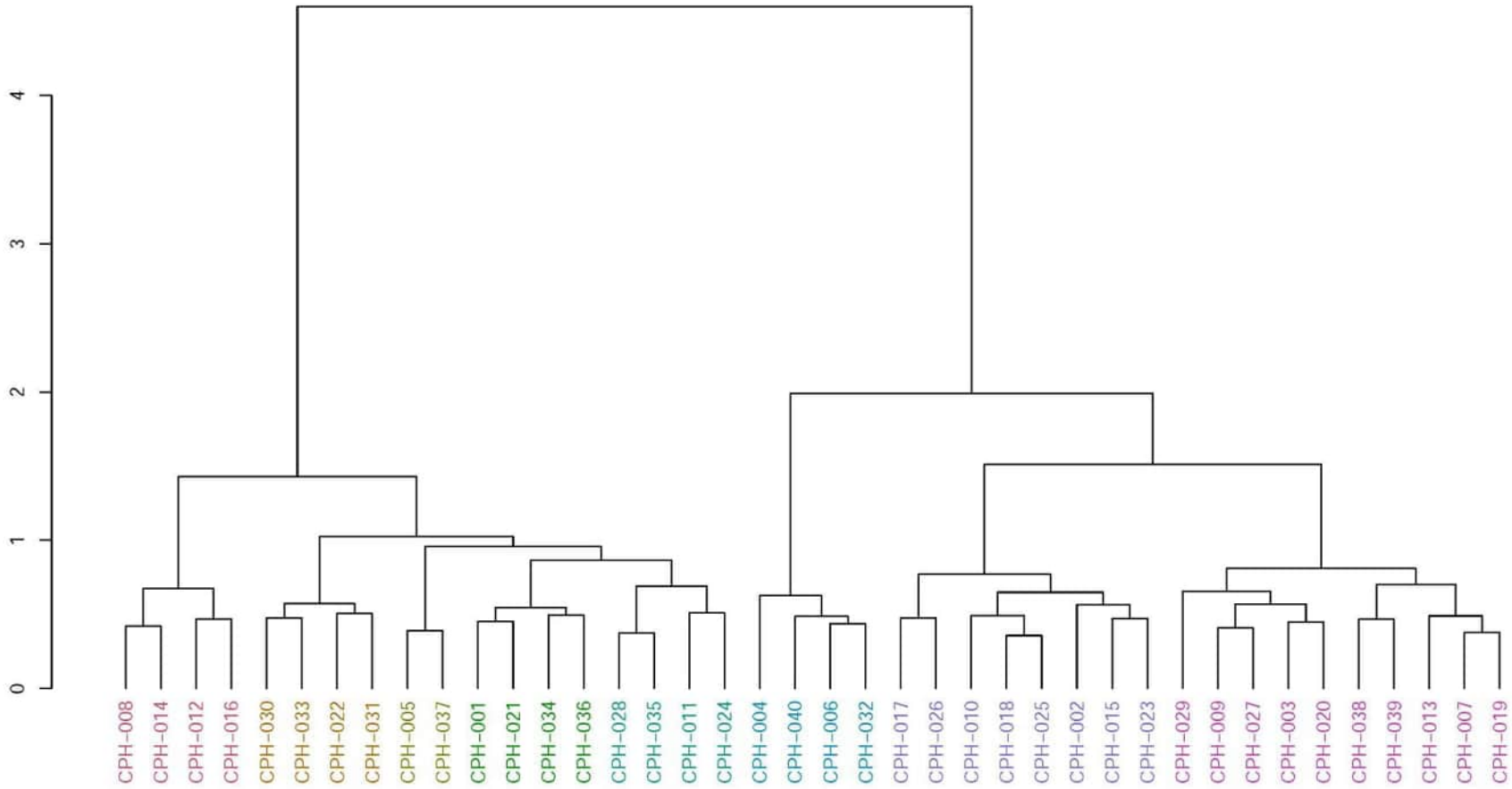
Dendrogram (Pineapple Hill & Camp Hill): Weeds and singletons removed, Braun-Blanquet transformed, Bray-Curtis coefficient



Dendrogram (Mudlark Well): Weeds and singletons removed, Braun-Blanquet transformed, Bray-Curtis coefficient



Dendrogram (MAC to Yandi Rail Corridor): Weeds and singletons removed, Braun-Blanquet transformed, Bray-Curtis coefficient



Appendix J: Likelihood of Occurrence Assessment.

Taxon	Conservation Status			Habit and Habitat	Habitat within Study Area	Within Current Known Distribution	Distance to Nearest Record	Likelihood Pre-Survey	Likelihood Post-Survey
	DBCA	BC Act	EPBC Act						
Triodia sp. Karijini (S. van Leeuwen 4111)	P1			Hummock grass to 0.9 m high. Steep hillslopes, hillcrests, ironstone outcrops on grey-brown silty loam	Yes	Yes	Within	Confirmed	Confirmed - by current survey
Eragrostis sp. Mt Robinson (S. van Leeuwen 4109)	P2			Tussock-forming perennial, grass-like or herb, to 0.3 m high. Fl. Sep. Red-brown skeletal soils, ironstone. Steep slopes, summits.	Yes	Yes	Within	Confirmed	Confirmed - by current survey
Eremophila sp. West Angelas (S. van Leeuwen 4068)	P2			Spindly shrub, 0.4-3 m high. Skeletal brown-red soil or loam. Hill slopes and summits.	Yes	Yes	Within	Confirmed	Confirmed - by current survey
Aristida lazaridis	P2			Tufted perennial, grass-like or herb, 0.4-1.5 m high. Fl. green/purple, Apr. Sand or loam.	Yes	Yes	Within	Confirmed	Confirmed - by current survey
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	P2			Erect slender shrub, 1-3 m high. Fl. pale purple. Loamy skeletal soils. Gorge with ironstone outcropping, gullies, drainage line.	Yes	Yes	Within	Confirmed	Confirmed - by current survey
Oxalis sp. Pilbara (M.E. Trudgen 12725)	P2			Annual herb, 0.1-0.3 m high. Fl. Yellow. Brown sandy loam or clay. Gorge, ironstone outcrops, gully, shaded areas, creeklines.	Yes	Yes	Within	Confirmed	Confirmed - by current survey
Aristida jerichoensis var. subspinulifera	P3			Compactly tufted perennial, grass-like or herb, 0.3-0.8 m high, lemma groove muricate. Hardpan plains.	Yes	Yes	Within	Confirmed	Confirmed - by current survey
Eremophila naaykensii	P3			Erect shrub, 1-3 m high. Fl. White/pale blue. Red brown sandy clay loam. Upper slopes, gullies, gorges.	Yes	Yes	Within	Confirmed	Confirmed - by current survey
Indigofera gilesii	P3			Shrub, to 1.5 m high. Fl. purple-pink, May or Aug. Pebbly loam. Amongst boulders & outcrops, hills.	Yes	Yes	Within	Confirmed	Confirmed - by current survey
Pilbara trudgenii	P3			Gnarled, aromatic shrub, to 1 m high. Fl. Sep. Skeletal, red stony soil over ironstone. Hill summits, steep slopes, screes, cliff faces.	Yes	Yes	Within	Confirmed	Confirmed - by current survey
Rhagodia sp. Hamersley (M. Trudgen 17794)	P3			Tall spindly shrub, 1.5-4 m high. Fl. yellow. Red brown sandy loam or clay, ironstone plain. Undulating plains, floodplain.	Yes	Yes	Within	Confirmed	Confirmed - by current survey
Rostellularia adscendens var. *latifolia*	P3			Herb or shrub, 0.1-0.3 m high. Fl. blue-purple-violet, Apr to May. Ironstone soils. Near creeks, rocky hills.	Yes	Yes	Within	Confirmed	Confirmed - by current survey
Solanum kentrocaule	P3			Spiny, erect perennial shrub, to 0.7 m high. Fl. purple. Steep rocky gullies, gorges, outcrops, cliffs.	Yes	Yes	Within	Confirmed	Confirmed - by current survey
Themeda sp. Hamersley Station (M.E. Trudgen 11431)	P3			Tussocky perennial, grass-like or herb, 0.9-1.8 m high. Fl. Aug. Red clay. Clay pan, grass plain.	Yes	Yes	Within	Confirmed	Confirmed - by current survey
Triodia sp. Mt Ella (M.E. Trudgen 12739)	P3			Perennial, grass-like or herb, 0.4 m high. Light orange-brown, pebbly loam. Amongst rocks & outcrops, gully slopes.	Yes	Yes	Within	Confirmed	Confirmed - by current survey
Vittadinia sp. Coondewanna Flats (S. van Leeuwen 4684)	P3			Erect annual herb, 0.3-1 m high. Fl. cream. Red-brown sandy loam. Drainage areas, floodplains, flat and/or stony plains.	Yes	Yes	Within	Confirmed	Confirmed - by current survey
Eremophila magnifica subsp. *magnifica*	P4			Shrub, 0.5-1.5 m high. Fl. blue, Aug to Nov. Skeletal soils over ironstone. Rocky screes.	Yes	Yes	Within	Confirmed	Confirmed - by current survey
Lepidium catapycnon	P4			Open, woody perennial, herb or shrub, 0.2-0.3 m high, stems zigzag. Fl. white, Oct. Skeletal soils. Hillsides.	Yes	Yes	Within	Confirmed	Confirmed - by current survey
Sida sp. Barlee Range (S. van Leeuwen 1642)	P4			Spreading shrub, to 0.5 m high. Fl. yellow, Aug. Skeletal red soils pockets. Steep slope.	Yes	Yes	Within	Confirmed	Confirmed - by current survey
Ipomoea racemigera	P2			Creeping annual, herb or climber. Fl. white.	Possible	Yes	14.2 km W	Possible	Confirmed - by current survey
Dampiera metallorum	P3			Rounded, multistemmed perennial, herb, to 0.5 m high. Fl. blue, Apr or Jun to Oct. Skeletal red-brown gravelly soil over banded ironstone. Steep slopes, summits of hills.	Yes	Yes	Within	Confirmed	Confirmed
Goodenia lyrata	P3			Prostrate herb, with lyrate leaves. Fl. yellow, Aug. Red sandy loam. Near claypan	Yes	Yes	Within	Confirmed	Confirmed
Goodenia sp. East Pilbara (A.A. Mitchell PRP 727)	P3			Open, erect annual or biennial, herb, to 0.2 m high. Fl. yellow. Red-brown clay soil, calcrete pebbles. Low undulating plain, swampy plains.	Yes	Yes	Within	Confirmed	Confirmed
Grevillea saxicola	P3			Tree or shrub, to 8 m high, rough bark on trunks and stems. Fl. creamy white. Skeletal red brown sandy loam with ironstone pebble cover. Rocky gully, drainage lines, steep cliff, low rocky hills.	Yes	Yes	Within	Confirmed	Confirmed
Xerochrysum boreale	P3			Perennial, erect shrub, 0.15-1 m high. Flowers yellow. Red-brown clay loam. Stony plain.	Yes	Yes	Within	Confirmed	Confirmed
Ptilotus mollis	P4			Compact, perennial shrub, to 0.5 m high, soft grey foliage. Fl. white/pink, May or Sep. Stony hills and screes.	Yes	Yes	Within	Confirmed	Confirmed
Acacia bromilowiana	P4			Tree or shrub, to 12 m high, bark dark grey, fibrous; inflorescence in spikes. Fl. yellow/pink, Jul to Aug. Red skeletal stony loam, orange-brown pebbly, gravel loam, laterite, banded ironstone, basalt. Rocky hills, breakaways, scree slopes, gorges, creek beds.	Yes	Yes	Within	Confirmed	Confirmed
Dolichocarpa sp. Hamersley Station (A.A. Mitchell PRP 1479)	P3			Spreading annual, herb, 0.05-0.1 m high. Fl. blue, Mar, May-Jul, Sep. Cracking clay, basalt. Gently undulating plain with large surface rocks, flat crabholed plain.	Yes	Yes	0.7 km S	Highly Likely	Possible

Taxon	Conservation Status			Habit and Habitat	Habitat within Study Area	Within Current Known Distribution	Distance to Nearest Record	Likelihood Pre-Survey	Likelihood Post-Survey
	DBCA	BC Act	EPBC Act						
Olearia mucronata	P3			Densely branched, unpleasantly aromatic shrub, 0.6-1 m high. Fl. white & yellow, Aug to Dec or Jan. Schistose hills, along drainage channels.	Yes	Yes	0.4 km S	Highly Likely	Possible
Triodia basitricha	P3			Hummock grass to 0.8 m high, non-resinous. Fl. Mar-Jul. Red/brown clay loam over ironstone. Floodplains, flat hill crest, lower slopes.	Yes	Yes	1.2 km NNW	Highly Likely	Unlikely
Arthropodium vanleeuwenii	P2			Perennial herb, 0.3-0.9 m high. Fl. Mauve, Sep. Red-brown loam soil. Moderately steep, south facing slopes of banded and Brockman iron formations.	Yes	Yes	2.1 km W	Likely	Possible
Eremophila pusilliflora	P2			Low spreading shrub, to 0.8 m high. Fl. purple, Mar-Jul. Red/brown loam or clay. Drainage lines, broad depressions, flood plains.	Yes	Yes	5.3 km W	Likely	Possible
Acacia effusa	P3			Low, dense, spreading, somewhat viscid shrub, 0.3-1 m high, bark 'minni-ritchi'. Fl. yellow, May to Aug. Stony red loam. Scree slopes of low ranges	Yes	Yes	2.2 km N	Likely	Possible
Isotropis parviflora	P3			Shrub, 0.1 m high. Fl. white/pink, Mar. Valley slope of ironstone plateau.	Yes	Yes	1.2 km NNW	Likely	Possible
Streptoglossa sp. Cracking clays (S. van Leeuwen et al. PBS 7353)	P3			Erect annual herb. Fl. pink, Jun or Sep. Red/brown cracking clays. Colluvial and alluvial gravels in floodplains.	Yes	Yes	1.1 km S	Likely	Possible
Eremophila magnifica subsp. *velutina*	P3			Shrub, 0.5-1.5 m high. Fl. blue-purple, Aug to Sep. Skeletal soils over ironstone. Summits.	Yes	Yes	0.5 km N	Likely	Unlikely
Rhodanthe ascendens	P1			Ascending annual, herb, to 0.1 m high. Fl. yellow, Aug. Clay. Roadside verge.	Possible	Adjacent	4.4 km W	Possible	Possible
Euphorbia inappendiculata var. *queenslandica*	P2			Spreading, procumbent herb, to 0.4 m high. Fl. pink, Aug. Clay soils. Among broken rocky screes	Possible	Yes	12.3 km SSW	Possible	Possible
Tetratheca fordiana	P2			Dwarf shrub, 0.2-0.4 m high. Fl. dark pink or lilac, Apr-May or Jul. Skeletal soils/ironstone. Vertical cliff face and upper rocky ridgelines, breakaways.	Possible	Yes	6.7 km S	Possible	Possible
Eragrostis crateriformis	P3			Annual, grass-like or herb, 0.1-0.5 m high. Fl. Jan to May or Jul. Clayey loam or clay. Creek banks, depressions.	Possible	Adjacent	13.3 km NNE	Possible	Possible
Euphorbia stevenii	P3			Somewhat succulent perennial, herb, 0.1-0.5 m high. Clay, sandy soils.	Yes	Yes	5.6 km S	Possible	Possible
Synostemon hamersleyensis	P1			Shrub, 0.5-1 m high. Fl. Yellow-green, red, Aug or Oct-Nov. Red sandy loam. Steep slopes, ironstone gorges.	Possible	Adjacent	13.4 km NNE	Possible	Unlikely
Teucrium pilbaranum	P2			Upright shrub, 0.2 m high. Fl. white, May or Sep. Clay. Crab hole plain in a river floodplain, margin of calcrete table	Possible	Yes	0.1 km N	Possible	Unlikely
Acacia daweana	P3			Spreading shrub, 0.3-1.5(-2) m high. Fl. yellow, Jul to Sep. Stony red loamy soils. Low rocky rises, along drainage lines.	Yes	Adjacent	18.6 km W	Possible	Unlikely
Acacia subtiliformis	P3			Spindly, slender, erect shrub, to 3.5 m high, phyllodes green; inflorescence in heads to 6 mm diameter; peduncles red. Fl. yellow, Jun. On rocky calcrete plateau.	Possible	Yes	8.5 km ESE	Possible	Unlikely
Amaranthus centralis	P3			Erect, annual herb (with pink stems), to 0.6 m high. Fl. green/white, Apr-Aug. Red sandy clay. Sand plains, granite outcrops.	Possible	Yes	1.4 km WNW	Possible	Unlikely
Euphorbia clementii	P3			Erect annual herb, to 0.6 m high. Fl, white, May-Jul. Gravelly hillsides, stony grounds.	Possible	Adjacent	5.6 km S	Possible	Unlikely
Fimbristylis sieberiana	P3			Shortly rhizomatous, tufted perennial, grass-like or herb (sedge), 0.25-0.6 m high. Fl. brown, May to Jun. Mud, skeletal soil pockets. Pool edges, sandstone cliffs	Possible	Yes	0.4 km SE	Possible	Unlikely
Gymnanthera cunninghamii	P3			Erect shrub, 1-2 m high. Fl. cream-yellow-green, Jan to Dec. Sandy soils.	Possible	Yes	10.9 km ESE	Possible	Unlikely
Iotasperma sessilifolium	P3			Erect herb, up to 0.4m high. Fl. pink-mauve, yellow, Jul-Sep. Cracking clay, black loam. Edges of waterholes, plains.	Yes	Adjacent	15.5 km NNE	Possible	Unlikely
Sida sp. Hamersley Range (K. Newbey 10692)	P3			Low, spreading shrub, to 0.5 m high. Fl. yellow, May or Aug-Oct. Brown loamy soil. Base of breakaways, gullies, hill summits.	Possible	Adjacent	12.8 km S	Possible	Unlikely
Stackhousia clementii	P3			Dense broom-like perennial, herb, to 0.45 m high. Fl. green/yellow/brown, Feb-Apr, Jun, Aug-Sep, Nov. Skeletal soils. Sandstone hills	Possible	Yes	10 km NNW	Possible	Unlikely
Stylidium weeliwolli	P3			Annual, herb, 0.1-0.25 m high, throat appendages 4, rod-shaped. Fl. pink & red, Aug to Sep. Gritty sand soil, sandy clay. Edge of watercourses	Possible	Yes	10.5 km ESE	Possible	Unlikely
Swainsona thompsoniana	P3			Prostrate annual herb, to 0.2m high, Fl. Blue, Apr-Aug. Higher altitude floodplains, top of hilltops and cracking clays on red-brown clay.	Possible	Yes	5.6 km S	Possible	Unlikely
Thryptomene wittweri	T	VU	-	Spreading or rounded shrub, 0.5-1.5(-2.1) m high. Fl. white-cream, Apr or Jul or Aug. Skeletal red stony soils. Breakaways, stony creek beds.	Yes	Adjacent	5 km WNW	Possible	Unlikely
Cladium procerum	P2			Densely tufted perennial, grass-like or herb (sedge), 2 m high. Fl. Nov. Perennial pools.	Possible	Yes	11.1 km ESE	Possible	Highly Unlikely
Gompholobium karijini	P2			Shrub, to 1 m high. Fl. yellow/green, Aug-Sep. Red/brown gravelly loam or clay. Undulating hills, hilltops, drainage lines.	Yes	No	27 km WNW	Possible	Highly Unlikely
Paranotis sp. Pilbara (H. Ajduk HAOP04a)	P1			Erect ephemeral herb, to 0.3 m high. Fl. white, Feb-Mar. Raised banks of shallow drainage lines on exposed hardpan.	Possible	No	49 km ESE	Unlikely	Unlikely

Taxon	Conservation Status			Habit and Habitat	Habitat within Study Area	Within Current Known Distribution	Distance to Nearest Record	Likelihood Pre-Survey	Likelihood Post-Survey
	DBCA	BC Act	EPBC Act						
Adiantum capillus-veneris	P2			Rhizomatous, perennial, herb or (fern), 0.1-0.2 m high, frond 1-2-pinnate; stipe blackish-brown, hard, glossy; sori marginal between sinuses, oblong. Moist, sheltered sites in gorges and on cliff walls.	Possible	No	24.9 km NNW	Unlikely	Unlikely
Euphorbia inappendiculata var. *inappendiculata*	P2			Prostrate annual herb, to 0.1 m high. Red brown clay loam. Flat plain, cracking clay floodplain, gentle slopes.	Possible	Yes	32.7 km NNE	Unlikely	Unlikely
Kohautia australiensis	P2			Erect sparsely or much-branched annual, herb, 0.1-0.5 m high. Fl. blue. Low calcrete outcrops.	Possible	Adjacent	17 km NE	Unlikely	Unlikely
Euphorbia australis var. *glabra*	P3			Annual prostrate herb, leaves green with a red tinged margins. Drainage lines on clay loam and river sand.	Possible	Adjacent	18.2 km NE	Unlikely	Unlikely
Dampiera anonyma	P3			Multistemmed perennial, herb, to 0.5(-1) m high. Fl. blue-purple, Jun to Sep. Skeletal red-brown to brown gravelly soil over banded ironstone, basalt, shale and jaspilite. Hill summits, upper slopes above 1000m.	Possible	No	39.6 km WNW	Unlikely	Unlikely
Geijera salicifolia	P3			Tree, 1.5-6 m high. Fl. white, Sep. Skeletal soils, stony soils. Massive rock scree, gorges.	Possible	No	37.9 km WNW	Unlikely	Unlikely
Calotis squamigera	P1			Procumbent annual, herb, to 0.21 m high. Fl. yellow, Jul. Pebbly loam	No	No	23.2 km NE	Unlikely	Unlikely
Dicrastylis mitchellii	P1			Shrub, to about 0.3 m high. Sand or clay soils. Around dunes.	No	No	36.7 km SW	Unlikely	Highly Unlikely
Hibiscus sp. Mt Brockman (E. Thoma ET 1354)	P1			Spindly, erect shrub, to 3.5 m high. Fl. Mauve, May, Jul-Aug or Nov. Steep, deeply incised drainage gullies, base of breakaways.	Possible	No	47.4 km NNW	Unlikely	Highly Unlikely
Indigofera ixocarpa	P2			Shrub, to 1 m high. Fl. pink, May. Skeletal red soils over massive ironstone.	Possible	No	37.6 km WNW	Unlikely	Highly Unlikely
Pentalepis trichodesmoides subsp. *hispida*	P2			Upright, perennial shrub, to 1.3 m high. Fl. yellow. Red/brown clay loam. Undulating hills and crests, ridge summits, slopes of low hills.	Possible	No	25.7 km WSW	Unlikely	Highly Unlikely
Scaevola sp. Hamersley Range basalts (S. van Leeuwen 3675)	P2			Shrub, to 1 m high. Fl. Jul to Aug. Skeletal, brown gritty soil over basalt. Summits of hills, steep hils.	Possible	No	39.2 km W	Unlikely	Highly Unlikely
Ampelopteris prolifera	P3			Rhizomatous, perennial, herb or (fern), to 4 m high, fronds 1-pinnate, pinnae shallowly lobed; buds on pinnae can form new plants; sori lacking indusia. Near water or in wet ground.	Possible	No	25 km NNW	Unlikely	Highly Unlikely
Atriplex flabelliformis	P3			Monoecious, erect, rounded perennial, herb, to 0.35 m high. Clay loam, loam. Saline flats or marshes.	No	No	35.2 km N	Unlikely	Highly Unlikely
Eremophila spongiocarpa	P3			Compact, succulent-leaved shrub, to 1 m high. Fl. white, May or Sep. Weakly saline alluvial plain on margins of marsh.	No	No	28.5 km N	Unlikely	Highly Unlikely
Glycine falcata	P3			Mat-forming perennial, herb, to 0.2 m high. Fl. blue-purple, May or Jul. Black clayey sand. Along drainage depressions in crabhole plains on river floodplains.	Possible	Adjacent	15.4 km NE	Unlikely	Highly Unlikely
Rhynchosia bungarensis	P4			Compact, prostrate shrub, to 0.5 m high. Fl. yellow. Pebbly, shingly coarse sand amongst boulders. Banks of flow line in the mouth of a gully in a valley wall. Granite	Possible	Adjacent	17 km NNW	Unlikely	Highly Unlikely
Isotropis forrestii	P1			Erect shrub, 0.4-1.5 m high. Fl. yellow/orange & red, Apr to Sep or Dec. Stony clay loam, sandy alluvium. Along drainage lines.	No	No	97.6 km WSW	Highly Unlikely	Highly Unlikely
Lindernia sp. Pilbara (M.N. Lyons & L. Lewis FV 1069)	P1			Erect, annual herb. Claypans, low dunes/slopes, waters edge.	No	No	44.9 km NNE	Highly Unlikely	Highly Unlikely
Samolus sp. Fortescue Marsh (A. Markey & R. Coppen FM 9702)	P1			Erect, perennial, straggly shrub, to 1.5 m high. Fl. white. Red/brown clay loam. Floodplains, flat lake margins, banks of permanent freshwater pools.	No	No	48.6 km NNW	Highly Unlikely	Highly Unlikely
Tecticornia globulifera	P1			Low chenopod shrub, 0.4 m high. Salt lakes, marshes	No	No	45.1 km N	Highly Unlikely	Highly Unlikely
Tecticornia sp. Christmas Creek (K.A. Shepherd & T. Colmer et al. KS 1063)	P1			Low, erect perennial shrub, 0.3-1.1 m high. Red/brown sandy clay loam. Undulating plains, flats, floodplains. Widespread across the saline flats of the Fortescue Marsh on red-brown clay.	No	No	40.6 km NNW	Highly Unlikely	Highly Unlikely
Dicladanthera glabra	P2			Spreading perennial, herb or shrub, to 0.6(-1) m high. Fl. white/white-blue, Apr or Aug to Oct. Alluvium. Along watercourses, near rock pools.	No	No	50.4 km NW	Highly Unlikely	Highly Unlikely
Rhodanthe frenchii	P2			Upright annual, herb, to 0.35 m high. Fl. yellow, Aug to Oct. Stony hills, rocky river banks & outcrops.	No	No	~ 160 km WSW	Highly Unlikely	Highly Unlikely
Thryptomene stenophylla	P2			Spreading shrub, 0.3-1.2 m high. Fl. pink-purple, Jun or Aug. Red or yellow sand, loam. Limestone hills, sandplains.	No	No	~ 650 km SW	Highly Unlikely	Highly Unlikely
Dysphania congestiflora	P3			Erect annual herb, 0.05-0.1 m tall. Deep red-brown saline clays. Edge of saline floodplains and lake beds, seasonally inundated flats	No	No	40.5 km NNW	Highly Unlikely	Highly Unlikely
Eleocharis papillosa	P3			Annual, herb. Fl. brown, Nov. Red clay over granite, open clay flats. Claypans.	No	Yes	47.9 km NNE	Highly Unlikely	Highly Unlikely
Eragrostis sp. Erect spikelets (P.K. Latz 2122)	P3			Tufted, erect perennial grass, to 0.3 m high. Calcrete rise, near samphire flats.	No	Yes	48.5 km NNW	Highly Unlikely	Highly Unlikely

Taxon	Conservation Status			Habit and Habitat	Habitat within Study Area	Within Current Known Distribution	Distance to Nearest Record	Likelihood Pre-Survey	Likelihood Post-Survey
	DBCA	BC Act	EPBC Act						
Eremophila rigida	P3			Bushy shrub, 0.3-4 m high. Fl. cream, Sep. Red sand alluvium. Hardpan plains, stony clay depressions.	No	No	46.9 km S	Highly Unlikely	Highly Unlikely
Tecticornia medusa	P3			Erect shrub to 0.7 m. Articles bright green. Flat saline floodplain. Red clay. Samphire flats	No	No	45.5 km ENE	Highly Unlikely	Highly Unlikely
Vittadinia pustulata	P3			Low annual, herb (sometimes persisting as an under-shrub), 0.1-0.3 m high. Fl. Sep.	No	No	~ 250 km SE	Highly Unlikely	Highly Unlikely
Eremophila youngii subsp. *lepidota*	P4			Dense, spreading shrub, (0.2-)1-3 m high. Fl. purple-red-pink, Jan or Mar or Jun or Aug to Sep. Stony red sandy loam. Flats plains, floodplains, sometimes semi-saline, clay flats.	No	Yes	40.3 km NNE	Highly Unlikely	Highly Unlikely
Androcalva adenothalia	T	CR	-	Low, prostrate shrub, to 0.1 m high. Fl. white/pink. Orange/brown sandy gravelly loam. Plains.	No	No	~ 700 km SW	Highly Unlikely	Highly Unlikely

Appendix K: Database Search Results.

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Acanthaceae	*Dicladanthera forrestii*	x	x	x								
	Dicladanthera glabra	x	x						P2			
	Dipteracanthus australasicus		x									
	Dipteracanthus australasicus subsp. *australasicus*	x		x								
	Dipteracanthus australasicus subsp. *corynothecus*	x										
	Harnieria kempeana		x	x								
	Harnieria kempeana subsp. *muelleri*	x										
	Rostellularia adscendens	x	x									
	Rostellularia adscendens var. *latifolia*	x		x	x				P3			
Aizoaceae	*Trianthema glossostigmum*	x	x									
	Trianthema pilosum	x	x									
	Trianthema triquetrum		x									
	Trianthema turgidifolium		x									
Alismataceae	*Sagittaria platyphylla*							x				Y
Amaranthaceae	*Achyranthes aspera*		x	x								
	Aerva javanica	x	x	x								Y
	Alternanthera denticulata	x	x	x								
	Alternanthera nana	x	x	x								
	Alternanthera nodiflora	x		x								
	Alternanthera pungens		x									Y
	Amaranthus centralis	x	x		x				P3			
	Amaranthus cochleitepalus	x	x									
	Amaranthus cuspidifolius	x	x	x								
	Amaranthus interruptus	x		x								
	Amaranthus mitchellii	x	x	x								
	Amaranthus undulatus	x	x	x								
	Gomphrena affinis		x									
	Gomphrena canescens	x	x									
	Gomphrena canescens subsp. *canescens*	x		x								
	Gomphrena cunninghamii	x	x	x								

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Amaranthaceae cont.	*Gomphrena kanisii*	x	x	x								
	Gomphrena lanata		x									
	Gomphrena sordida		x									
	Ptilotus aervoides	x	x	x								
	Ptilotus arthrolasius		x									
	Ptilotus astrolasius	x	x	x								
	Ptilotus auriculifolius	x	x	x								
	Ptilotus calostachyus	x	x	x								
	Ptilotus carinatus	x	x									
	Ptilotus clementii	x	x	x								
	Ptilotus decipiens	x	x									
	Ptilotus drummondii	x	x									
	Ptilotus exaltatus	x	x	x								
	Ptilotus fusiformis	x	x	x								
	Ptilotus gaudichaudii	x	x	x								
	Ptilotus gomphrenoides	x	x									
	Ptilotus helipteroides	x	x	x								
	Ptilotus incanus	x	x	x								
	Ptilotus mollis	x	x	x	x				P4			
	Ptilotus obovatus	x	x	x								
	Ptilotus polystachyus	x	x	x								
	Ptilotus roei	x	x	x								
	Ptilotus rotundifolius	x	x	x								
	Ptilotus schwartzii	x	x									
	Ptilotus schwartzii var. *schwartzii*	x		x								
	Ptilotus xerophilus		x	x								
Apiaceae	*Cyclospermum leptophyllum*	x	x									Y
	Daucus glochidiatus	x	x									
Apocynaceae	*Calotropis procera*							x				Y
	Catharanthus roseus		x									Y
	Cryptostegia madagascariensis							x				Y
	Cynanchum floribundum	x	x	x								

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Apocynaceae cont.	*Cynanchum pedunculatum*	x	x									
	Cynanchum viminale		x									
	Cynanchum viminale subsp. *australe*	x		x								
	Gymnanthera cunninghamii	x	x	x	x				P3			
	Leichhardtia australis	x	x	x								
	Vincetoxicum flexuosum		x	x								
	Vincetoxicum lineare	x	x	x								
Araceae	*Pistia stratiotes*							x				Y
	Zantedeschia aethiopica							x				Y
Araliaceae	*Astrotricha hamptonii*	x	x	x								
	Hydrocotyle ranunculoides							x				Y
	Trachymene oleracea	x	x	x								
	Trachymene oleracea subsp. *oleracea*	x		x								
	Trachymene pilbarensis	x	x									
Arecaceae	*Phoenix dactylifera*		x									Y
Asparagaceae	*Arthropodium vanleeuwenii*	x			x				P2			
	Asparagus asparagoides							x				Y
	Thysanotus exiliflorus	x	x									
	Thysanotus manglesianus	x	x									
	Thysanotus sp. Eremaean (S. van Leeuwen 1067)	x	x									
Asphodelaceae	*Bulbine pendula*	x	x									
Asteraceae	*Angianthus tomentosus*		x									
	Apowollastonia hamersleyensis	x	x									
	Bidens bipinnata	x	x	x								Y
	Bidens pilosa var. *pilosa*		x									Y
	Bidens subalternans var. *simulans*	x										
	Blumea tenella	x	x	x								
	Brachyscome ciliaris	x	x									
	Brachyscome iberidifolia		x	x								
	Calocephalus beardii	x	x									
	Calocephalus francisii	x	x									

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Asteraceae cont.	*Calocephalus knappii*	x	x									
	Calocephalus multiflorus	x	x	x								
	Calocephalus pilbarensis	x	x									
	Calotis hispidula	x	x	x								
	Calotis latiuscula		x	x								
	Calotis multicaulis	x	x									
	Calotis plumulifera	x	x	x								
	Calotis porphyroglossa	x	x									
	Calotis squamigera		x		x				P1			
	Centipeda crateriformis subsp. *crateriformis*			x								
	Centipeda minima		x	x								
	Centipeda minima subsp. *macrocephala*	x		x								
	Centipeda minima subsp. *minima*	x										
	Centipeda thespidioides	x	x									
	Chondrilla juncea							x				Y
	Chrysocephalum apiculatum		x	x								
	Chrysocephalum apiculatum subsp. *pilbarense*	x		x								
	Chrysocephalum gilesii	x	x	x								
	Chrysocephalum pterochaetum	x	x	x								
	Dichromochlamys dentatifolia	x	x									
	Erigeron bonariensis	x	x	x								Y
	Flaveria trinervia	x	x	x								Y
	Gnephosis arachnoidea	x	x	x								
	Gnephosis brevifolia		x									
	Iotasperma sessilifolium	x	x		x				P3			
	Ixiochlamys cuneifolia	x	x									
	Lactuca saligna		x									Y
	Lactuca serriola	x	x	x								Y
	Lactuca serriola forma *serriola*	x										
	Leiocarpa semicalva	x	x									
	Leiocarpa semicalva subsp. *semicalva*	x		x								
	Leiocarpa tomentosa	x	x									

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Asteraceae cont.	*Minuria leptophylla*	x	x									
	Myriocephalus oldfieldii	x	x	x								
	Olearia fluvialis	x	x	x								
	Olearia mucronata	x	x	x	x	x			P3			
	Olearia plucheacea		x									
	Olearia stuartii	x	x	x								
	Olearia xerophila	x	x	x								
	Onopordum acaulon							x				Y
	Pentalepis trichodesmoides		x									
	Pentalepis trichodesmoides subsp. *hispida*				x				P2			
	Peripleura arida	x	x	x								
	Peripleura obovata	x	x	x								
	Peripleura virgata	x	x	x								
	Pilbara trudgenii	x	x	x	x	x			P3			
	Pluchea dentex	x	x	x								
	Pluchea dunlopii		x	x								
	Pluchea ferdinandi-muelleri	x	x									
	Pluchea rubelliflora		x	x								
	Pluchea tetranthera			x								
	Podolepis eremaea	x	x									
	Podolepis remota	x	x									
	Pseudognaphalium luteoalbum	x	x	x								
	Pterocaulon serrulatum		x	x								
	Pterocaulon serrulatum var. *velutinum*	x		x								
	Pterocaulon sphacelatum	x	x	x								
	Pterocaulon sphaeranthoides	x	x	x								
	Rhodanthe ascendens	x	x		x	x			P1			
	Rhodanthe cf. *margarethae*			x								
	Rhodanthe charsleyae	x	x	x								
	Rhodanthe citrina	x	x									
	Rhodanthe floribunda	x	x	x								
	Rhodanthe frenchii	x	x						P2			

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Asteraceae cont.	*Rhodanthe humboldtiana*	x	x									
	Rhodanthe margarethae	x	x	x								
	Rhodanthe polakii	x	x									
	Rhodanthe propinqua	x	x	x								
	Rhodanthe sterilescens	x	x	x								
	Roebuckiella ciliocarpa		x	x								
	Roebuckiella oncocarpa		x									
	Roebuckiella similis	x	x	x								
	Rutidosis helichrysoides	x	x	x								
	Rutidosis helichrysoides subsp. *helichrysoides*	x		x								
	Schoenia ayersii	x	x									
	Schoenia cassiniana	x	x									
	Senecio hamersleyensis	x	x	x								
	Senecio magnificus	x	x									
	Senecio pinnatifolius		x									
	Sigesbeckia orientalis	x	x	x								Y
	Silybum marianum							x				Y
	Sonchus hydrophilus		x									
	Sonchus oleraceus		x	x								Y
	Streptoglossa adscendens	x	x									
	Streptoglossa bubakii	x	x	x								
	Streptoglossa cylindriceps	x	x									
	Streptoglossa decurrens	x	x	x								
	Streptoglossa liatroides			x								
	Streptoglossa odora	x	x									
	Streptoglossa sp. Cracking clays (S. van Leeuwen et al. PBS 7353)				x				P3			
	Streptoglossa tenuiflora	x	x									
	Symphyotrichum squamatum	x	x									Y
	Taplinia saxatilis	x	x									
	Taraxacum khatoonae	x	x									Y
	Tridax procumbens	x	x	x								Y

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Asteraceae cont.	*Vittadinia dissecta*		x									
	Vittadinia dissecta var. *hirta*	x		x								
	Vittadinia eremaea	x	x									
	Vittadinia sp. Coondewanna Flats (S. van Leeuwen 4684)	x	x	x	x	x			P3			
	Xanthium spinosum							x				Y
	Xanthium strumarium							x				Y
	Xerochrysum boreale	x	x		x				P3			
	Xerochrysum interiore	x	x	x								
	Xerochrysum macranthum		x									
Bignoniaceae	*Pandorea pandorana*	x	x	x								
Boraginaceae	*Echium plantagineum*							x				Y
	Ehretia saligna		x	x								
	Euploca chrysocarpa	x	x									
	Euploca conocarpa		x									
	Euploca cunninghamii	x	x	x								
	Euploca glabella		x									
	Euploca heterantha	x	x	x								
	Euploca inexplicita	x	x	x								
	Euploca ovalifolia		x									
	Euploca pachyphylla	x	x									
	Euploca skeleton		x									
	Euploca tenuifolia		x	x								
	Euploca ventricosa	x	x									
	Halgania cyanea	x	x									
	Halgania cyanea var. Allambi Stn (B.W. Strong 676)	x										
	Halgania gustafsenii	x	x									
	Halgania gustafsenii var. *gustafsenii*	x		x								
	Halgania gustafsenii var. Mid West (G. Perry 370)	x		x								
	Halgania solanacea		x									

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Boraginaceae cont.	*Halgania solanacea* var. Mt Doreen (G.M. Chippendale 4206)	x										
	Heliotropium crispatum	x	x									
	Trichodesma zeylanicum	x	x	x								
	Trichodesma zeylanicum var. *zeylanicum*			x								
Brassicaceae	*Cuphonotus andraeanus*	x	x	x								
	Lepidium catapycnon	x	x	x	x	x			P4			
	Lepidium echinatum	x	x	x								
	Lepidium muelleri-ferdinandii	x	x	x								
	Lepidium oxytrichum	x	x	x								
	Lepidium pedicellosum	x	x	x								
	Lepidium phlebopetalum	x	x	x								
	Lepidium pholidogynum	x	x	x								
	Lepidium platypetalum		x	x								
	Menkea villosula	x	x									
	Sisymbrium orientale			x								
	Stenopetalum anfractum	x	x	x								
	Stenopetalum decipiens	x	x									
	Stenopetalum nutans	x	x	x								
	Stenopetalum pedicellare	x	x	x								
	Stenopetalum velutinum	x	x									
Cactaceae	*Austrocylindropuntia cylindrica*							x				Y
	Austrocylindropuntia subulata							x				Y
	Cylindropuntia fulgida							x				Y
	Cylindropuntia imbricata							x				Y
	Cylindropuntia kleiniae							x				Y
	Cylindropuntia pallida							x				Y
	Cylindropuntia tunicata							x				Y
	Opuntia elata							x				Y
	Opuntia elatior							x				Y
	Opuntia engelmannii							x				Y
	Opuntia ficus-indica							x				Y

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Cactaceae cont.	*Opuntia microdasys*							x				Y
	Opuntia monacantha							x				Y
	Opuntia polyacantha							x				Y
	Opuntia puberula							x				Y
	Opuntia stricta							x				Y
	Opuntia tomentosa							x				Y
Campanulaceae	*Isotoma petraea*	x	x									
	Lobelia arnhemiaca	x	x									
	Lobelia heterophylla	x	x									
	Lobelia heterophylla subsp. *heterophylla*	x										
	Lobelia heterophylla subsp. *pilbarensis*	x		x								
	Wahlenbergia caryophylloides		x									
	Wahlenbergia gracilenta	x	x	x								
	Wahlenbergia tumidifructa	x	x	x								
Capparaceae	*Capparis lasiantha*	x	x	x								
	Capparis mitchellii	x	x	x								
	Capparis spinosa	x	x									
	Capparis spinosa subsp. *nummularia*	x		x								
	Capparis umbonata	x	x	x								
Caryophyllaceae	*Polycarpaea corymbosa*	x	x	x								
	Polycarpaea corymbosa var. *corymbosa*	x		x								
	Polycarpaea holtzei	x	x	x								
	Polycarpaea longiflora	x	x	x								
Celastraceae	*Maytenus* sp. Mt Windell (S. van Leeuwen 846)	x	x	x								
	Stackhousia clementii	x	x		x				P3			
	Stackhousia intermedia	x	x	x								
	Stackhousia muricata	x	x	x								
	Stackhousia muricata subsp. *annual (W.R. Barker 2172)*	x										
	Stackhousia sp. swollen gynophore (W.R. Barker 2041)	x	x	x								

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Chenopodiaceae	*Atriplex amnicola*		x									
	Atriplex bunburyana		x									
	Atriplex codonocarpa		x									
	Atriplex flabelliformis		x		x				P3			
	Atriplex lindleyi		x									
	Chenopodium auricomum	x	x									
	Chenopodium gaudichaudianum			x								
	Dissocarpus paradoxus	x	x									
	Dysphania congestiflora				x				P3			
	Dysphania glomulifera		x									
	Dysphania glomulifera subsp. *eremaea*	x		x								
	Dysphania kalpari	x	x	x								
	Dysphania melanocarpa	x	x	x								
	Dysphania melanocarpa forma *leucocarpa*	x										
	Dysphania melanocarpa forma *melanocarpa*	x										
	Dysphania plantaginella			x								
	Dysphania rhadinostachya	x	x	x								
	Dysphania rhadinostachya subsp. *inflata*	x										
	Dysphania rhadinostachya subsp. *rhadinostachya*	x		x								
	Dysphania saxatilis		x	x								
	Enchylaena tomentosa	x	x									
	Enchylaena tomentosa var. *tomentosa*			x								
	Maireana carnosa	x	x									
	Maireana georgei	x	x	x								
	Maireana luehmannii		x									
	Maireana melanocoma		x									
	Maireana planifolia	x	x	x								
	Maireana planifolia x *villosa*	x										
	Maireana platycarpa		x									
	Maireana pyramidata		x									
	Maireana thesioides	x	x									

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Chenopodiaceae cont.	*Maireana tomentosa*			x								
	Maireana triptera	x	x	x								
	Maireana villosa	x	x	x								
	Rhagodia eremaea	x	x	x								
	Rhagodia preissii	x	x									
	Rhagodia sp. Hamersley (M. Trudgen 17794)	x	x	x	x	x			P3			
	Salsola australis	x	x	x								
	Sclerolaena burbidgeae		x									
	Sclerolaena convexula	x	x	x								
	Sclerolaena cornishiana	x	x	x								
	Sclerolaena costata	x	x	x								
	Sclerolaena cuneata		x									
	Sclerolaena densiflora		x									
	Sclerolaena deserticola	x	x									
	Sclerolaena diacantha		x									
	Sclerolaena eriacantha	x	x									
	Sclerolaena lanicuspis		x									
	Sclerolaena tetragona	x	x	x								
	Tecticornia auriculata		x									
	Tecticornia disarticulata		x									
	Tecticornia globulifera				x	x			P1			
	Tecticornia halocnemoides		x									
	Tecticornia indica		x									
	Tecticornia medusa		x		x				P3			
	Tecticornia sp. Christmas Creek (K.A. Shepherd & T. Colmer et al. KS 1063)				x				P1			
	Tecticornia sp. Dennys Crossing (K.A. Shepherd & J. English KS 552)		x									
Cleomaceae	*Areocleome oxalidea*	x	x									
	Arivela viscosa	x	x	x								
Commelinaceae	*Commelina ensifolia*	x	x	x								

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Convolvulaceae	*Bonamia erecta*	x	x	x								
	Bonamia media	x	x	x								
	Bonamia pilbarensis	x	x	x								
	Bonamia rosea	x	x	x								
	Convolvulus clementii	x	x	x								
	Convolvulus remotus		x	x								
	Cuscuta victoriana	x	x									
	Distimake dissectus		x									Y
	Duperreya commixta	x	x	x								
	Evolvulus alsinoides	x	x	x								
	Evolvulus alsinoides var. *decumbens*			x								
	Evolvulus alsinoides var. *villosicalyx*	x		x								
	Ipomoea calobra		x									
	Ipomoea lonchophylla	x	x									
	Ipomoea muelleri	x	x	x								
	Ipomoea plebeia	x	x	x								
	Ipomoea polymorpha	x	x									
	Ipomoea racemigera	x	x		x				P2			
	Operculina aequisepala		x									
	Polymeria ambigua	x	x	x								
	Polymeria calycina	x		x								
	Polymeria lanata	x	x									
	Polymeria longifolia	x	x									
	Polymeria mollis		x	x								
Crassulaceae	*Crassula peduncularis*	x	x									
	Crassula tetramera		x									
Cucurbitaceae	*Austrobryonia pilbarensis*	x	x									
	Citrullus amarus	x	x	x								Y
	Citrullus colocynthis			x								
	Coccinia grandis							x				Y
	Cucumis melo	x	x	x								
	Cucumis myriocarpus		x	x								Y

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Cucurbitaceae cont.	*Cucumis myriocarpus* subsp. *myriocarpus*	x										
	Cucumis picrocarpus	x	x									
	Cucumis variabilis	x	x	x								
Cupressaceae	*Callitris columellaris*	x	x	x								
Cyperaceae	*Bulbostylis barbata*	x	x	x								
	Bulbostylis turbinata	x	x									
	Cladium procerum		x		x				P2			
	Cyperus bifax	x	x	x								
	Cyperus bulbosus	x	x									
	Cyperus cunninghamii	x	x	x								
	Cyperus cunninghamii subsp. *cunninghamii*	x		x								
	Cyperus dactylotes			x								
	Cyperus difformis	x	x	x								
	Cyperus hesperius	x	x									
	Cyperus iria	x	x	x								
	Cyperus ixiocarpus	x	x	x								
	Cyperus leptocarpus			x								
	Cyperus pulchellus		x									
	Cyperus squarrosus		x									
	Cyperus vaginatus	x	x	x								
	Eleocharis atropurpurea	x	x									
	Eleocharis geniculata	x	x	x								
	Eleocharis pallens		x									
	Eleocharis papillosa				x				P3			
	Fimbristylis depauperata	x	x									
	Fimbristylis dichotoma	x	x	x								
	Fimbristylis littoralis	x	x									
	Fimbristylis microcarya	x	x	x								
	Fimbristylis sieberiana	x	x		x	x			P3			
	Fimbristylis simulans	x	x	x								
	Fuirena ciliaris		x									
	Machaerina rubiginosa		x									

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Cyperaceae cont.	*Schoenoplectiella dissachantha*	x	x	x								
	Schoenoplectiella laevis		x									
	Schoenoplectus subulatus	x	x	x								
	Schoenus falcatus		x									
Dilleniaceae	*Hibbertia glaberrima*	x	x	x								
Droseraceae	*Drosera finlaysoniana*			x								
Elaeocarpaceae	*Tetratheca fordiana*	x	x		x	x			P2			
Elatinaceae	*Bergia pedicellaris*		x	x								
	Bergia trimera		x	x								
Euphorbiaceae	*Adriana tomentosa*	x	x									
	Adriana tomentosa var. *hookeri*	x										
	Adriana tomentosa var. *tomentosa*	x										
	Euphorbia australis	x	x	x								
	Euphorbia australis var. *glabra*	x			x	x			P3			
	Euphorbia australis var. *hispidula*	x		x								
	Euphorbia australis var. *subtomentosa*	x		x								
	Euphorbia biconvexa	x	x	x								
	Euphorbia boophthona	x	x	x								
	Euphorbia careyi		x									
	Euphorbia clementii	x				x			P3			
	Euphorbia coghlanii	x	x	x								
	Euphorbia drummondii	x	x	x								
	Euphorbia ferdinandi	x	x									
	Euphorbia ferdinandi var. *ferdinandi*	x		x								
	Euphorbia hirta			x								
	Euphorbia inappendiculata		x									
	Euphorbia inappendiculata var. *inappendiculata*				x				P2			
	Euphorbia inappendiculata var. *queenslandica*	x			x				P2			
	Euphorbia myrtoides	x										
	Euphorbia prostrata		x									Y
	Euphorbia stevenii	x	x		x				P3			
	Euphorbia tannensis		x									

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Euphorbiaceae cont.	*Euphorbia tannensis* subsp. *eremophila*	x		x								
	Euphorbia trigonosperma	x	x	x								
	Euphorbia vaccaria		x									
	Euphorbia vaccaria var. *vaccaria*	x										
	Euphorbia wheeleri		x									
	Jatropha gossypiifolia							x				Y
	Mercurialis annua	x	x									Y
Fabaceae	*Acacia* ? *arida* x *hilliana*			x								
	Acacia acradenia	x	x									
	Acacia adoxa	x	x	x								
	Acacia adoxa var. *adoxa*	x		x								
	Acacia adsurgens	x	x	x								
	Acacia adsurgens x ?			x								
	Acacia adsurgens x *rhodophloia*	x	x									
	Acacia aff. *ayersiana*	x										
	Acacia aff. *hamersleyensis*	x										
	Acacia ampliceps	x	x	x								
	Acacia ancistrocarpa	x	x	x								
	Acacia aneura	x	x	x								
	Acacia aneura x *ayersiana*			x								
	Acacia aneura x *incurvaneura*	x										
	Acacia aptaneura	x	x	x								
	Acacia aptaneura x *ayersiana*			x								
	Acacia aptaneura x *incurvaneura*	x										
	Acacia aptaneura x *paraneura*	x										
	Acacia aptaneura x *pteraneura*	x										
	Acacia arida	x	x	x								
	Acacia arrecta		x									
	Acacia atkinsiana	x	x	x								
	Acacia ayersiana	x	x	x								
	Acacia ayersiana (hybrid)	x										
	Acacia bivenosa	x	x	x								

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Fabaceae cont.	*Acacia bromilowiana*	x	x	x	x	x			P4			
	Acacia catenulata	x	x									
	Acacia catenulata subsp. *occidentalis*	x		x								
	Acacia citrinoviridis	x	x	x								
	Acacia colei		x									
	Acacia colei var. *colei*	x										
	Acacia colei var. *ileocarpa*			x								
	Acacia coriacea		x									
	Acacia coriacea subsp. *pendens*	x		x								
	Acacia cowleana	x	x	x								
	Acacia cuthbertsonii subsp. *cuthbertsonii*			x								
	Acacia daweana		x		x	x			P3			
	Acacia dictyophleba	x	x	x								
	Acacia effusa	x	x	x	x	x			P3			
	Acacia elachantha	x	x	x								
	Acacia eriopoda		x									
	Acacia exigua	x	x									
	Acacia hamersleyensis	x	x	x								
	Acacia hilliana	x	x	x								
	Acacia inaequilatera	x	x	x								
	Acacia incurvaneura	x	x	x								
	Acacia kempeana	x	x	x								
	Acacia ligulata	x	x									
	Acacia macraneura	x	x	x								
	Acacia maitlandii	x	x	x								
	Acacia marramamba	x	x	x								
	Acacia melleodora	x	x									
	Acacia minyura	x	x	x								
	Acacia monticola	x	x	x								
	Acacia mulganeura	x	x	x								
	Acacia orthocarpa			x								
	Acacia pachyacra	x	x	x								

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Fabaceae cont.	*Acacia paraneura*	x	x	x								
	Acacia pruinocarpa	x	x	x								
	Acacia pteraneura	x	x	x								
	Acacia pyrifolia	x	x	x								
	Acacia pyrifolia var. *morrisonii*	x										
	Acacia pyrifolia var. *pyrifolia*	x		x								
	Acacia retivenea		x									
	Acacia retivenea subsp. *clandestina*	x										
	Acacia rhodophloia	x	x	x								
	Acacia rhodophloia x *sibirica*	x	x	x								
	Acacia sclerosperma		x									
	Acacia sclerosperma subsp. *sclerosperma*	x										
	Acacia sericophylla	x	x	x								
	Acacia sibilans		x									
	Acacia sibirica	x	x	x								
	Acacia sphaerostachya		x									
	Acacia spondylophylla	x	x	x								
	Acacia steedmanii		x									
	Acacia steedmanii subsp. *borealis*	x		x								
	Acacia subcontorta		x									
	Acacia subtiliformis	x	x		x	x			P3			
	Acacia synchronicia	x	x	x								
	Acacia tenuissima	x	x	x								
	Acacia tetragonophylla	x	x	x								
	Acacia trachycarpa	x	x	x								
	Acacia trudgeniana	x	x	x								
	Acacia tumida		x									
	Acacia tumida var. *pilbarensis*	x		x								
	Acacia victoriae	x	x									
	Acacia victoriae subsp. *victoriae*	x										
	Acacia wanyu		x	x								
	Acacia xiphophylla		x									

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Fabaceae cont.	*Alhagi maurorum*							x				Y
	Alysicarpus muelleri		x									
	Cajanus cinereus		x									
	Cajanus marmoratus	x	x									
	Crotalaria cunninghamii		x									
	Crotalaria dissitiflora		x									
	Crotalaria dissitiflora subsp. *benthamiana*	x										
	Crotalaria medicaginea	x	x	x								
	Crotalaria medicaginea var. *neglecta*	x		x								
	Crotalaria novae-hollandiae	x	x									
	Crotalaria novae-hollandiae subsp. *novae-hollandiae*	x										
	Cullen cinereum	x	x									
	Cullen graveolens	x	x									
	Cullen lachnostachys		x									
	Cullen leucanthum		x									
	Cullen leucochaites	x	x	x								
	Cullen martinii	x	x									
	Cullen pallidum	x	x									
	Cullen pogonocarpum	x	x	x								
	Daviesia eremaea	x	x									
	Desmodiopsis campylocaulon	x	x									
	Gastrolobium grandiflorum	x	x	x								
	Glycine canescens	x	x	x								
	Glycine falcata	x	x		x	x			P3			
	Glycine tabacina		x									
	Gompholobium karijini		x		x				P2			
	Gompholobium oreophilum	x	x	x								
	Gompholobium polyzygum	x	x	x								
	Grona muelleri	x	x									
	Indigastrum parviflorum		x									
	Indigofera colutea		x									

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Fabaceae cont.	*Indigofera fractiflexa*	x	x	x								
	Indigofera fractiflexa subsp. *fractiflexa*	x		x								
	Indigofera georgei	x	x	x								
	Indigofera gilesii	x	x	x	x	x			P3			
	Indigofera hirsuta		x									
	Indigofera ixocarpa		x		x	x			P2			
	Indigofera linifolia	x	x									
	Indigofera linnaei		x	x								
	Indigofera monophylla	x	x	x								
	Indigofera rugosa	x	x	x								
	Indigofera trita	x	x									
	Isotropis atropurpurea	x	x	x								
	Isotropis forrestii		x						P1			
	Isotropis iophyta	x	x	x								
	Isotropis parviflora	x	x		x				P2			
	Kennedia prorepens			x								
	Labichea cassioides		x									
	Lotus cruentus	x	x									
	Mirbelia viminalis	x	x	x								
	Muelleranthus stipularis		x									
	Neptunia dimorphantha	x	x									
	Neptunia gracilis	x	x									
	Neptunia gracilis forma *gracilis*	x										
	Parkinsonia aculeata							x				Y
	Petalostylis cassioides		x									
	Petalostylis labicheoides	x	x	x								
	Prosopis glandulosa x *velutina*							x				Y
	Rhynchosia australis	x	x									
	Rhynchosia bungarensis	x	x		x				P4			
	Rhynchosia minima	x	x	x								
	Senna alata							x				Y
	Senna artemisioides	x	x									

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Fabaceae cont.	*Senna artemisioides* subsp. ×*artemisioides*	x		x								
	Senna artemisioides subsp. ×*sturtii*	x		x								
	Senna artemisioides subsp. *filifolia*	x		x								
	Senna artemisioides subsp. *helmsii*	x		x								
	Senna artemisioides subsp. *oligophylla*	x		x								
	Senna artemisioides subsp. *oligophylla* x *glutinosa* subsp. *glutinosa*	x										
	Senna artemisioides subsp. *oligophylla* x *helmsii*	x		x								
	Senna artemisioides subsp. *petiolaris*	x		x								
	Senna cf. *glaucifolia*			x								
	Senna curvistyla		x									
	Senna cuthbertsonii		x									
	Senna ferraria	x	x	x								
	Senna glaucifolia	x	x	x								
	Senna glaucifolia x *glutinosa* subsp. ×*luerssenii*	x										
	Senna glaucifolia x *glutinosa* subsp. *glutinosa*	x										
	Senna glutinosa	x	x									
	Senna glutinosa subsp. ×*luerssenii*	x		x								
	Senna glutinosa subsp. ×*luerssenii* x *stricta*	x										
	Senna glutinosa subsp. *chatelainiana*	x										
	Senna glutinosa subsp. *glutinosa*	x		x								
	Senna glutinosa subsp. *glutinosa* x *glutinosa* subsp. ×*luerssenii*	x										
	Senna glutinosa subsp. *glutinosa* x *stricta*	x										
	Senna glutinosa subsp. *pruinosa*	x		x								
	Senna hamersleyensis	x	x	x								
	Senna notabilis	x	x	x								
	Senna obtusifolia							x				Y
	Senna pleurocarpa		x	x								
	Senna pleurocarpa var. *angustifolia*	x		x								
	Senna sericea	x	x	x								
	Senna sp. Karijini (M.E. Trudgen 10392)	x	x									

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Fabaceae cont.	*Senna* sp. Meekatharra (E. Bailey 1-26)		x	x								
	Senna stricta	x	x	x								
	Senna symonii	x	x	x								
	Senna venusta	x	x	x								
	Sesbania cannabina	x	x									
	Stylosanthes hamata	x	x									Y
	Swainsona canescens	x	x	x								
	Swainsona complanata	x	x	x								
	Swainsona decurrens	x	x									
	Swainsona elegantoides	x	x									
	Swainsona formosa	x	x									
	Swainsona kingii	x	x	x								
	Swainsona leeana	x	x									
	Swainsona maccullochiana	x	x									
	Swainsona oroboides	x	x									
	Swainsona paucifoliolata		x									
	Swainsona thompsoniana	x	x		x				P3			
	Swainsona unifoliolata		x									
	Templetonia egena	x	x									
	Tephrosia arenicola		x									
	Tephrosia clementii	x	x									
	Tephrosia densa	x	x	x								
	Tephrosia oxalidea	x	x	x								
	Tephrosia rosea		x									
	Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	x		x								
	Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	x	x	x								
	Tephrosia sp. Clay soils (S. van Leeuwen et al. PBS 0273)	x	x									
	Tephrosia sp. Newman (A.A. Mitchell PRP 29)	x	x									
	Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	x	x									

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Fabaceae cont.	*Tephrosia stipuligera*		x									
	Tephrosia supina		x									
	Tephrosia virens	x	x	x								
	Trigonella suavissima		x									
	Ulex europaeus							x				Y
	Vachellia farnesiana	x	x	x								Y
	Vigna lanceolata	x	x	x								
	Vigna lanceolata var. *lanceolata*	x		x								
	Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)	x	x	x								
Frankeniaceae	*Frankenia cinerea*		x									
Gentianaceae	*Schenkia australis*	x	x									
Geraniaceae	*Erodium cygnorum*	x	x									
Goodeniaceae	*Brunonia australis*	x	x	x								
	Brunonia australis var. A Kimberley Flora (K.F. Kenneally 5452)	x										
	Brunonia sp. Long hairs (D.E. Symon 2440)	x										
	Dampiera anonyma				x	x			P3			
	Dampiera candicans	x	x	x								
	Dampiera metallorum	x	x	x	x	x			P3			
	Goodenia connata	x	x	x								
	Goodenia cusackiana	x	x	x								
	Goodenia heterochila		x	x								
	Goodenia lamprosperma		x	x								
	Goodenia lyrata	x	x		x	x			P3			
	Goodenia microptera	x	x	x								
	Goodenia mueckeana	x	x									
	Goodenia muelleriana	x	x	x								
	Goodenia nuda	x	x	x	x	x						
	Goodenia pascua	x	x									
	Goodenia prostrata	x	x	x								
	Goodenia scaevolina	x	x									

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Goodeniaceae cont.	*Goodenia* sp. East Pilbara (A.A. Mitchell PRP 727)	x			x	x			P3			
	Goodenia stellata	x	x	x								
	Goodenia stobbsiana	x	x	x								
	Goodenia tenuiloba	x	x	x								
	Goodenia triodiophila	x	x	x								
	Scaevola acacioides	x	x	x								
	Scaevola amblyanthera	x	x	x								
	Scaevola amblyanthera var. *amblyanthera*	x										
	Scaevola amblyanthera var. *centralis*	x		x								
	Scaevola browniana	x	x	x								
	Scaevola browniana subsp. *browniana*	x		x								
	Scaevola parvifolia	x	x									
	Scaevola parvifolia subsp. *pilbarae*	x		x								
	Scaevola sp. Hamersley Range basalts (S. van Leeuwen 3675)				x	x			P2			
	Scaevola sp. Mt Bruce (M.E. Trudgen 1333)		x	x								
	Scaevola spinescens	x	x	x								
Gyrostemonaceae	*Codonocarpus cotinifolius*	x	x	x								
Haloragaceae	*Gonocarpus ephemerus*		x									
	Haloragis gossei	x	x	x								
	Haloragis gossei var. *gossei*	x		x								
	Haloragis gossei var. *inflata*	x										
	Haloragis maierae	x	x									
	Haloragis trigonocarpa	x	x									
	Myriophyllum verrucosum		x									
Hemerocallidaceae	*Tricoryne* sp. Hamersley Range (S. van Leeuwen 915)	x	x	x								
Hydrocharitaceae	*Najas marina*		x									
Iridaceae	*Moraea flaccida*							x				Y
	Moraea miniata							x				Y

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Lamiaceae	*Clerodendrum floribundum*		x									
	Clerodendrum floribundum var. *angustifolium*	x		x								
	Clerodendrum tomentosum		x									
	Clerodendrum tomentosum var. *lanceolatum*	x										
	Coleus intraterraneus	x	x									
	Dicrastylis cordifolia	x	x	x								
	Dicrastylis mitchellii		x		x				P1			
	Newcastelia cephalantha	x	x									
	Newcastelia clavipetala	x	x	x								
	Newcastelia hexarrhena		x									
	Prostanthera albiflora	x	x	x								
	Prostanthera campbellii	x	x									
	Teucrium disjunctum	x	x	x								
	Teucrium pilbaranum	x	x		x				P2			
	Teucrium teucriiflorum	x	x	x								
Lauraceae	*Cassytha capillaris*	x	x	x								
	Cassytha filiformis	x	x	x								
	Cassytha racemosa		x									
	Cassytha racemosa forma *pilosa*	x										
Linderniaceae	*Lindernia* sp. Pilbara (M.N. Lyons & L. Lewis FV 1069)				x				P1			
Loganiaceae	*Mitrasacme connata*		x									
Loranthaceae	*Amyema benthamii*		x									
	Amyema bifurcata	x	x									
	Amyema fitzgeraldii	x	x	x								
	Amyema gibberula	x	x									
	Amyema gibberula var. *gibberula*	x		x								
	Amyema hilliana	x	x									
	Amyema miquelii	x	x	x								
	Amyema preissii	x	x	x								
	Amyema sanguinea	x	x	x								
	Amyema sanguinea var. *pulchra*	x		x								

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Loranthaceae cont.	*Amyema sanguinea* var. *sanguinea*	x										
	Diplatia grandibractea		x									
	Lysiana casuarinae	x	x	x								
	Lysiana murrayi	x	x	x								
Lythraceae	*Ammannia baccifera*	x	x	x								
	Ammannia multiflora		x	x								
	Rotala diandra			x								
	Rotala mexicana		x									
	Rotala occultiflora			x								
Malvaceae	*Abutilon amplum*	x	x	x								
	Abutilon cryptopetalum	x	x	x								
	Abutilon cunninghamii	x	x	x								
	Abutilon fraseri	x	x	x								
	Abutilon fraseri subsp. *fraseri*	x										
	Abutilon hannii	x	x									
	Abutilon lepidum	x	x	x								
	Abutilon leucopetalum	x	x									
	Abutilon macrum	x	x	x								
	Abutilon malvifolium	x	x	x								
	Abutilon otocarpum	x	x	x								
	Abutilon oxycarpum	x	x	x								
	Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)	x										
	Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	x	x	x								
	Abutilon sp. Pilbara (W.R. Barker 2025)	x	x	x								
	Androcalva loxophylla		x	x								
	Androcalva luteiflora	x	x	x								
	Brachychiton acuminatus	x	x	x								
	Brachychiton gregorii	x	x	x								
	Corchorus crozophorifolius	x	x	x								
	Corchorus incanus		x									
	Corchorus incanus subsp. *incanus*			x								

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Malvaceae cont.	*Corchorus incanus* subsp. *lithophilus*			x								
	Corchorus laniflorus			x								
	Corchorus lasiocarpus	x	x	x								
	Corchorus lasiocarpus subsp. *lasiocarpus*	x		x								
	Corchorus lasiocarpus subsp. *parvus*	x		x								
	Corchorus parviflorus		x									
	Corchorus sidoides	x	x	x								
	Corchorus sidoides subsp. *sidoides*	x		x								
	Corchorus sp. Hamersley Range (S. van Leeuwen 3586)			x								
	Corchorus sp. Hamersley Range hilltops (S. van Leeuwen 3826)	x	x									
	Corchorus tectus	x	x									
	Corchorus tridens	x	x	x								
	Corchorus walcottii		x									
	Gossypium australe	x	x	x								
	Gossypium australe x *sturtianum*	x										
	Gossypium robinsonii	x	x	x								
	Gossypium robinsonii x *sturtianum*	x										
	Gossypium sturtianum	x	x	x								
	Gossypium sturtianum var. *sturtianum*	x		x								
	Hannafordia bissillii		x									
	Hannafordia bissillii subsp. *bissillii*	x										
	Hibiscus aff. *haynaldii*	x										
	Hibiscus brachychlaenus	x	x	x								
	Hibiscus brachysiphonius		x									
	Hibiscus burtonii	x	x	x								
	Hibiscus coatesii	x	x	x								
	Hibiscus goldsworthii	x		x								
	Hibiscus haynaldii	x	x	x								
	Hibiscus leptocladus	x	x	x								
	Hibiscus sp. Gardneri (A.L. Payne PRP 1435)	x	x									

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Malvaceae cont.	*Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	x		x	x				P2			
	Hibiscus sp. Mt Brockman (E. Thoma ET 1354)				x				P1			
	Hibiscus sp. Mt Robinson (G. Byrne 3537)	x	x									
	Hibiscus sturtii	x	x									
	Hibiscus sturtii var. *campylochlamys*	x		x								
	Hibiscus sturtii var. *grandiflorus*	x		x								
	Hibiscus sturtii var. *platychlamys*	x		x								
	Hibiscus sturtii var. *truncatus*	x										
	Hibiscus verdcourtii	x	x									
	Lawrencia densiflora		x									
	Lawrencia glomerata		x									
	Lawrencia helmsii		x									
	Malvastrum americanum	x	x	x								Y
	Melhania oblongifolia	x	x	x								
	Seringia exastia	x	x	x	x							
	Seringia nephrosperma	x	x	x								
	Sida aff. *fibulifera*			x								
	Sida arenicola	x	x	x								
	Sida arsiniata		x	x								
	Sida calyxhymenia	x	x									
	Sida cardiophylla	x	x	x								
	Sida cf. *platycalyx*			x								
	Sida clementii	x										
	Sida echinocarpa	x	x	x								
	Sida ectogama	x	x	x								
	Sida fibulifera	x	x	x								
	Sida macropoda		x									
	Sida platycalyx	x	x	x								
	Sida rohlenae	x	x									
	Sida rohlenae subsp. *rohlenae*			x								

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Malvaceae cont.	*Sida* sp. Articulation below (A.A. Mitchell PRP 1605)	x	x	x								
	Sida sp. Barlee Range (S. van Leeuwen 1642)	x	x	x	x				P4			
	Sida sp. dark green fruits (S. van Leeuwen 2260)	x	x	x								
	Sida sp. Excedentifolia (J.L. Egan 1925)	x	x	x								
	Sida sp. Golden calyces glabrous (H.N. Foote 32)	x		x								
	Sida sp. Hamersley Range (K. Newbey 10692)	x	x		x				P3			
	Sida sp. L (A.M. Ashby 4202)	x	x	x								
	Sida sp. Pilbara (A.A. Mitchell PRP 1543)	x	x	x								
	Sida sp. Rabbit Flat (B.J. Carter 626)		x									
	Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	x	x	x								
	Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	x	x	x								
	Sida sp. Supplejack Station (T.S. Henshall 2345)	x	x	x								
	Sida sp. tiny glabrous fruit (A.A. Mitchell PRP1152)		x									
	Sida spinosa	x	x	x								
	Sida trichopoda	x	x									
	Triumfetta chaetocarpa			x								
	Triumfetta clementii			x								
	Triumfetta leptacantha	x	x	x								
	Triumfetta maconochieana	x	x									
	Triumfetta ramosa	x	x									
	Waltheria indica	x	x	x								
	Waltheria virgata		x									
Marsileaceae	*Marsilea costulifera*		x									
	Marsilea drummondii		x									
	Marsilea exarata	x	x	x								
	Marsilea hirsuta	x	x	x								
Menispermaceae	*Tinospora smilacina*	x	x	x								

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Molluginaceae	*Trigastrotheca molluginea*	x	x	x								
Montiaceae	*Calandrinia balonensis*		x									
	Calandrinia eremaea		x									
	Calandrinia monosperma	x	x									
	Calandrinia polyandra	x										
	Calandrinia ptychosperma	x	x	x								
	Calandrinia pumila	x	x									
	Calandrinia reticulata		x									
	Calandrinia schistorhiza		x									
Moraceae	*Ficus brachypoda*	x	x	x								
	Ficus platypoda	x	x									
	Ficus virens		x									
Myrtaceae	*Calytrix carinata*	x	x	x								
	Corymbia aspera	x	x	x								
	Corymbia candida	x	x									
	Corymbia chippendalei		x									
	Corymbia deserticola	x	x	x								
	Corymbia deserticola subsp. *deserticola*	x		x								
	Corymbia dichromophloia	x	x									
	Corymbia ferriticola	x	x	x								
	Corymbia hamersleyana	x	x	x								
	Corymbia opaca	x	x									
	Eucalyptus aridimontana		x									
	Eucalyptus camaldulensis	x	x	x								
	Eucalyptus camaldulensis subsp. *obtusa*	x		x								
	Eucalyptus camaldulensis subsp. *refulgens*	x		x								
	Eucalyptus ewartiana	x	x	x								
	Eucalyptus gamophylla	x	x	x								
	Eucalyptus kingsmillii	x	x	x								
	Eucalyptus leucophloia	x	x									
	Eucalyptus leucophloia subsp. *leucophloia*	x		x								
	Eucalyptus lucasii	x	x									

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Myrtaceae cont.	*Eucalyptus pilbarensis*	x	x	x								
	Eucalyptus repullulans	x	x	x								
	Eucalyptus socialis	x	x									
	Eucalyptus socialis subsp. *eucentrica*	x										
	Eucalyptus tephrodes	x	x									
	Eucalyptus trivalva	x	x	x								
	Eucalyptus victrix	x	x	x								
	Eucalyptus xerothermica	x	x	x								
	Lamarchea sulcata		x									
	Melaleuca argentea	x	x									
	Melaleuca bracteata	x	x	x								
	Melaleuca eleuterostachya	x	x									
	Melaleuca glomerata	x	x	x								
	Melaleuca leiocarpa		x									
	Melaleuca leucadendra		x									
	Melaleuca linophylla		x									
	Melaleuca xerophila		x									
	Thryptomene wittweri	x	x		x	x	x		T	VUL	VUL	
Nyctaginaceae	*Boerhavia coccinea*	x	x	x								
	Boerhavia gardneri			x								
	Boerhavia paludosa	x	x									
	Boerhavia repleta	x	x	x								
	Boerhavia schomburgkiana			x								
Oleaceae	*Jasminum didymum*	x	x									
	Jasminum didymum subsp. *lineare*	x		x								
Onagraceae	*Ludwigia perennis*			x								
Ophioglossaceae	*Ophioglossum lusitanicum*	x	x									
Orobanchaceae	*Striga* cf. *squamigera*			x								
	Striga curviflora		x									
	Striga squamigera	x	x									

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Oxalidaceae	*Oxalis corniculata*	x	x									Y
	Oxalis perennans	x	x	x								
	Oxalis sp. Pilbara (M.E. Trudgen 12725)	x	x	x	x				P2			
Papaveraceae	*Argemone ochroleuca*	x	x	x								Y
	Argemone ochroleuca subsp. *ochroleuca*			x								
Pedaliaceae	*Josephinia eugeniae*	x	x	x								
Phrymaceae	*Elacholoma hornii*	x	x									
	Glossostigma diandrum	x	x									
	Mimulus gracilis	x	x	x								
	Peplidium aithocheilum	x	x									
	Peplidium muelleri	x	x	x								
	Peplidium sp. C Evol. Fl. Fauna Arid Aust. (N.T. Burbidge & A. Kanis 8158)			x								
	Peplidium sp. E Evol. Fl. Fauna Arid Aust. (A.S. Weston 12768)	x	x									
Phyllanthaceae	*Cathetus virgatus*	x	x									
	Dendrophyllanthus erwinii	x	x	x								
	Kirganelia baccata	x	x	x								
	Nellica maderaspatensis	x	x	x								
	Notoleptopus decaisnei		x									
	Notoleptopus decaisnei var. *decaisnei*			x								
	Notoleptopus decaisnei var. Orbicularis (A.B. Craig 428)			x								
	Synostemon hamersleyensis	x	x		x				P1			
	Synostemon rhytidospermus	x	x									
Pittosporaceae	*Pittosporum angustifolium*		x	x								
	Pittosporum phillyreoides	x	x									
Plantaginaceae	*Plantago cunninghamii*	x	x									
	Stemodia glabella		x									
	Stemodia grossa	x	x	x								
	Stemodia linophylla		x									
	Stemodia viscosa		x	x								

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Plumbaginaceae	*Plumbago zeylanica*	x	x									
Poaceae	*Acrachne racemosa*	x	x	x								
	Amphipogon caricinus	x	x									
	Amphipogon caricinus var. *caricinus*			x								
	Amphipogon sericeus	x	x	x								
	Aristida burbidgeae	x	x	x								
	Aristida contorta	x	x	x								
	Aristida holathera		x									
	Aristida holathera var. *holathera*	x		x								
	Aristida hygrometrica		x									
	Aristida inaequiglumis	x	x	x								
	Aristida ingrata	x	x	x								
	Aristida jerichoensis		x									
	Aristida jerichoensis var. *subspinulifera*	x		x	x				P3			
	Aristida latifolia	x	x									
	Aristida lazaridis	x	x	x	x				P2			
	Aristida nitidula	x										
	Aristida obscura	x	x	x								
	Aristida pruinosa	x	x	x								
	Astrebla elymoides	x	x									
	Astrebla pectinata	x	x									
	Bothriochloa bladhii	x	x									
	Bothriochloa bladhii subsp. *bladhii*	x										
	Bothriochloa ewartiana	x	x	x								
	Cenchrus ciliaris	x	x	x								Y
	Cenchrus echinatus	x	x									Y
	Cenchrus setiger		x	x								Y
	Chloris barbata	x	x									Y
	Chloris pectinata	x	x	x								
	Chloris virgata	x	x	x								Y
	Chrysopogon fallax	x	x	x								
	Cymbopogon ambiguus	x	x	x								

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Poaceae cont.	*Cymbopogon bombycinus*	x	x									
	Cymbopogon obtectus	x	x	x								
	Cynodon convergens	x	x									
	Cynodon prostratus		x									
	Cynodon tenellus	x	x									
	Dactyloctenium radulans	x	x	x								
	Dichanthium fecundum			x								
	Dichanthium sericeum		x									
	Dichanthium sericeum subsp. *humilius*	x		x								
	Dichanthium sericeum subsp. *polystachyum*	x										
	Dichanthium sericeum subsp. *sericeum*	x										
	Digitaria ammophila	x	x	x								
	Digitaria brownii	x	x	x								
	Digitaria ciliaris	x	x	x								Y
	Digitaria coenicola	x										
	Digitaria ctenantha	x	x	x								
	Diplachne fusca		x									
	Diplachne fusca subsp. *fusca*	x										
	Echinochloa colona	x	x	x								Y
	Elytrophorus spicatus		x	x								
	Enneapogon avenaceus		x									
	Enneapogon caerulescens	x	x	x								
	Enneapogon cylindricus		x	x								
	Enneapogon lindleyanus	x	x	x								
	Enneapogon pallidus	x	x									
	Enneapogon polyphyllus	x	x	x								
	Enneapogon robustissimus	x	x	x								
	Enteropogon ramosus	x	x	x								
	Eragrostis crateriformis		x		x				P3			
	Eragrostis cumingii	x	x	x								
	Eragrostis desertorum	x	x									
	Eragrostis dielsii	x	x									

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Poaceae cont.	*Eragrostis elongata*		x	x								
	Eragrostis eriopoda	x	x	x								
	Eragrostis falcata	x	x									
	Eragrostis fallax	x	x									
	Eragrostis leptocarpa	x	x	x								
	Eragrostis olida		x									
	Eragrostis pergracilis	x	x	x								
	Eragrostis setifolia	x	x	x								
	Eragrostis sp. Erect spikelets (P.K. Latz 2122)				x				P3			
	Eragrostis sp. Mt Robinson (S. van Leeuwen 4109)	x	x	x	x	x			P2			
	Eragrostis tenellula	x	x	x								
	Eragrostis xerophila	x	x	x								
	Eriachne aristidea	x	x	x								
	Eriachne benthamii	x	x	x								
	Eriachne ciliata	x		x								
	Eriachne flaccida	x	x	x								
	Eriachne gardneri		x									
	Eriachne helmsii	x	x	x								
	Eriachne lanata	x	x	x								
	Eriachne mucronata	x	x	x								
	Eriachne obtusa			x								
	Eriachne ovata	x	x									
	Eriachne pulchella	x	x	x								
	Eriachne pulchella subsp. *dominii*	x		x								
	Eriachne pulchella subsp. *pulchella*	x		x								
	Eriachne tenuiculmis	x	x	x								
	Eulalia aurea	x	x	x								
	Eulalia simonii			x								
	Imperata cylindrica		x									
	Ischaemum albovillosum	x	x									
	Iseilema dolichotrichum	x	x	x								

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Poaceae cont.	*Iseilema eremaeum*	x	x	x								
	Iseilema membranaceum	x	x	x								
	Iseilema vaginiflorum	x	x									
	Leptochloa sp. indet			x								
	Melinis repens		x	x								Y
	Monachather paradoxus	x	x									
	Panicum australiense	x	x									
	Panicum australiense var. *australiense*	x										
	Panicum decompositum	x	x	x								
	Panicum effusum	x	x	x								
	Panicum laevinode	x	x	x								
	Paraneurachne muelleri	x	x	x								
	Paspalidium basicladum	x	x	x								
	Paspalidium cf. *jubiflorum*			x								
	Paspalidium clementii	x	x	x								
	Paspalidium constrictum	x	x									
	Paspalidium gracile	x	x									
	Paspalidium jubiflorum	x	x									
	Paspalidium rarum	x	x	x								
	Paspalidium reflexum	x	x									
	Paspalum dilatatum		x									Y
	Perotis rara	x	x	x								
	Schizachyrium fragile	x	x	x								
	Setaria dielsii	x	x	x								
	Setaria surgens		x	x								
	Setaria verticillata	x	x	x								Y
	Sorghum plumosum		x	x								
	Sorghum plumosum var. *plumosum*			x								
	Sorghum timorense		x	x								
	Sporobolus australasicus	x	x	x								
	Themeda avenacea	x	x									

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Poaceae cont.	*Themeda* cf. sp. Hamersley Station (M.E. Trudgen 11431)			x								
	Themeda sp. Hamersley Station (M.E. Trudgen 11431)	x	x	x	x				P3			
	Themeda sp. Mt Barricade (M.E. Trudgen 2471)	x	x	x								
	Themeda triandra	x	x	x								
	Thyridolepis mitchelliana		x									
	Tragus australianus	x	x	x								
	Triodia angusta		x	x								
	Triodia basedowii	x	x	x								
	Triodia basitricha		x		x				P3			
	Triodia biflora	x	x	x								
	Triodia brizoides	x	x	x								
	Triodia epactia		x	x								
	Triodia lanigera			x								
	Triodia longiceps	x	x	x								
	Triodia melvillei	x	x	x								
	Triodia pungens	x	x	x								
	Triodia schinzii	x	x									
	Triodia sp. Karijini (S. van Leeuwen 4111)	x	x	x	x				P1			
	Triodia sp. Mt Ella (M.E. Trudgen 12739)	x	x	x	x				P3			
	Triodia vanleeuwenii	x	x	x								
	Triodia wiseana	x	x	x								
	Tripogonella loliiformis	x	x	x								
	Triraphis mollis	x	x	x								
	Urochloa occidentalis	x	x									
	Urochloa occidentalis var. *ciliata*	x										
	Urochloa occidentalis var. *occidentalis*	x										
	Urochloa piligera	x	x	x								
	Urochloa pubigera	x	x									
	Urochloa subquadripara	x	x									

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Polygalaceae	*Polygala glaucifolia*	x	x	x								
	Polygala isingii	x	x	x								
Polygonaceae	*Duma florulenta*	x	x									
	Rumex vesicarius	x	x	x								Y
Portulacaceae	*Portulaca decipiens*	x	x									
	Portulaca intraterranea		x									
	Portulaca oleracea	x	x	x								
	Portulaca pilosa	x										Y
Potamogetonaceae	*Potamogeton tepperi*		x									
Primulaceae	*Lysimachia arvensis*			x								
	Samolus sp. Fortescue Marsh (A. Markey & R. Coppen FM 9702)				x				P1			
	Samolus sp. Millstream (M.I.H. Brooker 2076)		x									
Proteaceae	*Grevillea berryana*	x	x	x								
	Grevillea eriostachya		x									
	Grevillea pyramidalis	x	x									
	Grevillea pyramidalis subsp. *leucadendron*	x		x								
	Grevillea saxicola	x	x	x	x				P3			
	Grevillea striata		x	x								
	Grevillea wickhamii	x	x	x								
	Grevillea wickhamii subsp. *aprica*	x		x								
	Grevillea wickhamii subsp. *hispidula*	x		x								
	Hakea chordophylla	x	x	x								
	Hakea loreus	x	x									
	Hakea loreus subsp. *loreus*	x		x								
	Hakea preissii		x									
	Hakea rhombales	x	x									
Pteridaceae	*Adiantum capillus-veneris*		x		x				P2			
	Cheilanthes austrotenuifolia	x	x	x								
	Cheilanthes brownii	x	x	x								
	Cheilanthes contigua		x									
	Cheilanthes lasiophylla	x	x	x								

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Pteridaceae cont.	*Cheilanthes sieberi*	x	x									
	Cheilanthes sieberi subsp. *pseudovellea*	x										
	Cheilanthes sieberi subsp. *sieberi*	x		x								
	Pellaea reynoldsii	x	x	x								
	Pteris vittata		x									
Rhamnaceae	*Cryptandra monticola*	x	x	x								
	Stenanthemum petraeum	x	x									
	Ventilago viminalis		x	x								
	Ziziphus mauritiana							x				Y
Rosaceae	*Rubus anglocandicans*							x				Y
	Rubus laudatus							x				Y
	Rubus rugosus							x				Y
	Rubus ulmifolius							x				Y
Rubiaceae	*Dolichocarpa crouchiana*	x	x	x								
	Dolichocarpa sp. Hamersley Station (A.A. Mitchell PRP 1479)	x			x				P3			
	Kohautia australiensis	x	x		x				P2			
	Paranotis sp. Pilbara (H. Ajduk HAOP04a)				x				P1			
	Pomax rupestris	x	x									
	Psydrax latifolia	x	x	x								
	Psydrax rigidula	x	x									
	Psydrax suaveolens	x	x	x								
	Scleromitrion galioides			x								
	Spermacoce brachystema	x	x	x								
	Synaptantha tillaeacea	x	x	x								
Rutaceae	*Geijera salicifolia*		x		x				P3			
Santalaceae	*Anthobolus leptomerioides*	x	x	x								
	Exocarpos sparteus	x	x	x								
	Santalum acuminatum		x									
	Santalum lanceolatum	x	x	x								
	Santalum spicatum		x	x								

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Sapindaceae	*Alectryon oleifolius*	x	x									
	Atalaya hemiglauca	x	x	x								
	Diplopeltis stuartii		x									
	Diplopeltis stuartii var. *stuartii*	x										
	Dodonaea coriacea	x	x	x								
	Dodonaea lanceolata	x	x	x								
	Dodonaea lanceolata var. *lanceolata*	x		x								
	Dodonaea pachyneura	x	x	x								
	Dodonaea petiolaris	x	x	x								
	Dodonaea viscosa	x	x									
	Dodonaea viscosa subsp. *angustissima*			x								
	Dodonaea viscosa subsp. *mucronata*	x		x								
	Dodonaea viscosa subsp. *spatulata*	x		x								
Scrophulariaceae	*Eremophila caespitosa*	x	x	x								
	Eremophila canaliculata	x	x	x								
	Eremophila clarkei	x	x									
	Eremophila compacta	x	x									
	Eremophila compacta subsp. *compacta*			x								
	Eremophila cuneifolia	x	x	x								
	Eremophila exilifolia	x	x									
	Eremophila flaccida		x									
	Eremophila flaccida subsp. *flaccida*	x										
	Eremophila forrestii	x	x	x								
	Eremophila forrestii subsp. *forrestii*	x		x								
	Eremophila forrestii x *latrobei*	x										
	Eremophila fraseri	x	x									
	Eremophila fraseri subsp. *fraseri*	x		x								
	Eremophila galeata	x	x									
	Eremophila gilesii	x	x									
	Eremophila glabra	x	x									
	Eremophila jucunda	x	x									
	Eremophila jucunda subsp. *pulcherrima*	x		x								

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Scrophulariaceae cont.	*Eremophila lachnocalyx*	x	x									
	Eremophila lanceolata	x	x	x								
	Eremophila latrobei	x	x	x								
	Eremophila latrobei subsp. *filiformis*	x		x								
	Eremophila latrobei subsp. *glabra*	x		x								
	Eremophila latrobei subsp. *latrobei*	x		x								
	Eremophila longifolia	x	x	x								
	Eremophila maculata		x									
	Eremophila magnifica	x	x									
	Eremophila magnifica subsp. *magnifica*	x		x	x				P4			
	Eremophila magnifica subsp. *velutina*	x			x	x			P3			
	Eremophila naaykensii	x			x				P3			
	Eremophila oppositifolia		x									
	Eremophila oppositifolia subsp. *angustifolia*	x										
	Eremophila petrophila		x									
	Eremophila petrophila subsp. *petrophila*	x		x								
	Eremophila phyllopoda		x									
	Eremophila phyllopoda subsp. *obliqua*	x		x								
	Eremophila platycalyx	x	x									
	Eremophila platycalyx subsp. Neds Creek (N.H. Speck 1228)	x										
	Eremophila platycalyx subsp. *pardalota*	x		x								
	Eremophila pusilliflora	x	x		x	x			P2			
	Eremophila rigida				x				P3			
	Eremophila sp. West Angelas (S. van Leeuwen 4068)	x	x	x	x				P2			
	Eremophila spongiocarpa		x		x	x			P3			
	Eremophila strongylophylla		x									
	Eremophila tietkensii	x	x	x								
	Eremophila youngii		x									
	Eremophila youngii subsp. *lepidota*	x			x				P4			
	Myoporum montanum	x	x	x								

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Solanaceae	*Datura leichhardtii* subsp. *leichhardtii*	x	x	x								Y
	Nicotiana benthamiana	x	x	x								
	Nicotiana cavicola	x	x									
	Nicotiana ingulba	x										
	Nicotiana obliqua	x		x								
	Nicotiana occidentalis	x	x	x								
	Nicotiana rosulata	x	x	x								
	Nicotiana simulans	x	x									
	Solanum centrale	x	x	x								
	Solanum chippendalei		x									
	Solanum cleistogamum	x	x	x								
	Solanum diversiflorum	x	x									
	Solanum elaeagnifolium							x				Y
	Solanum elatius	x	x	x								
	Solanum ferocissimum	x	x	x								
	Solanum gabrielae	x	x									
	Solanum horridum	x	x	x								
	Solanum kentrocaule	x	x	x	x				P3			
	Solanum lasiophyllum	x	x	x								
	Solanum linnaeanum							x				Y
	Solanum morrisonii	x	x	x								
	Solanum nigrum	x	x	x								Y
	Solanum orbiculatum		x									
	Solanum phlomoides	x	x	x								
	Solanum piceum	x	x									
Stylidiaceae	*Stylidium fluminense*		x									
	Stylidium weeliwolli	x	x		x	x			P3			
Surianaceae	*Stylobasium spathulatum*	x	x	x								
Tamaricaceae	*Tamarix aphylla*							x				Y
Thelypteridaceae	*Ampelopteris prolifera*		x		x				P3			

Family	Taxon	Source							Conservation Status			Introduced
		NM	ALA	BHP	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Thymelaeaceae	*Pimelea forrestiana*	x	x									
	Pimelea holroydii	x	x									
	Pimelea microcephala		x									
	Pimelea microcephala subsp. *microcephala*	x										
Typhaceae	*Typha domingensis*		x									
Urticaceae	*Parietaria cardiostegia*	x	x									
Verbenaceae	*Lantana camara*							x				Y
Violaceae	*Afrohybanthus aurantiacus*	x	x	x								
Zygophyllaceae	*Roepera compressa*		x									
	Roepera eichleri	x	x									
	Roepera iodocarpa	x										
	Tribulopis angustifolia	x	x									
	Tribulus astrocarpus	x	x	x								
	Tribulus forrestii	x	x									
	Tribulus hirsutus	x	x	x								
	Tribulus macrocarpus	x	x									
	Tribulus occidentalis		x	x								
	Tribulus platypterus		x	x								
	Tribulus suberosus	x	x	x								
	Tribulus terrestris		x	x								Y

Appendix L: Introduced Flora Desktop.

Family	Taxon	Source				DP	WoNS	Ecological Impact	Invasiveness
		NM	ALA	WAOL	BHP				
Alismataceae	*Sagittaria platyphylla*			x		Yes	Yes	Not Assessed	Not Assessed
Amaranthaceae	*Aerva javanica*	x	x		x	No	No	High	Rapid
	Alternanthera pungens		x			No	No	Low	Slow
Apiaceae	*Cyclospermum leptophyllum*	x	x			No	No	Not Assessed	Not Assessed
Apocynaceae	*Calotropis procera**			x		Yes	No	Not Assessed	Not Assessed
	Catharanthus roseus		x			No	No	Unknown	Unknown
	Cryptostegia madagascariensis			x		Yes	No	Not Assessed	Not Assessed
Araceae	*Pistia stratiotes*			x		Yes	No	Not Assessed	Not Assessed
	Zantedeschia aethiopica			x		Yes	No	Not Assessed	Not Assessed
Araliaceae	*Hydrocotyle ranunculoides*			x		Yes	No	Not Assessed	Not Assessed
Arecaceae	*Phoenix dactylifera*		x			No	No	High	Rapid
Asparagaceae	*Asparagus asparagoides*			x		Yes	Yes	Not Assessed	Not Assessed
Asteraceae	*Bidens bipinnata*	x	x		x	No	No	Unknown	Rapid
	Bidens pilosa var. *pilosa*		x			No	No	Not Assessed	Not Assessed
	Chondrilla juncea			x		Yes	No	Not Assessed	Not Assessed
	Erigeron bonariensis	x	x		x	No	No	Not Assessed	Not Assessed
	Flaveria trinervia	x	x		x	No	No	Not Assessed	Not Assessed
	Lactuca saligna		x			No	No	Not Assessed	Not Assessed
	Lactuca serriola	x	x		x	No	No	Not Assessed	Not Assessed
	Onopordum acaulon			x		Yes	No	Not Assessed	Not Assessed
	Sigesbeckia orientalis	x	x		x	No	No	Unknown	Rapid
	Silybum marianum			x		Yes	No	Not Assessed	Not Assessed
	Sonchus oleraceus		x		x	No	No	Low	Rapid
	Symphyotrichum squamatum	x	x			No	No	Not Assessed	Not Assessed
	Taraxacum khatoonae	x	x			No	No	Not Assessed	Not Assessed
	Tridax procumbens	x	x		x	No	No	Not Assessed	Not Assessed
	Xanthium spinosum			x		Yes	No	Not Assessed	Not Assessed
	*Xanthium strumarium**			x		Yes	No	Not Assessed	Not Assessed
Boraginaceae	*Echium plantagineum*			x		Yes	No	Not Assessed	Not Assessed
Brassicaceae	*Sisymbrium orientale*				x	No	No	Low	Unknown
Cactaceae	*Austrocylindropuntia cylindrica*			x		Yes	Yes	Not Assessed	Not Assessed
	Austrocylindropuntia subulata			x		Yes	Yes	Not Assessed	Not Assessed
	Cylindropuntia fulgida			x		Yes	Yes	High	Slow

Family	Taxon	Source				DP	WoNS	Ecological Impact	Invasiveness
		NM	ALA	WAOL	BHP				
Cactaceae cont.	*Cylindropuntia imbricata*			x		Yes	Yes	Not Assessed	Not Assessed
	Cylindropuntia kleiniae			x		Yes	Yes	Not Assessed	Not Assessed
	Cylindropuntia pallida			x		Yes	Yes	Not Assessed	Not Assessed
	Cylindropuntia tunicata			x		Yes	Yes	Not Assessed	Not Assessed
	Opuntia elata			x		Yes	Yes	Not Assessed	Not Assessed
	Opuntia elatior			x		Yes	Yes	Not Assessed	Not Assessed
	Opuntia engelmannii			x		Yes	Yes	Not Assessed	Not Assessed
	Opuntia ficus-indica			x		Yes	Yes	Not Assessed	Not Assessed
	Opuntia microdasys			x		Yes	Yes	Not Assessed	Not Assessed
	Opuntia monacantha			x		Yes	Yes	Not Assessed	Not Assessed
	Opuntia polyacantha			x		Yes	Yes	Not Assessed	Not Assessed
	Opuntia puberula			x		Yes	Yes	Not Assessed	Not Assessed
	Opuntia stricta			x		Yes	Yes	High	Rapid
	Opuntia tomentosa			x		Yes	Yes	Not Assessed	Not Assessed
Convolvulaceae	*Distimake dissectus*		x			No	No	Not Assessed	Not Assessed
Cucurbitaceae	*Citrullus amarus*	x	x		x	No	No	Not Assessed	Not Assessed
	Citrullus colocynthis				x	No	No	Unknown	Moderate
	Coccinia grandis			x		Yes	No	Not Assessed	Not Assessed
	Cucumis myriocarpus		x			No	No	Low	Rapid
Euphorbiaceae	*Euphorbia hirta*				x	No	No	Low	Slow
	Euphorbia prostrata		x			No	No	Unknown	Unknown
	*Jatropha gossypiifolia**			x		Yes	Yes	Not Assessed	Not Assessed
	Mercurialis annua	x	x			No	No	Not Assessed	Not Assessed
Fabaceae	*Alhagi maurorum*			x		Yes	No	Not Assessed	Not Assessed
	Parkinsonia aculeata			x		Yes	Yes	High	Rapid
	Prosopis glandulosa x velutina			x		Yes	Yes	Not Assessed	Not Assessed
	Senna alata			x		Yes	No	Not Assessed	Not Assessed
	Senna obtusifolia			x		Yes	No	Not Assessed	Not Assessed
	Stylosanthes hamata	x	x			No	No	Not Assessed	Not Assessed
	Ulex europaeus			x		Yes	Yes	Not Assessed	Not Assessed
	Vachellia farnesiana	x	x		x	No	No	High	Rapid
Iridaceae	*Moraea flaccida*			x		Yes	No	Not Assessed	Not Assessed
	Moraea miniata			x		Yes	No	Not Assessed	Not Assessed

Family	Taxon	Source				DP	WoNS	Ecological Impact	Invasiveness
		NM	ALA	WAOL	BHP				
Malvaceae	*Malvastrum americanum*	x	x		x	No	No	High	Rapid
	Sida acuta		x			No	No	Not Assessed	Not Assessed
Oxalidaceae	*Oxalis corniculata*	x	x			No	No	Not Assessed	Not Assessed
Papaveraceae	*Argemone ochroleuca*	x	x		x	No	No	Not Assessed	Not Assessed
Poaceae	*Cenchrus ciliaris*	x	x		x	No	No	High	Rapid
	Cenchrus echinatus	x	x			No	No	Medium	Rapid
	Cenchrus setiger		x		x	No	No	High	Rapid
	Chloris barbata	x	x			No	No	High	Rapid
	Chloris virgata	x	x		x	No	No	High	Rapid
	Digitaria ciliaris	x	x		x	No	No	Low	Slow
	Echinochloa colona	x	x		x	No	No	High	Rapid
	Melinis repens		x		x	No	No	Not Assessed	Not Assessed
	Paspalum dilatatum		x			No	No	Not Assessed	Not Assessed
	Setaria verticillata	x	x		x	No	No	High	Rapid
Polygonaceae	*Rumex vesicarius*	x	x		x	No	No	Not Assessed	Not Assessed
Portulacaceae	*Portulaca pilosa*	x				No	No	Not Assessed	Not Assessed
Primulaceae	*Lysimachia arvensis*				x	No	No	Not Assessed	Not Assessed
Rhamnaceae	*Ziziphus mauritiana*			x		Yes	No	Not Assessed	Not Assessed
Rosaceae	*Rubus anglocandicans*			x		Yes	Yes	Not Assessed	Not Assessed
	Rubus laudatus			x		Yes	Yes	Not Assessed	Not Assessed
	Rubus rugosus			x		Yes	Yes	Not Assessed	Not Assessed
	Rubus ulmifolius			x		Yes	Yes	Not Assessed	Not Assessed
Solanaceae	*Datura leichhardtii* subsp. *leichhardtii*	x	x		x	No	No	Unknown	Unknown
	Solanum elaeagnifolium			x		Yes	Yes	Not Assessed	Not Assessed
	Solanum linnaeanum			x		Yes	No	Not Assessed	Not Assessed
	Solanum nigrum	x	x		x	No	No	Low	Rapid
Tamaricaceae	*Tamarix aphylla*			x		Yes	Yes	High	Rapid
Verbenaceae	*Lantana camara*			x		Yes	Yes	Not Assessed	Not Assessed
Zygophyllaceae	*Tribulus terrestris*		x		x	No	No	Unknown	Moderate

* Denotes Priority Alert Weeds for the Pilbara region

Appendix M: Flora Composition.

Family	Species	Priority Area		
		MAC to Yandi Rail Corridor	Mudlark Well	Pineapple Hill and Camp Hill
Acanthaceae	*Avicennia marina*	x		
	Dipteracanthus australasicus			x
	Dipteracanthus australasicus subsp. *australasicus*	x	x	
	Rostellularia adscendens			x
	Rostellularia adscendens var. *latifolia* (P3)		x	x
Amaranthaceae	*Achyranthes aspera*			x
	**Aerva javanica*	x		
	Alternanthera angustifolia		x	x
	Alternanthera denticulata	x		
	Alternanthera nana	x	x	x
	Amaranthus cuspidifolius		x	x
	Amaranthus undulatus		x	x
	Gomphrena affinis subsp. *pilbarensis*		x	
	Gomphrena canescens	x	x	x
	Gomphrena cunninghamii	x	x	x
	Gomphrena kanisii		x	
	Gomphrena lanata		x	x
	Ptilotus astrolasius	x	x	x
	Ptilotus auriculifolius			x
	Ptilotus calostachyus	x	x	x
	Ptilotus clementii		x	x
	Ptilotus exaltatus	x	x	x
	Ptilotus fusiformis		x	
	Ptilotus gaudichaudii		x	x
	Ptilotus helipteroides		x	x
	Ptilotus incanus		x	
	Ptilotus obovatus var. *obovatus*	x	x	x
	Ptilotus polystachyus		x	x
	Ptilotus roei		x	x
	Ptilotus rotundifolius	x	x	x
	Ptilotus schwartzii var. *schwartzii*		x	x
	Ptilotus sp. indet			x
	Ptilotus xerophilus		x	
Apocynaceae	*Cynanchum floribundum*	x	x	
	Cynanchum pedunculatum			x
	Leichhardtia australis			x
	Vincetoxicum carnosum		x	
	Vincetoxicum flexuosum	x		x
	Vincetoxicum lineare	x	x	x
Araliaceae	*Astrotricha hamptonii*	x	x	x
	Trachymene oleracea subsp. *oleracea*			x
Asteraceae	*Apowollastonia hamersleyensis*			x
	Asteraceae sp. indet		x	
	**Bidens bipinnata*	x	x	x
	Blumea tenella		x	x
	Calotis hispidula		x	
	Calotis plumulifera		x	
	Centipeda minima subsp. *macrocephala*			x
	Chrysocephalum apiculatum			x

Family	Species	Priority Area		
		MAC to Yandi Rail Corridor	Mudlark Well	Pineapple Hill and Camp Hill
Asteraceae cont.	*Chrysocephalum gilesii*	x	x	x
	**Erigeron bonariensis*			x
	Leiocarpa semicalva subsp. *semicalva*		x	
	Olearia stuartii		x	x
	Peripleura arida		x	x
	Peripleura obovata	x	x	x
	Peripleura sp. indet		x	
	Pilbara trudgenii (P3)		x	
	Pluchea dentex	x		x
	Pluchea dunlopii		x	x
	Pluchea rubelliflora			x
	Pterocaulon serrulatum		x	x
	Pterocaulon sp. indet	x		
	Pterocaulon sphacelatum	x	x	x
	Pterocaulon sphaeranthoides		x	x
	Rhodanthe margarethae		x	x
	Rhodanthe propinqua		x	x
	Roebuckiella similis		x	x
	**Sigesbeckia orientalis*		x	
	**Sonchus oleraceus*		x	x
	Streptoglossa bubakii		x	
	Streptoglossa decurrens		x	x
	Streptoglossa sp. indet		x	
	Vittadinia dissecta var. *hirta*		x	
	Vittadinia eremaea		x	x
	Vittadinia sp. Coondewanna Flats (S. van Leeuwen 4684) (P3)			x
	Vittadinia sp. indet			x
Bignoniaceae	*Pandorea doratoxylon*			x
Boraginaceae	*Euploca inexplicita*		x	x
	Euploca pachyphylla	x		
	Euploca sp. indet	x	x	x
	Euploca tanythrix		x	
	Euploca tenuifolia	x		x
	Halgania gustafsenii var. *gustafsenii*		x	
	Halgania gustafsenii var. Mid West (G. Perry 370)			x
	Trichodesma zeylanicum var. zeylanicum	x	x	x
Brassicaceae	*Lepidium catapycnon* (P4)		x	
	Lepidium echinatum		x	
	Lepidium oxytrichum		x	
	Lepidium phlebopetalum		x	
	Menkea villosula		x	
	Stenopetalum decipiens			x
	Stenopetalum nutans		x	x
	Stenopetalum sp. indet		x	
Campanulaceae	*Isotoma petraea*			x
	Lobelia heterophylla subsp. *pilbarensis*		x	
	Wahlenbergia tumidifructa			x

Family	Species	Priority Area		
		MAC to Yandi Rail Corridor	Mudlark Well	Pineapple Hill and Camp Hill
Capparaceae	*Capparis lasiantha*	x	x	x
	Capparis mitchellii		x	x
	Capparis sp. indet			x
Caryophyllaceae	*Polycarpaea corymbosa* var. *corymbosa*		x	
	Polycarpaea holtzei			x
	Polycarpaea longiflora	x	x	x
Celastraceae	*Maytenus* sp. Mt Windell (S. van Leeuwen 846)		x	x
Chenopodiaceae	*Dysphania glomulifera subsp. eremaea*		x	
	Dysphania kalpari		x	x
	Dysphania melanocarpa		x	x
	Dysphania melanocarpa forma *melanocarpa*		x	x
	Dysphania rhadinostachya		x	x
	Dysphania saxatilis		x	
	Dysphania sp. indet	x	x	
	Enchylaena tomentosa var. *tomentosa*	x	x	x
	Maireana planifolia		x	x
	Maireana sp. indet	x	x	x
	Maireana villosa	x	x	x
	Rhagodia eremaea	x	x	x
	Rhagodia sp. Hamersley (M. Trudgen 17794) (P3)		x	x
	Salsola australis	x	x	x
	Sclerolaena cornishiana	x	x	x
	Sclerolaena costata		x	
	Sclerolaena sp. indet			x
	Sclerolaena tetragona		x	x
Cleomaceae	*Areocleome oxalidea*		x	x
	Arivela uncifera			x
	Arivela viscosa	x	x	x
Commelinaceae	*Commelina ensifolia*		x	x
Convolvulaceae	*Bonamia erecta*	x	x	x
	Bonamia pilbarensis	x		
	Convolvulus clementii		x	x
	Convolvulus remotus			x
	Duperreya commixta	x	x	x
	Evolvulus alsinoides	x		x
	Evolvulus alsinoides var. *decumbens*	x		x
	Evolvulus alsinoides var. *villosicalyx*	x	x	x
	Ipomoea muelleri		x	x
	Ipomoea polymorpha			x
	Ipomoea racemigera (P2)			x
	Polymeria ambigua		x	x
Crassulaceae	*Crassula tetramera*		x	
Cucurbitaceae	*Cucumis variabilis*	x	x	x
Cupressaceae	*Callitris columellaris*		x	
Cyperaceae	*Bulbostylis turbinata*		x	
	Cyperus cunninghamii			x
	Cyperus cunninghamii subsp. *cunninghamii*	x	x	
	Cyperus iria			x

Family	Species	Priority Area		
		MAC to Yandi Rail Corridor	Mudlark Well	Pineapple Hill and Camp Hill
Cyperaceae cont.	*Cyperus* sp. indet		x	
	Fimbristylis dichotoma	x	x	x
	Fimbristylis sp. indet	x		
Dilleniaceae	*Hibbertia glaberrima*		x	
Elatinaceae	*Bergia perennis*		x	
Euphorbiaceae	*Euphorbia australis*	x		x
	Euphorbia australis var. *hispidula*		x	x
	Euphorbia australis var. *subtomentosa*	x		x
	Euphorbia biconvexa	x	x	x
	Euphorbia boophthona			x
	Euphorbia drummondii		x	x
	Euphorbia ferdinandi var. *ferdinandi*		x	x
	Euphorbia sp. indet	x	x	x
	Euphorbia tannensis subsp. *eremophila*		x	x
	Euphorbia trigonosperma	x	x	x
Fabaceae	*Acacia adoxa* var. *adoxa*	x	x	x
	Acacia adsurgens	x	x	x
	Acacia ancistrocarpa	x	x	x
	Acacia aneura	x	x	x
	Acacia aptaneura	x	x	x
	Acacia arida	x	x	
	Acacia atkinsiana		x	x
	Acacia ayersiana		x	x
	Acacia bivenosa	x	x	x
	Acacia catenulata subsp. *occidentalis*		x	
	Acacia colei var. *colei*	x		x
	Acacia coriacea subsp. *pendens*	x	x	
	Acacia cowleana		x	x
	Acacia dictyophleba	x	x	x
	Acacia elachantha		x	x
	Acacia hamersleyensis	x	x	x
	Acacia hilliana	x		x
	Acacia inaequilatera	x		x
	Acacia incurvaneura			x
	Acacia kempeana		x	x
	Acacia macraneura			x
	Acacia maitlandii	x	x	x
	Acacia marramamba		x	x
	Acacia minyura			x
	Acacia monticola	x	x	x
	Acacia pachyacra	x	x	x
	Acacia pruinocarpa	x	x	x
	Acacia pteraneura		x	x
	Acacia pyrifolia var. *morrisonii*		x	
	Acacia pyrifolia var. *pyrifolia*	x	x	x
	Acacia rhodophloia			x
	Acacia rhodophloia × *sibirica*			x
	Acacia sericophylla			x
	Acacia sibirica	x		x

Family	Species	Priority Area		
		MAC to Yandi Rail Corridor	Mudlark Well	Pineapple Hill and Camp Hill
Fabaceae cont.	*Acacia* sp. indet		x	x
	Acacia steedmanii subsp. *borealis*			x
	Acacia synchronicia			x
	Acacia tenuissima	x	x	x
	Acacia tetragonophylla	x		x
	Acacia trudgeniana		x	x
	Acacia tumida var. *pilbarensis*	x		x
	Crotalaria medicaginea var. *neglecta*		x	x
	Fabaceae sp. indet	x		
	Gastrolobium grandiflorum	x		x
	Glycine canescens	x	x	x
	Gompholobium oreophilum	x	x	x
	Indigofera georgei	x	x	x
	Indigofera gilesii (P3)	x	x	
	Indigofera monophylla	x	x	x
	Indigofera rugosa	x		x
	Isotropis atropurpurea			x
	Isotropis iophyta	x	x	x
	Mirbelia viminalis	x	x	x
	Muelleranthus obovatus		x	
	Petalostylis labicheoides	x	x	x
	Rhynchosia minima	x	x	x
	Senna artemisioides subsp. ×*artemisioides*	x	x	x
	Senna artemisioides subsp. ×*sturtii*	x		
	Senna artemisioides subsp. *helmsii*	x	x	x
	Senna artemisioides subsp. *oligophylla*	x	x	x
	Senna ferraria	x	x	x
	Senna glaucifolia	x	x	x
	Senna glutinosa	x		
	Senna glutinosa subsp. ×*luerssenii*	x	x	x
	Senna glutinosa subsp. *glutinosa*	x	x	x
	Senna glutinosa subsp. *pruinosa*	x	x	x
	Senna hamersleyensis		x	
	Senna notabilis	x	x	x
	Senna pleurocarpa var. *angustifolia*		x	x
	Senna sericea	x		
	Senna sp. indet			x
	Senna sp. Meekatharra (E. Bailey 1-26)		x	
	Senna stricta		x	
	Senna symonii			x
	Senna venusta		x	
	**Stylosanthes hamata*		x	
	Swainsona canescens		x	
	Swainsona kingii		x	x
	Swainsona sp. indet		x	x
	Tephrosia densa	x	x	x
	Tephrosia oxalidea	x		x
	Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	x	x	x

Family	Species	Priority Area		
		MAC to Yandi Rail Corridor	Mudlark Well	Pineapple Hill and Camp Hill
Fabaceae cont.	*Tephrosia* sp. Bungaroo Creek (M.E. Trudgen 11601)			x
	Tephrosia sp. deserts (J.R. Maconochie 1403)			x
	Tephrosia sp. Newman (A.A. Mitchell PRP 29)	x		x
	Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)		x	x
	Tephrosia virens	x		
	Vigna lanceolata	x		x
	Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)		x	x
Goodeniaceae	*Brunonia* sp. Long hairs (D.E. Symon 2440)		x	
	Dampiera candicans	x	x	x
	Goodenia cusackiana	x		
	Goodenia microptera	x	x	x
	Goodenia muelleriana	x	x	x
	Goodenia nuda		x	x
	Goodenia prostrata		x	x
	Goodenia sp. indet			x
	Goodenia stellata	x	x	x
	Goodenia stobbsiana	x	x	x
	Goodenia triodiophila	x	x	x
	Scaevola acacioides		x	
	Scaevola amblyanthera var. *centralis*	x	x	x
	Scaevola browniana subsp. *browniana*	x		x
	Scaevola parvifolia subsp. *pilbarae*	x	x	x
	Scaevola spinescens	x	x	x
Gyrostemonaceae	*Codonocarpus cotinifolius*	x	x	x
Haloragaceae	*Haloragis* sp. indet		x	
Hemerocallidaceae	*Tricoryne* sp. Hamersley Range (S. van Leeuwen 915)			x
Lamiaceae	*Clerodendrum floribundum*	x	x	x
	Clerodendrum floribundum var. *angustifolium*	x	x	x
	Clerodendrum floribundum var. *floribundum*		x	x
	Clerodendrum tomentosum var. *lanceolatum*	x		
	Dicrastylis cordifolia		x	x
	Newcastelia clavipetala		x	
	Prostanthera albiflora		x	x
	Prostanthera campbellii		x	
	Teucrium disjunctum		x	
	Teucrium teucriiflorum		x	x
Lauraceae	*Cassytha capillaris*			x
	Cassytha filiformis	x		x
	Cassytha sp. indet			x
Loranthaceae	*Amyema fitzgeraldii*		x	
	Amyema hilliana		x	
	Amyema sp. indet	x		x
	Lysiana murrayi			x
Lythraceae	*Ammannia multiflora*			x
	Ammannia sp. indet			x

Family	Species	Priority Area		
		MAC to Yandi Rail Corridor	Mudlark Well	Pineapple Hill and Camp Hill
Malvaceae	*Abutilon amplum*		x	x
	Abutilon cryptopetalum		x	x
	Abutilon cunninghamii		x	x
	Abutilon fraseri subsp. *fraseri*	x	x	x
	Abutilon lepidum		x	x
	Abutilon leucopetalum		x	
	Abutilon macrum		x	x
	Abutilon otocarpum	x	x	x
	Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)		x	
	Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	x	x	x
	Abutilon sp. indet	x		x
	Androcalva luteiflora	x	x	x
	Brachychiton acuminatus		x	x
	Corchorus crozophorifolius		x	x
	Corchorus incanus subsp. *incanus*			x
	Corchorus lasiocarpus	x		x
	Corchorus lasiocarpus subsp. *lasiocarpus*	x		x
	Corchorus lasiocarpus subsp. *parvus*		x	x
	Corchorus sidoides subsp. *sidoides*			x
	Corchorus tridens	x	x	x
	Gossypium australe	x		x
	Gossypium robinsonii	x	x	x
	Gossypium sturtianum			x
	Gossypium sturtianum var. *sturtianum*			x
	Hibiscus brachychlaenus			x
	Hibiscus burtonii	x	x	x
	Hibiscus coatesii	x	x	x
	Hibiscus leptocladus			x
	Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (P2)		x	x
	Hibiscus sp. indet			x
	Hibiscus sp. Mt Robinson (G. Byrne 3537)		x	
	Hibiscus sturtii			x
	Hibiscus sturtii var. *campylochlamys*	x	x	x
	Hibiscus sturtii var. *grandiflorus*		x	
	Hibiscus sturtii var. *platychlamys*	x	x	x
	Malvaceae sp. indet		x	
	**Malvastrum americanum*	x	x	x
	Melhania oblongifolia	x	x	x
	Seringia exastia	x	x	x
	Seringia nephrosperma			x
	Sida arenicola		x	x
	Sida calyxhymenia	x		
	Sida cardiophylla		x	x
	Sida echinocarpa		x	x
	Sida ectogama		x	x
	Sida fibulifera	x	x	x
	Sida platycalyx		x	x
	Sida rohlenae subsp. *rohlenae*			x

Family	Species	Priority Area		
		MAC to Yandi Rail Corridor	Mudlark Well	Pineapple Hill and Camp Hill
Malvaceae cont.	*Sida* sp. Articulation below (A.A. Mitchell PRP 1605)			x
	Sida sp. Barlee Range (S. van Leeuwen 1642) (P4)	x	x	x
	Sida sp. dark green fruits (S. van Leeuwen 2260)		x	x
	Sida sp. Excedentifolia (J.L. Egan 1925)		x	x
	Sida sp. Golden calyces glabrous (H.N. Foote 32)	x	x	x
	Sida sp. indet	x	x	x
	Sida sp. L (A.M. Ashby 4202)	x	x	x
	Sida sp. Pilbara (A.A. Mitchell PRP 1543)	x	x	x
	Sida sp. Shovelanna Hill (S. van Leeuwen 3842)	x	x	x
	Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	x	x	x
	Sida sp. Supplejack Station (T.S. Henshall 2345)	x	x	x
	Triumfetta appendiculata	x		
	Triumfetta chaetocarpa		x	
	Triumfetta leptacantha			x
	Triumfetta maconochieana			x
	Waltheria indica	x		x
	Waltheria virgata			x
Marsileaceae	*Marsilea* sp. indet		x	
Menispermaceae	*Tinospora smilacina*		x	x
Molluginaceae	*Trigastrotheca molluginea*	x		
Montiaceae	*Calandrinia ptychosperma*		x	
	Calandrinia pumila		x	
	Calandrinia sp. indet		x	x
Moraceae	*Ficus brachypoda*	x	x	x
	Ficus platypoda			x
Myrtaceae	*Calytrix carinata*	x		x
	Corymbia candida		x	
	Corymbia deserticola subsp. *deserticola*	x	x	x
	Corymbia ferriticola	x	x	x
	Corymbia hamersleyana	x	x	x
	Eucalyptus gamophylla	x	x	x
	Eucalyptus kingsmillii			x
	Eucalyptus leucophloia subsp. *leucophloia*	x	x	x
	Eucalyptus repullulans		x	x
	Eucalyptus trivalva			x
	Eucalyptus victrix	x		x
	Eucalyptus xerothermica	x	x	x
Nyctaginaceae	*Boerhavia coccinea*	x	x	x
	Boerhavia repleta		x	x
	Boerhavia sp. indet		x	x
Oleaceae	*Jasminum didymum* subsp. *lineare*	x	x	x
Ophioglossaceae	*Ophioglossum lusitanicum*		x	x
Oxalidaceae	*Oxalis perennans*		x	
	Oxalis sp. Pilbara (M.E. Trudgen 12725) (P2)		x	x
Pedaliaceae	*Josephinia eugeniae*		x	

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		MAC to Yandi Rail Corridor	Mudlark Well	Pineapple Hill and Camp Hill
Phrymaceae	*Mimulus gracilis*			x
	Peplidium muelleri		x	
	Peplidium sp. C Evol. Fl. Fauna Arid Aust. (N.T. Burbidge & A. Kanis 8158)		x	
Phyllanthaceae	*Dendrophyllanthus erwinii*		x	x
	Nellica maderaspatensis	x	x	x
	Nellica sp. indet	x		
	Notoleptopus decaisnei var. Orbicularis (A.B. Craig 428)		x	x
Plantaginaceae	Plantaginaceae sp. indet	x		
	Stemodia grossa			x
	Stemodia sp. indet	x		
	Stemodia viscosa			x
Plumbaginaceae	*Plumbago zeylanica*			x
Poaceae	*Acrachne racemosa*	x		
	Amphipogon sericeus	x	x	x
	Aristida burbidgeae		x	x
	Aristida contorta	x	x	x
	Aristida holathera var. *holathera*	x	x	x
	Aristida inaequiglumis	x	x	x
	Aristida jerichoensis var. *subspinulifera* (P3)		x	x
	Aristida lazaridis (P2)	x	x	x
	Aristida obscura		x	x
	Aristida pruinosa			x
	Aristida sp. indet	x	x	x
	Bothriochloa ewartiana			x
	**Bothriochloa pertusa*			x
	**Cenchrus ciliaris*	x	x	x
	**Cenchrus setiger*			x
	Chloris pectinata		x	
	**Chloris virgata*		x	x
	Chrysopogon fallax	x	x	x
	Cymbopogon ambiguus	x	x	x
	Cymbopogon obtectus		x	x
	Cymbopogon sp. indet	x		
	Dactyloctenium radulans		x	x
	Dichanthium sericeum		x	
	Dichanthium sericeum subsp. *humilius*		x	x
	Digitaria ammophila		x	x
	Digitaria brownii	x	x	x
	**Digitaria ciliaris*	x	x	
	Digitaria ctenantha	x	x	x
	Echinochloa colona			x
	Enneapogon caerulescens		x	x
	Enneapogon lindleyanus	x	x	x
	Enneapogon polyphyllus	x	x	x
	Enneapogon robustissimus		x	x
	Enteropogon ramosus		x	
	Eragrostis cumingii	x	x	x

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		MAC to Yandi Rail Corridor	Mudlark Well	Pineapple Hill and Camp Hill
Poaceae cont.	*Eragrostis eriopoda*		x	x
	Eragrostis leptocarpa		x	x
	Eragrostis olida	x		x
	Eragrostis pergracilis		x	x
	Eragrostis setifolia			x
	Eragrostis sp. indet	x		
	Eragrostis sp. Mt Robinson (S. van Leeuwen 4109) (P2)		x	
	Eragrostis tenellula			x
	Eragrostis xerophila		x	x
	Eriachne benthamii	x	x	
	Eriachne ciliata	x		
	Eriachne flaccida		x	x
	Eriachne helmsii	x	x	x
	Eriachne lanata	x		x
	Eriachne mucronata	x	x	x
	Eriachne pulchella		x	x
	Eriachne pulchella subsp. *dominii*		x	
	Eriachne pulchella subsp. *pulchella*	x	x	x
	Eriachne sp. indet	x	x	
	Eriachne tenuiculmis			x
	Eulalia aurea	x	x	x
	Iseilema eremaeum		x	x
	Iseilema membranaceum	x	x	x
	**Melinis repens*		x	x
	Panicum decompositum		x	x
	Panicum effusum		x	x
	Panicum sp. indet			x
	Paraneurachne muelleri	x	x	x
	Paspalidium clementii		x	x
	Paspalidium constrictum			x
	Paspalidium rarum		x	x
	Paspalidium sp. indet	x		
	Perotis rara	x	x	x
	Poaceae sp. indet	x		x
	Schizachyrium fragile		x	x
	Setaria dielsii			x
	Setaria sp. indet	x		
	Setaria surgens	x		x
	**Setaria verticillata*	x		x
	Sporobolus australasicus		x	x
	Themeda sp. Hamersley Station (M.E. Trudgen 11431) (P3)			x
	Themeda sp. Mt Barricade (M.E. Trudgen 2471)	x	x	
	Themeda triandra	x	x	x
	Thyridolepis mitchelliana		x	x
	Tragus australianus		x	x
	Triodia biflora	x		
	Triodia brizoides		x	x

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		MAC to Yandi Rail Corridor	Mudlark Well	Pineapple Hill and Camp Hill
Poaceae cont.	*Triodia melvillei*		x	x
	Triodia pungens	x	x	x
	Triodia sp. Karijini (S. van Leeuwen 4111) (P1)			x
	Triodia sp. Mt Ella (M.E. Trudgen 12739) (P3)		x	x
	Triodia vanleeuwenii	x	x	x
	Triodia wiseana	x	x	x
	Tripogonella loliiformis		x	x
	Urochloa occidentalis var. *ciliata*		x	x
	Urochloa piligera		x	
	Urochloa subquadripara			x
Polygalaceae	*Polygala glaucifolia*		x	x
	Polygala isingii		x	
Portulacaceae	*Portulaca filifolia*		x	
	Portulaca oleracea		x	x
	**Portulaca pilosa*			x
Proteaceae	*Grevillea berryana*	x	x	x
	Grevillea wickhamii	x		x
	Grevillea wickhamii subsp. *aprica*	x		x
	Grevillea wickhamii subsp. *hispidula*	x	x	x
	Hakea chordophylla	x	x	x
	Hakea loreus subsp. *loreus*	x	x	x
Pteridaceae	*Cheilanthes austrotenuifolia*		x	
	Cheilanthes brownii	x	x	x
	Cheilanthes sieberi subsp. *sieberi*	x	x	x
	Cheilanthes sp. indet	x		
	Pellaea reynoldsii		x	x
Rhamnaceae	*Cryptandra monticola*		x	
Rubiaceae	*Dolichocarpa crouchiana*		x	
	Psydrax latifolia	x	x	x
	Psydrax rigidula		x	x
	Psydrax suaveolens		x	x
	Rubiaceae sp. indet	x		
	Spermacoce brachystema			x
	Synaptantha tillaeacea var. *tillaeacea*		x	
Santalaceae	*Anthobolus leptomerioides*	x	x	x
	Exocarpos sparteus			x
	Santalum lanceolatum	x	x	x
Sapindaceae	*Atalaya hemiglauca*	x		
	Diplopeltis stuartii var. *stuartii*			x
	Dodonaea coriacea	x	x	x
	Dodonaea lanceolata	x	x	x
	Dodonaea lanceolata var. *lanceolata*	x		x
	Dodonaea pachyneura		x	x
	Dodonaea petiolaris		x	
	Dodonaea viscosa			x
	Dodonaea viscosa subsp. *mucronata*	x	x	x
	Sapindaceae sp. indet	x		
Scrophulariaceae	*Eremophila clarkei*		x	
	Eremophila flaccida		x	

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Scrophulariaceae cont.	*Eremophila forrestii*		x	x
	Eremophila forrestii subsp. *forrestii*	x	x	x
	Eremophila fraseri subsp. *fraseri*			x
	Eremophila jucunda subsp. *pulcherrima*		x	
	Eremophila lachnocalyx		x	
	Eremophila lanceolata		x	x
	Eremophila latrobei	x		x
	Eremophila latrobei subsp. *filiformis*		x	x
	Eremophila latrobei subsp. *glabra*		x	
	Eremophila latrobei subsp. *latrobei*	x	x	x
	Eremophila longifolia	x	x	x
	Eremophila magnifica subsp. *magnifica* (P4)		x	x
	Eremophila naaykensii (P3)		x	x
	Eremophila petrophila subsp. *petrophila*		x	
	Eremophila platycalyx			x
	Eremophila platycalyx subsp. *pardalota*		x	
	Eremophila sp. indet	x		x
	Eremophila sp. West Angelas (S. van Leeuwen 4068) (P2)		x	x
Solanaceae	*Nicotiana benthamiana*			x
	Nicotiana rosulata		x	x
	Nicotiana sp. indet		x	x
	Solanum centrale		x	
	Solanum cleistogamum	x	x	x
	Solanum ferocissimum		x	x
	Solanum gabrielae			x
	Solanum horridum		x	
	Solanum kentrocaule (P3)		x	
	Solanum lasiophyllum	x	x	x
	**Solanum nigrum*			x
	Solanum phlomoides			x
	Solanum sp. indet	x	x	x
Surianaceae	*Stylobasium spathulatum*	x		x
Thymelaeaceae	*Pimelea microcephala* subsp. *microcephala*			x
Typhaceae	*Typha domingensis*			x
Violaceae	*Afrohybanthus aurantiacus*	x	x	x
Zygophyllaceae	*Tribulopis angustifolia*			x
	Tribulus astrocarpus		x	x
	Tribulus hirsutus			x
	Tribulus macrocarpus	x		
	Tribulus platypterus			x
	Tribulus sp. indet		x	x
	Tribulus suberosus	x	x	x
	**Tribulus terrestris*		x	x