Ethnobotanical and Ethnozoological Values Desktop Assessment - Eliwana Project

Fortescue Metals Group

ecoscape

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ACKNOWLEDGEMENTS

Ecoscape would like to acknowledge all the people that have provided information about their traditional use of plants and animals across Australia in the books and other documnents that we have utilised and referenced.

SUMMARY

Fortescue is developing an iron ore prospect known as Eliwana, located 80 km west of Tom Price in the Pilbara region of Western Australia. The Eliwana Iron Ore Project consists of the development of 120 km railway linking Fortescue's existing rail network at the Solomon Mine with Fortescue's proposed Eliwana Iron Ore Mine. The Eliwana Iron Ore Project intersects the native title claim areas of two traditional owners, the Eastern Guruma and Puutu Kunti Kurrama Pinikura (PKKP) people.

Fortescue has enlisted Ecoscape to undertake an assessment of the ethnobotanical values and culturally significant fauna species in the Eliwana Rail Development Envelope and Eliwana Iron Ore Mine Development Envelope. These assessments will assist Fortescue in addressing the objectives of the Environmental Protection Authority's (EPA) Social Surroundings Environmental Factor Guideline (EPA 2016) to be incorporated into the Eliwana Rail Project and Eliwana Iron Ore Mine environmental review documents.

The Scope of Works is to undertake an ethnobotanical assessment including:

1. compile a list of all known plants from the Pilbara region of Western Australia that:
    a. Contain edible parts (e.g. leaves, fruits, seeds, flowers, sap, roots etc.);
    b. Host edible grubs or other edible insects;
    c. Support bee hives that can be harvested for honey;
    d. Produce useful wood for making things; or
    e. Have other useful parts (e.g. provide shelter, produce wax, can be woven etc.).
2. review available flora and vegetation data and identify the ethnobotanical significant species within the Eliwana Rail Project and Eliwana Iron Ore Mine development envelopes;
3. identify and tabulate the vegetation communities associated with the ethnobotanical significant species;
4. map the area and quantify each relevant vegetation community containing ethnobotanical significant species within each development envelope per claim area; and
5. quantify the area of each relevant vegetation community outside the development envelope within the Eastern Guruma and PKKP native title claim areas.

The Scope of Works also includes an assessment detailing the culturally significant fauna species including:

1. compile a list of all fauna species that were traditionally hunted or are currently hunted in the Pilbara region of Western Australia and identify the species beneficial uses (food, hides etc.);
2. review available information and identify which of these fauna species are found within the Eastern Guruma and PKKP native title claim areas;
3. identify which habitats these fauna species are found in;
4. map the fauna species habitat within the Eliwana Rail Project and Eliwana Iron Ore Mine development envelopes and other areas where habitat information is available;
5. discuss likely or known abundance of fauna species within the Eliwana Rail Project and Eliwana Iron Ore Mine development envelopes and other areas where habitat information is available.

The desktop assessment identified 24 references from which a list of flora and fauna species utilised by Eastern Guruma and other Aboriginal people (including the PKKP). This included 255 native vascular flora species (10 introduced (weed) flora species) from 56 families; and 11 mammals, 7 birds, 7 reptiles, 2 fish and 12 invertebrate fauna species. A further 14 birds, 13 reptiles, 3 amphibians and 2 fish were extrapolated to be utilised based on the information gathered from Ecoscape's 2017 fauna report. All fauna habitat types support culturally significant fauna species.

1 INTRODUCTION

1.1 BACKGROUND & LOCATION

Fortescue Metals Group Ltd (Fortescue) is an integrated business comprised of mine, rail and port operations based in the Pilbara region of Western Australia. Fortescue is developing an iron ore prospect known as Eliwana, located 80 km west of Tom Price in the Pilbara region of Western Australia. The Eliwana Iron Ore Project consists of the development of 120 km railway linking Fortescue's existing rail network at the Solomon Mine with Fortescue's proposed Eliwana Iron Ore Mine (**Map 1**). The Eliwana Iron Ore Mine is predicted to produce 30Mtpa of iron ore over a 24 year mine life. The Eliwana Railway Project intersects the native title claim areas of two traditional owners, the Eastern Guruma and Puutu Kunti Kurrama Pinikura (PKKP) people while the Eliwana Iron Ore Mine Project only intersects the PKKP native title claim area.

Fortescue has enlisted Ecoscape to undertake an assessment of the *ethnobotanical values* and *culturally significant fauna species* in the Eliwana Rail Development Envelope and Eliwana Iron Ore Mine Development Envelope. These assessments will assist Fortescue in addressing the objectives of the Environmental Protection Authority's (EPA) Social Surroundings Environmental Factor Guideline (EPA 2016) to be incorporated into the Eliwana Rail Project and Eliwana Iron Ore Mine environmental review documents.

1.2 PROJECT OBJECTIVES

The objective of this project is to identify all known flora and fauna species with beneficial uses for traditional owners. The assessment will assist with the preparation of the environmental impact assessment and covers the ethnobotanical and ethnozoological features of both the Eliwana Iron Ore Mine and Railway projects including how each corresponds with the Eastern Guruma and PKKP native title claim areas.

1.2.1 ETHNOBOTANICAL ASSESSMENT

The ethnobotanical assessment incorporates the following specific objectives.

- compile a list of all known plants from the Pilbara region of Western Australia that:
    - Contain edible parts (e.g. leaves, fruits, seeds, flowers, sap, roots etc.);
    - Host edible grubs or other edible insects;
    - Support bee hives that can be harvested for honey;
    - Produce useful wood for making things; or
    - Have other useful parts (e.g. provide shelter, produce wax, can be woven etc.).
- review available flora and vegetation data and identify the ethnobotanical significant species within the Eliwana Rail Project and Eliwana Iron Ore Mine development envelopes;
- identify and tabulate the vegetation communities associated with the ethnobotanical significant species;
- map the area and quantify each relevant vegetation community containing ethnobotanical significant species within each development envelope per claim area; and
- quantify the area of each relevant vegetation community outside the development envelope within the Eastern Guruma and PKKP native title claim areas.

1.2.2 ETHNOZOOLOGICAL ASSESSMENT

The ethnozoological assessment incorporates the following specific objectives.

- compile a list of all fauna species that were traditionally hunted or are currently hunted in the Pilbara region of Western Australia and identify the species beneficial uses (food, hides etc.);
- review available information and identify which of these fauna species are found within the Eastern Guruma and PKKP native title claim areas;
- identify which habitats these fauna species are found in;
- map the fauna species habitat within the Eliwana Rail Project and Eliwana Iron Ore Mine development envelopes and other areas where habitat information is available;
- discuss likely or known abundance of fauna species within the Eliwana Rail Project and Eliwana Iron Ore Mine development envelopes and other areas where habitat information is available.

2 METHODS

2.1 LITERATURE REVIEW

A literature review was completed to address the following objectives.

- compile a list of all known plants from the Pilbara region of Western Australia that:
    - contain edible parts (e.g. leaves, fruits, seeds, flowers, sap, roots etc.);
    - host edible grubs or other edible insects;
    - support bee hives that can be harvested for honey;
    - produce useful wood for making things; or
    - have other useful parts (e.g. provide shelter, produce wax, can be woven etc.).
- review available flora and vegetation data and identify the ethnobotanical significant species within the Eliwana Rail Project and Eliwana Iron Ore Mine development envelopes;
- compile a list of all fauna species that were traditionally hunted or are currently hunted in the Pilbara region of Western Australia and identify the species beneficial uses (food, hides etc.);
- review available information and identify which of these fauna species are found within the Eastern Guruma and PKKP native title claim areas;

Steven Dillon from the Department of Biodiversity Conservation and Attractions (DBCA) maintains an list of vascular plants recorded from the Pilbara IBRA region. The latest version of this list (January 2018) was used as a baseline plant list for the ethnobotanical assessment.

A literature review was then conducted sourcing information around traditional resource use in Australia with particular focus on communities located in arid inland area, although information from other areas was included if relevant. **Table 1** below outlines the 24 references utilised. Vascular plant species from the Pilbara region that are thought to be used as traditional resources are listed in **Appendix One**.

Flora and vegetation (Biota 2017) and terrestrial fauna assessments (Ecoscape 2017) were recently completed to consolidate all available information relevant to the Eliwana Iron Ore Mine and Railway projects and the surrounding region. This information was cross referenced with the list of Pilbara flora and fauna species that are traditionally used as by local communities to create a list of culturally significant flora and fauna species that occur within the study area.

Due to ongoing changes in the taxonomy of many of the flora and fauna found across the Pilbara, information from the literature review was extrapolated where is was considered suitable. Examples of extrapolated flora include the recent split of the Mulga (*Acacia aneura*) into several distinct species. Similar acacia species were therefore included in the assessment. Examples of extrapolated fauna include the inclusion of the majority of small mammals due to several references mentioning that small burrowing mice were regularly consumed. Many additional bird species were also included as an extrapolation due to references discussing the opportunitic hunting of birds where possible and the expectation that any opportunity to obtain meat would be readily utilised.

2.1 DATA ANALYSIS

2.1.1 ETHNOBOTANICAL ASSESSMENT

Following the identification of flora species that are traditionally utilised, the following objectives were addressed:

- identify and tabulate the vegetation communities associated with the ethnobotanical significant species;
- map the area and quantify each relevant vegetation community containing ethnobotanical significant species within each development envelope per claim area; and
- quantify the area of each relevant vegetation community outside the development envelope within the Eastern Guruma and PKKP native title claim areas.

Previously completed vegetation community mapping of the Eliwana Rail Project and Eliwana Iron Ore Mine development envelopes were utilised to determine the potential distribution of ethnobotanical significant

species within the development envelopes and within the Eastern Guruma and PKKP native title claim areas. Regional vegetation community mapping is considered extensive and allows regional comparisons to be made, however vegetation community mapping was not available for the entire Eastern Guruma and PKKP native title clain areas (**Map 2**)

All vegetation communities that have been recorded from the Eliwana Rail Project and Eliwana Iron Ore Mine development envelopes were selected from the consolidated regional vegetation mapping dataset (Biota 2017). The selected vegetation communities were then linked with the previously identified culturally significant flora species list to identify which culturally significant flora species are associated with each vegetation community. The number of culturally significant flora species that have been recorded from each vegetation community was then calculated to allow vegetation communities to be mapped showing areas of high and low culturally significant flora species diversity.

The identified vegetation communities were then mapped within each development area and also within each native title claim area. The area (ha) of each vegetation community was then calculated as related to each development envelope and native title claim area.

2.1.2 ETHNOZOOLOGICAL ASSESSMENT

Following the identification of fauna species that are traditional utilised, the following were addressed:

- identify which habitats these fauna species are found in;
- map the fauna species habitat within the Eliwana Rail Project and Eliwana Iron Ore Mine development envelopes and other areas where habitat information is available;
- discuss likely or known abundance of fauna species within the Eliwana Rail Project and Eliwana Iron Ore Mine development envelopes and other areas where habitat information is available.

Previously completed fauna habitat mapping of the Eliwana Rail Project and Eliwana Iron Ore Mine development envelopes were utilised to determine the potential distribution of culturally significant fauna species within the development envelopes and within the Eastern Guruma and PKKP native title claim areas. Site by species data from previously completed level 2 fauna assessments, which was compiled during the recent Eliwana fauna assessment (Ecoscape 2017) was used to determine the likely or known abundance of fauna species with in the development envelopes.

Table 1: Reference list

No.	Title	Reference	Location	Aboriginal Group	Flora/Fauna reference
A	The Guruma story	(Brehaut & Vitenbergs 2001)	Pilbara	Guruma	Flora/Fauna
B	The food resources of the aborigines of the south-west of Western Australia	(Meagher 1974)	South-west	Noongar languages	Flora/Fauna
C	Traditional Aboriginal Plant Resources in the Kalumburu Area: Aspects in Ethno-economics	(Crawford 1982)	Kimberley	Kalumburu	Flora
D	Aboriginal people and their plants	(Clarke 2007)	Australia wide	N/A	Flora
E	Australian Aboriginal Peoples' Seasonal Knowledge: a Potential Basis for Shared Understanding in Environmental Management	(Prober et al. 2011)	Worldwide	N/A	Flora/Fauna
F	Discovering Aboriginal plant use: The journeys of an Australian anthropologist	(Clarke 2014)	Australia wide	N/A	Flora/Fauna
G	Australian plants as Aboriginal tools	(Clarke 2012)	Australia wide	N/A	Flora/Fauna
H	Aboriginal Plant Collectors	(Clarke 2008)	Australia wide	N/A	
I	Wild foods in Australia	(Cribb 1987)	Australia wide	N/A	
J	Bush food: Aboriginal food and herbal medicine	(Isaacs 1987)	Australia wide	N/A	Flora/Fauna
K	The bush food handbook: how to gather, grow, process and cook Australian wild foods	(Cherikoff 1989)	Australia wide	N/A	Flora
L	Jilji: Life in the Great Sandy Desert	(Lowe 1990)	Great Sandy Desert	Martu	Flora/Fauna
M	Wild food plants of Australia	(Low 1991)	Australia wide	N/A	Flora
N	Bushfires & bushtucker : Aboriginal plant use in Central Australia	(Latz 1995)	Central Australia	Arandic languages	Flora
O	Useful bush plants	(Bindon 1996)	Australia wide	N/A	Flora
P	Food Safety of Australian Plant Bushfoods	(Hegarty & Hegarty 2001)	Australia wide	N/A	Flora
Q	Medical ethnobotany of Australia: past and present	(Pearn 2004)	Australia wide	N/A	Flora
R	The "fire stick farming" hypothesis: Australian Aboriginal foraging strategies, biodiversity, and anthropogenic fire mosaics	(Bird et al. 2008)	Australia wide	N/A	Flora
S	The Point of Spinifex: Aboriginal uses of spinifex grasses in Australia	(Pitman & Wallis 2012)	Australia wide	N/A	Flora
T	Traditional uses of Australian native plants	(Australian National Botanic Gardens 2011)	Australia wide	N/A	Used for references only
U	Traditional Aboriginal Clothing	(Koori History 2016)	Australia wide	N/A	Fauna
V	Bush remedies	(Taste Australia. 2017)	Australia wide	N/A	Flora
W	The Importance of Insects in Australian Aboriginal Society: A Dictionary Survey	(Aung & Turpin 2015)	Australia wide	N/A	Fauna
X	Putijarra plants	(Charles & Ellery (Coppin) 2015)	Pilbara	Putijarra	Flora
Y	Ngambunyjarri : ngambunyjarri Thalanyjibarndi yininyjarri	(Hayes & Hayes 2007)	Pilbara	Thalanyji	Flora
Z	Lola Young, Medicine Woman and Teacher	(Young & Vitenbergs 2007)	Pilbara	Guruma	Flora/Fauna

3 RESULTS

3.1 LITERATURE REVIEW

3.1.1 ETHNOBOTANICAL ASSESSMENT

All known plants from the Pilbara region of Western Australia that traditionally provide resources to local communities are listed in **Table 5** (**Appendix One**). The resource use of each plant was classified into seven resource categories, with may plant species providing resources in multiple categories.

- Food/Water – Edible plants or plants with high water content
- Medicinal – Plants used for healing; either directly consumed, applied externally or burnt to create healing smoke
- Tools – Plants used to create tools for hunting, food preparation, conflict, and ceremonies
- Fire – Plants used to aid creation of fire
- Ceremonial – Plants used in cultural ceremonies either directly or burnt to create smoke
- Clothing – Plants used to create clothing or decorations
- Shelter – Plants used to create shelter either structures or coverings

The list of culturally significant plant species was then cross referenced with all plant species recorded from the Eliwana Iron Ore Mine and Eliwana Rail Project development envelopes as reported in the Eliwana consolidated detailed flora and vegetation assessment (Biota 2017). **Table 2** lists all the culturally significant plant species recorded and also the traditional Guruma names that were identified in the literature review. **Appendix Two**[1] lists each vegetation community with the associated culturally significant plant species. Resources categories are identified for each plant species and a brief description of the plants use is provided where possible. Due to the ongoing taxonomic revisions of Western Australia's plants, plant taxa that are similar to identified culturally significant plant species were also included as an extrapolation based on its likelihood of providing a similar resource. Taxa names reported from the consolidated detailed flora and vegetation assessment (Biota 2017) were maintained to allow future cross referencing with the current vegetation mapping data.

3.1.2 ETHNOZOOLOGICAL ASSESSMENT

All fauna species that have been recorded from the Pilbara region were assessed to determine if they were traditionally used as a resource by local communities. Several groups such as kangaroos/wallabies, goannas, emus/bush turkeys, waterfowl, fish and insect grubs are commonly used as a traditional resource by communities across Australia and many are recognised at the species level. For other fauna groups, many of the literature sources indicate that general terms were used when describing smaller animals. One example is the term "small burrowing mice". This can be attributed to potentially 9 Muridae species and also a similar number of small Dasyuridae species. Based on descriptions of traditional foods across all of the reviewed literature, it is thought that the majority of fauna would be used as a potential resource when available.

To simplify the list of potential fauna species that are traditionally hunted or used as an additional resource, several assumptions were made to exclude certain fauna groups. Fauna species that are small and potentially difficult to capture (small canopy dwelling birds), birds that nest in difficult to reach places (Falcons), fossorial species and small reptiles that are may not be of sufficient size. These assumptions may be incorrect as the majority of fauna species could have been traditionally used by local communities based on current environmental conditions and species abundance.

All fauna species that were thought to be traditionally hunted or provide beneficial uses to local communities in the Pilbara region of Western Australia are listed in **Table 6** (**Appendix Three**). Fauna species that have been recorded from the Eliwana Mine and Rail project or are highly likely to occur within the PKKP and Eastern Guruma native title clainm area based on regional data are presented in **Table 4**.

[1] Table not readable when printed

3.2 DATA ANALYSIS

3.2.1 ETHNOBOTANICAL ASSESSMENT

Vegetation communities associated with the Eliwana Mine and Rail Project were assessed to identify the vegetation communities that contain culturally significant flora species. **Table 3** outlines the 110 vegetation communities that contain culturally significant flora species including the number of distinct culturally significant taxa recorded from each vegetation community and the number of survey sites that recorded culturally significant flora species. The Eliwana Mine development envelope contained 48 vegetation communities and the Eliwana Rail development envelope contained 83 vegetation communities.

Table 3 also details the area of each vegetation community recorded from the Mine and Rail development envelopes. The area of each vegetation community within the Rail development envelope that occurs in the PKKP and Eastern Guruma native title claim areas is also presented. The Mine development envelope is located entirely in the PKKP native title claim area. The total area of each vegetation community recorded from each native title claim area is also presented.

3.2.2 ETHNOZOOLOGICAL ASSESSMENT

Fauna species that are expected to be utilised traditionally as a resource by local communities are presented in **Table 4**. There are 11 mammals, 7 birds, 7 reptiles, 2 fish and 12 invertebrate species identified from references listed in **Table 1.** Four species are of conservation significance; .Northern Quoll (*Dasyurus hallucatus*) (EN, S2), Western Pebble-mound mouse (*Dasyurus hallucatus*) (P4), Fork-tailed Swift (*Apus pacifus)* (M, S5) and Pilbara Olive Python (*Liasis olivaceus barroni*) (VU, S3). A further 14 birds, 13 reptiles, 3 amphibians and 2 fish were extrapolated to be utilised based on references listed in **Table 1** and general biological interpretations. Assumptions made were that all large sized animal species would be targeted for hunting, and similar species (such as species of Goannas) would also be taken if encountered.

Each species was assessed and the habitat types that are expected to be utilised by each species and the abundance of each species was identified (**Table 4**). All habitat types (**Map 6**) are expected to utilised by culturally significant fauna species however certain areas within each habitat type are expected to be used in different ways to utilise these fauna resources. Areas such as water pools and narrowing gorges/gullies may be preferentially used by local communities when hunting as they may attract fauna species (water pools) or concentrate fauna into smaller areas (narrowing gorges.gullies). Patches of plant species that attract fauna species may also be preferentially used to hunt. An example is patches of *Capparis spinosa* (Coastal Capper) are known to attract Australian Bustards (Bush Turkeys) and pits were often dug under these plants so that feeding birds would be trapped (Young & Vitenbergs 2007). Utilisation of fauna species is also generally opportunistic and follows seasonal patterns and due to the episodic rainfall that occurs in the Pilbara (isolated thunderstorms) hunting is expected to be focused on these newly watered areas instead of certain habitat types (M. Wohling pers. comms.).

Information from the literature review identified that invertebrate fauna provide an important and ongoing traditional resource for local communities. Information on these groups have been included in **Table 4** however these groups are rarely studied and the information provided is considered limited.

Table 2: Culturally significant plant species recorded from the Eliwana Mine and Rail Project

Common Name	Species	Extrapolated	Eastern Guruma Name	Food / Water	Medicinal	Tools	Fire	Ceremonial	Clothing	Shelter	Comment
	Acacia adsurgens		Pilarri	•							Edible seeds, Witchetty grubs found in roots
Salt wattle	*Acacia ampliceps*		Yiringan		•			•			For healing and ceremony – bark used for eye medicine, sores
Fitzroy Wattle	*Acacia ancistrocarpa*		Palperin	•	•	•					Edible seeds, for healing and ceremony, used to make brooms
Mulga	*Acacia aneura*		Wintamarra	•		•				•	Edible galls, used for making spears, woomeras, clubs, digging sticks, sandals, water found in roots, bough shelters
	Acacia aneura 'sens. lat'			•		•				•	
	Acacia aneura var. intermedia			•		•				•	
	Acacia aptaneura	#									*Recent taxonomic revision. Uses thought to be similar to A. aneura*
	Acacia aptaneura x pteraneura	#									
Arid wattle	*Acacia arida*		Kunalya		•			•			For healing and ceremony. Leaves mashed and boiled for eye medicine.
Atkin's wattle	*Acacia atkinsiana*		Pilarri	•							Edible galls, good for finding edible grubs
Two-nerved wattle	*Acacia bivenosa*		Murrurpa	•						•	Good for finding edible grubs, used for making houses, brooms,
Jam tree, black mulga	*Acacia citrinoviridis*		Jarparri			•				•	Used for making spears, woomeras, bough shelter. Witchetty grubs found in roots
Cole's Wattle	*Acacia colei*		Karranyongu	•		•					Edible seeds and gum, used for making hunting spears
	Acacia colei var. colei			•		•					
	Acacia colei var. ileocarpa			•		•					
Wirewood	*Acacia coriacea*		Warntanyin	•		•					Edible seed, used for making spears and boomerangs, ash mixed with tobacco and chewed, good for wrapping meat to keep flies away
Leather-leaved wattle	*Acacia coriacea subsp. pendens*			•		•					
	Acacia coriacea subsp. sericophylla			•		•					
Halls Creek Wattle	*Acacia cowleana*			•		•					Edible seeds, wood used for artefacts
Sandhill Wattle	*Acacia dictyophleba*				•	•				•	Used to make houses, brooms, medicinal use
	Acacia exigua		Jonanyong	•							Edible seeds
Baderi	*Acacia inaequilatera*		Partirri	•	•			•			Edible seeds, Bark burnt and used to make skin lotion and insect repellent, used for healing and ceremony
Witchetty Bush	*Acacia kempeana*			•	•						Edible leaves, medicinal use
Maitland's Wattle	*Acacia maitlandii*		Jumpinhkar	•							Edible gum
	Acacia aff. maitlandii			•							
Gawar	*Acacia monticola*		Mangkalangu		•	•					Used for making spear points, medicinal use
	Acacia pachyacra			•							Edible seeds
Gidgee	*Acacia pruinocarpa*		Yallari or Pulluru	•							Edible gum, ash mixed with tobacco and chewed
Ranji Bush/Kanji	*Acacia pyrifolia*		Jirparli	•							Edible gum, edible seeds
	Acacia pyrifolia var. morrisonii			•							
	Acacia pyrifolia var. pyrifolia			•							
Belalie	*Acacia stenophylla*			•							Edible plant, seed
Barbi bush	*Acacia synchronicia*		Nhurungan			•					Used for making spears, clubs, axe handles, fence posts, lerps found on leaves
	Acacia tenuissima		Janangungu	•							Edible seeds
Kurara	*Acacia tetragonophylla*		Jilkuru	•		•					Edible seeds, used for making boomerangs, male elder specific
Minni Ritchi	*Acacia trachycarpa*		Muntaru or Putawarri		•	•					Used for making spears, clubs, axe handles, smoke calms children
Pindan wattle	*Acacia tumida*		Pilamurka	•		•					Used for making hunting spears, Edible seeds
	Acacia tumida var. pilbarensis			•		•					
	Acacia tumida var. tumida			•		•					
Bramble Wattle	*Acacia victoriae*			•							Edible seeds

Common Name	Species	Extrapolated	Eastern Guruma Name	Food / Water	Medicinal	Tools	Fire	Ceremonial	Clothing	Shelter	Comment
Wanyu	*Acacia wanyu*		Murruturu			•				•	Used for making boomerangs, shade shelters
Snakewood	*Acacia xiphophylla*		Pukarti	•		•					Edible seeds, gum, roots, good for finding edible grubs, used for making boomerangs and weapons. Ash mixed with tabacco and chewed (*pulkurr*)
Kapok	*Aerva javanica*					•	•				Seed heads used for pillow stuffing, fire starter. **Cochlospermum fraseri/gillivraei* also known as Kapok and used as similar resource
Native Amaranth	*Amaranthus interruptus*			•							Edible seeds
Boggabri Weed	*Amaranthus mitchellii*			•							Seeds ground to make damper
	Amaranthus cuspidifolius	#		•							*Genus comprises several species used for food resource*
	Amaranthus undulatus	#		•							
	Amaranthus aff. undulatus (round leaves, short tepals)	#		•							
Green Amaranth	*Amaranthus viridis*			•							Edible leaves and shoots
	Amyema sanguinea var. sanguinea			•							Edible fruit
	Amyema benthamii	#		•							*Genus comprises several species used for food resource*
	Amyema bifurcata	#		•							
Pincushion Mistletoe	*Amyema fitzgeraldii*	#		•							
	Amyema hilliana	#		•							
Wireleaf Mistletoe	*Amyema preissii*	#		•							
	Amyema sp. Fortescue (M.E. Trudgen 5358)	#		•							
Bunched Kerosene Grass	*Aristida contorta*					•	•				Fire starter, hair lotion
Feathertop Threeawn	*Aristida inaequiglumis*			•							Edible seeds
Tar Vine	*Boerhavia coccinea*			•							Edible roots
Kurrajong	*Brachychiton acuminatus*			•							Edible seeds, Water from young roots
	Bulbostylis barbata			•							Edible seed
Split Jack/Wild Passionfruit	*Capparis lasiantha*		Jilpukarri	•	•						Edible fruit, nectar used to cure coughs, leaves boiled blood circulation/diabetic people)
Wild Orange	*Capparis mitchellii*		Kajawarri	•							Edible plant, fruit
Coastal Caper	*Capparis spinosa subsp. nummularia*		Pajilla	•	•			•			Edible plant and favourite of bush turkeys, for healing and ceremony.
Wild Orange	*Capparis umbonata*		Kajawarri	•							Edible fruit
Conkerberry	*Carissa lanceolata*		Marrayn	•							Edible plant
Love Vine, Dodder laurel	*Cassytha filiformis*			•							Edible fruit
	Cenchrus setiger						•				Fire starter
Golden Beard Grass	*Chrysopogon fallax*			•							Edible seeds
	Citrullus colocynthis			•							Edible fruit
Tickweed	*Cleome viscosa*		Kunti	•	•			•			For healing and ceremony, grind seeds to make damper
Lollybush	*Clerodendrum floribundum*			•							Edible fruit
	Clerodendrum floribundum var. angustifolium			•							
	Clerodendrum floribundum var. floribundum			•							
	Clerodendrum floribundum var. ovatum			•							
Lolly bush	*Clerodendrum tomentosum var. lanceolatum*		Waylpa		•	•		•			Used to make smoking pipes, for healing and ceremony
Native Poplar	*Codonocarpus cotinifolius*		Kartajiparra, Karlutongu		•			•			For healing and ceremony. Bark and leaves boiled to make external antiseptic wash

Common Name	Species	Extrapolated	Eastern Guruma Name	Food / Water	Medicinal	Tools	Fire	Ceremonial	Clothing	Shelter	Comment
Wandering Jew	*Commelina ensifolia*			•							Edible roots
Woolly Corchorus	*Corchorus walcottii*					•					Bark from the stem used to make twine
	Corymbia candida	#									
Desert bloodwood	*Corymbia deserticola*		Nyurka	•		•					Good for finding honey
	Corymbia deserticola subsp. deserticola			•		•					
Bloodwood	*Corymbia hamersleyana*		Punaangu	•	•			•			Edible galls, good for finding honey, lerp or honeydew, for healing and ceremony – gum used to treat sores, heart and circulation problems, also stomach ulcers
Desert bloodwood	*Corymbia opaca*			•	•						Good for finding edible grubs, edible gall, gum used for healing
	Corymbia dichromophloia	#									*Similar form to other Corymbia sp. so expected to provide similar resources*
	Corymbia ferriticola	#									
Ulcardo Melon/Wild cucumber	*Cucumis melo*		Ngapunturr, jiputra	•							Edible plant
Snake vine	*Cucumis variabilis*		Thurlayilku		•						Boil plant to treat sore eyes
	Cucumis picrocarpus	#									*Edible species reported from the genus*
	Cullen leucanthum		Witiangu			•					Used for making hunting spears
Scentgrass	*Cymbopogon ambiguus*		Marrayin		•						Medicinal use. *C. bombycinus* also used (ceremony, healing – eye wash and cold treatment)
Dumara Bush/Native pear	*Cynanchum floribundum*		Jupa or Walyuru	•							Edible plant and leaves
Caustic vine	*Cynanchum viminale*		Pipiju		•						For healing and ceremony – sap used to stimulate breast milk flow and bathe sores
	Cynanchum viminale subsp. australe				•						
Downs Nutgrass	*Cyperus bifax*			•							Edible 'nuts'
Bush Onion	*Cyperus bulbosus*			•							Edible roots
Button Grass	*Dactyloctenium radulans*			•							Seeds used to make flour
Yellow hop-bush, Pirrungu	*Dodonaea lanceolata*				•						Medicinal use
	Dodonaea lanceolata var. lanceolata				•						
Sticky Hopbush	*Dodonaea viscosa*		Pirungu		•						For healing and ceremony – boil and drink to treat colds, also wash sores
	Dodonaea viscosa subsp. mucronata				•						
	Dodonaea viscosa subsp. spatulata				•						
Bush Bean	*Duperreya commixta*			•							Edible plant
Rat's Tail	*Dysphania kalpari*			•							Seeds ground to make damper
Crumbweed	*Dysphania rhadinostachya*		Kalparri	•							Seeds ground to make damper
	Dysphania rhadinostachya subsp. inflata			•							
	Dysphania rhadinostachya subsp. rhadinostachya			•							
Black Crumbweed	*Dysphania melanocarpa*	#									*Similar form to other Dysphania sp. so expected to provide similar resources*
	Dysphania plantaginella	#									
	Dysphania sphaerosperma	#		•							
Barrier Saltbush	*Enchylaena tomentosa*		Nyerilyi	•							Edible fruit
	Enchylaena tomentosa var. tomentosa			•							
Mallee Lovegrass	*Eragrostis dielsii*			•							Edible seeds
Woollybutt Grass	*Eragrostis eriopoda*			•							Seeds used to make flour
Sickle Lovegrass	*Eragrostis falcata*			•							Edible seeds
Drooping Lovegrass	*Eragrostis leptocarpa*			•							Edible seeds

Common Name	Species	Extrapolated	Eastern Guruma Name	Food / Water	Medicinal	Tools	Fire	Ceremonial	Clothing	Shelter	Comment
Neverfail Grass	*Eragrostis setifolia*			•							Edible seeds
Cuming's Love Grass	*Eragrostis cumingii*	#		•							*Similar form to other Eragrostis sp. so expected to provide similar resources*
Desert Lovegrass	*Eragrostis desertorum*	#		•							
Clustered Lovegrass	*Eragrostis elongata*	#		•							
	Eragrostis exigua	#		•							
	Eragrostis parviflora	#		•							
	Eragrostis pergracilis	#		•							
	Eragrostis sp. Mt Montagu	#		•							
	Eragrostis surreyana	#		•							
Delicate Lovegrass	*Eragrostis tenellula*	#		•							
Knotty-butt Neverfail	*Eragrostis xerophila*	#		•							
	Eremophila canaliculata		Muyumalla		•			•			For healing and ceremony
Pinyuru/Emu bush	*Eremophila cuneifolia*		Nhirti		•			•			used to soak swollen feet, boil leaves and use to treat sores and flu, also shampoo/soap
Burra/Barabirdi/Turpentine bush	*Eremophila fraseri*		Jilanpa		•			•			For healing and ceremony. Used to treat cuts and sores. Smoke keeps mosquitoes away, makes bubble bath, shampoo/soap
	Eremophila fraseri subsp. fraseri				•			•			
Warty Fuchsia Bush	*Eremophila latrobei*			•	•						Medicinal use, sweet drink
	Eremophila latrobei subsp. filiformis			•	•						
	Eremophila latrobei subsp. glabra			•	•						
	Eremophila latrobei subsp. latrobei			•	•						
Berrigan	*Eremophila longifolia*		Kawarra	•	•			•			Edible nectar. Ritual food and smoke during initiation and ceremony.
Perennial Cupgrass	*Eriochloa pseudoacrotricha*			•							Edible seeds
Yulbah	*Erythrina vespertilio*					•					Used to make necklaces, shields, coolamons (wooden dishes)
River Gum, Blunt-budded River Red Gum	*Eucalyptus camaldulensis*		Marralha	•	•			•			Good for finding edible grubs under bark, edible gum. Leaves boiled to treat flu and chest congestion.
	Eucalyptus camaldulensis subsp. obtusa			•	•			•			
	Eucalyptus camaldulensis subsp. refulgens			•	•			•			
Twin-leaf Mallee	*Eucalyptus gamophylla*		Mullerang	•							Good for finding honey, edible seeds
Snappy Gum	*Eucalyptus leucophloia*		Kartapirangu	•		•					Good for finding honey, lerp or honeydew, used to make spears, shields, hitting sticks
	Eucalyptus leucophloia subsp. leucophloia			•		•					
Blackheart gum	*Eucalyptus victrix*		Wirlu	•	•	•					Good for finding edible grubs, lerp, make bowls, boil sap to treat cuts/sores, Ash mixed with tobacco and chewed
Pilbara box	*Eucalyptus xerothermica*		Yarun	•							Edible lerp or honeydew, good for finding honey
	Eulalia aurea				•						Leaves used in "smoke therapy"
Namana, Caustic weed	*Euphorbia australis*				•						Medicinal use
	Euphorbia australis var. australis				•						
	Euphorbia australis var. erythrantha				•						
	Euphorbia australis var. glabra				•						
	Euphorbia australis var. hispidula				•						
	Euphorbia australis var. subtomentosa				•						
Caustic Weed	*Euphorbia drummondii*				•						Medicinal use
Broom Ballart	*Exocarpos sparteus*			•							Edible fruit
Rock Fig, Wild fig	*Ficus brachypoda*			•							Edible plant

Common Name	Species	Extrapolated	Eastern Guruma Name	Food / Water	Medicinal	Tools	Fire	Ceremonial	Clothing	Shelter	Comment
Native Fig	*Ficus platypoda*		Winyarrpa	•							Edible plant, used to make jam
Albayi	*Ficus virens*			•							Edible fruit
	Ficus virens var. virens			•							
Wallflower Poison	*Gastrolobium grandiflorum*			•							Herb (***poison risk**)
Wild Cotton/Desert Rose	*Gossypium robinsonii*		Wathawa			•			•		Used for making spears, dancing sticks, sandals. Sticky parts used to catch flies
	Grevillea berryana			•							Edible nectar
Caustic Bush	*Grevillea pyramidalis*		Jitartu	•				•			Yellow paint from bark, edible nectar
	Grevillea pyramidalis subsp. leucadendron			•				•			
Wickham's Grevillea	*Grevillea wickhamii*			•							Edible nectar, edible gum, edible fruits
	Grevillea wickhamii subsp. aprica			•							
	Grevillea wickhamii subsp. hispidula			•							
	Grevillea wickhamii subsp. macrodonta			•							
	Hakea lorea subsp. lorea		Kartanpa	•	•			•			Edible flower or nectar, for healing and ceremony. Burnt bark mixed with water used to protect newborn babies from heat, skin paint for Law ceremonies.
Mamukata	*Heliotropium tenuifolium*			•							Edible seeds
Bunch Speargrass	*Heteropogon contortus*				•						Medicinal use, insect repellent
Rock Morning Glory/Native yam	*Ipomoea costata*		Kulyu	•							Edible root
Poison Morning Glory	*Ipomoea muelleri*			•							Edible root
	Ipomoea pes-caprae subsp. brasiliensis		Yindalba or Jitta Yintalpa	•	•						Edible root, medicinal use
	Ipomoea polymorpha			•							Edible roots and seeds
Rock Isotome	*Isotoma petraea*				•						Similar to tobacco, medicinal use
Veined Peppercress	*Lepidium phlebopetalum*			•							Edible greens
Slender Peppercress/Native mustard bush	*Lepidium platypetalum*		Yajerri		•			•			Used to treat ulcers, skin and eye problems, treat swelling, drink to treat stomach ulcers
	Lepidium oxytrichum	#									*Similar form to other Lepidium sp. so expected to provide similar resources*
	Lepidium pedicellosum	#									
	Lepidium pholidogynum	#									
Bush banana, Silky pear	*Marsdenia australis*		Karkula or wira	•							Edible fruit and leaves
Silver Cadjeput	*Melaleuca argentea*		Mirli or wintamarra	•		•	•			•	Water, good for finding honey, used for making yandies, shields, spears, houses, firesticks
Desert paperbark	*Melaleuca eleuterostachya*		Nharkarangu	•							Lerp or honeydew
Tea-tree	*Melaleuca glomerata*		Kulimpa			•				•	Used to make shade houses, brooms, wrap meat to keep flies away
Paperbark	*Melaleuca lasiandra*			•		•					Edible nectar, make beds, tablecloth, broom, wrap meat to keep flies away
River Teatree	*Melaleuca bracteata*	#									*Melaleuca sp. provide several resource types. Other species in the genera expected to provide similar resources*
	Melaleuca linophylla	#									
Tjuntiwari/Wild tobacco	*Nicotiana benthamiana*		Yarrawarri		•			•			For healing and ceremony
Native Tobacco	*Nicotiana occidentalis*				•			•			For healing and ceremony
	Nicotiana occidentalis subsp. obliqua				•			•			
	Nicotiana occidentalis subsp. occidentalis				•			•			
Rosetted Tobacco	*Nicotiana rosulata*	#									*Similar form to other Nicotiana sp. so expected to provide similar resources*
	Nicotiana simulans	#									
Yellow Wood Sorrel	*Oxalis corniculata*			•							Edible greens

Common Name	Species	Extrapolated	Eastern Guruma Name	Food / Water	Medicinal	Tools	Fire	Ceremonial	Clothing	Shelter	Comment
	Oxalis sp. Pilbara (M.E. Trudgen 12725)	#									*Expected to provide similar resources*
Native Millet	*Panicum decompositum*			•							Edible plant and seeds
	Panicum decompositum var. decompositum			•							
Hairy Panic Grass	*Panicum effusum*			•							Edible plant and seeds
	Panicum laevinode	#									*Expected to provide similar resources*
Rare Paspalidium	*Paspalidium rarum*			•							Edible seeds
Clements Paspalidium	*Paspalidium clementii*	#									*Similar form to other Paspalidium sp. so expected to provide similar resources*
Knottybutt Grass	*Paspalidium constrictum*	#									
Warrego Grass	*Paspalidium jubiflorum*	#									
	Paspalidium retiglume	#									
	Paspalidium tabulatum	#									
Slender Petalostylis/Cassia	*Petalostylis labicheoides*		Mirntunyji			•					Used for making hunting spears, dancing sticks
Inland Pigweed	*Portulaca intraterranea*			•							Edible seeds and greens
	Portulaca oleracea/intraterranea			•							Edible seeds and greens
Purslane/Pigweed	*Portulaca oleracea*			•							Seeds ground to make damper, edible plant
Djanggara	*Portulaca pilosa*			•							Edible roots
	Portulaca conspicua	#									*Portulaca sp. provide food resource types. Other species in the genera expected to provide similar resources*
	Portulaca cyclophylla	#									
	Portulaca filifolia	#									
Conkleberry, native plum	*Psydrax latifolia*		Patharra	•							Edible fruit
Wild currant	*Psydrax suaveolens*		Wannalyyangu/ Wanalja	•							Edible fruit
	Psydrax rigidula	#		•							*Expected to provide similar resources*
Apple Bush	*Pterocaulon sphacelatum*				•						Dry plant ground to powder and used as a decongestant
	Pterocaulon sphaeranthoides		Thameran		•			•			For healing and ceremony
	Pterocaulon serrulatum	#			•						*Expected to provide similar medicinal resources as other Pterocaulon sp.*
	Pterocaulon serrulatum var. velutinum	#			•						
Narrowleaf Mulla Mulla	*Ptilotus drummondii*			•							Herb
Tall Mulla Mulla, Yellow Tails	*Ptilotus nobilis*		Murlumurlu		•			•			For healing and ceremony, stuff pillows
	Ptilotus nobilis subsp. nobilis				•			•			
Cotton Bush	*Ptilotus obovatus*				•			•			For healing and ceremony
	Ptilotus obovatus var. obovatus				•			•			
Bush Bean	*Rhyncharrhena linearis*		Warratu	•							Edible plant
Northern Sandalwood	*Santalum lanceolatum*		Ngilunpa	•	•	•					Edible fruit, insect repellent, wood used to make boomerangs
Sandalwood	*Santalum spicatum*		Putaty	•	•						Treat sores, insect repellent, hair tonic
Camel Weed	*Scaevola parvifolia*			•							Edible fruit
Currant Bush	*Scaevola spinescens*		Pungaar	•							Edible plant
Silver cassia	*Senna artemisioides*			•							Good place to find grubs, emus lay eggs when flowering
	Senna artemisioides subsp. artemisioides			•							
	Senna artemisioides subsp. filifolia			•							

Common Name	Species	Extrapolated	Eastern Guruma Name	Food / Water	Medicinal	Tools	Fire	Ceremonial	Clothing	Shelter	Comment
	Senna artemisioides subsp. helmsii			•							
	Senna artemisioides subsp. oligophylla			•							
	Senna artemisioides subsp. helmsii x oligophylla			•							
	Senna artemisioides subsp. oligophylla x?			•							
	Senna artemisioides subsp. x artemisioides			•							
	Senna artemisioides subsp. x artemisioides x S. stricta			•							
Cockroach bush	*Senna notabilis*			•							Good place to find grubs
Candlestick senna	*Senna venusta*				•						Medicinal use
Sesbania Pea	*Sesbania cannabina*					•					Used for making shields, yandies
White Dragon Tree	*Sesbania formosa*		Pitankarra			•					Used for making shields, yandies
Lifesaver Burr	*Sida platycalyx*			•							Edible seeds
Desert Raisin	*Solanum centrale*			•							Edible fruit
Bush tomato	*Solanum cleistogamum*			•							Edible fruit
Bush tomato	*Solanum diversiflorum*		Karlumpu / Jalhparrpa/Jalhpa	•							Edible fruit
	Solanum horridum			•		•					Edible plant, use the leaves for washing
Flannel Bush/bush tomato	*Solanum lasiophyllum*		Jalhparrpa/ Kulkaturra	•							Edible plant, Fruit not edible – kangaroo food
Black Berry Nightshade	*Solanum nigrum*			•							Edible leaves
Wild tomato	*Solanum phlomoides*		Jipurlyu	•							Edible plant
Marsh Stemodia/Vicks Bush	*Stemodia grossa*		Minjawarri		•	•		•			For healing and ceremony - placed in nose to clear nasal cavity, fish poison, used for aromatherapy to treat colds
Pagurda	*Stemodia viscosa*				•						Medicinal use
	Stemodia kingii	#									*Expected to provide similar medicinal resources*
Pebble Bush	*Stylobasium spathulatum*			•							Edible seeds
Sturt's desert pea	*Swainsona formosa*			•				•			Edible nectar, decorations from flowers, edible seeds
Round Templetonia	*Templetonia egena*				•						Medicinal use
Snakevine	*Tinospora smilacina*			•	•						Edible tuber, medicinal use
Lace flower	*Trachymene oleracea*		Kujiwangkalarra			•					Used for making drinking straws to drink from deep rock holes
	Trachymene oleracea subsp. oleracea					•					
Red Spinach	*Trianthema triquetrum*			•							Edible seeds and greens
Cork hopbush	*Tribulus suberosus*		Kartajiparra		•	•					Leaves used to stun fish. Boiled plant used to treat sores
Camel Bush/Northern bluebell	*Trichodesma zeylanicum*		Kalyartu				•				
	Trichodesma zeylanicum var. zeylanicum						•				
Soft Spinifex	*Triodia epactia*		Mina, Paru	•		•				•	Used to make wax, fishing nets, houses, seeds ground to make damper, shelter construction
	Triodia epactia/pungens (sterile)			•		•				•	
	Triodia pungens			•		•				•	Used to make wax, fishing nets, houses, seeds ground to make damper
Limestone Spinifex	*Triodia wiseana*			•		•					Spines used in fishing, seeds ground to make damper
Bulrush	*Typha domingensis*		Ngallowayn/ Puwarji	•				•			Edible root, fibres around seeds for body decorations, pillow stuffing
Supplejack	*Ventilago viminalis*				•						Similar to tobacco, medicial use

Common Name	Species	Extrapolated	Eastern Guruma Name	Food / Water	Medicinal	Tools	Fire	Ceremonial	Clothing	Shelter	Comment
Maloga Vigna	*Vigna lanceolata*						•				Roots used for fire starters
	Vigna lanceolata var. lanceolata						•				
	Waltheria indica			•							Edible fruit
	Yakirra australiensis			•							Edible seeds
	Yakirra australiensis var. australiensis			•							

Table 3: Vegetation associations that contain culturally significant flora species

Vegetation Association	Vegetation description (Level_V_As or Non_NVIS_C)	# Plant Species	# Survey Sites	Mine DE	Rail DE			Total Area in NTC (ha)	
				Area (ha)	Area (ha)	PKKP Area (ha)	Guruma Area (ha)	PKKP	Guruma
AanAbTHtCEc	Acacia 'aneura' low open woodland over Acacia bivenosa mid sparse shrubland over Themeda triandra, *Cenchrus ciliaris low tussock grassland	19	1		14.5		14.5		30.8
AanAprAatTwTe	Acacia 'aneura', A. pruinocarpa low open woodland over Acacia atkinsiana tall sparse shrubland over Triodia wiseana, T. epactia mid hummock grassland	35	5		505.2		505.2		595.1
AanAprERfTeTw	Acacia 'aneura', A. pruinocarpa low open woodland over Eremophila forrestii subsp. forrestii mid sparse shrubland over Triodia epactia, Triodia wiseana low open hummock grassland	10	2	52.3				79.5	
AanAprTw	Acacia 'aneura', A. pruinocarpa mid open woodland over Triodia wiseana mid open hummock grassland	19	2	46.1	18.8	18.8		64.9	
AanCHf	Acacia 'aneura' low open woodland over Chrysopogon fallax mid sparse tussock grassland	68	19	130.3	1317.6		1317.6	134.5	2482.8
AanEgAbTe	Acacia 'aneura' isolated trees over Eucalyptus gamophylla isolated mallee trees over A. bivenosa isolated tall shrubs over Triodia epactia, T. wiseana mid closed hummock grassland	43	9		2594.2		2594.2		3173.4
AanExAatAbCHfTe	Acacia 'aneura', Eucalyptus xerothermica mid open woodland over Acacia atkinsiana, A. bivenosa mid sparse shrubland over Chrysopogon fallax mid sparse tussock grassland over Triodia epactia mid hummock grassland	39	3	10.3	109.8		109.8	10.3	132.9
AanTw	Acacia 'aneura' low woodland over Triodia wiseana, T. epactia low sparse hummock grassland	35	6	35.7	88.2	88.2		123.9	
AanVfTHt	Acacia 'aneura' tall sparse shrubland over *Vachellia farnesiana mid sparse shrubland over Chrysopogon fallax, Themeda sp. Hamersley Station (M.E. Trudgen 11431) tall tussock grassland	15	5		237.9		237.9		866.6
AaTw	Acacia ancistrocarpa, Acacia bivenosa and Acacia inaequilatera mid sparse shrubland, over Triodia wiseana open hummock grassland	39	10	0.1	>0.001		0.0001	1813.8	713.6
AbAeTwTeTl	Acacia bivenosa, A. exigua, Stylobasium spathulatum mid sparse shrubland over Triodia wiseana, T. epactia, T. longiceps mid hummock grassland	24	3		400.7		400.7		456.8
AbTw1	N/A	17	1	0.2				73.5	
AbTwTe	Acacia bivenosa mid sparse shrubland over Triodia wiseana or T. epactia mid open hummock grassland	22	1	199.7				199.7	
AcAanVfBTe	Acacia citrinoviridis, Acacia 'aneura' mid isolated trees over *Vachellia farnesiana mid sparse shrubland over Bothriochloa ewartiana, Themeda sp. Hamersley Station (M.E. Trudgen 11431), Eriachne benthamii tall closed hummock grassland	7	2		25.0		25.0		74.6
AcANlTHt	Acacia citrinoviridis, Eucalyptus xerothermica low open forest over Androcalva luteiflora, Petalostylis labicheoides tall sparse shrubland over Themeda triandra, Dichanthium fecundum, Eulalia aurea mid closed tussock grassland	32	2		18.7		18.7		18.7
AcApyTErCcTe	Acacia citrinoviridis tall open shrubland over Acacia pyrifolia, Stylobasium spathulatum mid sparse shrubland over Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186) low sparse shrubland over *Cenchrus ciliaris mid sparse tussock grassland	37	4	115.7				115.7	
AcBTe	Acacia citrinoviridis, Eucalyptus victrix mid open woodland over Bothriochloa ewartiana and Chrysopogon fallax mid sparse tussock grassland	9	3		27.2		27.2		40.4
AeTw	Acacia exigua, A. trudgeniana, A. inaequilatera or A. ancistrocarpa mid open shrubland over Triodia wiseana open hummock grassland	37	5	12.0	94.5		94.5	199.2	105.5
AeTwTe	Acacia exigua, A. marramamba and /or A. bivenosa mid sparse shrubland over Triodia wiseana, T. epactia low open hummock grassland	46	10	2398.4				2398.4	
AiAkTe	Eucalyptus leucophloia subsp. leucophloia and Corymbia hamersleyana low isolated trees over Acacia inaequilatera and A. citrinoviridis low open woodland over Acacia kempeana, A. pyrifolia var. pyrifolia and A. synchronicia tall sparse shrubland over Acac	51	10	0.0				3562.9	
AiAsyCcTe	Acacia inaequilatera, Hakea lorea subsp. lorea tall sparse shrubland over A. synchronicia mid sparse shrubland over *Cenchrus ciliaris, Chrysopogon fallax mid sparse tussock grassland over Triodia epactia mid open hummock grassland	19	1	49.6				49.6	
AiTw	Acacia inaequilatera tall sparse shrubland over Triodia wiseana low open hummock grassland	56	18	86.3	4560.4	1834.0	2726.4	3436.2	3849.0
AiTw/ElTa	MOSAIC: Acacia inaequilatera tall sparse shrubland over Triodia wiseana low open hummock grassland / Eucalyptus leucophloia subsp. leucophloia low open woodland over Triodia angusta, T. longiceps, T. wiseana low open hummock grassland	65	22	3081.6	794.3	794.3		7415.9	275.9
AiTwCh2	Acacia inaequilatera, A. synchronicia and Senna artemisioides subsp. oligophylla tall sparse shrubland over Triodia wiseana and Enneapogon caerulescens low open hummock grassland/low tussock grassland with Corymbia hamersleyana isolated trees	23	1	0.001				49.7	
AmTw	Acacia maitlandii mid sparse shrubland over Triodia wiseana low open hummock grassland	22	6	13.0	678.9	678.8	0.1	830.2	17.4
ApApTe	N/A	14	1		>0.001		>0.001		1937.8
AtruTbt	Acacia trudgeniana tall isolated shrubs over Triodia basitricha, T. wiseana low open hummock grassland	12	2	187.1				187.1	
Ax	Acacia xiphophylla open shrubland over mixed Poaceae spp. sparse tussock grassland	23	4		547.2		547.2		762.2
AxAanAtERcTw	Acacia xiphophylla, A. 'aneura' low woodland over Acacia tetragonophylla tall sparse shrubland over Eremophila cuneifolia, E. forrestii subsp. forrestii, Senna stricta mid sparse shrubland over Triodia wiseana, T epactia mid open hummock grassland	57	14	86.7	108.7	57.3	51.5	162.1	70.2
AxSglTe	Acacia xiphophylla and A. aptaneura low woodland over Senna glutinosa subsp. x luerssenii, S. stricta and Acacia tetragonophylla low to mid sparse shrubland over mixed chenopod species low sparse shrubland (Maireana triptera, M. planifolia, Enchylaena to	18	1	0.1				746.6	
AxTl	Acacia xiphophylla low woodland over Triodia longiceps, T. angusta, T. wiseana low sparse hummock grassland	27	6		216.2	67.0	149.2	107.0	278.1
Burnt	N/A	55	13		17.3		17.3		18.6

Vegetation Association	Vegetation description (Level_V_As or Non_NVIS_C)	# Plant Species	# Survey Sites	Mine DE	Rail DE			Total Area in NTC (ha)	
				Area (ha)	Area (ha)	PKKP Area (ha)	Guruma Area (ha)	PKKP	Guruma
CdAhTw	Corymbia deserticola subsp. deserticola low sparse woodland over Acacia hamersleyensis tall sparse shrubland over Triodia wiseana low open hummock grassland	9	2		17.1		17.1		121.0
CdAiTwTbt	Corymbia deserticola subsp. deserticola low isolated trees over Acacia inaequilatera, A. exigua, Senna glutinosa subsp. glutinosa mid sparse shrubland over Triodia wiseana, T. basitricha low open hummock grassland	30	5	36.6				175.6	365.4
CdEgAaTw	Corymbia deserticola subsp. deserticola, E. leucophloia subsp. leucophloia mid open woodland over Eucalyptus gamophylla open mallee woodland over Acacia ancistrocarpa, A. atkinsiana, A. exigua mid sparse shrubland over Triodia wiseana mid hummock grassla	14	3		41.1		41.1	1.2	160.6
ChAarAadTw	Corymbia hamersleyana, Eucalyptus leucophloia subsp. leucophloia low open woodland over Acacia arida, Grevillea wickhamii mid sparse shrubland over Acacia adoxa var. adoxa low sparse shrubland over Triodia wiseana mid hummock grassland	34	5	413.2	87.4		87.4	1185.2	1207.9
ChAbTw	Corymbia hamersleyana, Eucalyptus leucophloia subsp. leucophloia mid open woodland over Acacia bivenosa, A. synchronicia, A. ancistrocarpa mid-tall sparse shrubland over Triodia wiseana low sparse hummock grassland	44	11	399.0				785.1	840.4
ChAiTw	N/A	41	11	943.2	0.4		0.4	1630.0	789.5
ChAiTw/ElAbTlo	Mosaic: Corymbia hamersleyana and/ or Eucalyptus leucophloia subsp. leucophloia low isolated trees over Acacia inaequilatera and/ or A. bivenosa mid-tall sparse shrubland over Triodia wiseana low hummock grassland / Eucalyptus leucophloia subsp. leucophl	69	39	14747.4	2308.3	2308.3		26023.8	2.4
ChApTr	N/A	44	15		1.4		1.4		1128.7
ChApTw	N/A	17	4		14.3		14.3		695.7
ChApyTHtTe	Corymbia hamersleyana low open woodland over Acacia pyrifolia and/or A. tumida var. pilbarensis mid sparse shrubland occasionally over Gossypium australe low sparse shrubland over Themeda triandra open tussock grassland over Triodia epactia mid open humm	34	3		136.9		136.9		136.1
ChApyTw	Corymbia hamersleyana low open woodland over Acacia pyrifolia, A. spp. sparse shrubland over Themeda triandra mid sparse tussock grassland over Triodia wiseana mid sparse hummock grassland	52	5		526.9		526.9		558.4
ChEgAatTw	Corymbia hamersleyana low open woodland over Eucalyptus gamophylla mid mallee woodland over Acacia atkinsiana, A. kempeana, A. bivenosa mid open shrubland over Triodia wiseana mid hummock grassland	23	6		581.1		581.1		603.1
Disturbed	Disturbed	16	2		745.5		745.5		898.5
EcAcEUaTe	Eucalyptus camaldulensis subsp. refulgens, E. victrix mid woodland over Acacia citrinoviridis, Melaleuca glomerata tall open shrubland over Eulalia aurea mid sparse tussock grassland over Triodia epactia low sparse hummock grassland	80	14	27.1	140.0		140.0	27.0	175.8
EcMbTH	N/A	12	2		>0.001		>0.001		41.7
EgAatAtuTe	Eucalyptus gamophylla low open mallee woodland over Acacia atkinsiana, A. tumida var pilbarensis and /or A. bivenosa and Senna artemisioides subsp. oligophylla mid sparse shrubland over Themeda triandra mid sparse tussock grassland over Triodia epactia,	8	3		100.7		100.7		100.7
EgAatTe	Eucalyptus gamophylla mid sparse mallee shrubland over Acacia atkinsiana, A. bivenosa, A. exigua tall sparse shrubland over Triodia epactia, T. wiseana mid hummock grassland	63	14	2212.3				2426.7	
EgAeTw	Eucalyptus gamophylla and Corymbia deserticola subsp. deserticola mid open mallee woodland/low open woodland over Acacia exilis and A. atkinsiana tall open shrubland over Triodia wiseana low hummock grassland	15	3		>0.001		>0.001		585.3
ElAanAbCAPlTb	Eucalyptus leucophloia subsp. leucophloia, Acacia 'aneura' low woodland over Acacia bivenosa, Senna artemisioides subsp. oligophylla, S. glutinosa subsp. glutinosa isolated tall shrubs over Capparis lasiantha, Abutilon dioicum, Dodonaea pachyneura mid is	7	1		26.6		26.6		26.6
ElAanAprAbTwTe	Eucalyptus leucophloia subsp. leucophloia isolated mid trees over Acacia 'aneura', A. pruinocarpa, A. bivenosa tall open shrubland over Triodia wiseana, T. epactia mid hummock grassland	41	13		5494.7		5494.7		6652.4
ElAanAteSENsTe	Eucalyptus leucophloia subsp. leucophloia, Acacia 'aneura', A. xiphophylla low open woodland over A. tetragonophylla tall sparse shrubland over Senna stricta mid sparse shrubland over Triodia epactia, T. wiseana, T. longiceps mid sparse hummock grassland	28	3	348.2				348.2	
ElAarTwTspr	Eucalyptus leucophloia subsp. leucophloia mid isolated trees Acacia arida mid open shrubland over Triodia wiseana, T. sp. Robe River (M.E. Trudgen et al. MET 12367) mid hummock grassland	39	18	2622.5				2622.6	
ElAaTbt	Eucalyptus leucophloia subsp. leucophloia low open woodland over Acacia ancistrocarpa and A. bivenosa tall sparse shrubland over Triodia basitricha, T. wiseana, T. epactia mid open hummock grassland	10	1		52.7		52.7		52.7
ElAatTe	Eucalyptus leucophloia subsp. leucophloia low open woodland over Acacia atkinsiana mid sparse shrubland over Triodia epactia low hummock grassland	35	7		233.5		233.5		379.1
ElAatTw	Eucalyptus leucophloia subsp. leucophloia low open woodland over Acacia atkinsiana, A. exigua tall sparse shrubland over Triodia wiseana low sparse hummock grassland	38	5	398.3				474.2	
ElAaTw	Eucalyptus leucophloia subsp. leucophloia low isolated trees over Acacia ancistrocarpa, A, bivenosa, A. inaequilatera mid sparse shrubland over Triodia wiseana or T. brizoides open hummock grassland	52	18		590.8		590.8	6186.1	2969.8
ElAbCHf	Eucalyptus leucophloia subsp. leucophloia, Corymbia hamersleyana, Acacia citrinoviridis low open woodland over Acacia bivenosa, Androcalva luteiflora, Petalostylis labicheoides mid shrubland over Chrysopogon fallax, Eulalia aurea, Themeda triandra mid tu	36	2		90.1		90.1		97.8

Vegetation Association	Vegetation description (Level_V_As or Non_NVIS_C)	# Plant Species	# Survey Sites	Mine DE	Rail DE			Total Area in NTC (ha)	
				Area (ha)	Area (ha)	PKKP Area (ha)	Guruma Area (ha)	PKKP	Guruma
ElAbTlo	Eucalyptus leucophloia subsp. leucophloia low open woodland over Acacia bivenosa mid open shrubland over Triodia longiceps, T. wiseana low open hummock grassland	22	5	884.6				885.5	
ElAbTw	Eucalyptus leucophloia subsp. leucophloia low open woodland over Acacia bivenosa mid sparse shrubland over Triodia wiseana mid closed hummock grassland	82	36	70.3	1978.1		1978.1	252.5	4818.7
ElAcAarTwTspr	Eucalyptus leucophloia subsp. leucophloia isolated low trees-low open woodland over Acacia citrinoviridis, A. pruinocarpa low open woodland over Acacia arida, A. maitlandii mid sparse-mid open shrubland over Triodia wiseana, T. sp. Robe River (M.E. Trudg	26	4	550.5				561.8	
ElAcTwTspr	Eucalyptus leucophloia subsp. leucophloia low isolated trees over Acacia citrinoviridis, A. pruinocarpa tall open-sparse shrubland over Triodia wiseana, T. sp. Robe River (M.E. Trudgen et al MET 12367) mid open hummock grassland	28	4	146.6				146.6	
ElAdAadTw	Eucalyptus leucophloia subsp. leucophloia, Corymbia hamersleyana low open woodland over Acacia dictyophleba and/ or A. tenuissima and A. cowleana mid sparse shrubland over A. adoxa var. adoxa low sparse shrubland over Triodia wiseana mid hummock grasslan	19	4		95.8		95.8		241.7
ElAeTw	Eucalyptus leucophloia subsp. leucophloia low isolated trees over Acacia exigua, A. pruinocarpa, Senna glutinosa subsp. glutinosa mid open shrubland over Triodia wiseana, T. epactia mid open hummock grassland	30	7		73.4		73.4		232.3
ElAkTbt	Eucalyptus leucophloia subsp. leucophloia low open woodland over Acacia kempeana mid sparse shrubland over Triodia basitricha low hummock grassland	31	9	265.4				265.4	
ElAkTe	Eucalyptus leucophloia subsp. leucophloia low open woodland over Acacia kempeana mid sparse shrubland over Triodia epactia or T. wiseana low hummock grassland	47	12	325.6	109.8		109.8	325.6	239.2
ElAmTw	Eucalyptus leucophloia subsp. leucophloia and/ or Corymbia hamersleyana mid open woodland over Acacia maitlandii mid sparse shrubland over Triodia wiseana low hummock grassland	118	78	13694.5	736.8	302.8	434.0	28723.6	660.4
ElAmTw/ElAarTwTspr	Mosaic: Eucalyptus leucophloia subsp. leucophloia and/ or Corymbia hamersleyana mid open woodland over Acacia maitlandii mid sparse shrubland over Triodia wiseana low hummock grassland / Eucalyptus leucophloia subsp. leucophloia mid isolated trees Acacia	36	13	2135.1				2135.1	
ElAmTw2	N/A	1	1		0.02				2204.6
ElApTspr	Eucalyptus leucophloia subsp. leucophloia low open woodland over Acacia pruinocarpa tall sparse shrubland over Triodia sp. Robe River (M.E. Trudgen et al. MET 12367) low hummock grassland	32	8	19.3				34.4	
ElApTw	N/A	44	8		>0.001		>0.001		113.6
ElAsyAbTwTl	Eucalyptus leucophloia subsp. leucophloia low isolated trees over Acacia synchronicia, A. bivenosa mid isolated shrubs over Triodia wiseana, T. longiceps mid hummock grassland	11	2		207.1		207.1		257.7
ElChAeTw	Eucalyptus leucophloia subsp. leucophloia and/ or Corymbia hamersleyana low open woodland over Acacia exigua, A. bivenosa, A. synchronicia mid open shrubland over Triodia wiseana mid hummock grassland	12	3		384.0		384.0		450.4
ElEgAatTw	Eucalyptus leucophloia subsp. leucophloia, Acacia pruinocarpa isolated low trees over E. gamophylla isolated low mallee trees over Acacia atkinsiana, A. bivenosa, Senna glutinosa subsp. glutinosa, S. glutinosa subsp. pruinosa tall sparse shrubland over T	13	2		55.9		55.9		101.2
ElEgAmTw	Eucalyptus leucophloia subsp. leucophloia and/ or Corymbia hamersleyana mid open woodland over E. gamophylla mid open mallee woodland over Acacia maitlandii, Petalostylis labicheoides, A. pyrifolia tall sparse shrubland over Triodia wiseana low hummock g	43	12	438.6				438.6	
ElEgApTw	Eucalyptus leucophloia subsp. leucophloia low open woodland over Eucalyptus gamophylla mid open mallee woodland over Acacia pruinocarpa and/ or A. pyrifolia tall sparse shrubland over Triodia wiseana mid hummock grassland	24	3		356.1		356.1		891.7
ElEpAbTe	Eucalyptus leucophloia subsp. leucophloia low open woodland over Eucalyptus pilbarensis low open mallee woodland over Acacia bivenosa mid sparse shrubland over Triodia epactia, T wiseana low sparse hummock grassland	29	7		42.1		42.1		56.9
ElGwCOlTw	Eucalyptus leucophloia subsp. leucophloia, Corymbia hamersleyana low open woodland over Grevillea wickhamii tall sparse shrubland over Acacia monticola mid sparse shrubland over Corchorus lasiocarpus low sparse shrubland over Triodia wiseana mid open hum	32	4		7.2		7.2		72.1
ElHcAhTw	Eucalyptus leucophloia subsp. leucophloia, Corymbia hamersleyana low open woodland over Hakea chordophylla mid sparse shrubland occasionally over Acacia hilliana, Acacia adoxa var. adoxa low sparse shrubland over Triodia wiseana mid hummock grassland	48	14		1146.5		1146.5		2986.2
ElSENgTw	Eucalyptus leucophloia subsp. leucophloia low open woodland over Senna glutinosa subsp. glutinosa, S. glutinosa subsp. pruinosa, Acacia marramamba mid isolated shrubs over Triodia wiseana, T. epactia mid hummock grassland	28	6		703.2		703.2		937.5
ElTa	Eucalyptus leucophloia subsp. leucophloia low open woodland over Triodia angusta, T. longiceps, T. wiseana low open hummock grassland	78	38	613.2	4267.8	2537.1	1730.7	4345.3	3304.6
ElTw1	N/A	49	8		47.4		47.4		32692.0
ERma	Eremophila maculata subsp. brevifolia, Sida fibulifera low sparse shrubland over Eragrostis xerophila low sparse tussock grassland	2	2		32.6		32.6		32.6
EsMeTl	Eucalyptus socialis subsp. eucentrica, E. leucophloia subsp. leucophloia low open woodland over Melaleuca eleuterostachya, Acacia exigua mid sparse shrubland over Triodia longiceps, T. wiseana mid hummock grassland	19	4		603.6		603.6		913.1
EvAcCcERIt	Eucalyptus victrix low-mid open woodland over Acacia citrinoviridis and/ or Melaleuca glomerata tall open shrubland over *Cenchrus ciliaris, Eriachne tenuiculmis mid open tussock grassland	72	10	396.5	82.0	82.0		566.0	

Vegetation Association	Vegetation description (Level_V_As or Non_NVIS_C)	# Plant Species	# Survey Sites	Mine DE	Rail DE			Total Area in NTC (ha)	
				Area (ha)	Area (ha)	PKKP Area (ha)	Guruma Area (ha)	PKKP	Guruma
EvAcMgERIt	Eucalyptus victrix low-mid open woodland over Acacia citrinoviridis, Melaleuca glomerata tall sparse shrubland over Eriachne tenuiculmis mid sparse tussock grassland	67	13	122.8	109.9	100.9	8.9	334.5	23.5
EvAcVfDICf	Eucalyptus victrix, (E. camaldulensis subsp. refulgens) woodland over Acacia citrinoviridis low open woodland over *Vachellia farnesiana tall sparse shrubland over Dichanthium fecundum, Eulalia aurea, Themeda triandra 'sens. lat', (Eriachne benthamii) mi	14	1		0.6		0.6		0.6
EvExAcTHt	Eucalyptus victrix, E. xerothermica open woodland over Acacia citrinoviridis, Gossypium robinsonii tall shrubland over Themeda triandra mid sparse tussock grassland	34	5		27.7	27.7		27.8	
ExAanERIoTHt	Eucalyptus xerothermica, Acacia aptaneura, A. citrinoviridis low open woodland over Eremophila longifolia, Acacia bivenosa, Acacia ancistrocarpa tall sparse shrubland over Themeda triandra, Chrysopogon fallax, Dichanthium fecundum mid closed tussock gras	27	4		53.4		53.4		55.5
ExAbTw	N/A	35	6		0.004		>0.001		512.3
ExAcTHtTe	Eucalyptus xerothermica low open woodland over Acacia citrinoviridis, A. bivenosa, A. pyrifolia tall sparse shrubland over Themeda triandra, Chrysopogon fallax mid tussock grassland over Triodia epactia mid hummock grassland	62	5	401.5	11.9		11.9	425.0	130.7
ExApCHfTw	Eucalyptus xerothermica low open woodland over Acacia pruinocarpa tall sparse shrubland over Triodia wiseana mid hummock grassland over Chrysopogon fallax mid tussock grassland	18	6		1273.6		1273.6		2170.5
ExApTe	N/A	38	2		1.3		1.3		240.9
ExEsAbTw	Eucalyptus xerothermica, E. socialis subsp. eucentrica low open mallee woodland over Acacia bivenosa, A. synchronicia tall sparse shrubland over Triodia wiseana low hummock grassland	53	13	1085.1				1280.4	22.7
ExEsAbTw/ElTa	Mosaic: Eucalyptus xerothermica, E. socialis subsp. eucentrica low open mallee woodland over Acacia bivenosa, A. synchronicia tall sparse shrubland over Triodia wiseana low hummock grassland / Eucalyptus leucophloia subsp. leucophloia low open woodland o	22	6	656.2				656.2	
FWE10	Low Open Woodland of Eucalyptus leucophloia subsp. leucophloia, Corymbia deserticola subsp.deserticola and Eucalyptus gamophylla to 10m over Scattered Tall Shrubs of Hakea chordophylla, Acacia monticola, Acacia bivenosa, Acacia elachantha, Acacia ina	1	1		33.4		33.4		650.9
FWE2	Low Open Woodland to Scattered Low Trees of Eucalyptus gamophylla, Corymbia hamersleyana and Corymbia deserticola subsp. deserticola to 9m over Tall Shrubland to Tall Open Shrubland of Acacia pyrifolia var. pyrifolia, Acacia atkinsiana, Gastrolobium	16	3		17.1		17.1		469.7
FWE3/FWE15	Low Open Woodland of Eucalyptus xerothermica, Eucalyptus leucophloia subsp. leucophloia, Corymbia hamersleyana and Eucalyptus gamophylla to 6m over Tall Open Shrubland to Scattered Tall Shrubs of Acacia bivenosa, Acacia ancistrocarpa, Acacia pyrifoli	1	1		0.2		0.2		303.7
GsTak	Grevillea saxicola isolated-sparse tall shrubs over Triodia aff. Karijini low open hummock grassland	9	3		8.7		8.7	4.2	10.0
MaMgCYPv	Melaleuca argentea (Eucalyptus camaldulensis subsp. refulgens) mid open forest over Melaleuca glomerata, Acacia coriacea subsp. pendens tall sparse shrubland over Cyperus vaginatus mid sparse sedgeland over Eriachne tenuiculmis low sparse tussock grassla	44	7	19.8				20.9	12.6
MDWE1	Woodland to Low Woodland of Corymbia hamersleyana to 12m over Tall Open Shrubland of Gossypium robinsonii, Acacia pyrifolia var. pyrifolia, Grevillea wickhamii subsp. hispidula and Acacia tumida var. pilbarensis over Tussock Grassland to Very Open Tu	17	3		12.3		12.3		121.0
PANdTHs	Panicum decompositum, Themeda sp. Hamersley Station (M.E. Trudgen 11431), mid-tall tussock grassland	9	6		40.7		40.7		668.6
SENgTw	Senna glutinosa subsp. glutinosa mid isolated shrubs over Triodia wiseana low open hummock grassland	30	5	690.8				690.8	
TEdTl	Acacia tetragonophylla, A. cowleana, A colei tall isolated shrubs over Tecticornia disarticulata low sparse shrubland over Triodia longiceps, T. angusta low sparse hummock grassland	42	7		142.4		142.4		142.4
THsERIb	Themeda sp. Hamersley Station (M.E. Trudgen 11431) and Eriachne benthamii tall closed tussock grassland over Cullen cinereum low isolated shrubs	2	2		67.3		67.3		766.9
Tw1	N/A	31	4		29.9		29.9		2968.6
VfARl	*Vachellia farnesiana mid sparse shrubland over Aristida latifolia, Chrysopogon fallax, Dichanthium sericeum, Eriachne benthamii mid tussock grassland	13	2		55.1		55.1		209.2
VfASl	*Vachellia farnesiana isolated mid shrubs over Astrebla lappacea, Themeda sp. Hamersley Station (M.E. Trudgen 11431) mid tussock grassland	5	2		14.3		14.3		245.8
VfERIb	*Vachellia farnesiana sparse shrubland over Eriachne benthamii, Dichanthium sericeum, Themeda sp. Hamersley Station (M.E. Trudgen 11431) tussock grassland	1	1		304.0		304.0		495.3

Table 4: Culturally significant fauna species recorded from the Eliwana Mine and Rail Project

Common Name	Species Name	Guruma Name	Conservation significance status			Identified from region in fauna report (Ecoscape 2017)	A	B	E	F	G	J	L	U	W	Traditional Resource Use	Suitable Habitats									Abundance estimate 1-100 100-1000 1000-10000 10000+
			EPBC Act	WC/BC Act	DBCA												Drainage Line (Major)	Drainage Line (Minor)	Gorges.Gullys	Hills/Ranges/Plateaux	Lower Slopes/Hillslopes	Plain (alluvial plain)	Plain (cracking clay)	Plain (shrubland)	Plain (stony gibber)	
Mammals																										
Short-beaked Echidna	*Tachyglossus aculeatus*	jinkartji				Y	Y			Y		Y		Y		Meat, Clothing pins	•	•	•	•	•	•		•		100-1000
Northern Quoll	*Dasyurus hallucatus*		EN	S2	T	Y		Y						Y		Clothing	•		•	•						1-100 (two recorded)
Common Brushtail possum	*Trichosurus vulpecula*					Y		Y		Y				Y		Meat, Clothing	•		•							1-100
Euro	*Osphranter robustus*	patjarri (hill kangaroo)				Y	Y	Y			Y	Y		Y		Meat, Clothing, used for making bags	•	•		•	•					1000-10000
Red Kangaroo	*Osphranter rufus*	pajiwanarra (plain kangaroo)				Y				Y						Meat	•	•				•	•	•	•	100-1000
Rothschild's Rock wallaby	*Petrogale rothschildi*	jarrunmarra jartun				Y	Y					Y		Y		Meat, Clothing			•	•						100-1000
Western Pebble-mound mouse	*Pseudomys chapmani*	yallaru (mouse) karroputayongu (pebble mound)			P4	Y	Y									Rocks used for making spears				•	•					1000-10000
Cat	*Felis catus*	ngaugnanha				Y	Y									Meat										100-1000
Dingo	*Canis familiaris*	wantja				Y		Y								Hunting	•	•		•	•	•	•	•	•	1-100
Camel*	*Camelus Dromedarius*					Y		Y								Meat	•	•				•	•	•	•	1-100
Birds																										
Emu	*Dromaius novaehollandiae*	kayatpu				Y		Y		Y		Y		Y		Meat, Eggs, Clothing, Feathers for skirts	•	•			•	•	•	•	•	100-1000
Stubble Quail	*Coturnix pectoralis*	puntaru				Y										Extrapolated – Meat	•	•		•	•	•	•	•		1000-10000
Brown Quail	*Coturnix ypsilophora*					Y										Extrapolated – Meat	•	•		•	•	•	•	•		1000-10000
Black Swan	*Cygnus atratus*	karlajiku				N	Y									Meat, Eggs	•									1-100
Plumed Whistling-duck	*Dendrocygna eytoni*	ngarranti karrandadi				Y										Meat, Eggs	•									1-100
Australian Wood Duck	*Chenonetta jubata*					Y										Meat, Eggs	•									1-100
Pink-eared Duck	*Malacorhynchus membranaceus*					Y										Meat, Eggs	•									1-100
Grey Teal	*Anas gracilis*					Y										Meat, Eggs	•									1-100
Pacific Black Duck	*Anas superciliosa*					Y										Meat, Eggs	•									1-100
Common Bronzewing	*Phaps chalcoptera*	marnpi				Y	Y	Y								Meat	•	•			•	•		•		100-1000
Flock Bronzewing	*Phaps histrionica*					Y	Y									Meat	•	•			•	•		•		1-100
Crested Pigeon	*Ocyphaps lophotes*	karlkarlulu				Y	Y									Meat	•	•		•	•	•		•	•	10000+
Spinifex Pigeon	*Geophaps plumifera*	ngunutu				Y	Y									Meat	•	•	•	•	•	•		•	•	10000+

Common Name	Species Name	Guruma Name	Conservation significance status			Identified from region in fauna report (Ecoscape 2017)	A	B	E	F	G	J	L	U	W	Traditional Resource Use	Suitable Habitats									Abundance estimate 1-100 100-1000 1000-10000 10000+
			EPBC Act	WC/BC Act	DBCA												Drainage Line (Major)	Drainage Line (Minor)	Gorges.Gullys	Hills/Ranges/Plateaux	Lower Slopes/Hillslopes	Plain (alluvial plain)	Plain (cracking clay)	Plain (shrubland)	Plain (stony gibber)	
Fork-tailed Swift	*Apus pacifus*		M	S5		Y			Y							"Rain bird" to indicate imminent weather	•	•	•	•	•	•	•	•	•	1-100
Australian Pelican	*Pelecanus conspicillatus*	pinpalulu				Y										Extrapolated – Meat	•									1-100
Australian Bustard	*Ardeotis australis*	parntakura				Y	Y									Meat, Eggs					•	•	•	•	•	100-1000
Galah	*Eolophus roseicapilla*	pilyaku				Y	Y									Meat	•	•	•	•	•	•		•		1000-10000
Little Corella	*Cacatua sanguinea*	pirtirra				Y										Extrapolated – Meat	•	•	•	•	•	•		•		1000-10000
Australian Ringneck	*Barnardius zonarius*	parnparn				Y										Extrapolated – Meat	•	•		•	•	•		•		1000-10000
Budgerigar	*Melopsittacus undulatus*	pulyiri pulyiri				Y										Extrapolated – Meat	•	•		•	•	•	•	•	•	10000+ (eruptive species)
Pheasant Coucal	*Centropus phasianinus*					Y										Extrapolated – Meat	•		•							1-100
Reptiles																										
Flat Shelled Turtle	*Chelodina steindachneri*	pingki				N						Y				Meat	•									1-100
Burton's Snake-lizard	*Lialis burtonis*					Y		Y								Meat	•				•	•	•	•	•	1000-10000
Western Hooded Scaly-foot	*Pygopus nigriceps*					Y										Extrapolated – Meat	•				•	•	•	•	•	1000-10000
Long-nosed dragon	*Gowidon longirostris*	karliringka				Y							Y			Meat	•	•	•							10000+
Dwarf Bearded Dragon	*Pogona minor*					Y										Extrapolated – Meat				•	•	•		•	•	1000-10000
Centralian Blue-tongue	*Tiliqua multifasciata*	palyiri				Y										Extrapolated – Meat				•	•	•		•	•	1000-10000
Spiny-tailed monitor	*Varanus acanthurus*	jitarra (black & white goanna) kurrumanthu pirriala (goanna) pirriala (goanna) panthawayi panthanparhanha (perentie) yurnga (small tree climbing)				Y							Y			Meat						•		•	•	1000-10000
Short-tailed Pygmy Monitor	*Varanus brevicauda*					Y										Extrapolated – Meat						•		•		100-1000
Pilbara Monitor	*Varanus bushi*					Y										Extrapolated – Meat	•	•			•	•		•	•	100-1000
Stripe-tailed Monitor	*Varanus caudolineatus*					Y										Extrapolated – Meat	•	•			•	•		•	•	100-1000
Pygmy Desert Monitor	*Varanus eremius*					Y										Extrapolated – Meat						•		•		100-1000
Perentie	*Varanus giganteus*					Y							Y			Meat	•	•	•	•	•	•		•	•	100-1000
Sand Goanna	*Varanus gouldii*					N	Y	Y				Y				Meat						•		•		100-1000
Southern Pilbara Rock Monitor	*Varanus hamersleyensis*					Y										Extrapolated – Meat			•	•						1000-10000
Yellow-spotted Monitor	*Varanus panoptes*					Y										Extrapolated – Meat	•	•	•	•	•	•	•	•	•	1000-10000
Black-headed Monitor	*Varanus tristis*					Y										Extrapolated – Meat	•	•	•	•		•			•	100-1000

Common Name	Species Name	Guruma Name	Conservation significance status			Identified from region in fauna report (Ecoscape 2017)	A	B	E	F	G	J	L	U	W	Traditional Resource Use	Suitable Habitats									Abundance estimate 1-100 100-1000 1000-10000 10000+
			EPBC Act	WC/BC Act	DBCA												Drainage Line (Major)	Drainage Line (Minor)	Gorges.Gullys	Hills/Ranges/Plateaux	Lower Slopes/Hillslopes	Plain (alluvial plain)	Plain (cracking clay)	Plain (shrubland)	Plain (stony gibber)	
Pygmy Python	*Antaresia perthensis*					Y										Extrapolated – Meat				•	•				•	100-1000
Stimson's Python	*Antaresia stimsoni*	tharwarru (carpet python)				Y										Extrapolated – Meat	•	•		•	•	•	•	•	•	1000-10000
Black-headed Python	*Aspidites melanocephalus*					Y										Extrapolated – Meat	•	•			•	•		•	•	1-100
Pilbara Olive Python	*Liasis olivaceus barroni*	palkunyji (rock python)	VU	S3	VU	Y	Y									Meat, Eggs	•		•							1-100
Amphibians																										
Main's Frog	*Cyclorana maini*	jarrkan (frog) junthalli (*P. spenceri*)				Y										Extrapolated – water, meat	•	•				•	•			10000+ (eruptive species)
Western Water-Holding Frog	*Cyclorana occidentalis*					Y										Extrapolated – water, meat	•	•				•	•			10000+ (eruptive species)
Centralian Burrowing Frog	*Platyplectrum spenceri*					Y										Extrapolated – water, meat	•	•				•	•			10000+ (eruptive species)
Fish																										
Hyrtl's catfish	*Neosilurus hyrtlii*	ngurruwayi				N		Y								Meat	•									1000-10000
Barred Grunter	*Amniataba percoides*					Y										Extrapolated – Meat	•									1000-10000
Fortescue Grunter	*Leiopotherapon aheneus*					Y										Extrapolated - Meat	•									100-1000
Spangled Perch	*Leiopotherapon unicolor*	kuthampa kulumpa				Y				Y						Meat	•									10000+
Invertebrates																										
Longhorn beetle	*Bardistus cibarius*	bardi				N/A		Y								Meat	•	•			•	•		•	•	10000+
Witchetty grub	*Endoxyla leucomochla*	bardi				N/A		Y								Meat, Bilby diggings indicate grubs are ready to eat,	•	•			•	•		•	•	10000+
Processionary caterpillar	*Ochrogaster lunifer*	wallulunga				N/A									Y	Spread in Bustard nests to help hunt, length of train indicates season severity	•	•	•		•	•		•	•	10000+
Ant Lion	*Myrmeleontidae*					N/A									Y	Toy			•	•						10000+
Native Bees	*Tetragonula spp., Austroplebeia spp.*	wanpayi				N/A									Y	Honey, Medicine (larvae)	•	•	•	•	•	•				10000+
Termites	*Isoptera*	munthur				N/A	Y								Y	Meat, Medicine (eggs)				•	•	•		•	•	10000+
Grasshoppers, crickets, locusts	*Orthoptera*	pinpilha (grasshopper)				N/A									Y		•	•	•	•	•	•	•	•	•	10000+
Beetles	*Coleoptera*	pilu (grub in roots, bardi) jalkunhungu (grub in tree branch) pirtingingu (grub in soil)				N/A									Y	Meat (Larval form), calls can indicate availability of yams/edible grasses	•	•	•	•	•	•		•	•	10000+

Common Name	Species Name	Guruma Name	Conservation significance status			Identified from region in fauna report (Ecoscape 2017)	A	B	E	F	G	J	L	U	W	Traditional Resource Use	Suitable Habitats									Abundance estimate 1-100 100-1000 1000-10000 10000+
			EPBC Act	WC/BC Act	DBCA												Drainage Line (Major)	Drainage Line (Minor)	Gorges.Gullys	Hills/Ranges/Plateaux	Lower Slopes/Hillslopes	Plain (alluvial plain)	Plain (cracking clay)	Plain (shrubland)	Plain (stony gibber)	
Moths	*Lepidoptera*					N/A									Y	Meat (Larval form)	•	•	•	•	•	•		•	•	10000+
Ants/Bees	*Hymenoptera*	minga (ant)				N/A									Y	Sugar/Honey, Medicine (eggs), Bee wax and resin from ant nests used as adhesive,	•	•	•	•	•	•		•	•	10000+
Scale insects	*Hemiptera: Coccoidea*	marrajun (lerp on *A. glaucocaesia*)				N/A									Y	Sugar	•	•	•	•	•	•		•	•	10000+
Gall inducing insects	*Cystococcus pomiformis*					N/A									Y	Food	•	•	•	•	•	•		•	•	10000+

4 DISCUSSION

For Aboriginal people, "bush food" is more than just a source of sustenance, their existence depends on harmony in the cycle of life, and often religious principles (Isaacs 1987). Aboriginal people's diet consists of hundreds of fruits, nuts, seeds, vegetables, insects and meats that are gathered, harvested, prepared and/or hunted (Cherikoff 1989; Isaacs 1987; Meagher 1974). Flora and fauna can also support other species (e.g. grubs and insects) and can be utilised to produce useful things (e.g. weapons, tools, shelter, clothing etc.) (Clarke 2007; Clarke 2012). These flora and fauna species utilised have been listed in **Section 3**.

4.1.1 ETHNOBOTANICAL ASSESSMENT

Ethnobotany is the close-up and personal interaction between flora and individual men and women and the communities in which they live (Pearn 2004). It relates to the use of botanical material for food, fire, tools, religious objects, and medicinal use. Plants contain an array of alkaloids, essential oils, steroids, terpenes and tannins, sugars, complex carbohydrates and elements such as iron, selenium and silica (Hegarty & Hegarty 2001; Latz 1995; Pearn 2004). Therefore majority of the flora species are used by Eastern Guruma, and other Aboriginal groups, are utilised as food (**Table 5**). Damper (Guruma name, *martumirri)* is a popular dish made by grinding seeds of plants (Brehaut & Vitenbergs 2001).

Flora species can be used to make tools, including fire-sticks, digging sticks, spears, boomerangs, netting, shields, hooks, traps etc (Bird *et al*. 2008; Clarke 2007; Clarke 2014). *Triodia* sp. resin is used as an adhesive for these tools (Pitman & Wallis 2012). A variety of flora species are also utilised for healing and ceremony (Brehaut & Vitenbergs 2001), whilst some species have a similar effect to tobacco (Bindon 1996) or are used in curing ailments.

Biota's 2017 Flora recorded 596 native vascular species (and 27 introduced flora (weed) species) (Biota 2017) of which 255 native vascular species (and 10 introduced flora species) were identified as being potentially culturally significant (**Table 5**). Therefore approximately 40% of the flora species in the project area are potentially of cultural significance to Aboriginal people (including Eastern Guruma and PKKP).

Two of the three priorty flora species identified in the desktop study, *Livistona alfredii* (P4) and *Acacia glaucocaesia* (P3), were also recorded from the 44 priority species in Biota's 2017 Flora report (Biota 2017). Of the 26 vegetation communities of conservation significance that were identified during the consolidated detailed flora and vegetation assessment (Biota 2017) 23 are also considered to be culturally significant. These species and vegetation communities are still culturally important to Aboriginal people (including Eastern Guruma and PKKP), but also significant to cultural values.

Table 3 outlines the vegetation communities with culturally significant flora species within Eastern Guruma and PKKP areas of both the Eliwana Rail and Mine project areas. These vegetation communities are therefore important to these cultural groups due to the flora species occurring there.

4.1.2 CULTURALLY SIGNIFICANT FAUNA SPECIES

Food sources most readily available to Aboriginal people would have been mammals, birds and their eggs, most reptiles, some frogs, fish (where there was adequate water), and some invertebrates, but most invertebrates seemed to be unpalatable (Meagher 1974). The Eastern Guruma, as with most Aboriginal people, men did the big hunting with spears and women did the small hunting (Bird *et al*. 2008; Brehaut & Vitenbergs 2001; Young & Vitenbergs 2007).

The most common species utilised by the Eastern Guruma people, and from the desktop assessment, were the Euro (Guruma name, *patjarri* (hill kangaroo); *Osphrater robustus*), Short-beaked Echidna (Guruma name, *jinkartji*,*Tachyglossus aculeatus*) and Emu (Guruma name, *kayatpu*, *Dromaius novaehollandiae*) (**Table 4**). The desktop assessment mentioned a variety of reptile and bird species being utilised by Aboriginal people, but no specifics were identified. Therefore extrapolation was made from Ecoscape's 2017 fauna report. These species would be most likely utilised for their meat. Invertebrates, including the well-known witchetty grub, are utilised in a variety of ways from being toys to meat and medicinal purposes.

Four species of conservation significance were identified in the desktop assessment; Northern Quoll (*Dasyurus hallucatus*) (EN, S2), Western Pebble-mound mouse (*Dasyurus hallucatus*) (P4), Fork-tailed Swift (*Apus pacifus)* (M, S5) and Pilbara Olive Python (*Liasis olivaceus barroni*) (VU, S3) (**Table 4**). All four of these species have been recorded from the region (Ecoscape 2017).

All fauna habitat types identified in Ecoscape's 2017 fauna report (Ecoscape 2017) were associated with fauna of cultural significance. All habitat types are common and widespread in the Eliwana Project Area. Specific areas within the landscape such as areas of permanent/temporary water, suitable topographic features (e.g. narrowing gorges/gullies) and shelters (e.g. caves) would be favoured for certain hunting techniques, whilst the entire landscape would be utilised opportunistically.

REFERENCES

Aung, S. & Turpin, M. 2015. The Importance of Insects in Australian Aboriginal Society: A Dictionary Survey. *Ethnobiology*, vol. 6, no. 1

Australian National Botanic Gardens. 2011. *Traditional uses of Australian native plants*. Available from: https://www.anbg.gov.au/bibliography/bushfood.html. [December 2017].

Bindon, P. 1996. *Useful bush plants* Western Australian Museum.

Biota Environmental Sciences Pty Ltd. 2017, *Eliwana Consolidated Detailed Flora and Vegetation Phase 2*.

Bird, R., Bird, D., Bodding, B., Parker, C., & Jones, J. 2008. The "fire stick farming" hypothesis: Australian Aboriginal foraging strategies, biodiversity, and anthropogenic fire mosaics. *PNAS*, vol. 105, no. 39

Brehaut, L. & Vitenbergs, A. 2001. The Guruma Story = Guruma-yharntu wangka. Told by the Guruma Elders Group, led by Peter Stevens. IAD Press.

Charles, D. & Ellery (Coppin), G. 2015. *Putijarra plants*.

Cherikoff, V. 1989. *The bush food handbook: how to gather, grow, process and cook Australian wild foods* Ti Tree Press.

Clarke, P. 2007. *Aboriginal people and their plants* Rosenberg.

Clarke, P. 2008. *Aboriginal Plant Collectors* Rosenberg.

Clarke, P. 2012. *Australian plants as Aboriginal tools* Rosenberg.

Clarke, P. 2014. *Discovering Aboriginal plant use: The journeys of an Australian anthropologist* Rosenberg.

Crawford, I. 1982. Traditional Aboriginal Plant Resources in the Kalumburu Area: Aspects in Ethno-economics. *Records of the West Australian Museum*, vol. 15,

Cribb, A. 1987. *Wild foods in Australia* Fontana.

Ecoscape (Australia) Pty Ltd 2017, *Eliwana Project: Consolidated Vertebrate Fauna*.

Hayes, A. & Hayes, S. 2007. *Ngambunyjarri : ngambunyjarri Thalanyjibarndi yininyjarri = Thalanyji plant names and uses*.

Hegarty, M. & Hegarty, E. 2001, *Food Safety of Australian Plant Bushfoods*, Rural Industries Research and Development Corporation.

Isaacs, J. 1987. *Bush food: Aboriginal food and herbal medicine* New Holland Publishers.

Koori History. 2016. *Traditional Aboriginal Clothing*. Available from: http://koorihistory.com/traditional-aboriginal-clothing/. [December 2017].

Latz, P. 1995. *Bushfires & bushtucker: Aboriginal plant use in Central Australia* IAD Press.

Low, T. 1991. *Wild food plants of Australia* Angus & Robertson.

Lowe, P. 1990. *Jilji: Life in the Great Sandy Desert* Magabla Books.

Meagher, S. 1974. The food resources of the aborigines of the south-west of Western Australia. *Records of the Western Australian Museum*, vol. 3, no. 1

Pearn, J. 2004, *Medical Ethnobotany of Australia: Past and Present*, School of Medical Publications.

Pitman, H. & Wallis, L. 2012. The Point of Spinifex: Aboriginal uses of spinifex grasses in Australia. *Ethnobotany Research and Applications*[15 December 2017].

Prober, S., O'Connor, M., & Walsh, F. 2011. Australian Aboriginal Peoples' Seasonal Knowledge: a Potential Basis for Shared Understanding in Environmental Management. *Ecology and Society*, vol. 16, no. 2

Taste Australia. 2017. *Bush remedies*. Available from: http://tasteaustralia.bizbushfoodbush-remedies.

Young, L. & Vitenbergs, A. 2007. *Lola Young, Medicine Woman and Teacher* Fremantle Arts Centre Press.

MAPS & FIGURES

460100 480100 500100 520100 540100 560100 580100 600100

7579970 7559970 7539970 7519970 7499970 7479970

671 m
822 m
871 m
981 m
1116 m
993 m
926 m
1209 m
Fortescue River
Tom Price
Rocklea
utarra-Wittenoom Rd
Tom Price Pt

LEGEND

- Mine Development Envelope
- Rail Development Envelope

DATA SOURCES :
SOURCE DATA:
AERIAL:
SERVICE LAYERS: SOURCES: ESRI, HERE, DELORME, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), SWISSTOPO, MAPMYINDIA, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

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ELIWANA PROJECT STUDY AREA

ELIWANA PROJECT

FORTESCUE METALS GROUP

FMG Fortescue
The New Force in Iron Ore

COORDINATE SYSTEM: GDA 1994 MGA ZONE 50
PROJECTION: TRANSVERSE MERCATOR
DATUM: GDA 1994
UNITS: METER

N

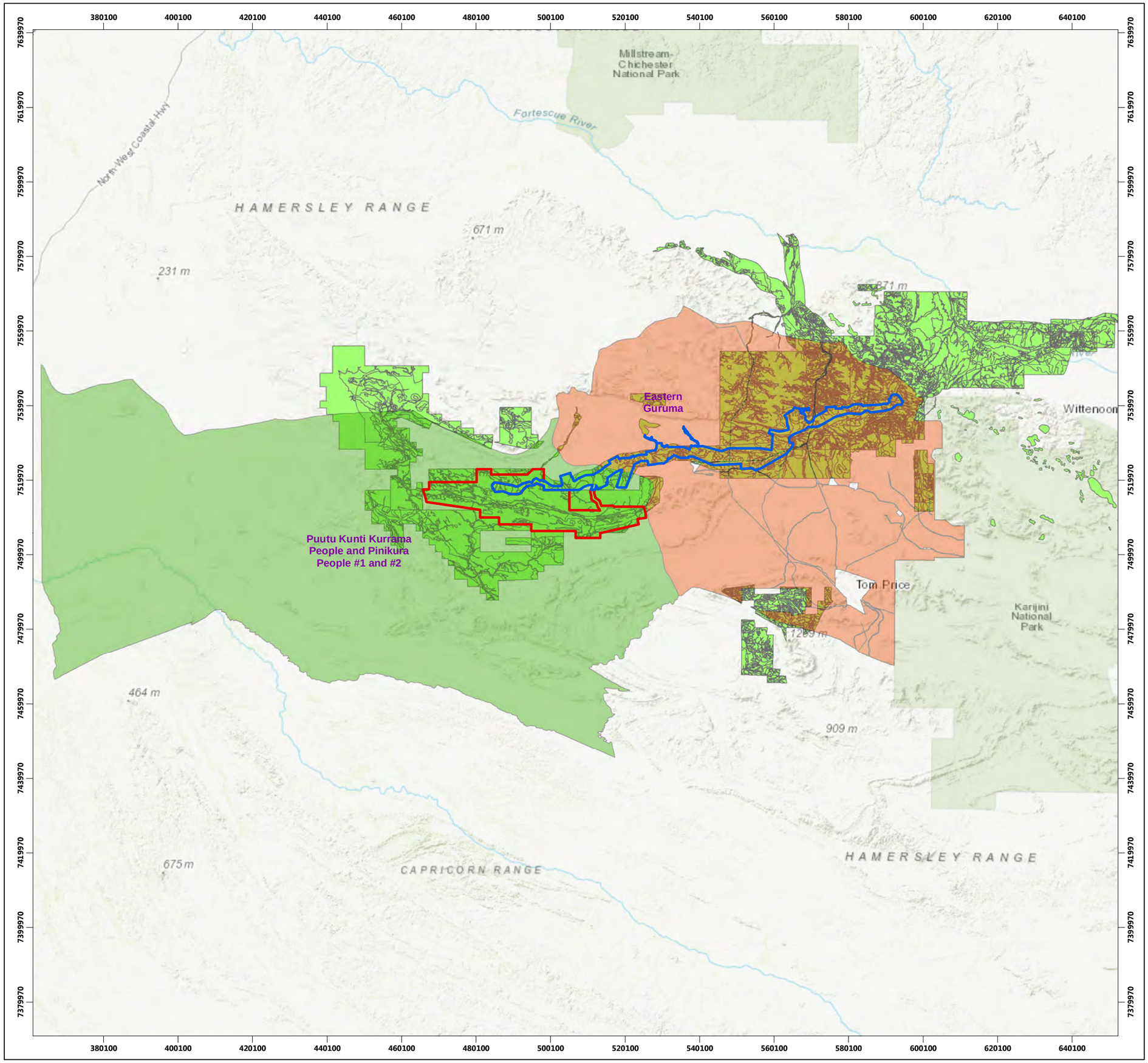
SCALE: 1:500,000 @ A3

0 4 8 12 16 20 km

PROJECT NO: XXXX-XX

REV	AUTHOR	APPROVED	DATE
XX	XX	XX	XX/XX/XXXX

MAP 01

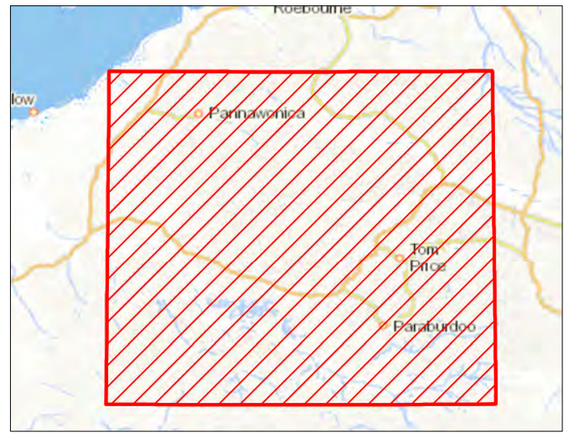


Native Claim Boundaries

Native Title

- Eastern Guruma
- Puutu Kunti Kurrama People and Pinikura People #1 and #2
- Eliwana Consolidated Vegetation Mapping
- Mine Development Envelope
- Rail Development Envelope

DATA SOURCES :
SOURCE DATA:
AERIAL:
SERVICE LAYERS: SOURCES: ESRI, HERE, DELORME, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), SWISSTOPO, MAPMYINDIA, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY



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VEGETATION MAPPING ON NATIVE CLAIM AREAS

ELIWANA PROJECT

FORTESCUE METALS GROUP

Fortescue
The New Force in Iron Ore

COORDINATE SYSTEM: GDA 1994 MGA ZONE 50
PROJECTION: TRANSVERSE MERCATOR
DATUM: GDA 1994
UNITS: METER

N

SCALE 1:1,000,000 @ A3

0 8.5 17 25.5 34 42.5 km

PROJECT NO: 4106-17

REV	AUTHOR	APPROVED	DATE
0	DC	JN	25/01/2018

MAP
02

480100 500100 520100

7539970 7519970 7499970

799 m 832 m 998 m 858 m 981 m 729 m 705 m 875 m

Eastern Guruma

Puutu Kunti Kurrama People and Pinikura People #1 and #2

LEGEND

Count of Culturally Significant Flora Species

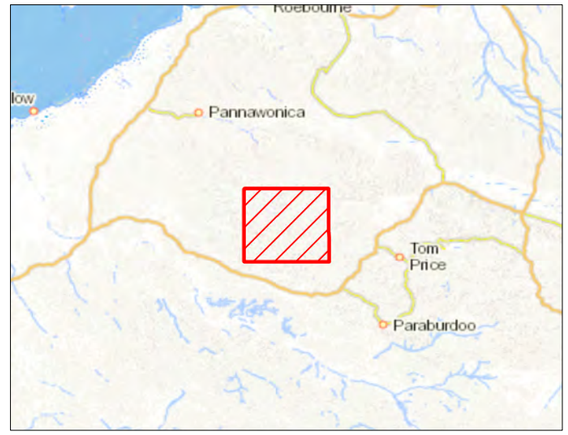
- 0-10
- 11 - 20
- 21 - 40
- 41 - 60
- 61 - 80
- 81 - 120
- Nil

Native Claim Boundaries

Native Title Claim

- Eastern Guruma
- Puutu Kunti Kurrama People and Pinikura People #1 and #2

DATA SOURCES :
SOURCE DATA:
AERIAL:
SERVICE LAYERS: SOURCES: ESRI, HERE, DELORME, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), SWISSTOPO, MAPMYINDIA, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY



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CULTURALLY SIGNIFICANT VEGETATION TYPES - MINE

ELIWANA PROJECT

FORTESCUE METALS GROUP

FMG Fortescue The New Force in Iron Ore

COORDINATE SYSTEM: GDA 1994 MGA ZONE 50
PROJECTION: TRANSVERSE MERCATOR
DATUM: GDA 1994
UNITS: METER

N

SCALE: 1:220,000 @ A3

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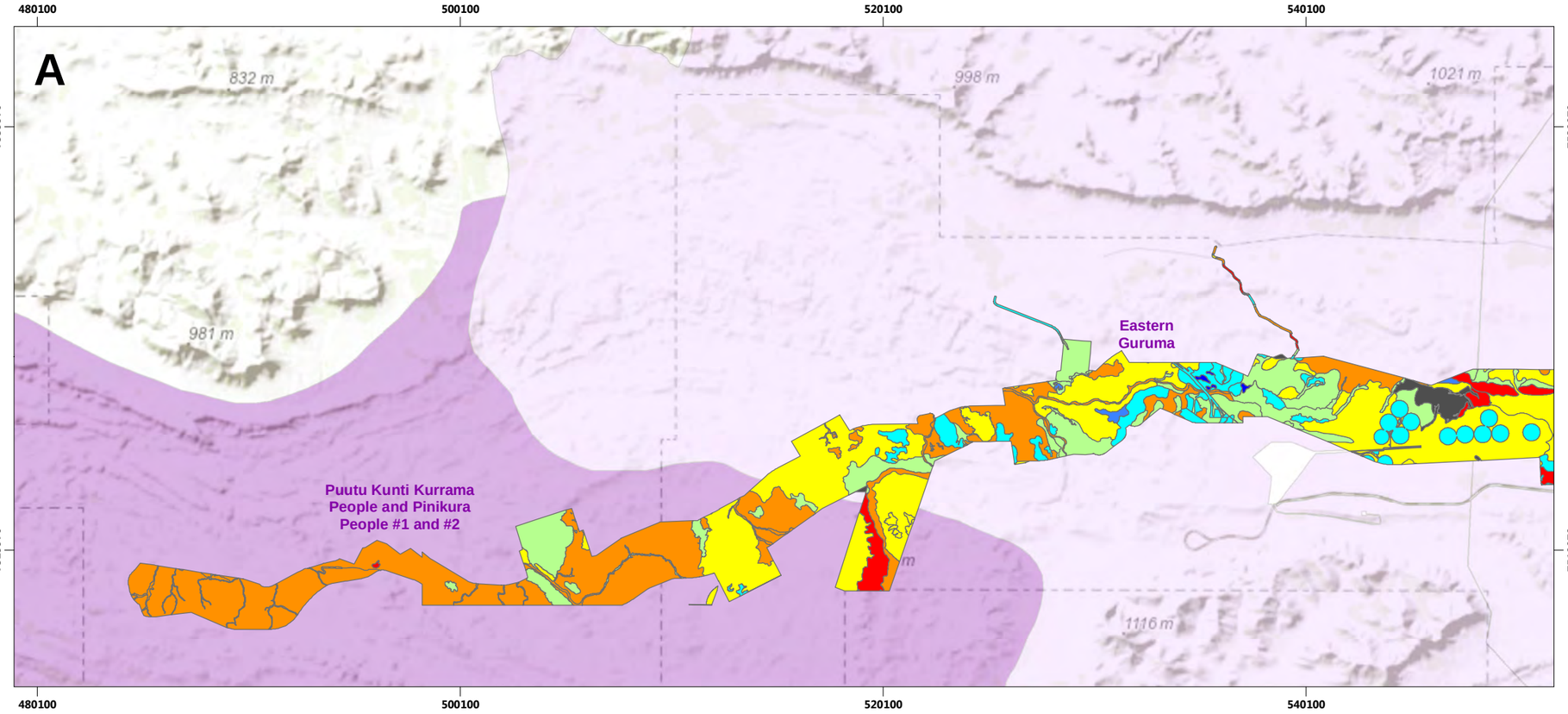
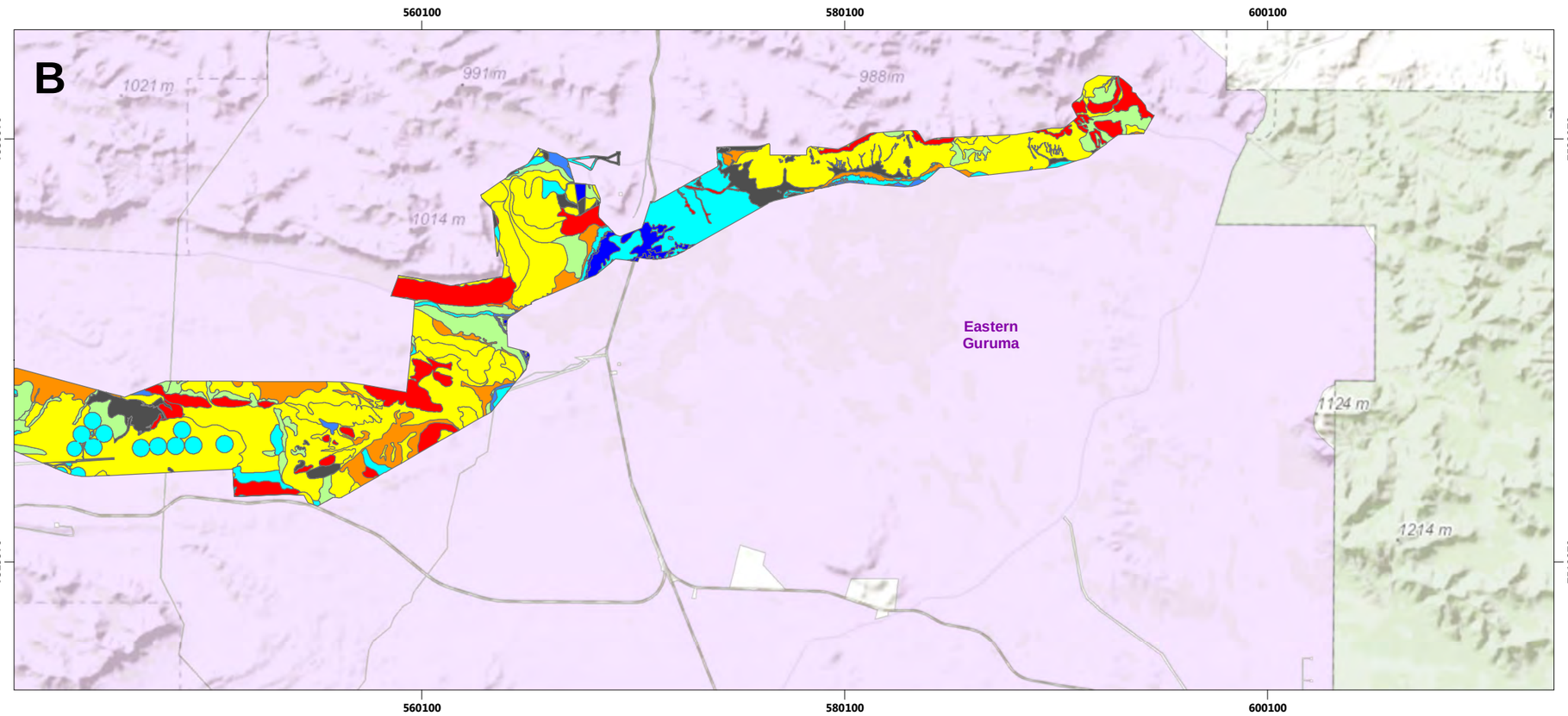
PROJECT NO: 4106-17

REV	AUTHOR	APPROVED	DATE
0	DC	JN	25/01/2018

MAP 03





LEGEND

Vegetation Types in the Rail Development Envelope

Count of Culturally Significant Species

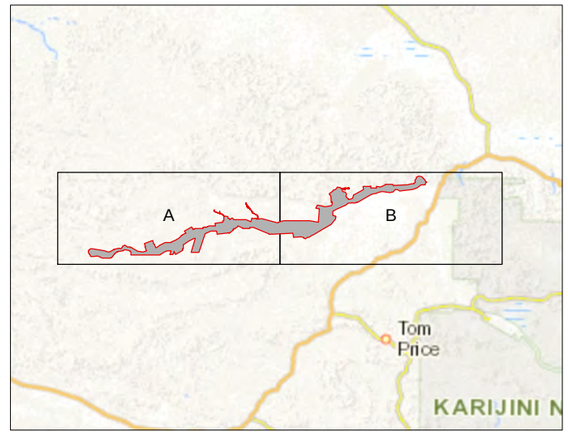
- 1 - 5
- 6 - 10
- 11 - 20
- 21 - 40
- 41 - 60
- 61 - 80
- 81 - 120
- Nil

Native Claim Boundaries

Native Title Claim

- Eastern Guruma
- Puutu Kunti Kurrama People and Pinikura People #1 and #2

DATA SOURCES :
SOURCE DATA:
AERIAL:
SERVICE LAYERS: SOURCES: ESRI, HERE, DELORME, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), SWISSTOPO, MAPMYINDIA, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY



ecoscape

CULTURALLY SIGNIFICANT VEGETATION TYPES - RAIL

ELIWANA PROJECT

FORTESCUE METALS GROUP

Fortescue
The New Force in Iron Ore

COORDINATE SYSTEM: GDA 1994 MGA ZONE 50
PROJECTION: TRANSVERSE MERCATOR
DATUM: GDA 1994
UNITS: METER

N

SCALE: 1:250,000 @ A3

0 2 4 6 8 10 km

PROJECT NO: 4106-17

REV	AUTHOR	APPROVED	DATE
0	DC	JN	25/01/2018

MAP
04

480100 500100 520100

7539970 7519970 7499970

799 m 832 m 998 m 858 m 981 m 705 m 875 m

Eastern Guruma

Puutu Kunti Kurrama People and Pinikura People #1 and #2

LEGEND

Eliwana Fauna Habitat Mapping

Fauna Habitat Types

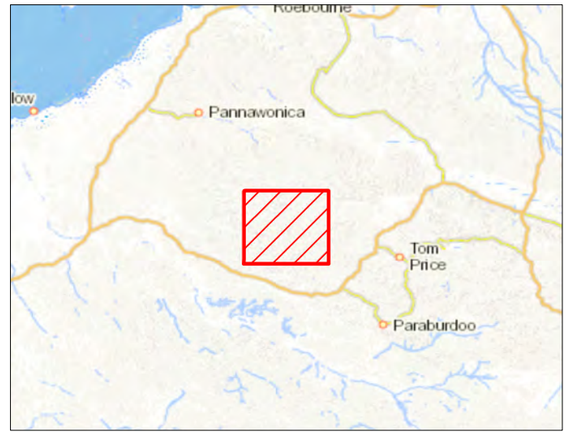
- Plain (stony/gibber)
- Hills/Ranges/Plateaux
- Gorges/Gullys
- Plain (shrubland)
- Lower slopes/hillslopes
- Plain (Cracking Clay)
- Plain (alluvial plain)
- Drainage Line/River/Creek (Major)
- Drainage Line/River/Creek (Minor)
- Cleared or Developed

Native Claim Boundaries

Native Title Claim

- Eastern Guruma
- Puutu Kunti Kurrama People and Pinikura People #1 and #2
- Mine Development Envelope

DATA SOURCES :
SOURCE DATA:
AERIAL:
SERVICE LAYERS: SOURCES: ESRI, HERE, DELORME, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), SWISSTOPO, MAPMYINDIA, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY



ecoscape

FAUNA HABITAT TYPES MINE DEVELOPMENT ENVELOPE

ELIWANA PROJECT

FORTESCUE METALS GROUP

Fortescue The New Force in Iron Ore

COORDINATE SYSTEM: GDA 1994 MGA ZONE 50
PROJECTION: TRANSVERSE MERCATOR
DATUM: GDA 1994
UNITS: METER

N

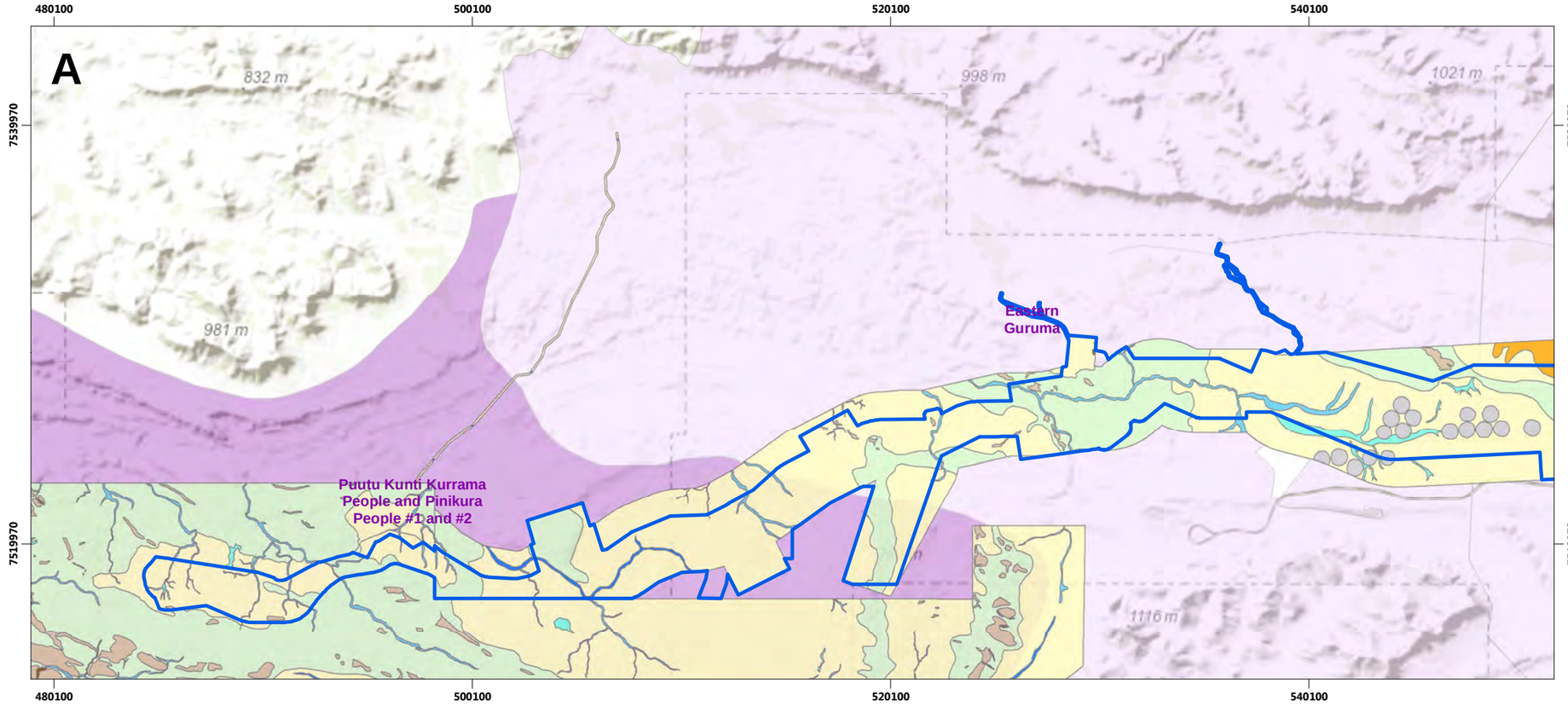
SCALE: 1:220,000 @ A3

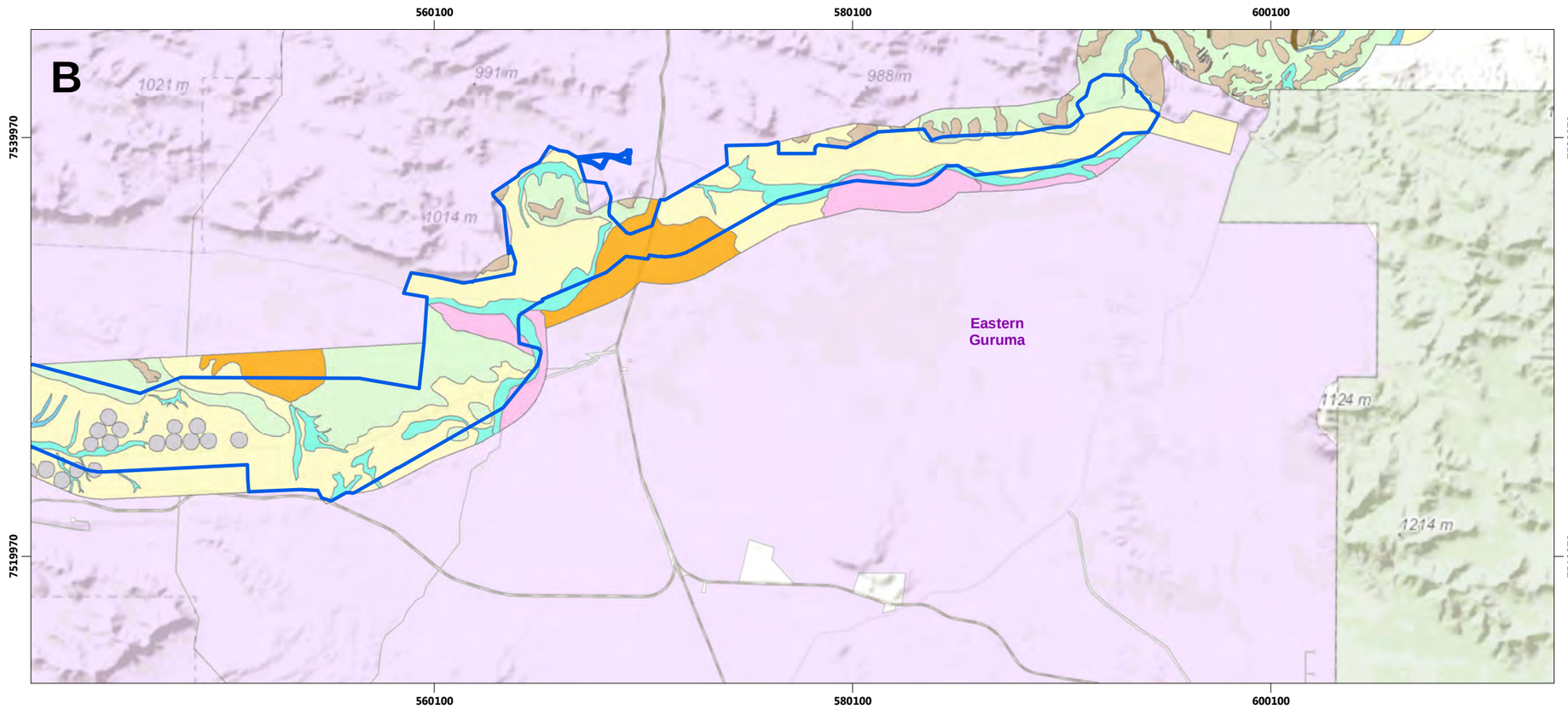
0 1.5 3 4.5 6 7.5 km

PROJECT NO: 4106-17

REV	AUTHOR	APPROVED	DATE
0	DC	JN	25/01/2018

MAP 05





LEGEND

Rail Development Envelope

Eliwana Fauna Habitat Mapping

Fauna Habitat Types

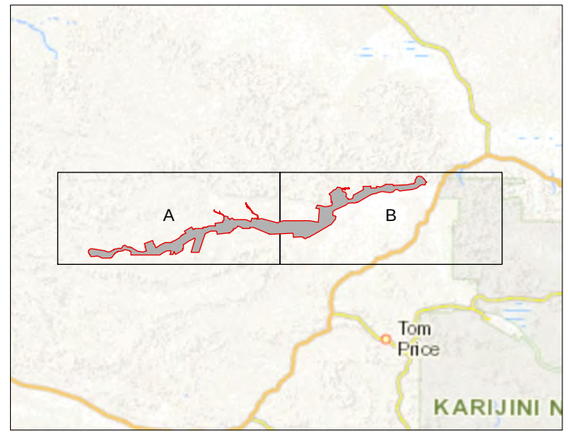
- Plain (stony/gibber)
- Hills/Ranges/Plateaux
- Gorges/Gullys
- Plain (shrubland)
- Lower slopes/hillslopes
- Plain (Cracking Clay)
- Plain (alluvial plain)
- Drainage Line/River/Creek (Major)
- Drainage Line/River/Creek (Minor)
- Cleared or Developed

Native Claim Boundaries

Native Title Claim

- Eastern Guruma
- Puutu Kunti Kurrama People and Pinikura People #1 and #2

DATA SOURCES :
SOURCE DATA:
AERIAL:
SERVICE LAYERS: SOURCES: ESRI, HERE, DELORME, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), SWISSTOPO, MAPMYINDIA, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY



ecoscape

FAUNA HABITAT TYPES
RAIL DEVELOPMENT ENVELOPE

ELIWANA PROJECT

FORTESCUE METALS GROUP

Fortescue
The New Force in Iron Ore

COORDINATE SYSTEM: GDA 1994 MGA ZONE 50
PROJECTION: TRANSVERSE MERCATOR
DATUM: GDA 1994
UNITS: METER

N

SCALE: 1:250,000 @ A3

0 2 4 6 8 10 km

PROJECT NO: 4106-17

REV	AUTHOR	APPROVED	DATE
0	DC	JN	25/01/2018

MAP
06

APPENDIX ONE CULTURALLY SIGNIFICANT FLORA

Table 5: Culturally Significant Plant Species from the Pilbara region

Common Name	Species Name	Guruma Name	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	V	X	Y	Z	Traditional Resource Use
Acanthaceae																										
White Mangrove	*Avicennia marina*																Y									Edible fruit
Aizoaceae																										
Red Spinach	*Trianthema triquetrum*												Y													Edible seeds and greens
Amaranthaceae																										
Kapok Bush	*Aerva javanica**								Y								Y					Y	Y	Y		Seed heads used for pillow stuffing, fire starter
Native Amaranth	*Amaranthus interruptus*												Y													Edible seeds
Boggabri Weed	*Amaranthus mitchellii*											Y														Seeds ground to make damper
Green Amaranth	*Amaranthus viridis**										Y															Edible leaves and shoots
Narrowleaf Mulla Mulla	*Ptilotus drummondii*																						Y			Herb
Tall Mulla Mulla	*Ptilotus nobilis*	Murlumurlu							Y														Y		Y	For healing and ceremony, pillow stuffing
Cotton Bush	*Ptilotus obovatus*								Y								Y						Y			For healing and ceremony
Apocynaceae																										
Conkerberry	*Carissa lanceolata*	Marrayn	Y									Y	Y										Y			Edible plant
Dumara Bush/Native pear	*Cynanchum floribundum*	Jupa or Walyuru	Y								Y				Y		Y									Edible plant and leaves
	Cynanchum pedunculatum																									Edible fruit and seeds
Caustic vine	*Cynanchum viminale subsp. australe*	Pipiju	Y																				Y		Y	Stimulates milk flow, treat sores
Bush banana, Silky pear	*Marsdenia australis*	Karkula or wira	Y																					Y		Edible fruit and leaves
Bush Bean	*Rhyncharrhena linearis*	Warratu	Y									Y	Y													Edible plant
Araliaceae																										
Lace flower	*Trachymene oleracea*	Kujiwangkalarra	Y						Y														Y		Y	Used for making drinking straws to drink from deep rock holes
Millstream Fan-palm	*Livistona alfredii* (**Priority 4**)																Y									Edible 'heart' of the palm
Asparagaceae																										
Fringe Lily	*Thysanotus exiliflorus*												Y													Edible tuber
Asteraceae																										
Apple Bush	*Pterocaulon sphacelatum*																Y									Dry plant ground to powder and used as a decongestant
	Pterocaulon sphaeranthoides	Thameran	Y																							For healing and ceremony
Bignoniaceae																										
Lemonwood	*Dolichandrone heterophylla*																Y									Medicinal use, sticks used for fire
Western wonga vine	*Pandorea pandorana*																Y									Stems used for spear shafts
Boraginaceae																										
White bush apple	*Cordia subcordata*																Y									Edible fruit
Mamukata	*Heliotropium tenuifolium*												Y													Edible seeds
Camel Bush/Northern bluebell	*Trichodesma zeylanicum*	Kalyartu	Y														Y						Y	Y		Used to make firesticks
Brassicaceae																										
Pepper-cress	*Lepidium muelleri-ferdinandii*											Y	Y													Edible greens
Veined Peppercress	*Lepidium phlebopetalum*											Y	Y													Edible greens
Slender Peppercress/Native mustard bush	*Lepidium platypetalum*	Yajerri	Y																						Y	Boil plant to treat sores, swelling, drink to treat ulcers
Velvet Thread Petal	*Stenopetalum velutinum*												Y													Edible greens

Common Name	Species Name	Guruma Name	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	V	X	Y	Z	Traditional Resource Use
Campanulaceae																										
Rock Isotome	*Isotoma petraea*																Y					Y				Similar to tobacco, medicinal use
Capparaceae																										
Wild Passionfruit/Split Jack	*Capparis lasiantha*	Jilpukarri	Y					Y			Y	Y	Y		Y	Y	Y						Y		Y	Edible plant, fruit, nectar for medicinal use (cure coughs, circulation)
Wild Orange	*Capparis mitchellii*	Kajawarri	Y					Y									Y						Y			Edible plant, fruit
Caper bush	*Capparis spinosa*	Pajila	Y					Y							Y	Y							Y	Y	Y	Edible plant, for healing and ceremony
Flinders rose	*Capparis spinosa subsp. nummularia*																Y									Edible plant
Wild Orange	*Capparis umbonata*	Kajawarri			Y			Y				Y	Y		Y	Y	Y						Y	Y	Y	Edible fruit
Casuarinaceae																										
Desert Oak	*Allocasuarina decaisneana*															Y										Edible seeds and gum
Chenopodiaceae																										
Bladder Saltbush	*Atriplex vesicaria*																Y									Edible seeds
Queensland Bluebush	*Chenopodium auricomum*										Y															Edible shoots
Rat's Tail	*Dysphania kalpari*																						Y			Seeds ground to make damper
Crumbweed	*Dysphania rhadinostachya*	Kalparri	Y			Y							Y				Y						Y			Seeds ground to make damper
Barrier Saltbush	*Enchylaena tomentosa*	Nyerilyi	Y												Y	Y							Y		Y	Edible fruit
Barrier Saltbush	*Enchylaena tomentosa var. tomentosa*																Y									Edible fruit
Samphire	*Tecticornia verrucosa*												Y				Y									Edible seeds
Cleomaceae																										
Tickweed	*Cleome viscosa*	Kunti										Y				Y	Y						Y		Y	For healing and ceremony, grind seeds to make damper
Commelinaceae																										
Wandering Jew	*Commelina ensifolia*				Y																					Edible roots
Baniyu	*Murdannia graminea*				Y							Y														Edible roots
Convolvulaceae																										
Bush Bean	*Duperreya commixta*				Y																			Y		Edible plant
Weir Vine	*Ipomoea calobra*																Y						Y			Edible root
Rock Morning Glory/Native yam	*Ipomoea costata*	Kulyu	Y		Y				Y			Y	Y				Y							Y		Edible root
Poison Morning Glory	*Ipomoea muelleri*				Y								Y			Y								Y		Edible root
Wild potato	*Ipomoea pes-caprae*	Yindalba or Jitta	Y		Y																			Y		Edible root
	Ipomoea pes-caprae subsp. brasiliensis																Y									Medicinal use
	Ipomoea polymorpha												Y													Edible roots and seeds
Cucurbitaceae																										
	*Citrullus colocynthis**																Y									Edible fruit
Wild melon	*Cucumis variabilis*	Jiputra/ Thurlayilku	Y																						Y	Boil plant to treat eye sores
Ulcardo Melon/Wild cucumber	*Cucumis melo*	Ngapunturr	Y		Y							Y			Y		Y							Y		Edible plant
Cupressaceae																										
White Cypress Pine	*Callitris glaucophylla*	Thuwalpa	Y					Y				Y					Y									For healing and ceremony
Cyperaceae																										

Common Name	Species Name	Guruma Name	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	V	X	Y	Z	Traditional Resource Use
	Bulbostylis barbata												Y													Edible seed
Downs Nutgrass	*Cyperus bifax*										Y															Edible 'nuts'
Bush Onion	*Cyperus bulbosus*				Y							Y	Y			Y	Y									Edible roots
Stiffleaf Sedge	*Cyperus vaginatus*	Yalliri / Kanampa	Y																					Y	Y	Used to make fishing nests, baskets, carry fish
Chinese Water Chestnut	*Eleocharis dulcis*	Yarralayn	Y									Y					Y									Edible roots, medicinal use
Tall Spikerush	*Eleocharis sphacelata*				Y							Y														Edible tuber
Fringe rush	*Fimbristylis eremophila*												Y													Edible seeds
Fringe rush	*Fimbristylis oxystachya*												Y													Edible seeds
Euphorbiaceae																										
Namana, Caustic weed	*Euphorbia australis*																Y									Medicinal use
Caustic Weed	*Euphorbia drummondii*											Y					Y									Medicinal use
Fabaceae																										
Mulga	*Acacia adsurgens*	Pilarri				Y							Y			Y									Y	Edible seeds, grubs in roots
Salt wattle	*Acacia ampliceps*	Yiringan	Y																				Y	Y	Y	Boil bark to treat eyes, and sores
Fitzroy Wattle	*Acacia ancistrocarpa*	Palperin	Y						Y			Y				Y	Y						Y	Y		Edible seeds, for healing and ceremony, used to make brooms
Mulga	*Acacia aneura*	Wintamarra	Y						Y	Y	Y	Y			Y	Y	Y	Y					Y	Y		Edible galls, used for making spears, woomeras, clubs, digging sticks, sandals, water found in roots, bough shelters
Arid wattle	*Acacia arida*	Kunalya	Y																				Y	Y	Y	For healing and ceremony, eye medicine
Atkin's wattle	*Acacia atkinsiana*	Pilarri	Y																				Y	Y		Edible galls, good for finding edible grubs
Two-nerved wattle	*Acacia bivenosa*	Murrurpa	Y						Y													Y	Y	Y		Good for finding edible grubs, used for making houses, brooms,
Jam tree, black mulga	*Acacia citrinoviridis*	Jarparri	Y																				Y	Y	Y	Used for making spears, woomeras, bough shelter. Grubs (*Pilu*) found in roots
Cole's Wattle	*Acacia colei*	Karranyongu	Y															Y					Y	Y		Edible seeds and gum, used for making hunting spears
Wirewood	*Acacia coriacea*											Y	Y			Y		Y								Edible seeds
Leather-leaved wattle/ weeping wire-wood	*Acacia coriacea subsp. pendens*	Warntanyin	Y														Y						Y	Y	Y	Edible seed, used for making spears and boomerangs, mix ash with tabacco, wrap meat
Halls Creek Wattle	*Acacia cowleana*											Y	Y			Y	Y	Y								Edible seeds, wood used for artefacts
	Acacia cuthbertsonii subsp. cuthbertsonii											Y					Y		Y			Y				Bark: medicinal use (toothache)
Sandhill Wattle	*Acacia dictyophleba*								Y				Y			Y	Y							Y		Used to make houses, brooms, medicinal use
	Acacia exigua	Jonanyong	Y																				Y	Y		Edible seeds
	Acacia glaucocaesia (**Priority 3**)	Nhurungan	Y																				Y	Y		Edible gum, edible seeds
Candelbra Wattle	*Acacia holosericea*												Y				Y	Y	Y							Bark used to make lotion, edible seeds
Baderi/Camel Bush	*Acacia inaequilatera*	Partirri	Y													Y	Y						Y	Y	Y	Edible seeds, bark burnt and used to make skin lotion, insect repellent
Witchetty Bush	*Acacia kempeana*					Y						Y	Y			Y	Y									Edible leaves, medicinal use
Umbrella Bush	*Acacia ligulata*		Y									Y	Y			Y	Y	Y								Edible gum, bark for medicinal use
Maitland's Wattle	*Acacia maitlandii*	Jumpinhkar	Y						Y				Y			Y							Y	Y		Edible gum
Gawar	*Acacia monticola*	Mangkalangu	Y										Y			Y	Y					Y	Y	Y		Used for making spear points, medicinal use
Sandplain Wattle	*Acacia murrayana*											Y	Y			Y	Y	Y				Y				Edible seeds
	Acacia pachyacra												Y			Y										Edible seeds
Western Myall	*Acacia papyrocarpa*								Y	Y																Edible fruits

Common Name	Species Name	Guruma Name	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	V	X	Y	Z	Traditional Resource Use
Gidgee	*Acacia pruinocarpa*	Yallari or Pulluru	Y						Y			Y				Y							Y	Y	Y	Edible gum, chew mix of ash and tabacco
Ranji Bush/Kanji	*Acacia pyrifolia*	Jirparli	Y									Y											Y	Y	Y	Edible gum, edible seeds
Rattle Tree/ Limestone Wattle	*Acacia sclerosperma*	Pakurta																							Y	Bark used to tan skins and as a dye
Belalie	*Acacia stenophylla*								Y	Y			Y													Edible plant, seed
Barbi bush	*Acacia synchronicia*	Nhurungan																						Y	Y	Used for making spears, clubs, axe handles, fence posts, lerp
	Acacia tenuissima	Janangungu	Y										Y			Y							Y	Y		Edible seeds
Kurara	*Acacia tetragonophylla*	Jilkuru										Y	Y			Y	Y						Y	Y	Y	Edible seeds, used for making boomerangs, spear thrower, fighting sticks etc. Male elders only.
Minni Ritchi	*Acacia trachycarpa*	Muntaru or Putawarri	Y						Y														Y	Y	Y	Used for making spears, clubs, axe handles, smoke calms children
Poverty Bush	*Acacia translucens*		Y														Y									Leaves and twigs for medicinal use
Pindan wattle	*Acacia tumida var. pilbarensis*	Pilamurka	Y									Y											Y	Y		Used for making hunting spears
	Acacia tumida var. tumida											Y					Y					Y				Edible seeds
Bramble Wattle	*Acacia victoriae*					Y		Y				Y	Y				Y	Y				Y				Edible seeds
Wanyu	*Acacia wanyu*	Murruturu	Y																				Y	Y		Used for making boomerangs, shade shelter
Snakewood	*Acacia xiphophylla*	Pukarti	Y						Y								Y						Y	Y	Y	Edible seeds, gum, roots, good for finding edible grubs, used for making boomerangs and weapons, good firewood
Green Birdflower	*Crotalaria cunninghamii*															Y	Y						Y	Y		Bark strips used to make sandals
	Cullen leucanthum	Witiangu	Y																							Used for making hunting spears
Yulbah	*Erythrina vespertilio*											Y	Y										Y	Y		Used to make necklaces, shields, coolamons (wooden dishes)
Wallflower Poison	*Gastrolobium grandiflorum*																						Y			Herb
	Leptosema chambersii												Y													Edible nectar
	Petalostylis cassioides												Y			Y										Edible lerp
Slender Petalostylis/Cassia	*Petalostylis labicheoides*	Mirntunyji	Y																				Y		Y	Used for making hunting spears
Silver cassia	*Senna artemisioides*	Marrkan														Y	Y						Y		Y	Good place to find grubs, Emus lay eggs when flowering
Cockroach bush	*Senna notabilis*																Y						Y			Good place to find grubs
	Senna pleurocarpa																		Y			Y				Medicinal use
Candlestick senna	*Senna venusta*																Y									Medicinal use
Sesbania Pea	*Sesbania cannabina*																							Y		Used for making shields, yandies
White Dragon Tree	*Sesbania formosa*	Pitankarra	Y														Y								Y	Used for making shields, yandies
Sturt's desert pea	*Swainsona formosa*																Y						Y	Y		Edible nectar, decorations from flowers, edible seeds
	Swainsona pterostylis																		Y							Medicinal use
Round Templetonia	*Templetonia egena*																		Y							Medicinal use
Fish Poison	*Tephrosia leptoclada*																Y									Fish poison
Sweet Fenugreek	*Trigonella suavissima*												Y													Edible greens
Maloga Vigna	*Vigna lanceolata*											Y	Y				Y									Roots used for fire starters
Geraniaceae																										
Corkscrew	*Erodium crinitum*												Y													Edible root
Blue Heronsbill	*Erodium cygnorum*												Y													Edible root
Goodeniaceae																										
Camel Weed	*Scaevola parvifolia*												Y									Y	Y			Edible fruit

Common Name	Species Name	Guruma Name	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	V	X	Y	Z	Traditional Resource Use
Currant Bush	*Scaevola spinescens*	Pungaar	Y														Y					Y		Y		Edible plant
Gyrostemonaceae																										
Native Poplar	*Codonocarpus cotinifolius*	Kartajiparra, karlutongu	Y										Y				Y						Y			For healing and ceremony
Corkybark	*Gyrostemon ramulosus*												Y													Edible grub
Lamiaceae																										
Lollybush	*Clerodendrum floribundum*																Y									Edible fruit
Lolly bush	*Clerodendrum tomentosum var. lanceolatum*	Waylpa	Y																				Y			Used to make smoking pipes, for healing and ceremony
Sand sage	*Dicrastylis exsuccosa*																Y									Making fire or body decorations
Basil	*Ocimum basilicum*																		Y							Medicinal use
Lauraceae																										
Love Vine, Dodder laurel	*Cassytha filiformis*												Y				Y									Edible fruit
Loranthaceae																										
Stalked Mistletoe	*Amyema miquelii*																					Y	Y			Edible fruit
	Amyema sanguinea																					Y				Edible fruit
Mistletoe	*Lysiana murrayi*																Y									Edible fruit
Malvaceae																										
Kurrajong	*Brachychiton acuminatus*	Ngangu			Y																				Y	Edible seeds, water in young roots
Desert Kurrajong	*Brachychiton gregorii*				Y			Y				Y					Y									Edible seeds and roots
Woolly Corchorus	*Corchorus walcottii*																Y									Bark from the stem used to make twine
Wild Cotton/Desert Rose	*Gossypium robinsonii*	Wathawa	Y																				Y		Y	Used for making spears, dancing sticks, sandals
Native hibiscus	*Hibiscus panduriformis*	Panjinji/ Wira	Y																						Y	Firesticks
Lifesaver Burr	*Sida platycalyx*												Y			Y										Edible seeds
	Waltheria indica												Y													Edible fruit
Marsileaceae																										
Common Nardoo	*Marsilea drummondii*												Y				Y									Edible paste from sporocarps
Nardoo	*Marsilea mutica*												Y													Edible spores
Meliaceae																										
Gruie/Native plum	*Owenia acidula* (**Priority 3**)												Y		Y	Y			Y			Y				Edible fruit, medicinal use
Native Walnut	*Owenia reticulata*												Y			Y	Y		Y							Edible fruit, medicinal use
Menispermaceae																										
Snakevine	*Tinospora smilacina*															Y	Y					Y	Y			Edible tuber, medicinal use
Montiaceae																										
Parakeelya	*Calandrinia sp.*	Kukatarri	Y																				Y		Y	Edible roots
Broadleaf Parakeelya	*Calandrinia balonensis*									Y	Y		Y													Edible roots and seeds
Twining Purslane	*Calandrinia eremaea*												Y													Edible seeds
Moraceae																										
Sandpaper fig	*Ficus aculeata*	jirkayn	Y						Y																	Edible plant
Rock Fig, Wild fig	*Ficus brachypoda*								Y													Y		Y		Edible plant
Native Fig	*Ficus platypoda*	Winyarrpa	Y							Y'		Y	Y		Y		Y						Y			Edible plant, used to make jam
Albayi	*Ficus virens*														Y											Edible fruit
Myrtaceae																										

Common Name	Species Name	Guruma Name	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	V	X	Y	Z	Traditional Resource Use
Rough-leaf range gum	*Corymbia aspera*								Y														Y			For healing and ceremony
Desert bloodwood	*Corymbia deserticola*	Nyurka	Y																							Good for finding honey
Bloodwood	*Corymbia hamersleyana*	Punaangu	Y						Y															Y	Y	Edible galls, good for finding honey, lerp or honeydew, gum used to treat sores, heart, ulcers
Desert bloodwood	*Corymbia opaca*																						Y			Good for finding edible grubs, edible gall, gum used for healing
River Gum	*Eucalyptus camaldulensis*	Marralha	Y					Y		Y			Y				Y						Y		Y	Good for finding edible grubs under bark, sweet gums, for healing and ceremony
Twin-leaf Mallee	*Eucalyptus gamophylla*								Y			Y	Y				Y						Y			Good for finding honey, edible seeds
Snappy Gum	*Eucalyptus leucophloia*	Kartapirangu	Y						Y								Y						Y		Y	Good for finding honey, lerp or honeydew, used to make spears, shields, hitting sticks
Thick-leaved Mallee	*Eucalyptus pachyphylla*															Y										Edible seeds, lerp
Blackheart gum	*Eucalyptus victrix*	Wirlu	Y																				Y		Y	Good for finding edible grubs, lerp, boil sap to treat cuts, mix ash with tabacco.
Pilbara box	*Eucalyptus xerothermica*	Yarun	Y																						Y	Edible lerp or honeydew, bee honey
	Lamarchea sulcata												Y													Edible nectar
Silver Cadjeput	*Melaleuca argentea*	Mirli or wintamarra	Y						Y															Y	Y	Water, good for finding honey, used for making yandies, shields, spears, houses, firesticks
Desert paperbark	*Melaleuca eleuterostachya*	Nharkarangu	Y						Y														Y			Lerp or honeydew
Tea-tree	*Melaleuca glomerata*	Kulimpa	Y						Y							Y									Y	Used to make shade houses, brooms, wrap meat
Paperbark	*Melaleuca lasiandra*	Nharkarnun/ Nharkarangu											Y			Y									Y	Used to make shade houses, brooms , Edible nectar, wrap meat
	Melaleuca leucadendra								Y								Y		Y							Medicinal use, making torches
Nyctaginaceae																										
Tar Vine	*Boerhavia coccinea*																Y									Edible roots
Nymphaeaceae																										
Water lily	*Nymphaea macrosperma*							Y														Y	Y			Edible tuber
Oxalidaceae																										
Yellow Wood Sorrel	*Oxalis corniculata**												Y													Edible greens
Passifloraceae																										
Stinking Passion Flower	*Passiflora foetida**				Y												Y									Edible fruit and seeds, medicinal use (ringworm)
Phyllanthaceae																										
White berry bush	*Flueggea virosa*											Y			Y		Y									Edible fruits
Pittosporaceae																										
Weeping Pittosporum	*Pittosporum phillyreoides*												Y		Y		Y									Edible gum and seeds, medicinal use
Plantaginaceae																										
Marsh Stemodia/Vicks Bush	*Stemodia grossa*	Minjawarri / Minjarri	Y						Y			Y											Y	Y	Y	Used to treat colds, fish poison, used for aromatherapy
Pagurda	*Stemodia viscosa*																Y									Medicinal use
Poaceae																										
Bunched Kerosene Grass	*Aristida contorta*								Y														Y	Y		Fire starter, hair lotion
Feathertop Threeawn	*Aristida inaequiglumis*															Y										Edible seeds
Buffel grass	*Cenchrus ciliaris**																						Y			
Birdwood Grass	*Cenchrus setigerus**								Y													Y				Fire starter
Golden Beard Grass	*Chrysopogon fallax*																					Y				Edible seeds

Common Name	Species Name	Guruma Name	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	V	X	Y	Z	Traditional Resource Use
Scentgrass	*Cymbopogon ambiguus*											Y					Y		Y				Y	Y		Medicinal use
Silky Oilgrass/Native Lemongrass	*Cymbopogon bombycinus*	Marrayin	Y																						Y	Boil leaves to treat colds
Button Grass	*Dactyloctenium radulans*											Y	Y				Y									Seeds used to make flour
Mallee Lovegrass	*Eragrostis dielsii*											Y	Y													Edible seeds
Woollybutt Grass	*Eragrostis eriopoda*											Y	Y		Y		Y									Seeds used to make flour
Sickle Lovegrass	*Eragrostis falcata*												Y													Edible seeds
Creeping Wanderrie	*Eragrostis lanipes*												Y													Edible seeds
Drooping Lovegrass	*Eragrostis leptocarpa*												Y													Edible seeds
Neverfail Grass	*Eragrostis setifolia*												Y													Edible seeds
Perennial Cupgrass	*Eriochloa pseudoacrotricha*												Y													Edible seeds
	Eulalia aurea													Y												Leaves used in "smoke therapy"
Bunch Speargrass	*Heteropogon contortus*																Y									Medicinal use, insect repellent
Kunai Grass	*Imperata cylindrica*											Y														Grass causes sneezing
Native Millet	*Panicum decompositum*											Y	Y		Y	Y										Edible plant and seeds
Hairy Panic Grass	*Panicum effusum*											Y				Y										Edible plant and seeds
Wandie	*Paractaenum novae-hollandiae subsp. novae-hollandiae*												Y													Edible seeds
	Paspalidium basicladum												Y													Edible seeds
Rare Paspalidium	*Paspalidium rarum*												Y													Edible seeds
Tropical Reed	*Phragmites karka*		Y														Y									Bamboo for spears, stems used for making bags and baskets
Italian Millet	*Setaria italica**										Y															Edible seeds
Soft Spinifex	*Triodia epactia*	Paru	Y						Y											Y			Y	Y	Y	Used to make wax, fishing nets, houses, seeds ground to make damper, shelter construction
Soft Spinifex	*Triodia pungens*	Minha	Y														Y			Y					Y	Used to make wax/glue, fishing nets, houses, seeds ground to make damper
Limestone Spinifex	*Triodia wiseana*								Y								Y									Spines used in fishing, seeds ground to make damper
	Yakirra australiensis															Y										Edible seeds
Portulacaceae																										
Inland Pigweed	*Portulaca intraterranea*												Y													Edible seeds and greens
Purslane/Pigweed	*Portulaca oleracea*											Y	Y		Y	Y	Y						Y			Seeds ground to make damper, edible plant
Djanggara	*Portulaca pilosa**				Y							Y	Y			Y										Edible roots
Proteaceae																										
	Grevillea berryana										Y															Edible nectar
Flame Grevillea	*Grevillea eriostachya*												Y													Edible nectar
Honeysuckle grevillea	*Grevillea juncifolia*												Y										Y			For healing and ceremony, edible nectar
Caustic Bush	*Grevillea pyramidalis*	Jitartu	Y																				Y			Yellow paint from bark, edible nectar
	Grevillea stenobotrya												Y													Edible seeds
Beefwood	*Grevillea striata*	Pantalpa/Wiralu	Y								Y		Y			Y									Y	Used for making shields
Wickham's Grevillea	*Grevillea wickhamii*												Y			Y							Y			Edible nectar, edible gum, edible fruits
Honey hakea/Witinti	*Hakea lorea*	Kartanpa	Y									Y											Y	Y	Y	Nectar, burn bark to make ash which is rubbed on skin, ceremony
Corkwood tree	*Hakea macrocarpa*																Y		Y							Medicinal use

Common Name	Species Name	Guruma Name	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	V	X	Y	Z	Traditional Resource Use
Wild Pear	*Persoonia falcata*				Y							Y	Y		Y											Edible fruit and kernal
Pteridaceae																										
Mangrove fern	*Acrostichum speciosum*										Y															Edible shoots
Rhamnaceae																										
Supplejack	*Ventilago viminalis*											Y					Y		Y							Similar to tobacco, medicinal use
Rhizophoraceae																										
Spotted-leaved Red Mangrove	*Rhizophora stylosa*																Y									Medicinal use
Rubiaceae																										
Malara	*Gardenia pyriformis*		Y																							Resin used as bonding agent
	Gardenia pyriformis subsp. keartlandii		Y																							Resin used as bonding agent
Conkleberry, native plum	*Psydrax latifolia*	Patharra	Y																				Y	Y	Y	Edible fruit, 'blackberry jam'
Wild currant	*Psydrax suaveolens*	Wannalyyangu/ Wanalja	Y																						Y	Edible fruit
Santalaceae																										
Broom Ballart	*Exocarpos sparteus*																Y									Edible fruit
Quandong	*Santalum acuminatum*								Y	Y		Y	Y			Y		Y				Y				Edible fruit, insect repellent
Northern Sandalwood	*Santalum lanceolatum*	Ngilunpa/ Ngilun	Y						Y	Y		Y	Y		Y	Y	Y					Y	Y	Y	Y	Edible plant, insect repellent, wood used to make boomerangs
Sandalwood	*Santalum spicatum*	Putatu	Y						Y	Y		Y					Y					Y		Y	Y	Treat sores, insect repellent, hair tonic
Sapindaceae																										
Yellow hop-bush	*Dodonaea lanceolata var. lanceolata*																Y									Medicinal use
Sticky Hopbush	*Dodonaea viscosa*													Y		Y	Y		Y							Medicinal use, leaves used in "smoke therapy"
Native hop-bush	*Dodonaea pachyneura*	Pirungu	Y																						Y	Boil to treat sores and colds, bubble bath
Scrophulariaceae																										
	Eremophila canaliculata	Muyumalla	Y																				Y			For healing and ceremony
Pinyuru/Emu bush	*Eremophila cuneifolia*	Nhirti	Y																				Y	Y	Y	Boil to treat sores, swollen feet, shampoo/soap
Burra/Turpentine Bush	*Eremophila fraseri*	Jilanpa/Jilan	Y														Y						Y	Y	Y	Used to treat sores, create shampoo/soap, smoke acts as mosquito repellent.
Biro bush	*Eremophila galeata*							Y																		Medicinal use
Warty Fuchsia Bush	*Eremophila latrobei*								Y		Y	Y	Y			Y	Y		Y							Medicinal use, sweet drink
Berrigan	*Eremophila longifolia*	Kawarra	Y						Y								Y						Y		Y	Smoke used for healing and leaves eaten in Law ceremony, edible nectar
	Eremophila maculata subsp. maculata												Y						Y							Medicinal use
Native Myrtle	*Myoporum montanum*										Y				Y											Edible fruit
Solanaceae																										
Pituri	*Duboisia hopwoodii*																Y		Y							Similar to tobacco, used to poison waterholes
Tjuntiwari/Wild tobacco	*Nicotiana benthamiana*	Yarrawarri	Y									Y				Y							Y			For healing and ceremony
Talara	*Nicotiana cavicola*					Y																				Similar to tobacco
Native Tobacco	*Nicotiana occidentalis*																						Y			For healing and ceremony
Desert Raisin	*Solanum centrale*						Y		Y	Y		Y	Y			Y	Y	Y				Y	Y			Edible fruit
Bush tomato	*Solanum chippendalei*								Y	Y		Y	Y		Y	Y						Y	Y	Y		Edible fruit

Common Name	Species Name	Guruma Name	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	V	X	Y	Z	Traditional Resource Use
Bush tomato	*Solanum cleistogamum*											Y	Y			Y		Y								Edible fruit
Western Nightshade	*Solanum coactiliferum*												Y			Y										Juiced fruits, roasted
Gilu	*Solanum dioicum*				Y								Y													Edible fruit and seed
Bush tomato	*Solanum diversiflorum*	Kalumpu	Y										Y			Y	Y	Y					Y	Y	Y	Edible plant
Quena	*Solanum esuriale*											Y	Y													Edible fruit
Bush tomato	*Solanum gilesii*												Y			Y										Edible fruit
	Solanum horridum																							Y		Edible plant, use the leaves for washing
Flannel Bush/bush tomato	*Solanum lasiophyllum*	Jalhparrpa/ Kulkaturra	Y									Y	Y										Y	Y	Y	Edible plant/fruit not edible, kangaroo food
Black Berry Nightshade	*Solanum nigrum**										Y		Y				Y									Edible leaves
Wild Tomato	*Solanum orbiculatum*												Y				Y									Edible fruit
Wild tomato	*Solanum phlomoides*	jipurlyu	Y										Y										Y	Y		Edible plant
Surianaceae																										
Pebble Bush	*Stylobasium spathulatum*												Y													Edible seeds
Typhaceae																										
Bulrush	*Typha sp.*	Ngallowayn	Y																				Y			
Bulrush	*Typha domingensis*	Puwarji		Y									Y				Y								Y	Edible root, fibres around seeds for body decorations, pillows
Xanthorrhoeaceae																										
Grass Tree	*Xanthorrhoea thorntonii*																						Y			Good source of honey
Zygophyllaceae																										
Cork Hopbush	Tribulus suberosus	Kartajiparra																							Y	Crush leaves in water to stun fish, boil leaves to treat sores.

APPENDIX TWO VEGETATION COMMUNITY X SPECIES MATRIX

Mapping_Un	? Eulalia aurea	Acacia adsurgens	Acacia aff. maitlandii	Acacia ampliceps	Acacia ancistrocarpa	Acacia aneura	Acacia aneura 'sens. lat'	Acacia aneura var. intermedia	Acacia aptaneura	Acacia aptaneura x pteraneura	Acacia arida	Acacia atkinsiana	Acacia bivenosa	Acacia citrinoviridis	Acacia colei	Acacia colei (Insufficient material for further determination; sterile)	Acacia colei var. colei	Acacia colei var. ileocarpa	Acacia coriacea subsp. pendens	Acacia cowleana	Acacia dictyophleba	Acacia exigua	Acacia inaequilatera	Acacia kempeana	Acacia maitlandii	Acacia monticola	Acacia pachyacra	Acacia pruinocarpa	Acacia pyrifolia	Acacia pyrifolia var. pyrifolia	Acacia synchronicia	Acacia tenuissima	Acacia tetragonophylla	Acacia tumida	Acacia tumida var. pilbarensis	Acacia victoriae	Acacia xiphophylla	Aerva javanica	Amaranthus aff. undulatus (round leaves, short tepals)	Amaranthus cuspidifolius
AanAbTHtCEc									1			1	1								1									1										
AanAprAatTwTe					1							1	3	2										1				1			2									
AanAprERfTeTw									2																			2												
AanAprTw					1				2			1	1	1														1			1		1							
AanCHf		1			3	1			13			1	4							2					1	1		4			2	3	3				1			1
AanEgAbTe					1				5			3	2							1		1			2	2		5			1	2								
AanExAatAbCHfTe					1	1			2			1	2							1																				1
AanTw							1		4				1										1						1		2		2							
AanVfTHt									1																			1								3				
AaTw				1	5				1		2		5	1									6		6			1	1		3									
AbAeTwTeTl													2																		1									
AbTw1					1								1															1			1		1							
AbTwTe						1		1	1				1																		1									
AcAanVfBTe									1					1																										
AcANlTHt													1	2											2	2			1				1		2					
AcApyTErCcTe					1								1	3									1		1				3		1									
AcBTe														1																										
AeTw					3				1			1	1							1		1		1	1	1		1			2		2							
AeTwTe					2				3			4	6	1									2	4	6	2		5		1	3		2							

APPENDIX THREE CULTURALLY SIGNIFICANT FAUNA

Table 6: Culturally Significant Fauna Species from the Pilbara region

Common Name	Species Name	Guruma Name	Conservation status			A	B	E	F	G	J	L	U	W	Traditional Resource Use
			EPBC Act	WC/BC Act	DBCA										
MAMMALS															
Tachyglossidae															
Short-beaked Echidna	*Tachyglossus aculeatus*	jinkartji				Y			Y		Y		Y		Meat, Clothing pins
Dasyuridae															
Kultarr	*Antechinomys laniger*						Y								Meat (small mammals)
Brush-tailed Mulgara, Ampurta	*Dasycercus blythi*						Y								Meat (small mammals)
Kaluta	*Dasykaluta rosamondae*						Y								Meat (small mammals)
Northern Quoll	*Dasyurus hallucatus*		EN	S2	T		Y						Y		Meat, Clothing
Fat-tailed Pseudantechinus	*Pseudantechinus macdonnellensis*						Y								Meat (small mammals)
Woolley's Pseudantechinus	*Pseudantechinus woolleyae*						Y								Meat (small mammals)
Long-tailed Dunnart	*Sminthopsis longicaudata*						Y								Meat (small mammals)
Froggatt's Stripe-faced Dunnart	*Sminthopsis macroura*						Y								Meat (small mammals)
Ooldea Dunnart	*Sminthopsis ooldea*						Y								Meat (small mammals)
Lesser Hairy-footed Dunnart	*Sminthopsis youngsoni*						Y								Meat (small mammals)
Thylacomyidae															
Bilby, Dalgyte	*Macrotis lagotis*	jawampa, jawanpa (bandicoot)				Y	Y								Meat
Phalangeridae															
Common Brushtail Possum	*Trichosurus vulpecula*						Y		Y				Y		Meat, Clothing
Macropodidae															
Spectacled Hare-wallaby	*Lagorchestes conspicillatus*														Meat, Clothing
Euro	*Osphranter robustus*	patjarri (hill kangaroo)				Y	Y			Y	Y		Y		Meat, Clothing, Used for making bags, Tools
Red Kangaroo	*Osphranter rufus*	pajiwanarra (plain kangaroo)					Y		Y						Meat, Clothing, Used for making bags, Tools
Black-footed Rock-wallaby	*Petrogale lateralis*	jarrunmarra jartun (rock wallaby)													Meat, Clothing
Rothschild's Rock wallaby	*Petrogale rothschildi*	jarrunmarra jartun (rock wallaby)				Y					Y		Y		Meat, Clothing
Muridae															
Water-rat	*Hydromys chrysogaster*														Meat
Short-tailed Mouse	*Leggadina lakedownensis*	ngartja (mouse)					Y								Meat (small burrowing mouse., field mouse)
House Mouse	*Mus musculus*	ngartja (mouse)					Y								Meat (small burrowing mouse., field mouse)
Spinifex Hopping-mouse	*Notomys alexis*	ngartja (mouse)					Y								Meat (small burrowing mouse., field mouse)
Western Pebble-mound mouse	*Pseudomys chapmani*	yallaru (pebblemouse) karroputayongu (pebble mound)			P4	Y									Rocks used for making spears
Delicate Mouse	*Pseudomys delicatulus*	ngartja (mouse)					Y								Meat (small burrowing mouse., field mouse)
Desert Mouse	*Pseudomys desertor*	ngartja (mouse)					Y								Meat (small burrowing mouse., field mouse)
Sandy Inland Mouse	*Pseudomys hermannsburgensis*	ngartja (mouse)					Y								Meat (small burrowing mouse., field mouse)
Western Chestnut Mouse	*Pseudomys nanus*	ngartja (mouse)					Y								Meat (small burrowing mouse., field mouse)
Black Rat	*Rattus rattus*														
Pale Field-rat	*Rattus tunneyi*														
Common Rock-rat	*Zyzomys argurus*														
Pteropodidae															
Black Flying-fox	*Pteropus alecto*														Potential food resource.
Little Red Flying-fox	*Pteropus scapulatus*														Potential food resource
Canidae															

Common Name	Species Name	Guruma Name	Conservation status			A	B	E	F	G	J	L	U	W	Traditional Resource Use
			EPBC Act	WC/BC Act	DBCA										
Dingo	*Canis familiaris*	wantja (dog),mujira (dingo)					Y								Meat, Hunting, Clothing
Red Fox	*Vulpes vulpes*														
Felidae															
Cat	*Felis catus*	ngaugnanha				Y									Meat
Leporidae															
Rabbit	*Oryctolagus cuniculus*										Y				Meat
Equidae															
Donkey	*Equus asinus*														
Horse	*Equus caballus*														
Camelidae															
Camel	*Camelus Dromedarius*						Y								Meat
Bovidae															
European Cattle	*Bos taurus*														
Goat	*Capra aegagrus hircus*						Y								Meat
BIRDS															
Dromaiidae															
Emu	*Dromaius novaehollandiae*	kayatpu, wilpili wirta (chick)					Y		Y		Y		Y		Meat, Eggs, Clothing, Feathers for skirts. Oil for sores
Anatidae															
Plumed Whistling Duck	*Dendrocygna eytoni*	ngarranti, karrandadi					Y								Meat, Eggs
Wandering Whistling Duck (Chestnut Whistling Duck)	*Dendrocygna arcuata*						Y								Meat, Eggs
Black Swan	*Cygnus atratus*	karlajiku				Y	Y								Meat, Eggs
Freckled Duck	*Stictonetta naevosa*	ngarranti, karrandadi					Y								Meat, Eggs
Australian Shelduck (Mountain Duck)	*Tadorna tadornoides*						Y								Meat, Eggs
Pink-eared Duck	*Malacorhynchus membranaceus*						Y								Meat, Eggs
Australian Wood Duck (Wood Duck, Maned Duck)	*Chenonetta jubata*						Y								Meat, Eggs
Pacific Black Duck	*Anas superciliosa*						Y								Meat, Eggs
Grey Teal	*Anas gracilis*						Y								Meat, Eggs
Hardhead	*Aythya australis*						Y								Meat, Eggs
Blue-billed Duck	*Oxyura australis*						Y								Meat, Eggs
Phasianidae															
Stubble Quail	*Coturnix pectoralis*	puntaru					Y								Meat
Brown Quail	*Coturnix ypsilophora*						Y								Meat
Podicipedidae															
Australasian Grebe (Black-throated Grebe)	*Tachybaptus novaehollandiae*						Y								Extrapolated – Meat
Hoary-headed Grebe	*Poliocephalus poliocephalus*	pinju					Y								Extrapolated – Meat
Great Crested Grebe	*Podiceps cristatus*						Y								Extrapolated – Meat
Ciconiidae															
Black-necked Stork	*Ephippiorhynchus asiaticus*						Y								Extrapolated – Meat
Threskiornithidae															
Australian White Ibis	*Threskiornis moluccus*						Y								Extrapolated – Meat
Straw-necked Ibis	*Threskiornis spinicollis*						Y								Extrapolated – Meat

Common Name	Species Name	Guruma Name	Conservation status			A	B	E	F	G	J	L	U	W	Traditional Resource Use
			EPBC Act	WC/BC Act	DBCA										
Glossy Ibis	*Plegadis falcinellus*						Y								Extrapolated – Meat
Royal Spoonbill	*Platalea regia*						Y								Extrapolated – Meat
Yellow-billed Spoonbill	*Platalea flavipes*						Y								Extrapolated – Meat
Ardeidae															
Black Bittern	*Ixobrychus flavicollis*														Extrapolated – Meat
Nankeen Night Heron (Rufous Night Heron)	*Nycticorax caledonicus*														Extrapolated – Meat
Striated Heron (Mangrove Heron)	*Butorides striata*														Extrapolated – Meat
Cattle Egret	*Ardea ibis*														Extrapolated – Meat
White-necked Heron	*Ardea pacifica*	payuka, marangura (heron? or crane)													Extrapolated – Meat
Eastern Great Egret	*Ardea modesta*														Extrapolated – Meat
White-faced Heron	*Ardea novaehollandiae*	payuka, marangura (heron? or crane)													Extrapolated – Meat
Little Egret	*Ardea garzetta*														Extrapolated – Meat
Eastern Reef Heron (Eastern Reef Egret)	*Ardea sacra*														Extrapolated – Meat
Pelecanidae															
Australian Pelican	*Pelecanus conspicillatus*	pinpalulu					Y								Extrapolated – Meat
Phalacrocoracidae															
Little Pied Cormorant	*Phalacrocorax melanoleucos*	putput (cormorant)													Extrapolated – Meat
Little Black Cormorant	*Phalacrocorax sulcirostris*														Extrapolated – Meat
Pied Cormorant (Australian Pied Cormorant)	*Phalacrocorax varius*														Extrapolated – Meat
Great Cormorant	*Phalacrocorax carbo*														Extrapolated – Meat
Anhingidae															
Australasian Darter	*Anhinga novaehollandiae*														Extrapolated – Meat
Pandionidae															
Eastern Osprey	*Pandion haliaetus*														Extrapolated – Meat
Accipitridae															
Little Eagle	*Hieraaetus morphnoides*														Extrapolated – Meat
Wedge-tailed Eagle	*Aquila audax*	warrita (eaglehawk)					Y								Meat
Swamp Harrier	*Circus approximans*														Extrapolated – Meat
Spotted Harrier	*Circus assimilis*														Extrapolated – Meat
Black Kite	*Milvus migrans*	karrkarti, kagulyu (kitehawk)													Extrapolated – Meat
Whistling Kite	*Haliastur sphenurus*	karrkarti, kagulyu (kitehawk)													Extrapolated – Meat
Brahminy Kite	*Haliastur indus*														Extrapolated – Meat
White-bellied Sea-Eagle	*Haliaeetus leucogaster*														Extrapolated – Meat
Otididae															
Australian Bustard	*Ardeotis australis*	parntakura				Y									Meat, Eggs
Rallidae															
Buff-banded Rail	*Gallirallus philippensis*														Extrapolated – Meat
Baillon's Crake	*Porzana pusilla*														Extrapolated – Meat
Australian Spotted Crake	*Porzana fluminea*														Extrapolated – Meat
Spotless Crake	*Porzana tabuensis*														Extrapolated – Meat
Purple Swamphen	*Porphyrio porphyrio*														Extrapolated – Meat

Common Name	Species Name	Guruma Name	Conservation status			A	B	E	F	G	J	L	U	W	Traditional Resource Use
			EPBC Act	WC/BC Act	DBCA										
Dusky Moorhen	*Gallinula tenebrosa*														Extrapolated – Meat
Black-tailed Native-hen	*Tribonyx ventralis*	jantinti													Extrapolated – Meat
Eurasian Coot	*Fulica atra*														Extrapolated – Meat
Gruidae															
Brolga	*Grus rubicunda*	payuka, marangura (heron? or crane)													Extrapolated – Meat
Turnicidae															
Little Button-quail	*Turnix velox*														Extrapolated – Meat
Burhinidae															
Bush Stone-curlew (Bush Thick-knee)	*Burhinus grallarius*														Extrapolated – Meat
Beach Stone-curlew (Beach Thick-knee)	*Esacus magnirostris*														Extrapolated – Meat
Haematopodidae															
Pied Oystercatcher	*Haematopus longirostris*														Extrapolated – Meat
Sooty Oystercatcher	*Haematopus fuliginosus*														Extrapolated – Meat
Recurvirostridae															
Black-winged Stilt	*Himantopus himantopus*														Extrapolated – Meat
Banded Stilt	*Cladorhynchus leucocephalus*														Extrapolated – Meat
Red-necked Avocet	*Recurvirostra novaehollandiae*														Extrapolated – Meat
Charadriidae															
Banded Lapwing	*Vanellus tricolor*	ketehipah, keteth, ketir													Extrapolated – Meat
Inland Dotterel	*Peltohyas australis*														Extrapolated – Meat
Oriental Plover	*Charadrius veredus*														Extrapolated – Meat
Scolopacidae															
Pin-tailed Snipe	*Gallinago stenura*	jinparting (sandpiper) pithiny (stint) wirlu-uru (curlew)													Extrapolated – Meat
Swinhoe's Snipe	*Gallinago megala*														Extrapolated – Meat
Asian Dowitcher	*Limnodromus semipalmatus*														Extrapolated – Meat
Black-tailed Godwit	*Limosa limosa*														Extrapolated – Meat
Bar-tailed Godwit	*Limosa lapponica*														Extrapolated – Meat
Little Curlew	*Numenius minutus*														Extrapolated – Meat
Whimbrel	*Numenius phaeopus*														Extrapolated – Meat
Far Eastern Curlew (Eastern Curlew)	*Numenius madagascariensis*														Extrapolated – Meat
Common Redshank	*Tringa totanus*														Extrapolated – Meat
Marsh Sandpiper	*Tringa stagnatilis*														Extrapolated – Meat
Common Greenshank	*Tringa nebularia*														Extrapolated – Meat
Wood Sandpiper	*Tringa glareola*														Extrapolated – Meat
Grey-tailed Tattler	*Tringa brevipes*														Extrapolated – Meat
Terek Sandpiper	*Tringa cinerea*														Extrapolated – Meat
Common Sandpiper	*Tringa hypoleucos*														Extrapolated – Meat
Ruddy Turnstone	*Arenaria interpres*														Extrapolated – Meat
Great Knot	*Calidris tenuirostris*														Extrapolated – Meat
Red Knot	*Calidris canutus*														Extrapolated – Meat
Sanderling	*Calidris alba*														Extrapolated – Meat
Red-necked Stint	*Calidris ruficollis*														Extrapolated – Meat

Common Name	Species Name	Guruma Name	Conservation status			A	B	E	F	G	J	L	U	W	Traditional Resource Use
			EPBC Act	WC/BC Act	DBCA										
Long-toed Stint	*Calidris subminuta*														Extrapolated – Meat
Pectoral Sandpiper	*Calidris melanotos*														Extrapolated – Meat
Sharp-tailed Sandpiper	*Calidris acuminata*														Extrapolated – Meat
Curlew Sandpiper	*Calidris ferruginea*														Extrapolated – Meat
Broad-billed Sandpiper	*Limicola falcinellus*														Extrapolated – Meat
Red-necked Phalarope	*Phalaropus lobatus*														Extrapolated – Meat
Laridae															
Silver Gull	*Larus novaehollandiae*														Extrapolated – Meat
Australian Gull-billed Tern	*Sterna nilotica*														Extrapolated – Meat
Caspian Tern	*Sterna caspia*														Extrapolated – Meat
Lesser Crested Tern	*Sterna bengalensis*														Extrapolated – Meat
Fairy Tern	*Sterna nereis*														Extrapolated – Meat
Bridled Tern	*Sterna anaethetus*														Extrapolated – Meat
Sooty Tern	*Sterna fuscata*														Extrapolated – Meat
Roseate Tern	*Sterna dougallii*														Extrapolated – Meat
Common Tern	*Sterna hirundo*														Extrapolated – Meat
Whiskered Tern	*Sterna hybrida*														Extrapolated – Meat
White-winged Black Tern	*Sterna leucoptera*														Extrapolated – Meat
Columbidae															
Rock Dove	*Columba livia*														Extrapolated – Meat
Common Bronzewing	*Phaps chalcoptera*	marnpi				Y	Y								Meat
Flock Bronzewing	*Phaps histrionica*					Y									Meat
Crested Pigeon	*Ocyphaps lophotes*	karlkarlulu				Y									Meat
Spinifex Pigeon	*Geophaps plumifera*	ngunutu				Y									Meat
Diamond Dove	*Geopelia cuneata*														Extrapolated – Meat
Peaceful Dove	*Geopelia striata*	karlita karpanji													Extrapolated – Meat
Bar-shouldered Dove	*Geopelia humeralis*														Extrapolated – Meat
Cuculidae															
Pheasant Coucal	*Centropus phasianinus*														Extrapolated – Meat
Tytonidae															
Australian Masked Owl (Masked Owl)	*Tyto novaehollandiae*	kunkurn (owl type) wirraju (barn owl)													Extrapolated – Meat
Eastern Barn Owl	*Tyto alba*														Extrapolated – Meat
Strigidae															
Barking Owl	*Ninox connivens*	kunkurn (owl type)													Extrapolated – Meat
Southern Boobook	*Ninox boobook*														Extrapolated – Meat
Podargidae															
Tawny Frogmouth	*Podargus strigoides*	thuli													Extrapolated – Meat
Caprimulgidae															
Spotted Nightjar	*Eurostopodus argus*														Extrapolated – Meat
Aegothelidae															
Australian Owlet-nightjar	*Aegotheles cristatus*														Extrapolated – Meat
Apodidae															
Pacific Swift (Fork-tailed Swift)	*Apus pacificus*	jalperingpering (swift or swallow)	M	S5				Y							"Rain bird" to indicate imminent weather

Common Name	Species Name	Guruma Name	Conservation status			A	B	E	F	G	J	L	U	W	Traditional Resource Use
			EPBC Act	WC/BC Act	DBCA										
Alcedinidae															
Blue-winged Kookaburra	*Dacelo leachii*	jarrurtu													
Collared Kingfisher	*Todiramphus chloris*	pirunji (kingfisher)													
Sacred Kingfisher	*Todiramphus sanctus*														
Red-backed Kingfisher	*Todiramphus pyrrhopygius*														
Falconidae															
Australian Kestrel (Nankeen Kestrel)	*Falco cenchroides*														
Australian Hobby	*Falco longipennis*	wirntiwirnti													
Brown Falcon	*Falco berigora*														
Cacatuidae															
Galah	*Eolophus roseicapilla*	pilyaku				Y	Y								Meat
Little Corella	*Cacatua sanguinea*	pirtirra					Y								Extrapolated – Meat
Cockatiel	*Nymphicus hollandicus*	wiro													
Psittacidae															
Australian Ringneck	*Platycercus zonarius*	parnparn													Extrapolated – Meat
Mulga Parrot	*Platycercus varius*														Extrapolated – Meat
Bourke's Parrot	*Neophema bourkii*														Extrapolated – Meat
Elegant Parrot	*Neophema elegans*														Extrapolated – Meat
Budgerigar	*Melopsittacus undulatus*	pulyiri pulyari													Extrapolated – Meat
Night Parrot	*Pezoporus occidentalis*														Extrapolated – Meat
Princess Parrot	*Polytelis alexandrae*														Extrapolated – Meat
Ptilonorhynchidae															
Western Bowerbird	*Ptilonorhynchus maculatus*	tharraji, thaaraki													
Grey-crowned Babbler	*Pomatostomus temporalis*	kakaju													
White-browed Babbler	*Pomatostomus superciliosus*														
Psophodidae															
Western Wedgebill (Chiming Wedgebill)	*Psophodes occidentalis*														
Western Quail-thrush	*Cinclosoma marginatum*														
Cracticidae															
Grey Butcherbird	*Cracticus torquatus*	kulpatutu (butcherbird)													
Pied Butcherbird	*Cracticus nigrogularis*														
Australian Magpie	*Cracticus tibicen*	warnturla													
Campephagidae															
Ground Cuckoo-shrike	*Coracina maxima*	kujhipurrapurra (cuckoo-shrike?) nyurrilara (Black-faced Cuckoo-shrike)													
Black-faced Cuckoo-shrike	*Coracina novaehollandiae*														
White-winged Triller	*Lalage tricolor*														
Oreoicidae															
Crested Bellbird	*Oreoica gutturalis*														
Pachycephalidae															
Mangrove Golden Whistler	*Pachycephala melanura*														
Rufous Whistler	*Pachycephala rufiventris*														
White-breasted Whistler	*Pachycephala lanioides*														
Grey Shrike-thrush	*Colluricincla harmonica*														

Common Name	Species Name	Guruma Name	Conservation status			A	B	E	F	G	J	L	U	W	Traditional Resource Use
			EPBC Act	WC/BC Act	DBCA										
Monarchidae															
Magpie-lark	*Grallina cyanoleuca*	yilimpira, jilimpri													
Corvidae															
Torresian Crow	*Corvus orru*	wakurra (crow)													
Little Crow	*Corvus bennetti*														
Alaudidae															
Horsfield's Bushlark	*Mirafra javanica*														
Locustellidae															
Rufous Songlark	*Megalurus mathewsi*														
Brown Songlark	*Megalurus cruralis*														
Reptiles															
Cheluidae															
Flat Shelled Turtle	*Chelodina steindachneri*	pingki									Y				Meat
Pygopodidae															
	Delma borea														Extrapolated – Meat
	Delma butleri														Extrapolated – Meat
	Delma desmosa														Extrapolated – Meat
	Delma elegans														Extrapolated – Meat
	Delma nasuta														Extrapolated – Meat
	Delma pax														Extrapolated – Meat
	Delma tincta														Extrapolated – Meat
Burton's Snake-lizard	*Lialis burtonis*						Y								Meat
Western Hooded Scaly-foot	*Pygopus nigriceps*														Extrapolated – Meat
Agamidae															
Western Ring-tailed Dragon	*Ctenophorus caudicinctus*	muntha (lizard of dragon type) partinha (dragon lizard), karliringka (Long-nosed Dragon) pututuputurra (*Tympanocryptis* sp.)													Extrapolated – Meat
Dune Dragon	*Ctenophorus femoralis*														Extrapolated – Meat
Central Military Dragon	*Ctenophorus isolepis*														Extrapolated – Meat
Central Netted Dragon	*Ctenophorus nuchalis*														Extrapolated – Meat
Western Netted Dragon	*Ctenophorus reticulatus*														Extrapolated – Meat
Red Dragon	*Ctenophorus rubens*														Extrapolated – Meat
	Ctenophorus scutulatus														Extrapolated – Meat
Mulga Dragon	*Diporiphora amphiboluroides*														Extrapolated – Meat
Long-nosed dragon	*Gowidon longirostris*											Y			Meat
Ta-Ta or Gilbert's Dragon	*Lophognathus gilberti*														Extrapolated – Meat
Western Bearded Dragon	*Pogona minor*														Extrapolated – Meat
Scincidae															
	Ctenotus grandis														
	Ctenotus pantherinus														
	Ctenotus robustus														
	Cyclodomorphus melanops														
Western Pilbara Spiny-tailed Skink	*Egernia cygnitos*														
Southern Pygmy Spiny-tailed Skink	*Egernia depressa*														

Common Name	Species Name	Guruma Name	Conservation status			A	B	E	F	G	J	L	U	W	Traditional Resource Use
			EPBC Act	WC/BC Act	DBCA										
Eastern Pilbara Spiny-tailed Skink	*Egernia epsisolus*														
	Egernia formosa														
Pilbara Skink	*Egernia pilbarensis*														
	Eremiascincus isolepis														
Mosaic Desert Skink	*Eremiascincus musivus*														
Western Narrow-banded Skink	*Eremiascincus pallidus*														
Broad-banded Sand Swimmer	*Eremiascincus richardsonii*														
Night Skink	*Liopholis striata*														
Central Blue-tongue	*Tiliqua multifasciata*	palyiri													Extrapolated – Meat
Varanidae															
Spiny-tailed Goanna	*Varanus acanthurus*	jitarra (black & white goanna) kurrumanthu pirriala (goanna) pirriala (goanna) panthawayi panthanparhanha (perentie) yurnga (small tree climbing jurri (black lizard climbs trees – *V. tristis*?) prangka (small goanna – young kurrumanthu)					Y								Meat
Short-tailed Pygmy Goanna	*Varanus brevicauda*						Y								Meat
Pilbara Mulga Goanna	*Varanus bushi*						Y								Meat
Stripe-tailed Monitor	*Varanus caudolineatus*						Y								Meat
Pygmy Desert Goanna	*Varanus eremius*						Y								Meat
Perentie	*Varanus giganteus*						Y								Meat
Pygmy Mulga Goanna	*Varanus gilleni*						Y								Meat
Bungarra or Sand Goanna	*Varanus gouldii*						Y								Meat
Southern Pilbara Rock Goanna	*Varanus hamersleyensis*						Y								Meat
Yellow-spotted Monitor	*Varanus panoptes*						Y								Meat
Northern Pilbara Rock Goanna	*Varanus pilbarensis*						Y								Meat
Racehorse Goanna	*Varanus tristis*						Y								Meat
Pythonidae															
Pygmy Python	*Antaresia perthensis*														Extrapolated – Meat
Stimson's Python	*Antaresia stimsoni*	tharwarru (carpet python)													Extrapolated – Meat
Black-headed Python	*Aspidites melanocephalus*														Extrapolated – Meat
Woma	*Aspidites ramsayi*														Extrapolated – Meat
Pilbara Olive Python	*Liasis olivaceus barroni*	rock python snake (palkunyji, parkunji);	VU	S3	VU	Y									Meat, Eggs
Elapidae															
	Demansia psammophis	pithipilyirirri (coppertail snake – *D. p. cupreiceps)*					Y								
Rufous Whipsnake	*Demansia rufescens*						Y								
Moon Snake	*Furina ornata*						Y								
	Parasuta monachus						Y								
Mulga Snake	*Pseudechis australis*	pakkutakarra					Y								
Western Brown Snake	*Pseudonaja mengdeni*						Y								
Ringed Brown Snake	*Pseudonaja modesta*						Y								
Rosen's Snake	*Suta fasciata*						Y								
Spotted Snake	*Suta punctata*						Y								
AMPHIBIANS															
Pelodryadidae															
Giant Frog	*Cyclorana australis*						Y								

Common Name	Species Name	Guruma Name	Conservation status			A	B	E	F	G	J	L	U	W	Traditional Resource Use
			EPBC Act	WC/BC Act	DBCA										
Sheep Frog	*Cyclorana maini*						Y								Extrapolated – water, meat
Western Water-holding Frog	*Cyclorana occidentalis*						Y								Extrapolated – water, meat
Little Red Tree Frog	*Litoria rubella*						Y								
Limnodynastidae															
Northern Burrowing Frog	*Neobatrachus aquilonius*						Y								
Tawny Trilling Frog	*Neobatrachus fulvus*						Y								
Shoemaker Frog	*Neobatrachus sutor*						Y								
Desert Spadefoot	*Notaden nichollsi*						Y								
Centralian Burrowing Frog	*Platyplectrum spenceri*	junthalli (*P. spenceri*)					Y								Extrapolated – water, meat
Myobatrachidae															
Gorge Toadlet	*Pseudophryne douglasi*														
Glandular Toadlet	*Uperoleia glandulosa*														
Tanami Toadlet	*Uperoleia micromeles*														
Pilbara Toadlet	*Uperoleia saxatilis*														
Ratcheting Toadlet	*Uperoleia talpa*														
INLAND FISH															
Anguillidae															
Indian Short-finned Eel	*Anguilla bicolor*	marntamirra (eel)													Extrapolated – Meat
Ariidae															
Lesser Salmon Catfish	*Arius graeffei*														Extrapolated – Meat
Atherinidae															
Murchison River Hardyhead	*Craterocephalus cuneiceps*														Extrapolated – Meat
Clupeidae															
Bony Bream	*Nematalosa erebi*	jikurra													Extrapolated – Meat
Eleotrididae															
Golden Gudgeon	*Hypseleotris aurea*														Extrapolated – Meat
Empire Gudgeon	*Hypseleotris compressa*														Extrapolated – Meat
Gobiidae															
Flathead Goby	*Glossogobius giurus*														Extrapolated – Meat
Melanotaeniidae															
Western Rainbowfish	*Melanotaenia splendida australis*														Extrapolated – Meat
Plotosidae															
Hyrtl's catfish	*Neosilurus hyrtlii*	ngurruwayi					Y								Meat
A recently discovered catfish	*Neosilurus sp.*	katharrwaa													Extrapolated – Meat
Teraponidae															
Barred Grunter	*Amniataba percoides*														Extrapolated – Meat
Spangled Perch	*Leiopotherapon unicolor*	kuthampa kulumpa							Y						Meat
Fortescue Grunter	*Leiopotherapon aheneus*														Extrapolated - Meat
INVERTEBRATES															
Longhorn beetle	*Bardistus cibarius*	bardi					Y								Meat
Witchetty grub	*Endoxyla leucomochla*	bardi,pilu					Y								Meat, Bilby diggings indicate grubs are ready to eat,

Common Name	Species Name	Guruma Name	Conservation status			A	B	E	F	G	J	L	U	W	Traditional Resource Use
			EPBC Act	WC/BC Act	DBCA										
Processionary caterpillar	*Ochrogaster lunifer*	wallulunga												Y	Spread in Bustard nests to help hunt, length of train indicates season severity
Ant Lion	*Myrmeleontidae*													Y	Toy
Native Bees	*Tetragonula spp., Austroplebeia spp.*	wanpayi												Y	Honey, Medicine (larvae)
Termites	*Isoptera*	munthur				Y								Y	Meat, Medicine (eggs)
Grasshoppers, crickets, locusts	*Orthoptera*	pinpilha (grasshopper)												Y	
Stick insects	*Phasmatodea*	maarka													
Beetles	*Coleoptera*	pilu (grub in roots, bardi) jalkunhungu (grub in tree branch) pirtingingu (grub in soil)												Y	Meat (Larval form), calls can indicate availability of yams/edible grasses
Butterflies/Moths	*Lepidoptera*	pirtipirti (butterfly)												Y	Meat (Larval form)
Ants/Bees	*Hymenoptera*	minga (ant)												Y	Sugar/Honey, Medicine (eggs), Bee wax and resin from ant nests used as adhesive,
Flies, mosquitoes	*Diptera*	nyurni (mosquito)													
Scale insects	*Hemiptera: Coccoidea*	marrajun (lerp on *A. glaucocaesia*)					Y							Y	Sugar
Gall inducing insects	*Cystococcus pomiformis*													Y	Food

APPENDIX FOUR REGIONAL VEGETATION COMMUNITIES

Table 7: Regional Vegetation Communities with Culturally Significant Flora

Vegetation Association	Vegetation description (Level_V_As or Non_NVIS_C)	# Distinct Species	Total Count Species	# Sites	# Distinct species / # Sites
A	N/A	47	121	23	2.04
AaAbTt	Acacia aneura tall sparse shrubland, over Acacia bivenosa and Acacia pruinocarpa mid sparse shrubland, over Triodia epactia open hummock grassland and Themeda triandra tussock grassland	20	26	2	10
AaAbTw	N/A	21	22	4	5.25
AaAcAs	N/A	4	4	1	4
AaAnCf	N/A	10	10	2	5
AaApRe	N/A	22	31	2	11
AaApTr	N/A	41	71	7	5.86
AaAxAl	N/A	31	43	5	6.2
AaCf	Acacia aptaneura low open woodland over Chrysopogon fallax and Eulalia aurea mid open tussock grassland	30	74	4	7.5
AaCfA	N/A	25	44	6	4.17
AaCfAlTH	N/A	22	35	5	4.4
AaEfTw1	"Acacia aptaneura and Acacia citrinoviridis isolated low trees, over Eremophila fraseri subsp. fraseri isolated mid shrubs, over Triodia				
wiseana sparse hummock grassland."	12	15	3	4	
AaElCf	Acacia aneura tall shrubland over Eremophila lanceolata, Sida sp. verrucose glands (F.H. Mollemans 2423) and Solanum lasiophyllum mid sparse shrubland over Chrysopogon fallax and Aristida contorta sparse tussock grassland	47	94	8	5.88
AaElfTe	Acacia aneura and Acacia pruinocarpa tall open shrubland over Eremophila latrobei subsp. filiformis and Dodonaea petiolaris mid sparse shrubland over Triodia epactia hummock grassland	20	20	1	20
AaEp	Acacia aneura tall shrubland, over open Enneapogon polyphyllus tussock grassland and Triodia brizoides isolated hummock grasses	46	160	9	5.11
AaEpEp	Acacia aneura tall open shrubland, over Eremophila phyllopoda subsp. obliqua and Acacia ayersiana mid, open shrubland, over Eriachne pulchella subsp. dominii isolated grasses	36	73	6	6
AaImTe	Acacia aneura and Acacia pruinocarpa tall shrubland, overAcacia ancistrocarpa and Eremophila longifolia mid sparse shrubland, over Indigofera monophylla and Sida sp. verrucose glands (F.H. Mollemans 2423) low sparse shrubland, over Cenchrus ciliaris tuss	19	19	1	19
AaLWTeHG	N/A	11	11	1	11
AanAbTHtCEc	Acacia 'aneura' low open woodland over Acacia bivenosa mid sparse shrubland over Themeda triandra, *Cenchrus ciliaris low tussock grassland	19	19	1	19
AanAprAatTwTe	Acacia 'aneura', A. pruinocarpa low open woodland over Acacia atkinsiana tall sparse shrubland over Triodia wiseana, T. epactia mid hummock grassland	35	55	5	7
AanAprERfTeTw	Acacia 'aneura', A. pruinocarpa low open woodland over Eremophila forrestii subsp. forrestii mid sparse shrubland over Triodia epactia, Triodia wiseana low open hummock grassland	10	23	2	5

Vegetation Association	Vegetation description (Level_V_As or Non_NVIS_C)	# Distinct Species	Total Count Species	# Sites	# Distinct species / # Sites
AanAprTw	Acacia 'aneura', A. pruinocarpa mid open woodland over Triodia wiseana mid open hummock grassland	19	22	2	9.5
AanCHf	Acacia 'aneura' low open woodland over Chrysopogon fallax mid sparse tussock grassland	68	175	19	3.58
AanEgAbTe	Acacia 'aneura' isolated trees over Eucalyptus gamophylla isolated mallee trees over A. bivenosa isolated tall shrubs over Triodia epactia, T. wiseana mid closed hummock grassland	43	80	9	4.78
AanExAatAbCHfTe	Acacia 'aneura', Eucalyptus xerothermica mid open woodland over Acacia atkinsiana, A. bivenosa mid sparse shrubland over Chrysopogon fallax mid sparse tussock grassland over Triodia epactia mid hummock grassland	39	91	3	13
AanTw	Acacia 'aneura' low woodland over Triodia wiseana, T. epactia low sparse hummock grassland	35	79	6	5.83
AanVfTHt	Acacia 'aneura' tall sparse shrubland over *Vachellia farnesiana mid sparse shrubland over Chrysopogon fallax, Themeda sp. Hamersley Station (M.E. Trudgen 11431) tall tussock grassland	15	35	5	3
AaPlAc	Acacia aneura, Acacia pruinocarpa and Grevillea berryana tall open shrubland over Psydrax latifolia and Sida sp. verrucose glands (F.H. Mollemans 2423) mid sparse shrubland over Aristida contorta and Enneapogon polyphyllus sparse tussock grassland and Tr	46	157	13	3.54
AaPsCf	Acacia aptaneura open shrubland, over low Abutilon otocarpum sparse shrubland, over Pterocaulon sphacelatum and Ptilotus obovatus open forbeland, over open Chrysopogon fallax tussock grassland	30	38	2	15
AaSaTw + AaAl Mosaic	N/A	16	25	3	5.33
AaSfAl	Acacia aptaneura open shrubland, over low Sida fibulifera sparse shrubland, over Aristida latifolia and Chrysopogon fallax tussock grassland	18	30	4	4.5
AaSvCc	Acacia aneura tall open shrubland over Sida sp. verrucose glands (F.H. Mollemans 2423) and Sclerolaena cornishiana mid sparse shrubland over Abutilon otocarpum, Malvastrum americanum and Boerhavia coccinea sparse herbland and Cenchrus ciliaris tussock gr	48	150	16	3
AaTa	N/A	10	12	2	5
AaTb1	Acacia ayersiana and Acacia pruinocarpa mid, open shrubland, over Triodia bitextura and Triodia wiseana hummock grassland	40	115	8	5
AaTb2	Acacia aneura Tall shrubland, over Ptilotus schwartzii low, sparse shrubland, over Triodia brizoides open hummock grassland	43	178	15	2.87
AaTe1	Acacia aptaneura and A. aneura low woodland over Triodia epactia low hummock grassland	17	23	2	8.5
AaTe2	Acacia aneura, A. aptaneura and Eucalyptus xerothermica low open forest over Triodia epactia low sparse hummock grassland	14	14	1	14
AaTeCh/EgTwCd/ExAbCf	Mosiac of 1. Acacia ancistrocarpa, A. atkinsiana and A. bivenosa mid sparse shrubland over Triodia epactia and T. wiseana mid hummock grassland with Corymbia hamersleyana and Eucalyptus leucophloia subsp. leucophloia low scattered trees; 2. Eucalyptus ga	48	257	8	6
AaTeEl	Acacia atkinsiana, A. bivenosa and A. kempeana tall open shrubland over Triodia epactia mid open hummock grassland with Eucalyptus leucophloia subsp. leucophloia low scattered trees	17	26	2	8.5

Vegetation Association	Vegetation description (Level_V_As or Non_NVIS_C)	# Distinct Species	Total Count Species	# Sites	# Distinct species / # Sites
AaTm	N/A	6	14	4	1.5
AaTm/AxPsp./AvSa	N/A	4	6	4	1
AaTp1	Acacia atkinsonia and Acacia pruinocarpa mid, open shrubland, over Triodia pungens hummock grassland	40	80	4	10
AaTp2	Eucalyptus leucophloia isolated low trees, over Acacia aneura and Acacia pruinocarpa open shrubland, over Triodia pungens open hummock grassland	60	165	10	6
AaTp3	Acacia aneura and Acacia tetragonophylla tall shrubland, over Triodia pungens hummock grassland	47	175	11	4.27
AaTpAl	N/A	26	38	4	6.5
AaTpCa	N/A	13	13	1	13
AaTREl	Acacia arida, A. marramamba and A. pruinocarpa mid open shrubland over Triodia sp. Robe River and T. wiseana low hummock grassland with Eucalyptus leucophloia subsp. leucophloia low scattered trees	21	76	6	3.5
AaTw	Acacia ancistrocarpa, Acacia bivenosa and Acacia inaequilatera mid sparse shrubland, over Triodia wiseana open hummock grassland	39	91	10	3.9
AaTw/AaTe/AiTw1	N/A	71	525	19	3.74
AaVfTH1	Acacia aneura sparse shrubland, over mid Vachellia farnesiana sparse shrubland, over Chrysopogon fallax and Themeda sp. Hamersley Station (M.E. Trudgen 11431) tussock grassland	1	1	1	1
AaVfTH2	Acacia aneura shrubland, over mid Vachellia farnesiana sparse shrubland, over Chrysopogon fallax and Themeda sp. Hamersley Station (M.E. Trudgen 11431) tussock grassland	11	11	1	11
AbAeTwTeTl	Acacia bivenosa, A. exigua, Stylobasium spathulatum mid sparse shrubland over Triodia wiseana, T. epactia, T. longiceps mid hummock grassland	24	33	3	8
AbTp1	Acacia bivenosa, Codonocarpus cotinifolius and Senna artemisioides subsp. oligophylla sparse shrubland over open Triodia pungens hummock grassland	9	9	1	9
AbTw	Eucalyptus leucophloia subsp. leucophloia isolated low trees, over mid Acacia bivenosa sparse shrubland, over Triodia wiseana hummock grassland	74	346	32	2.31
AbTw1	N/A	17	17	1	17
AbTwTe	Acacia bivenosa mid sparse shrubland over Triodia wiseana or T. epactia mid open hummock grassland	22	37	1	22
AcAanVfBTe	Acacia citrinoviridis, Acacia 'aneura' mid isolated trees over *Vachellia farnesiana mid sparse shrubland over Bothriochloa ewartiana, Themeda sp. Hamersley Station (M.E. Trudgen 11431), Eriachne benthamii tall closed hummock grassland	7	8	2	3.5
AcAiTe	Corymbia hamersleyana and Eucalyptus leucophloia subsp. leucophloia low isolated trees over Acacia citrinoviridis and Eucalyptus xerothermica low open woodland over Acacia inaequilatera, A. sclerosperma subsp. sclerosperma, A. ancistrocarpa, A. kempeana,	46	124	8	5.75
AcANlTHt	Acacia citrinoviridis, Eucalyptus xerothermica low open forest over Androcalva luteiflora, Petalostylis labicheoides tall sparse shrubland over Themeda triandra, Dichanthium fecundum, Eulalia aurea mid closed tussock grassland	32	54	2	16

Vegetation Association	Vegetation description (Level_V_As or Non_NVIS_C)	# Distinct Species	Total Count Species	# Sites	# Distinct species / # Sites
AcApyTErCcTe	Acacia citrinoviridis tall open shrubland over Acacia pyrifolia, Stylobasium spathulatum mid sparse shrubland over Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186) low sparse shrubland over *Cenchrus ciliaris mid sparse tussock grassland	37	53	4	9.25
AcBTe	Acacia citrinoviridis, Eucalyptus victrix mid open woodland over Bothriochloa ewartiana and Chrysopogon fallax mid sparse tussock grassland	9	10	3	3
AcCc	Acacia citrinoviridis and Acacia aneura tall, open shrubland, over Cenchrus ciliaris tussock grassland	64	255	19	3.37
AcCmnTe	Acacia citrinoviridis open shrubland over Crotalaria medicaginea var. neglecta mid sparse shrubland over Triodia epactia sparse tussock grassland	58	96	8	7.25
AcCs	Acacia citrinoviridis low woodland over* Cenchrus setiger, *Cenchrus ciliaris and Triodia wiseana low tussock grassland/low sparse hummock grassland	30	64	4	7.5
AcEcTt	N/A	12	12	1	12
AcEfAc	Acacia citrinoviridis, Acacia pruinocarpa and Grevillea berryana tall open shrubland over Eremophila forrestii and Psydrax latifolia mid sparse shrubland over Ptilotus schwartzii low sparse shrubland over Aristida contorta sparse tussock grassland	37	122	10	3.7
AcTe	Acacia citrinoviridis tall open shrubland over Triodia epactia low sparse hummock grassland	41	90	3	13.67
AcTR	Acacia citrinoviridis, A. pruinocarpa and Eucalyptus leucophloia subsp. leucophloia low woodland over Triodia sp. Robe River and T. wiseana low open hummock grassland	14	37	2	7
AcTt	Acacia citrinoviridis and Acacia pyrifolia tall, open shrubland, over Themeda triandra and Cenchrus ciliaris open tussock grassland	64	208	11	5.82
Ae	Astrebla elymoides, Aristida latifolia and Senna artemisioides subsp. oligophylla mid open tussock grassland/low sparse shrubland	14	37	4	3.5
AeTw	Acacia exigua, A. trudgeniana, A. inaequilatera or A. ancistrocarpa mid open shrubland over Triodia wiseana open hummock grassland	37	95	5	7.4
AeTw/EgAaTe	Mosaic of 1. Acacia exilis, A. inaequilatera and A. atkinsiana mid sparse shrubland over Triodia wiseana low hummock grassland; 2. Eucalyptus gamophylla, E. xerothermica and Corymbia hamersleyana low open mallee woodland/low open woodland over Acacia atk	31	92	3	10.33
AeTwEx	Acacia exilis and A. bivenosa tall-mid sparse shrubland over Triodia wiseana mid hummock grassland with Eucalyptus xerothermica mid scattered mallee trees	8	8	1	8
AeTwTe	Acacia exigua, A. marramamba and /or A. bivenosa mid sparse shrubland over Triodia wiseana, T. epactia low open hummock grassland	46	208	10	4.6
AhGwTe	Atalaya hemiglauca low open woodland over Grevillea wickhamii and Acacia pyrifolia mid open shrubland, over Corchorus lasiocarpus, Indigofera monophylla and Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186) low open shrubland over Triodia epac	67	275	23	2.91

Vegetation Association	Vegetation description (Level_V_As or Non_NVIS_C)	# Distinct Species	Total Count Species	# Sites	# Distinct species / # Sites
AiAaTe	Acacia inaequilatera and Hakea chordophylla low open woodland over Acacia ancistrocarpa, Gossypium australe, Ptilotus astrolasius and Solanum diversiflorum low sparse shrubland over Triodia epactia low open hummock to low hummock grassland over Boerhavia	15	15	1	15
AiAkTe	Eucalyptus leucophloia subsp. leucophloia and Corymbia hamersleyana low isolated trees over Acacia inaequilatera and A. citrinoviridis low open woodland over Acacia kempeana, A. pyrifolia var. pyrifolia and A. synchronicia tall sparse shrubland over Acac	51	153	10	5.1
AiAsyCcTe	Acacia inaequilatera, Hakea lorea subsp. lorea tall sparse shrubland over A. synchronicia mid sparse shrubland over *Cenchrus ciliaris, Chrysopogon fallax mid sparse tussock grassland over Triodia epactia mid open hummock grassland	19	19	1	19
AiGwTp	Acacia inaequilatera and Acacia ancistrocarpa tall sparse shrubland over Grevillea wickhamii mid sparse shrubland over Senna artemisioides subsp. oligophylla low sparse shrubland over Triodia pungens hummock grassland	36	79	6	6
AiTe	Acacia inaequilatera, Senna glutinosa subsp. glutinosa and S. glutinosa subsp. pruinosa mid sparse shrubland over Triodia epactia and T. wiseana low hummock grassland	13	25	1	13
AiTe2	Acacia inaequilatera, A. synchronicia and Senna glutinosa subsp. glutinosa tall sparse shrubland over Triodia epactia and Corchorus laniflorus mid hummock grassland/low sparse shrubland	7	7	1	7
AiTw	Acacia inaequilatera tall sparse shrubland over Triodia wiseana low open hummock grassland	56	232	18	3.11
AiTw/ElTa	MOSAIC: Acacia inaequilatera tall sparse shrubland over Triodia wiseana low open hummock grassland / Eucalyptus leucophloia subsp. leucophloia low open woodland over Triodia angusta, T. longiceps, T. wiseana low open hummock grassland	65	246	22	2.95
AiTw1	Acacia inaequilatera, A. bivenosa and A. synchronicia tall sparse shrubland over Triodia wiseana and T. epactia low hummock grassland	24	50	3	8
AiTw2	Acacia inaequilatera, A. synchronicia and Senna glutinosa subsp. pruinosa tall sparse shrubland over Triodia wiseana low open hummock grassland	39	156	9	4.33
AiTwCh2	Acacia inaequilatera, A. synchronicia and Senna artemisioides subsp. oligophylla tall sparse shrubland over Triodia wiseana and Enneapogon caerulescens low open hummock grassland/low tussock grassland with Corymbia hamersleyana isolated trees	23	43	1	23
Al	N/A	1	1	1	1
AlCf	N/A	5	7	2	2.5
AlCfTm + AaAxAl Mosaic	N/A	8	9	2	4
AmTb	Eucalyptus leucophloia subsp. leucophloia mid isolated trees, over Acacia maitlandii sparse low shrubland, over Triodia brizoides hummock grassland	48	114	10	4.8
AmTw	Acacia maitlandii mid sparse shrubland over Triodia wiseana low open hummock grassland	22	58	6	3.67

Vegetation Association	Vegetation description (Level_V_As or Non_NVIS_C)	# Distinct Species	Total Count Species	# Sites	# Distinct species / # Sites
ApAaTe	Acacia pruinocarpa and Hakea lorea subsp. lorea tall sparse shrubland over Acacia atkinsiana mid sparse shrubland over Hibiscus sturtii and Senna glutinosa subsp. glutinosa low sparse shrubland over Triodia epactia hummock grassland	77	429	32	2.41
ApAbTw	Acacia pyrifolia tall sparse shrubland over Acacia bivenosa mid sparse shrubland over Triodia wiseana hummock grassland	60	218	11	5.45
ApApTe	N/A	14	14	1	14
ApCa	Acacia pruinocarpa and Senna glutinosa subsp. x luerssenii open shrubland, over Cymbopogon ambiguus sparse tussock grassland	48	109	5	9.6
ApHlLOW	N/A	17	21	3	5.67
ApSaoTw	Eucalyptus leucophloia subsp. leucophloia low isolated trees over Acacia pruinocarpa, A. aptaneura, A. atkinsiana, A. kempeana and A. synchronicia low woodland over Senna artemisioides subsp. oligophylla, S. glutinosa subsp. x luerssenii, Corchorus lanif	12	12	1	12
ApSoTw	N/A	11	11	1	11
ApTp	Acacia pyrifolia and Gossypium robinsonii mid, open shrubland, over Triodia pungens hummock grassland	60	279	15	4
ApTrTp	Acacia pyrifolia tall sparse shrubland over Tephrosia rosea and Corchorus crozophorifolius mid sparse shrubland over Triodia pungens hummock grassland	1	2	1	1
ApTw	Acacia pruinocarpa and Corchorus lasiocarpus sparse mid shrubland, over Triodia wiseana hummock grassland	66	274	22	3
ApTw/GwTp	N/A	21	27	3	7
AsEcCc	Acacia synchronicia and *Vachellia farnesiana tall open shrubland to tall shrubland over Eremophila cuneifolia low sparse shrubland over *Cenchrus ciliaris and *C. setiger low to mid open tussock to tussock grassland.	37	59	4	9.25
AsppS	N/A	2	3	1	2
AtGwTw	Acacia trachycarpa tall open shrubland over Grevillea wickhamii mid sparse shrubland over Corchorus tectus, Ptilotus astrolasius and Ptilotus calostachyus low sparse shrubland over Triodia pungens and Triodia wiseana hummock grassland	29	43	6	4.83
AtruTbt	Acacia trudgeniana tall isolated shrubs over Triodia basitricha, T. wiseana low open hummock grassland	12	32	2	6
AtTt	N/A	43	138	3	14.33
Ax	Acacia xiphophylla open shrubland over mixed Poaceae spp. sparse tussock grassland	23	33	4	5.75
AxAanAtERcTw	Acacia xiphophylla, A. 'aneura' low woodland over Acacia tetragonophylla tall sparse shrubland over Eremophila cuneifolia, E. forrestii subsp. forrestii, Senna stricta mid sparse shrubland over Triodia wiseana, T epactia mid open hummock grassland	57	198	14	4.07
AxAsTl	Acacia xiphophylla low open woodland over Acacia synchronicia tall sparse shrubland over Triodia longiceps low sparse hummock grassland over *Cenchrus ciliaris low sparse tussock grassland.	8	8	1	8
AxEcTw	Acacia xiphophylla, A. synchronicia and A. aptaneura low open woodland over Eremophila cuneifolia, Tribulus suberosus, Senna glutinosa subsp. x luerssenii and S. artemisioides subsp. oligophylla mid sparse to open shrubland over Triodia wiseana low spars	40	85	6	6.67

Vegetation Association	Vegetation description (Level_V_As or Non_NVIS_C)	# Distinct Species	Total Count Species	# Sites	# Distinct species / # Sites
AxElTw	N/A	4	4	1	4
AxSglTe	Acacia xiphophylla and A. aptaneura low woodland over Senna glutinosa subsp. x luerssenii, S. stricta and Acacia tetragonophylla low to mid sparse shrubland over mixed chenopod species low sparse shrubland (Maireana triptera, M. planifolia, Enchylaena to	18	18	1	18
AxSsTw	Acacia xiphophylla and A. aptaneura low open woodland over Senna stricta Eremophila forrestii subsp. forrestii, Acacia tetragonophylla mid sparse shrubland over Triodia wiseana and T. epactia mid open hummock grassland	11	11	1	11
AxTl	Acacia xiphophylla low woodland over Triodia longiceps, T. angusta, T. wiseana low sparse hummock grassland	27	57	6	4.5
Burnt	N/A	55	236	13	4.23
Burnt - AaTw/AaTe/AiTw 1	N/A	16	30	1	16
Burnt - AbTw	N/A	5	5	1	5
Burnt - ElAmTw	N/A	8	16	1	8
Burnt - ExAbTe	N/A	20	41	2	10
Burnt - ExAcCc	N/A	22	36	1	22
Burnt - ExApTe	N/A	38	90	2	19
CdAhTw	Corymbia deserticola subsp. deserticola low sparse woodland over Acacia hamersleyensis tall sparse shrubland over Triodia wiseana low open hummock grassland	9	11	2	4.5
CdAiTw	N/A	2	8	3	0.67
CdAiTwTbt	Corymbia deserticola subsp. deserticola low isolated trees over Acacia inaequilatera, A. exigua, Senna glutinosa subsp. glutinosa mid sparse shrubland over Triodia wiseana, T. basitricha low open hummock grassland	30	78	5	6
CdApTp	N/A	17	17	1	17
CdAtTw	N/A	3	3	2	1.5
CddAdTw	Corymbia deserticola subsp. deserticola and Corymbia hamersleyana low sparse woodland over Hakea chordophylla tall isolated shrubs over Acacia dictyophleba mid sparse shrubland over Acacia tumida var. pilbarensis low sparse shrubland over Triodia wiseana	6	6	1	6
CdEgAaTw	Corymbia deserticola subsp. deserticola, E. leucophloia subsp. leucophloia mid open woodland over Eucalyptus gamophylla open mallee woodland over Acacia ancistrocarpa, A. atkinsiana, A. exigua mid sparse shrubland over Triodia wiseana mid hummock grassla	14	19	3	4.67
CdTa	N/A	6	6	1	6
Cf	Chrysopogon fallax, Aristida latifolia and Themeda sp. Hamersley Station mid open tussock grassland	13	37	4	3.25
CfCcTt	Corymbia ferriticola, Acacia citrinoviridis and Eucalyptus leucophloia subsp. leucophloia low open woodland over Corchorus crozophorifolius, Dodonaea pachyneura and Rhagodia eremaea mid sparse shrubland over Themeda triandra, Triodia wiseana and Cymbopog	25	48	1	25

Vegetation Association	Vegetation description (Level_V_As or Non_NVIS_C)	# Distinct Species	Total Count Species	# Sites	# Distinct species / # Sites
ChAarAadTw	Corymbia hamersleyana, Eucalyptus leucophloia subsp. leucophloia low open woodland over Acacia arida, Grevillea wickhamii mid sparse shrubland over Acacia adoxa var. adoxa low sparse shrubland over Triodia wiseana mid hummock grassland	34	57	5	6.8
ChAaTw	Corymbia hamersleyana and Eucalyptus leucophloia subsp. leucophloia low sparse woodland, over Acacia arida and Grevillea wickhamii mid sparse shrubland, over Acacia adoxa var. adoxa low sparse shrubland, over Triodia wiseana hummock grassland	14	29	4	3.5
ChAbTw	Corymbia hamersleyana, Eucalyptus leucophloia subsp. leucophloia mid open woodland over Acacia bivenosa, A. synchronicia, A. ancistrocarpa mid-tall sparse shrubland over Triodia wiseana low sparse hummock grassland	44	190	11	4
ChAdTa	N/A	2	7	4	0.5
ChAdTe1	Corymbia hamersleyana low sparse woodland, over Acacia dictyophleba mid sparse shrubland, over Triodia epactia hummock grassland	52	155	13	4
ChAiTw	N/A	41	60	11	3.73
ChAiTw/ElAbTlo	Mosaic: Corymbia hamersleyana and/ or Eucalyptus leucophloia subsp. leucophloia low isolated trees over Acacia inaequilatera and/ or A. bivenosa mid-tall sparse shrubland over Triodia wiseana low hummock grassland / Eucalyptus leucophloia subsp. leucophl	69	638	39	1.77
ChAiTw2	Corymbia hamersleyana and Eucalyptus leucophloia subsp. leucophloia low sparse woodland over Acacia inaequilatera and Grevillea wickhamii tall sparse shrubland over Triodia wiseana hummock grassland	22	29	5	4.4
ChAiTw3	Corymbia hamersleyana low sparse woodland over Acacia inaequilatera tall sparse shrubland over Senna glutinosa subsp. glutinosa and Acacia bivenosa mid sparse shrubland over Triodia wiseana hummock grassland	8	11	2	4
ChAiTw4	Corymbia hamersleyana low sparse woodland, over Acacia inaequilatera tall sparse shrubland over Senna glutinosa subsp. glutinosa mid sparse shrubland over Triodia wiseana hummock grassland	24	24	1	24
ChAmTe	Corymbia hamersleyana and Eucalyptus leucophloia subsp. leucophloia low open woodland over Acacia inaequilatera and A. pruinocarpa low open woodland over Acacia maitlandii, A. synchronicia, Senna glutinosa subsp. glutinosa, S. glutinosa subsp. pruinosa a	17	24	3	5.67
ChAoCf	Corymbia hamersleyana low woodland over Tall Acacia aptaneura open shrubland, over low Abutilon otocarpum sparse shrubland, over Pterocaulon sphacelatum and Ptilotus obovatus open forbeland, over open Chrysopogon fallax tussock grassland	18	21	2	9
ChAoTe	N/A	11	11	1	11
ChApTe	N/A	21	21	1	21
ChApTe1	Corymbia hamersleyana low sparse woodland, Acacia pyrifolia and Acacia tumida var. pilbarensis mid sparse shrubland over Triodia epactia closed hummock grassland	24	41	4	6
ChApTe3	Corymbia hamersleyana low open woodland over Acacia pyrifolia mid sparse shrubland, over Gossypium australe low sparse shrubland, over Themeda triandra open tussock grassland and Triodia epactia open hummock grassland	40	62	3	13.33

Vegetation Association	Vegetation description (Level_V_As or Non_NVIS_C)	# Distinct Species	Total Count Species	# Sites	# Distinct species / # Sites
ChApTr	N/A	44	93	15	2.93
ChApTw	N/A	17	21	4	4.25
ChApyTHtTe	Corymbia hamersleyana low open woodland over Acacia pyrifolia and/or A. tumida var. pilbarensis mid sparse shrubland occasionally over Gossypium australe low sparse shrubland over Themeda triandra open tussock grassland over Triodia epactia mid open humm	34	41	3	11.33
ChApyTw	Corymbia hamersleyana low open woodland over Acacia pyrifolia, A. spp. sparse shrubland over Themeda triandra mid sparse tussock grassland over Triodia wiseana mid sparse hummock grassland	52	94	5	10.4
ChAtpTw	Corymbia hamersleyana low open woodland over Acacia tumida var. pilbarensis, Acacia pyrifolia, Acacia monticola and Grevillea wickhamii mid sparse shrubland over Triodia wiseana sparse hummock grassland and Themeda triandra sparse tussock grassland	71	183	8	8.88
ChAtTt	Corymbia hamersleyana low open woodland over Acacia tumida var. pilbarensis, A. pyrifolia var. pyrifolia and Grevillea wickhamii mid shrubland over Themeda triandra, Triodia epactia and T. wiseana mid open tussock grassland/low open hummock grasslandÂ	16	29	1	16
ChAtTw	N/A	11	35	13	0.85
ChEgAatTw	Corymbia hamersleyana low open woodland over Eucalyptus gamophylla mid mallee woodland over Acacia atkinsiana, A. kempeana, A. bivenosa mid open shrubland over Triodia wiseana mid hummock grassland	23	52	6	3.83
ChEllSggEmTw	Low Corymbia hamersleyana and Eucalyptus leucophloia subsp. leucophloia open woodland, over mid Senna glutinosa subsp. glutinosa sparse shrubland, over sparse Eriachne mucronata tussock grassland and closed Triodia wiseana hummock grassland	19	45	2	9.5
ChElTe	N/A	1	1	1	1
ChGlTw	N/A	1	2	1	1
ChHlTe	N/A	1	3	1	1
ChHlTw	N/A	12	59	44	0.27
Disturbed	Disturbed	16	26	2	8
DWE6/HWE7	Low Woodland to Low Open Woodland of Eucalyptus leucophloia subsp. leucophloia, Eucalyptus gamophylla, Corymbia hamersleyana, Eucalyptus xerothermica and Corymbia deserticola subsp.deserticola to 8m over Tall Open Scrub to Tall Shrubland of Acacia mo	5	10	3	1.67
EcAcEu	Eucalyptus camaldulensis subsp. obtusa open mid woodland, over Acacia citrinoviridis open low woodland, over Melaleuca linophylla and Atalaya hemiglauca sparse tall shrubland, over Eulalia aurea open tussock grassland.	20	76	19	1.05
EcAcEUaTe	Eucalyptus camaldulensis subsp. refulgens, E. victrix mid woodland over Acacia citrinoviridis, Melaleuca glomerata tall open shrubland over Eulalia aurea mid sparse tussock grassland over Triodia epactia low sparse hummock grassland	80	361	14	5.71
EcApCa	Eucalyptus camaldulensis low woodland over Acacia pyrifolia tall sparse shrubland over Tephrosia rosea and Corchorus crozophorifolius mid sparse shrubland over Cymbopogon ambiguus open tussock grassland	51	176	11	4.64

Vegetation Association	Vegetation description (Level_V_As or Non_NVIS_C)	# Distinct Species	Total Count Species	# Sites	# Distinct species / # Sites
EcApyCv	N/A	22	22	1	22
EcApyTErCYa	Eucalyptus camaldulensis, Melaleuca argentea low woodland over Acacia pyrifolia tall sparse shrubland over Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186), Corchorus crozophorifolius mid sparse shrubland over Cymbopogon ambiguus open tussock	23	23	2	11.5
EcCv	N/A	23	25	2	11.5
EcMbCv	N/A	43	127	3	14.33
EcMbTH	N/A	12	12	2	6
EcMlCc	Eucalyptus camaldulensis var. refulgens, E. victrix and Melaleuca argentea mid woodland over Melaleuca linophylla, M. bracteata and Acacia coriacea subsp. pendens tall sparse shrubland over *Cenchrus ciliaris, Ammannia baccifera and Stemodia grossa low o	42	114	5	8.4
EcoMaTr	N/A	19	22	3	6.33
EcrAcPr	Eucalyptus camaldulensis subsp. refulgens and E. victrix mid woodland to mid open forest, with scattered patches of Melaleuca argentea mid open woodland, over Acacia citrinoviridis and A. coriacea subsp. pendens low open woodland over Melaleuca glomerata	50	185	12	4.17
EcTl	Acacia xiphophylla and Eremophila cuneifolia tall, open shrubland, over Triodia longiceps hummock grassland	41	110	9	4.56
EcTrCv	N/A	24	123	2	12
EfTb	Eremophila fraseri subsp. fraseri and Eremophila cuneifolia low, open shrubland, over Triodia brizoides hummock grassland	42	149	10	4.2
EgAatAtuTe	Eucalyptus gamophylla low open mallee woodland over Acacia atkinsiana, A. tumida var pilbarensis and /or A. bivenosa and Senna artemisioides subsp. oligophylla mid sparse shrubland over Themeda triandra mid sparse tussock grassland over Triodia epactia,	8	9	3	2.67
EgAaTe1	Eucalyptus gamophylla low, open woodland, over mid Acacia atkinsiana, Acacia bivenosa and Senna artemisioides subsp. oligophylla sparse shrubland, over low Keraudrenia nephrosperma sparse shrubland, over Triodia epactia and Triodia wiseana open hummock	14	14	1	14
EgAaTe2	Eucalyptus gamophylla low open woodland, over Acacia atkinsiana, Acacia bivenosa and Senna artemisioides subsp. oligophylla mid sparse shrubland, over Keraudrenia nephrosperma low sparse shrubland, over Triodia epactia and Triodia wiseana open hummock gr	24	24	1	24
EgAaTe3	Eucalyptus gamophylla and Eucalyptus leucophloia subsp. leucophloia low sparse woodland, over Acacia atkinsiana and Senna glutinosa subsp. glutnosa mid sparse shrubland, over Keraudrenia nephrosperma and Acacia spondylophylla low sparse shrubland, over T	35	71	10	3.5
EgAaTe4	Eucalyptus gamophylla low sparse woodland over Acacia atkinsiana and Acacia tumida var. pilbarensis mid sparse shrubland over Triodia epactia hummock grassland and Themeda triandra tussock grassland	26	36	3	8.67
EgAatTe	Eucalyptus gamophylla mid sparse mallee shrubland over Acacia atkinsiana, A. bivenosa, A. exigua tall sparse shrubland over Triodia epactia, T. wiseana mid hummock grassland	63	421	14	4.5

Vegetation Association	Vegetation description (Level_V_As or Non_NVIS_C)	# Distinct Species	Total Count Species	# Sites	# Distinct species / # Sites
EgAeTw	Eucalyptus gamophylla and Corymbia deserticola subsp. deserticola mid open mallee woodland/low open woodland over Acacia exilis and A. atkinsiana tall open shrubland over Triodia wiseana low hummock grassland	15	24	3	5
EgCl	Eucalyptus gamophylla low, isolated trees, over Acacia monticola and Corchorus lasiocarpus low open shrubland, over Fimbristylis simulans sparse sedgeland	48	80	5	9.6
EgGwTe	N/A	21	21	1	21
EhA	N/A	3	7	1	3
ElAanAbCAPlTb	Eucalyptus leucophloia subsp. leucophloia, Acacia 'aneura' low woodland over Acacia bivenosa, Senna artemisioides subsp. oligophylla, S. glutinosa subsp. glutinosa isolated tall shrubs over Capparis lasiantha, Abutilon dioicum, Dodonaea pachyneura mid is	7	7	1	7
ElAanAprAbTwTe	Eucalyptus leucophloia subsp. leucophloia isolated mid trees over Acacia 'aneura', A. pruinocarpa, A. bivenosa tall open shrubland over Triodia wiseana, T. epactia mid hummock grassland	41	93	13	3.15
ElAanAteSENsTe	Eucalyptus leucophloia subsp. leucophloia, Acacia 'aneura', A. xiphophylla low open woodland over A. tetragonophylla tall sparse shrubland over Senna stricta mid sparse shrubland over Triodia epactia, T. wiseana, T. longiceps mid sparse hummock grassland	28	49	3	9.33
ElAarTwTspr	Eucalyptus leucophloia subsp. leucophloia mid isolated trees Acacia arida mid open shrubland over Triodia wiseana, T. sp. Robe River (M.E. Trudgen et al. MET 12367) mid hummock grassland	39	224	18	2.17
ElAaTb	N/A	20	25	2	10
ElAaTbt	Eucalyptus leucophloia subsp. leucophloia low open woodland over Acacia ancistrocarpa and A. bivenosa tall sparse shrubland over Triodia basitricha, T. wiseana, T. epactia mid open hummock grassland	10	11	1	10
ElAatTe	Eucalyptus leucophloia subsp. leucophloia low open woodland over Acacia atkinsiana mid sparse shrubland over Triodia epactia low hummock grassland	35	73	7	5
ElAatTw	Eucalyptus leucophloia subsp. leucophloia low open woodland over Acacia atkinsiana, A. exigua tall sparse shrubland over Triodia wiseana low sparse hummock grassland	38	98	5	7.6
ElAaTw	Eucalyptus leucophloia subsp. leucophloia low isolated trees over Acacia ancistrocarpa, A, bivenosa, A. inaequilatera mid sparse shrubland over Triodia wiseana or T. brizoides open hummock grassland	52	170	18	2.89
ElAbCHf	Eucalyptus leucophloia subsp. leucophloia, Corymbia hamersleyana, Acacia citrinoviridis low open woodland over Acacia bivenosa, Androcalva luteiflora, Petalostylis labicheoides mid shrubland over Chrysopogon fallax, Eulalia aurea, Themeda triandra mid tu	36	54	2	18
ElAbTlo	Eucalyptus leucophloia subsp. leucophloia low open woodland over Acacia bivenosa mid open shrubland over Triodia longiceps, T. wiseana low open hummock grassland	22	45	5	4.4
ElAbTw	Eucalyptus leucophloia subsp. leucophloia low open woodland over Acacia bivenosa mid sparse shrubland over Triodia wiseana mid closed hummock grassland	82	348	36	2.28

Vegetation Association	Vegetation description (Level_V_As or Non_NVIS_C)	# Distinct Species	Total Count Species	# Sites	# Distinct species / # Sites
ElAbTw/ElTa	Mosaic: Eucalyptus leucophloia subsp. leucophloia low open woodland over Acacia bivenosa mid sparse shrubland over Triodia wiseana mid closed hummock grassland / Eucalyptus leucophloia subsp. leucophloia low open woodland over Triodia angusta, T.longicep	2	2	1	2
ElAcAarTwTspr	Eucalyptus leucophloia subsp. leucophloia isolated low trees-low open woodland over Acacia citrinoviridis, A. pruinocarpa low open woodland over Acacia arida, A. maitlandii mid sparse-mid open shrubland over Triodia wiseana, T. sp. Robe River (M.E. Trudg	26	58	4	6.5
ElAcTR	N/A	13	37	3	4.33
ElAcTw	Eucalyptus leucophloia subsp. leucophloia isolated low trees to low open woodland over Acacia citrinoviridis and A. pruinocarpa low open woodland over Acacia arida and A. maitlandii mid sparse to mid open shrubland over Triodia wiseana and Triodia sp. Ro	36	102	8	4.5
ElAcTwTspr	Eucalyptus leucophloia subsp. leucophloia low isolated trees over Acacia citrinoviridis, A. pruinocarpa tall open-sparse shrubland over Triodia wiseana, T. sp. Robe River (M.E. Trudgen et al MET 12367) mid open hummock grassland	28	86	4	7
ElAdAadTw	Eucalyptus leucophloia subsp. leucophloia, Corymbia hamersleyana low open woodland over Acacia dictyophleba and/ or A. tenuissima and A. cowleana mid sparse shrubland over A. adoxa var. adoxa low sparse shrubland over Triodia wiseana mid hummock grasslan	19	25	4	4.75
ElAeTw	Eucalyptus leucophloia subsp. leucophloia low isolated trees over Acacia exigua, A. pruinocarpa, Senna glutinosa subsp. glutinosa mid open shrubland over Triodia wiseana, T. epactia mid open hummock grassland	30	46	7	4.29
ElAhTw	Eucalyptus leucophloia subsp. leucophloia and Corymbia hamersleyana low open woodland over Acacia hamersleyensis and A. pruinocarpa tall sparse shrubland over Triodia wiseana low hummock grassland	18	18	1	18
ElAiAa	N/A	7	18	7	1
ElAiTw	N/A	8	11	2	4
ElAkTbt	Eucalyptus leucophloia subsp. leucophloia low open woodland over Acacia kempeana mid sparse shrubland over Triodia basitricha low hummock grassland	31	91	9	3.44
ElAkTe	Eucalyptus leucophloia subsp. leucophloia low open woodland over Acacia kempeana mid sparse shrubland over Triodia epactia or T. wiseana low hummock grassland	47	143	12	3.92
ElAmTw	Eucalyptus leucophloia subsp. leucophloia and/ or Corymbia hamersleyana mid open woodland over Acacia maitlandii mid sparse shrubland over Triodia wiseana low hummock grassland	118	1164	78	1.51
ElAmTw/ElAarTw Tspr	Mosaic: Eucalyptus leucophloia subsp. leucophloia and/ or Corymbia hamersleyana mid open woodland over Acacia maitlandii mid sparse shrubland over Triodia wiseana low hummock grassland / Eucalyptus leucophloia subsp. leucophloia mid isolated trees Acacia	36	118	13	2.77
ElAmTw2	N/A	1	1	1	1
ElAp	N/A	21	32	5	4.2

Vegetation Association	Vegetation description (Level_V_As or Non_NVIS_C)	# Distinct Species	Total Count Species	# Sites	# Distinct species / # Sites
ElApTspr	Eucalyptus leucophloia subsp. leucophloia low open woodland over Acacia pruinocarpa tall sparse shrubland over Triodia sp. Robe River (M.E. Trudgen et al. MET 12367) low hummock grassland	32	96	8	4
ElApTw	N/A	44	118	8	5.5
ElApTw/AtTt	N/A	27	67	2	13.5
ElAsyAbTwTl	Eucalyptus leucophloia subsp. leucophloia low isolated trees over Acacia synchronicia, A. bivenosa mid isolated shrubs over Triodia wiseana, T. longiceps mid hummock grassland	11	15	2	5.5
ElAtTt	N/A	49	80	4	12.25
ElChAeTw	Eucalyptus leucophloia subsp. leucophloia and/ or Corymbia hamersleyana low open woodland over Acacia exigua, A. bivenosa, A. synchronicia mid open shrubland over Triodia wiseana mid hummock grassland	12	25	3	4
ElChLOW	N/A	6	11	4	1.5
ElChLOW/TsppHG	N/A	4	8	3	1.33
ElEgAatTw	Eucalyptus leucophloia subsp. leucophloia, Acacia pruinocarpa isolated low trees over E. gamophylla isolated low mallee trees over Acacia atkinsiana, A. bivenosa, Senna glutinosa subsp. glutinosa, S. glutinosa subsp. pruinosa tall sparse shrubland over T	13	14	2	6.5
ElEgAmTw	Eucalyptus leucophloia subsp. leucophloia and/ or Corymbia hamersleyana mid open woodland over E. gamophylla mid open mallee woodland over Acacia maitlandii, Petalostylis labicheoides, A. pyrifolia tall sparse shrubland over Triodia wiseana low hummock g	43	199	12	3.58
ElEgApTw	Eucalyptus leucophloia subsp. leucophloia low open woodland over Eucalyptus gamophylla mid open mallee woodland over Acacia pruinocarpa and/ or A. pyrifolia tall sparse shrubland over Triodia wiseana mid hummock grassland	24	31	3	8
ElEpAbTe	Eucalyptus leucophloia subsp. leucophloia low open woodland over Eucalyptus pilbarensis low open mallee woodland over Acacia bivenosa mid sparse shrubland over Triodia epactia, T wiseana low sparse hummock grassland	29	88	7	4.14
ElGwCOlTw	Eucalyptus leucophloia subsp. leucophloia, Corymbia hamersleyana low open woodland over Grevillea wickhamii tall sparse shrubland over Acacia monticola mid sparse shrubland over Corchorus lasiocarpus low sparse shrubland over Triodia wiseana mid open hum	32	62	4	8
ElGwTp	Eucalyptus leucophloia open woodland over Acacia bivenosa and Senna glutinosa subsp. glutinosa mid open shrubland over Triodia wiseana hummock grassland	40	106	7	5.71
ElHcAhTw	Eucalyptus leucophloia subsp. leucophloia, Corymbia hamersleyana low open woodland over Hakea chordophylla mid sparse shrubland occasionally over Acacia hilliana, Acacia adoxa var. adoxa low sparse shrubland over Triodia wiseana mid hummock grassland	48	101	14	3.43
ElIBTw	N/A	51	155	6	8.5
ElIAaTw1	Eucalyptus leucophloia subsp. leucophloia low sparse woodland, over Acacia arida, Acacia bivenosa and Senna glutinosa subsp. glutinosa mid sparse shrubland, over Triodia wiseana open hummock grassland	63	289	37	1.7

Vegetation Association	Vegetation description (Level_V_As or Non_NVIS_C)	# Distinct Species	Total Count Species	# Sites	# Distinct species / # Sites
EllAbTw1	Eucalyptus leucophloia subsp. leucophloia low open woodland, over Acacia bivenosa and Senna glutinosa subsp. glutinosa mid sparse shrubland, over Triodia wiseana closed hummock grassland	29	37	4	7.25
EllAbTw2	Eucalyptus leucophloia subsp. leucophloia low open woodland, over Acacia bivenosa, Senna glutinosa subsp. glutinosa and Senna artemisioides subsp. oligophylla mid sparse shrubland, over Triodia wiseana open hummock grassland	5	6	1	5
EllAbTw3	Eucalyptus leucophloia subsp. leucophloia low sparse woodland over Acacia bivenosa mid sparse shrubland over Triodia wiseana hummock grassland	17	25	2	8.5
EllAbTw4	Eucalyptus leucophloia subsp. leucophloia low open woodland, over Acacia bivenosa and Senna glutinosa subsp. glutinosa mid sparse shrubland over Triodia wiseana closed hummock grassland	17	25	3	5.67
EllAbTw5	Eucalyptus leucophloia subsp. leucophloia low open woodland, over Acacia bivenosa and Senna glutinosa subsp. glutinosa mid sparse shrubland, over Triodia wiseana closed hummock grassland	29	46	4	7.25
EllAdTw1	Eucalyptus leucophloia subsp. leucophloia low sparse woodland over Acacia dictyophleba, Acacia tenuissima and Acacia cowleana mid sparse shrubland over Acacia adoxa var. adoxa over Triodia wiseana hummock grassland	11	11	1	11
EllAdTw2	Eucalyptus leucophloia subsp. leucophloia and Corymbia hamersleyana Low open woodland, over Acacia dictyophleba, Senna glutinosa and Indigofera monophylla mid sparse shrubland , over Acacia adoxa var. adoxa low sparse shrubland, over Triodia wiseana open	21	22	2	10.5
EllAiTw	Eucalyptus leucophloia subsp. leucophloia and Corymbia hamersleyana low sparse woodland over Acacia inaequilatera tall sparse shrubland over Acacia bivenosa and Senna glutinosa subsp. glutinosa mid sparse shrubland over Ptilotus calostachyus low sparse s	32	91	10	3.2
EllApTw1	Eucalyptus leucophloia subsp. leucophloia and Eucalyptus gamophylla low sparse woodland over Acacia pruinocarpa and Acacia pyrifolia tall sparse shrubland Corchorus lasiocarpus mid sparse shrubland over Triodia wiseana hummock grassland	28	44	5	5.6
EllApTw2	Eucalyptus leucophloia subsp. leucophloia low open woodland, over Acacia pruinocarpa mid sparse shrubland, over Triodia wiseana open hummock grassland and isolated Eriachne mucronata tussock grasses	62	149	10	6.2
EllAxTp	Low Eucalyptus leucophloia subsp. leucophloia open woodland, over tall Acacia xiphophylla sparse shrubland, over mid Acacia bivenosa sparse shrubland, over open Triodia pungens and Triodia basedowii hummock grassland	35	45	4	8.75
EllGwTw1	Eucalyptus leucophloia subsp. leucophloia and Corymbia hamersleyana low sparse woodland over Grevillea wickhamii tall sparse shrubland over Acacia monticola mid sparse shrubland over Corchorus lasiocarpus low sparse shrubland over Triodia wiseana open hu	29	35	2	14.5
EllGwTw2	Eucalyptus leucophloia subsp. leucophloia low open woodland over Grevillea wickhamii mid sparse shrubland over Triodia wiseana hummock grassland	9	10	1	9

Vegetation Association	Vegetation description (Level_V_As or Non_NVIS_C)	# Distinct Species	Total Count Species	# Sites	# Distinct species / # Sites
EllHcTw1	Eucalyptus leucophloia subsp. leucophloia and Corymbia hamersleyana low sparse woodland over Hakea chordophylla mid sparse shrubland over Acacia hilliana, Acacia adoxa var. adoxa and Dampiera candicans low sparse shrubland over Triodia wiseana hummock gr	50	251	31	1.61
EllHcTw2	Eucalyptus leucophloia subsp. leucophloia and Corymbia hamersleyana low sparse woodland over Hakea chordophylla mid sparse shrubland over Acacia hilliana and Acacia adoxa var. adoxa low sparse shrubland over Triodia wiseana hummock grassland	7	13	3	2.33
EllHcTw3	Eucalyptus leucophloia subsp. leucophloia and Corymbia deserticola subsp. deserticola low sparse woodland over Hakea chordophylla and Acacia dictyophleba tall sparse shrubland over Acacia tenuissima and Senna glutinosa subsp. glutinosa mid sparse shrubla	28	58	8	3.5
EllHcTw4	Eucalyptus leucophloia subsp. leucophloia low sparse woodland over Hakea chordophylla tall sparse shrubland over Senna glutinosa subsp. glutinosa mid sparse shrubland over Triodia wiseana closed hummock grassland	19	38	7	2.71
EllHllTw	Eucalyptus leucophloia subsp. leucophloia low sparse woodland over Hakea lorea subsp. lorea tall sparse shrubland over Acacia atkinsiana, Acacia bivenosa and Acacia maitlandii mid sparse shrubland, over Ptilotus calostachyus low sparse shrubland over Tri	25	44	5	5
ElMeTw	Eucalyptus leucophloia subsp. leucophloia low open mallee woodland to low open woodland over Melaleuca eleuterostachya and Acacia bivenosa mid open shrubland over Triodia wiseana and T. angusta low hummock grassland.	11	11	1	11
ElPcTw	N/A	12	12	1	12
ElSENgTw	Eucalyptus leucophloia subsp. leucophloia low open woodland over Senna glutinosa subsp. glutinosa, S. glutinosa subsp. pruinosa, Acacia marramamba mid isolated shrubs over Triodia wiseana, T. epactia mid hummock grassland	28	62	6	4.67
ElTa	Eucalyptus leucophloia subsp. leucophloia low open woodland over Triodia angusta, T. longiceps, T. wiseana low open hummock grassland	78	390	38	2.05
ElTp	Eucalyptus leucophloia subsp. leucophloia mid open woodland, over Ptilotus rotundifolius and Senna glutinosa subsp. pruinosa sparse mid shrubland, over Triodia pungens hummock grassland	47	122	9	5.22
ElTw	Eucalyptus leucophloia subsp. leucophloia low, open woodland, over Acacia marramamba sparse low shrubland, over Triodia wiseana hummock grassland	56	144	12	4.67
ElTw1	N/A	49	106	8	6.13
ElTwAp	Eucalyptus leucophloia subsp. leucophloia and Corymbia hamersleyana low open woodland over Triodia wiseana and T. sp. Robe River low hummock grassland with Acacia pyrifolia var. pyrifolia and A. maitlandii low-mid scattered shrubs	38	125	6	6.33
ERma	Eremophila maculata subsp. brevifolia, Sida fibulifera low sparse shrubland over Eragrostis xerophila low sparse tussock grassland	2	3	2	1
EsMeTl	Eucalyptus socialis subsp. eucentrica, E. leucophloia subsp. leucophloia low open woodland over Melaleuca eleuterostachya, Acacia exigua mid sparse shrubland over Triodia longiceps, T. wiseana mid hummock grassland	19	36	4	4.75

Vegetation Association	Vegetation description (Level_V_As or Non_NVIS_C)	# Distinct Species	Total Count Species	# Sites	# Distinct species / # Sites
EsppArspTG	N/A	1	1	1	1
EvAaW	N/A	1	6	5	0.2
EvAcCc	Eucalyptus victrix low to mid open woodland over Acacia citrinoviridis low open woodland over Acacia pyrifolia var. pyrifolia and A. synchronicia mid to tall sparse shrubland over Triodia epactia low sparse to open hummock grassland over *Cenchrus ciliar	60	182	17	3.53
EvAcCcERIt	Eucalyptus victrix low-mid open woodland over Acacia citrinoviridis and/ or Melaleuca glomerata tall open shrubland over *Cenchrus ciliaris, Eriachne tenuiculmis mid open tussock grassland	72	284	10	7.2
EvAcEa	Eucalyptus victrix mid open woodland, overAcacia citrinoviridis tall sparse shrubland, over Atalaya hemiglauca and Acacia tetragonophylla mid sparse shrubland, over Eriachne benthamii and Eulalia aurea open tussock grassland	39	70	10	3.9
EvAcMgERIt	Eucalyptus victrix low-mid open woodland over Acacia citrinoviridis, Melaleuca glomerata tall sparse shrubland over Eriachne tenuiculmis mid sparse tussock grassland	67	253	13	5.15
EvAcTt	Eucalyptus victrix and E. camaldulensis var. refulgens mid woodland over Acacia citrinoviridis, Gossypium robinsonii and Acacia pyrifolia var. pyrifolia tall shrubland over Themeda triandra, Eulalia aurea and Enteropogon ramosus mid tussock grassland	24	24	1	24
EvAcVfDICf	Eucalyptus victrix, (E. camaldulensis subsp. refulgens) woodland over Acacia citrinoviridis low open woodland over *Vachellia farnesiana tall sparse shrubland over Dichanthium fecundum, Eulalia aurea, Themeda triandra 'sens. lat', (Eriachne benthamii) mi	14	14	1	14
EvApCc	N/A	28	46	5	5.6
EvApTe	Eucalyptus victrix mid open woodland over Acacia pyrifolia var. pyrifolia, Gossypium robinsonii and A. tumida var. pilbarensis tall open shrubland over Triodia epactia, Tephrosia rosea var. glabrior and Themeda triandra mid sparsehummock grassland/low sp	33	46	2	16.5
EvAtTe	N/A	35	57	3	11.67
EvCv	Eucalyptus victrix and Eucalyptus camaldulensis tall, woodland, over Acacia citrinoviridis mid shrubland, over Cyperus vaginatus sedgeland and Cenchrus ciliaris open tussock grassland	27	41	3	9
EvExAcTHt	Eucalyptus victrix, E. xerothermica open woodland over Acacia citrinoviridis, Gossypium robinsonii tall shrubland over Themeda triandra mid sparse tussock grassland	34	89	5	6.8
EvLW	N/A	1	1	1	1
EvLW/CcEePoaTG	N/A	2	12	4	0.5
EvLWAcTOS	N/A	13	15	4	3.25
EvMgSg	N/A	20	20	2	10
EvTr	N/A	19	36	1	19
EvTrAp	Eucalyptus victrix and Corymbia hamersleyana mid open woodland over Tephrosia rosea var. glabrior, Triodia epactia and Cleome viscosa low sparse shrubland/low sparse hummock grassland/low sparse herbland with Acacia pyrifolia var. pyrifolia and Gossypium	6	7	1	6

Vegetation Association	Vegetation description (Level_V_As or Non_NVIS_C)	# Distinct Species	Total Count Species	# Sites	# Distinct species / # Sites
EvVfCc	Eucalyptus victrix mid open woodland, over Vachellia farnesiana and Acacia pyrifolia mid sparse shrubland, over Cyperus vaginatus and Typha domingensis mid sparse sedgeland, over Themeda triandra and Cenchrus setiger open tussock grassland	8	8	2	4
EvVfEb	N/A	1	1	1	1
ExAanERloTHt	Eucalyptus xerothermica, Acacia aptaneura, A. citrinoviridis low open woodland over Eremophila longifolia, Acacia bivenosa, Acacia ancistrocarpa tall sparse shrubland over Themeda triandra, Chrysopogon fallax, Dichanthium fecundum mid closed tussock gras	27	47	4	6.75
ExAaTe	E. xerothermica and E. leucophloia subsp. leucophloia low open woodland over Acacia atkinsiana and A. kempeana tall sparse shrubland over Acacia bivenosa, A. exilis, Stylobasium spathulatum, Senna glutinosa subsp. glutinosa and S. artemisioides subsp. ol	37	67	4	9.25
ExAbTe	N/A	30	53	2	15
ExAbTw	N/A	35	92	6	5.83
ExAcCc	N/A	23	45	1	23
ExAcTe	Eucalyptus xerothermica low open woodland over Acacia citrinoviridis, A. bivenosa and A. pyrifolia var. pyrifolia tall open shrubland over Triodia epactia, Themeda triandra and Chrysopogon fallax mid hummock grassland/mid tussock grassland	23	41	1	23
ExAcTHtTe	Eucalyptus xerothermica low open woodland over Acacia citrinoviridis, A. bivenosa, A. pyrifolia tall sparse shrubland over Themeda triandra, Chrysopogon fallax mid tussock grassland over Triodia epactia mid hummock grassland	62	243	5	12.4
ExApCHfTw	Eucalyptus xerothermica low open woodland over Acacia pruinocarpa tall sparse shrubland over Triodia wiseana mid hummock grassland over Chrysopogon fallax mid tussock grassland	18	28	6	3
ExApTe	N/A	38	87	2	19
ExApTw	Eucalyptus xerothermica low open woodland over Acacia pruinocarpa tall sparse shrubland over Senna artemisioides subsp. oligophylla low sparse shrubland Triodia wiseana hummock grassland and Chrysopogon fallax tussock grassland	22	30	2	11
ExCc	Eucalyptus xerothermica low isolated trees, over Eremophila longifolia and Petalostylis labicheoides mid, open shrubland, over Cenchrus ciliaris open tussock grassland	35	75	6	5.83
ExEgCf	N/A	13	13	1	13
ExEsAbTw	Eucalyptus xerothermica, E. socialis subsp. eucentrica low open mallee woodland over Acacia bivenosa, A. synchronicia tall sparse shrubland over Triodia wiseana low hummock grassland	53	186	13	4.08
ExEsAbTw/ElTa	Mosaic: Eucalyptus xerothermica, E. socialis subsp. eucentrica low open mallee woodland over Acacia bivenosa, A. synchronicia tall sparse shrubland over Triodia wiseana low hummock grassland / Eucalyptus leucophloia subsp. leucophloia low open woodland o	22	48	6	3.67
ExTw	Eucalyptus xerothermica and Eucalyptus socialis subsp. eucentrica low open mallee woodland over Triodia wiseana low hummock grassland	35	45	2	17.5
FpAu	Ficus platypoda low isolated trees, over Abutilon dioicum sparse low shrubland, over Themeda triandra and Eriachne mucronata tussock grassland	40	69	4	10

Vegetation Association	Vegetation description (Level_V_As or Non_NVIS_C)	# Distinct Species	Total Count Species	# Sites	# Distinct species / # Sites
FSA13/FWE3	Scattered Shrubs of Acacia ancistrocarpa and Acacia atkinsiana over Hummock Grassland of Triodia epactia? and Triodia wiseana to 1.3m over Low Open Shrubland of Ptilotus astrolasius var. astrolasius, Bonamia rosea and Acacia bivenosa to 1m (Quadrat S	9	10	2	4.5
FSA2	Tall Open Shrubland to Scattered Tall Shrubs of Acacia inaequilatera, Hakea lorea subsp. lorea, Acacia victoriae, Acacia synchronicia, Acacia pruinocarpa, Acacia sclerosperma subsp. sclerosperma, Acacia aff. aneura (narrow fine veined (1, 259) and Ac	11	37	3	3.67
FSA5/FWE3/FWE 1	Tall Open Shrubland of Acacia pruinocarpa, Acacia pyrifolia var. pyrifolia, Hakea lorea subsp. lorea, Acacia ancistrocarpa, Acacia synchronicia, Acacia aneura var. pilbarana, Acacia sclerosperma subsp.sclerosperma, Acacia aneura (narrow, fine veined,	14	16	3	4.67
FSA6	Tall Open Shrubland of Acacia aff. aneura (subterete long; site 1245), Acacia aff. aneura (narrow fine veined: site 1259) and Acacia pruinocarpa to 8m over Shrubland of Sida sp. Spiciform panicles, Petalostylis labicheoides, Acacia bivenosa, Acacia a	15	15	1	15
FSM2	Tall Open Scrub of Acacia aff. aneura (narrow fine veined: site 1, 259), Acacia pruinocarpa, Acacia xiphophylla, Hakea lorea subsp. lorea and Psydrax latifolia to 8m over Scattered Low Trees of Corymbia hamersleyana to 6m over Hummock to Open Hummock	1	1	1	1
FSM3	Tall Closed Scrub to Tall Open Scrub of Acacia aff. aneura (narrow fine veined: site 1, 259), Acacia aneura var. conifera, Acacia aneura var. pilbarana, Hakea lorea subsp. lorea, Psydrax latifolia and Acacia pruinocarpa to 8m over Open Tussock Grassl	20	27	4	5
FSM3/FWE8	Tall Closed Scrub to Tall Open Scrub of Acacia aff. aneura (narrow fine veined: site 1, 259), Acacia aneura var. conifera, Acacia aneura var. pilbarana, Hakea lorea subsp. lorea, Psydrax latifolia and Acacia pruinocarpa to 8m over Open Tussock Grassl	13	13	2	6.5
FSM4	Tall Open Shrubland to Tall Shrubland of Acacia aff. aneura (narrow fine veined: site 1, 259) with occasional Eucalyptus victrix and Corymbia deserticola subsp. deserticola to 6m over Scattered Tall Shrubs of Acacia arida to 3m over Tussock Grassland	16	18	3	5.33
FWE1/HWE8/DWE1	Low Open Woodland of Eucalyptus gamophylla, Eucalyptus leucophloia subsp. leucophloia and Corymbia hamersleyana to 4.5m over Tall Open Scrub to Tall Shrubland of Acacia atkinsiana, Acacia cowleana, Acacia inaequilatera, Acacia pruinocarpa and Grevill	1	2	1	1
FWE10	Low Open Woodland of Eucalyptus leucophloia subsp. leucophloia, Corymbia deserticola subsp.deserticola and Eucalyptus gamophylla to 10m over Scattered Tall Shrubs of Hakea chordophylla, Acacia monticola, Acacia bivenosa, Acacia elachantha, Acacia ina	1	1	1	1
FWE2	Low Open Woodland to Scattered Low Trees of Eucalyptus gamophylla, Corymbia hamersleyana and Corymbia deserticola subsp. deserticola to 9m over Tall Shrubland to Tall Open Shrubland of Acacia pyrifolia var. pyrifolia, Acacia atkinsiana, Gastrolobium	16	22	3	5.33
FWE2/FWE21	Low Open Woodland to Scattered Low Trees of Eucalyptus gamophylla, Corymbia hamersleyana and Corymbia deserticola subsp. deserticola to 9m over Tall Shrubland to Tall Open Shrubland of Acacia pyrifolia var. pyrifolia, Acacia atkinsiana, Gastrolobium	1	1	1	1

Vegetation Association	Vegetation description (Level_V_As or Non_NVIS_C)	# Distinct Species	Total Count Species	# Sites	# Distinct species / # Sites
FWE2/HWE3	Low Open Woodland to Scattered Low Trees of Eucalyptus gamophylla, Corymbia hamersleyana and Corymbia deserticola subsp. deserticola to 9m over Tall Shrubland to Tall Open Shrubland of Acacia pyrifolia var. pyrifolia, Acacia atkinsiana, Gastrolobium	12	13	1	12
FWE3	Low Open Woodland of Eucalyptus xerothermica, Eucalyptus leucophloia subsp. leucophloia, Corymbia hamersleyana and Eucalyptus gamophylla to 6m over Tall Open Shrubland to Scattered Tall Shrubs of Acacia bivenosa, Acacia ancistrocarpa, Acacia pyrifoli	26	43	19	1.37
FWE3/FWE15	Low Open Woodland of Eucalyptus xerothermica, Eucalyptus leucophloia subsp. leucophloia, Corymbia hamersleyana and Eucalyptus gamophylla to 6m over Tall Open Shrubland to Scattered Tall Shrubs of Acacia bivenosa, Acacia ancistrocarpa, Acacia pyrifoli	1	1	1	1
GsTak	Grevillea saxicola isolated-sparse tall shrubs over Triodia aff. Karijini low open hummock grassland	9	14	3	3
GWE2	Open Woodland of Eucalyptus xerothermica to 15m over Low Woodland of Acacia citrinoviridis, Ehretia saligna var. saligna and Corymbia hamersleyana to 10m over Tall Open Shrubland of Gossypium robinsonii, Petalostylis labicheoides and Flueggea virosa	10	10	1	10
HllAvCf	Hakea lorea subsp. lorea and Atalaya hemiglauca tall sparse shrubland over Acacia victoriae mid sparse shrubland over Chrysopogon fallax and Eulalia aura tussock grassland	43	114	10	4.3
HlTH	N/A	1	2	1	1
HWE4	Low Open Woodland to Scattered Low Trees of Eucalyptus leucophloia subsp. leucophloia, Corymbia deserticola subsp. deserticola and Corymbia hamersleyana to 10m over Tall Open Shrubland to Scattered Tall Shrubs of Acacia dictyophleba, Acacia inaequila	3	7	3	1
IAa7	Tall Shrubland of Acacia aneura var. pilbarana to 7m over Tall Open Shrubland to Scattered Tall Shrubs of Acacia synchronicia and Acacia tetragonophylla to 5m over Very Open Tussock of Aristida contorta, Aristida latifolia, Chrysopogon fallax and Cenchru	29	36	2	14.5
IE9	Scattered Trees of Corymbia candida to 12m over Low Open Trees of Eucalyptus xerothermica and Acacia aff. aneura (narrow fine veined) to 5m over Very Open Tussock Grassland of Themeda triandra to 1m over Low Open Shrubland of Ptilotus obovatus	18	18	1	18
MaCv	Melaleuca argentea, Eucalyptus camaldulensis subsp. refulgens and Eucalyptus victrix mid open forest over Cyperus vaginatus, Tephrosia rosea var. glabrior and Stemodia grossa low sparse sedgeland/low sparse shrubland/low sparse herbland	34	74	2	17
MaMgCYPv	Melaleuca argentea (Eucalyptus camaldulensis subsp. refulgens) mid open forest over Melaleuca glomerata, Acacia coriacea subsp. pendens tall sparse shrubland over Cyperus vaginatus mid sparse sedgeland over Eriachne tenuiculmis low sparse tussock grassla	44	111	7	6.29
MDWE1	Woodland to Low Woodland of Corymbia hamersleyana to 12m over Tall Open Shrubland of Gossypium robinsonii, Acacia pyrifolia var. pyrifolia, Grevillea wickhamii subsp. hispidula and Acacia tumida var. pilbarensis over Tussock Grassland to Very Open Tu	17	18	3	5.67

Vegetation Association	Vegetation description (Level_V_As or Non_NVIS_C)	# Distinct Species	Total Count Species	# Sites	# Distinct species / # Sites
MDWE2	Open Forest to Woodland of Eucalyptus victrix to 13m over Tall Open Scrub of Melaleuca glomerata and Hakea lorea subsp. lorea to 5m over Open Sedgeland of Typha domingensis and Cyperus vaginata to 2.4m over Open Tussock Grassland of Eulalia aurea and	2	2	2	1
MDWE7	Woodland of Eucalyptus camaldulensis var. obtusa and Eucalyptus victrix to 20m over Tall Open Scrub of Melaleuca glomerata, Atalaya hemiglauca, Petalostylis labicheoides, Acacia coriacea subsp.pendens and Flueggea virosa subsp. melanthesoides to 9m o	1	1	1	1
N/A	N/A	18	26	5	3.6
No Vegetation Mapping	#N/A	100	254	24	4.17
O	N/A	5	5	1	5
PaAa	N/A	6	6	1	6
PANdTHs	Panicum decompositum, Themeda sp. Hamersley Station (M.E. Trudgen 11431), mid-tall tussock grassland	9	26	6	1.5
PoaTG	N/A	1	3	3	0.33
SeE1	Low Open Woodland of Eucalyptus leucophloia subsp. leucophloia and Corymbia hamersleyana to 10m over Scattered Tall Shrubs of Hakea lorea subsp. lorea and Acacia ancistrocarpa to 4.5m over Closed to Mid-dense Hummock Grassland of Triodia wiseana	1	1	1	1
SeE104	N/A	1	1	1	1
SeE2	Low Open Woodland of Eucalyptus leucophloia subsp. leucophloia to 7m over Tall Open Shrubland of Acacia monticola and Grevillea wickhamii subsp. hispidula to 2.5m over Mid-dense Hummock Grassland of Triodia wiseana to 1.2m over Very Open Tussock	1	1	1	1
SeE25/SeE17	N/A	1	1	1	1
SeE26/SeE35	N/A	1	1	1	1
SeE3	Low Woodland of Eucalyptus gamophylla to 3m over Scattered Shrubs of Acacia atkinsiana to 1.3m over Mid-dense Hummock Grassland of Triodia epactia (Form 3) to 1.3m	1	1	1	1
SeE33	Low Open Woodland of Eucalyptus gamophylla and Eucalyptus leucophloia subsp. leucophloia to 7m over Tall Shrubland of Acacia dictyophleba to 3m over Open Shrubland of Acacia monticola, Hakea lorea subsp. lorea, Senna glutinosa subsp. glutinosa and	1	1	1	1
SeE46	Scattered Low Trees of Eucalyptus gamophylla, Eucalyptus leucophloia subsp. leucophloia and Corymbia hamersleyana to 9m over Tall Open Shrubland of Acacia dictyophleba and Acacia elachantha (golden hairy variant) to 2.4m over Mid-dense	1	1	1	1
SeE51/SeE65	N/A	2	2	1	2
SeE70	Scattered Low Trees of Corymbia hamersleyana to 8m over Scattered Tall Shrubs of Acacia tumida var. pilbarensis, Gossypium robinsonii and Grevillea pyramidalis subsp. leucadendron to 3.8m over Hummock Grassland to Open Hummock Grassland of	1	1	1	1
SENgTw	Senna glutinosa subsp. glutinosa mid isolated shrubs over Triodia wiseana low open hummock grassland	30	78	5	6

Vegetation Association	Vegetation description (Level_V_As or Non_NVIS_C)	# Distinct Species	Total Count Species	# Sites	# Distinct species / # Sites
SgTw	Corymbia hamersleyana low, isolated trees over Senna glutinosa subsp. x luerssenii and Acacia tetragonophylla low, open shrubland, over Triodia wiseana hummock grassland	34	80	5	6.8
SoAc4	Tall Open Scrub of Acacia inaequilatera, Acacia pyrifolia and Grevillea pyramidalis to 6m over Closed Hummock Grassland of Triodia sp. to 1.5m over Low Shrubland of Senna artemisioides subsp.oligophylla, Pentalepis trichodesmoides, Tephrosia rosea var.	5	9	4	1.25
T	N/A	16	23	6	2.67
T+O	N/A	17	22	3	5.67
Ta	N/A	9	11	2	4.5
Te	N/A	15	30	1	15
TEdTl	Acacia tetragonophylla, A. cowleana, A colei tall isolated shrubs over Tecticornia disarticulata low sparse shrubland over Triodia longiceps, T. angusta low sparse hummock grassland	42	107	7	6
THsERIb	Themeda sp. Hamersley Station (M.E. Trudgen 11431) and Eriachne benthamii tall closed tussock grassland over Cullen cinereum low isolated shrubs	2	6	2	1
TmImPh + Themada sp. Hamersley Station	N/A	3	3	1	3
Tp	Triodia bynoei and T. pungens open hummock grassland	14	14	1	14
Tw	N/A	11	11	1	11
Tw1	N/A	31	61	4	7.75
Tw2	N/A	8	16	1	8
TwElAb	Triodia wiseana low open hummock grassland with Eucalyptus leucophloia subsp. leucophloia low scattered trees and Acacia bivenosa mid scattered shrubs	14	32	2	7
VfARl	*Vachellia farnesiana mid sparse shrubland over Aristida latifolia, Chrysopogon fallax, Dichanthium sericeum, Eriachne benthamii mid tussock grassland	13	13	2	6.5
VfASl	*Vachellia farnesiana isolated mid shrubs over Astrebla lappacea, Themeda sp. Hamersley Station (M.E. Trudgen 11431) mid tussock grassland	5	7	2	2.5