

Appendix 1

Framework for Conservation Significance Ranking of Communities and Species in WA



A. Definitions, Categories and Criteria for Threatened and Priority Ecological Communities (DEC 2010)

1. General Definitions

Ecological Community

A naturally occurring biological assemblage that occurs in a particular type of habitat.

Note: The scale at which biological communities are defined will often depend on the level of detail in the information source, therefore no particular scale is specified.

A **threatened ecological community** (TEC) is one which is found to fit into one of the following categories; "presumed totally destroyed", "critically endangered", "endangered" or "vulnerable".

Possible threatened ecological communities that do not meet survey criteria are added to the DBCA's Priority Ecological Community Lists under Priorities 1, 2 and 3. Ecological Communities that are adequately known, are rare but not threatened, or meet criteria for Near Threatened, or that have been recently removed from the threatened list, are placed in Priority 4. These ecological communities require regular monitoring. Conservation Dependent ecological communities are placed in Priority 5.

An **assemblage** is a defined group of biological entities.

Habitat is defined as the areas in which an organism and/or assemblage of organisms lives. It includes the abiotic factors (e.g. substrate and topography), and the biotic factors.

Occurrence: a discrete example of an ecological community, separated from other examples of the same community by more than 20 metres of a different ecological community, an artificial surface or a totally destroyed community.

By ensuring that every discrete occurrence is recognised and recorded future changes in status can be readily monitored.

Adequately Surveyed is defined as follows:

"An ecological community that has been searched for thoroughly in most likely habitats, by relevant experts."

Community structure is defined as follows:

"The spatial organisation, construction and arrangement of the biological elements comprising a biological assemblage" (e.g. *Eucalyptus salmonophloia* woodland over scattered small shrubs over dense herbs; structure in a faunal assemblage could refer to trophic structure, e.g. dominance by feeders on detritus as distinct from feeders on live plants).

Definitions of **Modification** and **Destruction** of an ecological community:

Modification: "changes to some or all of ecological processes (including abiotic processes such as hydrology), species composition and community structure as a direct or indirect result of human activities. The level of damage involved could be ameliorated naturally or by human intervention."

Destruction: "modification such that reestablishment of ecological processes, species composition and community structure within the range of variability exhibited by the original community is unlikely within the foreseeable future even with positive human intervention."

Note: Modification and destruction are difficult concepts to quantify, and their application will be determined by scientific judgement. Examples of modification and total destruction are cited below:

Modification of ecological processes: The hydrology of Toolibin Lake has been altered by clearing of the catchment such that death of some of the original flora has occurred due to dependence on fresh water. The system may be brought back to a semblance of the original state by redirecting saline runoff and pumping waters of the rising underground watertable away to restore the hydrological balance. Total destruction of downstream lakes has occurred due to hydrology being altered to the point that few of the original flora or fauna species are able to tolerate the level of salinity and/or water logging.

Modification of structure: The understorey of a plant community may be altered by weed invasion due to nutrient enrichment by addition of fertiliser. Should the additional nutrients be removed from the system the balance may be restored, and the original plant species better able to compete. Total destruction may occur if additional nutrients continue to be added to the system causing the understorey to be completely replaced by weed species, and death of overstorey species due to inability to tolerate high nutrient levels.

Modification of species composition: Pollution may cause alteration of the invertebrate species present in a freshwater lake. Removal of pollutants may allow the return of the original inhabitant species. Addition of residual highly toxic substances may cause permanent changes to water quality, and total destruction of the community.

Threatening processes are defined as follows:

"Any process or activity that threatens to destroy or significantly modify the ecological community and/or affect the continuing evolutionary processes within any ecological community."

Examples of some of the continuing threatening processes in Western Australia include: general pollution; competition, predation and change induced in ecological communities as a result of introduced animals; competition and displacement of native plants by introduced species; hydrological changes; inappropriate fire regimes; diseases resulting from introduced micro-organisms; direct human exploitation and disturbance of ecological communities.

Restoration is defined as returning an ecological community to its pre-disturbance or natural state in terms of abiotic conditions, community structure and species composition.

Rehabilitation is defined as the re-establishment of ecological attributes in a damaged ecological community although the community will remain modified.

2. Definitions and Criteria for Presumed Totally Destroyed, Critically Endangered, Endangered and Vulnerable Ecological Communities

ECOLOGICAL COMMUNITIES

Presumed Totally Destroyed (PD)

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

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

- A) Records within the last 50 years have not been confirmed despite thorough searches of known or likely habitats or
- B) All occurrences recorded within the last 50 years have since been destroyed

Critically Endangered (CR)

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

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

- A) The estimated geographic range, and/or total area occupied, and/or number of discrete occurrences since European settlement have been reduced by at least 90% and either or both of the following apply (i or ii):
 - i) geographic range, and/or total area occupied and/or number of discrete occurrences are continuing to decline such that total destruction of the community is imminent (within approximately 10 years);
 - ii) modification throughout its range is continuing such that in the immediate future (within approximately 10 years) the community is unlikely to be capable of being substantially rehabilitated.
- B) Current distribution is limited, and one or more of the following apply (i, ii or iii):
 - i) geographic range and/or number of discrete occurrences, and/or area occupied is highly restricted and the community is currently subject to known threatening processes which are likely to result in total destruction throughout its range in the immediate future (within approximately 10 years);
 - ii) there are very few occurrences, each of which is small and/or isolated and extremely vulnerable to known threatening processes;

- iii) there may be many occurrences but total area is very small and each occurrence is small and/or isolated and extremely vulnerable to known threatening processes.
- C) The ecological community exists only as highly modified occurrences that may be capable of being rehabilitated if such work begins in the immediate future (within approximately 10 years).

Endangered (EN)

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

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

- A) The geographic range, and/or total area occupied, and/or number of discrete occurrences have been reduced by at least 70% since European settlement and either or both of the following apply (i or ii):
 - i) the estimated geographic range, and/or total area occupied and/or number of discrete occurrences are continuing to decline such that total destruction of the community is likely in the short term future (within approximately 20 years);
 - ii) modification throughout its range is continuing such that in the short term future (within approximately 20 years) the community is unlikely to be capable of being substantially restored or rehabilitated.
- B) Current distribution is limited, and one or more of the following apply (i, ii or iii):
 - i) geographic range and/or number of discrete occurrences, and/or area occupied is highly restricted and the community is currently subject to known threatening processes which are likely to result in total destruction throughout its range in the short term future (within approximately 20 years);
 - ii) there are few occurrences, each of which is small and/or isolated and all or most occurrences are very vulnerable to known threatening processes;
 - iii) there may be many occurrences but total area is small and all or most occurrences are small and/or isolated and very vulnerable to known threatening processes.
- C) The ecological community exists only as very modified occurrences that may be capable of being substantially restored or rehabilitated if such work begins in the short-term future (within approximately 20 years).

Vulnerable (VU)

An ecological community that has been adequately surveyed and is found to be declining and/or has declined in distribution and/or condition and whose ultimate security has not yet been assured and/or a community that is still widespread but is believed likely to move into a category of higher threat in the near future if threatening processes continue or begin operating throughout its range.

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

- A) The ecological community exists largely as modified occurrences that are likely to be capable of being substantially restored or rehabilitated.
- B) The ecological community may already be modified and would be vulnerable to threatening processes, is restricted in area and/or range and/or is only found at a few locations.
- C) The ecological community may be still widespread but is believed likely to move into a category of higher threat in the medium to long term future because of existing or impending threatening processes.

3. Definitions and Criteria for Priority Ecological Communities

PRIORITY ECOLOGICAL COMMUNITY LIST

Possible threatened ecological communities that do not meet survey criteria or that are not adequately defined are added to the Priority Ecological Community Lists under Priorities 1, 2 and 3. These three categories are ranked in order of priority for survey and/or definition of the community, and evaluation of conservation status, so that consideration can be given to their declaration as threatened ecological communities. Ecological Communities that are adequately known, and are rare but not threatened or meet criteria for Near Threatened, or that have been recently removed from the threatened list, are placed in Priority 4. These ecological communities require regular monitoring. Conservation Dependent ecological communities are placed in Priority 5.

Priority One: Poorly-known ecological communities

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

Priority Two: Poorly-known ecological communities

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

Priority Three: Poorly known ecological communities

- (i) Communities that are known from several to many occurrences, a significant number or area of which are not under threat of habitat destruction or degradation or;
- (ii) communities known from a few widespread occurrences, which are either large or within significant remaining areas of habitat in which other occurrences may occur, much of it not under imminent threat, or;
- (iii) communities made up of large, and/or widespread occurrences, that may or not be represented in the reserve system, but are under threat of modification across much of their range from processes such as grazing by domestic and/or feral stock, and inappropriate fire regimes.

Communities may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and/or are not well defined, and known threatening processes exist that could affect them.

Priority Four: Ecological communities that are adequately known, rare but not threatened or meet criteria for Near Threatened, or that have been recently removed from the threatened list. These communities require regular monitoring.

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

Priority Five: Conservation Dependent ecological communities

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

B. Categories for Flora and Fauna Species

1. Western Australian Wildlife Conservation Act 1950

Until all Regulations associated with the new Western Australian Biodiversity Conservation Act 2016 are promulgated, all native flora and fauna species remain protected under the *Wildlife Conservation Act 1950*, making it an offence to take these without approval. The definition of 'take' is broad, and encompasses killing, capturing or disturbing fauna, and destroying, gathering, cutting or injuring flora. In addition to this basic level of statutory protection, a number of species are assigned an additional level of conservation significance based on the fact that there are a limited number of known populations, some of which may be under threat.

Such species are classified within a framework of 11 categories. Species of the highest conservation significance are designated as Threatened within four categories (Critically Endangered: CR, Endangered: EN, Vulnerable: V and Presumed Extinct: EX), representing those species listed in Schedules 1 to 4 of the annual *Wildlife Conservation (Specially Protected Fauna) Notice* and *Wildlife Conservation (Rare Flora) Notice*. Migratory birds that are protected under various international agreements are assigned to a separate category (IA). Conservation dependent fauna (species listed under Schedule 6 of the *Wildlife Conservation (Specially Protected Fauna) Notice*) and other specially protected fauna (those listed in Schedule 7 of the *Wildlife Conservation (Specially Protected Fauna) Notice*) comprise two additional categories (Conservation Dependent: CD and Other Specially Protected: OS). Species that appear to be rare or threatened, but for which there is insufficient information to properly evaluate their conservation significance, are assigned to one of three Priority categories (Priority 1 to Priority 3), while species that are adequately known but require regular monitoring are assigned to Priority 4. The 11 categories are explained in more detail on the following pages.

Note that of the above classifications, only 'Threatened' has statutory standing. The Priority flora and fauna classifications are employed by the WA Department of Parks and Wildlife to manage and classify their database of species considered potentially rare or at risk, but these categories have no legislative status. Note also that proposals that appear likely to affect Threatened flora require formal written approval from the Minister for the Environment under Section 23(f) of the *Wildlife Conservation Act 1950*, in addition to the requirements of the *Environmental Protection (Native Vegetation Clearing) Regulations 2004*.



CONSERVATION CODES

For Western Australian Flora and Fauna

Specially protected fauna or flora¹ are species² which have been adequately searched for and are deemed to be, in the wild, either rare, at risk of extinction, or otherwise in need of special protection, and have been gazetted as such.

Categories of specially protected fauna and flora are:

T Threatened species

Published as Specially Protected under the *Wildlife Conservation Act 1950*, and listed under Schedules 1 to 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).

Threatened fauna is that subset of 'Specially Protected Fauna' declared to be 'likely to become extinct' pursuant to section 14(4) of the *Wildlife Conservation Act*.

Threatened flora is flora that has been declared to be 'likely to become extinct or is rare, or otherwise in need of special protection', pursuant to section 23F(2) of the *Wildlife Conservation Act*.

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

CR Critically endangered species

Threatened species considered to be facing an extremely high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

EN Endangered species

Threatened species considered to be facing a very high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

VU Vulnerable species

Threatened species considered to be facing a high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

EX Presumed extinct species

Species which have been adequately searched for and there is no reasonable doubt that the last individual has died. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora.

IA Migratory birds protected under an international agreement

Birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and the Bonn Convention, relating to the protection of migratory birds. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice.

CD Conservation dependent fauna

Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice.

OS Other specially protected fauna

Fauna otherwise in need of special protection to ensure their conservation. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 7 of the Wildlife Conservation (Specially Protected Fauna) Notice.

P Priority species

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

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

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

1 Priority 1: Poorly-known species

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

2 Priority 2: Poorly-known species

Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

3 Priority 3: Poorly-known species

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

4 Priority 4: Rare, Near Threatened and other species in need of monitoring

(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands.

(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for Vulnerable, but are not listed as Conservation Dependent.

(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

¹ The definition of flora includes algae, fungi and lichens

² Species includes all taxa (plural of taxon - a classificatory group of any taxonomic rank, e.g. a family, genus, species or any infraspecific category i.e. subspecies or variety, or a distinct population).

2. Commonwealth Environment Protection and Biodiversity Conservation Act 1999

Many of the species that are specially protected at State level are also listed as Threatened species at the Federal level, as one of the Matters of National Environmental Significance (MNES) identified under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (the EPBC Act). These may be classified as 'critically endangered', 'endangered', 'vulnerable' or 'lower risk', consistent with IUCN categories:

1. **Critically Endangered (CR):** a taxon is Critically Endangered when it is facing an extremely high risk of extinction in the wild in the immediate future.
2. **Endangered (EN):** a taxon is Endangered when it is not Critically Endangered but is facing a very high risk of extinction in the wild in the near future.
3. **Vulnerable (VU):** a taxon is Vulnerable when it is not Critically Endangered or Endangered but is facing a high risk of extinction in the wild in the medium-term future.
4. **Lower Risk (LR):** a taxon is Lower Risk when it has been evaluated, does not satisfy the criteria for any of the categories Critically Endangered, Endangered or Vulnerable. Taxa included in the Lower Risk category can be separated into three subcategories:
 - **Conservation Dependent (CD).** Taxa which are the focus of a continuing taxon-specific or habitat-specific conservation program targeted towards the taxon in question, the cessation of which would result in the taxon qualifying for one of the threatened categories above within a period of five years.
 - **Near Threatened (NT).** Taxa which do not qualify for Conservation Dependent, but which are close to qualifying for Vulnerable.
 - **Least Concern (LC).** Taxa which do not qualify for Conservation Dependent or Near Threatened.

In addition, numerous Migratory species are listed as MNES under the EPBC Act (some of which are also listed as Threatened). Migratory species are those animals that migrate to Australia and its external territories, or pass through or over Australian waters during their annual migrations. The list of migratory species consists of those species listed under the following international conventions:

1. Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention);
2. China-Australia Migratory Bird Agreement (CAMBA);
3. Japan-Australia Migratory Bird Agreement (JAMBA); and,
4. Republic of Korea-Australia Migratory Bird Agreement (ROKAMBA).

Marine species are also protected under the EPBC Act, and are listed to ensure the long-term conservation of the species. Marine species include all Australian sea snakes, seals, crocodiles, dugongs, marine turtles, seahorses and seabirds that naturally occur in the Commonwealth marine area.

Under the terms of the EPBC Act, an action (e.g. a project or development) is required to be referred to the Australian Government Environment Minister for approval if it has, will have, or is likely to have, a significant impact on an MNES. The term 'action' includes projects and developments subsequent to commencement of the Act, however there are a number of exemptions (e.g. projects in Commonwealth areas). According to Department of the Environment (DoE 2013), a 'significant impact' is an impact which is important, notable, or of consequence, having regard to its context or intensity. Whether or not an action is likely to have a significant impact depends upon the sensitivity, value, and quality of the environment which is impacted, and upon the intensity, duration, magnitude and geographic extent of the impacts.

Appendix 2

Vegetation Structural Classification and Condition Scale



Table 1: Vegetation structural classification used for this study (based on Specht 1970, as modified by Muir 1977, and Aplin 1979).

Stratum	Canopy Cover (%)				
	70-100%	30-70%	10-30%	2-10%	<2%
Trees over 30 m	Tall closed forest	Tall open forest	Tall woodland	Tall open woodland	Scattered tall trees
Trees 10-30 m	Closed forest	Open forest	Woodland	Open woodland	Scattered trees
Trees under 10 m	Low closed forest	Low open forest	Low woodland	Low open woodland	Scattered low trees
Shrubs over 2 m	Tall closed scrub	Tall open scrub	Tall shrubland	Tall open shrubland	Scattered tall shrubs
Shrubs 1-2 m	Closed heath	Open heath	Shrubland	Open shrubland	Scattered shrubs
Shrubs under 1 m	Low closed heath	Low open heath	Low shrubland	Low open shrubland	Scattered low shrubs
Hummock grasses	Closed hummock grassland	Hummock grassland	Open hummock grassland	Very open hummock grassland	Scattered hummock grasses
Grasses, Sedges, Herbs	Closed tussock grassland / bunch grassland / sedgeland / hermland	Tussock grassland / bunch grassland / sedgeland / hermland	Open tussock grassland / bunch grassland / sedgeland / hermland	Very open tussock grassland / bunch grassland / sedgeland / hermland	Scattered tussock grasses / bunch grasses / sedges / herbs

Table 2: Vegetation condition scale from EPA (2016b) (adapted from Trudgen 1988, and Keighery 1994).

Vegetation Condition	South West and Interzone Botanical Provinces	Eremaean and Northern Botanical Provinces
Pristine	Pristine or nearly so, no obvious signs of disturbance or damage caused by human activities since European settlement.	
Excellent	Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species. Damage to trees caused by fire, the presence of non-aggressive weeds and occasional vehicle tracks.	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.
Very Good	Vegetation structure altered, obvious signs of disturbance. Disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and grazing.	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. Disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and grazing.	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds.
Poor		Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. Disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds at high density, partial clearing, dieback and grazing.	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species.
Completely Degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees and shrubs.	Areas that are completely or almost completely without native species in the structure of their vegetation; i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs.

Appendix 3

Raw Data from Flora Sampling Sites



Asian Hub Phase 1 **Site** AH01
Described by CEFPL **Date** 25-Aug-17 **Type** Quadrat 50x50m
MGA Zone 51 265635 mE 7768188 mN 120.757560 °E -20.169356 °S
Habitat Pindan plain; slightly elevated.
Soil Dark reddish brown sand.
Rock Type N/A.
Vegetation *Corymbia zygophylla* low open woodland over *Acacia monticola*, *A. ancistrocarpa* tall open shrubland over *Grevillea refracta* subsp. *refracta*, *A. sericea* scattered shrubs over *Triodia schinzii*, (*T. epactia*) open hummock grassland.
Veg Condition Excellent.
Fire Age No sign of recent fire.

Species	Cover	Height	Specimen	Notes
<i>Acacia adoxa</i> var. <i>adoxia</i>	0.1	40 cm	AH01-09	
<i>Acacia ancistrocarpa</i>	2	280 cm	AH01-03	
<i>Acacia colei</i> var. <i>colei</i>	0.1	210 cm	AH01-37	
<i>Acacia hilliana</i>	0.1	30 cm		
<i>Acacia monticola</i>	4	300 cm	AH01-04	
<i>Acacia sericea</i>	0.5	160 cm		
<i>Acacia tumida</i> var. <i>kulparn</i>	0.1	140 cm	AH01-20	
<i>Amphipogon sericeus</i>	0.1	60 cm	AH01-18	
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	50 cm	AH01-22	
<i>Boerhavia gardneri</i>	0.1	30 cm	AH01-30	Dead.
<i>Bonamia erecta</i>	2	40 cm	AH01-40	
<i>Bulbostylis barbata</i>	0.1	25 cm	AH01-11	
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	30 cm	AH01-26	Sens. lat.
<i>Corymbia zygophylla</i>	5	320 cm	AH01-01	Wholly rough bark; photos 1338-1339.
<i>Cucumis variabilis</i>	0.1	40 cm	AH01-36	
<i>Cullen martinii</i>	0.1	30 cm		
<i>Dampiera candicans</i>	0.1	30 cm		
<i>Digitaria brownii</i>	0.1	50 cm	AH01-32	
<i>Eragrostis eriopoda</i>	0.1	50 cm	AH01-17	
<i>Eriachne lanata</i>	0.1	50 cm	AH01-16	
<i>Eriachne obtusa</i>	0.1	50 cm	AH01-07	
<i>Euphorbia australis</i> var. <i>subtomentosa</i>	0.1	15 cm	AH01-31	
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	25 cm	AH01-34	
<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	0.1	180 cm	AH01-05	
<i>Goodenia armittiana</i>	0.1	20 cm	AH01-27	
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	170 cm	AH01-19	
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	180 cm	AH01-42	
<i>Gyrostemon tepperi</i>	0.1	25 cm	AH01-38	
<i>Halbania solanacea</i> var. <i>solanacea</i>	0.1	25 cm	AH01-14	
<i>Heliotropium pachyphyllum</i>	0.1	20 cm	AH01-28	
<i>Hibiscus leptocladus</i>	0.1	25 cm		
<i>Hybanthus aurantiacus</i>	0.1	30 cm		
<i>Indigofera monophylla</i>	0.1	70 cm	AH01-33	
<i>Isotropis atropurpurea</i>	0.1	25 cm	AH01-25	Recollect if possible; fills small gap in distribution.
<i>Jasminum didymum</i> subsp. <i>lineare</i>	0.1	110 cm	AH01-21	
<i>Oldenlandia pterospora</i>	0.1	25 cm	AH01-12	
<i>Polycarphaea corymbosa</i> var. <i>corymbosa</i>	0.1	15 cm	AH01-13	
<i>Pilotus arthrolasioides</i>	0.1	25 cm	AH01-39	
<i>Pilotus astrolasioides</i>	0.1	40 cm		
<i>Pilotus calostachyus</i>	0.1	50 cm		
<i>Pilotus polystachyus</i>	0.1	25 cm		
<i>Schizachyrium fragile</i>	0.1	30 cm	AH01-10	
<i>Setaria surgens</i>	0.1	50 cm		
<i>Sida</i> sp. Pindan (B.G. Thomson 3398)	0.1	40 cm	AH01-15	
<i>Solanum diversiflorum</i>	0.1	30 cm	AH01-29	
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	120 cm	AH01-23	
<i>Trianthema pilosum</i>	0.1	40 cm		
<i>Trichodesma zeylanicum</i>	0.1	110 cm	AH01-24	Sterile; subsp. not determined.
<i>Trigastrotheca molluginea</i>	0.1	10 cm	AH01-35	
<i>Triodia epactia</i>	2	40 cm	AH01-08	
<i>Triodia schinzii</i>	16	50 cm	AH01-02	
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	10 cm	AH01-06	
<i>Zornia chaetophora</i>	0.1	25 cm	AH01-41	



2017

Asian Hub Phase 1		Site	AH02
Described by	MM/PA	Date	25-Aug-17
MGA Zone	51	265932 mE	7767972 mN
Habitat	Crest of a low lateritic rise.		
Soil	Brown skeletal loamy sand (formed ~1 cm ribbon).		
Rock Type	Continuous surface layer of lateritic pebbles; also outcropping laterite.		
Vegetation	Grevillea wickhamii scattered shrubs over Calytrix carinata, (Acacia adoxa var. adoxa) low open shrubland over Triodia epactia open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	Burnt 3-5 years ago.		
Notes	Scattered Ptilotus calostachyus and Acacia hilliana also present, but not providing much cover.		

Species	Cover	Height	Specimen	Notes
Acacia adoxa var. adoxa	1	30 cm	AH02-06	
Acacia hilliana	0.1	50 cm		
Bulbostylis barbata	0.1	15 cm	AH02-11	
Calytrix carinata	3	50 cm	AH02-02	'Form 2 - longer leaves'.
Corymbia greeniana	0.1	100 cm		Sterile juvenile; not collected.
Eriachne pulchella	0.1	15 cm	AH02-03	
Fimbristylis simulans	0.1	25 cm	AH02-04	
Goodenia scaevolina	0.1	30 cm	AH02-05	
Grevillea wickhamii	0.1	130 cm		Sterile.
Halgania solanacea var. solanacea	0.1	30 cm	AH02-07	
Hybanthus aurantiacus	0.1	50 cm		
Polycarphaea holtzei	0.1	5 cm	AH02-10	
Ptilotus calostachyus	0.1	60 cm		
Scaevola browniana subsp. browniana	0.1	40 cm	AH02-09	
Seringia sp.	0.1	30 cm	AH02-12	Sterile; det. by Carol Wilkins.
Tephrosia rosea var. clementii	0.1	70 cm	AH02-08	
Triodia epactia	20	30 cm	AH02-01	Cover a bit patchy (15-35%).



2017

Asian Hub Phase 1	Site	AH03
Described by	CEPFL	Date 25-Aug-17
MGA Zone	51	274691 mE 7773607 mN
Habitat	Pindan plain.	Type Quadrat 50x50m
Soil	Red sand.	120.844834 °E -20.121504 °S
Rock Type	N/A.	
Vegetation	Owenia reticulata, Erythrophleum chlorostachys low open woodland over Acacia eriopoda, (A. sericeophylla) tall open shrubland over Androcalva loxophylla scattered shrubs over Sorghum plumosum var. plumosum, Eriachne lanata very open tussock grassland over Triodia schinzii, (T. epactia) open hummock grassland.	
Veg Condition	Excellent.	
Fire Age	Burnt 3-5 years ago.	

Species	Cover	Height	Specimen	Notes
<i>Acacia ancistrocarpa</i>	0.1	160 cm		
<i>Acacia drepanocarpa</i> subsp. <i>latifolia</i>	0.1	170 cm	AH03-12	
<i>Acacia eriopoda</i>	6	350 cm	AH03-01	
<i>Acacia sericeophylla</i>	0.5	320 cm		
<i>Acacia tumida</i> var. <i>kulparn</i>	0.1	60 cm	AH01-20=	
<i>Amphipogon sericeus</i>	0.1	30 cm	AH03-15	
<i>Androcalva loxophylla</i>	0.1	40 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	70 cm	AH03-10	
<i>Bonamia alatisemina</i>	0.1	10 cm	AH03-04	
<i>Eriachne lanata</i>	2	50 cm	AH01-16=	
<i>Eriachne obtusa</i>	0.1	60 cm		
<i>Erythrophleum chlorostachys</i>	1	400 cm		
<i>Fimbristylis oxyystachya</i>	0.1	15 cm	AH03-02	
<i>Gompholobium simplicifolium</i>	0.1	50 cm	AH03-14	Red flowers.
<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	50 cm	AHPL-02B=	Tentative ID; white flowers.
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	150 cm	AH01-19=	
<i>Gyrostemon tepperi</i>	0.1	130 cm	AH03-11	
<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	25 cm	AH03-05	
<i>Jacksonia aculeata</i>	0.1	40 cm	AH03-08	
<i>Leptosema anomalum</i>	0.1	30 cm	AH03-09	
<i>Owenia reticulata</i>	2	500 cm		
<i>Polycarphaea corymbosa</i> var. <i>corymbosa</i>	0.1	10 cm	AH01-13=	
<i>Polymeria</i> ? sp. Broome (K.F. Kenneally 9759)	0.1	20 cm	AH03-16	Sterile; treat as sp. Broome.
<i>Pilotus astrolasius</i>	0.1	50 cm		
<i>Pilotus polystachyus</i>	0.1	50 cm		
<i>Scaevola parvifolia</i>	0.1	15 cm	AH03-07	Sterile, subsp. not determined.
<i>Seringia nephrosperma</i>	0.1	50 cm	AH03-13	
<i>Setaria surgens</i>	0.1	40 cm		
<i>Sida</i> sp. Pindan (B.G. Thomson 3398)	0.1	40 cm	AH03-03	
<i>Sorghum plumosum</i> var. <i>plumosum</i>	2	20 cm	AH01-23=	
<i>Tephrosia</i> sp. D Kimberley Flora (R.D. Royce 1848)	0.1	40 cm	AH03-06	
<i>Trianthema pilosum</i>	0.1	30 cm		
<i>Tribulopis marliesiae</i>	0.1	20 cm	AHPL-03=	n=1.
<i>Triodia epactia</i>	1	50 cm	AH01-08=	
<i>Triodia schinzii</i>	9	40 cm	AH01-02=	
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	15 cm	AH01-06=	



Asian Hub Phase 1 **Site** AH04
Described by MM/PA **Date** 25-Aug-17 **Type** Quadrat 50x50m
MGA Zone 51 270030 mE 7771317 mN 120.799984 °E -20.141632 °S
Habitat Crest of a low lateritic rise.
Soil Brown skeletal loamy sand.
Rock Type Continuous surface layer of lateritic gravel and cobbles; also outcropping laterite.
Vegetation *Acacia hilliana* low open shrubland over *Triodia epactia* open hummock grassland.
Veg Condition Excellent.
Fire Age Burnt 3-5 years ago.

Species	Cover	Height	Specimen	Notes
<i>Acacia adoxa</i> var. <i>adoxa</i>	0.1	25 cm	AH02-06=	
<i>Acacia hilliana</i>	3	30 cm		
<i>Calytrix carinata</i>	0.1	40 cm	AH02-02=	'Form 2 - longer leaves'.
<i>Dampiera candidans</i>	0.1	50 cm		
<i>Eriachne lanata</i>	0.1	30 cm		
<i>Fimbristylis simulans</i>	0.1	25 cm	AH02-04=	
<i>Goodenia scaevolina</i>	0.1	40 cm	AH02-05=	
<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	40 cm	AH02-07=	
<i>Pilotus astrolasius</i>	0.1	30 cm		
<i>Pilotus calostachyus</i>	0.1	60 cm		
<i>Scaevola browniana</i> subsp. <i>browniana</i>	0.1	45 cm	AH02-09=	
<i>Seringia</i> sp.	0.1	60 cm	AH04-02	N=2. Sterile; det. by Carol Wilkins.
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	0.1	35 cm	AH04-01	
<i>Triodia epactia</i>	28	30 cm	AH02-01=	



2017

Asian Hub Phase 1 & 2	Site	AH05			
Described by	CEPPL / PLSW	Date	25-Aug-17 / 15-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	287787 mE	7782006 mN		120.971018 °E -20.047141 °S
Habitat	Low laterite rise.				
Soil	Dark reddish brown clay loam.				
Rock Type	Laterite; pebbles (26-50%) and gravel (51-75%).				
Vegetation	Acacia <i>hilliana</i> , (<i>A. adoxa</i> var. <i>adoxia</i>) low open heath over <i>Triodia epactia</i> open hummock grassland.				
Veg Condition	Excellent.				
Fire Age	No sign of recent fire.				

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Acacia adoxa</i> var. <i>adoxia</i>	1	40 cm	AH01-09=		<i>Acacia adoxa</i> var. <i>adoxia</i>	1	40 cm		
<i>Acacia hilliana</i>	65	40 cm	AH05-01		<i>Acacia hilliana</i>	55	40 cm		
<i>Bulbostylis barbata</i>	0.1	25 cm			<i>Bulbostylis barbata</i>	0.1	10 cm		
					<i>Cleome viscosa</i>	0.1	10 cm		
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	40 cm	AH05-10	Sens. lat.					
<i>Eriachne ciliata</i>	0.1	40 cm	AH05-07		<i>Eriachne ciliata</i>	0.1	20 cm		
					<i>Eriachne lanata</i>	0.1	50 cm		
<i>Goodenia scaevolina</i>	0.1	30 cm	AH05-09		<i>Goodenia scaevolina</i>	0.1	10 cm		
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	150 cm			<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	120 cm		
<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	30 cm	AH05-03		<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	30 cm		
					<i>Heliotropium glabellum</i>	0.1	40 cm	AHR05-01	
<i>Heliotropium leptaleum</i>	0.1	20 cm	AH05-08						
					<i>Hybanthus aurantiacus</i>	0.1	40 cm		
<i>Indigofera monophylla</i>	0.1	40 cm	AH05-06		<i>Indigofera monophylla</i>	0.1	40 cm		
					<i>Oldenlandia crouchiana</i>	0.1	5 cm		
<i>Polycarphae holtzei</i>	0.1	5 cm	AH05-04		<i>Polycarphae holtzei</i>	0.1	5 cm		
<i>Ptilotus calostachyus</i>	0.1	70 cm	AH05-05		<i>Ptilotus calostachyus</i>	0.1	25 cm		
<i>Scaevola browniana</i> subsp. <i>browniana</i>	0.1	50 cm	AH05-02		<i>Scaevola browniana</i> subsp. <i>browniana</i>	0.1	30 cm	AHR05-04	
					<i>Sida arenicola</i>	0.1	50 cm	AHR05-02	Ferruginous form.
<i>Tephrosia rosea</i> var. <i>clementii</i>	0.1	10 cm	AH05-11A						
<i>Tephrosia rosea</i> var. <i>rosea</i>	0.1	10 cm	AH05-11B						
<i>Trigastrotheca molluginea</i>	0.1	25 cm			<i>Trigastrotheca molluginea</i>	0.1	8 cm		
<i>Triodia epactia</i>	20	40 cm	AH05-12		<i>Triodia epactia</i>	20	40 cm		



2017



2018

Asian Hub Phase 1	Site	AH06
Described by	MM/PA	Date 25-Aug-17
MGA Zone	51	280231 mE 7777614 mN
Habitat	Pindan plain.	Type Quadrat 50x50m
Soil	Pink over red deep pindan sand.	120.898282 °E -20.085959 °S
Rock Type	N/A.	
Vegetation	Gardenia pyriformis subsp. keartlandii, Erythrophleum chlorostachys, Owenia reticulata scattered low trees over Androcalva loxophylla scattered low shrubs over Triodia schinzii open hummock grassland.	
Veg Condition	Excellent.	
Fire Age	Burnt 3-5 years ago.	

Species	Cover	Height	Specimen	Notes
<i>Acacia colei</i> var. <i>colei</i>	0.1	180 cm	AH06-12	
<i>Acacia sabulosa</i>	0.1	260 cm	AH06-25, 29	
<i>Acacia sericophylla</i>	0.1	250 cm	AH06-24	
<i>Acacia tumida</i> var. <i>kulparn</i>	0.1	150 cm	AH06-02	
<i>Androcalva loxophylla</i>	2	40 cm	AH06-01	
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	60 cm		
<i>Boerhavia gardneri</i>	0.1	30 cm	AH06-27	
<i>Bonamia alatisemina</i>	0.1	20 cm	AH06-05	
<i>Bulbostylis barbata</i>	0.1	15 cm		
<i>Cassytha capillaris</i>	0.1	20 cm	AH06-23	
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	20 cm	AH06-34	
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	50 cm	AH06-03	Sens. lat.
<i>Corynotheca micrantha</i> var. <i>gracilis</i>	0.1	40 cm	AH06-07	
<i>Cullen corallum</i>	0.1	150 cm	AH06-26	
<i>Dodonaea coriacea</i>	0.1	70 cm		
<i>Dodonaea hispidula</i> var. <i>arida</i>	0.1	110 cm	AH06-28	
<i>Eriachne obtusa</i>	0.1	40 cm		
<i>Erythrophleum chlorostachys</i>	0.5	250 cm		
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	10 cm	AH06-17	
<i>Fimbristylis simulans</i>	0.1	25 cm		
<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	1	400 cm		
<i>Goodenia armittiana</i>	0.1	20 cm	AH06-22	
<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	40 cm	AH06-16	
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	350 cm		
<i>Halgnania solanacea</i> var. <i>solanacea</i>	0.1	40 cm	AH06-04	
<i>Heliotropium transforme</i>	0.1	80 cm	AH06-09	
<i>Jacksonia aculeata</i>	0.1	80 cm	AH06-19	
<i>Leptosema anomalum</i>	0.1	25 cm	AH06-32	
<i>Owenia reticulata</i>	0.5	500 cm	AH06-30	
<i>Polycarpaea corymbosa</i> var. <i>corymbosa</i>	0.1	20 cm	AH06-18	
<i>Polygala isingii</i>	0.1	10 cm	AH06-21	
<i>Ptilotus arthrolasius</i>	0.1	15 cm	AH06-11	
<i>Ptilotus astrolasius</i>	0.1	40 cm	AH06-11	
<i>Ptilotus polystachyus</i>	0.1	60 cm		
<i>Scaevola parvifolia</i> subsp. <i>pilbarae</i>	0.1	30 cm	AH06-08	Sepals seem to only have glandular hairs outside.
<i>Setaria surgens</i>	0.1	30 cm	AH06-14	
<i>Sida</i> sp. Pindan (B.G. Thomson 3398)	0.1	30 cm	AH06-20, 31	
<i>Solanum diversiflorum</i>	0.1	30 cm		
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	50 cm	AH06-10	
<i>Striga curviflora</i>	0.1	50 cm	AH06-15	
<i>Trigastrotheca molluginea</i>	0.1	10 cm		
<i>Triodia schinzii</i>	28	40 cm	AH06-33	
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	5 cm	AH06-06	



2017

Asian Hub Phase 1 & 2	Site	AH07			
Described by	CEPPL / MM/BMa	Date	26-Aug-17 / 15-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	280131 mE	7784833 mN	120.898195 °E	-20.020757 °S
Habitat	Gently sloping pindan plain, immediately east of a low lateritic outcrop.				
Soil	Dark reddish brown sand; sandy clay loam at depth?				
Rock Type	N/A.				
Vegetation	Phase 1: Acacia monticola tall open shrubland over A. drepanocarpa subsp. drepanocarpa, A. tumida var. kulparn open shrubland over Triodia schinzii open hummock grassland. Phase 2: Acacia monticola tall open shrubland over A. drepanocarpa subsp. drepanocarpa, A. tumida var. kulparn scattered shrubs over Triodia schinzii, (T. epactia) open hummock grassland.				
Veg Condition	Excellent.				
Fire Age	Burnt 3-5 years ago.				
Notes	Phase 2: <i>Digitaria brownii</i> not seen in 2018.				

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Acacia drepanocarpa</i> subsp. <i>drepanocarpa</i>	2	200 cm	AH07-07		<i>Acacia drepanocarpa</i> subsp. <i>drepanocarpa</i>	1	200 cm	AH07-07	
<i>Acacia hilliana</i>	0.1	40 cm			<i>Acacia hilliana</i>	0.1	40 cm		
<i>Acacia monticola</i>	5	300 cm			<i>Acacia monticola</i>	5	300 cm		
<i>Acacia sericophylla</i>	0.1	40 cm			<i>Acacia sericophylla</i>	0.1	40 cm		
<i>Acacia tumida</i> var. <i>kulparn</i>	2	200 cm			<i>Acacia tumida</i> var. <i>kulparn</i>	1	200 cm	AHR07-01, 04	
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	30 cm	AH07-06		<i>Aristida holathera</i> var. <i>holathera</i>	0.1	30 cm	AH07-06	
<i>Boerhavia gardneri</i>	0.1	30 cm	AH07-13		<i>Boerhavia gardneri</i>	0.1	25 cm	AH07-13	
<i>Bonamia alatisemina</i>	0.1	25 cm	AH07-12		<i>Bonamia alatisemina</i>	0.1	25 cm	AH07-12	
<i>Bulbostylis barbata</i>	0.1	25 cm			<i>Bulbostylis barbata</i>	0.1	25 cm		
<i>Cassytha capillaris</i>	0.1	30 cm	AH07-03		<i>Cassytha capillaris</i>	0.1	30 cm	AH07-03	
<i>Digitaria brownii</i>	0.1	40 cm							
<i>Eragrostis eriopoda</i>	0.1	25 cm			<i>Eragrostis eriopoda</i>	0.1	25 cm		
<i>Eriachne ciliata</i>	0.1	30 cm			<i>Eriachne ciliata</i>	0.1	30 cm	AHR07-05	
<i>Eriachne obtusa</i>	0.1	40 cm			<i>Eriachne obtusa</i>	0.1	40 cm		
					<i>Euphorbia psilosperma</i>	0.1	25 cm	AHR07-02	
					<i>Gyrostemon tepperi</i>	0.1	160 cm		
<i>Hibiscus leptocladus</i>	0.1	40 cm	AH07-16		<i>Hibiscus leptocladus</i>	0.1	80 cm	AHR07-06	
<i>Paspalidium rarum</i>	0.1	20 cm	AH07-11		<i>Paspalidium rarum</i>	0.1	20 cm	AH07-11	
<i>Polycarphaea corymbosa</i> var. <i>corymbosa</i>	0.1	25 cm			<i>Polycarphaea corymbosa</i> var. <i>corymbosa</i>	0.1	25 cm		
<i>Ptilotus polystachyus</i>	0.1	50 cm	AH07-04		<i>Ptilotus polystachyus</i>	0.1	50 cm	AH07-04	
<i>Sida arenicola</i>	0.1	200 cm	AH07-09	Ferruginous form.	<i>Sida arenicola</i>	0.1	200 cm	AH07-09	White indumentum form.
<i>Solanum dioicum</i>	0.1	50 cm	AH07-08		<i>Solanum dioicum</i>	0.1	50 cm	AH07-08	
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	140 cm			<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	140 cm		
<i>Streptoglossa macrocephala</i>	0.1	40 cm	AH07-15		<i>Streptoglossa macrocephala</i>	0.1	40 cm	AH07-15	
<i>Trianthema pilosum</i>	0.1	25 cm			<i>Trianthema pilosum</i>	0.1	25 cm		
					<i>Tribulopsis marliesiae</i>	0.1	40 cm	N=2.	
<i>Trigastrotheca molluginea</i>	0.1	25 cm			<i>Trigastrotheca molluginea</i>	0.1	25 cm		

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Triodia epactia</i>	0.1	40 cm	AH07-02		<i>Triodia epactia</i>	2	40 cm	AH07-02	
<i>Triodia schinzii</i>	15	40 cm	AH07-01		<i>Triodia schinzii</i>	15	40 cm	AH07-01	
<i>Urochloa holosericea</i> subsp. <i>velutina</i>	0.1	25 cm	AH07-10		<i>Urochloa holosericea</i> subsp. <i>velutina</i>	0.1	40 cm	AHR07-03	
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	20 cm	AH07-05		<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	20 cm	AH07-05	



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Asian Hub Phase 1	Site	AH08		
Described by	MM/PA	Date	26-Aug-17	Type Quadrat 50x50m
MGA Zone	51	277225 mE	7785747 mN	120.870541 °E -20.012171 °S
Habitat	Pindan plain.			
Soil	Pink-red pindan sand.			
Rock Type	N/A.			
Vegetation	Owenia reticulata, Erythrophleum chlorostachys scattered low trees over Acacia tumida var. kulparn scattered shrubs over Jacksonia aculeata scattered low shrubs over Triodia schinzii open hummock grassland.			
Veg Condition	Excellent.			
Fire Age	Burnt 3-5 years ago.			

Species	Cover	Height	Specimen	Notes
<i>Acacia ancistrocarpa</i>	0.1	210 cm		
<i>Acacia sabulosa</i>	0.1	220 cm	AH08-07	
<i>Acacia sericeophylla</i>	0.1	110 cm		
<i>Acacia stellaticeps</i>	0.1	30 cm	AH08-02	
<i>Acacia tumida</i> var. <i>kulparn</i>	0.5	110 cm		
<i>Androcalva loxophylla</i>	0.1	25 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	80 cm		
<i>Boerhavia gardneri</i>	0.1	30 cm	AH06-27=	
<i>Bonamia erecta</i>	0.1	40 cm		
<i>Calandrinia strophiolata</i>	0.1	10 cm	AH08-01	
<i>Eriachne lanata</i>	0.1	30 cm	AH08-13	
<i>Eriachne obtusa</i>	0.1	80 cm	AH08-11	Sens. lat. (M. Barrett).
<i>Erythrophleum chlorostachys</i>	0.5	230 cm		
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	25 cm	AH08-06	
<i>Fimbristylis simulans</i>	0.1	25 cm		
<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	0.1	130 cm		
<i>Gompholobium simplicifolium</i>	0.1	60 cm		
<i>Goodenia triodiophila</i>	0.1	20 cm	AH08-12	
<i>Gyrostemon tepperi</i>	0.1	25 cm		
<i>Heliotropium transforme</i>	0.1	30 cm	AH06-09=	
<i>Jacksonia aculeata</i>	0.5	40 cm		
<i>Leptosema anomalum</i>	0.1	25 cm		
<i>Owenia reticulata</i>	1	430 cm	AH06-30=	
<i>Paraneurachne muelleri</i>	0.1	40 cm	AH08-04	
<i>Polycarphaea corymbosa</i> var. <i>corymbosa</i>	0.1	20 cm		
<i>Polygala isingii</i>	0.1	20 cm	AH08-08	
<i>Ptilotus astrolasius</i>	0.1	40 cm		
<i>Ptilotus calostachyus</i>	0.1	50 cm		
<i>Ptilotus polystachyus</i>	0.1	70 cm		
<i>Scaevola parvifolia</i>	0.1	25 cm		Sterile.
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	60 cm	AH08-03	
<i>Striga curviflora</i>	0.1	40 cm		
<i>Trianthema pilosum</i>	0.1	10 cm		
<i>Trigastrotheca molluginea</i>	0.1	15 cm		
<i>Triodia schinzii</i>	20	50 cm	AH08-10	
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	20 cm	AH08-09	
<i>Zornia chaetophora</i>	0.1	30 cm	AH08-05	



Asian Hub Phase 1 & 2	Site	AH09	
Described by	CEFPL / PLSW	Date	26-Aug-17 / 15-Mar-18
MGA Zone	51	296636 mE	7779707 mN
Habitat	Low lateritic rise.	Type	Quadrat 50x50m
Soil	Dark reddish brown clay loam.		121.055331 °E -20.068854 °S
Rock Type	Laterite; pebbles (51-75%) and gravel (26-50%).		
Vegetation	Acacia hilliana, (A. adoxa var. adoxa) low open shrubland over Triodia epactia open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	Burnt 3-5 years ago.		

Phase 1: Species	Cover	Height	Specimen	Phase 2: Species	Cover	Height
Acacia adoxa var. adoxa	1	40 cm		Acacia adoxa var. adoxa	1	40 cm
Acacia hilliana	7	40 cm		Acacia hilliana	7	50 cm
Bulbostylis barbata	0.1	20 cm		Bulbostylis barbata	0.1	10 cm
Cassytha capillaris	0.1	30 cm				
Eriachne pulchella	0.1	15 cm	AH09-02	Eriachne pulchella	0.1	15 cm
Goodenia azurea subsp. hesperia	0.1	20 cm	AH09-01	Goodenia azurea subsp. hesperia	0.1	40 cm
Polycarpaea corymbosa var. corymbosa	0.1	20 cm		Polycarpaea corymbosa var. corymbosa	0.1	20 cm
Ptilotus calostachyus	0.1	70 cm		Ptilotus calostachyus	0.1	110 cm
Trigastrotheca molluginea	0.1	20 cm		Trigastrotheca molluginea	0.1	15 cm
Triodia epactia	16	30 cm		Triodia epactia	17	50 cm



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Asian Hub Phase 1 & 2	Site	AH10			
Described by	MM/PA / MM/BMa	Date	26-Aug-17 / 15-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	282253 mE	7783582 mN	120.918321 °E	-20.032294 °S
Habitat	Gently sloping rocky lateritic rise; W aspect.				
Soil	Orange-brown skeletal loamy sand.				
Rock Type	Continuous surface layer of lateritic gravel and pebbles; also outcropping laterite.				
Vegetation	Phase 1: <i>Acacia hilliana</i> scattered low shrubs over <i>Triodia epactia</i> open hummock grassland. Phase 2: <i>Acacia hilliana</i> low open shrubland over <i>Triodia epactia</i> open hummock grassland.				
Veg Condition	Excellent.				
Fire Age	Phase 1: Burnt 1-2 years ago. Phase 2: Burnt 2-3 years ago.				
Notes	Phase 2: <i>Cleome viscosa</i> and <i>Oldenlandia mitrasacmoides</i> not seen in 2018.				

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen
<i>Acacia adoxa</i> var. <i>adoxa</i>	0.1	35 cm			<i>Acacia adoxa</i> var. <i>adoxa</i>	0.1	35 cm	
<i>Acacia hilliana</i>	2	30 cm			<i>Acacia hilliana</i>	3	30 cm	
<i>Acacia monticola</i>	0.1	90 cm	AH10-05		<i>Acacia monticola</i>	0.1	90 cm	AH10-05
<i>Cleome viscosa</i>	0.1	30 cm						
<i>Codonocarpus cotinifolius</i>	0.1	70 cm			<i>Codonocarpus cotinifolius</i>	0.1	70 cm	
<i>Dodonaea coriacea</i>	0.1	50 cm			<i>Dodonaea coriacea</i>	0.1	50 cm	
<i>Fimbristylis simulans</i>	0.1	20 cm			<i>Fimbristylis simulans</i>	0.1	20 cm	AHR10-01
					<i>Gomphrena lanata</i>	0.1	2 cm	AHR10-05
					<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	10 cm	AH66-02=
<i>Halgnania solanacea</i> var. <i>solanacea</i>	0.1	30 cm			<i>Halgnania solanacea</i> var. <i>solanacea</i>	0.1	30 cm	AHR10-02
<i>Hybanthus aurantiacus</i>	0.1	45 cm			<i>Hybanthus aurantiacus</i>	0.1	45 cm	
					<i>Indigofera monophylla</i>	0.1	30 cm	
<i>Oldenlandia mitrasacmoides</i> subsp. <i>mitrasacmoides</i>	0.1	20 cm	AH10-06					
<i>Polycarpaea holtzei</i>	0.1	3 cm	AH10-04		<i>Polycarpaea holtzei</i>	0.1	3 cm	AH10-04
<i>Polygala glaucifolia</i>	0.1	10 cm	AH10-03		<i>Polygala glaucifolia</i>	0.1	10 cm	AHR10-04
<i>Ptilotus astrolasius</i>	0.1	40 cm			<i>Ptilotus astrolasius</i>	0.1	40 cm	
<i>Ptilotus calostachyus</i>	0.1	40 cm			<i>Ptilotus calostachyus</i>	0.1	40 cm	
<i>Seringia nephrosperma</i>	0.1	40 cm	AH10-02	N=2. Sterile; ID updated based on Ph 2 collection.	<i>Seringia nephrosperma</i>	0.1	40 cm	AHR10-03
<i>Trigastrotheca molluginea</i>	0.1	10 cm			<i>Trigastrotheca molluginea</i>	0.1	10 cm	
<i>Triodia epactia</i>	15	30 cm	AH10-01		<i>Triodia epactia</i>	20	30 cm	AH10-01



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Asian Hub Phase 1		Site	AH11		
Described by	CEFPL	Date	26-Aug-17	Type	Quadrat 50x50m
MGA Zone	51	303190 mE	7773005 mN		121.117254 °E -20.130063 °S
Habitat	Broad flat pindan plain.				
Soil	Dark reddish brown sand.				
Rock Type	N/A.				
Vegetation	Owenia reticulata, Gardenia pyriformis subsp. keartlandii scattered low trees over Erythrophleum chlorostachys, Acacia eriopoda, A. sericophylla tall open shrubland over Triodia schinzii open hummock grassland.				
Veg Condition	Excellent.				
Fire Age	No sign of recent fire.				

Species	Cover	Height	Specimen	Notes
<i>Acacia ancistrocarpa</i>	0.1	150 cm		
<i>Acacia eriopoda</i>	2	300 cm		
<i>Acacia sericophylla</i>	0.5	300 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	50 cm		
<i>Boerhavia gardneri</i>	0.1	40 cm	AH07-13=	Dead.
<i>Bonamia erecta</i>	5	40 cm		
<i>Bulbostylis barbata</i>	0.1	25 cm		
<i>Calytrix carinata</i>	0.1	50 cm	AH11-04	'Form 1 - short leaves'.
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	25 cm	AH11-06	
<i>Clerodendrum tomentosum</i> var. <i>mollissima</i>	0.1	30 cm	AH11-07	
<i>Corynotheca micrantha</i> var. <i>gracilis</i>	0.1	40 cm	AH11-09	
<i>Dampiera cinerea</i>	0.1	25 cm	AH-PL12=	
<i>Digitaria brownii</i>	0.1	40 cm		
<i>Eriachne obtusa</i>	0.1	40 cm		
<i>Erythrophleum chlorostachys</i>	3	180 cm		
<i>Euphorbia</i> sp.	0.1	25 cm		Dead.
<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	1	380 cm		
<i>Gompholobium simplicifolium</i>	0.1	50 cm	AH11-08	
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	220 cm		
<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	25 cm	AH11-03	
<i>Jacksonia aculeata</i>	0.1	40 cm	AH11-10	
<i>Owenia reticulata</i>	1	400 cm		
<i>Polycarphaea corymbosa</i> var. <i>corymbosa</i>	0.1	15 cm		
<i>Ptilotus arthrolasius</i>	0.1	40 cm	AH11-11	
<i>Ptilotus astrolasius</i>	0.1	70 cm		
<i>Ptilotus polystachyus</i>	0.1	70 cm		
<i>Scaevola parvifolia</i>	0.1	25 cm	AH03-07=	Sterile.
<i>Sida arenicola</i>	0.1	120 cm	AH11-05	White indumentum form.
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	120 cm		
<i>Tephrosia</i> sp. D Kimberley Flora (R.D. Royce 1848)	0.1	25 cm	AH11-02	
<i>Tinospora smilacina</i>	0.1	240 cm		
<i>Trianthema pilosum</i>	0.1	30 cm		
<i>Trigastrotheca molluginea</i>	0.1	20 cm		
<i>Triodia epactia</i>	0.1	40 cm		
<i>Triodia schinzii</i>	18	40 cm	AH11-01	
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	20 cm	AH07-05=	



Asian Hub Phase 1 & 2	Site	AH12	Type	Quadrat 50x50m
Described by	MM/PA / PLSW	Date	26-Aug-17 / 15-Mar-18	
MGA Zone	51	294579 mE	7780308 mN	121.035737 °E -20.063209 °S
Habitat	Pindan plain.			
Soil	Pink-red deep pindan sand.			
Rock Type	N/A.			
Vegetation	Phase 1: <i>Erythrophleum chlorostachys</i> scattered low trees over <i>Acacia monticola</i> , <i>A. ancistrocarpa</i> tall open shrubland over <i>Triodia schinzii</i> open hummock grassland. Phase 2: <i>Erythrophleum chlorostachys</i> scattered low trees over <i>Acacia monticola</i> , <i>A. ancistrocarpa</i> tall open shrubland over <i>Triodia schinzii</i> open hummock grassland and <i>Sorghum plumosum</i> var. <i>plumosum</i> very open tussock grassland.			
Veg Condition	Phase 1: Excellent; two very old cattle scats present. Phase 2: Excellent.			
Fire Age	Phase 1: No sign of recent fire / Burnt 3-5 years ago. Phase 2: No sign of recent fire.			

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Acacia ancistrocarpa</i>	2	300 cm			<i>Acacia ancistrocarpa</i>	3	300 cm		
<i>Acacia colei</i> var. <i>colei</i>	0.1	220 cm	AH12-09		<i>Acacia colei</i> var. <i>colei</i>	0.1	300 cm		
<i>Acacia monticola</i>	3	300 cm			<i>Acacia monticola</i>	4	320 cm		
<i>Acacia sericophylla</i>	0.1	260 cm			<i>Acacia sericophylla</i>	0.1	300 cm		
					<i>Boerhavia gardneri</i>	0.1	25 cm	AHR49-07=	
<i>Bonamia alatisemina</i>	0.1	20 cm	AH12-04		<i>Bonamia alatisemina</i>	0.1	20 cm		
<i>Bulbostylis barbata</i>	0.1	15 cm			<i>Bulbostylis barbata</i>	0.1	25 cm		
<i>Calandrinia strophiolata</i>	0.1	10 cm	AH08-01=	.					
<i>Cassytha capillaris</i>	0.1	30 cm			<i>Cassytha capillaris</i>	0.1	40 cm		
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	20 cm			<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	40 cm		
					<i>Cleome viscosa</i>	0.1	30 cm		
<i>Codonocarpus cotinifolius</i>	0.1	220 cm			<i>Codonocarpus cotinifolius</i>	0.1	220 cm		
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	30 cm	AH12-07	Sens. lat.	<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	40 cm		
					<i>Eragrostis eriopoda</i>	0.1	40 cm		
<i>Eriachne obtusa</i>	0.1	30 cm			<i>Eriachne obtusa</i>	0.1	50 cm		
<i>Eriachne pulchella</i>	0.1	10 cm							
<i>Erythrophleum chlorostachys</i>	1	420 cm			<i>Erythrophleum chlorostachys</i>	1	300 cm		
<i>Euphorbia psilosperma</i>	0.1	15 cm	AH12-03		<i>Euphorbia psilosperma</i>	0.1	25 cm	AHR49-09=	
					<i>Fimbristylis ammobia</i>	0.1	15 cm	AH12R-04	
<i>Goodenia armittiana</i>	0.1	20 cm	AH12-05		<i>Goodenia armittiana</i>	0.1	30 cm	AHR12-01	
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	420 cm			<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	20 cm		
<i>Polycarphaea corymbosa</i> var. <i>corymbosa</i>	0.1	25 cm			<i>Polycarphaea corymbosa</i> var. <i>corymbosa</i>	0.1	25 cm		
<i>Ptilotus astrolasius</i>	0.1	50 cm			<i>Ptilotus astrolasius</i>	0.1	50 cm		
<i>Ptilotus calostachyus</i>	0.1	60 cm			<i>Ptilotus calostachyus</i>	0.1	60 cm		
<i>Ptilotus polystachyus</i>	0.1	80 cm			<i>Ptilotus polystachyus</i>	0.1	40 cm		
					<i>Senna notabilis</i>	0.1	40 cm		
<i>Sida arenicola</i>	0.1	150 cm	AH12-06	Ferruginous form.	<i>Sida arenicola</i>	0.1	140 cm	AHR12-02	White indumentum form.
					<i>Sida arenicola</i>	0.1	180 cm		
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	70 cm	AH12-02		<i>Sorghum plumosum</i> var. <i>plumosum</i>	3	190 cm	AHR49-02=	

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	0.1	40 cm	AH12-08	Orange flowers; in burnt area.	<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	0.1	40 cm		
<i>Trianthema pilosum</i>	0.1	25 cm			<i>Tribulopis marliesiae</i>	0.1	25 cm	AHR12-03	Number not recorded.
<i>Trigastrotheca molluginea</i>	0.1	10 cm			<i>Trigastrotheca molluginea</i>	0.1	20 cm		
<i>Triodia epactia</i>	0.1	40 cm	AH12-01		<i>Triodia schinzii</i>	12	50 cm		
<i>Triodia schinzii</i>	12	50 cm							
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	10 cm							



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Asian Hub Phase 1 & 2	Site	AH13			
Described by	CEFPL / MM/BMa	Date	27-Aug-17 / 20-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	286054 mE	7755100 mN		120.951286 °E -20.289930 °S
Habitat	Flat pindan plain, low-lying.				
Soil	Dark reddish brown sand; sandy clay loam subsurface?				
Rock Type	N/A.				
Vegetation	Phase 1: <i>Corymbia greeniana</i> scattered low trees over <i>Erythrophleum chlorostachys</i> , <i>Acacia ancistrocarpa</i> , (<i>A. monticola</i>) tall open shrubland over <i>Triodia schinzii</i> , <i>T. epactia</i> very open hummock grassland with <i>Chrysopogon fallax</i> , <i>Aristida inaequiglumis</i> scattered tussock grasses. Phase 2: <i>Corymbia greeniana</i> low open woodland over <i>Erythrophleum chlorostachys</i> , <i>Acacia ancistrocarpa</i> , (<i>A. monticola</i>) tall open shrubland over <i>Triodia schinzii</i> , <i>T. epactia</i> open hummock grassland with <i>Aristida inaequiglumis</i> , <i>Eragrostis eriopoda</i> scattered tussock grasses.				
Veg Condition	Very Good; some signs of human disturbance (cans, wire etc).				
Fire Age	No sign of recent fire.				
Notes	Phase 2: <i>Clerodendrum tomentosum</i> , <i>Codonocarpus cotinifolius</i> , <i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i> , <i>Ptilotus fusiformis</i> , <i>Solanum diversiflorum</i> not seen in 2018. PLSW also sampled this quadrat; only <i>Indigofera monophylla</i> and <i>Gomphrena lanata</i> recorded as an additional species.				

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Acacia ancistrocarpa</i>	3	280 cm			<i>Acacia ancistrocarpa</i>	3	280 cm		
					<i>Acacia colei</i> var. <i>colei</i>	0.1	60 cm		
<i>Acacia monticola</i>	0.5	300 cm			<i>Acacia monticola</i>	0.5	300 cm		
<i>Acacia sericophylla</i>	0.1	80 cm			<i>Acacia sericophylla</i>	0.1	80 cm		
<i>Acacia tumida</i> var. <i>kulparn</i>	0.1	80 cm	AH13-09		<i>Acacia tumida</i> var. <i>kulparn</i>	0.1	80 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	30 cm			<i>Aristida holathera</i> var. <i>holathera</i>	0.1	30 cm		
<i>Aristida inaequiglumis</i>	0.5	100 cm	AH13-07		<i>Aristida inaequiglumis</i>	0.5	100 cm		
					<i>Boerhavia coccinea</i>	0.1	40 cm		
<i>Bonamia erecta</i>	0.1	40 cm			<i>Bonamia erecta</i>	0.1	40 cm		
					<i>Bonamia oblongifolia</i>	0.1	30 cm	AHR13-01	
<i>Bulbostylis barbata</i>	0.1	20 cm			<i>Bulbostylis barbata</i>	0.1	20 cm		
<i>Cassytha capillaris</i>	0.1	25 cm	AH13-10		<i>Cassytha capillaris</i>	0.1	25 cm		
<i>Chrysopogon fallax</i>	1	90 cm	AH13-05		<i>Chrysopogon fallax</i>	0.1	90 cm	AHR13-02	
<i>Cleome viscosa</i>	0.1	50 cm			<i>Cleome viscosa</i>	0.1	50 cm		
<i>Clerodendrum tomentosum</i>	0.1	80 cm							
<i>Codonocarpus cotinifolius</i>	0.1	40 cm							
					<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	40 cm		
<i>Corymbia greeniana</i>	2	700 cm	AH13-01		<i>Corymbia greeniana</i>	3	700 cm		
<i>Cucumis variabilis</i>	0.1	80 cm	AH13-12		<i>Cucumis variabilis</i>	0.1	80 cm		
<i>Digitaria brownii</i>	0.1	30 cm			<i>Digitaria brownii</i>	0.1	30 cm		
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	0.1	30 cm	AH13-14	Dead.					
<i>Eragrostis eriopoda</i>	0.1	40 cm			<i>Eragrostis eriopoda</i>	0.5	40 cm		
<i>Eriachne lanata</i>	0.1	40 cm			<i>Eriachne lanata</i>	0.1	60 cm	AHR13-04	
<i>Eriachne obtusa</i>	0.1	45 cm			<i>Eriachne obtusa</i>	0.1	45 cm		
<i>Eriachne pulchella</i>	0.1	20 cm			<i>Eriachne pulchella</i>	0.1	20 cm		
<i>Erythrophleum chlorostachys</i>	3	400 cm			<i>Erythrophleum chlorostachys</i>	2	400 cm		
<i>Eulalia aurea</i>	0.1	60 cm	AH13-13	Sens. lat.	<i>Eulalia aurea</i>	0.1	60 cm		Sens. lat.

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
					<i>Euphorbia psilosperma</i>	0.1	15 cm	AHR13-08	
					<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	30 cm		
					<i>Gomphrena lanata</i>	0.1	30 cm	AHR13-05	
<i>Goodenia armittiana</i>	0.1	20 cm	AH13-06		<i>Goodenia armittiana</i>	0.1	20 cm		
<i>Gossypium australe</i>	0.1	80 cm	AH13-02	Burrup Peninsula form.	<i>Gossypium australe</i>	0.1	80 cm		Burrup Peninsula form.
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	140 cm			<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	140 cm		
<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	30 cm	AH11-03=		<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	30 cm		
					<i>Heliotropium pachyphyllum</i>	0.1	40 cm	AHR13-06	
<i>Hibiscus leptocladus</i>	0.1	15 cm			<i>Hibiscus leptocladus</i>	0.1	15 cm		
<i>Indigofera monophylla</i>	0.1	40 cm	AH13-15		<i>Indigofera monophylla</i>	0.1	50 cm		
					<i>Isotropis atropurpurea</i>	0.1	60 cm		
					<i>Paraneurachne muelleri</i>	0.1	60 cm		
<i>Paspalidium rarum</i>	0.1	25 cm	AH13-08		<i>Paspalidium rarum</i>	0.1	25 cm	AHR13-01	
<i>Phyllanthus eremicus</i>	0.1	40 cm	AH13-16	N=3.	<i>Phyllanthus eremicus</i>	0.1	40 cm		N=3.
<i>Polycarpaea corymbosa</i> var. <i>corymbosa</i>	0.1	15 cm			<i>Polycarpaea corymbosa</i> var. <i>corymbosa</i>	0.1	15 cm		
<i>Ptilotus astrolasius</i>	0.1	40 cm			<i>Ptilotus astrolasius</i>	0.1	40 cm		
<i>Ptilotus fusiformis</i>	0.1	40 cm							
<i>Ptilotus polystachyus</i>	0.1	35 cm			<i>Ptilotus polystachyus</i>	0.1	35 cm		
					<i>Setaria dielsii</i>	0.1	60 cm		
<i>Sida arenicola</i>	0.1	90 cm	AH11-05=	White indumentum form.	<i>Sida arenicola</i>	0.1	60 cm	AHR13-09A -05, 09B	Ferruginous form and white form both present.
					<i>Solanum dioicum</i>	0.1	40 cm	AHR13-03	
<i>Solanum diversiflorum</i>	0.1	50 cm	Dead.						
					<i>Tinospora smilacina</i>	0.1	20 cm		
					<i>Tribulopis marliesiae</i>	0.1	20 cm		N=11.
<i>Trigastrotheca molluginea</i>	0.1	25 cm			<i>Trigastrotheca molluginea</i>	0.1	25 cm		
<i>Triodia epactia</i>	3	40 cm			<i>Triodia epactia</i>	3	40 cm		
<i>Triodia schinzii</i>	5	40 cm	AH13-03		<i>Triodia schinzii</i>	5	40 cm		
<i>Triumfetta aff. plumigera</i>	0.1	25 cm	AH13-11	Det. by M. Barrett as closest to <i>T. plumigera</i> , but leaves are an unusual shape.	<i>Triumfetta aff. plumigera</i>	0.1	25 cm		
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	20 cm	AH13-04		<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	20 cm		
					<i>Zornia chaetophora</i>	0.1	50 cm	AHR13-07	



2017



2018

Asian Hub Phase 1	Site	AH14		
Described by	MM/PA	Date	26-Aug-17	Type Quadrat 50x50m
MGA Zone	51	300122 mE	7769709 mN	121.087555 °E -20.159515 °S
Habitat	Pindan plain.			
Soil	Orange sand.			
Rock Type	N/A.			
Vegetation	Owenia reticulata, (Erythrophleum chlorostachys) low open woodland over Acacia eriopoda tall open shrubland over Triodia schinzii open hummock grassland.			
Veg Condition	Excellent.			
Fire Age	No sign of recent fire.			

Species	Cover	Height	Specimen	Notes
<i>Acacia eriopoda</i>	3	250 cm	AH14-01	
<i>Acacia sericophylla</i>	0.1	260 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	60 cm		
<i>Aristida holathera</i> var. <i>latifolia</i>	0.1	80 cm	AH14-14	
<i>Boerhavia gardneri</i>	0.1	40 cm	AH06-27=	
<i>Bonamia alatisemina</i>	0.1	15 cm		
<i>Bulbostylis barbata</i>	0.1	15 cm		
<i>Calytrix carinata</i>	0.1	60 cm	AH14-10	'Form 1 - short leaves'.
<i>Cassytha capillaris</i>	0.1	40 cm		
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	25 cm	AH14-07	
<i>Clerodendrum tomentosum</i> var. <i>mollissima</i>	0.1	170 cm	AH14-11	
<i>Dodonaea coriacea</i>	0.1	70 cm		
<i>Eragrostis eriopoda</i>	0.1	35 cm		
<i>Eriachne obtusa</i>	0.1	40 cm		
<i>Erythrophleum chlorostachys</i>	0.5	300 cm		
<i>Fimbristylis oxystachya</i>	0.1	35 cm	AH14-05	
<i>Gompholobium simplicifolium</i>	0.1	35 cm		Dark red and yellow flowers.
<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	55 cm	AH14-13	
<i>Grevillea wickhamii</i>	0.1	350 cm		Sterile.
<i>Gyrostemon tepperi</i>	0.1	60 cm		
<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	40 cm		
<i>Jacksonia aculeata</i>	0.1	60 cm		
<i>Oldenlandia pterospora</i>	0.1	25 cm	AH14-04	N=3.
<i>Owenia reticulata</i>	2	600 cm		
<i>Polycarpea corymbosa</i> var. <i>corymbosa</i>	0.1	25 cm		
<i>Ptilotus arthrolasius</i>	0.1	15 cm	AH14-12	
<i>Ptilotus arthrolasius</i>	0.1	20 cm		
<i>Ptilotus astrolasius</i>	0.1	60 cm		
<i>Ptilotus polystachyus</i>	0.1	30 cm	AH14-09	
<i>Scaevola parvifolia</i>	0.1	35 cm		Sterile.
<i>Seringia</i> sp.	0.1	60 cm	AH14-06	Sterile; det. by Carol Wilkins.
<i>Setaria surgens</i>	0.1	40 cm	AH14-02	
<i>Sida arenicola</i>	0.1	300 cm	AH14-03	Ferruginous form.
<i>Tinospora smilacina</i>	0.1	400 cm		
<i>Trianthema pilosum</i>	2	5 cm		
<i>Tribulopis marliesiae</i>	0.1	5 cm	AH14-08	N=4.
<i>Trigastrotheca molluginea</i>	0.1	15 cm		
<i>Triodia epactia</i>	0.5	40 cm		
<i>Triodia schinzii</i>	15	50 cm		
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	10 cm		



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Asian Hub Phase 1 & 2	Site	AH15			
Described by	CEFPL / MM/BMa	Date	27-Aug-17 / 20-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	287089 mE	7755702 mN	120.961263 °E	-20.284609 °S
Habitat	Slope of lateritic rise, before indistinct ridge to the west.				
Soil	Dark reddish brown clay loam.				
Rock Type	Lateritic pebbles (51-75%) and gravel (26-50%).				
Vegetation	Acacia inaequilatera scattered tall shrubs over A. hilliana, A. adoxa var. adoxa low open shrubland over Triodia epactia hummock grassland.				
Veg Condition	Excellent.				
Fire Age	No sign of recent fire.				

Phase 1: Species	Cover	Height	Specimen	Phase 2: Species	Cover	Height	Specimen
Acacia adoxa var. adoxa	3	40 cm		Acacia adoxa var. adoxa	3	40 cm	
Acacia hilliana	4	40 cm		Acacia hilliana	4	40 cm	
Acacia inaequilatera	1.5	330 cm		Acacia inaequilatera	0.5	330 cm	
				Bonamia oblongifolia	0.1	30 cm	AHR13-01=
Bulbostylis barbata	0.1	20 cm		Bulbostylis barbata	0.1	20 cm	
Corymbia greeniana	0.1	100 cm	AH13-01=	Corymbia greeniana	0.1	100 cm	AH13-01=
Eriachne lanata	0.1	10 cm		Eriachne lanata	0.1	10 cm	
				Eriachne obtusa	0.1	10 cm	AHR13-02=
Eriachne pulchella	0.1	20 cm		Eriachne pulchella	0.1	20 cm	
Fimbristylis simulans	0.1	25 cm	AH15-01	Fimbristylis simulans	0.1	25 cm	AH15-01
Goodenia scaevolina	0.1	45 cm		Goodenia scaevolina	0.1	45 cm	
				Heliotropium glabellum	0.1	50 cm	AHR15-02
Heliotropium pachyphyllum	0.1	25 cm	AH15-02	Heliotropium pachyphyllum	0.1	25 cm	AH15-02
Mirbelia viminalis	0.1	80 cm		Mirbelia viminalis	0.1	80 cm	
Polycarphaea corymbosa var. corymbosa	0.1	15 cm		Polycarphaea corymbosa var. corymbosa	0.1	15 cm	
Ptilotus calostachyus	0.1	80 cm		Ptilotus calostachyus	0.1	80 cm	
				Tephrosia rosea var. clementii	0.1	40 cm	AHR15-01
Trigastrotheca molluginea	0.1	20 cm		Trigastrotheca molluginea	0.1	20 cm	
Triodia epactia	34	40 cm		Triodia epactia	34	40 cm	



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2018

Asian Hub Phase 1 & 2	Site	AH16			
Described by	MM/PA / MM/BMa	Date	27-Aug-17 / 20-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	286956 mE	7757132 mN		120.960159 °E -20.271680 °S
Habitat	Crest of a lateritic plateau.				
Soil	Red-brown sandy loam.				
Rock Type	Near continuous layer of lateritic gravel (80%) and pebbles (10%).				
Vegetation	Acacia inaequilatera scattered tall shrubs over A. adoxa var. adoxa low open shrubland over Triodia epactia open hummock grassland.				
Veg Condition	Excellent.				
Fire Age	Burnt 1-2 years ago.				
Fire Age	Phase 2: Aristida holathera, Bonamia pannosa, Corchorus sidoides subsp. vermicularis, Eriachne obtusa, Ptilotus calostachyus, P. fusiformis, P. incanus, Tephrosia sp. Bungaroo Creek not seen in 2018.				

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
Acacia adoxa var. adoxa	3	25 cm			Acacia adoxa var. adoxa	3	25 cm		
Acacia ancistrocarpa	0.1	60 cm			Acacia ancistrocarpa	0.1	60 cm		
Acacia hilliana	0.1	20 cm			Acacia hilliana	0.1	20 cm		
Acacia inaequilatera	1	390 cm	AH16-01		Acacia inaequilatera	1	390 cm		
Amphipogon sericeus	0.1	50 cm	AH16-09		Amphipogon sericeus	0.1	50 cm		
Aristida holathera var. holathera	0.1	40 cm							
Bonamia alatisemina	0.1	50 cm	AH16-15		Bonamia alatisemina	0.1	50 cm		
					Bonamia oblongifolia	0.1	15 cm	AHR13-01=	
Bonamia pannosa	0.1	15 cm	AH16-18						
Bulbostylis barbata	0.1	10 cm			Bulbostylis barbata	0.1	10 cm		
Calytrix carinata	0.1	40 cm			Calytrix carinata	0.1	40 cm		
Cleome viscosa	0.1	70 cm			Cleome viscosa	0.1	70 cm		
Corchorus sidoides subsp. vermicularis	0.1	30 cm	AH16-07	Sens. lat.					
Dampiera candicans	0.1	50 cm			Dampiera candicans	0.1	50 cm		
Eriachne obtusa	0.1	40 cm	AH16-06						
Eriachne pulchella	0.1	15 cm			Eriachne pulchella	0.1	15 cm		
Fimbristylis simulans	0.1	20 cm			Fimbristylis simulans	0.1	20 cm	AHR16-01	
					Gomphrena cunninghamii	0.1	15 cm	AHR16-02	
Grevillea wickhamii	0.1	60 cm		Sterile.	Grevillea wickhamii	0.1	60 cm		Sterile.
Heliotropium pachyphyllum	0.1	30 cm	AH16-05, 19		Heliotropium pachyphyllum	0.1	30 cm		
Heliotropium sp.	0.1	20 cm	AH16-13	Poor material, insufficient for further determination.	Heliotropium sp.	0.1	20 cm	AH16-13=	
Indigofera monophylla	0.1	35 cm	AH16-03		Indigofera monophylla	0.1	35 cm		
Polycarphaea corymbosa var. corymbosa	0.1	25 cm			Polycarphaea corymbosa var. corymbosa	0.1	25 cm		
Ptilotus calostachyus	0.1	50 cm							
Ptilotus fusiformis	0.1	35 cm	AH16-14						
Ptilotus incanus	0.1	30 cm	AH16-12						
Scaevola browniana subsp. browniana	0.1	40 cm	AH16-08		Scaevola browniana subsp. browniana	0.1	40 cm		
Senna notabilis	0.1	35 cm			Senna notabilis	0.1	35 cm		

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	50 cm	AH16-04		<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	50 cm		
<i>Solanum dioicum</i>	0.1	25 cm	AH16-11	Det. by M. Barrett; sens. lat.	<i>Solanum dioicum</i>	0.1	25 cm		.
<i>Solanum diversiflorum</i>	0.1	20 cm	AH16-17		<i>Solanum diversiflorum</i>	0.1	20 cm		
<i>Tephrosia rosea</i> var. <i>rosea</i>	0.1	80 cm	AH16-02		<i>Tephrosia rosea</i> var. <i>rosea</i>	0.1	80 cm		
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	0.1	20 cm							
<i>Triodia epactia</i>	12	25 cm	AH16-10		<i>Trigastrotheca molluginea</i>	0.1	20 cm		
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	20 cm	AH16-16		<i>Triodia epactia</i>	12	25 cm		
					<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	20 cm		



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2018

Asian Hub Phase 1 & 2	Site	AH17			
Described by	CEPFL / MM/BMa	Date	27-Aug-17 / 20-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	290195 mE	7759264 mN	120.991405 °E	-20.252785 °S
Habitat	Pindan plain with low lateritic hills to the north and east.				
Soil	Orange-brown sand.				
Rock Type	N/A.				
Vegetation	Phase 1: <i>Corymbia greeniana</i> scattered low trees over <i>Grevillea refracta</i> subsp. <i>refracta</i> , <i>Acacia ancistrocarpa</i> tall open shrubland over <i>Dodonaea hispidula</i> var. <i>arida</i> scattered low shrubs over <i>Triodia schinzii</i> open hummock grassland. Phase 2: <i>Corymbia greeniana</i> low open woodland over <i>Grevillea refracta</i> subsp. <i>refracta</i> , <i>Acacia ancistrocarpa</i> tall open shrubland over <i>Dodonaea hispidula</i> var. <i>arida</i> scattered shrubs over <i>Triodia schinzii</i> open hummock grassland with <i>Sorghum plumosum</i> var. <i>plumosum</i> scattered tussock grasses.				
Veg Condition	Excellent.				
Fire Age	No sign of recent fire.				

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Acacia adoxa</i> var. <i>adoxia</i>	0.1	40 cm			<i>Acacia adoxa</i> var. <i>adoxia</i>	0.1	40 cm		
<i>Acacia ancistrocarpa</i>	1	250 cm			<i>Acacia ancistrocarpa</i>	1	250 cm		
<i>Acacia colei</i> var. <i>colei</i>	0.1	200 cm	AH17-05		<i>Acacia colei</i> var. <i>colei</i>	0.1	200 cm	AH17-05	
<i>Acacia cowleana</i>	0.1	200 cm	AH17-02		<i>Acacia cowleana</i>	0.1	200 cm	AH17-02	
<i>Acacia hilliana</i>	0.1	60 cm			<i>Acacia hilliana</i>	0.1	60 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	20 cm			<i>Aristida holathera</i> var. <i>holathera</i>	0.1	20 cm		
<i>Boerhavia gardneri</i>	0.1	10 cm	AH17-04		<i>Boerhavia gardneri</i>	0.1	10 cm	AH17-04	
<i>Bonamia erecta</i>	0.1	30 cm			<i>Bonamia erecta</i>	0.1	30 cm		
<i>Cassytha capillaris</i>	0.1	25 cm	AH13-10=		<i>Cassytha capillaris</i>	0.1	25 cm	AH13-10=	
<i>Chrysopogon fallax</i>	0.1	70 cm	AH13-05=		<i>Chrysopogon fallax</i>	0.1	70 cm	AH13-05=	
<i>Clerodendrum tomentosum</i> var. <i>tomentosum</i>	0.1	100 cm			<i>Clerodendrum tomentosum</i> var. <i>tomentosum</i>	0.1	100 cm	AHR17-02	
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	40 cm		Poor material, not collected; extrapolated from Phase 2.	<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	40 cm		
<i>Corymbia greeniana</i>	2	550 cm			<i>Corymbia greeniana</i>	2	550 cm		
<i>Cyperus conicus</i>	0.1	30 cm	AH17-01		<i>Cyperus conicus</i>	0.1	30 cm	AH17-01	
<i>Dodonaea coriacea</i>	0.1	130 cm			<i>Dodonaea coriacea</i>	0.1	130 cm		
<i>Dodonaea hispidula</i> var. <i>arida</i>	2	130 cm	AHPL-23=		<i>Dodonaea hispidula</i> var. <i>arida</i>	2	130 cm	AHPL-23=	
					<i>Eragrostis eriopoda</i>	0.1	35 cm		
<i>Eriachne lanata</i>	0.1	40 cm			<i>Eriachne lanata</i>	0.1	40 cm	AHR13-04=	
<i>Eriachne obtusa</i>	0.1	60 cm			<i>Eriachne obtusa</i>	0.1	60 cm		
<i>Eulalia aurea</i>	0.1	70 cm	AH13-13=		<i>Eulalia aurea</i>	0.1	70 cm	AH13-13 =	
					<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	20 cm	AHR17-06	
<i>Fimbristylis simulans</i>	0.1	15 cm	AH15-01=						
<i>Gossypium austrole</i>	0.1	80 cm	AH13-02=	Burrup Peninsula form.	<i>Gossypium austrole</i>	0.1	80 cm	AHR17-05	
<i>Grevillea pyramidalis</i>	0.1	300 cm			<i>Grevillea pyramidalis</i>	0.1	300 cm		
<i>Grevillea refracta</i> subsp. <i>refracta</i>	2	400 cm			<i>Grevillea refracta</i> subsp. <i>refracta</i>	2	400 cm		
<i>Hakea chordophylla</i>	0.1	250 cm	AH17-06		<i>Hakea chordophylla</i>	0.1	200 cm	AH17-06	
<i>Hybanthus aurantiacus</i>	0.1	50 cm			<i>Hybanthus aurantiacus</i>	0.1	50 cm		
<i>Indigofera monophylla</i>	0.1	40 cm	AH13-15=		<i>Indigofera monophylla</i>	0.1	40 cm	AH13-15=	

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Jacksonia aculeata</i>	0.1	40 cm			<i>Isotropis atropurpurea</i>	0.1	60 cm		
<i>Oldenlandia pterospora</i>	0.1	25 cm	AH17-03		<i>Jacksonia aculeata</i>	0.1	50 cm		
<i>Phyllanthus eremicus</i>	0.1	40 cm		N=6.	<i>Paraneurachne muelleri</i>	0.1	30 cm		
<i>Polycarpaea corymbosa</i> var. <i>corymbosa</i>	0.1	20 cm			<i>Phyllanthus eremicus</i>	0.1	40 cm		N=11.
<i>Portulaca filifolia</i>	0.1	30 cm	AH17-08						
<i>Ptilotus astrolasius</i>	0.1	30 cm			<i>Ptilotus astrolasius</i>	0.1	30 cm		
<i>Sida arenicola</i>	0.1	40 cm	AH11-05=	White indumentum form.	<i>Ptilotus fusiformis</i>	0.1	50 cm		
<i>Sida</i> sp. Pindan (B.G. Thomson 3398)	0.1	45 cm	AH17-07		<i>Sida arenicola</i>	0.1	80 cm		
<i>Solanum dioicum</i>	0.1	30 cm			<i>Solanum dioicum</i>	0.1	50 cm	AHR13-03=	
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	120 cm			<i>Sorghum plumosum</i> var. <i>plumosum</i>	2	120 cm		
<i>Striga curviflora</i>	0.1	15 cm	AH17-09						
<i>Tephrosia rosea</i> var. <i>clementii</i>	0.1	150 cm			<i>Tephrosia leptoclada</i>	0.1	30 cm	AHR17-01, 3	Pink flowers.
<i>Trianthema pilosum</i>	0.1	30 cm			<i>Tephrosia rosea</i> var. <i>clementii</i>	0.1	150 cm		
<i>Triodia epactia</i>	0.1	40 cm			<i>Tinospora smilacina</i>	0.1	45 cm		
<i>Triodia schinzii</i>	23	45 cm	AH13-03=						
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	20 cm	AH13-04=		<i>Tribulopis marliesiae</i>	0.1	30 cm		N=1.
					<i>Trigastrotheca molluginea</i>	0.1	20 cm		
					<i>Triodia epactia</i>	0.1	40 cm		
					<i>Triodia schinzii</i>	23	45 cm	AH13-03=	
					<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	20 cm	AH13-04=	
					<i>Zornia chaetophora</i>	0.1	40 cm		



2017



2018

Asian Hub Phase 1 & 2	Site	AH18			
Described by	MM/PA / PLSW	Date	27-Aug-17 / 20-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	286330 mE	7757203 mN	120.954176 °E	-20.270969 °S
Habitat	Broad pindan plain; low-lying area between very gently sloping lateritic rises (basically plains).				
Soil	Pink-red loamy sand.				
Rock Type	Scattered lateritic gravel.				
Vegetation	Phase 1: <i>Corymbia greeniana</i> low open woodland over <i>Grevillea refracta</i> subsp. <i>refracta</i> tall open shrubland over <i>Carissa lanceolata</i> , <i>Acacia monticola</i> open shrubland over <i>Heliotropium pachyphyllum</i> , <i>Scaevola browniana</i> subsp. <i>browniana</i> low open shrubland over <i>Triodia epactia</i> open hummock grassland with <i>Chrysopogon fallax</i> very open tussock grassland. Phase 1: <i>Corymbia greeniana</i> low open woodland over <i>Grevillea refracta</i> subsp. <i>refracta</i> tall open shrubland over <i>Acacia monticola</i> , (<i>Carissa lanceolata</i>) open shrubland over <i>Scaevola browniana</i> subsp. <i>browniana</i> , <i>Heliotropium pachyphyllum</i> low open shrubland over <i>Triodia epactia</i> open hummock grassland with <i>Chrysopogon fallax</i> very open tussock grassland.				
Veg Condition	Phase 1: Excellent; camel tracks in quadrat and one individual seen nearby, but no grazing evident. Phase 2: Excellent.				
Fire Age	Phase 1: Burnt 1-2 years ago or possibly 3-5 years ago? Phase 2: Burnt 3-5 years ago.				
Notes	Phase 1: Older apparent fire age may just be due to vegetation regenerating quicker in the lower part of the landscape.				

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Acacia adoxa</i> var. <i>adoxa</i>	0.1	30 cm			<i>Acacia adoxa</i> var. <i>adoxa</i>	0.1	10 cm		
<i>Acacia ancistrocarpa</i>	0.1	70 cm			<i>Acacia ancistrocarpa</i>	0.1	120 cm		
<i>Acacia colei</i> var. <i>colei</i>	0.1	130 cm	AH18-03		<i>Acacia colei</i> var. <i>colei</i>	0.1	140 cm		
<i>Acacia hilliana</i>	0.1	30 cm			<i>Acacia hilliana</i>	0.1	30 cm		
<i>Acacia monticola</i>	1	130 cm			<i>Acacia monticola</i>	2	130 cm		
					<i>Amphipogon sericeus</i>	0.1	45 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	35 cm							
					<i>Boerhavia coccinea</i>	0.1	10 cm	AHR13- =	
<i>Bonamia alatisemina</i>	0.1	50 cm	AH18-08		<i>Bonamia alatisemina</i>	0.1	10 cm	AHR18-03	
<i>Bulbostylis barbata</i>	0.1	15 cm			<i>Bulbostylis barbata</i>	0.1	10 cm		
					<i>Capparis umbonata</i>	0.1	100 cm		
<i>Carissa lanceolata</i>	1	130 cm			<i>Carissa lanceolata</i>	0.5	130 cm		
<i>Chrysopogon fallax</i>	3	60 cm	AH18-07		<i>Chrysopogon fallax</i>	3	100 cm		
<i>Cleome viscosa</i>	0.1	70 cm			<i>Cleome viscosa</i>	0.1	20 cm		
<i>Codonocarpus cotinifolius</i>	0.1	100 cm			<i>Codonocarpus cotinifolius</i>	0.1	100 cm		
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	40 cm	AH16-07=	Sens. lat.	<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	60 cm		
<i>Corymbia greeniana</i>	3	500 cm	AH18-10		<i>Corymbia greeniana</i>	4	500 cm		
<i>Dampiera candidans</i>	0.1	50 cm			<i>Dampiera candidans</i>	0.1	30 cm		
<i>Eragrostis eriopoda</i>	0.1	40 cm			<i>Eragrostis eriopoda</i>	0.1	40 cm		
<i>Eriachne obtusa</i>	0.1	50 cm			<i>Eriachne obtusa</i>	0.1	40 cm		
<i>Eriachne pulchella</i>	0.1	15 cm							
<i>Eulalia aurea</i>	0.1	50 cm	AH18-17	Sens. lat.					
<i>Euphorbia australis</i> var. <i>subtomentosa</i>	0.1	25 cm	AH18-16		<i>Euphorbia australis</i> var. <i>subtomentosa</i>	0.1	15 cm	AHR18-01	
<i>Evolvulus alsinoides</i> var. <i>vilosicalyx</i>	0.1	20 cm	AH18-12		<i>Evolvulus alsinoides</i> var. <i>vilosicalyx</i>	0.1	15 cm		
<i>Fimbristylis simulans</i>	0.1	15 cm							
<i>Gomphrena lanata</i>	0.1	20 cm	AH18-11						
<i>Goodenia armittiana</i>	0.1	40 cm	AH18-02		<i>Goodenia armittiana</i>	0.1	20 cm		
<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	60 cm	AH18-13						

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Goodenia scaevolina</i>	0.1	110 cm			<i>Goodenia scaevolina</i>	0.1	60 cm		
<i>Gossypium australe</i>	0.1	130 cm	AH18-04	Burrup Peninsula form.	<i>Gossypium australe</i>	0.1	110 cm		
<i>Grevillea refracta</i> subsp. <i>refracta</i>	4	300 cm			<i>Grevillea refracta</i> subsp. <i>refracta</i>	4	300 cm		
<i>Grevillea wickhamii</i>	0.1	70 cm	Sterile.		<i>Grevillea wickhamii</i>	0.1	140 cm		Sterile.
<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	40 cm			<i>Halgnaria solanacea</i> var. <i>solanacea</i>	0.1	30 cm		
					<i>Heliotropium glabellum</i>	0.1	30 cm	AHR18-02	
<i>Heliotropium pachyphyllum</i>	3	35 cm	AH18-01		<i>Heliotropium pachyphyllum</i>	1	40 cm		
<i>Heliotropium</i> sp.	0.1	30 cm	AH16-13=	Insufficient material for determination.					
<i>Hibiscus leptocladus</i>	0.1	70 cm	AH18-14		<i>Hibiscus leptocladus</i>	0.1	80 cm		
					<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>	0.1	60 cm		
<i>Indigofera monophylla</i>	0.1	45 cm	AH16-03=		<i>Indigofera monophylla</i>	0.1	60 cm		
<i>Isotropis atropurpurea</i>	0.1	60 cm			<i>Isotropis atropurpurea</i>	0.1	60 cm		
<i>Jasminum didymum</i> subsp. <i>lineare</i>	0.1	140 cm			<i>Jasminum didymum</i> subsp. <i>lineare</i>	0.1	60 cm		
					<i>Leptosema anomalum</i>	0.1	30 cm		
<i>Paraneurachne muelleri</i>	0.1	50 cm			<i>Paraneurachne muelleri</i>	0.1	40 cm		
<i>Paspalidium rarum</i>	0.1	30 cm	AH18-15		<i>Paspalidium rarum</i>	0.1	10 cm		
<i>Polycarpaea corymbosa</i> var. <i>corymbosa</i>	0.1	20 cm							
<i>Ptilotus astrolasius</i>	0.1	50 cm							
<i>Ptilotus calostachyus</i>	0.1	80 cm			<i>Ptilotus calostachyus</i>	0.1	60 cm		
<i>Ptilotus fusiformis</i>	0.1	35 cm			<i>Ptilotus fusiformis</i>	0.1	60 cm		
<i>Scaevola browniana</i> subsp. <i>browniana</i>	3	50 cm	AH16-08=		<i>Scaevola browniana</i> subsp. <i>browniana</i>	2	30 cm		
<i>Sida arenicola</i>	0.1	120 cm	AH18-09	White indumentum form.	<i>Sida arenicola</i>	0.1	180 cm		White indumentum form.
<i>Solanum dioicum</i>	0.1	70 cm	AH18-06		<i>Solanum dioicum</i>	0.1	80 cm		
<i>Solanum diversiflorum</i>	0.1	30 cm			<i>Solanum diversiflorum</i>	0.1	40 cm		
<i>Tephrosia rosea</i> var. <i>clementii</i>	0.1	100 cm	AH18-05		<i>Tephrosia rosea</i> var. <i>clementii</i>	0.1	130 cm		
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	0.1	35 cm			<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	0.1	35 cm		
<i>Trigastrotheca molluginea</i>	0.1	20 cm			<i>Trigastrotheca molluginea</i>	0.1	10 cm		
<i>Triodia epactia</i>	15	50 cm			<i>Triodia epactia</i>	18	60 cm		
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	10 cm	AH16-16=						



2017



2018

Asian Hub Phase 1 & 2	Site	AH19			
Described by	CEFPL / MM/BMa	Date	28-Aug-17 / 20-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	291371 mE	7760788 mN		121.002834 °E -20.239150 °S
Habitat	Low rocky rise, gently sloping to the SE.				
Rock Type	Laterite: cobbles (1-25%), pebbles (51-75%) and gravel (1-25%).				
Vegetation	Phase 1: Acacia hilliana low shrubland over Triodia epactia open hummock grassland with Fimbristylis simulans scattered sedges. Phase 2: Acacia hilliana low shrubland over Triodia epactia open hummock grassland.				
Veg Condition	Excellent.				
Fire Age	Burnt 1-2 years ago?				
Notes	Phase 1: Smaller Triodia hummocks than other lateritic sites sampled. Scattered tall shrubs of Hakea chordophylla, Acacia inaequilatera in wider landscape. Phase 2: Dampiera candidans not seen in 2018.				

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
Acacia adoxa var. adoxa	0.1	45 cm			Acacia adoxa var. adoxa	0.1	45 cm		
Acacia hilliana	22	40 cm			Acacia hilliana	22	40 cm		
Acacia monticola	0.1	160 cm			Acacia monticola	0.1	160 cm		
Calytrix carinata	0.1	80 cm	AH19-04	'Form 2 - longer leaves'.	Calytrix carinata	0.1	80 cm	AH19-04	'Form 2 - longer leaves'.
Dampiera candidans	0.1	80 cm			Fimbristylis simulans	0.1	20 cm	AH19-02	
Fimbristylis simulans	2	20 cm	AH19-02		Goodenia scaevolina	0.1	30 cm		
Goodenia scaevolina	0.1	30 cm		Dead.	Grevillea wickhamii	0.1	60 cm		
Grevillea wickhamii	0.1	60 cm		Sterile juvenile.	Ptilotus calostachyus	0.1	60 cm		Sterile juvenile.
Ptilotus calostachyus	0.1	60 cm			Scaevola browniana subsp. browniana	0.1	40 cm	AH19-03	
Scaevola browniana subsp. browniana	0.1	40 cm	AH19-03		Triodia epactia	15	30 cm	AH19-01	
Triodia epactia	12	30 cm	AH19-01						



2017



2018

Asian Hub Phase 1 & 2	Site	AH20			
Described by	MM/PA / MM/BMa	Date	28-Aug-17 / 20-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	292159 mE	7761391 mN		121.010444 °E -20.233790 °S
Habitat	Crest of low undulating lateritic rise.				
Soil	Pink-red pindan sand.				
Rock Type	30% cover of lateritic pebbles and gravel.				
Vegetation	Grevillea refracta subsp. refracta scattered tall shrubs over Acacia adoxa var. adoxa, (<i>A. hilliana</i>) low shrubland over Triodia epactia open hummock grassland.				
Veg Condition	Excellent. Very old track through quadrat to old borrow pit to SW, but this does not affect vegetation condition.				
Fire Age	Burnt 2-3 years ago.				
Notes	Phase 2: <i>Cassytha capillaris</i> , <i>Ptilotus fusiformis</i> , <i>Trianthema pilosum</i> , <i>Yakirra australiensis</i> var. <i>australiensis</i> not seen in 2018.				

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Acacia adoxa</i> var. <i>adoxia</i>	12	40 cm			<i>Acacia adoxa</i> var. <i>adoxia</i>	12	40 cm		
<i>Acacia hilliana</i>	3	40 cm			<i>Acacia hilliana</i>	5	40 cm		
<i>Amphipogon sericeus</i>	0.1	30 cm			<i>Amphipogon sericeus</i>	0.1	30 cm		
					<i>Bonamia oblongifolia</i>	0.1	30 cm	AHR13-01=	
					<i>Bulbostylis barbata</i>	0.1	15 cm		
<i>Calytrix carinata</i>	0.1	50 cm		'Form 2 - longer leaves'.	<i>Calytrix carinata</i>	0.1	25 cm		'Form 2 - longer leaves'.
<i>Cassytha capillaris</i>	0.1	15 cm							
					<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	30 cm		
<i>Fimbristylis simulans</i>	0.1	25 cm			<i>Fimbristylis simulans</i>	0.1	25 cm		
<i>Goodenia scaevolina</i>	0.1	35 cm			<i>Goodenia scaevolina</i>	0.1	35 cm		
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.3	280 cm			<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.5	280 cm		
<i>Grevillea wickhamii</i>	0.1	100 cm		Sterile.	<i>Grevillea wickhamii</i>	0.1	100 cm		Sterile.
<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	25 cm			<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	20 cm	AHR10-02=	
<i>Hybanthus aurantiacus</i>	0.1	70 cm			<i>Hybanthus aurantiacus</i>	0.1	70 cm		
<i>Polycarphaea corymbosa</i> var. <i>corymbosa</i>	0.1	20 cm			<i>Polycarphaea corymbosa</i> var. <i>corymbosa</i>	0.1	20 cm		Dead.
<i>Ptilotus astrolasius</i>	0.1	35 cm	AH20-02		<i>Ptilotus astrolasius</i>	0.1	35 cm	AH20-02	
<i>Ptilotus calostachyus</i>	0.1	70 cm			<i>Ptilotus calostachyus</i>	0.1	70 cm		
<i>Ptilotus fusiformis</i>	0.1	30 cm							
<i>Seringia</i> sp.	0.1	50 cm	AH20-01	N=50 adults. Sterile; det. by Carol Wilkins.	<i>Seringia</i> sp.	0.1	50 cm		Sterile.
<i>Trianthema pilosum</i>	0.1	25 cm							
<i>Trigastrotheca molluginea</i>	0.1	20 cm			<i>Trigastrotheca molluginea</i>	0.1	20 cm		
<i>Triodia epactia</i>	18	30 cm			<i>Triodia epactia</i>	18	30 cm		
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	15 cm							



2017



2018

Asian Hub Phase 1 & 2	Site	AH21			
Described by	CEFPL / MM/BMa	Date	28-Aug-17 / 20-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	293170 mE	7762517 mN		121.020246 °E -20.223731 °S
Habitat		Crest and slopes of low aeolian dune within broader pindan plain.			
Soil		Dark reddish brown sand.			
Rock Type		N/A.			
Vegetation		Acacia anaticeps, A. eriopoda tall open shrubland over Grevillea eriostachya scattered shrubs over Gompholobium simplicifolium, Androcalva loxophylla, Cyanostegia cyanocalyx, Dampiera cinerea, Jacksonia aculeata low open shrubland over Triodia schinzii open hummock grassland.			
Veg Condition		Excellent.			
Fire Age		No sign of recent fire.			
Notes		Not recorded in 2018: Yakirra australiensis var. australiensis.			

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Acacia anaticeps</i>	4	400 cm	AH21-03		<i>Acacia anaticeps</i>	4	400 cm	AH21-03	
					<i>Acacia colei</i> var. <i>colei</i>	0.1	130 cm		
<i>Acacia drepanocarpa</i> subsp. <i>drepanocarpa</i>	0.1	70 cm	AH21-08		<i>Acacia drepanocarpa</i> subsp. <i>drepanocarpa</i>	0.1	70 cm	AH21-08	
<i>Acacia eriopoda</i>	3	300 cm	AH21-02		<i>Acacia eriopoda</i>	3	300 cm	AH21-02	
<i>Acacia sericophylla</i>	0.1	200 cm			<i>Acacia sericophylla</i>	0.1	200 cm		
<i>Androcalva loxophylla</i>	2	50 cm	AH21-04		<i>Androcalva loxophylla</i>	2	50 cm	AH21-04	
<i>Bonamia erecta</i>	0.1	40 cm			<i>Bonamia erecta</i>	0.1	40 cm		
<i>Calytrix carinata</i>	0.1	130 cm	AH21-10	'Form 1 - short leaves'.	<i>Calytrix carinata</i>	0.1	130 cm	AH21-10	'Form 1 - short leaves'.
					<i>Cassytha capillaris</i>	0.1	30 cm		
<i>Cullen corallum</i>	0.5	180 cm	AH21-09		<i>Cullen corallum</i>	0.1	180 cm	AH21-09	
<i>Cyanostegia cyanocalyx</i>	1	90 cm	AH21-13		<i>Cyanostegia cyanocalyx</i>	1	90 cm	AH21-13	
					<i>Cyperus conicus</i>	0.1	60 cm		
<i>Dampiera cinerea</i>	1	50 cm	AH21-05		<i>Dampiera cinerea</i>	1	50 cm	AH21-05	
<i>Dodonaea coriacea</i>	0.1	100 cm			<i>Dodonaea coriacea</i>	0.1	100 cm		
					<i>Eragrostis eriopoda</i>	0.1	60 cm		
<i>Erythrophleum chlorostachys</i>	0.5	80 cm			<i>Erythrophleum chlorostachys</i>	0.1	80 cm		
<i>Gompholobium simplicifolium</i>	3	50 cm	AH21-06	Red flowers.	<i>Gompholobium simplicifolium</i>	3	50 cm	AH21-06	
<i>Grevillea eriostachya</i>	1	160 cm			<i>Grevillea eriostachya</i>	1	160 cm		
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	300 cm			<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	300 cm		
<i>Grevillea wickhamii</i> subsp. <i>macrodonta</i>	0.1	250 cm	AH21-07		<i>Grevillea wickhamii</i> subsp. <i>macrodonta</i>	0.1	250 cm	AH21-07	
<i>Gyrostemon tepperi</i>	0.1	50 cm			<i>Gyrostemon tepperi</i>	0.1	50 cm		
<i>Hybanthus aurantiacus</i>	0.1	120 cm			<i>Hybanthus aurantiacus</i>	0.1	120 cm		
<i>Jacksonia aculeata</i>	1	60 cm			<i>Jacksonia aculeata</i>	1	60 cm		
<i>Ptilotus arthrolasius</i>	0.1	25 cm	AH21-12		<i>Ptilotus arthrolasius</i>	0.1	25 cm	AH21-12	
<i>Trianthema pilosum</i>	0.1	25 cm			<i>Trianthema pilosum</i>	0.1	25 cm		
					<i>Tribulopis marliesiae</i>	0.1	30 cm		N=3.
<i>Triodia schinzii</i>	15	40 cm	AH21-01		<i>Triodia schinzii</i>	15	40 cm	AH21-01	
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	20 cm	AH21-11						



2017



2018

Asian Hub Phase 1		Site	AH22
Described by	MM/PA	Date	28-Aug-17
MGA Zone	51	296514 mE	7765863 mN
Habitat	Crest of low pindan dune.		
Soil	Pink-red pindan sand.		
Rock Type	N/A.		
Vegetation	Erythrophleum chlorostachys scattered low trees (resprouting) over Acacia tumida var. <i>kulparn</i> , (Grevillea refracta subsp. <i>refracta</i>) tall open shrubland over Dampiera cinerea, (Gompholobium simplicifolium, Jacksonia aculeata) low open shrubland over Triodia schinzii open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	Burnt 3-5 years ago.		

Species	Cover	Height	Specimen	Notes
<i>Acacia eriopoda</i>	0.5	230 cm	AH22-13	
<i>Acacia tumida</i> var. <i>kulparn</i>	3	190 cm	AH22-01	
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	55 cm		Terete leaves.
<i>Bonamia alatisemina</i>	0.1	10 cm	AH22-11	
<i>Bonamia erecta</i>	0.1	20 cm	AH22-10	
<i>Bulbostylis barbata</i>	0.1	15 cm		
<i>Calytrix carinata</i>	0.1	90 cm		
<i>Cassytha capillaris</i>	0.1	50 cm		
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	30 cm		
<i>Cyanostegia cyanocalyx</i>	0.1	180 cm	AH22-09	
<i>Dampiera cinerea</i>	2	40 cm	AH22-03	
<i>Dodonaea coriacea</i>	0.1	80 cm		
<i>Erythrophleum chlorostachys</i>	0.1	230 cm		
<i>Euphorbia psilosperma</i>	0.1	10 cm	AH22-06	
<i>Gompholobium simplicifolium</i>	0.1	60 cm		Red flowers.
<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	50 cm		
<i>Grevillea eriostachya</i>	0.1	20 cm		
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	400 cm		
<i>Grevillea wickhamii</i>	0.1	160 cm		Sterile.
<i>Hakea macrocarpa</i>	0.1	170 cm	AH22-15	
<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	40 cm	AH22-14	
<i>Heliotropium transforme</i>	0.1	40 cm	AH06-09=	
<i>Jacksonia aculeata</i>	0.1	40 cm		
<i>Oldenlandia pterospora</i>	0.1	20 cm	AH22-05	
<i>Pimelea ammonocharis</i>	0.1	100 cm	AH22-08	
<i>Ptilotus arthrolasioides</i>	0.1	20 cm		
<i>Scaevola parvifolia</i>	0.1	15 cm		Sterile.
<i>Seringia elliptica</i>	0.1	50 cm	AH22-04	N=78 plants. Confirmed by Carol Wilkins.
<i>Solanum diversiflorum</i>	0.1	30 cm		
<i>Terminalia kumpajia</i>	0.5	250 cm	AH22-02	N=1; in flower and fruit.
<i>Tinospora smilacina</i>	0.1	40 cm		
<i>Trianthema pilosum</i>	0.1	30 cm		
<i>Tribulopis marliesiae</i>	0.1	25 cm		N=1; in flower.
<i>Triodia epactia</i>	0.1	40 cm	AH22-07	
<i>Triodia schinzii</i>	13	50 cm		
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	10 cm	AH22-12	



Asian Hub Phase 1 & 2	Site	AH23			
Described by	CEFPL / PLSW	Date	29-Aug-17 / 19-Mar-18	Type	Quadrat 40x62.5m
MGA Zone	51	335445 mE	7756657 mN		121.424234 °E -20.280761 °S
Habitat	Crest and slopes of low dune in broad pindan plain.				
Soil	Dark reddish brown sand.				
Rock Type	N/A.				
Vegetation	Phase 1: <i>Acacia anaticeps</i> , (<i>Grevillea stenobotrya</i> , <i>G. wickhamii</i> subsp. <i>macrodonta</i>) tall open shrubland over <i>Cyanostegia cyanocalyx</i> , <i>Dicrastylis doranii</i> , <i>Gompholobium simplicifolium</i> , <i>Dampiera cinerea</i> low open shrubland over <i>Triodia schinzii</i> very open hummock grassland. Phase 2: <i>Acacia anaticeps</i> , (<i>Grevillea stenobotrya</i> , <i>G. wickhamii</i> subsp. <i>macrodonta</i> , <i>A. tumida</i> var. <i>kulparn</i>) tall open shrubland over <i>Cyanostegia cyanocalyx</i> , <i>Dicrastylis doranii</i> , <i>Gompholobium simplicifolium</i> , <i>Dampiera cinerea</i> low open shrubland over <i>Triodia schinzii</i> very open hummock grassland.				
Veg Condition	Excellent.				
Fire Age	No sign of recent fire.				

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Acacia anaticeps</i>	3	400 cm	AH23-06		<i>Acacia anaticeps</i>	3	400 cm		
<i>Acacia sericophylla</i>	0.1	140 cm			<i>Acacia sericophylla</i>	0.1	140 cm		
<i>Acacia tumida</i> var. <i>kulparn</i>	1	30 cm	AH23-13		<i>Acacia tumida</i> var. <i>kulparn</i>	1	110 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	35 cm			<i>Aristida holathera</i> var. <i>holathera</i>	1	50 cm		
<i>Calytrix carinata</i>	0.1	80 cm	AH23-03	'Form 1 - short leaves'.	<i>Calytrix carinata</i>	0.1	50 cm		'Form 1 - short leaves'.
<i>Cassytha capillaris</i>	0.1	35 cm	AH23-08		<i>Cassytha capillaris</i>	0.1	40 cm		
<i>Cyanostegia cyanocalyx</i>	3	100 cm	AH23-05		<i>Cyanostegia cyanocalyx</i>	3	100 cm		
<i>Dampiera cinerea</i>	0.5	30 cm	AH23-04		<i>Dampiera cinerea</i>	1	35 cm		
<i>Dicrastylis doranii</i>	2	40 cm	AH23-12		<i>Dicrastylis doranii</i>	2	40 cm		
<i>Eragrostis eriopoda</i>	0.1	40 cm	AH23-11		<i>Eragrostis eriopoda</i>	0.1	40 cm		
<i>Erythrophleum chlorostachys</i>	0.1	80 cm			<i>Erythrophleum chlorostachys</i>	0.1	120 cm		
<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	0.5	500 cm			<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	0.5	500 cm		
<i>Gompholobium simplicifolium</i>	1.5	50 cm	AH21-06=	Red flowers.	<i>Gompholobium simplicifolium</i>	1.5	50 cm		
<i>Grevillea stenobotrya</i>	1.5	220 cm	AH23-01		<i>Grevillea stenobotrya</i>	1.5	220 cm		
<i>Grevillea wickhamii</i> subsp. <i>macrodonta</i>	1	230 cm	AH23-02		<i>Grevillea wickhamii</i> subsp. <i>macrodonta</i>	1	230 cm		
<i>Jacksonia aculeata</i>	0.1	90 cm			<i>Jacksonia aculeata</i>	0.1	50 cm		
<i>Newcastelia cladotricha</i>	0.1	60 cm	AH23-10		<i>Newcastelia cladotricha</i>	0.5	60 cm	AHR23-02	
<i>Paractaenum refractum</i>	0.1	30 cm	AH23-15						
<i>Polycarpaea longiflora</i>	0.1	30 cm	AH23-07		<i>Polycarpaea longiflora</i>	0.1	30 cm		
<i>Ptilotus arthrolasius</i>	0.1	20 cm	AH21-12=						
<i>Sida</i> sp. Western sand dunes (P.K. Latz 11980)	0.1	140 cm	AH23-16		<i>Sida</i> sp. Western sand dunes (P.K. Latz 11980)	0.1	180 cm	AHR23-01	
<i>Spermacoce occidentalis</i>	0.1	25 cm	AH23-09		<i>Spermacoce occidentalis</i>	0.1	20 cm		
<i>Trianthema pilosum</i>	0.1	20 cm			<i>Trianthema pilosum</i>	0.1	15 cm		
<i>Triodia schinzii</i>	8	40 cm	AH21-01=		<i>Triodia schinzii</i>	8	30 cm		



2017



2018

Asian Hub Phase 1	Site	AH24
Described by	MM/PA	Date 29-Aug-17
MGA Zone	51	338147 mE 7753026 mN 121.449775 °E -20.313790 °S
Habitat	Low-lying flat swale area between two parallel low dunes.	
Soil	Pink pindan sand.	
Rock Type	N/A.	
Vegetation	<i>Grevillea wickhamii</i> subsp. <i>macrodonta</i> scattered shrubs over <i>Dampiera cinerea</i> , (<i>Acacia stellaticeps</i> , <i>Dicrastylis doranii</i>) low shrubland.	
Veg Condition	Excellent.	
Fire Age	Burnt 3-5 years ago.	

Species	Cover	Height	Specimen	Notes
<i>Acacia stellaticeps</i>	2	60 cm		
<i>Acacia tumida</i> var. <i>kulparn</i>	0.1	100 cm		
<i>Amphipogon sericeus</i>	0.1	25 cm	AH24-07	Sterile.
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	60 cm		Terete leaves.
<i>Calytrix carinata</i>	0.1	70 cm		
<i>Cassytha capillaris</i>	0.1	20 cm		
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	25 cm		
<i>Cyanostegia cyanocalyx</i>	0.1	80 cm		
<i>Dampiera cinerea</i>	0.1	40 cm		
<i>Dicrastylis doranii</i>	2	30 cm	AH24-05	
<i>Eragrostis eriopoda</i>	0.1	30 cm		
<i>Erythrophleum chlorostachys</i>	0.1	120 cm		
<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	0.1	210 cm		
<i>Gompholobium simplicifolium</i>	9	50 cm		Red flowers.
<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	30 cm		
<i>Grevillea eriostachya</i>	0.1	50 cm		
<i>Grevillea wickhamii</i> subsp. <i>macrodonta</i>	0.5	180 cm	AH24-03	
<i>Gyrostemon tepperi</i>	0.1	30 cm		
<i>Jacksonia aculeata</i>	0.1	60 cm		
<i>Newcastelia cladotrichia</i>	0.1	120 cm	AH24-06	
<i>Oldenlandia pterospora</i>	0.1	15 cm	AH24-02	
<i>Owenia reticulata</i>	0.1	600 cm		
<i>Polygala isingii</i>	0.1	10 cm	AH24-01	
<i>Ptilotus arthrolasius</i>	0.1	25 cm		
<i>Tinospora smilacina</i>	0.1	10 cm		
<i>Trianthema pilosum</i>	0.1	10 cm		
<i>Trigastrotheca molluginea</i>	0.1	15 cm		
<i>Triodia schinzii</i>	0.1	25 cm	AH24-04	



2017

Asian Hub Phase 1 & 2	Site	AH25			
Described by	CEFPL / MM/BMa	Date	29-Aug-17 / 19-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	338761 mE	7766020 mN		121.456814 °E -20.196466 °S
Habitat	Broad expanse of pindan plain.				
Soil	Orange brown sand.				
Rock Type	N/A.				
Vegetation	Phase 1: <i>Grevillea refracta</i> subsp. <i>refracta</i> , <i>Acacia ancistrocarpa</i> , <i>A. orthocarpa</i> tall open shrubland over <i>A. monticola</i> scattered shrubs over <i>Triodia epactia</i> open hummock grassland. Phase 2: <i>Grevillea refracta</i> subsp. <i>refracta</i> , <i>Acacia ancistrocarpa</i> , (<i>A. orthocarpa</i>) tall open shrubland over <i>A. monticola</i> scattered shrubs over <i>Triodia epactia</i> open hummock grassland.				
Veg Condition	Excellent.				
Fire Age	Burnt 3-5 years ago / No sign of recent fire.				
Notes	Phase 1: <i>Erythrophleum chlorostachys</i> scattered shrubs also in wider landscape.				

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Acacia adoxa</i> var. <i>adoxa</i>	0.1	30 cm			<i>Acacia adoxa</i> var. <i>adoxa</i>	0.1	55 cm		
<i>Acacia ancistrocarpa</i>	3	220 cm			<i>Acacia ancistrocarpa</i>	3	220 cm		
<i>Acacia colei</i> var. <i>colei</i>	0.1	Not recorded.			<i>Acacia colei</i> var. <i>colei</i>	0.1	70 cm		
<i>Acacia monticola</i>	2	170 cm			<i>Acacia monticola</i>	2	170 cm		
<i>Acacia orthocarpa</i>	1	210 cm	AH25-01		<i>Acacia orthocarpa</i>	1	210 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	40 cm			<i>Aristida holathera</i> var. <i>holathera</i>	0.1	50 cm		
<i>Bonamia alatisemina</i>	0.1	10 cm			<i>Bonamia alatisemina</i>	0.1	40 cm		
<i>Bulbostylis barbata</i>	0.1	20 cm			<i>Bulbostylis barbata</i>	0.1	20 cm		
<i>Cassytha capillaris</i>	0.1	20 cm	AH23-08=		<i>Cassytha capillaris</i>	0.1	45 cm		
					<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	40 cm		
<i>Dodonaea coriacea</i>	0.1	70 cm			<i>Dodonaea coriacea</i>	0.1	80 cm		
					<i>Eragrostis eriopoda</i>	0.1	30 cm		
<i>Eriachne lanata</i>	0.1	40 cm			<i>Eriachne lanata</i>	0.1	50 cm		
<i>Eulalia aurea</i>	0.1	40 cm			<i>Eulalia aurea</i>	0.1	70 cm		
					<i>Euphorbia psilosperma</i>	0.1	25 cm	AHR25-01	
<i>Goodenia armittiana</i>	0.1	30 cm	AH25-07		<i>Goodenia armittiana</i>	0.1	30 cm	AHR25-03	
<i>Grevillea refracta</i> subsp. <i>refracta</i>	2	400 cm			<i>Grevillea refracta</i> subsp. <i>refracta</i>	2	400 cm		
					<i>Hibiscus leptocladius</i>	0.1	40 cm		
<i>Jacksonia aculeata</i>	0.1	50 cm	AH25-03		<i>Jacksonia aculeata</i>	0.1	45 cm		
<i>Phyllanthus eremicus</i>	0.1	30 cm	AH25-02	N=9.	<i>Phyllanthus eremicus</i>	0.1	40 cm		
<i>Polygala isingii</i>	0.1	10 cm	AH25-06		<i>Polygala isingii</i>	0.1	20 cm	AHR25-02	
<i>Ptilotus astrolasius</i>	0.1	30 cm			<i>Ptilotus astrolasius</i>	0.1	60 cm		
<i>Ptilotus calostachyus</i>	0.1	50 cm			<i>Ptilotus calostachyus</i>	0.1	80 cm		
					<i>Sida arenicola</i>	0.1	100 cm		White indumentum form.
<i>Sida arenicola</i>	0.1	160 cm	AH25-04	Ferruginous form.	<i>Sida arenicola</i>	0.1	170 cm		Ferruginous form.
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	130 cm			<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	120 cm		
<i>Tribulopis marliesiae</i>	0.1	10 cm		N=1, poor condition.	<i>Tribulopis marliesiae</i>	0.1	30 cm		N=1.

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Trigastrotheca molluginea</i>	0.1	10 cm			<i>Trigastrotheca molluginea</i>	0.1	25 cm		
<i>Triodia epactia</i>	23	40 cm	AH25-05		<i>Triodia epactia</i>	23	50 cm		
<i>Velleia panduriformis</i>	0.1	20 cm							
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	10 cm	AH25-08		<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	15 cm		



2017



2018

Asian Hub Phase 1 & 2	Site	AH26			
Described by	MM/PA/ PLSW	Date	29-Aug-17 / 19-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	337713 mE	7763222 mN		121.446536 °E -20.221653 °S
Habitat	Pindan plain.				
Soil	Pink-orange pindan sand.				
Rock Type	N/A.				
Vegetation	Owenia reticulata, Gardenia pyriformis subsp. keartlandii scattered low trees over Acacia eriopoda, (Grevillea eriostachya) tall open shrubland over Goodenia azurea subsp. hesperia scattered low shrubs over Triodia schinzii, (T. epactia) open hummock grassland.				
Veg Condition	Phase 1: Excellent: camel scats present but no signs of grazing.		Phase 2: Excellent.		
Fire Age	No sign of recent fire.				

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Acacia anaticeps</i>	0.1	230 cm			<i>Acacia anaticeps</i>	0.1	260 cm		
<i>Acacia eriopoda</i>	4	370 cm	AH26-01		<i>Acacia eriopoda</i>	4	370 cm		
<i>Acacia sericophylla</i>	0.1	150 cm			<i>Acacia sericophylla</i>	0.1	180 cm		
<i>Acacia stellaticeps</i>	0.1	60 cm			<i>Acacia stellaticeps</i>	0.1	50 cm		
<i>Androcalva loxophylla</i>	0.1	35 cm			<i>Androcalva loxophylla</i>	0.1	45 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	45 cm			<i>Aristida holathera</i> var. <i>holathera</i>	0.1	40 cm		
<i>Boerhavia gardneri</i>	0.1	20 cm			<i>Boerhavia gardneri</i>	0.1	5 cm	AHR26-04	
<i>Bonamia alatisemina</i>	0.1	10 cm	AH26-03		<i>Bonamia alatisemina</i>	0.1	10 cm		
<i>Bulbostylis barbata</i>	0.1	20 cm			<i>Bulbostylis barbata</i>	0.1	10 cm		
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	25 cm			<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	20 cm		
<i>Codonocarpus cotinifolius</i>	0.1	60 cm							
<i>Dodonaea hispidula</i> var. <i>arida</i>	0.1	150 cm			<i>Dodonaea hispidula</i> var. <i>arida</i>	0.1	160 cm		
					<i>Eragrostis eriopoda</i>	0.1	40 cm		
<i>Eriachne lanata</i>	0.1	60 cm	AH26-07		<i>Eriachne lanata</i>	0.1	40 cm		
<i>Eriachne obtusa</i>	0.1	40 cm			<i>Eriachne obtusa</i>	0.1	30 cm	AHR26-03	Sens. lat.
<i>Erythrophleum chlorostachys</i>	0.1	210 cm			<i>Erythrophleum chlorostachys</i>	0.1	210 cm		
<i>Euphorbia psilosperma</i>	0.1	15 cm	AH26-02		<i>Euphorbia psilosperma</i>	0.1	10 cm	AHR26-01	
<i>Fimbristylis simulans</i>	0.1	25 cm							
<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	0.5	390 cm			<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	0.5	390 cm		
<i>Gompholobium simplicifolium</i>	0.1	110 cm		Red flowers.	<i>Gompholobium simplicifolium</i>	0.1	60 cm		
<i>Goodenia armitiana</i>	0.1	20 cm	AH26-05						
<i>Goodenia azurea</i> subsp. <i>hesperia</i>	1	40 cm			<i>Goodenia azurea</i> subsp. <i>hesperia</i>	2	20 cm		
<i>Grevillea eriostachya</i>	1	250 cm			<i>Grevillea eriostachya</i>	1	200 cm		
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	380 cm			<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	380 cm		
<i>Gyrostemon tepperi</i>	0.1	110 cm			<i>Gyrostemon tepperi</i>	0.1	80 cm		
<i>Jacksonia aculeata</i>	0.1	60 cm			<i>Jacksonia aculeata</i>	0.1	70 cm		
<i>Oldenlandia pterospora</i>	0.1	20 cm	AH24-02=						
<i>Owenia reticulata</i>	1	700 cm			<i>Owenia reticulata</i>	1	700 cm		
<i>Polygala isingii</i>	0.1	15 cm	AH26-09		<i>Polygala isingii</i>	0.1	15 cm	AHR26-02	
<i>Ptilotus astrolasius</i>	0.1	40 cm			<i>Ptilotus astrolasius</i>	0.1	45 cm		
<i>Sida</i> sp. Pindan (B.G. Thomson 3398)	0.1	40 cm	AH26-06		<i>Sida</i> sp. Pindan (B.G. Thomson 3398)	0.1	60 cm		
<i>Solanum diversiflorum</i>	0.1	20 cm							
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	30 cm	AH26-04		<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	60 cm		

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Tephrosia</i> sp. D Kimberley Flora (R.D. Royce 1848)	0.1	35 cm	AH26-08		<i>Tephrosia</i> sp. D Kimberley Flora (R.D. Royce 1848)	0.1	20 cm		
<i>Trianthema pilosum</i>	0.1	20 cm			<i>Trianthema pilosum</i>	0.1	10 cm		
<i>Trigastrotheca molluginea</i>	0.1	7 cm			<i>Trigastrotheca molluginea</i>	0.1	20 cm		
<i>Triodia epactia</i>	2	60 cm			<i>Triodia epactia</i>	2	60 cm		
<i>Triodia schinzii</i>	15	60 cm			<i>Triodia schinzii</i>	15	60 cm		
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	5 cm			<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	20 cm		
					<i>Zornia chaetophora</i>	0.1	35 cm		



2017



2018

Asian Hub Phase 1		Site	AH27
Described by	CEPPL	Date	29-Aug-17
MGA Zone	51	335977 mE	7769258 mN
Habitat	South-facing slope and crest of rocky outcrop.		
Soil	Red-brown sandy loam.		
Rock Type	Laterite; outcropping (26-50%), large boulders (26-50%), boulders (1-25%), cobbles (1-25%), pebbles (1-25%), gravel (1-25%).		
Vegetation	Ficus brachypoda low open woodland over Acacia monticola tall open shrubland over Solanum dioicum, (Ptilotus incanus) low open shrubland over Triodia epactia open hummock grassland with Pterocaulon serrulatum var. velutinum scattered herbs.		
Veg Condition	Excellent to Very Good: scattered *Bidens bipinnata.		
Fire Age	Burnt 3-5 years ago.		
Notes	Very rocky, and with several logs and branches scattered over the surface.		

Species	Cover	Height	Specimen	Notes
<i>Abutilon otocarpum</i>	0.1	40 cm		
<i>Acacia colei</i> var. <i>colei</i>	0.1	220 cm	AH27-11	
<i>Acacia monticola</i>	5	300 cm		
<i>Amaranthus undulatus</i>	0.1	30 cm	AH27-08	
* <i>Bidens bipinnata</i>	0.1	30 cm		N=3 plants.
<i>Bulbostylis barbata</i>	0.1	10 cm		
<i>Cleome viscosa</i>	0.1	60 cm		Dead.
<i>Cucumis variabilis</i>	0.1	10 cm		
<i>Cyperus ? cunninghamii</i>	0.1	20 cm	AH27-06	
<i>Eriachne ciliata</i>	0.1	25 cm		
<i>Eriachne lanata</i>	0.1	30 cm		
<i>Ficus brachypoda</i>	4	550 cm		
<i>Gomphrena cunninghamii</i>	0.1	10 cm		
<i>Grevillea wickhamii</i> subsp. <i>macrodonta</i>	0.1	170 cm	AH27-12	
<i>Oldenlandia crouchiana</i>	0.1	15 cm	AH27-09	
<i>Paspalidium tabulatum</i>	0.1	35 cm	AH27-05	
<i>Polycarpaea corymbosa</i> var. <i>corymbosa</i>	0.1	10 cm		
<i>Pterocaulon serrulatum</i> var. <i>velutinum</i>	1	50 cm	AH27-07	
<i>Ptilotus incanus</i>	1	20 cm	AH27-02	
<i>Senna notabilis</i>	0.1	120 cm	AH27-10	
<i>Sida arenicola</i>	0.1	150 cm	AH27-13	Ferruginous form.
<i>Solanum dioicum</i>	3	30 cm		
<i>Solanum horidum</i>	0.1	30 cm	AH27-14	
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	190 cm		
<i>Trigastrotheca molluginea</i>	0.1	10 cm		
<i>Triodia epactia</i>	15	35 cm		
<i>Triumfetta incana</i>	0.1	25 cm	AH27-03	



2017

Asian Hub Phase 1 & 2	Site	AH28			
Described by	MM/PA / MM/BMa	Date	29-Aug-17 / 19-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	330803 mE	7730791 mN	121.377351 °E	-20.513993 °S
Habitat	Broad undulating pindan plain.				
Soil	Pink-orange pindan sand.				
Rock Type	N/A.				
Vegetation	Phase 1: <i>Corymbia zygophylla</i> low open woodland over <i>Gompholobium simplicifolium</i> , <i>Jacksonia aculeata</i> , <i>Dampiera cinerea</i> low open shrubland over <i>Triodia schinzii</i> very open hummock grassland. Phase 2: <i>Corymbia zygophylla</i> low open woodland over <i>Gompholobium simplicifolium</i> , <i>Jacksonia aculeata</i> , <i>Dampiera cinerea</i> , <i>Dicrastylis doranii</i> low open shrubland over <i>Triodia schinzii</i> very open hummock grassland.				
Veg Condition	Excellent.				
Fire Age	Burnt 3-5 years ago.				
Notes	Phase 2: <i>Acacia eriopoda</i> , <i>Cucumis variabilis</i> , <i>Grevillea wickhamii</i> , <i>Yakirra australiensis</i> var. <i>australiensis</i> not seen in 2018.				

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Acacia anaticeps</i>	0.1	170 cm			<i>Acacia anaticeps</i>	0.1	170 cm		
<i>Acacia eriopoda</i>	0.1	30 cm			<i>Acacia sericophylla</i>	0.1	150 cm		
<i>Acacia sericophylla</i>	0.1	150 cm			<i>Acacia stellaticeps</i>	0.1	40 cm		
<i>Acacia stellaticeps</i>	0.1	40 cm			<i>Androcalva loxophylla</i>	0.1	40 cm		
<i>Androcalva loxophylla</i>	0.1	40 cm	AH28-04		<i>Aristida holathera</i> var. <i>holathera</i>	0.1	35 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	35 cm			<i>Calytrix carinata</i>	0.1	55 cm		
<i>Calytrix carinata</i>	0.1	55 cm			<i>Cassytha capillaris</i>	0.1	40 cm		
<i>Cassytha capillaris</i>	0.1	40 cm			<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	40 cm		
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	40 cm			<i>Corymbia zygophylla</i>	2	600 cm		
<i>Corymbia zygophylla</i>	2.5	600 cm			<i>Dampiera cinerea</i>	1	40 cm		
<i>Cucumis variabilis</i>	0.1	20 cm			<i>Dicrastylis doranii</i>	0.1	30 cm		
<i>Dampiera cinerea</i>	1	40 cm			<i>Eragrostis eriopoda</i>	0.1	50 cm		
<i>Dicrastylis doranii</i>	0.1	30 cm			<i>Erythrophleum chlorostachys</i>	0.1	70 cm		
					<i>Gompholobium simplicifolium</i>	1	45 cm		
<i>Erythrophleum chlorostachys</i>	0.1	70 cm			<i>Grevillea eriostachya</i>	0.1	120 cm		
<i>Gompholobium simplicifolium</i>	1	45 cm			<i>Grevillea wickhamii</i>	0.1	60 cm		
<i>Grevillea eriostachya</i>	0.1	120 cm			<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	40 cm	AHR28-01	
<i>Grevillea wickhamii</i>	0.1	60 cm		Sterile.	<i>Indigofera boviperda</i> subsp. <i>eremaea</i>	0.1	25 cm		
<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	40 cm	AH28-02	This specimen has entirely glandular indumentum.	<i>Jacksonia aculeata</i>	1	70 cm		
<i>Indigofera boviperda</i> subsp. <i>eremaea</i>	0.1	25 cm	AH28-01		<i>Oldenlandia pterospora</i>	0.1	20 cm	AHR28-02	
<i>Jacksonia aculeata</i>	1	70 cm			<i>Ptilotus arthrolasius</i>	0.1	25 cm.		
<i>Oldenlandia pterospora</i>	0.1	20 cm			<i>Tephrosia</i> sp. D Kimberley Flora (R.D. Royce 1848)	0.1	30 cm		
<i>Ptilotus arthrolasius</i>	0.1	25 cm			<i>Tinospora smilacina</i>	0.1	5 cm		
<i>Tephrosia</i> sp. D Kimberley Flora (R.D. Royce 1848)	0.1	30 cm	AH28-03		<i>Tribulopis marliesiae</i>	0.1	6 cm		N=2.
<i>Tribulopis marliesiae</i>	0.1	6 cm		N=1.	<i>Triodia schinzii</i>	9	35 cm		
<i>Triodia schinzii</i>	9	35 cm			<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	20 cm		



2017



2018

Asian Hub Phase 1 & 2	Site	AH29			
Described by	CEFL / MM/BMa	Date	30-Aug-17 / 19-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	327017 mE	7724306 mN		121.340421 °E -20.572224 °S
Habitat	Pindan plain, 150m N of a dune.				
Soil	Dark reddish brown sand.				
Rock Type	N/A.				
Vegetation	Acacia platycarpa, (A. tumida var. <i>kulparn</i>) shrubland over <i>Gompholobium simplicifolium</i> , (<i>Dampiera cinerea</i> , <i>Dicrastylis doranii</i>) low open shrubland over <i>Triodia schinzii</i> very open hummock grassland.				
Veg Condition	Excellent.				
Fire Age	Burnt 3-5 years ago.				
Notes	Phase 2: <i>Goodenia sepalosa</i> , <i>Goodenia triodiophila</i> , <i>Yakirra australiensis</i> var. <i>australiensis</i> not seen in 2018.				

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Acacia anaticeps</i>	0.1	210 cm			<i>Acacia anaticeps</i>	0.1	210 cm		
<i>Acacia platycarpa</i>	11	150 cm	AH29-10		<i>Acacia platycarpa</i>	8	150 cm		
					<i>Acacia sericophylla</i>	0.1	60 cm	AHR29-03	Resprouting.
<i>Acacia stellaticeps</i>	0.1	40 cm	AH29-17		<i>Acacia stellaticeps</i>	0.1	40 cm		
<i>Acacia tumida</i> var. <i>kulparn</i>	0.5	170 cm			<i>Acacia tumida</i> var. <i>kulparn</i>	0.1	170 cm	AHR29-01	
<i>Androcalva loxophylla</i>	0.1	40 cm			<i>Androcalva loxophylla</i>	0.1	40 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	30 cm			<i>Aristida holathera</i> var. <i>holathera</i>	0.1	30 cm		
<i>Bonamia alatisemina</i>	0.1	25 cm			<i>Bonamia alatisemina</i>	0.1	25 cm		
<i>Calytrix carinata</i>	0.1	80 cm	AH29-04	'Form 1 - short leaves'.	<i>Calytrix carinata</i>	0.1	80 cm		'Form 1 - short leaves'.
<i>Corynotheca micrantha</i> var. <i>gracilis</i>	0.1	35 cm	AH29-09		<i>Corynotheca micrantha</i> var. <i>gracilis</i>	0.1	35 cm		
<i>Dampiera cinerea</i>	2	40 cm	AH29-01		<i>Dampiera cinerea</i>	1	40 cm		
<i>Dicrastylis doranii</i>	1.5	40 cm	AH29-05		<i>Dicrastylis doranii</i>	0.1	40 cm	AHR31-06=	
<i>Eriachne aristidea</i>	0.1	30 cm	AH29-08		<i>Eriachne aristidea</i>	0.1	30 cm		
<i>Erythrophleum chlorostachys</i>	0.1	130 cm			<i>Erythrophleum chlorostachys</i>	0.1	130 cm		
<i>Gompholobium simplicifolium</i>	4	40 cm		Red flowers.	<i>Gompholobium simplicifolium</i>	2	40 cm		
<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	40 cm	AH29-15		<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	40 cm		
<i>Goodenia triodiophila</i>	0.1	30 cm	AH29-11						
<i>Grevillea wickhamii</i> subsp. <i>hispidula</i>	0.1	150 cm	AH29-14		<i>Grevillea wickhamii</i> subsp. <i>hispidula</i>	0.1	150 cm		
<i>Jacksonia aculeata</i>	0.1	50 cm	AH29-12		<i>Jacksonia aculeata</i>	0.1	10 cm		
<i>Oldenlandia pterospora</i>	0.1	20 cm	AH29-07		<i>Oldenlandia pterospora</i>	0.1	20 cm		
<i>Orianthera centralis</i>	0.1	30 cm	AH29-13		<i>Orianthera centralis</i>	0.1	30 cm	AHR29-02	
<i>Polygala isingii</i>	0.1	20 cm	AH29-03		<i>Polygala isingii</i>	0.1	20 cm		
<i>Ptilotus arthrolasius</i>	0.1	25 cm	AH29-06		<i>Ptilotus arthrolasius</i>	0.1	25 cm		
<i>Scaevola parvifolia</i>	0.1	30 cm		Sterile.	<i>Scaevola parvifolia</i>	0.1	30 cm		Sterile.
<i>Tribulopis marliesiae</i>	0.1	20	AH29-16	N=5 plants.	<i>Tribulopis marliesiae</i>	0.1	20 cm		N=5.
<i>Triodia schinzii</i>	9	40 cm			<i>Triodia schinzii</i>	9	40 cm		
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	20 cm	AH29-02						



2017



2018

Asian Hub Phase 1 & 2	Site	AH30			
Described by	MM/PA / MM/BMa	Date	30-Aug-17 / 19-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	332801 mE	7737428 mN		121.397130 °E -20.454221 °S
Habitat	Pindan plain.				
Soil	Orange sand.				
Rock Type	N/A.				
Vegetation	Erythrophleum chlorostachys, (Owenia reticulata, Gardenia pyriformis subsp. keartlandii) low open woodland over Acacia tumida var. kulparn scattered shrubs over Dicrastylis doranii, (Androcalva loxophylla) low open shrubland over Triodia epactia, T. schinzii open hummock grassland.				
Veg Condition	Excellent.				
Fire Age	No sign of recent fire.				
Notes	Phase 2: <i>Bulbostylis barbata</i> , <i>Clerodendrum tomentosum</i> , <i>Goodenia armittiana</i> , <i>Polygala isingii</i> , <i>Yakirra australiensis</i> var. <i>australiensis</i> not seen in 2018.				

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Acacia monticola</i>	0.1	180 cm			<i>Acacia monticola</i>	0.1	180 cm		
<i>Acacia sericophylla</i>	2	320 cm			<i>Acacia sericophylla</i>	1	320 cm		
<i>Acacia stellaticeps</i>	0.1	60 cm			<i>Acacia stellaticeps</i>	0.1	60 cm		
<i>Acacia tumida</i> var. <i>kulparn</i>	1	180 cm			<i>Acacia tumida</i> var. <i>kulparn</i>	0.5	180 cm		
<i>Androcalva loxophylla</i>	1	50 cm			<i>Androcalva loxophylla</i>	2	50 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	50 cm			<i>Aristida holathera</i> var. <i>holathera</i>	0.1	50 cm		
<i>Bulbostylis barbata</i>	0.1	20 cm			<i>Bonamia alatisemina</i>	0.1	20 cm		
<i>Calytrix carinata</i>	0.1	40 cm			<i>Calytrix carinata</i>	0.1	40 cm		
<i>Cassytha capillaris</i>	0.1	30 cm			<i>Cassytha capillaris</i>	0.1	30 cm		
<i>Clerodendrum tomentosum</i>	0.1	30 cm		Juvenile.					
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	50 cm			<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	50 cm		
<i>Dicrastylis doranii</i>	2	50 cm			<i>Dicrastylis doranii</i>	4	50 cm	AH82-03=	
<i>Erythrophleum chlorostachys</i>	3	420 cm			<i>Erythrophleum chlorostachys</i>	2	420 cm		
					<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	30 cm	AHR30-01	
<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	0.5	320 cm			<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	0.5	320 cm		
<i>Goodenia armittiana</i>	0.1	45 cm			<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	60 cm		
<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	60 cm			<i>Grevillea eriostachya</i>	0.1	130 cm		
<i>Grevillea eriostachya</i>	0.1	130 cm			<i>Grevillea wickhamii</i> subsp. <i>macrodonta</i>	0.1	90 cm		
<i>Grevillea wickhamii</i> subsp. <i>macrodonta</i>	0.1	90 cm	AH30-02		<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	25 cm		
<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	25 cm			<i>Jacksonia aculeata</i>	0.1	50 cm		
<i>Jacksonia aculeata</i>	0.1	50 cm			<i>Oldenlandia pterospora</i>	0.1	35 cm	AHR28-02=	
					<i>Owenia reticulata</i>	1	850 cm		
<i>Owenia reticulata</i>	1	850 cm			<i>Ptilotus arthrolasius</i>	0.1	25 cm		
<i>Polygala isingii</i>	0.1	30 cm			<i>Ptilotus astrolasius</i>	0.1	40 cm		
<i>Ptilotus arthrolasius</i>	0.1	25 cm			<i>Ptilotus calostachyus</i>	0.1	60 cm		
<i>Ptilotus astrolasius</i>	0.1	40 cm			<i>Scaevola parvifolia</i>	0.1	30 cm		Sterile.
					<i>Seringia exastia</i>	0.1	60 cm		N=30 plants.
<i>Scaevola parvifolia</i>	0.1	30 cm		Sterile.	<i>Setaria surgens</i>	0.1	30 cm	AHR30-02	
<i>Seringia exastia</i>	0.1	60 cm	AH30-01	N=30 plants.	<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	160 cm		
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	25 cm							

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
					<i>Tribulopis marliesiae</i>	0.1	20 cm	N=2.	
					<i>Trigastrotheca molluginea</i>	0.1	15 cm		
<i>Triodia epactia</i>	8	50 cm			<i>Triodia epactia</i>	8	50 cm		
<i>Triodia schinzii</i>	7	50 cm			<i>Triodia schinzii</i>	7	50 cm		
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	15 cm							



2017



2018

Asian Hub Phase 1 & 2	Site	AH31			
Described by	CEPL / MM/BMa	Date	30-Aug-17 / 19-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	326918 mE	7724175 mN		121.339459 °E -20.573398 °S
Habitat	Crest and slopes of a dune in a broad pindan plain.				
Soil	Dark reddish brown sand.				
Rock Type	N/A.				
Vegetation	Erythrophleum chlorostachys, (Grevillea wickhamii subsp. hispidula, Thinicola incana, Acacia anaticeps) tall open shrubland over A. platycarpa, (A. tumida var. kulparn, Sida sp. Western sand dunes (P.K. Latz 11980)) open shrubland over Dicrastylis doranii low open shrubland over Triodia schinii very open hummock grassland and Eriachne aristidea, E. obtusa, (Aristida holathera var. holathera) very open tussock grassland.				
Veg Condition	Phase 1: Excellent.	Phase 2: Excellent; camel scats present but no signs of grazing.			
Fire Age	Burnt 3-5 years ago.				
Notes	Phase 2: Dampiera cinerea, Paractaenium refractum, Yakirra australiensis var. australiensis not seen in 2018.				

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Acacia anaticeps</i>	1	220 cm			<i>Acacia anaticeps</i>	1	220 cm		
<i>Acacia platycarpa</i>	5	190 cm	AH29-10=		<i>Acacia platycarpa</i>	5	190 cm		
<i>Acacia sabulosa</i>	0.1	60 cm	AH31-06		<i>Acacia sabulosa</i>	0.1	60 cm		
<i>Acacia tumida</i> var. <i>kulparn</i>	1	160 cm			<i>Acacia tumida</i> var. <i>kulparn</i>	0.5	160 cm	AHR31-02	
<i>Aristida holathera</i> var. <i>holathera</i>	0.5	30 cm			<i>Aristida holathera</i> var. <i>holathera</i>	1.5	30 cm		
<i>Calytrix carinata</i>	0.1	70 cm	AH29-04=	'Form 1 - short leaves'.	<i>Calytrix carinata</i>	0.1	100 cm		'Form 1 - short leaves'.
<i>Cassytha capillaris</i>	0.1	30 cm			<i>Cassytha capillaris</i>	0.1	30 cm		
<i>Corynotheca micrantha</i> var. <i>gracilis</i>	0.1	35 cm			<i>Corynotheca micrantha</i> var. <i>gracilis</i>	0.1	30 cm	AHR31-09	
<i>Crotalaria cunninghamii</i> subsp. <i>cunninghamii</i>	0.1	160 cm	AH31-01		<i>Crotalaria cunninghamii</i> subsp. <i>cunninghamii</i>	0.1	160 cm		
<i>Cyanostegia cyanocalyx</i>	0.1	90 cm			<i>Cyanostegia cyanocalyx</i>	0.1	70 cm		
<i>Dampiera cinerea</i>	0.1	40 cm	AH29-01=						
<i>Dicrastylis doranii</i>	4	50 cm	AH29-05=		<i>Dicrastylis doranii</i>	2	40 cm	AHR31-06	
<i>Eragrostis eriopoda</i>	0.1	40 cm			<i>Eragrostis eriopoda</i>	0.1	40 cm		
<i>Eriachne aristidea</i>	2	30 cm			<i>Eriachne aristidea</i>	1.5	30 cm		
<i>Eriachne obtusa</i>	1.5	60 cm	AH31-03	Sens. lat. (M. Barrett).	<i>Eriachne obtusa</i>	0.1	60 cm	AHR31-05	
<i>Erythrophleum chlorostachys</i>	4	210 cm			<i>Erythrophleum chlorostachys</i>	3	210 cm		
<i>Euphorbia ? myrtoides</i>	0.1	20 cm	AH31-09	Tentative identification.	<i>Euphorbia ? myrtoides</i>	0.1	20 cm	AHR31-04	Tentative identification.
<i>Grevillea eriostachya</i>	0.1	170 cm			<i>Grevillea eriostachya</i>	0.1	170 cm		
<i>Grevillea wickhamii</i> subsp. <i>macrodonta</i>	2	300 cm		Not collected; extrapolated from Phase 2 collection.	<i>Grevillea wickhamii</i> subsp. <i>macrodonta</i>	2	300 cm	AHR31-10	
<i>Gyrostemon tepperi</i>	0.1	160 cm			<i>Gyrostemon tepperi</i>	0.1	160 cm		
<i>Indigofera ammobia</i>	0.1	30 cm	AH31-08		<i>Indigofera ammobia</i>	0.1	30 cm	AHR31-08	
<i>Newcastelia cladotricha</i>	0.1	90 cm			<i>Newcastelia cladotricha</i>	0.1	80 cm	AHR31-03	
<i>Paractaenium refractum</i>	0.1	60 cm	AH31-07						
<i>Polygala isingii</i>	0.1	10 cm	AH29-03=		<i>Polygala isingii</i>	0.1	10 cm		
<i>Ptilotus arthrolasius</i>	0.1	30 cm	AH29-06=		<i>Ptilotus arthrolasius</i>	0.1	30 cm		
<i>Sida</i> sp. Western sand dunes (P.K. Latz 11980)	1	190 cm	AH31-04		<i>Sida</i> sp. Western sand dunes (P.K. Latz 11980)	0.1	70 cm	AHR31-07	

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Spermacoce occidentalis</i>	0.1	25 cm	AH31-02		<i>Spermacoce occidentalis</i>	0.1	30 cm	AHR31-01	
<i>Thinicola incana</i>	1.5	250 cm	AH31-05		<i>Thinicola incana</i>	0.1	250 cm		
<i>Tinospora smilacina</i>	0.1	50 cm			<i>Tinospora smilacina</i>	0.1	50 cm		
<i>Trianthema pilosum</i>	0.1	20 cm			<i>Trianthema pilosum</i>	0.1	20 cm		
<i>Triodia schinzii</i>	7	40 cm			<i>Triodia schinzii</i>	7	40 cm		
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	20 cm	AH29-02=						



2017



2018

Asian Hub Phase 1 & 2	Site	AH32			
Described by	MM/PA / MM/BMa	Date	30-Aug-17 / 19-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	334656 mE	7741592 mN		121.415293 °E -20.416772 °S
Habitat	Gently undulating broad low dune.				
Soil	Pink-orange pindan sand.				
Rock Type	N/A.				
Vegetation	Phase 1: <i>Acacia platycarpa</i> , <i>Gompholobium simplicifolium</i> , <i>Jacksonia aculeata</i> , <i>Dicrastylis doranii</i> low open shrubland over <i>Triodia schinzii</i> very open hummock grassland with <i>Eriachne lanata</i> scattered bunch grasses. Phase 2: <i>Acacia platycarpa</i> , <i>Jacksonia aculeata</i> , <i>Gompholobium simplicifolium</i> , <i>Dicrastylis doranii</i> low open shrubland over <i>Triodia schinzii</i> very open hummock grassland with <i>Eriachne lanata</i> scattered bunch grasses.				
Veg Condition	Excellent.				
Fire Age	Burnt 3-5 years ago.				
Notes	Phase 1: <i>Acacia platycarpa</i> would be in the shrub layer at maturity. Phase 2: <i>Heliotropium transforme</i> , <i>Spermacoce hillii</i> not seen in 2018.				

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Acacia anaticeps</i>	0.1	40 cm			<i>Acacia anaticeps</i>	0.1	40 cm		
<i>Acacia platycarpa</i>	3	90 cm	AH32-01	Resprouting.	<i>Acacia platycarpa</i>	3	90 cm	AH32-01	Resprouting.
					<i>Acacia tumida</i> var. <i>kulparn</i>	0.1	100 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	60 cm			<i>Aristida holathera</i> var. <i>holathera</i>	0.1	40 cm		
<i>Calytrix carinata</i>	0.1	60 cm			<i>Calytrix carinata</i>	0.1	60 cm		
<i>Cassytha capillaris</i>	0.1	30 cm			<i>Cassytha capillaris</i>	0.1	30 cm		
<i>Cyanostegia cyanocalyx</i>	0.1	50 cm			<i>Cyanostegia cyanocalyx</i>	0.1	50 cm		
<i>Dampiera cinerea</i>	0.1	40 cm			<i>Dampiera cinerea</i>	0.1	40 cm		
<i>Dicrastylis doranii</i>	1	35 cm	AH32-08		<i>Dicrastylis doranii</i>	1	35 cm	AH32-08	
<i>Eragrostis eriopoda</i>	0.1	30 cm	AH32-02		<i>Eragrostis eriopoda</i>	0.1	30 cm	AH32-02	
<i>Eriachne aristidea</i>	0.1	30 cm	AH32-03		<i>Eriachne aristidea</i>	0.1	30 cm	AH32-03	
<i>Eriachne lanata</i>	2	50 cm	AHR32-01=		<i>Eriachne lanata</i>	0.5	50 cm	AHR32-01	
<i>Erythrophleum chlorostachys</i>	0.1	100 cm			<i>Erythrophleum chlorostachys</i>	0.1	100 cm		
<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	0.1	100 cm		Resprouting.	<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	0.1	100 cm		Resprouting.
<i>Gompholobium simplicifolium</i>	2	50 cm	AH32-04, 05	Dark red flowers (04) and orange flowers (05).	<i>Gompholobium simplicifolium</i>	2	50 cm	AH32-04	
<i>Grevillea eriostachya</i>	0.1	120 cm			<i>Grevillea eriostachya</i>	0.1	120 cm		
<i>Grevillea wickhamii</i> subsp. <i>hispidula</i>	0.1	190 cm	AH32-09		<i>Grevillea wickhamii</i> subsp. <i>hispidula</i>	0.1	190 cm	AH32-09	
<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	25 cm			<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	25 cm		
<i>Heliotropium transforme</i>	0.1	30 cm							
<i>Indigofera boviperda</i> subsp. <i>eremaea</i>	0.1	25 cm	AH28-01=		<i>Indigofera boviperda</i> subsp. <i>eremaea</i>	0.1	40 cm		
<i>Jacksonia aculeata</i>	2	60 cm			<i>Jacksonia aculeata</i>	3	60 cm		
<i>Newcastelia cladotricha</i>	0.1	60 cm			<i>Newcastelia cladotricha</i>	0.1	60 cm		
<i>Owenia reticulata</i>	0.1	390 cm			<i>Owenia reticulata</i>	0.1	390 cm		
<i>Polygala isingii</i>	0.1	15 cm			<i>Polygala isingii</i>	0.1	15 cm		
<i>Ptilotus arthrolasius</i>	0.1	25 cm			<i>Ptilotus arthrolasius</i>	0.1	25 cm		
<i>Seringia exastia</i>	0.1	35 cm	AH32-07	N=15 plants. Confirmed by Carol Wilkins.	<i>Seringia exastia</i>	0.1	35 cm	AH32-07	N=15 plants.
<i>Spermacoce hillii</i>	0.1	5 cm	AH32-06						

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Triodia schinzii</i>	4	40 cm			<i>Triodia schinzii</i>	4	40 cm		



2017



2018

Asian Hub Phase 1		Site	AH33		
Described by	CEFPL	Date	30-Aug-17	Type	Quadrat 50x50m
MGA Zone	51	336074 mE	7749864 mN		121.429637 °E -20.342175 °S
Habitat	Slightly elevated, flat pindan plain.				
Soil	Dark reddish brown sand.				
Rock Type	N/A.				
Vegetation	Corymbia zygophylla low open woodland over Dampiera cinerea, Gompholobium simplicifolium, Jacksonia aculeata, (Corchorus sidoides subsp. vermicularis, Newcastelia cladotricha) low shrubland over Triodia schinzii very open hummock grassland with Eragrostis eriopoda scattered tussock grasses.				
Veg Condition	Excellent.				
Fire Age	Burnt 3-5 years ago.				

Species	Cover	Height	Specimen	Notes
<i>Aristida holathera</i> var. <i>holathera</i>	0.5	50 cm		
<i>Calytrix carinata</i>	0.1	80 cm	AH33-03	'Form 1 - short leaves'.
<i>Clerodendrum tomentosum</i>	0.1	20 cm		Juvenile.
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	1	90 cm	AH33-01	
<i>Corymbia zygophylla</i>	5	500 cm		
<i>Cyanostegia cyanocalyx</i>	0.1	40 cm		
<i>Dampiera cinerea</i>	8	80 cm	AH29-01=	
<i>Eragrostis eriopoda</i>	2	40 cm		
<i>Eriachne aristidea</i>	0.1	40 cm		
<i>Erythrophleum chlorostachys</i>	0.1	100 cm		
<i>Gompholobium simplicifolium</i>	1	60 cm	AH33-06	Orange flowers.
<i>Gompholobium simplicifolium</i>	4	80 cm		Red flowers.
<i>Grevillea eriostachya</i>	0.1	190 cm		
<i>Grevillea wickhamii</i> subsp. <i>macrodonta</i>	0.1	170 cm	AH33-04	
<i>Gyrostemon tepperi</i>	0.1	30 cm		
<i>Jacksonia aculeata</i>	4	70 cm		
<i>Newcastelia cladotricha</i>	1	80 cm		
<i>Oldenlandia pterospora</i>	0.1	25 cm	AH29-07=	
<i>Polygala isingii</i>	0.1	20 cm	AH-PL29=	
<i>Pilotus arthrolasius</i>	0.1	25 cm	AH29-6=	
<i>Senna notabilis</i>	0.1	30 cm		
<i>Setaria surgens</i>	0.1	30 cm	AH33-02	
<i>Sida</i> sp. Pindan (B.G. Thomson 3398)	0.1	80 cm	AH33-05	
<i>Tinospora smilacina</i>	0.1	40 cm		
<i>Triodia schinzii</i>	6	30 cm		
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	20 cm		



2017

Asian Hub Phase 1 **Site** AH34
Described by MM/PA **Date** 30-Aug-17 **Type** Quadrat 50x50m
MGA Zone 51 336354 mE 7752058 mN 121.432518 °E -20.322381 °S
Habitat Narrow swale between two parallel dunes.
Soil Pink-orange pindan sand.
Rock Type N/A.
Vegetation *Corymbia zygophylla*, *Owenia reticulata* scattered low trees over *Grevillea wickhamii* scattered tall shrubs over *Erythrophleum chlorostachys*, *Cyanostegia cyanocalyx* scattered shrubs over *Gompholobium simplicifolium*, *Acacia stellaticeps*, *Jacksonia aculeata* low open shrubland over *Triodia schinzii* scattered hummock grasses and *Eragrostis eriopoda* scattered tussock grasses.
Veg Condition Excellent.
Fire Age Burnt 3-5 years ago.

Species	Cover	Height	Specimen	Notes
<i>Acacia sericophylla</i>	0.1	60 cm		
<i>Acacia stellaticeps</i>	1	70 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	50 cm		
<i>Bonamia alatisemina</i>	0.1	20 cm		
<i>Calytrix carinata</i>	0.1	70 cm		
<i>Cassytha capillaris</i>	0.1	20 cm		
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	30 cm		
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	80 cm		
<i>Corymbia zygophylla</i>	1	750 cm		
<i>Corynotheca micrantha</i> var. <i>gracilis</i>	0.1	30 cm	AH34-03	
<i>Cyanostegia cyanocalyx</i>	1	100 cm		
<i>Dampiera cinerea</i>	0.1	40 cm		
<i>Dodonaea hispidula</i> var. <i>arida</i>	0.1	160 cm	AH34-07	
<i>Eragrostis eriopoda</i>	1	30 cm		
<i>Eriachne aristidea</i>	0.1	20 cm	AH32-03=	
<i>Erythrophleum chlorostachys</i>	1	170 cm		
<i>Gompholobium simplicifolium</i>	0.1	60 cm		Red flowers.
<i>Gompholobium simplicifolium</i>	1.5	60 cm	AH34-01	Yellow-orange flowers.
<i>Goodenia armitiana</i>	0.1	30 cm		
<i>Grevillea eriostachya</i>	0.1	120 cm		
<i>Grevillea wickhamii</i>	1	220 cm		Sterile.
<i>Gyrostemon tepperi</i>	0.1	100 cm		
<i>Hibiscus leptocladus</i>	0.1	100 cm	AH34-04	
<i>Indigofera boviperda</i> subsp. <i>eremaea</i>	0.1	30 cm	AH28-01=	
<i>Jacksonia aculeata</i>	1	60 cm		
<i>Newcastelia cladotricha</i>	0.1	35 cm		
<i>Oldenlandia pterospora</i>	0.1	30 cm		
<i>Owenia reticulata</i>	1	700 cm		
<i>Polygala isingii</i>	0.1	20 cm		
<i>Ptilotus arthrolasius</i>	0.1	40 cm		
<i>Ptilotus polystachyus</i>	0.1	130 cm		
<i>Senna curvistyla</i>	0.1	45 cm	AH34-06	
<i>Sida</i> sp. Pindan (B.G. Thomson 3398)	0.1	60 cm	AH34-05	
<i>Spermacoce occidentalis</i>	0.1	20 cm	AH34-02	
<i>Trianthema pilosum</i>	0.1	25 cm		
<i>Trigastrotheca molluginea</i>	0.1	15 cm		
<i>Triodia schinzii</i>	1	40 cm		
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	15 cm		



2017

Asian Hub Phase 1		Site	AH35
Described by	CEFPL	Date	30-Aug-17
MGA Zone	51	336845 mE	7751787 mN
Habitat	Crest and slopes of a long dune, running ~E-W in a broad pindan plain.		
Soil	Orange-brown sand.		
Rock Type	N/A.		
Vegetation	Erythrophleum chlorostachys, Acacia tumida var. kulparn tall open shrubland over <i>Cyanostegia cyanocalyx</i> , (<i>Grevillea stenobotrya</i>) open shrubland over <i>Dicrastylis doranii</i> , (<i>Acacia stellaticeps</i> , <i>Newcastelia cladotricha</i> , <i>Gompholobium simplicifolium</i>) low shrubland over <i>Triodia schinzii</i> very open hummock grassland over <i>Eriachne obtusa</i> , (<i>Eragrostis eriopoda</i> , <i>Aristida holathera</i>) very open tussock grassland over <i>Spermacoce occidentalis</i> very open hermland.		
Veg Condition	Excellent.		
Fire Age	No sign of recent fire.		

Species	Cover	Height	Specimen	Notes
<i>Acacia anaticeps</i>	0.1	30 cm		
<i>Acacia sericophylla</i>	0.1	50 cm		Resprouting.
<i>Acacia stellaticeps</i>	3	65 cm	AH35-04	
<i>Acacia tumida</i> var. <i>kulparn</i>	3	200 cm	AH35-01	
<i>Aristida holathera</i> var. <i>holathera</i>	1	30 cm		
<i>Cassytha capillaris</i>	0.1	10 cm		
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	30 cm		
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	80 cm	AH35-05	Sens. lat.
<i>Corynotheca micrantha</i> var. <i>gracilis</i>	0.1	70 cm	AH35-10	
<i>Cullen martinii</i>	0.1	80 cm	AH35-07	
<i>Cyanostegia cyanocalyx</i>	2	150 cm		
<i>Dampiera cinerea</i>	0.1	50 cm	AH29-01=	
<i>Dicrastylis doranii</i>	5	60 cm	AH29-05=	
<i>Eragrostis eriopoda</i>	1	25 cm		
<i>Eriachne obtusa</i>	5	70 cm	AH35-02	
<i>Erythrophleum chlorostachys</i>	3	350 cm		
<i>Euphorbia ? albrechtii</i>	0.1	35 cm	AH35-09	Tentative identification.
<i>Fimbristylis oxystachya</i>	0.1	15 cm	AH35-06	
<i>Gompholobium simplicifolium</i>	0.1	70 cm		Red flowers.
<i>Gompholobium simplicifolium</i>	0.5	50 cm	AH33-06=	Orange flowers.
<i>Grevillea stenobotrya</i>	0.5	160 cm		
<i>Grevillea wickhamii</i>	0.1	120 cm		Sterile.
<i>Gyrostemon tepperi</i>	0.1	130 cm		
<i>Indigofera ammobia</i>	0.1	55 cm	AH35-08	
<i>Newcastelia cladotricha</i>	3	50 cm		
<i>Oldenlandia pterospora</i>	0.1	10 cm	AH29-07=	
<i>Polycarphaea longiflora</i>	0.1	30 cm		
<i>Ptilotus arthrolasius</i>	0.1	25 cm	AH29-06=	
<i>Ptilotus polystachyus</i>	0.1	60 cm		
<i>Sida</i> sp. Western sand dunes (P.K. Latz 11980)	0.1	150 cm	AH35-03	
<i>Spermacoce occidentalis</i>	5	30 cm	AH31-02=	
<i>Tinospora smilacina</i>	0.1	20 cm		
<i>Trianthema pilosum</i>	0.1	20 cm		
<i>Trigastrotheca molluginea</i>	0.1	10 cm		
<i>Triodia schinzii</i>	4	50 cm		



Asian Hub Phase 1	Site	AH36		
Described by	MM/PA	Date	31-Aug-17	Type Quadrat 50x50m
MGA Zone	51	340118 mE	7767459 mN	121.469926 °E -20.183581 °S
Habitat	Pindan plain.			
Soil	Orange-brown sand over orange sand.			
Rock Type	N/A.			
Vegetation	Erythrophleum chlorostachys scattered low trees over <i>Acacia monticola</i> , (<i>A. sabulosa</i> , <i>A. ancistrocarpa</i>) tall open shrubland over <i>A. tumida</i> var. <i>kulparn</i> scattered shrubs over <i>Triodia epactia</i> open hummock grassland.			
Veg Condition	Excellent.			
Fire Age	Burnt 3-5 years ago.			

Species	Cover	Height	Specimen	Notes
<i>Acacia ancistrocarpa</i>	0.1	210 cm		
<i>Acacia colei</i> var. <i>colei</i>	0.1	260 cm		
<i>Acacia monticola</i>	2	250 cm		
<i>Acacia sabulosa</i>	0.5	230 cm	AH36-01	
<i>Acacia tumida</i> var. <i>kulparn</i>	0.5	170 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	60 cm		
<i>Bonamia oblongifolia</i>	0.1	5 cm	AH36-03	Number not recorded.
<i>Bulbostylis barbata</i>	0.1	10 cm		
<i>Cassytha capillaris</i>	0.1	30 cm		
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	40 cm		
<i>Eriachne lanata</i>	0.1	50 cm		
<i>Erythrophleum chlorostachys</i>	1.5	400 cm		
<i>Euphorbia psilosperma</i>	0.1	12 cm	AH36-02	
<i>Goodenia armittiana</i>	0.1	30 cm		
<i>Grevillea wickhamii</i>	0.1	80 cm		Sterile.
<i>Hibiscus leptocladus</i>	0.1	70 cm	AH36-04	
<i>Leptosema anomalam</i>	0.1	30 cm	AH36-07	
<i>Newcastelia cladotricha</i>	0.1	70 cm		
<i>Pilotus astrolasius</i>	0.1	50 cm		
<i>Pilotus calostachyus</i>	0.1	70 cm		
<i>Pilotus polystachyus</i>	0.1	80 cm		
<i>Scaevola parvifolia</i>	0.1	35 cm		Sterile.
<i>Sida arenicola</i>	0.1	200 cm	AH36-06	Ferruginous form.
<i>Solanum diversiflorum</i>	0.1	15 cm		
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	25 cm		
<i>Tephrosia</i> sp. D Kimberley Flora (R.D. Royce 1848)	0.1	40 cm	AH36-05	Orange flowers.
<i>Trianthema pilosum</i>	0.1	7 cm		
<i>Triodia epactia</i>	20	55 cm		
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	15 cm		



2017

Asian Hub Phase 1		Site	AH37
Described by	CEFPL	Date	31-Aug-17
MGA Zone	51	344224 mE	7766962 mN
Habitat	Broad undulating pindan plain with areas of laterite.	Type	Quadrat 50x50m
Soil	Dark reddish brown sandy clay loam.		
Rock Type	Laterite; fine lag gravel on the surface; pebbles (1-25%) and gravel (1-25%).		
Vegetation	<i>Acacia monticola</i> , (<i>A. ancistrocarpa</i> , <i>Grevillea refracta</i> subsp. <i>refracta</i>) tall shrubland over <i>Triodia epactia</i> , (<i>T. schinzii</i>) open hummock grassland with <i>Sorghum plumosum</i> var. <i>plumosum</i> , <i>Eriachne lanata</i> scattered tussock grasses.		
Veg Condition	Excellent.		
Fire Age	No sign of recent fire.		
Notes	Similar vegetation surrounding quadrat, but burnt approximately 3 years ago.		

Species	Cover	Height	Specimen	Notes
<i>Acacia adoxa</i> var. <i>adoxa</i>	0.1	40 cm		
<i>Acacia ancistrocarpa</i>	2	320 cm		
<i>Acacia monticola</i>	25	320 cm		
<i>Acacia orthocarpa</i>	0.1	60 cm	AH37-05	
<i>Amphipogon sericeus</i>	0.1	30 cm	AH37-03	
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	35 cm		
<i>Bulbostylis barbata</i>	0.1	20 cm		
<i>Codonocarpus cotinifolius</i>	0.1	40 cm		
<i>Dampiera candicans</i>	0.1	50 cm		
<i>Dodonaea coriacea</i>	0.1	100 cm		
<i>Eragrostis eriopoda</i>	0.1	40 cm		
<i>Eriachne lanata</i>	0.5	45 cm		
<i>Eriachne obtusa</i>	0.1	40 cm		
<i>Eriachne pulchella</i>	0.1	15 cm		
<i>Goodenia armittiana</i>	0.1	40 cm	AH37-02	
<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	40 cm	AH37-01	
<i>Grevillea refracta</i> subsp. <i>refracta</i>	1	220 cm		
<i>Grevillea wickhamii</i>	0.1	300 cm		Sterile.
<i>Hibiscus leptoclados</i>	0.1	80 cm		
<i>Indigofera monophylla</i>	0.1	40 cm	AH01-33=	
<i>Oldenlandia pterospora</i>	0.1	25 cm	AH29-07=	
<i>Polycarphaea corymbosa</i> var. <i>corymbosa</i>	0.1	20 cm		
<i>Ptilotus arthrolasius</i>	0.1	40 cm	AH29-06=	
<i>Ptilotus calostachyus</i>	0.1	120 cm		
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.5	100 cm		
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	0.1	30 cm	AH37-04	
<i>Trigastrotheca molluginea</i>	0.1	20 cm		
<i>Triodia epactia</i>	12	50 cm		
<i>Triodia schinzii</i>	1	40 cm		
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	20 cm	AH29-02=	



2017

Asian Hub Phase 1 & 2	Site	AH38	
Described by	MM/PA / PLSW	Date	31-Aug-17 / 20-Mar-18
MGA Zone	51	339960 mE	7768061 mN
Habitat	Barely incised (mostly not at all) drainage line between lateritic rises.		
Soil	Brown silty sand.		
Rock Type	Scattered lateritic gravel (1%).		
Vegetation	Corymbia flavescens low open woodland over Grevillea wickhamii scattered tall shrubs over Santalum lanceolatum, Acacia colei var. colei open shrubland over A. adoxa var. adoxa low open shrubland over Triodia epactia very open hummock grassland and Eulalia aurea, (Paraneurachne muelleri) very open tussock grassland.		
Veg Condition	Excellent.		
Fire Age	Phase 1: Burnt 3-5 years ago.	Phase 2: No sign of recent fire.	

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Abutilon otocarpum</i>	0.1	60 cm							
<i>Acacia adoxa</i> var. <i>adoxa</i>	6	45 cm			<i>Acacia adoxa</i> var. <i>adoxa</i>	6	65 cm		
<i>Acacia ancistrocarpa</i>	0.1	130 cm							
<i>Acacia colei</i> var. <i>colei</i>	2	160 cm			<i>Acacia colei</i> var. <i>colei</i>	2	160 cm		
<i>Acacia hilliana</i>	0.1	25 cm			<i>Acacia hilliana</i>	0.1	60 cm		
<i>Acacia monticola</i>	0.1	60 cm			<i>Acacia monticola</i>	0.1	80 cm		
<i>Acacia sabulosa</i>	0.1	50 cm							
<i>Acacia sericophylla</i>	0.1	160 cm			<i>Acacia sericophylla</i>	0.1	160 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	70 cm							
					<i>Boerhavia coccinea</i>	0.1	10 cm	AHR38-02	
<i>Boerhavia gardneri</i>	0.1	20 cm	AH38-07						
<i>Bonamia alatisemina</i>	0.1	40 cm			<i>Bonamia alatisemina</i>	0.1	10 cm	AHR38-04	
<i>Bulbostylis barbata</i>	0.1	10 cm			<i>Bulbostylis barbata</i>	0.1	10 cm		
					<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	20 cm		
<i>Cleome viscosa</i>	0.1	70 cm			<i>Cleome viscosa</i>	0.1	20 cm		
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	30 cm			<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	30 cm		
<i>Corymbia flavescens</i>	4	900 cm	AH38-01		<i>Corymbia flavescens</i>	6	900 cm		
<i>Cymbopogon obtectus</i>	0.1	80 cm	AH38-12		<i>Cymbopogon obtectus</i>	0.1	80 cm	AHR38-05	
<i>Dampiera candidans</i>	0.1	60 cm			<i>Dampiera candidans</i>	0.1	40 cm		
<i>Dodonaea coriacea</i>	0.1	80 cm							
<i>Dodonaea hispidula</i> var. <i>arida</i>	0.1	90 cm			<i>Dodonaea hispidula</i> var. <i>arida</i>	0.1	100 cm		
<i>Eragrostis eriopoda</i>	0.1	40 cm			<i>Eragrostis eriopoda</i>	0.1	20 cm		
					<i>Eriachne ciliata</i>	0.1	40 cm		
<i>Eriachne obtusa</i>	0.1	45 cm	AH38-09		<i>Eriachne obtusa</i>	0.1	40 cm		
<i>Eulalia aurea</i>	4	60 cm	AH38-04	Sens. lat.	<i>Eulalia aurea</i>	4	60 cm		
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	30 cm			<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	20 cm		
<i>Fimbristylis simulans</i>	0.1	25 cm			<i>Fimbristylis simulans</i>	0.1	30 cm		
<i>Goodenia armittiana</i>	0.1	35 cm			<i>Goodenia armittiana</i>	0.1	40 cm		
<i>Grevillea pyramidalis</i> subsp. <i>pyramidalis</i>	0.1	130 cm	AH38-10		<i>Grevillea pyramidalis</i> subsp. <i>pyramidalis</i>	0.1	80 cm		
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	70 cm							
<i>Grevillea wickhamii</i>	2	270 cm		Sterile.	<i>Grevillea wickhamii</i>	2	270 cm		Sterile.
<i>Hibiscus leptocladus</i>	0.1	60 cm	AH38-11						

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Hybanthus aurantiacus</i>	0.1	40 cm			<i>Hybanthus aurantiacus</i>	0.1	20 cm		
<i>Indigofera monophylla</i>	0.1	45 cm	AH38-15, 18		<i>Indigofera monophylla</i>	0.1	60 cm		
<i>Oldenlandia mitrasacmoides</i> subsp. <i>mitrasacmoides</i>	0.1	20 cm	AH38-06		<i>Oldenlandia mitrasacmoides</i> subsp. <i>mitrasacmoides</i>	0.1	15 cm	AHR38-08	
<i>Paraneurachne muelleri</i>	2	50 cm	AH38-03		<i>Paraneurachne muelleri</i>	3	70 cm		
<i>Phyllanthus eremicus</i>	0.1	30 cm		N=1 plant.					
<i>Polycarphaea corymbosa</i> var. <i>corymbosa</i>	0.1	20 cm							
<i>Ptilotus astrolasius</i>	0.1	40 cm			<i>Ptilotus astrolasius</i>	0.1	40 cm		
<i>Ptilotus calostachyus</i>	0.1	60 cm							
<i>Santalum lanceolatum</i>	3	110 cm	AH38-02		<i>Santalum lanceolatum</i>	2	120 cm		
<i>Scaevola browniana</i> subsp. <i>browniana</i>	0.1	50 cm	AH38-13		<i>Scaevola browniana</i> subsp. <i>browniana</i>	0.1	50 cm	AHR38-01	
<i>Senna artemisioides</i> subsp. <i>oligophylla</i> x subsp. <i>helmsii</i>	0.1	70 cm	AH38-14						
<i>Senna notabilis</i>	0.1	50 cm			<i>Senna notabilis</i>	0.1	20 cm		
<i>Sida arenicola</i>	0.1	140 cm	AH36-06=	Ferruginous form.	<i>Sida arenicola</i>	0.1	160 cm		
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	80 cm	AH38-08						
<i>Solanum dioicum</i>	0.1	40 cm	AH38-16		<i>Solanum dioicum</i>	0.1	45 cm	AHR38-07	
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	80 cm	AH38-05		<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	40 cm		
					<i>Striga curviflora</i>	0.1	20 cm		
					<i>Tephrosia simplicifolia</i>	0.1	20 cm	AHR38-03	
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	0.1	40 cm	AH38-17						
<i>Tephrosia</i> sp. D Kimberley Flora (R.D. Royce 1848)	0.1	10 cm	AH36-05=		<i>Tribulopis angustifolia</i>	0.1	40 cm	AHR38-06	
					<i>Tribulopis marliesiae</i>	0.1	20 cm		N=1.
<i>Trigastrotheca molluginea</i>	0.1	15 cm			<i>Trigastrotheca molluginea</i>	0.1	10 cm		
<i>Triodia epactia</i>	3	50 cm			<i>Triodia epactia</i>	8	60 cm		



2017



2018

Asian Hub Phase 1 & 2	Site	AH39			
Described by	CEFPL / PLSW	Date	31-Aug-17 / 20-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	344781 mE	7766618 mN		121.514467 °E -20.191561 °S
Habitat	Slightly elevated pindan plain.				
Soil	Dark reddish brown sand with small areas of sandy clay loam.				
Rock Type	Laterite with a surface layer of lag gravel.				
Vegetation	Phase 1: <i>Corymbia flavescens</i> scattered low trees over <i>Acacia cowleana</i> scattered tall shrubs over <i>A. tumida</i> var. <i>kulparn</i> , <i>A. hilliana</i> , <i>A. adoxa</i> var. <i>adoxia</i> low open shrubland over <i>Triodia epactia</i> hummock grassland with <i>Sorghum plumosum</i> var. <i>plumosum</i> scattered tussock grasses. Phase 2: <i>Corymbia flavescens</i> scattered low trees over <i>Acacia tumida</i> var. <i>kulparn</i> , <i>A. hilliana</i> , <i>A. adoxa</i> low open shrubland over <i>Triodia epactia</i> hummock grassland with <i>Sorghum plumosum</i> var. <i>plumosum</i> scattered tussock grasses.				
Veg Condition	Excellent.				
Fire Age	No sign of recent fire.				

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Acacia adoxa</i> var. <i>adoxia</i>	0.5	40 cm			<i>Acacia adoxa</i> var. <i>adoxia</i>	1	40 cm		
<i>Acacia colei</i> var. <i>colei</i>	0.1	80 cm			<i>Acacia colei</i> var. <i>colei</i>	0.1	190 cm		
<i>Acacia cowleana</i>	0.5	280 cm	AH39-02		<i>Acacia cowleana</i>	0.1	280 cm	AHR39-02	
<i>Acacia hilliana</i>	1	40 cm			<i>Acacia hilliana</i>	2	40 cm		
<i>Acacia sericophylla</i>	0.1	50 cm			<i>Acacia sericophylla</i>	0.1	110 cm		
<i>Acacia tumida</i> var. <i>kulparn</i>	1	100 cm	AH39-06		<i>Acacia tumida</i> var. <i>kulparn</i>	1	100 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	40 cm			<i>Aristida holathera</i> var. <i>holathera</i>	0.1	45 cm		
<i>Boerhavia gardneri</i>	0.1	40 cm							
<i>Bonamia alatisemina</i>	0.1	25 cm			<i>Bonamia alatisemina</i>	0.1	45 cm		
<i>Bulbostylis barbata</i>	0.1	25 cm			<i>Bulbostylis barbata</i>	0.1	10 cm		
<i>Cleome viscosa</i>	0.1	30 cm							
<i>Codonocarpus cotinifolius</i>	0.1	40 cm			<i>Codonocarpus cotinifolius</i>	0.1	40 cm		
<i>Corymbia flavescens</i>	2	700 cm	AH39-01		<i>Corymbia flavescens</i>	2	700 cm		
<i>Dodonaea coriacea</i>	0.1	60 cm			<i>Dodonaea coriacea</i>	0.1	60 cm		
					<i>Eriachne ciliata</i>	0.1	20 cm		
<i>Eriachne lanata</i>	0.1	40 cm			<i>Eriachne lanata</i>	0.1	50 cm		
<i>Eulalia aurea</i>	0.1	80 cm							
					<i>Euphorbia psilosperma</i>	0.1	25 cm	AHR39-01	
<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	45 cm	AH37-01=		<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	40 cm		
<i>Goodenia triodiophila</i>	0.1	25 cm	AH39-03						
<i>Grevillea pyramidalis</i>	0.1	50 cm			<i>Grevillea pyramidalis</i>	0.1	50 cm		
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	250 cm			<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	140 cm		
<i>Grevillea wickhamii</i>	0.1	190 cm		Sterile.	<i>Grevillea wickhamii</i>	0.1	190 cm		Sterile.
<i>Leptosema anomalum</i>	0.1	30 cm			<i>Leptosema anomalum</i>	0.1	30 cm		
<i>Phyllanthus eremicus</i>	0.1	25 cm		N=2 plants.	<i>Phyllanthus eremicus</i>	0.1	40 cm		
<i>Polycarpaea corymbosa</i> var. <i>corymbosa</i>	0.1	20 cm			<i>Polycarpaea corymbosa</i> var. <i>corymbosa</i>	0.1	25 cm		
<i>Polygala isingii</i>	0.1	20 cm	AH39-05		<i>Polygala isingii</i>	0.1	25 cm	AHR39-03	
<i>Ptilotus astrolasius</i>	0.5	40 cm			<i>Ptilotus astrolasius</i>	0.1	50 cm		
<i>Ptilotus calostachyus</i>	0.1	80 cm			<i>Ptilotus calostachyus</i>	0.1	60 cm		
<i>Ptilotus polystachyus</i>	0.1	45 cm			<i>Ptilotus polystachyus</i>	0.1	50 cm		
					<i>Sida arenicola</i>	0.1	45 cm		

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Sorghum plumosum</i> var. <i>plumosum</i>	2	60 cm			<i>Sorghum plumosum</i> var. <i>plumosum</i>	2	100 cm		
<i>Striga curviflora</i>	0.1	30 cm	AH39-04		<i>Striga curviflora</i>	0.1	30 cm		
<i>Tephrosia simplicifolia</i>	0.1	45 cm	AH39-07		<i>Tephrosia simplicifolia</i>	0.1	30 cm	AHR39-04	N=3. Orange flowers.
<i>Tribulopis marliesiae</i>	0.1	20 cm	AH39-08	N=1 plant.	<i>Tribulopis marliesiae</i>	0.1	40 cm		N=4.
<i>Trigastrotheca molluginea</i>	0.1	20 cm			<i>Trigastrotheca molluginea</i>	0.1	25 cm		
<i>Triodia epactia</i>	34	40 cm			<i>Triodia epactia</i>	34	50 cm		
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	10 cm	AH29-2=						



2017



2018

Asian Hub Phase 1 & 2	Site	AH40	Type	Quadrat 50x50m
Described by	MM/PA / MM/BMa	Date	31-Aug-17 / 16-Mar-18	
MGA Zone	51	333785 mE	7770864 mN	121.409648 °E -20.152286 °S
Habitat	Pindan plain.			
Soil	Pindan sand.			
Rock Type	N/A.			
Vegetation	Phase 1: <i>Acacia monticola</i> , (<i>A. ancistrocarpa</i>) tall open shrubland over <i>Triodia epactia</i> open hummock grassland. Phase 2: <i>Acacia monticola</i> , (<i>A. ancistrocarpa</i>) tall open shrubland over <i>Triodia epactia</i> hummock grassland with <i>Sorghum plumosum</i> var. <i>plumosum</i> scattered tussock grasses.			
Veg Condition	Excellent.			
Fire Age	Burnt 3-5 years ago.			
Notes	Phase 2: <i>Eriachne ciliata</i> , <i>Yakirra australiensis</i> var. <i>australiensis</i> not seen in 2018.			

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Acacia ancistrocarpa</i>	2	300 cm			<i>Acacia ancistrocarpa</i>	1	300 cm		
<i>Acacia monticola</i>	4	400 cm			<i>Acacia monticola</i>	4	400 cm		
<i>Acacia tumida</i> var. <i>kulparn</i>	0.1	100 cm			<i>Acacia tumida</i> var. <i>kulparn</i>	0.1	100 cm		
<i>Bonamia alatisemina</i>	0.1	20 cm	AH40-03		<i>Bonamia alatisemina</i>	0.1	20 cm	AH40-03	
<i>Bulbostylis barbata</i>	0.1	15 cm			<i>Bulbostylis barbata</i>	0.1	15 cm		
<i>Cassytha capillaris</i>	0.1	30 cm			<i>Cassytha capillaris</i>	0.1	30 cm		
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	25 cm			<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	25 cm		
<i>Cleome viscosa</i>	0.1	40 cm			<i>Cleome viscosa</i>	0.1	40 cm		
<i>Cucumis variabilis</i>	0.1	100 cm			<i>Cucumis variabilis</i>	0.1	100 cm		
<i>Dodonaea coriacea</i>	0.1	90 cm			<i>Dodonaea coriacea</i>	0.1	90 cm		
					<i>Eragrostis eriopoda</i>	0.1	40 cm		
<i>Eriachne ciliata</i>	0.1	40 cm	AH40-02		<i>Eriachne ciliata</i>	0.1	15 cm		
<i>Euphorbia psilosperma</i>	0.1	20 cm	AH40-01		<i>Euphorbia psilosperma</i>	0.1	20 cm	AH40-01	
<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	0.1	150 cm			<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	0.1	150 cm		
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	25 cm		Seedling.	<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	25 cm		
					<i>Hibiscus leptocladus</i>	0.1	50 cm	AH40R-01	
<i>Polycarphaea corymbosa</i> var. <i>corymbosa</i>	0.1	40 cm			<i>Polycarphaea corymbosa</i> var. <i>corymbosa</i>	0.1	40 cm		
<i>Ptilotus astrolasius</i>	0.1	45 cm			<i>Ptilotus astrolasius</i>	0.1	45 cm		
<i>Ptilotus calostachyus</i>	0.1	80 cm			<i>Ptilotus calostachyus</i>	0.1	80 cm		
<i>Sida arenicola</i>	0.1	160 cm	AH36-06=	Ferruginous form.	<i>Sida arenicola</i>	0.1	50 cm		
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	60 cm			<i>Sorghum plumosum</i> var. <i>plumosum</i>	1	80 cm		
<i>Trianthema pilosum</i>	0.1	20 cm			<i>Trianthema pilosum</i>	0.1	20 cm		
					<i>Tribulopis marliesiae</i>	0.1	20 cm		N=3.
<i>Trigastrotheca molluginea</i>	0.1	10 cm			<i>Trigastrotheca molluginea</i>	0.1	10 cm		
<i>Triodia epactia</i>	20	50 cm			<i>Triodia epactia</i>	32	50 cm		
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	20 cm							



No photo taken.

2017

2018

Asian Hub Phase 1	Site	AH41
Described by	CEFPL	Date 31-Aug-17
MGA Zone	51	328275 mE 7772138 mN 121.357064 °E -20.140294 °S
Habitat	Crest and slopes of a low lateritic hill; very gently sloping to the SW.	
Soil	Red-brown loamy sand.	
Rock Type	Laterite; outcropping (1-25%), cobbles (1-25%), pebbles (51-75%), and gravel (26-50%).	
Vegetation	<i>Triodia epactia</i> open hummock grassland with <i>Eriachne lanata</i> scattered tussock grasses.	
Veg Condition	Excellent.	
Fire Age	Burnt 3-5 years ago.	
Notes	No shrub stratum; this is representative of the surrounding vegetation.	

Species	Cover	Height	Specimen
<i>Bulbostylis barbata</i>	0.1	10 cm	
<i>Eriachne ciliata</i>	0.1	20 cm	
<i>Eriachne lanata</i>	0.5	30 cm	
<i>Fimbristylis simulans</i>	0.1	20 cm	AH41-01
<i>Pilotus calostachyus</i>	0.1	50 cm	
<i>Trigastrotheca molluginea</i>	0.1	10 cm	
<i>Triodia epactia</i>	20	30 cm	



2017

Asian Hub Phase 1	Site	AH42
Described by	MM/PA	Date 01-Sep-17
MGA Zone	51	298631 mE 7778249 mN 121.074239 °E -20.082231 °S
Habitat	Lower slope of a very broad, low laterite rise.	
Soil	Red-brown loamy sand.	
Rock Type	Laterite; pebbles (26-50%) and gravel (26-50%).	
Vegetation	<i>Grevillea pyramidalis</i> scattered tall shrubs over <i>Triodia epactia</i> open hummock grassland.	
Veg Condition	Excellent; one camel track.	
Fire Age	Burnt 3-5 years ago.	

Species	Cover	Height	Specimen	Notes
<i>Acacia adoxa</i> var. <i>adoxia</i>	0.1	25 cm		
<i>Acacia hilliana</i>	0.1	10 cm		
<i>Calandrinia strophiolata</i>	0.1	10 cm	AH42-01	Dead.
<i>Calytrix carinata</i>	0.1	70 cm		
<i>Cleome viscosa</i>	0.1	25 cm		
<i>Eriachne pulchella</i>	0.1	8 cm		
<i>Fimbristylis simulans</i>	0.1	20 cm		
<i>Goodenia armittiana</i>	0.1	40 cm	AH42-02	
<i>Grevillea pyramidalis</i>	0.1	250 cm		
<i>Polycarphaea corymbosa</i> var. <i>corymbosa</i>	0.1	20 cm		
<i>Pilotus calostachyus</i>	0.1	70 cm		
<i>Solanum diversiflorum</i>	0.1	15 cm		
<i>Trigastrotheca molluginea</i>	0.1	10 cm		
<i>Triodia epactia</i>	12	50 cm		



2017

Asian Hub Phase 1	Site	AH43
Described by	CEPFL	Date 01-Sep-17
MGA Zone	51	308066 mE 7777083 mN
Type	Quadrat 50x50m	121.164311 °E -20.093723 °S
Habitat	Rocky crest of a low lateritic hill.	
Soil	Red-brown sandy loam.	
Rock Type	Laterite: cobbles (1-25%), pebbles (26-50%) and gravel (26-50%).	
Vegetation	Grevillea pyramidalis subsp. pyramidalis scattered tall shrubs over Acacia hilliana scattered low shrubs over Triodia epactia open hummock grassland.	
Veg Condition	Excellent to Very Good; camel scats present but no grazing noted; also a camel/cattle track through the center of quadrat,	
Fire Age	Burnt 3-5 years ago.	
Notes	Some minor depressions throughout hills have Acacia colei tall shrubs over Themeda triandra tussock grasses; one next to the NE corner of this quadrat.	

Species	Cover	Height	Specimen	Notes
Acacia adoxa var. adoxa	0.1	45 cm		
Acacia hilliana	1	45 cm		
Bulbostylis barbata	0.1	10 cm		
Cleome viscosa	0.1	15 cm		Dead.
Dodonaea coriacea	0.1	100 cm		
Eriachne lanata	0.1	20 cm		
Eriachne pulchella	0.1	10 cm		
Fimbristylis simulans	0.1	15 cm		
Grevillea pyramidalis subsp. pyramidalis	1	250 cm	AH43-01	
Polycarphaea corymbosa var. corymbosa	0.1	20 cm		
Ptilotus calostachyus	0.1	20 cm		
Triodia epactia	20	40 cm		



2017

Asian Hub Phase 1		Site	AH44		
Described by	MM/PA	Date	01-Sep-17	Type	Quadrat 50x50m
MGA Zone	51	299931 mE	7777897 mN		121.086628 °E -20.085545 °S
Habitat	Elevated undulating pindan plain.				
Soil	Orange-brown pindan sand.				
Rock Type	N/A.				
Vegetation	Grevillea refracta subsp. refracta scattered tall shrubs over Acacia adoxa var. adoxa, (A. hilliana, Ptilotus astrolasius) scattered low shrubs over Triodia schinzii open hummock grassland with Eriachne lanata scattered tussock grasses.				
Veg Condition	Excellent.				
Fire Age	No sign of recent fire.				

Species	Cover	Height	Specimen	Notes
<i>Acacia adoxa</i> var. <i>adoxia</i>	1	50 cm		
<i>Acacia hilliana</i>	0.5	50 cm		
<i>Acacia sericophylla</i>	0.1	80 cm		
<i>Bonamia alatisemina</i>	0.1	20 cm		
<i>Cassytha capillaris</i>	0.1	20 cm		
<i>Codonocarpus cotinifolius</i>	0.1	100 cm		
<i>Corymbia zygophylla</i>	0.1	130 cm		
<i>Dodonaea coriacea</i>	0.1	70 cm		
<i>Eriachne lanata</i>	1	50 cm	AH44-01	
<i>Eriachne obtusa</i>	0.1	60 cm	AH44-04	
<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	0.1	130 cm		Resprouting.
<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	40 cm	AH44-02	
<i>Grevillea pyramidalis</i>	0.1	60 cm		
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	350 cm		
<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	50 cm		
<i>Hybanthus aurantiacus</i>	0.1	60 cm		
<i>Leptosema anomalum</i>	0.1	30 cm		
<i>Polycarpaea corymbosa</i> var. <i>corymbosa</i>	0.1	30 cm		
<i>Polygala isingii</i>	0.1	4 cm		
<i>Ptilotus astrolasius</i>	0.5	50 cm		
<i>Ptilotus calostachyus</i>	0.1	90 cm		
<i>Seringia</i> sp.	0.1	60 cm	AH44-03	Sterile; det. by Carol Wilkins.
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	80 cm		
<i>Streptoglossa decurrentis</i>	0.1	50 cm		
<i>Trianthema pilosum</i>	0.1	20 cm		
<i>Trigastrotheca molluginea</i>	0.1	20 cm		
<i>Triodia epactia</i>	0.1	50 cm		
<i>Triodia schinzii</i>	20	50 cm		
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	8 cm		



2017

Asian Hub Phase 1		Site	AH45
Described by	CEPPL	Date	01-Sep-17
MGA Zone	51	308075 mE	7776500 mN
Habitat	Footslope of a low lateritic rise; S-facing gentle rocky footslope within a landscape of broad undulating low hills.		
Soil	Red-brown sandy loam.		
Rock Type	Laterite: cobbles (1-25%), pebbles (26-50%) and gravel (26-50%).		
Vegetation	<i>Grevillea pyramidalis</i> subsp. <i>pyramidalis</i> tall open shrubland over <i>Acacia hilliana</i> , (<i>A. adoxa</i> var. <i>adoxia</i>) low shrubland over <i>Triodia epactia</i> , (<i>T. schinzii</i>) hummock grassland over <i>Fimbristylis simulans</i> scattered sedges.		
Veg Condition	Excellent to Very Good; camel scats present but no grazing noted.		
Fire Age	No sign of recent fire.		
Notes	Large termite mound in the middle of the quadrat. Some of the <i>Acacia hilliana</i> is dying off; natural senescence?		

Species	Cover	Height	Specimen	Notes
<i>Acacia adoxa</i> var. <i>adoxia</i>	1	55 cm		
<i>Acacia hilliana</i>	11	60 cm		
<i>Aristida holathera</i> var. <i>latifolia</i>	0.1	55 cm	AH43-X=	
<i>Bonamia alatisemina</i>	0.1	20 cm		
<i>Cucumis variabilis</i>	0.1	40 cm	AH45-02	
<i>Cullen martinii</i>	0.1	5 cm	AH45-03	Juvenile.
<i>Dodonaea coriacea</i>	0.1	20 cm		
<i>Eriachne lanata</i>	0.1	30 cm		
<i>Eriachne obtusa</i>	0.1	40 cm		
<i>Eriachne pulchella</i>	0.1	5 cm		
<i>Fimbristylis simulans</i>	1	15 cm		
<i>Grevillea pyramidalis</i>	3	400 cm		
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	10 cm		Juvenile.
<i>Hibiscus leptoclados</i>	0.1	20 cm		
<i>Oldenlandia pterospora</i>	0.1	15 cm		
<i>Phyllanthus eremicus</i>	0.1	20 cm		N=2 plants.
<i>Polycarpaea corymbosa</i> var. <i>corymbosa</i>	0.1	10 cm		
<i>Pilotus calostachyus</i>	0.1	60 cm		
<i>Senna notabilis</i>	0.1	20 cm		
<i>Sida arenicola</i>	0.1	25 cm		
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	130 cm		
<i>Streptoglossa macrocephala</i>	0.1	30 cm	AH45-04	
<i>Tephrosia simplicifolia</i>	0.1	30 cm	AH45-01	
<i>Tephrosia</i> sp. D Kimberley Flora (R.D. Royce 1848)	0.1	35 cm	AH45-05	
<i>Trianthema pilosum</i>	0.1	20 cm		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	0.1	40 cm	REL3-02=	
<i>Trigastrotheca molluginea</i>	0.1	10 cm		
<i>Triodia epactia</i>	29	50 cm		
<i>Triodia schinzii</i>	2	45 cm		
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	10 cm		



Asian Hub Phase 1	Site	AH46		
Described by	MM/PA	Date	01-Sep-17	Type Quadrat 50x50m
MGA Zone	51	303326 mE	7777156 mN	121.119003 °E -20.092586 °S
Habitat	Pindan plain.			
Soil	Red-brown loamy sand.			
Rock Type	N/A.			
Vegetation	Grevillea refracta subsp. refracta, (Acacia monticola) scattered tall shrubs over A. hilliana scattered low shrubs over Triodia epactia very open hummock grassland and Eulalia aurea open tussock grassland.			
Veg Condition	Excellent.			
Fire Age	Burnt 3-5 years ago.			

Species	Cover	Height	Specimen	Notes
<i>Acacia adoxa</i> var. <i>adoxia</i>	0.1	50 cm		
<i>Acacia ancistrocarpa</i>	0.1	210 cm		
<i>Acacia colei</i> var. <i>colei</i>	0.1	230 cm		
<i>Acacia hilliana</i>	0.5	90 cm		
<i>Acacia monticola</i>	0.5	220 cm		
<i>Acacia sericophylla</i>	0.1	160 cm		
<i>Bulbostylis barbata</i>	0.1	10 cm		
<i>Cassytha capillaris</i>	0.1	30 cm		
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	45 cm		
<i>Digitaria brownii</i>	0.1	50 cm		
<i>Dodonaea coriacea</i>	0.1	120 cm		
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	0.1	30 cm	AH41-03	
<i>Eriachne obtusa</i>	0.1	50 cm		
<i>Eulalia aurea</i>	11	60 cm	AH46-03	Sens. lat.
<i>Fimbristylis simulans</i>	0.1	25 cm		
<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	0.1	110 cm		
<i>Goodenia armitiana</i>	0.1	40 cm	AH42-02=	
<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	80 cm		
<i>Grevillea refracta</i> subsp. <i>refracta</i>	1	600 cm		
<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	50 cm		
<i>Polycarphaea corymbosa</i> var. <i>corymbosa</i>	0.1	30 cm		
<i>Pilotus calostachyus</i>	0.1	60 cm		
<i>Pilotus fusiformis</i>	0.1	40 cm		
<i>Seringia nephrosperma</i>	0.1	70 cm	AH46-01	
<i>Sida arenicola</i>	0.1	150 cm		
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	50 cm	AH46-02	
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	0.1	60 cm		
<i>Trianthema pilosum</i>	0.1	20 cm		
<i>Trigastrotheca molluginea</i>	0.1	15 cm		
<i>Triodia epactia</i>	8	60 cm		
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	20 cm		



2017

Asian Hub Phase 1		Site	AH47
Described by	CEFPL	Date	01-Sep-17
MGA Zone	51	308076 mE	7776091 mN
Habitat	Low-lying pindan plain.		
Soil	Dark reddish brown sand.		
Rock Type	N/A.		
Vegetation	Erythrophleum chlorostachys low open woodland over Grevillea refracta subsp. refracta, Acacia sericophylla scattered tall shrubs over A. ancistrocarpa open shrubland over Ptilotus astrolasius low open shrubland over Triodia schinzii open hummock grassland with Sorghum plumosum var. plumosum, Eriachne obtusa very open tussock grassland and Trianthema pilosum scattered herbs.		
Veg Condition	Excellent.		
Fire Age	No sign of recent fire.		

Species	Cover	Height	Specimen	Notes
<i>Abutilon otocarpum</i>	0.1	80 cm	AH47-06	
<i>Acacia ancistrocarpa</i>	6	160 cm		
<i>Acacia colei</i> var. <i>colei</i>	1	170 cm		
<i>Acacia sericophylla</i>	1	320 cm		
<i>Androcalva loxophylla</i>	0.1	40 cm		
<i>Boerhavia gardneri</i>	0.1	40 cm	AH47-03	Dead.
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	40 cm		
<i>Codonocarpus cotinifolius</i>	0.1	140 cm		
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	40 cm	AH47-08	
<i>Crotalaria ramosissima</i>	0.1	30 cm	AHCEF05=	
<i>Cucumis variabilis</i>	0.1	70 cm		
<i>Dodonaea coriacea</i>	0.1	90 cm		
<i>Eragrostis eriopoda</i>	0.1	40 cm		
<i>Eriachne obtusa</i>	1	45 cm		
<i>Erythrophleum chlorostachys</i>	3.5	450 cm		
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	15 cm		
<i>Fimbristylis simulans</i>	0.1	30 cm		
<i>Goodenia armittiana</i>	0.1	30 cm		
<i>Grevillea refracta</i> subsp. <i>refracta</i>	1	340 cm		
<i>Heliotropium leptaleum</i>	0.1	40 cm	AH47-07	
<i>Oldenlandia pterospora</i>	0.1	30 cm		
<i>Polycarpea corymbosa</i> var. <i>corymbosa</i>	0.1	20 cm		
<i>Polymeria</i> ? sp. Broome (K.F. Kenneally 9759)	0.1	30 cm	AH47-04	Insufficient material for confident determination.
<i>Portulaca filifolia</i>	0.1	35 cm	AH47-02	Dead.
<i>Ptilotus arthrolasius</i>	0.1	30 cm		
<i>Ptilotus astrolasius</i>	3	45 cm		
<i>Ptilotus polystachyus</i>	0.1	60 cm		
<i>Sorghum plumosum</i> var. <i>plumosum</i>	2	80 cm		
<i>Striga curviflora</i>	0.1	40 cm		
<i>Tephrosia</i> sp. D Kimberley Flora (R.D. Royce 1848)	0.1	40 cm	AH47-01	
<i>Trianthema pilosum</i>	1	25 cm		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	0.1	80 cm	AH47-05	
<i>Trigastrotheca molluginea</i>	0.1	25 cm		
<i>Triodia schinzii</i>	25	40 cm		
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	20 cm		



Asian Hub Phase 1	Site	AH48		
Described by	MM/PA	Date	01-Sep-17	Type Quadrat 50x50m
MGA Zone	51	315157 mE	7775129 mN	121.231908 °E -20.112064 °S
Habitat	Pindan plain.			
Soil	Pindan sand.			
Rock Type	N/A.			
Vegetation	Acacia ancistrocarpa, (Erythrophleum chlorostachys) scattered tall shrubs over Triodia epactia open hummock grassland.			
Veg Condition	Excellent.			
Fire Age	Burnt 3-5 years ago.			
Notes	Old drain E of quadrat and a few old tins.			

Species	Cover	Height	Specimen	Notes
<i>Acacia ancistrocarpa</i>	1.5	290 cm		
<i>Acacia sabulosa</i>	0.1	120 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	70 cm		
<i>Bonamia alatisemina</i>	0.1	15 cm		
<i>Bulbostylis barbata</i>	0.1	20 cm		
<i>Cassytha capillaris</i>	0.1	40 cm		
<i>Eriachne obtusa</i>	0.1	40 cm		
<i>Erythrophleum chlorostachys</i>	0.5	210 cm		
<i>Euphorbia psilosperma</i>	0.1	15 cm	AH48-01	
<i>Hibiscus leptocladus</i>	0.1	25 cm	AH48-02	
<i>Polycarphaea corymbosa</i> var. <i>corymbosa</i>	0.1	30 cm		
<i>Pilotus polystachyus</i>	0.1	30 cm		
<i>Sida arenicola</i>	0.1	15 cm		
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	60 cm		
<i>Trianthema pilosum</i>	0.1	20 cm		
<i>Tribulopis marliesiae</i>	0.1	20 cm		N=3; sterile adults.
<i>Trigastrotheca molluginea</i>	0.1	15 cm		
<i>Triodia epactia</i>	15	60 cm		
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	20 cm		



2017

Asian Hub Phase 1 & 2	Site	AH49	
Described by	CEFPL / PLSW	Date	02-Sep-17 / 15-Mar-18
MGA Zone	51	296383 mE	7779711 mN
Habitat	Low-lying pindan plain between low laterite hills.	Type	Quadrat 50x50m
Soil	Dark reddish brown loamy sand.		121.052913 °E
Rock Type	Laterite: pebbles (1-25%) and gravel (1-25%).		-20.068791 °S
Vegetation	Phase 1: <i>Acacia monticola</i> open shrubland over <i>A. adoxa</i> var. <i>adoxia</i> , <i>Tephrosia rosea</i> var. <i>clementii</i> low open shrubland over <i>Triodia epactia</i> open hummock grassland and <i>Sorghum plumosum</i> var. <i>plumosum</i> , <i>Eulalia aurea</i> very open tussock grassland. Phase 2: <i>Acacia monticola</i> , (<i>Sida arenicola</i>) open shrubland over <i>A. adoxa</i> var. <i>adoxia</i> scattered low shrubs over <i>Triodia epactia</i> open hummock grassland and <i>Eulalia aurea</i> , <i>Sorghum plumosum</i> var. <i>plumosum</i> open tussock grassland.		
Veg Condition	Excellent.		
Fire Age	Burnt 3-5 years ago.		

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Acacia adoxa</i> var. <i>adoxia</i>	2	40 cm			<i>Acacia adoxa</i> var. <i>adoxia</i>	2	60 cm		
<i>Acacia ancistrocarpa</i>	0.1	90 cm			<i>Acacia ancistrocarpa</i>	0.1	80 cm		
<i>Acacia colei</i> var. <i>colei</i>	0.1	110 cm			<i>Acacia colei</i> var. <i>colei</i>	0.1	140 cm		
<i>Acacia monticola</i>	7	200 cm			<i>Acacia monticola</i>	7	200 cm		
					<i>Acacia sabulosa</i>	0.1	120 cm	AHR49-06	
<i>Aristida holathera</i> var. <i>holathera</i>	2	50 cm			<i>Aristida holathera</i> var. <i>holathera</i>	2	45 cm	AHR49-01	
					<i>Boerhavia gardneri</i>	0.1	10 cm	AHR49-07	
<i>Bulbostylis barbata</i>	0.1	25 cm			<i>Bulbostylis barbata</i>	0.1	10 cm		
					<i>Cassytha capillaris</i>	0.1	30 cm		
<i>Cleome viscosa</i>	0.1	50 cm		Dead.	<i>Cleome viscosa</i>	0.1	10 cm		
<i>Digitaria brownii</i>	0.1	70 cm			<i>Digitaria brownii</i>	0.1	70 cm		
<i>Eragrostis eriopoda</i>	0.1	40 cm			<i>Eragrostis eriopoda</i>	0.1	70 cm		
<i>Eriachne obtusa</i>	0.1	45 cm			<i>Eriachne obtusa</i>	0.1	70 cm	AHR49-03	
<i>Eulalia aurea</i>	4	70 cm	AH49-03	Sens. lat.	<i>Eulalia aurea</i>	8	70 cm		
<i>Euphorbia psilosperma</i>	0.1	20 cm	AH49-02		<i>Euphorbia psilosperma</i>	0.1	20 cm	AHR49-09	
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	20 cm			<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	20 cm		
<i>Goodenia armittiana</i>	0.1	45 cm							
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	250 cm			<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	200 cm		
<i>Hibiscus leptocladus</i>	0.1	50 cm			<i>Hibiscus leptocladus</i>	0.1	40 cm		
					<i>Paspalidium rarum</i>	0.1	20 cm	AHR49-04	
<i>Polycarpaea corymbosa</i> var. <i>corymbosa</i>	0.1	20 cm			<i>Polycarpaea corymbosa</i> var. <i>corymbosa</i>	0.1	20 cm		
<i>Ptilotus calostachyus</i>	0.1	80 cm			<i>Ptilotus calostachyus</i>	0.1	30 cm		
<i>Ptilotus fusiformis</i>	0.1	40 cm							
<i>Ptilotus polystachyus</i>	0.1	70 cm			<i>Ptilotus polystachyus</i>	0.1	30 cm		
<i>Senna notabilis</i>	0.1	50 cm			<i>Senna notabilis</i>	0.1	20 cm		
					<i>Seringia nephrosperma</i>	0.1	50 cm	AHR49-08	
<i>Sida arenicola</i>	0.1	210 cm	AH49-01	White indumentum form.	<i>Sida arenicola</i>	0.1	200 cm		White indumentum form.
<i>Sida arenicola</i>	1	190 cm	AH49-04	Ferruginous form.	<i>Sida arenicola</i>	1	170 cm		
<i>Sorghum plumosum</i> var. <i>plumosum</i>	4	180 cm			<i>Sorghum plumosum</i> var. <i>plumosum</i>	6	180 cm	AHR49-02	

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Tephrosia rosea</i> var. <i>clementii</i>	1	50 cm			<i>Tephrosia rosea</i> var. <i>clementii</i>	0.1	110 cm		
<i>Trianthema pilosum</i>	1	20 cm		Dead.	<i>Trianthema pilosum</i>	0.1	5 cm		
<i>Trichodesma zeylanicum</i>	0.1	90 cm		Sterile.	<i>Trichodesma zeylanicum</i>	0.1	30 cm		Sterile.
<i>Trigastrotheca molluginea</i>	0.1	20 cm			<i>Trigastrotheca molluginea</i>	0.1	20 cm		
<i>Triodia epactia</i>	12	40 cm			<i>Triodia epactia</i>	19	80 cm		
<i>Triodia schinzii</i>	0.1	90 cm							
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	20 cm			<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	25 cm	AHR49-05	



2017



2018

Asian Hub Phase 1 & 2	Site	AH50			
Described by	MM/PA / PLSW	Date	02-Sep-17 / 16-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	317676 mE	7774766 mN		121.255958 °E -20.115583 °S
Habitat	Crest of broad stony lateritic rise.				
Soil	Orange-brown loamy sand.				
Rock Type	Lateritic gravel (26-50%).				
Vegetation	Phase 1: <i>Grevillea refracta</i> subsp. <i>refracta</i> , (<i>G. wickhamii</i> subsp. <i>macrodonta</i>) tall open shrubland over <i>Acacia hilliana</i> , (<i>A. adoxa</i> var. <i>adoxa</i>) low shrubland over <i>Triodia epactia</i> open hummock grassland.				
	Phase 2: <i>Grevillea refracta</i> subsp. <i>refracta</i> , (<i>G. wickhamii</i> subsp. <i>hispidula</i>) tall open shrubland over <i>Acacia hilliana</i> , (<i>A. adoxa</i> var. <i>adoxa</i>) low shrubland over <i>Triodia epactia</i> open hummock grassland.				
Veg Condition	Excellent.				
Fire Age	No sign of recent fire.				
Notes	Two subspecies of <i>Grevillea wickhamii</i> identified from specimens; both would have been present in both phases, but have not adjusted data.				

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Acacia adoxa</i> var. <i>adoxa</i>	5	60 cm			<i>Acacia adoxa</i> var. <i>adoxa</i>	5	60 cm		
<i>Acacia hilliana</i>	15	55 cm			<i>Acacia hilliana</i>	15	50 cm		
<i>Acacia monticola</i>	0.1	70 cm			<i>Acacia monticola</i>	0.1	80 cm		
<i>Bulbostylis barbata</i>	0.1	10 cm			<i>Bulbostylis barbata</i>	0.1	15 cm		
					<i>Cassytha capillaris</i>	0.1	40 cm		
<i>Codonocarpus cotinifolius</i>	0.1	80 cm			<i>Codonocarpus cotinifolius</i>	0.1	80 cm		
<i>Dodonaea coriacea</i>	0.1	60 cm			<i>Dodonaea coriacea</i>	0.1	50 cm		
<i>Eriachne ciliata</i>	0.1	20 cm							
<i>Eriachne pulchella</i>	0.1	20 cm		Multi-jointed culms.	<i>Eriachne pulchella</i>	0.1	15 cm		
<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	50 cm			<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	40 cm		
<i>Grevillea refracta</i> subsp. <i>refracta</i>	6	400 cm			<i>Grevillea refracta</i> subsp. <i>refracta</i>	6	400 cm		
					<i>Grevillea wickhamii</i> subsp. <i>hispidula</i>	3	220 cm	AHR50-01	Subsp. ID checked; perianth has short erect hairs.
<i>Grevillea wickhamii</i> subsp. <i>macrodonta</i>	3	220 cm	AH50-01	Subsp. ID checked; outer perianth is glabrous.					
<i>Gyrostemon tepperi</i>	0.1	120 cm			<i>Gyrostemon tepperi</i>	0.1	120 cm		
<i>Polycarphaea corymbosa</i> var. <i>corymbosa</i>	0.1	20 cm			<i>Polycarphaea corymbosa</i> var. <i>corymbosa</i>	0.1	20 cm		
<i>Ptilotus calostachyus</i>	0.1	50 cm			<i>Ptilotus calostachyus</i>	0.1	70 cm		
<i>Sida arenicola</i>	0.1	70 cm			<i>Sida arenicola</i>	0.1	90 cm	AHR50-03	White indumentum form.
<i>Solanum dioicum</i>	0.1	30 cm	AH50-02						
					<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	120 cm	AHR50-02	
<i>Trigastrotheca molluginea</i>	0.1	8 cm			<i>Trigastrotheca molluginea</i>	0.1	15 cm		
<i>Triodia epactia</i>	11	50 cm			<i>Triodia epactia</i>	11	50 cm		



2017



2018

Asian Hub Phase 1 & 2	Site	AH51			
Described by	CEFPL / PLSW	Date	02-Sep-17 / 16-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	323986 mE	7772440 mN		121.316072 °E -20.137179 °S
Habitat	Broad pindan plain with rocky lateritic low hills to the SE.				
Soil	Red brown loamy sand.				
Rock Type	N/A.				
Vegetation	Acacia ancistrocarpa tall open shrubland over <i>Triodia epactia</i> open hummock grassland.				
Veg Condition	Excellent.				
Fire Age	Burnt 3-5 years ago.				
Notes	Phase 1: Scattered <i>Corymbia zygophylla</i> trees in broader landscape on N side of road, none on S side where fauna site is located.				

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Acacia ancistrocarpa</i>	3	350 cm			<i>Acacia ancistrocarpa</i>	3	350 cm		
<i>Acacia colei</i> var. <i>colei</i>	0.1	170 cm			<i>Acacia colei</i> var. <i>colei</i>	0.1	170 cm		
<i>Bulbostylis barbata</i>	0.1	15 cm			<i>Bulbostylis barbata</i>	0.1	15 cm		
<i>Cassytha capillaris</i>	0.1	15 cm	AH51-01		<i>Cassytha capillaris</i>	0.1	40 cm		
					<i>Euphorbia psilosperma</i>	0.1	20 cm	AHR51-02	
<i>Goodenia armittiana</i>	0.1	10 cm							
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	350 cm			<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	300 cm		
<i>Grevillea wickhamii</i>	0.1	140 cm		Sterile.	<i>Grevillea wickhamii</i>	0.1	140 cm		Sterile.
<i>Oldenlandia pterospora</i>	0.1	10 cm							
<i>Polycarpaea corymbosa</i> var. <i>corymbosa</i>	0.1	10 cm			<i>Polycarpaea corymbosa</i> var. <i>corymbosa</i>	0.1	25 cm		
<i>Ptilotus arthrolasius</i>	0.1	40 cm			<i>Ptilotus arthrolasius</i>	0.1	40 cm		
<i>Ptilotus astrolasius</i>	0.1	20 cm			<i>Ptilotus astrolasius</i>	0.1	45 cm		
<i>Ptilotus calostachyus</i>	0.1	80 cm			<i>Ptilotus calostachyus</i>	0.1	40 cm		
<i>Senna notabilis</i>	0.1	45 cm			<i>Senna notabilis</i>	0.1	40 cm		
<i>Sida arenicola</i>	0.1	70 cm	AH49-01=		<i>Sida arenicola</i>	0.1	140 cm		Ferruginous form.
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	90 cm			<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	120 cm	AHR52- =	
					Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.1	10 cm	AHR51-01	
<i>Trigastrotheca molluginea</i>	0.1	10 cm			<i>Trigastrotheca molluginea</i>	0.1	25 cm		
<i>Triodia epactia</i>	14	45 cm			<i>Triodia epactia</i>	18	50 cm		
					<i>Zornia chaetophora</i>	0.1	40 cm	AHR52-01 =	



2017



2018

Asian Hub Phase 1 & 2	Site	AH52			
Described by	MM/PA / PLSW	Date	02-Sep-17 / 16-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	321418 mE	7773419 mN		121.291609 °E -20.128100 °S
Habitat	Gently undulating broad pindan plain.				
Soil	Red-brown sand.				
Rock Type	Scattered lateritic gravel.				
Vegetation	Phase 1: <i>Grevillea pyramidalis</i> scattered tall shrubs over <i>Acacia orthocarpa</i> open shrubland over <i>Triodia epactia</i> open hummock grassland. Phase 2: <i>Acacia orthocarpa</i> , (<i>Grevillea pyramidalis</i>) tall open shrubland over <i>Triodia epactia</i> open hummock grassland.				
Veg Condition	Phase 1: Excellent; an old camel track but no sign of grazing.		Phase 2: Excellent.		
Fire Age	No sign of recent fire.				

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Acacia ancistrocarpa</i>	0.1	210 cm			<i>Acacia ancistrocarpa</i>	0.1	240 cm		
<i>Acacia orthocarpa</i>	3	200 cm	AH52-01		<i>Acacia orthocarpa</i>	3	210 cm		
<i>Bulbostylis barbata</i>	0.1	10 cm			<i>Bulbostylis barbata</i>	0.1	10 cm		
<i>Cassytha capillaris</i>	0.1	40 cm			<i>Cassytha capillaris</i>	0.1	10 cm		
<i>Cucumis variabilis</i>	0.1	60 cm		Dead.					
<i>Eriachne ciliata</i>	0.1	40 cm							
<i>Eriachne obtusa</i>	0.1	50 cm			<i>Eriachne obtusa</i>	0.1	40 cm		
<i>Eriachne pulchella</i>	0.1	15 cm							
					<i>Goodenia armitiana</i>	0.1	40 cm	AHR52-02	
<i>Grevillea pyramidalis</i>	0.5	340 cm			<i>Grevillea pyramidalis</i>	0.5	340 cm		
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	200 cm			<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	200 cm		200 cm individual is dead, but 40 cm shrub is alive.
					<i>Polycarphaea corymbosa</i> var. <i>corymbosa</i>	0.1	10 cm		
<i>Ptilotus calostachyus</i>	0.1	70 cm			<i>Ptilotus calostachyus</i>	0.1	40 cm		
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	35 cm	AH52-02		<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	50 cm	AHR48- =	
<i>Trigastrotheca molluginea</i>	0.1	4 cm			<i>Trigastrotheca molluginea</i>	0.1	10 cm		
<i>Triodia epactia</i>	15	50 cm			<i>Triodia epactia</i>	15	50 cm		
					<i>Zornia chaetophora</i>	0.1	40 cm	AHR52-01	



2017



2018

Asian Hub Phase 1 & 2	Site	AH53			
Described by	CEFPL / MM/BMa	Date	02-Sep-17 / 16-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	327626 mE	7771983 mN	121.350842 °E	-20.141636 °S
Habitat	Gently sloping pindan plain; receives run-off from surrounding low lateritic rises.				
Soil	Dark reddish brown loamy sand.				
Rock Type	Laterite; gravel and pebble surface covering 50%.				
Vegetation	Grevillea refracta subsp. refracta tall open shrubland over Acacia monticola scattered shrubs over A. adoxa var. adoxa, (A. hilliana, Ptilotus astrolasius, Androcalva loxophylla, G. wickhamii subsp. hispidula) low shrubland over Triodia epactia open hummock grassland.				
Veg Condition	Excellent.				
Fire Age	Burnt 3-5 years ago.				
Notes	Phase 2: <i>Hibiscus leptocladus</i> , <i>Trianthema pilosum</i> not seen in 2018.				

Phase 1: Species	Cover	Height	Specimen	Phase 2: Species	Cover	Height	Specimen
<i>Acacia adoxa</i> var. <i>adoxa</i>	11	40 cm		<i>Acacia adoxa</i> var. <i>adoxa</i>	20	40 cm	
<i>Acacia hilliana</i>	2	40 cm		<i>Acacia hilliana</i>	2	40 cm	
<i>Acacia monticola</i>	0.5	120 cm		<i>Acacia monticola</i>	0.5	120 cm	
<i>Acacia sericophylla</i>	0.1	90 cm		<i>Acacia sericophylla</i>	0.1	90 cm	
<i>Acacia tumida</i> var. <i>kulparn</i>	0.1	40 cm		<i>Acacia tumida</i> var. <i>kulparn</i>	0.1	40 cm	
<i>Androcalva loxophylla</i>	1	45 cm		<i>Androcalva loxophylla</i>	0.5	45 cm	
<i>Bonamia alatisemina</i>	0.1	25 cm		<i>Bonamia alatisemina</i>	0.1	25 cm	AH70-03=
<i>Bulbostylis barbata</i>	0.1	25 cm		<i>Bulbostylis barbata</i>	0.1	25 cm	
<i>Cassytha capillaris</i>	0.1	30 cm	AH51-01=	<i>Cassytha capillaris</i>	0.1	30 cm	AH51-01=
				<i>Dodonaea coriacea</i>	0.1	50 cm	
<i>Eragrostis eriopoda</i>	0.1	40 cm		<i>Eragrostis eriopoda</i>	0.1	40 cm	
<i>Eriachne lanata</i>	0.1	50 cm		<i>Eriachne lanata</i>	0.1	50 cm	AHR53-01
<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	0.1	190 cm		<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	0.1	190 cm	
<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	40 cm	AH53-01	<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	40 cm	AH53-01
<i>Grevillea refracta</i> subsp. <i>refracta</i>	6	300 cm		<i>Grevillea refracta</i> subsp. <i>refracta</i>	6	300 cm	
<i>Grevillea wickhamii</i> subsp. <i>hispidula</i>	0.5	90 cm	AH53-03	<i>Grevillea wickhamii</i> subsp. <i>hispidula</i>	0.5	90 cm	AH53-03
<i>Hibiscus leptocladus</i>	0.1	40 cm	AH53-02				
<i>Leptosema anomalum</i>	0.1	25 cm		<i>Leptosema anomalum</i>	0.1	25 cm	
<i>Ptilotus astrolasius</i>	3	30 cm		<i>Ptilotus astrolasius</i>	1	30 cm	
<i>Ptilotus calostachyus</i>	0.1	70 cm		<i>Ptilotus calostachyus</i>	0.1	70 cm	
				<i>Sida arenicola</i>	0.1	50 cm	
<i>Solanum dioicum</i>	0.1	50 cm		<i>Solanum dioicum</i>	0.1	50 cm	
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	100 cm		<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	100 cm	
<i>Trianthema pilosum</i>	0.1	20 cm					
<i>Trigastrotheca molluginea</i>	0.1	20 cm		<i>Trigastrotheca molluginea</i>	0.1	20 cm	
<i>Triodia epactia</i>	15	30 cm		<i>Triodia epactia</i>	15	30 cm	



2017



2018

Asian Hub Phase 1	Site	AH54
Described by	MM/PA	Date 02-Sep-17
MGA Zone	51	326027 mE 7771763 mN
Habitat	Minor drainage between low undulating rocky rises.	
Soil	Red brown loamy sand.	
Rock Type	Laterite; pebbles (1-25%) and gravel (1-25%).	
Vegetation	Acacia colei var. colei, (Grevillea wickhamii, G. refracta subsp. refracta, A. ancistrocarpa) tall open scrub over A. adoxa var. adoxa low shrubland over Triodia epactia very open hummock grassland.	
Veg Condition	Excellent.	
Fire Age	No sign of recent fire.	

Species	Cover	Height	Specimen	Notes
Acacia adoxa var. adoxa	25	50 cm		
Acacia ancistrocarpa	2	280 cm		
Acacia colei var. colei	25	300 cm		
Acacia hilliana	0.1	50 cm		
Acacia monticola	0.1	170 cm		
Aristida holathera var. holathera	0.1	70 cm		
Bulbostylis barbata	0.1	20 cm		
Cassytha capillaris	0.1	30 cm		
Cleome viscosa	0.1	60 cm		
Codonocarpus cotinifolius	0.1	120 cm		
Corchorus sidoides subsp. vermicularis	0.1	30 cm		
Cullen martinii	0.1	20 cm		
Cymbopogon obtectus	0.1	60 cm		
Digitaria brownii	0.1	55 cm		
Dodonaea coriacea	0.1	170 cm		
Eriachne ciliata	0.1	25 cm		
Eriachne lanata	0.1	50 cm		
Euphorbia psilosperma	0.1	25 cm	AH54-01	
Fimbristylis simulans	0.1	20 cm		
Gardenia pyriformis subsp. keartlandii	0.1	280 cm		
Goodenia azurea subsp. hesperia	0.1	35 cm		
Grevillea refracta subsp. refracta	8	350 cm		
Grevillea wickhamii	15	400 cm		Sterile.
Oldenlandia pterospora	0.1	20 cm		
Ptilotus astrolasius	0.1	40 cm		
Ptilotus calostachyus	0.1	50 cm		
Schizachyrium fragile	0.1	25 cm	AH54-03	
Senna notabilis	0.1	40 cm		
Setaria surgens	0.1	60 cm	AH54-02	
Sida arenicola	0.1	120 cm		
Solanum dioicum	0.1	70 cm	AH50-02=	
Sorghum plumosum var. plumosum	0.1	60 cm	AH52-02 =	
Trianthema pilosum	0.1	30 cm		
Trichodesma zeylanicum	0.1	50 cm		Sterile.
Trigastrotheca molluginea	0.1	15 cm		
Triodia epactia	8	60 cm		
Yakirra australiensis var. australiensis	0.1	15 cm		



2017

Asian Hub Phase 1 & 2	Site	AH55			
Described by	CEFPL / PLSW	Date	02-Sep-17 / 20-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	339799 mE	7767874 mN		121.466910 °E -20.179806 °S
Habitat	Pindan plain, and very gentle S-facing footslope.				
Soil	Red brown loamy sand.				
Rock Type	Lateritic gravel (1-25%).				
Vegetation	Corymbia flavescens low open woodland over Erythrophleum chlorostachys, (Acacia sericophylla) tall open shrubland over Grevillea pyramidalis, A. colei var. colei, A. sabulosa open shrubland over Bonamia erecta, Androcalva loxophylla, (Acacia adoxa var. adoxa, A. hilliana) low shrubland over Triodia epactia open hummock grassland with Sorghum plumosum var. plumosum scattered tussock grasses.				
Veg Condition	Excellent.				
Fire Age	Phase 1: Burnt 3-5 years ago.	Phase 2: No sign of recent fire.			
Notes	Phase 1: Corymbia flavescens is scattered in broader landscape on and around low rises. No defined drainage lines, but more Corymbia trees in run-off areas.				

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
Acacia adoxa var. adoxa	2	40 cm			Acacia adoxa var. adoxa	2	40 cm		
Acacia colei var. colei	1	140 cm			Acacia colei var. colei	1	150 cm		
Acacia hilliana	2	60 cm			Acacia hilliana	2	60 cm		
Acacia sabulosa	1	110 cm	AH55-01		Acacia sabulosa	1	110 cm		
Acacia sericophylla	0.5	220 cm			Acacia sericophylla	0.5	220 cm		
Achyranthes aspera	0.1	70 cm	AH55-12		Achyranthes aspera	0.1	40 cm		
Androcalva loxophylla	6	55 cm			Androcalva loxophylla	6	55 cm		
Aristida holathera var. holathera	0.1	30 cm			Aristida holathera var. holathera	0.1	50 cm		
					Boerhavia gardneri	0.1	30 cm	AHR55-01	
Bonamia erecta	7	40 cm			Bonamia erecta	7	40 cm		
					Bulbostylis barbata	0.1	15 cm		
Cassytha capillaris	0.1	30 cm	AH51-01=		Cassytha capillaris	0.1	35 cm		
					Cleome viscosa	0.1	30 cm		
Corchorus sidoides subsp. vermicularis	0.1	40 cm			Corchorus sidoides subsp. vermicularis	0.1	30 cm		
Corymbia flavescens	3	600 cm	AH55-13		Corymbia flavescens	3	700 cm		
Cyperus sp.	0.1	40 cm	AH55-09	Sterile; insufficient material for further identification.					
Dodonaea coriacea	0.1	40 cm			Dodonaea coriacea	0.1	90 cm		
Eragrostis eriopoda	0.1	40 cm			Eragrostis eriopoda	0.1	40 cm		
Eriachne obtusa	0.1	45 cm			Eriachne obtusa	0.1	40 cm		
Erythrophleum chlorostachys	2	350 cm			Erythrophleum chlorostachys	2	350 cm		
					Euphorbia psilosperma	0.1	20 cm	AHR39-01=	
Fimbristylis dichotoma	0.1	20 cm	AH55-04						
Gardenia pyriformis subsp. keartlandii	0.1	55 cm							
Goodenia armittiana	0.1	20 cm			Goodenia armittiana	0.1	40 cm		
					Goodenia azurea subsp. hesperia	0.1	45 cm		
Grevillea pyramidalis	1.5	100 cm			Grevillea pyramidalis	1.5	100 cm		
Grevillea wickhamii	0.1	70 cm		Sterile.					
Hibiscus leptocladus	0.1	80 cm			Hibiscus leptocladus	0.1	35 cm		
Hybanthus aurantiacus	0.1	50 cm			Hybanthus aurantiacus	0.1	50 cm		

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Indigofera linnaei</i>	0.1	50 cm	AH55-11		<i>Indigofera linnaei</i>	0.1	35 cm		
<i>Indigofera monophylla</i>	0.1	45 cm	AH55-06						
<i>Jacksonia aculeata</i>	0.1	50 cm			<i>Jacksonia aculeata</i>	0.1	40 cm		
<i>Leptosema anomalum</i>	0.1	60 cm			<i>Leptosema anomalum</i>	0.1	30 cm		
<i>Paspalidium rarum</i>	0.1	20 cm	AH55-10						
					<i>Phyllanthus eremicus</i>	0.1	40 cm		
<i>Polygala isingii</i>	0.1	5 cm	AH55-03						
<i>Portulaca filifolia</i>	0.1	15 cm	AH55-14						
<i>Ptilotus astrolasius</i>	0.1	40 cm							
<i>Ptilotus calostachyus</i>	0.1	55 cm			<i>Ptilotus calostachyus</i>	0.1	60 cm		
<i>Sida arenicola</i>	0.1	160 cm							
<i>Sida</i> sp. Pindan (B.G. Thomson 3398)	0.1	45 cm	AH55-07		<i>Sida</i> sp. Pindan (B.G. Thomson 3398)	0.1	40 cm		
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.5	70 cm			<i>Sorghum plumosum</i> var. <i>plumosum</i>	1	130 cm		
					<i>Tephrosia simplicifolia</i>	0.1	40 cm	AHR55-03	
<i>Tephrosia</i> sp. D Kimberley Flora (R.D. Royce 1848)	0.1	20 cm	AH55-02		<i>Tephrosia</i> sp. D Kimberley Flora (R.D. Royce 1848)	0.1	40 cm		
<i>Trianthema pilosum</i>	0.1	15 cm			<i>Tinospora smilacina</i>	0.1	20 cm		
<i>Tribulopis marliesiae</i>	0.1	10 cm	AH55-08	N=2 plants.	<i>Trianthema pilosum</i>	0.1	40 cm		
<i>Trigastrotheca molluginea</i>	0.1	10 cm			<i>Tribulopis marliesiae</i>	0.1	25 cm		N=1.
<i>Triodia epactia</i>	18	45 cm			<i>Trigastrotheca molluginea</i>	0.1	25 cm		
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	20 cm			<i>Triodia epactia</i>	18	50 cm		
<i>Zornia chaetophora</i>	0.1	40 cm	AH55-05		<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	20 cm	AHR55-02	
					<i>Zornia chaetophora</i>	0.1	30 cm		



2017



2018

Asian Hub Phase 1 & 2	Site	AH56			
Described by	MM/PA / PLSW	Date	02-Sep-17 / 16-Mar-18	Type	Quadrat 25x50m
MGA Zone	51	326254 mE	7771746 mN		121.337697 °E -20.143654 °S
Habitat	Crest of low lateritic outcrop.				
Soil	Red-brown loamy sand.				
Rock Type	Laterite.				
Vegetation	Ficus brachypoda low open woodland over Acacia colei var. colei, (Grevillea wickhamii) tall open shrubland over A. hilliana scattered low shrubs over Triodia epactia very open hummock grassland and Eriachne ciliata, Paspalidium tabulatum scattered tussock grasses.				
Veg Condition	Excellent.				
Fire Age	Burnt 3-5 years ago.				

Phase 1: Species	Cover	Height	Specimen	Notes	Phase 2: Species	Cover	Height	Specimen	Notes
<i>Abutilon leucopetalum</i>	0.1	30 cm	AH56-05		<i>Abutilon leucopetalum</i>	0.1	70 cm	AHR56-02	
<i>Acacia colei</i> var. <i>colei</i>	4	250 cm	AH56-02		<i>Acacia colei</i> var. <i>colei</i>	2	250 cm		
<i>Acacia hilliana</i>	1	30 cm			<i>Acacia hilliana</i>	1	40 cm		
<i>Acacia monticola</i>	0.1	220 cm							
<i>Amaranthus undulatus</i>	0.1	40 cm	AH56-04		<i>Amaranthus undulatus</i>	0.1	70 cm	AHR56-03	
<i>Boerhavia coccinea</i>	0.1	20 cm	AH56-01		<i>Boerhavia coccinea</i>	3	40 cm		
<i>Bulbostylis barbata</i>	0.1	15 cm			<i>Bulbostylis barbata</i>	0.1	15 cm		
<i>Cleome viscosa</i>	0.1	60 cm			<i>Cleome viscosa</i>	3	80 cm		
					<i>Cucumis variabilis</i>	0.1	80 cm		
<i>Eriachne ciliata</i>	1	20 cm			<i>Eriachne ciliata</i>	2	20 cm	AHR56-08	
					<i>Evolvulus alsinoides</i> var. <i>vilosicalyx</i>	0.1	25 cm	AHR56-05	
<i>Ficus brachypoda</i>	6	500 cm	AH56-06		<i>Ficus brachypoda</i>	6	500 cm		
<i>Fimbristylis simulans</i>	0.1	15 cm			<i>Fimbristylis simulans</i>	0.1	25 cm		
<i>Grevillea wickhamii</i>	2	250 cm		Sterile.	<i>Grevillea wickhamii</i> subsp. <i>macrodonta</i>	2	250 cm	AHR56-01	
<i>Paspalidium tabulatum</i>	1	40 cm			<i>Paspalidium tabulatum</i>	1	30 cm		
<i>Polycarphaea corymbosa</i> var. <i>corymbosa</i>	0.1	20 cm			<i>Polycarphaea corymbosa</i> var. <i>corymbosa</i>	0.1	25 cm		
<i>Ptilotus calostachyus</i>	0.1	60 cm			<i>Ptilotus calostachyus</i>	0.1	50 cm		
					<i>Rhynchosia minima</i>	0.1	25 cm	AHR56-06	
<i>Solanum dioicum</i>	0.1	30 cm	AH50-02=		<i>Solanum dioicum</i>	0.1	40 cm	AHR56-07	
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	80 cm							
<i>Trigastrotheca molluginea</i>	0.1	15 cm			<i>Trigastrotheca molluginea</i>	0.1	20 cm		
<i>Triodia epactia</i>	4	30 cm			<i>Triodia epactia</i>	4	50 cm		
<i>Triumfetta ? maconochieana</i>	0.1	30 cm	AH56-03	Tentative identification.	<i>Triumfetta ? maconochieana</i>	0.1	40 cm	AHR56-04	Tentative identification.



2017



2018

Asian Hub Phase 2	Site	AH60
Described by	MM/BMa	Date 14-Mar-18
MGA Zone	51	268060 mE 7812278 mN 120.786316 °E -19.771522 °S
Habitat	Broad low-lying plain, seasonally inundated.	
Soil	Brown silty clay to light clay.	
Rock Type	N/A.	
Vegetation	Acacia ampliceps, (Melaleuca glomerata) tall shrubland over M. glomerata, (A. am over M. glomerata, (A. ampliceps, Trianthema turgidifolium) low shrubland over Triodia hummock grasses.	
Veg Condition	Excellent; occasional annual grass weed (*Eragrostis minor).	
Fire Age	No sign of recent fire.	

Species	Cover	Height	Specimen	Notes
Acacia ampliceps	20	240 cm		
Amaranthus undulatus	0.1	20 cm	AH60-04	
Boerhavia burbridgeana	0.1	5 cm	AH60-09	
Cassytha filiformis	0.1	140 cm	AH60-08	
Cynanchum carnosum	0.1	100 cm	AH60-05	
*Eragrostis minor	0.1	20 cm	AH60-03	Number of individuals not recorded
Melaleuca glomerata	50	160 cm	AH60-01	
Myoporum montanum	0.1	110 cm	AH60-06	
Pterocaulon sp.	0.1	2 cm	Seedlings.	
Ptilotus exaltatus	0.1	40 cm		
Solanum esuriale	0.1	20 cm	AH60-02	
Trianthema triquetrum	0.1	15 cm	AH60-07	
Trianthema turgidifolium	4	40 cm		
Triodia epactia	2	40 cm	AH60-10	



2018

Asian Hub Phase 2	Site	AH61
Described by	PLSW	Date 14-Mar-18
MGA Zone	51	268051 mE 7811741 mN 120.786163 °E -19.776370 °S
Habitat	Low-lying plain, seasonally wet; extensive floodplain fringing coastline to W.	
Soil	Dark brown to grey clay loam.	
Rock Type	N/A.	
Vegetation	<i>Melaleuca glomerata</i> , (<i>Acacia colei</i> var. <i>colei</i> , <i>Myoporum montanum</i>) tall shrubland over <i>A. ampliceps</i> open shrubland over <i>Solanum esuriale</i> low open shrubland.	
Veg Condition	Very Good; some cattle scats and trampling; scattered weeds.	
Fire Age	No sign of recent fire.	

Species	Cover	Height	Specimen	Notes
<i>Abutilon</i> sp.	0.1	20 cm	AH61-26	Inadequate material for further determination
<i>Acacia ampliceps</i>	11	200 cm		
<i>Acacia colei</i> var. <i>colei</i>	3	300 cm	AH61-20	
<i>Amaranthus undulatus</i>	0.1	30 cm	AH61-12	
<i>Boerhavia burbridgeana</i>	0.1	20 cm	AH61-11	
<i>Boerhavia coccinea</i>	0.1	30 cm	AH61-15	
* <i>Citrullus colocynthis</i>	0.1	35 cm	AH61-16	
<i>Cleome viscosa</i>	0.1	40 cm	AH61-07	
<i>Cucumis variabilis</i>	0.1	30 cm	AH61-24	
<i>Cynanchum carnosum</i>	0.1	35 cm	AH61-06	
<i>Dysphania plantaginella</i>	0.1	8 cm	AH61-09	Inadequate material; no seeds but likely <i>D. plantaginella</i> .
<i>Enneapogon</i> ? <i>purpurascens</i>	0.1	30 cm	AH61-05	Tentative identification.
* <i>Eragrostis minor</i>	0.1	30 cm	AH61-13	Number of individuals not recorded.
<i>Eragrostis</i> sp..	0.1	40 cm		Sterile (similar to <i>E. desertorum</i>).
<i>Euphorbia</i> ? <i>wheeleri</i>	0.1	25 cm	AH61-08	Tentative identification.
<i>Indigofera colutea</i>	0.1	25 cm		
<i>Melaleuca glomerata</i>	14	310 cm	AH61-01	
<i>Melhania oblongifolia</i>	0.1	25 cm	AH61-23	
<i>Myoporum montanum</i>	1.5	340 cm	AH61-17	
<i>Pterocaulon sphacelatum</i>	0.1	25 cm	AH61-18	Juvenile.
<i>Pilotus exaltatus</i>	0.1	100 cm	AH61-04	
<i>Rhynchosia minima</i>	0.1	30 cm	AH61-25	
<i>Santalum lanceolatum</i>	0.1	40 cm		
<i>Scaevola amblyanthera</i> var. <i>centralis</i>	0.1	25 cm	AH61-19	Relatively abundant glandular hairs.
<i>Scaevola spinescens</i>	0.1	50 cm	AH61-22	
<i>Senna notabilis</i>	0.1	30 cm		
* <i>Setaria verticillata</i>	0.1	40 cm		N=1.
<i>Solanum esuriale</i>	4	40 cm	AH61-02	
<i>Sporobolus australasicus</i>	0.1	25 cm	AH61-10	
<i>Threlkeldia diffusa</i>	0.1	30 cm	AH61-21	
<i>Tinospora smilacina</i>	0.1	40 cm		
<i>Trianthema triquetrum</i>	1	30 cm	AH61-03	
<i>Tiraphis mollis</i>	0.1	35 cm	AH61-14	



2018

Asian Hub Phase 2	Site	AH62
Described by	MM/BMa	Date 14-Mar-18
MGA Zone	51	268051 mE 7753272 mN
Habitat	Pindan plain.	Type Quadrat 50x50m
Soil	Orange-brown loamy sand.	120.778750 °E -20.304334 °S
Rock Type	N/A.	
Vegetation	Owenia reticulata, Gardenia pyriformis subsp. keartlandii, Erythrophleum chlorostachys scattered low trees over Acacia eriopoda scattered tall shrubs over Bonamia erecta, (A. stellaticeps) low open shrubland over Triodia schinzii open hummock grassland with Sorghum plumosum var. plumosum, Eriachne obtusa scattered tussock grasses.	
Veg Condition	Excellent.	
Fire Age	Burnt 3-5 years ago.	

Species	Cover	Height	Specimen	Notes
<i>Acacia ancistrocarpa</i>	0.1	160 cm		
<i>Acacia eriopoda</i>	1.5	300 cm		
<i>Acacia stellaticeps</i>	1	40 cm		
<i>Bonamia erecta</i>	4	50 cm		
<i>Bulbostylis barbata</i>	0.1	10 cm		
<i>Calytrix carinata</i>	0.1	50 cm	AH62-06	'Form 1 - short leaves'.
<i>Cassytha capillaris</i>	0.1	10 cm		
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	30 cm		
<i>Clerodendrum tomentosum</i> var. <i>mollissima</i>	0.1	100 cm	AH62-10	
<i>Cucumis variabilis</i>	0.1	110 cm	AH62-12	
<i>Eriachne lanata</i>	0.1	30 cm	AH62-05	
<i>Eriachne obtusa</i>	1	50 cm	AH62-01	
<i>Erythrophleum chlorostachys</i>	0.5	250 cm		
<i>Euphorbia psilosperma</i>	0.1	10 cm	AH62-03	
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	30 cm	AH62-14	
<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	0.5	300 cm		
<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	30 cm		
<i>Grevillea wickhamii</i>	0.1	60 cm	Sterile.	
<i>Halgnania solanacea</i> var. <i>solanacea</i>	0.1	30 cm	AH62-04	
<i>Heliotropium vestitum</i>	0.1	10 cm	AH62-07	
<i>Hybanthus aurantiacus</i>	0.1	50 cm		
<i>Indigofera boviperda</i> subsp. <i>eremaea</i>	0.1	30 cm	AH62-11	
<i>Jacksonia aculeata</i>	0.1	40 cm		
<i>Owenia reticulata</i>	0.5	450 cm		
<i>Phyllanthus eremicus</i>	0.1	25 cm		
<i>Polycarphaea corymbosa</i> var. <i>corymbosa</i>	0.1	15 cm	AH62-09	
<i>Pilotus astrolasius</i>	0.5	30 cm		
<i>Pilotus calostachyus</i>	0.1	80 cm		
<i>Sida</i> sp. Pindan (B.G. Thomson 3398)	0.1	35 cm	AH62-13	
<i>Sorghum plumosum</i> var. <i>plumosum</i>	1	120 cm	AH62-02	
<i>Spermacoce hillii</i>	0.1	20 cm	AH62-08	
<i>Trianthema pilosum</i>	0.1	10 cm		
<i>Tribulopis marliesiae</i>	0.1	30 cm	AH62-15	N=1.
<i>Trigastrotheca molluginea</i>	0.1	20 cm		
<i>Triodia schinzii</i>	15	40 cm		



Asian Hub Phase 2		Site	AH63
Described by	PLSW	Date	14-Mar-18
MGA Zone	51	268963 mE	7759948 mN
Habitat	Small rise, with rocky outcropping laterite.		
Soil	Dark reddish brown sandy clay loam.		
Rock Type	Laterite; outcropping (1-25%), large boulders (1-25%), boulders (1-25%), cobbles (1-25%), pebbles (1-25%) and gravel (1-25%).		
Vegetation	Acacia tumida subsp. <i>kulparn</i> tall open shrubland over <i>Triodia epactia</i> open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	Very long unburnt.		

Species	Cover	Height	Specimen	Notes
<i>Acacia tumida</i> var. <i>kulparn</i>	6	240 cm	AH63-02	
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	25 cm	AH63-08	
<i>Boerhavia coccinea</i>	0.1	5 cm	AH63-12	
<i>Bulbostylis barbata</i>	0.1	20 cm		
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	25 cm	AH63-09	
<i>Cleome viscosa</i>	0.1	40 cm		
<i>Cyperus cunninghamii</i> subsp. <i>cunninghamii</i>	0.1	30 cm	AH63-06	
<i>Eriachne ciliata</i>	0.1	25 cm		
<i>Eriachne lanata</i>	0.1	40 cm	AH63-13	
<i>Eriachne mucronata</i>	0.1	20 cm	AH63-14	Typical form.
<i>Gomphrena cunninghamii</i>	0.1	20 cm		
<i>Goodenia scaevolina</i>	0.1	20 cm		
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	210 cm		
<i>Hibiscus leptocladius</i>	0.1	20 cm		
<i>Indigofera monophylla</i>	0.5	20 cm		
<i>Nicotiana benthamiana</i>	0.1	20 cm	AH63-15	
<i>Oldenlandia crouchiana</i>	0.1	10 cm	AH63-10	
<i>Paspalidium tabulatum</i>	0.1	30 cm	AH63-07	
<i>Polycarpaea corymbosa</i> var. <i>corymbosa</i>	0.1	10 cm	AH63-04	
<i>Polycarpaea holtzei</i>	0.1	5 cm		
<i>Pilotus calostachyus</i>	0.1	60 cm		
<i>Pilotus incanus</i>	0.1	10 cm	AH63-05	
<i>Senna venusta</i>	0.1	40 cm		
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	45 cm		
<i>Tephrosia rosea</i> var. <i>clementii</i>	0.1	20 cm	AH63-16	
<i>Trachymene oleracea</i> subsp. <i>oleracea</i>	0.1	20 cm		Sterile.
<i>Trigastrotheca molluginea</i>	0.1	15 cm		
<i>Triodia epactia</i>	24	70 cm	AH63-01	
<i>Triumfetta johnstonii</i>	0.1	20 cm	AH63-17	



2018

Asian Hub Phase 2 **Site** AH64
Described by MM/BMa **Date** 14-Mar-18 **Type** Quadrat 25x100m
MGA Zone 51 277832 mE 7746254 mN 120.871500 °E -20.368871 °S
Habitat Flat crest of a moderate-sized hill (254m ASL).
Soil Dark reddish brown sandy loam.
Rock Type Laterite; pebbles (1-25%) and gravel (>75%).
Vegetation *Acacia hilliana* low open heath over *Triodia epactia* open hummock grassland.
Veg Condition Excellent.
Fire Age Burnt 3-5 years ago / No sign of recent fire.

Species	Cover	Height	Specimen	Notes
<i>Acacia adoxa</i> var. <i>adoxia</i>	0.1	20 cm		
<i>Acacia hilliana</i>	35	30 cm		
<i>Acacia monticola</i>	0.1	30 cm		
<i>Acacia tumida</i> var. <i>kulparn</i>	0.1	140 cm	AH64-04	
<i>Corymbia flavescens</i>	0.1	200 cm	AH64-02	Juvenile; smooth grey bark.
<i>Dampiera candicans</i>	0.1	40 cm		
<i>Dodonaea coriacea</i>	0.1	30 cm		
<i>Eriachne lanata</i>	0.1	20 cm	AH66-05=	
<i>Fimbristylis simulans</i>	0.1	5 cm	AH64-01	
<i>Goodenia scaevolina</i>	0.1	50 cm		
<i>Polygala glaucifolia</i>	0.1	2 cm	AH64-03	
<i>Ptilotus calostachyus</i>	0.1	60 cm		
<i>Triodia epactia</i>	12	30 cm		



2018

Asian Hub Phase 2	Site	AH65
Described by	MM/BMa	Date 21-Mar-18
MGA Zone	51	268118 mE 7805977 mN
Habitat	Pindan plain.	Type Quadrat 25x100m
Soil	Orange-brown sand.	120.786082 °E -19.828427 °S
Rock Type	NA.	
Vegetation	Acacia colei var. colei open shrubland over <i>Cochrorus incanus</i> subsp. <i>incanus</i> low shrubland over <i>Triodia epactia</i> open hummock grassland with <i>Sorghum plumosum</i> var. <i>plumosum</i> , (<i>Eriachne obtusa</i> , <i>Paraneurachne muelleri</i> , * <i>Cenchrus ciliaris</i> , * <i>C. setiger</i>) open tussock grassland.	
Veg Condition	Very Good; 0.5% * <i>Cenchrus</i> cover, which is grazed; scattered other weeds.	
Fire Age	Burnt 3-5 years ago.	
Notes	Labeled as AH90 on original datasheet; renamed AH65 due to duplicated site AH90.	

Species	Cover	Height	Specimen	Notes
<i>Abutilon otocarpum</i>	0.1	15 cm	AH65-09	
<i>Acacia colei</i> var. <i>colei</i>	3.5	120 cm		
<i>Acacia sabulosa</i>	0.1	100 cm		
<i>Acacia sericophylla</i>	0.1	120 cm		
<i>Acacia stellaticeps</i>	0.5	40 cm		
* <i>Aerva javanica</i>	0.1	50 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	50 cm		
<i>Boerhavia coccinea</i>	0.1	10 cm		
<i>Bonamia alatisemina</i>	0.1	30 cm		White flowers.
<i>Bonamia oblongifolia</i>	0.1	10 cm	AH65-05	Blue flowers.
<i>Calandrinia strophiolata</i>	0.1	20 cm	AH65-13	
* <i>Cenchrus ciliaris</i>	0.25	30 cm		Grazed.
* <i>Cenchrus setiger</i>	0.25	30 cm		Grazed.
<i>Cochrorus incanus</i> subsp. <i>incanus</i>	12	30 cm	AH65-01	
<i>Cochrorus siodoides</i> subsp. <i>vermicularis</i>	0.1	30 cm		
<i>Cyperus conicus</i>	0.1	30 cm		
<i>Digitaria brownii</i>	0.1	40 cm		
<i>Dodonaea coriacea</i>	0.1	70 cm		
<i>Dolichandrone occidentalis</i>	0.1	80 cm	AH65-03	
<i>Eragrostis eriopoda</i>	0.1	40 cm		
<i>Eriachne obtusa</i>	0.5	60 cm		
<i>Euphorbia psilosperma</i>	0.1	15 cm	AH65-02	
<i>Euphorbia vaccaria</i> var. <i>vaccaria</i>	0.1	2 cm	AH65-04	
<i>Grevillea pyramidalis</i>	0.1	100 cm		
<i>Heliotropium foliatum</i>	0.1	10 cm	AH65-08	
<i>Heliotropium leptaleum</i>	0.1	20 cm	AH65-11	
<i>Indigofera linifolia</i>	0.1	20 cm		
<i>Indigofera monophylla</i>	0.1	20 cm		
<i>Jacksonia aculeata</i>	0.1	60 cm		
<i>Leptosema anomalum</i>	0.1	30 cm		
<i>Paraneurachne muelleri</i>	0.5	40 cm		
<i>Pilostus astrolasius</i>	0.1	50 cm		
<i>Pilostus lanatus</i>	0.1	30 cm	AH65-12	
<i>Pilostus polystachyus</i>	0.1	30 cm		
<i>Scaevola parvifolia</i>	0.1	30 cm		Sterile.
<i>Senna notabilis</i>	0.1	40 cm		
<i>Sida arenicola</i>	0.1	120 cm		White indumentum form.
<i>Sida arenicola</i>	0.1	120 cm		Ferruginous form.
<i>Solanum diversiflorum</i>	0.1	35		
<i>Sorghum plumosum</i> var. <i>plumosum</i>	9	80 cm		
* <i>Stylosanthes hamata</i>	0.1	15 cm	AH65-10	
<i>Tephrosia rosea</i> var. <i>rosea</i>	0.1	50 cm	AH65-07	
<i>Tephrosia simplicifolia</i>	0.1	30 cm	AH65-06	Orange flowers.
<i>Tinospora smilacina</i>	0.1	50 cm		
<i>Trianthema pilosum</i>	0.1	20 cm		
<i>Tribulopis marliesiae</i>	0.1	25 cm		N=1.
<i>Trigastrotheca molluginea</i>	0.1	20 cm		
<i>Triodia epactia</i>	11	40 cm		Patchy.
<i>Triodia schinzii</i>	0.1	40 cm		



2018

Asian Hub Phase 2	Site	AH66
Described by	MM/BMa	Date 15-Mar-18
MGA Zone	51	294805 mE 7749736 mN
		121.034434 °E -20.339332 °S
Habitat	Crest and upper slopes of a small, low laterite rise.	
Soil	Orange-brown sandy loam.	
Rock Type	Laterite; outcropping (1-25%), cobbles (1-25%), pebbles (26-50%) and gravel (26-50%).	
Vegetation	<i>Corymbia greeniana</i> scattered low trees over <i>Grevillea refracta</i> subsp. <i>refracta</i> scattered tall shrubs over <i>Acacia hilliana</i> , <i>A adoxa</i> var. <i>adoxa</i> low open heath over <i>Triodia epactia</i> open hummock grassland.	
Veg Condition	Excellent.	
Fire Age	Burnt 3-5 years ago.	

Species	Cover	Height	Specimen	Notes
<i>Acacia adoxa</i> var. <i>adoxa</i>	20	30 cm		
<i>Acacia colei</i> var. <i>colei</i>	0.1	170 cm		
<i>Acacia hilliana</i>	20	40 cm		
<i>Acacia monticola</i>	0.1	100 cm		
<i>Bonamia alatisemina</i>	0.1	10 cm	AH66-01	
<i>Calytrix carinata</i>	0.1	50 cm	AH66-03	'Form 2 - longer leaves'.
<i>Calytrix carinata</i>	0.1	50 cm	AH66-04A	'Form 1 - short leaves'.
<i>Cassytha capillaris</i>	0.1	20 cm		
<i>Corymbia greeniana</i>	0.5	500 cm	AH66-07	Grey over orange, thin flakey tessellated bark.
<i>Dampiera candicans</i>	0.1	50 cm		
<i>Dodonaea coriacea</i>	0.1	100 cm		
<i>Eriachne lanata</i>	0.1	20 cm	AH66-05	
<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	20 cm	AH66-02	
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.5	400 cm		
<i>Grevillea wickhamii</i>	0.1	130 cm		Sterile.
<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	15 cm	AH62-04=	
<i>Mirbelia viminalis</i>	0.1	120 cm		
<i>Scaevola browniana</i> subsp. <i>browniana</i>	0.1	50 cm	AH66-06	
<i>Triodia epactia</i>	25	30 cm		



2018

Asian Hub Phase 2	Site	AH67
Described by	PL/SC	Date 14-Mar-18
MGA Zone	51	269579 mE 7759073 mN
Type Quadrat 50x50m		
120.794116 °E -20.252138 °S		
Habitat Low lateritic rise; quadrat crosses a small flowline.		
Soil Dark reddish brown sandy clay loam.		
Rock Type Laterite; outcropping (1-25%), cobbles (1-25%), pebbles (1-25%), and gravel (1-25%).		
Vegetation <i>Acacia inaequilatera</i> scattered tall shrubs over <i>A. adoxa</i> var. <i>adoxia</i> scattered low shrubs over <i>Triodia epactia</i> open hummock grassland.		
Veg Condition	Excellent.	
Fire Age	No sign of recent fire.	

Species	Cover	Height	Specimen
<i>Acacia adoxa</i> var. <i>adoxia</i>	0.5	60 cm	
<i>Acacia hilliana</i>	0.1	40 cm	
<i>Acacia inaequilatera</i>	1	240 cm	
<i>Amphipogon sericeus</i>	0.1	20 cm	
<i>Bonamia alatisemina</i>	0.1	10 cm	
<i>Eriachne lanata</i>	0.1	30 cm	
<i>Fimbristylis simulans</i>	0.1	10 cm	
<i>Goodenia scaevolina</i>	0.1	20 cm	
<i>Grevillea pyramidalis</i>	0.1	70 cm	
<i>Indigofera monophylla</i>	0.1	50 cm	
<i>Polycarphaea holtzei</i>	0.1	5 cm	
<i>Polygala glaucifolia</i>	0.1	5 cm	Ah67-03
<i>Ptilotus calostachyus</i>	0.1	40 cm	
<i>Senna ? glaucifolia</i>	0.1	110 cm	AH67-02
<i>Tephrosia rosea</i> var. <i>clementii</i>	0.1	30 cm	
<i>Trigastrotheca molluginea</i>	0.1	10 cm	
<i>Triodia epactia</i>	28	60 cm	AH67-01



2018

Asian Hub Phase 2 **Site** AH68
Described by MM/BMa **Date** 15-Mar-18 **Type** Quadrat 50x50m
MGA Zone 51 297670 mE 7754289 mN 121.062378 °E -20.298520 °S
Habitat Crest and gentle slopes of a low lateritic rise.
Soil Orange-brown sandy loam.
Rock Type Laterite; cobbles (1-25%), pebbles (26-50%) and gravel (26-50%).
Vegetation *Acacia hilliana*, *A. adoxa* var. *adoxa*, (*Goodenia scaevolina*) low open shrubland over *Triodia epactia* open hummock grassland.
Veg Condition Excellent.
Fire Age No sign of recent fire.

Species	Cover	Height	Specimen	Notes
<i>Acacia adoxa</i> var. <i>adoxa</i>	1.5	30 cm		
<i>Acacia hilliana</i>	1.5	40 cm		
<i>Acacia monticola</i>	0.1	300 cm		
<i>Bonamia alatisemina</i>	0.1	20 cm	AH66-01=	
<i>Calytrix carinata</i>	0.1	30 cm	AH66-03=	'Form 2 - longer leaves'.
<i>Codonocarpus cotinifolius</i>	0.1	60 cm		
<i>Dampiera candicans</i>	0.1	90 cm		
<i>Eriachne pulchella</i>	0.1	5 cm	AH68-01	
<i>Goodenia scaevolina</i>	0.5	60 cm		
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	220 cm		
<i>Ptilotus calostachyus</i>	0.1	60 cm		
<i>Trigastrotheca molluginea</i>	0.1	20 cm		
<i>Triodia epactia</i>	15	40 cm		



2018

Asian Hub Phase 2		Site	AH69
Described by	PLSW	Date	15-Mar-18
MGA Zone	51	295541 mE	7742282 mN
Habitat	Sand dune, running SE-NW through a very broad flat pindan plain.		
Soil	Reddish brown sand.		
Rock Type	N/A.		
Vegetation	<i>Grevillea stenobotrya</i> , <i>Acacia anaticeps</i> tall open shrubland over <i>Dicrastylis doranii</i> , <i>Newcastelia spodiotricha</i> low open shrubland over <i>Triodia schinzii</i> very open hummock grassland with <i>Eriachne obtusa</i> , <i>Aristida holathera</i> var. <i>holathera</i> , <i>Eragrostis eriopoda</i> very open tussock grassland.		
Veg Condition	Excellent.		
Fire Age	Very long unburnt.		

Species	Cover	Height	Specimen	Notes
<i>Abildgaardia schoenoides</i>	0.1	70 cm	AH69-05	
<i>Acacia anaticeps</i>	3	320 cm		
<i>Aenictophyton reconditum</i> subsp. <i>reconditum</i>	0.1	40 cm	AH69-06	
<i>Aristida holathera</i> var. <i>holathera</i>	2.5	50 cm	AH-REL05=	
<i>Cassytha filiformis</i>	0.1	210 cm	AH69-08	
<i>Chamaecrista symonii</i>	0.5	50 cm	AH69-03	
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	40 cm		
<i>Crotalaria cunninghamii</i> subsp. <i>cunninghamii</i>	0.1	110 cm		
<i>Cyanostegia cyanocalyx</i>	0.1	40 cm		
<i>Dampiera cinerea</i>	0.1	40 cm		
<i>Dicrastylis doranii</i>	4	40 cm	AH69-07	
<i>Eragrostis eriopoda</i>	2	50 cm		
<i>Eriachne aristidea</i>	0.1	45 cm		
<i>Eriachne obtusa</i>	3	90 cm	AH69-02	
<i>Erythrophleum chlorostachys</i>	0.1	210 cm		
<i>Euphorbia</i> ? <i>myrtoides</i>	0.1	25 cm	AH69-09	Tentative identification.
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	40 cm	AH69-12	
<i>Grevillea stenobotrya</i>	4	350 cm		
<i>Gyrostemon tepperi</i>	0.1	80 cm		
<i>Heliotropium transforme</i>	0.1	90 cm	AH69-04	
<i>Indigofera ammobia</i>	0.1	70 cm	AH69-10	Pink flowers.
<i>Newcastelia spodiotricha</i>	2	60 cm	AH69-01A	
<i>Pilotus polystachyus</i>	0.1	40 cm		
<i>Sida</i> sp. Western sand dunes (P.K. Latz 11980)	0.1	190 cm	AH69-11	
<i>Spermacoce occidentalis</i>	1	40 cm		
<i>Trianthema pilosum</i>	0.1	25 cm		
<i>Triodia schinzii</i>	9	50 cm		



2018

Asian Hub Phase 2	Site	AH70		
Described by	MM/BMa	Date	16-Mar-18	Type Quadrat 50x50m
MGA Zone	51	314002 mE	7749384 mN	121.218216 °E -20.344483 °S
Habitat	Pindan plain.			
Soil	Orange-brown sand.			
Rock Type	NA.			
Vegetation	Grevillea wickhamii subsp. macrodonta scattered tall shrubs over Terminalia kumpajá scattered shrubs over Jacksonia aculeata, (Dicrastylis doranii) low open shrubland over Triodia schinzii very open tussock grassland.			
Veg Condition	Excellent.			
Fire Age	No sign of recent fire.			

Species	Cover	Height	Specimen	Notes
Acacia melleodora	0.1	100 cm	AH70-13	
Acacia platycarpa	0.1	110 cm	AH70-20	
Acacia sericophylla	0.1	200 cm		
Acacia stellaticeps	0.1	30 cm		
Acacia tumida var. kulparn	0.1	100 cm	AH70-17	
Aristida holathera var. holathera	0.1	20 cm		
Bonamia alatisemina	0.1	20 cm	AH70-03	White flowers.
Bonamia oblongifolia	0.1	30 cm	AH70-16	Blue flowers.
Cassytha capillaris	0.1	20 cm		
Cleome uncifera subsp. uncifera	0.1	40 cm	AH70-10	
Clerodendrum floribundum var. angustifolium	0.1	200 cm	AH70-01	
Corchorus sidoides subsp. vermicularis	0.1	20 cm	AH72-07=	
Dampiera cinerea	0.1	40 cm	AH70-09	
Dicrastylis doranii	1	40 cm	AH70-04	
Dodonaea hispidula var. arida	0.1	80 cm	AH70-18	
Eragrostis eriopoda	0.1	40 cm		
Eriachne obtusa	0.1	50 cm	AH70-08	Sens. lat.
Erythrophleum chlorostachys	0.1	80 cm		
Gompholobium simplicifolium	0.1	30 cm		
Goodenia azurea subsp. hesperia	0.1	40 cm	AH70-07	
Grevillea eriostachya	0.1	60 cm		
Grevillea wickhamii subsp. macrodonta	2	300 cm	AH70-19	
Halgnania solanacea var. solanacea	0.1	30 cm	AH70-06	
Hibiscus leptocladius	0.1	50 cm	AH70-11	
Jacksonia aculeata	5	30 cm		
Oldenlandia pterospora	0.1	20 cm	AH70-05	
Owenia reticulata	0.1	150 cm		
Ptilotus arthrolasius	0.1	40 cm		
Ptilotus astrolasius	0.1	35 cm		
Scaevola parvifolia subsp. parvifolia	0.1	15 cm	AH70-14	
Seringia sp.	0.1	80 cm	AH70-12	N=20. Sterile; confirmed by Carol Wilkins.
Sorghum plumosum var. plumosum	0.1	80 cm		
Terminalia kumpajá	0.5	120 cm	AH70-02	N=4.
Trigastrotheca molluginea	0.1	15 cm		
Triodia schinzii	9	30 cm		



Asian Hub Phase 2		Site	AH71		
Described by	PLSW	Date	15-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	292957 mE	7739884 mN		121.015602 °E -20.428104 °S
Habitat	Pindan plain.				
Soil	Red-brown sand.				
Rock Type	Lateritic gravel (1-25%).				
Vegetation	Acacia eriopoda, Erythrophleum chlorostachys, Gardenia pyriformis subsp. keartlandii tall open shrubland over A. tumida var. kulparn open shrubland over Gompholobium simplicifolium, (Jacksonia aculeata) low open shrubland over Triodia schinzii open hummock grassland.				
Veg Condition	Excellent.				
Fire Age	No sign of recent fire.				

Species	Cover	Height	Specimen	Notes
Acacia eriopoda	3	210 cm	AH71-01	
Acacia sericophylla	0.1	100 cm		
Acacia stellaticeps	0.1	35 cm	AH71-05	
Acacia tumida var. kulparn	3	200 cm	AH71-02	
Bonamia erecta	0.1	20 cm		
Calytrix carinata	0.5	70 cm	AH71-06	'Form 1 - short leaves'.
Calytrix carinata	0.1	50 cm	AH71-08	'Form 2 - longer leaves'.
Corymbia zygophylla	0.1	200 cm		
Dampiera cinerea	0.5	60 cm		
Eragrostis eriopoda	0.1	15 cm		
Eriachne lanata	0.1	80 cm		
Eriachne obtusa	0.1	40 cm		
Erythrophleum chlorostachys	2	260 cm		
Gardenia pyriformis subsp. keartlandii	1	300 cm		
Gompholobium simplicifolium	7	60 cm		
Goodenia azurea subsp. hesperia	0.1	40 cm	AH71-04	
Grevillea eriostachya	0.1	200 cm		
Gyrostemon tepperi	0.1	140 cm		
Halgania solanacea var. solanacea	0.1	30 cm		
Hybanthus aurantiacus	0.1	30 cm		
Jacksonia aculeata	3	40 cm	AH71-03	
Pimelea ammonocharis	0.1	20 cm		
Polygala isingii	0.1	20 cm	AH71-07	
Scaevola parvifolia subsp. parvifolia	0.1	20 cm	AH71-09	
Trichodesma zeylanicum	0.1	40 cm	Sterile.	
Triodia schinzii	13	70 cm		



2018

Asian Hub Phase 2		Site	AH72		
Described by	PLSW	Date	16-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	312801 mE	7740659 mN		121.205804 °E -20.423168 °S
Habitat	Broad pindan plain.				
Soil	Orange-brown sand.				
Rock Type	N/A.				
Vegetation	Corymbia zygophylla scattered low trees over Grevillea wickhamii scattered tall shrubs over Jacksonia aculeata, (Dicrastylis doranii) low open shrubland over Triodia schinzii very open hummock grassland and Eragrostis eriopoda, (Sorghum plumosum var. plumosum) very open tussock grassland.				
Veg Condition	Excellent.				
Fire Age	Burnt 3-5 years ago.				

Species	Cover	Height	Specimen	Notes
<i>Abildgaardia schoenoides</i>	0.1	40 cm	AH72-02	
<i>Acacia monticola</i>	0.1	120 cm		
<i>Acacia sericophylla</i>	0.1	160 cm	AH72-06, -09	
<i>Acacia stellaticeps</i>	0.1	40 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	60 cm		
<i>Bonamia diflatisemina</i>	0.1	20 cm	AH70-03	White flowers.
<i>Bonamia erecta</i>	0.1	30 cm		
<i>Bonamia oblongifolia</i>	0.1	20 cm	AH70-16=	Blue flowers.
<i>Calytrix carinata</i>	0.1	60 cm	AH72-03	'Form 2 - longer leaves'.
<i>Corchorus siodoides</i> subsp. <i>vermicularis</i>	0.1	40 cm	AH72-07	
<i>Corymbia zygophylla</i>	1.5	150 cm		
<i>Dampiera candicans</i>	0.1	40 cm		
<i>Dicrastylis doranii</i>	1	30 cm	AH70-04=	
<i>Eragrostis eriopoda</i>	3	30 cm		
<i>Eriachne obtusa</i>	0.1	50 cm	AH72-04	Sens. lat.
<i>Erythrophleum chlorostachys</i>	0.1	200 cm		
<i>Gompholobium simplicifolium</i>	0.1	40 cm		
<i>Grevillea wickhamii</i>	1	300 cm		Sterile.
<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	40 cm	AH70-06=	
<i>Hibiscus leptocladius</i>	0.1	60 cm	AH72-08	
<i>Hybanthus aurantiacus</i>	0.1	60 cm		
<i>Jacksonia aculeata</i>	3	40 cm		
<i>Newcastelia cladotricha</i>	0.1	40 cm	AH72-05	
<i>Oldenlandia pterospora</i>	0.1	20 cm	AH70-05=	
<i>Ptilotus arthrolasius</i>	0.1	40 cm		
<i>Ptilotus astrolasius</i>	0.1	40 cm		
<i>Ptilotus calostachyus</i>	0.1	70 cm		
<i>Ptilotus polystachyus</i>	0.1	60 cm		
<i>Scaevola parvifolia</i>	0.1	20 cm		Sterile.
<i>Sorghum plumosum</i> var. <i>plumosum</i>	1	80 cm		
<i>Tephrosia</i> sp. D Kimberley Flora (R.D. Royce 1848)	0.1	50 cm	AH72-01	
<i>Trianthema pilosum</i>	0.1	20 cm		
<i>Tribulopis marliesiae</i>	0.1	20 cm		N=3.
<i>Triodia schinzii</i>	3	30 cm		



2018

Asian Hub Phase 2		Site	AH73		
Described by	PLSW	Date	16-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	307344 mE	7761998 mN		121.155808 °E -20.229896 °S
Habitat	Broad pindan plain.				
Soil	Dark reddish brown loamy sand.				
Rock Type	N/A.				
Vegetation	Owenia reticulata scattered low trees over Acacia sericophylla, Erythrophleum chlorostachys tall open shrubland over Androcalva loxophylla, Indigofera boviperda subsp. eremaea low open shrubland over Triodia schinzii open hummock grassland.				
Veg Condition	Excellent.				
Fire Age	No sign of recent fire.				

Species	Cover	Height	Specimen	Notes
<i>Acacia colei</i> var. <i>colei</i>	0.1	180 cm		
<i>Acacia eriopoda</i>	0.1	90 cm		
<i>Acacia platycarpa</i>	1	90 cm	AH73-07	
<i>Acacia sericophylla</i>	2	300 cm		
<i>Androcalva loxophylla</i>	3	50 cm		
<i>Boerhavia gardneri</i>	0.1	40 cm	AH73-05	
<i>Bonamia alatisemina</i>	0.1	45 cm		
<i>Bulbostylis barbata</i>	0.1	20 cm		
<i>Cassytha capillaris</i>	0.1	40 cm		
<i>Corchorus sidooides</i> subsp. <i>vermicularis</i>	0.1	45 cm	AH73-10	
<i>Cucumis variabilis</i>	0.1	70 cm		
<i>Cyanostegia cyanocalyx</i>	0.1	110 cm		
<i>Dampiera cinerea</i>	0.1	40 cm		
<i>Erythrophleum chlorostachys</i>	1	300 cm		
<i>Euphorbia psilosperma</i>	0.1	20 cm	AH73-03	
<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	0.1	190 cm		
<i>Gompholobium simplicifolium</i>	0.1	50 cm		Red flowers.
<i>Grevillea eriostachya</i>	0.1	160 cm		
<i>Grevillea wickhamii</i>	0.1	210 cm		Sterile.
<i>Hibiscus leptocladius</i>	0.1	40 cm		
<i>Indigofera boviperda</i> subsp. <i>eremaea</i>	2	50 cm	AH73-01, -06	
<i>Owenia reticulata</i>	1	650 cm		
<i>Polygala isingii</i>	0.1	8 cm	AH73-08	
<i>Pilotus arthrolasius</i>	0.1	45 cm	AH73-04	
<i>Pilotus astrolasius</i>	0.1	50 cm		
<i>Scaevola parvifolia</i> subsp. <i>parvifolia</i>	0.1	25 cm	AH73-09	
<i>Setaria surgens</i>	0.1	40 cm	AH73-02	
<i>Sida</i> sp. Pindan (B.G. Thomson 3398)	0.1	50 cm		
<i>Tinospora smilacina</i>	0.1	40 cm		
<i>Tribulopis marliesiae</i>	0.1	30 cm		N=1.
<i>Trichodesma zeylanicum</i>	0.1	70 cm		Sterile.
<i>Trigastrotheca molluginea</i>	0.1	25 cm		
<i>Triodia schinzii</i>	16	50 cm		



2018

Asian Hub Phase 2	Site	AH74
Described by	MM/BMa	Date 17-Mar-18
MGA Zone	51	308852 mE 7724634 mN
Habitat	Broad pindan plain.	Type Quadrat 50x50m
Soil	Orange-brown sand.	121.166248 °E -20.567504 °S
Rock Type	N/A.	
Vegetation	Acacia ancistrocarpa, A. monticola tall shrubland over Calytrix carinata scattered low shrubs over Triodia schinzii open hummock grassland and Eriachne obtusa very open tussock grassland.	
Veg Condition	Excellent.	
Fire Age	Burnt 3-5 years ago / No sign of recent fire.	

Species	Cover	Height	Specimen	Notes
<i>Acacia ancistrocarpa</i>	8	250 cm		
<i>Acacia monticola</i>	8	210 cm		
<i>Acacia sericophylla</i>	0.1	160 cm		
<i>Amphipogon sericeus</i>	0.1	30 cm	AH74-04	
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	30 cm		
<i>Calytrix carinata</i>	0.5	40 cm	AH74-07	'Form 2 - longer leaves'.
<i>Calytrix carinata</i>	0.1	50 cm		'Form 1 - short leaves'.
<i>Cassytha capillaris</i>	0.1	30 cm		
<i>Clerodendrum tomentosum</i>	0.1	50 cm		Juvenile.
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	10 cm	AH72-07=	
<i>Corymbia zygophylla</i>	0.1	280 cm		
<i>Dampiera candicans</i>	0.1	80 cm		
<i>Dodonaea coriacea</i>	0.1	70 cm		
<i>Eriachne obtusa</i>	3	40 cm	AH70-08=	Sens. lat.
<i>Goodenia armittiana</i>	0.1	30 cm	AH74-03	
<i>Goodenia triodiophila</i>	0.1	20 cm	AH74-01	
<i>Grevillea wickhamii</i>	0.1	200 cm		Sterile.
<i>Gyrostemon tepperi</i>	0.1	130 cm		
<i>Hakea macrocarpa</i>	0.1	80 cm	AH74-08	
<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	30 cm	AH74-02	
<i>Hibiscus leptocladius</i>	0.1	20 cm		
<i>Indigofera boviperda</i> subsp. <i>eremaea</i>	0.1	40 cm		
<i>Leptosema anomalum</i>	0.1	20 cm		
<i>Paraneurachne muelleri</i>	0.1	40 cm		
<i>Phyllanthus eremicus</i>	0.1	60 cm		
<i>Ptilotus astrolasius</i>	0.1	40 cm		
<i>Ptilotus calostachyus</i>	0.1	60 cm		
<i>Ptilotus fusiformis</i>	0.1	30 cm		
<i>Sida arenicola</i>	0.1	150 cm		
<i>Sida</i> sp. Pindan (B.G. Thomson 3398)	0.1	90 cm	AH74-06	
<i>Trigastrotheca molluginea</i>	0.1	20 cm		
<i>Triodia schinzii</i>	20	40 cm		
<i>Velleia panduriformis</i>	0.1	30 cm	AH74-05	



2018

Asian Hub Phase 2		Site	AH75
Described by	PLSW	Date	16-Mar-18
MGA Zone	51	309068 mE	7742507 mN
Habitat	Low lateritic rise.		
Soil	Dark reddish brown sandy clay loam.		
Rock Type	Ironstone and laterite; pebbles (1-25%) and gravel (1-25%).		
Vegetation	Acacia <i>hilliana</i> , A. <i>adoxa</i> var. <i>adoxa</i> low shrubland over <i>Triodia epactia</i> open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	No sign of recent fire.		

Species	Cover	Height	Specimen	Notes
<i>Acacia adoxa</i> var. <i>adoxa</i>	6	30 cm	AH75-05, -06	
<i>Acacia hilliana</i>	8	40 cm		
<i>Bulbostylis barbata</i>	0.1	10 cm		
<i>Calytrix carinata</i>	0.1	40 cm	AH75-02	'Form 2 - longer leaves'.
<i>Codonocarpus cotinifolius</i>	0.1	70 cm		
<i>Dampiera candicans</i>	0.1	60 cm		
<i>Eriachne lanata</i>	0.1	40 cm		
<i>Fimbristylis simulans</i>	0.1	15 cm	AH75-04	
<i>Goodenia scaevolina</i>	0.1	25 cm		
<i>Halgnania solanacea</i> var. <i>solanacea</i>	0.1	30 cm		
<i>Mirbelia virinalis</i>	0.1	110 cm	AH75-03	
<i>Polygala glaucifolia</i>	0.1	5 cm	AH75-01	
<i>Pilotus calostachyus</i>	0.1	60 cm		
<i>Trigastrotheca molluginea</i>	0.1	10 cm		
<i>Triodia epactia</i>	11	50 cm		



2018

Asian Hub Phase 2	Site	AH76
Described by	MM/BMa	Date 17-Mar-18
MGA Zone	51	310987 mE 7709920 mN 121.185146 °E -20.700608 °S
Habitat	Crest and slopes of an undulating dune, running E-W through a pindan plain.	
Soil	Orange-brown sand.	
Rock Type	N/A.	
Vegetation	Acacia eriopoda scattered tall shrubs over Newcastelia spodiotricha scattered low shrubs over Triodia schinzii scattered hummock grasses and Eriachne obtusa very open tussock grassland.	
Veg Condition	Excellent.	
Fire Age	Burnt 3-5 years ago.	

Species	Cover	Height	Specimen	Notes
<i>Acacia anaticeps</i>	0.1	60 cm		
<i>Acacia eriopoda</i>	0.5	300 cm		
<i>Acacia stellaticeps</i>	0.1	30 cm		
<i>Acacia tumida</i> var. <i>kulparn</i>	0.1	120 cm	AH76-05	
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	40 cm		
<i>Calytrix carinata</i>	0.1	70 cm		
<i>Cyanostegia cyanocalyx</i>	0.1	70 cm	AH76-06	
<i>Dampiera candicans</i>	0.1	50 cm		
<i>Eragrostis eriopoda</i>	0.1	60 cm		
<i>Eriachne obtusa</i>	3	50 cm		
<i>Erythrophleum chlorostachys</i>	0.1	140 cm		
<i>Euphorbia</i> ? <i>myrtoides</i>	0.1	20 cm	AH76-08	Tentative identification.
<i>Gompholobium simplicifolium</i>	0.1	60 cm		
<i>Grevillea stenobotrya</i>	0.1	70 cm	AH76-10	
<i>Heliotropium transforme</i>	0.1	40 cm	AH76-03	
<i>Indigofera ammobia</i>	0.1	50 cm	AH76-09	
<i>Newcastelia spodiotricha</i>	1	50 cm	AH76-01	
<i>Paraneurachne muelleri</i>	0.1	40 cm		
<i>Polygala isingii</i>	0.1	20 cm	AH76-07	
<i>Spermacoce occidentalis</i>	0.1	20 cm	AH76-02	
<i>Thinicola incana</i>	0.1	120 cm	AH76-04	
<i>Trianthema pilosum</i>	0.1	30 cm		
<i>Triodia schinzii</i>	2	40 cm		
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	5 cm		



2018

Asian Hub Phase 2		Site	AH77
Described by	PLSW	Date	16-Mar-18
MGA Zone	51	310723 mE	7738356 mN
Habitat			121.185651 °E -20.443761 °S
Soil		Sand dune running SE-NW through a broad pindan plain.	
Rock Type		Dark red sand.	
Vegetation		N/A.	
Veg Condition	Excellent.		
Fire Age	Burnt 3-5 years ago.		

Species	Cover	Height	Specimen	Notes
<i>Acacia anaticeps</i>	2	220 cm		
<i>Acacia platycarpa</i>	3	80 cm	AH73-07=	
<i>Acacia sericophylla</i>	0.1	100 cm		
<i>Acacia stellaticeps</i>	0.5	40 cm	AH71-05=	
<i>Androcalva loxophylla</i>	0.1	80 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	3	70 cm		
<i>Bonamia erecta</i>	0.1	40 cm		
<i>Chamaecrista symonii</i>	0.1	60 cm	AH77-03	
<i>Crotalaria cunninghamii</i> subsp. <i>cunninghamii</i>	0.1	80 cm		
<i>Croton aridus</i>	0.1	100 cm	AH77-06	
<i>Cyanostegia cyanocalyx</i>	0.1	80 cm		
<i>Dampiera cinerea</i>	0.5	40 cm		
<i>Dicrastylis doranii</i>	5	40 cm	AH69-07=	
<i>Eragrostis eriopoda</i>	0.1	50 cm		
<i>Eriachne aristidea</i>	0.5	40 cm		
<i>Eriachne helmsii</i>	0.1	50 cm	AH77-08	
<i>Erythrophleum chlorostachys</i>	1	150 cm		
<i>Gompholobium simplicifolium</i>	0.1	70 cm		
<i>Grevillea eriostachya</i>	0.1	100 cm		
<i>Grevillea stenobotrya</i>	0.5	190 cm		
<i>Grevillea wickhamii</i>	0.1	190 cm		Sterile.
<i>Heliotropium transforme</i>	0.1	70 cm	AH77-02	
<i>Hybanthus aurantiacus</i>	0.1	60 cm		
<i>Indigofera ammobia</i>	0.1	50 cm	AH69-10	
<i>Jacksonia aculeata</i>	1	70 cm	AH71-03=	
<i>Newcastelia cladotricha</i>	0.1	40 cm	AH77-04	
<i>Orianthera centralis</i>	0.1	40 cm	AH77-09	
<i>Santalum lanceolatum</i>	0.5	80 cm	AH77-10	
<i>Scaevola parvifolia</i> subsp. <i>parvifolia</i>	0.1	25 cm	AH77-05	
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	200 cm	AH77-01	
<i>Spermacoce occidentalis</i>	0.1	30 cm		
<i>Trianthema pilosum</i>	0.1	25 cm		
<i>Triodia schinzii</i>	6	40 cm		



2018

Asian Hub Phase 2	Site	AH78
Described by	MM/BMa	Date 17-Mar-18
MGA Zone	51	321734 mE 7710626 mN
Habitat	Broad pindan plain.	Type Quadrat 50x50m
Soil	Orange-brown sand.	121.288372 °E -20.695288 °S
Rock Type	N/A.	
Vegetation	Melaleuca laisiandra scattered tall shrubs over <i>Triodia schinzii</i> very open hummock grassland with <i>Sorghum plumosum</i> var. <i>plumosum</i> scattered tussock grasses.	
Veg Condition	Excellent.	
Fire Age	Burnt 3-5 years ago.	

Species	Cover	Height	Specimen	Notes
<i>Acacia sericophylla</i>	0.1	250 cm	AH78-04	
<i>Acacia stellaticeps</i>	0.1	40 cm		
<i>Acacia tumida</i> var. <i>kulparn</i>	0.1	50 cm		Juvenile.
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	50 cm		
<i>Calytrix carinata</i>	0.1	50 cm		'Form 1 - short leaves'.
<i>Cassytha capillaris</i>	0.1	100 cm		
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	30 cm		
<i>Cleome viscosa</i>	0.1	20 cm		
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	30 cm	AH72-07=	
<i>Eragrostis eriopoda</i>	0.1	40 cm		
<i>Eriachne obtusa</i>	0.1	60 cm		
<i>Goodenia armittiana</i>	0.1	20 cm	AH74-03=	
<i>Grevillea eriostachya</i>	0.1	70 cm		
<i>Grevillea wickhamii</i>	0.1	80 cm		Sterile.
<i>Gyrostemon tepperi</i>	0.1	90 cm		
<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	60 cm	AH74-02=	
<i>Jacksonia aculeata</i>	0.1	50 cm		
<i>Melaleuca laisiandra</i>	1	220 cm	AH78-05	
<i>Newcastelia cladotricha</i>	0.1	20 cm	AH78-02	
<i>Oldenlandia pterospora</i>	0.1	30 cm	AH78-06	
<i>Paraneurachne muelleri</i>	0.1	60 cm		
<i>Polygala isingii</i>	0.1	10 cm	AH78-01	
<i>Pilotus arthrolasius</i>	0.1	30 cm		
<i>Pilotus astrolasius</i>	0.1	60 cm		
<i>Pilotus fusiformis</i>	0.1	60 cm		
<i>Sorghum plumosum</i> var. <i>plumosum</i>	1	100 cm		
<i>Tinospora smilacina</i>	0.1	80 cm		
<i>Trianthema pilosum</i>	0.1	10 cm		
<i>Tribulopis marliesiae</i>	0.1	20 cm	AH78-03	N=12.
<i>Trigastrotheca molluginea</i>	0.1	25 cm		
<i>Triodia schinzii</i>	8	40 cm		
<i>Velleia panduriformis</i>	0.1	40 cm	AH74-05=	



2018

Asian Hub Phase 2 **Site** AH79
Described by PLSW **Date** 17-Mar-18 **Type** Quadrat 50x50m
MGA Zone 51 320837 mE 7736609 mN 121.282391 °E -20.460524 °S
Habitat Pindan plain.
Soil Dark reddish brown loamy sand.
Rock Type N/A.
Vegetation *Corymbia zygophylla* scattered low mallees over *Acacia sericophylla* scattered tall shrubs over *Jacksonia aculeata*, (*Gompholobium simplicifolium*, *Dampiera cinerea*, *Dicrastylis doranii*) low shrubland over *Triodia schinzii* very open hummock grassland.
Veg Condition Excellent.
Fire Age Burnt 3-5 years ago.

Species	Cover	Height	Specimen	Notes
<i>Acacia anaticeps</i>	0.1	100 cm		
<i>Acacia sericophylla</i>	1	250 cm		
<i>Acacia stellaticeps</i>	0.5	50 cm		
<i>Acacia tumida</i> var. <i>kulparn</i>	0.1	120 cm		
<i>Calytrix carinata</i>	0.1	40 cm	AH79-04	'Form 1 - short leaves'.
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	25 cm		
<i>Corymbia zygophylla</i>	2	300 cm		
<i>Dampiera cinerea</i>	3	40 cm		
<i>Dicrastylis doranii</i>	2	45 cm		
<i>Dodonaea hispidula</i> var. <i>arida</i>	0.1	120 cm		
<i>Eragrostis eriopoda</i>	0.1	40 cm		
<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	0.1	100 cm		
<i>Gompholobium simplicifolium</i>	3	50 cm		
<i>Grevillea eriostachya</i>	0.1	120 cm		
<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	45 cm		
<i>Jacksonia aculeata</i>	5	60 cm		
<i>Newcastelia cladotricha</i>	0.1	70 cm	AH79-02	
<i>Oldenlandia pterospora</i>	0.1	40 cm	AH79-01	
<i>Pilotus arthrolasius</i>	0.1	40 cm		
<i>Scaevola parvifolia</i>	0.1	25 cm		Sterile.
<i>Seringia</i> sp.	0.1	40 cm	AH79-03	Sterile; confirmed by Carol Wilkins.
<i>Tinospora smilacina</i>	0.1	300 cm		
<i>Trianthema pilosum</i>	0.1	25 cm		
<i>Triodia schinzii</i>	8	50 cm		



2018

Asian Hub Phase 2	Site	AH80
Described by	MM/BMa	Date 17-Mar-18
MGA Zone	51	341873 mE 7740734 mN
Habitat	Broad pindan plain.	Type Quadrat 50x50m
Soil	Orange-brown sand.	121.484369 °E -20.425138 °S
Rock Type	N/A.	
Vegetation	Owenia reticulata, Grevillea refracta subsp. refracta scattered low trees over Gompholobium simplicifolium scattered low shrubs over Triodia schinzii hummock grassland.	
Veg Condition	Excellent.	
Fire Age	Burnt 3-5 years ago.	

Species	Cover	Height	Specimen	Notes
<i>Acacia platycarpa</i>	0.1	150 cm		
<i>Acacia stellaticeps</i>	0.1	40 cm		
<i>Androcalva loxophylla</i>	0.5	40 cm		
<i>Calytrix carinata</i>	0.1	70 cm		
<i>Cassytha capillaris</i>	0.1	30 cm		
<i>Cyanostegia cyanocalyx</i>	0.1	60 cm		
<i>Dampiera cinerea</i>	0.1	60 cm		
<i>Dodonaea coriacea</i>	0.1	50 cm		
<i>Eriachne obtusa</i>	0.1	60 cm	AH70-08=	Sens. lat.
<i>Erythrophleum chlorostachys</i>	0.1	70 cm		
<i>Gompholobium simplicifolium</i>	2	60 cm		
<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	30 cm		
<i>Grevillea eriostachya</i>	0.1	80 cm	AH80-05	
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.5	300 cm		
<i>Grevillea wickhamii</i> subsp. <i>hispidula</i>	0.1	100 cm	AH80-04	
<i>Gyrostemon tepperi</i>	0.1	80 cm		
<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	40 cm	AH74-02=	
<i>Indigofera boviperda</i> subsp. <i>eremaea</i>	0.1	30 cm		
<i>Jacksonia aculeata</i>	0.1	40 cm		
<i>Newcastelia cladotrichia</i>	0.1	30 cm	AH80-03	
<i>Orianthera centralis</i>	0.1	30 cm	AH80-02	
<i>Owenia reticulata</i>	0.5	300 cm		
<i>Seringia</i> sp.	0.1	40 cm	AH80-01	N=3. Sterile; confirmed by Carol Wilkins.
<i>Sida</i> sp. Pindan (B.G. Thomson 3398)	0.1	60 cm	AH80-06	
<i>Triodia schinzii</i>	35	40 cm		



2018

Asian Hub Phase 2		Site	AH81
Described by	PLSW	Date	17-Mar-18
MGA Zone	51	329648 mE	7719152 mN
Habitat	Pindan plain.		
Soil	Dark reddish brown loamy sand.		
Rock Type	N/A.		
Vegetation	Corymbia zygophylla scattered low mallees over Erythrophleum chlorostachys scattered low trees over Acacia sericophylla scattered tall shrubs over A. ancistrocarpa scattered shrubs over Bonamia erecta, Indigofera boviperda subsp. eremaea low open shrubland over Triodia schinzii open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	No sign of recent fire.		

Species	Cover	Height	Specimen	Notes
<i>Acacia ancistrocarpa</i>	1.5	180 cm		
<i>Acacia colei</i> var. <i>colei</i>	0.1	190 cm		
<i>Acacia eriopoda</i>	0.1	300 cm		
<i>Acacia sericophylla</i>	1	350 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	40 cm		
<i>Bonamia diflatisemina</i>	0.1	50 cm	AH81-03	
<i>Bonamia erecta</i>	3	40 cm		
<i>Bulbostylis barbata</i>	0.1	15 cm		
<i>Bulbostylis barbata</i>	0.1	15 cm		
<i>Calytrix carinata</i>	0.1	60 cm	AH79-04=	'Form 1 - short leaves'.
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	30 cm		
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	40 cm	AH81-06	
<i>Corymbia zygophylla</i>	2	300 cm		
<i>Eriachne aristidea</i>	0.1	40 cm		
<i>Eriachne obtusa</i>	0.1	50 cm		
<i>Erythrophleum chlorostachys</i>	1	230 cm		
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	25 cm	AH81-05	
<i>Goodenia armittiana</i>	0.1	30 cm	AH81-04	
<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	40 cm		
<i>Grevillea wickhamii</i>	0.1	80 cm		Sterile.
<i>Gyrostemon tepperi</i>	0.1	60 cm		
<i>Hakea macrocarpa</i>	0.1	100 cm	AH81-07	
<i>Halgnania solanacea</i> var. <i>solanacea</i>	0.1	40 cm		
<i>Hibiscus leptocladius</i>	0.1	25 cm		
<i>Indigofera boviperda</i> subsp. <i>eremaea</i>	2	45 cm	AH81-02	
<i>Jacksonia aculeata</i>	0.1	60 cm		
<i>Newcastelia cladotricha</i>	0.1	40 cm		
<i>Oldenlandia pterospora</i>	0.1	40 cm	AH81-01	
<i>Ptilotus arthrolasioides</i>	0.1	40 cm		
<i>Ptilotus astrolasioides</i>	0.1	40 cm		
<i>Ptilotus calostachyus</i>	0.1	70 cm		
<i>Ptilotus polystachyus</i>	0.1	50 cm		
<i>Senna notabilis</i>	0.1	25 cm		
<i>Tribulopis marliesiae</i>	0.1	20 cm		N=25.
<i>Trigastrotheca molluginea</i>	0.1	25 cm		
<i>Triodia schinzii</i>	16	40 cm		



Asian Hub Phase 2	Site	AH82
Described by	MM/BMa	Date 18-Mar-18
MGA Zone	51	285479 mE 7714682 mN 120.940918 °E -20.654853 °S
Habitat	Depression in the crest of a braided sand dune within a broad pindan plain.	
Soil	Orange-brown sand.	
Rock Type	N/A.	
Vegetation	<i>Grevillea wickhamii</i> , (<i>Acacia tumida</i> var. <i>kulparn</i>) tall open shrubland over <i>Gompholobium simplicifolium</i> , <i>Dicrastylis doranii</i> low open shrubland over <i>Triodia schinzii</i> very open hummock grassland.	
Veg Condition	Excellent; camel tracks but no signs of grazing.	
Fire Age	No sign of recent fire.	

Species	Cover	Height	Specimen	Notes
<i>Acacia colei</i> var. <i>colei</i>	0.1	200 cm		
<i>Acacia melleodora</i>	0.5	120 cm	AH82-01	
<i>Acacia tumida</i> var. <i>kulparn</i>	0.5	250 cm	AH82-10	
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	50 cm		
<i>Calytrix carinata</i>	0.1	45 cm		
<i>Cassytha capillaris</i>	0.1	50 cm		
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	20 cm		
<i>Corynotheca micrantha</i> var. <i>gracilis</i>	0.1	30 cm	AH82-06	
<i>Cyanostegia cyanocalyx</i>	0.1	50 cm		
<i>Dampiera cinerea</i>	0.1	50 cm		
<i>Dicrastylis doranii</i>	2	40 cm	AH82-03	
<i>Duboisia hopwoodii</i>	0.1	180 cm	AH82-02	
<i>Eragrostis eriopoda</i>	0.1	50 cm		
<i>Eriachne obtusa</i>	0.1	50 cm		
<i>Erythrophleum chlorostachys</i>	0.1	200 cm		
<i>Gompholobium simplicifolium</i>	2	40 cm		
<i>Grevillea wickhamii</i>	3.5	480 cm		Sterile.
<i>Heliotropium transforme</i>	0.1	50 cm	AH76-03=	
<i>Hibiscus leptocladius</i>	0.1	60 cm		
<i>Indigofera boviperda</i> subsp. <i>eremaea</i>	0.1	30 cm		
<i>Jacksonia aculeata</i>	0.1	40 cm		
<i>Newcastelia cladotricha</i>	0.1	60 cm	AH82-05	
<i>Oldenlandia pterospora</i>	0.1	10 cm	AH78-06=	
<i>Polygala isingii</i>	0.1	25 cm	AH82-04	
<i>Ptilotus arthrolasius</i>	0.1	25 cm		
<i>Ptilotus astrolasius</i>	0.1	40 cm		
<i>Scaevola parvifolia</i> subsp. <i>parvifolia</i>	0.1	40 cm	AH82-09	
<i>Sida</i> sp. Pindan (B.G. Thomson 3398)	0.1	60 cm	AH82-08	
<i>Spermacoce occidentalis</i>	0.1	20 cm	AH82-07	
<i>Trianthema pilosum</i>	0.1	20 cm		
<i>Tribulopis marliesiae</i>	0.1	20 cm		N=1.
<i>Trigastrotheca molluginea</i>	0.1	15 cm		
<i>Triodia epactia</i>	0.1	60 cm		
<i>Triodia schinzii</i>	9	30 cm		



2018

Asian Hub Phase 2		Site	AH83
Described by	PLSW	Date	17-Mar-18
MGA Zone	51	319477 mE	7716057 mN
Habitat	Inland sand dune, including swale within the dune.		
Soil	Pink red loamy sand.		
Rock Type	N/A.		
Vegetation	<i>Acacia tumida</i> var. <i>kulparn</i> , (<i>A. anaticeps</i> , <i>A. platycarpa</i>) open shrubland over <i>Dampiera cinerea</i> , (<i>Cyanostegia cyanocalyx</i>) low open shrubland over <i>Triodia schinzii</i> very open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	No sign of recent fire.		

Species	Cover	Height	Specimen	Notes
<i>Acacia anaticeps</i>	2	120 cm		
<i>Acacia platycarpa</i>	1	110 cm		
<i>Acacia tumida</i> var. <i>kulparn</i>	4	200 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	30 cm		
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	40 cm		
<i>Corynotheca micrantha</i> var. <i>gracilis</i>	0.1	20 cm	AH83-01	
<i>Cyanostegia cyanocalyx</i>	1	80 cm		
<i>Dampiera cinerea</i>	3	40 cm		
<i>Dicrastylis doranii</i>	0.1	40 cm		
<i>Eragrostis eriopoda</i>	0.1	40 cm		
<i>Eriachne aristidea</i>	0.1	50 cm		
<i>Eriachne mucronata</i>	0.1	40 cm		Typical form.
<i>Eriachne obtusa</i>	0.1	40 cm		
<i>Erythrophleum chlorostachys</i>	0.1	190 cm		
<i>Gompholobium simplicifolium</i>	0.1	60 cm		
<i>Grevillea stenobotrya</i>	0.1	160 cm		
<i>Heliotropium transforme</i>	0.1	60 cm	AH83-04	
<i>Indigofera ammobia</i>	0.1	20 cm	AH83-02	
<i>Newcastelia cladotricha</i>	0.1	40 cm		
<i>Orianthera centralis</i>	0.1	40 cm		
<i>Polygala isingii</i>	0.1	5 cm	AH83-03	
<i>Pilotus arthrolasius</i>	0.1	45 cm		
<i>Spermacoce occidentalis</i>	0.1	15 cm		
<i>Trianthema pilosum</i>	0.1	30 cm		
<i>Tribulopis marliesiae</i>	0.1	10 cm	AH83-05	N=15.
<i>Triodia schinzii</i>	8	60 cm		



2018

Asian Hub Phase 2 **Site** AH84
Described by MM/BMa **Date** 18-Mar-18 **Type** Quadrat 50x50m
MGA Zone 51 285448 mE 7714907 mN 120.940648 °E -20.652817 °S
Habitat Pindan plain at the base of a dune running E-W.
Soil Orange-brown sand.
Rock Type N/A.
Vegetation *Acacia stellaticeps* low open heath over *Triodia schinzii* very open hummock grassland.
Veg Condition Excellent.
Fire Age Burnt 3-5 years ago.

Species	Cover	Height	Specimen	Notes
<i>Acacia sphaerostachya</i>	0.1	70 cm	AH84-01	
<i>Acacia stellaticeps</i>	45	60 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	60 cm		
<i>Bonamia erecta</i>	0.1	30 cm		
<i>Cassytha capillaris</i>	0.1	30 cm		
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	40 cm		
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	20 cm		
<i>Eragrostis eriopoda</i>	0.1	50 cm		
<i>Eriachne obtusa</i>	0.1	60 cm		
<i>Goodenia armittiana</i>	0.1	30 cm		
<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	45 cm		
<i>Heliotropium transforme</i>	0.1	40 cm	AH76-03=	
<i>Hibiscus leptocladius</i>	0.1	50 cm		
<i>Indigofera boviperda</i> subsp. <i>eremaea</i>	0.1	30 cm		
<i>Jacksonia aculeata</i>	0.1	70 cm		
<i>Newcastelia cladotricha</i>	0.1	40 cm	AH82-05=	
<i>Pilotus arthrolasius</i>	0.1	60 cm		
<i>Pilotus astrolasius</i>	0.1	40 cm		
<i>Pilotus fusiformis</i>	0.1	40 cm		
<i>Pilotus polystachyus</i>	0.1	50 cm		
<i>Stylobasium spathulatum</i>	0.1	100 cm		
<i>Tribulopis marliesiae</i>	0.1	30 cm		N=12.
<i>Trigastrotheca molluginea</i>	0.1	15 cm		
<i>Triodia epactia</i>	0.1	40 cm		
<i>Triodia schinzii</i>	4	40 cm		
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	5 cm		



2018

Asian Hub Phase 2		Site	AH85		
Described by	PLSW	Date	17-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	326800 mE	7762152 mN		121.342003 °E -20.230362 °S
Habitat	Sand dune.				
Soil	Dark reddish sand.				
Rock Type	N/A.				
Vegetation	Acacia tumida var. <i>kulparn</i> , (<i>A. eriopoda</i>) tall open shrubland over <i>Gompholobium simplicifolium</i> , (<i>Dampiera cinerea</i> , <i>Cyanostegia cyanocalyx</i>) low shrubland over <i>Triodia schinzii</i> very open hummock grassland.				
Veg Condition	Excellent.				
Fire Age	Burnt 3-5 years ago.				

Species	Cover	Height	Specimen	Notes
<i>Acacia eriopoda</i>	0.5	260 cm		
<i>Acacia platycarpa</i>	0.5	90 cm		
<i>Acacia tumida</i> var. <i>kulparn</i>	3	300 cm	AH85-04, -05	
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	40 cm		
<i>Calytrix carinata</i>	0.1	80 cm	AH85-02	'Form 1 - short leaves'.
<i>Cyanostegia cyanocalyx</i>	2	80 cm		
<i>Dampiera cinerea</i>	2	40 cm		
<i>Eragrostis eriopoda</i>	0.1	40 cm		
<i>Erythrophleum chlorostachys</i>	0.5	90 cm		
<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	0.1	300 cm		
<i>Gompholobium simplicifolium</i>	8	50 cm		
<i>Grevillea eriostachya</i>	0.1	80 cm		
<i>Grevillea wickhamii</i>	0.1	140 cm		Sterile.
<i>Gyrostemon tepperi</i>	0.1	110 cm		
<i>Newcastelia cladotricha</i>	0.5	50 cm	AH85-01	
<i>Seringia</i> sp.	1	50 cm	AH85-03	Sterile; confirmed by Carol Wilkins.
<i>Sida</i> sp. Pindan (B.G. Thomson 3398)	0.1	45 cm		
<i>Triodia epactia</i>	0.1	50 cm		
<i>Triodia schinzii</i>	9	40 cm		



2018

Asian Hub Phase 2	Site	AH86
Described by	MM/BMa	Date 18-Mar-18
MGA Zone	51	282213 mE 7736101 mN
Habitat	Broad pindan plain.	Type Quadrat 50x50m
Soil	Orange-brown sand.	120.912215 °E -20.461061 °S
Rock Type	Laterite; fine gravel (1-25%).	
Vegetation	Corymbia zygophylla low open mallee woodland over Acacia tumida var. <i>kulparn</i> scattered shrubs over <i>Dicrastylis cordifolia</i> scattered low shrubs over <i>Triodia epactia</i> , (<i>T. schinzii</i>) open hummock grassland.	
Veg Condition	Excellent; camel scats but no signs of grazing.	
Fire Age	No sign of recent fire.	

Species	Cover	Height	Specimen	Notes
<i>Acacia ancistrocarpa</i>	0.1	160 cm		
<i>Acacia colei</i> var. <i>colei</i>	0.1	100 cm		
<i>Acacia sericophylla</i>	0.1	200 cm		
<i>Acacia tumida</i> var. <i>kulparn</i>	0.5	100 cm	AH86-04	
<i>Amphipogon sericeus</i>	0.1	20 cm	AH74-04=	
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	50 cm		
<i>Bonamia erecta</i>	0.1	40 cm		
<i>Cassytha capillaris</i>	0.1	80 cm		
<i>Codonocarpus cotinifolius</i>	0.1	110 cm		
<i>Corymbia zygophylla</i>	3	300 cm		
<i>Dampiera candidans</i>	0.1	60 cm		
<i>Dicrastylis cordifolia</i>	0.5	20 cm	AH86-07	
<i>Eragrostis eriopoda</i>	0.1	40 cm		
<i>Eriachne obtusa</i>	0.1	65 cm		
<i>Erythrophleum chlorostachys</i>	0.1	150 cm		
<i>Euphorbia</i> sp.	0.1	30 cm	AH86-06	Insufficient material.
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	30 cm	AH86-03	
<i>Goodenia armittiana</i>	0.1	30 cm		
<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	35 cm		
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	350 cm		
<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	40 cm	AH86-01	
<i>Hibiscus leptocladus</i>	0.1	40 cm		
<i>Hybanthus aurantiacus</i>	0.1	110 cm		
<i>Indigofera monophylla</i>	0.1	60 cm	AH86-05	
<i>Paraneurachne muelleri</i>	0.1	50 cm		
<i>Phyllanthus eremicus</i>	0.1	40 cm		
<i>Ptilotus astrolasius</i>	0.1	80 cm		
<i>Ptilotus calostachyus</i>	0.1	70 cm		
<i>Ptilotus fusiformis</i>	0.1	70 cm		
<i>Ptilotus polystachyus</i>	0.1	30 cm		
<i>Tephrosia</i> sp. D Kimberley Flora (R.D. Royce 1848)	0.1	35 cm	AH86-02	
<i>Tribulopis marliesiae</i>	0.1	30 cm		N=6.
<i>Trigastrotheca molluginea</i>	0.1	10 cm		
<i>Triodia epactia</i>	18	40 cm		
<i>Triodia schinzii</i>	7	40 cm		



2018

Asian Hub Phase 2		Site	AH87
Described by	PLSW	Date	18-Mar-18
MGA Zone	51	280654 mE	7726901 mN
Habitat	Undulating crest of a sand dune, including an elevated depression.		
Soil	Reddish brown sand.		
Rock Type	N/A.		
Vegetation	Grevillea stenobotrya, Owenia reticulata, (Acacia anaticeps) tall open shrubland over Tephrosia rosea var. Port Hedland (A.S. George 1114), (Dicrastylis doranii) low open shrubland over Triodia schinzii very open hummock grassland with Aristida holathera var. holathera, (Eriachne aristidea, Sorghum plumosum var. plumosum) very open tussock grassland.		
Veg Condition	Very Good; ?donkey scats and tracks.		
Fire Age	No sign of recent fire.		

Species	Cover	Height	Specimen	Notes
<i>Acacia anaticeps</i>	0.5	330 cm		
<i>Acacia sericophylla</i>	0.1	160 cm		
<i>Acacia stellaticeps</i>	0.1	50 cm	AH87-02	
<i>Acacia tumida</i> var. <i>kulparn</i>	0.1	90 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	4	45 cm		
<i>Cassytha capillaris</i>	0.1	30 cm		
<i>Chamaecrista symonii</i>	0.1	45 cm		
<i>Croton aridus</i>	0.1	80 cm	AH87-06	
<i>Dampiera cinerea</i>	0.1	45 cm		
<i>Dicrastylis doranii</i>	1	40 cm	AH87-04	
<i>Eragrostis eriopoda</i>	0.1	40 cm		
<i>Eriachne aristidea</i>	1	40 cm		
<i>Eriachne helmsii</i>	0.1	40 cm	AH87-07	
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	25 cm	AH87-08	
<i>Gompholobium simplicifolium</i>	0.1	40 cm		
<i>Grevillea stenobotrya</i>	3	300 cm		
<i>Indigofera ammobia</i>	0.1	40 cm	AH87-03	
<i>Newcastelia cladotricha</i>	0.1	55 cm		
<i>Newcastelia spodiotricha</i>	0.1	45 cm		
<i>Owenia reticulata</i>	2	400 cm		
<i>Portulaca filifolia</i>	0.1	25 cm	AH87-11	
<i>Pilotus polystachyus</i>	0.1	50 cm		
<i>Sida</i> sp. Pindan (B.G. Thomson 3398)	0.1	50 cm		
<i>Sida</i> sp. Western sand dunes (P.K. Latz 11980)	0.1	170 cm	AH87-01	
<i>Sorghum plumosum</i> var. <i>plumosum</i>	1	130 cm		
<i>Spermacoce occidentalis</i>	0.1	25 cm		
<i>Tephrosia rosea</i> var. Port Hedland (A.S. George 1114)	4	45 cm	AH87-05	Ph 84-86, semi-prostrate, pink flower. Confirmed by S. Dillon and R. Butcher; atypical in recurved stipules and broader leaflets, matching specimen PERTH 08024960, outlier from 20km E of Warrawagine.
<i>Thinicola incana</i>	0.1	110 cm	AH87-09	
<i>Tinospora smilacina</i>	0.1	80 cm		
<i>Trianthema pilosum</i>	0.1	25 cm		
<i>Triodia schinzii</i>	7	50 cm		



Asian Hub Phase 2 **Site** AH88
Described by MM/BMa **Date** 18-Mar-18 **Type** Quadrat 50x50m
MGA Zone 51 272937 mE 7740031 mN 120.823839 °E -20.424485 °S
Habitat Broad pindan plain, surrounded by a drainage line to the E and lateritic ridges to the S and N.
Soil Orange-brown sand with gravel.
Rock Type Lateritic gravel (1-25%).
Vegetation *Acacia ancistrocarpa* open shrubland over *Triodia epactia* hummock grassland.
Veg Condition Excellent.
Fire Age No sign of recent fire.

Species	Cover	Height	Specimen	Notes
<i>Acacia ancistrocarpa</i>	5	160 cm		
<i>Acacia colei</i> var. <i>colei</i>	0.1	250 cm		
<i>Acacia sabulosa</i>	0.1	160 cm	AH88-03	
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	30 cm		
<i>Bonamia erecta</i>	0.1	40 cm		
<i>Calytrix carinata</i>	0.1	40 cm		
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	30 cm		
<i>Codonocarpus cotinifolius</i>	0.1	200 cm		
<i>Cucumis variabilis</i>	0.1	100 cm		
<i>Dampiera candicans</i>	0.1	60 cm		
<i>Dicrastylis cordifolia</i>	0.1	30 cm		
<i>Eragrostis eriopoda</i>	0.1	50 cm		
<i>Eriachne obtusa</i>	0.1	60 cm		
<i>Erythrophleum chlorostachys</i>	0.1	100 cm		
<i>Goodenia armittiana</i>	0.1	30 cm		
<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	80 cm		
<i>Gossypium australe</i>	0.1	100 cm	AH88-04	Burrup Peninsula form.
<i>Grevillea pyramidalis</i>	0.1	220 cm		
<i>Grevillea wickhamii</i>	0.1	300 cm		Sterile.
<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	120 cm	AH86-01=	
<i>Heliotropium pachyphyllum</i>	0.1	40 cm	AH88-02	
<i>Heliotropium vestitum</i>	0.1	40 cm	AH88-01	
<i>Hybanthus aurantiacus</i>	0.1	60 cm		
<i>Indigofera monophylla</i>	0.1	50 cm		
<i>Pilotus calostachyus</i>	0.1	60 cm		
<i>Pilotus fusiformis</i>	0.1	30 cm		
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	80 cm		
<i>Streptoglossa macrocephala</i>	0.1	90 cm	AH88-07	
<i>Trianthema pilosum</i>	0.1	20 cm		
<i>Tribulus hirsutus</i>	0.1	25 cm	AH88-06	
<i>Trigastrotheca molluginea</i>	0.1	20 cm		
<i>Triodia epactia</i>	40	40 cm		
<i>Triodia schinzii</i>	0.1	40 cm		
<i>Triumfetta aff. plumigera</i>	0.1	80 cm	AH88-05	Det. by M. Barrett as closest to <i>T. plumigera</i> , but leaves are an unusual shape.



Asian Hub Phase 2		Site	AH89
Described by	PLSW	Date	18-Mar-18
MGA Zone	51	280538 mE	7727094 mN
Habitat	Pindan plain, between inland red sand dunes.		
Soil	Pink-red sand.		
Rock Type	Gravel (1-25%).		
Vegetation	Erythrophleum chlorostachys (<i>Owenia reticulata</i>) low open woodland over <i>Grevillea refracta</i> subsp. <i>refracta</i> scattered tall shrubs over <i>Croton aridus</i> open shrubland over <i>Triodia schinzii</i> open hummock grassland with <i>Sorghum plumosum</i> var. <i>plumosum</i> , (<i>Eriachne obtusa</i>) very open tussock grassland.		
Veg Condition	Excellent.		
Fire Age	No sign of recent fire.		

Species	Cover	Height	Specimen	Notes
<i>Acacia ancistrocarpa</i>	0.1	30 cm		
<i>Acacia colei</i> var. <i>colei</i>	0.1	40 cm		
<i>Acacia sabulosa</i>	0.1	60 cm	AH89-06	
<i>Androcalva loxophylla</i>	0.1	60 cm		
<i>Boerhavia gardneri</i>	0.1	10 cm	AH89-03	
<i>Bonamia erecta</i>	0.1	30 cm		
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	25 cm		
<i>Croton aridus</i>	3	180 cm	AH87-06=	
<i>Cucumis variabilis</i>	0.1	80 cm		
<i>Dicrastylis cordifolia</i>	0.1	35 cm	AH89-08	
<i>Dicrastylis doranii</i>	0.1	35 cm		
<i>Eriachne aristidea</i>	0.1	20 cm		
<i>Eriachne obtusa</i>	1	60 cm		
<i>Erythrophleum chlorostachys</i>	3	190 cm		
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	20 cm	AH87-08=	
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.5	310 cm		
<i>Hakea macrocarpa</i>	0.1	60 cm		
<i>Heliotropium leptaleum</i>	0.1	10 cm	AH89-01	
<i>Heliotropium vestitum</i>	0.1	15 cm	AH89-02	
<i>Hibiscus leptocladius</i>	0.1	20 cm		
<i>Jacksonia aculeata</i>	0.1	40 cm		
<i>Owenia reticulata</i>	0.5	450 cm		
<i>Pimelea ammocharis</i>	0.1	30 cm		
<i>Pilototus astrolasius</i>	0.1	30 cm		
<i>Pilototus polystachyus</i>	0.1	25 cm		
<i>Scaevola parvifolia</i>	0.1	15 cm		Sterile.
<i>Senna artemisioides</i> subsp. <i>helmsii</i>	0.1	110 cm	AH89-07	Sterile.
<i>Sida arenicola</i>	0.1	40 cm		White indumentum form.
<i>Sida arenicola</i>	0.1	30 cm		Ferruginous form.
<i>Sorghum plumosum</i> var. <i>plumosum</i>	4	110 cm		
<i>Tephrosia</i> sp. D Kimberley Flora (R.D. Royce 1848)	0.1	30 cm	AH89-04	
<i>Trianthema pilosum</i>	0.1	10 cm		
<i>Tribulopis marliesiae</i>	0.1	10 cm		N=8.
<i>Trichodesma zeylanicum</i>	0.1	40 cm		Sterile.
<i>Trigastrotheca molluginea</i>	0.1	15 cm		
<i>Triodia schinzii</i>	13	50 cm		
<i>Zornia chaetophora</i>	0.1	40 cm		



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Asian Hub Phase 2 **Site** AH90
Described by PLSW **Date** 21-Mar-18 **Type** Quadrat 50x50m
MGA Zone 51 267950 mE 7819733 mN 120.786195 °E -19.704189 °S
Habitat Dune swale approximately 100m wide, immediately S of narrow band of coastal dune habitat.
Soil Grey sand.
Rock Type Limestone pebbles and shells.
Vegetation *Triodia epactia*, (*Spinifex longifolius*) open hummock grassland with *Whiteochloa airoides* open tussock grassland.
Veg Condition Excellent.
Fire Age Very long unburnt.
Notes Map note taken within narrow dune to Nth, swale approximately 100m wide.

Species	Cover	Height	Specimen	Notes
<i>Acacia bivenosa</i>	0.1	100 cm		
<i>Cassytha capillaris</i>	0.5	40 cm		
<i>Cleome viscosa</i>	0.1	8 cm	AH90-06	
<i>Euphorbia trigonosperma</i>	1	40 cm	AH90-04B	
<i>Euphorbia vaccaria</i> var. <i>vaccaria</i>	0.1	10 cm	AH90-04A	
<i>Panicum decompositum</i>	0.1	80 cm	AH90-05	
<i>Portulaca aff. australis</i>	0.1	7 cm	AH90-07	Recollect if possible; potentially a new species (M. Barrett). Need good material, photos, field count of stamens and styles, petal number, operculum shape and try to get seed and taproot.
<i>Spinifex longifolius</i>	0.5	80 cm	AH90-03	
<i>Triodia epactia</i>	15	50 cm	AH90-01	
<i>Whiteochloa airoides</i>	12	80 cm	AH90-02	



2018

Asian Hub Phase 2		Site	AH91
Described by	PLSW	Date	18-Mar-18
MGA Zone	51	273621 mE	7738939 mN
Habitat	Broad drainage between low mesiform lateritic hills.		
Soil	Dark reddish brown loamy sand.		
Rock Type	Patches of fine laterite gravel over surface (1-25%).		
Vegetation	Corymbia greeniana low open woodland over <i>Acacia tumida</i> var. <i>kulparn</i> , (<i>Petalostylis labicheoides</i>) tall shrubland over <i>Bonamia erecta</i> , <i>Gossypium australe</i> , <i>Indigofera monophylla</i> low shrubland over <i>Triodia epactia</i> very open hummock grassland and <i>Paspalidium rarum</i> , <i>Aristida holathera</i> var. <i>holathera</i> , <i>Eragrostis eriopoda</i> , <i>Eriachne obtusa</i> very open tussock grassland with <i>Rhynchosia minima</i> very open hermland.		

Veg Condition Excellent; ?donkey scats present but no signs of grazing.

Species	Cover	Height	Specimen	Notes
<i>Abutilon lepidum</i>	0.1	40 cm	AH91-14B	
<i>Abutilon otocarpum</i>	0.1	50 cm	AH91-14A	
<i>Acacia colei</i> var. <i>colei</i>	0.1	300 cm		
<i>Acacia sericophylla</i>	0.1	70 cm		
<i>Acacia tumida</i> var. <i>kulparn</i>	11	360 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	1	50 cm		
<i>Boerhavia coccinea</i>	0.1	30 cm		
<i>Bonamia erecta</i>	5	60 cm		
<i>Bonamia oblongifolia</i>	1	20 cm	AH91-02,7A	
<i>Bonamia pannosa</i>	0.5	40 cm	AH91-07B	
<i>Bulbostylis barbata</i>	1	15 cm		
<i>Cassytha capillaris</i>	0.1	60 cm		
<i>Cleome viscosa</i>	0.1	30 cm		
<i>Clerodendrum tomentosum</i> var. <i>tomentosum</i>	0.1	60 cm	AH91-18	
<i>Codonocarpus cotinifolius</i>	0.1	220 cm		
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	45 cm		
<i>Corymbia greeniana</i>	5	800 cm	AH91-01	
<i>Cucumis variabilis</i>	0.1	140 cm		
<i>Cymbopogon</i> sp.	0.1	50 cm		Sterile.
<i>Dampiera candicans</i>	0.1	40 cm		
<i>Dicrastylis cordifolia</i>	0.1	40 cm		
<i>Digitaria brownii</i>	0.1	45 cm	AH91-16	
<i>Eragrostis cumingii</i>	0.1	25 cm	AH91-22	
<i>Eragrostis eriopoda</i>	1	40 cm		
<i>Eriachne aristidea</i>	0.1	40 cm		
<i>Eriachne obtusa</i>	1	45 cm		
<i>Euphorbia trigonosperma</i>	0.1	25 cm	AH91-12	
<i>Euphorbia vaccaria</i> var. <i>vaccaria</i>	0.1	10 cm	AH91-10	
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	25 cm		
<i>Gomphrena cunninghamii</i>	0.1	20 cm		
<i>Gomphrena lanata</i>	0.1	25 cm	AH91-21	
<i>Goodenia armittiana</i>	0.5	40 cm	AH91-26	
<i>Gossypium australe</i>	4	60 cm	AH91-03	Burrup Peninsula form.
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	240 cm		
<i>Grevillea wickhamii</i>	0.1	210 cm		Sterile.
<i>Heliotropium leptaleum</i>	0.1	20 cm	AH91-15	
<i>Heliotropium pachyphyllum</i>	0.1	60 cm		
<i>Hibiscus leptocladus</i>	0.1	60 cm		
<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>	0.1	50 cm	AH91-04	
<i>Hybanthus aurantiacus</i>	0.1	70 cm		
<i>Indigofera monophylla</i>	3	50 cm	AH91-05	Sens. lat.; specimens vary a lot.
<i>Isotropis atropurpurea</i>	0.1	55 cm	AH91-11	
<i>Jasminum didymum</i> subsp. <i>lineare</i>	0.1	80 cm	AH91-06	
<i>Paraneurachne muelleri</i>	0.1	40 cm		
<i>Paspalidium rarum</i>	2	30 cm	AH91-13	
<i>Perotis rara</i>	0.1	15 cm	AH91-23	
<i>Petalostylis labicheoides</i>	1	220 cm	AH91-08	
<i>Polycarpaea corymbosa</i> var. <i>corymbosa</i>	0.1	20 cm		
<i>Pterocaulon serrulatum</i> var. <i>velutinum</i>	0.1	40 cm		
<i>Pilotus calostachyus</i>	0.1	80 cm		
<i>Pilotus fusiformis</i>	0.1	35 cm	AH91-20	
<i>Rhynchosia minima</i>	3	40 cm		
<i>Sida arenicola</i>	0.1	140 cm		White indumentum form.
<i>Sida arenicola</i>	0.1	160 cm		Ferruginous form.

Species	Cover	Height	Specimen	Notes
<i>Solanum dioicum</i>	0.1	60 cm	AH91-24	
<i>Solanum diversiflorum</i>	0.1	70 cm		
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	0.1	40 cm		
<i>Trianthema pilosum</i>	0.1	30 cm		
<i>Tribulopis marliesiae</i>	0.1	25 cm		N=1.
<i>Trigastrotheca molluginea</i>	0.1	20 cm		
<i>Triodia epactia</i>	3	40 cm		
<i>Triumfetta johnstonii</i>	0.1	80 cm	AH91-17	
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	35 cm	AH91-19	



2018

Asian Hub Phase 2	Site	AH92		
Described by	PLSW	Date	21-Mar-18	Type
MGA Zone	51	267981 mE	7818116 mN	Quadrat 50x50m 120.786290 °E -19.718795 °S
Habitat	Flat coastal plain.			
Soil	Grey silty loam.			
Rock Type	N/A.			
Vegetation	* <i>Cenchrus ciliaris</i> tussock grassland.			
Veg Condition	Very Poor; heavily grazed paddock on Mandora Station dominated by Buffel Grass (approaching 100% cover if not grazed).			
Fire Age	No sign of recent fire.			

Species	Cover	Height	Specimen	Notes
* <i>Aerva javanica</i>	0.1	20 cm	AH92-06	
* <i>Cenchrus ciliaris</i>	60	30 cm		
<i>Corchorus tridens</i>	0.1	5 cm	AH92-07	
<i>Crotalaria medicaginea</i> var. <i>neglecta</i>	0.1	20 cm	AH92-09	
<i>Euphorbia</i> ? <i>wheeleri</i>	0.1	15 cm	AH92-08	Tentative identification.
<i>Euphorbia trigonosperma</i>	0.1	10 cm	AH92-05	
<i>Indigofera linifolia</i>	0.1	10 cm	AH92-10	
<i>Indigofera linnaei</i>	0.1	10 cm	AH92-04	
<i>Melhania oblongifolia</i>	0.1	5 cm	AH92-01	
<i>Panicum decompositum</i>	0.1	40 cm	AH90-05=	
<i>Pterocaulon</i> sp.	0.1	5 cm		Seedlings; insufficient material for determination.
<i>Rhynchosia minima</i>	0.1	5 cm	AH92-02	
<i>Solanum esuriale</i>	0.1	10 cm	AH92-03	

No photo taken.

Asian Hub Phase 2 **Site** AH93
Described by PLSW **Date** 18-Mar-18 **Type** Quadrat 50x50m
MGA Zone 51 274847 mE 7738813 mN 120.841981 °E -20.435711 °S
Habitat Minor flowline, draining to the NE off a low lateritic mesiform hill.
Soil Reddish brown loamy sand.
Rock Type N/A.
Vegetation *Corymbia greeniana* scattered low trees over *Grevillea refracta* subsp. *refracta*, (*G. wickhamii*) tall open shrubland over *Acacia tumida* var. *kulparn* open shrubland over *A. adoxa* var. *adoxia*, (*Indigofera monophylla*) low open shrubland over *Triodia epactia* open hummock grassland.
Veg Condition Excellent.
Fire Age Very long unburnt.

Species	Cover	Height	Specimen	Notes
<i>Acacia adoxa</i> var. <i>adoxia</i>	4	45 cm		
<i>Acacia colei</i> var. <i>colei</i>	0.1	120 cm		
<i>Acacia cowleana</i>	0.1	80 cm	AH93-11	
<i>Acacia hilliana</i>	0.1	60 cm		
<i>Acacia sabulosa</i>	0.1	120 cm	AH93-10	
<i>Acacia tumida</i> var. <i>kulparn</i>	5	120 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	20 cm		
<i>Boerhavia coccinea</i>	0.1	30 cm		
<i>Bonamia oblongifolia</i>	0.1	10 cm	AH91-02=	
<i>Bulbostylis barbata</i>	0.1	15 cm		
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	10 cm		
<i>Codonocarpus cotinifolius</i>	0.1	290 cm		
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	60 cm	AH93-01	
<i>Corymbia greeniana</i>	1	450 cm		
<i>Cucumis variabilis</i>	0.1	60 cm		
<i>Dampiera candicans</i>	0.1	30 cm		
<i>Dodonaea coriacea</i>	0.1	60 cm		
<i>Eragrostis eriopoda</i>	0.1	70 cm		
<i>Eriachne aristidea</i>	0.1	60 cm		
<i>Eriachne obtusa</i>	0.1	60 cm	AH93-07	
<i>Euphorbia trigonosperma</i>	0.1	30 cm	AH91-12=	
<i>Evolvulus alsinoides</i> var. <i>vilosocalyx</i>	0.1	20 cm		
<i>Gompholobium polyzygum</i>	0.1	15 cm	REL07-02=	
<i>Goodenia armittiana</i>	0.1	20 cm		
<i>Goodenia scaevolina</i>	0.1	60 cm		
<i>Gossypium australe</i>	0.1	60 cm	AH91-03=	Burrup Peninsula form.
<i>Grevillea refracta</i> subsp. <i>refracta</i>	3	300 cm		
<i>Grevillea wickhamii</i>	1	220 cm		Sterile.
<i>Hakea macrocarpa</i>	0.1	80 cm		
<i>Heliotropium glabellum</i>	0.1	25 cm	AH93-02	
<i>Heliotropium pachyphyllum</i>	0.1	40 cm		
<i>Hibiscus leptocladius</i>	0.1	50 cm		
<i>Hybanthus aurantiacus</i>	0.1	20 cm		
<i>Indigofera monophylla</i>	2	50 cm		
<i>Isotropis atropurpurea</i>	0.1	80 cm		
<i>Leptosema anomalam</i>	0.1	20 cm		
<i>Polygala glauca</i>	0.1	10 cm	AH93-08	
<i>Pilotus calostachyus</i>	0.1	60 cm		
<i>Pilotus fusiformis</i>	0.1	45 cm		
<i>Pilotus incanus</i>	0.1	40 cm	AH93-12B	
<i>Pilotus polystachyus</i>	0.1	20 cm		
<i>Sida arenicola</i>	0.1	20 cm		Ferruginous form.
<i>Sida arenicola</i>	0.1	110 cm		White indumentum form.
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	45 cm		
<i>Solanum dioicum</i>	0.5	60 cm	AH91-24=	
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	200 cm		
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	0.1	50 cm		
<i>Tribulus hirsutus</i>	0.1	10 cm	AH93-06	
<i>Trichodesma zeylanicum</i>	0.1	60 cm		
<i>Trigastrotheca molluginea</i>	0.1	20 cm		
<i>Triodia epactia</i>	16	60 cm		
<i>Triumfetta johnstonii</i>	0.1	40 cm	AH93-09	
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	30 cm	AH91-19=	



2018

Asian Hub Phase 2	Site	AH94
Described by	PLSW	Date 21-Mar-18
MGA Zone	51	267963 mE 7817263 mN
Habitat	Flat coastal plain, located between dunes to N and Melaleuca thicket to S.	
Soil	Grey light clay.	
Rock Type	N/A.	
Vegetation	<i>Sida fibulifera</i> scattered low shrubs over * <i>Cenchrus ciliaris</i> , * <i>C. setiger</i> , (<i>Eulalia aurea</i>) tussock grassland.	
Veg Condition	Very Poor; area grazed by cattle, and dominated by * <i>Cenchrus</i> spp. weeds.	
Fire Age	Very long unburnt.	
Notes	SE corner coordinates not recorded.	

Species	Cover	Height	Specimen	Notes
* <i>Aerva javanica</i>	0.1	40 cm		
<i>Amaranthus undulatus</i>	0.1	15 cm	AH94-04	
<i>Boerhavia burbridgeana</i>	0.1	15 cm	AH94-08	
* <i>Cenchrus ciliaris</i>	30	60 cm		
* <i>Cenchrus setiger</i>	20	80 cm		
<i>Corchorus tridens</i>	0.1	10 cm	AH92-07=	
<i>Crotalaria medicaginea</i> var. <i>neglecta</i>	0.1	30 cm		
<i>Eulalia aurea</i>	8	70 cm	AH94-02	Sens. lat.
<i>Euphorbia ? wheeleri</i>	0.1	25 cm	AH92-08=	Tentative identification.
<i>Goodenia microptera</i>	0.1	25 cm	AH94-05	
<i>Indigofera trita</i> subsp. <i>trita</i>	0.1	20 cm	AH94-07	
<i>Neobassia astrocarpa</i>	0.1	25 cm	AH94-09	
<i>Panicum decompositum</i>	0.1	70 cm	AH90-05=	
<i>Portulaca aff. australis</i>	0.1	8 cm	AH90-07=	
<i>Pterocaulon sphacelatum</i>	0.1	5 cm	AH94-10	
<i>Rhynchosia minima</i>	0.1	20 cm		
<i>Scaevola spinescens</i>	0.1	10 cm	AH94-06	
<i>Sida fibulifera</i>	2	40 cm	AH94-01	Sens. lat.; long pedicels.
<i>Solanum esuriale</i>	0.1	30 cm	AH92-03=	
<i>Striga curviflora</i>	0.1	30 cm	AH94-03	



2018

Asian Hub Phase 2		Site	AH95		
Described by	PLSW	Date	19-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	277318 mE	7791857 mN		120.872170 °E -19.957006 °S
Habitat	Pindan plain.				
Soil	Pink red sand.				
Rock Type	NA.				
Vegetation	Acacia sericophylla scattered tall shrubs over A. tumida subsp. kulparn scattered shrubs over A. stellaticeps, (Erythrophleum chlorostachys, Dodonaea hispidula, Ptilotus astrolasius) low open shrubland over Triodia schinzii open hummock grassland and Eriachne lanata scattered bunch grasses.				
Veg Condition	Excellent.				
Fire Age	No sign of recent fire.				

Species	Cover	Height	Specimen	Notes
<i>Acacia ancistrocarpa</i>	0.1	140 cm		
<i>Acacia sericophylla</i>	1	220 cm		
<i>Acacia sphaerostachya</i>	0.1	120 cm	AH95-01	
<i>Acacia stellaticeps</i>	4	45 cm		
<i>Acacia tumida</i> var. <i>kulparn</i>	2	160 cm		
<i>Androcalva loxophylla</i>	0.1	45 cm		
<i>Bonamia alatisemina</i>	0.1	10 cm		
<i>Bonamia erecta</i>	0.1	30 cm		
<i>Calandrinia strophiolata</i>	0.1	10 cm	AH95-02	
<i>Cassytha capillaris</i>	0.1	30 cm		
<i>Dodonaea hispidula</i> var. <i>arida</i>	0.5	100 cm		
<i>Eriachne lanata</i>	2	40 cm		
<i>Erythrophleum chlorostachys</i>	1	90 cm		
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	25 cm	AH95-04	
<i>Fimbristylis simulans</i>	0.1	10 cm		
<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	0.1	310 cm		
<i>Gyrostemon tepperi</i>	0.1	60 cm		
<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	40 cm		
<i>Jacksonia aculeata</i>	0.1	40 cm		
<i>Leptosema anomalum</i>	0.1	40 cm		
<i>Ptilotus astrolasius</i>	0.5	45 cm		
<i>Ptilotus calostachyus</i>	0.1	60 cm		
<i>Scaevola parvifolia</i>	0.1	10 cm		Sterile.
<i>Seringia nephrosperma</i>	0.1	100 cm	AH95-03	
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	140 cm		
<i>Trigastrotheca molluginea</i>	0.1	20 cm		
<i>Triodia schinzii</i>	12	50 cm		
<i>Zornia chaetophora</i>	0.1	20 cm		



2018

Asian Hub Phase 2	Site	AH96
Described by	PLSW	Date 21-Mar-18
MGA Zone	51	268295 mE 7813464 mN
Habitat	Seasonal wetland on coastal plain.	Type Quadrat 50x50m
Soil	Brown loamy clay.	120.788705 °E -19.760840 °S
Rock Type	N/A.	
Vegetation	<i>Melaleuca laisiandra</i> , <i>M. alsophila</i> , (<i>Acacia ampliceps</i>) tall shrubland over <i>Trianthema turgidifolium</i> , (<i>Hibiscus apodus</i>) low open shrubland.	
Veg Condition	Very Good; * <i>Aerva javanica</i> at high density (currently dead due to inundation), cow scats and trampling.	
Fire Age	Very long unburnt.	
Notes	Quadrat located in representative vegetation outside study area corridor, which is inundated.	

Species	Cover	Height	Specimen	Notes
<i>Acacia ampliceps</i>	3	400 cm	AH96-03	
<i>Acacia colei</i> var. <i>colei</i>	0.1	140 cm		
<i>Achyranthes aspera</i>	0.1	50 cm		
* <i>Aerva javanica</i>	0.1	40 cm		N=1000 (dead, killed by inundation).
<i>Amaranthus undulatus</i>	0.1	15 cm	AH96-05	
<i>Cassytha capillaris</i>	0.1	80 cm		
* <i>Citrullus colocynthis</i>	0.1	20 cm	AH-PL18=	N=1.
* <i>Datura</i> ? <i>leichhardtii</i>	0.1	40 cm	AH96-13	N=1. Sterile; insufficient material for confident determination.
<i>Enchytraea tomentosa</i> var. <i>tomentosa</i>	0.1	60 cm		
<i>Euphorbia</i> ? <i>wheeleri</i>	0.1	30 cm	AH96-07	Tentative identification.
<i>Hibiscus apodus</i>	0.5	80 cm	AH96-08	
<i>Ipomoea coptica</i>	0.1	25 cm	AH96-11	
<i>Melaleuca alsophila</i>	5	600 cm	AH96-01	
<i>Melaleuca laisiandra</i>	6	500 cm	AH96-02	
<i>Portulaca oleracea</i>	0.1	20 cm	AH96-04, 12	
<i>Rhynchosia minima</i>	0.1	40 cm		
<i>Solanum esuriale</i>	0.1	20 cm	AH92-03=	
<i>Tephrosia supina</i>	0.1	25 cm	AH96-14	
* <i>Trianthema portulacastrum</i>	0.1	20 cm	AH96-10	N=1.
<i>Trianthema turgidifolium</i>	2	40 cm		



2018

Asian Hub Phase 2	Site	AH97		
Described by	PLSW	Date	19-Mar-18	Type Quadrat 50x50m
MGA Zone	51	309933 mE	7786313 mN	121.183120 °E -20.010542 °S
Habitat	Pindan plain.			
Soil	Dark reddish brown loamy sand.			
Rock Type	N/A.			
Vegetation	Acacia stellaticeps, (Seringia sp., Goodenia azurea subsp. hesperia, Gompholobium simplicifolium) low open shrubland over Triodia schinzii, (Epactia) open hummock grassland.			
Veg Condition	Excellent.			
Fire Age	Burnt 3-5 years ago.			

Species	Cover	Height	Specimen	Notes
<i>Acacia sericophylla</i>	0.1	40 cm		
<i>Acacia stellaticeps</i>	5	50 cm		
<i>Calytrix carinata</i>	0.1	60 cm	AH97-07	'Form 1 - short leaves'.
<i>Cassytha capillaris</i>	0.1	40 cm		
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	40 cm		
<i>Corynotheca micrantha</i> var. <i>gracilis</i>	0.1	40 cm	AH97-04	
<i>Cullen corallum</i>	0.1	50 cm	AH97-06	
<i>Gompholobium simplicifolium</i>	1	50 cm		
<i>Goodenia azurea</i> subsp. <i>hesperia</i>	1	40 cm	AH97-08	
<i>Grevillea eriostachya</i>	0.1	100 cm		
<i>Grevillea pyramidalis</i>	0.1	120 cm		
<i>Gyrostemon tepperi</i>	0.1	110 cm		
<i>Jacksonia aculeata</i>	0.1	40 cm		
<i>Polygala isingii</i>	0.1	15 cm	AH97-03	
<i>Portulaca bicolor</i>	0.1	4 cm	AH97-02	
<i>Ptilotus arthrolasius</i>	0.1	20 cm	AH97-05	
<i>Ptilotus astrolasius</i>	0.1	50 cm		
<i>Scaevola parvifolia</i>	0.1	25 cm		Sterile.
<i>Seringia</i> sp.	2	40 cm	AH97-01	Sterile; confirmed by Carol Wilkins.
<i>Sida</i> sp. Pindan (B.G. Thomson 3398)	0.1	40 cm		
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	110 cm		
<i>Trigastrotheca molluginea</i>	0.1	25 cm		
<i>Triodia epactia</i>	4	40 cm		
<i>Triodia schinzii</i>	12	40 cm		



2018

Asian Hub Phase 2 **Site** AH98
Described by PLSW **Date** 21-Mar-18 **Type** Quadrat 50x50m
MGA Zone 51 268081 mE 7809657 mN 120.786189 °E -19.795192 °S
Habitat Coastal pindan plain.
Soil Pink-red sand.
Rock Type N/A.
Vegetation *Acacia sericophylla*, (*Bauhinia cunninghamii*) tall open shrubland over *Acacia colei* var. *colei* scattered shrubs over *Crochorus incanus* subsp. *incanus*, (*Carissa lanceolata*) low open shrubland over *Triodia epactia*, (*T. schinzii*) open hummock grassland.
Veg Condition Very Good; 2 individuals of **Aerva javanica*.
Fire Age Very long unburnt.

Species	Cover	Height	Specimen	Notes
<i>Acacia colei</i> var. <i>colei</i>	2	110 cm		
<i>Acacia sericophylla</i>	5	300 cm		
<i>Acacia tumida</i> var. <i>kulparn</i>	0.1	170 cm		
* <i>Aerva javanica</i>	0.1	80 cm		N=2.
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	30 cm		
<i>Bauhinia cunninghamii</i>	1	300 cm		
<i>Boerhavia gardneri</i>	0.1	20 cm	AH98-04	
<i>Bonamia oblongifolia</i>	0.1	5 cm	AH98-03	
<i>Cajanus marmoratus</i>	0.1	25 cm	AH98-07	
<i>Calandrinia tepperiana</i>	0.1	10 cm	AH98-10B	
<i>Carissa lanceolata</i>	1	80 cm		
<i>Cassytha capillaris</i>	0.1	20 cm		
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	15 cm		
<i>Cleome viscosa</i>	0.1	40 cm		
<i>Crochorus incanus</i> subsp. <i>incanus</i>	3	60 cm	AH98-01	
<i>Crochorus sidoides</i> subsp. <i>vermicularis</i>	0.1	65 cm		
<i>Corymbia zygophylla</i>	0.1	180 cm		
<i>Crotalaria ramosissima</i>	0.1	10 cm	AH98-02	
<i>Cucumis variabilis</i>	0.1	90 cm		
<i>Cullen corallum</i>	0.1	30 cm	AH98-09	
<i>Eragrostis eriopoda</i>	0.1	40 cm		
<i>Eriachne obtusa</i>	0.1	60 cm		
<i>Euphorbia trigonosperma</i>	0.1	40 cm		
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	20 cm	AH98-12	
<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	0.1	220 cm		
<i>Hibiscus leptocladus</i>	0.1	50 cm		
<i>Indigofera colutea</i>	0.1	15 cm		
<i>Indigofera linifolia</i>	0.1	25 cm		
<i>Indigofera monophylla</i>	0.1	60 cm		
<i>Ipomoea muelleri</i>	0.1	90 cm	AH98-10A	
<i>Jasminum calcareum</i>	0.1	70 cm	AH98-06A	
<i>Leptosema anomalum</i>	0.1	30 cm		
<i>Melhania oblongifolia</i>	0.1	40 cm	AH98-05	
<i>Ptilotus astrolasius</i>	0.1	40 cm		
<i>Sida</i> sp. Pindan (B.G. Thomson 3398)	0.1	40 cm		
<i>Tephrosia</i> sp. D Kimberley Flora (R.D. Royce 1848)	0.1	30 cm	AH98-06B	
<i>Tinospora smilacina</i>	0.1	80 cm		
<i>Trianthema pilosum</i>	0.1	1 cm		
<i>Tribulopis marliesiae</i>	0.1	10 cm		N=7.
<i>Triodia epactia</i>	15	30 cm		
<i>Triodia schinzii</i>	3	70 cm		
<i>Urochloa holosericea</i> subsp. <i>velutina</i>	0.1	10 cm	AH98-11	
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	10 cm		



2018

Asian Hub Phase 2		Site	AH99
Described by	PLSW	Date	19-Mar-18
MGA Zone	51	342147 mE	7777316 mN
Habitat	Pindan plain, slightly elevated in the broader landscape.		
Soil	Pink red loamy sand.		
Rock Type	N/A.		
Vegetation	<i>Erythrophleum chlorostachys</i> , <i>Corymbia zygophylla</i> low open woodland over <i>Acacia tumida</i> var. <i>kulparn</i> tall open shrubland over <i>A. orthocarpa</i> scattered shrubs over <i>Triodia epactia</i> open hummock grassland and <i>Sorghum plumosum</i> var. <i>plumosum</i> very open tussock grassland.		
Veg Condition	Excellent.		
Fire Age	No sign of recent fire.		

Species	Cover	Height	Specimen	Notes
<i>Acacia orthocarpa</i>	1	185 cm		
<i>Acacia tumida</i> var. <i>kulparn</i>	4	210 cm		
<i>Bonamia alatisemina</i>	0.1	10 cm		
<i>Bulbostylis barbata</i>	0.1	10 cm		
<i>Cassytha capillaris</i>	0.1	20 cm		
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	20 cm		
<i>Corymbia zygophylla</i>	1	340 cm		
<i>Erythrophleum chlorostachys</i>	2	320 cm		
<i>Euphorbia psilosperma</i>	0.1	15 cm	AH99-03	
<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	30 cm		
<i>Grevillea pyramidalis</i>	0.1	220 cm		
<i>Heliotropium foliatum</i>	0.1	5 cm	AH99-02	
<i>Heliotropium foliatum</i>	0.1	10 cm	AH99-04	
<i>Polycarpaea corymbosa</i> var. <i>corymbosa</i>	0.1	10 cm		
<i>Portulaca bicolor</i>	0.1	5 cm	AH99-01	
<i>Sorghum plumosum</i> var. <i>plumosum</i>	3	60 cm		
<i>Trianthema pilosum</i>	0.1	10 cm		
<i>Tribulopis marliesiae</i>	0.1	15 cm		N=1.
<i>Trigastrotheca molluginea</i>	0.1	10 cm		
<i>Triodia epactia</i>	15	40 cm		



2018

Asian Hub Phase 2 **Site** AH100
Described by PLSW **Date** 21-Mar-18 **Type** Quadrat 50x50m
MGA Zone 51 268103 mE 7809154 mN 120.786336 °E -19.799737 °S
Habitat Coastal pindan plain.
Soil Dark reddish brown loamy sand.
Rock Type N/A.
Vegetation *Acacia sericophylla*, *A. colei* var. *colei* scattered tall shrubs over *Corchorus incanus* subsp. *incanus* low open shrubland over *Triodia epactia* open hummock grassland with *Eriachne obtusa* scattered tussock grasses.
Veg Condition Excellent.
Fire Age No sign of recent fire.

Species	Cover	Height	Specimen	Notes
<i>Abutilon otocarpum</i>	0.1	40 cm		
<i>Acacia colei</i> var. <i>colei</i>	0.5	210 cm		
<i>Acacia sabulosa</i>	0.1	220 cm	AH100-06	
<i>Acacia sericophylla</i>	0.5	270 cm		
<i>Bauhinia cunninghamii</i>	0.1	250 cm		
<i>Boerhavia gardneri</i>	0.1	30 cm	AH98-04=	
<i>Bonamia oblongifolia</i>	0.1	25 cm	AH98-03=	
<i>Cajanus marmoratus</i>	0.1	30 cm	AH98-07=	
<i>Cassytha capillaris</i>	0.1	40 cm		
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	30 cm		
<i>Cleome viscosa</i>	0.1	20 cm		
<i>Corchorus incanus</i> subsp. <i>incanus</i>	4	60 cm	AH100-01	
<i>Corymbia zygophylla</i>	0.1	300 cm		
<i>Crotalaria ramosissima</i>	0.1	30 cm	AH98-02=	
<i>Cullen corallum</i>	0.1	40 cm	AH98-09=	
<i>Eragrostis eriopoda</i>	0.1	40 cm		
<i>Eriachne obtusa</i>	1	40 cm		
<i>Euphorbia trigonosperma</i>	0.1	30 cm	AH98=	
<i>Euphorbia vaccaria</i> var. <i>vaccaria</i>	0.1	3 cm	AH100-03	
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	25 cm	AH98-12=	
<i>Heliotropium foliatum</i>	0.1	25 cm	AH100-04	
<i>Heliotropium leptaleum</i>	0.1	40 cm	AH100-05	
<i>Indigofera colutea</i>	0.1	20 cm		
<i>Indigofera linifolia</i>	0.1	25 cm		
<i>Indigofera linnaei</i>	0.1	30 cm		
<i>Indigofera monophylla</i>	0.1	80 cm		
<i>Ipomoea muelleri</i>	0.1	70 cm		
<i>Jasminum calcareum</i>	0.1	150 cm	AH100-08	
<i>Portulaca filifolia</i>	0.1	40 cm	AH100-07	
<i>Ptilotus polystachyus</i>	0.1	20 cm		
<i>Setaria surgens</i>	0.1	45 cm	AH100-10	
<i>Sida arenicola</i>	0.1	40 cm		Ferruginous form.
<i>Tephrosia</i> sp. D Kimberley Flora (R.D. Royce 1848)	0.1	30 cm		
<i>Tinospora smilacina</i>	0.1	20 cm		
<i>Trianthema pilosum</i>	0.1	25 cm		
<i>Tribulopis marliesiae</i>	0.1	30 cm	AH100-02	N=5.
<i>Trigastrotheca molluginea</i>	0.1	20 cm		
<i>Triodia epactia</i>	17	50 cm		
<i>Urochloa holosericea</i> subsp. <i>velutina</i>	0.1	40 cm	AH98-11=	
<i>Waltheria indica</i>	0.1	50 cm		
<i>Whiteochloa airoides</i>	0.1	80 cm	AH100-09	



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Asian Hub Phase 2		Site	AH101
Described by	PLSW	Date	19-Mar-18
MGA Zone	51	357236 mE	7773572 mN
Habitat	Pindan plain.		
Soil	Dark reddish brown loamy sand.		
Rock Type	N/A.		
Vegetation	Erythrophleum chlorostachys, Acacia eriopoda tall open shrubland over <i>A. melleodora</i> open shrubland over <i>Bonamia erecta</i> , <i>Jacksonia aculeata</i> low open shrubland over <i>Triodia epactia</i> open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	No sign of recent fire.		

Species	Cover	Height	Specimen	Notes
<i>Acacia eriopoda</i>	2	340 cm		
<i>Acacia melleodora</i>	3	190 cm	AH101-02	
<i>Acacia sericophylla</i>	0.1	300 cm	AH101-08	
<i>Androcalva loxophylla</i>	0.1	50 cm		
<i>Bonamia alatisemina</i>	0.1	20 cm		
<i>Bonamia erecta</i>	2	60 cm		
<i>Bulbostylis barbata</i>	0.1	15 cm		
<i>Cassytha capillaris</i>	0.1	40 cm		
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	35 cm	AH101-05	
<i>Cucumis variabilis</i>	0.1	40 cm		
<i>Eragrostis eriopoda</i>	0.1	45 cm		
<i>Erythrophleum chlorostachys</i>	2	400 cm		
<i>Euphorbia psilosperma</i>	0.1	20 cm	AH99-03=	
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	30 cm	AH101-06	
<i>Fimbristylis simulans</i>	0.1	20 cm		
<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	40 cm	AH97-08=	
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	10 cm		
<i>Gyrostemon tepperi</i>	0.1	30 cm		
<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	40 cm		
<i>Hibiscus leptocladius</i>	0.1	30 cm		
<i>Jacksonia aculeata</i>	1	40 cm		
<i>Newcastelia cladotrichia</i>	0.1	40 cm	AH101-03	
<i>Polygala isingii</i>	0.1	8 cm	AH101-07	
<i>Ptilotus arthrolasius</i>	0.1	35 cm		
<i>Ptilotus astrolasius</i>	0.1	40 cm		
<i>Ptilotus calostachyus</i>	0.1	60 cm		
<i>Ptilotus polystachyus</i>	0.1	40 cm		
<i>Scaevola parvifolia</i>	0.1	25 cm		Sterile.
<i>Seringia</i> sp.	0.1	45 cm	AH97-01=	Sterile; confirmed by Carol Wilkins.
<i>Sida arenicola</i>	0.1	170 cm		White indumentum form.
<i>Sida</i> sp. Pindan (B.G. Thomson 3398)	0.1	40 cm		
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.5	140 cm		
<i>Tribulopis marliesiae</i>	0.1	40 cm		N=7.
<i>Trichodesma zeylanicum</i>	0.1	50 cm		Sterile.
<i>Triodia epactia</i>	16	40 cm	AH101-01	
<i>Velleia panduriformis</i>	0.1	40 cm		
<i>Yakirra australiensis</i> var. <i>australiensis</i>	0.1	25 cm	AH101-04	



Asian Hub Phase 2		Site	AH102		
Described by	PLSW	Date	19-Mar-18	Type	Quadrat 50x50m
MGA Zone	51	346200 mE	7762477 mN		121.527693 °E -20.229082 °S
Habitat	Pindan plain				
Soil	Red brown loamy sand.				
Rock Type	N/A.				
Vegetation	Acacia eriopoda, (A. sericophylla) open shrubland over Newcastelia cladotricha, (Androcalva loxophylla, Indigofera boviperda subsp. eremaea) low open shrubland over Triodia schinzii, (T. epactia) open hummock grassland with Sorghum plumosum var. plumosum scattered tussock grasses.				
Veg Condition	Excellent.				
Fire Age	No sign of recent fire.				
Notes	Site renamed 102 from 103.				

Species	Cover	Height	Specimen	Notes
<i>Acacia ancistrocarpa</i>	0.1	200 cm		
<i>Acacia eriopoda</i>	5	200 cm		
<i>Acacia sericophylla</i>	1	200 cm		
<i>Acacia tumida</i> var. <i>kulparn</i>	0.5	180 cm		
<i>Androcalva loxophylla</i>	1	40 cm		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	14 cm		
<i>Bonamia alatisemina</i>	0.1	10 cm		
<i>Bulbostylis barbata</i>	0.1	10 cm		
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	50 cm		
<i>Dysphania</i> sp.	0.1	10 cm		Sterile, seedling.
<i>Eriachne obtusa</i>	0.1	40 cm	AH102-02	Sens. lat. (M. Barrett).
<i>Erythrophleum chlorostachys</i>	0.5	50 cm		
<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	0.1	240 cm		
<i>Gompholobium simplicifolium</i>	0.1	40 cm		
<i>Goodenia azurea</i> subsp. <i>hesperia</i>	0.1	20 cm		
<i>Grevillea eriostachya</i>	0.1	170 cm		
<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1	50 cm		
<i>Indigofera boviperda</i> subsp. <i>eremaea</i>	1	20 cm	AH102-01	
<i>Jacksonia aculeata</i>	0.1	90 cm		
<i>Newcastelia cladotricha</i>	3	40 cm		
<i>Ptilotus astrolasius</i>	0.1	40 cm		
<i>Ptilotus calostachyus</i>	0.1	50 cm		
<i>Scaevola parvifolia</i>	0.1	15 cm		Sterile.
<i>Sorghum plumosum</i> var. <i>plumosum</i>	2	60 cm		
<i>Tephrosia</i> sp. D Kimberley Flora (R.D. Royce 1848)	0.1	40 cm	AH102-03	
<i>Trianthema pilosum</i>	0.1	10 cm		
<i>Tribulopis marliesiae</i>	0.1	5 cm		N=4.
<i>Trigastrotheca molluginea</i>	0.1	20 cm		
<i>Triodia epactia</i>	6	80 cm		
<i>Triodia schinzii</i>	11	50 cm		



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Asian Hub Phase 1	Site	AH-REL01	
Described by	CEFPL	Date	26-Aug-17
MGA Zone	51	279999 mE	7784719 mN
Habitat	Rocky outcrop on top of a low lateritic rise.		
Soil	Red-brown skeletal sandy loam.		
Rock Type	Laterite; outcropping (40%), large boulders (20%), boulders (10%), cobbles (10%), pebbles (10%) and gravel (10%).		
Vegetation	<i>Ficus brachypoda</i> scattered low trees over <i>Grevillea pyramidalis</i> tall open shrubland over <i>Triodia epactia</i> open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	No sign of recent fire.		
Notes	Relevé follows rocky outcrop/ridgeline, including the top and the sides.		

Species	Cover	Height	Specimen
<i>Abutilon leucopetalum</i>	0.1	45 cm	AHREL01-05
<i>Acacia colei</i> var. <i>colei</i>	0.1	220 cm	AHREL01-09
<i>Acacia hilliana</i>	0.1	40 cm	
<i>Acacia monticola</i>	0.1	160 cm	
<i>Achyranthes aspera</i>	0.1	50 cm	
<i>Amaranthus undulatus</i>	0.1	30 cm	AHREL01-11
<i>Bulbostylis barbata</i>	0.1	10 cm	
<i>Commicarpus australis</i>	0.1	40 cm	AHREL01-04
<i>Cucumis variabilis</i>	0.1	30 cm	
<i>Cuscuta victoriana</i>	0.1	10 cm	AHREL01-08
<i>Cynanchum pedunculatum</i>	0.1	15 cm	AHREL01-06
<i>Cyperus ? cunninghamii</i>	0.1	80 cm	AHREL01-03
<i>Eriachne ciliata</i>	0.1	25 cm	
<i>Ficus brachypoda</i>	0.5	500 cm	AHREL01-01
<i>Gomphrena cunninghamii</i>	0.1	30 cm	
<i>Grevillea pyramidalis</i>	3	350 cm	
<i>Grevillea refracta</i> subsp. <i>refracta</i>	0.1	180 cm	
<i>Indigofera monophylla</i>	0.1	30 cm	AHREL01-10
<i>Paspalidium tabulatum</i>	0.1	50 cm	AHREL01-02
<i>Polycarphaea holtzei</i>	0.1	10 cm	
<i>Pilotus incanus</i>	0.1	40 cm	AHREL01-12
<i>Schizachyrium fragile</i>	0.1	50 cm	AHREL01-13
<i>Solanum dioicum</i>	0.1	30 cm	AH07-08=
<i>Trachymene oleracea</i> subsp. <i>oleracea</i>	0.1	70 cm	
<i>Triodia epactia</i>	18	20 cm	
<i>Triumfetta incana</i>	0.1	20 cm	AHREL01-07



2018

Asian Hub Phase 1	Site	AH-REL02
Described by	MM/PA	Date 27-Aug-17
MGA Zone	51	286825 mE 7757126 mN
Habitat	Lateritic breakaway.	Type Relevé
Soil	Red-brown skeletal sandy loam.	120.958905 °E -20.271720 °S
Rock Type	Outcropping lateritic boulders.	
Vegetation	Corymbia greeniana scattered low trees over Acacia monticola open shrubland over <i>Ptilotus incanus</i> , <i>Tephrosia rosea</i> var. <i>clementii</i> low open heath over <i>Triodia epactia</i> very open hummock grassland.	
Veg Condition	Excellent.	
Fire Age	Burnt 1-2 years ago.	

Species	Cover	Height	Specimen	Notes
<i>Acacia adoxa</i> var. <i>adoxa</i>	0.1	50 cm		
<i>Acacia ancistrocarpa</i>	0.1	120 cm		
<i>Acacia inaequilatera</i>	0.1	120 cm		
<i>Acacia monticola</i>	3	190 cm		
<i>Amaranthus undulatus</i>	0.1	60 cm	AHREL02-16	
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	40 cm		Terete leaves.
<i>Cleome viscosa</i>	0.1	80 cm		
<i>Corymbia greeniana</i>	1	500 cm		
<i>Cucumis variabilis</i>	0.1	100 cm		
<i>Cymbopogon ambiguus</i>	0.1	60 cm	AHREL02-13	
<i>Cyperus ? cunninghamii</i>	0.1	30 cm	AHREL02-19	Tentative identification.
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	0.1	25 cm	AHREL02-10	
<i>Eriachne lanata</i>	0.1	30 cm		
<i>Eriachne mucronata</i>	0.1	40 cm	AHREL02-11	Typical form.
<i>Fimbristylis simulans</i>	0.1	15 cm		
<i>Gomphrena cunninghamii</i>	0.1	20 cm	AHREL02-06	
<i>Grevillea wickhamii</i> subsp. <i>hispidula</i>	0.1	200 cm	AHREL02-01	
<i>Heliotropium pachyphyllum</i>	0.1	25 cm	AH18-01=	
<i>Indigofera monophylla</i>	0.1	45 cm	AH16-03=	
<i>Isotropis atropurpurea</i>	0.1	60 cm		
<i>Paspalidium tabulatum</i>	0.1	30 cm	AHREL02-05	
<i>Ptilotus calostachyus</i>	0.1	80 cm		
<i>Ptilotus fusiformis</i>	0.1	50 cm		
<i>Ptilotus incanus</i>	20	70 cm	AHREL02-04	
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	0.1	100 cm		
<i>Senna venusta</i>	0.1	160 cm	AHREL02-03	
<i>Sida fibulifera</i>	0.1	40 cm	AHREL02-14, 17, 18	Sens. lat.; long pedicels.
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	80 cm	AHREL02-08	
<i>Sida</i> sp. Pindan (B.G. Thomson 3398)	0.1	50 cm	AHREL02-23	
<i>Solanum dioicum</i>	0.1	50 cm	AH16-11=	
<i>Solanum diversiflorum</i>	0.1	40 cm		
<i>Streptoglossa decurrents</i>	0.1	80 cm		
<i>Tephrosia rosea</i> var. <i>clementii</i>	20	80 cm	AH16-05=	
<i>Tephrosia rosea</i> var. <i>rosea</i>	0.1	90 cm	AH16-02=	
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	0.1	40 cm	AHREL02-09	
<i>Tephrosia</i> sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	10 cm	AHREL02-20	Det. confirmed by Ryonen Butcher.
<i>Tephrosia virens</i>	0.1	150 cm	AHREL02-02	
<i>Tinospora smilacina</i>	0.1	150 cm		
<i>Trachymene oleracea</i> subsp. <i>oleracea</i>	0.1	90 cm	AHREL02-21	
<i>Tribulus hirsutus</i>	0.1	20 cm	AHREL02-12	
<i>Triodia epactia</i>	4	40 cm		
<i>Triumfetta ? maconochieana</i>	0.1	60 cm	AHREL02-22	Tentative identification.
<i>Triumfetta incana</i>	0.1	50 cm	AHREL02-07	
<i>Triumfetta johnstonii</i>	0.1	80 cm	AHREL02-15	



2018

Asian Hub Phase 1	Site	AH-REL03
Described by	CEPFL	Date 01-Sep-17
MGA Zone	51	307677 mE 7777305 mN
Habitat		121.160616 °E -20.091679 °S
Soil		Flow area between two low lateritic rises; narrow low-lying area, <20 m wide in places.
Rock Type		Dark reddish-brown clay loam.
Vegetation		Laterite; pebbles (1-25%) and gravel (1-25%).
		Grevillea refracta subsp. refracta, (Acacia colei var. colei, A. monticola) tall open scrub over Dodonaea coriacea scattered shrubs over A. adoxa var. adoxa, (Indigofera monophylla, Tephrosia rosea var. clementii) low shrubland over Eulalia aurea, (Sorghum plumosum var. plumosum) open tussock grassland over Triodia epactia open hummock grassland.
Veg Condition		Excellent.
Fire Age		No sign of recent fire.

Species	Cover	Height	Specimen	Notes
Acacia adoxa var. adoxa	12	40 cm		
Acacia ancistrocarpa	0.1	110 cm		
Acacia colei var. colei	10	300 cm	AHREL03-01	
Acacia drepanocarpa subsp. drepanocarpa	0.1	90 cm	AHREL03-04	Recollect if possible.
Acacia hilliana	0.5	50 cm		
Acacia monticola	4	230 cm		
Corchorus sidoides subsp. vermicularis	0.1	40 cm		
Digitaria brownii	0.1	80 cm		
Dodonaea coriacea	2	130 cm		
Eriachne ciliata	0.1	300 cm	AHREL03-06	
Eriachne obtusa	0.1	50 cm		
Eriachne pulchella	0.1	20 cm		
Eulalia aurea	11	70 cm		
Evolvulus alsinoides var. decumbens	0.1	30 cm		
Grevillea pyramidalis	0.1	140 cm		
Grevillea refracta subsp. refracta	46	320 cm		
Hibiscus sturtii var. campylochlamys	0.1	60 cm	AH-PL46=	
Indigofera monophylla	4	80 cm	AHREL03-03	Sens. lat.; recollect if possible.
Oldenlandia pterospora	0.1	25 cm		
Paspalidium rarum	0.5	40 cm	AHREL03-05	
Polycarphaea corymbosa var. corymbosa	0.1	25 cm		
Pilotus calostachyus	0.1	80 cm		
Pilotus fusiformis	0.1	45 cm		
Sida arenicola	0.1	130 cm		
Solanum dioicum	0.1	50 cm		
Sorghum plumosum var. plumosum	3	140 cm		
Tephrosia rosea var. clementii	2	90 cm		
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.1	40 cm		
Trichodesma zeylanicum var. zeylanicum	0.1	70 cm	AHREL03-02	
Triodia epactia	11	40 cm		
Yakirra australiensis var. australiensis	0.1	20 cm		

No photo taken.

Asian Hub Phase 2	Site	AH-REL04
Described by	MM/BMa	Date 18-Mar-18
MGA Zone	51	276252 mE 7766986 mN
Habitat	Rocky outcropping on a low hill.	
Soil	Orange sandy loam in pockets amongst boulders.	
Rock Type	Laterite.	
Vegetation	Regenerating vegetation; early seral stage dominated by herbs, grasses and fire ephemeral shrubs.	
Veg Condition	Very Good; a few Kapok.	
Fire Age	Burnt <1 year ago.	
Notes	Exclude from analysis, as recently burnt. Heights not recorded; plants regenerating.	

Species	Cover	Specimen	Notes
* <i>Aerva javanica</i>	0.1		N=3.
<i>Amaranthus undulatus</i>	0.1	REL04-02	
<i>Aristida holathera</i> var. <i>holathera</i>	0.1		
<i>Boerhavia coccinea</i>	0.1		
<i>Bulbostylis barbata</i>	0.1		
<i>Chrysopogon fallax</i>	0.1		
<i>Cleome viscosa</i>	0.1		
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1		
<i>Cymbopogon ambiguus</i>	0.1	REL04-09	
<i>Cynanchum pedunculatum</i>	0.1	REL04-05	Sens. lat.
<i>Cyperus cunninghamii</i> subsp. <i>cunninghamii</i>	0.1	REL04-07	
<i>Digitaria brownii</i>	0.1		
<i>Euphorbia vaccaria</i> var. <i>vaccaria</i>	0.1	REL04-11	
<i>Ficus brachypoda</i>	0.1		
<i>Gomphrena cunninghamii</i>	0.1		
<i>Grevillea pyramidalis</i>	0.1		
<i>Mallotus nesophilus</i>	0.1	REL04-10	
<i>Nicotiana benthamiana</i>	0.1	REL04-08	
<i>Paspalidium clementii</i>	0.1		
<i>Polycarpaea corymbosa</i> var. <i>corymbosa</i>	0.1		
<i>Pterocaulon serrulatum</i> var. <i>velutinum</i>	0.1	REL04-06	
<i>Stemodia grossa</i>	0.1		
<i>Tephrosia rosea</i> var. <i>rosea</i>	0.1	REL04-03	
<i>Trachymene oleracea</i> subsp. <i>oleracea</i>	0.1		
<i>Triodia epactia</i>	0.1		
<i>Triumfetta johnstonii</i>	0.1	REL04-01	



2018

Asian Hub Phase 2 **Site** AH-REL05
Described by PLSW **Date** 14-Mar-18 **Type** Relevé 25x100m
MGA Zone 51 269451 mE 7759206 mN 120.792908 °E -20.250922 °S
Habitat Drainage area on N side of a low laterite rise.
Soil Dark reddish brown sandy loam.
Rock Type Laterite gravel over surface in some areas.
Vegetation *Acacia tumida* var. *kulparn*, (*Grevillea refracta* subsp. *refracta*) tall open scrub over *Bonamia erecta* low open shrubland over *Triodia epactia* very open hummock grassland with *Aristida holathera* var. *holathera* scattered tussock grasses.
Veg Condition Excellent.
Fire Age No sign of recent fire.

Species	Cover	Height	Specimen	Notes
<i>Acacia adoxa</i> var. <i>adoxa</i>	0.1	50 cm	AHREL05-10	
<i>Acacia inaequilatera</i>	0.1	180 cm		
<i>Acacia tumida</i> var. <i>kulparn</i>	43	350 cm	AH63-02=	
<i>Aristida holathera</i> var. <i>holathera</i>	1	60 cm	AH63-08=	
<i>Boerhavia coccinea</i>	0.1	35 cm	AHREL05-11	
<i>Bonamia dilatisemina</i>	0.1	10 cm		
<i>Bonamia erecta</i>	5	60 cm		
<i>Bonamia pannosa</i>	0.1	15 cm	AHREL05-07	
<i>Cleome uncifera</i> subsp. <i>uncifera</i>	0.1	40 cm		
<i>Cleome viscosa</i>	0.1	25 cm		
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1	40 cm		
<i>Cucumis variabilis</i>	0.1	50 cm		
<i>Dampiera candicans</i>	0.1	30 cm		
<i>Dodonaea hispidula</i> var. <i>arida</i>	0.1	60 cm	AHREL05-02	
<i>Eragrostis eriopoda</i>	0.1	40 cm	AHREL05-04	
<i>Eriachne obtusa</i>	0.1	45 cm	AHREL05-06	
<i>Eulalia aurea</i>	0.1	120 cm	AHREL05-13	Sens. lat.
<i>Euphorbia australis</i> var. <i>subtomentosa</i>	0.1	10 cm	AHREL05-15	
<i>Euphorbia psilosperma</i>	0.1	25 cm	AHREL05-09	
<i>Goodenia armittiana</i>	0.1	30 cm	AHREL05-12	
<i>Goodenia scaevolina</i>	0.1	35 cm		
<i>Gossypium austrole</i>	0.1	40 cm		Burrup Peninsula form.
<i>Grevillea refracta</i> subsp. <i>refracta</i>	2	280 cm		
<i>Halgnania solanacea</i> var. <i>solanacea</i>	0.1	50 cm		
<i>Heliotropium glabellum</i>	0.1	40 cm	AHREL05-01	
<i>Hybanthus aurantiacus</i>	0.1	35 cm		
<i>Indigofera monophylla</i>	0.1	80 cm		
<i>Isotropis atropurpurea</i>	0.1	40 cm		
<i>Phyllanthus eremicus</i>	0.1	25 cm		
<i>Pilotus calostachyus</i>	0.1	80 cm		
<i>Senna notabilis</i>	0.1	35 cm		
<i>Seringia</i> sp.	0.1	50 cm		Sterile.
<i>Sida</i> sp. Pindan (B.G. Thomson 3398)	0.1	60 cm	AHREL05-14	
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1	190 cm	AHREL05-08	
<i>Tephrosia rosea</i> var. <i>clementii</i>	0.1	80 cm		
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	0.1	25 cm		
<i>Trachymene oleracea</i> subsp. <i>oleracea</i>	0.1	15 cm		Sterile.
<i>Trichodesma zeylanicum</i>	0.1	40 cm		Sterile, juvenile.
<i>Trigastrotheca molluginea</i>	0.1	25 cm		
<i>Triodia epactia</i>	3	50 cm	AHREL05-03	



2018

Asian Hub Phase 2		Site	AH-REL06
Described by	PLSW	Date	21-Mar-18
MGA Zone	51	267976 mE	7819770 mN
Habitat	Primary dune, adjacent to beach; 30 m wide.		
Soil	White sand.		
Vegetation	<i>Spinifex longifolius</i> open hummock grassland.		
Veg Condition	Excellent.		
Fire Age	No sign of recent fire.		

Species	Cover	Height	Specimen
<i>Ipomoea pes-caprae</i> subsp. <i>brasiliensis</i>	5	10 cm	AH-PL16
<i>Salsola australis</i>	0.1	30 cm	
<i>Scaevola crassifolia</i>	0.1	30 cm	AH-PL17
<i>Spinifex longifolius</i>	15	40 cm	



2018

Asian Hub Phase 2 **Site** AH-REL07
Described by PLSW **Date** 18-Mar-18 **Type** Relevé 50x50m
MGA Zone 51 273756 mE 7739606 mN 120.831630 °E -20.428420 °S
Habitat Mesiform lateritic rise, with drainages to W and SW.
Soil Dark reddish brown clay loam.
Rock Type Laterite.
Vegetation *Acacia hilliana* low shrubland over *Triodia epactia* very open hummock grassland.
Veg Condition Excellent.
Fire Age Burnt 3-5 years ago.

Species	Cover	Height	Specimen	Notes
<i>Acacia adoxa</i> var. <i>adoxia</i>	0.1	40 cm		
<i>Acacia hilliana</i>	11	40 cm		
<i>Acacia tumida</i> var. <i>kulparn</i>	0.1	150 cm		
<i>Dampiera candicans</i>	0.1	30 cm		
<i>Eriachne lanata</i>	0.1	40 cm		
<i>Fimbristylis simulans</i>	0.1	15 cm		
<i>Gompholobium polyzygum</i>	0.1	50 cm	AHREL07-02	
<i>Goodenia scaevolina</i>	0.1	40 cm		
<i>Grevillea wickhamii</i>	0.1	70 cm		Sterile.
<i>Hakea chordophylla</i>	0.1	80 cm		
<i>Halgnia solanacea</i> var. <i>solanacea</i>	0.1	40 cm		
<i>Heliotropium pachyphyllum</i>	0.1	35 cm		
<i>Pilotus calostachyus</i>	0.1	80 cm		
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	0.1	40 cm	AHREL07-01	
<i>Trigastrotheca molluginea</i>	0.1	20 cm		
<i>Triodia epactia</i>	9	40 cm		

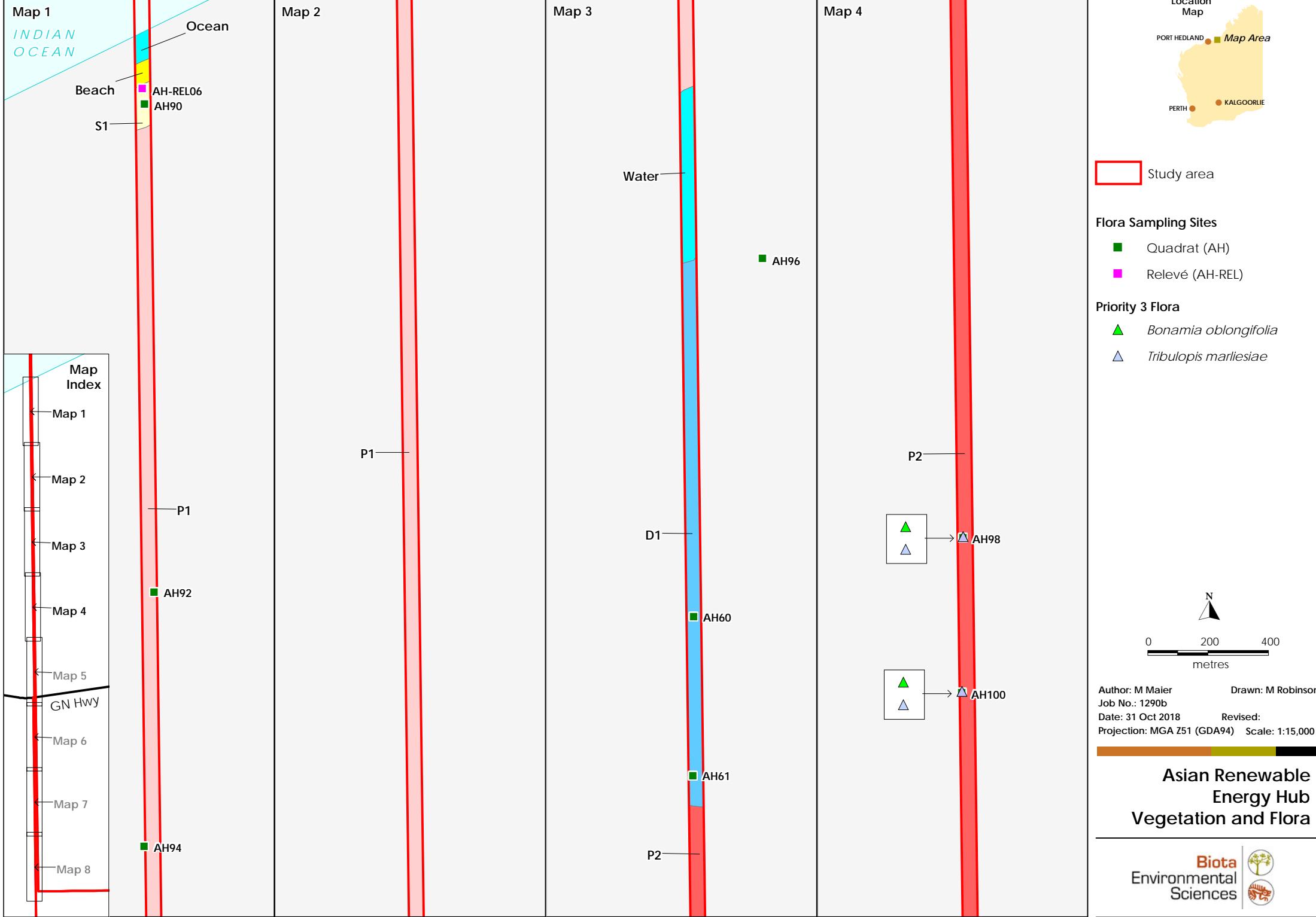


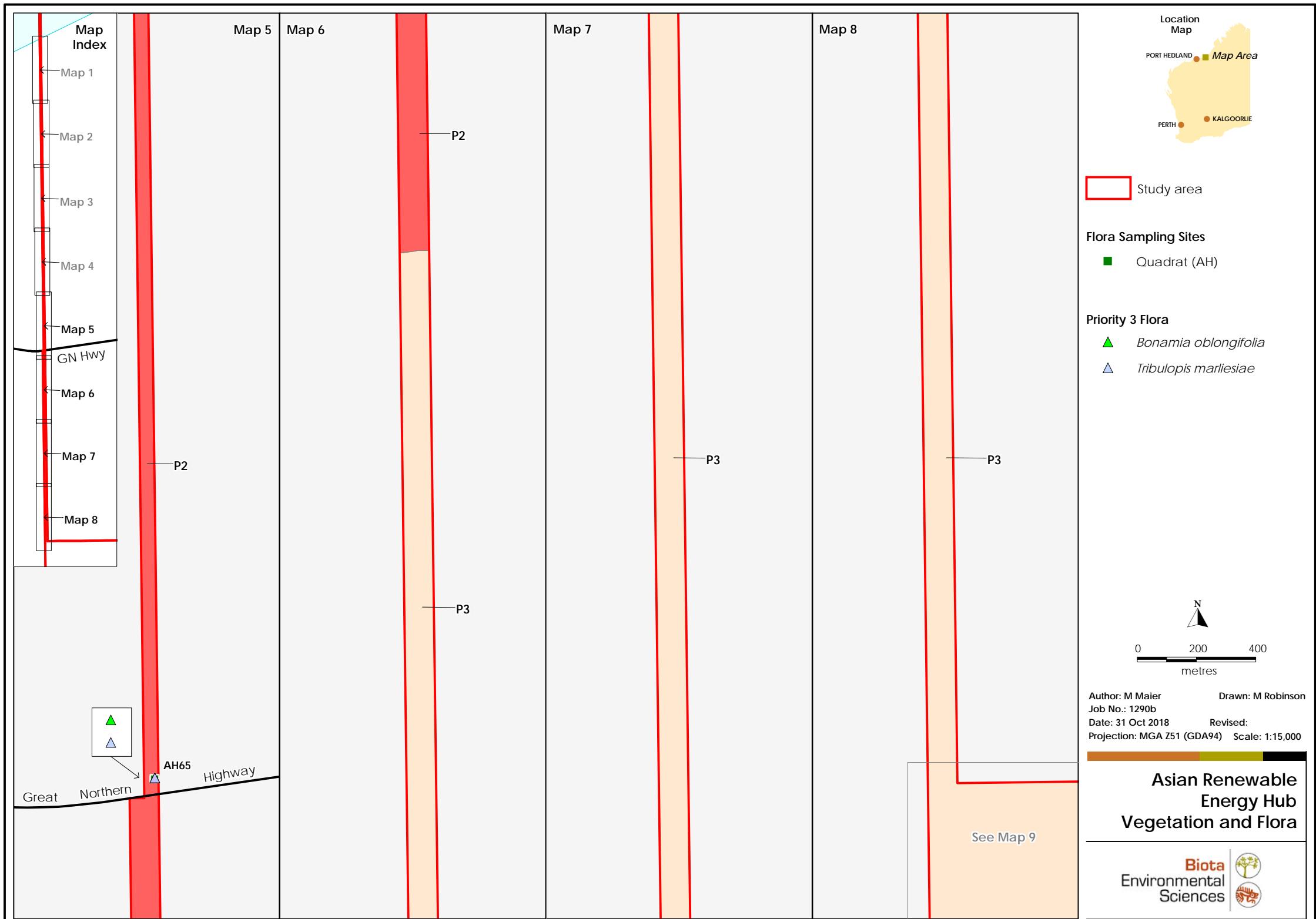
2018

Appendix 4

Vegetation Mapping for the Study Area, Including Locations of Conservation Significant Flora









 Study area

Flora Sampling Sites

- Quadrat (AH)
- Relevé (AH-REL)

Conservation Significant Flora

Threatened

- *Seringia* sp. (sterile)

Priority 3

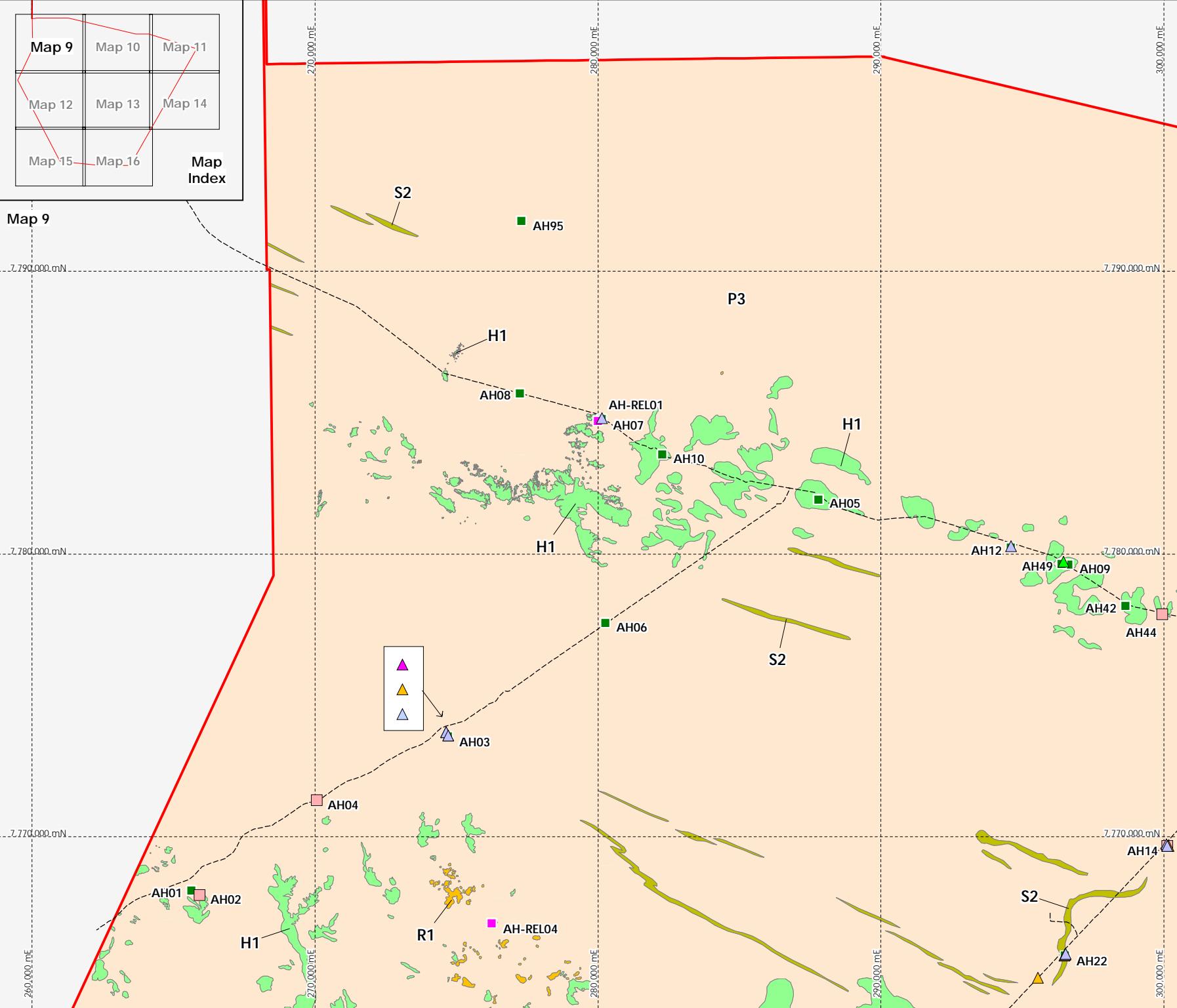
- ▲ *Bonamia oblongifolia*
- ▲ *Polymeria* ? sp. Broome
- ▲ *Broome* (K.F. Kenneally 9759)
- ▲ *Terminalia kumpaja*
- △ *Tribulopis marliesiae*

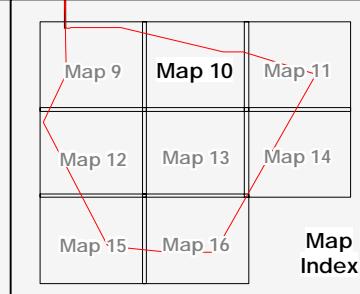


0 4 8
kilometres

Author: M Maier Drawn: M Robinson
Job No.: 1290b
Date: 31 Oct 2018 Revised:
Projection: MGA Z51 (GDA94) Scale: 1:175,000

Asian Renewable Energy Hub Vegetation and Flora





Map Index

Map 10

Study area

Flora Sampling Sites

- Quadrat (AH)
- Relevé (AH-REL)

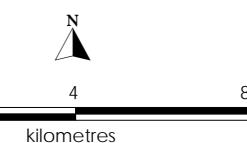
Conservation Significant Flora

Threatened

- *Seringia exastia*
- *Seringia* sp. (sterile)
- ▲ *Bonamia oblongifolia*
- ▲ *Polymeria* ? sp. Broome
Broome (K.F. Kenneally 9759)
- ▲ *Terminalia kumpaja*
- △ *Tribulopis marliesiae*

Priority 3

- ▲ *Bonamia oblongifolia*
- ▲ *Polymeria* ? sp. Broome
Broome (K.F. Kenneally 9759)
- ▲ *Terminalia kumpaja*
- △ *Tribulopis marliesiae*

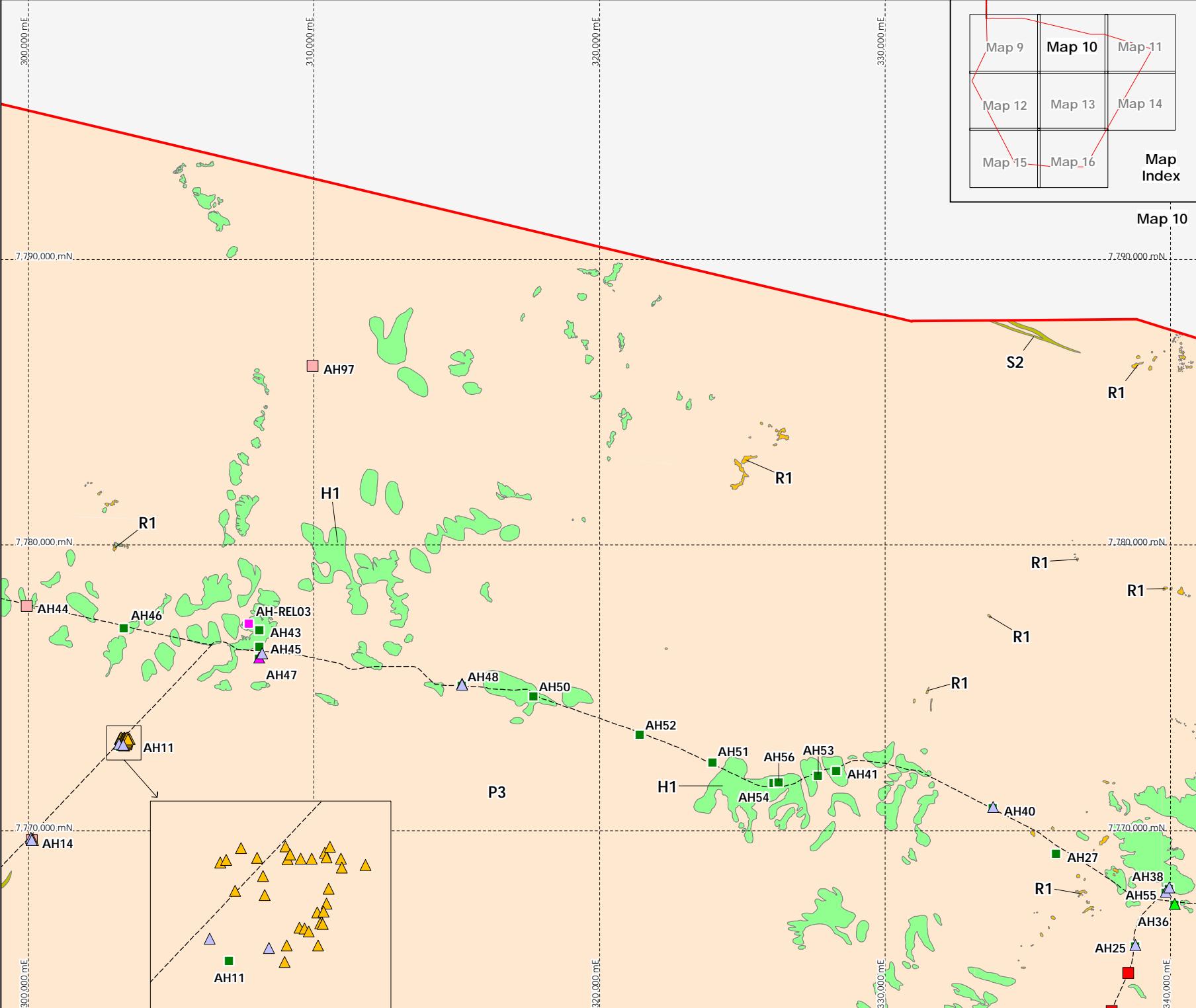


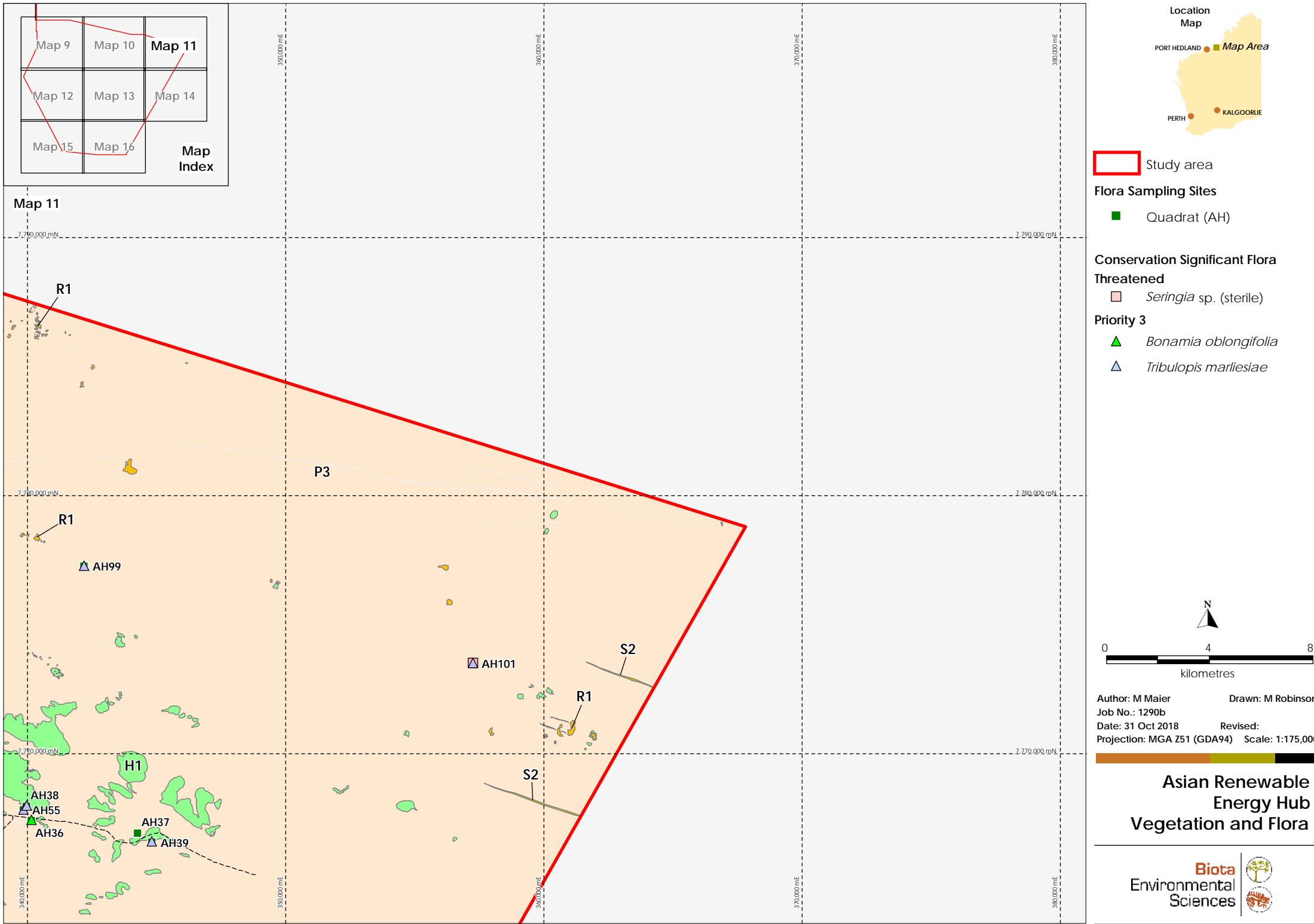
Author: M Maier Drawn: M Robinson

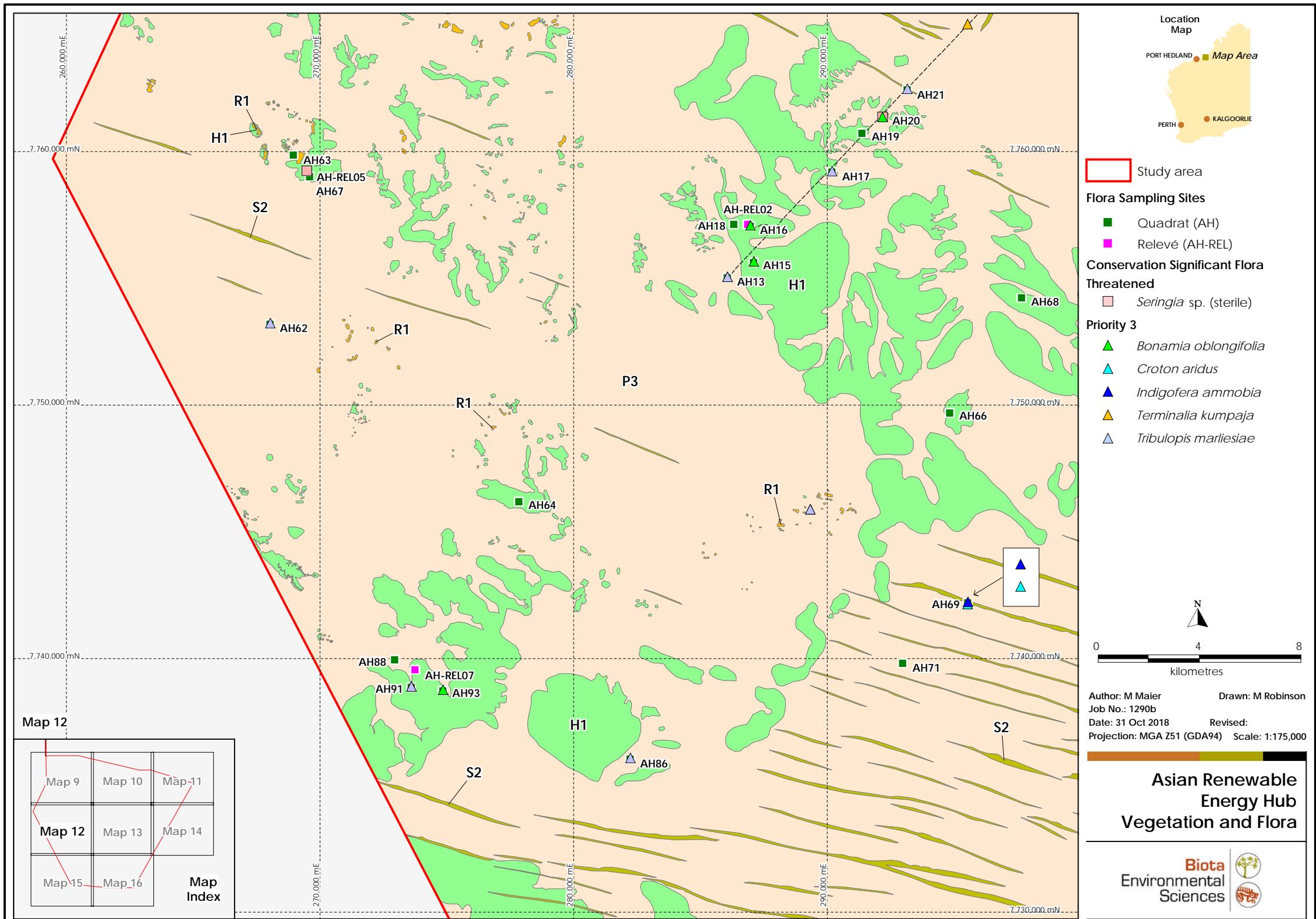
Job No.: 1290b Date: 31 Oct 2018 Revised:

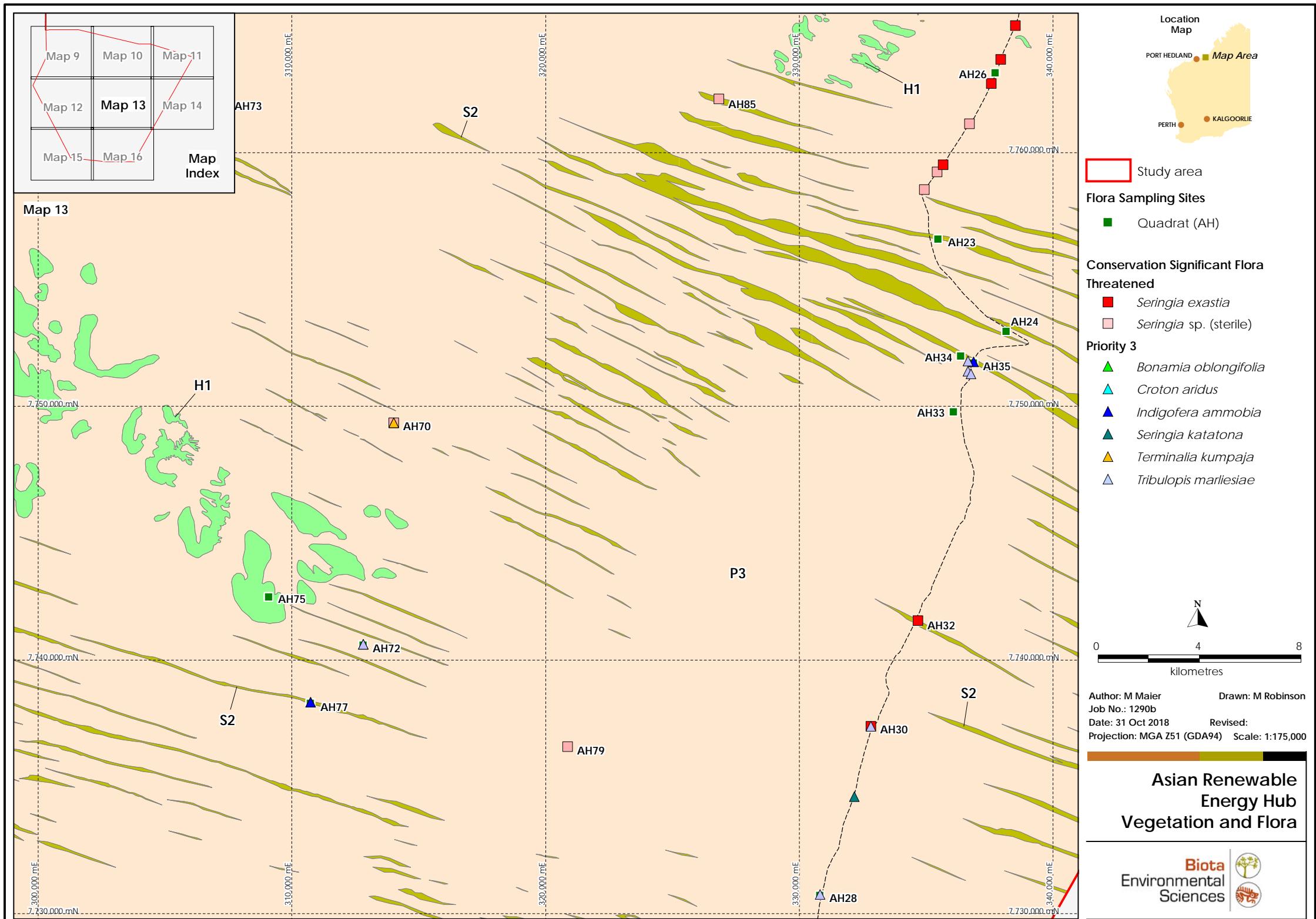
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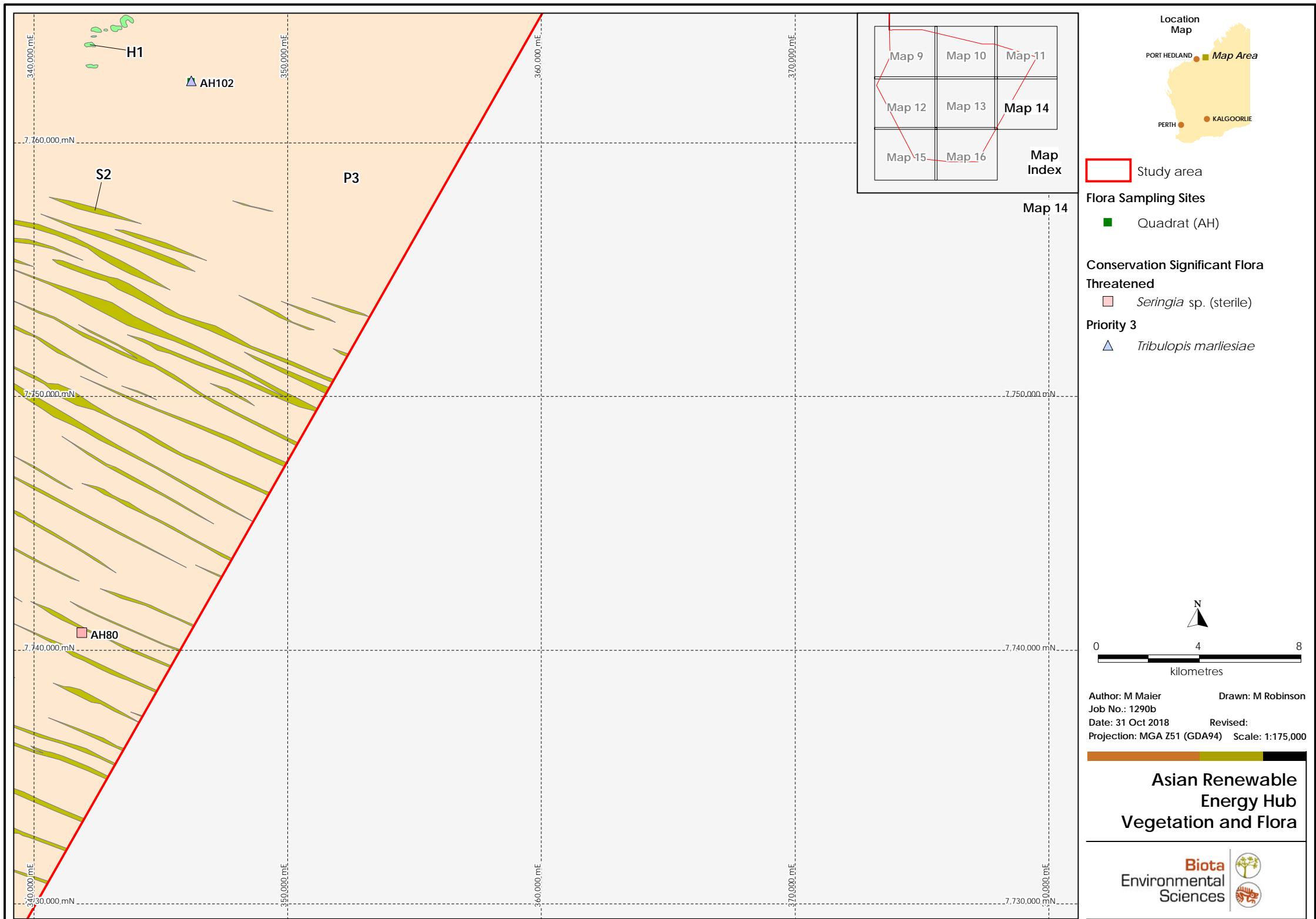
Asian Renewable Energy Hub Vegetation and Flora

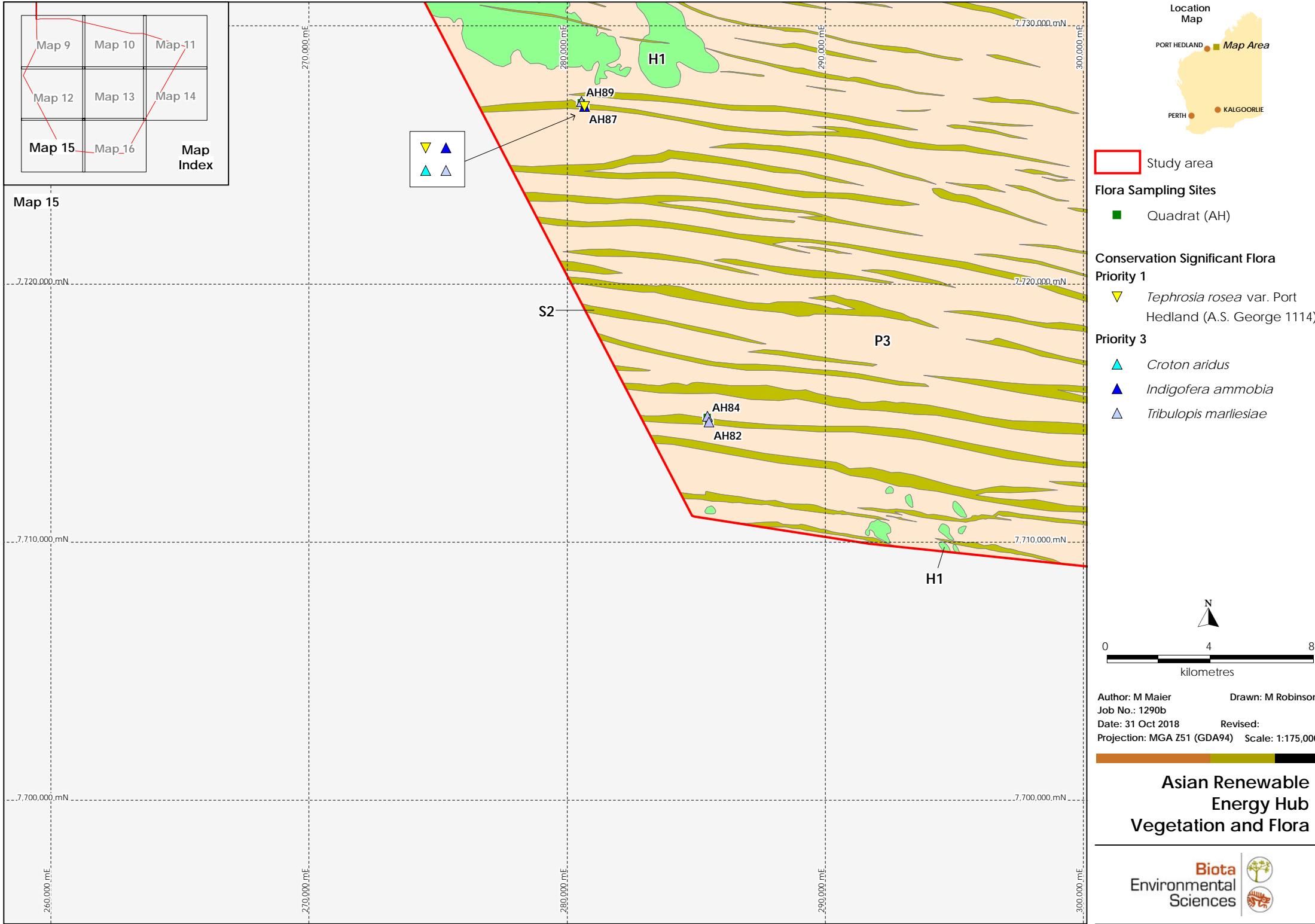














Study area

Flora Sampling Sites

Quadrat (AH)

Conservation Significant Flora Priority 3

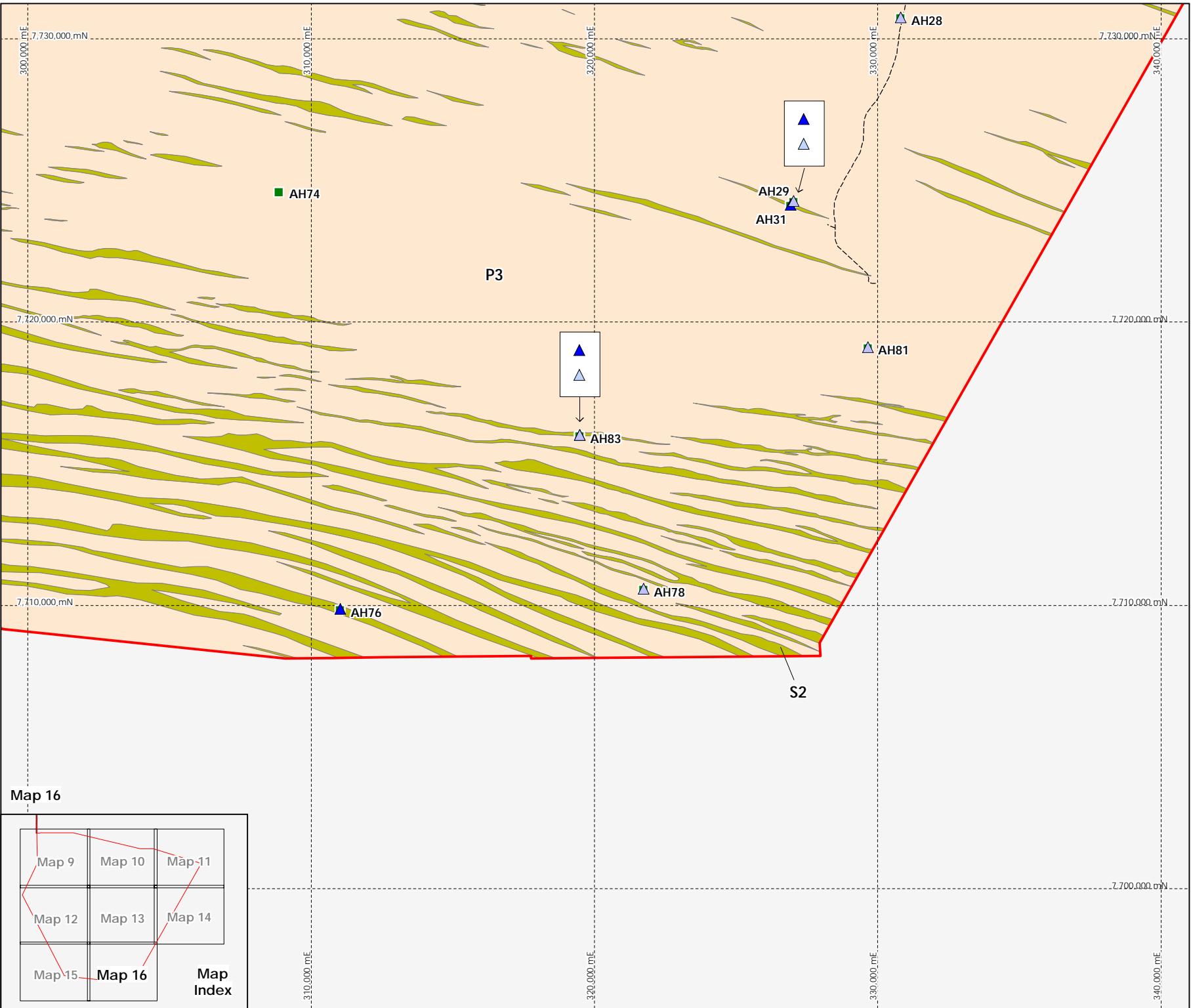
Indigofera ammobia

Tribulopis marliesiae

Author: M Maier
Job No.: 1290b
Date: 31 Oct 2018
Projection: MGA Z51 (GDA94)
Drawn: M Robinson
Revised:
Scale: 1:175,000

Asian Renewable Energy Hub Vegetation and Flora

Biota Environmental Sciences



Asian Renewable Energy Hub Vegetation Mapping Legend

	D1	<i>Melaleuca glomerata, M. lasiandra, M. alsophila, Acacia ampliceps</i> tall shrubland over <i>Trianthema turgidifolium, Solanum esuriale</i> low open shrubland
	S1	<i>Triodia epactia, Spinifex longifolius</i> open hummock grassland with <i>Whiteochloa airoides</i> open tussock grassland
	S2	a <i>Grevillea stenobotrya, G. wickhamii, Acacia anaticeps</i> tall open shrubland over <i>A. tumida</i> var. <i>kulparn, Cyanostegia cyanocalyx, Sida</i> sp. Western sand dunes (P.K. Latz 11980) open shrubland over <i>Dicrastylis doranii, (Dampiera cinerea, A. stellaticeps, Gompholobium simplicifolium, Newcastelia cladotricha)</i> low open shrubland over <i>Triodia schinzii</i> very open hummock grassland and <i>Eriachne obtusa, Aristida holathera</i> var. <i>holathera</i> very open tussock grassland b <i>Grevillea wickhamii</i> tall open shrubland over <i>Acacia tumida</i> var. <i>kulparn, Cyanostegia cyanocalyx</i> open shrubland over <i>Gompholobium simplicifolium, Jacksonia aculeata, (Dicrastylis doranii, Dampiera cinerea)</i> low open shrubland over <i>Triodia schinzii</i> very open hummock grassland
	P1	<i>Sida fibulifera</i> scattered shrubs over <i>*Cenchrus ciliaris, *C. setiger</i> tussock grassland
	P2	<i>Acacia colei</i> var. <i>colei, A. sericophylla</i> tall open shrubland over <i>Corchorus incanus</i> subsp. <i>incanus</i> low open shrubland over <i>Triodia epactia</i> open hummock grassland
	P3	a <i>Owenia reticulata, Erythrophleum chlorostachys</i> scattered low trees over <i>Acacia eriopoda, A. sericophylla</i> scattered tall shrubs over <i>Acacia stellaticeps, Androcalva loxophylla</i> low open shrubland over <i>Triodia schinzii, (T. epactia)</i> open hummock grassland b <i>Erythrophleum chlorostachys</i> scattered low trees over <i>Acacia ancistrocarpa, A. monticola</i> tall open shrubland over <i>Triodia schinzii, (T. epactia)</i> open hummock grassland c <i>Corymbia zygophylla, Erythrophleum chlorostachys</i> scattered low trees over <i>Grevillea eriostachya, G. wickhamii</i> scattered tall shrubs over <i>Gompholobium simplicifolium, Jacksonia aculeata, (Dicrastylis doranii, Dampiera cinerea, Acacia stellaticeps)</i> low open shrubland over <i>Triodia schinzii</i> very open hummock grassland d <i>Erythrophleum chlorostachys</i> scattered low trees over <i>Grevillea refracta</i> scattered tall shrubs over <i>Acacia ancistrocarpa, A. monticola, A. tumida</i> var. <i>kulparn</i> open shrubland over <i>Triodia epactia</i> open hummock grassland e <i>Grevillea refracta, Acacia monticola, A. colei</i> var. <i>colei</i> tall open shrubland over <i>Acacia hilliana, A. adoxa</i> var. <i>adoxa</i> scattered low shrubs over <i>Triodia epactia</i> open hummock grassland
	H1	<i>Acacia hilliana, (A. adoxa var. adoxa)</i> low open shrubland over <i>Triodia epactia</i> open hummock grassland
	R1	<i>Ficus brachypoda</i> low open woodland over <i>Acacia monticola, A. colei</i> var. <i>colei, Grevillea pyramidalis</i> tall open shrubland over <i>Triodia epactia</i> open hummock grassland



Appendix 5

Records of Conservation Significant Flora and Weeds



Table 1: Conservation significant taxa recorded from the study area.

Species	Status	Site	Easting	Northing	Field No.	% Cover	No. of Plants
<i>Seringia exastia</i>	Threatened	AH30	332812	7737393	AH30-01	0.1	30
		AH32	334672	7741560	AH32-07	0.1	15
		AH-OPPL	335662	7759530	AH-PL33		43
		AH-OPCEF	337554	7762726	AH-CEF04		30
		AH-OPPL	337933	7763683	AH-PL37		160
		AH-OPPL	338509	7765014	AH-PL38		56
<i>Seringia</i> sp. (sterile)	Treating as Threatened	AH02	265923	7767938	AH02-12	0.1	
		AH-REL05	269484	7759240		0.1	
		AH04	270062	7771302	AH04-02	0.1	2
		AH20	292187	7761367	AH20-01	0.1	50
		AH44	299948	7777865	AH44-03	0.1	
		AH14	300112	7769673	AH14-06	0.1	
		AH97	309954	7786284	AH97-01	2	
		AH70	314012	7749350	AH70-12	0.1	20
		AH79	320861	7736583	AH79-03	0.1	
		AH85	326819	7762123	AH85-03	1	
		AH-OPPL	334920	7758543	AH-PL30		20
		AH-OPPL	335429	7759251	AH-PL32		10
		AH-OPPL	336699	7761142	AH-PL34		34
		AH80	341883	7740700	AH80-01	0.1	3
		AH101	357253	7773533		0.1	
<i>Tephrosia rosea</i> var. Port Hedland (A.S. George 1114)	Priority 1	AH87	280672	7726871	AH87-05	4	
<i>Bonamia oblongifolia</i>	Priority 3	AH100	268099	7809118		0.1	
		AH98	268103	7809633	AH98-03	0.1	
		AH65	268169	7805974	AH65-05	0.1	
		AH91	273616	7738905	AH91-02, AH91-07A	1	
		AH93	274855	7738780		0.1	
		AH13	286071	7755069	AHR13-01	0.1	
		AH16	286970	7757099		0.1	
		AH15	287104	7755670		0.1	
		AH20	292187	7761367		0.1	

Species	Status	Site	Easting	Northing	Field No.	% Cover	No. of Plants
<i>Bonamia oblongifolia</i> (continued)	Priority 3	AH-OPPL	296456	7779724	AH-PL02		2
		AH72	312812	7740626		0.1	
		AH70	314012	7749350	AH70-16	0.1	
		AH36	340136	7767427	AH36-03	0.1	
<i>Croton aridus</i>	Priority 3	AH89	280558	7727066		3	
		AH87	280672	7726871	AH87-06	0.1	
		AH-OPPL	289338	7745889			
		AH-OPPL	295539	7742158			
		AH77	310743	7738334	AH77-06	0.1	
<i>Indigofera ammobia</i>	Priority 3	AH87	280672	7726871	AH87-03	0.1	
		AH69	295554	7742250	AH69-10	0.1	
		AH77	310743	7738334		0.1	
		AH76	311028	7709884	AH76-09	0.1	
		AH83	319483	7716025	AH83-02	0.1	
		AH31	326932	7724145	AH31-08	0.1	
		AH35	336857	7751753	AH35-08	0.1	
<i>Polymeria</i> ? sp. Broome (K.F. Kenneally 9759)	Priority 3	AH03	274712	7773580	AH03-16	0.1	
		AH47	308083	7776055	AH47-04	0.1	
<i>Seringia katatona</i>	Priority 3	AH-OPMP	332168	7734618	AH-MP05, AH-MP06		150
<i>Terminalia kumpaja</i>	Priority 3	AH-OPPL	274629	7773701	AH-PL04		1
		AH-OPMP	295541	7765024			1
		AH-OPMP	296484	7765803			1
		AH22	296515	7765830	AH22-02	0.5	1
		AH-OPMP	300156	7769674			1
		AH-OPMP	303198	7773216			2
		AH-OPMP	303212	7773222			1
		AH-OPMP	303233	7773148			5
		AH-OPMP	303248	7773251			4
		AH-OPMP	303286	7773228			1
		AH-OPMP	303300	7773184			2
		AH-OPMP	303304	7773138			1
		AH-OPMP	303352	7772978			1
		AH-OPMP	303354	7773255			1

Species	Status	Site	Easting	Northing	Field No.	% Cover	No. of Plants
<i>Terminalia kumpaja</i> (continued)	Priority 3	AH-OPMP	303357	7773017			1
		AH-OPMP	303359	7773224			1
		AH-OPMP	303365	7773236			1
		AH-OPMP	303388	7773060			1
		AH-OPMP	303391	7773226			1
		AH-OPMP	303400	7773058			2
		AH-OPMP	303410	7773051			1
		AH-OPMP	303417	7773226			3
		AH-OPMP	303430	7773097			4
		AH-OPMP	303432	7773017			1
		AH-OPMP	303437	7773070			1
		AH-OPMP	303444	7773069			2
		AH-OPMP	303446	7773099			1
		AH-OPMP	303449	7773240			2
		AH-OPMP	303453	7773229			3
		AH-OPMP	303453	7773118			1
		AH-OPMP	303458	7773153			1
		AH-OPMP	303461	7773254			5
		AH-OPMP	303487	7773225			5
		AH-OPMP	303489	7773204			1
		AH-OPMP	303546	7773210			3
		AH70	314012	7749350	AH70-02	0.5	4
<i>Tribulopis marliesiae</i>	Priority 3	AH62	268047	7753236	AH62-15	0.1	1
		AH100	268099	7809118	AH100-02	0.1	5
		AH98	268103	7809633		0.1	7
		AH65	268169	7805974		0.1	1
		AH91	273616	7738905		0.1	1
		AH-OPPL	274629	7773701	AH-PL03		5
		AH03	274712	7773580		0.1	1
		AH07	280133	7784798		0.1	2
		AH89	280558	7727066		0.1	8
		AH86	282246	7736088		0.1	6
		AH84	285441	7714873		0.1	12

Species	Status	Site	Easting	Northing	Field No.	% Cover	No. of Plants
<i>Tribulopis martiesiae</i> (continued)	Priority 3	AH82	285499	7714657		0.1	1
		AH13	286071	7755069		0.1	11
		AH-OPPL	289338	7745889			1
	Priority 3	AH17	290201	7759230		0.1	1
		AH21	293163	7762485		0.1	3
		AH12	294596	7780276	AHR12-03	0.1	
		AH22	296515	7765830		0.1	1
		AH-OPMP	296520	7765866			1
		AH-OPPL	300093	7769736			2
		AH14	300112	7769673	AH14-08	0.1	4
		AH-OPPL	303172	7773034	AH-PL13		1
		AH-OPMP	303315	7773011			1
		AH73	307371	7761974		0.1	1
		AH-OPPL	308181	7776202	AH-PL51		1
		AH72	312812	7740626		0.1	3
		AH-OPMP	315185	7775135			2
		AH48	315187	7775110		0.1	3
		AH83	319483	7716025	AH83-05	0.1	15
		AH78	321736	7710591	AH78-03	0.1	12
		AH29	327022	7724272	AH29-16	0.1	5
		AH81	329646	7719119		0.1	25
		AH28	330816	7730757		0.1	3
		AH30	332812	7737393		0.1	2
		AH40	333782	7770827		0.1	3
		AH-OPMP	336637	7751785			2
		AH-OPMP	336643	7751387			1
		AH-OPPL	336757	7751280	AH-PL28		1
		AH25	338769	7765987		0.1	1
		AH55	339831	7767856	AH55-08	0.1	3
		AH38	339949	7768011		0.1	1
		AH99	342167	7777284		0.1	1
		AH39	344807	7766594	AH39-08	0.1	4
		AH102	346204	7762442		0.1	4

Species	Status	Site	Easting	Northing	Field No.	% Cover	No. of Plants
<i>Tribulopis marliesiae</i> (continued)	Priority 3	AH101	357253	7773533		0.1	7

Table 2: Introduced species recorded from the study area.

Species	Site	Easting	Northing	Field No.	% Cover	No. of Plants	Notes
<i>*Aerva javanica</i>	AH94	267982	7817252		0.1		
	AH-OPPL	268011	7817850			100	
	AH-OPPL	268012	7817888			100	
	AH92	268015	7818097	AH92-06	0.1		
	AH98	268103	7809632		0.1	2	
	AH65	268169	7805974		0.1		
	AH96	268305	7813432		0.1	1,000	Plants dead, killed by inundation.
	AH-REL04	276252	7766986		0.1	3	
<i>*Bidens bipinnata</i>	AH27	335990	7769227		0.1	3	
<i>*Cenchrus ciliaris</i>	AH94	267982	7817252		30		
	AH-OPPL	268011	7817850			2,000	
	AH-OPPL	268012	7817888			1,000	
	AH92	268015	7818097		60		
	AH65	268169	7805974		0.25		Grazed; north side of Great Northern Highway.
<i>*Cenchrus setiger</i>	AH94	267982	7817252		20		
	AH-OPPL	268011	7817850			1,000	
	AH65	268169	7805974		0.25		Grazed.
<i>*Citrullus colocynthis</i>	AH-OPPL	268012	7817888	AH-PL18		3	
	AH61	268072	7811714	AH61-16	0.1		
	AH96	268305	7813432		0.1	1	
<i>*Datura ? leichhardtii</i>	AH96	268305	7813432	AH96-13	0.1	1	Sterile specimen.
<i>*Eragrostis minor</i>	AH61	268072	7811714	AH61-13	0.1		Number of individuals not recorded.
	AH60	268076	7812243	AH60-03	0.1		Number of individuals not recorded.
<i>*Setaria verticillata</i>	AH61	268072	7811714		0.1	1	
	AH-OPMP	268832	7770709			100	Small patch of ~100 plants in 10x2m area on rockpile.
<i>*Stylosanthes hamata</i>	AH65	268169	7805974	AH65-10	0.1		
<i>*Trianthema portulacastrum</i>	AH96	268305	7813432	AH96-10	0.1	1	

Appendix 6

Vascular Flora List for the Study Area



Family	Species	Status	Current Study		NatureMap, AVH Records	NWAC (2016)
			Phase 1	Phase 2		
Aizoaceae	<i>Trianthema pilosum</i>		Y	Y	AVH	
	* <i>Trianthema portulacastrum</i>	Weed		Y		
	<i>Trianthema triquetrum</i>			Y	AVH	
	<i>Trianthema turgidifolium</i>			Y		
Amaranthaceae	<i>Achyranthes aspera</i>		Y	Y		
	* <i>Aerva javanica</i>	Weed		Y	NM, AVH	
	<i>Amaranthus undulatus</i>		Y	Y		
	<i>Amaranthus aff. undulatus</i> (round leaves, small tepals)			Y		
	<i>Gomphrena cunninghamii</i>		Y	Y		
	<i>Gomphrena lanata</i>		Y	Y		
	<i>Ptilotus arthrolasius</i>		Y	Y	NM, AVH	
	<i>Ptilotus astrolasius</i>		Y	Y		
	<i>Ptilotus axillaris</i>				NM, AVH	
	<i>Ptilotus calostachyus</i>		Y	Y	NM, AVH	
	<i>Ptilotus exaltatus</i>			Y	NM, AVH	
	<i>Ptilotus fusiformis</i>		Y	Y		
	<i>Ptilotus incanus</i>		Y	Y		
	<i>Ptilotus lanatus</i>			Y	NM, AVH	
	<i>Ptilotus obovatus</i>			Y		
	<i>Ptilotus polystachyus</i>		Y	Y	NM, AVH	
Apocynaceae	<i>Carissa lanceolata</i>		Y	Y	NM, AVH	
	<i>Cynanchum carnosum</i>			Y		
	<i>Cynanchum pedunculatum</i> (sens. lat.)		Y	Y		
Araliaceae	<i>Trachymene oleracea</i> subsp. <i>oleracea</i>		Y	Y		
Asteraceae	* <i>Bidens bipinnata</i>	Weed	Y			
	<i>Pterocaulon serrulatum</i> var. <i>velutinum</i>		Y	Y		
	<i>Pterocaulon sphacelatum</i>			Y		
	<i>Pterocaulon sphaeranthoides</i>			Y		
	<i>Pterocaulon</i> sp. (sterile seedlings)			Y		
	<i>Streptoglossa decurrens</i>		Y			
	<i>Streptoglossa macrocephala</i>		Y	Y	AVH	

Family	Species	Status	Current Study		NatureMap, AVH Records	NWAC (2016)
			Phase 1	Phase 2		
Asteraceae (cont.)	<i>Streptoglossa odora</i>		Y		AVH	
Bignoniaceae	<i>Dolichandrone occidentalis</i>		Y	Y		Y
Boraginaceae	<i>Halgnania solanacea</i> var. <i>solanacea</i>		Y	Y	NM, AVH	
	<i>Heliotropium foliatum</i>			Y		
	<i>Heliotropium glabellum</i>			Y		
	<i>Heliotropium leptaleum</i>		Y	Y	NM, AVH	
	<i>Heliotropium pachyphyllum</i>		Y	Y	NM, AVH	
	<i>Heliotropium transforme</i>		Y	Y		
	<i>Heliotropium vestitum</i>		Y	Y	NM, AVH	
	<i>Heliotropium</i> sp. (poor material; insufficient for further determination)		Y	Y		
	<i>Trichodesma zeylanicum</i> (var. not determined)		Y	Y		
	<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		Y			
Capparaceae	<i>Capparis umbonata</i>		Y	Y		
Caryophyllaceae	<i>Polycarpaea corymbosa</i> var. <i>corymbosa</i>		Y	Y		
	<i>Polycarpaea holtzei</i>		Y	Y		
	<i>Polycarpaea longiflora</i>		Y	Y		
Chenopodiaceae	<i>Dysphania plantaginella</i>			Y		
	<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>		Y			
	<i>Dysphania</i> sp. (seedlings)			Y		
	<i>Enchytraea tomentosa</i> var. <i>tomentosa</i>			Y		
	<i>Neobassia astrocarpa</i>			Y		
	<i>Salsola australis</i>			Y		
	<i>Threlkeldia diffusa</i>			Y		
Cleomaceae	<i>Cleome uncifera</i> subsp. <i>uncifera</i>		Y	Y	NM, AVH	
Cleomaceae	<i>Cleome viscosa</i>		Y	Y		
Combretaceae	<i>Terminalia kumpaja</i>	Priority 3	Y	Y	NM, AVH	
Convolvulaceae	<i>Bonamia alatisemina</i>		Y	Y		
	<i>Bonamia erecta</i>		Y	Y		
	<i>Bonamia oblongifolia</i>	Priority 3	Y	Y		
	<i>Bonamia pannosa</i>		Y	Y		

Family	Species	Status	Current Study		NatureMap, AVH Records	NWAC (2016)
			Phase 1	Phase 2		
Convolvulaceae (cont.)	<i>Cuscuta victoriana</i>		Y			
	<i>Evolvulus alsinoides</i> var. <i>decumbens</i>		Y	Y		
	<i>Evolvulus alsinoides</i> var. <i>vilosicalyx</i>		Y	Y		
	<i>Ipomoea coptica</i>			Y		
	<i>Ipomoea costata</i>		Y		NM, AVH	
	<i>Ipomoea muelleri</i>			Y		
	<i>Ipomoea pes-caprae</i> subsp. <i>brasiliensis</i>			Y		
	<i>Polymeria</i> ? sp. Broome (K.F. Kenneally 9759) (sterile)	Priority 3	Y			
Cucurbitaceae	* <i>Citrullus colocynthis</i>	Weed		Y		
	<i>Cucumis variabilis</i>		Y	Y		
	<i>Trichosanthes cucumerina</i> var. <i>cucumerina</i>		Y	Y		
Cyperaceae	<i>Abildgaardia schoenoides</i>			Y		
	<i>Bulbostylis barbata</i>		Y	Y		
	<i>Cyperus conicus</i>		Y	Y		
	<i>Cyperus cunninghamii</i> subsp. <i>cunninghamii</i>		Y	Y		
	<i>Cyperus</i> sp. (sterile; insufficient material for identification)		Y			
	<i>Fimbristylis ammobia</i>			Y		
	<i>Fimbristylis dichotoma</i>		Y			
	<i>Fimbristylis oxystachya</i>		Y			
	<i>Fimbristylis simulans</i>		Y	Y		
Euphorbiaceae	<i>Croton aridus</i>	Priority 3		Y		
	<i>Euphorbia</i> ? <i>albrechtii</i>		Y			
	<i>Euphorbia australis</i> var. <i>subtomentosa</i>		Y	Y		
	<i>Euphorbia</i> ? <i>myrtoides</i>		Y	Y		
	<i>Euphorbia psilosperma</i>		Y	Y		
	<i>Euphorbia trigonosperma</i>			Y		
	<i>Euphorbia vaccaria</i> var. <i>vaccaria</i>		Y	Y		
	<i>Euphorbia</i> ? <i>wheeleri</i>			Y		
	<i>Euphorbia</i> sp. (inadequate material)		Y	Y		
	<i>Mallotus nesophilus</i>			Y		
Fabaceae	<i>Acacia adoxa</i> var. <i>adoxa</i>		Y	Y	NM, AVH	

Family	Species	Status	Current Study		NatureMap, AVH Records	NWAC (2016)
			Phase 1	Phase 2		
Fabaceae (cont.)	<i>Acacia ampliceps</i>			Y		
	<i>Acacia anaticeps</i>			Y	Y	NM, AVH
	<i>Acacia ancistrocarpa</i>			Y	Y	
	<i>Acacia bivenosa</i>				Y	AVH
	<i>Acacia colei</i> var. <i>colei</i>			Y	Y	NM, AVH
	<i>Acacia cowleana</i>			Y	Y	
	<i>Acacia drepanocarpa</i> subsp. <i>drepanocarpa</i>			Y	Y	
	<i>Acacia drepanocarpa</i> subsp. <i>latifolia</i>			Y	Y	
	<i>Acacia eriopoda</i>			Y	Y	NM, AVH
	<i>Acacia hilliana</i>			Y	Y	NM, AVH
	<i>Acacia inaequilatera</i>			Y	Y	
	<i>Acacia melleodora</i>			Y	Y	
	<i>Acacia monticola</i>			Y	Y	NM, AVH
	<i>Acacia orthocarpa</i>			Y	Y	
	<i>Acacia platycarpa</i>			Y	Y	NM, AVH
	<i>Acacia sabulosa</i>			Y	Y	NM, AVH
	<i>Acacia sericophylla</i>			Y	Y	NM, AVH
	<i>Acacia sphaerostachya</i>				Y	
	<i>Acacia stellaticeps</i>			Y	Y	
	<i>Acacia tumida</i> var. <i>kulparn</i>			Y	Y	NM, AVH
	<i>Aenictophyton reconditum</i> subsp. <i>reconditum</i>				Y	
	<i>Bauhinia cunninghamii</i>				Y	NM, AVH
	<i>Cajanus marmoratus</i>			Y	Y	
	<i>Chamaecrista symonii</i>				Y	NM, AVH
	<i>Crotalaria cunninghamii</i> subsp. <i>cunninghamii</i>			Y	Y	
	<i>Crotalaria medicaginea</i> var. <i>neglecta</i>				Y	
	<i>Crotalaria ramosissima</i>			Y	Y	
	<i>Cullen corallum</i>			Y	Y	NM, AVH
	<i>Cullen martinii</i>			Y		
	<i>Erythrophleum chlorostachys</i>			Y	Y	NM, AVH
	<i>Gompholobium polyzygum</i>			Y	Y	

Family	Species	Status	Current Study		NatureMap, AVH Records	NWAC (2016)
			Phase 1	Phase 2		
Fabaceae (cont.)	<i>Gompholobium simplicifolium</i>		Y	Y	NM, AVH	
	<i>Indigofera ammobia</i>	Priority 3	Y	Y		
	<i>Indigofera boviperda</i> subsp. <i>eremaea</i>		Y	Y		
	<i>Indigofera colutea</i>		Y	Y		
	<i>Indigofera linifolia</i>			Y		
	<i>Indigofera linnaei</i>			Y		
	<i>Indigofera monophylla</i> (sens. lat.)			Y		
	<i>Indigofera trita</i> subsp. <i>trita</i>			Y		
	<i>Isotropis atropurpurea</i>			Y		
	<i>Jacksonia aculeata</i>			Y		
	<i>Leptosema anomalam</i>			Y		
	<i>Mirbelia viminalis</i>			Y		
	<i>Petalostylis labicheoides</i>			Y		
	<i>Rhynchosia minima</i>			Y		
	<i>Senna artemisioides</i> subsp. <i>helmsii</i>			Y		
	<i>Senna artemisioides</i> subsp. <i>oligophylla</i> x subsp. <i>helmsii</i>			Y		
	<i>Senna curvistyla</i>			Y		
	<i>Senna</i> ? <i>glaucifolia</i>				Y	
	<i>Senna glutinosa</i> subsp. <i>glutinosa</i>			Y	AVH	
	<i>Senna notabilis</i>			Y	Y	
	<i>Senna sericea</i>			Y		
	<i>Senna venusta</i>			Y	Y	
	* <i>Stylosanthes hamata</i>	Weed		Y		
	<i>Tephrosia leptoclada</i>			Y		
	<i>Tephrosia rosea</i> var. <i>clementii</i>			Y	Y	
	<i>Tephrosia rosea</i> var. Port Hedland (A.S. George 1114)	Priority 1		Y		
	<i>Tephrosia rosea</i> var. <i>rosea</i>			Y	Y	
	<i>Tephrosia simplicifolia</i>			Y	Y	
	<i>Tephrosia supina</i>				Y	
	<i>Tephrosia virens</i>			Y		
	<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)			Y	Y	AVH

Family	Species	Status	Current Study		NatureMap, AVH Records	NWAC (2016)
			Phase 1	Phase 2		
Fabaceae (cont.)	<i>Tephrosia</i> sp. D Kimberley Flora (R.D. Royce 1848)		Y	Y		
	<i>Tephrosia</i> sp. Northern (K.F. Kenneally 11950)		Y			
	<i>Tephrosia</i> sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)		Y			
	<i>Thinicola incana</i>		Y	Y		
	<i>Zornia chaetophora</i>		Y	Y		
Goodeniaceae	<i>Dampiera candidans</i>		Y	Y	NM, AVH	
	<i>Dampiera cinerea</i>		Y	Y		
	<i>Goodenia armitiana</i>		Y	Y	AVH	
	<i>Goodenia azurea</i> subsp. <i>hesperia</i>		Y	Y		
	<i>Goodenia</i> ? <i>azurea</i> subsp. <i>hesperia</i> (white flowers)		Y			
	<i>Goodenia microptera</i>			Y		
	<i>Goodenia scaevolina</i>		Y	Y		
	<i>Goodenia triodiophila</i>		Y	Y		
	<i>Scaevola amblyanthera</i> var. <i>centralis</i>			Y		
	<i>Scaevola browniana</i> subsp. <i>browniana</i>		Y	Y		
	<i>Scaevola crassifolia</i>			Y		
	<i>Scaevola parvifolia</i> (sterile; subsp. not determined)		Y	Y		
	<i>Scaevola parvifolia</i> subsp. <i>parvifolia</i>			Y		
	<i>Scaevola parvifolia</i> subsp. <i>pilbara</i>		Y			
	<i>Scaevola spinescens</i>			Y		
Gyrostemonaceae	<i>Codonocarpus cotinifolius</i>		Y	Y		
	<i>Gyrostemon tepperi</i>		Y	Y		
Hemerocallidaceae	<i>Corynotheca micrantha</i> var. <i>gracilis</i>		Y	Y		
Lamiaceae	<i>Clerodendrum floribundum</i> var. <i>angustifolium</i>			Y		
	<i>Clerodendrum tomentosum</i> (juveniles; var. not determined)		Y	Y		
	<i>Clerodendrum tomentosum</i> var. <i>mollissima</i>		Y	Y		
	<i>Clerodendrum tomentosum</i> var. <i>tomentosum</i>		Y	Y	NM, AVH	
	<i>Cyanostegia cyanocalyx</i>		Y	Y	NM, AVH	Y
	<i>Dicrastylis cordifolia</i>			Y		
	<i>Dicrastylis doranii</i>		Y	Y		

Family	Species	Status	Current Study		NatureMap, AVH Records	NWAC (2016)
			Phase 1	Phase 2		
Lamiaceae (cont.)	<i>Newcastelia cladotricha</i>		Y	Y	NM, AVH	
	<i>Newcastelia spodiotoricha</i>			Y		
Lauraceae	<i>Cassytha capillaris</i>		Y	Y		
	<i>Cassytha filiformis</i>			Y		
Loganiaceae	<i>Orianthera centralis</i>		Y	Y		
Loranthaceae	<i>Amyema</i> sp. (sterile)		Y			
Malvaceae	<i>Abutilon lepidum</i>			Y		
	<i>Abutilon leucopetalum</i>		Y	Y		
	<i>Abutilon otocarpum</i>		Y	Y		
	<i>Abutilon</i> sp. (inadequate material for further determination)			Y		
	<i>Androcalva loxophylla</i>		Y	Y	NM, AVH	
	<i>Corchorus incanus</i> subsp. <i>incanus</i>			Y		
	<i>Corchorus sidoides</i> subsp. <i>vermicularis</i> (sens. lat.)		Y	Y		
	<i>Corchorus tridens</i>			Y		
	<i>Gossypium australe</i>		Y	Y	NM, AVH	
	<i>Hibiscus apodus</i>			Y	NM, AVH	
	<i>Hibiscus leptocladus</i>		Y	Y		
	<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>		Y	Y		
	<i>Melhania oblongifolia</i>			Y		
	<i>Seringia elliptica</i>		Y			
	<i>Seringia exastia</i>	Threatened	Y	Y		
	<i>Seringia katatona</i>	Priority 3	Y			
	<i>Seringia nephrosperma</i>		Y	Y	NM, AVH	
	<i>Seringia</i> sp. (sterile)	Treating as Threatened	Y	Y		
	<i>Sida arenicola</i>		Y	Y		
	<i>Sida fibulifera</i> (sens. lat.; long pedicels)		Y	Y		
	<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)		Y	Y		
	<i>Sida</i> sp. Pindan (B.G. Thomson 3398)		Y	Y		
	<i>Sida</i> sp. Western sand dunes (P.K. Latz 11980)		Y	Y		
	<i>Triumfetta incana</i>		Y	Y		

Family	Species	Status	Current Study		NatureMap, AVH Records	NWAC (2016)
			Phase 1	Phase 2		
Malvaceae (cont.)	<i>Triumfetta johnstonii</i>		Y	Y		
	<i>Triumfetta ? maconochieana</i>		Y	Y		
	<i>Triumfetta aff. plumigera</i> (leaves an unusual shape)		Y	Y		
	<i>Waltheria indica</i>			Y		
Meliaceae	<i>Owenia reticulata</i>		Y	Y	NM, AVH	Y
Menispermaceae	<i>Tinospora smilacina</i>		Y	Y	NM, AVH	
Molluginaceae	<i>Trigastrotheca molluginea</i>		Y	Y		
Moraceae	<i>Ficus brachypoda</i>		Y	Y		
Myrtaceae	<i>Calytrix carinata</i> (two forms present)		Y	Y	NM, AVH	
	<i>Corymbia flavescens</i>		Y	Y		
	<i>Corymbia greeniana</i>		Y	Y		
	<i>Corymbia zygophylla</i>		Y	Y		
	<i>Melaleuca alsophila</i>			Y	NM, AVH	
	<i>Melaleuca glomerata</i>			Y	NM, AVH	
	<i>Melaleuca lasiandra</i>			Y	NM, AVH	
Nyctaginaceae	<i>Boerhavia burbridgeana</i>			Y		
	<i>Boerhavia coccinea</i>		Y	Y		
	<i>Boerhavia gardneri</i>		Y	Y		
	<i>Commicarpus australis</i>		Y			
Oleaceae	<i>Jasminum calcareum</i>			Y		
	<i>Jasminum didymum</i> subsp. <i>lineare</i>		Y	Y		
Orobanchaceae	<i>Striga curviflora</i>		Y	Y		
Phyllanthaceae	<i>Phyllanthus eremicus</i>		Y	Y		
Plantaginaceae	<i>Stemodia grossa</i>			Y		
Poaceae	<i>Amphipogon sericeus</i>		Y	Y		
	<i>Aristida holathera</i> var. <i>holathera</i>		Y	Y		
	<i>Aristida holathera</i> var. <i>latifolia</i>		Y			
	<i>Aristida inaequiglumis</i>		Y	Y		
	* <i>Cenchrus ciliaris</i>	Weed		Y		
	* <i>Cenchrus setiger</i>	Weed		Y		
	<i>Chrysopogon fallax</i>		Y	Y		

Family	Species	Status	Current Study		NatureMap, AVH Records	NWAC (2016)
			Phase 1	Phase 2		
Poaceae (cont.)	<i>Cymbopogon ambiguus</i>	Weed	Y	Y		
	<i>Cymbopogon obtectus</i>		Y	Y		
	<i>Cymbopogon</i> sp. (sterile)			Y		
	<i>Digitaria brownii</i>			Y		
	<i>Enneapogon ? purpurascens</i>			Y		
	<i>Enneapogon robustissimus</i>			Y		
	<i>Eragrostis cumingii</i>			Y		
	<i>Eragrostis eriopoda</i>			Y		
	* <i>Eragrostis minor</i>		Weed		Y	
	<i>Eragrostis</i> sp. (sterile; appears similar to <i>E. desertorum</i>).				Y	
	<i>Eriachne aristidea</i>			Y	Y	
	<i>Eriachne ciliata</i>			Y	Y	
	<i>Eriachne gardneri</i>				NM, AVH	
	<i>Eriachne helmsii</i>				Y	
	<i>Eriachne lanata</i>			Y	Y	
	<i>Eriachne mucronata</i>			Y	Y	
	<i>Eriachne obtusa</i> (sens. lat.)			Y	Y	
	<i>Eriachne pulchella</i>			Y	Y	
	<i>Eulalia aurea</i> (sens. lat.)			Y	Y	
	<i>Panicum decompositum</i>			Y	Y	
	<i>Paractaenum refractum</i>			Y		
	<i>Paraneurachne muelleri</i>			Y	Y	
	<i>Paspalidium clementii</i>			Y	Y	
	<i>Paspalidium rarum</i>			Y	Y	
	<i>Paspalidium tabulatum</i>			Y	Y	
	<i>Perotis rara</i>				Y	
	<i>Schizachyrium fragile</i>			Y		
	<i>Setaria dielsii</i>				Y	
	<i>Setaria surgens</i>			Y	Y	
	* <i>Setaria verticillata</i>		Weed	Y	Y	
	<i>Sorghum plumosum</i> var. <i>plumosum</i>			Y	Y	NM, AVH

Family	Species	Status	Current Study		NatureMap, AVH Records	NWAC (2016)
			Phase 1	Phase 2		
Poaceae (cont.)	<i>Spinifex longifolius</i>			Y		
	<i>Sporobolus australasicus</i>			Y		
	<i>Themeda triandra</i>			Y		
	<i>Triodia epactia</i>			Y	Y	
	<i>Triodia schinzii</i>			Y	Y	
	<i>Triraphis mollis</i>				Y	
	<i>Urochloa holosericea</i> subsp. <i>velutina</i>			Y	Y	
	<i>Urochloa piligera</i>				NM, AVH	
	<i>Whiteochloa airoides</i>				Y	
	<i>Yakirra australiensis</i> var. <i>australiensis</i>			Y	Y	
Polygalaceae	<i>Polygala glaucifolia</i>			Y	Y	
	<i>Polygala isingii</i>			Y	Y	
Portulacaceae	<i>Calandrinia strophiolata</i>			Y	Y	
	<i>Calandrinia tepperiana</i>				Y	
	<i>Portulaca</i> aff. <i>australis</i>				Y	
	<i>Portulaca bicolor</i>				Y	
	<i>Portulaca filifolia</i>			Y	Y	
	<i>Portulaca oleracea</i>				Y	
Proteaceae	<i>Grevillea eriostachya</i>			Y	Y	
	<i>Grevillea pyramidalis</i> (subsp. not recorded)			Y	Y	
	<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>				NM, AVH	
	<i>Grevillea pyramidalis</i> subsp. <i>pyramidalis</i>			Y	Y	
	<i>Grevillea refracta</i> subsp. <i>refracta</i>			Y	Y	NM, AVH
	<i>Grevillea stenobotrya</i>			Y	Y	Y
	<i>Grevillea wickhamii</i> (sterile; subsp. not determined)			Y	Y	
	<i>Grevillea wickhamii</i> subsp. <i>hispidula</i>			Y	Y	
	<i>Grevillea wickhamii</i> subsp. <i>macrodonta</i>			Y	Y	
	<i>Hakea chordophylla</i>			Y	Y	
	<i>Hakea macrocarpa</i>			Y	Y	
Rubiaceae	<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>			Y	Y	NM, AVH
	<i>Oldenlandia crouchiana</i>			Y	Y	

Family	Species	Status	Current Study		NatureMap, AVH Records	NWAC (2016)
			Phase 1	Phase 2		
Rubiaceae (cont.)	<i>Oldenlandia mitrasacmoides</i> subsp. <i>mitrasacmoides</i>		Y	Y		
	<i>Oldenlandia pterospora</i>		Y	Y		
	<i>Spermacoce hillii</i>		Y	Y		
	<i>Spermacoce occidentalis</i>		Y	Y		
Santalaceae	<i>Santalum lanceolatum</i>		Y	Y		
Sapindaceae	<i>Dodonaea coriacea</i>		Y	Y		
	<i>Dodonaea hispidula</i> var. <i>arida</i>		Y	Y		
Scrophulariaceae	<i>Myoporum montanum</i>			Y		
Solanaceae	* <i>Datura</i> ? <i>leichhardtii</i> (sterile)	Weed		Y		
	<i>Duboisia hopwoodii</i>			Y		
	<i>Nicotiana benthamiana</i>		Y	Y		
	<i>Solanum dioicum</i> (sens. lat.)		Y	Y	NM, AVH	
	<i>Solanum diversiflorum</i>		Y	Y		
	<i>Solanum esuriale</i>			Y		
	<i>Solanum horridum</i>		Y			
Surianaceae	<i>Stylobasium spathulatum</i>			Y		
Thymelaeaceae	<i>Pimelea ammocharis</i>		Y	Y		
Violaceae	<i>Hybanthus aurantiacus</i>		Y	Y		
Zygophyllaceae	<i>Tribulopis angustifolia</i>			Y		
	<i>Tribulopis marliesiae</i>	Priority 3	Y	Y		
	<i>Tribulus hirsutus</i>		Y	Y		

Appendix 7

Selected Inputs and Outputs of the Floristic Clustering Analysis



Table 1: List of species that were omitted or referred to other taxa for the floristic analysis.

Original Name	Status	Name Referred to for Analysis
<i>Abutilon aff. hannii</i>	Omitted; singleton record	NA
<i>Abutilon lepidum</i>	Omitted; singleton record	NA
<i>Abutilon macrum</i>	Omitted; singleton record	NA
<i>Abutilon</i> sp.	Omitted; singleton record	NA
<i>Acacia colei</i>	Likely to be var. <i>colei</i>	<i>Acacia colei</i> var. <i>colei</i>
<i>Acacia drepanocarpa</i> subsp. <i>latifolia</i>	Could be confused with subsp. <i>drepanocarpa</i>	<i>Acacia drepanocarpa</i> subsp. <i>drepanocarpa</i>
<i>Acacia tumida</i> var. <i>tumida</i>	Could be confused with var. <i>kulparn</i>	<i>Acacia tumida</i> var. <i>kulparn</i>
* <i>Aerva javanica</i>	Omitted; weed	NA
<i>Aristida holathera</i>	Likely to be var. <i>holathera</i>	<i>Aristida holathera</i> var. <i>holathera</i>
* <i>Bidens bipinnata</i>	Omitted; weed	NA
<i>Boerhavia</i> ? <i>gardneri</i>	Referred to species	<i>Boerhavia gardneri</i>
<i>Calandrinia quadrivalvis</i>	Likely to be <i>C. tepperiana</i>	<i>Calandrinia tepperiana</i>
<i>Calandrinia tepperiana</i>	Omitted; singleton record	NA
<i>Capparis umbonata</i>	Omitted; singleton record	NA
<i>Cassytha filiformis</i>	Could be confused with <i>C. capillaris</i>	<i>Cassytha capillaris</i>
* <i>Cenchrus ciliaris</i>	omitted from regional analysis; weed	NA
* <i>Cenchrus setiger</i>	omitted from regional analysis; weed	NA
<i>Chrysopogon pallidus</i>	Could be confused with <i>C. fallax</i>	<i>Chrysopogon fallax</i>
* <i>Citrullus colocynthis</i>	Omitted; weed	NA
<i>Cleome uncifera</i>	Likely to be subsp. <i>uncifera</i>	<i>Cleome uncifera</i> subsp. <i>uncifera</i>
<i>Clerodendrum floribundum</i>	Likely to be var. <i>angustifolium</i>	<i>Clerodendrum floribundum</i> var. <i>angustifolium</i>
<i>Clerodendrum tomentosum</i> var. <i>mollissima</i>	Not always identified to var.	<i>Clerodendrum tomentosum</i>
<i>Clerodendrum tomentosum</i> var. <i>tomentosum</i>		
<i>Corymbia hamersleyana</i>	May represent <i>C. greeniana</i>	<i>Corymbia greeniana</i>
<i>Corymbia</i> sp.	Omitted; may represent multiple species	NA
<i>Cuscuta victoriana</i>	Omitted; singleton record	NA
<i>Cymbopogon ambiguus</i>	Omitted; singleton record	NA
<i>Cymbopogon</i> sp.	Omitted; singleton record	NA
<i>Cynanchum pedunculatum</i>	Omitted; singleton record	NA
<i>Cyperus</i> sp.	Omitted; singleton record	NA
<i>Datura</i> ? <i>leichhardtii</i>	Omitted; singleton record	NA
<i>Denhamia cunninghamii</i>	Omitted; singleton record	NA
<i>Dolichandrone heterophylla</i>	Would refer to <i>D. occidentalis</i>	<i>Dolichandrone occidentalis</i>
<i>Duboisia hopwoodii</i>	Omitted; singleton record	NA

Original Name	Status	Name Referred to for Analysis
<i>Dysphania</i> sp.	Omitted; singleton record	NA
<i>Enchytraea tomentosa</i> var. <i>tomentosa</i>	Omitted; singleton record	NA
<i>Enneapogon</i> ? <i>purpurascens</i>	Referred to species	<i>Enneapogon purpurascens</i>
<i>Eragrostis cumingii</i>	Omitted; singleton record	NA
* <i>Eragrostis minor</i>	Omitted; weed	NA
<i>Eragrostis</i> sp.	Omitted; singleton record	NA
<i>Euphorbia</i> ? <i>albrechtii</i>	Omitted; singleton record	NA
<i>Euphorbia</i> sp.	Omitted; may represent multiple species	NA
<i>Fimbristylis ammobia</i>	Omitted; singleton record	NA
<i>Fimbristylis dichotoma</i>	Omitted; singleton record	NA
* <i>Flaveria trinervia</i>	Omitted; weed	NA
<i>Gardenia pyriformis</i>	Likely to be subsp. <i>keartlandii</i>	<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>
<i>Gomphrena canescens</i>	Omitted; singleton record	NA
<i>Goodenia microptera</i>	Omitted; singleton record	NA
<i>Goodenia sepalosa</i>	Likely to be var. <i>sepalosa</i>	<i>Goodenia sepalosa</i> var. <i>sepalosa</i>
<i>Goodenia stobbsiana</i>	<i>G. stobbsiana</i> and <i>G. scaevolina</i> are difficult to distinguish	<i>Goodenia scaevolina</i>
<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>	Not always identified to subsp.	<i>Grevillea pyramidalis</i>
<i>Grevillea pyramidalis</i> subsp. <i>pyramidalis</i>	Not always identified to subsp.	<i>Grevillea refracta</i>
<i>Grevillea refracta</i> subsp. <i>refracta</i>	Not always identified to subsp.	<i>Grevillea wickhamii</i>
<i>Grevillea wickhamii</i> subsp. <i>hispidula</i>	Not always identified to subsp.	<i>Grevillea wickhamii</i>
<i>Grevillea wickhamii</i> subsp. <i>macrodonta</i>	Not always identified to subsp.	NA
<i>Gymnanthera cunninghamii</i>	Omitted; singleton record	<i>Halgania solanacea</i>
<i>Halgania solanacea</i>	Likely to be var. <i>solanacea</i>	NA
<i>Heliotropium</i> ? <i>synaimon</i>	Omitted; singleton record	NA
<i>Heliotropium curassavicum</i>	Omitted; singleton record	NA
<i>Heliotropium</i> sp.	Omitted; may represent multiple species	NA
<i>Indigofera trita</i> subsp. <i>trita</i>	Omitted; singleton record	NA
<i>Ipomoea coptica</i>	Omitted; singleton record	NA
<i>Nauclea orientalis</i>	Omitted; singleton record	NA
<i>Panicum decompositum</i>	Likely to be var. <i>decompositum</i>	<i>Panicum decompositum</i> var. <i>decompositum</i>
* <i>Paspalum vaginatum</i>	Omitted; weed	NA
<i>Perotis rara</i>	Omitted; singleton record	NA
<i>Petalostylis labicheoides</i>	Omitted; singleton record	NA
<i>Polycarpaea corymbosa</i>	Likely to be var. <i>corymbosa</i>	<i>Polycarpaea corymbosa</i> var. <i>corymbosa</i>
<i>Polymeria ambigua</i>	Omitted; singleton record	NA

Original Name	Status	Name Referred to for Analysis
<i>Portulaca intraterranea</i>	Omitted; singleton record	NA
<i>Portulaca oleracea</i>	Omitted; singleton record	NA
<i>Pterocaulon</i> sp.	Omitted; may represent multiple species	NA
<i>Ptilotus lanatus</i>	Omitted; singleton record	NA
<i>Scaevola amblyanthera</i> var. <i>centralis</i>	Omitted; singleton record	NA
<i>Scaevola parvifolia</i> subsp. <i>parvifolia</i>	Not always identified to subsp.	<i>Scaevola parvifolia</i>
<i>Scaevola parvifolia</i> subsp. <i>pilbarae</i>		
<i>Senna</i> ? <i>glaucifolia</i>	Omitted; singleton record	NA
<i>Senna artemisioides</i> subsp. <i>helmsii</i>	Omitted; singleton record	NA
<i>Senna artemisioides</i> subsp. <i>oligophylla</i> x subsp. <i>helmsii</i>	Omitted; singleton record	NA
<i>Senna curvistyla</i>	Omitted; singleton record	NA
<i>Senna ferraria</i>	Omitted; singleton record	NA
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	Omitted; singleton record	NA
<i>Seringia elliptica</i>		
<i>Seringia exastia</i>	Difficult to distinguish <i>Seringia</i> species; records may refer to other taxa	<i>Seringia</i> sp.
<i>Seringia nephrosperma</i>		
<i>Setaria dielsii</i>	Omitted; singleton record	NA
* <i>Setaria verticillata</i>	Omitted; weed	NA
<i>Solanum horridum</i>	Omitted; singleton record	NA
<i>Sorghum plumosum</i>	Likely to be var. <i>plumosum</i>	<i>Sorghum plumosum</i> var. <i>plumosum</i>
<i>Stylobasium spathulatum</i>	Omitted; singleton record	NA
* <i>Stylosanthes hamata</i>	Omitted; weed	NA
<i>Tephrosia clementii</i>	Omitted; singleton record	NA
<i>Tephrosia rosea</i> var. Port Hedland (A.S. George 1114)	Omitted; singleton record	NA
<i>Tephrosia</i> sp. NW Eremaean (S. van Leeuwen et al. PBS)	Omitted; singleton record	NA
<i>Tephrosia virens</i>	Omitted; singleton record	NA
* <i>Trianthema portulacastrum</i>	Omitted; weed	NA
<i>Tribulopis angustifolia</i>	Omitted; singleton record	NA
<i>Trichodesma zeylanicum</i> var. <i>latisepalum</i>	Not always identified to var.	<i>Trichodesma zeylanicum</i>
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		
<i>Triraphis mollis</i>	Omitted; singleton record	NA
<i>Wrightia saligna</i>	Omitted; singleton record	NA
<i>Yakirra australiensis</i>	Likely to be var. <i>australiensis</i>	<i>Yakirra australiensis</i> var. <i>australiensis</i>

Species	AH01	AH02	AH03	AH04	AH05	AH06	AH07	AH08	AH09	AH10	AH11	AH12	AH13	AH14	AH15	AH16	AH17	AH18	AH19	AH20	AH21	AH22	AH23	AH24	AH25	AH26	AH27
<i>Cleome uncifera</i> subsp. <i>uncifera</i>						0.1					0.1	0.1		0.1									0.1	0.1	0.1	0.1	
<i>Cleome viscosa</i>						0.1					0.1	0.1	0.1			0.1		0.1									0.1
<i>Clerodendrum floribundum</i> var. <i>angustifolium</i>																											
<i>Clerodendrum tomentosum</i>											0.1		0.1	0.1			0.1										
<i>Codonocarpus cotinifolius</i>											0.1		0.1	0.1													0.1
<i>Commicarpus australis</i>																											
<i>Corchorus incanus</i> subsp. <i>incanus</i>																											
<i>Corchorus parviflorus</i>																											
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1					0.1	0.1					0.1	0.1				0.1	0.1	0.1		0.1						
<i>Corchorus tridens</i>																											
<i>Corymbia flavescens</i>																											
<i>Corymbia greeniana</i>						0.1											3	0.1	2	4							
<i>Corymbia zygophylla</i>	5											0.1															
<i>Corynotheca micrantha</i> var. <i>gracilis</i>																											
<i>Crotalaria aridicola</i> subsp. <i>densifolia</i>																											
<i>Crotalaria cunninghamii</i> subsp. <i>cunninghamii</i>																											
<i>Crotalaria medicaginea</i> var. <i>neglecta</i>																											
<i>Crotalaria ramosissima</i>																											
<i>Croton aridus</i>																											
<i>Cucumis melo</i>																											
<i>Cucumis variabilis</i>	0.1															0.1									0.1		0.1
<i>Cullen corallum</i>									0.1													0.5					
<i>Cullen martinii</i>	0.1																										
<i>Cyanostegia cyanocalyx</i>																						1	0.1	3	0.1		
<i>Cymbopogon obtectus</i>																											
<i>Cynanchum carnosum</i>																											
<i>Cyperus ? cunninghamii</i>																											0.1
<i>Cyperus bulbosus</i>																											
<i>Cyperus conicus</i>																		0.1				0.1					
<i>Dactyloctenium radulans</i>																											
<i>Dampiera candicans</i>	0.1					0.1											0.1	0.1	0.1			1	2	1	0.1		
<i>Dampiera cinerea</i>																0.1											
<i>Dicrastylis cordifolia</i>																											
<i>Dicrastylis doranii</i>																							2	2			
<i>Digitaria brownii</i>	0.1						0.1				0.1					0.1											
<i>Dodonaea coriacea</i>									0.1		0.1					0.1					0.1	0.1			0.1		
<i>Dodonaea hispidula</i> var. <i>arida</i>									0.1									2									0.1
<i>Dolichandrone occidentalis</i>																											
<i>Dysphania plantaginella</i>																											
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>																0.1											
<i>Ehretia saligna</i>																											
<i>Enneapogon purpurascens</i>																	0.1	0.5	0.1		0.1	0.1	0.1	0.1	0.1	0.1	
<i>Eragrostis eriopoda</i>	0.1								0.1							0.1											
<i>Eragrostis falcata</i>																											
<i>Eriachne aristidea</i>																											
<i>Eriachne avenacea</i>																											
<i>Eriachne ciliata</i>									0.1		0.1																0.1
<i>Eriachne helmsii</i>																											
<i>Eriachne lanata</i>	0.1	2	0.1	0.1			0.1						0.1		0.1		0.1								0.1	0.1	0.1
<i>Eriachne mucronata</i>																											
<i>Eriachne obtusa</i>	0.1	0.1				0.1	0.1	0.1			0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1								0.1
<i>Eriachne pulchella</i>	0.1										0.1																

Species	AH01	AH02	AH03	AH04	AH05	AH06	AH07	AH08	AH09	AH10	AH11	AH12	AH13	AH14	AH15	AH16	AH17	AH18	AH19	AH20	AH21	AH22	AH23	AH24	AH25	AH26	AH27		
<i>Euphorbia trigonosperma</i>																													
<i>Euphorbia vaccaria</i> var. <i>vaccaria</i>																													
<i>Euphorbia</i> ? <i>wheeleri</i>																													
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1					0.1		0.1					0.1				0.1												
<i>Evolvulus alsinoides</i> var. <i>vilosocalyx</i>																		0.1											
<i>Ficus brachypoda</i>																											4		
<i>Fimbristylis ferruginea</i>																													
<i>Fimbristylis oxystachya</i>		0.1														0.1													
<i>Fimbristylis simulans</i>		0.1		0.1		0.1		0.1		0.1					0.1	0.1	0.1	0.1	2	0.1					0.1				
<i>Frankenia ambita</i>																													
<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>	0.1					1		0.1		1															0.5	0.1	0.5		
<i>Gompholobium polyzygum</i>																													
<i>Gompholobium simplicifolium</i>		0.1					0.1			0.1			0.1								3	0.1	1.5	9		0.1			
<i>Gomphrena cunninghamii</i>																0.1											0.1		
<i>Gomphrena lanata</i>									0.1			0.1						0.1											
<i>Goodenia armitiana</i>	0.1					0.1					0.1	0.1						0.1								0.1	0.1		
<i>Goodenia azurea</i> subsp. <i>hesperia</i>		0.1				0.1			0.1	0.1				0.1				0.1				0.1			0.1	2			
<i>Goodenia scaevolina</i>		0.1		0.1	0.1											0.1		0.1	0.1	0.1									
<i>Goodenia sepalosa</i> var. <i>sepalosa</i>																													
<i>Goodenia triodiophila</i>								0.1																					
<i>Gossypium australe</i>																0.1		0.1											
<i>Grevillea eriostachya</i>																					1	0.1	0.1	0.1		1			
<i>Grevillea pyramidalis</i>																0.1													
<i>Grevillea refracta</i>	0.1	0.1		0.1	0.1					0.1	0.1	0.1						2	4	0.5	0.1	0.1		2	0.1				
<i>Grevillea stenobotrya</i>																										1.5			
<i>Grevillea wickhamii</i>		0.1														0.1	0.1	0.1	0.1	0.1	0.1	0.1	1	0.5			0.1		
<i>Grewia retusifolia</i>																													
<i>Gyrostemon tepperi</i>	0.1	0.1				0.1	0.1									0.1						0.1			0.1	0.1			
<i>Hakea chordophylla</i>																	0.1												
<i>Hakea macrocarpa</i>																										0.1			
<i>Halgnania solanacea</i> var. <i>solanacea</i>	0.1	0.1	0.1	0.1	0.1	0.1				0.1	0.1		0.1	0.1				0.1	0.1	0.1									
<i>Heliotropium foliatum</i>																													
<i>Heliotropium glabellum</i>							0.1										0.1		0.1										
<i>Heliotropium glanduliferum</i>																													
<i>Heliotropium leptaleum</i>							0.1																						
<i>Heliotropium pachyphyllum</i>	0.1														0.1		0.1	0.1	3										
<i>Heliotropium paniculatum</i>							0.1		0.1																0.1				
<i>Heliotropium transforme</i>							0.1		0.1																0.1				
<i>Heliotropium vestitum</i>																													
<i>Hibiscus apodus</i>																													
<i>Hibiscus leptocladus</i>	0.1						0.1								0.1			0.1								0.1			
<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>																		0.1											
<i>Hybanthus aurantiacus</i>	0.1	0.1			0.1					0.1								0.1		0.1	0.1	0.1							
<i>Indigofera ammobia</i>																													
<i>Indigofera boviperda</i> subsp. <i>eremaea</i>																													
<i>Indigofera colutea</i>																													
<i>Indigofera linifolia</i>																													
<i>Indigofera linnaei</i>																													
<i>Indigofera monophylla</i>	0.1				0.1					0.1			0.1			0.1	0.1	0.1											

Species	AH01	AH02	AH03	AH04	AH05	AH06	AH07	AH08	AH09	AH10	AH11	AH12	AH13	AH14	AH15	AH16	AH17	AH18	AH19	AH20	AH21	AH22	AH23	AH24	AH25	AH26	AH27		
<i>Leptosema anomalam</i>			0.1			0.1		0.1										0.1											
<i>Melaleuca alsophila</i>																													
<i>Melaleuca glomerata</i>																													
<i>Melaleuca lasiandra</i>																													
<i>Melaleuca leucadendra</i>																													
<i>Melhania oblongifolia</i>																													
<i>Mirbelia viminalis</i>																	0.1												
<i>Mitrasacme connata</i>																													
<i>Muellerolimon salicorniaceum</i>																													
<i>Myoporum montanum</i>																													
<i>Neobassia astrocarpa</i>																													
<i>Newcastelia cladotricha</i>																										0.5	0.1		
<i>Newcastelia spodiotricha</i>																													
<i>Nicotiana benthamiana</i>																													
<i>Oldenlandia crouchiana</i>								0.1																				0.1	
<i>Oldenlandia mitrasacmoides</i> subsp. <i>mitrasacmoides</i>															0.1														
<i>Oldenlandia pterospora</i>	0.1																0.1								0.1	0.1	0.1		
<i>Orianthera centralis</i>																													
<i>Owenia reticulata</i>			2			0.5		1			1			2											0.1	1			
<i>Panicum decompositum</i> var. <i>decompositum</i>																													
<i>Panicum effusum</i>																													
<i>Paractaenum refractum</i>																										0.1			
<i>Paraneurachne muelleri</i>									0.1						0.1		0.1	0.1											
<i>Paspalidium rarum</i>									0.1						0.1		0.1												
<i>Paspalidium tabulatum</i>																										0.1			
<i>Persoonia falcata</i>																													
<i>Phyllanthus eremicus</i>															0.1		0.1									0.1			
<i>Phyllanthus maderaspatensis</i>																													
<i>Pimelea ammocharis</i>																										0.1			
<i>Pluchea ferdinandi-muelleri</i>																													
<i>Pluchea longiseta</i>																													
<i>Pluchea rubelliflora</i>																													
<i>Pluchea tetrantha</i>																													
<i>Polycarphaea corymbosa</i> var. <i>corymbosa</i>	0.1		0.1			0.1	0.1	0.1	0.1		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1							0.1		
<i>Polycarphaea holtzei</i>		0.1				0.1								0.1															
<i>Polycarphaea longiflora</i>																										0.1			
<i>Polygala glaucifolia</i>														0.1															
<i>Polygala isingii</i>								0.1		0.1																0.1	0.1	0.1	
<i>Polygala tepperi</i>																													
<i>Polymeria</i> ? sp. Broome (K.F. Kenneally 9759)						0.1																							
<i>Portulaca aff. australis</i>																													
<i>Portulaca bicolor</i>																													
<i>Portulaca filifolia</i>																										0.1			
<i>Pterocaulon serrulatum</i> var. <i>velutinum</i>																												1	
<i>Pterocaulon sphacelatum</i>																													
<i>Ptilotus arthrolasioides</i>	0.1							0.1						0.1		0.1								0.1	0.1	0.1	0.1		
<i>Ptilotus astrolasioides</i>	0.1		0.1	0.1		0.1		0.1						0.1	0.1	0.1	0.1		0.1	0.1						0.1	0.1		
<i>Ptilotus axillaris</i>																													
<i>Ptilotus calostachyus</i>	0.1	0.1		0.1	0.1			0.1	0.1	0.1			0.1		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
<i>Ptilotus decalvatus</i>																													
<i>Ptilotus exaltatus</i>		</																											

Species	AH01	AH02	AH03	AH04	AH05	AH06	AH07	AH08	AH09	AH10	AH11	AH12	AH13	AH14	AH15	AH16	AH17	AH18	AH19	AH20	AH21	AH22	AH23	AH24	AH25	AH26	AH27
<i>Scaevola crassifolia</i>																											
<i>Scaevola parvifolia</i>			0.1			0.1		0.1			0.1			0.1											0.1		
<i>Scaevola spinescens</i>																											
<i>Schizachyrium fragile</i>	0.1																										
<i>Schoenoplectus subulatus</i>																											
<i>Schoenus falcatus</i>																											
<i>Senna notabilis</i>																0.1			0.1								0.1
<i>Senna oligoclada</i>																											
<i>Senna venusta</i>																											
<i>Seringia</i> sp.		0.1	0.1	0.1								0.1				0.1									0.1	0.1	
<i>Sesbania formosa</i>																											
<i>Sesuvium portulacastrum</i>																											
<i>Setaria surgens</i>	0.1		0.1			0.1		0.1			0.1	0.1	0.1	0.1		0.1		0.1	0.1							0.1	0.1
<i>Sida arenicola</i>						0.1		0.1																			
<i>Sida fibulifera</i>																											
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)																			0.1								
<i>Sida</i> sp. Pindan (B.G. Thomson 3398)	0.1		0.1			0.1												0.1								0.1	
<i>Sida</i> sp. Western sand dunes (P.K. Latz 11980)																										0.1	
<i>Solanum cunninghamii</i>																											
<i>Solanum dioicum</i>								0.1								0.1		0.1	0.1								3
<i>Solanum diversiflorum</i>	0.1					0.1										0.1		0.1	0.1							0.1	
<i>Solanum esuriale</i>																											
<i>Solanum oligandrum</i>																											
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1		2			0.1	0.1	0.1			0.1	3						2							0.1	0.1	0.1
<i>Spermacoce hillii</i>																											
<i>Spermacoce occidentalis</i>																										0.1	
<i>Spinifex longifolius</i>																											
<i>Sporobolus australasicus</i>																											
<i>Sporobolus virginicus</i>																											
<i>Stackhousia intermedia</i>																											
<i>Stemodia grossa</i>																											
<i>Streptoglossa bubakii</i>																											
<i>Streptoglossa decurrens</i>																											
<i>Streptoglossa macrocephala</i>								0.1																			
<i>Streptoglossa odora</i>								0.1		0.1								0.1									
<i>Striga curviflora</i>								0.1		0.1									0.1								
<i>Surreya diandra</i>																											
<i>Tecticornia auriculata</i>																											
<i>Tecticornia halocnemoides</i>																											
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>																											
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>																											
<i>Tecticornia halocnemoides</i> subsp. aff. <i>tenuis</i>																											
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>																											
<i>Tecticornia</i> sp.																											
<i>Tephrosia andrewii</i>																											
<i>Tephrosia leptoclada</i>																			0.1								
<i>Tephrosia rosea</i> var. <i>clementii</i>	0.1					0.1										0.1		0.1	0.1								
<i>Tephrosia rosea</i> var. <i>rosea</i>								0.1									0.1										
<i>Tephrosia simplicifolia</i>																											
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)						0.1										0.1		0.1	0.1								
<i>Tephrosia</i> sp. D Kimberley Flora (R.D. Royce 1848)			0.1													0.1										0.1	
<i>Tephrosia supina</i>																											
<i>Terminalia kumpaja</i>																										0.5	
<i>Thinicola incana</i>																											
<i>Threlkeldia diffusa</i>																											
<i>Tinospora smilacina</i>																0.1		0.1	0.1						0.1	0.1	
<i>Trachymene oleracea</i> subsp. <i>oleracea</i>																											
<i>Trianthema cusackianum</i>																											
<i>Trianthema pilosum</i>	0.1		0.1					0.1	0.1			0.1	0.1		2			0.1					0.1	0.1	0.1		

Table 2: PRIMER input matrix. NB: AH prefix = site:

Species	AH28	AH29	AH30	AH31	AH32	AH33	AH34	AH35	AH36	AH37	AH38	AH39	AH40	AH41	AH42	AH43	AH44	AH45	AH46	AH47	AH48	AH49	AH50	AH51	AH52	AH53	AH54	
<i>Cleome uncifera</i> subsp. <i>uncifera</i>							0.1	0.1			0.1		0.1								0.1							
<i>Cleome viscosa</i>											0.1	0.1	0.1		0.1	0.1						0.1					0.1	
<i>Clerodendrum floribundum</i> var. <i>angustifolium</i>																												
<i>Clerodendrum tomentosum</i>		0.1				0.1																						
<i>Codonocarpus cotinifolius</i>											0.1		0.1						0.1		0.1			0.1			0.1	
<i>Commicarpus australis</i>																												
<i>Corchorus incanus</i> subsp. <i>incanus</i>																												
<i>Corchorus parviflorus</i>																												
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	0.1		0.1			1	0.1	0.1	0.1		0.1									0.1	0.1						0.1	
<i>Corchorus tridens</i>																												
<i>Corymbia flavescens</i>																6	2											
<i>Corymbia greeniana</i>																												
<i>Corymbia zygophylla</i>	2.5					5	1													0.1								
<i>Corynotheca micrantha</i> var. <i>gracilis</i>		0.1		0.1			0.1	0.1																				
<i>Crotalaria aridicola</i> subsp. <i>densifolia</i>																												
<i>Crotalaria cunninghamii</i> subsp. <i>cunninghamii</i>			0.1																									
<i>Crotalaria medicaginea</i> var. <i>neglecta</i>																												
<i>Crotalaria ramosissima</i>																				0.1								
<i>Croton aridus</i>																												
<i>Cucumis melo</i>																												
<i>Cucumis variabilis</i>	0.1															0.1				0.1	0.1				0.1			
<i>Cullen corallum</i>																												
<i>Cullen martinii</i>										0.1										0.1						0.1		
<i>Cyanostegia cyanocalyx</i>				0.1	0.1	0.1	1	2						0.1													0.1	
<i>Cymbopogon obtectus</i>														0.1													0.1	
<i>Cynanchum carnosum</i>																												
<i>Cyperus ? cunninghamii</i>																												
<i>Cyperus bulbosus</i>																												
<i>Cyperus conicus</i>																												
<i>Dactyloctenium radulans</i>																												
<i>Dampiera candicans</i>															0.1	0.1												
<i>Dampiera cinerea</i>	1	2		0.1	0.1	8	0.1	0.1																				
<i>Dicrastylis cordifolia</i>																												
<i>Dicrastylis doranii</i>	0.1	1.5	4	4	1				5																			
<i>Digitaria brownii</i>												0.1	0.1	0.1	0.1						0.1		0.1				0.1	
<i>Dodonaea coriacea</i>												0.1												0.1		0.1	0.1	
<i>Dodonaea hispidula</i> var. <i>arida</i>													0.1															
<i>Dolichandrone occidentalis</i>																												
<i>Dysphania plantaginella</i>																												
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>																					0.1							
<i>Ehretia saligna</i>																												
<i>Enneapogon purpurascens</i>							0.1	0.1	2	1	1	0.1	0.1	0.1								0.1	0.1			0.1		
<i>Eragrostis eriopoda</i>	0.1																											
<i>Eragrostis falcata</i>																												
<i>Eriachne aristidea</i>	0.1			2	0.1	0.1	0.1																					
<i>Eriachne avenacea</i>																												
<i>Eriachne ciliata</i>													0.1	0.1	0.1	0.1									0.1	0.1	0.1	
<i>Eriachne helmsii</i>																												
<i>Eriachne lanata</i>						2					0.1	0.5		0.1		0.5		0.1	1	0.1							0.1	0.1
<i>Eriachne mucronata</i>																												
<i>Eriachne obtusa</i>						1.5					5	0.1	0.1							0.1	0.1	0.1	1	0.1				

Species	AH28	AH29	AH30	AH31	AH32	AH33	AH34	AH35	AH36	AH37	AH38	AH39	AH40	AH41	AH42	AH43	AH44	AH45	AH46	AH47	AH48	AH49	AH50	AH51	AH52	AH53	AH54			
<i>Euphorbia trigonosperma</i>																														
<i>Euphorbia vaccaria</i> var. <i>vaccaria</i>																														
<i>Euphorbia</i> ? <i>wheeleri</i>																														
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>		0.1									0.1									0.1	0.1									
<i>Evolvulus alsinoides</i> var. <i>vilosocalyx</i>																														
<i>Ficus brachypoda</i>																														
<i>Fimbristylis ferruginea</i>																														
<i>Fimbristylis oxystachya</i>								0.1																						
<i>Fimbristylis simulans</i>											0.1			0.1	0.1	0.1		1	0.1	0.1						0.1				
<i>Frankenia ambita</i>																														
<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>			0.5		0.1									0.1			0.1	0.1								0.1	0.1			
<i>Gompholobium polyzygum</i>																														
<i>Gompholobium simplicifolium</i>	1	4			2	1	0.1	0.1																						
<i>Gomphrena cunninghamii</i>																														
<i>Gomphrena lanata</i>																														
<i>Goodenia armitiana</i>			0.1				0.1			0.1	0.1	0.1				0.1			0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
<i>Goodenia azurea</i> subsp. <i>hesperia</i>		0.1	0.1								0.1		0.1						0.1	0.1			0.1		0.1	0.1	0.1			
<i>Goodenia scaevolina</i>																														
<i>Goodenia sepalosa</i> var. <i>sepalosa</i>																														
<i>Goodenia triodiophila</i>		0.1											0.1																	
<i>Gossypium australe</i>																														
<i>Grevillea eriostachya</i>	0.1		0.1	0.1	0.1	0.1	0.1	0.1																						
<i>Grevillea pyramidalis</i>													0.1	0.1			0.1	1	0.1	3						0.5				
<i>Grevillea refracta</i>														1	0.1	0.1	0.1			0.1	0.1	1	1	0.1	6	0.1	0.1	6	8	
<i>Grevillea stenobotrya</i>													0.5																	
<i>Grevillea wickhamii</i>	0.1	0.1	0.1	2	0.1	0.1	1	0.1	0.1	0.1	2	0.1											3	0.1		0.5	15			
<i>Grewia retusifolia</i>																														
<i>Gyrostemon tepperi</i>							0.1			0.1	0.1	0.1													0.1					
<i>Hakea chordophylla</i>																														
<i>Hakea macrocarpa</i>																														
<i>Halgania solanacea</i> var. <i>solanacea</i>	0.1		0.1			0.1													0.1	0.1										
<i>Heliotropium foliatum</i>																														
<i>Heliotropium glabellum</i>																														
<i>Heliotropium glanduliferum</i>																														
<i>Heliotropium leptaleum</i>																											0.1			
<i>Heliotropium pachyphyllum</i>																														
<i>Heliotropium paniculatum</i>																														
<i>Heliotropium transforme</i>							0.1																							
<i>Heliotropium vestitum</i>																														
<i>Hibiscus apodus</i>																														
<i>Hibiscus leptocladus</i>											0.1		0.1	0.1	0.1		0.1			0.1	0.1					0.1				
<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>												0.1																		
<i>Hybanthus aurantiacus</i>																0.1														
<i>Indigofera ammobia</i>							0.1					0.1																		
<i>Indigofera boviperda</i> subsp. <i>eremaea</i>	0.1					0.1		0.1																						
<i>Indigofera colutea</i>																														
<i>Indigofera linifolia</i>																														
<i>Indigofera linnaei</i>																														
<i>Indigofera monophylla</i>														0.1	0.1															
<i>Ipomoea muelleri</i>		</td																												

Species	AH28	AH29	AH30	AH31	AH32	AH33	AH34	AH35	AH36	AH37	AH38	AH39	AH40	AH41	AH42	AH43	AH44	AH45	AH46	AH47	AH48	AH49	AH50	AH51	AH52	AH53	AH54			
<i>Scaevola crassifolia</i>																														
<i>Scaevola parvifolia</i>	0.1	0.1							0.1																					
<i>Scaevola spinescens</i>																														
<i>Schizachyrium fragile</i>																											0.1			
<i>Schoenoplectus subulatus</i>																														
<i>Schoenus falcatus</i>																														
<i>Senna notabilis</i>						0.1					0.1							0.1			0.1	0.1				0.1				
<i>Senna oligoclada</i>																														
<i>Senna venusta</i>																														
<i>Seringia</i> sp.	0.1		0.1															0.1	0.1		0.1									
<i>Sesbania formosa</i>																														
<i>Sesuvium portulacastrum</i>																														
<i>Setaria surgens</i>	0.1			0.1														0.1	0.1		0.1	0.1	0.1			0.1				
<i>Sida arenicola</i>									0.1		0.1	0.1	0.1													0.1	0.1			
<i>Sida fibulifera</i>																														
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)												0.1																		
<i>Sida</i> sp. Pindan (B.G. Thomson 3398)							0.1	0.1																						
<i>Sida</i> sp. Western sand dunes (P.K. Latz 11980)			1						0.1																					
<i>Solanum cunninghamii</i>																														
<i>Solanum dioicum</i>												0.1															0.1	0.1	0.1	
<i>Solanum diversiflorum</i>											0.1							0.1												
<i>Solanum esuriale</i>																														
<i>Solanum oligandrum</i>																														
<i>Sorghum plumosum</i> var. <i>plumosum</i>	0.1								0.1	0.5	0.1	2	1				0.1	0.1	0.1	2	0.1	4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
<i>Spermacoce hillii</i>						0.1																								
<i>Spermacoce occidentalis</i>			0.1				0.1	5																						
<i>Spinifex longifolius</i>																														
<i>Sporobolus australasicus</i>																														
<i>Sporobolus virginicus</i>																														
<i>Stackhousia intermedia</i>																														
<i>Stemodia grossa</i>																														
<i>Streptoglossa bubakii</i>																														
<i>Streptoglossa decurrens</i>																			0.1											
<i>Streptoglossa macrocephala</i>																			0.1											
<i>Streptoglossa odora</i>																														
<i>Striga curviflora</i>												0.1	0.1																	
<i>Surreya diandra</i>																														
<i>Tecticornia auriculata</i>																														
<i>Tecticornia halocnemoides</i>																														
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>																														
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>																														
<i>Tecticornia halocnemoides</i> subsp. aff. <i>tenuis</i>																														
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>																														
<i>Tecticornia</i> sp.																														
<i>Tephrosia andrewii</i>																														
<i>Tephrosia leptoclada</i>																														
<i>Tephrosia rosea</i> var. <i>clementii</i>																														1
<i>Tephrosia rosea</i> var. <i>rosea</i>																														
<i>Tephrosia simplicifolia</i>												0.1	0.1					0.1												
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)												0.1	0.1						0.1									0.1		

Table 2: PRIMER input matrix. NB: AH prefix = site:

Species	AH55	AH56	AH60	AH61	AH62	AH63	AH64	AH65	AH66	AH67	AH68	AH69	AH70	AH71	AH72	AH73	AH74	AH75	AH76	AH77	AH78	AH79	AH80	AH81	AH82	AH83	AH84	
<i>Scaevola crassifolia</i>																												
<i>Scaevola parvifolia</i>									0.1															0.1			0.1	
<i>Scaevola spinescens</i>						0.1																						
<i>Schizachyrium fragile</i>																												
<i>Schoenoplectus subulatus</i>																												
<i>Schoenus falcatus</i>																												
<i>Senna notabilis</i>						0.1				0.1																0.1		
<i>Senna oligoclada</i>																												
<i>Senna venusta</i>									0.1																			
<i>Seringia</i> sp.															0.1										0.1	0.1		
<i>Sesbania formosa</i>																												
<i>Sesuvium portulacastrum</i>																												
<i>Setaria surgens</i>																			0.1									
<i>Sida arenicola</i>	0.1										0.1													0.1				
<i>Sida fibulifera</i>																												
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)									0.1																			
<i>Sida</i> sp. Pindan (B.G. Thomson 3398)	0.1							0.1												0.1	0.1				0.1	0.1		
<i>Sida</i> sp. Western sand dunes (P.K. Latz 11980)																0.1												
<i>Solanum cunninghamii</i>																												
<i>Solanum dioicum</i>		0.1																										
<i>Solanum diversiflorum</i>											0.1																	
<i>Solanum esuriale</i>			0.1		4																							
<i>Solanum oligandrum</i>																												
<i>Sorghum plumosum</i> var. <i>plumosum</i>	1	0.1					1				9					0.1		1						0.1	1			
<i>Spermacoce hillii</i>								0.1									1							0.1	0.1		0.1	0.1
<i>Spermacoce occidentalis</i>																												
<i>Spinifex longifolius</i>																												
<i>Sporobolus australasicus</i>						0.1																						
<i>Sporobolus virginicus</i>																												
<i>Stackhousia intermedia</i>																												
<i>Stemodia grossa</i>																												
<i>Streptoglossa bubakii</i>																												
<i>Streptoglossa decurrens</i>																												
<i>Streptoglossa macrocephala</i>																												
<i>Streptoglossa odora</i>																												
<i>Striga curviflora</i>																												
<i>Surreya diandra</i>																												
<i>Tecticornia auriculata</i>																												
<i>Tecticornia halocnemoides</i>																												
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>																												
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>																												
<i>Tecticornia halocnemoides</i> subsp. aff. <i>tenuis</i>																												
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>																												
<i>Tecticornia</i> sp.																												
<i>Tephrosia andrewii</i>																												
<i>Tephrosia leptoclada</i>																												
<i>Tephrosia rosea</i> var. <i>clementii</i>								0.1							0.1													
<i>Tephrosia rosea</i> var. <i>rosea</i>											0.1																	
<i>Tephrosia simplicifolia</i>	0.1										0.1																	
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)																												
<i>Tephrosia</i> sp. D Kimberley Flora (R.D. Royce 1848)	0.1																	0.1										
<i>Tephrosia supina</i>																												
<i>Terminalia kumpaja</i>															0.5													
<i>Thinicola incana</i>																									0.1			
<i>Threlkeldia diffusa</i>							0.1																					
<i>Tinospora smilacina</i>	0.1				0.1				0.1									0.1						0.1	0.1			
<i>Trachymene oleracea</i> subsp. <i>oleracea</i>							0.1																					
<i>Trianthema cusackianum</i>																												
<i>Trianthema pilosum</i>	0.1					0.1			0.1				0.1				0.1					0.1	0.1	0.1	0.1			

Table 2: PRIMER input matrix. NB: AH prefix = site:

Species	AH85	AH86	AH87	AH88	AH89	AH90	AH91	AH92	AH93	AH94	AH95	AH96	AH97	AH98	AH99	AH100	AH101	AH102	AH-REL01	AH-REL02	AH-REL03	AH-REL05	AH-REL06	
<i>Cleome uncifera</i> subsp. <i>uncifera</i>				0.1	0.1			0.1				0.1	0.1	0.1	0.1		0.1				0.1			
<i>Cleome viscosa</i>					0.1	0.1							0.1	0.1	0.1				0.1			0.1		
<i>Clerodendrum floribundum</i> var. <i>angustifolium</i>						0.1																		
<i>Clerodendrum tomentosum</i>							0.1																	
<i>Codonocarpus cotinifolius</i>	0.1		0.1			0.1		0.1																
<i>Commicarpus australis</i>																		0.1						
<i>Corchorus incanus</i> subsp. <i>incanus</i>														3	4									
<i>Corchorus parviflorus</i>																								
<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>						0.1		0.1					0.1			0.1				0.1	0.1			
<i>Corchorus tridens</i>							0.1		0.1															
<i>Corymbia flavescens</i>																								
<i>Corymbia greeniana</i>						5		1												1				
<i>Corymbia zygophylla</i>	3												0.1	1	0.1									
<i>Corynotheca micrantha</i> var. <i>gracilis</i>												0.1												
<i>Crotalaria aridicola</i> subsp. <i>densifolia</i>																								
<i>Crotalaria cunninghamii</i> subsp. <i>cunninghamii</i>																								
<i>Crotalaria medicaginea</i> var. <i>neglecta</i>							0.1		0.1															
<i>Crotalaria ramosissima</i>													0.1		0.1									
<i>Croton aridus</i>	0.1		3																					
<i>Cucumis melo</i>																								
<i>Cucumis variabilis</i>				0.1	0.1		0.1		0.1					0.1	0.1	0.1		0.1	0.1	0.1	0.1			
<i>Cullen corallum</i>														0.1	0.1	0.1								
<i>Cullen martinii</i>																								
<i>Cyanostegia cyanocalyx</i>	2																							
<i>Cymbopogon obtectus</i>																								
<i>Cynanchum carnosum</i>																								
<i>Cyperus ? cunninghamii</i>																		0.1	0.1					
<i>Cyperus bulbosus</i>																								
<i>Cyperus conicus</i>																								
<i>Dactyloctenium radulans</i>																								
<i>Dampiera candicans</i>	0.1		0.1			0.1		0.1													0.1			
<i>Dampiera cinerea</i>	2	0.1																						
<i>Dicrastylis cordifolia</i>	0.5		0.1	0.1		0.1																		
<i>Dicrastylis doranii</i>	1		0.1																					
<i>Digitaria brownii</i>							0.1				0.1									0.1				
<i>Dodonaea coriacea</i>												0.1								2				
<i>Dodonaea hispidula</i> var. <i>arida</i>												0.5									0.1			
<i>Dolichandrone occidentalis</i>																								
<i>Dysphania plantaginella</i>																			0.1					
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>																								
<i>Ehretia saligna</i>																								
<i>Enneapogon purpurascens</i>																								
<i>Eragrostis eriopoda</i>	0.1	0.1	0.1	0.1			1		0.1				0.1	0.1	0.1						0.1			
<i>Eragrostis falcata</i>																								
<i>Eriachne aristidea</i>			1		0.1		0.1		0.1															
<i>Eriachne avenacea</i>																								
<i>Eriachne ciliata</i>																			0.1		0.1			
<i>Eriachne helmsii</i>	0.1																							
<i>Eriachne lanata</i>											2									0.1				
<i>Eriachne mucronata</i>																				0.1				
<i>Eriachne obtusa</i>	0.1		0.1	1		1		0.1				0.1		1		0.1			0.1	0.1		0.1		
<i>Eriachne pulchella</i>																				0.1				
<i>Erythrophleum chlorostachys</i>	0.5	0.1	0.1	3						1			2		2	0.5				11	0.1			
<i>Eulalia aurea</i>										8														
<i>Euphorbia australis</i> var. <i>subtomentosa</i>																						0.1		
<i>Euphorbia hassallii</i>																								
<i>Euphorbia myrtoides</i>																								
<i>Euphorbia ? myrtoides</i>																								
<i>Euphorbia psilosperma</i>													0.1		0.1					</				

Species	AH85	AH86	AH87	AH88	AH89	AH90	AH91	AH92	AH93	AH94	AH95	AH96	AH97	AH98	AH99	AH100	AH101	AH102	AH-REL01	AH-REL02	AH-REL03	AH-REL05	AH-REL06	
<i>Leptosema anomalam</i>									0.1		0.1			0.1										
<i>Melaleuca alsophila</i>												5												
<i>Melaleuca glomerata</i>																								
<i>Melaleuca lasiandra</i>												6												
<i>Melaleuca leucadendra</i>																								
<i>Melhania oblongifolia</i>									0.1					0.1										
<i>Mirbelia viminalis</i>																								
<i>Mitrasacme connata</i>																								
<i>Muellerolimon salicorniaceum</i>																								
<i>Myoporum montanum</i>																								
<i>Neobassia astrocarpa</i>										0.1														
<i>Newcastelia cladotricha</i>	0.5		0.1															0.1	3					
<i>Newcastelia spodiotricha</i>			0.1																					
<i>Nicotiana benthamiana</i>																								
<i>Oldenlandia crouchiana</i>																								
<i>Oldenlandia mitrasacmoides</i> subsp. <i>mitrasacmoides</i>																								
<i>Oldenlandia pterospora</i>																					0.1			
<i>Orianthera centralis</i>																								
<i>Owenia reticulata</i>		2		0.5																				
<i>Panicum decompositum</i> var. <i>decompositum</i>									0.1	0.1	0.1													
<i>Panicum effusum</i>																								
<i>Paractaenum refractum</i>																								
<i>Paraneurachne muelleri</i>		0.1							0.1															
<i>Paspalidium rarum</i>									2												0.5			
<i>Paspalidium tabulatum</i>																			0.1	0.1				
<i>Persoonia falcata</i>																								
<i>Phyllanthus eremicus</i>		0.1																			0.1			
<i>Phyllanthus maderaspatensis</i>									0.1															
<i>Pimelea ammocharis</i>																								
<i>Pluchea ferdinandi-muelleri</i>																								
<i>Pluchea longiseta</i>																								
<i>Pluchea rubelliflora</i>																								
<i>Pluchea tetrantha</i>																								
<i>Polycarphaea corymbosa</i> var. <i>corymbosa</i>									0.1									0.1			0.1			
<i>Polycarphaea holtzei</i>																				0.1				
<i>Polycarphaea longiflora</i>																								
<i>Polygala glaucifolia</i>										0.1								0.1		0.1				
<i>Polygala isingii</i>																		0.1		0.1				
<i>Polygala tepperi</i>																								
<i>Polymeria</i> ? sp. Broome (K.F. Kenneally 9759)																								
<i>Portulaca aff. australis</i>									0.1			0.1												
<i>Portulaca bicolor</i>																		0.1	0.1					
<i>Portulaca filifolia</i>									0.1										0.1					
<i>Pterocaulon serrulatum</i> var. <i>velutinum</i>										0.1														
<i>Pterocaulon sphacelatum</i>												0.1												
<i>Ptilotus arthrolasius</i>																		0.1		0.1				
<i>Ptilotus astrolasius</i>		0.1				0.1											0.5	0.1	0.1		0.1	0.1		
<i>Ptilotus axillaris</i>																								
<i>Ptilotus calostachyus</i>		0.1		0.1					0.1		0.1		0.1						0.1	0.1		0.1	0.1	0.1
<i>Ptilotus decalvatus</i>																								
<i>Ptilotus exaltatus</i>																								
<i>Ptilotus fusiformis</i>		0.1		0.1					0.1		0.1										0.1	0.1		
<i>Ptilotus incanus</i>												0.1									0.1	20		
<i>Ptilotus polystachyus</i>	0.1	0.1		0.1						0.1								0.1	0.1					
<i>Rhynchosia minima</i>									3	0.1		0.1		0.1										
<i>Salsola australis</i>																								0.1
<i>Samolus</i> sp. Millstream (M.I.H. Brooker 2076)																								
<i>Santalum lanceolatum</i>																								
<i>Scaevola browniana</i> subsp. <i>browniana</i>																								

Species	AH85	AH86	AH87	AH88	AH89	AH90	AH91	AH92	AH93	AH94	AH95	AH96	AH97	AH98	AH99	AH100	AH101	AH102	AH-REL01	AH-REL02	AH-REL03	AH-REL05	AH-REL06
<i>Scaevola crassifolia</i>					0.1						0.1		0.1				0.1	0.1					
<i>Scaevola parvifolia</i>											0.1												
<i>Scaevola spinescens</i>											0.1												
<i>Schizachyrium fragile</i>																			0.1				
<i>Schoenoplectus subulatus</i>																							
<i>Schoenus falcatus</i>																							
<i>Senna notabilis</i>																						0.1	
<i>Senna oligoclada</i>																							
<i>Senna venusta</i>																			0.1				
<i>Seringia</i> sp.	1										0.1		2				0.1					0.1	
<i>Sesbania formosa</i>																							
<i>Sesuvium portulacastrum</i>																							
<i>Setaria surgens</i>																0.1							
<i>Sida arenicola</i>					0.1		0.1		0.1							0.1	0.1				0.1		
<i>Sida fibulifera</i>											2										0.1		
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)										0.1											0.1		
<i>Sida</i> sp. Pindan (B.G. Thomson 3398)	0.1		0.1											0.1	0.1			0.1			0.1		0.1
<i>Sida</i> sp. Western sand dunes (P.K. Latz 11980)			0.1																				
<i>Solanum cunninghamii</i>																							
<i>Solanum dioicum</i>									0.1	0.5									0.1	0.1	0.1		
<i>Solanum diversiflorum</i>								0.1													0.1		
<i>Solanum esuriale</i>									0.1		0.1		0.1										
<i>Solanum oligandrum</i>																							
<i>Sorghum plumosum</i> var. <i>plumosum</i>		1	0.1	4					0.1		0.1		0.1		3		0.5	2			3	0.1	
<i>Spermacoce hillii</i>																							
<i>Spermacoce occidentalis</i>			0.1																				
<i>Spinifex longifolius</i>							0.5															15	
<i>Sporobolus australasicus</i>																							
<i>Sporobolus virginicus</i>																							
<i>Stackhousia intermedia</i>																							
<i>Stemodia grossa</i>																							
<i>Streptoglossa bubakii</i>																							
<i>Streptoglossa decurrens</i>																				0.1			
<i>Streptoglossa macrocephala</i>			0.1																				
<i>Streptoglossa odora</i>														0.1									
<i>Striga curviflora</i>																							
<i>Surreya diandra</i>																							
<i>Tecticornia auriculata</i>																							
<i>Tecticornia halocnemoides</i>																							
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>																							
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>																							
<i>Tecticornia halocnemoides</i> subsp. aff. <i>tenuis</i>																							
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>																							
<i>Tecticornia</i> sp.																							
<i>Tephrosia andrewii</i>																							
<i>Tephrosia leptoclada</i>																							
<i>Tephrosia rosea</i> var. <i>clementii</i>																			20	2	0.1		
<i>Tephrosia rosea</i> var. <i>rosea</i>																				0.1			
<i>Tephrosia simplicifolia</i>																							
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)							0.1		0.1										0.1	0.1	0.1		
<i>Tephrosia</i> sp. D Kimberley Flora (R.D. Royce 1848)	0.1			0.1									0.1		0.1	0.1							
<i>Tephrosia supina</i>													0.1										
<i>Terminalia kumpaja</i>																							
<i>Thinicola incana</i>			0.1																				
<i>Threlkeldia diffusa</i>																							
<i>Tinospora smilacina</i>			0.1										0.1		0.1					0.1			
<i>Trachymene oleracea</i> subsp. <i>oleracea</i>																			0.1	0.1		0.1	
<i>Trianthema cusackianum</i>																							
<i>Trianthema pilosum</i>				0.1	0.1	0.1		0.1						0.1	0.1	0.1		0.1					

Table 2: PRIMER input matrix. NB: AH prefix = site:

Species	AH-REL07	MAND 01	MAND 02	MAND 03	MAND 04	MAND 05	MAND 06	MAND 07	MAND 08	MAND 09	MAND 10	MAND 11	MAND 12	MAND 13	MAND 14	MAND 15	MAND 16	MAND 17	MAND 18	MAND 19	MAND 20	MAND 22	MAND 23
<i>Scaevola crassifolia</i>																							
<i>Scaevola parvifolia</i>																							
<i>Scaevola spinescens</i>								1	1	1													
<i>Schizachyrium fragile</i>																							
<i>Schoenoplectus subulatus</i>																						1	1
<i>Schoenus falcatus</i>																		1					
<i>Senna notabilis</i>								1	1						1	1							
<i>Senna oligoclada</i>																							
<i>Senna venusta</i>																							
<i>Seringia</i> sp.																							
<i>Sesbania formosa</i>																			1	1	1	1	1
<i>Sesuvium portulacastrum</i>																				1			
<i>Setaria surgens</i>																							
<i>Sida arenicola</i>																							
<i>Sida fibulifera</i>										1	1	1											
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)																							
<i>Sida</i> sp. Pindan (B.G. Thomson 3398)																							
<i>Sida</i> sp. Western sand dunes (P.K. Latz 11980)																							
<i>Solanum cunninghamii</i>																							
<i>Solanum dioicum</i>																							
<i>Solanum diversiflorum</i>										1	1						1	1					
<i>Solanum esuriale</i>								1	1			1	1				1				1		
<i>Solanum oligandrum</i>										1							1						
<i>Sorghum plumosum</i> var. <i>plumosum</i>																							
<i>Spermacoce hillii</i>																							
<i>Spermacoce occidentalis</i>																				1			
<i>Spinifex longifolius</i>																							
<i>Sporobolus australasicus</i>	1								1	1							1					1	
<i>Sporobolus virginicus</i>	1							1	1	1							1	1				1	
<i>Stackhousia intermedia</i>																							
<i>Stemodia grossa</i>										1	1						1	1					
<i>Streptoglossa bubakii</i>									1				1					1					
<i>Streptoglossa decurrens</i>																							
<i>Streptoglossa macrocephala</i>																							
<i>Streptoglossa odora</i>									1		1	1						1					
<i>Striga curviflora</i>																							
<i>Surreya diandra</i>	1								1								1		1				
<i>Tecticornia auriculata</i>																	1						
<i>Tecticornia halocnemoides</i>																	1						
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>						1											1						
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>	1								1									1			1		1
<i>Tecticornia halocnemoides</i> subsp. aff. <i>tenuis</i>						1											1						
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>	1	1						1	1			1	1	1	1			1				1	
<i>Tecticornia</i> sp.		1																					
<i>Tephrosia andrewii</i>																							
<i>Tephrosia leptoclada</i>																							
<i>Tephrosia rosea</i> var. <i>clementii</i>																							
<i>Tephrosia rosea</i> var. <i>rosea</i>																							
<i>Tephrosia simplicifolia</i>																							
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)	0.1																						
<i>Tephrosia</i> sp. D Kimberley Flora (R.D. Royce 1848)																							
<i>Tephrosia supina</i>																							
<i>Terminalia kumpaja</i>						1	1											1	1	1			
<i>Thinicola incana</i>																							
<i>Threlkeldia diffusa</i>									1														
<i>Tinospora smilacina</i>								1															
<i>Trachymene oleracea</i> subsp. <i>oleracea</i>																							
<i>Trianthema cusackianum</i>																							
<i>Trianthema pilosum</i>							1	1										1					

Species	AH-REL07	MAND 01	MAND 02	MAND 03	MAND 04	MAND 05	MAND 06	MAND 07	MAND 08	MAND 09	MAND 10	MAND 11	MAND 12	MAND 13	MAND 14	MAND 15	MAND 16	MAND 17	MAND 18	MAND 19	MAND 20	MAND 22	MAND 23
<i>Trianthema triquetrum</i>		1							1					1	1								
<i>Trianthema turgidifolium</i>		1			1	1	1	1	1	1	1	1			1								
<i>Tribulopis marliesiae</i>																							
<i>Tribulus hirsutus</i>																							
<i>Trichodesma zeylanicum</i>																							
<i>Trigastrotheca molluginea</i>	0.1																						
<i>Triodia caelestialis</i>																							
<i>Triodia epactia</i>	9			1	1			1	1	1	1		1	1	1	1	1	1					
<i>Triodia schinzii</i>				1															1	1			
<i>Triumfetta ? maconochieana</i>																							
<i>Triumfetta aff. plumigera</i>																							
<i>Triumfetta incana</i>																							
<i>Triumfetta johnstonii</i>																							
<i>Typha domingensis</i>																						1	1
<i>Urochloa holosericea</i> subsp. <i>velutina</i>																							
<i>Velleia panduriformis</i>																			1				
<i>Waltheria indica</i>																							
<i>Whiteochloa airoides</i>																							
<i>Xerochloa barbata</i>								1				1					1						
<i>Yakirra australiensis</i> var. <i>australiensis</i>																							
<i>Zornia chaetophora</i>																							
<i>Zornia prostrata</i>																							
<i>Zygophyllum compressum</i>							1										1	1					

Table 2: PRIMER input matrix. NB: AH prefix = site:

Species	MAND 24	MAND 25	q111	q114	q163	q112	q138	q158	S001	S003	S004	S005	S006	S007	S009	S010	S011	S012	S013	S015	S016	S017	S018	S019	S020	S021	S022	S023
<i>Abildgaardia schoenoides</i>																												
<i>Abutilon leucopetalum</i>																												
<i>Abutilon otocarpum</i>									0.1											0.1								
<i>Acacia adoxa</i> var. <i>adoxia</i>																												
<i>Acacia adoxa</i> var. <i>subglabra</i>										1	0.1	0.1			0.1	0.1	0.1	0.1	1	0.1			0.1		0.1	2	2	
<i>Acacia ampliceps</i>	1		1	1	1																							
<i>Acacia anaticeps</i>																												
<i>Acacia ancistrocarpa</i>																												
<i>Acacia bivenosa</i>																												
<i>Acacia colei</i> var. <i>colei</i>			1		1	1	1	1		2	1				5	1	1	1	2			0.1	2	1	5	2	0.1	1
<i>Acacia cowleana</i>																												
<i>Acacia drepanocarpa</i> subsp. <i>drepanocarpa</i>																												
<i>Acacia eriopoda</i>									30	15	20	40	30	15	20	20	15	30	25	20	30	30	30	20	20	20	10	
<i>Acacia hilliana</i>																												
<i>Acacia inaequilatera</i>																												
<i>Acacia melleodora</i>																												
<i>Acacia monticola</i>																	5									1	0.1	
<i>Acacia orthocarpa</i>																											0.1	
<i>Acacia platycarpa</i>																												
<i>Acacia sabulosa</i>																												
<i>Acacia sericophylla</i>																												
<i>Acacia sphaerostachya</i>																												
<i>Acacia stellaticeps</i>			1	1	1	1	1	1																				
<i>Acacia stipuligera</i>														0.1			0.1											
<i>Acacia synchronicia</i>																												
<i>Acacia tumida</i> var. <i>kulparn</i>																												
<i>Achyranthes aspera</i>																												
<i>Acrostichum speciosum</i>																												
<i>Aenictophyton reconditum</i> subsp. <i>reconditum</i>																												
<i>Amaranthus undulatus</i>	1																											
<i>Amphipogon sericeus</i>																												
<i>Androcalva loxophylla</i>																												
<i>Aristida contorta</i>																												
<i>Aristida holathera</i> var. <i>holathera</i>									5							1	2	5	10	5	0.1	5	55	5		5	0.1	
<i>Aristida holathera</i> var. <i>latifolia</i>																												
<i>Aristida inaequiglumis</i>																												
<i>Avicennia marina</i>																												
<i>Bauhinia cunninghamii</i>									2		1	1	4		5		0.1	5	2	2	2	10	0.5	4	5	1	1	2
<i>Boerhavia burbridgeana</i>																												
<i>Boerhavia coccinea</i>																												
<i>Boerhavia gardneri</i>																												
<i>Bonamia alatisemina</i>						1	1	1																				
<i>Bonamia erecta</i>																												
<i>Bonamia oblongifolia</i>																												
<i>Bonamia pannosa</i>																												
<i>Brachychiton diversifolius</i>									0.1						1		1		1			0.1			0.1		0.1	
<i>Bulbostylis barbata</i>									0.1					0.1		1	0.1	0.1	0.5		0.1		0.1	0.5		1		
<i>Cajanus marmoratus</i>																												
<i>Calandrinia strophiolata</i>									0.1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1	0.1	0.1	0.1	0.1	1	0.1	0.1	
<i>Calandrinia tepperiana</i>																												
<i>Calytrix carinata</i>																												
<i>Carissa lanceolata</i>			1	1	1	1	1	1																				
<i>Cassytha capillaris</i>	1					1		1			0.1	0.1						1		0.1	1		0.1		0.1	0.1		
<i>Cenchrus ciliaris</i>	1																											
<i>Cenchrus setiger</i>																												
<i>Chamaecrista symonii</i>									0.1	0.1						0.1		0.1			0.1		0.2					
<i>Chrysopogon fallax</i>										0.1	20	5	5	10							35		10			1	10	

Species	MAND 24	MAND 25	q111	q114	q163	q112	q138	q158	S001	S003	S004	S005	S006	S007	S009	S010	S011	S012	S013	S015	S016	S017	S018	S019	S020	S021	S022	S023
<i>Leptosema anomalam</i>									0.1					0.1						0.1			0.1					
<i>Melaleuca alsophila</i>	1		1	1	1	1	1	1																				
<i>Melaleuca glomerata</i>																												
<i>Melaleuca lasiandra</i>			1	1	1	1	1	1																				
<i>Melaleuca leucadendra</i>																												
<i>Melhania oblongifolia</i>																												
<i>Mirbelia viminalis</i>																												
<i>Mitrasacme connata</i>																			0.1		0.1	0.1	0.1	0.1				
<i>Muellerolimon salicorniaceum</i>																												
<i>Myoporum montanum</i>																												
<i>Neobassia astrocarpa</i>																												
<i>Newcastelia cladotricha</i>									0.1		0.1	0.1										0.1						
<i>Newcastelia spodiotricha</i>																												
<i>Nicotiana benthamiana</i>																												
<i>Oldenlandia crouchiana</i>																												
<i>Oldenlandia mitrasacmoides</i> subsp. <i>mitrasacmoides</i>														0.1		0.1	0.1					0.1	0.1	0.1				
<i>Oldenlandia pterospora</i>																												
<i>Orianthera centralis</i>																												
<i>Owenia reticulata</i>																												
<i>Panicum decompositum</i> var. <i>decompositum</i>																												
<i>Panicum effusum</i>																		0.1			0.1	0.1	0.1		0.1	0.1	0.1	
<i>Paractaenum refractum</i>																												
<i>Paraneurachne muelleri</i>																												
<i>Paspalidium rarum</i>																												
<i>Paspalidium tabulatum</i>																												
<i>Persoonia falcata</i>																		0.2	1					1				
<i>Phyllanthus eremicus</i>																												
<i>Phyllanthus maderaspatensis</i>									0.1	0.1	0.1	0.1		0.1	0.1	0.1		0.1		0.1	0.1			0.1	0.1	0.1	0.1	
<i>Pimelea ammocharis</i>																												
<i>Pluchea ferdinandi-muelleri</i>		1	1		1		1																					
<i>Pluchea longiseta</i>																												
<i>Pluchea rubelliflora</i>																												
<i>Pluchea tetrantha</i>							1		1																			
<i>Polycarphaea corymbosa</i> var. <i>corymbosa</i>														0.1		0.1	0.1		0.1	0.1	0.1		0.1		0.1			
<i>Polycarphaea holtzei</i>																												
<i>Polycarphaea longiflora</i>																												
<i>Polygala glaucifolia</i>																												
<i>Polygala isingii</i>																												
<i>Polygala tepperi</i>										0.1	0.1	0.1	0.1		0.1		0.1	0.1							0.1			
<i>Polymeria</i> ? sp. Broome (K.F. Kenneally 9759)										0.1				0.1						0.1	0.1	0.1	0.1		0.1			
<i>Portulaca aff. australis</i>																												
<i>Portulaca bicolor</i>																											0.1	
<i>Portulaca filifolia</i>																												
<i>Pterocaulon serrulatum</i> var. <i>velutinum</i>																												
<i>Pterocaulon sphacelatum</i>						1																						
<i>Ptilotus arthrolasius</i>																		0.1	0.1		1				0.1	0.1	0.1	
<i>Ptilotus astrolasius</i>																												
<i>Ptilotus axillaris</i>																												
<i>Ptilotus calostachyus</i>																												
<i>Ptilotus decalvatus</i>																					1							
<i>Ptilotus exaltatus</i>																												
<i>Ptilotus fusiformis</i>																												
<i>Ptilotus incanus</i>					</td																							

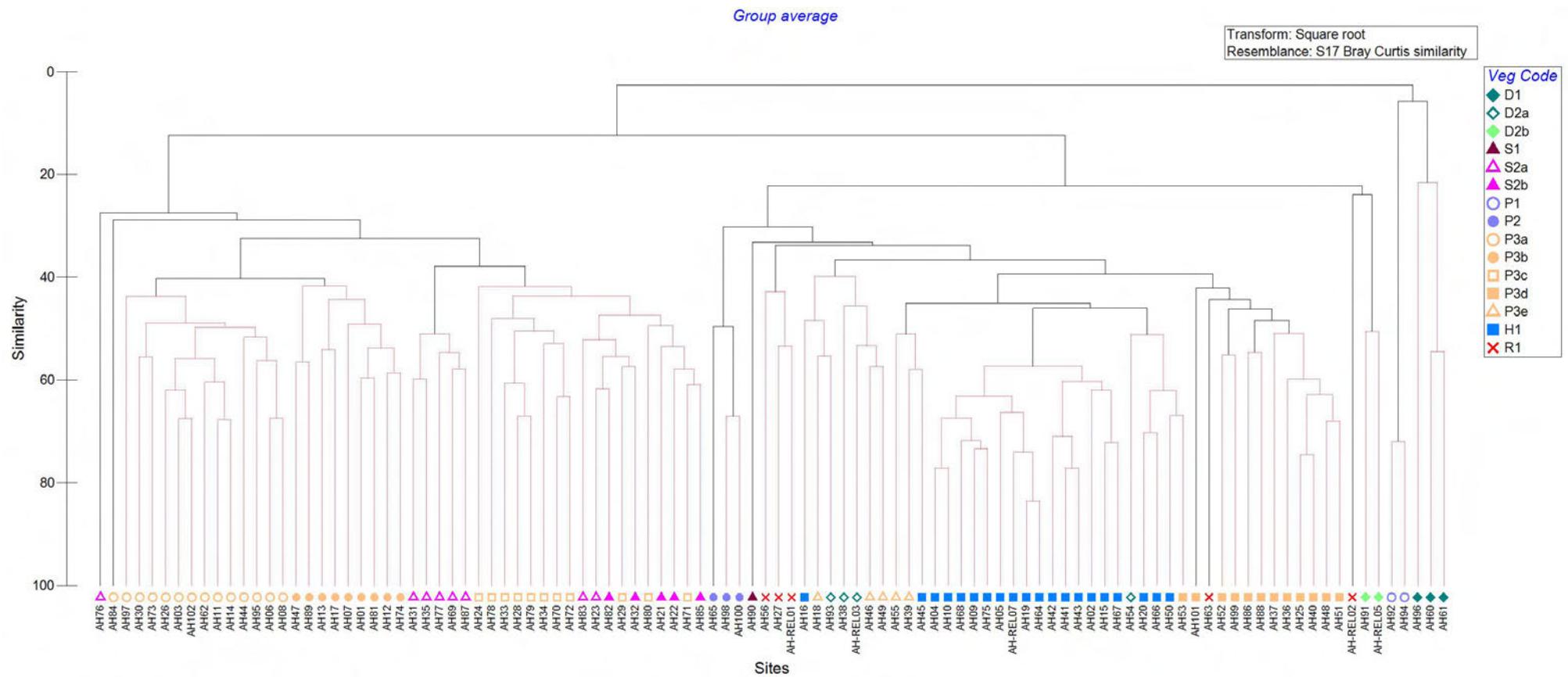


Figure 1: Dendrogram showing clustering of sites from the study area, coded by vegetation type (analysis based on percent cover data for perennial species only).

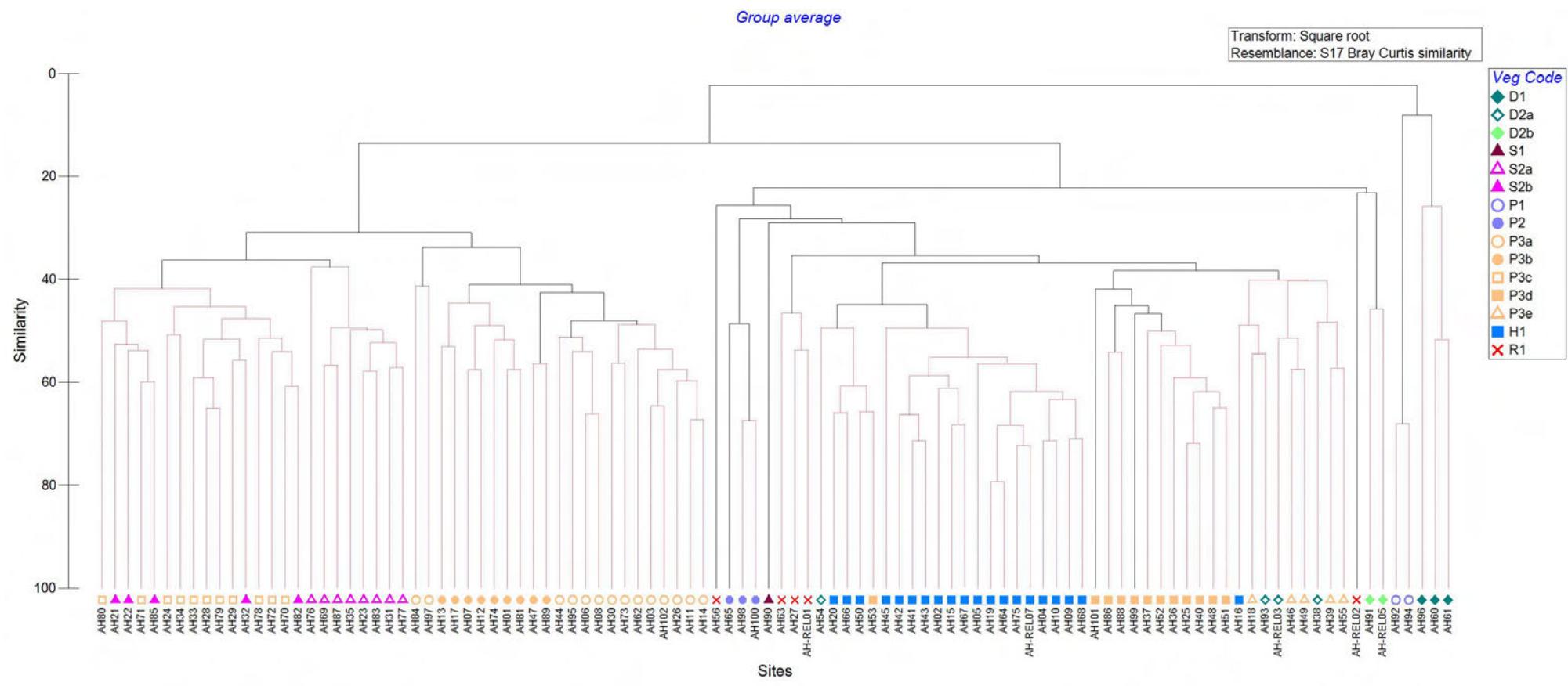


Figure 2: Dendrogram showing clustering of sites from the study area, coded by vegetation type (analysis based on percent cover data for both perennial and annual species).

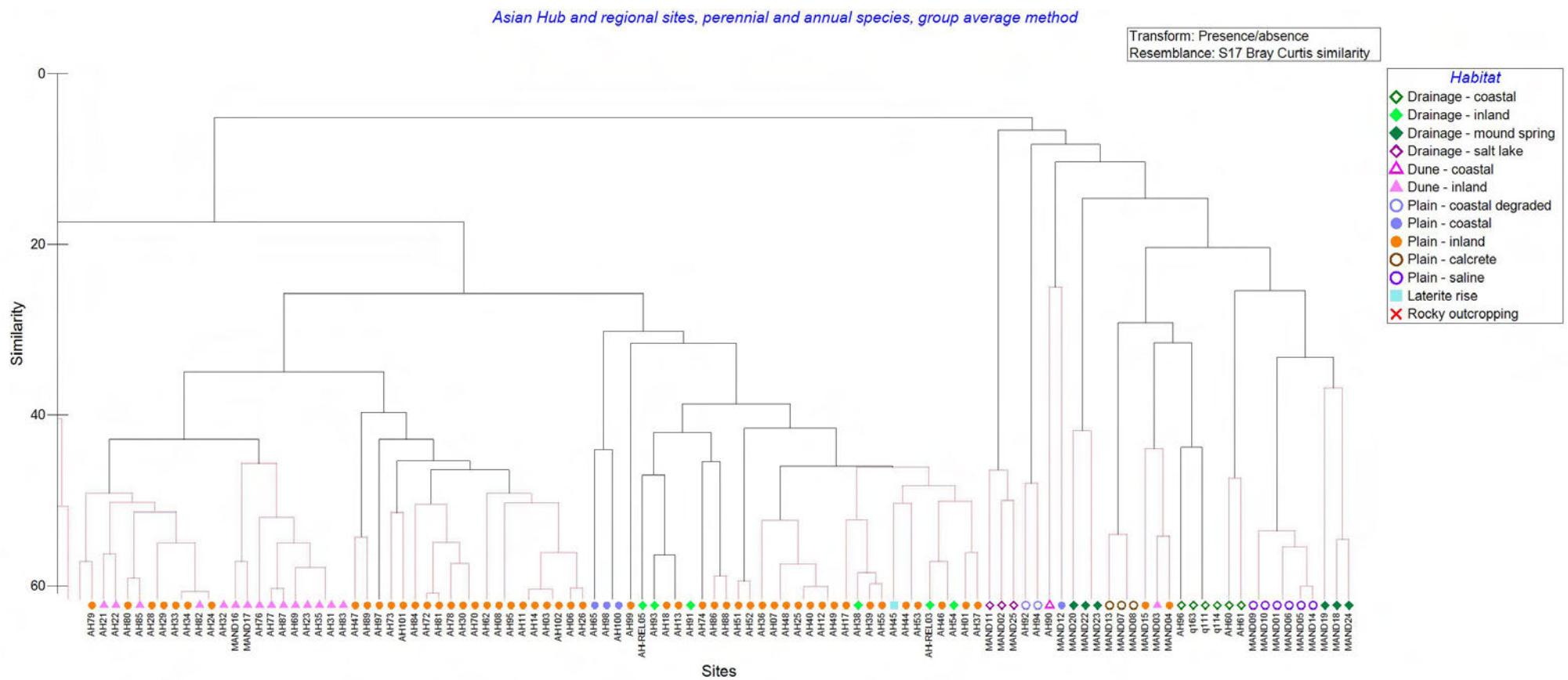


Figure 3: Dendrogram showing clustering of sites from the study area together with a selection of regional sites, coded by habitat (analysis based on presence/absence data for both perennial and annual species).

Table 3: Summary of floristic groups for the three main clustering analyses carried out using the sites in the study area. NB: Shading indicates dominant floristic groups (any that included at least half of the sites in a particular vegetation type).

Habitat	Site	Veg Code	No. of Sampling Phases	Floristic Group		
				AH sites only, Per only, % cover	AH sites only, Ann+Per, % cover	Inc regional sites Ann+Per (-Cenchrus) Pres Abs
Drainage - coastal	AH60	D1	1	w	w	ad
	AH61	D1	1	w	w	ad
	AH96	D1	1	w	w	ab
Drainage - inland	AH38	D2a	2	k	s	u
	AH54	D2a	1	n	m	u
	AH93	D2a	1	k	s	o
	AH-REL03	D2a	1	k	s	u
Drainage - inland	AH91	D2b	1	u	u	p
	AH-REL05	D2b	1	u	u	n
Laterite rise	AH02	H1	1	m	n	a
	AH04	H1	1	m	n	a
	AH05	H1	2	m	n	a
	AH09	H1	2	m	n	a
	AH10	H1	2	m	n	a
	AH15	H1	2	m	n	a
	AH16	H1	2	k	s	c
	AH19	H1	2	m	n	a
	AH20	H1	2	n	m	a
	AH41	H1	1	m	n	a
	AH42	H1	1	m	n	a
	AH43	H1	1	m	n	a
	AH45	H1	1	l	n	u
	AH50	H1	2	n	m	a
	AH64	H1	1	m	n	a
	AH66	H1	1	n	m	a
	AH67	H1	1	m	n	a
	AH68	H1	1	m	n	a
	AH75	H1	1	m	n	a
	AH-REL07	H1	1	m	n	a
Plain - coastal degraded	AH92	P1	1	v	v	w
	AH94	P1	1	v	v	w
Plain - coastal	AH65	P2	1	g	i	k
	AH98	P2	1	h	j	l
	AH100	P2	1	h	j	l
Plain - inland	AH03	P3a	1	c	g	j
	AH06	P3a	1	c	f	j
	AH08	P3a	1	c	f	j
	AH11	P3a	1	c	g	j
	AH14	P3a	1	c	g	j
	AH26	P3a	2	c	g	j
	AH30	P3a	2	c	g	i
	AH44	P3a	1	c	f	u
	AH62	P3a	1	c	g	j
	AH73	P3a	1	c	g	h
	AH84	P3a	1	b	c	i
	AH95	P3a	1	c	f	j
	AH97	P3a	1	c	c	g
	AH102	P3a	1	c	g	j

Habitat	Site	Veg Code	No. of Sampling Phases	Floristic Group		
				AH sites only, Per only, % cover	AH sites only, Ann+Per, % cover	Inc regional sites Ann+Per (-Cenchrus) Pres Abs
Plain - inland	AH01	P3b	1	d	d	u
	AH07	P3b	2	d	d	t
	AH12	P3b	2	d	d	t
	AH13	P3b	2	d	d	p
	AH17	P3b	2	d	d	u
	AH47	P3b	1	d	e	f
	AH74	P3b	1	d	d	q
	AH81	P3b	1	d	d	i
	AH89	P3b	1	d	e	f
Plain - inland	AH24	P3c	1	f	a	d
	AH28	P3c	2	f	a	d
	AH29	P3c	2	f	a	d
	AH33	P3c	1	f	a	d
	AH34	P3c	1	f	a	d
	AH70	P3c	1	f	a	i
	AH71	P3c	1	f	a	d
	AH72	P3c	1	f	a	i
	AH78	P3c	1	f	a	i
	AH79	P3c	1	f	a	d
Plain - inland	AH25	P3d	2	s	r	t
	AH36	P3d	1	s	r	t
	AH37	P3d	1	s	r	u
	AH40	P3d	2	s	r	t
	AH48	P3d	1	s	r	t
	AH51	P3d	2	s	r	s
	AH52	P3d	2	q	r	s
	AH53	P3d	2	n	m	u
	AH86	P3d	1	r	p	r
	AH88	P3d	1	r	p	r
	AH99	P3d	1	q	q	m
	AH101	P3d	1	o	o	h
Plain - inland	AH18	P3e	2	k	s	p
	AH39	P3e	2	l	s	u
	AH46	P3e	1	k	s	u
	AH49	P3e	2	k	s	t
	AH55	P3e	2	l	s	u
Rocky outcropping	AH27	R1	1	j	i	b
	AH56	R1	2	j	h	b
	AH63	R1	1	p	i	c
	AH-REL01	R1	1	j	i	b
	AH-REL02	R1	1	t	t	c
Dune - coastal	AH90	S1	1	i	k	x
Dune - inland	AH23	S2a	2	f	b	e
	AH31	S2a	2	e	b	e
	AH35	S2a	1	e	b	e
	AH69	S2a	1	e	b	e
	AH76	S2a	1	a	b	e
	AH77	S2a	1	e	b	e
	AH83	S2a	1	f	b	e
	AH87	S2a	1	e	b	e
Dune - inland	AH21	S2b	2	f	a	d
	AH22	S2b	1	f	a	d
	AH32	S2b	2	f	a	d
	AH82	S2b	1	f	a	d
	AH85	S2b	1	f	a	d

Appendix 8

Flora Species Comprising Range Extensions or Other Noteworthy Records



TAXON	APPROXIMATE EXTENSION (BASED ON RECORDS SHOWN ON NATUREMAP) OR OTHER REASON FOR INCLUSION
<i>Acacia drepanocarpa</i> subsp. <i>latifolia</i>	60 km W.
<i>Amphipogon sericeus</i>	120 km NE.
<i>Clerodendrum floribundum</i> var. <i>angustifolium</i>	110 km NE.
<i>Commicarpus australis</i>	200 km NE.
<i>Corymbia greeniana</i>	85 km SW.
* <i>Datura</i> ? <i>leichhardtii</i>	400 km NE, if confirmed.
<i>Dodonaea hispidula</i> var. <i>arida</i>	90 km SW.
<i>Eriachne helmsii</i>	120 km NE.
<i>Eriachne lanata</i>	90 km NE.
<i>Euphorbia</i> ? <i>albrechtii</i>	35 km NW, if confirmed.
<i>Euphorbia</i> ? <i>wheeleri</i>	250 km NW, if confirmed.
<i>Gompholobium polyzygum</i>	40 km N.
<i>Indigofera boviperda</i> subsp. <i>eremaea</i>	45 km W.
<i>Newcastelia spodiotricha</i>	190 km W.
<i>Oldenlandia mitrasacmoides</i> subsp. <i>mitrasacmoides</i>	240 km SW.
<i>Orianthera centralis</i>	60 km W.
<i>Petalostylis labicheoides</i>	70 km NE.
<i>Polygala glaucifolia</i>	45 km N.
<i>Seringia exastia</i>	120 km SW; see Section 6.2.
<i>Seringia katatona</i>	115 km SW; but see Section 6.2.
<i>Tephrosia</i> sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	65 km NE.
<i>Thinicola incana</i>	60 km NW.
<i>Tribulopis marliesiae</i>	25 km SW; but see Section 6.2.
<i>Abutilon leucopetalum</i>	Fills gap between Great Sandy Desert and Kimberley collections.
<i>Acacia cowleana</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Acacia inaequilatera</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Acacia orthocarpa</i>	Fills large gap in distribution between Pilbara and Kimberley.
* <i>Bidens bipinnata</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Boerhavia coccinea</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Boerhavia gardneri</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Cassytha capillaris</i>	Fills large gap in distribution between Pilbara and Kimberley.
* <i>Cenchrus setiger</i>	Fills large gap in distribution between Pilbara and Kimberley.

TAXON	APPROXIMATE EXTENSION (BASED ON RECORDS SHOWN ON NATUREMAP) OR OTHER REASON FOR INCLUSION
<i>Chrysopogon fallax</i>	Fills large gap in distribution between Pilbara and Kimberley.
* <i>Citrullus colocynthis</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Cleome viscosa</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Corchorus tridens</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Cullen martinii</i>	Fills gap in distribution between Pilbara and Kimberley.
<i>Cuscuta victoriana</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Cymbopogon ambiguus</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Cymbopogon obtectus</i>	Fills gap in distribution between Pilbara and Kimberley.
<i>Cynanchum pedunculatum</i> (sens. lat.)	Fills large gap in distribution between Pilbara and Kimberley.
<i>Cyperus cunninghamii</i> subsp. <i>cunninghamii</i>	Fills large gap in distribution between Pilbara and Kimberley.
* <i>Eragrostis minor</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Eriachne mucronata</i>	Fills large gap in distribution between Pilbara and Great Sandy Desert collections.
<i>Eriachne pulchella</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Euphorbia australis</i> var. <i>subtomentosa</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Euphorbia psilosperma</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Fimbristylis ammobia</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Fimbristylis dichotoma</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Fimbristylis simulans</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Gomphrena cunninghamii</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Goodenia scaevolina</i>	Fills gap in distribution between Pilbara and Kimberley.
<i>Grevillea pyramidalis</i> subsp. <i>pyramidalis</i>	Fills gap in distribution between Pilbara and Kimberley.
<i>Grevillea wickhamii</i> subsp. <i>hispidula</i>	Fills gap in distribution between southwestern and central Dampierland collections.
<i>Hybanthus aurantiacus</i>	Fills gap in distribution between Pilbara and Kimberley.
<i>Indigofera trita</i> subsp. <i>trita</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Ipomoea coptica</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Ipomoea muelleri</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Isotropis atropurpurea</i>	Fills gap in distribution between Pilbara and Kimberley.
<i>Mallotus nesophilus</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Mirbelia viminalis</i>	Fills gap in distribution between Pilbara and Kimberley.
<i>Nicotiana benthamiana</i>	Fills gap in distribution between western and northern Great Sandy Desert collections.
<i>Oldenlandia crouchiana</i>	Fills gap in distribution between Pilbara and Kimberley (review of this known species complex is currently underway).
<i>Paraneurachne muelleri</i>	Fills large gap in distribution between Pilbara and northern Great Sandy Desert collection.

TAXON	APPROXIMATE EXTENSION (BASED ON RECORDS SHOWN ON NATUREMAP) OR OTHER REASON FOR INCLUSION
<i>Paspalidium clementii</i>	Fills large gap in distribution between Pilbara and northern Great Sandy Desert collections.
<i>Paspalidium rarum</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Perotis rara</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Polycarpaea corymbosa</i> var. <i>corymbosa</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Polycarpaea holtzei</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Polycarpaea longiflora</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Portulaca aff. australis</i>	Fills large gap in distribution between Pilbara and Kimberley; see further text below.
<i>Portulaca bicolor</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Portulaca filifolia</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Pterocaulon sphaeranthoides</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Scaevola browniana</i> subsp. <i>browniana</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Schizachyrium fragile</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Senna sericea</i>	Fills gap in distribution between Pilbara and northwestern Great Sandy Desert collection.
<i>Setaria dielsii</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)	Fills large gap in distribution between Pilbara and Kimberley.
<i>Solanum horridum</i>	Fills gap in distribution between Pilbara and northern Great Sandy Desert collection.
<i>Sorghum plumosum</i> var. <i>plumosum</i>	Fills large gap in distribution of this variety between Pilbara and Kimberley, although <i>S. plumosum</i> is known from the locality.
<i>Spermacoce hillii</i>	Fills gap in distribution between western and northern Great Sandy Desert collections.
<i>Striga curviflora</i>	Fills large gap in distribution between Pilbara and Kimberley.
* <i>Stylosanthes hamata</i>	Fills gap in distribution between Pilbara and Kimberley.
<i>Tephrosia supina</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Tephrosia virens</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Tephrosia</i> sp. Northern (K.F. Kenneally 11950)	Fills large gap in distribution between Pilbara and Kimberley.
<i>Themeda triandra</i>	Fills large gap in distribution between Pilbara and northern Great Sandy Desert collections.
<i>Tribulus hirsutus</i>	Fills gap in distribution between Pilbara and Kimberley.
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Triumfetta incana</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Triumfetta maconochieana</i>	Fills large gap in distribution between Pilbara and northern Great Sandy Desert collection.
<i>Triumfetta</i> aff. <i>plumigera</i>	Fills large gap in distribution between Pilbara and Kimberley; see further text below.
<i>Urochloa holosericea</i> var. <i>velutina</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Waltheria indica</i>	Fills large gap in distribution between Pilbara and Kimberley.
<i>Yakirra australiensis</i> var. <i>australiensis</i>	Fills large gap in distribution between Pilbara and Kimberley.