

Appendix 12-A: Glebe Option Flora Methodology

CONTENTS

1.0 METHODS.....	2
1.1 Desktop Literature Review & Gap Analysis	2
1.2 Aerial Photograph Analysis and Site Location.....	2
1.3 Field Survey	3
1.4 Reference Sites	5
1.5 Classification of Vegetation	6
1.5.1 The Regional Ecosystem Framework.....	6
1.5.2 Conservation Significance.....	6
1.5.3 Remnant / Non remnant vegetation	7
1.6 Scale	10
1.7 Digital Processing and Accuracy.....	11
1.8 Flora Assessment Methods.....	11
1.8 Condition Assessment	12
1.9 Timber Resource Assessment.....	12
1.9.1 Species Composition	12
1.9.2 Timber Resource Groupings.....	12
1.9.3 Basal Area Measurements	13
1.9.4 Timber Volume Measurements	13
1.9.5 Study Limitations	13
REFERENCES	15

1.0 METHODS

1.1 Desktop Literature Review & Gap Analysis

To assist in identifying likely regional ecosystems and flora species that could be encountered and those that would need to be targeted during field work a search of relevant databases was undertaken prior to undertaking field investigations.

Regional Ecosystem mapping (Ver 5.0) sourced from the Queensland Herbarium provided the basis for vegetation community assessment. A search of the Commonwealth's EPBC Online Protected Matters Search Tool was also utilised to assist in identifying threatened ecological communities that might be encountered.

The following databases were assessed to provide a basis for assessment of flora species distribution:

- Commonwealth's EPBC Online Protected Matters Search Tool¹;
- Queensland Herbarium's HerbRecs & Corveg database²;
- EPA's WildNet database³; and
- Other flora assessments within the locale (including HERBRECS; Corveg, Dowling & Halford, 1997; Fensham & Wilson, 1997; and Fensham, 2008 *unpublished*).

1.2 Aerial Photograph Analysis and Site Location

Interpretation of SPOT 2.5m Satellite Imagery - Aug 2006 and SunWater Orthoimagery - 1:25,000 Aug 1994 allowed the establishment of preliminary vegetation line work and polygon attribution. The line work was completed in reference to the available remnant and pre-clearing regional ecosystem mapping in to assign anticipated regional ecosystems.

¹ Search Area for the proposed Glebe Inundation Area delineated by the following co-ordinates: - 25.44027,150.0176, -25.49916,150.0752, -25.58444,149.9574, -25.54805,149.9036. The proposed Glebe Pipeline delineated by the following co-ordinates: -25.49083,150.1327, -26.07222,149.9254 (0.03km buffer) and -25.46672,150.0341, -25.49083,150.1327 (0.03km buffer).

² Search Area for the proposed Glebe Inundation Area delineated graphically as a polygon of the Inundation Area buffered by 2km. The proposed Glebe Pipeline Route was delineated graphically as a linear study area from the Weir to Wandoan.

³ Search Area for the proposed Glebe Inundation Area delineated by the following co-ordinates: Latitude: 25.442 to 25.579, Longitude: 149.9 to 150.039. The proposed Glebe Pipeline Route was delineated by the following co-ordinates: Latitude: 25.5 to 26.12, Longitude: 149.8 to 150.2.

Polygons of both remnant and regrowth vegetation were identified through aerial photographic review. To verify this mapping and it was necessary to undertake intensive field survey. Therefore prior to field investigations a number of target locations were identified including:

- a representative range of habitats within the study area;
- areas that appeared to be boggomosses through aerial photographic interpretation;
- communities that could not be adequately categorised through air photo interpretation. This included areas where pre-clearing of the Endangered Regional Ecosystem 11.9.12 “*Dichanthium sericeum* grassland with clumps of *Acacia harpophylla* on fine-grained sedimentary rocks” of which remnants might be easily misinterpreted in aerial photographic review;
- some areas of non-remnant Brigalow to assess species composition and structure; and
- areas that were considered highly likely to provide habitat for threatened plant species.

Additional opportunistic sites were added during the field survey.

1.3 Field Survey

Vegetation was mapped at a scale of 1:10,000 as per methodology developed by the Queensland Herbarium (Neldner *et al*, 2005). The methods prescribed include a combination of secondary, tertiary and quaternary level sampling procedures. Additional informal site observations were also made.

Secondary sites consisted of a 50m x 10m plot located along the contour within vegetation communities that displayed homogeneity in terms of floristics, structure and age. A 100m tape measure was used to define plots with most Secondary site data collected in the first 50m and canopy cover recorded across the full 100m. A Mobile Mapper GPS was used to record the coordinates of the beginning and end of the 50m Secondary plot. Data collected in Secondary sites included:

- Complete species lists;
- Canopy height using a hypsometer;
- Canopy cover was recorded in using measured crown intercept transects over 100m;
- Bitterlich measurements, as described in Grosenbaugh (1952), were used to record community basal area; and

- The abundance of all woody species within the plot was recorded by stem counts and a visually assessed ranking of Dominant, Abundant, Frequent, Occasional and Uncommon.

For Secondary and Tertiary site field data was captured according to pro formas included in Neldner *et al* (2005). In order to adequately capture structural data from 100m transects information was recorded on additional field sheets.

Quaternary data primarily involved the recoding of dominant canopy elements for locations recorded by GPS.

Wherever a vegetation community was considered to be potential habitat for a threatened species scheduled under the EPBC Act or the *Nature Conservation (Wildlife) Regulation 2006*, the search area was broadened. Frequently this involved broad searches of broad areas on foot to establish the range of a species if encountered in the field.

Informal observation sites were utilised where vegetation structure and floristic assemblage was observed remotely, generally from roadsides and where access could not be attained. Dominant canopy species were identified utilising binoculars and information recorded on printed aerial photographs and draft vegetation linework.

Where species could not be readily identified in the field or where a specimen was known to be a threatened species, botanical voucher specimens were collected. Specimens of a sufficient size and quality (where possible) was pressed and labelled for future identification by the author or by the Queensland Herbarium.

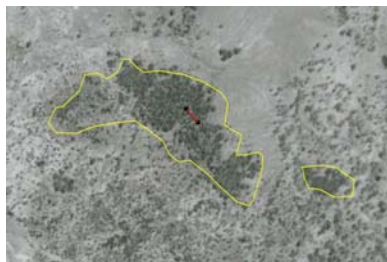
The field survey was completed in two phases for the pipeline study area. An initial preliminary survey was completed in March 2008, during which quaternary data was collected. A secondary more detailed assessment was undertaken in September 2008 during which additional quaternary data was collected in addition to secondary and tertiary plots. The field survey was also completed in two phases for the weir study area. An initial survey was conducted in March 2008, with a follow up survey completed in June 2008 in order to capture seasonal variation in floristics. Data from Reference sites was collected from the broader area on different occasions as discussed below.

Site locations tabulated in Appendix A are spatially illustrated in Figures 1a (for the Weir study area) and 1b (for the pipeline study area).

1.4 Reference Sites

Reference sites are established in undisturbed or lightly disturbed vegetation communities within the vicinity of the project area. Data collected from secondary plots at reference sites allow an assessment of the remnant/non-remnant status of a specific regional ecosystem against vegetation height, cover and floristics. The data also provides a reference point for the assessment of vegetation community condition.

The location of Reference sites was determined through review of existing regional ecosystem mapping and where aerial photography displayed an intact canopy pattern. On occasion, some Reference sites were located in areas currently not mapped as a given regional ecosystem or even as remnant vegetation. An example is the reference site for 11.9.5 “*Acacia harpophylla* and/or *Casuarina cristata* open forest on fine-grained sedimentary rocks”. This site has not been mapped by the Queensland Herbarium as remnant vegetation, but was found to be one of the most integral representations of this regional ecosystem in the local area. Review of historical aerial photography confirmed that the area was remnant as illustrated below.



1945 aerial photograph of the 11.9.5 Reference site



Current SPOT image with mapped polygon. Red line illustrates the transect.



Photograph of the site from the edge of the polygon

The value of an area as a Reference site could sometimes only be determined through field assessment. The presence of remnant canopy trees were used as indicators of original canopy composition and structure and the presence of significant disturbance employed to discount the value of an area as a Reference site.

Secondary site data for Reference sites is presented in Appendix B and their locations illustrated in Figure 2.

1.5 Classification of Vegetation

1.5.1 The Regional Ecosystem Framework

The mapping of vegetation categories across the study area was based on the regional ecosystem framework (Sattler & Williams, 1999). Regional ecosystems are coded with a three-part number:

- The first number is the bioregion in which the site occurs. In some instances the combination of vegetation and geology typical of a certain bioregion may occur outside the bioregional boundary. In this instance the Regional Ecosystem is assigned to the Bioregion in which it typically occurs, rather than the Bioregion in which the site is located. The site vegetation in this case is within the Brigalow Belt Bioregion and is therefore numbered “11”.
- The second number is the geomorphic category or “Land Zone” that the ecosystem falls within (eg all Regional Ecosystems occurring on “Hills and lowlands on metamorphosed sedimentary rocks are Land Zone ‘11’).
- The third number is the ecosystem number, and relates to the dominant vegetation.

The Land Zone was determined through review of pre-clearing mapping, current geological mapping (NRME, 2004) and verified through ground observations. The base geological mapping is at a scale of 1:250,000 and therefore does not capture small areas of alluvium (Land Zone 3) evident in 1:10,000 scale mapping which had to be verified through field observations.

1.5.2 Conservation Significance

Under the VMA, three levels of conservation status are defined for regional ecosystems:

- “Not of Concern regional ecosystem” means a regional ecosystem that is prescribed under a regulation and has either more than 30% of its pre-clearing extent remaining and the remnant vegetation remaining is more than 10,000 ha;
- “Of Concern regional ecosystem” means a regional ecosystem that is prescribed under a regulation and has either:
 - (a) 10% to 30% of its pre-clearing extent remaining; or
 - (b) more than 30% of its pre-clearing extent remaining and the remnant vegetation remaining is less than 10,000 ha
- “Endangered regional ecosystem” means a regional ecosystem that is prescribed under a regulation and has either:
 - (a) less than 10% of its pre-clearing extent remaining; or
 - (b) 10% to 30% of its pre-clearing extent remaining and the remnant vegetation remaining is less than 10,000 ha

For this study the current conservation status (EPA, 2007) was applied to remnant polygons.

Brigalow (*Acacia harpophylla* dominant and co-dominant) communities and Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions are also regarded as ‘Endangered’ under the EPBC Act. These communities correlate with 11.9.1, 11.9.4, 11.9.5 and 11.9.6 which have been recorded in the study area. Where remnant or suitably advanced regrowth (see 1.5.3 below) of these communities have been encountered they have also been attributed with their status under the EPBC Act. Also recorded as an ‘Endangered’ ecological community in the study area is “The community of native species dependent on natural discharge of groundwater from the Great Artesian Basin” – these are discussed further in Section 1.5.4.

1.5.3 Remnant / Non remnant vegetation

A regional ecosystem can only be regarded as ‘remnant’ provided it meets the following criteria as defined by the EPA (2005):

“Remnant woody vegetation is defined as vegetation where the dominant canopy has >70% of the height and >50% of the cover relative to the undisturbed height and cover of that stratum and is dominated by species characteristic of the vegetation’s undisturbed canopy”.

Therefore to adequately classify areas as remnant or non-remnant it is necessary to have a thorough understanding of the structural and floristic elements of reference sites. These sites must be established in communities or locations where disturbance has been minimal and are representative of environmental conditions of the community across the broader study area. Reference sites can be utilised to provide a transparent and repeatable method of comparing relative canopy height and canopy cover data of target sites with a remnant condition.

The classification of remnant vegetation is based solely on the nature and floristic composition of the original canopy layer (T1). Sub-canopy and shrub layers (T2, S1 etc) are not considered in the assessment of non-remnant vegetation communities in this exercise.

Some areas have been mapped as non-remnant because they do not meet necessary height or cover thresholds. Only areas that are likely to achieve remnant status within the next 20years on the basis of floristics, cover and height were mapped as non-

remnant vegetation polygons. Each non-remnant polygon has been assigned with the regional ecosystem they would achieve if they were managed toward achieving remnant status.

In addition to remnant Brigalow, areas of regrowth also require further consideration under the EPBC Act as a potential Threatened Ecological Community. Advice prepared by DEWHA (2003) identifies the following in relation to this:

Brigalow regrowth is part of the Brigalow ecological community listed under the EPBC Act only if it retains the species composition and structural elements typical of that found in undisturbed areas of the listed Brigalow ecological community.

Brigalow regrowth is not considered part of the Brigalow ecological community that is listed under the EPBC Act if it is of poor quality. An activity that affects Brigalow regrowth of poor quality is, therefore, not subject to the EPBC Act.

In general, areas that have been cleared within the past 15 years will not have regained the structure and species composition typical of remnant Brigalow and, therefore, will not qualify as the listed Brigalow ecological community.

Accordingly, clearing of Brigalow regrowth that is less than 15 years old does not need to be referred for assessment and approval under the EPBC Act.

On this basis, areas of non-remnant Brigalow have also been mapped where they appear to achieve the 15 year age threshold utilising the median height of a patch as the defining criterion. Studies in the region indicate that Brigalow regrowth of $\geq 2\text{-}3\text{m}$ in height approximates with regrowth that is 15 years old (J.Dwyer, unpublished data⁴). It is evident that isolated Brigalow specimens or trees at the edge of regrowth achieve this height threshold faster than trees in the centre of a copse and these were therefore disregarded in estimation of Brigalow age. A sample site located in the vicinity of the study area was used to validate this method of assessing age through review of historical aerial photography:

⁴ Preliminary data collected in the Tara, Taroom and Dingo districts between September and December 2007 as part of a current PhD project being undertaken at the University of Queensland



1994 aerial photograph illustrating very young regrowth 14 years ago



2004 aerial photograph illustrating progressive regrowth



Current SPOT image with mapped polygon.



Photograph of the site from within the polygon.

Although some areas of ≥ 15 year old regrowth can be mapped at a scale of 1:10,000 they are in poor condition and in the context of determining significant impacts on a threatened ecological community should not be considered. The DEWHA's EPBC Act Policy Statement 1.2 "Significant Impact Guidelines" (2006) notes in relation to determining whether an action is likely to have a significant impact the 'environmental context' must be considered and this includes, amongst other things, an assessment of the level of disturbance an area has experienced. Although some areas contain the same floristic elements as remnant Brigalow communities, the relative abundance of these species varies significantly and/or exotic / ecologically detrimental species such as Buffel Grass (*Cenchrus ciliaris*) (Buttler & Fairfax, 2003) dominate the ground layer. That is, these areas are highly disturbed and of poor quality. Furthermore, some patches may not be ecologically viable in the long term because of their shape (e.g. some very narrow young regrowth in road reserves) or because they are small and isolated.

1.5.4 Boggomosses

The boggomosses of the Dawson Valley require separate consideration. As boggomosses vary in size and vegetation cover only some are can mapped as remnant vegetation (specifically, as remnant regional ecosystem 11.3.27b). Others have been cleared of vegetation and vary in terms of their floristics. In all cases the boggomosses are regarded as a threatened ecological community under the EPBC Act.

Preliminary investigations found that the floristics and location of boggomosses recorded by Fensham & Wilson (1997) and Fensham & Fairfax (2005) were relatively thorough and of a high standard. However, the location of some boggomosses was found to be slightly inaccurate, most likely as a consequence of GPS technology at the time of the 1997 survey. Survey effort for boggomosses therefore focussed on:

- identifying the location and floristics of previously unmapped boggomosses directed by aerial photographic interpretation and opportunistic field observations. Floristics for each spring were recorded as Tertiary sites; and
- locating NCWR or EPBC listed flora recorded by Fensham & Wilson (1997) on boggomosses.

1.6 Scale

The draft TOR for the Glebe Option EIS indicates 1:10,000 scale vegetation mapping as a data requirement. In vegetation survey, scale is determined by sampling intensity, influenced by vegetation complexity and the areal extent of remnant vegetation.

Neldner *et al* (2005) recommends 25 ground observations/km² for a 1:10,000 scale map. The frequency of secondary site observations is dependant on the vegetation complexity, the amount of remnant vegetation present and the quantum of existing data for nearby areas.

The mapping scale for the current study is based on the combined extent of mapped remnant vegetation and non remnant vegetation within the investigation area rather than the total study area, which contains large tracts of cleared land. The Weir study area covers 104.5km² which contains approximately 22.9km² of remnant and non-remnant woody vegetation. This necessitates approximately 573 observations for a map at a 1:10,000 scale. For the mapping of vegetation along the pipeline route only vegetation patches were considered within 50m either side of the proposed route. This gives a total study area of 8.4 km² which contains approximately 1km² of remnant and non-remnant woody vegetation. This necessitates a minimum of 25 observations for a map at a 1:10,000 scale. To assist in putting vegetation within the context of its broader extent, vegetation polygons were also mapped for a broader area around the pipeline route, but were not as intensively surveyed.

Data previously collected in the area by the Queensland Herbarium as either Quaternary or Corveg sites (the latter are equivalent with Secondary sites) were also used to assist with refining mapping. Table 1 below summarises the total number of observations made:

Table 1 – Number of Ground Observations

Sites	Number Glebe Pipeline	Number Weir
Secondaries	11	4
Previous Secondaries by Queensland Herbarium	2	1
Tertiaries	2	6
Quaternaries	56	55
Previous Quaternaries by Queensland Herbarium	97	4
Informal observation sites	0	133
TOTAL	168	207⁵

Consideration should also be given to the scale of aerial imagery utilised in the study when considering the accuracy of mapping at a scale of 1:10,000. The Spot imagery used in the vegetation mapping component applies a spatial limitation on the scale and resolution of the vegetation mapping produced. The derivation of the vegetation community boundaries may not be as precise as those produced utilising larger scale aerial photography for interpretation.

1.7 Digital Processing and Accuracy

Linework was prepared directly in GIS (Mapinfo) utilising 2.5m pixel Spot Imagery to delineate the extent of vegetation boundaries.

1.8 Flora Assessment Methods

Secondary site selection was based on surveying representative vegetation communities within the Glebe Option study area, along the proposed route and the proposed Sandy Creek Quarry site. An additional site was undertaken for the proposed pipeline route where pre-clearing mapping indicated the former presence of the Endangered Regional Ecosystem 11.9.12 “*Dichanthium sericeum* grassland with clumps of *Acacia harpophylla* on fine-grained sedimentary rocks” and therefore potentially small remnants of this community remaining in the road reserve. Floristic data was initially recorded on secondary site proformas (Nelder *et al*, 2005) and subsequently transferred to excel spreadsheets to compile a consolidated species list for the route. The conservation status and vegetation community in which the species had been recorded is also tabulated for each species. Nomenclature follows Bostock & Holland (2007).

Reference to lists derived from HERBRECS, Corveg, Dowling & Halford (1997), Fensham & Wilson (1997) and Fensham (2008 *unpublished*), were assessed to assist in predictive analysis of species distribution.

⁵ Although this is less than the desired 573 observations, consideration must be given to the homogeneity of vegetation assemblages associated with the riparian communities of the Dawson River, plus the additional 137 sites undertaken by Dowling & Halford (1997) across the broader study area.

State significant species are defined as those listed as Endangered, Vulnerable or Rare under the *Nature Conservation (Wildlife) Regulation 2006* and nationally significant species are those listed as Endangered or Vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999*. Species were targeted on the basis of review of preferred habitat types and correlation of this with habitats mapped and encountered in the field.

1.8 Condition Assessment

Beyond the remnant status of vegetation as defined under the VMA vegetation condition also been ascribed according to a four-point scale. This assessment is of particular value when determining whether Brigalow communities potentially warrant referral under the EPBC Act. The categories of vegetation, which were devised following completion of field survey, are detailed in Table 2:

Table 2 – Condition Assessment

Condition Category	Condition Category Description
1	Vegetation is regarded as Remnant. The subject vegetation community has an intact canopy with structural features of the original community in natural or lightly disturbed condition. Ground cover is in near natural condition although exotic species may occupy specific niches. Patch size >2ha.
2	Vegetation is regarded as Remnant. The subject vegetation community has an intact canopy with structural features of the original community in natural or lightly disturbed condition. Ground cover is in near natural condition although exotic species may occupy specific niches. Patch size <2ha. This includes several linear patches associated with road reserves which are frequently subjected to significant edge effects.
3	Vegetation not regarded as remnant, but sufficient structure present to identify climax regional remnant regional ecosystem if facilitated back to a remnant vegetation condition. Patch size >2ha.
4	Vegetation not regarded as remnant, but sufficient structure present to identify climax regional remnant regional ecosystem if facilitated back to a remnant vegetation condition. Patch size <2ha. This includes several linear patches associated with road reserves which are frequently subjected to significant edge effects.

1.9 Timber Resource Assessment

1.9.1 Species Composition

The assessment of timber resource is based on data collected as part of the standard herbarium plot (500m²) and a plotless Bitterlich method for each secondary site. Only species identified as belonging to the T1 (canopy) and T2 (sub-canopy) layer were considered as part of the assessment. Species were regraded as suitable timber species if identified as such in Lazarides & Hince (1993).

1.9.2 Timber Resource Groupings

The timber assessment utilized remnant regional ecosystems as mapped as part of this study as the fundamental ‘resource unit’. Regional ecosystems are referred to throughout this text from this point as ‘resource units’.

1.9.3 Basal Area Measurements

The Bitterlich method as described in Grosenbaugh (1952) utilizes a radial sweep of a Bitterlich Stick with a basal area factor of 1, where each tree recorded in the sweep contributes a basal area of 1m²/ha to a subject resource unit. Although T2 was recorded as part of this assessment, it is likely that in some communities that this layer would not provide a millable yield.

1.9.4 Timber Volume Measurements

Whilst bitterlich measurements provide a measure of basal area (m²), quantified estimates of timber volume also require the height of the contributing vegetation to be considered. Canopy heights of vegetation communities were measured utilising a hypsometer for each secondary site. The median value for each site was used for the purpose of volume measurements. The rule applied in this assessment assumed the average length of the millable bole (trunk) as one half of the median canopy height (for T1 and T2).

The volume of potential resource can be calculated by extrapolating the average data from secondary sites for specific regional ecosystems/ ‘resource unit’ to the full extent of the ‘resource unit’ within the study area.

1.9.5 Study Limitations

This study provides only a relative assessment of timber species and a quantitative estimate of the maximum available resource and most likely overestimate the available resource. The efficacy of the method is limited by:

- The investigation area is linear in shape which affects the reliability of bitterlich data for some locations;
- Survey sites are generally located in the best type examples of each resource unit represented;
- The bitterlich method for basal area measurement fails to take into account poorly formed trees, or trees with Diameter at Breast Height (DBH) below the minimum cutting requirements;
- Some species are not regarded as high quality timber. For instance, although *Acacia harpophylla* has been included, its uses are limited; and
- The limited number of survey sites in each regional ecosystem used in the assessment could potentially bias the calculated resource of some species.

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APPENDIX A

Quaternary Site data

Secondary Site Summary by RE

Site number	Regional Ecosystem					
	11.3.25	11.9.4a	11.9.5	11.9.7	11.9.10	11.10.7
DF T7	1					
DF T12					1	
DF T15				1		
DF T17						1
T1					1	
T2				1		
T3						1
T4	1					
T5			1			
T6			1			
MD67					1	
593003*			1			
594041*		1				
Total	1	1	3	2	3	2

*Queensland Herbarium Secondary Sites

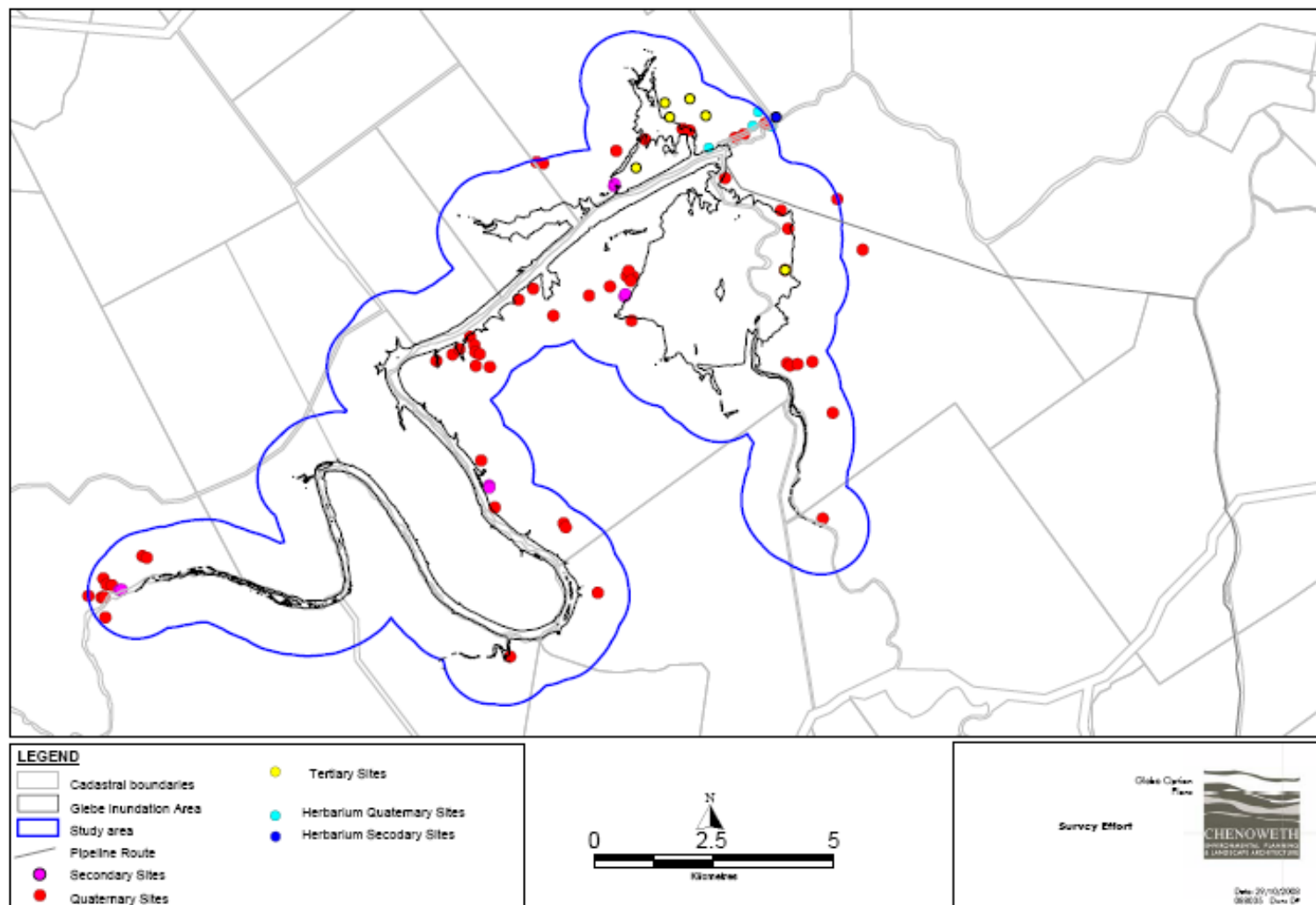


Figure 1a: Glebe Inundation Area Survey Effort

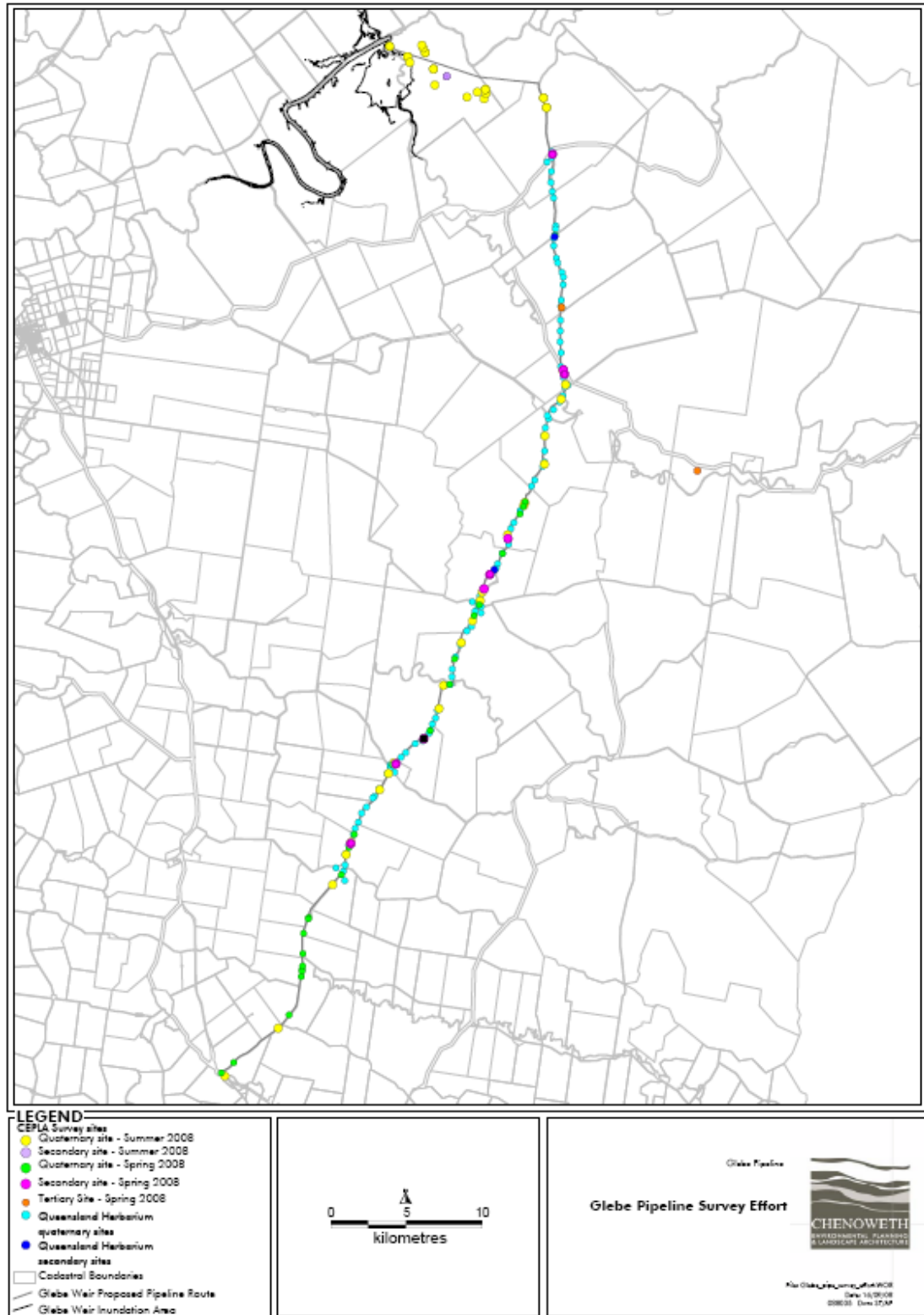


Figure 1b: Glebe Pipeline Survey Effort

SECONDARY SITE DATA

SITE NUMBER	DF T7												
LEVEL	2°												
DETAIL SP. LIST	Complete												
REGIONAL ECOSYSTEM	11.3.25												
DATE	4/09/2008												
RECORDER	DF												
LOCALITY	Taroom												
SITE DESCRIPTION	<i>Eucalyptus tereticornis</i> and <i>Angophora floribunda</i> woodland.												
GENERAL NOTES	Sandy Creek quarry site.												
COMMUNITY AREA (ha)	C	COMMUNITY WIDTH (m)	B										
MAPPED (Current RE)	11.9.7/11.3.25	REFERENCE SITE	N										
LANDFORM													
Situation	B	Element	BAN	Eros pattern	GP	Pattern	ALP						
SLOPE													
Type	VG	Slope (°)	1	ASPECT (°)	180								
SOILS													
Source	S	Reliability	Low	Code	A	Add	N	ISB		Colour	K	Texture	F
GEOLOGY													
Source	I	Reliability	Low	Code	G	Map Unit	Jle						
SPECHT STRUCTURE CODE				W									
GROUND (%)													
Litter	20	Rock	0	Bare	0	Cryptophyte	0	Vegetation	80				
RAINFOREST													
Struct. Complexity	X	Leaf Size	X	Leaf fall	X	Floor Comp	X	In. Gr Forms	X				
DISTURBANCE													
Storm damage (Proportion/Age)	0			Road Works (Proportion/Age)	0								
Fire (Proportion/Age/Height)	0			Salinity	0								
Logging (#)	3			Ringbarking /Thinning (#)	0								
Grazing	2			Feral Digging	N								
Weeds (% Cover)				Remnant	Yes								
Erosion (Type/Severity)	0												

SITE NUMBER			DF T7			continued									
STRUCTURAL SUMMARY															
Stratum	Median Height (m)	Height Range in Strata (m)				Cover (%) (100m transect)	Species								
Emergent															
Tree 1	20	16-23				64.5	<i>Eucalyptus tereticornis</i> <i>Angophora floribunda</i>								
Tree 2	13	6-14				2	<i>Angophora floribunda</i> <i>Brachychiton populneus</i>								
Tree 3															
Shrub 1															
Shrub 2															
Ground	0.5	0-0.5					<i>Lomandra leucocephala</i> <i>Richardia brasiliensis</i> * <i>Verbena tenuisecta</i> * <i>Acacia pendula</i> <i>Cirsium vulgare</i> * <i>Pratia concolor</i>								
BASAL AREA & STEM COUNTS															
Species	Basal area for plot (50X10m)					Volume/ha		Stem count for plot (50X10m)							
	E	T1	T2	T3	S1	T1	T2	E	T1	T2	T3	S1	S2		
<i>Eucalyptus tereticornis</i>		13				130			7						
<i>Angophora floribunda</i>		5				50			2	1					
<i>Pimelea neo-anglica</i>												1			

SITE NUMBER	DF T12												
LEVEL	2°												
DETAIL SP. LIST	Complete												
REGIONAL ECOSYSTEM	11.9.10												
DATE	4/09/2008												
RECORDER	DF												
LOCALITY	Wandoan												
SITE DESCRIPTION	<i>Eucalyptus populnea</i> and <i>Acacia harpophylla</i> woodland												
GENERAL NOTES	near Red Ridge Road on Nathan Road												
COMMUNITY AREA (ha)	E			COMMUNITY WIDTH (m)	E								
MAPPED (Current RE)	11.3.2/11.9.5			REFERENCE SITE	N								
LANDFORM													
Situation	F	Element	HSL	Eros pattern	UP	Pattern	Low						
SLOPE													
Type	LE		Slope	2		Aspect	320						
SOILS													
Source	I	Reliability	LOW	Code	K	Add	N	ISB/MU		Colour	B	Texture	A
GEOLOGY													
Source	I	Reliability	LOW	Code	G	Map Unit	Jle						
SPECHT STRUCTURE CODE				W									
GROUND (%)													
Litter	20	Rock	0	Bare	10	Cryptophyte	<1	Vegetation	70				
RAINFOREST													
Struct. Complexity	X	Leaf Size	X	Leaf fall	X	Floor Comp	X	In. Gr Forms	X				
DISTURBANCE													
Storm damage (Proportion/Age)	0			Road Works (Proportion/Age)	0								
Fire (Proportion/Age/Height)	0			Salinity	0								
Logging (#)	0			Ringbarking /Thinning (#)	0								
Grazing	1			Feral Digging	0								
Weeds (% Cover)	25			Remnant	Yes								
Erosion (Type/Severity)	0												

SITE NUMBER		D T12		continued										
STRUCTURAL SUMMARY														
Stratum	Median Height (m)	Height Range in Strata (m)		Cover (%) (100m transect)	Species									
Emergent														
Tree 1	16	14-18		35	Eucalyptus populnea Acacia harpophylla									
Tree 2	10	8-12		17	Acacia harpophylla Alectryon oleifolium									
Tree 3														
Shrub 1	3	2-4			Alectryon diversifolius Eremophila mitchellii									
Shrub 2	1	1-2			Apophyllum anomalum Geijera salicifolia									
Ground	0.5	0-0.5			Abutilon oxycarpum Apophyllum anomalum Atalaya hemiglauc Bothriochloa decipiens Brunoniella australis Cenchrus ciliaris* Citrus glauca Cymbopogon refractus Cyperus gracilis Hibiscus sturtii Jasminum didymum subsp. lineare Marsdenia fraseri Megathyrsus maximus* Nyssanthes erecta Opuntia hirtella Paspalidium caespitosum Enchylaena tomentosa Salsola kali Calotis scabiosifolia Evolvulus alsinoides									
BASAL AREA & STEM COUNTS														
Species		Basal area for plot (50X10m)					Volume/ha		Stem count for plot (50X10m)					
		E	T1	T2	T3	S1	T1	T2	E	T1	T2	T3	S1	S2
Eucalyptus populnea			6	2			48	10		4	1			
Acacia harpophylla			2	6			16	30		3	10		6	3
Eremophila mitchellii						1					2		9	3
Geijera salicifolia													1	1
Apophyllum anomalum														2

SITE NUMBER	DF T15												
LEVEL	2°												
DETAIL SP. LIST	Complete												
REGIONAL ECOSYSTEM	11.9.7												
DATE	4/09/2008												
RECORDER	DF												
LOCALITY	Wandoan												
SITE DESCRIPTION	<i>Eucalyptus populnea</i> and <i>Eucalyptus melanophloia</i> woodland												
GENERAL NOTES													
COMMUNITY AREA (ha)	D			COMMUNITY WIDTH (m)	B								
MAPPED (Current RE)	Non-remnant			REFERENCE SITE	N								
LANDFORM													
Situation	A		Element	HSL		Eros pattern	GP		Pattern	Low			
SLOPE													
Type	GP		Slope	1		Aspect							
SOILS													
Source	I	Reliability	Low	Code	K	Add	N	ISB/MU		Colour	F	Texture	A
GEOLOGY													
Source	I	Reliability	Low	Code	G		Map Unit	Jlh					
SPECHT STRUCTURE CODE						W							
GROUND (%)													
Litter	5		Rock	<1		Bare	<1		Cryptophyte	0		Vegetation	95
RAINFOREST													
Struct. Complexity	X		Leaf Size	X		Leaf fall	X		Floor Comp	X		In. Gr Forms	X
DISTURBANCE													
Storm damage (Proportion/Age)			0			Road Works (Proportion/Age)			0				
Fire (Proportion/Age/Height)			0			Salinity			0				
Logging (#)			2			Ringbarking /Thinning (#)			0				
Grazing			1			Feral Digging			N				
Weeds (% Cover)			0			Remnant			Yes				
Erosion (Type/Severity)			0										

SITE NUMBER		D T15				continued							
STRUCTURAL SUMMARY													
Stratum	Median Height (m)	Height Range in Strata (m)			Cover (%) (100m transect)	Species							
Emergent													
Tree 1	18	14-24			68	<i>Eucalyptus populnea</i> <i>Eucalyptus melanophloia</i>							
Tree 2	10	7-12			31	<i>Eucalyptus tereticornis</i> <i>Geijera parviflora</i> <i>Eucalyptus melanophloia</i>							
Tree 3													
Shrub 1	4	2-5				<i>Geijera parviflora</i> <i>Pittosporum phylliraeoides</i> <i>Acacia salicina</i> <i>Alectryon diversifolius</i>							
Shrub 2	1	1-2				<i>Geijera parviflora</i> <i>Pittosporum phylliraeoides</i> <i>Acacia salicina</i> <i>Alectryon diversifolius</i>							
Ground	0.5	0-0.9				<i>Abutilon oxycarpum</i> <i>Cyperus gracilis</i> <i>Megathyrsus maximus*</i> <i>Opuntia hirtella</i> <i>Acacia excelsa</i> <i>Dodonaea viscosa</i> <i>Grewia latifolia</i> <i>Jasminum simplicifolium</i> <i>Lomandra leucocephala</i> <i>Pittosporum phylliraeoides</i> <i>Sida rhombifolia*</i> <i>Sida subspicata</i> <i>Solanum nigrum*</i> <i>Verbena tenuisecta*</i>							
BASAL AREA & STEM COUNTS													
Species	Basal area for plot (50X10m)					Volume/ha		Stem count for plot (50X10m)					
	E	T1	T2	T3	S1	T1	T2	E	T1	T2	T3	S1	S2
<i>Eucalyptus populnea</i>		7	1			63	5		2	5		1	2
<i>Eucalyptus melanophloia</i>		2				18			1	3			1
<i>Geijera parviflora</i>			1							1		3	3
<i>Acacia salicina</i>										1			1
<i>Acacia excelsa</i>													2
<i>Dodonaea viscosa</i>													3
<i>Alectryon oleifolium</i>													1
<i>Eucalyptus tereticornis</i>									2				

REFERENCE SITE FOR 11.10.7 (DF T17)

SITE NUMBER	DF T17												
LEVEL	2°												
DETAIL SP. LIST	Complete												
REGIONAL ECOSYSTEM	11.10.7												
DATE	4/09/2008												
RECORDER	DF												
LOCALITY	Wandoan												
SITE DESCRIPTION	<i>Eucalyptus crebra</i> woodland												
GENERAL NOTES													
COMMUNITY AREA (ha)	E			COMMUNITY WIDTH (m)			D						
MAPPED (Current RE)	11.10.7/11.9.2			REFERENCE SITE			Y						
LANDFORM													
Situation	A		Element	HSL		Eros pattern	UP		Pattern	HIL			
SLOPE													
Type	MO		Slope	5-10		Aspect	20						
SOILS													
Source	I	Reliability	LOW	Code	K	Add	N	ISB/MU		Colour	F	Texture	A
GEOLOGY													
Source	I	Reliability	Low	Code	G			Map Unit	Jlh				
SPECHT STRUCTURE CODE													
GROUND (%)													
Litter	10	Rock	<1	Bare	10	Cryptophyte	0	Vegetation	80				
RAINFOREST													
Struct. Complexity	X	Leaf Size	X	Leaf fall	X	Floor Comp	X	In. Gr Forms	X				
DISTURBANCE													
Storm damage (Proportion/Age)	0			Road Works (Proportion/Age)	0								
Fire (Proportion/Age/Height)	0			Salinity	0								
Logging (#)	0			Ringbarking /Thinning (#)	0								
Grazing				Feral Digging	0								
Weeds (% Cover)	0			Remnant	Yes								
Erosion (Type/Severity):	0												

SITE NUMBER		D T17				continued								
STRUCTURAL SUMMARY														
Stratum	Median Height (m)	Height Range in Strata (m)				Cover (%) (100m transect)		Species						
Emergent														
Tree 1	15	14-16				48		<i>Eucalyptus crebra</i>						
Tree 2	7	6-8				17.5		<i>Canthium oleifolium</i> <i>Eucalyptus crebra</i> <i>Alphitonia excelsa</i>						
Tree 3														
Shrub 1	2	1-2						<i>Geijera parviflora</i> <i>Alstonia constricta</i>						
Shrub 2	1	0.5-1						<i>Carissa ovata</i>						
Ground	0.5	0-0.5						<i>Abutilon oxycarpum</i> <i>Acacia leiocalyx</i> <i>Cheilanthes tenuifolia</i> <i>Cheilanthes lasiophylla</i> <i>Aristida caput-medusae</i> <i>Iseilema membranaceum</i> <i>Maireana microphylla</i> <i>Notelaea microcarpa</i> <i>Petalostigma pubescens</i> <i>Podolepis longipedata</i> <i>Senecio pinnatifolius</i>						
BASAL AREA & STEM COUNTS														
Species		Basal area for plot (50X10m)					Volume/ha		Stem count for plot (50X10m)					
		E	T1	T2	T3	S1	T1	T2	E	T1	T2	T3	S1	S2
<i>Eucalyptus crebra</i>			11				82.5			14	3			
<i>Alphitonia excelsa</i>				1				3.5		2				1
<i>Carissa ovata</i>														1
<i>Petalostigma pubescens</i>											1			
<i>Alstonia constricta</i>											2		4	3
<i>Acacia Leiocalyx</i>													2	1
<i>Canthium odoratum</i>														1

SITE NUMBER	T1												
LEVEL	2 ^o												
DETAIL SP. LIST	Complete												
REGIONAL ECOSYSTEM	11.9.10												
DATE	4/09/2008												
RECORDER	ST/AP												
LOCALITY	Taroom												
SITE DESCRIPTION	<i>Acacia harpophylla</i>												
GENERAL NOTES	Junction Cracow and Nathan Roads												
COMMUNITY AREA (ha)	C	COMMUNITY WIDTH (m)	B										
MAPPED (Current RE)	Non-remnant	REFERENCE SITE	N										
LANDFORM													
Situation	A	Element	VLF	Eros pattern	GP	Pattern	PLA						
SLOPE													
Type	VG	Slope	1			Aspect	45						
SOILS													
Source	S	Reliability	Low	Code	K	data	N	ISB/MU		Colour	F	Texture	A
GEOLOGY													
Source	I	Reliability	Low	Code	G			Map Unit	Jle				
SPECHT STRUCTURE CODE				W									
GROUND (%)													
Litter	20	Rock	0	Bare	40	Cryptophyte	5	Vegetation	35				
RAINFOREST													
Struct. Complexity	X	Leaf Size	X	Leaf fall	X	Floor Comp	X	In. Gr Forms	X				
DISTURBANCE													
Storm damage (Proportion/Age)	0			Road Works (Proportion/Age)	0								
Fire (Proportion/Age/Height)	0			Salinity	0								
Logging (#)	3			Ringbarking /Thinning (#)	0								
Grazing	1			Feral Digging	0								
Weeds (% Cover)	0			Remnant	Yes								
Erosion (Type/Severity):	0												

SITE NUMBER		T1		continued									
STRUCTURAL SUMMARY													
Stratum	Median Height (m)	Height Range in Strata (m)			Cover (%) (100m transect)	Species							
Emergent													
Tree 1	15	10-16			22.5	<i>Eucalyptus populnea</i> <i>Acacia harpophylla</i>							
Tree 2	4	4-7			28.8	<i>Eremophila mitchellii</i> <i>Acacia harpophylla</i>							
Tree 3													
Shrub 1	2	1-3			13.2	<i>Geijera parviflora</i> <i>Notelaea microcarpa</i>							
Shrub 2	0.5	0.5-1				<i>Geijera parviflora</i> <i>Citrus glauca</i> <i>Alectryon diversifolius</i>							
Ground	0.5	0-0.5				<i>Cenchrus ciliaris</i> * <i>Abutilon oxycarpum</i> <i>Carissa ovata</i> <i>Senecio pinnatifolius</i> <i>Dodonaea viscosa</i> <i>Brunoniella australis</i> <i>Einadia hastata</i> <i>Sporobolus creber</i> <i>Boerhavia dominii</i> <i>Cheilanthes distans</i>							
BASAL AREA & STEM COUNTS													
Species	Basal area for plot (50X10m)					Volume/ha		Stem count for plot (50X10m)					
	E	T1	T2	T3	S1	T1	T2	E	T1	T2	T3	S1	S2
<i>Eucalyptus populnea</i>		6				45			3				
<i>Eremophila mitchellii</i>			2				4			28		31	2
<i>Geijera parviflora</i>										1		3	16
<i>Alectryon diversifolius</i>													1
<i>Citrus glauca</i>												2	3
<i>Dodonaea viscosa</i>													4
<i>Carissa ovata</i>													1

SITE NUMBER	T2												
LEVEL	2°												
DETAIL SP. LIST	Complete												
REGIONAL ECOSYSTEM	11.9.7												
DATE	4/09/2008												
RECORDER	AP/ST												
LOCALITY	Taroom												
SITE DESCRIPTION	<i>Eucalyptus populnea</i> woodland.												
GENERAL NOTES	Nathan Road												
COMMUNITY AREA (ha)	D			COMMUNITY WIDTH (m)	B								
MAPPED (Current RE)	11.3.2/11.9.5			REFERENCE SITE	N								
LANDFORM													
Situation	A		Element	VLF		Eros pattern	LP		Pattern	PLA			
SLOPE													
Type	LE		Slope	0-1		Aspect	0						
SOILS													
Source	S	Reliability	Low	Code	K	data	N	ISB/MU		Colour	F	Texture	A
GEOLOGY													
Source	I	Reliability	Low	Code	G			Map Unit	Jle				
SPECHT STRUCTURE CODE				W									
GROUND (%)													
Litter	20		Rock	0		Bare	40		Cryptophyte	10		Vegetation	30
RAINFOREST													
Struct. Complexity	X		Leaf Size	X		Leaf fall	X		Floor Comp	X		In. Gr Forms	X
DISTURBANCE													
Storm damage (Proportion/Age)	0			Road Works (Proportion/Age)	0								
Fire (Proportion/Age/Height)	0			Salinity	0								
Logging (#)	1			Ringbarking /Thinning (#)	0								
Grazing	1			Feral Digging	0								
Weeds (% Cover)	0			Remnant	Yes								
Erosion (Type/Severity):	0												

SITE NUMBER			T2		continued									
STRUCTURAL SUMMARY														
Stratum	Median Height (m)	Height Range in Strata (m)			Cover (%) (100m transect)	Species								
Emergent														
Tree 1	15	19-16			12.7	<i>Eucalyptus populnea</i>								
Tree 2	8	7 -10			17.5	<i>Eucalyptus populnea</i> <i>Casuarina cristata</i>								
Tree 3														
Shrub 1	2	1-4			13.6	<i>Citrus glauca</i> <i>Geijera parviflora</i> <i>Eremophila mitchellii</i> <i>Opuntia tomentosa</i> *								
Shrub 2	0.5	0.5-1			1.7	<i>Citrus glauca</i>								
Ground	0.5	0-0.5				<i>Abutilon oxycarpum</i> <i>Senecio pinnatifolius</i> <i>Brunoniella australis</i> <i>Cenchrus ciliaris</i> * <i>Cyperus gracilis</i> <i>Chrysocephalum apiculatum</i> <i>Salsola kali</i>								
BASAL AREA & STEM COUNTS														
Species	Basal area for plot (50X10m)					Volume/ha		Stem count for plot (50X10m)						
	E	T1	T2	T3	S1	T1	T2	E	T1	T2	T3	S1	S2	
<i>Eucalyptus populnea</i>		4	10			30	40		2	7		4		
<i>Eremophila mitchellii</i>												14		
<i>Citrus glauca</i>												6	2	
<i>Dodonaea viscosa</i>														
<i>Casuarina cristata</i>													1	

SITE NUMBER	T3												
LEVEL	2°												
DETAIL SP. LIST	Complete												
REGIONAL ECOSYSTEM	11.10.7												
DATE	4/09/2008												
RECORDER	DF												
LOCALITY	Wandoan												
SITE DESCRIPTION													
GENERAL NOTES	Nathan Road												
COMMUNITY AREA (ha)	A			COMMUNITY WIDTH (m)	A								
MAPPED (Current RE)	11.10.7/11.9.2			REFERENCE SITE	N								
LANDFORM													
Situation	F	Element	HSL	Eros pattern	GP	Pattern	Low						
SLOPE													
Type	VG	Slope	2		Aspect	0							
SOILS													
Source	S	Reliability	Low	Code	D	data	N	ISB/MU		Colour	K	Texture	F
GEOLOGY													
Source	I	Reliability	Low	Code	G	Map Unit	Jlh						
SPECHT STRUCTURE CODE				W									
GROUND (%)													
Litter	10	Rock	10	Bare	20	Cryptophyte	10	Vegetation	50				
RAINFOREST													
Struct. Complexity	X	Leaf Size	X	Leaf fall	X	Floor Comp	X	In. Gr Forms	X				
DISTURBANCE													
Storm damage (Proportion/Age)	0			Road Works (Proportion/Age)	1/2								
Fire (Proportion/Age/Height)	0			Salinity	0								
Logging (#)	0			Ringbarking /Thinning (#)	0								
Grazing	1			Feral Digging	0								
Weeds (% Cover)	0			Remnant	Yes								
Erosion (Type/Severity):	0												

SITE NUMBER		T3				continued								
STRUCTURAL SUMMARY														
Stratum	Median Height (m)	Height Range in Strata (m)				Cover (%) (100m transect)	Species							
Emergent														
Tree 1	16	14-16				2.5	<i>Eucalyptus crebra</i>							
Tree 2	10	8-10					<i>Callitris glaucophylla</i> <i>Eremophila mitchellii</i>							
Tree 3														
Shrub 1	3	1.5-4				19.4	<i>Acacia leiocalyx</i> <i>Acacia excelsa</i>							
Shrub 2	1	0-1					<i>Grevillea striata</i> <i>Carissa ovata</i>							
Ground	0.5	0-0.5					<i>Cenchrus ciliaris</i> * <i>Verbena tenuisecta</i> * <i>Hibiscus sturtii</i> <i>Opuntia stricta</i> * <i>Melinis repens</i> * <i>Oxalis corniculata</i> * <i>Portulaca pilosa</i> <i>Einadia hastata</i> <i>Calotis lappulacea</i> <i>Capparis lasiantha</i>							
BASAL AREA & STEM COUNTS														
Species		Basal area for plot (50X10m)					Volume/ha		Stem count for plot (50X10m)					
		E	T1	T2	T3	S1	T1	T2	E	T1	T2	T3	S1	S2
<i>Grevillea striata</i>													2	6
<i>Acacia leiocalyx</i>													9	
<i>Opuntia tomentosa</i>														1
<i>Acacia excelsa</i>													1	
<i>Callitris glaucophylla</i>											1		4	6
<i>Eucalyptus crebra</i>			3				24						1	2
<i>Eremophila mitchellii</i>													1	

SITE NUMBER	T4												
LEVEL	2°												
DETAIL SP. LIST	Complete												
REGIONAL ECOSYSTEM	11.3.25												
DATE	4/09/2008												
RECORDER	ST/AP												
LOCALITY	Wandoan												
SITE DESCRIPTION	<i>Eucalyptus tereticornis</i> and <i>Angophora floribunda</i> woodland												
GENERAL NOTES	Bullock Creek												
COMMUNITY AREA (ha)	D			COMMUNITY WIDTH (m)	B								
MAPPED (Current RE)	Non-remnant			REFERENCE SITE	N								
LANDFORM													
Situation	B		Element	BAN		Eros pattern	GP		Pattern	ALP			
SLOPE													
Type	VG		Slope	1		Aspect	225						
SOILS													
Source	S	Reliability	Low	Code	D	data	N	ISB/MU		Colour	F	Texture	D
GEOLOGY													
Source	I		Reliability	Low		Code	G		Map Unit	Ji			
SPECHT STRUCTURE CODE						W							
GROUND (%)													
Litter	0		Rock	0		Bare	10		Cryptophyte	0		Vegetation	90
RAINFOREST													
Struct. Complexity	X		Leaf Size	X		Leaf fall	X		Floor Comp	X		In. Gr Forms	X
DISTURBANCE													
Storm damage (Proportion/Age)	0					Road Works (Proportion/Age)	0						
Fire (Proportion/Age/Height)	0					Salinity	0						
Logging (#)	2					Ringbarking /Thinning (#)	0						
Grazing	2					Feral Digging	0						
Weeds (% Cover)	0					Remnant	Yes						
Erosion (Type/Severity):	0												

SITE NUMBER			T4		continued									
STRUCTURAL SUMMARY														
Stratum	Median Height (m)	Height Range in Strata (m)			Cover (%) (100m transect)	Species								
Emergent														
Tree 1	20	20-29			55.7	<i>Eucalyptus tereticornis</i> <i>Angophora floribunda</i>								
Tree 2	15	14-18			3.5	<i>Eucalyptus tereticornis</i> <i>Angophora floribunda</i> <i>Brachychiton populneus</i>								
Tree 3														
Shrub 1														
Shrub 2														
Ground	0.5	0-0.5				<i>Heteropogon contortus</i> <i>Imperata cylindrica</i> <i>Verbena tenuisecta</i> * <i>Opuntia stricta</i> * <i>Abutilon oxycarpum</i> <i>Megathyrsus maximus</i> * <i>Lomandra longifolia</i> <i>Malvastrum americanum</i> * <i>Onopordium acanthium</i> * <i>Swainsona galegifolia</i> <i>Themeda triandra</i>								
BASAL AREA & STEM COUNTS														
Species	Basal area for plot (50X10m)					Volume/ha		Stem count for plot (50X10m)						
	E	T1	T2	T3	S1	T1	T2	E	T1	T2	T3	S1	S2	
<i>Eucalyptus tereticornis</i>		22				220			6					
<i>Eucalyptus melanophloia</i>			1				7.5							
<i>Brachychiton populneus</i>			1				7.5							

SITE NUMBER	T5												
LEVEL	2°												
DETAIL SP. LIST	Complete												
REGIONAL ECOSYSTEM	11.9.5												
DATE	5/09/2008												
RECORDER	ST/AP												
LOCALITY	Wandoan												
SITE DESCRIPTION	<i>Acacia harpophylla</i> dominated woodland.												
GENERAL NOTES	Nathan Road												
COMMUNITY AREA (ha)	C			COMMUNITY WIDTH (m)			A						
MAPPED (Current RE)	Non-remnant			REFERENCE SITE			N						
LANDFORM													
Situation	F	Element	HSL	Eros pattern	GP	Pattern	Low						
SLOPE													
Type	G		Slope	2		Aspect	325						
SOILS													
Source	S	Reliability	Low	Code	H	data	N	ISB/MU		Colour	F	Texture	A
GEOLOGY													
Source	I		Reliability	Low		Code	G		Map Unit	Ji			
SPECHT STRUCTURE CODE						W							
GROUND (%)													
Litter	20		Rock	0		Bare	40		Cryptophyte	0		Vegetation	40
RAINFOREST													
Struct. Complexity	X		Leaf Size	X		Leaf fall	X		Floor Comp	X		In. Gr Forms	X
DISTURBANCE													
Storm damage (Proportion/Age)	0			Road Works (Proportion/Age)			0						
Fire (Proportion/Age/Height)	0			Salinity			0						
Logging (#)	5			Ringbarking /Thinning (#)			0						
Grazing	1			Feral Digging			0						
Weeds (% Cover)	10			Remnant			Yes						
Erosion (Type/Severity):	1/1												

SITE NUMBER		T5		continued									
STRUCTURAL SUMMARY													
Stratum	Median Height (m)	Height Range in Strata (m)		Cover (%) (100m transect)	Species								
Emergent													
Tree 1	12	9-15		18.8	Acacia harpophylla								
Tree 2	6	5-9		35.5	Acacia harpophylla Opuntia tomentosa Geijera parviflora Eremophila mitchellii								
Tree 3													
Shrub 1	2	1-4		5.8	Eremophila mitchellii Geijera parviflora Alectryon diversifolius								
Shrub 2	0.5	0.5-1			Carissa ovata								
Ground	0.5	0-0.5			Cenchrus ciliaris* Capparis lasiantha Cheilanthes distans Megathyrsus maximus* Oxalis corniculata* Abutilon micropetalum Cyperus gracilis Cissus opaca Psydrax odorata Tetragonia tetragonioides Lomandra leucocephala Jasminum didymum subsp. lineare								
BASAL AREA & STEM COUNTS													
Species	Basal area for plot (50X10m)					Volume/ha		Stem count for plot (50X10m)					
	E	T1	T2	T3	S1	T1	T2	E	T1	T2	T3	S1	S2
Acacia harpophylla		11				66			3	10		5	
Eremophila mitchellii			1				3			4		4	
Geijera parviflora			6						2	6		3	4
Brachychiton rupestris			1										
Carissa obovata													4
Alectryon diversifolius												1	6
Psydrax odoratum												2	
Capparis lasiantha												2	
Opuntia stricta										1			

SITE NUMBER	T6												
LEVEL	2°												
DETAIL SP. LIST	Complete												
REGIONAL ECOSYSTEM	11.9.5												
DATE	5/09/2008												
RECORDER	DF												
LOCALITY	Wandoan												
SITE DESCRIPTION	<i>Acacia harpophylla</i> , <i>Brachychiton rupestris</i> and <i>Lysiphyllum carolinii</i> woodland.												
GENERAL NOTES	Nathan Road												
COMMUNITY AREA (ha)	A			COMMUNITY WIDTH (m)			B						
MAPPED (Current RE)	Non-remnant			REFERENCE SITE			N						
LANDFORM													
Situation	A		Element	VLF		Eros pattern	GP		Pattern	Low			
SLOPE													
Type	VG		Slope	1		Aspect	90						
SOILS													
Source	S	Reliability	Low	Code	D	data	N	ISB/MU		Colour	F	Texture	D
GEOLOGY													
Source	I	Reliability	Low	Code	G		Map Unit	Ji					
SPECHT STRUCTURE CODE						W							
GROUND (%)													
Litter	5		Rock	0		Bare	0		Cryptophyte	0		Vegetation	95
RAINFOREST													
Struct. Complexity	X		Leaf Size	X		Leaf fall	X		Floor Comp	X		In. Gr Forms	X
DISTURBANCE													
Storm damage (Proportion/Age)	0			Road Works (Proportion/Age)			0						
Fire (Proportion/Age/Height)	0			Salinity			0						
Logging (#)	2			Ringbarking /Thinning (#)			0						
Grazing	1			Feral Digging			0						
Weeds (% Cover)	0			Remnant			Yes						
Erosion (Type/Severity):	0												

SITE NUMBER		T6		continued									
STRUCTURAL SUMMARY													
Stratum	Median Height (m)	Height Range in Strata (m)			Cover (%) (100m transect)	Species							
Emergent													
Tree 1	8	8-14			17	Acacia harpophylla Brachychiton rupestris Lysiphyllum carolinii							
Tree 2	7	4 -7			51	Geijera parviflora Opuntia tomentosa Eremophila mitchellii Acacia harpophylla							
Tree 3													
Shrub 1	2	2 -3			15.7	Alectryon diversifolius Geijera parviflora Acacia harpophylla							
Shrub 2													
Ground	0.5	0-0.5				Megathyrsus maximus* Capparis lasiantha Cheilanthes distans Cenchrus ciliaris* Oxalis corniculata* Tetragonia tetragonioides Einadia hastata Marsdenia fraseri Parsonsia eucalyptophylla Plectranthus parviflorus Salsola kali Roepera apiculata Marsdenia microlepis Cissus opaca Enchylaena tomentosa							
BASAL AREA & STEM COUNTS													
Species	Basal area for plot (50X10m)					Volume/ha		Stem count for plot (50X10m)					
	E	T1	T2	T3	S1	T1	T2	E	T1	T2	T3	S1	S2
Acacia harpophylla		4					14		18	7		1	
Lysiphyllum carolinii									1				
Opuntia tomentosa		1								2			
Geijera parviflora		1								11		7	
Brachychiton rupestris									1				
Alectryon diversifolius												1	

TERTIARY SITE DATA

Tertiary

SITE NUMBER	1												
LEVEL	3°												
DETAIL SP. LIST	Complete												
REGIONAL ECOSYSTEM	Non-remnant												
DATE	4/09/2008												
RECORDER	DF/ST/AP												
LOCALITY	Wandoan												
SITE DESCRIPTION	<i>Acacia harpophylla</i> with an understorey dominated by <i>Cenchrus ciliaris</i> *												
GENERAL NOTES	Nathan Road mapped as Pre-clearing RE 11.9.12. Search for <i>Dichanthium queenslandicum</i> .												
COMMUNITY AREA (ha)	A			COMMUNITY WIDTH (m)	A								
MAPPED (Current RE)	Non-remnant			REFERENCE SITE	N								
LANDFORM													
Situation	F	Element	HSL	Eros pattern	UL	Pattern	Low						
SLOPE													
Type	VG		Slope	1-2		Aspect	270						
SOILS													
Source	S	Reliability	Low	Code	K	data	N	ISB/MU		Colour	F	Texture	A
GEOLOGY													
Source	I	Reliability	Low	Code	G			Map Unit	Jle				
SPECHT STRUCTURE CODE													
GROUND (%)													
Litter	x	Rock	x	Bare	x	Cryptophyte	x	Vegetation	x				
RAINFOREST													
Struct. Complexity	X	Leaf Size	X	Leaf fall	X	Floor Comp	X	In. Gr Forms	X				
DISTURBANCE													
Storm damage (Proportion/Age)				Road Works (Proportion/Age)									
Fire (Proportion/Age/Height)				Salinity									
Logging (#)				Ringbarking /Thinning (#)									
Grazing				Feral Digging									
Weeds (% Cover)				Remnant									
Erosion (Type/Severity):													

SITE NUMBER		1												continued			
STRUCTURAL SUMMARY																	
Stratum		Median Height (m)		Height Range in Strata (m)				Cover (%) (100m transect)		Species							
Emergent																	
Tree 1		3		2-4				(Sparse)		Acacia harpophylla Acacia excelsa Eremophila mitchellii Notelaea microcarpa							
Tree 2																	
Tree 3																	
Shrub 1																	
Shrub 2																	
Ground		0.5		0-0.5				(dense)		Cenchrus ciliaris* (dominant) Salsola kali Enchylaena tomentosa Senecio pinnatifolius Maireana microphylla Atriplex muelleri Jasminum didymum subsp. lineare Sclerolaena muricata var. muricata Sporobolus creber Citrus glauca							
BASAL AREA & STEM COUNTS																	
Species		Basal area for plot (50X10m)					Volume/ha		Stem count for plot (50X10m)								
		E	T1	T2	T3	S1	T1	T2	E	T1	T2	T3	S1	S2			

SITE NUMBER	2 (DF 10)												
LEVEL	3°												
DETAIL SP. LIST	Complete												
REGIONAL ECOSYSTEM	11.3.25												
DATE	4/09/2008												
RECORDER	DF/ST/AP												
LOCALITY	Wandoan												
SITE DESCRIPTION	Boggomoss on Sandy Creek												
GENERAL NOTES													
COMMUNITY AREA (ha)			B			COMMUNITY WIDTH (m)			B				
MAPPED (Current RE)			Edge of 11.9.7/11.3.25 and non-remnant			REFERENCE SITE			N				
LANDFORM													
Situation	B		Element	VLF		Eros pattern	GP		Pattern	ALP			
SLOPE													
Type	VG		Slope	1-2		Aspect	135						
SOILS													
Source	S	Reliability	Low	Code	A	data	N	ISB/MU		Colour	K	Texture	F
GEOLOGY													
Source	I	Reliability	Low	Code	G	Map Unit	Jle						
SPECHT STRUCTURE CODE						X							
GROUND (%)													
Litter	x		Rock	x		Bare	x		Cryptophyte	x		Vegetation	x
RAINFOREST													
Struct. Complexity	X		Leaf Size	X		Leaf fall	X		Floor Comp	X		In. Gr Forms	X
DISTURBANCE													
Storm damage (Proportion/Age)							Road Works (Proportion/Age)						
Fire (Proportion/Age/Height)							Salinity						
Logging (#)							Ringbarking /Thinning (#)						
Grazing							Feral Digging						
Weeds (% Cover)							Remnant						
Erosion (Type/Severity):													

SITE NUMBER		10			continued
STRUCTURAL SUMMARY					
Stratum	Median Height (m)	Height Range in Strata (m)	Cover (%) (100m transect)	Species	
Emergent					
Tree 1					
Tree 2					
Tree 3					
Shrub 1					
Shrub 2					
Ground	0.3	0-1		<i>Eriocaulon carsonii</i> <i>Myriophyllum artesium</i> # <i>Chloris gayana</i> * # <i>Cynodon dactylon</i> # <i>Cyperus flavidus</i> # <i>Fimbristylis dichotoma</i> # <i>Leersia hexandra</i> # <i>Paspalum dilatatum</i> # <i>Pennisetum alopecuroides</i> # <i>Schoenoplectus mucronatus</i> # <i>Utricularia gibba</i> # <i>Utricularia dichotoma</i> # <i>Cyperus laevigatus</i> # <i>Eleocharis equisetina</i> # <i>Schoenus falcatus</i> # <i>Plantago gaudichaudii</i> # <i>Phragmites australe</i>	

Species taken from Australian National University (1991) Decoda Database for Ecological Community Data, Department of Biogeography and Geomorphology, Australian National University, Canberra.

QUATERNARY SITE DATA

Site No.	Tree1				Tree 2				Shrub 1			Shrub 2		Ground
	i	ii	iii	iv	i	ii	iii	iv	i	ii	iii	i	ii	
ST1					<i>Eremophila mitchellii</i>	<i>Acacia excelsa</i>	<i>Notelaea microcarpa</i>		<i>Citrus glauca</i>					<i>Verbena tenuisecta*</i> <i>Senecio pinnatifolius</i> <i>Maireana microphylla</i> <i>Salsola kali</i> <i>Sclerolaena muricata</i> var. <i>muricata</i> <i>Sporobolus creber</i>
ST2	<i>Eucalyptus populnea</i>				<i>Eucalyptus populnea</i>	<i>Eucalyptus melanophloia</i>			<i>Geijera parviflora</i>	<i>Citrus glauca</i>				
ST3	<i>Acacia harpophylla</i>	<i>Eucalyptus populnea</i>			<i>Acacia harpophylla</i>	<i>Eucalyptus populnea</i>			<i>Acacia excelsa</i>	<i>Geijera parviflora</i>				<i>Cenchrus ciliaris*</i>
ST4	<i>Acacia harpophylla</i>	<i>Eucalyptus crebra</i>												
ST5	<i>Callitris glaucophylla</i>	<i>Eucalyptus melanophloia</i>	<i>Eucalyptus populnea</i>	<i>Acacia harpophylla</i>	<i>Callitris glaucophylla</i>	<i>Eucalyptus populnea</i>	<i>Eremophila mitchellii</i>	<i>Eucalyptus melanophloia</i>	<i>Callitris glaucophylla</i>	<i>Geijera parviflora</i>	<i>Eucalyptus melanophloia</i>	<i>Acacia decora</i>	<i>Callitris glaucophylla</i>	
ST6	<i>Angophora floribunda</i>	<i>Eucalyptus tereticornis</i>			<i>Brachychiton populnea</i>	<i>Eucalyptus tereticornis</i>	<i>Angophora floribunda</i>							
ST7	<i>Acacia harpophylla</i>				<i>Brachychiton rupestris</i>	<i>Acacia harpophylla</i>			<i>Geijera parviflora</i>	<i>Acacia harpophylla</i>	<i>Opuntia stricta</i>			
ST8	<i>Acacia harpophylla</i>				<i>Brachychiton rupestris</i>	<i>Acacia harpophylla</i>			<i>Geijera parviflora</i>	<i>Acacia harpophylla</i>	<i>Opuntia stricta</i>			
ST9	<i>Eucalyptus populnea</i>	<i>Eucalyptus melanophloia</i>												
ST10	<i>Acacia harpophylla</i>				<i>Acacia harpophylla</i>	<i>Lysiphyllum carolinii</i>	<i>Brachychiton rupestris</i>		<i>Acacia excelsa</i>	<i>Geijera parviflora</i>	<i>Eremophila mitchellii</i>	<i>Opuntia stricta</i>	<i>Santalum lanceolatum</i>	
ST11	<i>Acacia harpophylla</i>													
ST12	<i>Acacia harpophylla</i>	<i>Acacia melvillei</i>			<i>Acacia harpophylla</i>	<i>Eremophila mitchellii</i>			<i>Geijera parviflora</i>	<i>Citrus glauca</i>				<i>Cenchrus ciliaris*</i>
ST13	<i>Acacia harpophylla</i>													
ST14	<i>Eucalyptus populnea</i>													
ST15	<i>Eucalyptus tereticornis</i>	<i>Eucalyptus populnea</i>			<i>Eucalyptus populnea</i>	<i>Casuarina cristata</i>	<i>Acacia harpophylla</i>		<i>Geijera parviflora</i>					
ST16	<i>Eucalyptus populnea</i>				<i>Eucalyptus populnea</i>	<i>Eremophila mitchellii</i>								
ST17	<i>Eucalyptus tereticornis</i>													
ST18	<i>Acacia melvillei</i>				<i>Acacia harpophylla</i>	<i>Acacia melvillei</i>	<i>Santalum lanceolatum</i>	<i>Lysiphyllum carolinii</i>						

Site No.	Tree1				Tree 2				Shrub 1			Shrub 2		Ground
	i	ii	iii	iv	i	ii	iii	iv	i	ii	iii	i	ii	
ST19	<i>Eucalyptus tereticornis</i>	<i>Eucalyptus populnea</i>												
ST20	<i>Eucalyptus populnea</i>	<i>Eucalyptus melanophloia</i>												
DF2	<i>Eucalyptus populnea</i>													
DF3	<i>Acacia melvillei</i>	<i>Acacia harpophylla</i>												
DF4	<i>Acacia harpophylla</i>	<i>Eucalyptus cambageana</i>												
DF5	<i>Eucalyptus populnea</i>	<i>Eucalyptus melanophloia</i>												
DF6	<i>Casuarina cristata</i>													
DF8	<i>Eucalyptus populnea</i>													
DF9	<i>Casuarina cristata</i>													
DF11	<i>Brachychiton rupestris</i>	<i>Acacia harpophylla</i>	<i>Lysiphyllum carolinii</i>		<i>Geijera parviflora</i>	<i>Flindersia collina</i>								
DF13	<i>Acacia harpophylla</i>	<i>Eucalyptus populnea</i>												
DF14	<i>Eucalyptus populnea</i>													
DF16	<i>Eucalyptus crebra</i>													
DF18	<i>Acacia harpophylla</i>													
DF19	<i>Acacia harpophylla</i>													
MAR 1	<i>Eucalyptus populnea</i>	<i>Acacia harpophylla</i>												
MAR 2	<i>Eucalyptus populnea</i>													
MAR 3	<i>Eucalyptus populnea</i>													
MAR 4	<i>Eucalyptus populnea</i>	<i>Corymbia tessellaris</i>	<i>Eucalyptus tereticornis</i>											
MAR 5	<i>Eucalyptus tereticornis</i>	<i>Eucalyptus populnea</i>	<i>Acacia harpophylla</i>											
MAR 6	<i>Eucalyptus melanophloia</i>	<i>Eucalyptus populnea</i>	<i>Acacia harpophylla</i>											
MAR 7	<i>Eucalyptus populnea</i>	<i>Eucalyptus tereticornis</i>												

Site No.	Tree1				Tree 2				Shrub 1			Shrub 2		Ground
	i	ii	iii	iv	i	ii	iii	iv	i	ii	iii	i	ii	
MAR 8	<i>Acacia harpophylla</i>													
MAR 9	<i>Acacia harpophylla</i>	<i>Eucalyptus cambageana</i>												
MAR 10	<i>Acacia harpophylla</i>	<i>Eucalyptus cambageana</i>												
MAR 12	<i>Angophora floribunda</i>	<i>Eucalyptus tereticornis</i>												
MAR 13	<i>Eucalyptus melanophloia</i>	<i>Eucalyptus tereticornis</i>												
MAR 14	<i>Acacia harpophylla</i>													
MAR 17	<i>Acacia harpophylla</i>													
MAR 18	<i>Acacia harpophylla</i>													
MAR 19	<i>Acacia harpophylla</i>													
MAR 20	<i>Acacia harpophylla</i>													
MAR 21	<i>Eucalyptus populnea</i>													
MAR 22	<i>Eucalyptus populnea</i>	<i>Eucalyptus tereticornis</i>												
MAR 23	<i>Acacia harpophylla</i>													
MD58	<i>Eucalyptus populnea</i>	<i>Acacia harpophylla</i>												
MD59	<i>Angophora floribunda</i>	<i>Eucalyptus coolabah</i>	<i>Eucalyptus populnea</i>		<i>Acacia harpophylla</i>									
MD60	<i>Eucalyptus coolabah</i>				<i>Acacia harpophylla</i>									
MD61	<i>Eucalyptus populnea</i>	<i>Eucalyptus melanophloia</i>			<i>Acacia harpophylla</i>									
MD62	<i>Eucalyptus melanophloia</i>	<i>Eucalyptus crebra</i>			<i>Callitris glaucophylla</i>									
MD63	<i>Casuarina cristata</i>	<i>Acacia harpophylla</i>			<i>Lysiphyllum caronii</i>									
MD68	<i>Casuarina cristata</i>				<i>Acacia harpophylla</i>									
MD69	<i>Eucalyptus coolabahs</i>	<i>Eucalyptus populnea</i>	<i>Acacia harpophylla</i>		<i>Casuarina cristata</i>									

Site No.	Tree1				Tree 2				Shrub 1			Shrub 2		Ground
	i	ii	iii	iv	i	ii	iii	iv	i	ii	iii	i	ii	
MD70	<i>Eucalyptus coolabah</i>													
MD71	<i>Eucalyptus coolabah</i>	<i>Acacia harpophylla</i>												
MD72	<i>Eucalyptus coolabah</i>													
MD74	<i>Eucalyptus coolabah</i>	<i>Eucalyptus populnea</i>												
MD75	<i>Eucalyptus coolabah</i>	<i>Acacia harpophylla</i>	<i>Casuarina cristata</i>											
MD76	<i>Eucalyptus coolabah</i>													
MD30	<i>Eucalyptus populnea</i>				<i>Geijera parviflora</i>	<i>Eremophila mitchellii</i>								
MD31	<i>Acacia harpophylla</i>	<i>Casuarina cristata</i>												
950	<i>Eucalyptus populnea</i>	<i>Acacia harpophylla</i> patches												
951	Edge of <i>Acacia harpophylla</i>	<i>Casuarina cristata</i>	<i>Eucalyptus populnea</i>											
1005	<i>Acacia harpophylla</i> Regrowth scattered													
1006	<i>Acacia harpophylla</i>	occasional <i>Eucalyptus populnea</i>			<i>Acacia harpophylla</i> on slopes gentle									
1007	<i>Eucalyptus populnea</i> scattered	<i>Acacia harpophylla</i> patches												
1008	<i>Eucalyptus populnea</i> scattered	<i>Acacia harpophylla</i> patches												
1009	<i>Eucalyptus populnea</i>	<i>Acacia harpophylla</i> patches scattered												
1010	<i>Eucalyptus populnea</i>	<i>Eremophila mitchellii</i>	<i>Acacia harpophylla</i> patches											
1011	<i>Eucalyptus populnea</i>	<i>Eremophila mitchellii</i>												grassy understorey good condition

Site No.	Tree1				Tree 2				Shrub 1			Shrub 2		Ground
	i	ii	iii	iv	i	ii	iii	iv	i	ii	iii	i	ii	
1012	<i>Eucalyptus populnea</i>	<i>Geijera parviflora</i>	<i>Eremophila mitchellii</i>											
1013	<i>Eucalyptus tereticornis</i>	<i>Angophora floribunda</i>												
1014	<i>Eucalyptus populnea</i>													
1015	<i>Eucalyptus populnea</i>	<i>Eremophila mitchellii</i>												
1016	<i>Eucalyptus populnea</i> scattered but large													
1017	<i>Eucalyptus populnea</i>	<i>Eucalyptus tereticornis</i>	<i>Angophora floribunda</i>											
1018	<i>Eucalyptus populnea</i>													grassy understorey
1019	<i>Eucalyptus populnea</i>	<i>Acacia harpophylla</i> to East												
1020	<i>Eucalyptus melanophloia</i> on hills													
1021	<i>Eucalyptus populnea</i>													
1022	<i>Eucalyptus populnea</i>	<i>Eucalyptus tereticornis</i>	<i>Angophora floribunda</i>											
1023	<i>Eucalyptus tereticornis</i>	<i>Eucalyptus populnea</i>	<i>Eucalyptus melanophloia</i>											
1024	<i>Eucalyptus populnea</i>	scattered <i>Acacia harpophylla</i>												
1025	<i>Eucalyptus populnea</i>	<i>Acacia harpophylla</i> on hills to West												
1026	<i>Eucalyptus populnea</i>	<i>Acacia harpophylla</i> on hills												
1027	<i>Acacia harpophylla</i>	<i>Lysiphyllum carronii</i>			<i>Geijera parviflora</i>									
1028	<i>Acacia harpophylla</i>	<i>Brachychiton australis</i>			<i>Lysiphyllum carronii</i> very scattered regrowth									

Site No.	Tree1				Tree 2				Shrub 1			Shrub 2		Ground
	i	ii	iii	iv	i	ii	iii	iv	i	ii	iii	i	ii	
1029	<i>Acacia harpophylla</i>	<i>Lysiphyllum carronii</i> almost non-existent regrowth												
1030	Softwood													
1031	Softwood on hills													
1032	<i>Acacia harpophylla</i> very scattered Regrowth													
1033	<i>Acacia harpophylla</i>	<i>Eucalyptus populnea</i> Boundary												
1034	<i>Eucalyptus populnea</i> scattered	<i>Acacia harpophylla</i> patches												
1035	<i>Eucalyptus tereticornis</i>	<i>Eucalyptus populnea</i> flats												
1036	<i>Eucalyptus populnea</i> very scattered													
1037	<i>Acacia harpophylla</i> Regrowth	very low scattered												
1038	<i>Eucalyptus populnea</i>	<i>Eucalyptus crebra</i>												
1069	<i>Eucalyptus populnea</i>													
1086	<i>Eucalyptus populnea</i>	<i>Acacia salicina</i>												
1087	<i>Eucalyptus populnea</i>													
1088	<i>Eucalyptus populnea</i>	<i>Acacia salicina</i>			<i>Geijera parviflora</i>									
1089	<i>Eucalyptus tereticornis</i>	<i>Eucalyptus populnea</i>	<i>Angophora floribunda</i>											
1090	<i>Eucalyptus populnea</i>	<i>Eucalyptus melanophloia</i>												
1091	<i>Eucalyptus melanophloia</i>	<i>Eucalyptus tereticornis</i>	<i>Corymbia tessellaris</i>											
1092	<i>Eucalyptus populnea</i>													

Site No.	Tree1				Tree 2				Shrub 1			Shrub 2		Ground
	i	ii	iii	iv	i	ii	iii	iv	i	ii	iii	i	ii	
1093	<i>Eucalyptus melanophloia</i>	<i>Eucalyptus populnea</i>	<i>Geijera parviflora</i>											
1094	<i>Eucalyptus populnea</i>													
1095	<i>Acacia harpophylla</i>													
1096	<i>Eucalyptus crebra</i> low hills	<i>Callitris glaucophylla</i> occasional												
1097	<i>Eucalyptus crebra</i>	<i>Alphitonia excelsa</i>												grassy understorey
1098	<i>Eucalyptus cambageana</i>	<i>Acacia harpophylla</i>			<i>Geijera parviflora</i>	dense understorey <i>Eremophila mitchellii</i>								
1099	<i>Eucalyptus crebra</i>	<i>Eremophila mitchellii</i>												
1115	<i>Eucalyptus populnea</i>	<i>Eucalyptus crebra</i>												
1959	<i>Eucalyptus crebra</i>	<i>Geijera parviflora</i>	<i>Alphitonia excelsa</i>											grassy understorey
1960	<i>Acacia harpophylla</i>	<i>Eucalyptus cambageana</i>												
1969	<i>Eucalyptus populnea</i>	occasional <i>Callitris glaucophylla</i>	narrow <i>Eucalyptus tereticornis</i> drainage line											grassy understorey
1970	<i>Eucalyptus melanophloia</i>	<i>Eucalyptus populnea</i>												
2155	<i>Acacia harpophylla</i>	<i>Eucalyptus crebra</i> patch			<i>Geijera parviflora</i>			<i>Acacia spp.</i> understorey						
2156	<i>Acacia harpophylla</i>	<i>Brachychiton rupestris</i>												
2170	<i>Eucalyptus crebra</i>	<i>Acacia harpophylla</i>	<i>Eucalyptus populnea</i>											
2171	<i>Eucalyptus crebra</i>	<i>Acacia spp.</i>												
2172	<i>Eucalyptus cambageana</i>	<i>Acacia harpophylla</i> hsl only												
2173	<i>Eucalyptus populnea</i>	<i>Eucalyptus melanophloia</i>												
2174	<i>Eucalyptus melanophloia</i>	<i>Eucalyptus populnea</i>												
2175	<i>Eucalyptus populnea</i>	<i>Eucalyptus melanophloia</i>	(<i>Acacia harpophylla</i> patches											

Site No.	Tree1				Tree 2				Shrub 1			Shrub 2		Ground
	i	ii	iii	iv	i	ii	iii	iv	i	ii	iii	i	ii	
			small)											
2176	<i>Eucalyptus populnea</i>	<i>Eucalyptus melanophloia</i>	(<i>Callitris glaucophylla</i> patch)											
2177	<i>Eucalyptus melanophloia</i>	<i>Eucalyptus populnea</i> occasional	<i>Eucalyptus tereticornis</i> (<i>Eucalyptus cambageana</i>)	<i>Eucalyptus crebra</i>		<i>Acacia harpophylla</i> on hills to far E.)								
2178	<i>Eucalyptus populnea</i>	<i>Eucalyptus melanophloia</i>												
2179	<i>Eucalyptus tereticornis</i>	<i>Angophora floribunda</i>	<i>Eucalyptus melanophloia</i>											
2180	<i>Eucalyptus melanophloia</i>	<i>Eucalyptus tereticornis</i>	<i>Angophora floribunda</i>											
2181	<i>Callitris glaucophylla</i>	<i>Eucalyptus populnea</i>	<i>Acacia harpophylla</i>											
2182	<i>Acacia harpophylla</i>													
2183	<i>Eucalyptus cambageana</i>	occasional <i>Acacia harpophylla</i>												
2184	emergent <i>Eucalyptus cambageana</i>	<i>Brachychiton rupestris</i>	<i>Acacia harpophylla</i>		(@ 1 km to E of here is ext. regrowth of <i>Casuarina cristata</i>	<i>Acacia harpophylla</i>								
2185	<i>Acacia harpophylla</i>	<i>brachy</i> spp.	<i>Eucalyptus cambageana</i>		<i>Geijera parviflora</i>									
2186	<i>Acacia harpophylla</i>	<i>Eucalyptus cambageana</i>			<i>Geijera parviflora</i>									
2187	<i>Acacia harpophylla</i>	<i>Eucalyptus cambageana</i>												
2188	<i>Acacia harpophylla</i>	<i>Eucalyptus cambageana</i>												
2189	<i>Eucalyptus populnea</i>	<i>Eucalyptus melanophloia</i>												
2190	<i>Eucalyptus tereticornis</i>	<i>Angophora floribunda</i>	<i>Eucalyptus populnea</i>	<i>Corymbia tessellaris</i>										
2191	<i>Eucalyptus melanophloia</i>	<i>Eucalyptus populnea</i>												<i>Heteropogon contortus</i>
2231	<i>Eucalyptus populnea</i>													
2240	<i>Eucalyptus melanophloia</i>	<i>Eucalyptus populnea</i>	<i>Acacia excelsa</i>											grassy understorey
2241		<i>Acacia harpophylla</i>		<i>Eucalyptus melanophloia</i>	<i>Eucalyptus populnea</i>	occasional <i>Geijera parviflora</i>								

Site No.	Tree1				Tree 2				Shrub 1			Shrub 2		Ground
	i	ii	iii	iv	i	ii	iii	iv	i	ii	iii	i	ii	
2242	<i>Acacia harpophylla</i>	<i>Casuarina cristata</i> (50/50)												
2243	<i>Acacia harpophylla</i>	<i>Casuarina cristata</i> (80/20)												
2244	<i>Eucalyptus populnea</i>	<i>Eucalyptus melanophloia</i> on low rises and flats												grassy understorey
2245	<i>Eucalyptus populnea</i>	<i>Casuarina cristata</i>			<i>Geijera parviflora</i>									
2246	<i>Acacia harpophylla</i>	<i>Casuarina cristata</i>			<i>Geijera parviflora</i>	<i>Lysiphyllum</i> sp.								
2247	<i>Acacia harpophylla</i>								<i>Santalum lanceolatum</i>	<i>Atalaya hemiglaucula</i>				
2248	<i>Acacia harpophylla</i>	minor <i>Casuarina cristata</i>												
2249	<i>Acacia harpophylla</i>	occasional <i>Brachychiton rupestris</i>	<i>Lysiphyllum</i> sp.											
2250	<i>Acacia harpophylla</i>	occasional <i>Casuarina cristata</i>			<i>Geijera parviflora</i>									
2251	<i>Acacia harpophylla</i>				<i>Geijera parviflora</i>				<i>Atalaya hemiglaucula</i>					
2252	<i>Acacia harpophylla</i>	<i>Eremophila mitchellii</i>	occasional <i>Lysiphyllum</i> sp.											
2253	<i>Acacia harpophylla</i>	occasional <i>Casuarina cristata</i>							<i>Santalum lanceolatum</i>					
2254	<i>Acacia harpophylla</i>				<i>Eremophila mitchellii</i>									
2255	<i>Acacia harpophylla</i>	<i>Casuarina cristata</i>												
2256	<i>Eucalyptus populnea</i>	<i>Acacia harpophylla</i> patches												

ST (collected by ST+AP) and DF (Collected by DF) annotated were collected in September 2008.

Numbers prefixed with MAR were collected by DF+JD in March 2008.

Numbers prefixed with MD were collected by DF+JD during the Dam survey in March 2008.

Numbers with no prefix from 950-2256 are Corveg sites recorded by Sandy Pollock and dated 1 February 2000.

CONSOLIDATED SPECIES LIST

Glebe Pipeline

			CEPLA Secondaries											CEPLA Quaternaries	Herbarium Secondaries		Herbarium Quaternaries
Species Name	Common name	Family	T1	T2	T3	T4	T5	T6	T7	T12	T15	T17	MD67		593003 (RE 11.9.5)	594041 (RE11.9.4a)	#950-2256
<i>Abutilon micropetalum</i>		Malvaceae				x											
<i>Abutilon oxycarpum</i>	Dwarf Lantern Flower	Malvaceae	x	x		x				x	x	x	x		x		
<i>Acacia decora</i>	Pretty Wattle	Mimosaceae						x						x			
<i>Acacia excelsa</i>		Mimosaceae		x				x		x				x			
<i>Acacia fasciculifera</i>		Mimosaceae														x	
<i>Acacia harpophylla</i>	Brigalow	Mimosaceae	x				x	x		x			x	x	x		x
<i>Acacia leiocalyx</i>	Early Black Wattle	Mimosaceae		x							x						
<i>Acacia melvillei</i>		Mimosaceae												x			
<i>Acacia pendula</i>	Weeping Myall	Mimosaceae						x				x					
<i>Acacia salicina</i>	Sally Wattle	Mimosaceae								x							x
<i>Acacia shirleyi</i>	Lancewood	Mimosaceae										x					
<i>Alectryon diversifolius</i>	Scrub Boonaree	Sapindaceae	x				x	x							x		
<i>Alectryon oleifolius</i>		Sapindaceae								x			x				
<i>Allocasuarina luehmannii</i>	Bulloak	Casuarinaceae										x			x		
<i>Alphitonia excelsa</i>	Red Ash	Casuarinaceae									x						x
<i>Alstonia constricta</i>	Quinine Bush	Apocynaceae									x						
<i>Ancistrachne uncinulata</i>		Poaceae											x		x	x	

Species Name	Common name	Family	CEPLA Secondaries											CEPLA Quaternaries	Herbarium Secondaries		Herbarium Quaternaries
			T1	T2	T3	T4	T5	T6	T7	T12	T15	T17	MD67		593003 (RE 11.9.5)	594041 (RE11.9.4a)	#950-2256
<i>Angophora floribunda</i>		Myrtaceae			x			x				x		x			x
<i>Angophora leiocarpa</i>		Myrtaceae										x					
<i>Apophyllum anomalum</i>	Warrior Bush	Capparaceae							x						x		
<i>Aristida caput-medusae</i>	Many Headed Wire Grass	Poaceae									x				x	x	
<i>Arundinella nepalensis</i>		Poaceae											x				
<i>Atalaya hemiglauca</i>		Sapindaceae							x								x
<i>Atalaya salicifolia</i>		Sapindaceae														x	
<i>Atalaya salicifolia</i>		Sapindaceae														x	
<i>Atriplex muelleri</i>		Chenopodiaceae											x				
<i>Bothriochloa decipiens</i>	Pitted Blue Grass	Poaceae							x								
<i>Brachiaria foliosa</i>		Poaceae													x	x	
<i>Brachychiton populneus</i>	Kurrajong	Sterculiaceae			x			x						x			
<i>Brachychiton rupestris</i>	Bottle Tree	Sterculiaceae				x	x							x	x		x
<i>Brunfelsia australis</i>		Solanaceae													x		
<i>Brunoniella australis</i>	Blue Trumpet	Acanthaceae	x	x						x					x	x	
<i>Callitris glaucophylla</i>	White Cypress	Cupressaceae		x								x		x			x

Species Name	Common name	Family	CEPLA Secondaries											CEPLA Quaternaries	Herbarium Secondaries		Herbarium Quaternaries
			T1	T2	T3	T4	T5	T6	T7	T12	T15	T17	MD67		593003 (RE 11.9.5)	594041 (RE11.9.4a)	
	Pine																
<i>Calotis lappulacea</i>	Burr Daisy	Asteraceae	x	x	x												
<i>Calotis scabiosifolia</i>	Rough Daisy Burr	Asteraceae							x								
<i>Capparis arborea</i>		Capparaceae														x	
<i>Capparis lasiantha</i>		Capparaceae		x		x	x										
<i>Capparis loranthifolia</i>		Capparaceae													x	x	
<i>Capparis sarmentosa</i>		Capparaceae														x	
<i>Carissa ovata</i>	Currant Bush	Apocynaceae	x		x		x					x			x		
<i>Casuarina cristata</i>	Belah	Casuarinaceae	x									x		x			x
<i>Cenchrus ciliaris</i> *	Buffel Grass	Poaceae	x	x	x		x	x		x			x	x		x	
<i>Chamaesyce drummondii</i>		Euphorbiaceae													x	x	
<i>Cheilanthes distans</i>	Bristly Cloak Fern	Adiantaceae	x				x						x		x	x	
<i>Cheilanthes lasiophylla</i>	Woolly Cloak Fern	Adiantaceae									x						
<i>Cheilanthes tenuifolia</i>	Mulga Fern	Adiantaceae									x						
<i>Chenopodium pumilio</i>		Chenopodiaceae											x				
<i>Chloris divaricata</i>		Poaceae													x	x	

Species Name	Common name	Family	CEPLA Secondaries											CEPLA Quaternaries	Herbarium Secondaries		Herbarium Quaternaries
			T1	T2	T3	T4	T5	T6	T7	T12	T15	T17	MD67		593003 (RE 11.9.5)	594041 (RE11.9.4a)	
<i>Chloris gayana</i> *	Rhodes Grass	Poaceae										x					
<i>Chrysocephalum apiculatum</i>	Yellow Buttons	Asteraceae	x														
<i>Cirsium vulgare</i> *	Spear Thistle	Asteraceae						x									
<i>Cissus opaca</i>		Vitaceae				x	x								x		
<i>Citrus glauca</i>		Rutaceae	x						x					x			
<i>Corymbia citriodora</i>	Lemon Scented Gum	Myrtaceae										x					
<i>Corymbia clarksoniana</i>		Myrtaceae										x					
<i>Corymbia tessellaris</i>	Moreton Bay Ash	Myrtaceae										x		x			x
<i>Croton insularis</i>		Euphorbiaceae													x		
<i>Cymbopogon refractus</i>	Barb Wire Grass	Poaceae							x								
<i>Cyperus aggregatus</i>		CYPERACEAE															
<i>Cyperus gracilis</i>		Cyperaceae	x			x			x	x					x		
<i>Denhamia pittosporoides</i>		CELASTRACEAE														x	
<i>Desmodium brachypodum</i>		Fabaceae													x		
<i>Dianella brevipedunculata</i>		Hemerocallidaceae													x		
<i>Diospyros humilis</i>		Ebenaceae														x	

Species Name	Common name	Family	CEPLA Secondaries											CEPLA Quaternaries	Herbarium Secondaries		Herbarium Quaternaries
			T1	T2	T3	T4	T5	T6	T7	T12	T15	T17	MD67		593003 (RE 11.9.5)	594041 (RE11.9.4a)	
<i>Dipteracanthus australasicus</i> subsp. <i>corynothecus</i>		Acanthaceae													x		
<i>Dodonaea viscosa</i>	Hop Bush	Sapindaceae	x								x						
<i>Ehretia membranifolia</i>		Boraginaceae													x		
<i>Einadia hastata</i>	Fish Weed	Chenopodiaceae	x					x					x				
<i>Einadia nutans</i>		Chenopodiaceae													x		
<i>Elaeodendron australe</i>		Celastraceae											x				
<i>Elattostachys nervosa</i>		Sapindaceae														x	
<i>Enchylaena tomentosa</i>	Ruby Saltbush	Chenopodiaceae					x		x				x				
<i>Enneapogon pallidus</i>		Poaceae													x	x	
<i>Enteropogon acicularis</i>	Curly Windmill Grass	Poaceae	x														
<i>Enteropogon unispiceus</i>		Poaceae													x		
<i>Eragrostis leptocarpa</i>		POACEAE													x		
<i>Eremophila mitchellii</i>	False Sandalwood	Myoporaceae	x	x	x		x			x		x		x	x		x

Species Name	Common name	Family	CEPLA Secondaries											CEPLA Quaternaries	Herbarium Secondaries		Herbarium Quaternaries
			T1	T2	T3	T4	T5	T6	T7	T12	T15	T17	MD67		593003 (RE 11.9.5)	594041 (RE11.9.4a)	#950-2256
<i>Erythroxylum</i> sp. (Splityard Creek L. Pedley 5360)		Erythroxylaceae													x		
<i>Eucalyptus camaldulensis</i>		Myrtaceae										x					
<i>Eucalyptus cambageana</i>	Dawson Gum	Myrtaceae				x						x		x			x
<i>Eucalyptus chloroclada</i>		Myrtaceae										x					
<i>Eucalyptus crebra</i>	Ironbark	Myrtaceae		x							x	x					x
<i>Eucalyptus fibrosa</i>	Ironbark	Myrtaceae										x					
<i>Eucalyptus melanophloia</i>	Silver Leaved Ironbark	Myrtaceae			x					x		x		x			x
<i>Eucalyptus microcarpa</i>		Myrtaceae										x					
<i>Eucalyptus pilligaenensis</i>	Narrow Leaf Grey Box	Myrtaceae										x					
<i>Eucalyptus populnea</i>	Poplar Box	Myrtaceae	x	x					x	x	x		x	x			x
<i>Eucalyptus tereticornis</i>	River Red Gum	Myrtaceae			x			x		x		x		x			x
<i>Evolvulus alsinoides</i>	Tropical Speedwell	Convolvulaceae							x								
<i>Exocarpos latifolius</i>		Santalaceae														x	
<i>Excoecaria dallachyana</i>																x	
<i>Flindersia collina</i>		Rutaceae												x		x	

Species Name	Common name	Family	CEPLA Secondaries											CEPLA Quaternaries	Herbarium Secondaries		Herbarium Quaternaries
			T1	T2	T3	T4	T5	T6	T7	T12	T15	T17	MD67		593003 (RE 11.9.5)	594041 (RE11.9.4a)	#950-2256
<i>Geijera parviflora</i>	Wilga	Rutaceae	x				x	x			x		x	x	x	x	x
<i>Grevillea striata</i>	Beefwood	Proteaceae		x													
<i>Grewia latifolia</i>		Sparganiaceae								x							
<i>Heteropogon contortus</i>	Black Spear Grass	Poaceae			x												
<i>Hibiscus sturtii</i>	Hill Hibiscus	Malvaceae		x					x								
<i>Hibiscus sturtii</i>	Hill Hibiscus	Malvaceae															
<i>Hovea longifolia</i>		Fabaceae													x		
<i>Imperata cylindrica</i>	Blady Grass	Poaceae			x												
<i>Iseilema membranaceum</i>	Flinders Grass	Poaceae									x						
<i>Jasminum didymum</i> subsp. <i>didymum</i>		Oleaceae														x	
<i>Jasminum didymum</i> subsp. <i>lineare</i>	A Native Jasmine	Oleaceae				x			x				x				
<i>Jasminum simplicifolium</i>	A Native Jasmine	Oleaceae								x					x		
<i>Leptopus decaisnei</i>		Phyllanthaceae													x		
<i>Lomandra leucocephala</i>		Laxmanniaceae				x				x							
<i>Lomandra longifolia</i>	Mat Rush	Laxmanniaceae			x			x									

Species Name	Common name	Family	CEPLA Secondaries											CEPLA Quaternaries	Herbarium Secondaries		Herbarium Quaternaries
			T1	T2	T3	T4	T5	T6	T7	T12	T15	T17	MD67		593003 (RE 11.9.5)	594041 (RE11.9.4a)	
<i>Lysiphyllum carolinii</i>		Caesalpinaceae					x							x			
<i>Lysiphyllum carronii</i>		Caesalpinaceae														x	
<i>Maireana microphylla</i>		Chenopodiaceae									x			x	x		
<i>Malvastrum americanum*</i>		Malvaceae			x								x			x	
<i>Marsdenia microlepis</i>	Narrow Leaved Milk Vine	Asclepiadaceae					x		x								
<i>Marsilea drummondii</i>		Marsileaceae															
<i>Maytenus silvestris</i>		CELASTRACEAE													x		
<i>Megathyrsus maximus*</i>	Guinea Grass	Poaceae			x	x	x		x	x			x			x	
<i>Melinis repens*</i>	Red Natal Grass	Poaceae		x													
<i>Notelaea microcarpa</i>	Native Olive	Oleaceae	x									x				x	
<i>Nyssanthus erecta</i>		Amaranthaceae							x								
<i>Onopordium acanthium*</i>	Scotch Thistle	Asteraceae			x												
<i>Opuntia hirtella</i>		Cactaceae							x	x							
<i>Opuntia stricta*</i>	Prickly Pear	Cactaceae		x	x									x	x		
<i>Opuntia tomentosa*</i>	Velvet Tree Pear	Cactaceae				x							x				
<i>Owenia acidula</i>		Meliaceae															
<i>Owenia venosa</i>		Meliaceae														x	

Species Name	Common name	Family	CEPLA Secondaries											CEPLA Quaternaries	Herbarium Secondaries		Herbarium Quaternaries
			T1	T2	T3	T4	T5	T6	T7	T12	T15	T17	MD67		593003 (RE 11.9.5)	594041 (RE11.9.4a)	
<i>Oxalis corniculata</i> *		Oxalidaceae		x		x	x										
<i>Oxalis perennans</i>		Oxalidaceae													x		
<i>Parsonsia eucalyptophylla</i>		Apocynaceae					x								x		
<i>Parsonsia lanceolata</i>		Apocynaceae														x	
<i>Paspalidium caespitosum</i>	Brigalow Grass	Poaceae							x				x			x	
<i>Paspalidium constrictum</i>		Poaceae											x		x		
<i>Paspalidium gracile</i>		Poaceae													x		
<i>Passiflora aurantia</i>		Passifloraceae														x	
<i>Petalostigma pubescens</i>		Picrodendraceae									x						
<i>Pimelea neo-angelica</i>		Thymelaeaceae						x									
<i>Pittosporum phylliraeoides</i>	Weeping Pittosporum	Pittosporaceae								x			x				
<i>Pittosporum spinescens</i>		Pittosporaceae														x	
<i>Plectranthus parviflorus</i>		Lamiaceae					x										
<i>Podolepis longipedata</i>		Asteraceae									x						
<i>Portulaca pilosa</i>	Pigweed	Portulacaceae		x													
<i>Pouteria cotinifolia</i>		Sapotaceae														x	

Species Name	Common name	Family	CEPLA Secondaries											CEPLA Quaternaries	Herbarium Secondaries		Herbarium Quaternaries
			T1	T2	T3	T4	T5	T6	T7	T12	T15	T17	MD67		593003 (RE 11.9.5)	594041 (RE11.9.4a)	
<i>Pratia concolor</i>		Campanulaceae						x									
<i>Pseuderanthemum variable</i>		Acanthaceae													x		
<i>Psyrax odorata</i>		Rubiaceae									x				x		
<i>Psyrax odorata</i>		Rubiaceae				x											
<i>Psyrax oleifolia</i>		Rubiaceae				x	x										
<i>Richardia brasiliensis*</i>	White Eye, Mexican Clover	Rubiaceae						x									
<i>Ricinocarpos ledifolius</i>		Euphorbiaceae													x		
<i>Roepora apiculata</i>	Twin Leaf	Zygophyllaceae					x										
<i>Salsola kali</i>	Soft Roly Poly	CHENOPODIACEAE	x				x		x				x	x			
<i>Santalum lanceolatum</i>		Santalaceae												x			
<i>Sclerolaena muricata var muricata</i>		Chenopodiaceae												x			
<i>Sclerolaena tetracladus</i>		Chenopodiaceae											x				
<i>Secamone elliptica</i>		Apocynaceae													x	x	
<i>Senecio pinnatifolius</i>	Fireweed	Asteraceae	x	x								x		x			
<i>Senna artemisioides</i>		Caesalpinceae										x					
<i>Setaria dielsii</i>		Poaceae													x		

Species Name	Common name	Family	CEPLA Secondaries											CEPLA Quaternaries	Herbarium Secondaries		Herbarium Quaternaries
			T1	T2	T3	T4	T5	T6	T7	T12	T15	T17	MD67		593003 (RE 11.9.5)	594041 (RE11.9.4a)	
<i>Sida rhombifolia</i> *	Common Sida	Malvaceae								x							
<i>Sida spinosa</i>		Malvaceae														x	
<i>Sida subspicata</i>		Malvaceae								x							
<i>Solanum nigrum</i> *		Solanaceae								x							
<i>Solanum semiarmatum</i>		Solanaceae														x	
<i>Sporobolus creber</i>		Poaceae												x			
<i>Sporobolus creber</i>		Poaceae	x														
<i>Swainsona galegifolia</i>	Smooth Darling Pea	Fabaceae			x												
<i>Tetragonia tetragonioides</i>	New Zealand Spinach	Aizoaceae				x	x										
<i>Themeda triandra</i>	Kangaroo Grass	Poaceae			x							x					
<i>Tinospora</i>		Menispermaceae														x	
<i>Turraea pubescens</i>		Meliaceae														x	
<i>Verbena tenuisecta</i> *	Mayne's Pest	Verbenaceae		x	x			x		x				x			
<i>Vernonia cinerea</i>		Asteraceae													x		

* = Exotic Species

Consolidated Species List

Glebe Weir

Species Name	Common Name	Family	Current Secondary Studies				Current Tertiaries	Current Quaternaries	Herbarium Secondaries 594008 (RE 11.3.25)	Herbarium Quaternaries	Australian National University Boggomoss [#]
			W7	W72	W43	W79					
<i>Abutilon oxycarpum</i>	Dwarf Lantern Flower	Malvaceae		x	x						
<i>Acacia excelsa</i>		Mimosaceae		x							
<i>Acacia farnesiana</i> (L.) Willd.		Mimosaceae							x		
<i>Acacia harpophylla</i>	Brigalow	Mimosaceae			x			x		x	
<i>Acacia leiocalyx</i>	Early Black Wattle	Mimosaceae	x								
<i>Acacia rhodoxylon</i>		Mimosaceae						x			
<i>Acacia salicina</i>		Mimosaceae									x
<i>Acacia stenophylla</i> <i>A. Cunn. ex Benth.</i>		Mimosaceae							x		
<i>Achyranthes aspera</i>		Amaranthaceae		x							x
<i>Adenostemma lavenia</i>		Asteraceae									x
<i>Aeschynomene indica</i>		Fabaceae									x
<i>Ajuga australis</i>	Australian Bugle	Laminaceae		x							x
<i>Alectryon diversifolius</i>	Scrub Boonaree	Sapindaceae			x	x					
<i>Alectryon oleifolius</i>		Sapindaceae		x							
<i>Alternanthera sessilis</i> (L.) DC.		Amaranthaceae							x		
<i>Ammannia multiflora</i>		Lythraceae					x				
<i>Ancistrachne uncinulata</i>	Hook Grass	Poaceae		x							

Species Name	Common Name	Family	Current Secondary Studies				Current Tertiaries	Current Quaternaries	Herbarium Secondaries 594008 (RE 11.3.25)	Herbarium Quaternaries	Australian National University Boggomoss [#]
			W7	W72	W43	W79					
<i>Arthraxon hispidus</i>		Poaceae									x
<i>Arundinella nepalensis</i>		Poaceae									x
<i>Aster subulatus</i> *		Asteraceae									x
<i>Austrostipa verticillata</i>		Poaceae									x
<i>Baumea rubiginosa</i>		Cyperaceae									x
<i>Bidens pilosa</i> *		Asteraceae									x
<i>Bothriochloa bladhii</i>	Forest Blue Grass	Poaceae				x			x		
<i>Brachiaria mutica</i>	Para Grass	Poaceae									x
<i>Brachychiton populneus</i>	Kurrajong	Sterculiaceae		x		x					
<i>Brachychiton rupestris</i>		Sterculiaceae						x			
<i>Brunoniella australis</i>	Blue Trumpet	Acanthaceae				x					
<i>Callitriche sonderi</i>		Callitrichaceae									x
<i>Callitris glaucophylla</i>		Cupressaceae						x			
<i>Capillipedium parviflorum</i>		Poaceae									x
<i>Capparis loranthifolia</i>		Capparaceae				x					
<i>Carex appressa</i>		Cyperaceae									x
<i>Carex gaudichaudiana</i>		Cyperaceae									x
<i>Casuarina cristata</i>		Casuarinaceae						x			
<i>Cenchrus ciliaris</i> *	Buffel Grass	Poaceae		x	x						
<i>Centella asiatica</i>		Apiaceae									x
<i>Centranthera cochinchinensis</i>		Scrophulariaceae									x

Species Name	Common Name	Family	Current Secondary Studies				Current Tertiaries	Current Quaternaries	Herbarium Secondaries 594008 (RE 11.3.25)	Herbarium Quaternaries	Australian National University Boggomoss [#]
			W7	W72	W43	W79					
<i>Chamaesyce drummondii</i> (Boiss.) D.C.Hassall		Euphorbiaceae							x		
<i>Chionachne cyathopoda</i> (F.Muell.) F.Muell. ex Benth.		Poaceae							x		
<i>Chloris gayana</i> *	Rhodes Grass	Poaceae					x				
<i>Chrysopogon filipes</i>		Poaceae	x								
<i>Citrus glauca</i>		Rutaceae		x	x						
<i>Commelina benghalensis</i> *	Hairy Wandering Jew	Commelinaceae	x						x		
<i>Commelina diffusa</i>		Commelinaceae									x
<i>Conyza sumatrensis</i> *		Asteraceae									x
<i>Corymbia clarksoniana</i>		Myrtaceae						x			
<i>Cotula australis</i>		Asteraceae									x
<i>Crassocephalum crepidioides</i> *		Asteraceae									x
<i>Crinum flaccidum</i>	Darling Lily	Amaryllidaceae		x							
<i>Cyclosorus interruptus</i>		Apiaceae					x				x
<i>Cyclosporum leptophyllum</i> (Pers.) Sprague ex Britton & P.Wilson		Apiaceae							x		
<i>Cymbopogon refractus</i>	Barb Wire Grass	Poaceae		x							
<i>Cynodon dactylon</i>		Poaceae					x				x

Species Name	Common Name	Family	Current Secondary Studies				Current Tertiaries	Current Quaternaries	Herbarium Secondaries 594008 (RE 11.3.25)	Herbarium Quaternaries	Australian National University Boggomoss [#]
			W7	W72	W43	W79					
<i>Cyperus bifax</i>		Cyperaceae					x				x
<i>Cyperus bulbosus</i> Vahl		Cyperaceae							x		
<i>Cyperus concinnus</i>		Cyperaceae			x						
<i>Cyperus difformis</i>		Cyperaceae					x				x
<i>Cyperus exaltatus</i>		Cyperaceae					x				x
<i>Cyperus flavidus</i>		Cyperaceae									x
<i>Cyperus gracilis</i>		Cyperaceae		x	x	x			x		
<i>Cyperus haspan</i>		Cyperaceae									x
<i>Cyperus haspan</i> ssp. <i>haspan</i>		Cyperaceae					x				
<i>Cyperus polystachyos</i>		Cyperaceae									x
<i>Cyperus unioides</i>		Cyperaceae									x
<i>Damasonium minus</i>	Starfruit	Alismataceae					x				
<i>Desmodium varians</i> (Labill.) G. Don		Fabaceae							x		
<i>Dianella longifolia</i> var. <i>longifolia</i>		Hemerocallidaceae									x
<i>Dianella longifolia</i> var. <i>stupata</i>		Hemerocallidaceae									x
<i>Dichanthium sericeum</i> subsp. <i>humilius</i> (J.M.Black) B.K.Simon		Poaceae							x		
<i>Digitaria ciliaris</i>		Poaceae									x
<i>Drosera burmanni</i>		Droseraceae									x

Species Name	Common Name	Family	Current Secondary Studies				Current Tertiaries	Current Quaternaries	Herbarium Secondaries 594008 (RE 11.3.25)	Herbarium Quaternaries	Australian National University Boggomoss [#]
			W7	W72	W43	W79					
<i>Echinochloa colona</i> *		Poaceae					x				x
<i>Echinochloa crus-galli</i> *		Poaceae					x				x
<i>Eclipta prostrata</i>		Asteraceae									x
<i>Einadia hastata</i>	fish weed	Chenopodiaceae		x							
<i>Elatine gratioloides</i>		Elatinaceae									x
<i>Eleocharis cylindrostachys</i>		Cyperaceae									x
<i>Eleocharis dietrichiana</i>		Cyperaceae									x
<i>Eleocharis pallens</i>		Cyperaceae					x				
<i>Enteropogon acicularis</i>		Poaceae				x					
<i>Enteropogon ramosus</i> B.K.Simon		Poaceae							x		
<i>Epilobium billardierianum</i> subsp. <i>cinereum</i>		Onagraceae									x
<i>Eragrostis elongata</i>		Poaceae									x
<i>Eragrostis parviflora</i>		Poaceae									x
<i>Eremophila debile</i>	Winter Apple	Myoporaceae		x	x						
<i>Eriocaulon scariosum</i>		Eriocaulaceae									x
<i>Eriochloa procera</i> (Retz.) C.E.Hubb.		Poaceae							x		
<i>Eucalyptus camaldulensis</i>		Myrtaceae	x				x	x	x	x	x
<i>Eucalyptus cerniceana</i>		Myrtaceae						x			
<i>Eucalyptus</i>	Coolabah	Myrtaceae	x	x	x			x	x	x	x

Species Name	Common Name	Family	Current Secondary Studies				Current Tertiaries	Current Quaternaries	Herbarium Secondaries 594008 (RE 11.3.25)	Herbarium Quaternaries	Australian National University Boggomoss [#]
			W7	W72	W43	W79					
<i>coolabah</i>											
<i>Eucalyptus crebra</i>	Ironbark	Myrtaceae				x		x			
<i>Eucalyptus melanophloia</i>		Myrtaceae						x			
<i>Eucalyptus populnea</i>	Poplar Box	Myrtaceae		x	x			x			
<i>Eucalyptus tereticornis</i>		Myrtaceae									x
<i>Eulalia aurea</i> (Bory) Kunth		Poaceae							x		
<i>Ficus opposita</i>		Moraceae									x
<i>Fimbristylis dichotoma</i>		Cyperaceae									x
<i>Fimbristylis nutans</i>		Cyperaceae									x
<i>Geijera parviflora</i>	Wilga	Rutaceae		x	x			x			
<i>Gomphocarpus physocarpus*</i>		Apocynaceae									x
<i>Grevillea striata</i>	Beefwood	Proteaceae		x							
<i>Haloragis aspera</i> Lindl.		Haloragaceae							x		
<i>Haloragis heterophylla</i>		Haloragaceae									x
<i>Hydrocotyle peduncularis</i>		Araliaceae									x
<i>Hydrocotyle verticillata</i>		Araliaceae									x
<i>Hypericum gramineum</i>		Clusiaceae					x				x
<i>Imperata cylindrica</i>		Poaceae									x
<i>Isachne globosa</i>		Poaceae					x				x
<i>Jasminum didymum</i> subsp. <i>lineare</i>	A Native Jasmine	Oleaceae		x							
<i>Juncus</i>		Cyperaceae									x

Species Name	Common Name	Family	Current Secondary Studies				Current Tertiaries	Current Quaternaries	Herbarium Secondaries 594008 (RE 11.3.25)	Herbarium Quaternaries	Australian National University Boggomoss [#]
			W7	W72	W43	W79					
<i>polyanthemus</i>											
<i>Juncus prismatocarpus</i>		Cyperaceae									x
<i>Leersia hexandra</i>		Poaceae					x				x
<i>Lemna aequinoctialis</i>		Araceae									x
<i>Leptochloa digitata</i> (R.Br.) Domin		Poaceae							x		
<i>Leptochloa fusca</i>		Poaceae									x
<i>Leptospermum polygalifolium</i>		Myrtaceae									x
<i>Lindernia</i> sp. (Bribie Island S.T.Blake 7089)		Scrophulariaceae									x
<i>Lobelia membranacea</i>		Campanulaceae									x
<i>Lomandra leucocephala</i>		Laxmanniaceae		x							
<i>Lomandra longifolia</i> Labill.		Laxmanniaceae							x		
<i>Ludwigia octovalvis</i>		Onagraceae									x
<i>Ludwigia peploides</i>		Onagraceae					x				x
<i>Lysiphyllum carolini</i>		Caesalpinaceae			x			x		x	
<i>Lythrum salicaria</i>		Lythraceae					x				x
<i>Maireana microphylla</i>		Chenopodiaceae		x							
<i>Malvastrum americanum</i> *		Malvaceae			x						
<i>Marsilea drummondii</i>	Nardoo	Marsileaceae					x				
<i>Marsilea hirsuta</i> R.Br.		Marsileaceae							x		x
<i>Megathyrsus maximus</i> *		Poaceae									x

Species Name	Common Name	Family	Current Secondary Studies				Current Tertiaries	Current Quaternaries	Herbarium Secondaries 594008 (RE 11.3.25)	Herbarium Quaternaries	Australian National University Boggomoss [#]
			W7	W72	W43	W79					
<i>Melaleuca linariifolia</i> var. <i>trichostachya</i>	Black Tea Tree	Myrtaceae	x					x			
<i>Melaleuca trichophylla</i> Lindl.		Myrtaceae							x		
<i>Mitrasacme paludosa</i>		Loganiaceae									x
<i>Monochoria cyanea</i>		Pontederiaceae									x
<i>Muehlenbeckia florulenta</i>	Lignum	Polygonaceae	x				x		x		
<i>Murdannia graminea</i>	Grass Lily	Commelinaceae				x					
<i>Nyssanthus erecta</i>		Amaranthaceae		x		x					
<i>Opuntia tomentosa</i> *		Cactaceae									x
<i>Oxalis perennans</i>		Oxalidaceae				x					
<i>Panicum effusum</i> var. <i>simile</i> (Domin) B.K.Simon		Poaceae							x		
<i>Paspalidium caespitosum</i>	Brigalow Grass	Poaceae		x	x						
<i>Paspalidium distans</i> (Trin.) Hughes		Poaceae							x		
<i>Paspalidium jubiflorum</i> (Trin.) Hughes		Poaceae							x		
<i>Paspalum dilatatum</i>		Poaceae									x
<i>Paspalum distichum</i>		Poaceae									x
<i>Paspalum distichum</i> *		Poaceae					x				
<i>Paspalum scrobiculatum</i>		Poaceae									x

Species Name	Common Name	Family	Current Secondary Studies				Current Tertiaries	Current Quaternaries	Herbarium Secondaries 594008 (RE 11.3.25)	Herbarium Quaternaries	Australian National University Boggomoss [#]
			W7	W72	W43	W79					
<i>Paspalum urvillei</i> *	Vasey Grass	Poaceae					x				x
<i>Pennisetum alopecuroides</i> *		Poaceae									x
<i>Persicaria hydropiper</i>		Polygonaceae									x
<i>Persicaria orientalis</i>		Polygonaceae									x
<i>Persicaria strigosa</i>		Polygonaceae									x
<i>Petalostigma pubescens</i>		Picrodendraceae		x							
<i>Philydrum lanuginosum</i>		Philydraceae									x
<i>Phragmites australis</i>		Poaceae					x				x
<i>Physalis minima</i> *		Solanaceae									x
<i>Polymeria pusilla</i> R.Br.		Convulvulaceae							x		
<i>Prostanthera euphrasioides</i>		Lamiaceae				x					
<i>Pseuderanthemum variable</i>	Love Flower	Acanthaceae	x						x		
<i>Ranunculus lappaceus</i>		Ranunculaceae									x
<i>Ranunculus sessiliflorus</i>		Ranunculaceae									x
<i>Rumex brownii</i> Campd.		Polygonaceae							x		x
<i>Rumex tenax</i>		Polygonaceae									x
<i>Rutidosis crispata</i>		Asteraceae						x			
<i>Rynchosia minima</i> car. Australis	Rynchosia	Fabaceae				x					
<i>Sacciolepis indica</i>		Poaceae									x
<i>Sacciolepis</i>		Poaceae					x				

Species Name	Common Name	Family	Current Secondary Studies				Current Tertiaries	Current Quaternaries	Herbarium Secondaries 594008 (RE 11.3.25)	Herbarium Quaternaries	Australian National University Boggomoss [#]
			W7	W72	W43	W79					
<i>indica</i>											
<i>Schoenoplectus mucronatus</i>		Cyperaceae					x				x
<i>Schoenoplectus validus</i>		Cyperaceae									x
<i>Sclerolaena birchii</i>	Galvinised Burr	Chenopodiaceae		x	x						
<i>Sclerolaena muricata</i> var <i>muricata</i>		Chenopodiaceae				x					
<i>Sesbania cannabina</i>		Fabaceae					x				
<i>Sida cordifolia</i> *	Flannel Weed	Malvaceae		x					x		
<i>Solanum americanum</i> *		Solanaceae				x					x
<i>Sonchus asper</i>		Asteraceae									x
<i>Sorghum halepense</i>		Poaceae									x
<i>Spartothomnella juncea</i>		Laminaceae		x							
<i>Sporobolus caroli</i>	Pepper Grass	Poaceae			x						
<i>Sporobolus creber</i>		Poaceae				x					
<i>Sporobolus elongatus</i>		Poaceae		x	x						
<i>Sporobolus mitchellii</i> (Trin.) C.E.Hubb. ex S.T.Blake		Poaceae							x		
<i>Stellaria angustifolia</i>		Caryophyllaceae									x
<i>Stylidium rotundifolium</i>		Stylidiaceae									x
<i>Swainsona galegifolia</i>	Smooth Darling Pea	Fabaceae				x					
<i>Tetragonia</i>	New	Aizoaceae			x						

Species Name	Common Name	Family	Current Secondary Studies				Current Tertiaries	Current Quaternaries	Herbarium Secondaries 594008 (RE 11.3.25)	Herbarium Quaternaries	Australian National University Boggomoss [#]
			W7	W72	W43	W79					
<i>tetragonioides</i>	Zealand Spinach										
<i>Triglochin dubium</i>		Juncaginaceae					x				
<i>Typha domingensis</i>		Typhaceae					x				
<i>Utricularia dichotoma</i>		Lentibulariaceae									x
<i>Verbena bonariensis</i>		Verbenaceae									x
<i>Verbena officinalis</i>		Verbenaceae									x
<i>Vetiveria filipes</i>		Poaceae							x		
<i>Vigna vexillata</i> var. <i>angustifolia</i>		Fabaceae					x				x
<i>Viola betonicifolia</i>		Violaceae									x
<i>Wahlenbergia communis</i> Carolin		Campanulaceae							x		
<i>Wahlenbergia stricta</i> subsp. <i>alterna</i>		Campanulaceae									x
<i>Xanthium pungens</i> *	Noogoora Burr	Asteraceae	x								x
<i>Xyris complanata</i>		Xyridaceae									x

[#]Species taken from Australian National University (1991) Decoda Database for Ecological Community Data, Department of Biogeography and Geomorphology, Australian National University, Canberra.

*=Exotic Species

APPENDIX B

Reference Site data

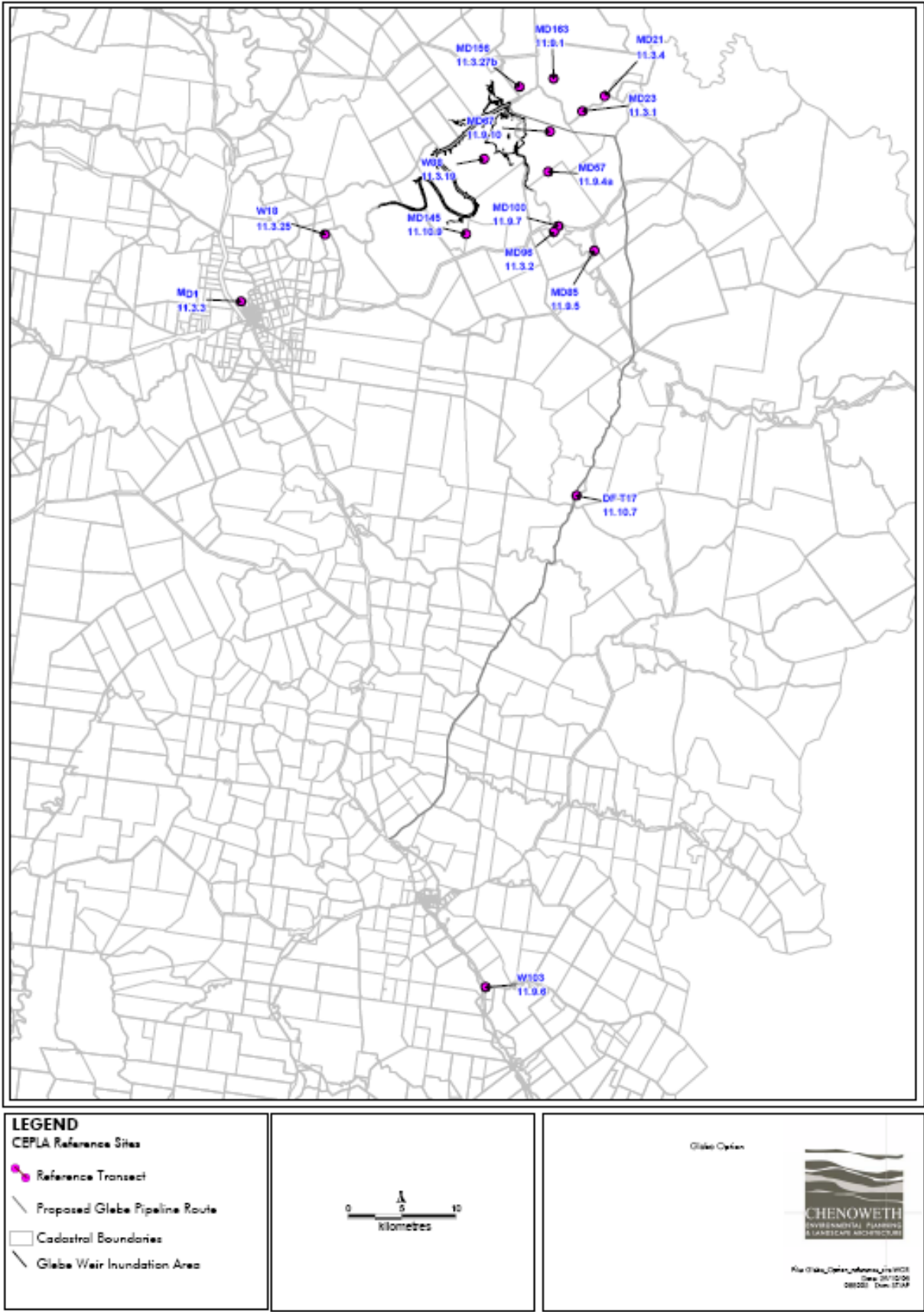


Figure 2: Reference Site Locations

Reference Site for 11.9.10 (MD67)

SITE NUMBER	MD67																			
LEVEL	2°																			
DETAIL SP. LIST	Complete																			
REGIONAL ECOSYSTEM	11.9.10																			
DATE	29/03/2008																			
RECORDER	DF, JD																			
LOCALITY	Taroom																			
SITE DESCRIPTION	Open forest on Sedimentary geology																			
GENERAL NOTES																				
COMMUNITY AREA (ha)	D			COMMUNITY WIDTH (m)	E															
MAPPED (Current RE)	11.3.2/11.9.5			REFERENCE SITE	Y															
LANDFORM																				
Situation	A		Element	HSL		Eros pattern	UL		Pattern	Low										
SLOPE																				
Type	VG		Slope	<3		Aspect	40													
SOILS																				
Source	S		Reliability	Low		Code	H		Add data	No		ISB/MU			Colour	K		Texture	B	
GEOLOGY																				
Source	O		Reliability	Low		Code	G		Map Unit	Jle										
SPECHT STRUCTURE CODE																				
W																				
GROUND (%)																				
Litter	5		Rock	0		Bare ground	10		Cryptophyte	5		vegetation	80							
RAINFOREST																				
Struct. Complexity	X		Leaf Size	X		Leaf fall	X		Floor Comp	X		In. Gr Forms	X							
DISTURBANCE																				
Storm damage (Proportion/Age)	-					Road Works (Proportion/Age)	-													
Fire (Proportion/Age/Height)	-					Salinity	-													
Logging (#)	-					Ringbarking /Thinning (#)	-													
Grazing	2					Feral Digging	-													
Weeds (% Cover)	5					Remnant	Yes													
Erosion (Type/Severity)	0					-														

SITE NUMBER		MD67		continued									
STRUCTURAL SUMMARY													
Stratum	Height Range in Strata (m)	Median Height (m)	Cover (%) (100m transect)	Species									
Emergent													
Tree 1	14 - 17	16	33.5	<i>Eucalyptus populnea</i> <i>Acacia harpophylla</i>									
Tree 2	7 - 13	10	37.5	<i>Acacia harpophylla</i> <i>Eucalyptus populnea</i>									
Tree 3													
Shrub 1	2 - 4	4		<i>Geijera parviflora</i> <i>Eremophila mitchellii</i>									
Shrub 2	1 - 2	1		<i>Geijera parviflora</i>									
Ground				<i>Cenchrus ciliaris</i> * <i>Malvastrum americanum</i> * <i>Salsola kali</i> <i>Paspalidium caespitosum</i> <i>Paspalidium constrictum</i> <i>Opuntia tomentosa</i> * <i>Pittosporum phylliraeoides</i> <i>Atriplex muelleri</i> <i>Ancistrachne uncinulata</i> <i>Megathyrsus maximus</i> * <i>Einadia hastata</i> <i>Elaeodendron australe</i> <i>Abutilon oxycarpum</i> <i>Jasminum didymum subsp lineare</i> <i>Enchylaena tomentosa</i> <i>Tetragonia tetragonioides</i> <i>Alectryon oleifolius</i> <i>Cheilanthes distans</i> <i>Sclerolaena tetracuspis</i>									
BASAL AREA & STEM COUNTS													
Species	Basal area for plot (50X10m)					Volume/ha		Stem count for plot (50X10m)					
	E	T1	T2	T3	S1	T1	T2	E	T1	T2	T3	S1	S2
<i>Eucalyptus populnea</i>		2				16			3				
<i>Acacia harpophylla</i>		3	5			24	25		3	25		12	
<i>Geijera parviflora</i>					1							11	8
<i>Pittosporum phylliraeoides</i>													1
<i>Elaeodendron australe</i>												1	
<i>Alectryon oleifolius</i>												1	

Reference Site for 11.9.1 (MD163)

SITE NUMBER	MD163	
LEVEL	2°	
DETAIL SP. LIST	Complete	
REGIONAL ECOSYSTEM	11.9.1	
DATE	1/04/2008	
RECORDER	DF, JD	
LOCALITY	Taroom	
		
SITE DESCRIPTION	<i>Eucalyptus cambageana</i> and <i>Acacia harpophylla</i>	
GENERAL NOTES		
COMMUNITY AREA (ha)	D	COMMUNITY WIDTH (m) E
MAPPED (Current RE)	11.9.5/11.9.4a	REFERENCE SITE Y
LANDFORM		
Situation	F	Element FOO Eros pattern UL Pattern HIL
SLOPE		
Type	GE	Slope 5 Aspect 100
SOILS		
Source S	Reliability Low	Code K Add data N ISB/MU Colour F Texture A
GEOLOGY		
Source I	Reliability Low	Code F Map Unit Jle
SPECHT STRUCTURE CODE		
GROUND (%)		
Litter 5	Rock 0	Bare ground 1 Cryptophyte 0 vegetation 85
RAINFOREST		
Struct. Complexity X	Leaf Size X	Leaf fall X Floor Comp X In. Gr Forms X
DISTURBANCE		
Storm damage (Proportion/Age)	-	Road Works (Proportion/Age) -
Fire (Proportion/Age/Height)	-	Salinity -
Logging (#)	-	Ringbarking /Thinning (#) -
Grazing	Yes	Feral Digging No
Weeds (% Cover)	-	Remnant Yes
Erosion (Type/Severity)	0	

SITE NUMBER		MD163				continued							
STRUCTURAL SUMMARY													
Stratum	Height Range in Strata (m)	Median Height (m)				Cover (%) (100m transect)	Species						
Emergent													
Tree 1	16-20	17				42	<i>Eucalyptus cambageana</i> <i>Acacia harpophylla</i>						
Tree 2	7-14	10				12	<i>Acacia harpophylla</i>						
Tree 3													
Shrub 1							<i>Geijera parviflora</i> <i>Alectryon diversifolius</i> <i>Psydrax johnsonii</i> <i>Alstonia constricta</i>						
Shrub 2							<i>Capparis mitchellii</i> <i>Notelaea microcarpa</i>						
Ground							<i>Abutilon oxycarpum</i> <i>Atriplex muelleri</i> <i>Cenchrus ciliaris*</i> <i>Pseuderanthemum variable</i> <i>Ancistrachne uncinulata</i> <i>Capparis lasiantha</i> <i>Carissa ovata</i> <i>Cheilanthes sieberi subsp. sieberi</i> <i>Chloris divaricata</i> <i>Cissus opaca</i> <i>Enteropogon unispiceus</i> <i>Hibiscus sturtii</i>						
BASAL AREA & STEM COUNTS													
Species	Basal area for plot (50X10m)					Volume/ha		Stem count for plot (50X10m)					
	E	T1	T2	T3	S1	T1	T2	E	T1	T2	T3	S1	S2
<i>Acacia harpophylla</i>		2	2			17	10		2	18			
<i>Eucalyptus cambageana</i>		6				51			2				
<i>Geijera parviflora</i>												2	10
<i>Alectryon diversifolius</i>												1	2
<i>Psydrax johnsonii</i>										1		1	
<i>Alstonia constricta</i>												1	
<i>Capparis Mitchellii</i>													2
<i>Notelaea Microcarpa</i>													1

Reference Site for 11.3.1 (MD23)

SITE NUMBER	MD23	
LEVEL	2 ^o	
DETAIL SP. LIST	Complete	
REGIONAL ECOSYSTEM	11.3.1	
DATE	27/03/2008	
RECORDER	DF, JD	
LOCALITY	Taroom	



SITE DESCRIPTION	<i>Eucalyptus coolibah</i> and <i>Acacia harpophylla</i> woodland												
GENERAL NOTES													
COMMUNITY AREA (ha)	D			COMMUNITY WIDTH (m)	E								
MAPPED (Current RE?)	11.3.25			REFERENCE SITE	Y								
LANDFORM													
Situation	B		Element	CBE		Eros pattern	GP		Pattern	ALP			
SLOPE													
Type	G		Slope			5	Aspect				140		
SOILS													
Source	S	Reliability	Low	Code	G	Add data	N	ISB/MU		Colour	B	Texture	A
GEOLOGY													
Source	I	Reliability	Low	Code	B		Map Unit	Qa					
SPECHT STRUCTURE CODE													
GROUND (%)													
Litter	20	Rock	0	Bare ground	50	Cryptophyte	0	vegetation	30				
RAINFOREST													
Struct. Complexity	X	Leaf Size	X	Leaf fall	X	Floor Comp	X	In. Gr Forms	X				
DISTURBANCE													
Storm damage (Proportion/Age)	-			Road Works (Proportion/Age)	-								
Fire (Proportion/Age/Height)	-			Salinity	-								
Logging (#)	5			Ringbarking /Thinning (#)	-								
Grazing	-			Feral Digging	No								
Weeds (% Cover)	2			Remnant	Yes								
Erosion (Type/Severity)	0												

SITE NUMBER			MD23			continued							
STRUCTURAL SUMMARY													
Stratum	Height Range in Strata (m)	Median Height (m)	Cover (%) (100m transect)	Species									
Emergent													
Tree 1	15-18	16	38.5	Eucalyptus coolibah Acacia harpophylla Casuarina cristata Lysiphyllum carolinii									
Tree 2	4-5	4.5	7.5	Lysiphyllum carolinii									
Tree 3													
Shrub 1	2-3	2.5		Geijera parviflora Eremophila mitchellii									
Shrub 2	1-2	1.5		Ehretia membranifolia									
Ground				Abutilon oxycarpum Alectryon diversifolius Atriplex muelleri Cenchrus ciliaris* Citrus glauca Cyperus gracilis Enchylaena tomentosa Eremophila debile Melinis repens* Parsonsia eucalyptophylla Paspalidium caespitosum Pseuderanthemum variable Salsola kali Sclerolaena muricata Sporobolus scabridus Tetragonia tetragonioides									
BASAL AREA & STEM COUNTS													
Species	Basal area for plot (50X10m)					Volume/ha		Stem count for plot (50X10m)					
	E	T1	T2	T3	S1	T1	T2	E	T1	T2	T3	S1	S2
Acacia harpophylla		8				64			8			1	
Eucalyptus coolibah		4				32			1	2			
Lysiphyllum carronii			2				4.5			12	2		
Casuarina cristata												1	3
Geijera parviflora													7
Ehretia membranifolia												7	10
Alectryon diversifolius													1
Citrus glauca													1

Reference Site 11.9.7 (MD100)

SITE NUMBER	MD100												
LEVEL	2°												
DETAIL SP. LIST	Complete												
REGIONAL ECOSYSTEM	11.9.7												
DATE	30/03/2008												
RECORDER	DF, JD												
LOCALITY	Taroom												
SITE DESCRIPTION			<i>Eucalyptus populnea</i> woodland on sedimentary substrates										
GENERAL NOTES													
COMMUNITY AREA (ha)			F		COMMUNITY WIDTH (m)			F					
MAPPED (Current RE)			11.3.2/11.9.5		REFERENCE SITE			Yes					
LANDFORM													
Situation		A		Element		HSL		Eros pattern		UL		Pattern	HIL
SLOPE													
Type		GE		Slope		5		Aspect		180			
SOILS													
Source	S	Reliability	Low	Code	K	Add data	No	ISB/MU		Colour	B	Texture	A
GEOLOGY													
Source	E	Reliability	Low	Code	B	Map Unit	Qa						
SPECHT STRUCTURE CODE							W						
GROUND (%)													
Litter	5	Rock	0	Bare ground	10	Cryptophyte	0	vegetation					
RAINFOREST													
Struct. Complexity	X	Leaf Size	X	Leaf fall	X	Floor Comp	X	In. Gr Forms	X				
DISTURBANCE													
Storm damage (Proportion/Age)				-				Road Works (Proportion/Age)				-	
Fire (Proportion/Age/Height)				-				Salinity				-	
Logging (#)				-				Ringbarking /Thinning (#)				?	
Grazing				2				Feral Digging				No	
Weeds (% Cover)				<1				Remnant				-	
Erosion (Type/Severity)						3/1							

SITE NUMBER		MD100		continued									
STRUCTURAL SUMMARY													
Stratum	Height Range in Strata (m)	Median Height (m)	Cover (%) (100m transect)	Species									
Emergent													
Tree 1	13 - 16	15	19	<i>Eucalyptus populnea</i>									
Tree 2	7 - 10	7	10.9	<i>Eucalyptus populnea</i>									
Tree 3													
Shrub 1	2 - 3	3	2.5	<i>Eremophila mitchellii</i>									
Shrub 2	0.5-1	1		<i>Eremophila mitchellii</i>									
Ground				<i>Cenchrus ciliaris</i> * <i>Brunoniella australis</i> <i>Malvastrum americanum</i> * <i>Cymbopogon refractus</i> <i>Boerhavia dominii</i> <i>Bothriochloa decipiens</i> <i>Dichanthium sericeum</i> <i>Neptunia gracilis</i> * <i>Salsola kali</i> <i>Brachyscome ciliaris</i> var. <i>subintegrifolia</i> <i>Dodonaea viscosa</i> <i>Glossocardia bidens</i> <i>Haloragis aspera</i> <i>Heteropogon contortus</i> <i>Phyllanthus maderaspatensis</i> <i>Rhynchosia minima</i> car. <i>Australis</i>									
BASAL AREA & STEM COUNTS													
Species	Basal area for plot (50X10m)					Volume/ha		Stem count for plot (50X10m)					
	E	T1	T2	T3	S1	T1	T2	E	T1	T2	T3	S1	S2
<i>Eucalyptus populnea</i>		1	4			7.5	14		3	7			
<i>Eremophila mitchellii</i>												7	11
<i>Dodonaea viscosa</i>													1
<i>Alectryon oleifolius</i>												1	

Reference Site 11.3.2 (MD96)

SITE NUMBER	MD96												
LEVEL	2°												
DETAIL SP. LIST	Complete												
REGIONAL ECOSYSTEM	11.3.2												
DATE	30/03/2008												
RECORDER	DF, JD												
LOCALITY	Taroom												
SITE DESCRIPTION			<i>Eucalyptus populnea</i> woodland on alluvium										
GENERAL NOTES													
COMMUNITY AREA (ha)			F			COMMUNITY WIDTH (m)			F				
MAPPED (Current RE)			11.3.2/11.9.5			REFERENCE SITE			Yes				
LANDFORM													
Situation		B		Element		CBE		Eros pattern		GP		Pattern	ALP
SLOPE													
Type		LE		Slope		<1		Aspect		200			
SOILS													
Source	S	Reliability	Low	Code	G	Add data	No	ISB/MU		Colour	B	Texture	A
GEOLOGY													
Source	O	Reliability	Low	Code	G	Map Unit	Jle						
SPECHT STRUCTURE CODE						W							
GROUND (%)													
Litter	5	Rock	0	Bare ground	10	Cryptophyte	5	vegetation					
RAINFOREST													
Struct. Complexity	X	Leaf Size	X	Leaf fall	X	Floor Comp	X	In. Gr Forms	X				
DISTURBANCE													
Storm damage (Proportion/Age)				-				Road Works (Proportion/Age)				-	
Fire (Proportion/Age/Height)				-				Salinity				-	
Logging (#)				-				Ringbarking /Thinning (#)				-	
Grazing				-				Feral Digging				-	
Weeds (% Cover)				-				Remnant				-	
Erosion (Type/Severity)						-							

SITE NUMBER		MD96				continued								
STRUCTURAL SUMMARY														
Stratum	Height Range in Strata (m)	Median Height (m)				Cover (%) (100m transect)	Species							
Emergent														
Tree 1	13 - 17	15				29.5	<i>Eucalyptus populnea</i>							
Tree 2	5 - 10	8				19	<i>Eucalyptus populnea</i> <i>Eremophila mitchellii</i>							
Tree 3														
Shrub 1	2-4.5	3					<i>Eremophila mitchellii</i>							
Shrub 2	1-1.5	1					<i>Acacia decora</i>							
Ground							<i>Cenchrus ciliaris</i> * <i>Brunoniella australis</i> <i>Malvastrum americanum</i> * <i>Paspalidium caespitosum</i> <i>Cymbopogon refractus</i> <i>Opuntia tomentosa</i> * <i>Ehretia membranifolia</i> <i>Cyperus gracilis</i> <i>Eremophila debile</i> <i>Alternanthera micrantha</i> <i>Alternanthera pungens</i> * <i>Boerhavia dominii</i> <i>Bothriochloa decipiens</i> <i>Cenchrus ciliaris</i> * <i>Chrysocephalum apiculatum</i> <i>Grevillea striata</i> <i>Pittosporum phylliraeoides</i> <i>Rostellularia adscendens</i> <i>Vittadinia pustulata</i>							
BASAL AREA & STEM COUNTS														
Species		Basal area for plot (50X10m)					Volume/ha		Stem count for plot (50X10m)					
		E	T1	T2	T3	S1	T1	T2	E	T1	T2	T3	S1	S2
<i>Eucalyptus populnea</i>			9	5			67.5	20		9	11		1	
<i>Eremophila mitchellii</i>													4	6
<i>Acacia decora</i>													2	
<i>Geijera parviflora</i>														2
<i>Alectryon diversifolius</i>													1	
<i>Alectryon oleifolius</i>														1
<i>Ehretia membranifolia</i>														1
<i>Pittosporum phylliraeoides</i>														1

Reference Site for 11.3.3 (MD1)

SITE NUMBER	MD1												
LEVEL	3°												
DETAIL SP. LIST	Complete												
REGIONAL ECOSYSTEM	11.3.3												
DATE	26/03/2008												
RECORDER	DF, JD												
LOCALITY	Taroom												
SITE DESCRIPTION	<i>Eucalyptus coolibah</i> woodland on flood plain												
GENERAL NOTES													
COMMUNITY AREA (ha)	F			COMMUNITY WIDTH (m)	F								
MAPPED (Current RE)	11.3.3			REFERENCE SITE	Yes								
LANDFORM													
Situation	Plain		Element	Fbo		Eros pattern	P		Pattern	ALP			
SLOPE													
Type	F		Slope	<5		Aspect	120						
SOILS													
Source	S	Reliability	Low	Code	Q	Add data	No	ISB/MU	-	Colour	B	Texture	A
GEOLOGY													
Source	I		Reliability	Low		Code	B		Map Unit	Qa			
SPECHT STRUCTURE CODE						OF							
GROUND (%)													
Litter	10		Rock	0		Bare ground	5		Cryptophyte	0		vegetation	
RAINFOREST													
Struct. Complexity	X		Leaf Size	X		Leaf fall	X		Floor Comp	X		In. Gr Forms	X
DISTURBANCE													
Storm damage (Proportion/Age)			-				Road Works (Proportion/Age)			-			
Fire (Proportion/Age/Height)			-				Salinity			-			
Logging (#)			5				Ringbarking /Thinning (#)			-			
Grazing			2				Feral Digging			Yes			
Weeds (% Cover)			-				Remnant			Yes			
Erosion (Type/Severity)													

SITE NUMBER			MD1	continued										
STRUCTURAL SUMMARY														
Stratum	Height Range in Strata (m)	Median Height (m)	Cover (%) (100m transect)	Species										
Emergent														
Tree 1	16 - 18.5	17	53	Eucalyptus coolibah										
Tree 2	5 - 8	6		Eucalyptus coolibah										
Tree 3														
Shrub 1														
Shrub 2	1	0.5-1.5		Acacia stenophylla										
Ground	0-0.5	0.4		Dichanthium sericeum Cenchrus ciliaris* Sclerolaena muricata Brunoniella australis Cyperus concinnus Eleocharis pallens Eragrostis leptocarpa Malvastrum americanum* Marsilea drummondii Mimulus gracilis Minuria integerrima Neptunia gracilis* Panicum larcomianum Senecio pinnatifolius Sida rhombifolia*										
BASAL AREA & STEM COUNTS														
Species		Basal area for plot (50X10m)					Volume/ha		Stem count for plot (50X10m)					
		E	T1	T2	T3	S1	T1	T2	E	T1	T2	T3	S1	S2
Eucalyptus coolibah			18				153			13	1			
Acacia stenophylla													2	

Reference Site for 11.9.4a (MD57)

SITE NUMBER	MD57												
LEVEL	2°												
DETAIL SP. LIST	Complete												
REGIONAL ECOSYSTEM	11.9.4a												
DATE	29/03/2008												
RECORDER	DF, JD												
LOCALITY	Taroom												
SITE DESCRIPTION	Low closed forest												
GENERAL NOTES													
COMMUNITY AREA (ha)	E		COMMUNITY WIDTH (m)	F									
MAPPED (Current RE)	11.9.5		REFERENCE SITE	Yes									
LANDFORM													
Situation	A	Element	HSL	Eros pattern	UL	Pattern	HIL						
SLOPE													
Type	GE	Slope	5	Aspect	330								
SOILS													
Source	S	Reliability	Low	Code	H	Add data	No	ISB/MU		Colour	F	Texture	B
GEOLOGY													
Source	O	Reliability	Low	Code	G	Map Unit	Jle						
SPECHT STRUCTURE CODE				LCF									
GROUND (%)													
Litter	20	Rock	10	Bare ground	<1	Cryptophyte	0	vegetation					
RAINFOREST													
Struct. Complexity	X	Leaf Size	X	Leaf fall	X	Floor Comp	X	In. Gr Forms	X				
DISTURBANCE													
Storm damage (Proportion/Age)	-		Road Works (Proportion/Age)	-									
Fire (Proportion/Age/Height)	-		Salinity	-									
Logging (#)	-		Ringbarking /Thinning (#)	-									
Grazing	2		Feral Digging	-									
Weeds (% Cover)	-		Remnant	Yes									
Erosion (Type/Severity)	-												

SITE NUMBER		MD57		continued									
STRUCTURAL SUMMARY													
Stratum	Height Range in Strata (m)	Median Height (m)		Cover (%) (100m transect)	Species								
Emergent													
Tree 1	6 - 10	7		13.5	Geijera parviflora Brachychiton rupestris Lysiphyllum carronii Acacia fasciculifera Eremophila mitchellii								
Tree 2	4 - 6	4		11	Elaeodendron australe								
Tree 3	3	3		15	Alectryon connatus								
Shrub 1	1 - 3	2			Turraea pubescens Pittosporum spinescens								
Shrub 2	0.5-1	1			Jasminum simplicifolium Ehretia membranifolia								
Ground	0-0.5	0.5			Cenchrus ciliaris* Capparis lasiantha Carissa ovata Cissus opaca Paspalidium caespitosum Apophyllum anomalum Croton insularis Einadia hastata Elaeodendron australe Jasminum didymum subsp. lineare Jasminum simplicifolium Lysiphyllum carolinii Owenia venosa Pittosporum spinescens Sarcostemma viminale subsp. australe Turraea pubescens								
BASAL AREA & STEM COUNTS													
Species	Basal area for plot (50X10m)					Volume/ha		Stem count for plot (50X10m)					
	E	T1	T2	T3	S1	T1	T2	E	T1	T2	T3	S1	S2
Elaeodendron australe			1						1	1	1		
Alectryon oleifolius											3	1	
Croton insularis												5	3
Acacia fasciculiflora									1	8	7	2	
Pittosporum spinescens												7	2
Atalaya salicifolia										2		0	
Brachychiton rupestris		1	1							1			
Eremophila mitchellii									2				
Geijera parviflora		2							2		1	1	
Apophyllum anomalum			1										
Lvsiphyllum carronii		1											

Reference Site for 11.9.5 (MD85)

SITE NUMBER	MD85														
LEVEL	2°														
DETAIL SP. LIST	Complete														
REGIONAL ECOSYSTEM	11.9.5														
DATE	30/03/2008														
RECORDER	DF, JD														
LOCALITY	Taroom														
SITE DESCRIPTION		Open forest of Brigalow on sedimentary substrate													
GENERAL NOTES															
COMMUNITY AREA (ha)			D			COMMUNITY WIDTH (m)			E						
MAPPED (Current RE)			Non-remnant			REFERENCE SITE			Yes						
LANDFORM															
Situation		A		Element		HSL		Eros pattern		UL		Pattern		HIL	
SLOPE															
Type		VG		Slope		<5		Aspect							
SOILS															
Source	S	Reliability	low	Code	H	Add data	No	ISB/MU		Colour	F	Texture	B		
GEOLOGY															
Source	O	Reliability	Low	Code	G	Map Unit	Jle								
SPECHT STRUCTURE CODE															
GROUND (%)															
Litter	5	Rock	0	Bare ground	5	Cryptophyte	0	vegetation							
RAINFOREST															
Struct. Complexity	X	Leaf Size	X	Leaf fall	X	Floor Comp	X	In. Gr Forms	X						
DISTURBANCE															
Storm damage (Proportion/Age)		-		Road Works (Proportion/Age)		-									
Fire (Proportion/Age/Height)		-		Salinity		-									
Logging (#)		-		Ringbarking /Thinning (#)		-									
Grazing		2		Feral Digging		Yes									
Weeds (% Cover)		20		Remnant		-									
Erosion (Type/Severity)		-													

SITE NUMBER		MD85		continued									
STRUCTURAL SUMMARY													
Stratum	Height Range in Strata (m)	Median Height (m)	Cover (%) (100m transect)	Species									
Emergent													
Tree 1	12 - 17	15	44.1	Acacia harpophylla									
Tree 2	5 - 10	8	51.5	Eremophila mitchellii Geijera parviflora Psydrax johnsonii Acacia harpophylla Alectryon oleifolius									
Tree 3													
Shrub 1	2-4.5	4		Eremophila mitchellii Geijera parviflora									
Shrub 2													
Ground				Cenchrus ciliaris* Cissus opaca Paspalidium caespitosum Pseuderanthemum variable Ancistrachne uncinulata Citrus glauca Cymbopogon refractus Leptochloa decipiens subsp. asthenes Megathyrsus maximus* Opuntia tomentosa*									
BASAL AREA & STEM COUNTS													
Species	Basal area for plot (50X10m)					Volume/ha		Stem count for plot (50X10m)					
	E	T1	T2	T3	S1	T1	T2	E	T1	T2	T3	S1	S2
Acacia harpophylla		9	1			67.5	4		13	5			
Geijera parviflora					2					7		9	
Eremophila mitchellii			1				4			3		2	
Alectryon oleifolius			1							5			
Psydrax johnsonii										1			
Brachychiton rupestris										1			
Citrus glauca										1			

Reference Site for 11.3.25 (W18)

SITE NUMBER	W18												
LEVEL	2°												
DETAIL SP. LIST	Complete												
REGIONAL ECOSYSTEM	11.3.25												
DATE	13/06/2008												
RECORDER	DF,ST												
LOCALITY	Taroom												
SITE DESCRIPTION	Eucalypt open forest												
GENERAL NOTES	Dawson River , The Bend Road												
COMMUNITY AREA (ha)	C		COMMUNITY WIDTH (m)	A									
MAPPED (Current RE)	11.3.25		REFERENCE SITE	Y									
LANDFORM													
Situation	B		Element	CBE		Eros pattern	UL		Pattern	ALP			
SLOPE													
Type	VG		Slope	1-3		Aspect	180						
SOILS													
Source	I	Reliability	High	Code	G	Add data	No	ISB/MU		Colour	F	Texture	B
GEOLOGY													
Source	I	Reliability	High	Code	B	Map Unit							
SPECHT STRUCTURE CODE													
GROUND (%)													
Litter	15%		Rock	0		Bare ground	80%		Cryptophyte	5		Vegetation	
RAINFOREST													
Struct. Complexity	X		Leaf Size	X		Leaf fall	X		Floor Comp	X		In. Gr Forms	X
DISTURBANCE													
Storm damage (Proportion/Age)	0		Road Works (Proportion/Age)	0									
Fire (Proportion/Age/Height)	0		Salinity	0									
Logging (#)	0		Grazing	1									
Ringbarking /Thinning (#)	0		Extensive Clearing	N									
Weeds (% Cover)	0		Feral Digging	N									
Remnant			Erosion (Type/Severity)	0									

SITE NUMBER		W18			continued									
STRUCTURAL SUMMARY														
Stratum	Height Range in Strata (m)	Median Height (m)				Cover (%) (100m transect)	Species							
Emergent														
Tree 1	20-35	27				51.5	<i>Eucalyptus tereticornis</i> <i>Eucalyptus coolabah</i> <i>Eucalyptus camaldulensis</i>							
Tree 2	12--15	13				22.5	<i>Acacia leiocalyx</i> <i>Melaleuca bracteata</i>							
Tree 3														
Shrub 1	2--7	5					<i>Acacia leiocalyx</i> <i>Melaleuca bracteata</i>							
Shrub 2														
Ground							<i>Pseuderanthemum variable</i> <i>Chionachne hubbardiana</i> <i>Lomandra longifolia</i> <i>Muehlenbeckia florulenta</i> <i>Paspalidium jubiflorum</i> <i>Cenchrus ciliaris</i> *							
BASAL AREA & STEM COUNTS														
Species	Basal area for plot (50X10m)					Volume/ha		Stem count for plot (50X10m)						
	E	T1	T2	T3	S1	T1	T2	E	T1	T2	T3	S1	S2	
<i>Eucalyptus camaldulensis</i>		9				121.5			2					
<i>Eucalyptus coolabah</i>		9				121.5			2	3				
<i>Melaleuca bracteata</i>												3		
<i>Acacia leiocalyx</i>														

Reference Site for 11.9.6 (W103)

SITE NUMBER	W103	
LEVEL	2°	
DETAIL SP. LIST	Complete	
REGIONAL ECOSYSTEM	11.9.6	
DATE	17/06/2008	
RECORDER	DF,ST	
LOCALITY	Wandoan	



SITE DESCRIPTION	Roadside remnant <i>Acacia harpophylla</i> and <i>Acacia melvillei</i>												
GENERAL NOTES	5km west of Wandoan												
COMMUNITY AREA (ha)	C			COMMUNITY WIDTH (m)	A								
MAPPED (Current RE)	Non-remnant			REFERENCE SITE	Y								
LANDFORM													
Situation	A		Element	HSL		Eros pattern	GR		Pattern	LOW			
SLOPE													
Type	VG		Slope	1-3%		Aspect	40						
SOILS													
Source	I	Reliability	Low	Code	K	Add data	No	ISB/MU		Colour	F	Texture	B
GEOLOGY													
Source	I	Reliability	Low	Code	F		Map Unit						
SPECHT STRUCTURE CODE													
GROUND (%)													
Litter	70%		Rock	0		Bare ground	30%		Cryptophyte	0		Vegetation	
RAINFOREST													
Struct. Complexity	X		Leaf Size	X		Leaf fall	X		Floor Comp	X		In. Gr Forms	X
DISTURBANCE													
Storm damage (Proportion/Age)	0%			Road Works (Proportion/Age)	1%								
Fire (Proportion/Age/Height)	0			Salinity	0								
Logging (#)	0			Grazing	1								
Ringbarking /Thinning (#)	0			Extensive Clearing	adjacent								
Weeds (% Cover)	0			Feral Digging	N								
Remnant				Erosion (Type/Severity)	0								

SITE NUMBER		W103	continued										
STRUCTURAL SUMMARY													
Stratum	Height Range in Strata (m)	Median Height (m)	Cover (%) (100m transect)	Species									
Emergent													
Tree 1	10--14	12	27.1	Acacia harpophylla Eucalyptus populnea Brachychiton rupestris Acacia Melvillei									
Tree 2	5--9	7	26.3	Alectryon diversifolia Acacia harpophylla Opuntia tomentosa Santalum lanceolatum Pittosporum phylliarioides Eremophila mitchellii Casuarina cristata									
Tree 3													
Shrub 1	2--4	3		Geijera parviflora									
Shrub 2													
Ground				Cenchrus ciliaris* Salsola kali Paspalidium caespitosum Opuntia tomentosa* Atriplex muelleri Pittosporum phylliraeoides Abutilon oxycarpum Alectryon oleifolius Dichanthium sericeum Capparis lasiantha Atalaya hemiglauca Enneapogon robustissimus Eremophila longifolia Notelaea microcarpa Santalum lanceolatum Sclerolaena muricata Sporobolus caroli Sporobolus elongatus Verbena tenuisecta*									
BASAL AREA & STEM COUNTS													
Species	Basal area for plot (50X10m)					Volume/ha		Stem count for plot (50X10m)					
	E	T1	T2	T3	S1	T1	T2	E	T1	T2	T3	S1	S2
Acacia melvillei									1	2			
Brachychiton rupestris									1				
Eucalyptus populnea									2				
Acacia harpophylla		1				6			2	20		3	
Acacia melvillei		1	1			6	3.5		1	2			
Alectryon oleifolium		1	1			6	3.5		1	5			
Eremophila mitchellii										2		10	7
Geijera parviflora												2	2
Opuntia tomentosa										6			
Santalum lanceolatum										10		1	
Brachychiton rupestris		1							1				
Casuarina cristata												2	
Atalaya hemiglauca										1			
Eremophila linifolia												1	
Alectryon diversifolia													1
Notelaea microcarpa													1

Reference Site for RE 11.10.9 (MD145)

SITE NUMBER	MD145																										
LEVEL	2°																										
DETAIL SP. LIST	Complete																										
REGIONAL ECOSYSTEM	11.10.9																										
DATE	31/03/2008																										
RECORDER	DF, JD																										
LOCALITY	Taroom																										
SITE DESCRIPTION	Callitris glaucophylla woodland																										
GENERAL NOTES																											
COMMUNITY AREA (ha)			F			COMMUNITY WIDTH (m)			F																		
MAPPED (Current RE)			11.10.7/11.10.7/11.10.9/11.3.2			REFERENCE SITE			Yes																		
LANDFORM																											
Situation		A		Element		HSL		Eros pattern		UH		Pattern		Low													
SLOPE																											
Type		VG		Slope		<3		Aspect		230																	
SOILS																											
Source		S		Reliability		L		Code		sandy soil		Add data		No		ISB/MU		I		Colour		B		Texture			
GEOLOGY																											
Source		I		Reliability		Low		Code		F		Map Unit		Jlh													
SPECHT STRUCTURE CODE													W														
GROUND (%)																											
Litter		2		Rock		0		Bare ground		2		Cryptophyte		0		vegetation		96									
RAINFOREST																											
Struct. Complexity		X		Leaf Size		X		Leaf fall		X		Floor Comp		X		In. Gr Forms		X									
DISTURBANCE																											
Storm damage (Proportion/Age)				-				Road Works (Proportion/Age)				-															
Fire (Proportion/Age/Height)				-				Salinity				-															
Logging (#)				-				Ringbarking /Thinning (#)				-															
Grazing				2				Feral Digging				-															
Weeds (% Cover)				-				Remnant				-															
Erosion (Type/Severity)				-																							

SITE NUMBER		MD145		continued									
STRUCTURAL SUMMARY													
Stratum	Height Range in Strata (m)	Median Height (m)				Cover (%) (100m transect)	Species						
Emergent													
Tree 1	14 - 18	17				45	Callitris glaucophylla Corymbia tessellaris						
Tree 2	8 - 10	9				10.5	Callitris glaucophylla Corymbia clarksoniana						
Tree 3													
Shrub 1													
Shrub 2													
Ground	0-0.5	0.5					Achyranthes aspera Bulbostylis barbata Cenchrus ciliaris* Cheilanthes sieberi subsp. Sieberi Chenopodium pumilio Commelina diffusa Cymbopogon refractus Cyperus dietrichiae var. brevibracteatus Cyperus gracilis Megathyrsus maximus* Melinis repens* Murdannia graminea Opuntia stricta* Perotis rara Polycarpaea corymbosa Portulaca pilosa* Psydrax odorata Sclerolaena birchii Sida rhombifolia* Sporobolus elongatus						
BASAL AREA & STEM COUNTS													
Species	Basal area for plot (50X10m)					Volume/ha		Stem count for plot (50X10m)					
	E	T1	T2	T3	S1	T1	T2	E	T1	T2	T3	S1	S2
Callitris glaucophylla		12				102			17	5			
Corymbia tessellaris									1				
Corymbia clarksoniana										2			
Psydrax odorata													1

Reference Site for RE 11.3.19 (W88)

SITE NUMBER	W88												
LEVEL	2°												
DETAIL SP. LIST	Complete												
REGIONAL ECOSYSTEM	11.3.19												
DATE	16/06/2008												
RECORDER	DF,ST												
LOCALITY													
SITE DESCRIPTION			Callitris glaucophylla closed forest										
GENERAL NOTES			Mrs. Gall's property										
COMMUNITY AREA (ha)		C		COMMUNITY WIDTH (m)				A					
MAPPED (Current RE)		11.3.2/11.3.3		REFERENCE SITE				Yes					
LANDFORM													
Situation	B		Element	VLF		Eros pattern	GR		Pattern	ALP			
SLOPE													
Type	VG		Slope	1-3		Aspect	130						
SOILS													
Source	I	Reliability	Low	Code	G	Add data	No	ISB/MU		Colour	F(Pale)	Texture	E
GEOLOGY													
Source	I	Reliability	Low	Code	B	Map Unit	J1e						
SPECHT STRUCTURE CODE						CF							
GROUND (%)													
Litter	25	Rock	0	Bare ground	25	Cryptophyte	0	Vegetation	50				
RAINFOREST													
Struct. Complexity	X	Leaf Size	X	Leaf fall	X	Floor Comp	X	In. Gr Forms	X				
DISTURBANCE													
Storm damage (Proportion/Age)		0				Road Works (Proportion/Age)		0					
Fire (Proportion/Age/Height)		0				Salinity		0					
Logging (#)		0				Grazing		2					
Ringbarking /Thinning (#)		0				Extensive Clearing		N					
Weeds (% Cover)		0				Feral Digging		N					
Remnant						Erosion (Type/Severity)		0					

SITE NUMBER		W88		continued									
STRUCTURAL SUMMARY													
Stratum	Height Range in Strata (m)	Median Height (m)	Cover (%) (100m transect)	Species									
Emergent													
Tree 1	11-19	15		Callitris glaucophylla Eucalyptus populnea									
Tree 2	2-4	3		Callitris glaucophylla									
Tree 3													
Shrub 1													
Shrub 2													
Ground				Carissa ovata Cenchrus ciliaris* Commelina benghalensis* Cymbopogon refractus Cyperus gracilis Digitaria diffusa Malvastrum americanum* Opuntia aurantiaca* Opuntia hirtella* Oxalis corniculata* Perotis rara Petalostigma pubescens Portulaca pilosa* Rostellularia adscendens Sclerolaena birchii Sporobolus caroli Urochloa foliosa									
BASAL AREA & STEM COUNTS													
Species	Basal area for plot (50X10m)					Volume/ha		Stem count for plot (50X10m)					
	E	T1	T2	T3	S1	T1	T2	E	T1	T2	T3	S1	S2
Carissa ovata		21				157.5			70	4		2	
Eucalyptus populnea		1				7.5							
Callitris glaucophylla													1

Reference Site for RE 11.3.27b (MD156)

SITE NUMBER	MD156												
LEVEL	2°												
DETAIL SP. LIST	Complete												
REGIONAL ECOSYSTEM	11.3.27b												
DATE	1/04/2008												
RECORDER	DF, JD												
LOCALITY	Taroom												
SITE DESCRIPTION	<i>Eucalyptus camaldulensis</i> woodland												
GENERAL NOTES													
COMMUNITY AREA (ha)		C		COMMUNITY WIDTH (m)				F					
MAPPED (Current RE)		11.3.27b		REFERENCE SITE				Yes					
LANDFORM													
Situation	B	Element	BAN	Eros pattern	GP	Pattern	ALP						
SLOPE													
Type	VG		Slope	1		Aspect							
SOILS													
Source	I	Reliability	Low	Code	A	Add data	N	ISB/MU		Colour	K	Texture	F
GEOLOGY													
Source	I	Reliability	Low	Code	B	Map Unit	Qa						
SPECHT STRUCTURE CODE				W									
GROUND (%)													
Litter	-	Rock	-	Bare ground	-	Cryptophyte	-	vegetation	-				
RAINFOREST													
Struct. Complexity	X	Leaf Size	X	Leaf fall	X	Floor Comp	X	In. Gr Forms	X				
DISTURBANCE													
Storm damage (Proportion/Age)		-				Road Works (Proportion/Age)		-					
Fire (Proportion/Age/Height)		-				Salinity		-					
Logging (#)		-				Ringbarking /Thinning (#)		-					
Grazing		-				Feral Digging		-					
Weeds (% Cover)		-				Remnant		-					
Erosion (Type/Severity)		0				-							

SITE NUMBER		MD156				continued								
STRUCTURAL SUMMARY														
Stratum	Height Range in Strata (m)	Median Height (m)			Cover (%) (100m transect)	Species								
Emergent														
Tree 1	23-30	25			52	<i>Eucalyptus camaldulensis</i> <i>Eucalyptus coolibah</i>								
Tree 2	17-21	18			27	<i>Eucalyptus coolibah</i> <i>Eucalyptus camaldulensis</i>								
Tree 3														
Shrub 1														
Shrub 2														
Ground	0-1	0.5				<i>Alectryon diversifolius</i> <i>Bothriochloa decipiens</i> <i>Centella asiatica</i> * <i>Cyclosorus interruptus</i> <i>Dianella brevipedunculata</i> <i>Gomphocarpus physocarpa</i> * <i>Imperata cylindrica</i> <i>Lomandra longifolia</i> <i>Ludwigia octovalvis</i> <i>Marsilea drummondii</i> <i>Megathyrsus maximus</i> * <i>Phragmites australis</i> <i>Schoenoplectus maritimus</i> <i>Sida rhombifolia</i> * <i>Sida subspicata</i> <i>Tetragonia tetragonioides</i> <i>Vigna lanceolata</i> *								
BASAL AREA & STEM COUNTS														
Species		Basal area for plot (50X10m)					Volume/ha		Stem count for plot (50X10m)					
		E	T1	T2	T3	S1	T1	T2	E	T1	T2	T3	S1	S2
<i>Eucalyptus camaldulensis</i>			17				212.5			8	2			
<i>Eucalyptus coolibah</i>			2	2						2	6			
<i>Alectryon diversifolius</i>													1	

Reference Site for RE 11.3.4 (MD21)

SITE NUMBER	MD21	Photo of small mound spring at the immediate edge of the plot 											
LEVEL	2°												
DETAIL SP. LIST	Complete												
REGIONAL ECOSYSTEM	11.3.4												
DATE	1/04/2008												
RECORDER	DF, JD												
LOCALITY	Taroom												
SITE DESCRIPTION		<i>Eucalyptus tereticornis</i> and <i>Eucalyptus camaldulensis</i> woodland											
GENERAL NOTES													
COMMUNITY AREA (ha)		F				COMMUNITY WIDTH (m)		D					
MAPPED (Current RE)		11.3.4				REFERENCE SITE		Yes					
LANDFORM													
Situation		B		Element		BAN		Eros pattern		GP			
Pattern								Pattern		ALP			
SLOPE													
Type		VG		Slope		1		Aspect		-			
SOILS													
Source	I	Reliability	L	Code	A	Add data	N	ISB/MU		Colour	K	Texture	F
GEOLOGY													
Source	I	Reliability	Low	Code	B	Map Unit	Jlp						
SPECHT STRUCTURE CODE						W							
GROUND (%)													
Litter	5	Rock	0	Bare ground	20	Cryptophyte	0	vegetation	75				
RAINFOREST													
Struct. Complexity	X	Leaf Size	X	Leaf fall	X	Floor Comp	X	In. Gr Forms	X				
DISTURBANCE													
Storm damage (Proportion/Age)				-				Road Works (Proportion/Age)				-	
Fire (Proportion/Age/Height)				-				Salinity				-	
Logging (#)				-				Ringbarking /Thinning (#)				-	
Grazing				-				Feral Digging				-	
Weeds (% Cover)				-				Remnant				-	
Erosion (Type/Severity)				0								-	

SITE NUMBER		MD21				continued							
STRUCTURAL SUMMARY													
Stratum	Height Range in Strata (m)	Median Height (m)			Cover (%) (100m transect)	Species							
Emergent													
Tree 1	27-31	29			100	<i>Eucalyptus tereticornis</i> <i>Eucalyptus camaldulensis</i>							
Tree 2	5-12	9			41.5	<i>Melaleuca linariifolia</i>							
Tree 3													
Shrub 1	1-1.5	1.5				<i>Ficus opposita</i>							
Shrub 2													
Ground	0-1	0.5				<i>Cyclosorus interruptus</i> <i>Dichondra repens*</i> <i>Juncus usitatus</i> <i>Livistona nitida</i> <i>Lomandra hystrix</i> <i>Lomandra longifolia</i> <i>Paspalidium distans</i> <i>Pseuderanthemum variable</i> <i>Xanthium pungens*</i>							
BASAL AREA & STEM COUNTS													
Species	Basal area for plot (50X10m)					Volume/ha		Stem count for plot (50X10m)					
	E	T1	T2	T3	S1	T1	T2	E	T1	T2	T3	S1	S2
<i>Eucalyptus camaldulensis</i>		10				145	4.5		5	2			
<i>Eucalyptus tereticornis</i>		6	1			87	4.5						
<i>Melaleuca linariifolia</i>										1	2	1	
<i>Ficus opposita</i>												3	

GLOSSARY**Vegetation Mapping Recording Form (Nelder et al., 2005)****Community area**

A – site only
 B - <1ha
 C – 1-5ha
 D – 5-20ha
 E – 20-50ha
 F - >50ha

Community Width

A - <35m
 B – 35-75m
 D – 75-100m
 E – 150-300m
 F – not linear

LandformSituation

A – Undulating Plain
 B- Alluvial Plain
 C- Lake, Watercourse
 F – Slope/Hill

Element

BAN – Stream bank
 CBE – Channel bench
 FOO – Footslope
 HSL – Hill slope
 VLF – Valley flat

Eros Pattern

GP – Gentle undulating plain
 GR – Gently undulating rises
 LP – Level plain
 P – Extremely low <9m
 UH – Undulating Hills
 UL – Undulating low hills
 UP – Undulating plain

Pattern

ALP – Alluvial plain
 HIL – Hills
 LOW – Low hills
 PLA – Plain

SlopeType

LE – Level (0°)
 VG – Very gentle (1-2°)
 GE – Gentle incline (3-6°)
 MO – Moderate incline (7-18°)
 ST – Steep (19-29°)
 VS – Very steep (30-45°)

SoilsCode

A – Sand
 B – Calcareous sands, siliceous sands, earthy sands
 D – Loamy sand
 G – Silt, Alluvial
 H- Clay loam
 K – Clay unspecified
 Q – Heavy clay, black soil, black earth, heavy soil, grey and brown soils of heavy texture, light medium clay, medium clay, rendzinas, chernozems, prairie soils, wiesenboden

Colour

B- Greyish
 F – Brown
 J - Grey
 K – Pale

Texture

A – Clay
 B – Clay loam
 D – Loam
 E – Sandy loam
 F – Sand

GeologyCode

B – Alluvium
 F – Sandstone
 G – Fine sedimentary
 H – Mixed sedimentary

Map Unit

Qa – Alluvium
 Jle – Arenite-mudrock (Evergreen Formation)
 Jlh – Arenite (Hutton Sandstone)
 Tc – Poorly consolidated sediments (Chinchilla sand)
 Ji – Sedimentary rock (Injune Creek Group)

Specht

W - Woodland
 LCF – Low Closed Forest
 CF – Closed Forest
 OF- Open Forest