



**Roma Ecological Assessment  
Report – Lot 27 SP214993  
Santos Ltd**

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# 1. Background

## 1.1 Project description

Santos Ltd (Santos) have commissioned Aurecon Australia Pty Ltd (Aurecon) to undertake ecological investigations of proposed areas of development for the Roma gas fields.

The Roma gas fields are located near the township of Roma and are characterised by undulating terrain with small elevated areas including the Thomby and Grafton Range. The dominant vegetation types within the Roma gas fields include Eucalypt and/or Brigalow woodlands, Blue grass or Mitchell grass downs, and smaller areas of White Cypress Pine and Mulga (Eddie 2007). The Roma gas fields are located within the Balonne River catchment.

Much of this area has been subject to cattle grazing and other agricultural practices, as well as previous development associated with the gas fields.

This report is specific to the proposed development areas for Lot 27 on SP214993, listed below and shown in Figure 1 (Appendix B):

- Pipeline corridors R80, R9
- Geotechnical survey location TP-R15 (Figure 1, Appendix B)
- Well pad Roma077

Note that the subject of this report is solely related to Lot 27 on SP214993. Where survey areas overlap additional properties, these sites will be further addressed in the report relevant to those properties/lots.

## 1.2 Purpose of report

The aim of this report is to provide an ecological assessment of the proposed development areas located on Lot 27 on SP214993 (Figure 1, Appendix B) and to identify areas and species of notable ecological or conservation value. This report does not make any recommendations regarding the development in relation to any Santos environmental authorities or other approvals.

## 2. Methodology

### 2.1 Desktop methodology

Areas of development have been projected on a range of maps provided by Santos. These maps include Regional Ecosystem (RE) Mapping (version 6.0, Department of Environment and Resource Management [DERM]), Environmentally Sensitive Areas (ESA) mapping, drainage mapping and aerial photography. Where available ahead of time, these resources were reviewed to determine target areas for the field inspection. It is important to note that the RE classifications used in this report are based on the 'biodiversity status' of the vegetation and not the '*Vegetation Management Act 1999* (VM Act) status' of the vegetation.

### 2.2 Field methodology

The proposed corridors were assessed by two (2) Aurecon ecologists (Cassandra Arkinstall, Chris Schell) on 6 & 8 June 2011. These assessments were to determine the existing vegetation communities and habitat value of the proposed clearing within the pipeline corridors as well as to verify the RE mapping as produced by the Department of Environment and Resource Management (DERM).

GIS environmental constraints layers (e.g. RE Mapping, ESA mapping etc) and high resolution aerial photography were uploaded onto a toughbook (C5 mobile clinical assistant CFT-001 – Motion computing), with an integrated GPS used to locate surveys areas. Handheld Garmin GPS units (GPS map 76) were also used during the field investigations. It should be noted that while efforts were made to ensure the GPS co-ordinates provided in this report are accurate, a margin of error approximately +/- 15 m is expected due to the limitations of the devices used and the recording environment.

The corridors were 100 m wide and of varying lengths, and the circular well pad areas had a radius of 175 m. Geotechnical survey locations were also assessed as part of the survey areas (a 50 m buffer zone around each survey location was assessed).

The ground-truthing of the corridors (including road corridors), well pad areas and the geotechnical survey locations included undertaking detailed flora species surveys including sampling of unknown flora, and recording all incidental fauna observations. All species known to be of conservation significance (such as endangered, vulnerable, near threatened or Type A species under the *Nature Conservation Act 1992* and/or the *Environment Protection and Biodiversity Conservation Act 1999* [EPBC Act]) were recorded using the toughbook.

A list of flora species observed in the proposed development areas has been included in Appendix A. Incidental fauna observations are provided in the relevant sections throughout this report.

## 3. Ecological assessment

### 3.1 Corridor R80

#### General

The proposed development area is located on Lot 27 SP214993 (Figure 1, Appendix B). The site is gently undulating with sandy soils. The development area has been extensively disturbed due to previous vegetation clearing and heavy grazing by stock. An existing access road also traverses the area, along the property boundary fence.

The proposed development area is currently mapped as non remnant on the DERM RE mapping. The area does not occur within any areas identified as ESA's and the nearest ESA to the corridor is located approximately 400 m to the south-east of the development area.

There are no watercourses mapped within the development area, with the nearest watercourse located approximately 150 m to the south-east.

#### Geotechnical survey locations

No geotechnical survey locations were assessed as part of this corridor.

#### Floristics

The vegetation within the proposed corridor has been previously cleared for stock grazing, and an existing access track runs the length of the development area (along the property boundary). There is limited woody vegetation within the development area, with a narrow corridor of trees retained within the road corridor at the southern end, and canopy/sub-canopy trees occurring as isolated individuals/small stands throughout the corridor.

The site has a dense ground layer which is dominated by *Pennisetum ciliare* (Buffel grass), *Chloris gayana* (Rhodes Grass), with a range of other native and non-native grasses and herbs. The ground and shrub layer cover approximately 80% of the total corridor area.

The canopy layer within the site is very sparse, (less than 5% cover of the total corridor area). Species present include *Acacia harpophylla* (Brigalow), *Eucalyptus populnea* (Poplar Box), *E. melanophloia* (Silver-leaved Ironbark), and *Callitris glaucophylla* (White Cypress Pine), with a height range of approximately 7-14 m.

One (1) *Brachychiton populneus* (Kurrajong) was recorded within the corridor – the location of this species is provided in Table 3.1 and in Figure 1 of Appendix B. *Brachychiton populneus* is a Type A restricted plant under the NC Act.

No species protected under the provisions of the EPBC Act were observed within the proposed corridor.

A list of flora species observed within corridor R80 is presented in Appendix A.

**Table 3.1 Location of Type A Restricted Plants (*Nature Conservation Act 1992*)**

Species	Easting (GDA 94, Zone 55J)	Northing (GDA 94, Zone 55J)
<i>Brachychiton populneus</i>	703902	7077438

### Habitat values

Six (6) incidental fauna species were recorded within the proposed corridor, namely Sulphur-crested Cockatoo (*Cacatua galerita*), Pale-headed Rosella (*Platycercus adscitus*), Galah (*Eolophus roseicapilla*), Noisy Miner (*Manorina melanocephala*), Apostlebird (*Struthidea cinerea*) and Cockatiel (*Nymphicus hollandicus*).

All of these species are listed as least concern under the provisions of the NC Act and EPBC Act.

Habitat features associated with the proposed disturbance area include:

- Limited canopy cover suitable for shelter, foraging and perching
- Limited fissured tree bark
- Dense groundcover vegetation (ie grassy tussocks)
- Woody debris (ie fallen/felled timber, including hollow-bearing logs)

The habitat value of corridor R80 is low overall, as it contains limited woody vegetation and has been disturbed by grazing stock, previous vegetation clearing and the invasion of exotic pasture species. Species utilising resources within this area are likely to be limited to common, generalist species that can tolerate/adapt to significant habitat disturbances.

## 3.2 Corridor R9

### General

The proposed pipeline corridor is located on Lot 27 SP214993 (Figure 1, Appendix B). The site is gently undulating with silty-clay and silty-sand soils. The proposed pipeline corridor has been extensively disturbed due previous vegetation clearing and heavy grazing by stock. An existing access road also traverses the corridor along the property boundary fence.

The proposed development area is currently mapped as non remnant on the DERM RE mapping. The area does not occur within any areas identified as ESA's and the nearest ESA to the corridor is located on the adjacent property to the west of the proposed corridor (Note: part of the corridor is mapped within an ESA Category B *buffer* – however, the ESA is not located within the corridor).

There are no watercourses mapped within the proposed development area, with the nearest watercourse located approximately 90 m to the east of the proposed corridor (stream order 3). The land within the northern section of the proposed corridor is gently sloped towards, and is likely to drain into, this watercourse.

### Geotechnical survey locations

One (1) geotechnical survey locations was assessed as part of this corridor, namely TP-R15 (Figure 1, Appendix B). The floristics and habitat values for this test-pit are discussed in the following sections. A flora species list for corridor R9 and TP-R15 are provided in Appendix A.

### Floristics

The vegetation within the proposed corridor has been previously cleared, and an existing cleared access road also traverses the corridor. The vegetation within the corridor is characterised by a dense ground cover layer, with very sparse shrub, sub-canopy and canopy layers.

There is a small patch of *A. harpophylla* regrowth occurring within the proposed corridor (Figure 1, Appendix B) greater than 15 years old (height range 8-15 m). As such, clearing vegetation within this patch of regrowth is referable under the provisions of the EPBC Act (Brigalow ecological community).

The corridor has a dense ground layer which is co-dominated by *Pennisetum ciliare* (Buffel Grass), and *Chloris gayana* (Rhodes Grass), with *Chloris virgata* (Silky-topped Rhodes Grass) occurring as an associated species. The ground cover layer also contains a range of other native grasses and forbs and covers approximately 80% of the total corridor area.

The shrub layer is dominated by *Eremophila mitchellii* (False Sandalwood), with *Eucalyptus populnea* (Poplar Box) persisting as the sub-dominant shrub species (height range of 1-4 m).

The sub-canopy and canopy cover within the site is very sparse, (less than 5% of the total corridor area) due to previous vegetation clearing. Species present include *A. harpophylla*, *Eucalyptus populnea* (Poplar Box) and *E. melanophloia* (Silver-leaved ironbark). The sub-canopy and canopy height ranges are 6-12 m and 12-20 m, respectively.

A total of five (5) *Brachychiton* species were recorded within the corridor – the locations of these species are outlined in Table 3.2 and in Figure 1 of Appendix B. All of the species in Table 3.2 are Type A restricted plants under the NC Act.

No species protected under the provisions of the EPBC Act were observed within the proposed corridor.

A list of flora species observed within the proposed corridor is presented in Appendix A.



**Table 3.2 Location of Type A Restricted Plants (*Nature Conservation Act 1992*)**

<b>Species</b>	<b>Easting</b> (GDA 94, Zone 55J)	<b>Northing</b> (GDA 94, Zone 55J)
<i>Brachychiton populneus</i>	703339	7078249
<i>Brachychiton populneus</i>	703342	7078273
<i>Brachychiton populneus</i>	703494	7078573
<i>Brachychiton populneus</i>	703615	7078744
<i>Brachychiton populneus</i>	703635	7078747

**Habitat values**

Twelve (12) incidental fauna species were recorded within the proposed disturbance area, namely Torresian crow (*Corvus orru*), Noisy Miner (*Manorina melanocephala*), Rainbow Lorikeet (*Trichoglossus haematodus*), Pale-headed Rosella (*Platycercus adscitus*), Striated pardalote (*Pardalotus striatus*), Laughing Kookaburra (*Dacelo novaeguineae*), Willie Wagtail (*Rhipidura leucophrys*), Sulphur-crested Cockatoo (*Cacatua galerita*), Apostlebird (*Struthidea cinerea*), Australian Magpie (*Cracticus tibicen*), Galah (*Eolophus roseicapilla*) and Black-faced Cuckoo-shrike (*Coracina novaehollandiae*).

All of these species are listed as least concern under the provisions of the NC Act and EPBC Act.

Habitat features associated with the proposed disturbance area include:

- Limited canopy cover suitable for shelter, foraging and perching
- Limited fissured/exfoliating tree bark
- Dense groundcover vegetation (ie grassy tussocks)
- Woody debris (ie fallen/felled timber, including hollow-bearing logs)

The habitat value of corridor R9 is low overall, as it contains limited woody vegetation and has been disturbed by grazing stock, previous vegetation clearing and the invasion of exotic pasture species. Species utilising resources in this area are most likely to be limited to common, generalist species that are able to adapt to significant habitat disturbances.

### 3.3 Well Pad Roma077

#### General

The proposed well pad development area is located on Lot 27 SP214993 (Figure 1, Appendix B). The site is gently undulating with silty-sand soils. Evidence of moderate to severe gully erosion was observed during field assessments, adjacent to the waterway on the south-eastern boundary of the site. The proposed development area has been extensively disturbed due previous vegetation clearing and heavy grazing by stock. An existing access road also bisects the development area.

The development area is currently mapped as non remnant on the DERM RE mapping. The area does not occur within any areas identified as ESA's and the nearest ESA to the development area is located approximately 150 m to the north.

One (1) watercourse is mapped within the development area, on the south-eastern boundary of the well pad (stream order 3). The land within the northern section of the proposed development area is gently sloped towards, and is likely to drain into, this watercourse.

#### Geotechnical survey locations

One (1) geotechnical survey locations is situated within the proposed development area, namely TP-R15; however this test-pit is discussed in Section 3.2 of this report.

#### Floristics

The vegetation within the proposed development area has been previously cleared for stock grazing, and an existing cleared access road also traverses the development area. The vegetation within the development area is characterised by a dense ground cover layer, with very sparse shrub, sub-canopy and canopy layers.

The well pad area has a dense ground layer which is co-dominated by *Pennisetum ciliare* (Buffel Grass), and *Chloris gayana* (Rhodes Grass), with *Chloris virgata* (Silky-topped Rhodes Grass) occurring as an associated species. The ground cover layer also contains a range of other native grasses and forbs and covers approximately 80% of the total development area.

The shrub layer is dominated by *Grevillia striata* (Beefwood) and *Acacia excelsa* and is very sparse covering less than 5% of the total development area (height range of 0.8-2 m).

The sub-canopy and canopy cover within the site is very sparse, (less than 5% of the total development area) due to previous vegetation clearing. Species present include *Eucalyptus populnea* (Poplar Box) and *Eucalyptus camaldulensis* (River Red Gum). The sub-canopy and canopy height ranges are 6-12 m and 12-20 m, respectively. There are only a few small stands of mature trees within the development area, including mature riparian vegetation associated with the watercourse.

One (1) *Brachychiton* species was recorded within the proposed development area – the location of this individual is outlined in Table 3.3 and in Figure 1 of Appendix B. This species is a Type A restricted plants under the NC Act.

No species protected under the provisions of the EPBC Act were observed within the proposed well pad development area. A list of flora species observed within the development area is presented in Appendix A.

**Table 3.3 Location of Type A Restricted Plants (*Nature Conservation Act 1992*)**

Species	Easting (GDA 94, Zone 55J)	Northing (GDA 94, Zone 55J)
<i>Brachychiton populneus</i>	704060	7078933

### Habitat values

Five (5) incidental fauna species were recorded within the proposed disturbance area, namely Torresian crow (*Corvus orru*), Noisy Miner (*Manorina melanocephala*), Magpie (*Gymnorhina tibicen*), Pretty Face Wallaby (*Macropus parryi*) and Sulphur-crested Cockatoo (*Cacatua galerita*). All of these species are listed as least concern under the provisions of the NC Act and EPBC Act.

Habitat features associated with the proposed disturbance area include:

- Limited canopy cover suitable for shelter, foraging and perching
- Limited fissured/exfoliating tree bark
- Dense groundcover vegetation (ie grassy tussocks)
- Woody debris (ie fallen/felled timber, including hollow-bearing logs)
- Watercourse habitat (including banks)

The habitat value of the proposed development area is medium overall, as it contains limited woody vegetation and has been disturbed by grazing stock, previous vegetation clearing and the invasion of exotic pasture species. Species utilising resources in this area are most likely to be limited to common, generalist species that are able to adapt to significant habitat disturbances.

Although the watercourse that traverses the south-eastern boundary of the development area has been largely cleared of riparian vegetation, the remaining vegetation and banks likely provide habitat which may be utilised by a range of native fauna, particularly avian fauna. The watercourse may also provide habitat for riparian-dependent species (eg amphibian species), although is unlikely to support significant populations due to the limited riparian vegetation and current land use (ie grazing).

## 4. Conclusion

The proposed development area is located on gently undulating plains which have been extensively disturbed, as a result of previous clearing for agricultural practices, development of access roads (unsealed) and as a result of heavy grazing by stock. The soil is generally silty-sands, and evidence of moderate gully erosion was observed within the proposed well pad development area.

The proposed development area is not mapped as remnant vegetation on the DERM RE mapping. The RE mapping was confirmed as correct during these investigations.

One (1) patch of *Acacia harpophylla* (Brigalow) regrowth (height 8-15 m) occurs within the proposed development area on this lot and is analogous with regrowth vegetation greater than 15 years old. As such this patch of regrowth Brigalow is referable under the provisions of the EPBC Act.

One (1) watercourse occurs within the proposed development area (Well Pad Roma077) (stream order 3). The watercourse has limited fringing riparian vegetation, and therefore has limited habitat and ecological value.

Seven (7) Type A restricted plants were observed within the proposed development area on the lot.

No species protected under the provisions of the EPBC Act were observed within the proposed development areas during these investigations.

## 5. References

Eddie, C (2007) Field Guide to Trees and Shrubs of Eastern Queensland Oil and Gas Fields, First Edition, Santos Ltd, Adelaide.

Regional Ecosystem Mapping, Version 6.0 (2011), Queensland Government Department of Environment and Resource Management (DERM).



**Appendix A**  
**Flora species list**



## Appendix A

Family Name	Scientific Name	Common Name	Notes	R80	R9	Roma 077 Well Pad
Adiantaceae	<i>Cheilanthes sieberi</i>	Mulga Fern				
Amaranthaceae	<i>Alternanthera dentata</i>	Joy Weed				
Amaranthaceae	<i>Gomphrena celosioides</i>	Gomphrena Weed				
Apocynaceae	<i>Alstonia constricta</i>	Bitter Bark				
Apocynaceae	<i>Carissa ovata</i>	Currant Bush				
Asteraceae	<i>Bidens pilosa</i>	Cobblers Pegs				
Asteraceae	<i>Brachycome dentata</i>	Lobe-seed Daisy				
Asteraceae	<i>Calocephalus platycephalus</i>	Billy Buttons				
Asteraceae	<i>Calotis cuneifolia</i>	Purple Burr Daisy				
Asteraceae	<i>Calotis hispidula</i>	Bogan Flea				
Asteraceae	<i>Calotis lappulacea</i>	Yellow Burr Daisy				
Asteraceae	<i>Chrysocephalum apiculatum</i>	Yellow Buttons				
Asteraceae	<i>Cirsium vulgare</i>	Spear Thistle, Black Thistle				
Asteraceae	<i>Conyza bonariensis</i>	Fleabane				
Asteraceae	<i>Podolepis jaceoides</i>	Showy Copper Wire Daisy				
Asteraceae	<i>Tridax procumbens</i>	Tridax Daisy				
Bignoniaceae	<i>Pandorea pandorana</i>	Wonga Vine				
Cactaceae	<i>Harrisia sp.</i> (juvenile – no fertile material)	Harrisia Cactus	Some species of this genus are classified as LP Act Class 1 or Class 2 Weeds			
Cactaceae	<i>Opuntia stricta</i>	Prickly Pear	LP Act Class 2 Weed			
Cactaceae	<i>Opuntia tomentosa</i>	Velvety Tree Pear	LP Act Class 2 Weed			
Campanulaceae	<i>Wahlenbergia communis</i>	Large Bluebells				
Campanulaceae	<i>Wahlenbergia gracilis</i>	Sprawling Bluebell				
Capparaceae	<i>Capparis loranthifolia</i>	Nipan, Wait-a-while				
Casuarinaceae	<i>Allocasuarina luehmannii</i>	Bull Oak				
Celastraceae	<i>Maytenus cunninghamii</i>	Yellow Berry Bush				
Chenopodiaceae	<i>Maireana microphylla</i>	Small-leaf Bluebush				
Chenopodiaceae	<i>Maireana villosa</i>	Silky Bluebush				

Family Name	Scientific Name	Common Name	Notes	R80	R9	Roma 077 Well Pad
Chenopodiaceae	<i>Sclerolaena birchii</i>	Galvanised Burr				
Convolvulaceae	<i>Evolvulus alsinoides</i>	Speedwell				
Cupressaceae	<i>Callitris glaucophylla</i>	White Cypress Pine				
Cyperaceae	<i>Cyperus bifax</i>	Star Sedge				
Cyperaceae	<i>Cyperus gracilis</i>	Bunchy Sedge				
Fabaceae - Caesalpinioideae	<i>Senna artemisioides</i>	Senna				
Fabaceae - Faboideae	<i>Desmodium varians</i>	Tree Foil				
Fabaceae - Faboideae	<i>Glycine tomentella</i>	Hairy Glycine				
Fabaceae - Faboideae	<i>Hovea planifolia</i>	Hovea				
Fabaceae - Faboideae	<i>Indigofera spicata</i>	Creeping Indigo, Purple Indigo				
Fabaceae - Faboideae	<i>Medicago polymorpha</i>	Burr Medic				
Fabaceae - Mimosoideae	<i>Acacia deanei</i>	Dean's Wattle				
Fabaceae - Mimosoideae	<i>Acacia decora</i>	Pretty Wattle				
Fabaceae - Mimosoideae	<i>Acacia harpophylla</i>	Brigalow				
Fabaceae - Mimosoideae	<i>Acacia leiocalyx</i>	Black Wattle				
Fabaceae - Mimosoideae	<i>Neptunia gracilis</i>	Native Sensitive Weed				
Geraniaceae	<i>Erodium cicutarium</i>	Stork's Bill Geranium				
Goodeniaceae	<i>Goodenia glabra</i>	Smooth Goodenia				
Goodeniaceae	<i>Goodenia rotundifolia</i>	Goodenia				
Juncaceae	<i>Juncus usitatus</i>	Juncus				
Lomandraceae	<i>Lomandra multiflora</i>	Lomandra				
Lomandraceae	<i>Lomandra spicata</i>	Lomandra				
Malvaceae	<i>Abutilon oxycarpum</i>	Chinese Lantern				
Malvaceae	<i>Malva parviflora</i>	Small-flowered Mallow				
Malvaceae	<i>Malvastrum americanum</i>	Spiny Malvastrum				
Malvaceae	<i>Sida rohlenae</i>	Shrub Sida				
Malvaceae	<i>Sida subspicata</i>	Queensland Hemp				
Myoporaceae	<i>Eremophila mitchellii</i>	False Sandalwood				
Myrtaceae	<i>Corymbia clarksoniana</i>	Clarkson's Bloodwood				



Family Name	Scientific Name	Common Name	Notes	R80	R9	Roma 077 Well Pad
Myrtaceae	<i>Corymbia erythrophloia</i>	Variable-barked Bloodwood				
Myrtaceae	<i>Corymbia trachyphloia</i>	Brown Bloodwood				
Myrtaceae	<i>Eucalyptus camaldulensis</i>	River Red Gum				
Myrtaceae	<i>Eucalyptus crebra</i>	Narrow-leaved Ironbark				
Myrtaceae	<i>Eucalyptus melanophloia</i>	Silver Leaved Ironbark				
Myrtaceae	<i>Eucalyptus populnea</i>	Poplar Box				
Oxalidaceae	<i>Oxalis stricta</i>	Yellow Wood Sorrel				
Pittosporaceae	<i>Pittosporum phyllirioides</i>	Wild Apricot				
Poaceae	<i>Aristida caput medusae</i>	Many-headed Wire Grass				
Poaceae	<i>Aristida ingrata</i>	Purple Aristida				
Poaceae	<i>Aristida jerichoensis</i>	Jericho Wire Grass				
Poaceae	<i>Austrostipa verticillata</i>	Slender Bamboo Grass				
Poaceae	<i>Bothriochloa bladhii</i>	Forest Blue Grass				
Poaceae	<i>Bothriochloa decipiens</i> var. <i>decipiens</i>	Pitted Bluegrass				
Poaceae	<i>Bothriochloa ewartiana</i>	Desert Blue Grass				
Poaceae	<i>Chloris gayana</i>	Rhodes Grass				
Poaceae	<i>Chloris inflata</i>	Purple Top Rhodes				
Poaceae	<i>Chloris pectinata</i>	Comb Chloris				
Poaceae	<i>Chloris ventricosa</i>	Tall Chloris				
Poaceae	<i>Chloris virgata</i>	Silky Topped Rhodes Grass				
Poaceae	<i>Cymbopogon refractus</i>	Barbed-wire Grass				
Poaceae	<i>Cynodon dactylon</i>	Green Couch				
Poaceae	<i>Dichanthium sericeum</i>	Queensland Blue Grass				
Poaceae	<i>Digitaria ammophila</i>	Digitaria				
Poaceae	<i>Eragrostis sororia</i>	Woodland Lovegrass				
Poaceae	<i>Melinis repens</i>	Red Natal				
Poaceae	<i>Panicum decompositum</i>	Hairy Panic				
Poaceae	<i>Paspalidium caespitosum</i>	Brigalow Grass				
Poaceae	<i>Paspalidium distans</i>	Paspalidium				
Poaceae	<i>Pennisetum ciliare</i>	Buffel Grass				

Family Name	Scientific Name	Common Name	Notes	R80	R9	Roma 077 Well Pad
Poaceae	<i>Perotis rara</i>	Comet Grass				
Poaceae	<i>Sorghum alum</i>	Silk Sorghum				
Poaceae	<i>Sporobolus creber</i>	Western Rats Tail Grass				
Poaceae	<i>Sporobolus elongatus</i>	Tall Sporobolus				
Poaceae	<i>Themeda triandra</i>	Kangaroo Grass				
Poaceae	<i>Tragus australianus</i>	Burr Grass				
Poaceae	<i>Urochloa mosambicensis</i>	Urochloa, Sabi Grass				
Poaceae	<i>Aristida contorta</i>	Kerosene Grass				
Polygonaceae	<i>Rumex brownii</i>	Swamp Dock				
Portulacaceae	<i>Portulaca pilosa</i>	Hairy Pigweed				
Proteaceae	<i>Grevillea striata</i>	Beefwood				
Rhamnaceae	<i>Alphitonia excelsa</i>	Red Ash				
Rutaceae	<i>Geijera parviflora</i>	Wilga				
Sapindaceae	<i>Alectryon oleifolius</i>	Boonaree				
Sapindaceae	<i>Atalaya hemiglauca</i>	Whitewood				
Solanaceae	<i>Solanum esuriale</i>	Brown Potato Bush				
Solanaceae	<i>Solanum nigrum</i>	Blackberry nightshade				
Solanaceae	<i>Solanum stelligerum</i>	Devil's Needles				
Sterculiaceae	<i>Brachychiton populneus</i>	Kurrajong	NC Act Type A Species			
Verbenaceae	<i>Verbena tenuisecta</i>	Mayne's Curse				



**Appendix B**  
Figure of the survey area



## Appendix B