

**Roma Ecological Assessment
Report – Lot 2 RP858912
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.

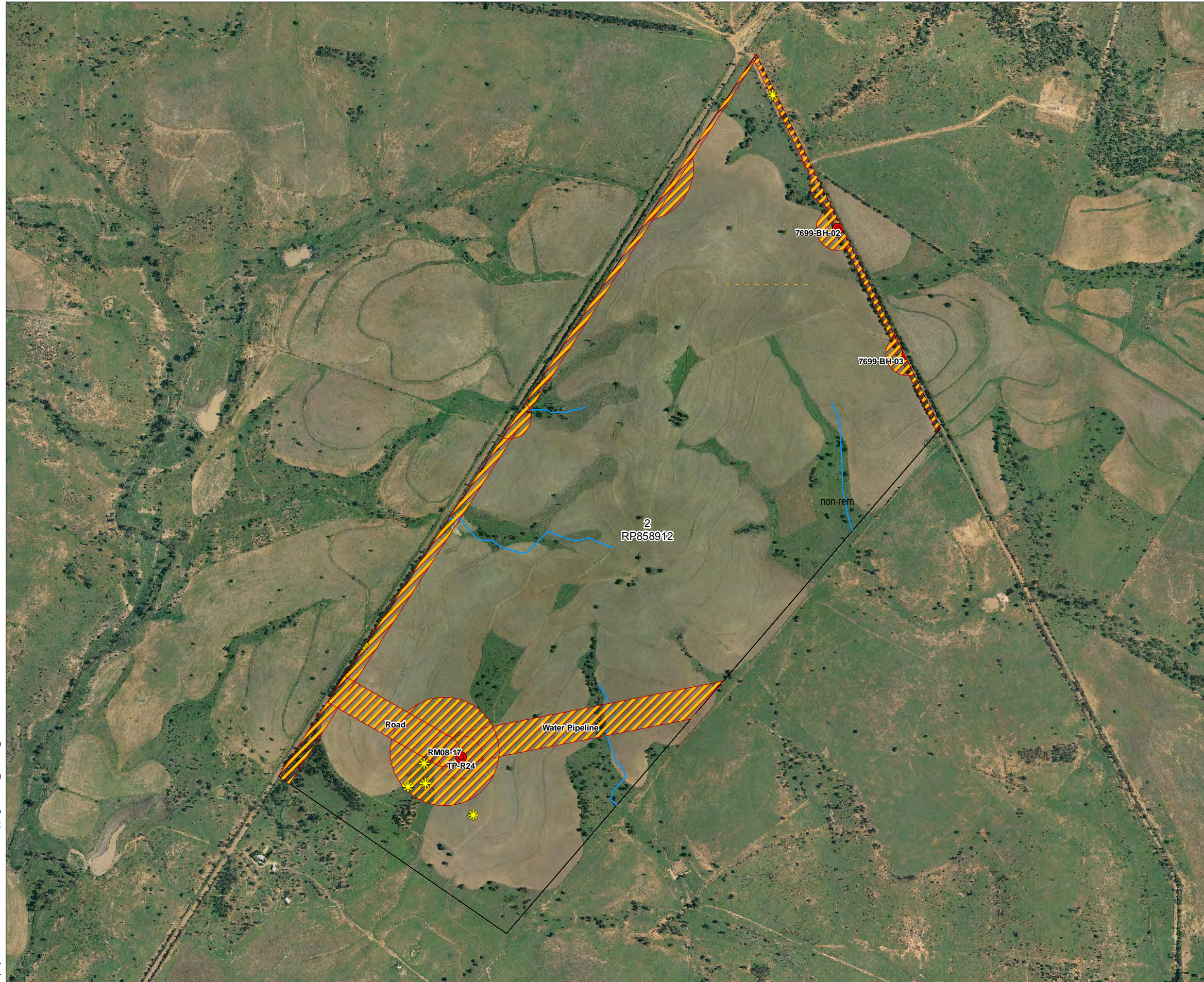
This report is specific to the proposed development areas listed below and shown in Figure 1:

- Pipeline corridor R4 (portion of),
- Water pipeline corridor and
- Geotechnical survey locations situated within the above corridors and shown in Figure 1

These areas are collectively referred to as the 'proposed development area', and are located entirely within Lot 2 RP858912. Note that the subject of this report is solely related to Lot 2 RP858912. Where survey areas overlap additional properties, these sites will be further addressed in the report relevant to those properties/lots. The road corridor located partially along the western boundary of this lot will be discussed in the Lot 234 (WV496) report.

1.2 Purpose of report

The aim of this report is to provide an ecological assessment of the proposed development areas located on Lot 2 RP858912 (Figure 1), 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.



Legend

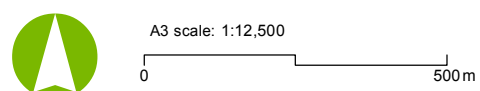
- Notable Species
- Geotech Borehole Locations
- Ground Truthed Areas
- Drainage (100K)
- ESA Category A
- ESA Category B
- ESA Category C
- Regional Ecosystem Mapping**
- Non-remnant / regrowth
- Endangered - Sub-dominant
- Endangered - Dominant
- Of Concern - Sub-dominant
- Of Concern - Dominant
- Not Of Concern
- Plantation forest
- Water

Notes:

Date: 05/07/2011

Version: 1

Map by: Moore NK P:\CW\215648 Santos\Mapping\13\WT18_Fairview_Overview.mxd 09/06/2011 09:01



Job No: 215648
Coordinate system: GDA 1994 MGA Zone 55

2. Methodology

2.1 Desktop methodology

Proposed development areas 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 development areas were assessed by two (2) Aurecon ecologists (Luke Foster and Karen Bowland) between 17-18 June 2011. These assessments were to determine the existing vegetation communities and habitat value of the proposed clearing within the development areas as well as to verify the RE mapping as produced by DERM.

GIS environmental constraints layers (eg 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 proposed development areas 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* [NC Act] or endangered, vulnerable or rare species under 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 Water Pipeline Corridor

General

The water pipeline corridor heads in a west-south-west direction across lot 2 (RP858912) and ends at well pad RM08-17 and TP-R24 in the southern portion of Lot 2. The water pipeline corridor and associated pads RM08-17 and TP-R24 can be seen in Figure 3.1, Figure 3.2 and Figure 3.3 respectively.

The majority of the corridor has been subjected to severe disturbance in the form of extensive clearing and various agricultural practices. Grazing was evident at the time of surveys; however cropping was the main form of disturbance. An access road traverses part of the corridor.

No remnant vegetation under RE mapping is present within the corridor and associated well pads.

No mapped ESAs are present within the proposed water pipeline corridor and associated pads. The closest ESA is situated more than 1 km north of the corridor.

However June surveys detected the presence of *Acacia harpophylla* (Brigalow) occurring within the creek-line intersecting the corridor. This community is listed as an endangered community under the EPBC Act. This community is classified as a 'Category B' ESA. This community was found to be present across the entire width of the corridor at this location.

Existing vegetation (canopy layer) is along a small (stream order 1) water course which intersects the corridor.

Parts of the corridor exhibited signs of severe erosion, due from water run-off from cropped areas.

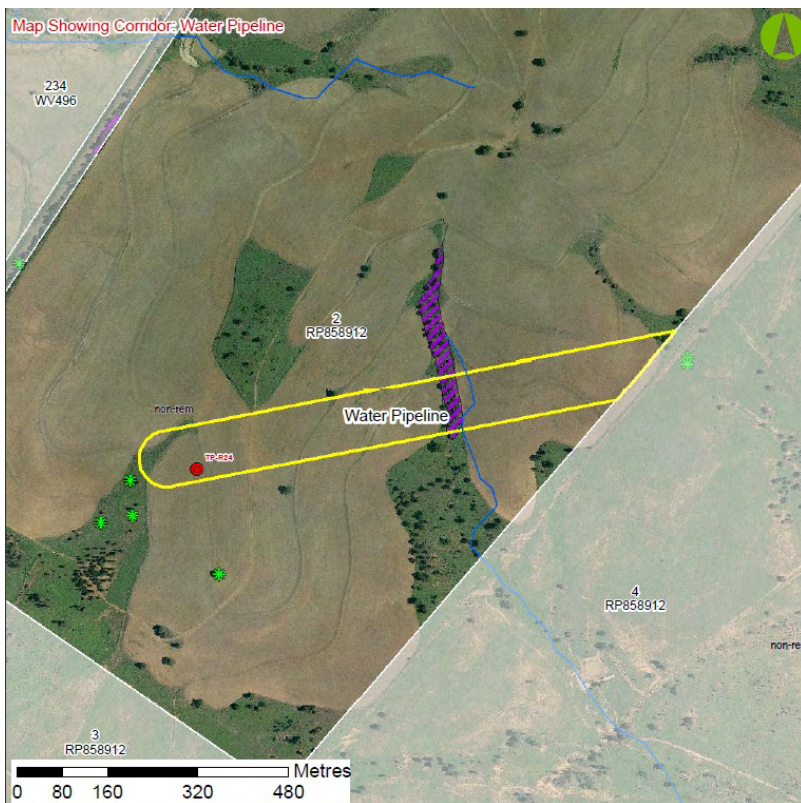


Figure 3.1 The proposed water pipeline corridor in Lot 2 RP858912



Figure 3.2 RM08-17 within the Lot 2 RP858912

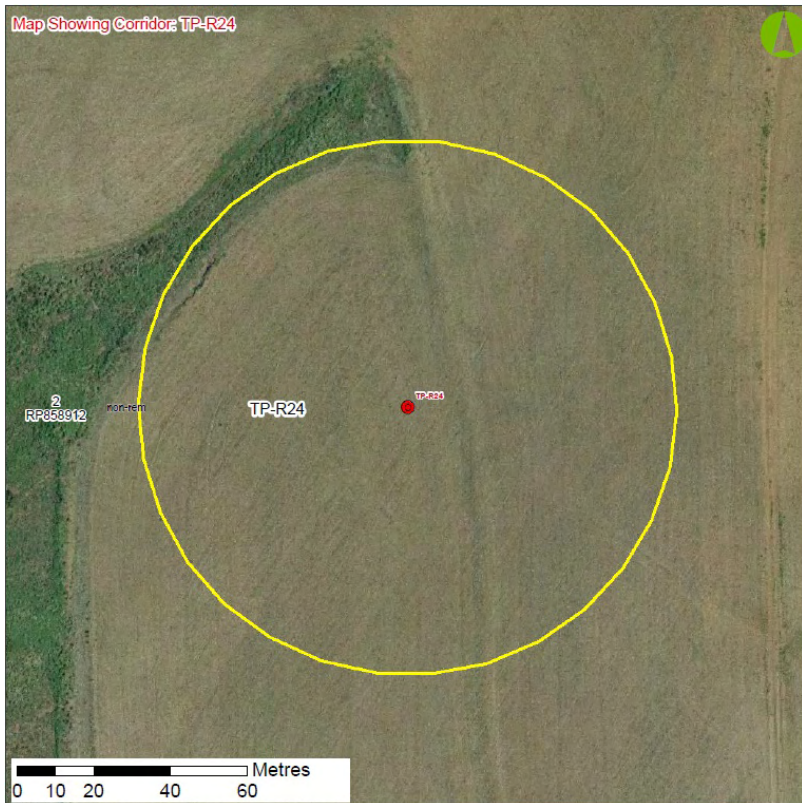


Figure 3.3 TP-R24 within Lot 2 RP858912

Floristics

Due to the cleared and agricultural nature of Lot 2 RP858912, the remaining vegetation is scarce and is predominantly made up of non-native species.

Canopy species including *Acacia harpophylla* (Brigalow) and *Casuarina cristata* (Belah) are present within the creek-line running through the corridor, and within a small patch of vegetation (10 m x 5 m) located within a cropped area. Shrubs species are generally scarce; the scattered few include *Acacia excelsa* (Ironwood) and *Eremophila mitchellii* (False Sandalwood). Patches of *Enchylaena tomentosa* (Ruby Saltbush) and *Sclerolaena birchii* (Galvanised Burr) are present throughout the remnant patches.

Ground cover is dominated by *Pennisetum ciliare* (Buffel Grass) alongside cropped areas, and partially within the vegetated patches. Native species including *Sporobolus creber* (Western Rats Tail Grass) and *Bothriochloa bladhii* subsp. *Bladhii* (Forest Blue Grass) are present within the vegetated pockets.

No Type A restricted plants were located within the water pipeline corridor or associated pads.

Four (4) records of the EPBC listed endangered community were identified. The details and location of these records are shown below in Table 3.1.

Table 3.1 Location of EPBC significant species

Species	Easting (GDA 94, Zone 55J)	Northing (GDA 94, Zone 55J)
<i>Acacia harpophylla</i>	698264	7072133
<i>Acacia harpophylla</i>	698320	7072144
<i>Acacia harpophylla</i>	698316	7072208
<i>Acacia harpophylla</i>	698878	7072350

Habitat values

The cleared and cultivated areas within this corridor and associated pads are considered to have low habitat value. This is due to the lack of suitable habitat attributes.

The small pockets of vegetation particularly along the creek line represent moderate to high habitat value. This is due to the scarcity of vegetation within the area, the presence of fallen timber, and the presence of some rocky habitat.

Eleven (11) incidental fauna sightings were made during surveys, species recorded include: Australian Magpie (*Gymnorhina tibicen*), Sulfur-crested Cockatoo (*Cacatua galerita*), Richard's Pipit (*Anthus novaeseelandiae*), Torresian Crow (*Corvus orru*), Eastern Grey Kangaroo (*Macropus giganteus*), Galah (*Cacatua roseicapilla*), Grey Butcher Bird (*Cracticus torquatus*), Pied Butcher Bird (*Cracticus nigrogularis*), Apostle Bird (*Struthidea cinerea*), Striated Pardalote (*Pardalotus striatus*) and Variegated Fairy Wren (*Malurus lamberti*).

No EVNT fauna was observed within the proposed water pipeline corridor and associated pads.

3.2 Corridor R4 (Portion of)

General

Corridor R4 runs south-east along the northern boundary of Lot 2 RP858912 along the Bend Road. This corridor is only partially located within corridor R4, and the remainder will be assessed in the appropriate report (Lot 1 CP848049). Included in this assessment are well pads 7699-BH-03, 7699-BH-02 and partial areas of TP-R09 and 7699-RM-19. The proposed corridor R4 and associated pads 7699-BH-02, 7699-BH-03, TP-R09 and 7699-RM-19 can be seen in Figure 3.4, Figure 3.5, Figure 3.6, Figure 3.7, and Figure 3.8 respectively.

The majority of Lot 2 has been cleared for cultivation; however corridor R4 is situated along the roadside which still contains scattered canopy trees. The location of the corridor in relation to the road and to the cultivated area indicates that the area is still highly disturbed.

The area is mapped as Nonremnant on the RE mapping.

There are no mapped ESAs within corridor R4, however there is a mapped ESA (RE 11.9.5 'endangered', and RE 11.3.25/11.3.2 'of concern') within 800 m north of the corridor.

Acacia harpophylla (Brigalow) which is listed under the EPBC Acts as endangered community occurs along the road side vegetation along the road side vegetation

No watercourses intersect this corridor.

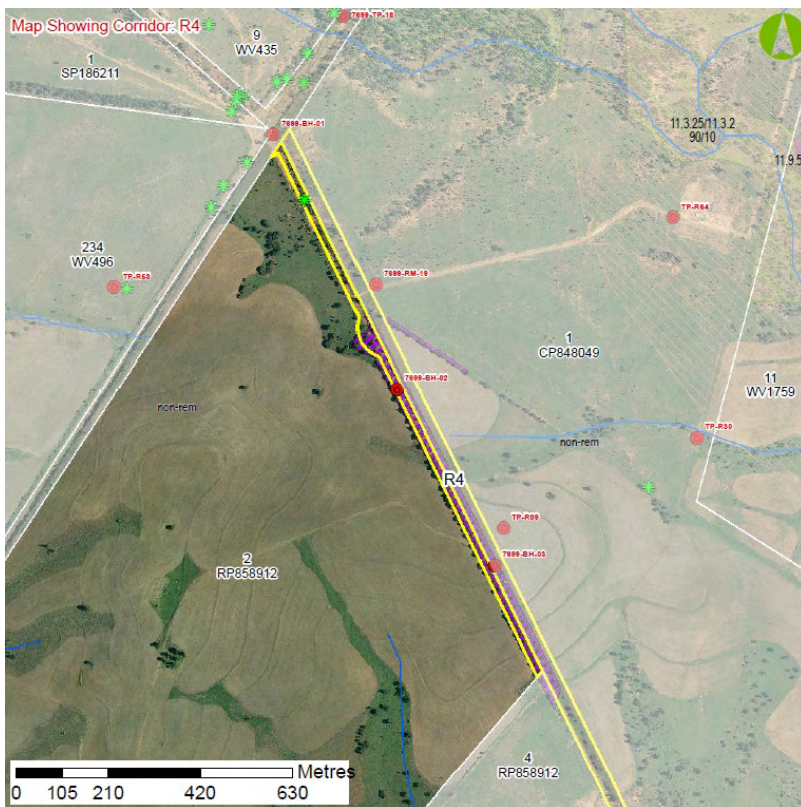


Figure 3.4 Proposed corridor R4 within Lot 2 RP858912

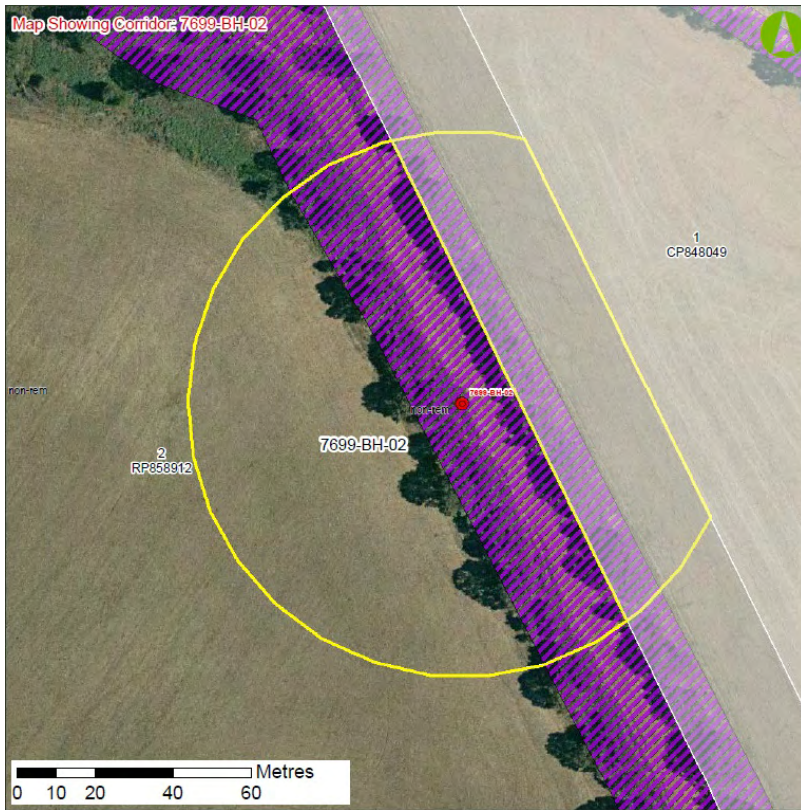


Figure 3.5 Proposed 7699-BH-02 within Lot 2 RP858912

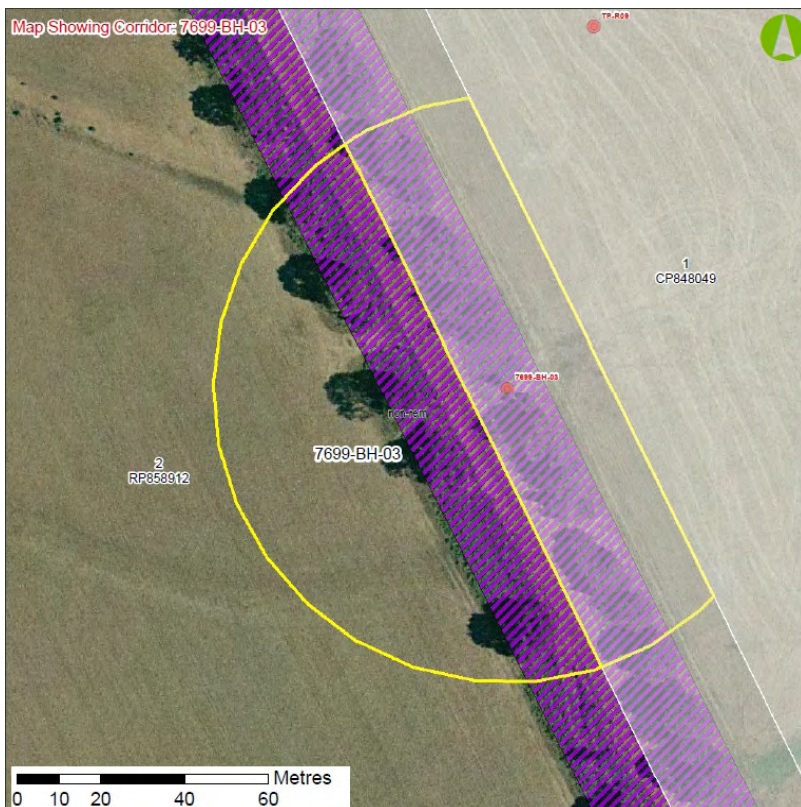


Figure 3.6 Proposed 7699-BH-03 within Lot 2 RP858912



Figure 3.7 Proposed portion of TP-R09 within Lot 2 RP858912

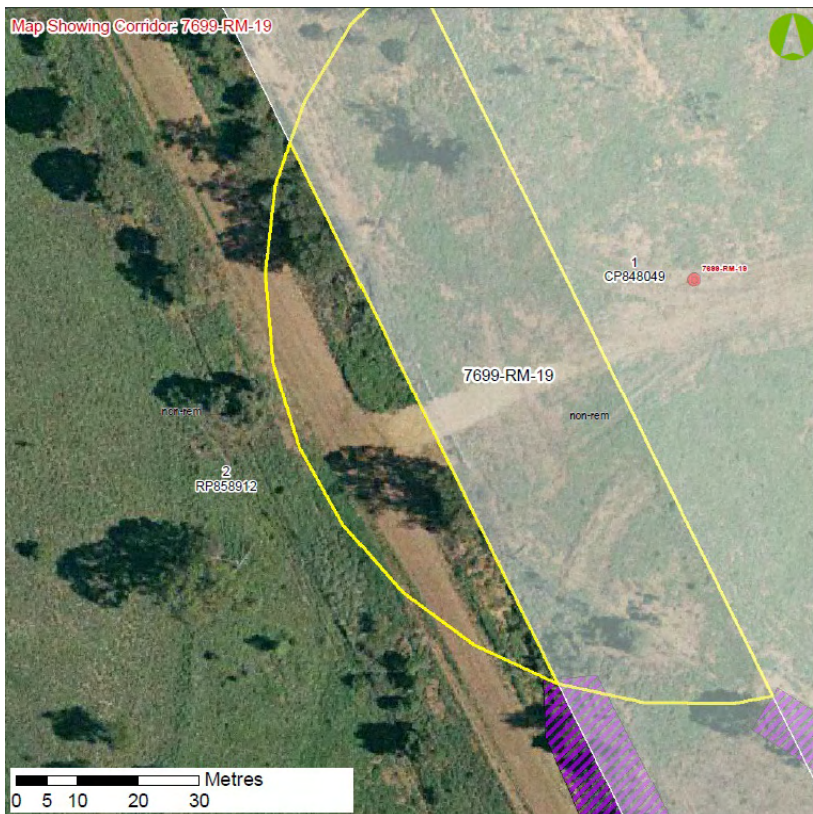


Figure 3.8 Proposed portion of 7699-RM-19 within Lot 2 RP858912

Floristics

This corridor is located within roadside vegetation which is made up of a number of native species. Canopy species present include *Acacia harpophylla* (Brigalow), *Casuarina cristata* (Belah) and *Eucalyptus populnea* (Poplar Box). Mid-storey species include *Acacia leiocalyx* (Black Wattle), *Geijera parviflora* (Wilga), and *Canthium oleifolium* (Hatstand). Ground cover species are a mixture of native and introduced species including *Themeda triandra* (Kangaroo Grass), *Sporobolus creber* (Western Rats Tail Grass), *Xanthium occidentale* (Noogoora Burr), and *Bothriochloa bladhii subsp. Bladhii* (Forest Blue Grass). Pasture species such as *Sorghum* sp. also have encroached from neighbouring cultivation. Partial areas of the associated pads (7699-NH-03 and 7699-BH-02) fall within the cultivated areas. At the time of surveys, these were predominantly bare earth with scattered pasture plants.

No mapped ESAs occur within the corridor; however there are scattered *Acacia harpophylla* (Brigalow) throughout the road side vegetation.

One (1) Type A restricted species was located within corridor R4. The details and location of this record is shown below in Table 3.2.

Table 3.2 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>	699443	7077741

As mentioned above, *Acacia harpophylla* (Brigalow) which is listed as an endangered community under the EPBC Act is scattered throughout the roadside vegetation present within this corridor. Coordinates of the approximate start and end of the road side population is shown below in Table 3.3.

Table 3.3 Location of EPBC significant species

Species	Notes	Easting (GDA 94, Zone 55J)	Northing (GDA 94, Zone 55J)
<i>Acacia harpophylla</i>	Population start	699578	7074054
<i>Acacia harpophylla</i>	Population end	700007	7073212

Habitat values

The vegetation present alongside the road and within the corridor represents moderate habitat to high value. This is due to the presence of some vegetative structure, fallen timber and dense vegetation in parts.

The narrowness of the vegetation restricts the fauna species that potentially may utilise the area.

A number of incidental fauna species were recorded during surveys. These were identified either by sight, calls, tracks or scats. The species recorded include: Australian Magpie (*Gymnorhina tibicen*), Sulfur-crested Cockatoo (*Cacatua galerita*), Richard's Pipit (*Anthus novaeseelandiae*), Torresian Crow (*Corvus orru*), Galah (*Cacatua roseicapilla*), Grey Butcher Bird (*Cracticus torquatus*), Pied Butcher Bird (*Cracticus nigrogularis*), Apostle Bird (*Struthidea cinerea*), Striated Pardalote (*Pardalotus striatus*), Variegated Fairy Wren (*Malurus lamberti*), Noisy Minor (*Manorina melanocephala*), Red Rump Parrot (*Psephotus haematonotus*), Weebill (*Smicrornis brevirostris*), Silvereye (*Zosterops lateralis*), Yellow Thornbill (*Acanthiza nana*), and feral cat (*Felix catus*).

No EVNT fauna species were identified within the corridor.

3.3 Road corridor

General

The road corridor runs in a northern direction along the western edge of Lot 2 (RP858912). The majority of the road corridor is situated within the limits of the existing Salt Bush Road corridor, and partially within Lot 2 (RP858912) and Lot 234 (WV496). Associated pads within this corridor are 7699-TP-16 and RM08-11 (partial). The road corridor and associated pads 7699-TP-16 and RM08-11 (partial) can be seen in Figure 3.9, Figure 3.10 and Figure 3.11 respectively.

The road corridor and associated well pads are situated in an existing road corridor and as such disturbance is high. A thin strip of vegetation is present alongside the road, however this varies in thickness. The eastern and western edges of the road corridor and associated pads are located within cultivated land.

The area is mapped as Nonremnant on the RE mapping, the corridor is situated within cultivated land, with only small patches of vegetation present.

There are no Mapped ESAs within the corridor; however the nearest ESA is approximately 1km north east of the corridor.

Two stream order 1 water courses intersect the road corridor. Both were dry at the time of surveys.

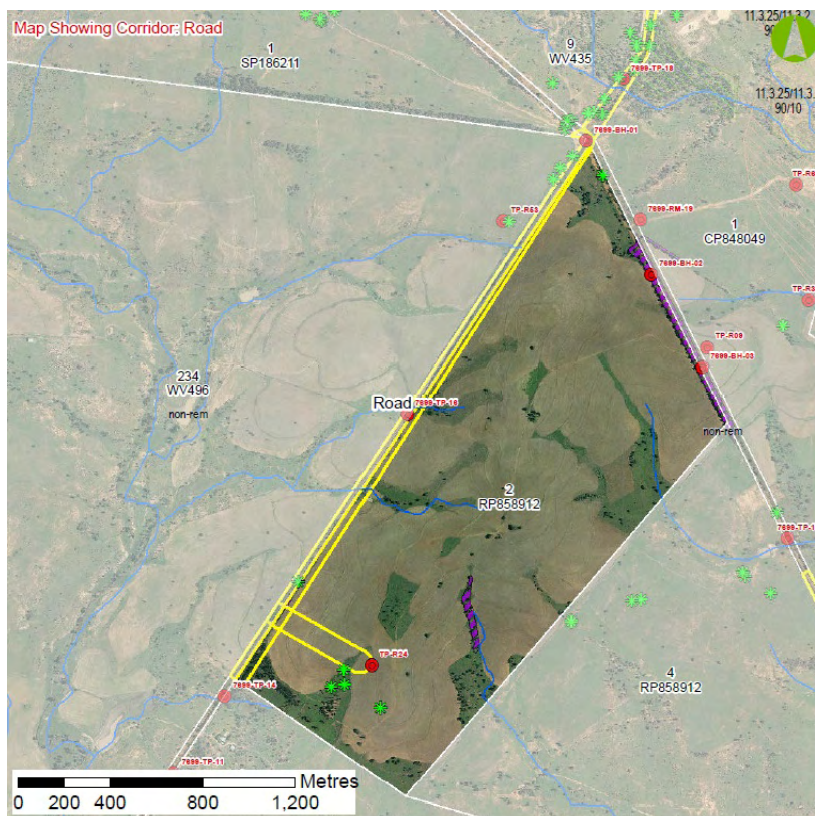


Figure 3.9 Proposed road corridor within Lot 2 RP858912

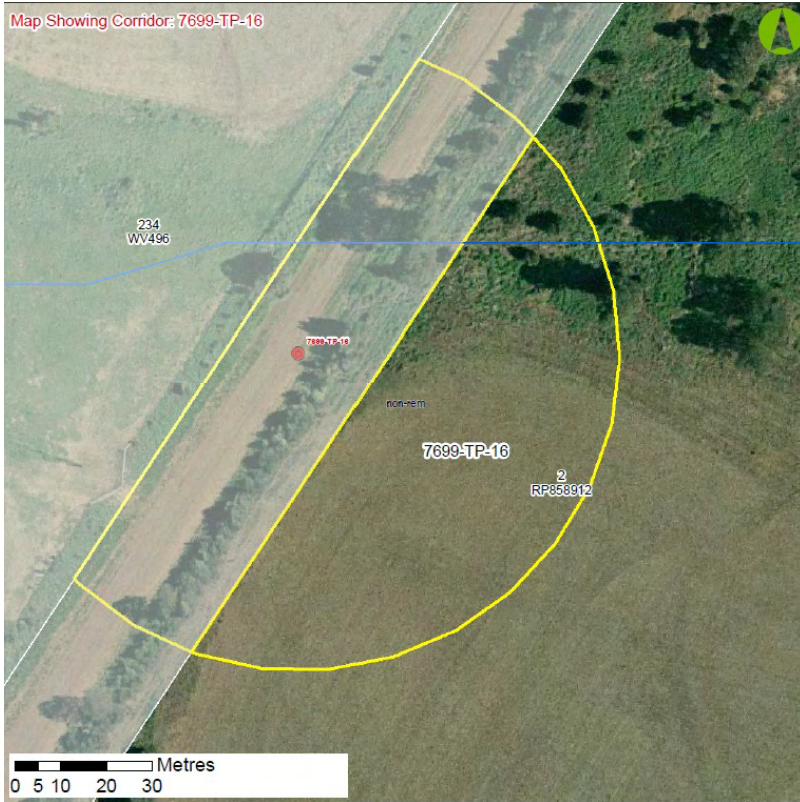


Figure 3.10 Proposed 7699-TP-16 within Lot 2 RP858912

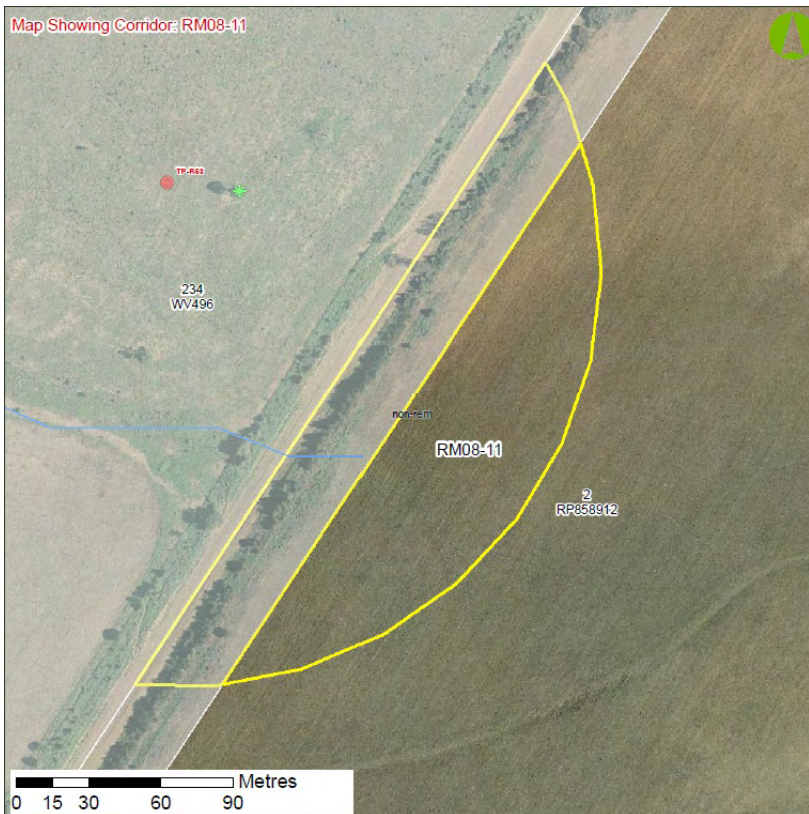


Figure 3.11 Proposed RM08-11 within Lot 2 RP858912

Floristics

This corridor is located within roadside vegetation which is made up of a number of native species. Canopy species present include *Acacia harpophylla* (Brigalow), *Casuarina cristata* (Belah) and *Eucalyptus populnea* (Poplar Box). Mid-storey species include *Acacia leiocalyx* (Black Wattle), *Gejjera parviflora* (Wilga), and *Canthium oleifolium* (Hatstand). Ground cover species are a mixture of native and introduced species including *Themeda triandra* (Kangaroo Grass), *Sporobolus creber* (Western Rats Tail Grass), and *Bothriochloa bladhii subsp. Bladhii* (Forest Blue Grass). Scattered mature *Opuntia tomentosa* (Velvety Tree Pear) are present throughout the corridor.

Pasture species such as *Sorghum* sp. also have encroached from neighbouring cultivation. Partial areas of the associated pads (7699-NH-03 and 7699-BH-02) fall within the cultivated areas. At the time of surveys, these were predominantly bare earth with scattered pasture plants.

No mapped ESAs occur within the corridor; however there are scattered *Acacia harpophylla* (Brigalow) which is listed as an endangered community under the EPBC Act, throughout the road side vegetation.

One Type A Restricted species was recorded within the road corridor. The details and location of this is shown below in Table 3.4.

Table 3.4 Location of type A restricted plants (*Nature Conservation Act 1992*)

Species	Easting (GDA 94, Zone 55J)	Northing (GDA 94, Zone 55J)
<i>Brachychiton rupestris</i>	699304	7074438

Acacia harpophylla (Brigalow) is scattered throughout the road side vegetation within this corridor. This community is listed as an endangered community under the EPBC Act. The locations of this species within the corridor are given below in Table 3.5.

Table 3.5 Location of EPBC significant species

Species	Notes	Easting (GDA 94, Zone 55J)	Northing (GDA 94, Zone 55J)
<i>Acacia harpophylla</i>	Population start	698020	7072422
<i>Acacia harpophylla</i>	Population end	698088	7072531
<i>Acacia harpophylla</i>	Population start	698252	7072785
<i>Acacia harpophylla</i>	Population end	698295	7072854

Habitat values

The vegetation present alongside the road and within the corridor represents moderate to high habitat value. This is due to the presence of some vegetative structure, fallen timber and dense vegetation in parts.

The narrowness of the vegetation restricts the fauna species that potentially may utilise the area.

A number of incidental fauna species were recorded during surveys. These were identified either by sight, calls, tracks or scats. The species recorded include: Australian Magpie (*Gymnorhina tibicen*), Sulfur-crested Cockatoo (*Cacatua galerita*), Richard's Pipit (*Anthus novaeseelandiae*), Torresian Crow (*Corvus orru*), Galah (*Cacatua roseicapilla*), Grey Butcher Bird (*Cracticus torquatus*), Pied Butcher Bird (*Cracticus nigrogularis*), Apostle Bird (*Struthidea cinerea*), Striated Pardalote (*Pardalotus striatus*), Variegated Fairy Wren (*Malurus lamberti*), Noisy Minor (*Manorina melanocephala*), Red Rump Parrot (*Psephotus haematonotus*), Weebill (*Smicrornis brevirostris*), Silvereye (*Zosterops lateralis*), Yellow Thornbill (*Acanthiza nana*), and feral cat (*Felis catus*).

No EVNT fauna species were identified within the corridor.

4. Conclusion

The corridors and associated pads within Lot 2 (RP858912) occur predominantly across cleared and cultivated landscapes and vegetation types. While most of the vegetation is cleared, small pockets along roadsides and creek lines remain and within these are found species of significance (ie Type A restricted plants).

Multiple watercourses occur within, or in close proximity to, development areas. The watercourses within the proposed development areas have limited fringing riparian vegetation, however due to the lack of vegetation within close proximity; these remaining patches represent high ecological and habitat value.

Multiple Type A restricted plant species were observed within the proposed development areas.

Acacia harpophylla (Brigalow) which is protected under the provisions of the EPBC Act was 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, Queensland Government Department of Environment and Resource Management (DERM).



Appendix A
Flora species list



Appendix A

Flora Species List					
Family Name	Scientific Name	Common Name	R4	Water pipeline	Road
Adiantaceae	<i>Cheilanthes aspera</i>	Bristly cloak fern			
Adiantaceae	<i>Cheilanthes sieberi</i>	Mulga Fern			
Apocynaceae	<i>Alstonia constricta</i>	Bitter Bark			
Apocynaceae	<i>Carissa ovata</i>	Currant Bush			
Apocynaceae	<i>Gomphocarpus physocarpus</i>	Balloon Cotton Bush			
Apocynaceae	<i>Marsdenia lanceolata</i>	Marsdenia			
Asteraceae	<i>Bidens pilosa</i>	Cobblers Pegs			
Asteraceae	<i>Bracteantha bracteata</i>	Everlasting Daisy			
Asteraceae	<i>Calotis lappulacea</i>	Yellow Burr Daisy			
Asteraceae	<i>Calotis scabiosifolia</i>	Rough Daisy Burr			
Asteraceae	<i>Cirsium vulgare</i>	Spear Thistle, Black Thistle			
Asteraceae	<i>Pterocaulon sphacelatum</i>	Apple Bush			
Asteraceae	<i>Sonchus oleraceus</i>	Sow Thistle			
Asteraceae	<i>Tagetes minuta</i>	Stinking Rodger			
Asteraceae	<i>Xanthium occidentale</i>	Noogoora Burr			
Asteraceae	<i>Calotis cuneifolia</i>	Purple Burr Daisy			
Asteraceae	<i>Chrysocephalum apiculatum</i>	Yellow Buttons			
Asteraceae	<i>Conyza bonariensis</i>	Fleabane			
Bignoniaceae	<i>Pandorea pandorana</i>	Wonga Vine			
Brassicaceae	<i>Lepidium sagittulatum</i>	Pepper Cress			
Brassicaceae	<i>Capsella bursa-pastoris</i>	Shepherd's purse			
Cactaceae	<i>Harrisia spp</i>	Harrisia cactus			
Cactaceae	<i>Opuntia tomentosa</i>	Velvety Tree Pear			
Cactaceae	<i>Opuntia stricta</i>	Prickly Pear			
Capparaceae	<i>Apophyllum anomalum</i>	Warrior bush			
Capparaceae	<i>Capparis loranthifolia</i>	Nipan, Wait a while			
Capparaceae	<i>Capparis spinosa</i>	Capparis midsize			
Casuarinaceae	<i>Allocasuarina luehmannii</i>	Bull Oak			
Casuarinaceae	<i>Casuarina cristata</i>	Belah			
Chenopodiaceae	<i>Chenopodium desertorum</i>	Desert Goosefoot			
Chenopodiaceae	<i>Maireana microphylla</i>	Small-leaf Bluebush			
Chenopodiaceae	<i>Maireana villosa</i>	Silky Bluebush			
Chenopodiaceae	<i>Salsola kali</i>	Roly Poly			
Chenopodiaceae	<i>Sclerolaena birchii</i>	Galvanised Burr			
Chenopodiaceae	<i>Enchylaena tomentosa</i>	Ruby Saltbush			
Cucurbitaceae	<i>Cucumis myriocarpus</i>	Paddy melon			
Cyperaceae	<i>Cyperus difformis</i>	sedge 2 - difformis, Dirty Dora			

Flora Species List					
Family Name	Scientific Name	Common Name	R4	Water pipeline	Road
Cyperaceae	<i>Fimbristylis dichotoma</i>	Fimbristylis			
Euphorbiaceae	<i>Euphorbia peplus</i>	Petty Spurge			
Fabaceae - Faboideae	<i>Crotalaria dissitiflora</i>	Grey Rattlepod			
Fabaceae - Faboideae	<i>Desmodium varians</i>	Tree Foil			
Fabaceae - Faboideae	<i>Glycine tomentella</i>	Hairy Glycine			
Fabaceae - Faboideae	<i>Medicago polymorpha</i>	Burr Medic			
Fabaceae - Faboideae	<i>Tephrosia supina</i>	Tephrosia			
Fabaceae - Mimosoideae	<i>Acacia deanei</i>	Dean's Wattle			
Fabaceae - Mimosoideae	<i>Acacia excelsa</i>	Iron wood			
Fabaceae - Mimosoideae	<i>Acacia harpophylla</i>	Brigalow			
Fabaceae - Mimosoideae	<i>Acacia leiocalyx</i>	Black Wattle			
Fabaceae - Mimosoideae	<i>Acacia macradenia</i>	Zigzag Wattle			
Fabaceae - Mimosoideae	<i>Acacia salicina</i>	Sally Wattle			
Goodeniaceae	<i>Goodenia glabra</i>	Smooth Goodenia			
Juncaceae	<i>Juncus usitatus</i>	Juncus			
Lomandraceae	<i>Lomandra hystrix</i>	Creek Mat Rush			
Lomandraceae	<i>Lomandra multiflora</i>	Lomandra			
Malvaceae	<i>Abutilon oxycarpum</i>	Chinese Lantern			
Malvaceae	<i>Malvastrum americanum</i>	Spiny Malvastrum			
Malvaceae	<i>Sida platycalyx</i>	Sida			
Malvaceae	<i>Sida rohlenae</i>	Shrub Sida			
Malvaceae	<i>Sida subspicata</i>	Queensland Hemp			
Meliaceae	<i>Owenia acidula</i>	Emu Apple			
Myoporaceae	<i>Eremophila mitchellii</i>	False Sandalwood			
Myrtaceae	<i>Eucalyptus chloroclada</i>	Baradine Red Gum			
Myrtaceae	<i>Eucalyptus melanophloia</i>	Silver Leaved Ironbark			
Myrtaceae	<i>Eucalyptus orgadophila</i>	Mountain Coolibah			
Myrtaceae	<i>Eucalyptus populnea</i>	Poplar Box			
Oleaceae	<i>Jasminum didymum</i> subsp. <i>racemosum</i>	Native Jasmine			
Oxalidaceae	<i>Oxalis stricta</i>	Yellow Wood Sorrel			
Phyllanthaceae	<i>Phyllanthus gunnii</i>	Phyllanthus			
Pittosporaceae	<i>Pittosporum angustifolium</i>	Native Apricot			
Poaceae	<i>Aristida caput medusae</i>	Many-headed Wire Grass			
Poaceae	<i>Aristida holathera</i>	Tall Wire Grass			
Poaceae	<i>Aristida jerichoensis</i>	Jericho wire grass			

Flora Species List					
Family Name	Scientific Name	Common Name	R4	Water pipeline	Road
Poaceae	<i>Austrostipa verticillata</i>	Slender Bamboo Grass			
Poaceae	<i>Bothriochloa bladhii</i> subsp. <i>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 pectinata</i>	Comb Chloris			
Poaceae	<i>Dichanthium sericeum</i>	Queensland Blue Grass			
Poaceae	<i>Digitaria ammophila</i>	Digitaria			
Poaceae	<i>Enneapogon avenaceus</i>	Bottle Washer			
Poaceae	<i>Enteropogon acicularis</i>	Curly Windmill Grass			
Poaceae	<i>Enteropogon ramosus</i>	Twirly Windmill Grass			
Poaceae	<i>Eragrostis brownii</i>	Browns Lovegrass			
Poaceae	<i>Eragrostis sororia</i>	Woodland Lovegrass			
Poaceae	<i>Melinis repens</i>	Red Natal			
Poaceae	<i>Panicum buncei</i>	Native Panic			
Poaceae	<i>Panicum decompositum</i>	Hairy Panic			
Poaceae	<i>Panicum simile</i>	Two-coloured Panic			
Poaceae	<i>Pennisetum ciliare</i>	Buffel Grass			
Poaceae	<i>Sorghum alum</i>	Silk Sorghum			
Poaceae	<i>Sorghum plumosa</i>	Plume sorghum			
Poaceae	<i>Sporobolus caroli</i>	Desert Sporobolus, Fairy Grass			
Poaceae	<i>Sporobolus creber</i>	Western Rats Tail Grass			
Poaceae	<i>Themeda avenacea</i>	Wild Oats Grass			
Poaceae	<i>Themeda triandra</i>	Kangaroo Grass			
Poaceae	<i>Urochloa mosambicensis</i>	Urochloa, Sabi Grass			
Poaceae	<i>Aristida calycina</i>	Dark Wiregrass			
Poaceae	<i>Aristida muricata</i>	Wire Grass			
Poaceae	<i>Chloris divaricata</i>	Windmill Chloris			
Poaceae	<i>Eragrostis leptostachya</i>	Lovegrass			
Poaceae	<i>Paspalum dilatatum</i>	Paspalum			
Polygonaceae	<i>Rumex brownii</i>	Swamp Dock			
Polygonaceae	<i>Emex australis</i>	Goathead Burr			
Proteaceae	<i>Grevillea striata</i>	Beefwood			
Ranunculaceae	<i>Ranunculus lappaceus</i>	Australian Buttercup			
Rubiaceae	<i>Canthium oleifolium</i>	Hat stand, Wild Lemon			
Rubiaceae	<i>Psydrax odorata</i> subsp. <i>australiana</i>	Canthium			
Rutaceae	<i>Geijera parviflora</i>	Wilga			
Santalaceae	<i>Exocarpus cupressifolia</i>	Bush Cherry			

Flora Species List					
Family Name	Scientific Name	Common Name	R4	Water pipeline	Road
Sapindaceae	<i>Alectryon diversifolius</i>	Scrub Boonaree			
Sapindaceae	<i>Atalaya hemiglauca</i>	Whitewood			
Solanaceae	<i>Solanum brownii</i>	Violet Nightshade			
Solanaceae	<i>Solanum ellipticum</i>	Potato Bush			
Solanaceae	<i>Solanum nigrum</i>	Blackberry nightshade			
Sterculiaceae	<i>Brachychiton populneus</i>	Kurrajong			
Sterculiaceae	<i>Brachychiton rupestris</i>	Narrow Leaved Bottle Tree			
Verbenaceae	<i>Verbena bonariensis</i>	Bunchy Verbena, Purpletop Verbena			
Verbenaceae	<i>Verbena officinalis</i>	Common Verbena, Native Verbena			
Verbenaceae	<i>Verbena tenuisecta</i>	Mayne's Curse			
Zygophyllaceae	<i>Zygophyllum howittii</i>	Red twinleaf			

