

Roma Ecological Assessment – Project: Lot 10 WV1758 & Lot 11 WV1759 Fibre Optic Cable	Reference: 221708
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To:	Copy:	Circulate:	Name:	Organisation:	Location/Facsimile:
✓			Paul Wybrew	Santos Ltd	32 Turbot St, Brisbane
From: Aurecon C/o Vanessa Boettcher			Date: 23 August 2011		Total pages: 6

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Subject: Fibre Optic Cable – Addendum to Lot 10 WV1758 & Lot 11 WV1759 Reports

Dear Mr Wybrew,

This memo is in relation to the ground-truthing of a section of the proposed Comet Ridge to Wallumbilla Fibre Optic Corridor (herein referred to as the FOC) that occurs within Lot 10 WV1758 and Lot 11 WV1759 (Figure 1.1; page 3). Reports specific to the additional proposed developments within Lot 10 (0020-GLNG-4-1.3-0035) and Lot 11 (*Roma Ecological Assessment - Lot 11 WV1759*, 11 August 2011) have previously been prepared and submitted, excluding the data collected for this section of the FOC. This document should be treated as an addendum to those reports.

This document is specific to the ecology of a section of the FOC contained within Lot 10 WV1758 and Lot 11 WV1759 (Figure 1.1). For additional information on the FOC relative to where it overlaps additional properties, please refer to the appropriate lot-specific report, where this information has been captured.

## 1.1 Fibre Optic Corridor – Comet Ridge to Wallumbilla

### General

The FOC extends approximately 850 m to the west of the proposed Corridor R89, and is a continuation of the FOC corridor located to the south of the current area of investigation and which extends to Blythdale Road (Figure 1.1).

The proposed FOC development area is considered a highly modified environment, as a result of historical land clearing, and current agricultural practices. As a result, mature canopy cover is considered very sparse (ie less than 5% cover of the total area assessed), and the shrub layer is considered sparse (ie 10-15% cover). The ground cover is the dominant stratum with respect to species diversity and abundance, and is considered dense (ie 80% cover).

No Regional Ecosystem (RE) communities or known Environmentally Sensitive Areas (ESAs) (or associated buffers) have been recorded within the FOC footprint. The closest ESA mapping occurs approximately 325 m to the north of the proposed development area.

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No watercourses occur within the proposed development area, with the nearest watercourses situated approximately 325 m to the north.

### Floristics

This proposed development area exhibits a very sparse canopy layer which is represented by *Ventilago viminalis* (Vine Tree) and *Eucalyptus populnea* (Poplar Box).

The sparse shrub layer is dominated by *Geijera parviflora* (Wilga), with other species recorded including *Capparis mitchellii* (Bumble Fruit), Poplar Box and *Eremophila mitchellii* (False Sandalwood).

The dense ground layer is dominated by exotic pasture grasses and weeds. *Pennisetum ciliare* (Buffel grass) dominates this stratum, whilst additional native species include *Themeda triandra* (Kangaroo Grass), *Heteropogon contortus* (Black Spear Grass), *Sporobolus creber* (Western Rat's-tail Grass), and *Sclerolaena birchii* (Galvanised Burr).

No Type A restricted species were recorded within the FOC development area assessed (Figure 1.1).

A species list for this proposed development area is provided in the Attachment on page 4.

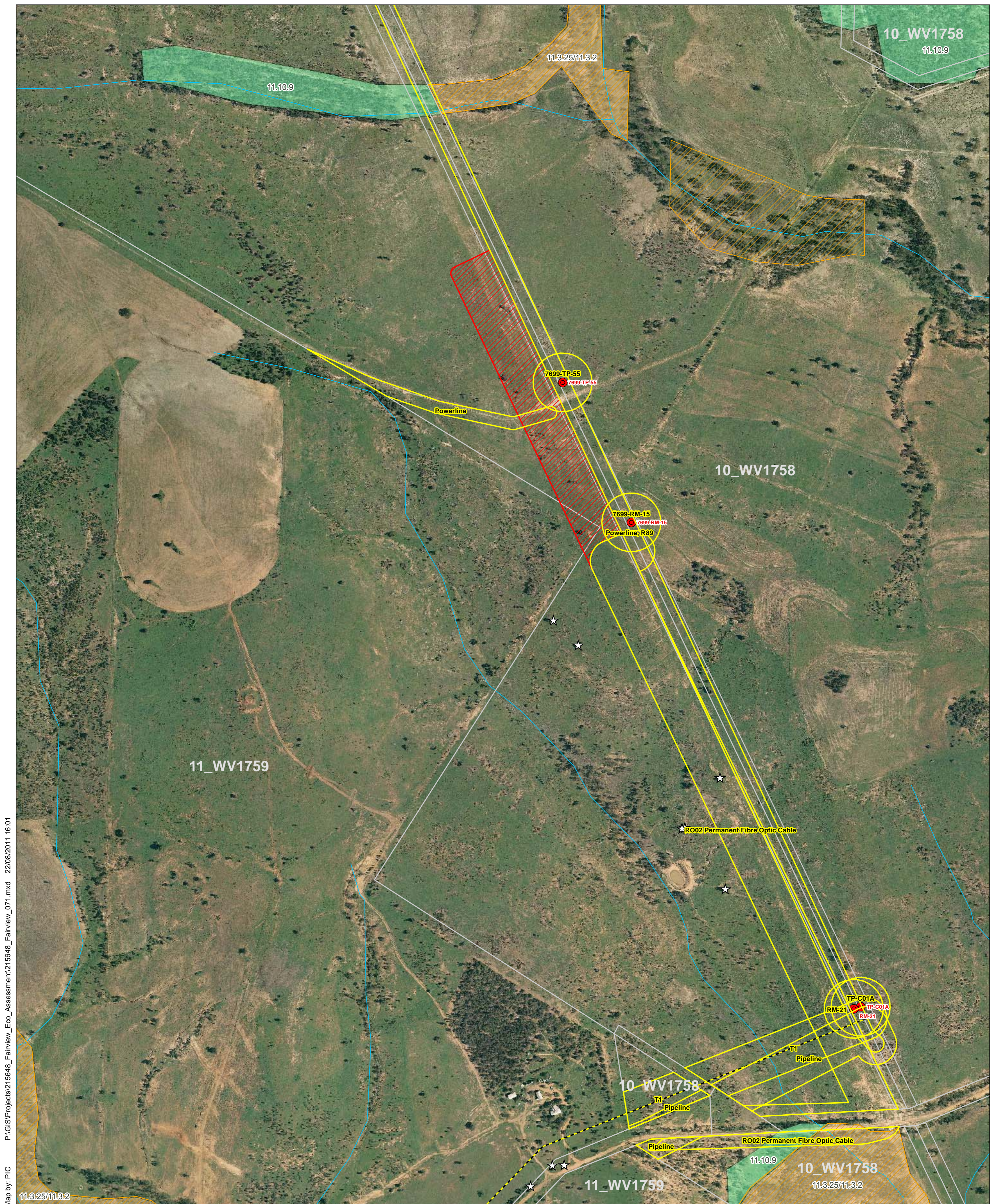
### Habitat values

Nine (9) incidental fauna species were recorded during this survey of the FOC, namely Galah (*Cacatua roseicapilla*), Sulphur-crested Cockatoo (*Cacatua galerita*), Torresian Crow (*Corvus orru*), Weebill (*Smicrornis brevirostris*), Australasian Pipit (*Anthus novaeseelandiae*), Wedge-tailed Eagle (*Aquila audax*), Noisy Miners (*Manorina melanocephala*), Pied Butcherbird (*Cracticus nigrogularis*), and Eastern Grey Kangaroo (*Macropus giganteus*).

No conservation significant fauna species (as listed under the provisions of the *Environment Protection and Biodiversity Conservation Act 1999* and/or *Nature Conservation Act 1992*) were detected during field investigations.

The proposed development area contains limited woody vegetation and has been extensively disturbed by cattle grazing, historical clearing, and the invasion of exotic pasture species. Habitat features associated with the proposed development are therefore typically limited to dense groundcover vegetation (ie grassy tussocks) and woody debris (ie fallen/felled timber). As a result, the habitat value of this survey area is considered low, overall.

Accordingly, the species utilising resources in the FOC development area shown in Figure 1.1 are most likely to be limited to common, generalist species that are able to adapt to significant habitat disturbances (ie House mouse [*Mus musculus*], macropods etc). Common birds of prey (eg Nankeen Kestrel [*Falco cenchroides*], Black Kite [*Milvus migrans*]) are also expected to utilise this site and the surrounding areas for foraging purposes.



Map by: PIC  
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**Legend**

- |                             |   |   |
|-----------------------------|---|---|
| Fibre Optic Cable Extension | <b>ESA Mapping (Including Buffer Areas)</b> | <b>Regional Ecosystem (VM Act Status)</b> |
| EVNT and Type A Species     | Category A                                  | Endangered - Dominant                     |
| Corridors - Ground Truth    | Category B                                  | Endangered - Sub-dominant                 |
| Geotech Borehole            | Category C                                  | Of Concern - Dominant                     |
| Cadastre                    |   | Of Concern - Sub-dominant                 |
| Watercourse                 |   | Least Concern                             |

Source:  
Cadastre: DERM, 2011.  
Regional Ecosystems: Version 6, The State of Queensland  
(Department of Environment and Resource Management),  
Nov 2009.



A1 scale: 1:4,500  
0 25 50 100 150 200 Meters

Date: 22/08/2011 Version: 1 Job No: 215648  
Coordinate system: GDA\_1994\_MGA\_Zone\_55

**Santos Upstream Ecological Assessment**

**Figure 1-1: Location of Proposed Pipeline Corridors Investigated**

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*Botanical species list*

Family Name	Scientific Name	Common Name
Malvaceae	<i>Abutilon oxycarpum</i>	Chinese Lantern
Fabaceae - Mimosoideae	<i>Acacia excelsa</i>	Iron Wood
Capparaceae	<i>Apophyllum anomalum</i>	Warrior Bush
Poaceae	<i>Aristida caput medusae</i>	Curly Head Wire Grass
Poaceae	<i>Austrostipa verticillata</i>	Slender Bamboo Grass
Asteraceae	<i>Bracteantha bracteata</i>	Everlasting Daisy
Asteraceae	<i>Calotis cuneifolia</i>	Purple Burr Daisy
Rubiaceae	<i>Canthium oleifolium</i>	Hat Stand, Wild Lemon
Capparaceae	<i>Capparis loranthifolia</i>	Nipan, Wait a while
Capparaceae	<i>Capparis mitchellii</i>	Bumble Fruit
Apocynaceae	<i>Carissa ovata</i>	Currant Bush
Adiantaceae	<i>Cheilanthes aspera</i>	Bristly Cloak Fern
Adiantaceae	<i>Cheilanthes sieberi</i>	Mulga Fern
Poaceae	<i>Chloris pectinata</i>	Comb Chloris
Asteraceae	<i>Conyza bonariensis</i>	Fleabane
Poaceae	<i>Cymbopogon refractus</i>	Barbwire Grass
Convolvulaceae	<i>Dichondra repens</i>	Kidney Weed
Sapindaceae	<i>Dodonaea viscosa</i>	Sticky Hopbush
Polygonaceae	<i>Emex australis</i>	Spiny Emex
Poaceae	<i>Eragrostis fallax</i>	Tall Lovegrass
Poaceae	<i>Eragrostis lacunaria</i>	Tall Lovegrass
Poaceae	<i>Eragrostis sororia</i>	Blue eragrostis
Myoporaceae	<i>Eremophila deserti</i>	Turkey Bush
Myoporaceae	<i>Eremophila mitchellii</i>	False Sandalwood
Myrtaceae	<i>Eucalyptus populnea</i>	Poplar Box
Cyperaceae	<i>Fimbristylis dichotoma</i>	Fimbristylis
Rutaceae	<i>Geijera parviflora</i>	Wilga

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Family Name	Scientific Name	Common Name
Goodeniaceae	<i>Goodenia glabra</i>	Smooth Goodenia
Goodeniaceae	<i>Goodenia rotundifolia</i>	Goodenia
Proteaceae	<i>Grevillea striata</i>	Beefwood
Poaceae	<i>Heteropogon contortus</i>	Black Spear Grass
Apiaceae	<i>Hydrocotyle laxiflora</i>	Pennywort
Oleaceae	<i>Jasminum didymum subsp. racemosum</i>	Native Jasmine
Juncaceae	<i>Juncus polyanthemus</i>	Sharp Rush
Juncaceae	<i>Juncus usitatus</i>	Juncus
Lomandraceae	<i>Lomandra multiflora</i>	Lomandra
Chenopodiaceae	<i>Maireana microphylla</i>	Small-leaf Bluebush
Celastraceae	<i>Maytenus cunninghamii</i>	Yellow Berry Bush
Fabaceae - Faboideae	<i>Medicago polymorpha</i>	Burr Medic
Poaceae	<i>Melinis repens</i>	Red Natal
Cactaceae	<i>Opuntia stricta</i> <sup>LPA2</sup>	Prickly Pear
Cactaceae	<i>Opuntia tomentosa</i> <sup>LPA2</sup>	Velvety Tree Pear
Meliaceae	<i>Owenia acidula</i>	Emu Apple
Oxalidaceae	<i>Oxalis stricta</i>	Yellow Wood Sorrel
Poaceae	<i>Pennisetum ciliare</i>	Buffel Grass
Plantaginaceae	<i>Plantago cunninghamii</i>	Plantago
Asteraceae	<i>Pterocaulon sphacelatum</i>	Apple Bush
Polygonaceae	<i>Rumex brownii</i>	Swamp Dock
Chenopodiaceae	<i>Sclerolaena birchii</i>	Galvanised Burr
Brassicaceae	<i>Sisymbrium thellungii</i>	African Turnip Weed
Asteraceae	<i>Sonchus oleraceus</i>	Sow Thistle
Poaceae	<i>Sporobolus creber</i>	Western Rat's-tail Grass
Poaceae	<i>Themeda avenacea</i>	Wild Oats Grass
Poaceae	<i>Themeda triandra</i>	Kangaroo Grass

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Family Name	Scientific Name	Common Name
Poaceae	<i>Urochloa mosambicensis</i>	Urochloa
Rhamnaceae	<i>Ventilago viminalis</i>	Vine Tree
Verbenaceae	<i>Verbena tenuisecta</i>	Mayne's Curse

Notes <sup>1</sup> - Taxonomic classifications, nomenclature and naturalised status of species is derived from the Census of Queensland Flora 2010

LPA<sup>2</sup> - Land Protection (Pest and Stock Route Management) Act 2002 (Qld) – Class 2 weed