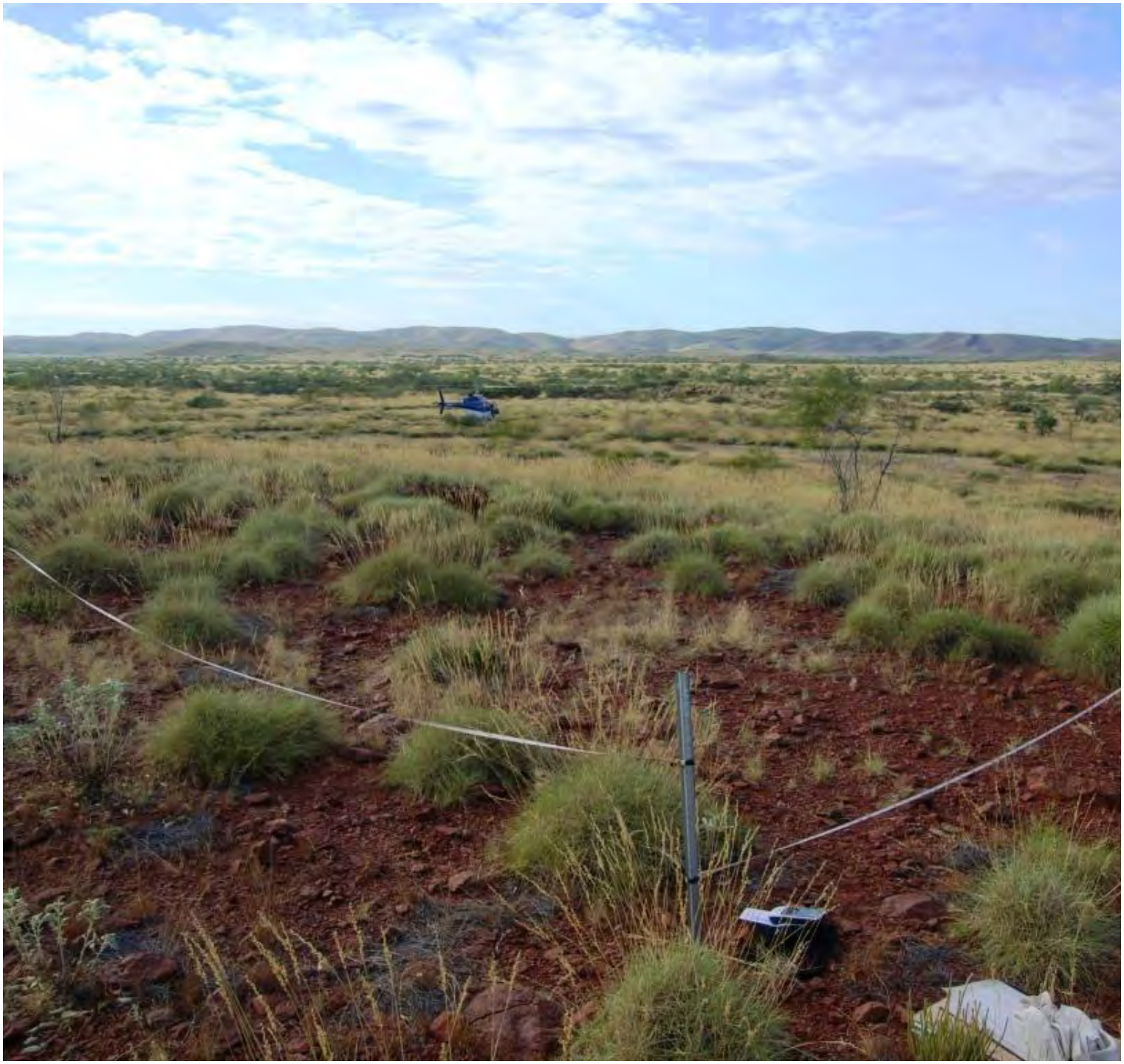
API Rail Flora Survey

API Management Pty Ltd

29 April 2010

Proposed Anketell Point Transport Corridor, Associated Borrow Pits and Communication Towers

Level 2 Flora and Vegetation Assessment



Proposed Anketell Point Transport Corridor, Associated Borrow Pits and Communication Towers

Level 2 Flora and Vegetation Assessment

Prepared for

API Management Pty Ltd

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Executive Summary

Australian Premium Iron (API) Management Pty Ltd is developing the West Pilbara Iron Ore Project (WPIOP) based on eight economic iron ore deposits at five locations, between 35km and 80km south of Pannawonica.

This report presents the findings of the botanical component of environmental studies for the 100km transport corridor (known as the Anketell Point transport corridor) that would deliver the ore from south of Cape Preston to a proposed port option located at Anketell Point, just east of Karratha.

The field component of the second phase Level 2 assessment was conducted by AECOM in April and May 2009 and specifically deals with flora and vegetation communities, vegetation condition and potential floristic environmental constraints within a 1km wide corridor, associated borrow pits, communication towers and proposed campsites. This study is the second phase of a 'Level 2' assessment and meets the requirements for a 'Comprehensive Survey' as part of a Level 2 Flora and Vegetation Assessment, according to EPA Guidance (2004).

The flora and vegetation assessment has identified the following factors of environmental significance associated with the project:

- Three species of conservation significance as recognised by the DEC were recorded, namely *Acacia glaucocaesia* (P3), *Flaveria australasica* spp. *gilgai* (P3) and *Vigna* sp. central (M.E. Trudgen 1626) (P2);
- 'Other Flora' of potential conservation significance were recorded, namely *Tephrosia* aff, *clementii* (4) (M35-14), *Vigna* sp. rockpiles (R. Butcher *et al.*, RB 1400) and *Trianthema* sp. Python Pool. Based on current knowledge these species should be treated as if they were Priority Flora;
- One Declared Plant by the *Department of Agriculture and Food* was recorded (**Prosopis pallida*);
- Five communities were considered to be locally significant due to supporting populations of Priority Flora species. These communities are as follows Thg, AThg2, Hf, CAT and AxT; and
- Vegetation communities AEThg, AHf, DEAT2, DMATE, Amg, CAThg2, CAT and DCAT2 may be considered significant due to their limited representation (by area) within the local and regional context.

The following recommendations are made, in light of the outcomes of the assessment:

- Design avoids direct impacts to the recorded population of *Acacia glaucocaesia* (P3) and that direct impacts to this population, for example from dust, also be managed;
- Design avoids direct impacts to communities of conservation significance, namely Thg, AThg2, Hf, CAT and AxT as they support populations of Priority Flora;
- A weed management plan be prepared and implemented for the project that particularly addresses **Prosopis pallida, *Cenchrus ciliaris* and **Aerva javanica*;
- Direct impacts (i.e. from clearing) to all areas supporting vegetation communities of significance, due to being limited in their representation, are minimised;
- Follow-up assessment to complete the full second phase Level 2 assessment be carried out within areas where only one sampling event has thus far been conducted (i.e. the 30 additional quadrats established in 2009), and that this study also incorporates a targeted Priority Flora survey; and
- Address DEC request to ensure no accidental clearing of flora of conservation significance by carrying out clearance of the trace line for the transport corridor and borrow areas.

1.0 Introduction

1.1 Background

Australian Premium Iron (API) Management Pty Ltd commissioned AECOM (formerly Maunsell AECOM) to conduct additional flora and vegetation assessments during 2009. This assessment was conducted within proposed infrastructure areas and corridors associated with the development of API's West Pilbara Iron Ore Project (WPIOP). API manages a number of tenements across the Pilbara Region which are prospective for iron ore; particularly Banded Ironstone Formations (BIF) and Goethite-hematite Channel Iron Deposits (CIDs) (Aquila Resources, 2007).

AECOM has previously conducted a Level 1 and initial Level 2 Floristic assessment during November 2007 and September 2008, respectively, for the proposed Anketell Point transport corridor. A supplementary Level 2 assessment was conducted during April and May 2009 to reassess quadrats and collect ephemeral species that may not have been recorded during the 2008 flora assessment. In addition to the proposed Anketell Point transport corridor, the following associated project areas were also assessed:

- Borrow Pits associated with the transport corridor construction;
- Two proposed accommodation campsites; and
- Three proposed Communication Tower sites.

Two supplementary site visits were also conducted in June 2009 to verify areas previously mapped by Mattiske Consulting Pty Ltd of the Cape Lambert Project Area (Mattiske Consulting Pty Ltd, 2007). Additionally, some areas in the proposed footprint development were added to the scope, following completion of field assessments during the optimum post-wet season period. Such areas include areas along the edge of the proposed borrow pits, to encompass a slightly greater area than previously assessed. A combination of extrapolation and some ground truthing during a supplementary site visit in October 2009 was used to determine the vegetation communities, condition and floral composition of these locations.

This report presents the findings of the Flora and vegetation assessments conducted during 2009, for the project infrastructure areas associated with Anketell Point.

1.2 Location

The proposed Anketell Point transport corridor and the associated project infrastructure are situated within the Shire of Roebourne, approximately 1,535km north of Perth and approximately 20km east of Karratha along North West Coastal Highway (Shire of Roebourne, 2006).

As previously discussed, the floristic assessments conducted during 2009 encompassed four separate survey areas (**Figure 1**). These survey areas are:

- The proposed Anketell Point transport corridor, encompassing original and additional alignment;
- Borrow Pits associated with the transport corridor construction;
- Two proposed accommodation campsites; and
- Three proposed Communication Tower sites.

1.2.1 Anketell Point Transport Corridor

The original 2008 survey area for the Anketell Point Transport Corridor begins at North West Coastal Highway, 20km east from Karratha - Dampier Road. It traverses in a south westerly direction terminating approximately 30km south of Cape Preston, 75km south west of Karratha and is approximately 100km in length (**Figure 1**). Almost the entire Anketell Point transport corridor runs parallel to, and approximately 6km south of, the North West Coastal Highway.

The additional Anketell Point transport corridor surveyed during 2009 encompasses a total area of 1129.3ha over a length of approximately 22km and deviates from the original transport corridor in two locations (**Figure 1**). One deviation begins approximately 2km south of North West Coastal Highway, and consists of widening the existing survey corridor. The second deviation begins approximately 20km south from North West Coastal Highway, traverses directly west of the original alignment then intersects the original alignment at approximately 467790mE and 7693388mN. This occurs approximately between chainage 39km and 62km.

The average width of the transport corridor survey area is 325m covering a total area of 5779.15Ha.

1.2.2 Borrow Pits

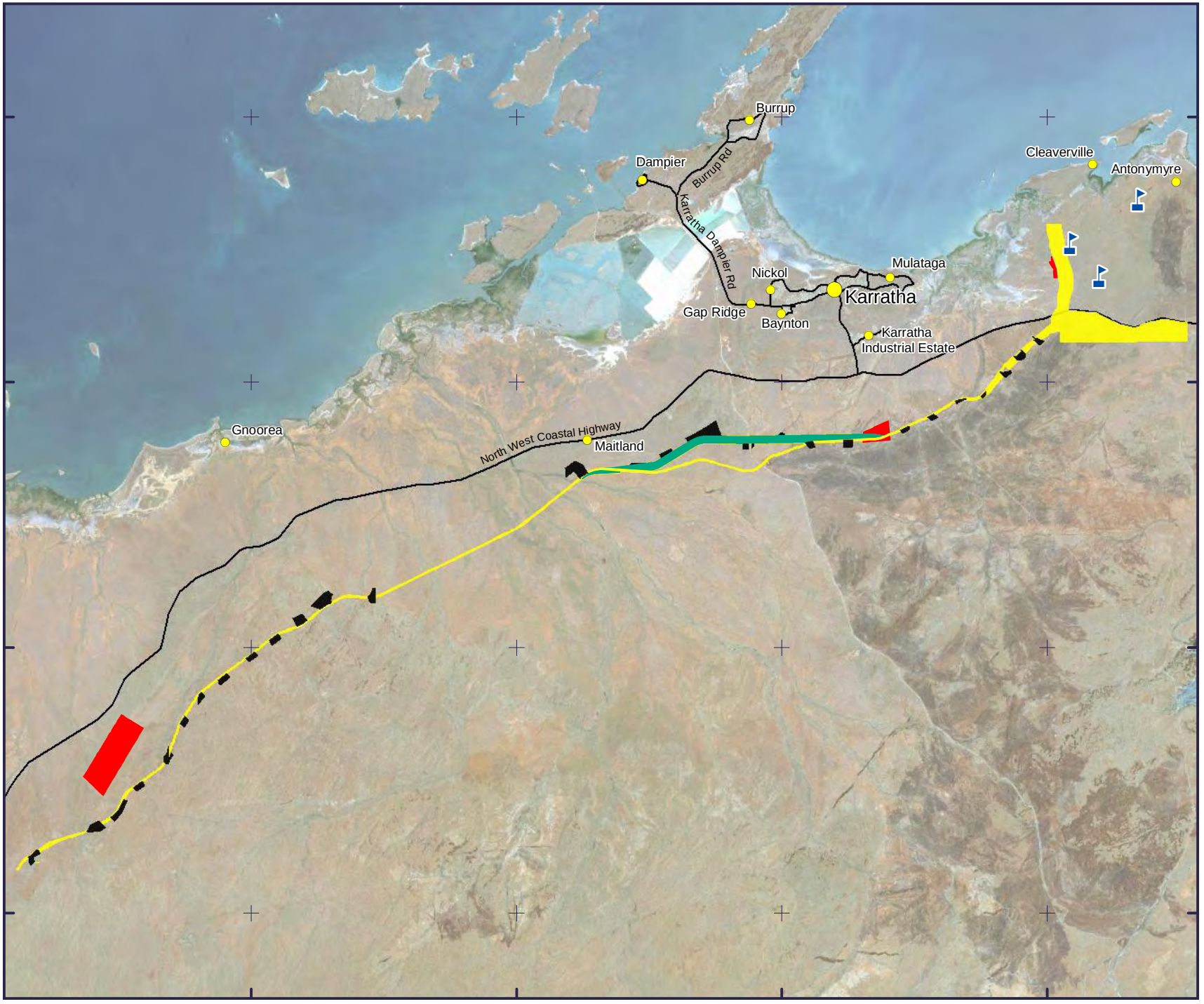
Thirty one potential Borrow Pit areas are located along the proposed transport corridor and may be used for construction of the transport corridor. Eighteen prospective borrow pits are located in the northern portion of the alignment and 13 are located in the southern portion.

1.2.3 Proposed Campsites

Two proposed campsites are located along the proposed transport corridor. Campsite one is located approximately 11km south of Karratha and 19km south along the alignment from North West Coastal Highway. Campsite one is approximately 248ha. Campsite two is located approximately 62km south-west of Karratha and 80km south of the alignment from North West Coastal Highway. Campsite two is approximately 1194ha.

1.2.4 Proposed Communication Towers

Three proposed communication towers are located in the vicinity of Anketell Point, approximately 20km east of Karratha. The Anketell Point tower is situated approximately 6km south south west of Anketell Point. Cleaverville Tower #1 and Cleaverville Tower #2 are both situated approximately 1km north west of the track to Cleaverville, 2.5km and 5.5km from North West Coastal Highway respectively (**Figure 1**).



Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Survey Area Locations

Figure 1

0 2.5 5 7.5 10

Kilometres

1:400,000

LEGEND

- Proposed Communication Towers
- Proposed Camp Sites
- Proposed Borrow Pits
- Proposed Transport Corridor
- Proposed Transport Corridor (Additional Survey Area)

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1.3 Physical Environment

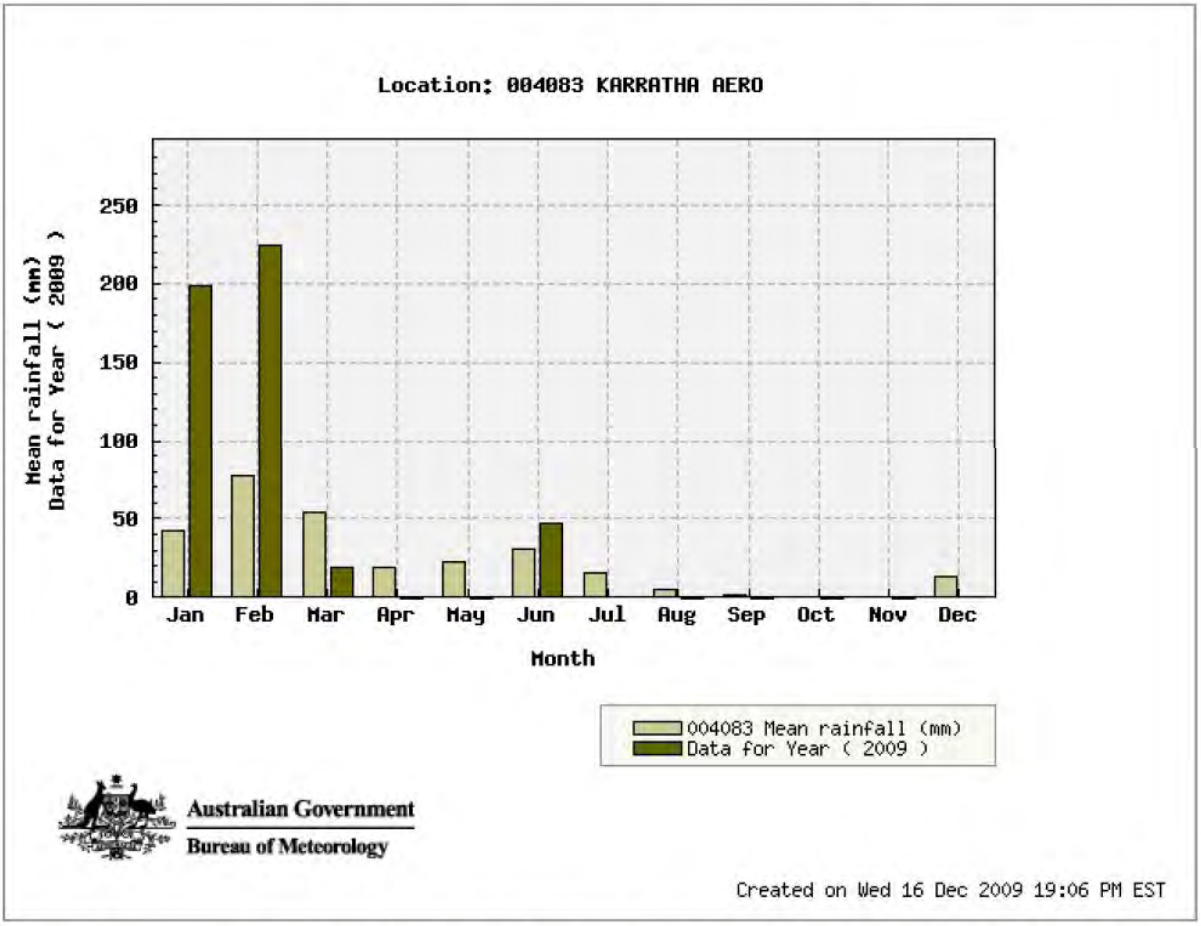
1.3.1 Climate

Karratha is located in the cyclone belt of Western Australia and during the cyclone season the region receives its annual rainfall (Karratha Visitors Centre, 2009). The region experiences both tropical and semi desert climates, with temperatures ranging from 15ºC to 45ºC.

Karratha experiences an average annual rainfall of 280mm per annum, with the lowest average rainfall of 53mm per annum and the highest average rainfall of 855mm per annum (Bureau of Meteorology, 2009). Rainfall data for 2009 to date is presented in **Figures 2a and 2b**. During January, February and June 2009 higher than average rainfall was experienced for the region.

KARRATHA AERO
Mean rainfall (mm)

Site details
Site name: KARRATHA AERO **Site number:** 004083 **Commenced:** 1971
Latitude: 20.71 °S **Longitude:** 116.77 °E **Elevation:** 7 m **Operational status:** Still Open



Statistics	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Years
Mean rainfall (mm)	41.7	77.5	53.9	18.8	22.2	30.3	15.0	5.1	1.0	0.4	0.6	12.6	280.3	36
Statistics	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**	**Years**
Rainfall (mm) for year 2009	*198.8*	*224.4*	*19.4*	*0.0*	*0.0*	*46.6*	*0.2*	*0.0*	*0.0*	*0.0*	*0.0*			1

Figure 2a: Actual rainfall data for Karratha during 2009 compared to mean rainfall (Bureau of Meteorology, 2009)

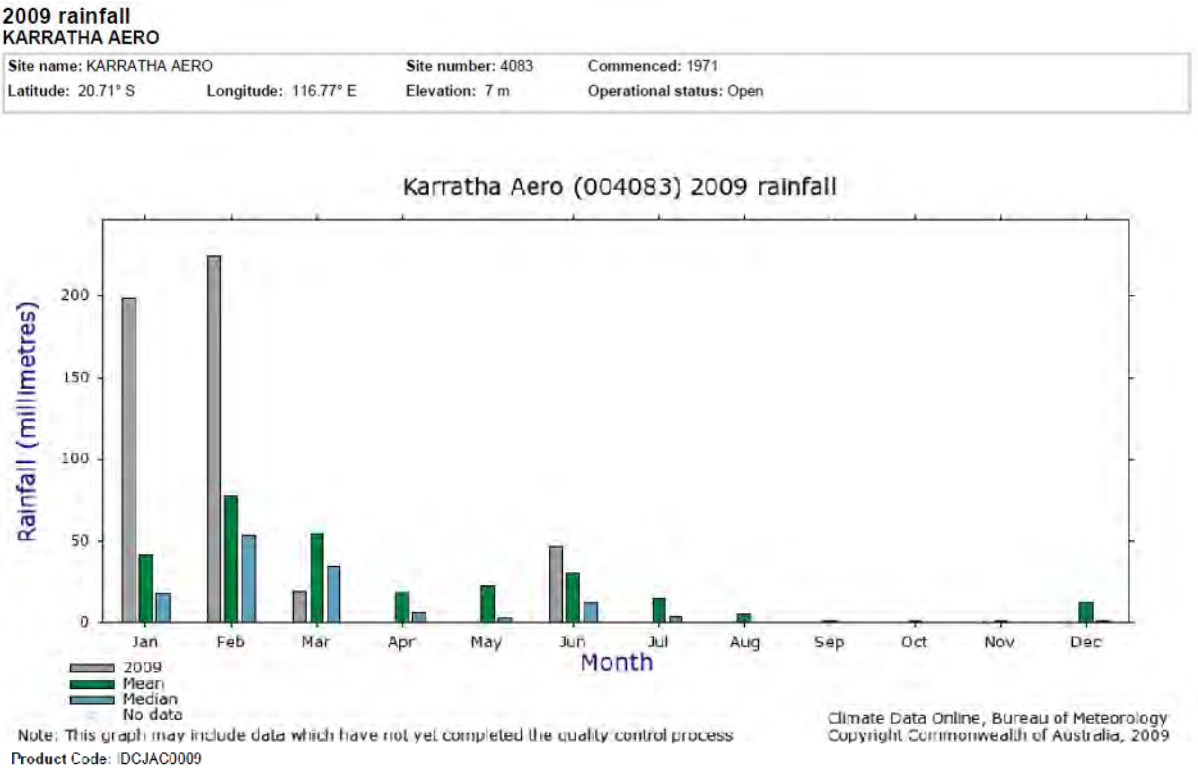


Figure 2b: Monthly Rainfall Data for Karratha (Bureau of Meteorology, 2009)

1.3.2 Soils

The Pilbara Region exhibits complex mosaics of soils and geology. The survey areas traverse a mosaic of differing soil types including friable loamy soils, brown self mulching cracking clays and shallow coherent porous loamy soils (CSIRO, 1967). Each soil type traversed has not been described in detail due to the large number of differing soil types present within the entire survey area.

1.3.3 Land System Units

The entire project area lies within a region for which the Land Systems have been mapped as part of the rangeland assessment programme (Van Vreeswyk *et al.*, 2004). The Land System Units in which each survey area is located is summarised in **Table 1** and represented spatially in **Figure 3**.

Table 1 Summary of Land System Units for survey areas.

Survey Area	Land System Units
Proposed Anketell Point transport corridor (including new revision)	Rocklea Paraburdoo Boolgeeda Ruth Horseflats River Mallina Macroy
Borrow Pits	Rocklea Paraburdoo Boolgeeda Ruth Horseflats River Macroy
Campsite 1	Boolgeeda Ruth Horseflat
Campsite 2	Ruth Rocklea Paraburdoo Horseflats
Campsite 3	Ruth Horseflats
Anketell Point Communication Tower	Rocklea
Cleaverville # 1 & 2 Communication Towers	Ruth

Eight Land System Units traverse the four different survey areas (**Table 1**) and are described as follows:

Boolgeeda Stony lower slopes and plains found below hill systems, supporting hard and soft spinifex grasslands and mulga shrublands. Predominantly deposition surfaces of very gently inclined stony slopes and plains becoming almost level further downslope.

Horseflats Extensive, gilgaied clay plains supporting tussock grasslands and minor grassy snakewood shrublands. Depositional surfaces consisting of gilgaied and non – gilgaied clay plains, stony plains, narrow linear drainage depressions and dissected slopes marginal to the River Land Systems.

Macroy Stony plains and occasional tor fields based on granite supporting hard soft spinifex grasslands. Erosional surfaces with gently undulating stony plains and interfluves with quartz surface mantles, sandy surfaced plains, minor calcrete plains, closely spaced tributary drainage lines in upper parts of the system becoming much wider downslope; minor granite hills, tor fields and quartz ridges.

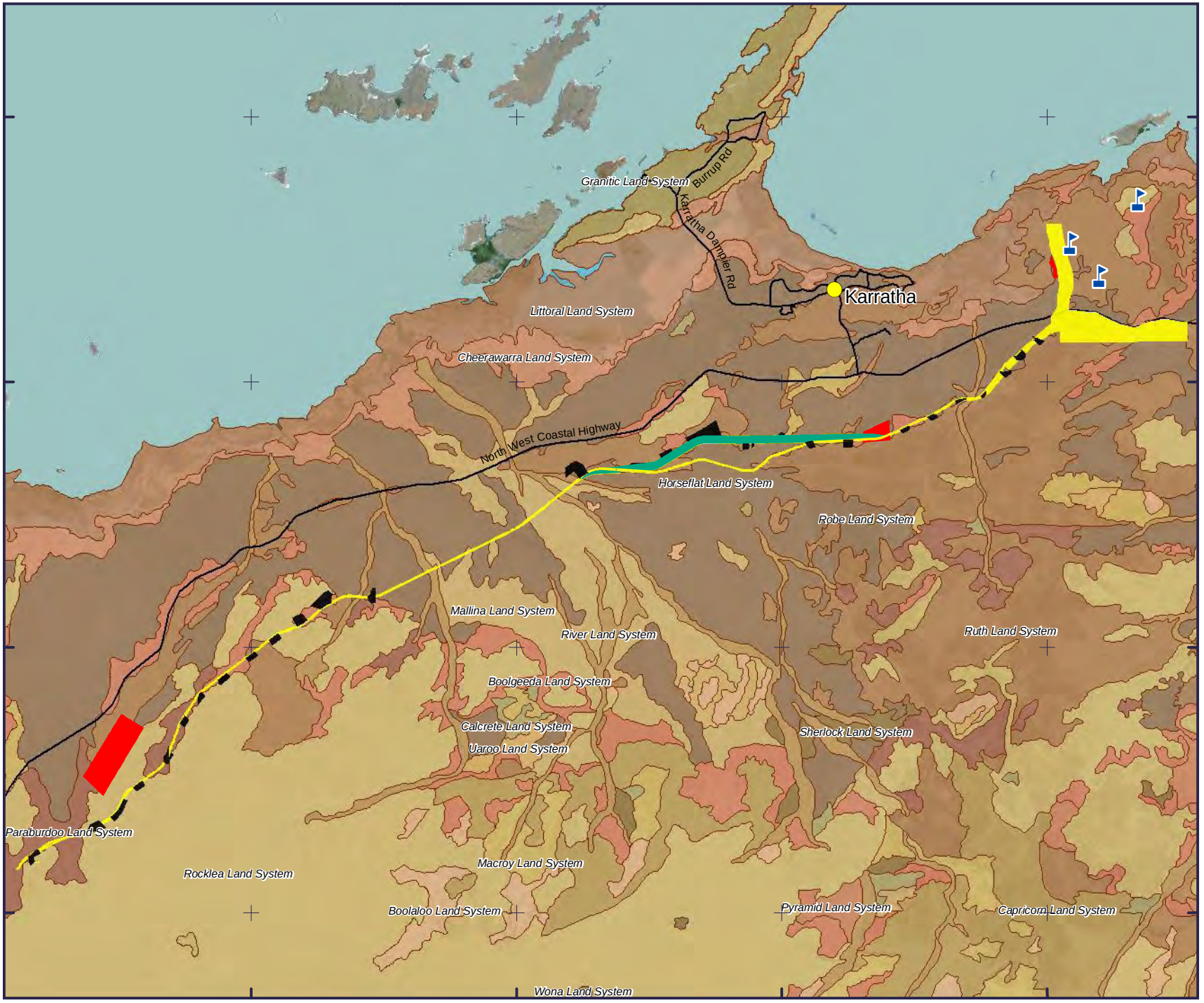
Mallina Sandy surfaced alluvial plains supporting soft spinifex and occasionally hard spinifex grasslands. Depositional surfaces of level sandy plains on alluvium with occasional patches of small claypans, minor clay plains with gilgai micro relief, minor stony plains and occasional isolated low hills.

Paraburdoo Stony gilgai plains derived from basalt, supporting snakewood shrublands and mulga shrublands with spinifex and tussock grasses. Consists of depositional surfaces, such as isolated low basalt hills and stony upper interfluves and plains with small groves.

River Active floodplains and terraces flanking major rivers supporting grassy eucalyptus woodlands, tussock grasslands and soft spinifex grasslands. Flood plains and river terraces are subject to fairly regular overbank flooding from major channels and watercourses, sandbanks and poorly defined levees and cobble plains.

Rocklea Rugged Basalt hills, plateaux, lower slopes and minor stony plains supporting hard spinifex and occasional soft spinifex grasslands. It is comprised of erosional surfaces such as hills, ridges and plateaux remnants on basalt with steep stony slopes and moderately spaced tributary drainage patterns of small channels in shallow valleys in upper parts becoming broader floors and channels downslope.

Ruth Hills and ridges of volcanic and other rocks supporting hard spinifex and occasionally soft spinifex grasslands. They consist of erosional surfaces of rounded hills and ridges with restricted lower slopes and stony interfluves with moderately to widely spaced drainage patterns.



Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Land Systems

Figure 3

0 2.5 5 7.5 10

Kilometres

1:400,000

LEGEND

- Proposed Communication Towers
- Proposed Camp Sites
- Proposed Borrow Pits
- Proposed Transport Corridor
- Proposed Transport Corridor (Additional Survey Area)

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1.4 Biological Context

1.4.1 IBRA Bioregion

There are 85 recognised Interim Biogeographic Regionalisation for Australia (IBRA) regions across Australia that have been defined based on climate, geology, landforms and characteristic vegetation and fauna (Environment Australia, 2000). All areas surveyed during 2009 lie within the Pilbara IBRA region (DEWHA, 2009a).

The Pilbara IBRA region is comprised of four biogeographical subregions; Chichester, Fortescue Plains, Hamersley and Roebourne Subregions. The survey areas are situated within two of these subregions, namely the Chichester and Roebourne Subregions (**Figure 4**). The subregion in which each survey area is located is summarised in **Table 2**.

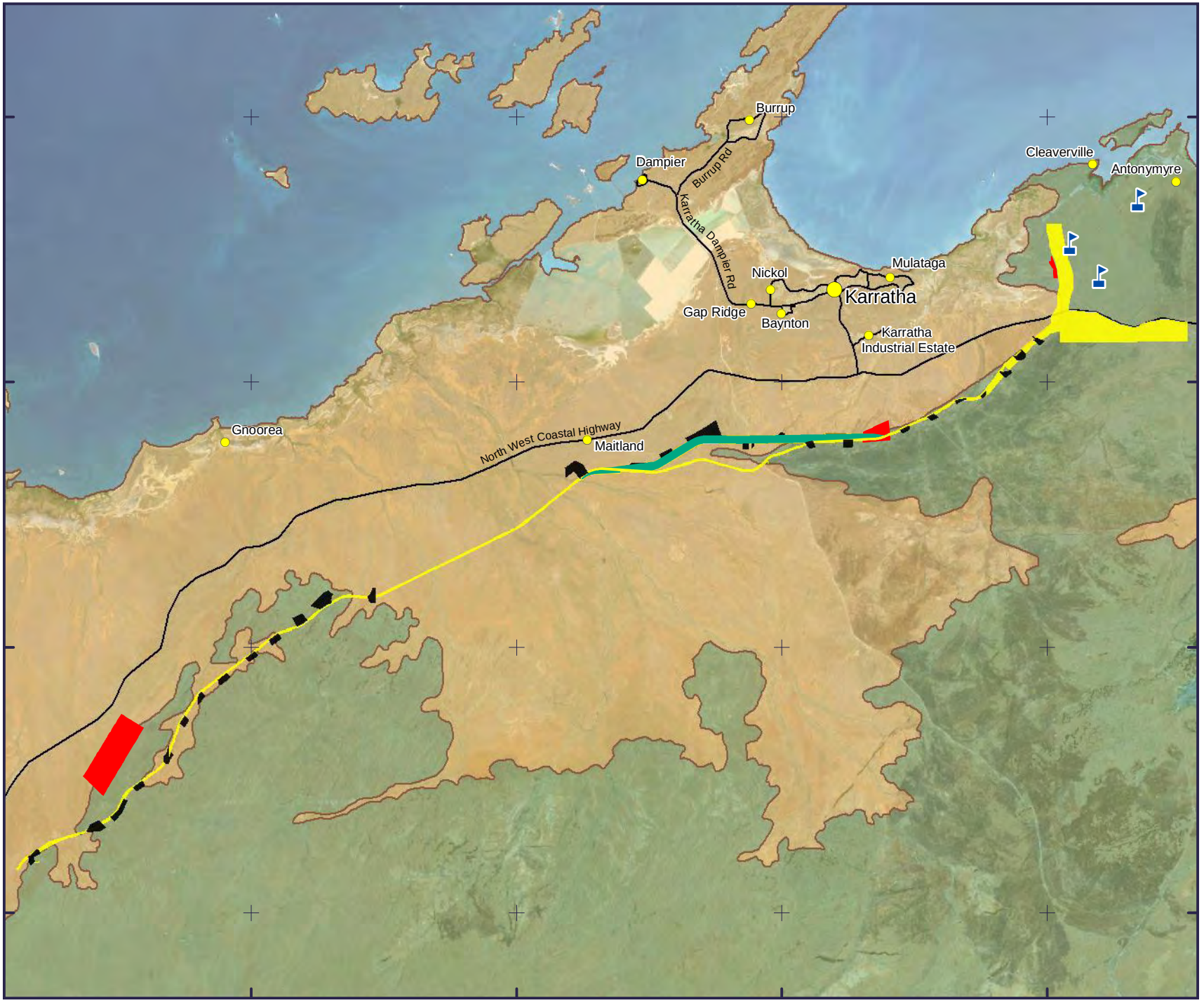
Table 2 Summary of Biogeographical Subregions within the Project Area

Survey Area	Subregion	Detail
Proposed Anketell Point transport corridor including new revision	Chichester	Approximate Chainage - 5km to 46km, 82km to 89km, 104km to 111km
	Roebourne	Approximate Chainage - 46km to 82km, 89km to 104km, 111km to 116km
Proposed Borrow Pits	Chichester	Borrow Pits 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 20, 21, 28, 29, 30, 31
	Roebourne	Borrow Pits 12, 13, 14, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27
Proposed Campsites	Roebourne & Chichester	Campsite 1 Campsite 2
	Chichester	Campsite 3
Proposed Communication Towers	Chichester	Anketell Point Cleaverville # 1 Cleaverville # 2

NB: Some Borrow Pits traverse two subregions, where this is the case it is classified based on area majority

The Chichester subregion comprises the northern section of the Pilbara Craton and is described as undulating Archaean granite and basalt plains including areas of basaltic ranges where the plains are characterised by *Acacia inaequilatera* over *Triodia wiseana* Hummock Grasslands (Kendrick and McKenzie, 2001).

Kendrick and Stanley (2001) have broadly described the Roebourne subregion as Quaternary alluvial and older colluvial coastal and sub-coastal plains with a grass savannah of mixed bunch and hummock grasses and a dwarf shrub steppe of *Acacia stellaticeps* or *Acacia pyrifolia* and *Acacia inaequilatera*. Uplands are dominated by Triodia Hummock Grasslands. Ephemeral drainage lines support *Eucalyptus victrix* or *Corymbia hamersleyana* Woodlands. Samphire, *Sporobolus* and mangal occur on marine alluvial flats and river deltas.



Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

IBRA Regions

Figure 4

0 2.5 5 7.5 10

Kilometres

1:400,000

LEGEND

- Proposed Communication Towers
- Proposed Camp Sites
- Proposed Borrow Pits
- Proposed Transport Corridor
- Proposed Transport Corridor (Additional Survey Area)

IBRA Regions

- Chichester
- Roebourne

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1.4.2 Flora and Vegetation

The proposed Anketell Point transport corridor is situated within the Fortescue Botanical District of the Pilbara region, which broadly consists of tree and shrub steppe communities with *Eucalyptus* trees, *Acacia* shrubs, *Triodia pungens* and *Triodia wiseana* (Beard, 1990).

Beard's (1975) 1:1,000,000 vegetation series mapping for the Pilbara Region identified six broad terrestrial vegetation types to occur within the project area and they are described as follows (**Table 3**) :

Table 3 Broad Vegetation Communities described by Beard (1975) within the entire Project Area

Code	Category
t_3Hi	Hummock grasslands, grass steppe; hard spinifex, *Triodia wiseana*
xGc/t1Hi	Mosaic: Short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe; soft spinifex
fl	Bare areas; mud flats
xGc	Short bunch grassland - savanna/grass plain (Pilbara);
e_{16}Lr t_3Hi/a_2Sr t_1Hi	Mosaic: Hummock grasslands, open low tree-steppe; snappy gum over *Triodia wiseana* / Hummock grasslands, shrub-steppe; kanji over *Triodia pungens*
a_2Sr t_1,3Hi	Hummock grasslands, shrub steppe; kanji over soft spinifex & *Triodia wiseana* on basalt

1.5 Biological Factors of Environmental Significance

1.5.1 Significant Flora

1.5.1.1 Flora of State Conservation Significance

The Department of Environment and Conservation (DEC) assigns conservation status to endemic plant species that are geographically restricted to few known populations or threatened by local processes. Allocating conservation status to plant species assists in protecting populations and conserving species from potential threats (DEC, 2009a and 2009b).

Declared Rare Flora species are gazetted under subsection 2 of section 23F of the *Wildlife Conservation Act 1950*.

Species designated as Priority Flora are under consideration for declaration as 'Rare Flora' and are in urgent need of further survey (Priority One to Three) or require monitoring every 5-10 years (Priority Four). **Table 4** presents the definitions of Declared Rare Flora, in accordance with the *Wildlife Conservation Act 1950* and Priority Flora as extracted from Department of Environment and Conservation (2009b).

Table 4 Definition of Rare and Priority Flora Species (Department of Environment and Conservation, 2009b)

Conservation Code	Category
DRF	**Declared Rare Flora – Extant Taxa** "Taxa which have been adequately searched for and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection and have been gazetted as such. "
P1	**Priority One – Poorly Known Taxa** "Taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey. "
P2	**Priority Two – Poorly Known Taxa** "Taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but urgently need further survey. "
P3	**Priority Three – Poorly Known Taxa** "Taxa which are known from several populations, and the taxa are not believed to be under immediate threat (i.e. not currently endangered), either due to the number of known populations (generally >5), or known populations being large, and either widespread or protected. Such taxa are under consideration for declaration as 'rare flora' but need further survey. "
P4	**Priority Four – Rare Taxa** "Taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5-10 years. "

Species at risk of extinction are also recognised at a Commonwealth level and are categorised according to the *Environment Protection and Biodiversity Conservation (EPBC) Act 1999*. Furthermore, significance is not limited to species covered by State and Commonwealth Legislation and also includes species of local significance and species showing significant range extensions or at the edge of their known range.

1.5.2 Threatened and Priority Ecological Communities

Threatened Ecological Communities (TECs) are naturally occurring biological assemblages that occur in a particular type of habitat, which are subject to processes that threaten to destroy or significantly modify the assemblage across its range (DEC, 2001).

Vegetation communities in Western Australia are described as TECs if they have been defined by the DEC Species and Community Branch and found to be Presumed Destroyed (PD), Critically Endangered (CR), Endangered (EN) or Vulnerable (VU) (English and Blyth, 1997).

TECs are indirectly protected under Western Australian legislation through the *Environmental Protection Act 1986* and the Environmental Protection (Clearing of native Vegetation) Regulations 2004(DEC, 2007). Some TECs are protected under the Commonwealth *EPBC Act 1999.* The Environmental Protection Authority's position on TECs states that proposals resulting in the direct loss of TECs are likely to be formally assessed.

Additional to state listed TECs, possible TECs that do not meet survey criteria or that are not adequately defined, are rare but not threatened, have been recently removed from the TEC list or require regular monitoring are considered to be Priority Ecological Communities or PECs (DEC, 2009c).

1.5.3 Local, Regional and National Significant Communities

Vegetation communities are referred to as Locally Significant where they:

- Support populations of Priority Flora species;
- Extend the geographic range of particular taxa from previously recorded locations;
- Are restricted to only one or a few locations;
- Occur as small isolated communities; or
- Exhibit unusually high structural and species diversity (Dr. E.M. Mattiske, *pers. comm.*).

Vegetation communities are referred to as Regionally Significant where they:

- Are limited to specific landform types;
- Are uncommon or restricted plant community types within the regional context; or
- Support populations of Declared Rare Flora (Dr. E.M. Mattiske, *pers. comm.*).

Vegetation communities are referred to as Nationally Significant where they:

- Support populations of Threatened (*EPBC* listed) species; or
- Support populations of TECs listed with national (*EPBC*) significance (Dr. E.M. Mattiske, *pers. comm.*).

Guidance Statement 51 (EPA, 2004) also states that *"vegetation may be significant for a range of reasons, other than a statutory listing as a Threatened Ecological Community or because the extent is below threshold level".* According to Guidance Statement 51, other significant vegetation may include communities that have:

- Scarcity;
- Unusual species;
- Novel combination of species;
- A role as a refuge;
- A role as a key habitat for threatened species or large populations representing a significant proportion of the local to regional total population of a species;
- Being representative of the range of a unit (particularly, a good local and/or regional example of a unit in "prime" habitat, at the extremes of a range, recently discovered range extensions, or isolated outliers of the main range);
- A restricted distribution.

1.5.4 Significant Species

Guidance Statement 51 (EPA, 2004) states that *"species, subspecies, varieties, hybrids and ecotypes may be significant for a range of reasons, other than as Declared Rare Flora or Priority Flora"*. According to Guidance Statement 51 (EPA, 2004), other significant flora may include taxa that:

- Have a keystone role in a particular habitat for threatened species, or supporting large populations representing a significant proportion of the local regional population of a species;
- Have a relic status;
- Have anomalous features that indicate a potential new discovery;
- Are representative of the range of a species (particularly, at the extremes of range, recently discovered range extensions, or isolated outliers of the main range);
- Show the presence of restricted subspecies, varieties or naturally occurring hybrids;
- Have local endemism / a restricted distribution; or
- Are poorly reserved.

1.6 Flora (Variant and Complexes)

Taxonomist Malcolm Trudgen identified differences in the key characteristics of a number of collected flora specimens (in order to determine the significance of the collections). They have been split into different forms and further taxonomic work will be required in future (**Table 5**).

Table 5 Variants and Complexes from collected Taxa

Species	Variant and/or Complex	Malcolm Trudgen Comments
Acacia elachantha	*Acacia elachantha* (golden hairy variant)	This is an informal variant recognised by the WA Herbarium, but not catalogued on Florabase
Euphorbia tannensis subsp. *eremophila*	*Euphorbia tannensis* subsp. *eremophila* (Burrup form)	A variant with some different characters
Gossypium australe	*Gossypium australe* (Whim Creek form) *Gossypium australe* (Burrup Peninsula form)	Two forms with different leaf tomentum
Indigofera monophylla	*Indigofera monophylla* (Cape Preston form) *Indigofera monophylla* (Burrup form) *Indigofera monophylla* (MJ OPP-2) *Indigofera monophylla* (grey leaflet form) *Indigofera monophylla* (grey/green leaflet form)	*Indigofera monophylla* is a species complex, these are different forms, varying in characters such as tomentum and calyx
Scaevola spinescens	*Scaevola spinescens* (broad leaf form) *Scaevola spinescens* (narrow form)	*Scaevola spinescens* is a species complex. These forms require further study but appear to be separate taxa
Senna artemisioides subsp. *oligophylla*	*Senna artemisioides* aff. *oligophylla* (thinly sericeous)	A well known variant of *Senna oligophylla* with a distinct apressed sericeous tomentum
Sida pilbarensis	*Sida pilbarensis* (Ferrugineous form)	This is an informal form of this taxa which is recognised by Robyn Barker from Adelaide Herbarium This taxa is under revision and the interim form will be confirmed by further work
Triodia wiseana	*Triodia wiseana* (fine form)	*Triodia wiseana* (fine form) is a complex and is informally recognised as different to other form/s.
Paspalidium tabulatum	*Paspalidium tabulatum* (Whim Creek form)	There appears to be two forms of this

Species	Variant and/or Complex	Malcolm Trudgen Comments
		taxa, a smaller and larger flowered form The Whim Creek form is the larger flowered form
Polycarpaea longiflora	*Polycarpaea longiflora* (red form) *Polycarpaea longiflora* (Whim Creek form, WC147-7) *Polycarpaea longiflora* (white form)	There are several colour forms. Taxonomic meaning not understood. Needs further research

1.6.1 Other Flora of Potential Conservation Significance

'Other flora' of potential conservation interest have been identified during the surveys. In the opinion of taxonomist Malcolm Trudgen these flora species are important and require special mention. These are flora species that are not listed as Declared Rare Flora (DRF) or Priority species by DEC, but which are poorly known and/or uncommon and may have a restricted distribution (**Table 6**).

Table 6 Other Flora of Conservation Significance

Species	Malcolm Trudgen Comment
Tephrosia aff. *clementii* (4) (M35-14)	Poorly known taxa and its should therefore be treated as if it is a Priority species
Vigna sp. rockpiles (R.Butcher *et al.*, RB1400)	Very uncommon taxon restricted to the Pilbara Bioregion (i.e. endemic to the Pilbara). Its conservation status should be Priority Flora on current knowledge
Trianthema sp. Python Pool	Poorly collected taxon. It's very uncommon and fairly restricted in distribution. It should therefore be treated as if it was Priority Flora

2.0 Objectives

The overall objective of the floristic assessment for the project areas (Anketell Point Transport Corridor, Borrow Pits, Campsites and Communication Towers) was to describe the vegetation and flora, identify any potential floristic matters of conservation significance and provide advice regarding ecological constraints within the project areas.

Additionally, quadrats previously established within the transport corridor that were assessed during the initial Phase 1 'Level 2' assessment conducted in 2008 were reassessed in order to collect ephemeral species that may not have been recorded during the 2008 assessment and to capture seasonal fluctuations.

The specific objectives for the assessment of flora and vegetation values were to:

- Review available information on terrestrial flora and vegetation of the study area and surrounds;
- Collect baseline data and re-collect seasonal data in previously sampled areas;
- Review the conservation status of potential threatened flora and vegetation occurring within the project area;
- Conduct phase two of a 'Level 2' vegetation and flora survey (EPA 2004);
- Determine the presence or absence of DRF, Priority or Significant Species and Communities;
- Accurately map and delineate vegetation communities and vegetation condition;
- Interpret and report on survey results, including a summary of the consequences of these results on environmental approvals; and
- Identify the potential impacts of the project.

3.0 Methodology

The flora and vegetation field assessment of the project area was conducted in accordance with the EPA Guidance Statement No. 51, *Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia* (EPA, 2004) for Level 2 Surveys, specifically addressing:

- Desktop studies;
- A reconnaissance field survey, including:
  - verification of desktop studies; and
  - delineation and characterisation of flora, vegetation units and vegetation condition.
- A detailed flora and vegetation field survey, including:
  - verification of vegetation mapping, vegetation units and vegetation condition; and
  - a comprehensive and quantitative assessment of individual vegetation units by quadrat assessment

3.1 Desktop Assessment

A search of the DEC's Declared Rare and Priority Flora database was undertaken to identify flora of conservation significance that could potentially occur within the project area.

The database search was conducted over an area that encompassed the entire Anketell Point Transport Corridor, (including borrow pits) plus a 1km buffer around the alignment. The 1km buffer ensures that Priority and DRF species not considered during the first database search in 2008 are taken into consideration in this assessment. The following databases were interrogated:

- DEC Threatened Flora Database;
- Western Australian Herbarium records; and
- DEC Declared Rare Flora and Priority Flora List.

A search of the DEC Threatened and priority Ecological Communities database was also conducted for the entire Anketell Point transport corridor and surrounding areas.

3.2 Field Assessment

A Level 2 Flora and Vegetation survey was conducted by experienced AECOM Botanists, Kellie Honczar and Gaby Martinez, assisted by Alexandra Sleep (Graduate Environmental Scientist), Andrew Batty (Senior Ecologist) and Peter Magaro (Senior Environmental Planner) initially between 14-24 April 2009 and then again between 11-15 May 2009. Two supplementary site visits were then conducted on 4 and 29 June 2009 to verify areas previously mapped by Mattiske Consulting Pty Ltd of the Cape Lambert Project Area (Mattiske Consulting Pty Ltd, 2007).

The project areas were traversed by vehicle, foot and helicopter (were appropriate), to verify and further define vegetation communities within the project areas. Detailed information was recorded for each vegetation community where distinct changes in floristic composition and structure were noted.

All 40 quadrats established in 2008 were resurveyed in 2009 to account for seasonal variability. One of these quadrats, APQ9 could not be located again in 2009 and consequently was not resurveyed. It is likely that this quadrat could not be relocated due to flooding that occurred during the wet season or was in an area where heavy grazing and trampling of cattle had occurred.

Quadrat dimensions often had to be adjusted to "fit" the habitat and to ensure that sample area doesn't overlap into differing vegetation communities, particularly in narrow creeklines. Standard quadrat dimensions in the Pilbara, and endorsed by DEC are 50m x 50m (2,500m^2). Therefore if plot dimensions are adjusted, it is usually expected that the total area sampled still be comparable to regular quadrats, and total 2,500m^2. In order to achieve this, for example, a plot established to be 25m wide would need to be 100m long. However, in some cases it is not possible to "fit" sample plots of sufficient lengths within a vegetation type due to river/creek geometry.

Additionally, species diversity and plant density are typically greater in river/creek areas. If sufficient species have been recorded e.g. no additional species are recorded along the length of the quadrat, then the data collected can be utilised for comparison purposes. This is based on the fact that the length of the quadrat is deemed sufficient to capture all species occurring within that vegetation community. The projected foliage cover is calculated based on the proportion of vegetation regardless of total area.

Where the number of additional species being recorded begins to diminish, which is often after 150-200m, sufficient data is collected. Quadrat APQ85 is an example of this, where the size sampled was 15m x 100m and the number of new species recorded in the plot began to diminish before 100m. APQ85 is therefore considered comparable with the rest of the quadrats sampled.

Quadrats APQ16, APQ32, APQ33 and APQ37 were originally established in 2008 and each sample an area of 10m x 50m (i.e. 500m^2). During 2008, these areas were considered sufficient to record the majority of perennial species. Additionally, APQ74 which was established in 2009 samples an area of 50m x 20m (i.e. 1000m^2). The extents of the vegetation communities in the aforementioned areas were too small to establish 50m x 50m quadrats. If areas larger than 10m x 50m (i.e. 500m^2) or 50m x 20m (i.e. 1000 m^2) were sampled for these quadrats, the sampled area would have overlapped with another vegetation unit and as a result would not have been representative of the vegetation community being sampled and described. Therefore within these areas, it was not possible to achieve a quadrat equivalent to 2500m^2. These quadrats are not considered when comparing species abundance per unit area.

New vegetation communities encountered during 2009 were quantitatively assessed using permanent 50m x 50m quadrats. Reoccurrences of previously defined vegetation communities were also sampled using quadrats if appropriate, given geographical ranges of vegetation units across the project areas. During the 2009 survey, an additional 30 vegetation quadrats were established.

Each quadrat was established in a north south orientation. At the north western corner of each quadrat, GPS locations and quadrat reference photos were taken. A thorough walkover was conducted in the area surrounding each quadrat to record additional species occurring within the vegetation community that may not have been recorded within the quadrat.

The described method complies with the EPA's guidelines for flora surveys as outlined in EPA Guidance Statement No. 51 (EPA, 2004). Standardised data collection sheets were used to ensure consistent data records for the following features at each quadrat:

- location;
- flora species;
- dominance of each species;
- average height of each species;
- Projected Foliage Cover;
- soil type and soil colour;
- topography; and
- vegetation condition.

A specimen collection of each flora species recorded within each quadrat was taken in order to minimise errors within the data and to account for variability within species. Plant specimens were identified by Malcolm Trudgen (taxonomic specialist for the Pilbara), assisted by Gaby Martinez (AECOM Botanist) and Alexandra Sleep (AECOM Graduate Environmental Scientist), via a combination of the use of taxonomic keys, comparison with pressed specimens housed at the West Australian Herbarium and Mr Trudgen's personal, extensive knowledge and experience with the Pilbara flora. Nomenclature of the species recorded follows protocols of the West Australian Herbarium.

Aerial imagery provided by API was used in the field to delineate vegetation community boundaries within the project areas. A Panasonic Toughbook ® was utilised in conjunction with a GPS and the aerial imagery, using the mobile mapping capabilities and the ability to plot real time locations onto aerial imagery. Coupled together, the aerial imagery and the Toughbook ® assisted with site navigation and tracking throughout the project areas to ensure that field assessments were within the defined alignments and that vegetation community and condition mapping was recorded accurately.

Vegetation condition is determined in relation to the (perceived) ability of the bushland to maintain itself (Keighery, 1994). This is commonly interpreted primarily on the ratio of visible introduced species to native species however disturbance (e.g. grazing, erosion), degree of alteration to community and habitat structure, site ecology and other factors are also considered.

In order to map vegetation condition of the project area, the condition was determined at a range of detailed recording sites and in between as necessary, where condition changed. The categories of vegetation condition used were consistent with a combination of methods developed by Keighery (1994) and the Braun-Blanquet Scale (Mueller-Dombois and Ellenberg, 1974), as summarised in **Table 7**. Given that effective measures of bushland condition are a measure of both the amount of change in community structure and the proportion of weeds present, a quantitative measure is considered to add value to interpretations and results. Accordingly our method incorporates the Keighery (1994) (descriptive and qualitative) and the Braun-Blanquet Scale (Mueller-Dombois and Ellenberg, 1974) (quantitative) methods.

Table 7 Bushland Condition Ratings (adapted from Keighery, 1994 and the Braun-Blanquet Scale of Cover Abundance (from Mueller-Dombois and Ellenberg, 1974))

Descriptor	Explanation
Pristine	Pristine or nearly so, no obvious signs of disturbance. *0% weed cover*
Excellent	Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species. *1 – 5% weed cover*
Very Good	Vegetation structure altered obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and grazing. *5 – 25% weed cover*
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and grazing. *25 – 50% weed cover*
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance of vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and grazing. *50 – 75% weed cover*
Completely Degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as “parkland cleared” with the flora comprising weed or crop species with isolated native trees or shrubs. *75 – 100% weed cover*

A search of the *Department of Agriculture and Food Western Australia* (DAFWA) website database for Declared Plants was consulted to determine if any of the recorded species are listed as Declared Plants (pest weeds) pursuant to the *Agriculture and Related Resources Protection Act 1976* (DAFWA, 2009).

3.3 Data Analysis

Statistical analysis of the survey data collected by AECOM (2008 and 2009) was undertaken by Astron (2010). The data analysis carried out included three multivariate techniques; Analysis of Similarity (ANOSIM), classification analysis and ordination analysis. The analyses focused on exploring the vegetation communities defined from the data and used in spatial mapping and then included in Environmental Impact Assessment. The purpose of the numerical analyses was to verify the groupings of flora species data into vegetation communities, to ensure that the AECOM descriptions, groupings and mapping has been robust and sufficiently detailed.

The stages of the data analysis were:

- Multivariate analysis of the whole data set to allow interpretation of results in a wider context than the Railway Alignment;
- Tests of differences in vegetation between Railway Alignment and the Port Area; and
- Interpretation of the vegetation communities derived by the field botanists in comparison to the numerical communities identified by the multivariate statistical analyses.

All analyses followed the procedures outlined in Clarke and Gorley (2006), and were carried out using the appropriate modules of *Primer v6*. Further details regarding methodologies utilised by Astron for this analysis are available in the comprehensive report provided as **Appendix A**.

4.0 Survey Limitations

The final phase of the Level 2 Flora and Vegetation Assessment was conducted between April and May 2009 with some areas assessed in June 2009. The timing of the majority of the survey (April/May -post wet) was agreed with DEC Pilbara specialist Stephen Van Leeuwen as being the optimal time to conduct surveys in the Pilbara. This survey identified additional species that may not have been encountered during the initial Level 2 assessment in 2008.

Some areas in the proposed footprint development were added to the scope following the completion of field assessments during the optimum post-wet season period. Such areas occur along the edge of the proposed transport corridor, to provide a slightly wider corridor at certain locations, as well as areas surrounding sampled borrow pits, to encompass slightly greater areas than previously assessed. A combination of extrapolation of previous data and some ground truthing during a site visit in October 2009 was used to determine the vegetation communities, condition and floral composition of these locations. Additional quadrats were not established. It is considered that given the intensive assessment across such a large project area that has been carried out to date during optimal survey conditions; these minor extrapolations do not represent gaps in the data, accuracy or validity of the assessment project as a whole.

Vegetation communities were delineated within the project area based on species composition and structure and may not necessarily take Land System Units into consideration. For this reason some vegetation communities may be located across numerous Land System Units. Deliberation of this in recent times, including discussions with various DEC personnel including Jill Pryde from the Threatened Species and Communities Unit and Pilbara expert, Stephen Van Leeuwen has led to a conclusion that Land System Mapping is based on underlying soil and landform characteristics and whilst there is usually a direct relationship with supported vegetation, ground truthing is considered the most accurate fine scale assessment and characterisation of vegetation distribution.

5.0 Results

5.1 Flora and Vegetation

5.1.1 Desktop Assessment

A search of the DEC Threatened Flora database, identified 26 Priority Flora species that have previously been recorded in the vicinity of the project area. The database results included three Priority One, three Priority Two, 18 Priority Three and two Priority Four species (**Table 8**).

The closest known Priority population (*Acacia glaucocaesia,* P3) is approximately 390m from the 200m wide transport corridor (**Figure 5**).

Table 8 Priority Flora known to potentially occur in the Locality

Species	Conservation Code	Species Description	Preferred Habitat	Likelihood of occurring within alignment
Ipomoea sp. A Kimberly Flora (L.J. Penn 84)	P1	Creeping or twinning perennial, herb. Flowers (pink) in June.	Shallow soils on sandstone.	*Unlikely* to occur (Typically a Kimberly species)
Nicotiana heterantha	P1	Decumbent, short lived annual or perennial, herb to 0.5m high, forming low spreading colonies. Flowers (white/cream) in March-June/September.	Black clay. Seasonally wet flats.	*Unlikely* to occur
Senna sp. Millstream (E. Leyland s.n. 30/8/1990)	P1	Flowers in August.		*May* occur
Cladium procerum	P2	Densely tufted perennial, grass like or herb 9sedge) 2m high. Flowers in November.	Perennial pools	*Unlikely* to occur
Gomphrena pusilla	P2	Slender branching annual, herb, to 0.2 m tall. Flowers white, March – June.	Fine beach sand, behind foredune on limestone	*Unlikely* to occur (Typically a Kimberly species)
Nymphoides beaglensis	P2	Aquatic annual, herb. Flowers (white, pink, purple) in March – June.	Shallow freshwater. Edges of permanent waterholes or in seasonally inundated claypans & depressions.	*Unlikely* to occur (Typically a Kimberly species)
Acacia glaucocaesia	P3	Dense, glabrous shrub or tree, 1.8–6 m tall Flowers yellow, July – September.	Red loam, sandy loam, clay. Floodplains	*Likely* to occur
Atriplex lindleyi subsp. *conduplicata*	P3	Monoecious, short lived annual or perennial herb to 0.2m high	Crabhole plains	*May* occur
Eragrostis lanicaulis	P3	Knotty or bulbous rhizomatous, perennial, grass like or herb, 0.45 – 0.5m high. Flowers March- May/August – October	Red sandy clay. Flats	*May* occur

Species	Conservation Code	Species Description	Preferred Habitat	Likelihood of occurring within alignment
Eriachne semiciliata	P3	Slender, leafy, usually ascending annual, grass like or herb, 0.2 – 0.52m high. Flowers March - April	Shallow soils over rock, red sand, sandy clay. Ridges, sand dunes.	*Unlikely* to occur (Typically a Kimberly species)
Euphorbia inappendiculata	P3	Spreading, procumbent herb, to 0.4m high. Flowers (pink) in August.	Clay soils. Among broken rocky screes.	*May* occur
Fimbristylis sieberiana	P3	Shortly rhizomatous, tufted perennial, grass like or herb (sedge) 0.25 - 0.6m high. Flowers brown, May – June.	Mud skeletal soil pockets. Pool edges, sandstone cliffs.	*May* occur
Flaveria australasica subsp. *gilgai*	P3	Flowers July – August.		*Likely* to occur
Gymnanthera cunninghamii	P3	Erect shrub to 1–2 m tall Flowers cream, yellow, green, January – December.	Hummock Grassland, Sandy soils	*May* occur
Oldenlandia sp. Hamersley Station (A.A. Mitchell PRP 1479)	P3	Spreading annual herb, 0.05 – 0.1m high. Flowers (blue) in March.	Crackling clay, basalt. Gently undulating plain with large surface rocks, flat crabhole plain.	*May* occur
Owenia acidula	P3	Tree, 3-8m high. Flowers (white, brown and cream) in August.	Clay.	*May* occur
Polymeria distigma	P3	Prostrate trailing herb. Flowers (pink) in April – July.	Sandy soils.	*May* occur
Rhynchosia bungarensis	P3	Compact, prostrate shrub, to 0.5 m high. Fl. yellow.	Pebbly, shingly coarse sand amongst boulders. Banks of flow line in the mouth of a gully in a valley wall	*Unlikely* to occur
Stackhousia clementii	P3	Dense broom-like perennial, herb to 0.45m high. Flowers are green, yellow and brown.	Skeletal soils. Sandstone hills.	*May* occur
Stylidium costulatum	P3	Erect, tufted annual herb to 0.1-0.2m high. Flowers (yellow, orange, red) in April-August.	Sandy or clayey soils. Creeks or seasonally wet areas.	*Unlikely* to occur (Typically a Kimberly species)
Swainsona sp. Hamersley Station (A.A. Mitchell 196)	P3	Prostrate annual, herb to 0.1m high. Flowers (blue) in March.	Flat crabhole plains.	*May* occur
Tephrosia bidwillii	P3	Shrub 0.3-0.9m high. Flowers (orange) in May/August.		*May* occur
Terminalia supranitifolia	P3	Spreading, tangled shrub or tree, 1.5–3 m high. Flowers green, yellow, May – July/December.	Sand. Among basalt rocks.	*Likely* to occur
Themeda sp. Hamersley Station (M.E. Trudgen 11431)	P3	Tussocky perennial, grass-like or herb, 0.9–1.8 m high. Flower. August.	Red clay. Clay pan, grass plain.	*May* occur

Species	Conservation Code	Species Description	Preferred Habitat	Likelihood of occurring within alignment
Livistona alfredii	P4	Tree-like monocot (palm) to 10m high. Flowers (cream) in July – September.	Edges of permanent pools.	*May* occur
Pittosporum moluccanum	P4	Tree, 2-6m high. Flowers (white) in February – August.	White sand. Sand dunes.	*Unlikely* to occur (Typically a Kimberly species)

5.1.2 Field Assessment

A total of 325 species from 127 genera and 46 families were recorded within the project areas. The total includes 316 (97%) native species and 9 (3%) introduced (weed) or non-endemic species. The full list of vascular flora species recorded and representative communities in which they occur are presented in **Appendices A and B**, respectively. Qualitative data recorded at individual quadrats is presented in **Appendix C**.

Families with the highest representation were Poaceae (Grass Family – 56 taxa; 55 native, 1 introduced), Papilionaceae (Pea Family – 39 taxa) and Mimosaceae (Wattle Family – 28 taxa; 26 native, 2 introduced).

No species of DRF, listed under the *Wildlife Conservation Act 1950* or as Threatened under the *EBPC Act 1999* were recorded within the project area.

Three species of Priority Flora as listed by the DEC under the *Wildlife Conservation Act 1950* were recorded within the project areas (**Figure 6**). The species recorded are *Vigna* sp. Central, which is listed by DEC as a Priority Two species, *Flaveria australasica* ssp. *gilgai* and *Acacia glaucocaesia* which are both listed by DEC as Priority Three species. Each of these species is discussed below, while a summary of the distribution of each species is provided in **Table 9**.

5.1.2.1 *Vigna* sp. central (M.E. Trudgen 1626) (P2)

This taxon is endemic to the Pilbara and was collected from one site (quadrat CP14) during the 2009 field assessment. There are currently only six recorded populations of this specimen housed at the WA Herbarium. The WA Herbarium indicates this specimen has been collected from the Hamersley Range National Park, Yilgalong Creek, along Tom Price North Road from the junction with Karijini Drive and North Ashburton in Onslow.

5.1.2.2 *Flaveria australasica* spp. *gilgai* (P3)

This taxon is restricted to the Pilbara Bioregion (i.e. endemic to the Pilbara) and was recorded from one site during the 2009 field assessment (**Table 9**). There are seven specimens of *Flaveria australasica* ssp. *gilgai* which are lodged within the WA Herbarium. They range in distribution from between Dampier and Mount Tom Price, along North West Coastal Highway 32km north of Fortescue River, near Mount Florence Homestead and Karijini National Park.

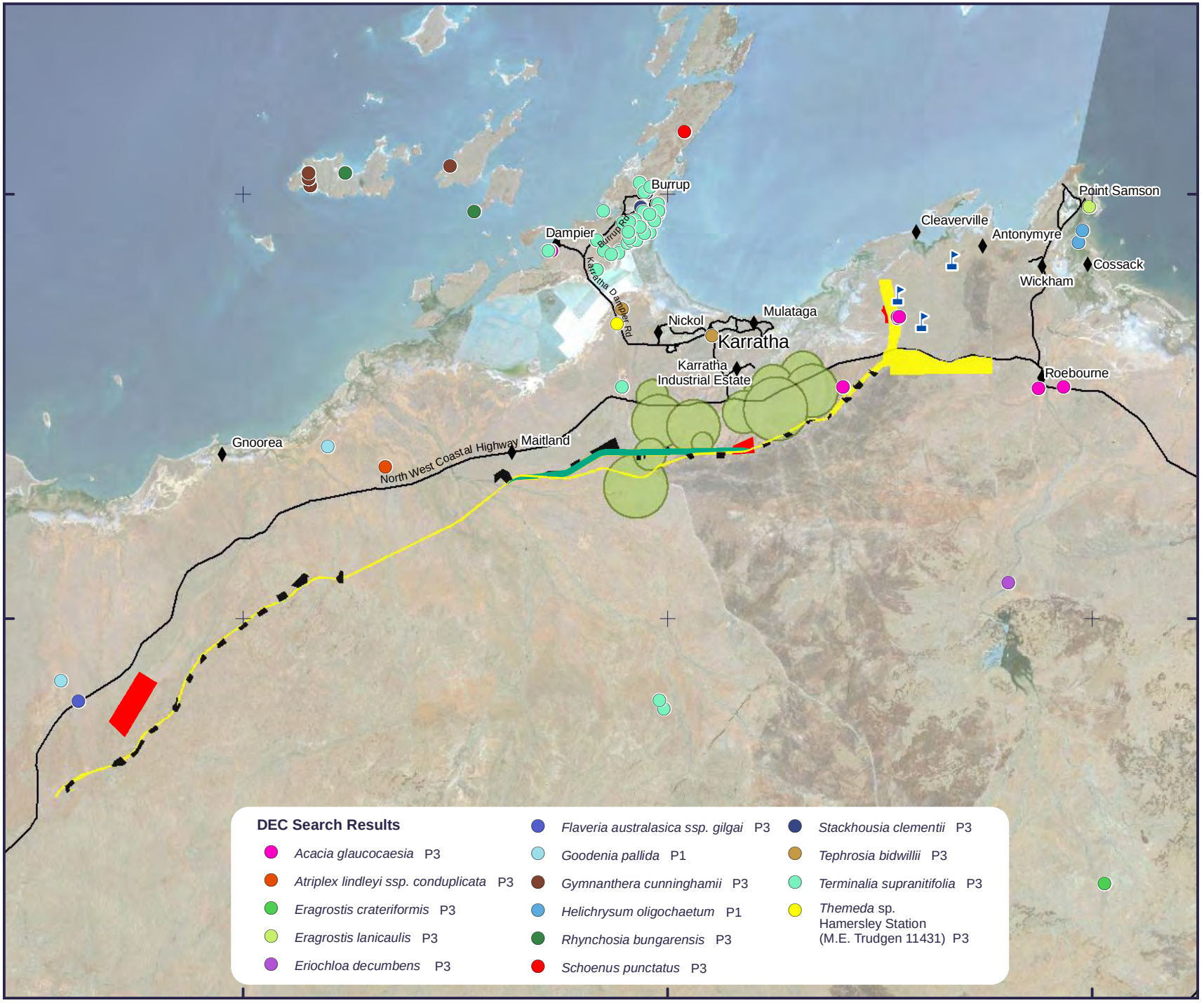
5.1.2.3 *Acacia glaucocaesia* (P3)

This taxon is a dense glabrous shrub or tree to 6m high. It flowers between July to September and prefers red loam, sandy loam clay and floodplains. Its flowers are yellow. There are 33 lodged records of this specimen at the WA Herbarium ranging in distribution from Dampierland, Great Sandy Desert and Pilbara IBRA regions. This taxon was recorded from two sites during the 2009 field assessment (**Table 9**). A single population, comprising five sub-populations and a total of more than 67 individual plants was recorded at a location within the project area between 501668 to 501677mE and 7708273 to 7708300mN (**Figure 6**).

This population of *Acacia glaucocaesia* was also a result in the DEC database search and the site visit during 2009 confirmed this population. This population was previously collected and reported by Bruce Maslin in October 2004. The WA Herbarium specimen collection for this record notes the population as occurring 4km north of the North West Coastal Highway, on the road to Cleaverville.

Table 9 Distribution of Priority Flora within the Project Areas

Species	Conservation Status	Vegetation Community	Quadrat Number
Vigna sp. central	P2	AThg1	CP14
Flaveria australasica spp. *gilgai*	P3	Hf	APQ86
Acacia glaucocaesia	P3	Thg & AThg2	n/a



Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Priority Flora Species & PECs

Figure 5

0 5 10 15

Kilometres

1:500,000

LEGEND

- Proposed Communication Towers
- Proposed Camp Sites
- Proposed Borrow Pits
- Proposed Transport Corridor
- Proposed Transport Corridor (Additional Survey Area)
- Roebourne Plains Gilgai Grasslands (Priority 1 PEC)

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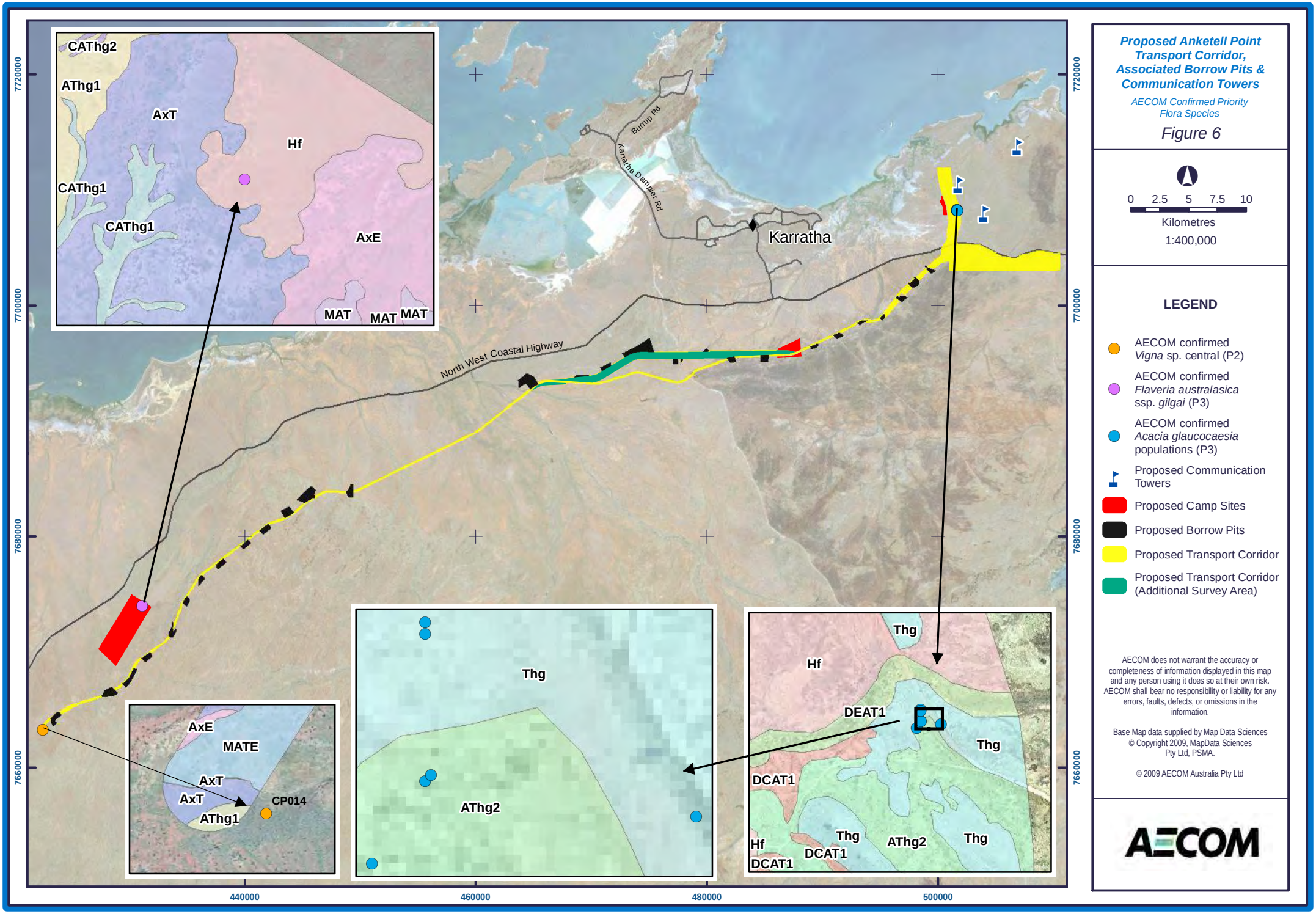

Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

AECOM Confirmed Priority Flora Species

Figure 6

0 2.5 5 7.5 10

Kilometres

1:400,000

LEGEND

- AECOM confirmed *Vigna* sp. central (P2)
- AECOM confirmed *Flaveria australasica* ssp. *gilgai* (P3)
- AECOM confirmed *Acacia glaucocaesia* populations (P3)
- Proposed Communication Towers
- Proposed Camp Sites
- Proposed Borrow Pits
- Proposed Transport Corridor
- Proposed Transport Corridor (Additional Survey Area)

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5.2 Introduced (Weed) Species

Some Environmental weed species are recognised as being very significant in various regions in terms of having current or potential impacts on WA biodiversity (EPA, 2007). Some of the most significant weeds for the Pilbara region are:

- Mesquite (**Prosopis* spp.);
- Ruby Dock (**Acetosa vesicaria*);
- Buffel grass (**Cenchrus ciliaris*);
- Redtop Natal Grass (**Melinis repens*);
- Parkinsonia (**Parkinsonia aculeata*);
- Kapok (**Aerva javanica*); and
- Mexican poppy (**Argemone ochroleuca*)

Close attention was given to the presence of any of the aforementioned species during survey efforts. Nine introduced weeds were recorded within the project areas and included **Aerva javanica, *Prosopis* spp. and **Cenchrus ciliaris* which are significant weeds in the Pilbara region (**Appendices A and B**). Of the nine introduced species recorded, one species (**Prosopis pallida*) is listed as a Declared Plant by DAFWA, pursuant to the *Agriculture and Related Resources Protection Act 1976* (DAFWA, 2009).

Prosopis pallida* was recorded within three quadrats during the 2009 field assessment. Vegetation communities and quadrats in which this species was recorded are summarised in **Table 10.

Table 10 Summary of Vegetation Communities and Quadrats recording Introduced and Declared Plant Species

Species	Declared Plant	Species Description	Vegetation Community	Quadrat Number
**Aerva javanica* (Kapok bush)		Kapok bush is a perennial herb, up to 1.6m high, densely covered in short, branched hairs, giving it a greyish appearance. It was introduced to Australia to assist with the re-vegetation of degraded rangelands. It's now widespread in many types of vegetation from Carnarvon to the Kimberley, although it prefers calcareous soils. It flowers and fruits for most of the year. It is native to northern Africa to south west Asia.	DEAT1 & MAT	APQ12, APQ18
**Cenchrus ciliaris* (Buffel grass)		Buffel grass is tufted, often tussocking perennial to 1m tall. The inflorescence is cylindrical, with purplish flowers produced for much of the year. It's widely planted in pastoral regions as a pasture grass and has become a widespread weed of roadsides, creeklines, river edges and most vegetation types from Shark Bay to the Pilbara and adjacent desert. It continues	MATE, AxE, AEThg, DMATE, DEAT1, AxT, DCAT2, AThg1, AThg2, MAT, DCAT1, CAThg1, AHf & Thg	APQ1, APQ3, APQ4, APQ7, APQ8, APQ9, APQ11,APQ12, APQ16, APQ17, APQ18, APQ21, APQ22, APQ24, APQ25, APQ26, APQ27, APQ30, APQ31, APQ33, APQ34, APQ37, APQ52, APQ56, APQ57, APQ71, APQ72, APQ73,

Species	Declared Plant	Species Description	Vegetation Community	Quadrat Number
		to spread in the north and south, both naturally and through deliberate establishment. It's native to Africa and India.		APQ74, APQ75, APQ77, APQ78, APQ83 & CP14
**Citrullus colocynthis* (Colocynth)		Colocynth is a native of northern Africa and western Asia. It's found in wetlands and creeks in the Pilbara and Kimberley regions. Its fruits are green with yellow markings.	CAThg2	APQ42
**Cucumis melo* ssp. *agrestis* (Ulcardo Melon)		Ulcardo Melon is a trailing annual, herb or climber. It flowers between February-June/September-October. It has yellow flowers.	Hf, AThg2, MAT & AxT	APQ15, APQ17, APQ18, APQ19, APQ20, APQ22, APQ58 & CP12
**Malvastrum americanum* (Spiked Malvastrum)		Spiked Malvastrum is an erect, hairy perennial up to 1.3m tall. It's native to America and has yellow to orange flowers in a dense terminal spike. It is inedible to herbivores and is therefore a weed of river and creek margins, wasteland and many arid zone habitats, from the Nullarbor to the Pilbara and Kimberley.	Hf, AThg1, DEAT1, AxT, DCAT2, DCAT1 & AHf	APQ11, APQ16, APQ25, APQ34, APQ37, APQ58, APQ71, APQ74, APQ83, CP12 & CP14
**Passiflora foetida* var. *hispida*		*Passiflora foetida* var. *hispida* is a common weed of disturbed areas on river and creek banks from the Kimberley to Carnarvon. It's a softly hairy perennial vine with solitary flowers with cream peals and white or purple corona. After flowering, the prickly bracts enlarge to enclose the orange berry. The whole plant has an unpleasant smell, but the ripe fruit is edible. It's native to South America and is now widespread throughout the tropics.	DEAT2	APQ35
**Portulaca oleracea* (Purslane, Pigweed)		Pigweed is a prostrate, succulent annual. Under water stress the whole plant becomes reddish. The shiny leaves are spoon shaped and have yellow flowers in their axils. Pigweed grows and flowers in summer and	AHf, Hf, MAT, AxT, AThg1, AEThg, Thg, DMATE, MATE, DEAT1, AThg2, MAT & AxE	APQ1, APQ4, APQ6, APQ7, APQ8, APQ9, APQ12, APQ15, APQ19, APQ22, APQ23, APQ24, APQ28, APQ29, APQ31, APQ34,

Species	Declared Plant	Species Description	Vegetation Community	Quadrat Number
		is a common widespread weed of horticulture, paddocks and gardens. It is considered a native in most of the State but is probably introduced to the south-west.		APQ36, APQ57, APQ58, APQ75 & CP14
**Prosopis pallida* (Algaroba)	✓	Algaroba is a fast growing thorny shrubs or tree 4 to 10m high, originating from South America. Algaroba has a widespread distribution throughout the State from Derby to Carnarvon. All *Prosopis* species are Declared Plants in WA (Hussey *et al.*, 2007)	Hf, DCAT1 & DCAT2	APQ16, APQ25 & CP12
**Vachellia farnesiana* (Mimosa Bush)		Mimosa Bush is a dense, sprawling, spiny shrub to 4m with bipinnata leaves and paired spines at each node. It is distinguished from Mesquite by the fact that it's sweetly scented flowers are grouped into globular flower heads arising from the leaf axils, and by its pods which are black and sausage shaped and tend to be retained on the plant. It is a widespread weed of roadsides, creeks, rivers and disturbed flood plains from the Kimberley to Carnarvon and occasionally south to Muchea along the roads used by trucks carrying stock from the pastoral area. It's originally from South America and was introduced to Australia prior to European Settlement.	DCAT1 & DEAT2	APQ25 & APQ35

NB: * denotes introduced or non endemic species (weeds).

The *Agriculture and Related Resources Protection Act 1976,* lists weed species (93 species within WA) as Declared Plants or significant pest weeds. Under the Act, these species are subject to restrictions on movement or sale and landholders are obliged to carry out control measures to prevent their spread. Weeds effectively colonise areas where the soil has been disturbed and where there has been clearing and can then rapidly invade surrounding natural sites. *The DAFWA* recommended control measures are detailed in **Appendix D**.

5.3 Vegetation Communities

A total of 19 vegetation communities and cleared areas were described and mapped during the field assessment in 2009. Vegetation community descriptions made during the initial Phase 1 'Level 2' assessment conducted in 2008 were refined during the Phase 2 'Level 2' assessment conducted in 2009. This allowed for more accurate and detailed vegetation descriptions and as a result some of the vegetation descriptions have changed. The vegetation communities within the project areas are presented spatially in **Figures 7.1 to 7.79** and are described below.

5.3.1 Grasslands

Hf

Horseflats of *Eragrostis* spp., *Eriachne* spp. and *Dichanthium* spp. on stony red clayey loam.

This community is represented by quadrats APQ15, APQ20, APQ29, APQ36, APQ58, APQ59, APQ70, APQ86 and CP12.

Thg

Mid Dense to Closed Hummock Grasslands of *Triodia* spp. on hillslopes, ridgetops and stony plains.

This community is represented by quadrats APQ06, APQ23, APQ50, APQ56, APQ73, APQ76, APQ77 and APQ78.

5.3.2 Shrublands

AEThg

Tall Open Shrubland of *Acacia pyrifolia* var. *pyrifolia* over a Closed Hummock Grassland dominated by *Triodia wiseana* (fine form).

This community is represented by quadrat APQ04.

AHf

Shrubland of *Acacia sclerosperma* subsp. *sclerosperma* over a Tussock Grassland of *Eragrostis xerophila*, *Eriachne benthamii*, and *Xerochloa barbata* on red cracking clay.

This community is represented by quadrat APQ34.

Amg

Tall Shrubland of *Acacia inaequilatera* with occasional *Corymbia hamersleyana* over a Grassland dominated by *Triodia wiseana, Triodia epactia* and *Chrysopogon fallax* in association with drainage lines.

This community is represented by quadrats APQ41 and APQ55.

AThg1

Tall Shrubland to Open Shrubland dominated by *Acacia pyrifolia* var. *pyrifolia*, *Acacia bivenosa*, *Acacia ancistrocarpa* and *Acacia synchronicia* over a Mid Dense Hummock Grassland dominated by *Triodia wiseana* (fine form) on rocky sandy flats, hill slopes and ridgetops.

This community is represented by quadrats APQ13, APQ14, APQ21, APQ26, APQ38, APQ40, APQ44, APQ45, APQ48, APQ49, APQ72 and CP14.

AThg2

Open Shrubland to Low Open Shrubland of *Acacia pyrifolia* var. *pyrifolia* with scattered *Corchorus* aff. *parviflorus* over a Mid Dense Hummock Grassland of *Triodia wiseana* (fine form) on rocky hill slopes.

This community is represented by quadrats APQ17 and APQ19.

AxE

Shrubland to Low Open Shrubland of *Acacia xiphophila* over a Tussock Grassland dominated by *Eriachne* spp., *Eragrostis* spp. and *Xerochloa* spp. over a Hummock Grassland of *Triodia wiseana* (fine form) on rocky clay loam.

This community is represented by quadrats APQ03, APQ05, APQ31, APQ52 and APQ54.

AxT

Tall Shrubland to Open Shrubland of *Acacia xiphophila* over Hummock Grassland dominated by *Triodia wiseana* (fine form) and *Triodia angusta* on red rocky clay loam.

This community is represented by quadrats APQ02, APQ11, APQ22, APQ47, APQ53 and APQ75.

MAT

Mixed Shrubland of *Acacia* spp. mainly dominated by *Acacia ancistrocarpa, Acacia bivenosa* and *Acacia pyrifolia* var. *pyrifolia* over a Mid Dense Hummock Grassland of *Triodia wiseana* (fine form), *Triodia angusta*, *Triodia* aff. *epactia*, *Triodia epactia* (Form A) on orange brown sandy soil with rocky nodules.

This community is represented by quadrats APQ18, APQ24, APQ28, APQ43, APQ57, APQ60, APQ84 and APQ85.

MATE

Tall Shrubland of *Acacia xiphophila, Acacia bivenosa* and *Acacia synchronicia* over a Mid Dense Hummock Grassland of *Triodia wiseana* (fine form), *Eriachne* spp. and *Aristida* spp. on red sandy loam.

This community is represented by quadrats APQ01, APQ08 and APQ30.

5.3.3 DRAINAGE LINES/CREEKLINES AND MINOR FLOWLINE COMMUNITIES

CAT

Low Open Woodland of *Corymbia hammersleyana* over a Shrubland of *Acacia trudgeniana* and *Acacia bivenosa* over a Closed Tussock Grassland of *Triodia wiseana* (fine form) on lower red stony loam slopes.

This community is represented by quadrat APQ51.

CAThg1

Tall Open Scrub to Tall Open Shrubland mainly dominated by *Acacia ancistrocarpa, Acacia tumida* var. *pilbarensis*, *Acacia pyrifolia* var. *pyrifolia* and *Acacia elachantha* (golden hairy variant) over a Mid Dense Hummock Grassland of *Triodia wiseana* (fine form) and *Triodia epactia* in creeklines on rocky hill slopes.

This community is represented by quadrats APQ32 and APQ33.

CAThg2

Tall Open Shrubland of *Acacia inaequilatera* with scattered *Acacia bivenosa* over a Mid Dense Hummock Grassland of *Triodia wiseana* on orange rocky sand.

This community is represented by APQ42 which is a data collection point for a vegetation description, not a quadrat.

DCAT1

Woodland of *Corymbia hamersleyana* over a Tall Shrubland mainly dominated by *Acacia bivenosa*, *Acacia tumida* var. *pilbarensis* and *Acacia ancistrocarpa* with occasional *Grevillea pyramidalis* subsp. *leucadendron* over a Mid Dense Hummock Grassland of *Triodia wiseana* (fine form) and *Triodia angusta* on red rocky soils in association with drainage lines.

This community is represented by quadrats APQ25 and APQAPQ27.

DCAT2

Low Open Woodland of *Corymbia hammersleyana* over a Tall Shrubland of *Acacia pyrifolia* var. *pyrifolia*, *Acacia bivenosa* and *Grevillea pyramidalis* subsp. *leucadendron* over a Mid Dense Hummock Grassland of *Triodia wiseana* (fine form) over a Tussock Grassland dominated by *Chrysopogon fallax* and **Cenchrus ciliaris* in minor drainage lines.

This community is represented by quadrats APQ16, APQ39 and APQ46.

DEAT1

Open Woodland of *Eucalyptus victrix* with scattered *Corymbia hamersleyana* over a Shrubland mainly dominated by *Acacia bivenosa, Acacia trachycarpa* and *Acacia sclerosperma* subsp. *sclerosperma* over a Hummock Grassland of *Triodia wiseana* (fine form), *Triodia epactia* and *Triodia angusta* over a Tussock Grassland of **Cenchrus ciliaris* in rocky drainage lines.

This community is represented by APQ09, APQ12, APQ37, APQ71, APQ74 and APQ83.

DEAT2

Open Forest of *Eucalyptus victrix* over a Tall Open Scrub of *Melaleuca glomerata* and *Acacia coriacea* subsp. *pendens* over an Open Hummock Grassland of *Triodia wiseana* (fine form).

This community is represented by quadrat APQ35.

DMATE

Mixed Tall Open Scrub to Shrubland mainly dominated by *Acacia bivenosa, Acacia xiphophila*, *Acacia victoriae* and *Acacia ancistrocarpa* over a Hummock Grassland of *Triodia wiseana* (fine form) and *Themeda triandra* on red sandy loam in drainage lines.

This community is represented by quadrats APQ07 and APQ10.

5.3.4 Cleared Areas

Cleared

Cleared areas void of any native and non native species.

The number of assessment sites (quadrats) established and scored for each vegetation community within each project component is summarised in **Table 11**.

Table 11 Number of Sites Recorded within each Vegetation Community in each project area

Vegetation Community	Proposed Anketell Point transport corridor	Proposed Borrow Pit	Campsites	Communication Towers
AEThg	1			1
AHf	1			
Amg	2			
AThg1	9	3		
AThg2	2			
AxE	4	1		
AxT	6			
CAT		1		
CAThg1	2			
CAThg2		1		
DCAT1	2			
DCAT2	3			
DEAT1	5		1	
DEAT2	1			
DMATE	2			
Hf	8			
MAT	5	1	2	
MATE	3			
Thg	3	2	2	3

5.4 Vegetation Condition

The condition of the vegetation within the project areas ranges from Completely Degraded to Very Good – Excellent. The majority of the project area was recorded to be in Very Good condition with 3321.91Ha or 39.88% of the total area in this condition. The proportion of varying vegetation condition is presented in **Table 12**.

Table 12 Proportion of Varying Vegetation Condition

Condition Rating	Area (Ha)	% Total Area Surveyed
Completely Degraded	9.77	0.12
Degraded	74.84	0.90
Degraded – Good	325.42	3.91
Good	2302.92	27.65
Good – Very Good	2135.10	25.63
Very Good	3321.91	39.88
Very Good – Excellent	160.01	1.92
TOTAL	**8329.97**	**100**

Vegetation condition for the Proposed Anketell Point Transport Corridor, borrow pits, proposed camp sites and communication tower sites have been mapped spatially and are presented with vegetation communities in **Figures 7.1 – 7.79**.

Approximately 67.43% of the vegetation within the proposed transport corridor is in 'Good - Very Good' or better condition, and 27.65% of the vegetation is considered to be in Good condition. Less than 5% of the vegetation is Completely Degraded, Degraded or Degraded - Good.

A few tracks and gravel roads traverse the alignment at various locations; however they have not been individually delineated as part of the vegetation condition mapping. Generally tracks and roads are in Completely Degraded condition but have not been individually delineated due to the small areas they occupy in comparison to the entire project area.

5.5 Threatened and Priority Ecological Communities

There are currently two communities listed as TECs that are known from the Pilbara region. These are:

- *Themeda* Grasslands - *Themeda* grasslands on cracking clays (Hamersley Station, Pilbara). Grassland plains dominated by the perennial *Themeda* (kangaroo grass) and many annual herbs and grasses; and
- Ethel Gorge - Ethel Gorge aquifer stygobiont community.

It has been reported by Kendrick and McKenzie (2001) and Kendrick and Stanley (2001) that there are no known TECs within the Chichester or the Roebourne Biogeographical Subregions. The search of the DEC Threatened and Priority Ecological Communities database conducted on 2 April 2009 did not identify any known TECs within the project areas. However, it did identify one Priority 1 Ecological Community, namely *Roebourne Plains Coastal Grassland* as occurring in proximity to the project areas (**Figure 5**).

The locations of PECs are represented by point data, based on confirmed study plots assessed by DEC. With respect to the Roebourne Plains Coastal Grassland the buffers for five of these points intersect the project areas (**Figure 5**). The buffers of DEC's PEC point data are sized such that the radius extends to the furthest point of the community, to ensure that the 'buffer' area encompasses at least the entire PEC. Therefore, occasionally buffers may extend across vegetation community boundaries into communities that do not represent PEC vegetation. In this regard, for proposed impacts on areas of PEC vegetation, it is important to accurately ground truth the boundaries of vegetation classifications and relate these to PEC equivalence. Furthermore, protection buffers should also be delineated for the PEC boundary.

There are 19 known PECs within the Pilbara Region. Further consultation with DEC now indicates that the *Roebourne Plains Coastal Grassland* PEC differs from the surrounding clay flats of the Horseflat Land System Unit which are dominated by *Eragrostis xerophila* and other perennial tussock grass species (*Eragrostis* mostly) (Jill Pryde, April 2009, *pers. comm.*).

Recently, the *Roebourne Plains, Coastal Grassland* was subject to a much more detailed assessment following results of the DEC Pilbara Biological Surveys, which set up survey sites on Roebourne Grasslands. This assisted in further defining the community and subsequently the *Roebourne Plains Coastal Grasslands with Gilgai micro-relief of deep crackling clays* (*Roebourne Plains Gilgai Grasslands*) was nominated as a TEC to the WA Threatened Ecological Communities Scientific Committee in August 2008 (Jill Pryde, April 2009, *pers. comm.*).

"*The Roebourne Plains Gilgai Grasslands*" is described as coastal grassland with self mulching cracking clays that emerge on depositional surfaces. The cracking clay plains are Gilgai and support mostly annual tussock grasses (*Sorghum* sp.) and ephemeral herbs dominated by Papilionaceae (*Desmodium* spp. and *Glycine* sp). Although the Horseflat Land System on which these grasslands occur is extensive, the *Roebourne Plains Gilgai Grasslands* are confined to only a small portion of the system that consists of heavy cracking clay soil. It occurs as disjunct occurrences of cracking clays on the Nickol/Maitland River floodplain in the vicinity of Karratha (Jill Pryde, Dec 2009, *pers. comm*.). The DEC search results for Threatened and Priority Ecological Communities indicates that this proposed TEC overlaps the transport corridor at approximately 10.6km south of Karratha (**Figure 5**).

5.6 Other Communities of Conservation Significance

Reservation priorities have been given to the six vegetation communities previously mapped by Beard (1975) within the Chichester and Roebourne Biogeographic Subregion. The Reservation Priority Status relates to the proportion of each vegetation type that is currently protected in IUCN reserves or DEC protected lands. In general, if none of a particular community is currently protected in reserves, then it is given 'High" Reservation Priority Status, whilst land currently protected in reserves may have a lower status of "Moderate". The Reservation Priority status for the Beard vegetation communities occurring within the project areas are provided in **Tables 13 and 14** (Kendrick and McKenzie, 2001 and Shepherd *et al*., 2002).

Although they are not categorised as TEC's, communities are determined to be at risk where a number of threatening processes have been identified with the potential to destroy or significantly modify biological assemblages of the community. High Reservation Priority communities are often of limited extent and are subject to threatening processes such as grazing pressures, altered fire regimes and competition from weed species (Kendrick and McKenzie, 2001 and Shepherd *et al*., 2002).

Vegetation communities not well represented in reserves are considered to be more at risk of becoming a TEC. Therefore, clearing of such community types is likely to be considered of greater environmental impact than clearing of vegetation that is well represented in the reserve system.

The current extent of each of the Beard communities which occur within the surveyed areas is presented in **Tables 13 and 14.**

Table 13 Community Reservation Priority status for Beard Vegetation within the Chichester Subregion (Kendrick and McKenzie, 2001 and Shepherd *et al*, 2002)

Vegetation Code No.	Beard Code	Community Description	Pre European Extent (ha)	Current Vegetation Extent (ha)	Current Extent within Project Area (ha)	Remaining (%)	Area protected in Conservation Reserve	Reservation Priority
127	mud	Bare Areas; mudflats	778 381	778 153	14.97	100	0	High
157	t_3Hi	Hummock grasslands, grass steppe; hard spinifex, *Triodia wiseana*	542 861	542 861	3666.91	100	0	Medium / Low
173	a_2Sr t_1,3Hi	Hummock grasslands, shrub steppe; kanji over soft spinifex & *Triodia wiseana* on basalt	1 865 728	1 856 728	39.56	100	255 577.3	Medium / Low
175	xGc	Heterogeneous short bunch grasslands; savanna grass plain;	558 002	558 002	17.43	100	22 929.7	High
587	e_{16}Lr t_3Hi/a_2Sr t_1Hi	Mosaic: Hummock grasslands, open low tree-steppe; snappy gum over *Triodia wiseana* / Hummock grasslands, shrub-steppe; kanji over *Triodia pungens*	627 733	627 733	1095.91	100	131 419.3	Low
589	xGc/t_1Hi	Mosaic: Short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe; soft spinifex	848 201	848 201	6.84	100	0	High

Table 14 Community Reservation Priority status for Beard Vegetation within the Roebourne Subregion (Kendrick and Stanley, 2001 and Shepherd *et al*. 2002)

Vegetation Code No.	Beard Code	Community Description	Pre European Extent (ha)	Current Vegetation Extent (ha)	Current Extent within Project Area (ha)	Remaining (%)	Area protected in Conservation Reserve (ha)	Reservation Priority
127	mud	Bare Areas; mudflats	778 381	778 153	49.88	100	30 345.4	Low
157	t_3Hi	Hummock grasslands, grass steppe; hard spinifex, *Triodia wiseana*	542 861	542 861	463.01	100	10.6	Medium
173	a_2Sr t_1,3Hi	Hummock grasslands, shrub steppe; kanji over soft spinifex & *Triodia wiseana* on basalt	1 865 728	1 856 728	47.91	100	0	Medium
175	xGc	Heterogeneous short bunch grasslands; savanna grass plain;	558 002	558 002	948	100	363.8	High
587	e_{16}Lr t_3Hi/a_2Sr t_1Hi	Mosaic: Hummock grasslands, open low tree-steppe; snappy gum over *Triodia wiseana* / Hummock grasslands, shrub-steppe; kanji over *Triodia pungens*	627 733	627 733	643.65	100	0	Medium
589	xGc/t_1Hi	Mosaic: Short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe; soft spinifex	848 201	848 201	1335.89	100	13 758.3	Medium

6.0 Discussion

6.1 Flora

A total of 325 species from 127 genera and 46 families were recorded within the project areas associated with the Anketell Point transport corridor, during the 2009 field assessments. During the initial Phase 1'Level 2' survey conducted in 2008, there was a total of 147 vascular species from 83 genera and 34 families recorded. Therefore between the two assessments there has been an increase in the number of species recorded of 178 vascular flora species, 44 genera and 12 families. The number of taxa has increased during the second phase of the 'Level 2' Flora survey as a result of the occurrence of a greater number of annual species following substantial summer rainfall events as well as inclusion of additional survey sites. An additional 30 sites were sampled during the 2009 assessment, which included quadrats, data collection sites for vegetation descriptions and opportunistic observations.

The 325 flora species encountered during 2009 were identified from 19 differing vegetation communities. Based on the length of the entire transport corridor, approximately 100km, 325 species recorded over this length is considered to be a low species diversity (i.e. equating to 3.25 species per kilometre) for the Pilbara region (Stephen Van Leeuwen, April 2010, *pers. comm*.). Vegetation associations and the species diversity within them is attributable to the underlying geology and hydrology. The surveys were conducted during April-May (post wet) 2009, which was considered to be an optimal time to conduct surveys in the area due to sufficient wet-season rains. Therefore, the likelihood of recording a high proportion of the species diversity supported by the project area at the time of the field surveys is high.

6.1.1 Declared Rare, Priority or Other Significant Flora

Interrogation of the DEC database identified 17 Priority Flora species with the potential to occur within the project area:

- *Acacia glaucocaesia* (P3);
- *Atriplex lindleyi* subsp. *conduplicata* (P3);
- *Eragrostis lanicaulis* (P3);
- *Euphorbia inappendiculata* (P3);
- *Fimbristylis sieberiana* (P3);
- *Flaveria australasica* subsp. *gilgai* (P3);
- *Gymnanthera cunninghamii* (P3);
- *Livistona alfredii* (P4);
- *Oldenlandia* sp. Hamersley Station (A.A. Mitchell PRP 1479) (P3);
- *Owenia acidula* (P3);
- *Polymeria distigma* (P3);
- *Senna* sp. Millstream (E.Leyland s.n. 30/8/1990) (P1);
- *Stackhousia clementii* (P3);
- *Swainsona* sp. Hamersley Station (A.A. Mitchell 196)
- *Tephrosia bidwillii* (P3);
- *Terminalia supranitifolia* (P3); and
- *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) (P3).

It has been determined that there is high potential for only three of these species to occur within the project areas based on preferred habitat and soil types, as outlined in **Table 8**. These species are; *Acacia glaucocaesia*, *Flaveria australasica* spp. *gilgai* and *Terminalia supranitifolia*, all which are classified by DEC as Priority Three Flora.

Two of the listed significant flora species identified through the DEC database search (**Table 8**) were recorded during the survey in 2009, namely *Acacia glaucocaesia* (P3) and *Flaveria australasica* ssp. *gilgai* (P3). An additional Priority 2 flora species not identified through the DEC Declared Rare and Priority Flora search namely, *Vigna* sp. central (M.E. Trudgen 1626) was also recorded. A single population of *Acacia glaucocaesia*, comprising five sub-populations and a total of more than 67 individual plants was recorded at a location between 501668 to 501677mE and 7708273 to 7708300mN. This species has been recorded to occur in communities Thg and AThg2. *Flaveria australasica* ssp. *gilgai* was recorded from one site only (i.e. APQ86) and occurs within the Horseflat (Hf) community (**Figure 6, Table 9**). *Vigna* sp. central (M.E. Trudgen 1626) was recorded to occur within Tall Shrubland to Open Shrubland dominated by *Acacia species* over a Mid Dense Hummock Grassland dominated by *Triodia wiseana* (AThg1) community within Quadrat CP14.

The other species identified from the DEC database search with the potential to occur within the transport corridor is *Terminalia supranitifolia.* This species is a perennial shrub of considerable size (2-3m in height), which if present in the project area, would have been easily observed and recognisable. Therefore, it can be excluded from occurring within the project areas with some confidence.

Spatial information obtained from the DEC indicates that all known populations of Priority Flora occur a significant distance from the project areas and it is not anticipated that any of these will be impacted.

No Declared Rare Flora was identified to occur within the transport corridor from either desktop assessment and during the 2009 assessment.

'Other Flora' of potential conservation significance were identified during the 2009 field assessment are outlined in **Table 6**. These taxa are *Tephrosia* aff. *clementii* (4) (M35-14), *Vigna* sp. rockpiles (R.Butcher *et al.*, RB 1400) and *Trianthema* sp. Python Pool. All of these taxa are very uncommon and poorly known and based on current knowledge they should therefore be treated as if they were Priority Flora (Malcolm Trudgen, 2009, *pers.comm*).

6.1.2 Introduced Species

To date, over 1,200 introduced (weed) species have been recognised to occur within Western Australia (EPA, 2007). Specifically within the Pilbara Bioregion a total of 86 weed species are known. Of these, 71% have been classified as Environmental (pest) Weeds (EPA, 2007). Environmental Weeds establish in natural ecosystems and adversely modify natural processes, resulting in the decline of the invaded community. Weeds threaten the survival of many flora because of their rapid growth and the ability to out-compete native plants for available nutrients, water, space and sunlight.

A total of nine introduced species were recorded within the project areas. This consisted of three of the most significant terrestrial weed species for the Pilbara region (**Aerva javanica, *Cenchrus ciliaris* and **Prosopis pallida*) one of which is listed as a Declared Plant by the *Department of Agriculture and Food,* namely **Prosopis pallida.*

**Aerva javanica* (Kapok bush) was recorded to occur in two quadrats (APQ12 and APQ18). This species is a perennial herb up to 1.6m in height and is densely covered in short, branched hairs giving it a greyish appearance. This species is native to northern Africa and south west Asia and was introduced to Australia to assist with revegetation of degraded rangelands. It is now widespread in many types of vegetation from Carnarvon to the Kimberley.

Cenchrus ciliaris* (Buffel grass) was recorded to occur in 34 quadrats (Table 10**). Buffel grass has been identified as a major threat to biodiversity in areas across Australia including the Rangelands of WA (CRC Weed Management, 2008). This species is native to Africa and south Western Asia. It grows on a range of soil types and is commonly found on stony and sandy soil (National Weed Strategy, 2009). This species has been identified as one of the top environmental weeds in Australia, requiring a very high urgency of action. It is considered as a critical invasive species because of its potential to displace native herbaceous species, affect the availability of food for native herbivores and alter fire regimes. This species was originally introduced for erosion control and pasture as it can withstand heavy grazing, however it has become an aggressive coloniser of mesic habitats (e.g. alluvial pans) in the arid zone (DEWHA, 2009b).

*_Prosopis pallida_ (Algaroba) was recorded to occur in three quadrats (APQ16, APQ25 and CP12) and is generally associated with watercourses. It is a tree or shrub to 10m in height and occurs on the coast, in sand, loam, wet soil (and saline soil), tidal flats, banks of watercourses, paddocks, wastelands and on bare areas (DEC, 2009a). This species is very salt tolerant, deep rooted and survives long periods of drought. Algaroba is known to infest an extensive area of Mardie station and is found in coastal areas on Peedamulla and Yarraloola stations (Van Vreeswyk *et. al.,* 2004). It is an aggressive invader of the rangelands and forms dense thorny thickets which shade out more useful foraging plants (Van Vreeswyk. *et al*., 2004). Under the *Agriculture and Related Resources Protection Act 1976*, control measures are required to prevent the spread of this species. The *DAFWA* recommended control measures that are detailed in **Appendix D**. This plant has been declared a weed of National significance (National Weed Strategy, 2009).

The remaining six weed species recorded during the 2009 field assessment are (**Table 10**).

- *_Citrullus colocynthis_, Colocynth, recorded in one quadrat;
- *_Cucumis melo,_ Ulcardo Melon, recorded in eight quadrats;
- *_Malvastrum americanum,_ Spiked Malvastrum, recorded in eleven quadrats;
- *_Passiflora foetida_ var. _hispida_, recorded in one quadrat;
- *_Portulacca oleracea,_ Purslane, recorded in 21 quadrats; and
- *_Vachelia farnesiana,_ Mimosa Bush, recorded in two quadrats.

These species are considered less invasive than Kapok Bush, Buffel grass and Algaroba.

6.2 Vegetation

Nineteen vegetation communities and cleared areas were recorded within the project area. These communities consisted of two Grasslands, nine Shrublands, eight Drainage and Creekline communities and Cleared areas.

Nineteen vegetation communities over such a large project area (that spans approximately 100km) is not considered to be a high community diversity. The project area is represented by three of the eight Land System units for the Pilbara; Ruth, Rocklea and Horseflats, and of these, the latter is typically dominated by only a few vegetation types. The proposed transport corridor tends to favour the plains of the Horseflats (comprising 19% by area of the vegetation assessed) for engineering reasons, and thus, a large proportion of the project area is floristically not as diverse as much of the region.

The Vegetation Communities were mapped based on species composition and changes in soil type and did not primarily take into consideration the changes in Land System Units. For this reason a number of vegetation communities identified during the preliminary assessment may traverse a number of differing land systems (**Figure 3**).

A range of factors, including isolation, occurrence of significant flora or fauna and landform type, determines the significance of native vegetation communities (**Sections 1.5.3 and 1.5.4**). However, the most important factor in consideration of community significance is the degree of representation in the local and regional area. That is, vegetation communities are considered significant if they are poorly represented elsewhere.

Vegetation Communities can be considered to be significant at either a local or regional level, depending on their representation in the local or regional context. Local and regional significance of the vegetation communities surveyed for the project are discussed in the following sections.

6.2.1 Statistical Analysis of Vegetation Data

The statistical analysis was carried out by Astron in order to verify that flora/vegetation data collected in the field and then grouped for the purposes of vegetation descriptions and mapping has been robust and sufficiently detailed. The report of this analysis is provided as **Appendix A**.

Analysis of the AECOM survey data found that there was a significant difference in data obtained for the transport corridor in comparison to the adjacent API project area at the Port Development Area (Global R = 0.398, p<0.001), which confirms significant differences in the species occurrences across the two project areas, and also allows a closer examination of each of the two data sets; transport corridor and Port Development Area, separately. A summary of the key results follows.

Classification analysis reflected the difference between the transport corridor and the Port Development Area. Only one Port Area quadrat (APQ98) was clustered within a transport corridor community (due to the occurrence of the dominant tussock grass *Eragrostis xerophila*). No transport corridor quadrats occurred within a numerical community dominated by Port Development Area quadrats.

Twelve significant groups of quadrats that represented vegetation communities were identified within the data from the transport corridor project area (Sample statistic Pi = 4.304, p<0.001), which indicates that the AECOM botanical field survey and results applied a precautionary approach to delineating individual vegetation communities in comparison to the numerical analysis. The implication for the Environmental Impact Assessment is that the mapping used to define vegetation communities is very unlikely to have grouped vegetation communities that may be of environmental significance. This cautious approach indicates that AECOM results have been presented to a finer level of detail than statistically indicated and that vegetation types have not been inappropriately grouped.

The cautious approach discussed above that was used to undertake delineation of vegetation communities is confirmed by the ANOSIM test of the groupings based on the 'field defined' vegetation communities. AECOM used field descriptions of vegetation communities coupled with aerial photography to undertake vegetation mapping and applied a vegetation code based on field descriptions of vegetation communities to each individual survey quadrat. The purpose of this final ANOSIM test was to determine if these field descriptions of vegetation communities were significantly associated with the actual quadrat data, and examine if strong overlap between the vegetation codes exists. This test indicated that significant associations between the field defined vegetation communities and the quadrat data occur (Global R = 0.563, p<0.001).

Analysis of the field applied vegetation communities used in mapping vegetation within the proposed transport corridor also indicates significant overall groupings (Global R = 0.567, p<0.001).

The conclusion of the range of statistical analyses carried out is that a cautious approach has been used in defining individual vegetation communities and, based on the numerical analysis, inappropriate 'grouping' of vegetation communities has not occurred.

The conclusions discussed above have determined that the described and mapped vegetation communities from the AECOM assessments have a sound basis for further consideration and assessment of their conservation significance, discussed in the following sections.

6.2.2 Locally Significant Vegetation

Determining vegetation representation on a local level involves assessing the proportionate extent of each recorded community within the project area. Based on this, it is considered that vegetation communities AEThg, AHf, DEAT2, DMATE, Amg, CAThg2, CAT and DCAT2 may be considered significant due to the limited in representation (by area) within the local context (**Table 15**). Representation of less than 1% of the total surveyed area has been considered to define limited representation within the local context.

Although all of the vegetation communities listed above are considered to be locally significant due to their limited proportionate extent within the project area, none of these communities have been determined to be regionally significant as part of the assessment discussed below. Since these communities have been determined to be well represented in the wider region, they are not considered to be of conservation significance.

Table 15 Proportion of area of various Vegetation Communities

Vegetation Community	Area (ha)	% Total Area Surveyed
AEThg	2.84	0.03
Cleared	9.77	0.12
AHf	16.86	0.20
DEAT2	17.79	0.21
DMATE	20.20	0.24
Amg	24.59	0.30
CAThg2	31.27	0.38
CAT	37.45	0.45
DCAT2	40.37	0.48
DEAT1	165.75	1.99
CAThg1	191.85	2.30
MATE	203.03	2.44
DCAT1	254.89	3.06
AxT	413.55	4.97
AxE	469.02	5.63
AThg2	469.44	5.64
MAT	960.81	11.54
Hf	1592.85	19.12
AThg1	1630.23	19.57
Thg	1776.26	21.33
TOTAL	**8328.83**	**100**

Vegetation communities that support populations of Priority Flora are also considered to be of local significance. Five communities described and mapped within the project areas may be considered locally significant due to the presence of Priority Flora species. Vegetation communities Thg, AThg2 and Hf support Priority Three species, *Flaveria australasica* ssp. *gilgai* and *Acacia glaucocaesia* and the Priority Two species, *Vigna* sp. central. Additionally, vegetation communities CAT and AxT support populations of 'other flora' of conservation significance, namely *Tephrosia* aff. *clementii* (4) (M35-14), *Vigna* sp. rockpiles (R.Butcher *et al.* RB 1400) (pn) and *Trianthema* sp. Python Pool (G.R. Guerin & M.E. Trudgen GG 1023) (pn).

6.2.3 Regionally Significant Vegetation

EPA Position Statement No. 2 lays out a series of constraints which relate to biodiversity. One of them is to protect at least 30% of the original extent of vegetation complexes in unconstrained areas and 10% in constrained areas (i.e. urban zoned regions). All of the vegetation types identified as occurring within the Chichester and Roebourne IBRA regions (**Tables 13 and 14**) meet the 30% target, with 100% of their original extent remaining.

The project area is situated within the Chichester and Roebourne Subregions with 58.12% and 41.88% within each subregion, respectively. The project area lies within a region for which the Land Systems have been mapped as part of the Rangeland Assessment Programme (Van Vreeswyk, *et. al.*, 2004). Eight Land System Units are supported by the project area, namely Boolgeeda, Horseflats, Macroy, Mallina, Paraburdoo, River, Rocklea and Ruth. The proportions of each of the Land Systems present within the Chichester and Roebourne Subregions are presented below in **Table 16**.

Table 16 Proportion of Land System Units within the project area and Chichester and Roebourne Subregions

Land System	Hectares of each Land System in whole of Chichester Subregion	Hectares of each Land System in whole of Roebourne Subregion	% of total Chichester	% of total Roebourne	Hectares in survey area (Chichester)	Hectares in survey area (Roebourne)	% Survey Area (Chichester)	% Survey Area (Roebourne)
Boolgeeda	167650.40	27085.24	3.95	3.97	506.93	285.88	10.47	8.20
Horseflats	27132.47	297358.74	0.64	43.62	1774.64	1058.96	36.65	30.36
Macroy	1326268.63	5341.23	31.25	0.78	0.00	10.24	0.00	0.29
Mallina	196264.57	133181.66	4.62	19.54	0.00	99.16	0.00	2.84
Paraburdoo	5282.69	17850.10	0.12	2.62	41.02	396.56	0.85	11.37
River	258768.72	125519.60	6.10	18.41	15.83	58.95	0.33	1.69
Rocklea	2125325.66	43182.63	50.08	6.33	698.23	139.90	14.42	4.01
Ruth	137147.00	32223.78	3.23	4.73	1804.97	1438.71	37.28	41.24
TOTAL	**4243840.14**	**681742.98**	**100.00**	**100.00**	**4841.62**	**3488.35**	**100.00**	**100.00**

All of the Land System Units represented in the project area are well represented in the local and regional area, with the exception of the Paraburdoo Unit (**Table 16**). Vegetation supported by the Paraburdoo Unit, may therefore be considered regionally significant. The vegetation units within the project area supported by the Paraburdoo Land System are:

- AThg1;
- AxE;
- AxT;
- CAThg1;
- DCAT1;
- DEAT1;
- DMATE;
- MAT;
- MATE; and
- Thg.

In order to determine whether the aforementioned vegetation communities are in actual fact regionally significant (i.e. limited to specific landform types/Land System Units), a more detailed assessment of their representation in the region has been carried out.

Land System mapping for the Pilbara bioregion has been prepared by the *Department of Agriculture and Food Western Australia* (Van Vreeswyk *et. al*., 2004) and describes the interrelationships between the physical environment and the plant communities they support by describing and classifying sampling points (inventory sites) into site types. Site types are described in terms of combinations of landforms, soil types and plant communities and are denoted by an appropriate four letter code (e.g. sandplain soft spinifex grassland; SSSG). Site types are then aggregated into broader site type groups. Site types within a particular site type group have generally similar positions in the landscape as well as similar vegetation and soils. Van Vreeswyk *et. al.*, (2004) described 44 major site types which have been combined into eleven site type groups.

Land System mapping for the Pilbara bioregion was compared to the species composition and habitat of potentially regionally significant communities recorded in the project area (previously listed). This was done in order to determine whether the potentially regionally significant communities are restricted to specific Land System Units, or whether they possibly occur elsewhere and are therefore actually not regionally restricted or significant. Information was considered for the Paraburdoo Land System and two adjacent Land Systems (Horseflats and Rocklea), to examine the potential for wider regional representation of vegetation outside the project area.

Site types and groups as described by Van Vreeswyk *et. al.*, (2004) have been mapped and described at a broad regional level. The vegetation communities described and mapped by AECOM in 2009 have been described to a finer level of detail and as such, an exact match of AECOM's communities versus site type and groups as described by Van Vreeswyk *et. al.*, (2004) is not always possible. Where this is the case, an argument based on representation of that particular community in other areas is presented.

6.2.3.1 Rationalisation of Regionally Significant Vegetation

A description of the Paraburdoo and adjacent Land System Units (i.e. Horseflats and Rocklea) is provided below and is based on Van Vreeswyk *et. al.*, (2004).

6.2.3.1.1 Paraburdoo Land System Unit

1) Low Basalt hills and ridges (2% of this land system): Low shrublands with *Corchorus walcottii*, *Ptilotus obovatus*, *Senna* spp., and sparse overstorey of *Acacia* spp. Also Hummock grassland of *Triodia wiseana* (hard spinifex) and very scattered shrubs (HSPG).
2) Upper interfluves and slopes (50%): Scattered tall shrublands of *Acacia aneura* or *Acacia xiphophylla* with numerous low shrubs including *Senna* spp. (PMCS, PSCS). Also Hummock grasslands of *Triodia wiseana* with very scattered acacia shrubs (PHSG).
3) Groves (2%): Moderately close to close tall shrubland/woodlands of *Acacia aneura* with sparse undershrubs and tussock grasses such as *Chrysopogon fallax* (GMGW).
4) Gilgai Plains (30%): Tussock grasslands with *Eragrostis xerophila* and other perennial grasses and isolated or very scattered shrubs (ARPG, APXG) or scattered tall shrublands of *Acacia xiphophylla* with tussock grass understorey (SSTS).
5) Drainage Zones (12%): Scattered tall shrubland with *Acacia aneura, Acacia xiphophylla, Acacia victoriae* with variable understoreys including *Senna* and *Maireana* spp. with tussock and/or Hummock grasses (PMCS, DEGW, DAHW). Also Hummock grasslands of *Triodia* spp. (hard and soft spinifex) with very scattered shrubs (AHSG, ASSG).
6) Braided creeklines and channels (3%): Moderately close tall shrublands/woodlands of *Acacia citrinoviridis* and other *Acacia* spp., *Eucalyptus camaldulensis* with variable low shrubs and tussock grasses (DEGW).
7) Calcrete platforms (1%): Hummock grasslands of *Triodia wiseana* with very scattered shrubs (CASG) or shrublands of *Senna* and *Acacia* spp. (CACS).

6.2.3.1.2 Horseflat Land System Unit

1) Stony rises and low hills (<1% of this land system): Hummock grasslands of *Triodia wiseana, Triodia. brizoides* (hard spinifex) with isolated shrubs (HSPG).
2) Calcrete plains (2%): Hummock grasslands of *Triodia wiseana* with isolated shrubs (CASG).
3) Gilgaied plains (52%): Mostly tussock grasslands dominated by *Eragrostis xerophila* (ARPG) but also other grasses such as *Chrysopogon fallax* and *Eriachne benthamii* (APRG, APSG).
4) Non gilgaied, sometimes stony plains (30%): Very scattered to scattered tall and mid height shrublands of *Acacia xiphophylla* with tussock grasses, mostly *Eragrostis xerophila* (SSTS). Also patchy tussock and annual grasslands (PMOG) and Hummock grasslands of *Triodia wiseana, Triodia longiceps* (hard spinifex) (PHSG).
5) Alluvial Plains (10%): Tussock grasslands with *Eragrostis xerophila, Eriachne benthamii, Chrysopogon fallax, Cenchrus ciliaris* (APXG, ARPG); also tussock grasslands with shrub *Atriplex bunburyana* (PCGS). Occasionally *Triodia* spp. Hummock grasslands.
6) Dissected slopes (1%): Very scattered tall and mid height shrublands of *Acacia xiphophylla* with patchy tussock grasses (SSTS). Also very sparse tussock grasslands and annual grasslands/herbfields.
7) Drainage depressions (4%): Dense tussock grasslands including *Eriachne benthamii, Chrysopogon fallax* with occasional eucalypt trees and shrubs such as *Acacia farnesiana* (APXG, APRG, DEGW).
8) Channels and minor river terraces (<1%): Fringing woodlands with *Eucalyptus camaldulensis, Eucalyptus victrix* and *Acacia coriacea* and grasses *Cenchrus ciliaris, Chrysopogon fallax, Triodia pungens* (DEGW).

6.2.3.1.3 Rocklea Land System Unit

1) Hills, ridges, plateaux and upper slopes (65% of this land system): Hummock grasslands of *Triodia wiseana, Triodia* .spp (hard spinifex) or, less frequently, of *Triodia pungens* (soft spinifex) with isolated to very scattered shrubs such as *Acacia inaequilatera* and *Senna* spp. (HSPG).
2) Lower slopes (15%): As for unit 1 (HSPG).
3) Stony Plains and interfluves (10%): Hummock grasslands of *Triodia wiseana* or, less frequently, *Triodia pungens* with isolated to very scattered shrubs such as *Acacia inaequilatera* (PHSG, PSSG). Occasionally grassy shrublands *with Acacia, Senna* and *Eremophila* spp. (PAGS, SAES).
4) Gilgaied plains (1%): Tussock grasslands with *Astrebla pectinata*, *Eragrostis xerophila* and other perennial grasses (BUTG).
5) Upper Drainage lines (4%): Hummock grasslands of *Triodia wiseana* or *Triodia pungens* with very scattered to scattered acacia shrubs and occasional *Corymbia hamersleyana* trees (AHSG, ASSG, DAHW).
6) Drainage floors and channels (5%): Scattered to moderately close tall shrublands or woodlands of *Acacia* and *Eucalyptus* spp. with numerous undershrubs and hummock grass understoreys (DEGW).

6.2.3.1.4 AxE

When comparing AECOM's AxE community to Van Vreeswyk *et. al.*, (2004) Site Type Groups and their component site types, this community corresponds to the Alluvial Plain Hummock Grassland (and Occasionally Grassy Shrubland) Site Types (Site Type Group H). This group of site types occur in depositional landscapes and support hummock grasslands (Van Vreekswyk *et. al.,* 2004).

On a finer scale, Site Type Group H (Alluvial Plain Hummock Grassland and Occasionally Grassy Shrubland) has three site types as follows:

1) Alluvial Plain Hard Spinifex Grassland (AHSG);
2) Alluvial Plain Soft Spinifex Grassland (ASSG) and
3) Alluvial Plain Snakewood Hummock Grass Shrubland (ASHS).

AxE has been inferred to be equivalent to the Alluvial Plain Snakewood Hummock Grass Shrubland (ASHS) site type, based on species composition and habitat.

ASHS is a common site type that occurs on stony and gravelly plains and on alluvial plains. It occurs as a scattered to moderately close *Acacia xiphophylla* (snakewood) shrubland with a hummock grass layer, or as a hummock grassland, with scattered shrubs of *Acacia xiphophylla.* The dominant shrub is *Acacia xiphophylla* with dominant hummock grasses *Triodia wiseana* or *Triodia pungens*, with tussock grasses, including *Cenchrus ciliaris, Enteropogon acicularis, Eragrostis xerophila, Aristida contorta, Brachyachne prostrata* and *Eriachne pulchella* also common (Van Vreekswyk *et. al.*, 2004).

ASHS is represented on conservation reserves, Van Vreeksyk *et. al.,* (2004) recorded it in Cane River Nature Reserve. ASHS is the most extensive site type on two land systems, is common on one and occurs as a minor component on seven other systems (Van Vreeswyk *et. al.*, 2004).

It is therefore concluded that AxE is not restricted to the Paraburdoo Land System Unit as it occurs elsewhere and within other Land Systems. AxE is unlikely to be regionally significant based on this conclusion.

6.2.3.1.5 CAThg1 and DMATE

When comparing AECOM's CAThg1 and DMATE communities to Van Vreeswyk *et. al.*, (2004) Site Type Groups and their component site types, they were found to correspond to the Drainage Shrubland and Woodland Site Types (Site Type Group K). This group of site types occur as drainage tracts and support moderately dense, tall shrublands or woodlands of *Acacia* or *Eucalyptus* spp. (Van Vreekswyk *et. al.*, 2004).

On a finer scale, Site Type Group K (Drainage Shrubland and Woodland) has six site types as follows:

1) Drainage Acacia Hummock Grass Shrubland/Woodland (DAHW);
2) Drainage Spinifex Grassland with Eucalypt Overstorey (DESG);
3) Drainage Eucalypt and Acacia Grassy Woodland/Shrubland (DEGW);
4) Drainage Eucalypt and Acacia Woodland/Shrubland (DEAW);
5) Drainage Melaleuca Shrubland (DMES) and
6) Gallery (riverbank and channel) Melaleuca Eucalypt Woodland (GMEW).

CAThg1 and DMATE has been inferred to be equivalent to the Drainage Acacia Hummock Grass Shrubland/ Woodland site type (DAHW), based on species composition and habitat.

DAHW is a widespread site type that occurs on narrow drainage floors and occasionally on groves on wash plains. It occurs as an *Acacia* spp. shrubland or woodland with a hummock grass layer. The dominant *Acacia* species include *Acacia aneura, Acacia atkinsiana, Acacia citrinoviridis, Acacia trachycarpa, Acacia tumida* and *Acacia ancistrocarpa.* The dominant hummock grass is commonly *Triodia pungens* but is occasionally a hard spinifex species (*Triodia wiseana*) (Van Vreekswyk *et. al.*, 2004).

DAHW is well represented in conservation reserves in the area, including Karijini National Park and Meentheena pastoral lease. It is a widespread site type and occurs as a minor component on 36 land systems (about one third of all systems in the Pilbara) (Van Vreeswyk *et. al.*, 2004).

It is therefore concluded that CAThg1 and DMATE are not restricted to the Paraburdoo Land System Unit as they occur elsewhere and within other Land Systems. CAThg1 and DMATE are unlikely to be regionally significant based on this conclusion.

6.2.3.1.6 DCAT1 and DEAT1

When comparing AECOM's DCAT1 and DEAT1 communities to Van Vreeswyk *et. al.*, (2004) Site Type Groups and their component site types, they were found to correspond to the Drainage Shrubland and Woodland Site Type (Site Type Group K). This group of site types occurs as drainage tracts in the lowest part of the landscape.

On a finer scale, Site Type Group K (Drainage Shrubland and Woodland) has six site types as follows:

1) Drainage Acacia Hummock Grass Shrubland/Woodland (DAHW);
2) Drainage Spinifex Grassland with Eucalypt Overstorey(DESG);
3) Drainage Eucalypt and Acacia Grassy Woodland/Shrubland (DEGW);
4) Drainage Eucalypt and Acacia Woodland/Shrubland (DEAW);
5) Drainage Melaleuca Shrubland (DMES); and
6) Gallery (riverbank and channel) Melaleuca Eucalypt woodland (GMEW).

DCAT1 and DEAT1 has been inferred to be equivalent to the Drainage Spinifex Grassland with Eucalypt Overstorey (DESG) site type, based on species composition and habitat.

DESG is a fairly common site type that occurs on drainage tracts and narrow floors. It occurs as Hummock grasslands with an overstorey of *Eucalyptus* trees. The dominant Hummock grass is often *Triodia pungens* (soft spinifex) but may be other *Triodia* spp.. The dominant Eucalypts may be *Corymbia hamersleyana*, *Eucalyptus victrix* or *Eucalyptus camaldulensis* (Van Vreeswyk *et. al.*, 2004).

DESG is represented in conservation reserves and has been recorded in Millstream-Chichester National Park and on the Meentheena pastoral lease and also on unallocated Crown land. DESG occurs as a minor component on twelve land systems (Van Vreeswyk *et. al.*, 2004).

It is therefore concluded that DCAT1 and DEAT1 are not restricted to the Paraburdoo Land System Unit as they occur elsewhere and within other Land Systems. DCAT1 and DEAT1 are unlikely to be regionally significant, based on this conclusion.

6.2.3.1.7 Thg

When comparing community Thg to Van Vreeswyk *et. al.*, (2004) Site Type Groups and their component site types, this community corresponds to the Hill Hummock Grassland Site Type (Site Type Group A). The Site Types in this group are based on Hummock grasses (spinifexes) and occur on nearly all hills, ridges and ranges in the Pilbara. Soils are stony skeletal sands, loams and clays with dense surface mantles of pebbles or cobbles and frequent rock outcrop (Van Vreeswyk *et. al.*, 2004). The site types contrast markedly with shrubland site types which dominate hills and ranges in adjacent survey areas to the south of the Pilbara.

On a finer scale, Site Type Group A (Hill Hummock Grassland and Occasionally Grassy Shrublands) has two site types as follows:

1) Hill Spinifex Grassland (HSPG); and

2) Hill Eucalypt Spinifex Grassland (HESG).

Thg has been inferred to be equivalent to the Hill Spinifex Grassland (HSPG) based on species composition and habitat.

The HSPG site type consists of Hummock Grasslands of *Triodia* species, with isolated to scattered trees and shrubs. The dominant Hummock grass species varies but is often *Triodia wiseana* or *Triodia pungens.* HSPG is represented in conservation reserves and was recorded in Karijini National Park and the Meetheena pastoral lease (a lease acquired by DEC for conservation purposes). It also occurs extensively on unallocated Crown Land (Van Vreeswyk *et. al.*, 2004).

HSPG is the dominant site type on the Black, Boolaloo, Callawa, Capricorn, Granitic, Houndstooth, McKay, Mosquito, Nanutarra, Robe, Robertson, Rocklea, Ruth and Talga Land Systems. It is a major site type on Adrian, Coongimah and Newman Land Systems and a minor site type on another 27 systems (Van Vreeswyk *et. al.*, 2004).

It is therefore concluded that the community Thg is not restricted to the Paraburdoo Land System Unit as it occurs in other Land System Units, some of which are located outside the project area, and that therefore it is also unlikely to be regionally significant, based on this conclusion.

6.2.3.1.8 AThg1, MAT and MATE

When communities AThg1, MAT and MATE were compared to site type groups and their corresponding component site types (Van Vreeswyk *et. al.*, 2004), no exact or closely matched communities were found.

Although this detailed assessment of the likely representation of these communities in the wider region did not produce any justifiable results for these communities, based on AECOM survey data it is apparent that these communities are locally widespread throughout the project areas surveyed (i.e. throughout the Anketell Point transport corridor and in the adjacent Port Development Area).

These communities have been recorded to be abundant in the area and occur on Land System Units other than the Paraburdoo unit in these locations. Vegetation communities AThg1, MAT and MATE are therefore not restricted to the Paraburdoo Land System Unit (**Table 15**) and therefore also unlikely to be regionally significant, based on this conclusion.

6.3 Threatened and Priority Ecological Communities

Kendrick and McKenzie (2001) and Kendrick and Stanley (2001) have stated that within the Chichester and the Roebourne Biogeographical Subregions that there are no known TECs. A search of the DEC Threatened Ecological Communities database did not identify any records of known TECs in the vicinity of the transport corridor and associated project areas. However, it did identify one Priority 1 Ecological Community, namely *Roebourne plains Coastal Grassland* as occurring in proximity to the project areas. The locations of PECs are represented by point data, based on confirmed DEC study plots and DEC buffers for these points intersect the project area.

There are 19 known PECs within the Pilbara Region. The *Roebourne Plains Coastal Grassland* was originally considered by AECOM to potentially occur within the Horseflat (Hf) Vegetation community (AECOM, 2008), based on its original description of it being dominated by *Eragrostis xerophila* (Roebourne Plains grass) (Mia Podesta, DEC, *pers. comm*., 2008). However, based on updated information received by DEC in April 2009, it was determined that the *Roebourne Plains Coastal Grassland* (re-named by DEC as *Roebourne Plains Gilgai Grassland*) differs from the surrounding clay flats of the Horseflat Land System which are dominated by *Eragrostis xerophila* and other perennial tussock (*Eragrostis* mostly) grass species. *The Roebourne Plains Gilgai Grasslands* supports mainly Tussock grasses (*Sorghum* sp.) and ephemeral herbs dominated by Papilionaceae (*Desmodium* sp. and *Glycine* sp). The Horseflat grassland described by AECOM within the project areas is dominated by *Eragrostis xerophila* and therefore has a low probability of being the *Roebourne Plains Gilgai Grassland* as described by DEC.

Based on species recorded during the 2008 and 2009 flora assessment, none of the vegetation communities described and mapped within the project areas are considered likely to be characterised as, or equivalent to any of the known PECs or TECs for the Pilbara Region. This conclusion is based on the fact that DEC descriptions and data that characterise the PECs in the region are not comparable to the available data for vegetation communities described and mapped within the survey extent in terms of species composition and site characteristics such as soil type and position in the landscape. The methods used to conduct this comparison are commensurate with the expectations of DEC for determination of TEC/PEC status.

6.4 Other Communities of Significance

Reservation Priority status has been allocated to all six of the Beard (1975) vegetation communities present within the project area (Kendrick and McKenzie, 2001 and Shepherd *et al*., 2002). Reservation Priorities are allocated to communities based on the known current extent of the community and the percentage of that community currently protected within Conservation reserves in each Subregion (**Tables 13 and 14**). For example, Beard's Short Bunch Grass community (xGc/t_1Hi) has a current extent of 848,201ha (Shepherd *et. al*, 2002), and since there is currently none of this community protected within reserves, it has been given a High Priority Status.

6.5 Vegetation Condition

A vegetation condition assessment was carried out for the project area generally based on the level of disturbance as determined by proportionate weed density. Areas considered being significant in terms of impacting negatively on the natural environment, are considered to be "weed risk zones". The weed risk zones have been determined to be areas that have recorded a vegetation condition rating of "Degraded to Good" (more than 50% weed cover) or worse and also selected vegetation communities known to support significant weed infestation (i.e. creeklines and drainage lines, typically infested with Buffel Grass). A breakdown of the area of each condition rating is presented in **Table 7**.

The total area for the weed risk zones indicates that only 410 Ha or 4.92% of the vegetation within the proposed transport corridor is in Completely Degraded, Degraded or Degraded-Good condition. However, 27.65% of the vegetation within the surveyed areas is considered to be in Good condition. Although, approximately a quarter of the surveyed areas are in Good condition, according to the methods used, this rating is on the lower end of the scale when considering vegetation condition, with 25 – 50% weed cover (**Table 7**). Therefore it can be concluded that collectively one third (32.57%) of the surveyed areas contain 50% or greater weed cover and approximately 67.43% is in Good to Very Good or better condition (i.e. 25% or less weed cover).

The limited number of weed species identified and the relative remoteness of the area contribute to its better condition ranking in some areas. The vegetation and landforms traversed during the assessment have limited access, therefore reducing degradation by weed invasion caused by human degradation and access track clearing.

The weed risk zones, which are presented spatially in **Figures 7.1-7.79** (i.e. Completely Degraded, Degraded and Degraded to Good condition rating), should be given priority during the development of project specific weed management strategies to prevent the spread or introduction of weeds to areas of the project that currently are not negatively impacted by weeds.

7.0 Conclusions and Recommendations

The significance of any potential impacts that may arise from the construction of the Anketell Point transport corridor and associated areas is dependent on the conservation status and reservation priorities of the vegetation communities that will be affected.

Overall, the majority of the vegetation occurring within the project areas is in Very Good and Good condition and has been subject to very little clearance and disturbance. In addition to the limited disturbance, only nine weed species were recorded to occur, indicating limited weed invasion within the area. However, the nine weed species recorded, consist of three of the most significant terrestrial weed species for the Pilbara region, one of which is listed as a Declared Plant by the *Department of Agriculture and Food,* namely **Prosopis pallida* obligatory control measures, enforced by DAFWA apply to this species (**Appendix D**).

The timing of the 2009 (April/May) was considered optimum to record all species (annuals and ephemerals) as it was conducted during the main flowering season, typically 4 to 6 weeks following major cyclonic events (the wet season).

No species of DRF, listed by DEC under the *Wildlife Conservation Act, 1950* or as Threatened under the *EBPC Act, 1999* were recorded within the project area.

Three species of conservation significance recognised by DEC were recorded during the field assessments, namely *Acacia glaucocaesia* (P3), *Flaveria australasica* spp. *gilgai* (P3) and *Vigna* sp. central (M.E. Trudgen 1626) (P2). An additional three species of potential conservation significance were also recorded, namely *Tephrosia* aff, *clementii* (4) (M35-14), *Vigna* sp. rockpiles (R. Butcher *et al*., RB 1400) and *Trianthema* sp. Python Pool. In total, six Priority Flora species have been recorded within the project area.

There are no vegetation communities of conservation significance due (listed as TECs and PECs) supported by the project areas.

Nineteen vegetation communities and one cleared area were recorded within the proposed footprint for the Anketell Point Transport Corridor, borrow pits, communication tower sites and proposed campsites. These communities consisted of two Grasslands, nine Shrublands, eight Drainage and Creekline communities and one cleared area.

The factors of environmental significance (constraints) with regards to flora and vegetation associated with the project are:

- Three species of conservation significance as recognised by DEC were recorded, namely *Acacia glaucocaesia* (P3), *Flaveria australasica* spp. *gilgai* (P3) and *Vigna* sp. central (M.E. Trudgen 1626) (P2);
- 'Other Flora' of potential conservation significance were recorded, namely *Tephrosia* aff, *clementii* (4) (M35-14), *Vigna* sp. rockpiles (R. Butcher *et al*., RB 1400) and *Trianthema* sp. Python Pool. Based on current knowledge these species should be treated as if they were Priority Flora; and
- One Declared Plant by the *Department of Agriculture and Food* was recorded (**Prosopis pallida*);
- Five communities are considered to be locally significant due to supporting populations of Priority Flora species. These communities are Thg, AThg2, Hf, CAT and AxT;
- Vegetation communities AEThg, AHf, DEAT2, DMATE, Amg, CAThg2, CAT and DCAT2 may be considered significant due to their limited representation (by area) within the local and regional context.

Based on the above conclusions, the following specific impact minimisation and management measures are recommended:

- Infrastructure design avoids direct impacts to the recorded population of *Acacia glaucocaesia* (P3) at the location between 501668 to 501677mE and 7708273 to 7708300mN and that direct impacts to this population, for example from dust, also be managed;
- Infrastructure design avoids direct impacts to communities of conservation significance, namely Thg, AThg2, Hf, CAT and AxT as they support populations of Priority Flora;
- A weed management plan be prepared and implemented for the project that particularly addresses the management of populations of weeds of environmental importance, including **Prosopis pallida, *Cenchrus ciliaris* and *Aerva javanica*; and
- Direct impacts (i.e. from clearing) to all areas supporting vegetation communities of significance, due to being limited in their representation are minimised.

Within areas where only a single phase of floristic survey has been conducted, (i.e. the 30 additional quadrats established in 2009), it is recommended that a second phase, Level 2 assessment and a Targeted Priority Flora Survey be conducted during favourable flowering season (post wet season) to reassess established quadrats and targeting vegetation communities where the Priority Flora that potentially occurs in the project areas would be likely to occur. This would also meet the requirements for a 'Comprehensive Survey' as part of a Level 2 Flora and Vegetation Assessment, according to EPA Guidance (2004). The need for this assessment has been acknowledged and is supported by DEC (Stephen Van Leeuwen, DEC, *pers. comm*., September 2009

With the completion of an intensive study of the vegetation of the Pilbara Region (DEC, 2004), that is culminating into a comprehensive understanding of the vegetation associations of the region, in particular with regards to TECs and PECs, combined with in-kind acknowledgment from DEC that there are no vegetation communities of conservation significance within the assessment area for the transport corridor project, the current focus on impact minimisation and management in the area from DECs point of view is for the conservation of flora species of conservation significance. And although the range of surveys concludes that no species of DRF and only six species of Priority Flora are supported by the project area, DEC have requested a particular measure to ensure no accidental clearing of flora of conservation significance. DEC suggest a commitment to site clearance of the trace line for the transport corridor and borrow areas. This would involve a brief walk over and inspection of the specific and refined area to be cleared, immediately before clearing, to ensure that no flora of conservation significance will be impacted (Stephen Van Leeuwen, DEC, *pers. comm*.. September 2009).

8.0 List of participants

- Kellie Honczar (Senior Environmental Scientist/Botanist)
  - Project Manager, Field Assessment, Report preparation
- Andrew Batty (Senior Environmental Scientist/Ecologist)
  - Project Manager, Field Assessment
- Gabriela Martinez (Environmental Scientist/Botanist)
  - Field Assessment, data collation, Herbarium work, Report preparation
- Lisa Chappell (Environmental Scientist/Botanist)
  - Report preparation
- Alexandra Sleep (Graduate Environmental Scientist)
  - Field Assessment
- Peter Magaro (Senior Environmental Planner)
  - Field Assessment
- Kathryn Jones (GIS Analyst)
  - Map production

9.0 Acknowledgements

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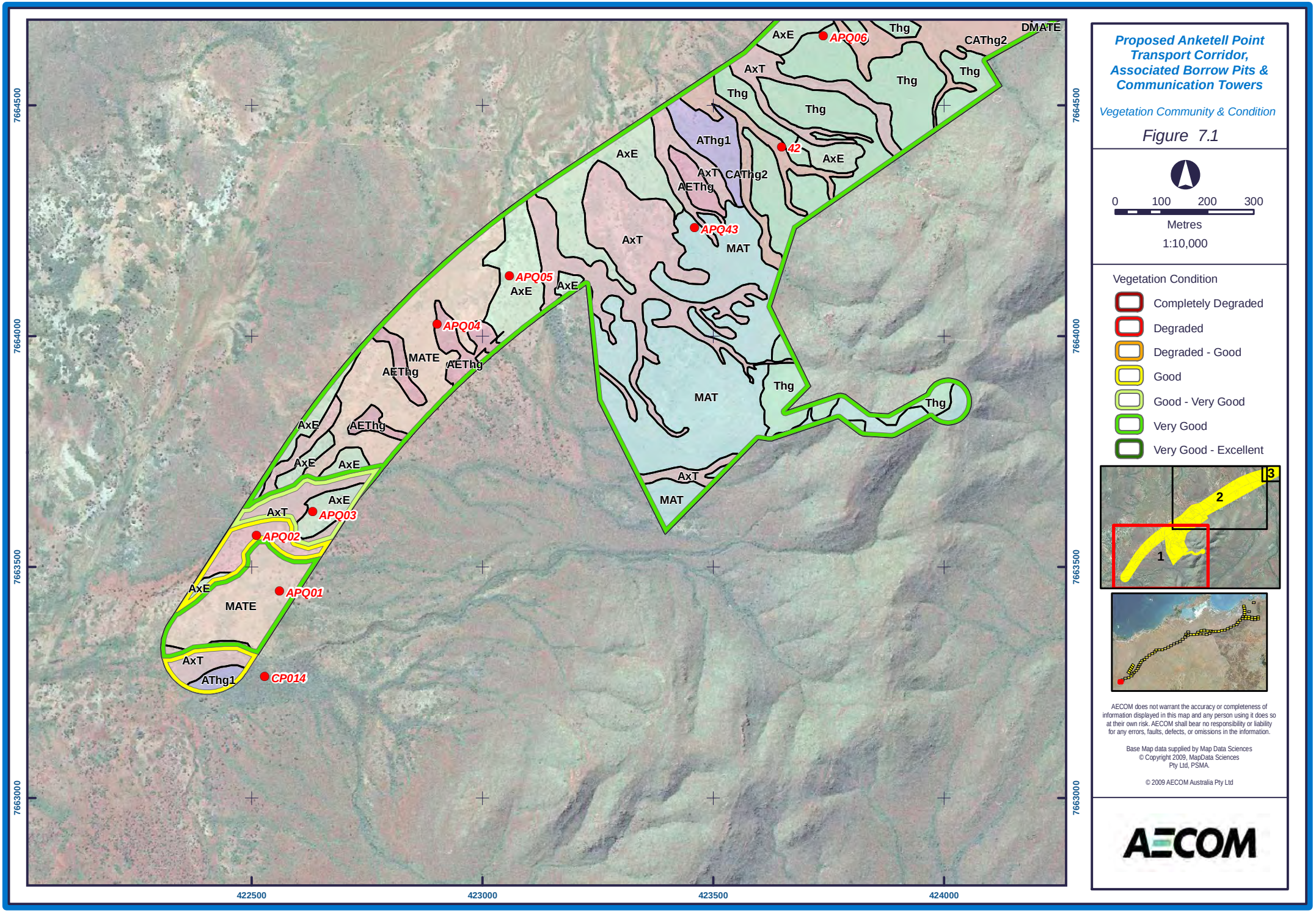

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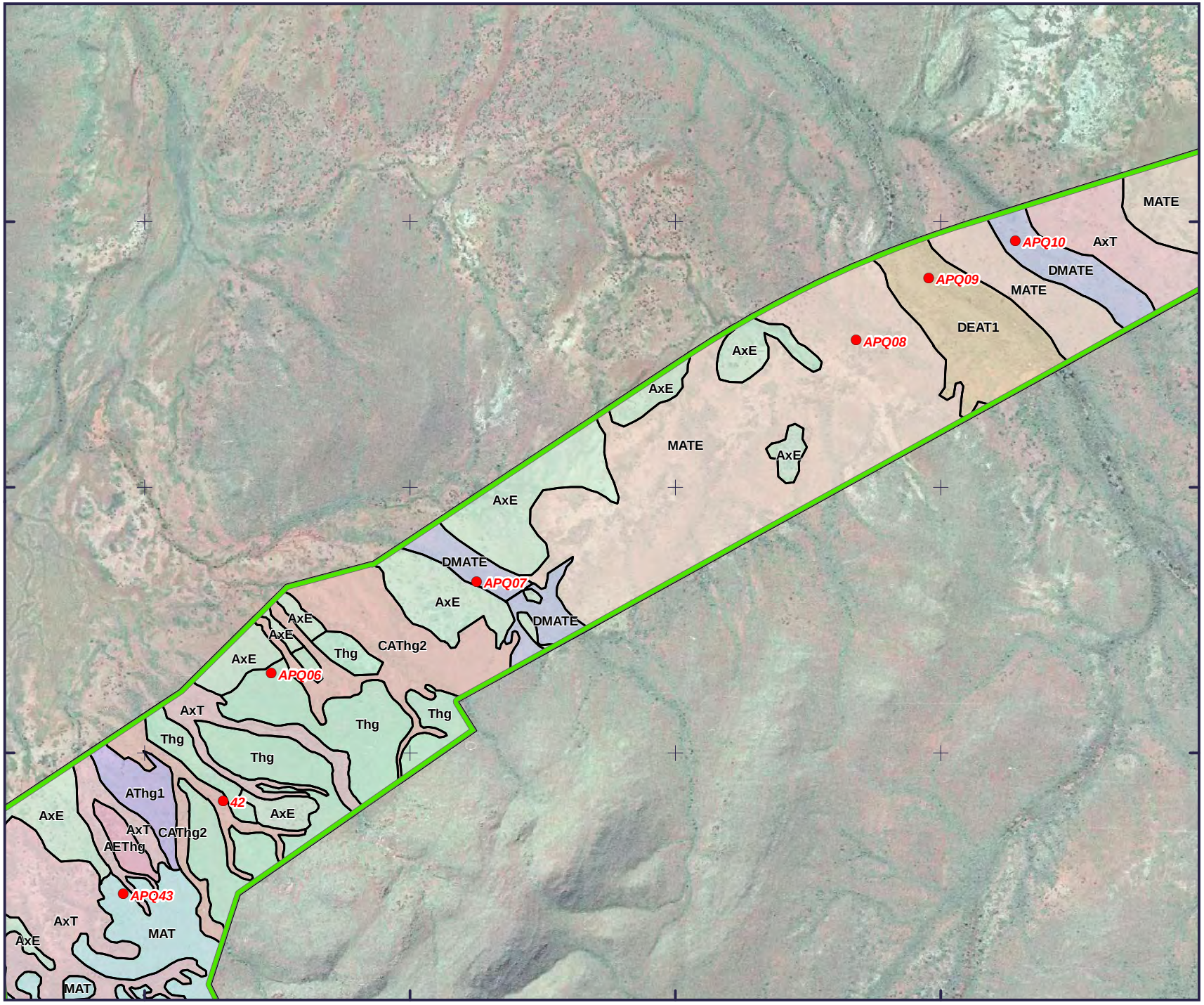


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.2

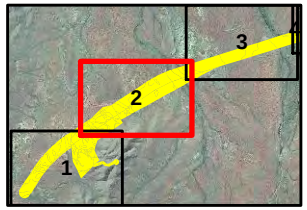
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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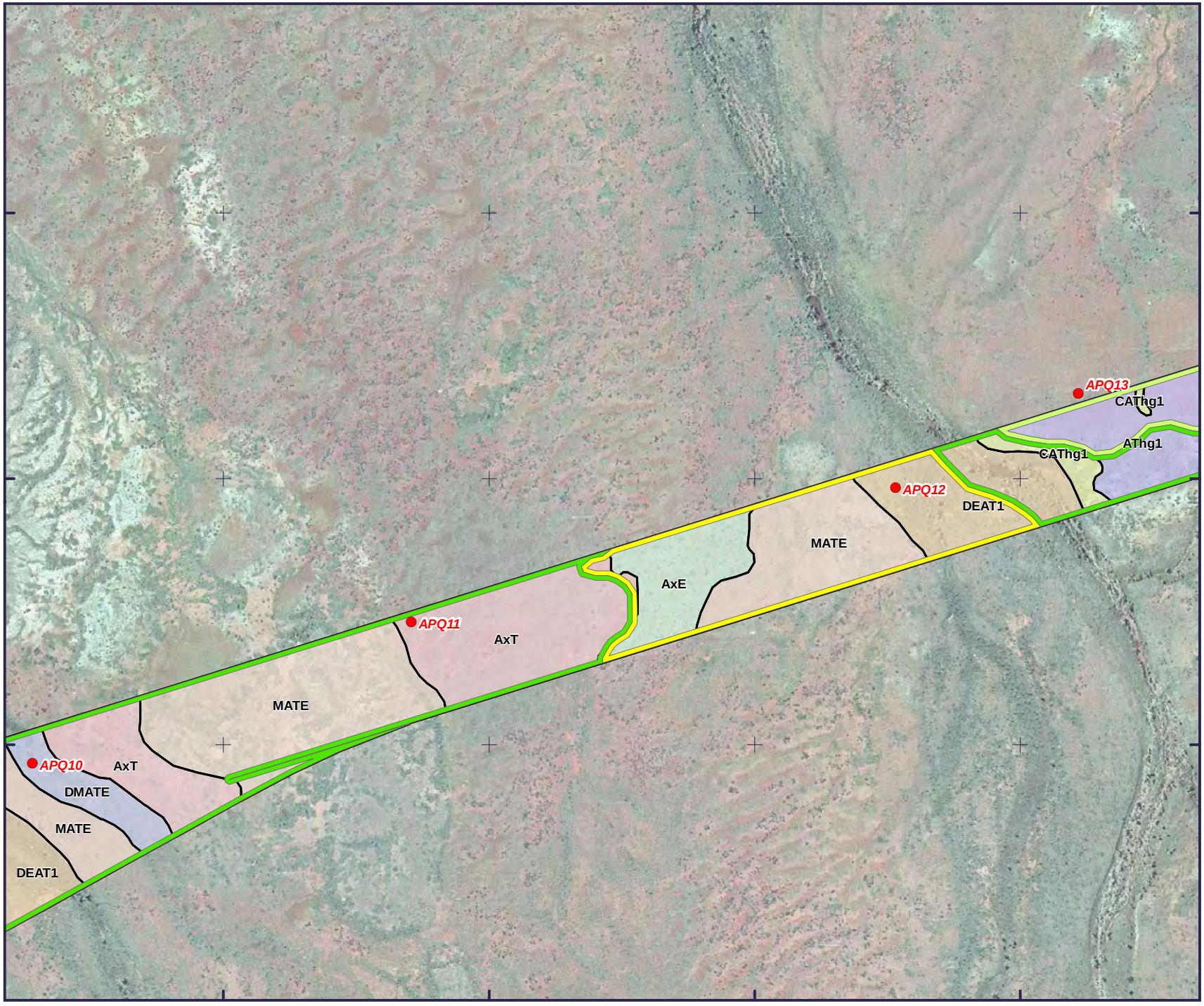


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.3

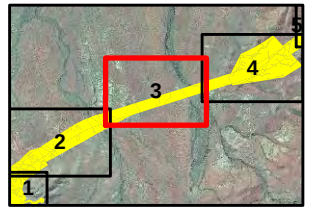
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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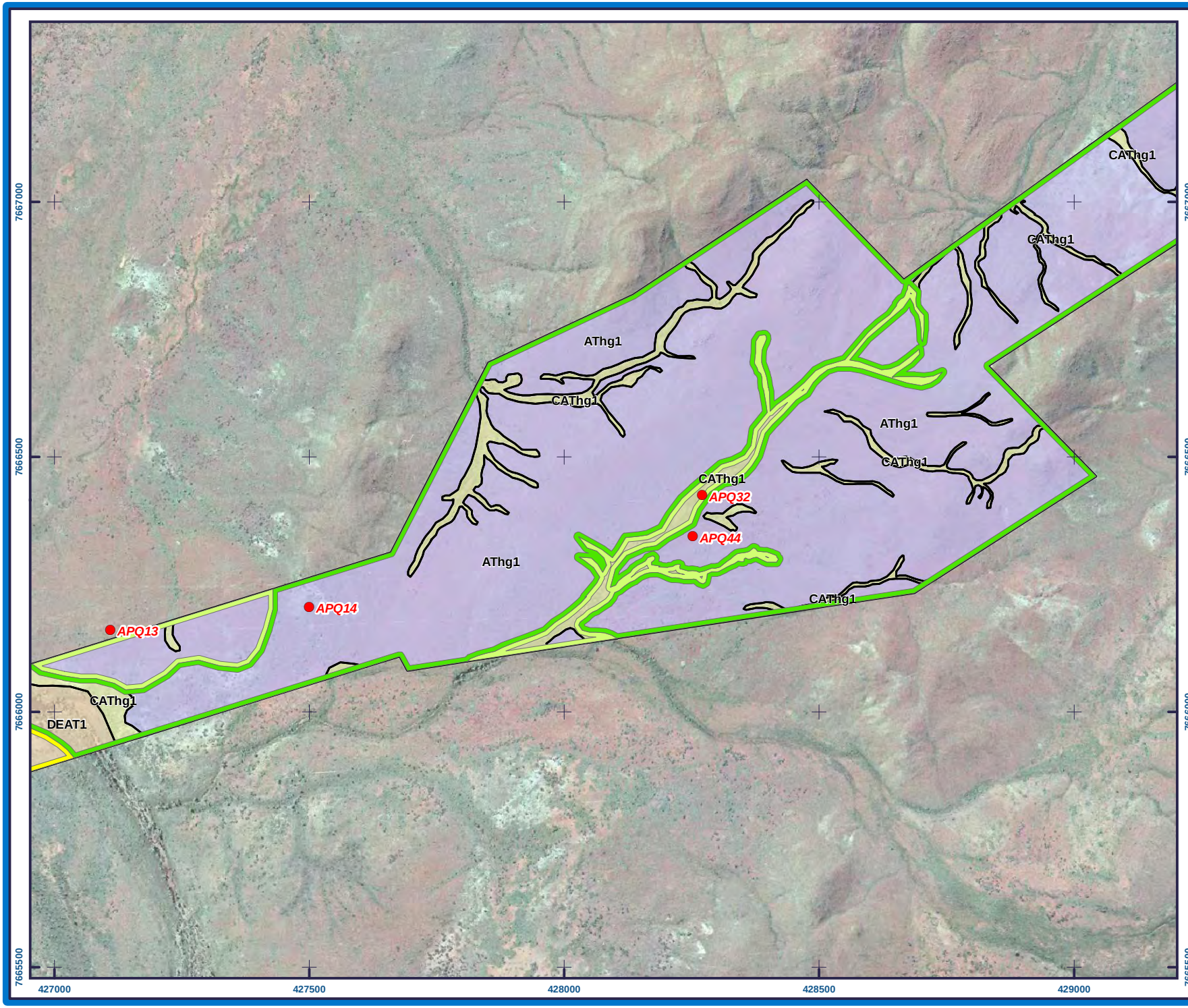


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.4

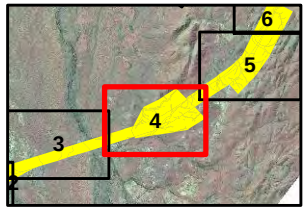
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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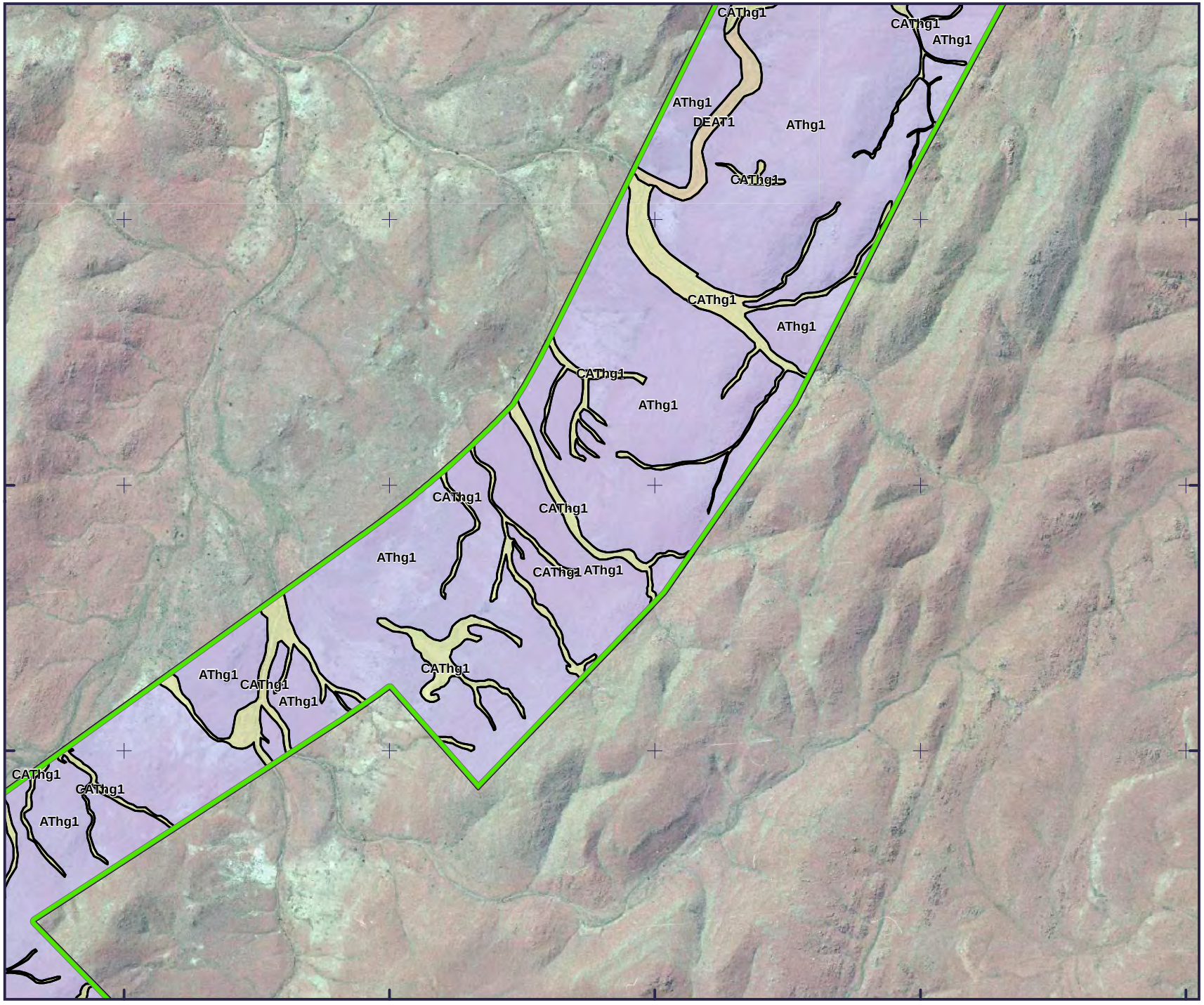


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.5

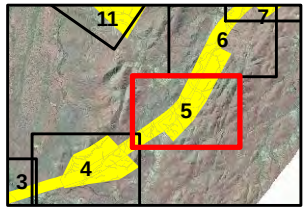
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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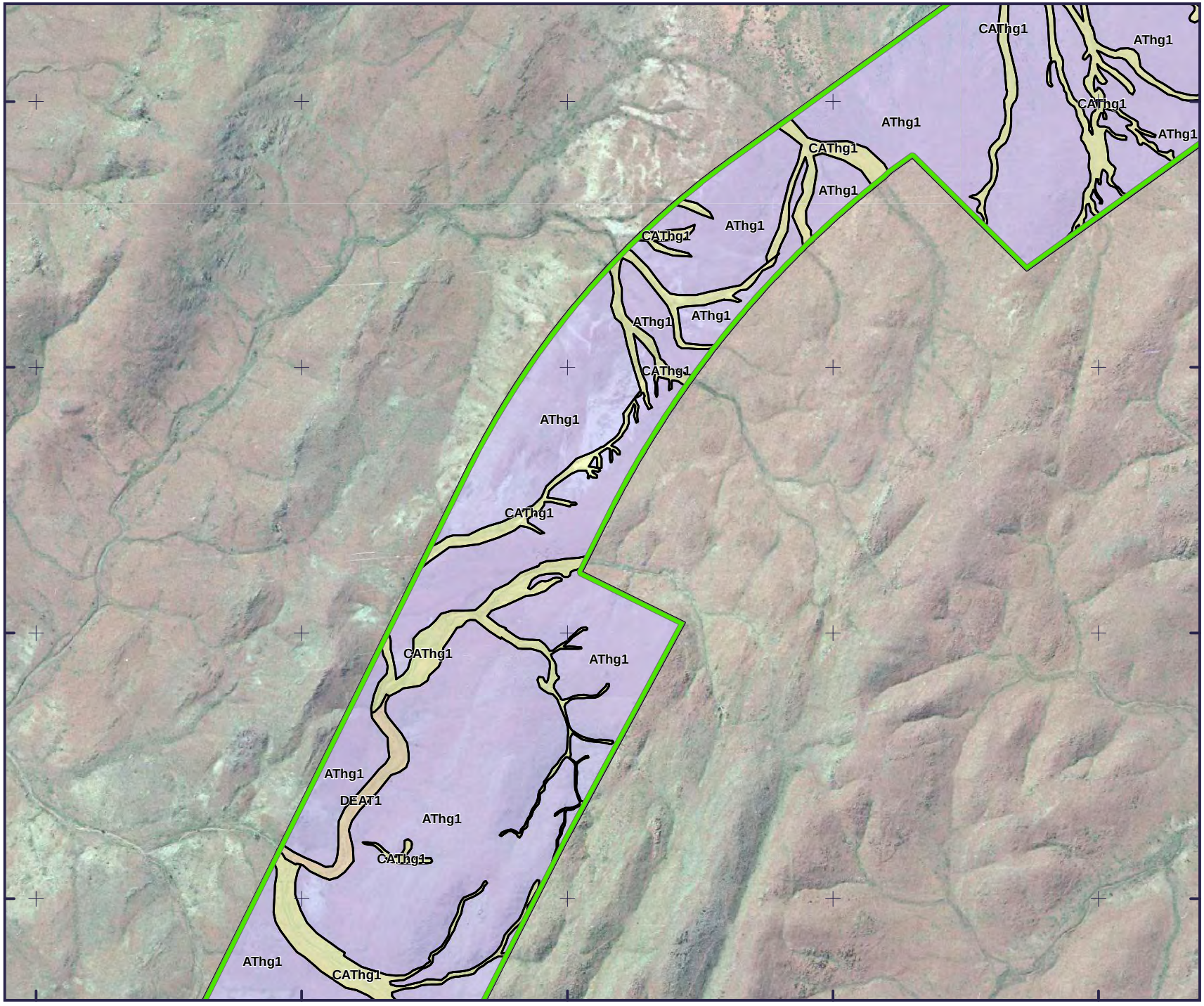


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.6

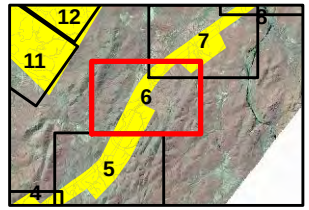
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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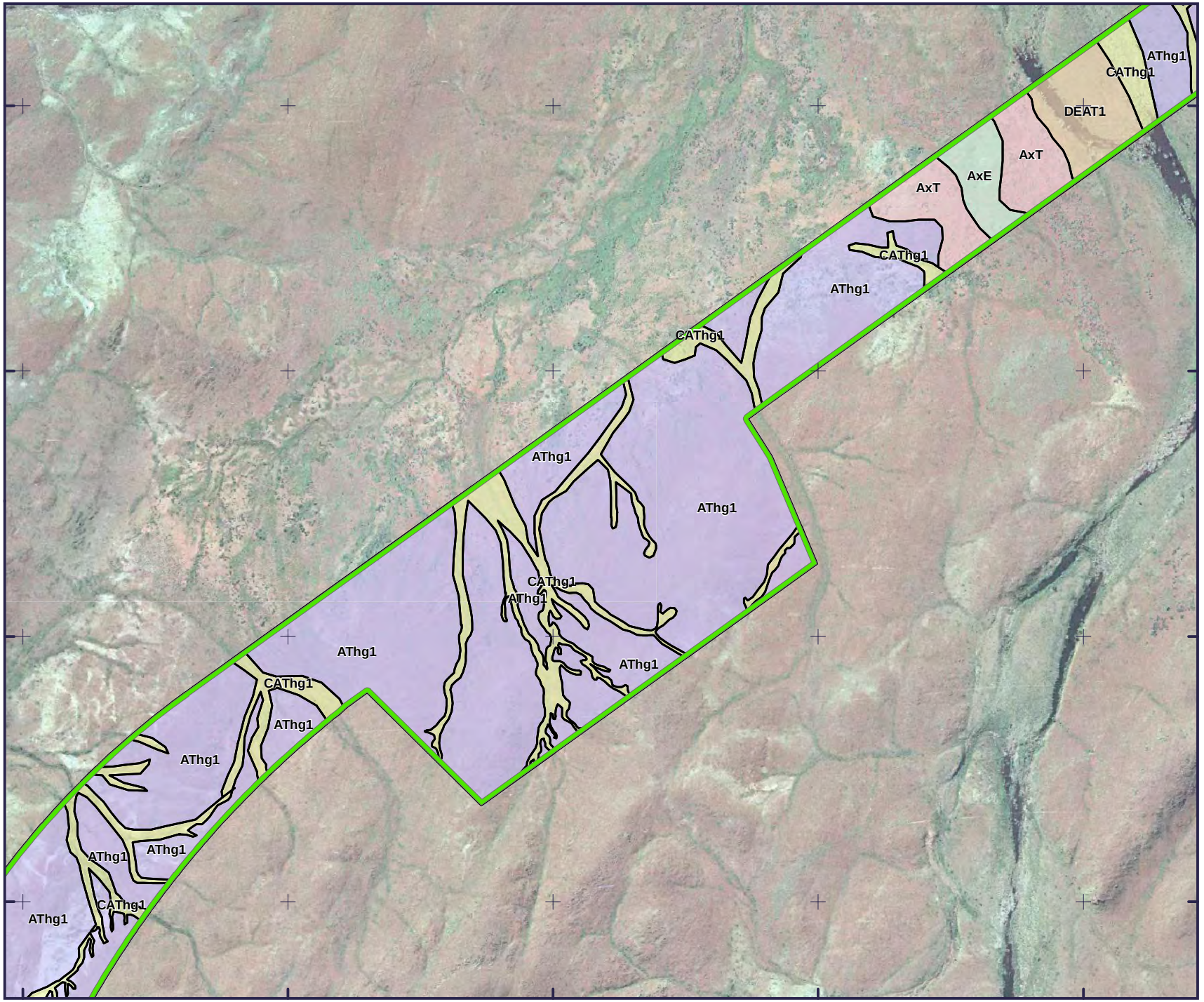


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.7

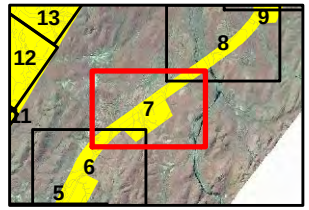
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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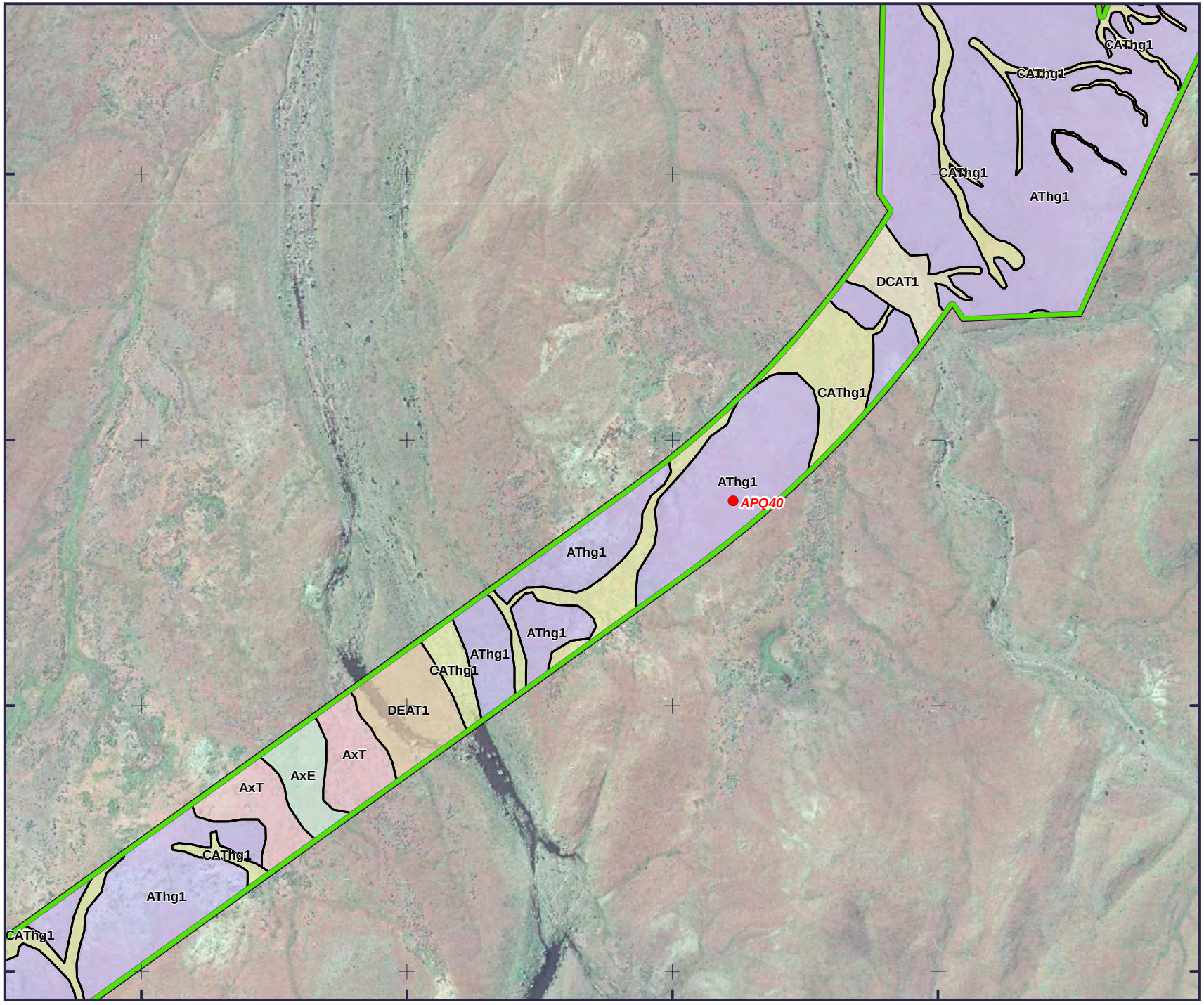


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.8

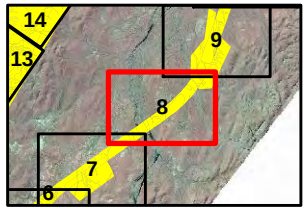
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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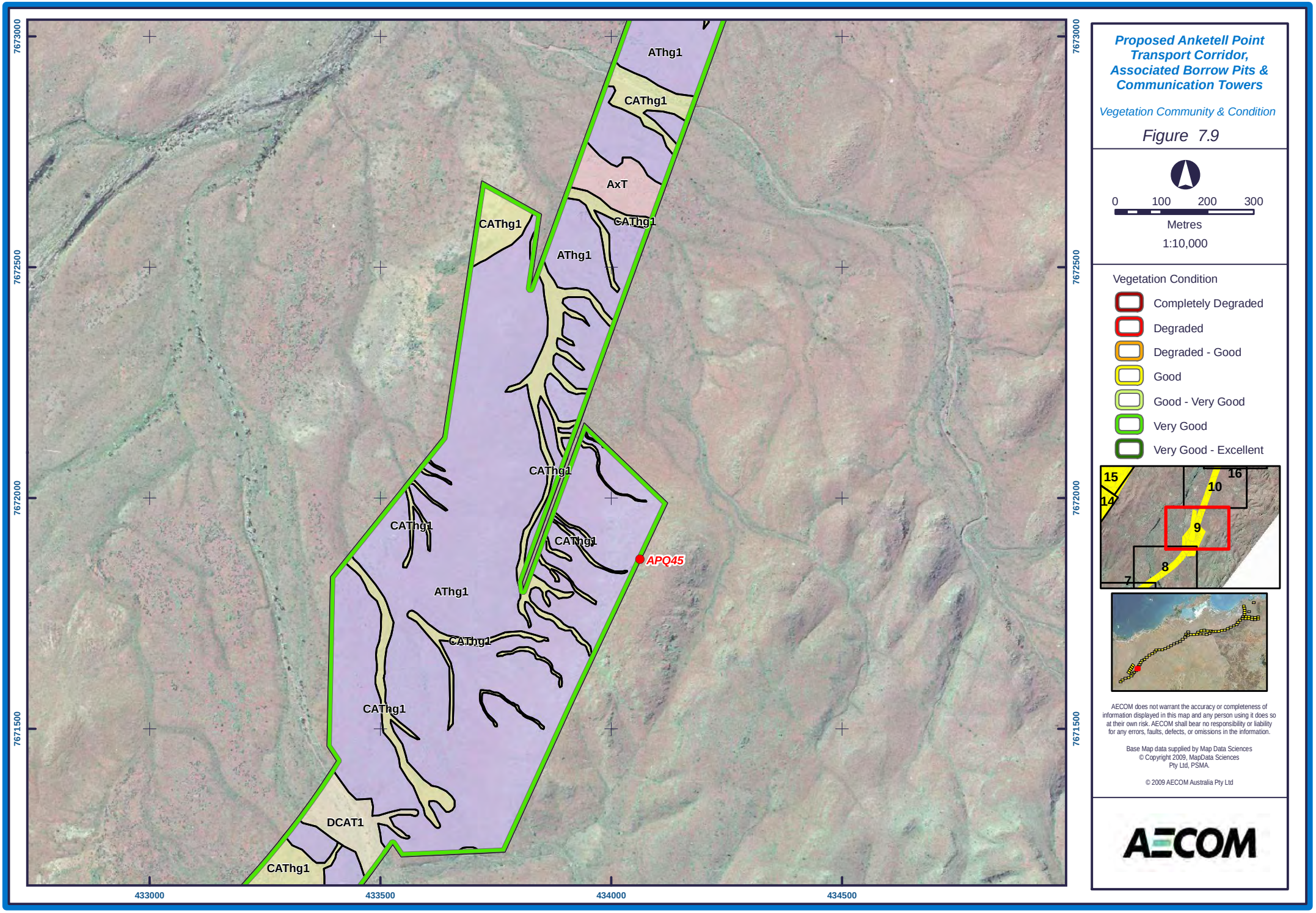

Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.9

0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent

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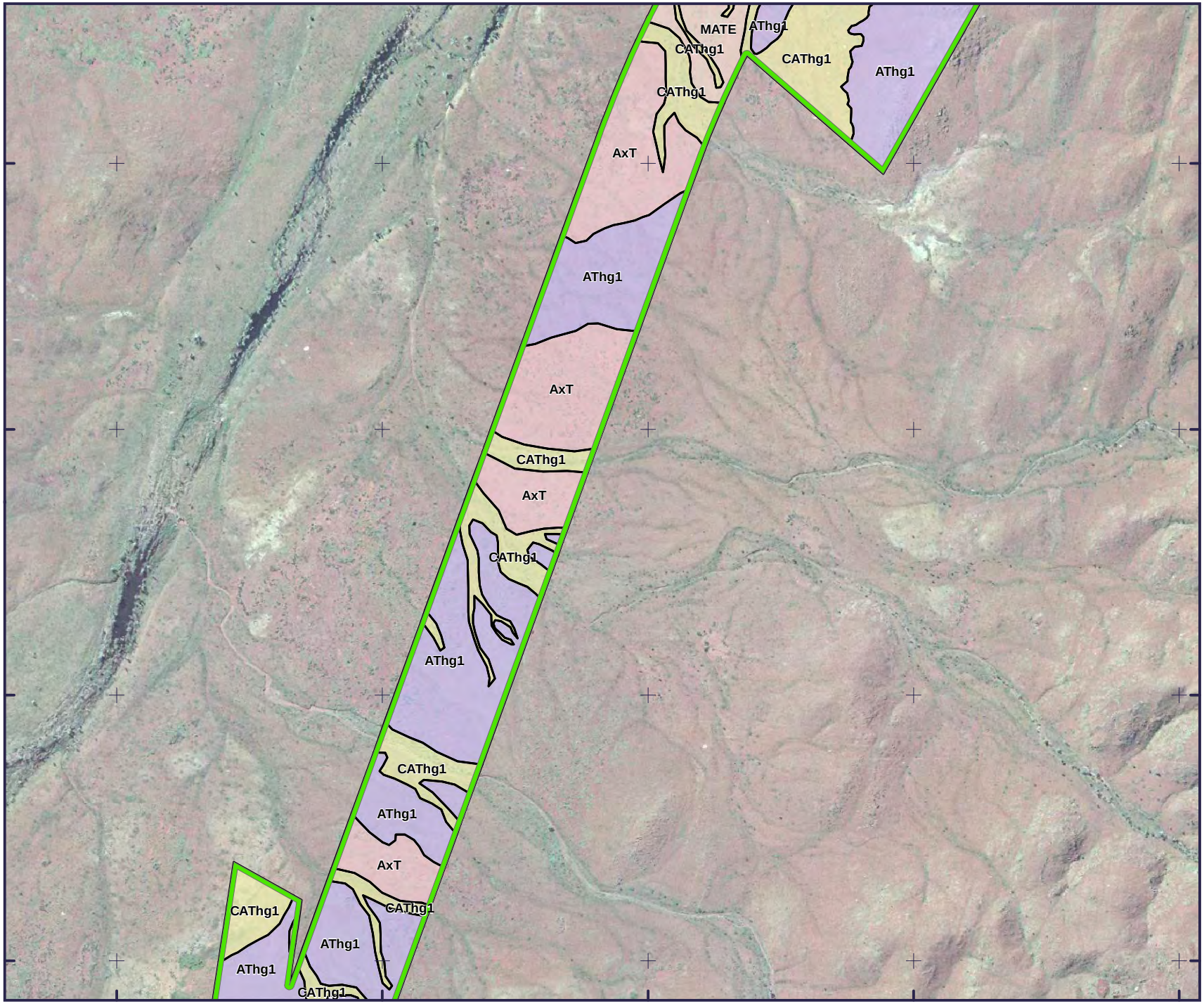


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.10

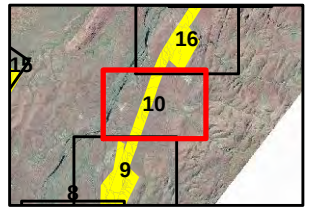
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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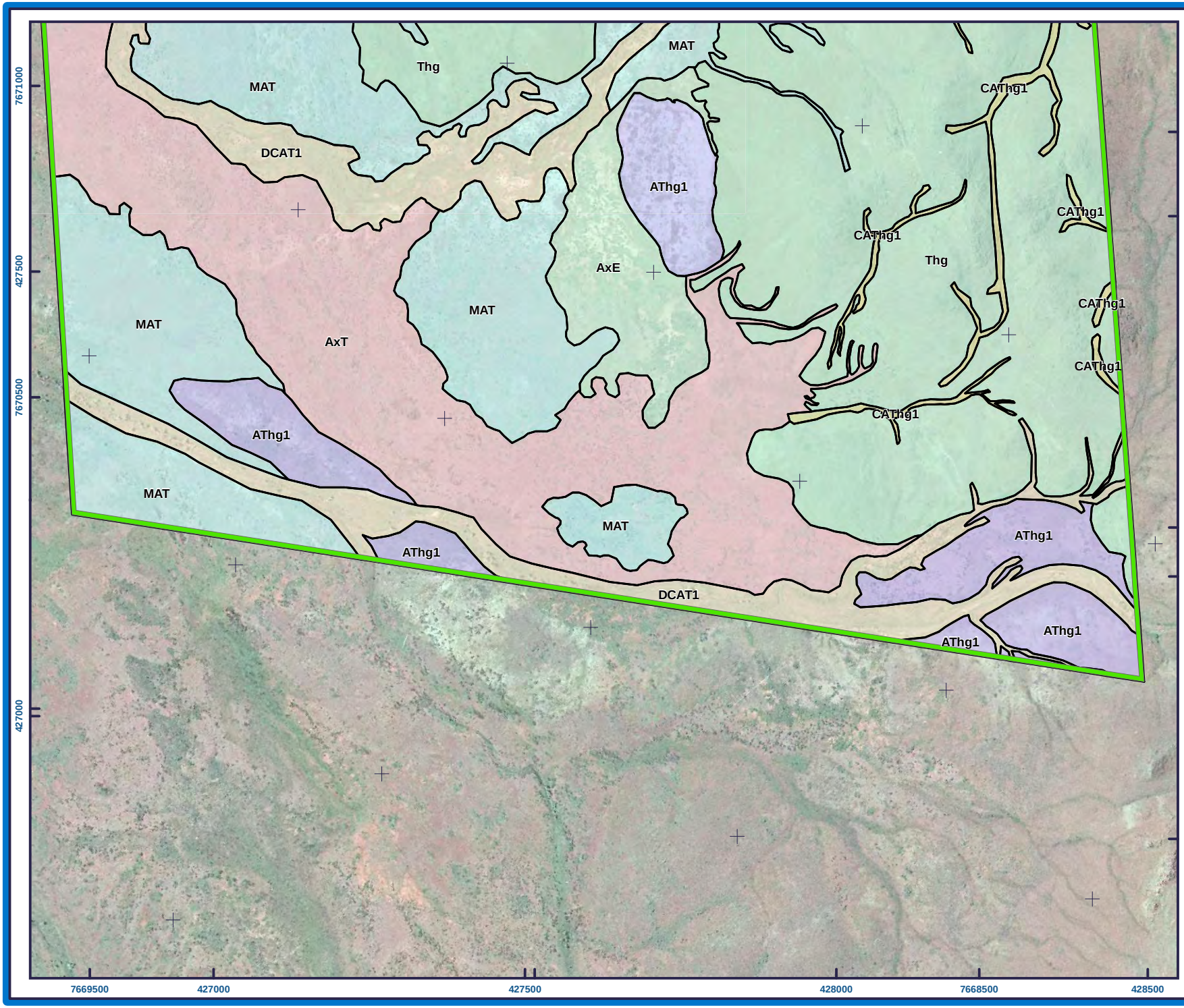


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.11

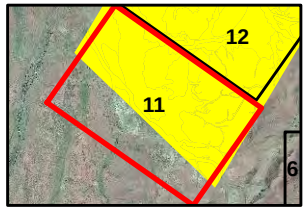
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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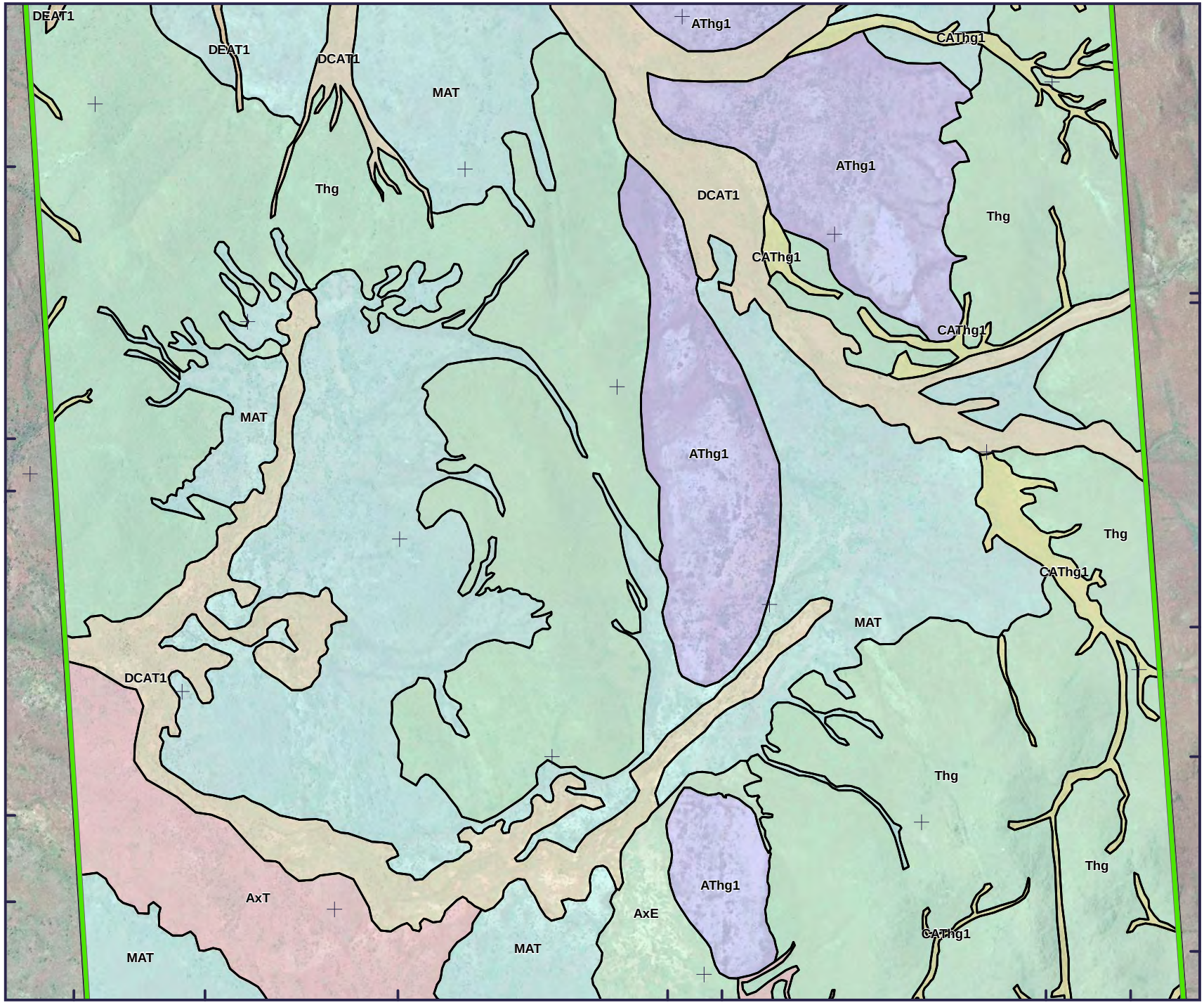


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.12

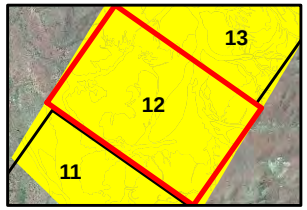
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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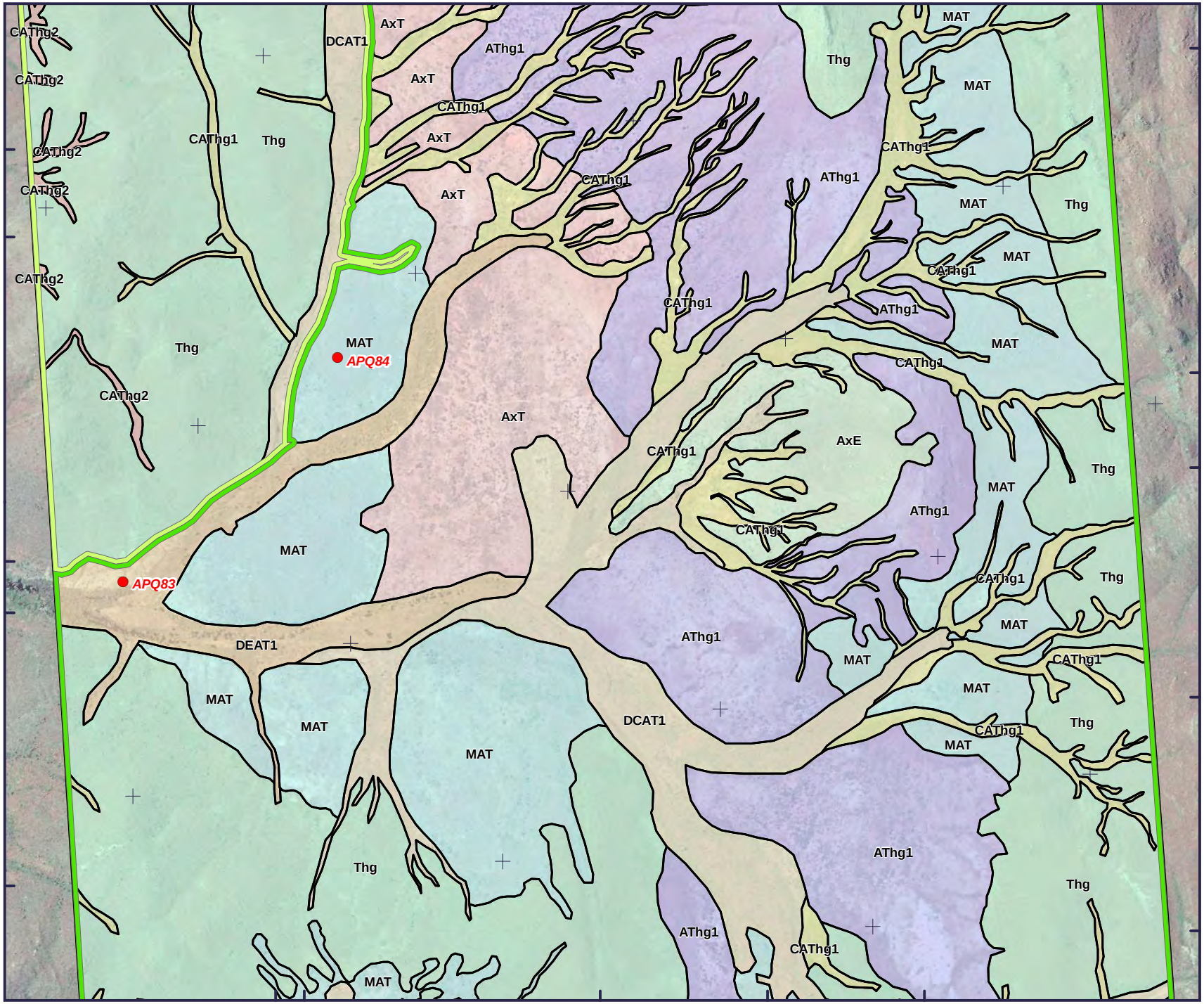


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.13

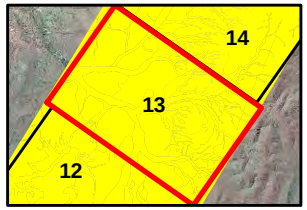
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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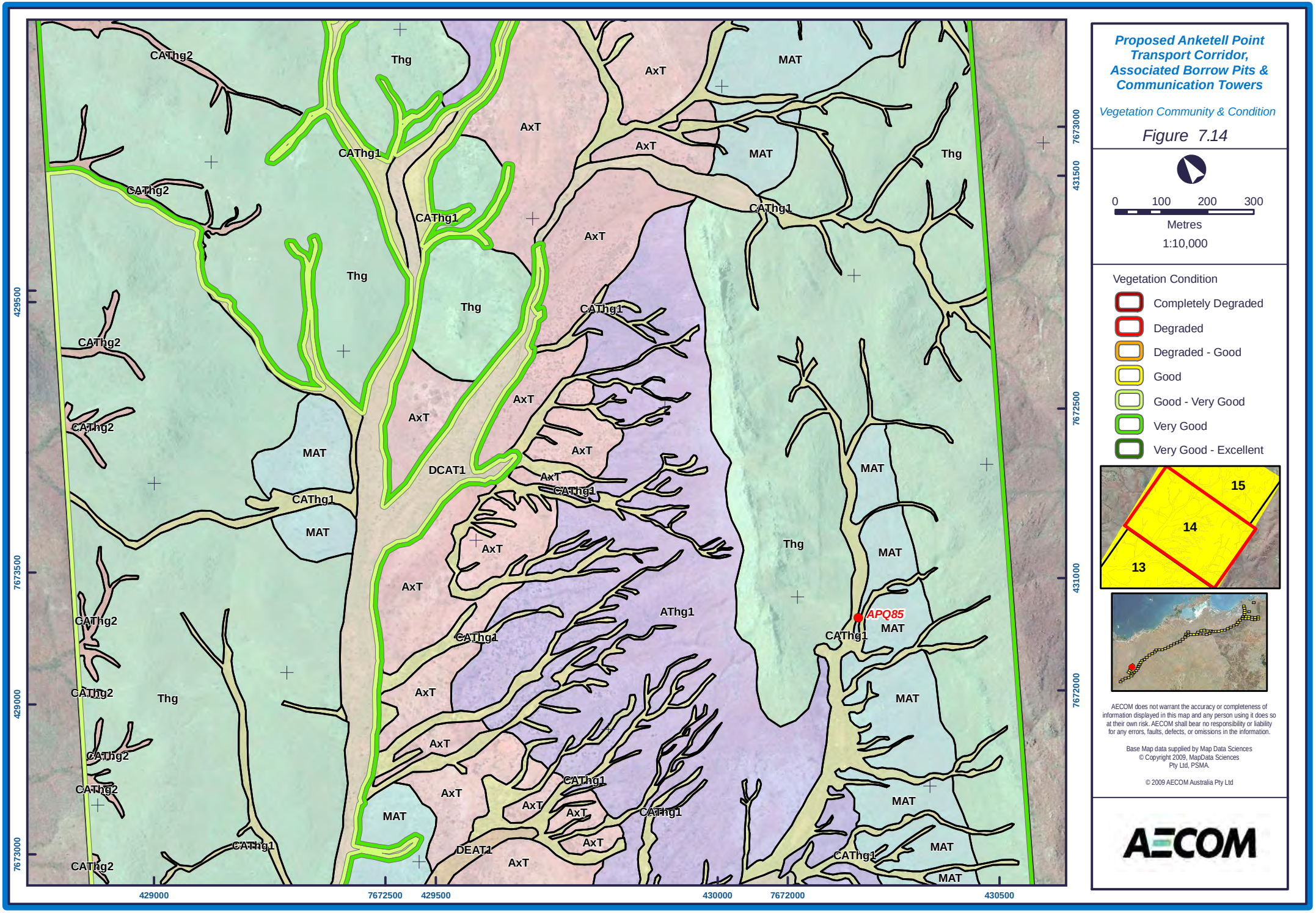

Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.14

0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent

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Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.15

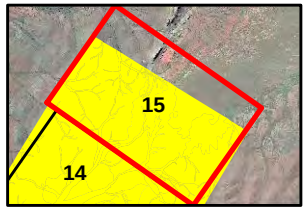
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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MAT
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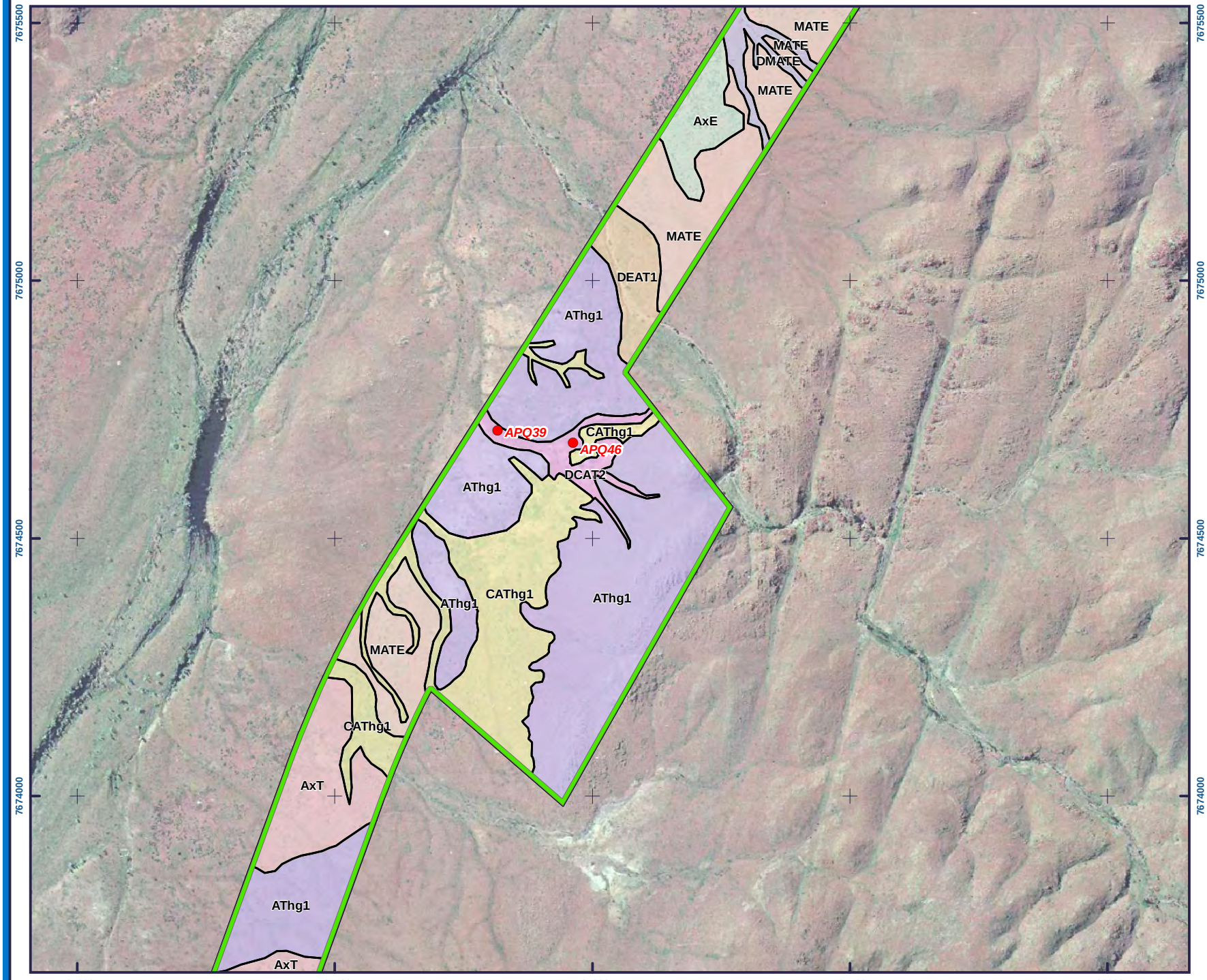


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.16

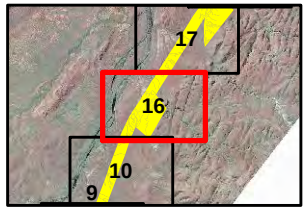
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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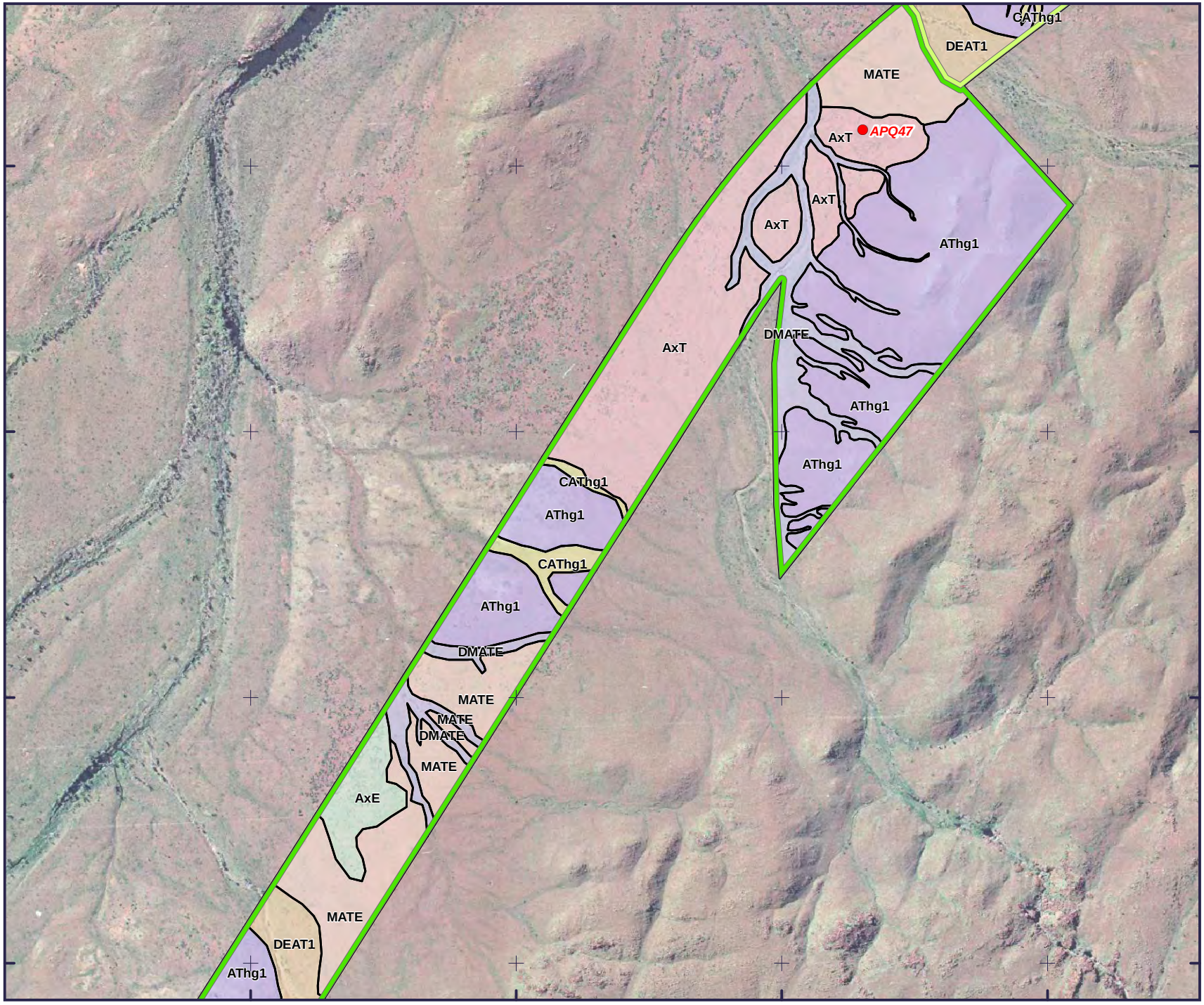


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.17

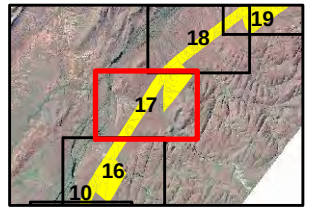
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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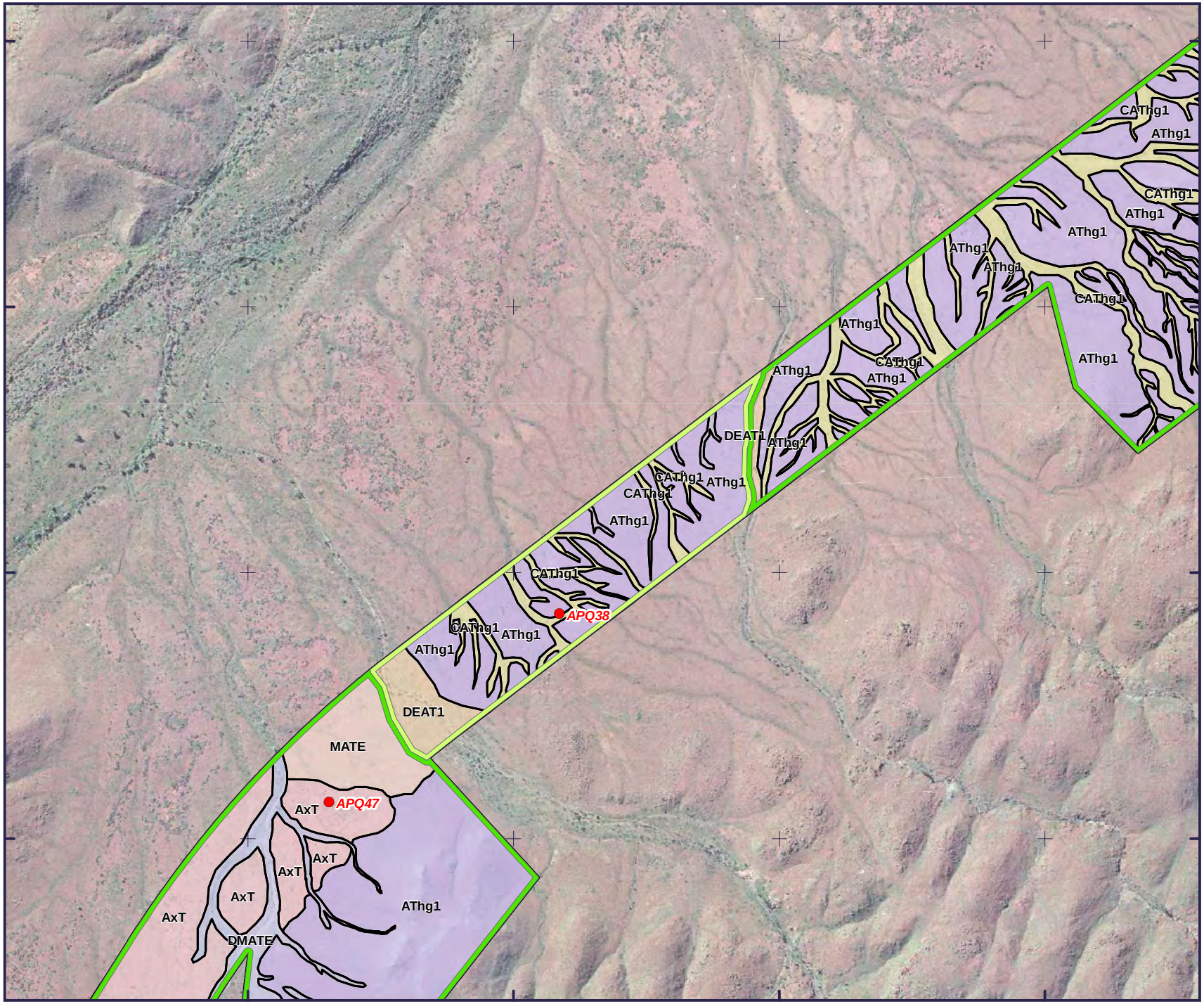


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.18

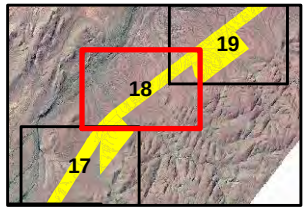
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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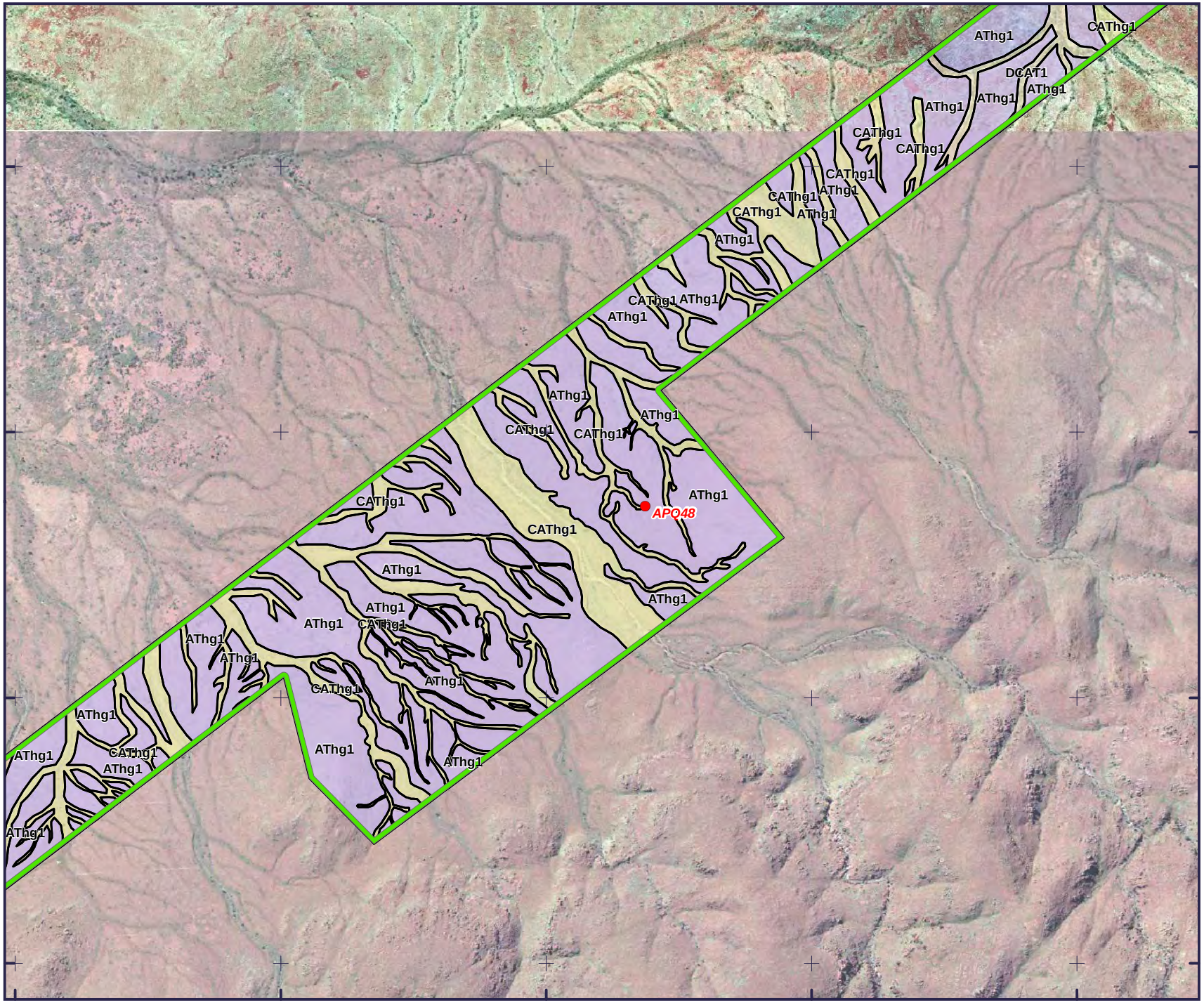


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.19

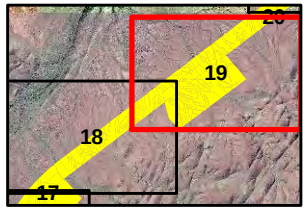
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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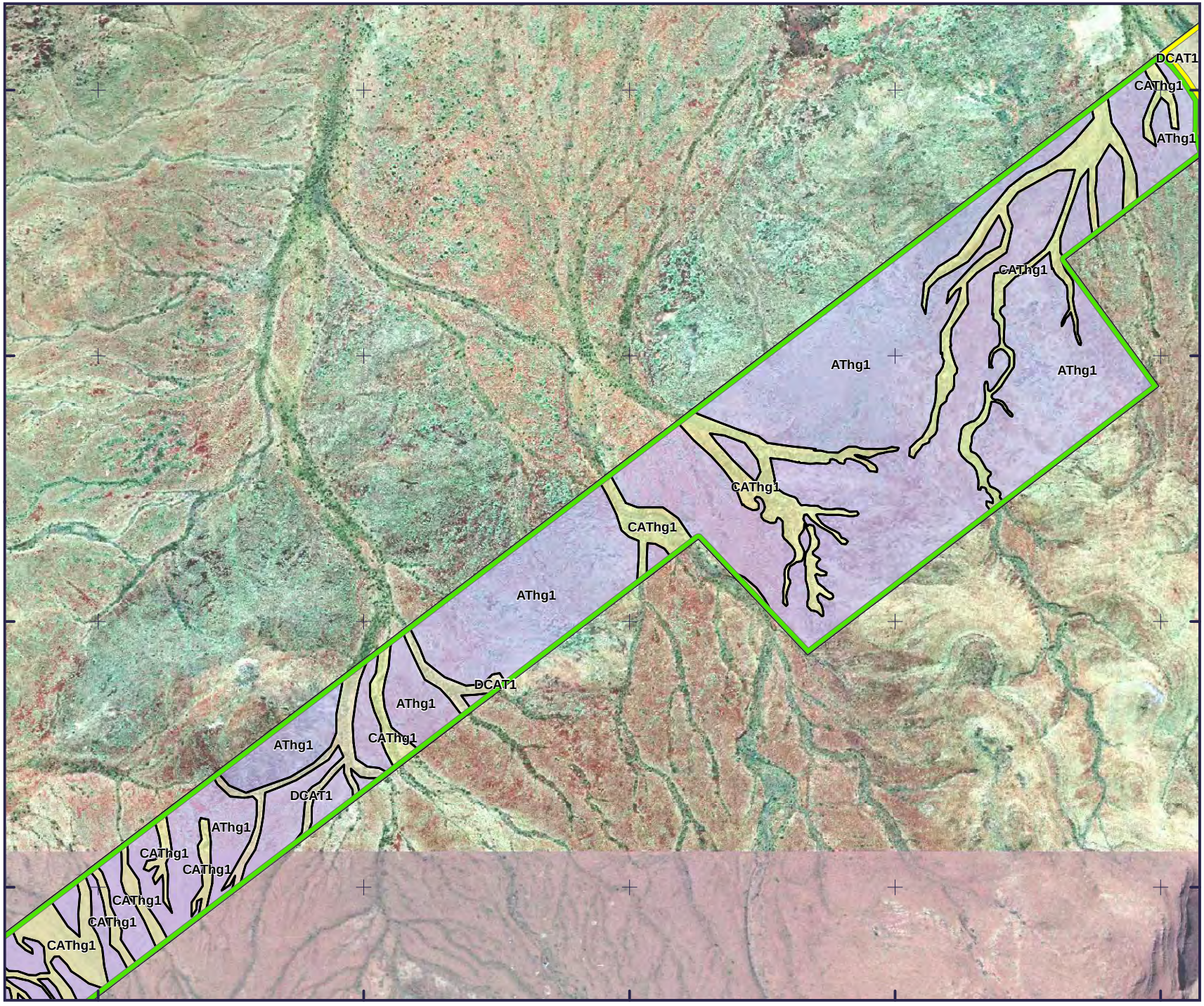
Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.20



0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent

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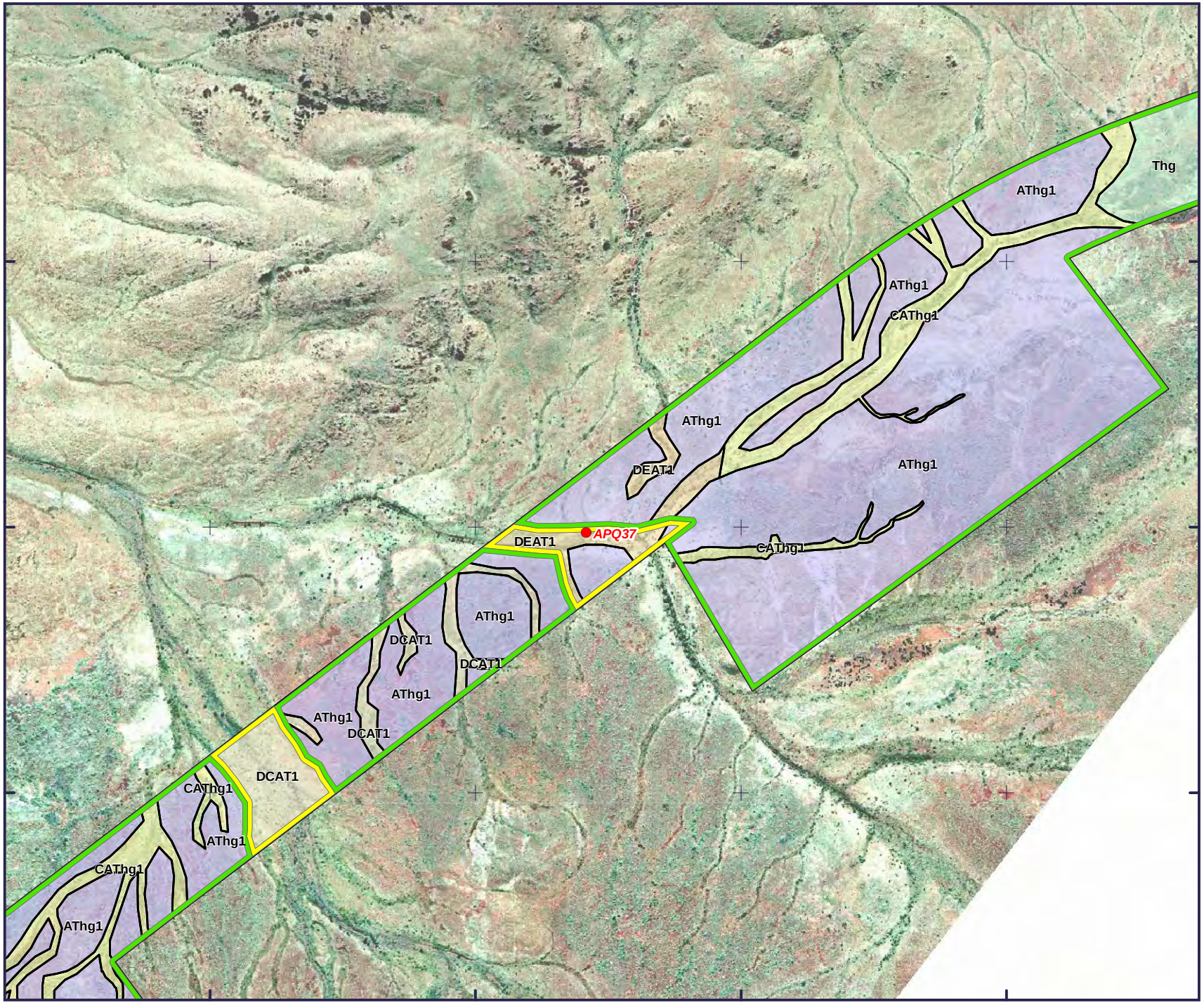


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.21

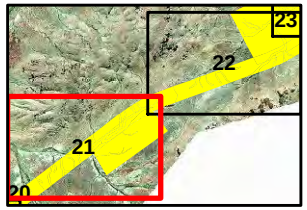
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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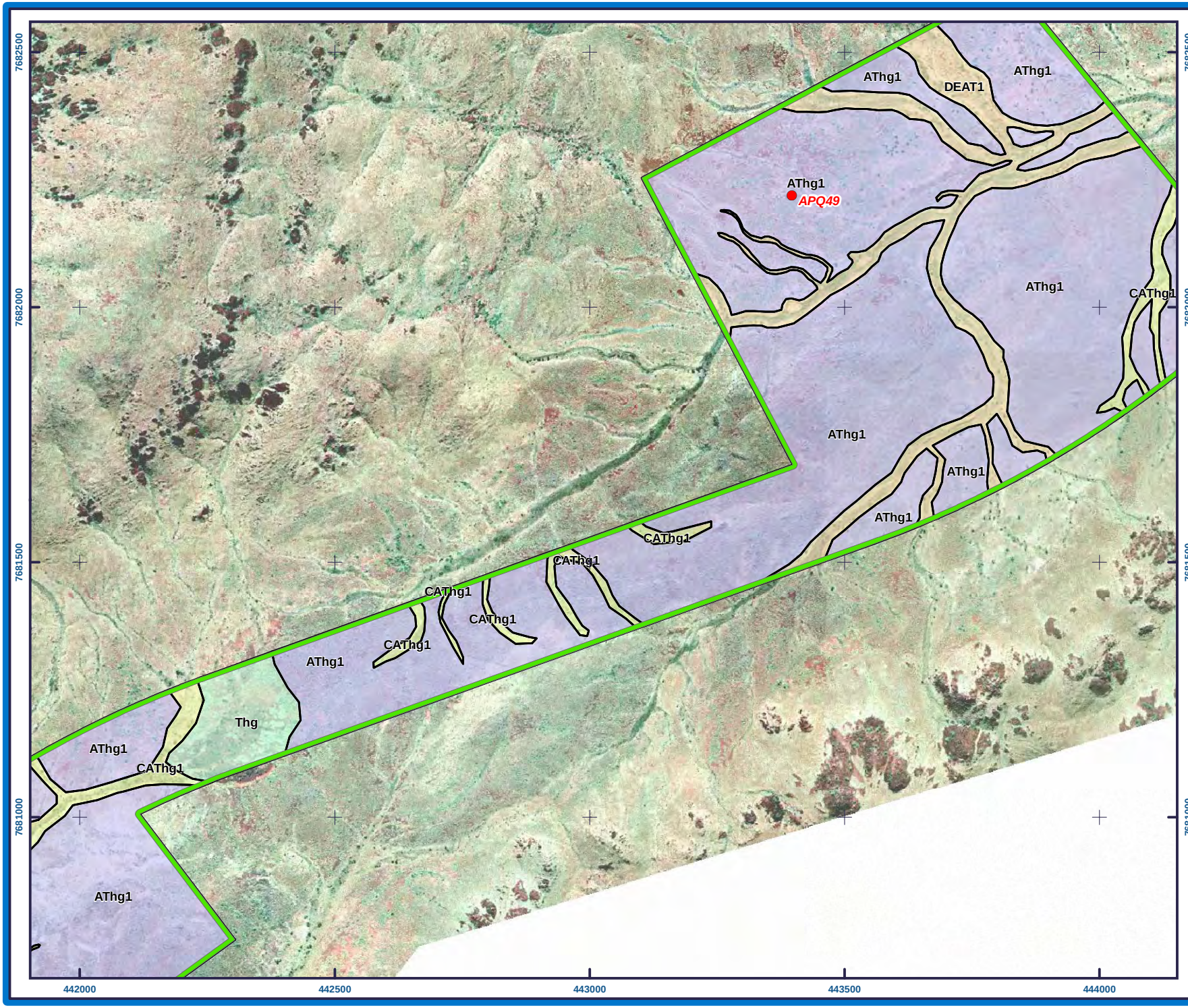


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.22

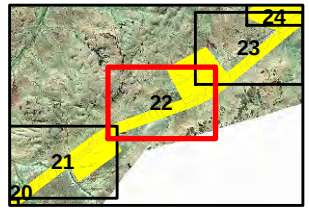
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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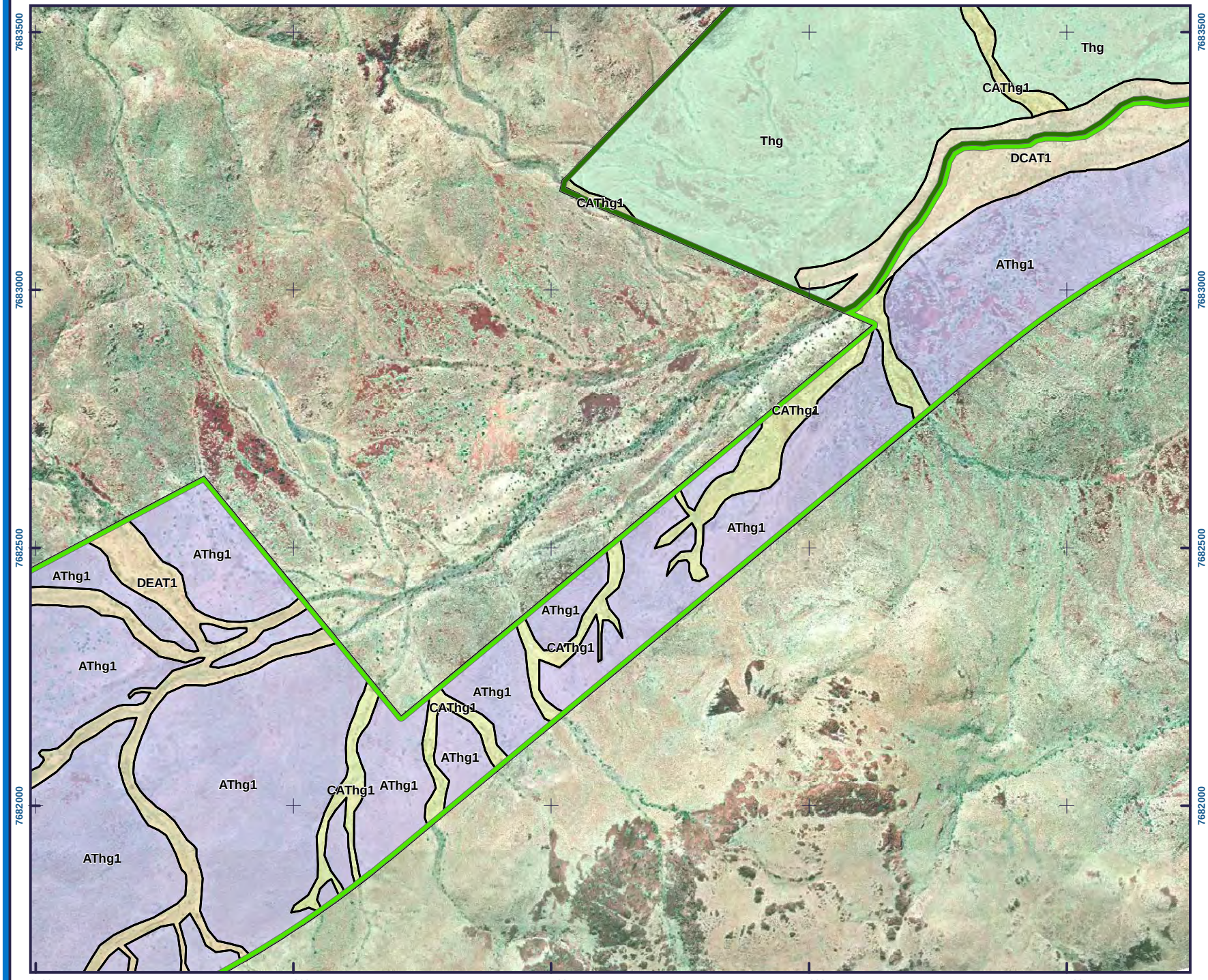


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.23

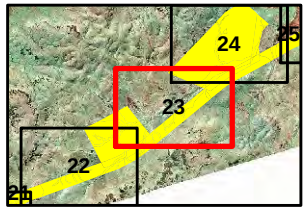
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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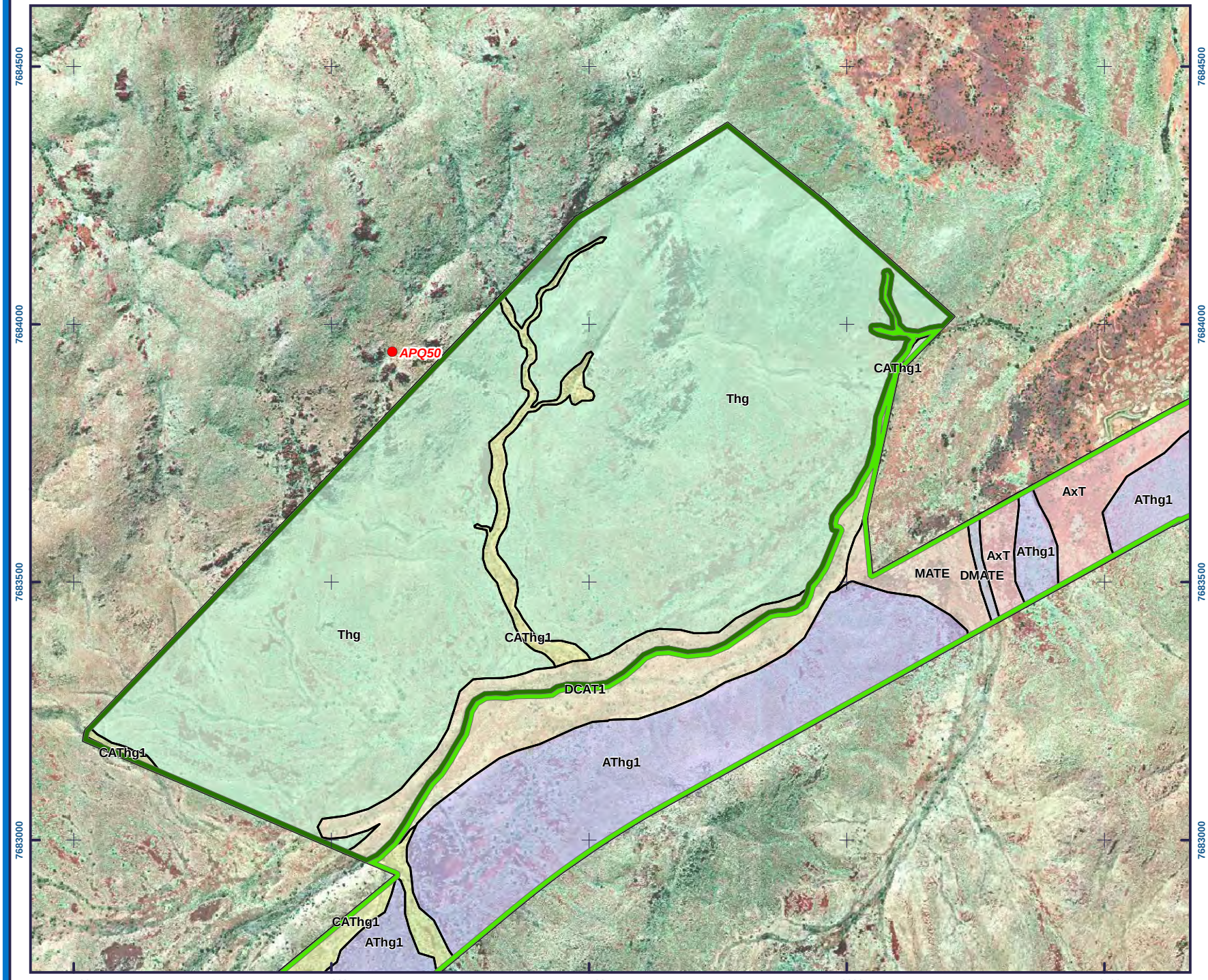


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.24

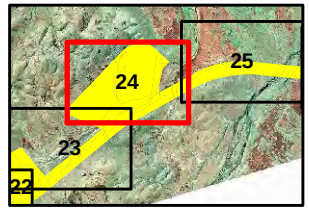
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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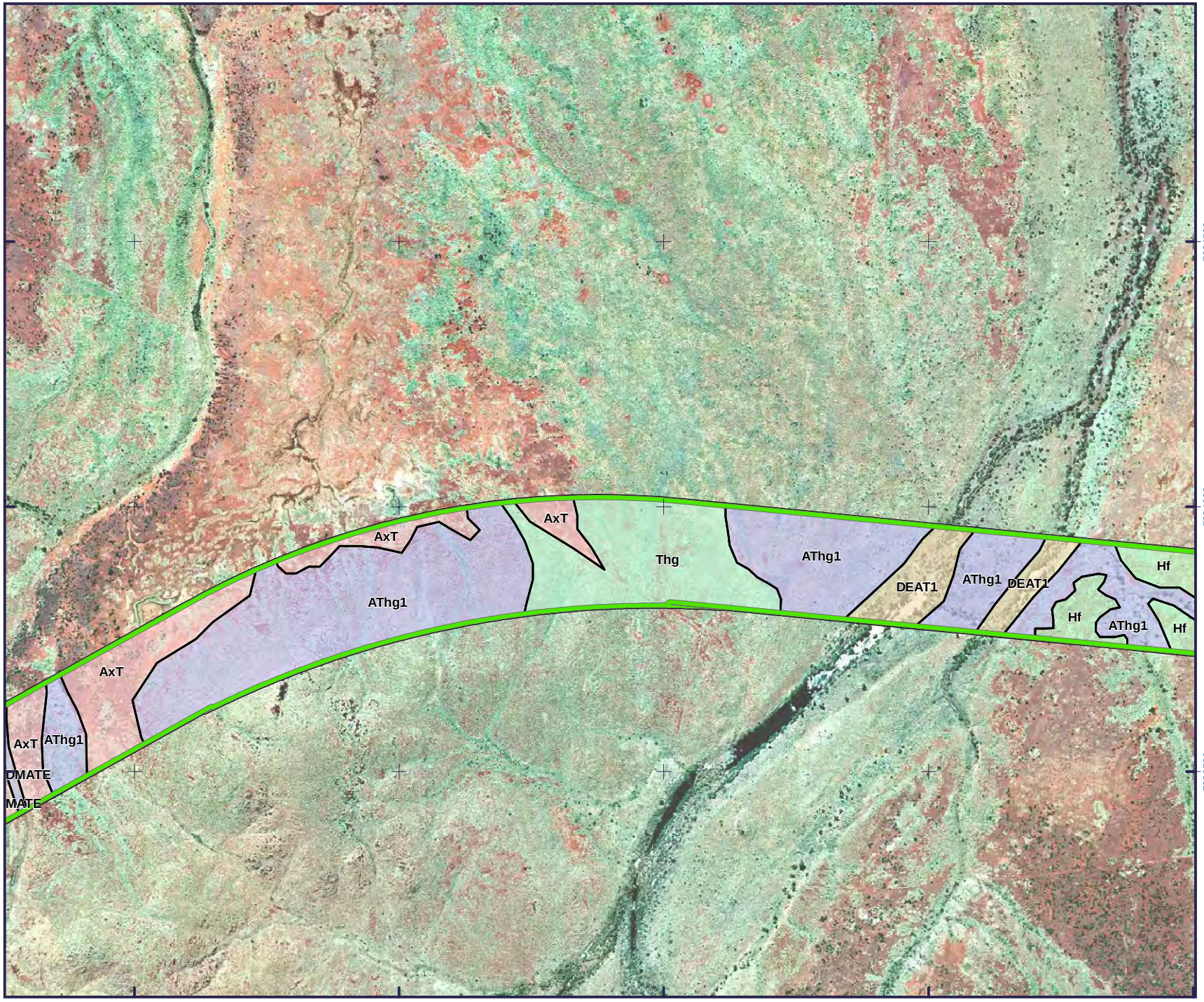


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.25

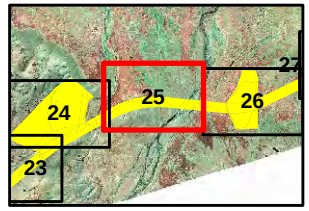
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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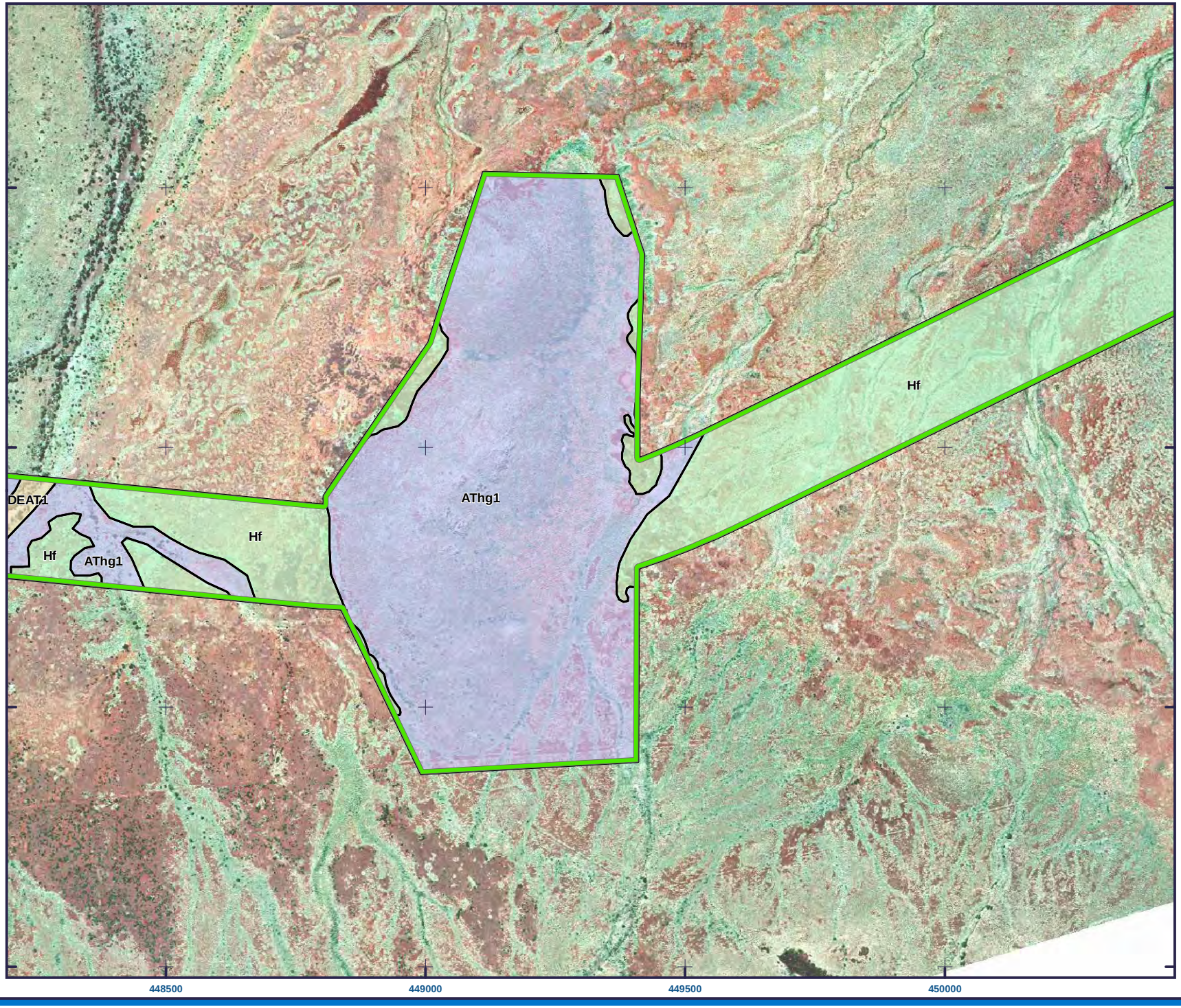
Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.26



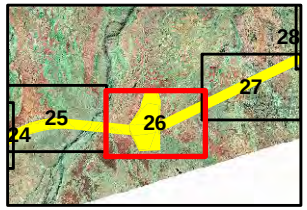
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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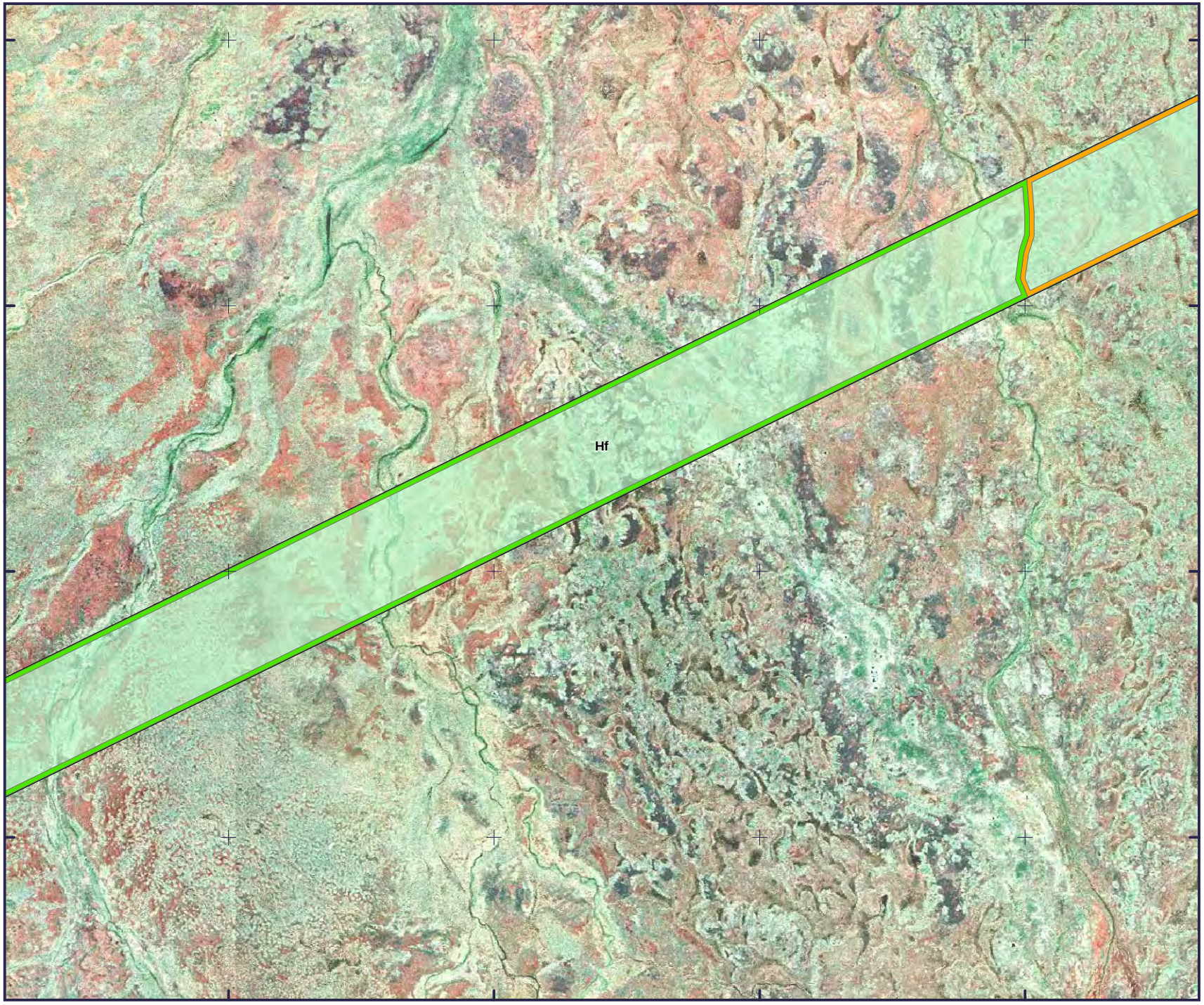


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.27

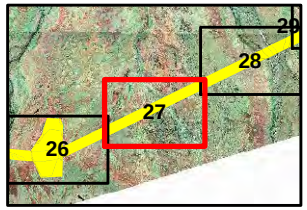
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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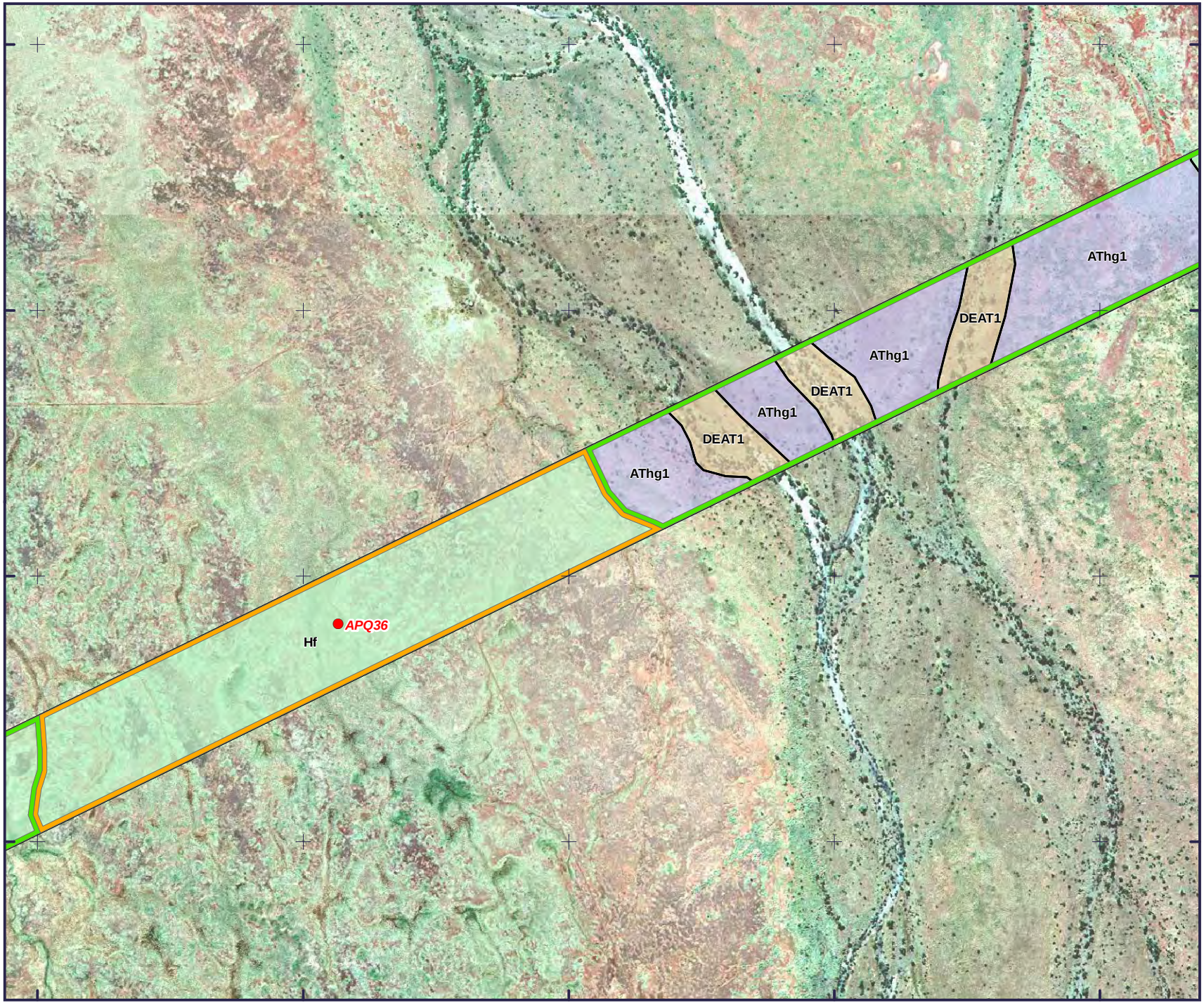


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.28

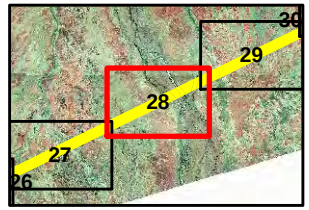
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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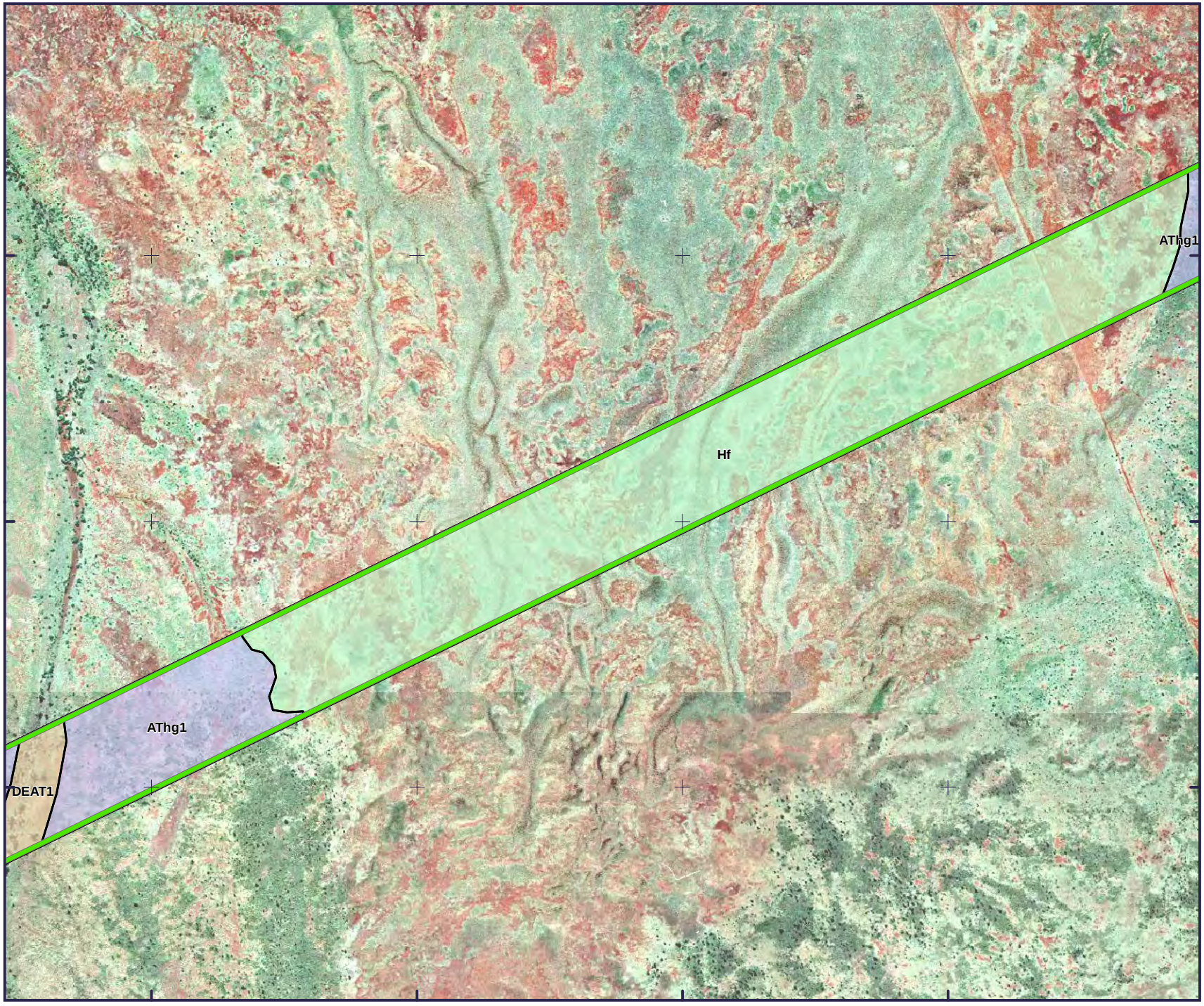
Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.29



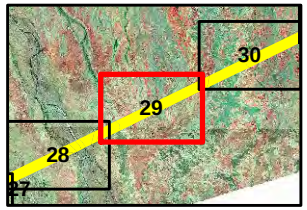
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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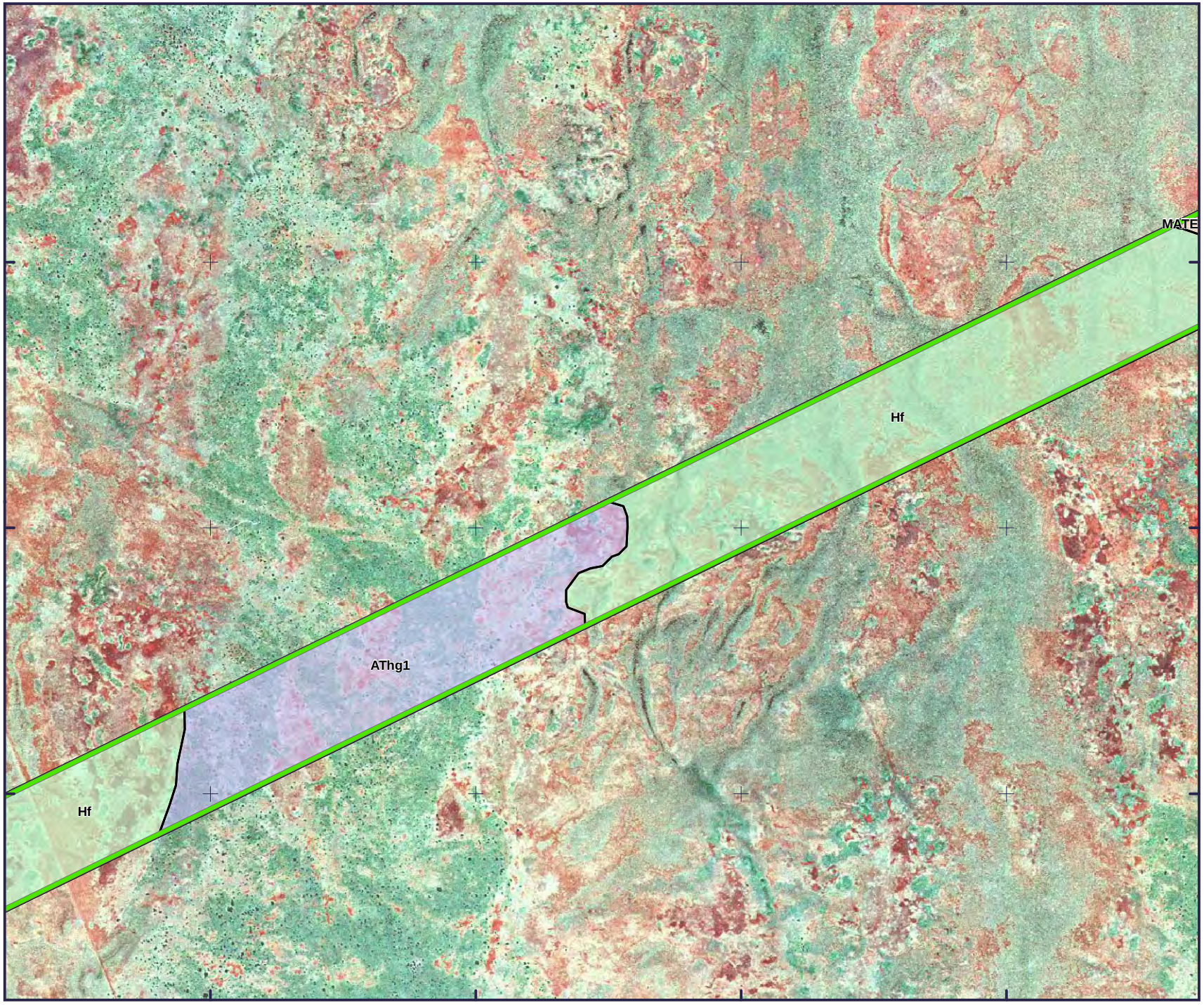


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.30

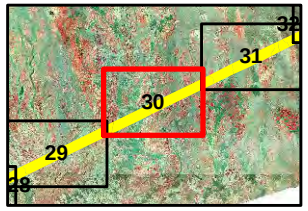
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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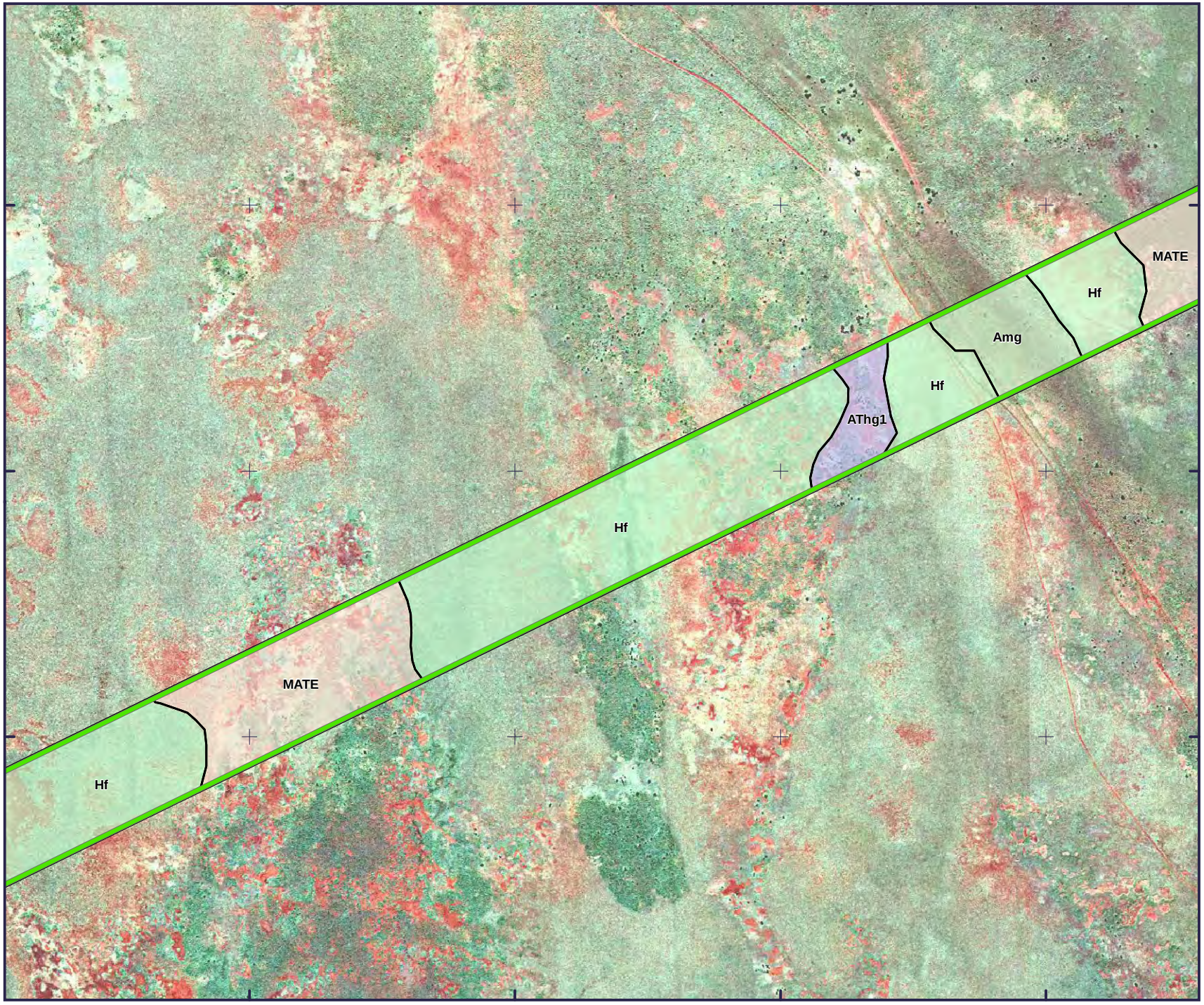


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.31

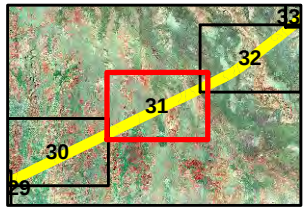
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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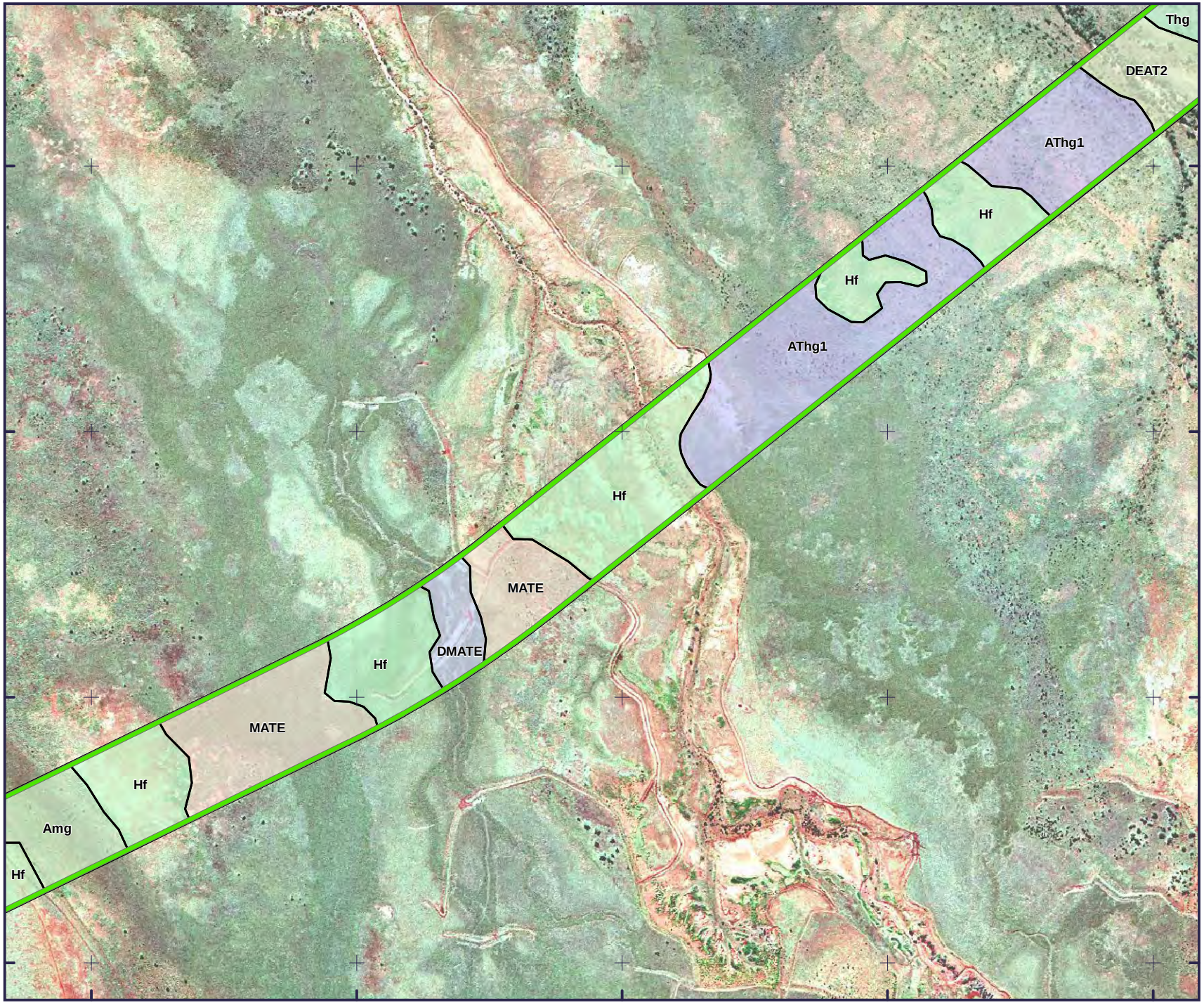


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.32

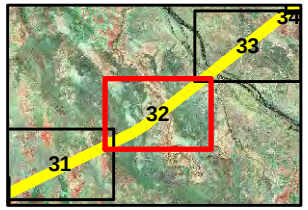
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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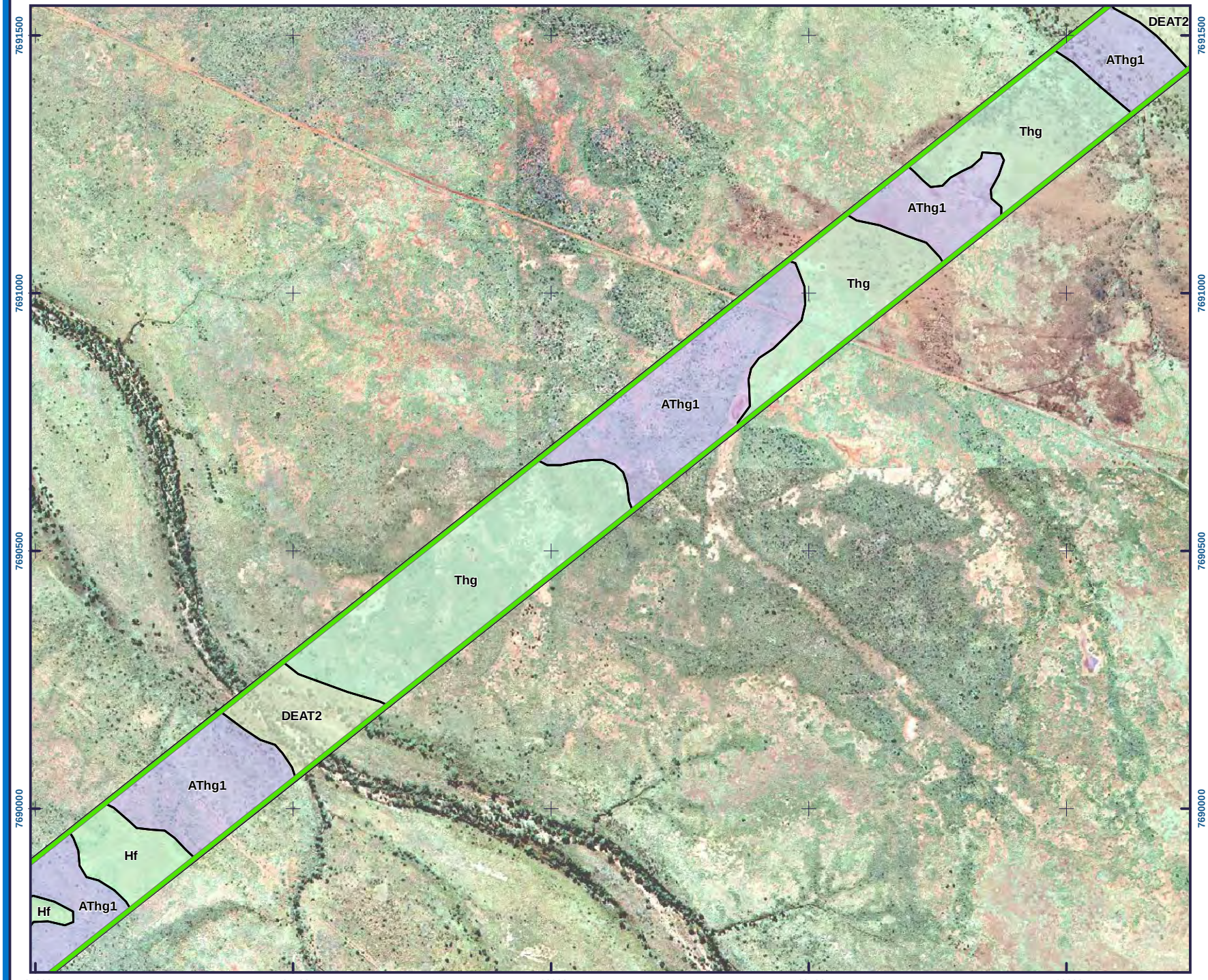


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.33

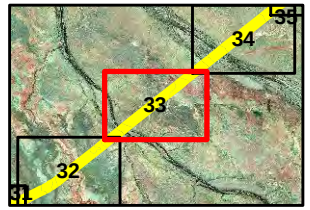
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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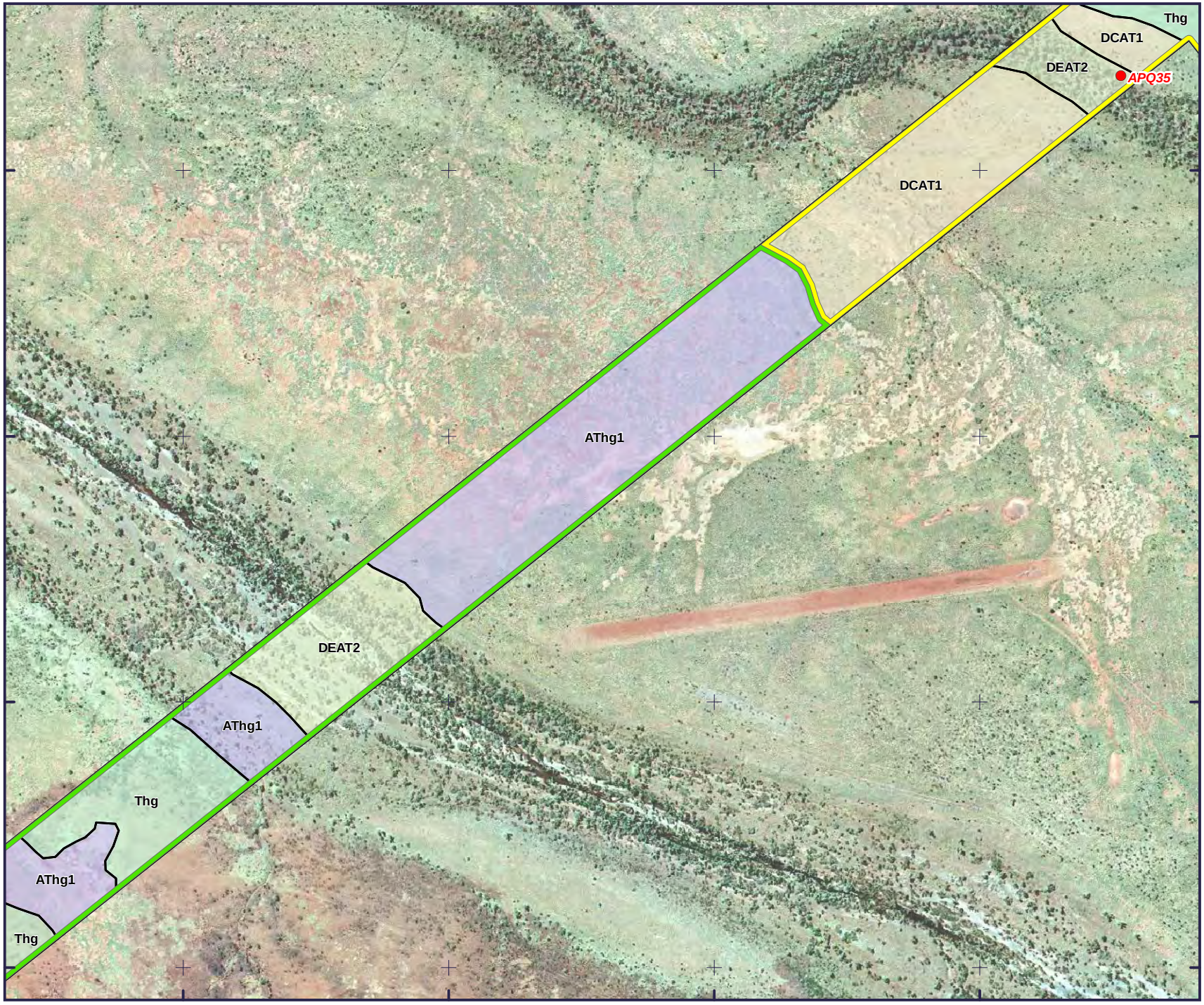


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.34

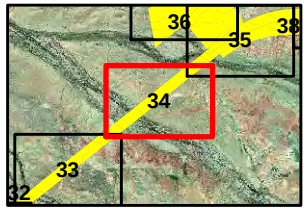
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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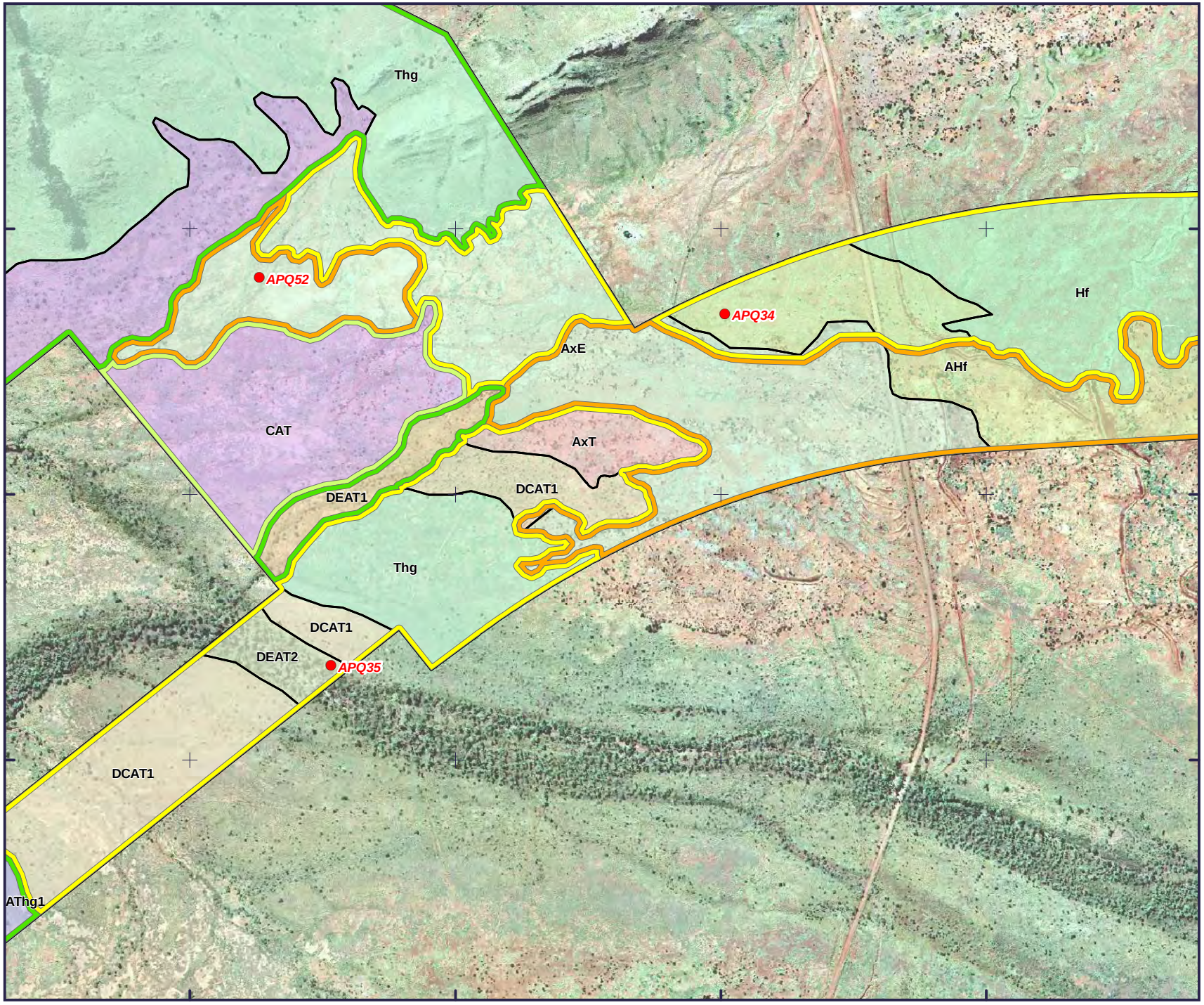


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.35

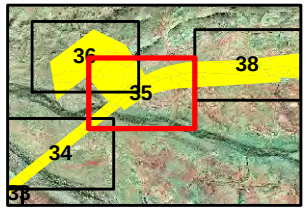
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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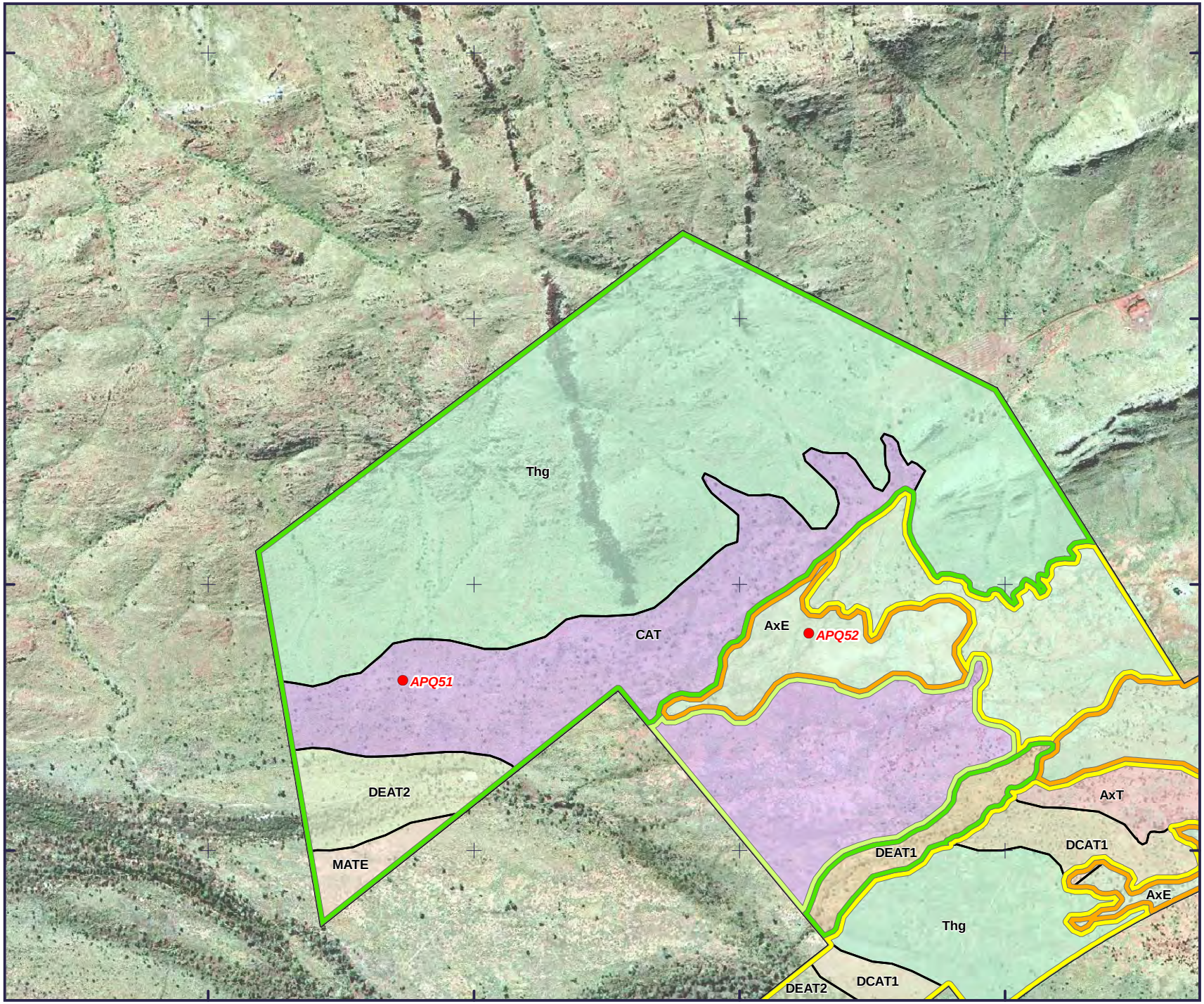


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.36

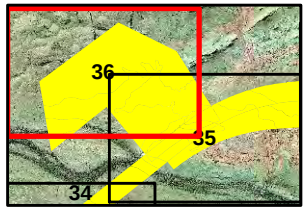
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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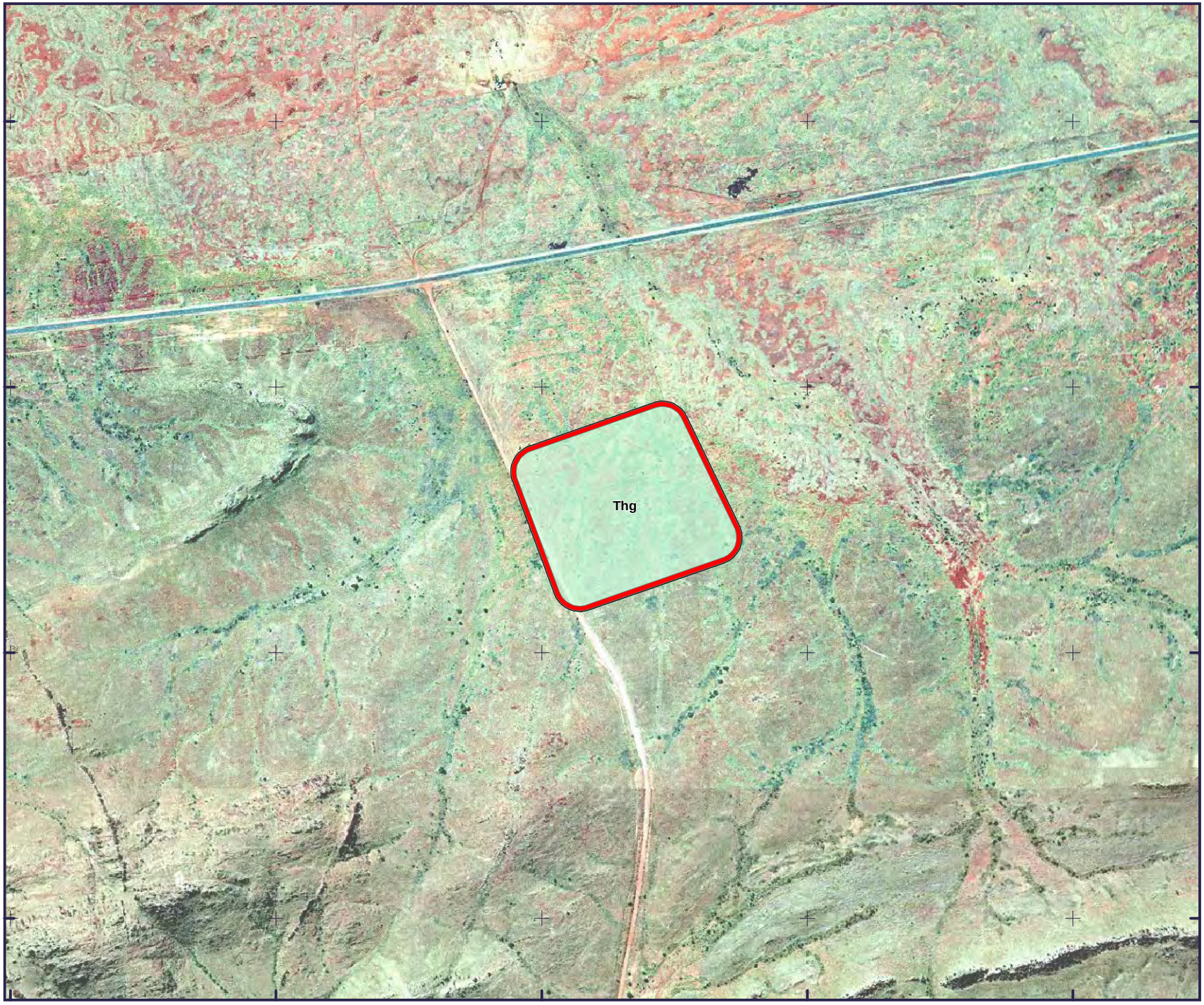


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.37

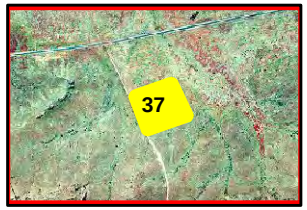
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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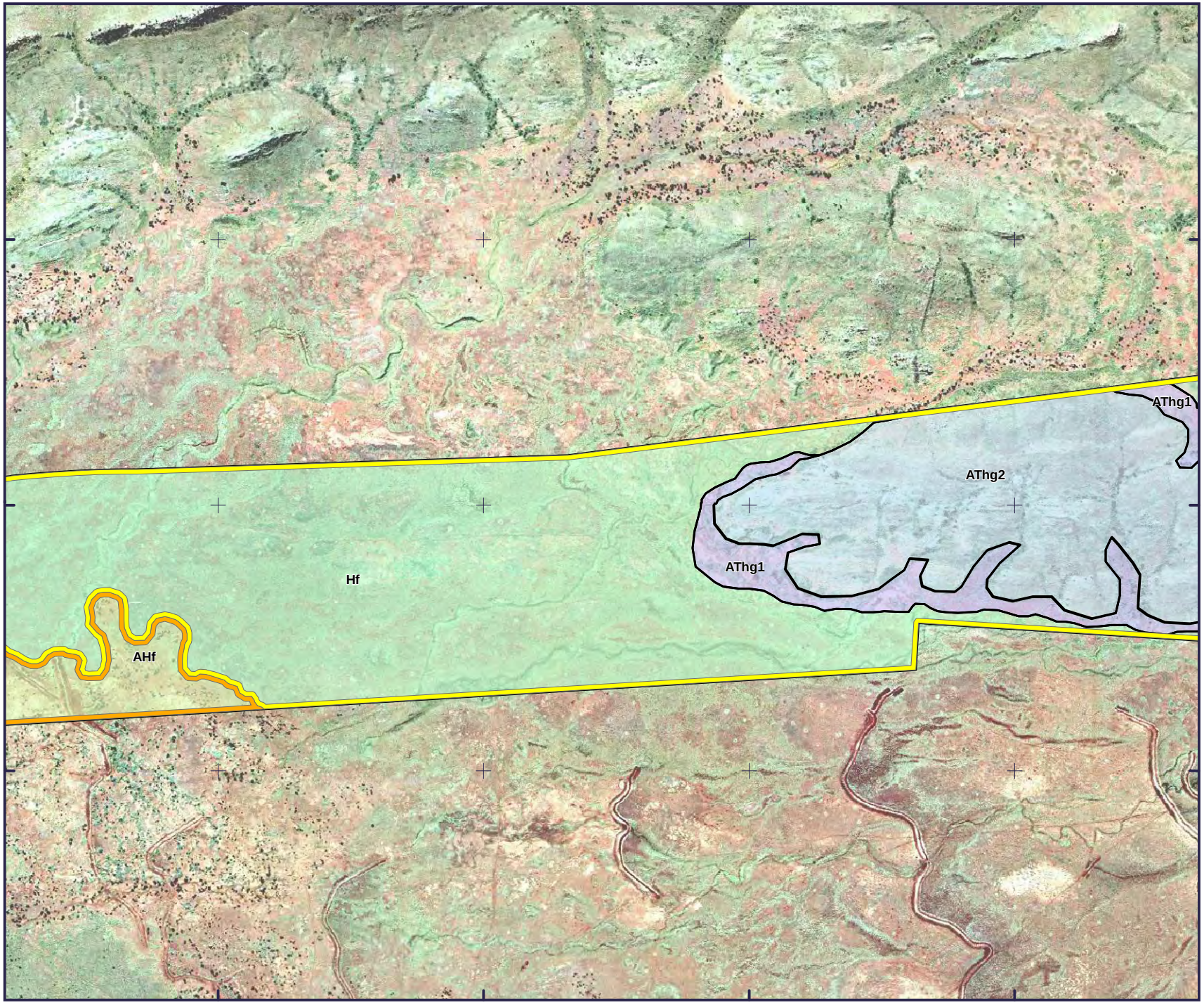


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.38

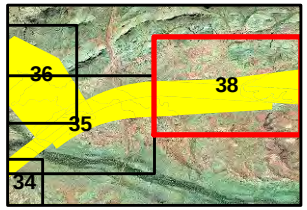
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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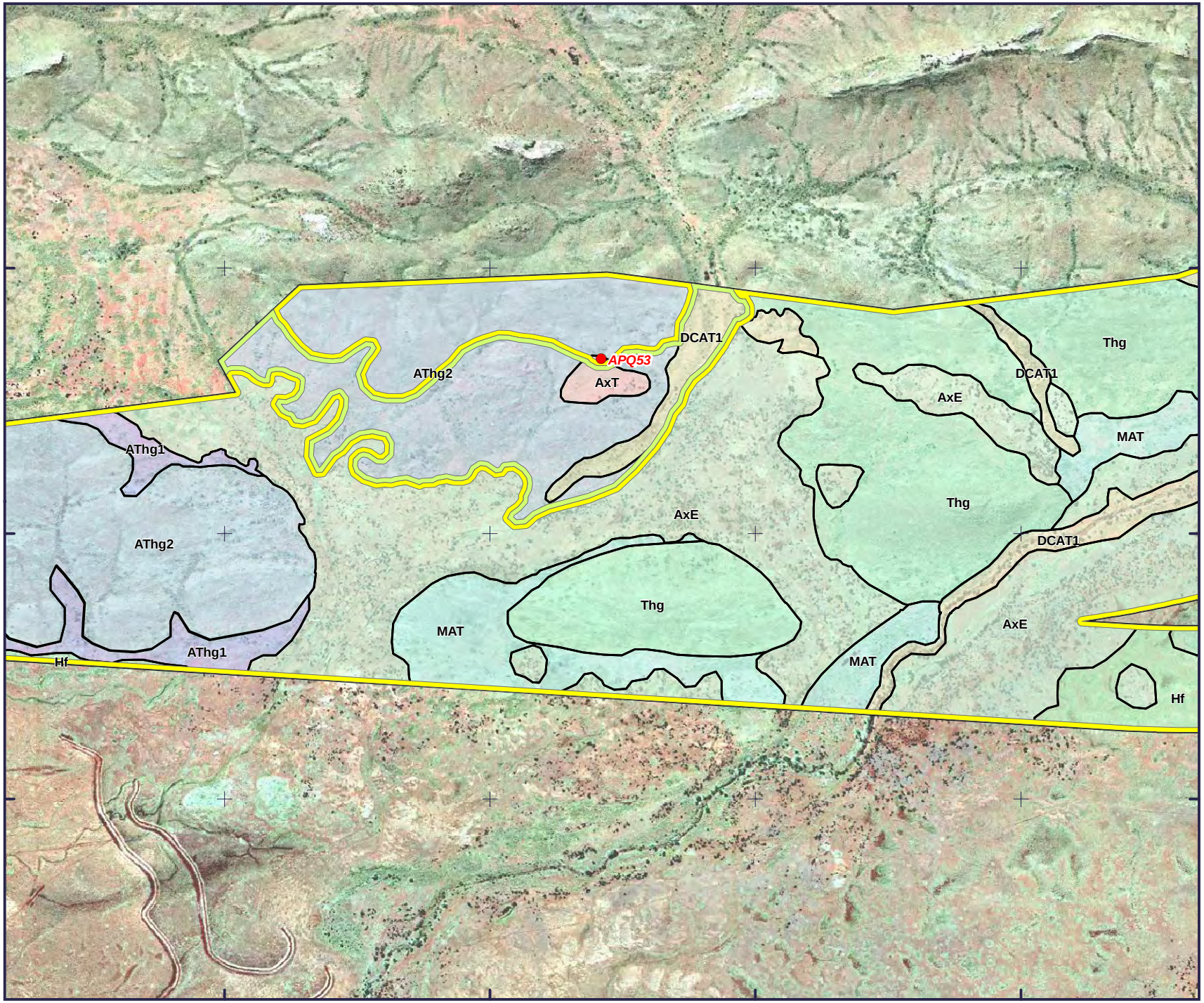


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.39

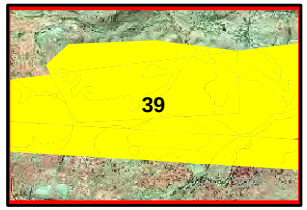
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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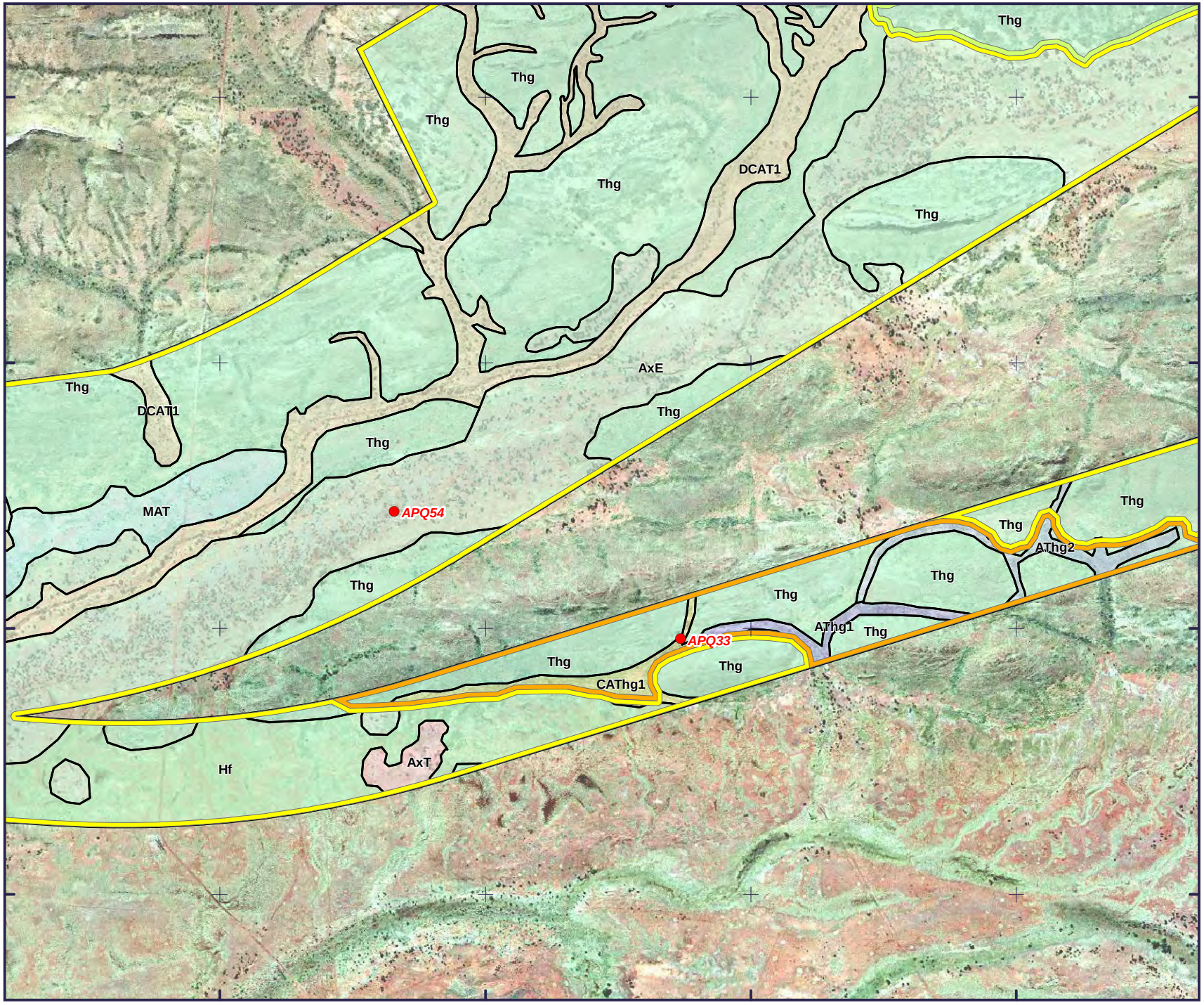


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.40

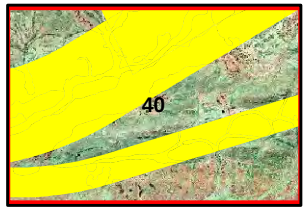
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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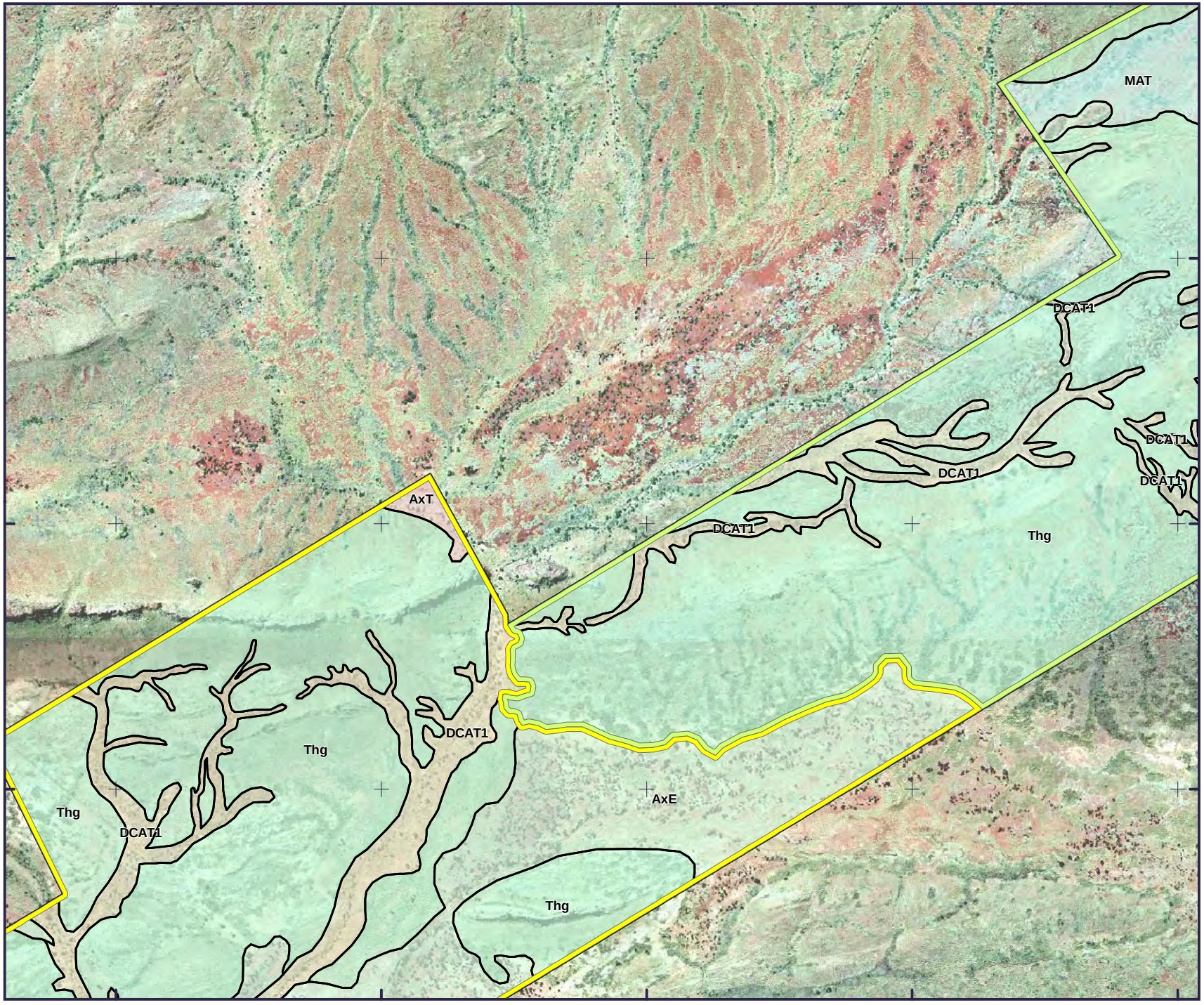


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.41

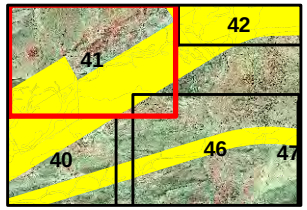
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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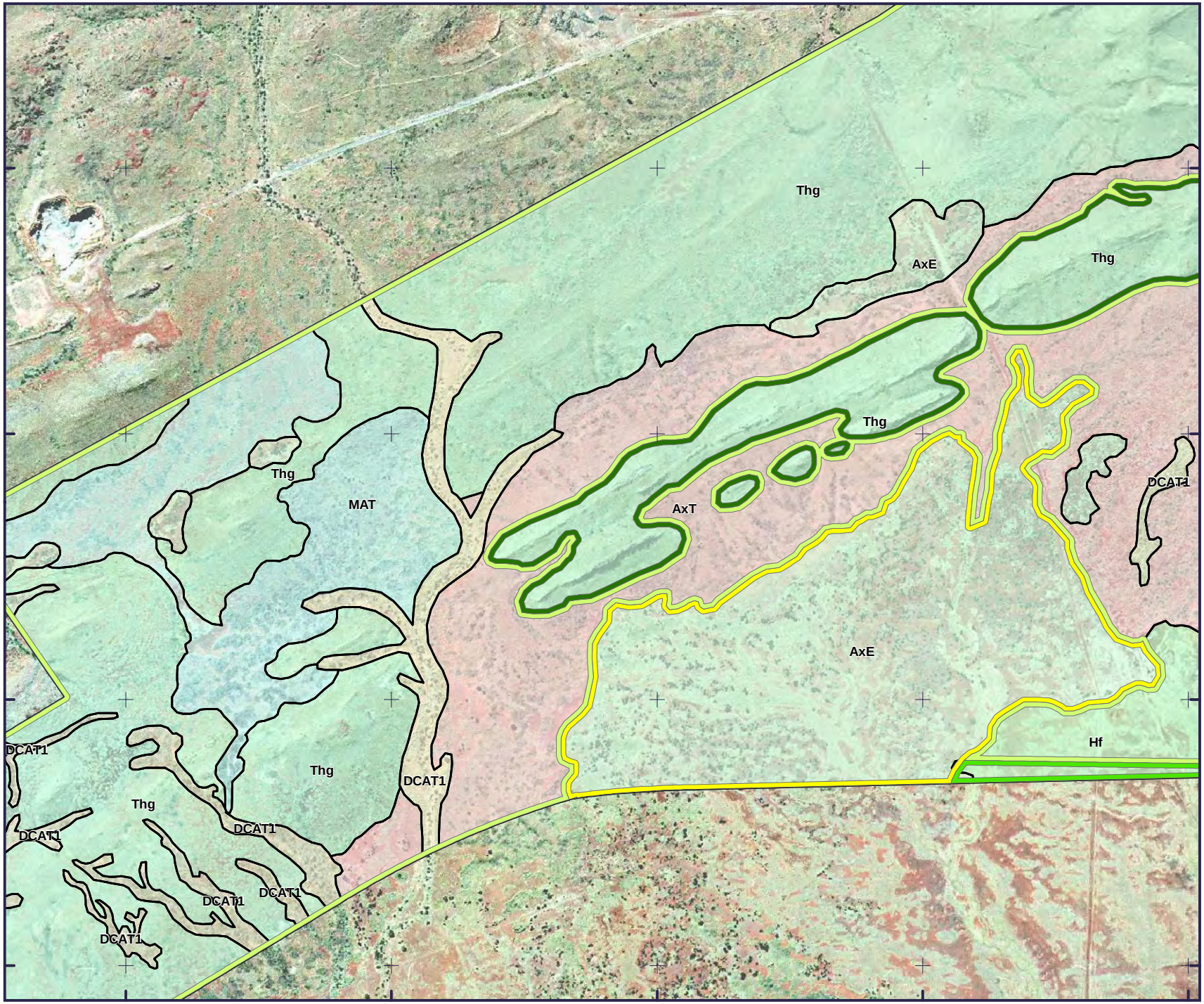
Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.42



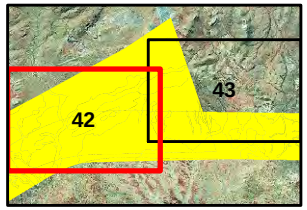
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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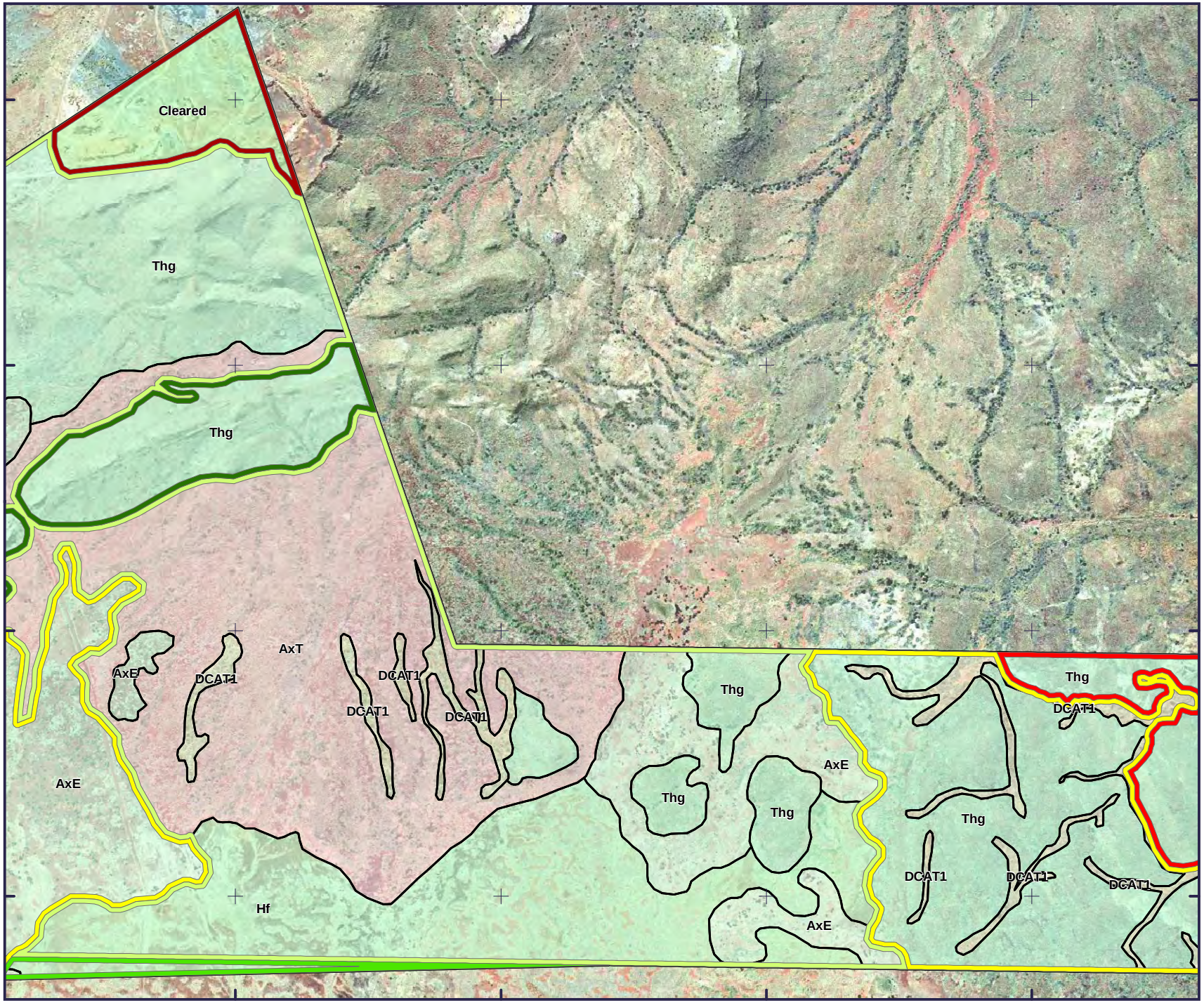


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.43

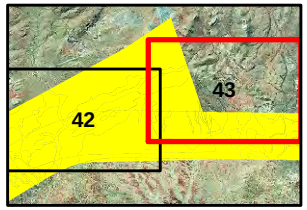
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.44

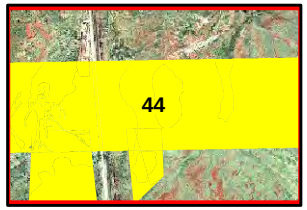
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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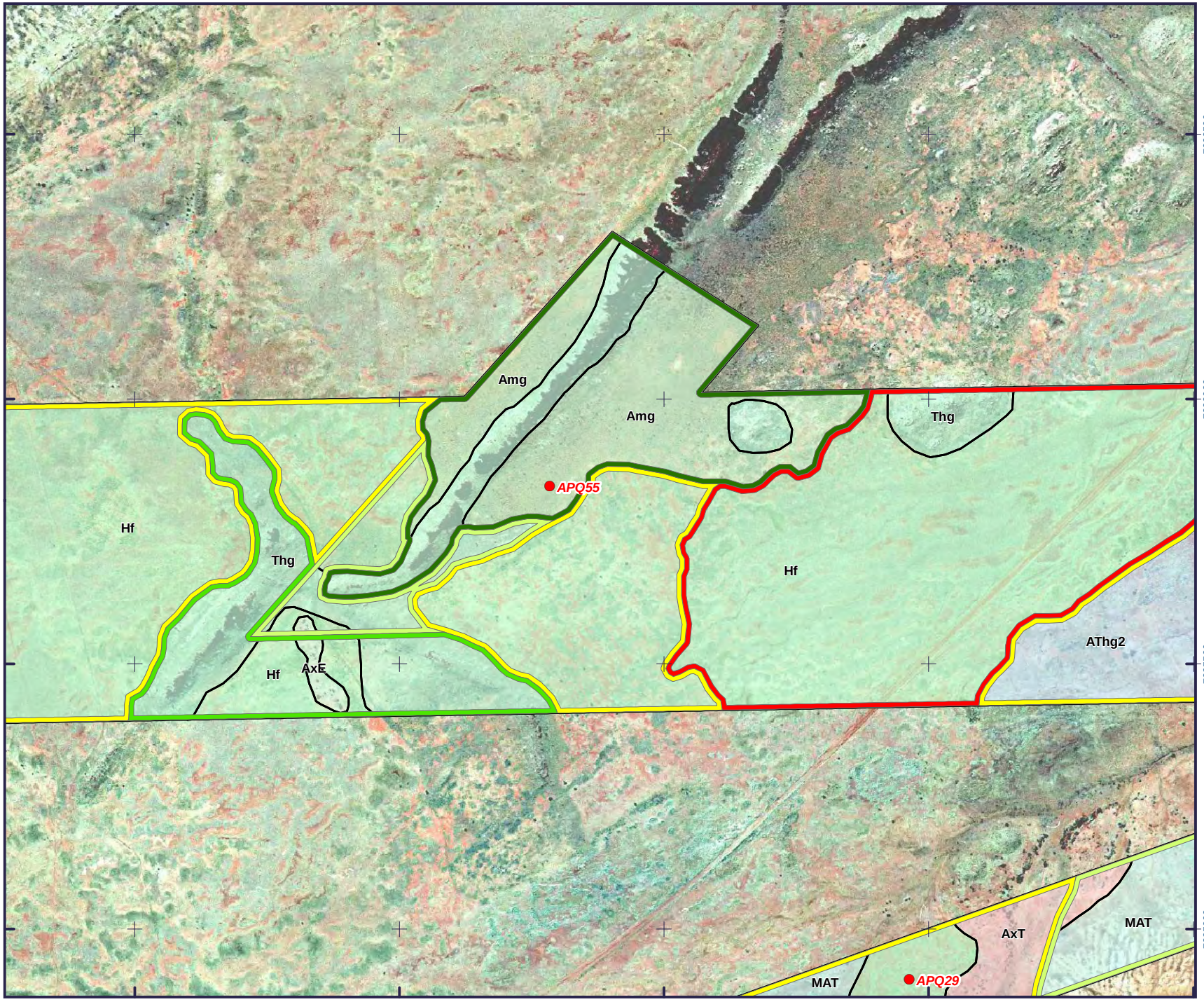
Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.45



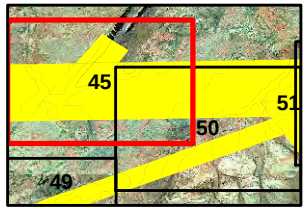
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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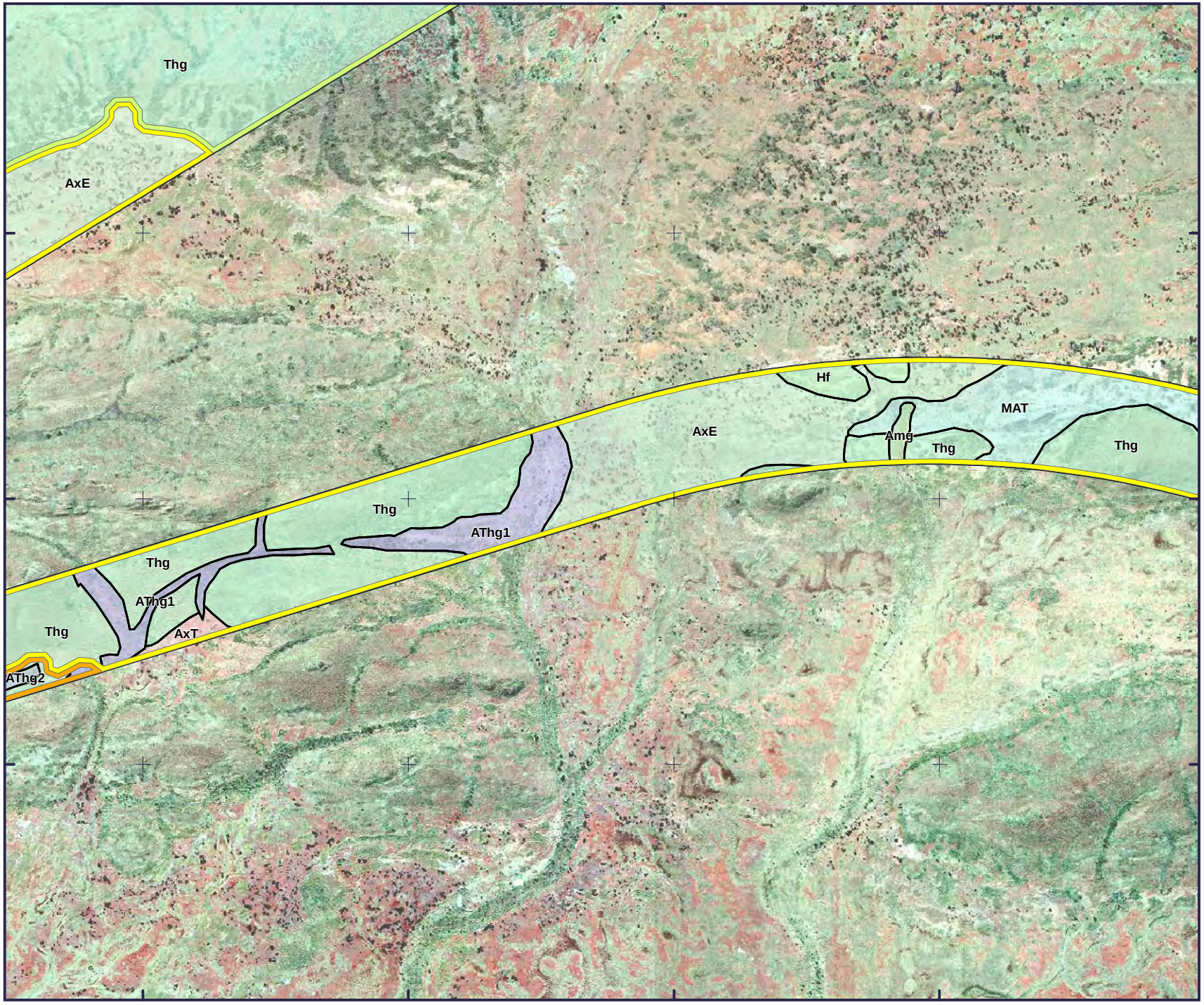


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.46

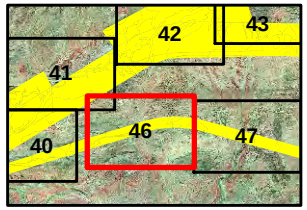
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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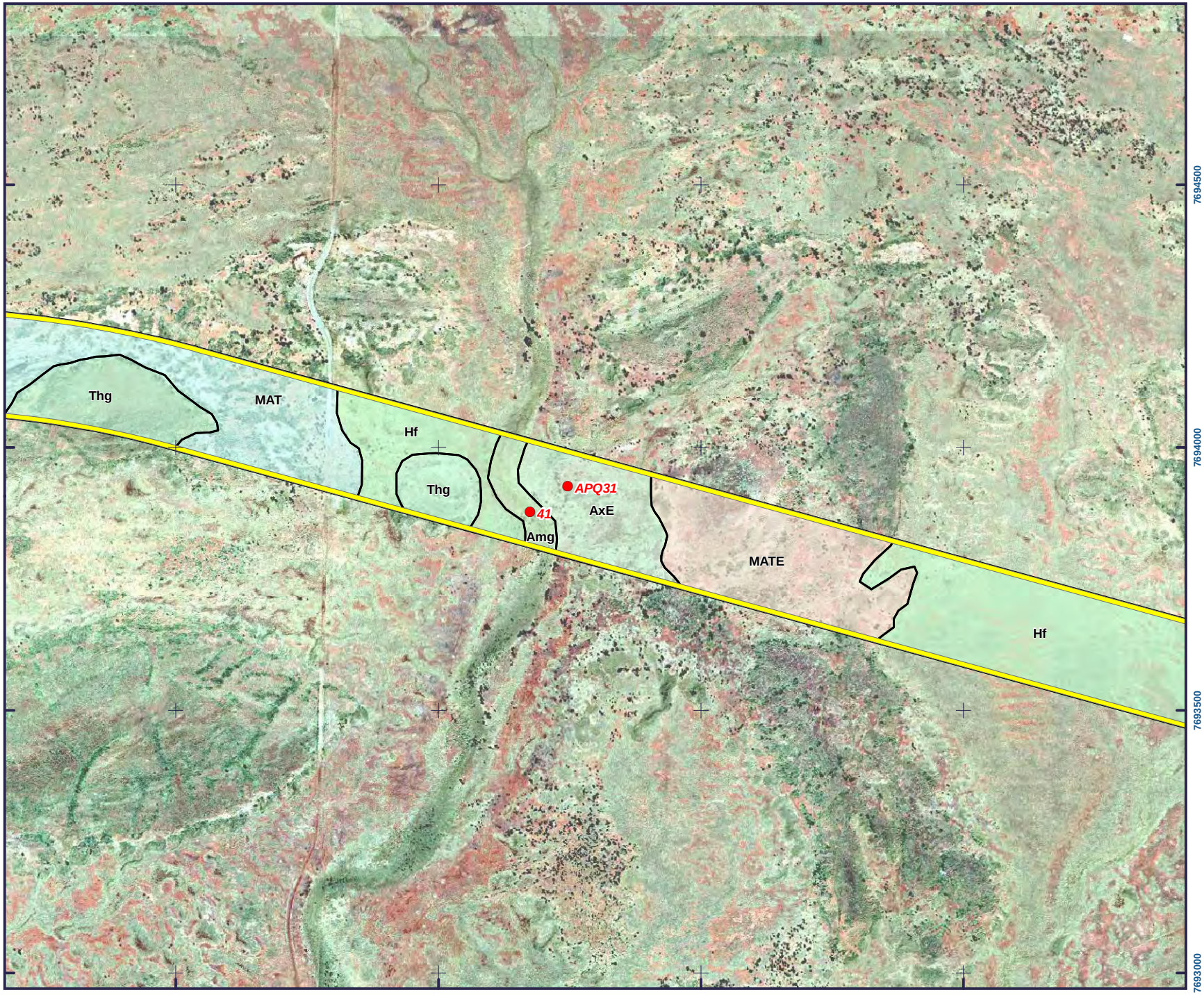
Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.47



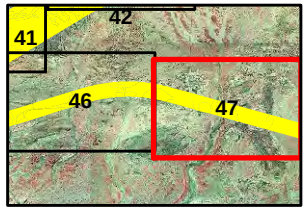
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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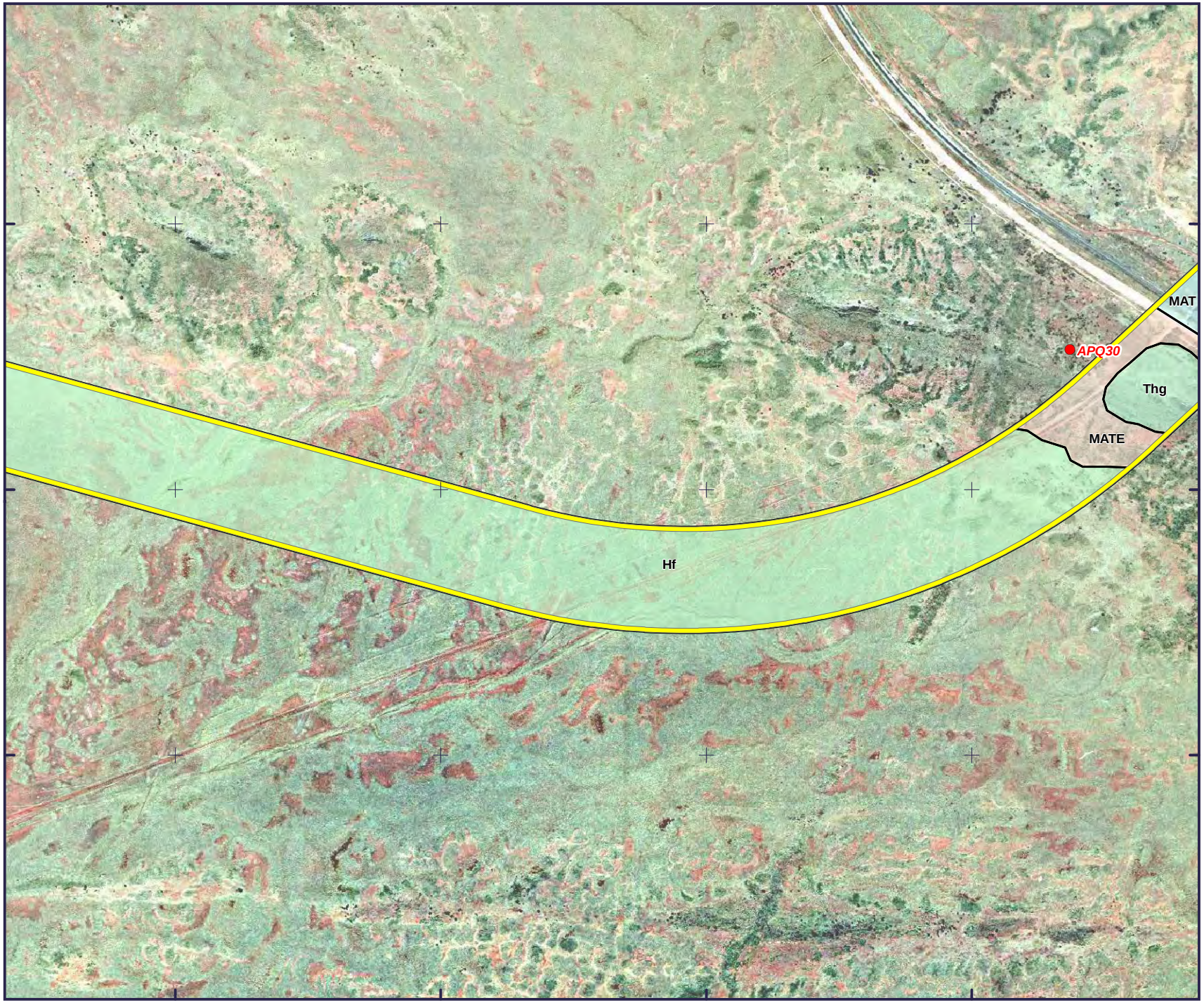


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.48

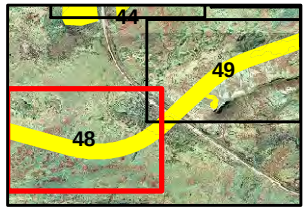
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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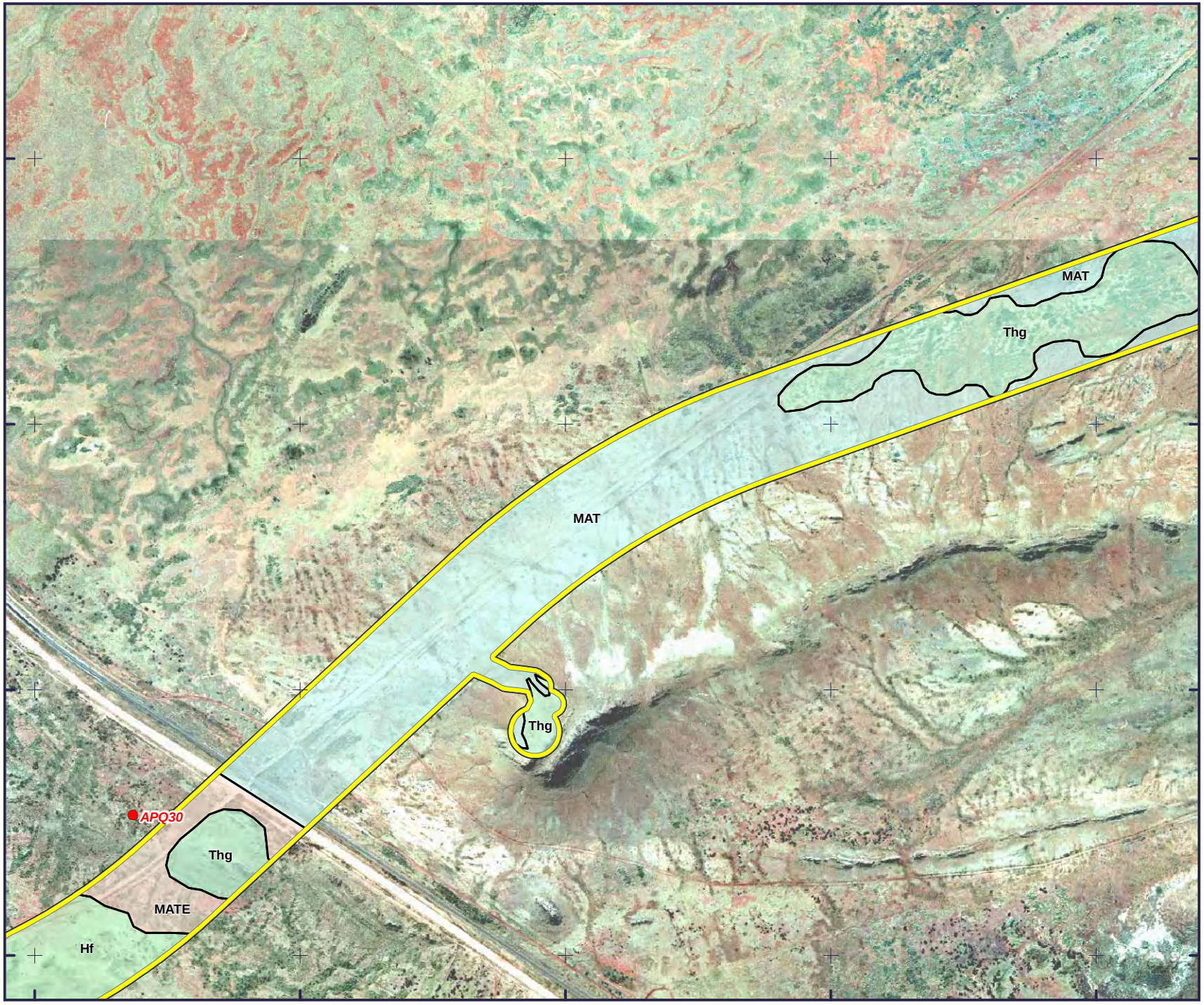


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.49

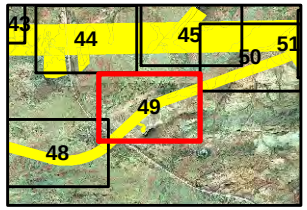
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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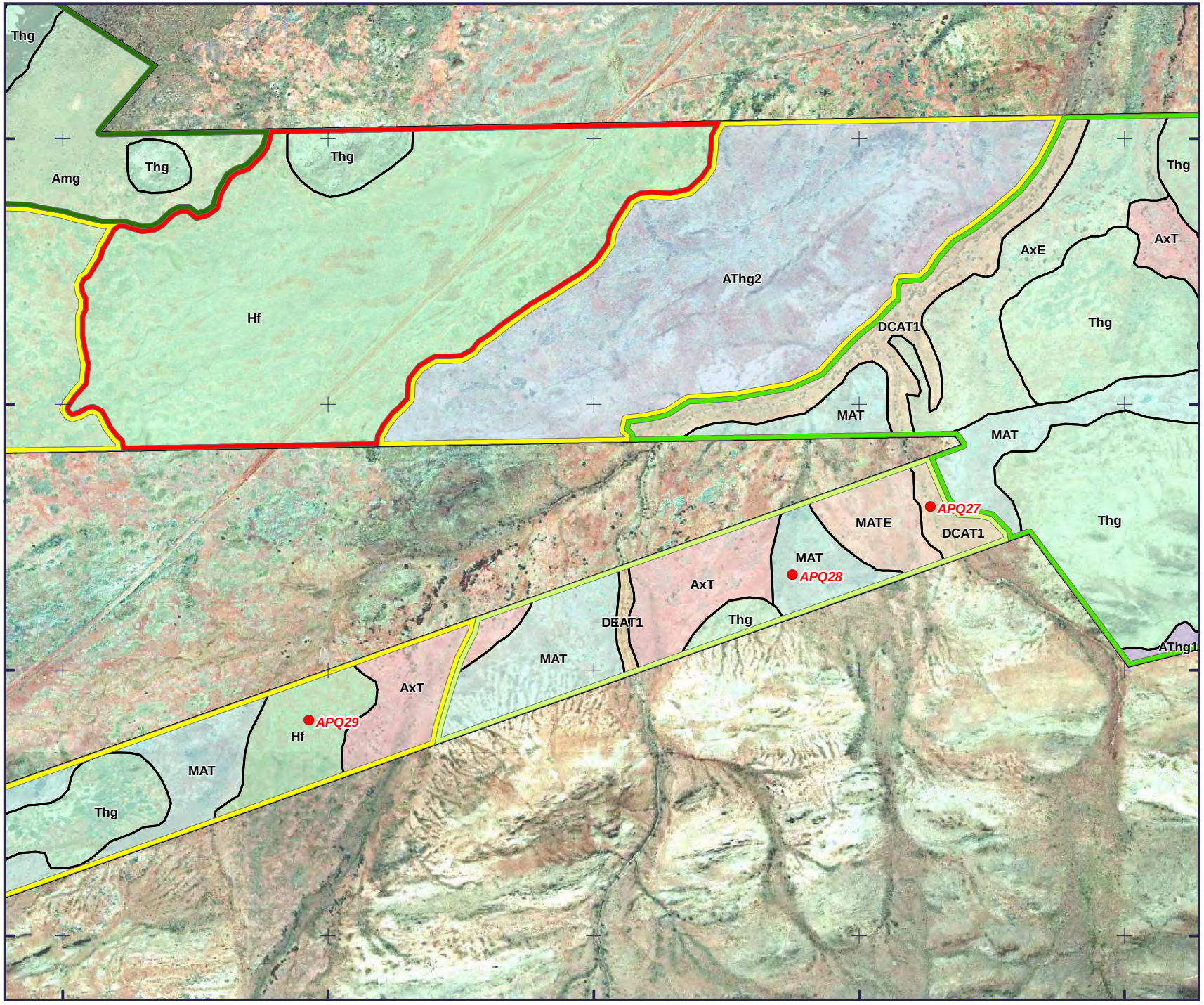


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.50

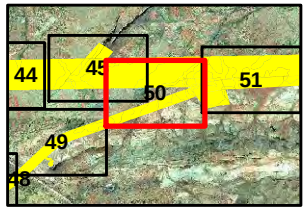
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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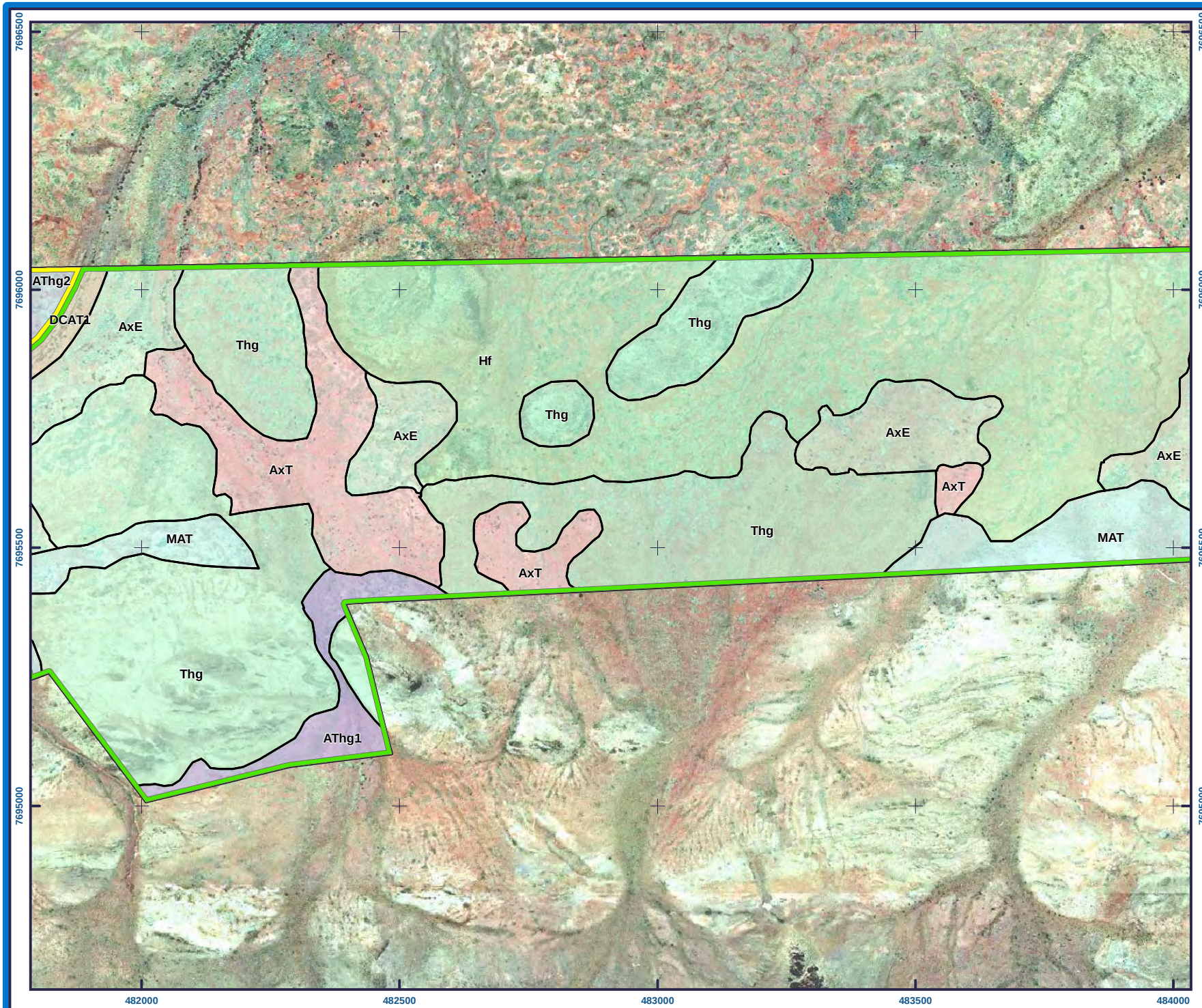


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.51

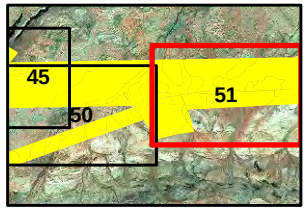
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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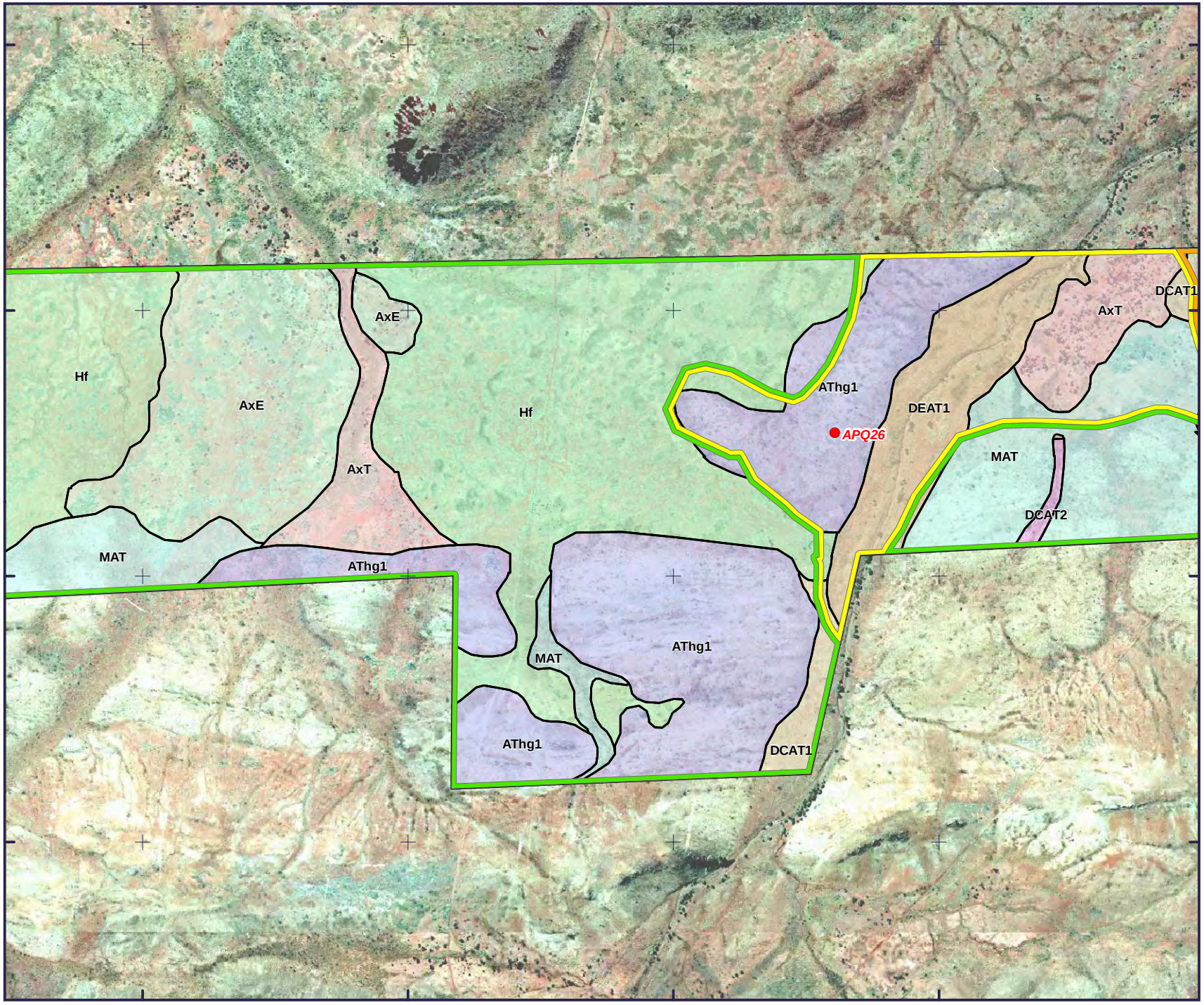


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.52

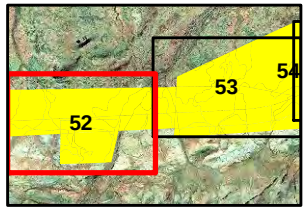
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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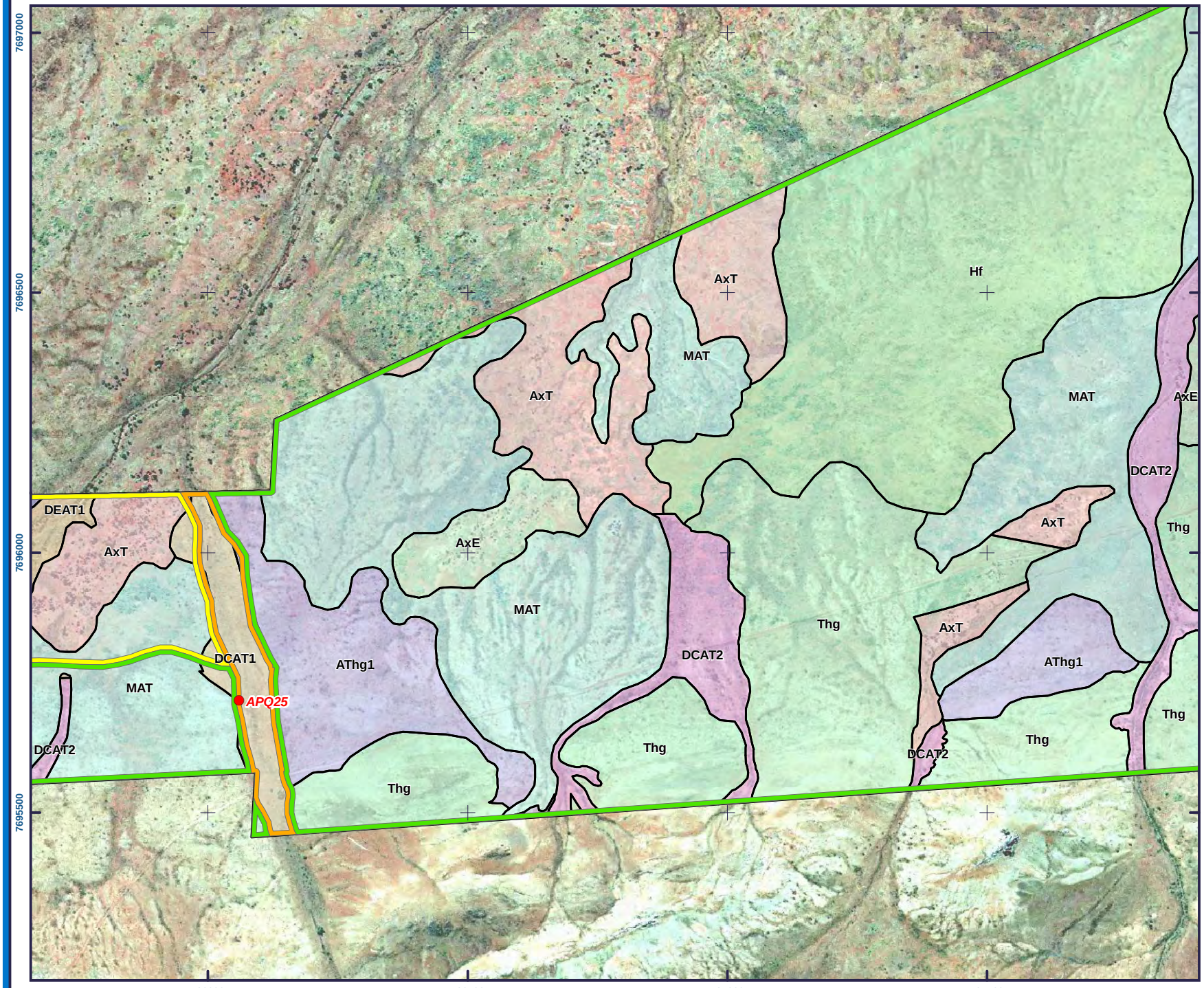


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.53

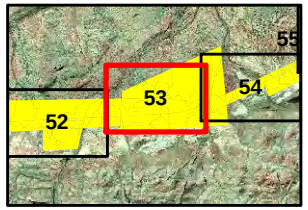
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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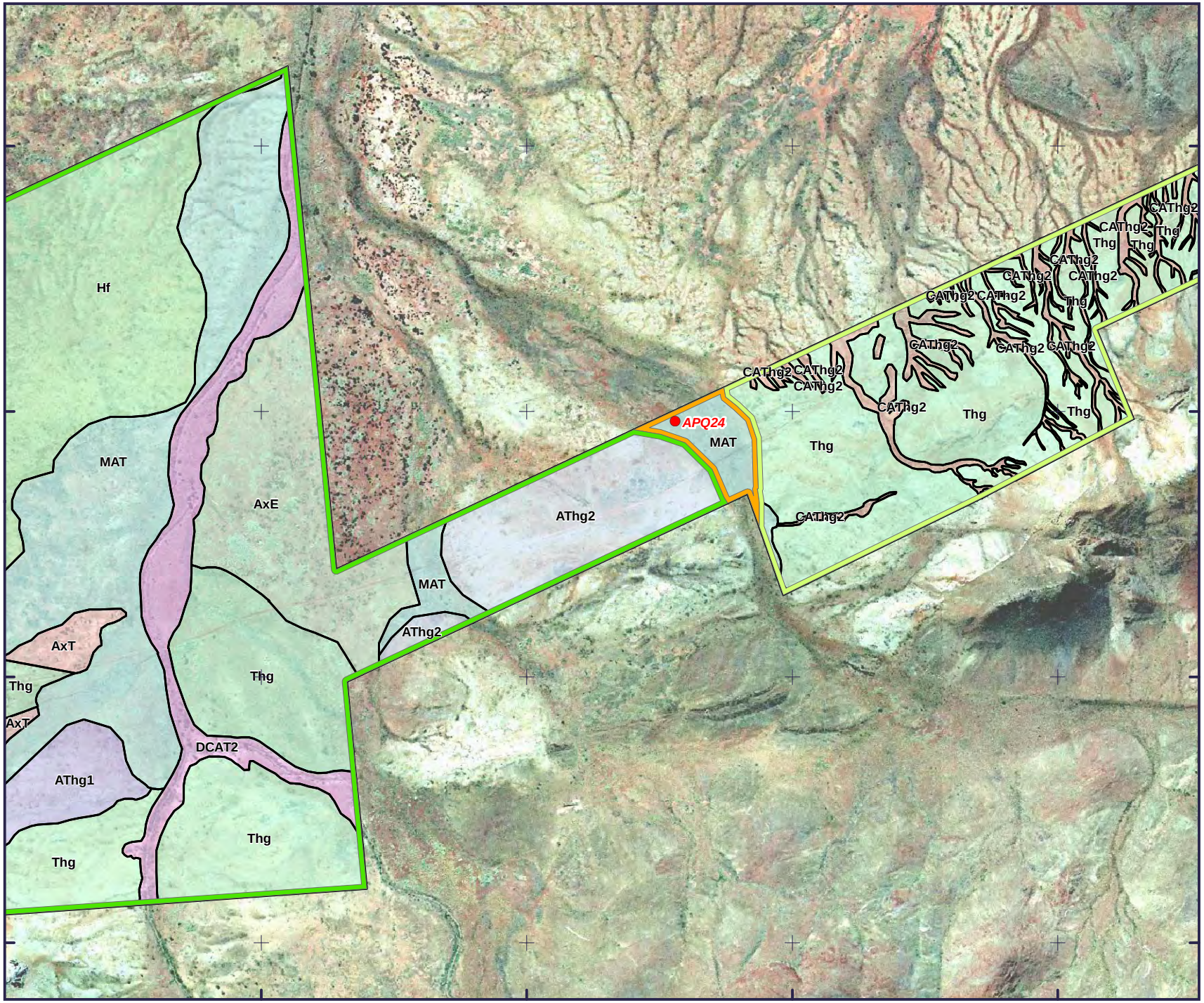


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.54

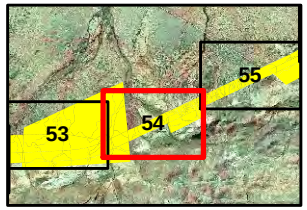
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.55

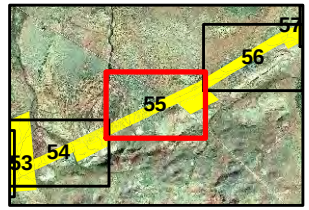
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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7698000
7697500
7697000
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489500 490000 490500 491000 491500

Hf
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CAThg2
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AThg2
AThg1
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MAT
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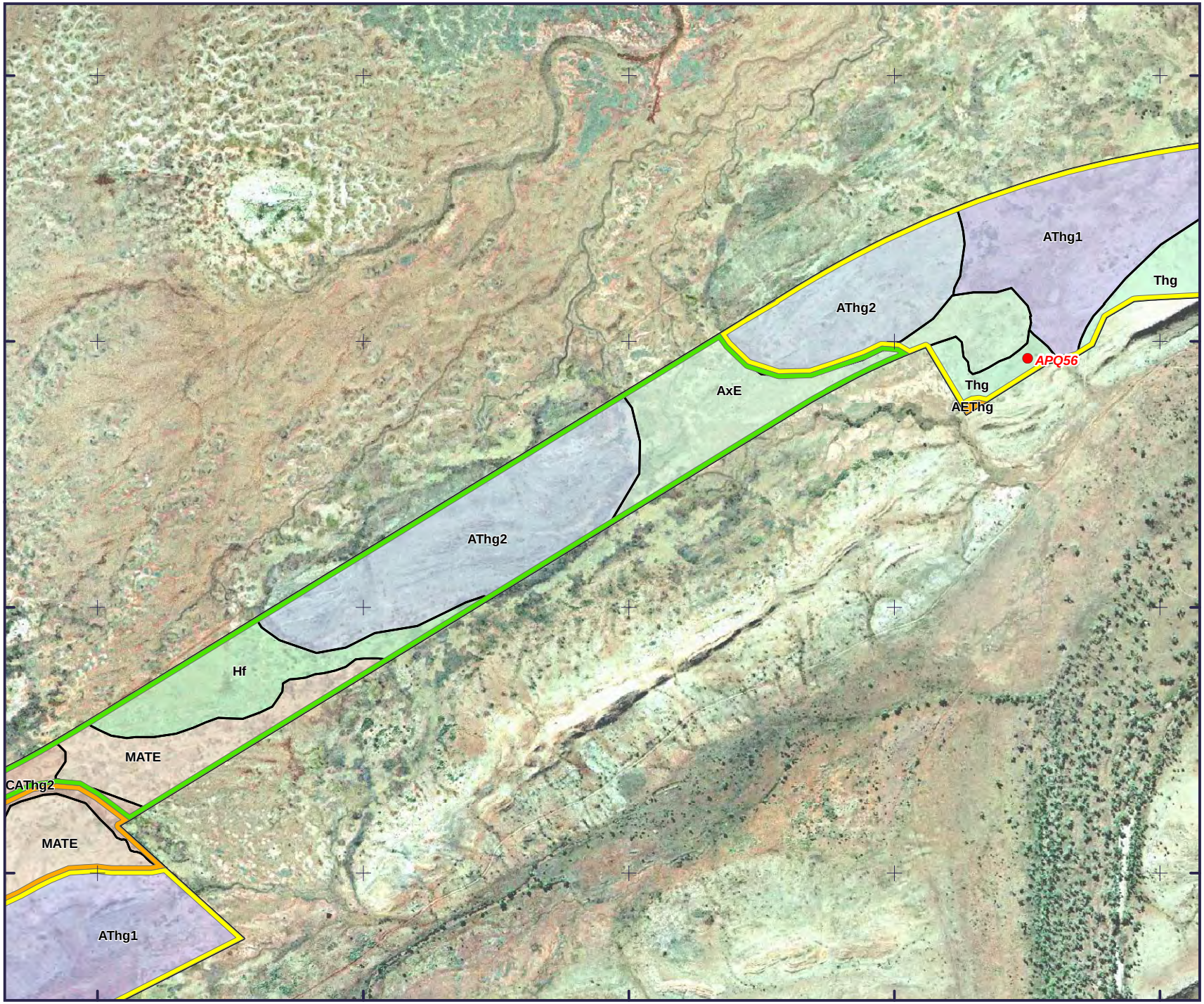


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.56

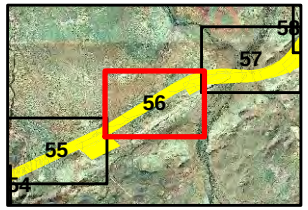
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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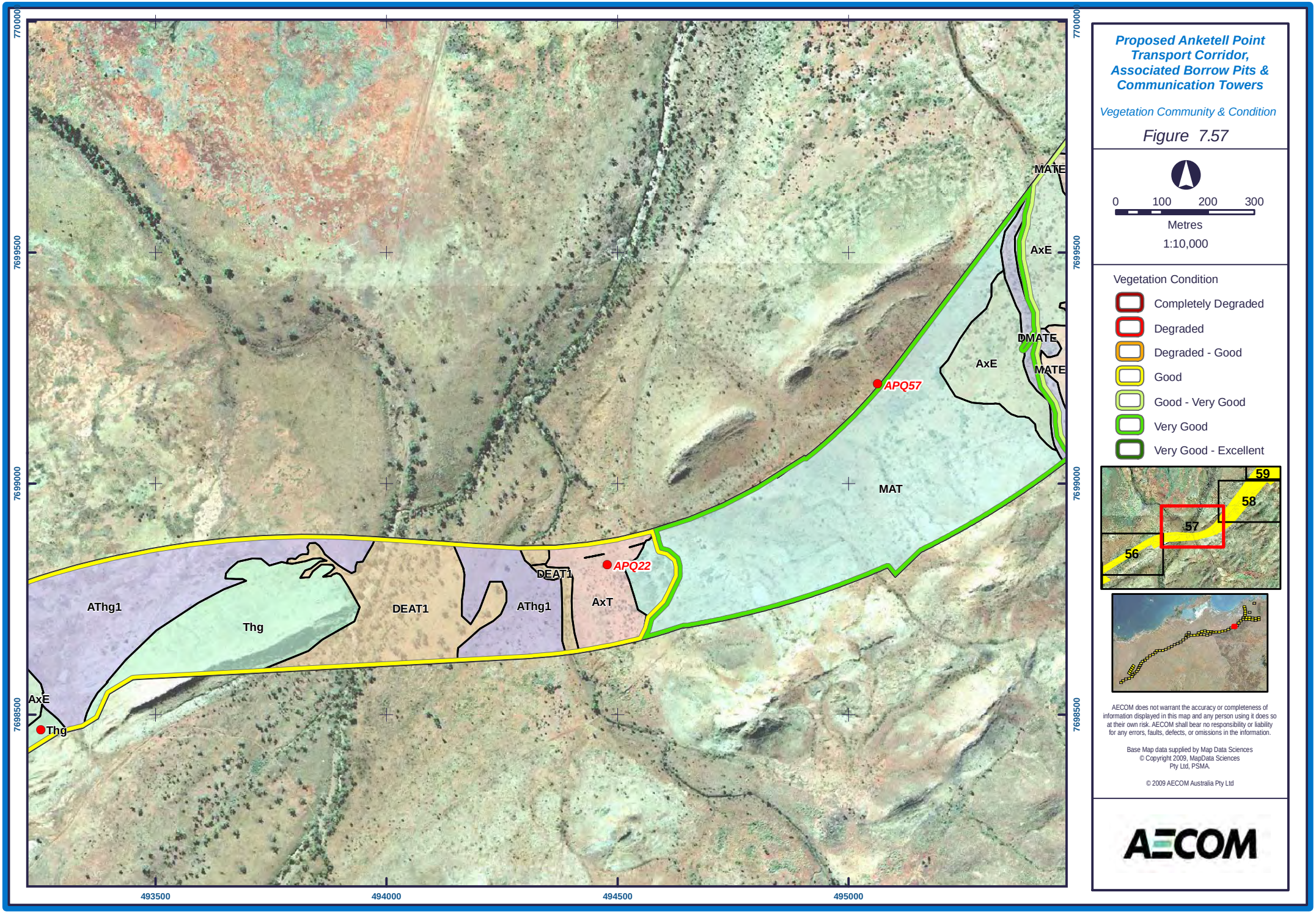

Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.57

0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent

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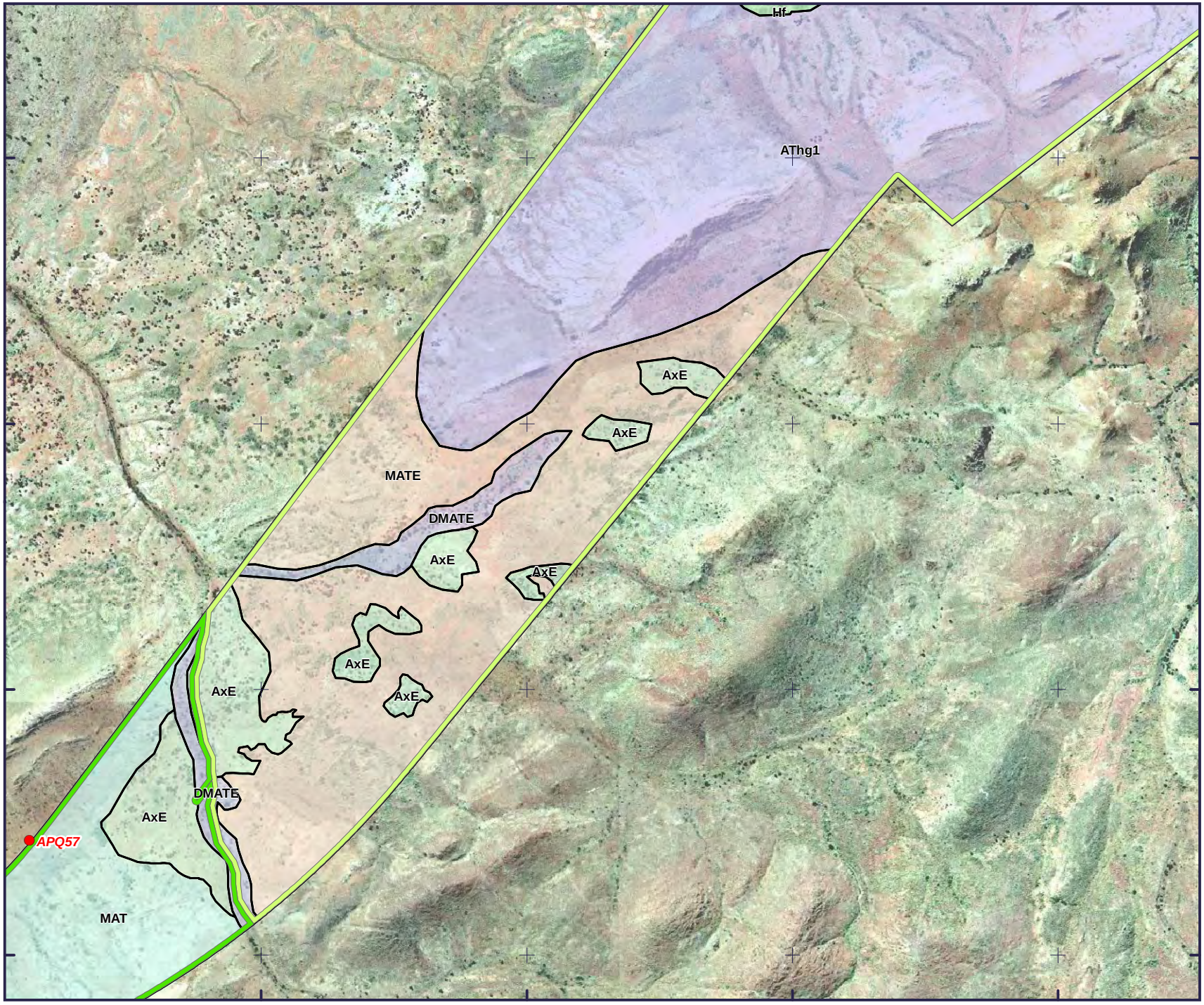


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.58

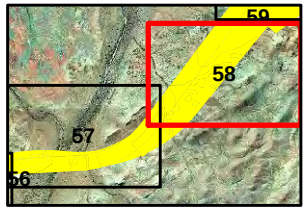
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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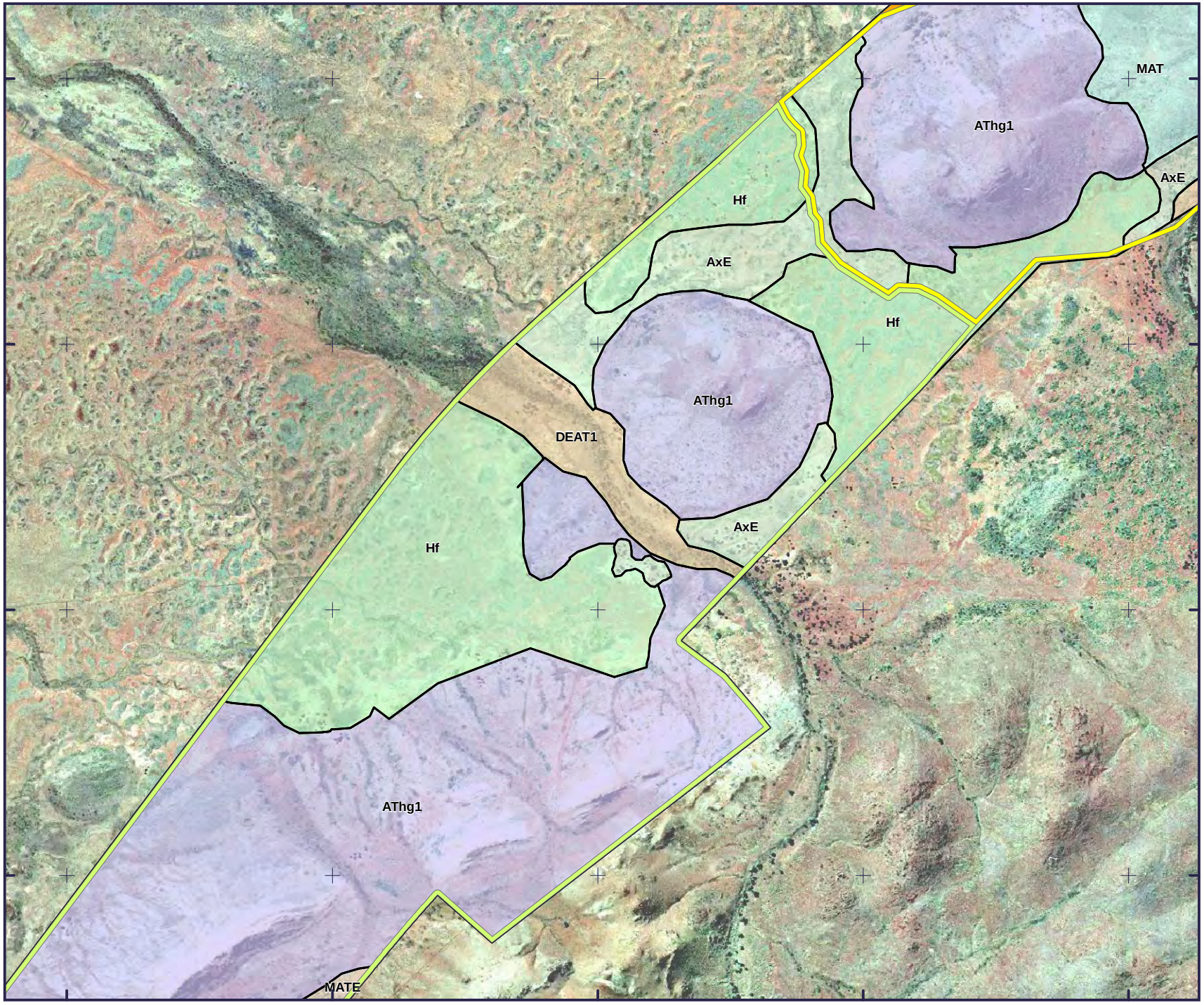


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.59

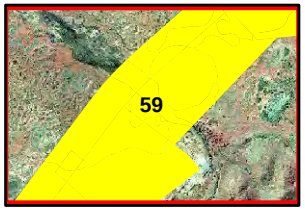
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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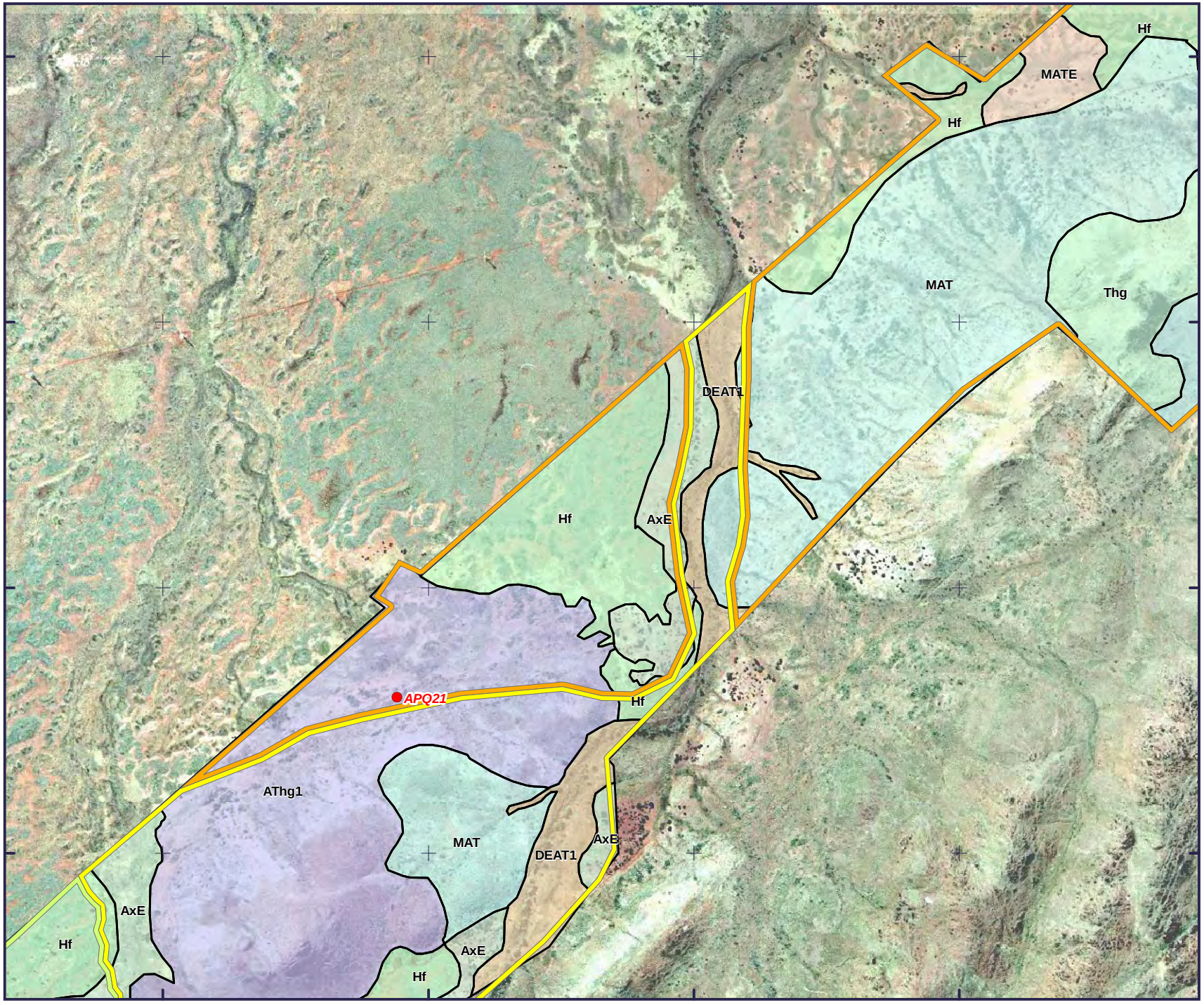


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.60

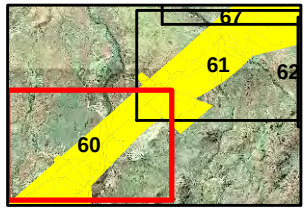
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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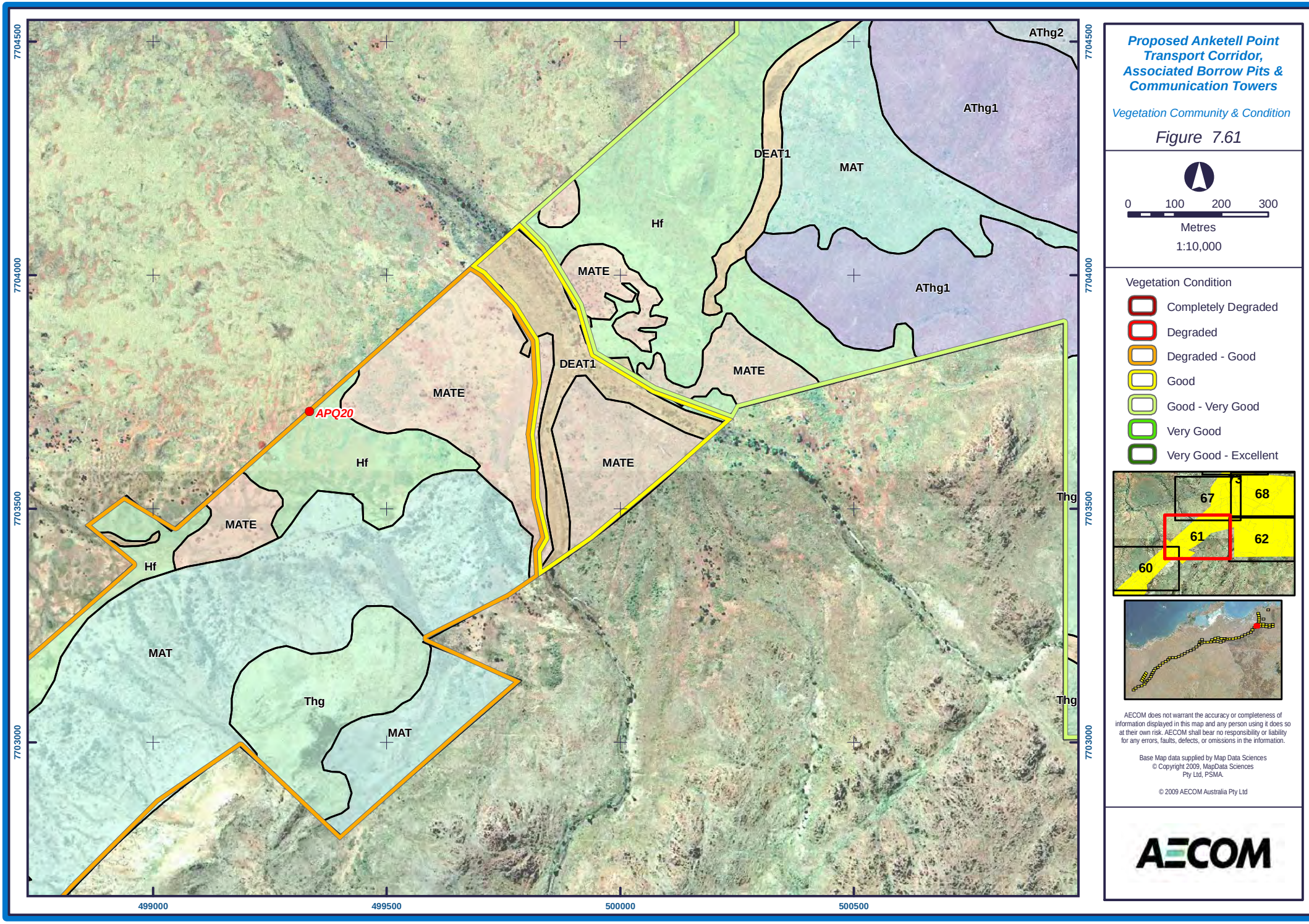

Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.61

0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent

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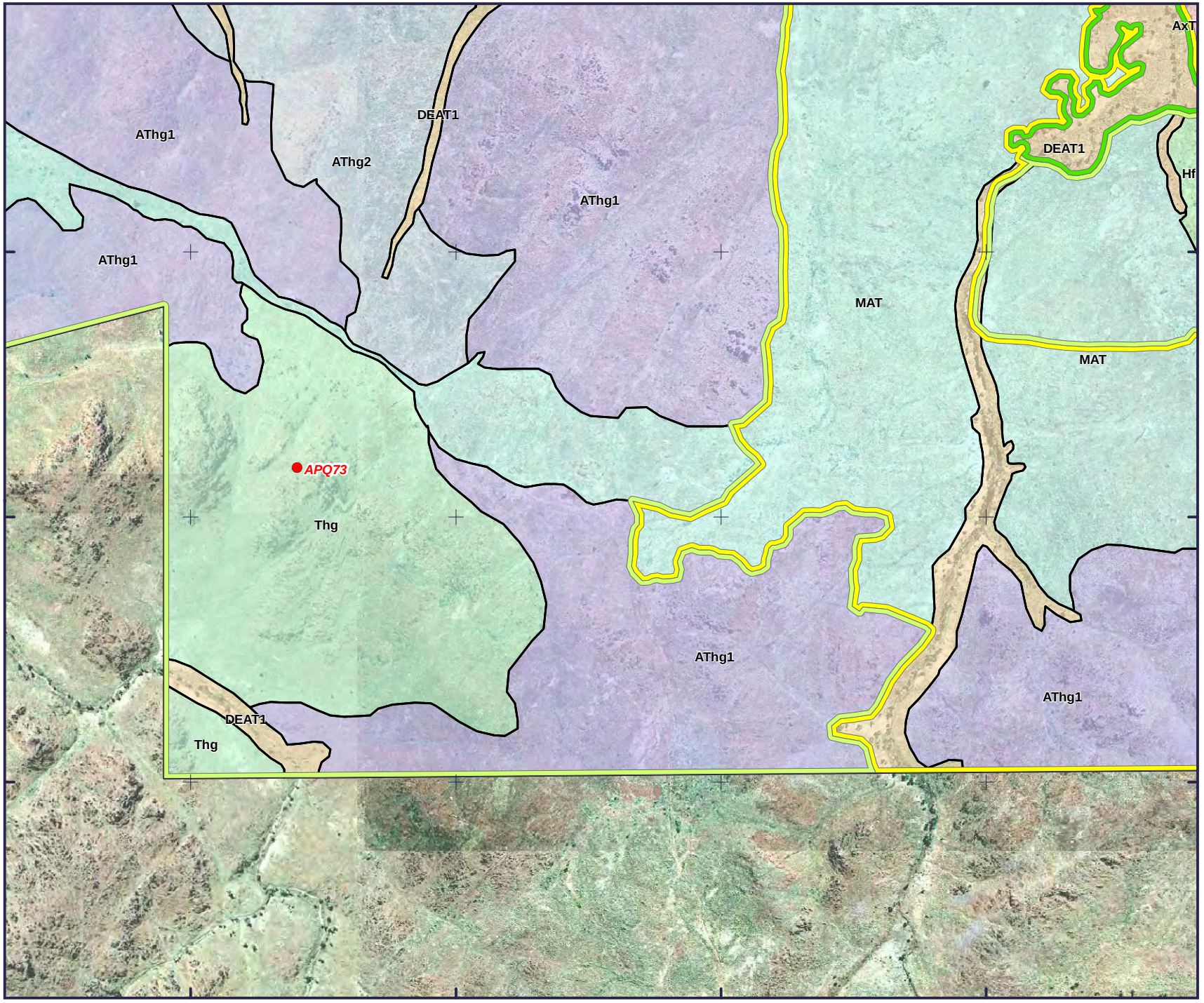


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.62

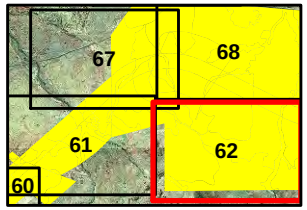
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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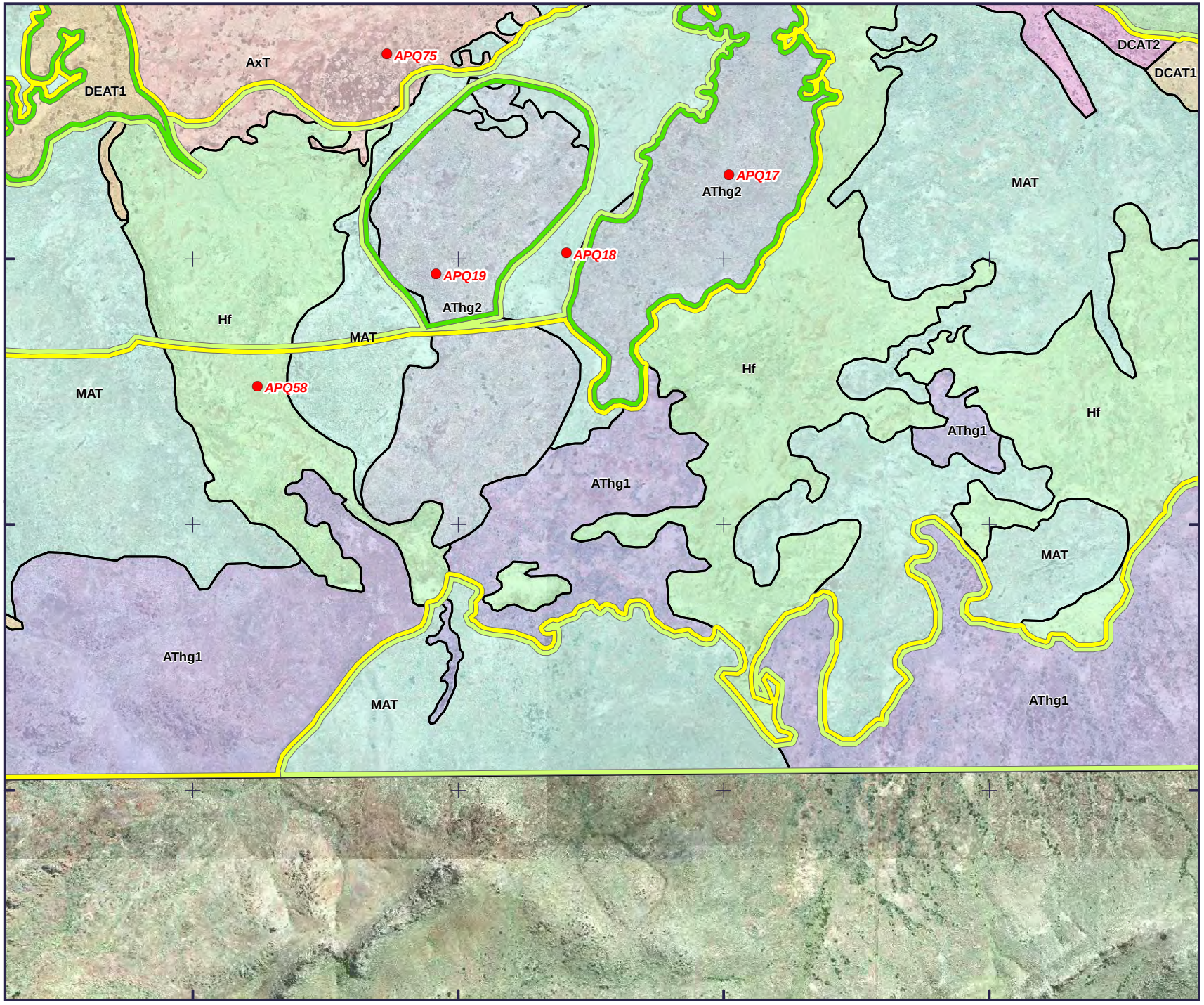


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.63

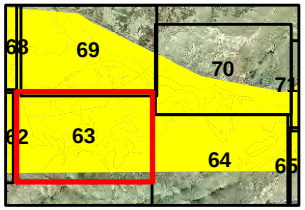
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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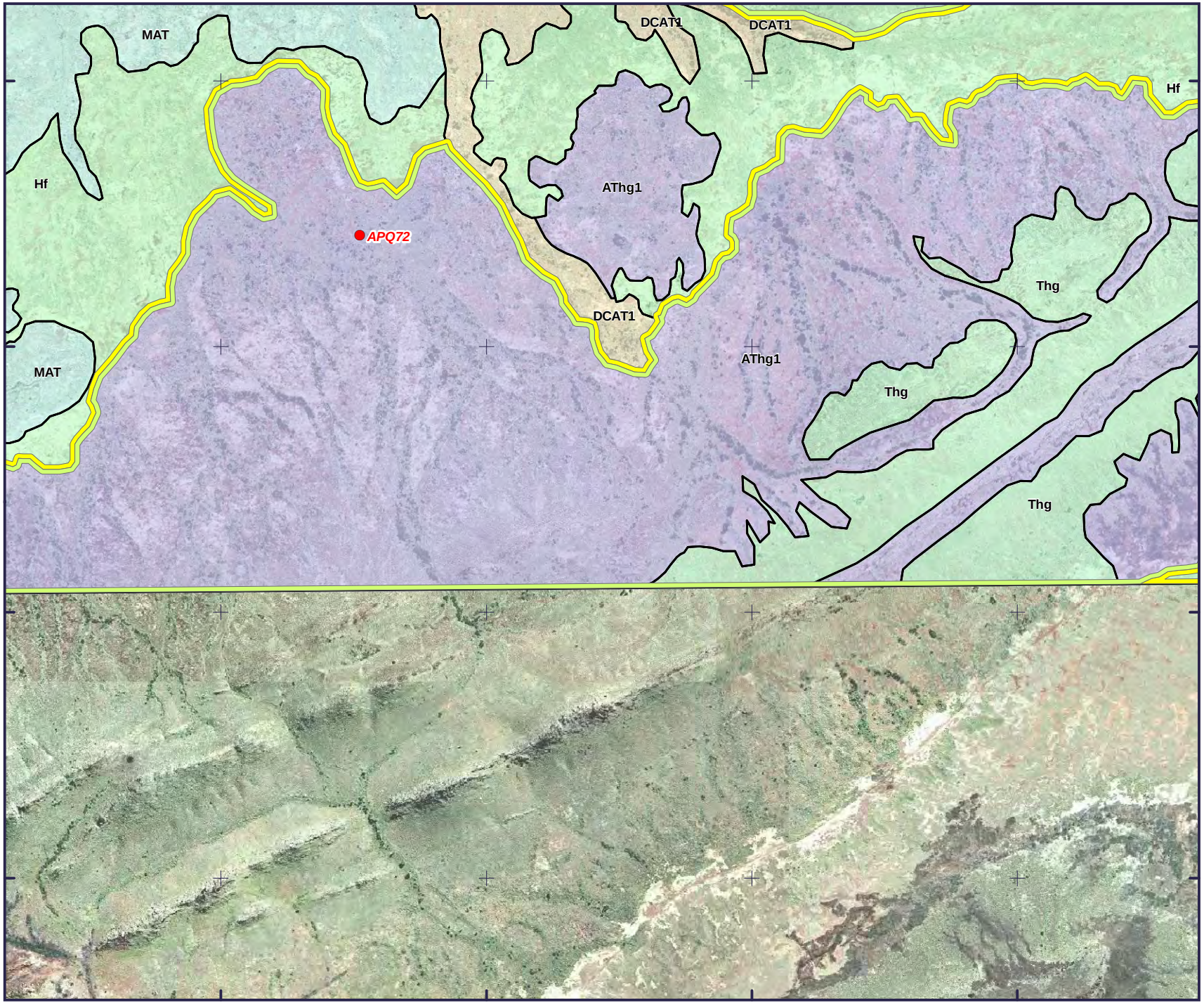


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.64

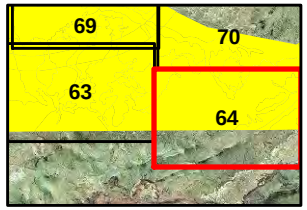
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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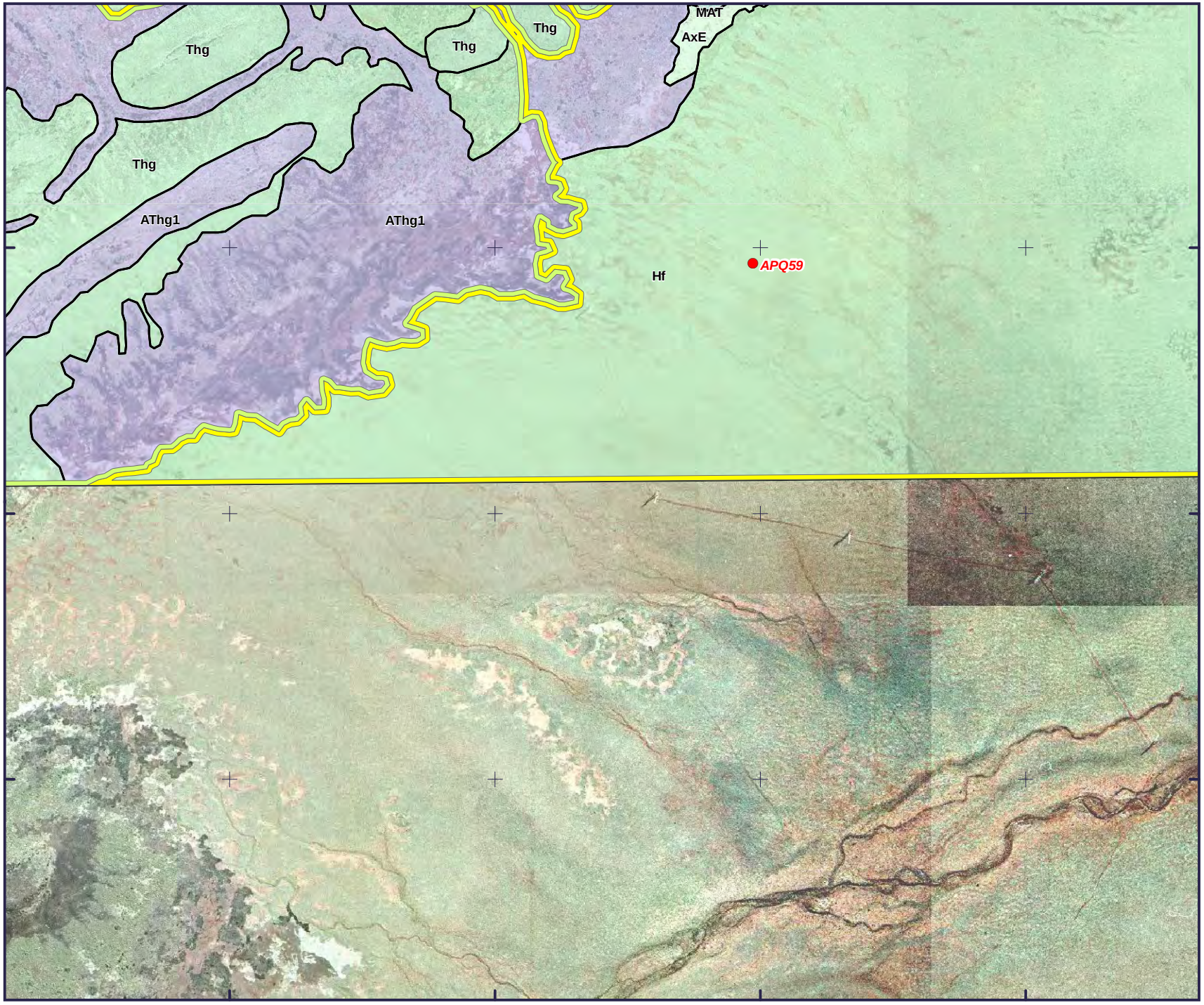


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.65

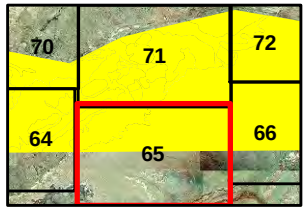
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.66

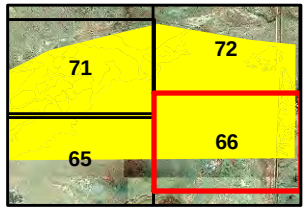
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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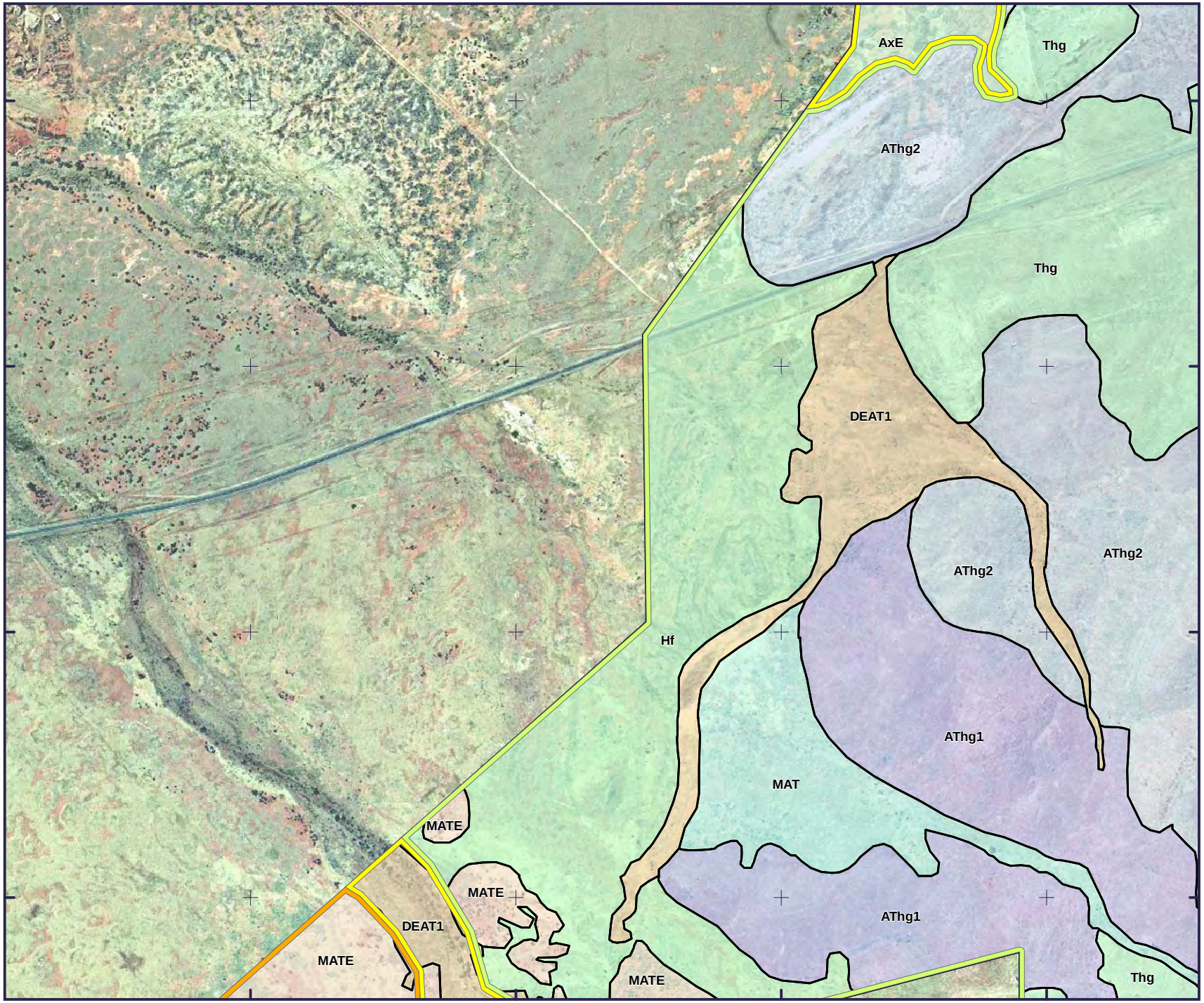


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.67

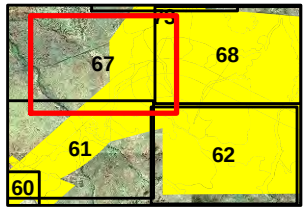
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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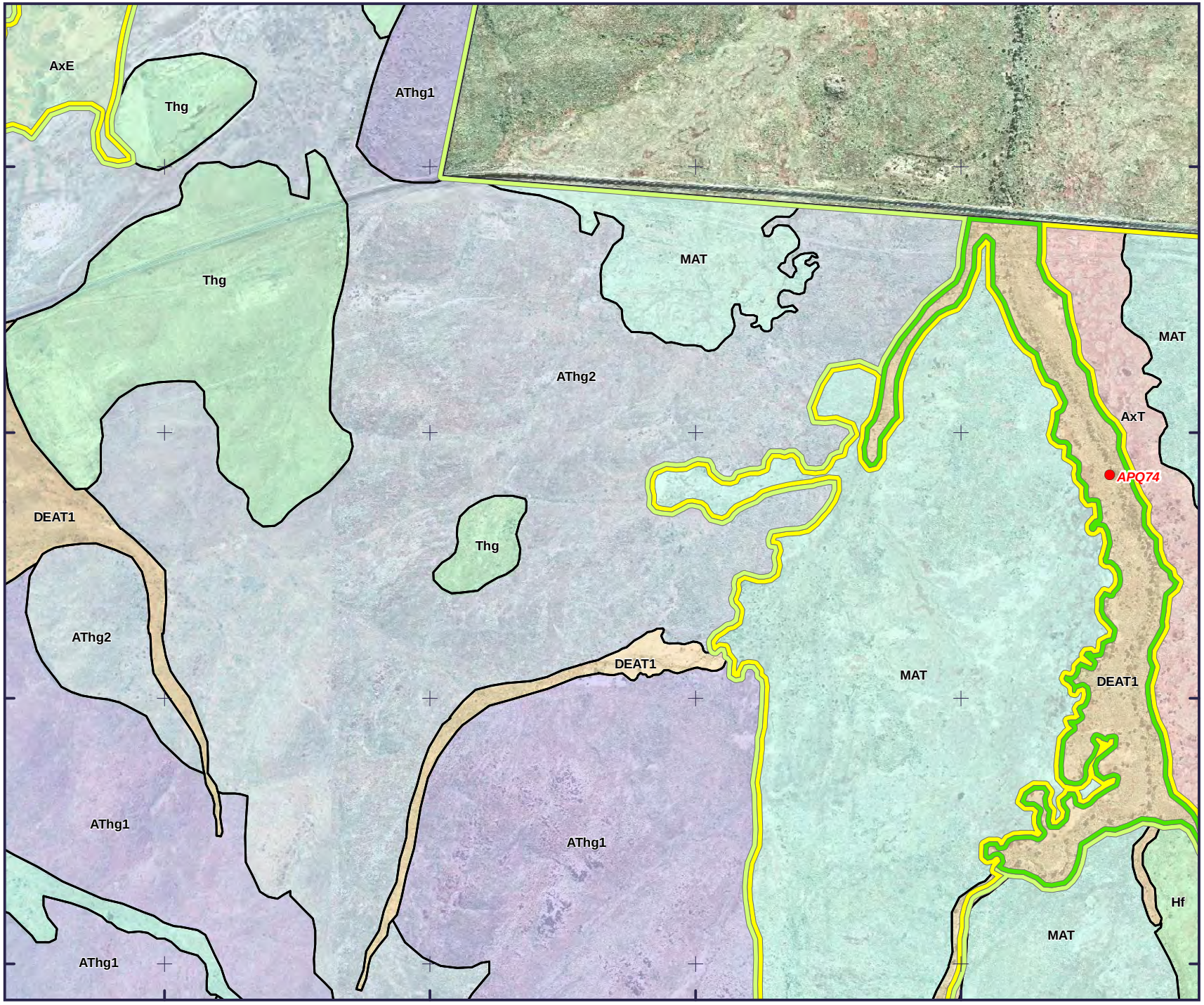


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.68

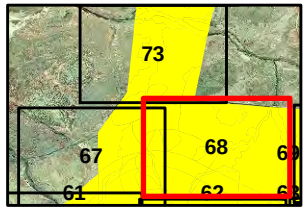
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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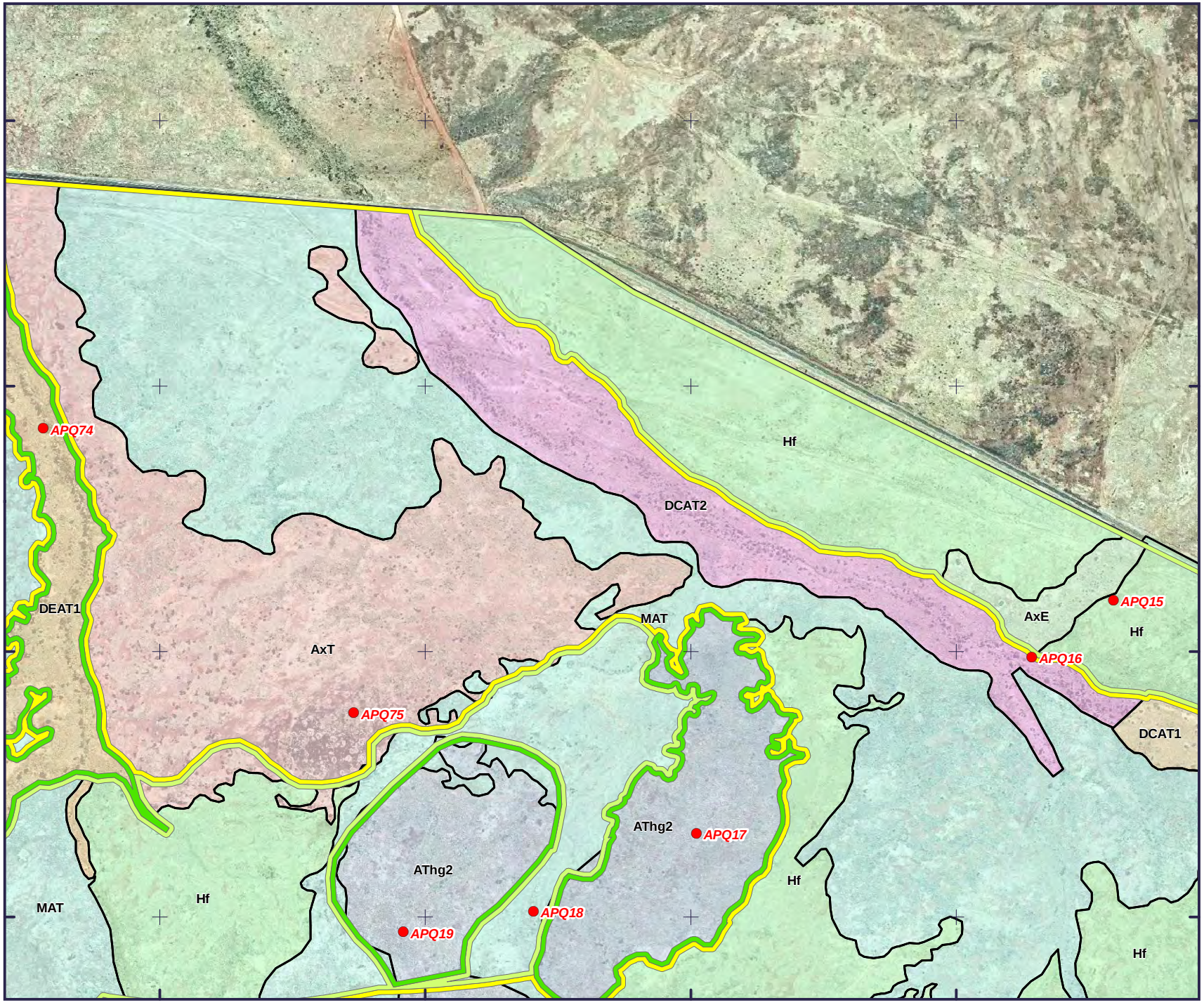


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.69

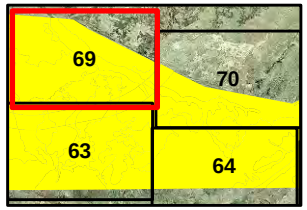
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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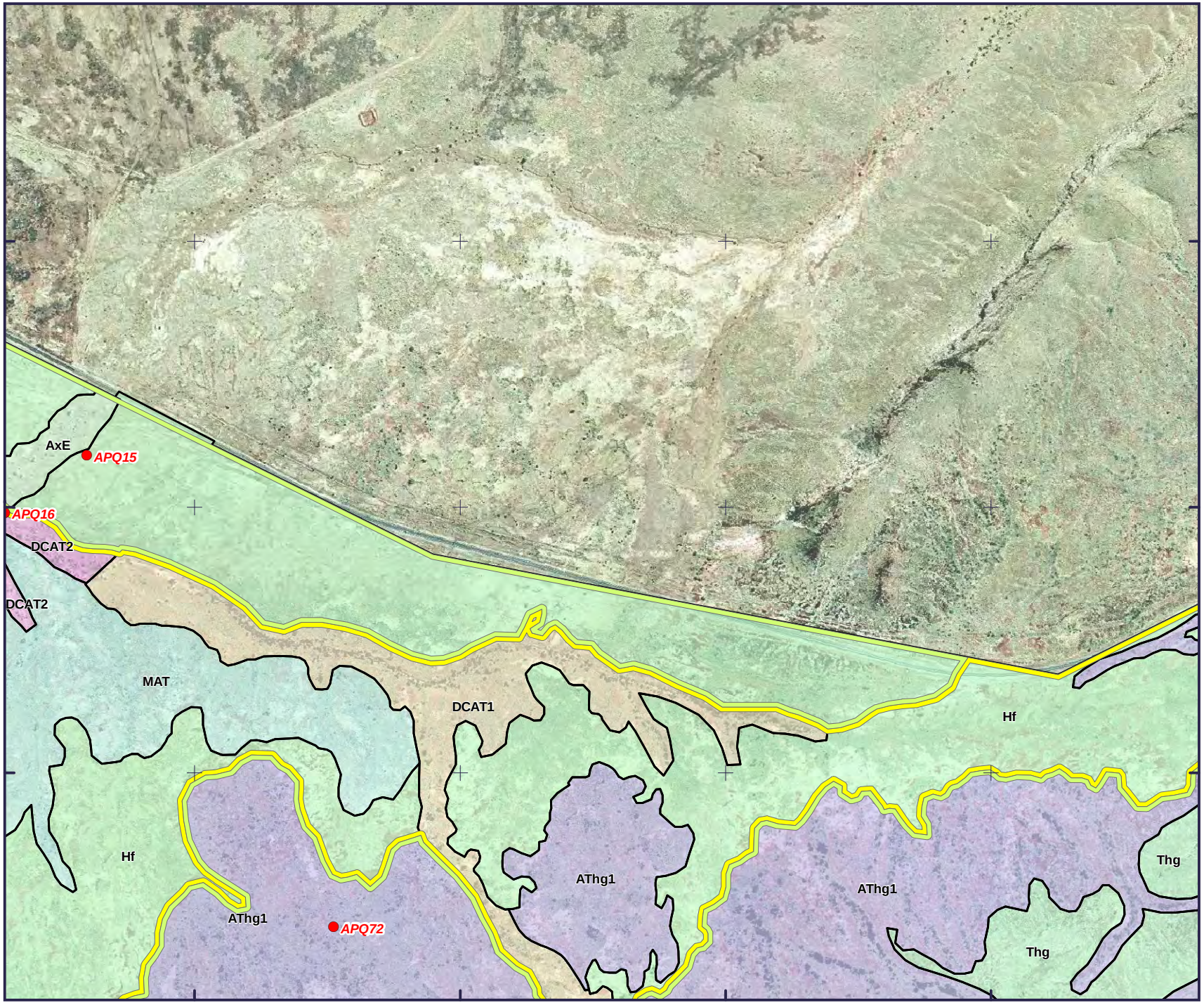


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.70

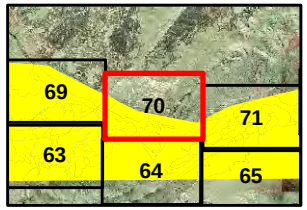
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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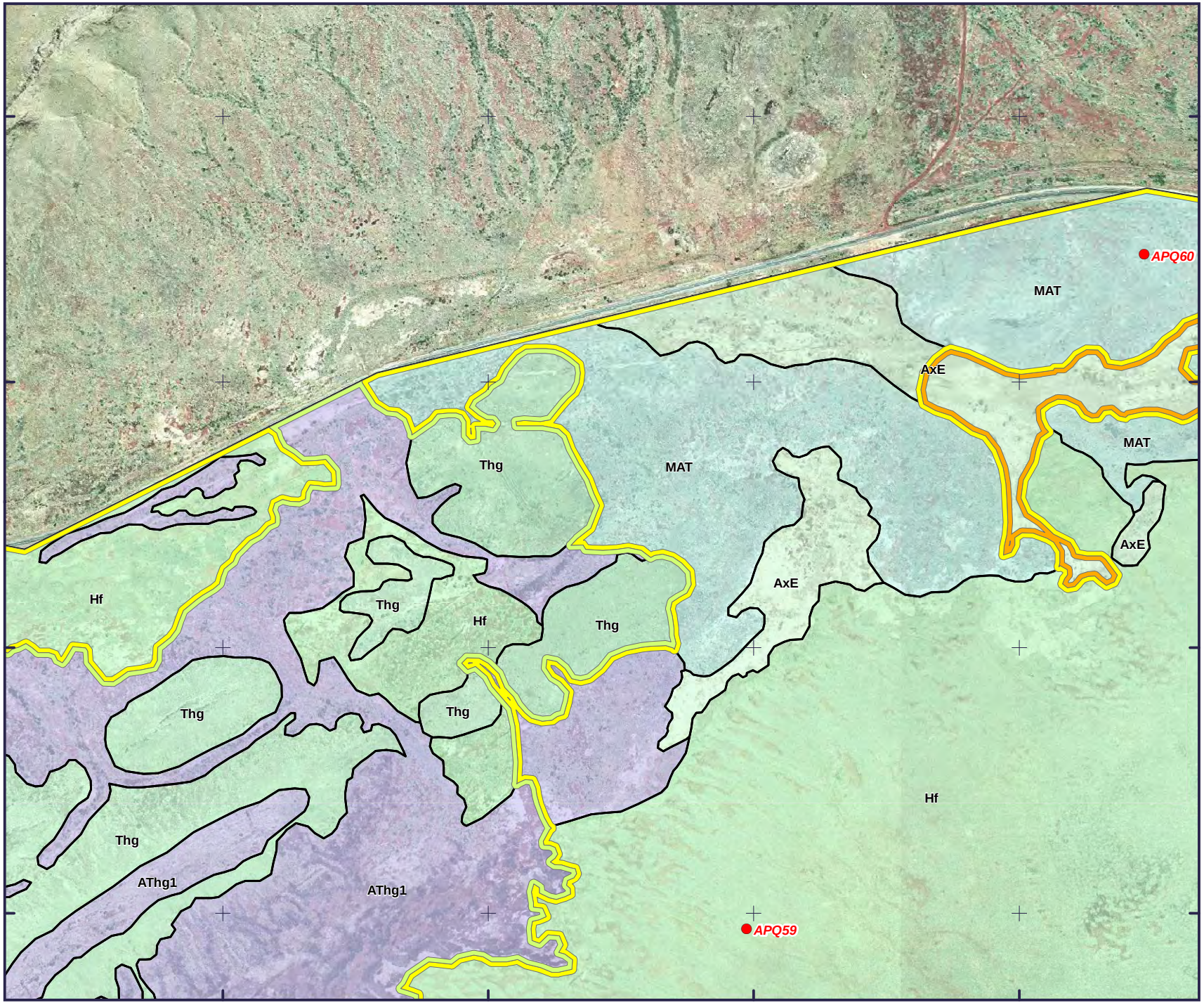


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.71

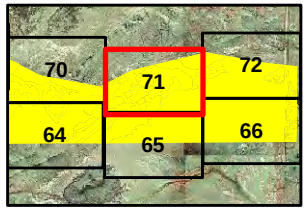
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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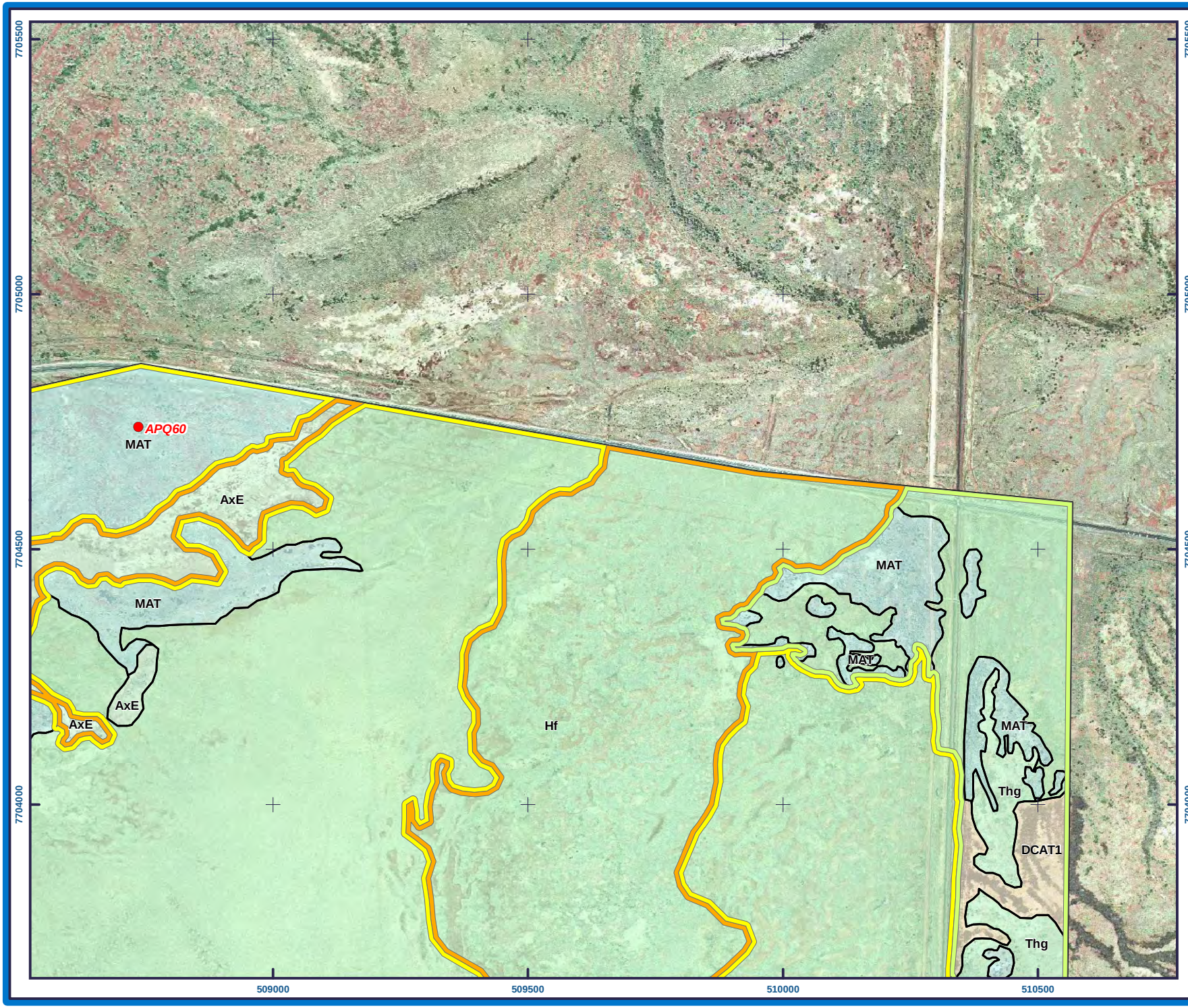


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.72

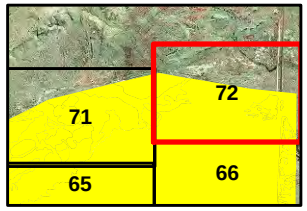
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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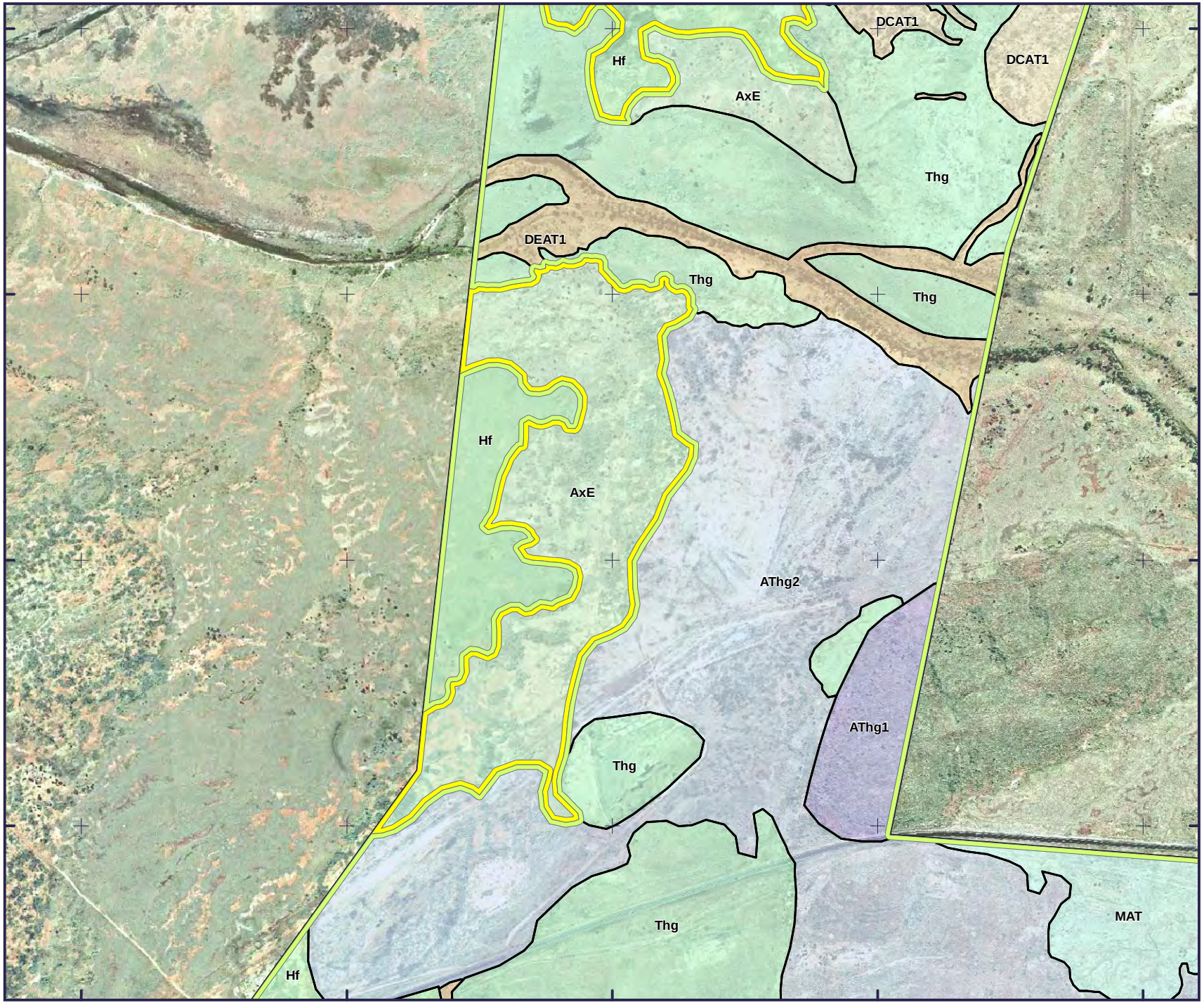


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.73

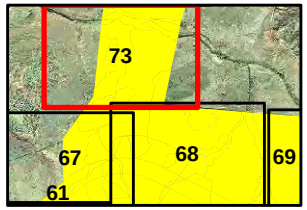
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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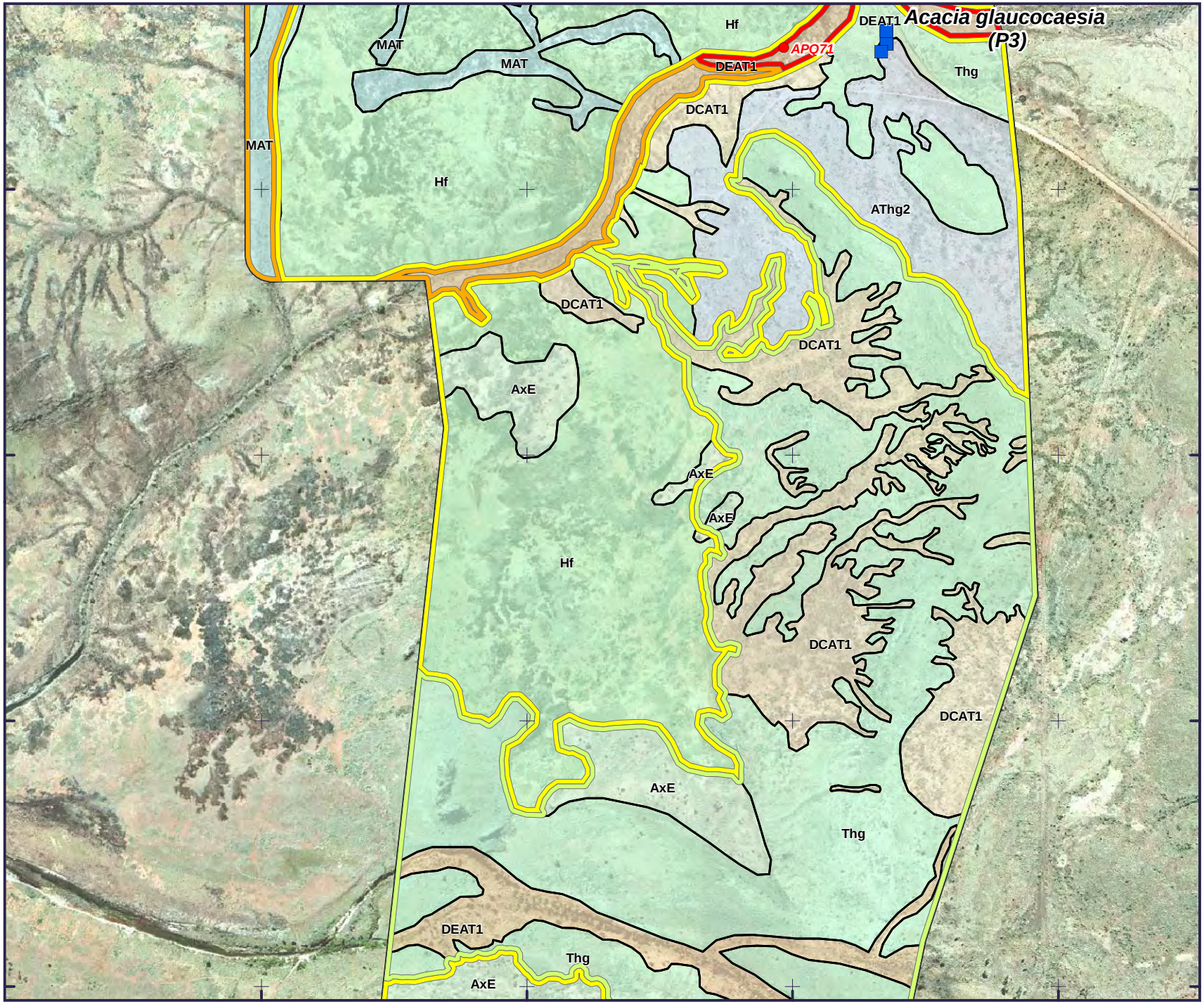

Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.74

0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent

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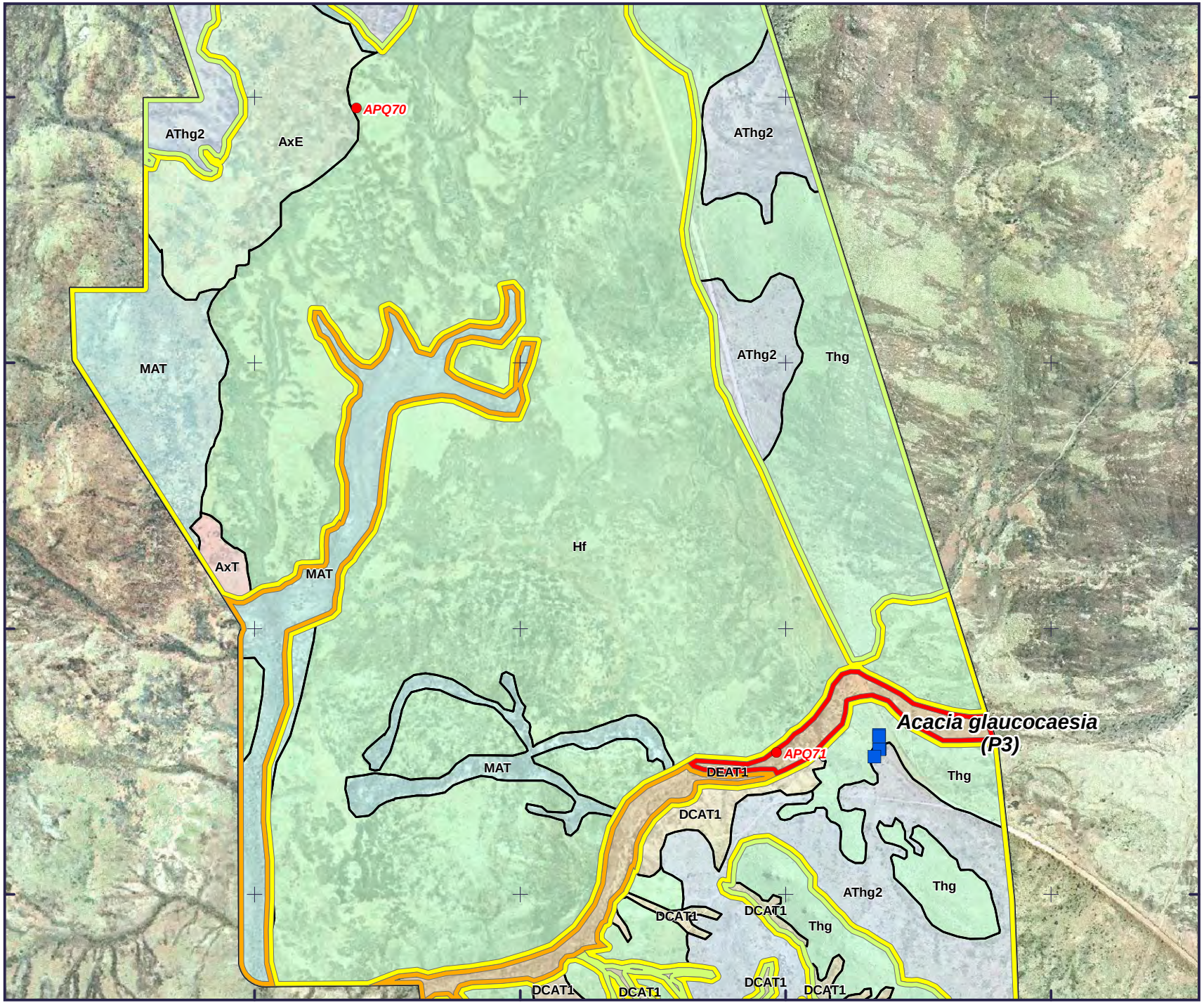


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.75

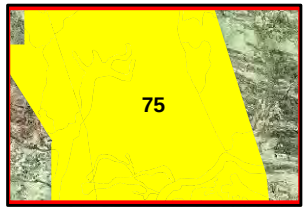
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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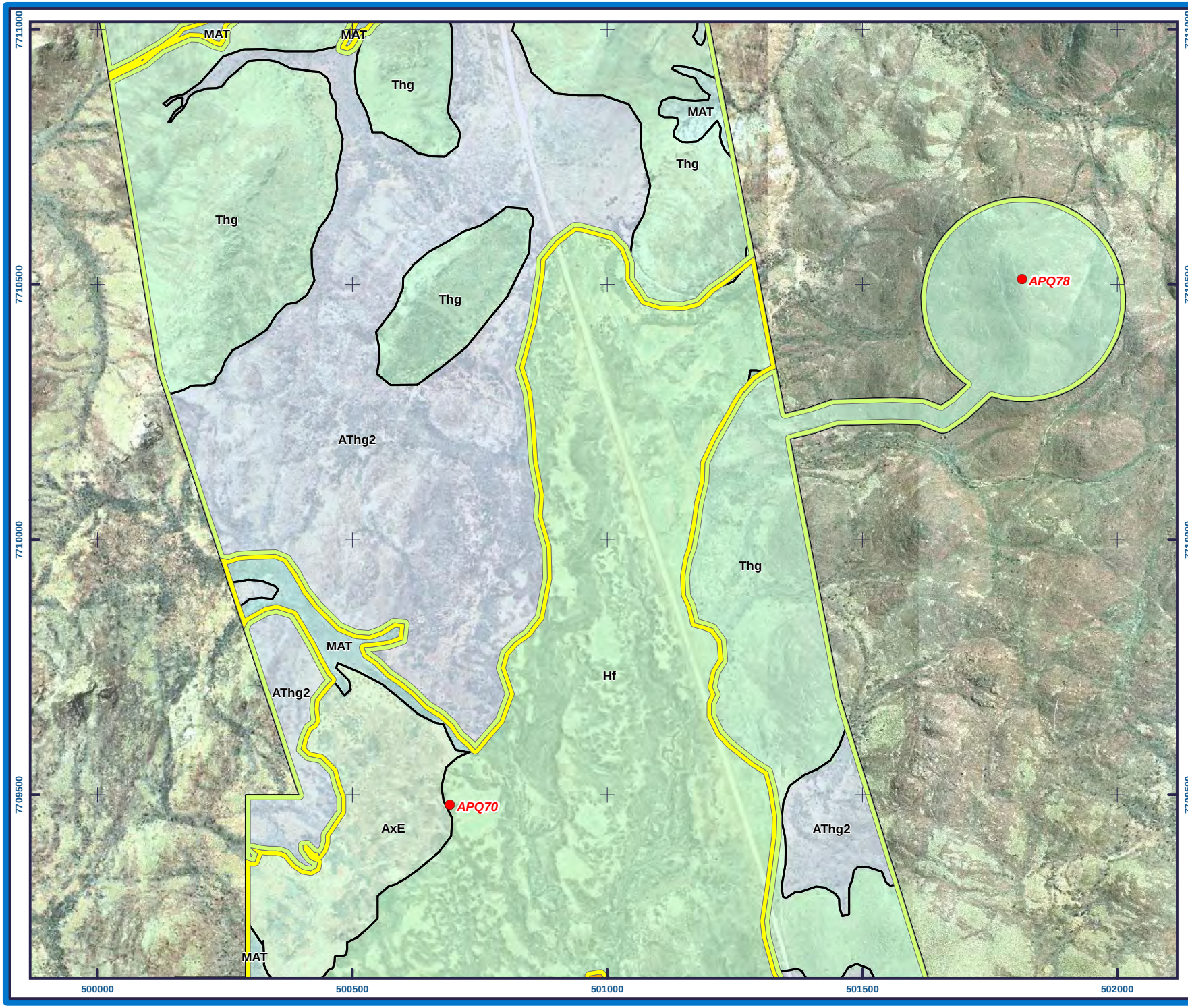


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.76

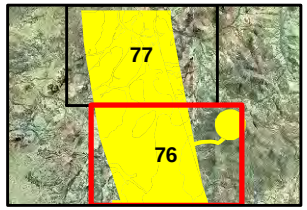
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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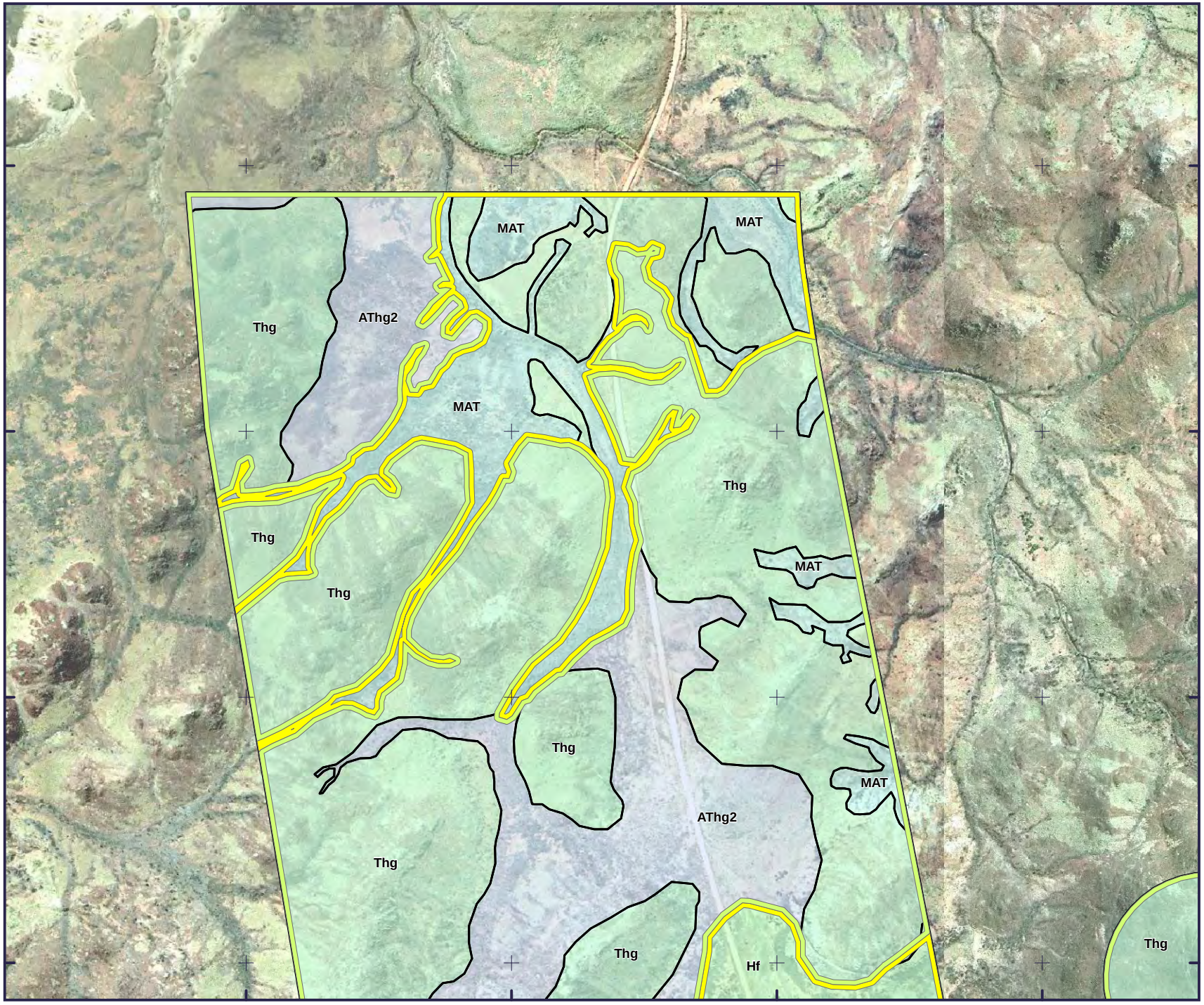


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.77

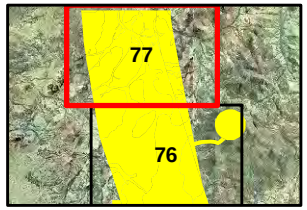
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.78

0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent

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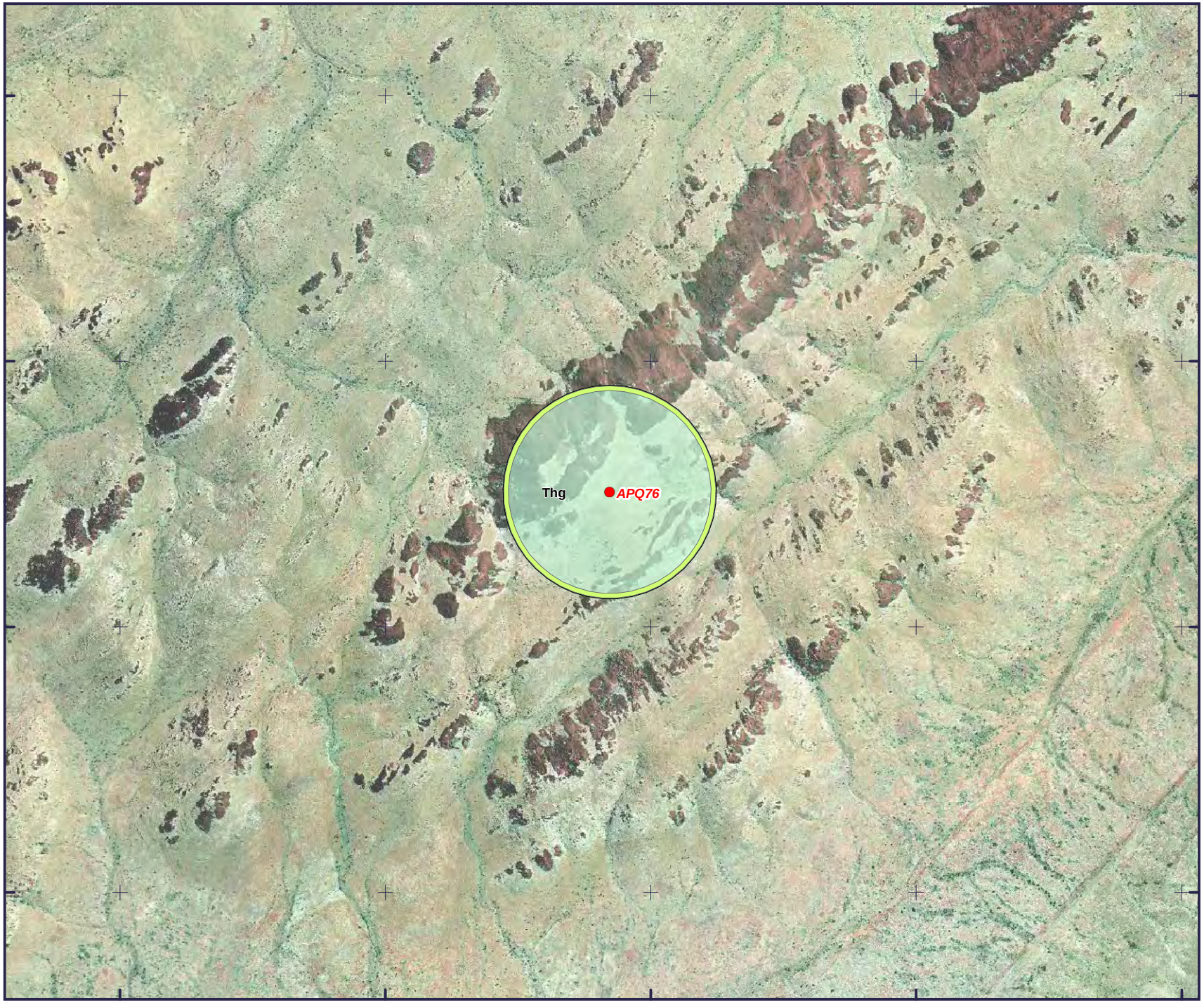


Proposed Anketell Point Transport Corridor, Associated Borrow Pits & Communication Towers

Vegetation Community & Condition

Figure 7.79

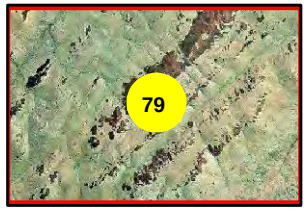
0 100 200 300

Metres

1:10,000

Vegetation Condition

- Completely Degraded
- Degraded
- Degraded - Good
- Good
- Good - Very Good
- Very Good
- Very Good - Excellent



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Appendix A

ASTRON (2010) Statistical Analysis Report

West Pilbara Iron Ore Project
Proposed Anketell Point Railway Alignment
Vegetation Survey Data Analysis

April 2010

Prepared for
API Management Pty Ltd

DRAFT

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Report Reference: 12012-10SRV2RevA_100428

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Revision Status

Rev	Date	Description	Author	Reviewer	Approval
A	28/04/2010	Draft Issued For Client Review	M. Garkaklis	W. Wishart	

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Report Reference: 12012-10SRV2RevA_1004128

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Referencing	Harvard

Checking Status	
Text	IR
Figures	IR
Tabulations	IR
Calculations	NR
Statistics	NR

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Executive Summary

Australian Premium Iron Management Pty Ltd (API) proposes to develop the West Pilbara Iron Ore Project (WPIOP), an iron ore mining and export operation based on a number of resources located on the western fringe of the Hamersley Ranges, south of Pannawonica, in the Pilbara region of Western Australia. The project involves the development of a series of open cut mines, a railway and port facilities at Anketell Point, near Dixon Island.

Flora and vegetation surveys of the Anketell Point and Dixon Island Port Area and Railway Alignment (the Study Area) were undertaken by AECOM (2009, 2010). The purpose of this numerical analysis was to identify vegetation communities from the botanical survey data of the Railway Alignment. This follows the recommendations for Level 2 surveys outlined within Guidance Statement 51, *Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia* (EPA 2004). The following procedures were used: Analysis of Similarity (ANOSIM), classification analysis, and ordination analysis.

Differences in vegetation between the Port Area and the Railway Alignment (ANOSIM)

Within the whole Study Area data set there is a significant difference between quadrats surveyed in the Port Area compared to quadrats surveyed within the Railway Alignment (Global R = 0.398, $p<0.001$). This confirms significant differences in the species occurrences, and also supports a closer examination of each part of the data set, Port Area and Railway Alignment, separately.

Classification Analysis

Classification analysis reflected this difference between the Port Area and the Railway Alignment. Only one Port Area sample (APQ98) was clustered within a Railway Alignment community. This was because of the occurrence of the dominant tussock grass *Eragrostis xerophila* in the quadrat samples within this numerical community. No Railway Alignment quadrats occur within a numerical community dominated by Port Area quadrat samples.

The Number of Numerical Vegetation Communities in the Study Area data set (SIMPROF)

Twelve significant groups of quadrats that represent vegetation communities were identified within the data from the Study Area (Sample statistic Pi = 4.304, $p<0.001$). However, these 12 significant groupings based on the numerical analysis of the Study Area are far less than the 26 individual vegetation communities used in the mapping and conservation assessment in both AECOM (2009) and AECOM (2010). It indicates that a precautionary or conservative approach was used during the botanical field survey to delineate individual vegetation communities. The numerical analysis supports the communities being amalgamated. The implication for the Environmental Impact Assessment is that the mapping used to define vegetation communities is very unlikely to have grouped vegetation communities that may be of environmental significance. A cautious approach has been adopted.

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The Number of Numerical Vegetation Communities within the Rail Alignment (SIMPROF)

Eight significant groups of quadrats that represent potential vegetation communities were identified within data from the Railway Alignment (Sample statistic Pi = 4.197, p<0.001). This compares to 22 communities that were delineated for the Proposed Rail Alignment assessment (AECOM 2009). The pattern of higher numbers of field delineated communities in this analysis follows the same pattern as the larger regional-scale Study Area analysis.

Ordination Analysis and ANOSIM Tests of Field Defined Vegetation Communities for the Study Area

This cautious approach to field mapping is confirmed by the ANOSIM test of the groupings based on the 'field defined' vegetation communities. Botanists use field descriptions of vegetation communities coupled with aerial photography to undertake vegetation mapping. In addition, botanists will apply a vegetation code based on their field descriptions of vegetation communities to each individual survey quadrat. The purpose of this final ANOSIM test was to determine if these field descriptions of vegetation communities are significantly associated with the actual quadrat data, and examine if strong correlation between the grouping of quadrats and the vegetation codes occurs. This test indicates that significant associations between the field defined vegetation communities and the quadrat data occur (Global R = 0.563, p<0.001). However, in a "pairwise test" of significant differences between each individual vegetation code, several vegetation codes are not significantly different. Several vegetation communities appear to have been split without support from numerical analyses. The 'closeness' of each of these codes is displayed as an ordination plot within this Report. The implication for the EIA undertaken is that a cautious approach has been used in defining individual vegetation communities, and based on the numerical analysis, inappropriate 'grouping' of vegetation communities has not occurred.

Examination of Railway Alignment Vegetation Communities

Within the Railway Alignment, numerical analysis confirmed eight 'numerical' vegetation communities and three single quadrat outliers. The quadrat outliers were:

- Quadrat APQ16 – a community described as *Corymbia hamersleyana* Woodland over *Acacia pyrifolia* var. *pyrifolia* over low *Sida echinocarpa* shrubland over *Sorgham plumosum* and *Cenchurus ciliaris* Closed Grassland in minor drainage. In this instance, the quadrat is likely to have been identified as an outlier because of the occurrence of buffel grass within this woodland community. Examination of a similar quadrat (APQ39) indicates that the difference between these two quadrats was due to the occurrence of buffel and *Sorgham* in APQ16 and *Triodia wiseana* in APQ 39.
- Quadrat APQ22 – this community is described as Open *Acacia xiphophylla* shrubland over Open *Triodia* Grassland. Similar to the above example, this quadrat has been identified as an outlier because of the high buffel grass foliar cover. This weed species is absent from quadrats grouped within the same community Axt(b).
- Quadrat APQ35 – Open *Eucalyptus camaldulensis* Woodland over Mixed Acacia Shrubland of *Acacia trachycarpa* and *Acacia bivenosa* over *Triodia* species. This was the only River Red Gum quadrat in the data set.

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These outliers do not represent unusual communities, and are artefacts of limited sampling within them.

The eight numerical communities are identified as those 'quadrat groups' significantly associated with each other. Each of the eight groups contains more than one field-defined vegetation community. The eight numerical communities are:

- *Eragrostis spp.* dominated communities (defined as communities **Hf** and **Ahf** in AECOM (2009) vegetation mapping). Note that quadrat **APQ34** (**Ahf**) occurs on Red Cracking Clays, and was mapped as a separate unit from **Hf**;
- Open *Acacia* shrublands (defined as communities **AThg1**, **AxE** and **AxT** in AECOM (2009) vegetation mapping);
- Mixed Acacia shrubland over *Triodia* (defined as communities **MAT** and **Athg2** in AECOM 2009);
- *Triodia* hummock grasslands with or without mixed *Acacia* (defined as communities **Thg** and MAT in AECOM (2009) vegetation mapping);
- Mixed *Acacia* shrublands (defined as communities **CAThg1**, **Athg1** and **DMATE** in AECOM (2009) vegetation mapping);
- *Acacia* shrublands (defined as communities **AxT**, **MATE** and **AEThg2** in AECOM (2009) vegetation mapping);
- *Acacia* shrublands or woodlands over *Trodia* hummock grasslands (defined as **Athg1**, **DEAT1**, **DCAT1**, **DMATE** and **DCAT2** in AECOM (2009) vegetation mapping); and

Shrublands or woodlands over *Triodia* grasslands usually in drainage lines, creeklines and minor flowline communities (defined as communities **DCAT1, MATE, DEAT1** and **CAThg1** in AECOM (2009) vegetation mapping).

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Appendix A: Data Analysis Figures

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1 Introduction

1.1 Project Background

Australian Premium Iron Management Pty Ltd (API) proposes to develop the West Pilbara Iron Ore Project (WPIOP), an iron ore mining and export operation based on a number of resources located on the western fringe of the Hamersley Ranges, south of Pannawonica, in the Pilbara region of Western Australia. The project involves the development of a series of open cut mines, a railway and port facilities at Anketell Point, near Dixon Island.

Flora and vegetation surveys of the Proposed Anketell Point Railway Alignment (the Railway Alignment) were undertaken by AECOM (2009). Multivariate statistical analysis (also referred to as numerical analysis) of the botanical quadrat survey data undertaken within the Railway Alignment is needed to fulfil the requirements of a Level 2 comprehensive flora and vegetation survey following the procedures outlined in Guidance Statement 51, *Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia* (EPA 2004).

1.2 Study Background

API commissioned Astron Environmental Services (Astron) to conduct a numerical analysis to explore patterns in vegetation communities within the areas surveyed by AECOM for the WPIOP Port and Railway Alignment near Anketell Point, and to test if quadrat vegetation survey data supported further splitting of mapped vegetation communities. The latter would have implications for the assessment of conservation significance of the vegetation communities used in vegetation mapping for the WPIOP.

Botanical survey data for this analysis was obtained from the hard copy reports AECOM (2009 and 2010). The data are for the Railway Alignment and the Port Area, within the zones defined by AECOM (2009) as the *API Proposed Anketell Point Railway Alignment* and in AECOM (2010) as the *Anketell Point and Dixon Island Port Project Area* (see Figure 2 AECOM 2009 and Figure 1 AECOM 2010). The combined Rail and Port Project Area is referred to as the Study Area within this Report.

Additional information regarding environmental variables for each quadrat surveyed was provided by API (M. Carey Pers. Comm.) The botanical survey data obtained from AECOM (2009 and 2010) was Percentage Foliar Cover of each species recorded within permanently marked 50m by 50m quadrats. The environmental and location information provided was:

- Location of the quadrats within the Port Area or the Railway Alignment;
- Vegetation Communities defined by field botanists; and
- Vegetation Condition.

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The stages of this analysis were:

- Multivariate analysis of the whole data set to allow interpretation of results in a wider context than the Railway Alignment;
- Tests of differences in vegetation between Railway Alignment and the Port Area; and
- Interpretation of the vegetation communities derived by the field botanists in comparison to the numerical communities identified by the multivariate statistical analyses.

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2 Methods

Data analyses exploring vegetation communities used in mapping and Environmental Impact Assessment were undertaken using multivariate techniques. Environmental data often fails the basic assumptions required for standard statistical tests (Anderson and Thompson 2004). These are the requirement for the data to be normally distributed and for variance between sample populations to be the same. In addition, ecological data often measures the response of multiple species; in this case multiple plant species. The data are multivariate and therefore requires 'non-parametric' multivariate analyses. This is the approach used in the current Report.

2.1 Data Pre-treatment

Data transformations in multivariate analyses allow a better interpretation of differences in communities due to changes in the occurrence (presence/absence) or dominance of plant species between each quadrat (Clarke and Green 1988). In this current Report fourth-root transformations were used following the recommendations of Clarke and Green (1998).

2.2 Classification

The purpose of classification is to produce a figure called a dendrogram that allows patterns in the data to be identified. In their simplest form, dendrograms are a visual aid and they allow obvious groups of quadrats to be identified. On their own they are not a test of the groups.

Test for significant groups of survey quadrats uses a technique called Similarity Profile Analysis (SIMPROF). The test indicates if groups of quadrats are significantly associated. This is determined by a 'p-value', which for significant groups using this technique should be less than 0.01 (Clarke and Gorely 2006). In the dendrograms provided in this Report, a vertical black line that splits to red indicates a numerical community or group of similar quadrats. These groups have been tested by SIMPROF. A solid black line linking to a single quadrat indicates an outlier in the data set. The outlier may result because of low sampling effort for this community, or because it is a very unusual vegetation community that only has a single sample.

2.3 Ordination

The purpose of ordination is to show the relationship between individual quadrats rather than the groupings of individual quadrats, which is the outcome of classification. The output of an ordination analysis is called an ordination plot, which is similar to a scatter plot. The intention of undertaking an ordination analysis is to show 'relatedness' between quadrats. Points close to each other are quite similar, while those further away are less similar. On its own, ordination is not a test of significance of a grouping, or difference. This requires a specific test called Analysis of Similarity (ANOSIM). Ordination plots should be viewed along with this test of significance to help interpret of any patterns seen.

The purpose of undertaking an ANOSIM is to test for the significance of groupings of quadrats based on identified categories (*a priori* factors in the data). In this current analysis, one-way ANOSIM was used to test the hypothesis that the *a priori* vegetation community groupings determined by the field botanists are reflected in the data. The purpose is to check that the numerical information does not suggest that vegetation communities identified by the field botanists should be split or

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grouped. This may have implications for a conservation assessment because 'split' communities, smaller in size, may be rare or unusual.

In this Report, pairwise tests of differences between each field identified vegetation community were undertaken. The results of these pairwise tests are presented as an ordination plot to show the relationship between vegetation communities used in vegetation mapping (see Clarke and Gorely (2006) for pairwsie analysis procedures in ANOSIM.

2.4 Summary of analyses

All analyses followed the procedures outlined in Clarke and Gorley (2006), and were carried out using the appropriate modules of *Primer v6*. A flowchart outlining the steps in the analyses and the graphical outputs is provided in Figure 1.

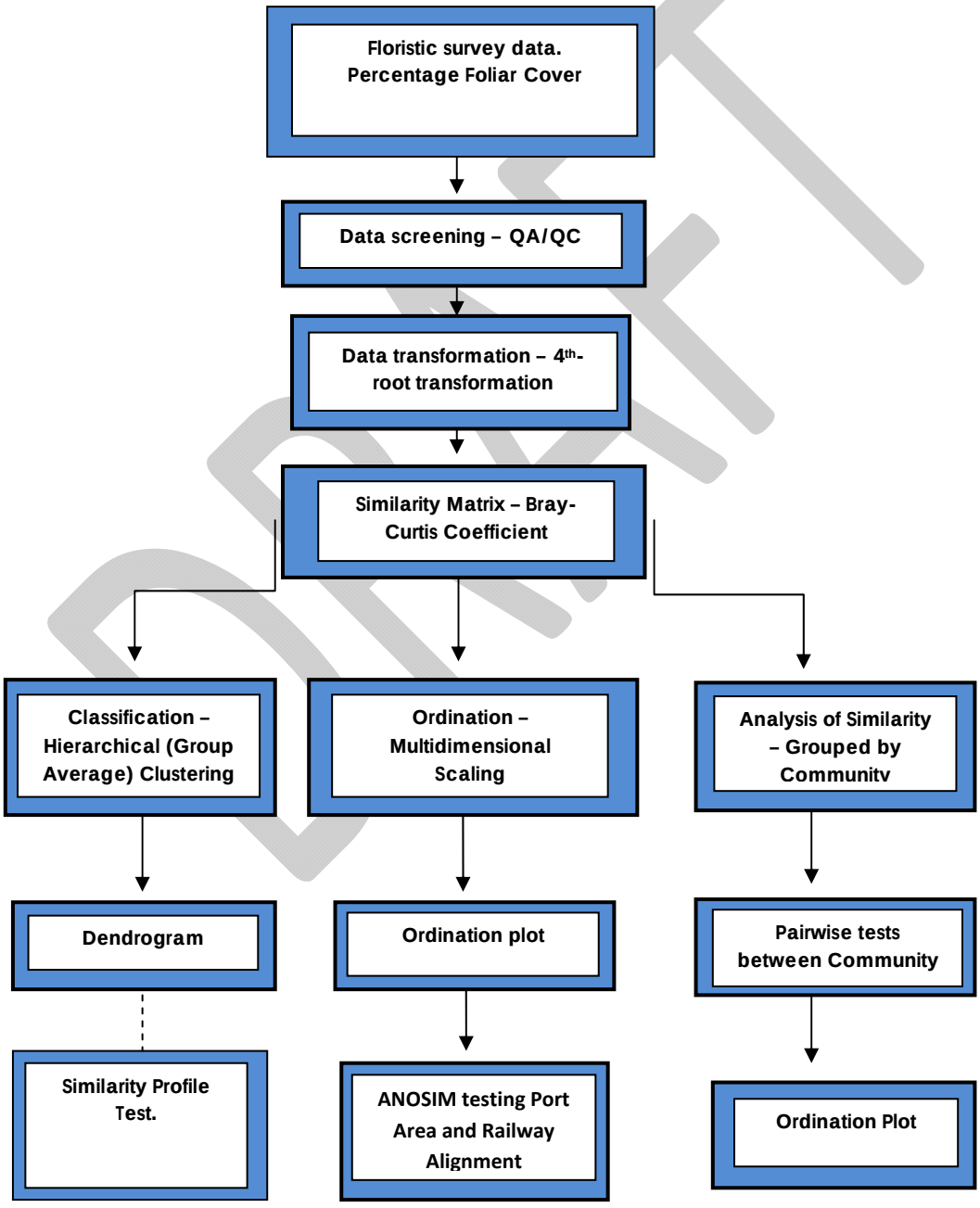

Figure 1: Flowchart of general application of non-parametric multivariate analyses (see Clarke & Warwick 2001 for descriptions of tests)

3 Results and Discussion

3.1 Differences in vegetation between the Port Area and the Railway Alignment (ANOSIM)

There is a significant difference in the survey data obtained for the Port Area and the Railway Alignment (Global R = 0.398, p<0.001). This confirms significant differences in the species occurrences, and also allows a closer examination of each part of the data set, Port Area and Railway Alignment, separately.

3.2 Classification Analysis

Classification analysis reflected this difference between the Railway Alignment and the Port Area (Figures A1 and A2). Only one Port Area sample (APQ98) was clustered within a Railway Alignment community. This was because of the occurrence of the dominant tussock grass *Eragrostis xerophila* in the quadrat samples within this numerical community. No Railway Alignment quadrats occur within a numerical community dominated by Port Area quadrat samples.

3.3 Similarity Profile Analysis (SIMPROF) of Study Area

Twelve significant groups of quadrats that represent vegetation communities were identified within the data from the Study Area (Sample statistic Pi = 4.304, p<0.001). However, these 12 significant groupings based on the numerical analysis of the Study Area are far less than the 26 individual vegetation communities applied as codes used in the mapping and conservation assessment in both AECOM reports (AECOM 2009 (22 communities)and 2010 (23 communities) – see Figure A3). It indicates that the botanical field survey has applied a precautionary or conservative approach to delineating individual vegetation communities in comparison to the numerical analysis; the latter supports the communities being amalgamated. The implication for the Environmental Impact Assessment is that the mapping used to define vegetation communities is very unlikely to have grouped vegetation communities that may be of environmental significance. A cautious approach has been adopted.

3.4 Similarity Profile Analysis (SIMPROF) of Railway Alignment

Eight significant groups of quadrats that represent potential vegetation communities were identified within data from the Railway Alignment (Sample statistic pi = 4.197, p<0.001 – Figure A4). This compares to 22 communities that were delineated for vegetation mapping within the Proposed Rail Alignment assessment (AECOM 2009). The pattern of higher numbers of field delineated communities in this analysis follows the same pattern as the larger regional scale Study Area analysis.

3.5 Ordination Analysis and ANOSIM Tests of Field Defined Vegetation Communities for the Study Area

This cautious approach to field mapping is confirmed by the ANOSIM test of the groupings based on the 'field defined' vegetation communities. Botanists use field descriptions of vegetation communities coupled with aerial photography to undertake vegetation mapping. In addition, botanists will apply a vegetation code based on their field descriptions of vegetation communities to each individual survey quadrat. The purpose of this final ANOSIM test was to determine if these field descriptions of vegetation communities are significantly associated with the actual quadrat data, and examine if strong overlap between the vegetation codes exists. This test indicates that

significant associations between the field defined vegetation communities and the quadrat data occur (Global R = 0.563, p<0.001). However, in a "pairwise test" of significant differences between each individual vegetation code, several vegetation codes are not significantly different. Several vegetation communities appear to have been split without support from numerical analyses. The 'closeness' of each of these codes is displayed as an ordination plot in Figure A5.

3.6 Analysis of Field Defined Vegetation Communities within the Railway Alignment

Analysis of the field applied vegetation communities used in mapping vegetation within the proposed Railway Alignment also indicate significant overall groupings (Global R = 0.567, p<0.001), but pairwise tests again demonstrate that many vegetation communities are numerically quite similar (Figures A6 and A7).

The implication for the EIA undertaken is that a cautious approach has been used in defining individual vegetation communities and, based on the numerical analysis, inappropriate 'grouping' of vegetation communities has not occurred.

3.7 Examination of Railway Alignment Vegetation Communities

Within the Port Area, numerical analysis confirmed three vegetation communities and three single quadrat outliers (Figure A6). The quadrat outliers were:

- Quadrat APQ16 – a community described as *Corymbia hamersleyana* Woodland over *Acacia pyrifolia* var. *pyrifolia* over low *Sida echinocarpa* shrubland over *Sorgham plumosum* (Sorgham) and **Cenchurus ciliaris* (Buffel Grass) Closed Grassland in minor drainage. In this instance, the quadrat is likely to have been identified as an outlier because of the occurrence of Buffel Grass within this woodland community. Examination of a similar quadrat (APQ39) indicates that the difference between these two quadrats was due to the occurrence of Buffel Grass and Sorgham in APQ16 and *Triodia wiseana* in APQ 39.
- Quadrat APQ22 – this community is described as Open *Acacia xiphophylla* shrubland over Open *Triodia* Grassland. Similar to the above example, this quadrat has been identified as an outlier because of the high Buffel Grass foliar cover. This weed species is absent from quadrats grouped within the same community Axt(b).
- Quadrat APQ35 – Open *Eucalyptus camaldulensis* (River Red Gum) Woodland over Mixed Acacia Shrubland of *Acacia trachycarpa* and *Acacia bivenosa* over *Triodia* species. This was the only quadrat in the dataset that contained River Red Gum.

These outliers do not represent unusual communities, and are an artefact of limited sampling within them.

The eight numerical communities are identified as those 'quadrat groups' significantly associated with each other. Each of the eight groups contains more than one field-defined vegetation community. The eight numerical communities are:

- *Eragrostis spp.* dominated communities (defined as communities **Hf** and **Ahf** in AECOM (2009) vegetation mapping). Note that quadrat **APQ34** (**Ahf**) occurs on Red Cracking Clays, and was mapped as a separate unit from **Hf**;

- Open *Acacia* shrublands (defined as communities **AThg1**, **AxE** and **AxT** in AECOM (2009) vegetation mapping);
- Mixed *Acacia* shrubland over *Triodia* (defined as communities **MAT** and **Athg2** in AECOM 2009).
- *Triodia* hummock grasslands with or without mixed *Acacia* (defined as communities **Thg** and **MAT** in AECOM (2009) vegetation mapping);
- Mixed *Acacia* shrublands (defined as communities **CAThg1**, **Athg1** and **DMATE** in AECOM (2009) vegetation mapping);
- *Acacia* shrublands (defined as communities **AxT**, **MATE** and **AEThg2** in AECOM (2009) vegetation mapping);
- *Acacia* shrublands or woodlands over *Trodia* hummock grasslands (defined as **Athg1**, **DEAT1**, **DCAT1**, **DMATE** and **DCAT2** in AECOM (2009) vegetation mapping); and
- Shrublands or woodlands over *Triodia* grasslands usually in drainage lines, creeklines and minor flowline communities (defined as communities **DCAT1**, **MATE**, **DEAT1** and **CAThg1** in AECOM (2009) vegetation mapping).

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4 Conclusion

Multivariate numerical analysis of the Study Area data provided by the AECOM survey, and the analysis of data from the Railway Alignment supports the cautious approach that has been used in identifying vegetation communities for the purpose of vegetation mapping and the Environmental Impact Assessment used in AECOM (2009). The numerical analysis suggests that it is highly unlikely that unusual vegetation communities that may be of significance have been grouped within a more common vegetation community used for the purposes of vegetation mapping.

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Appendix A

Data Analysis Figures

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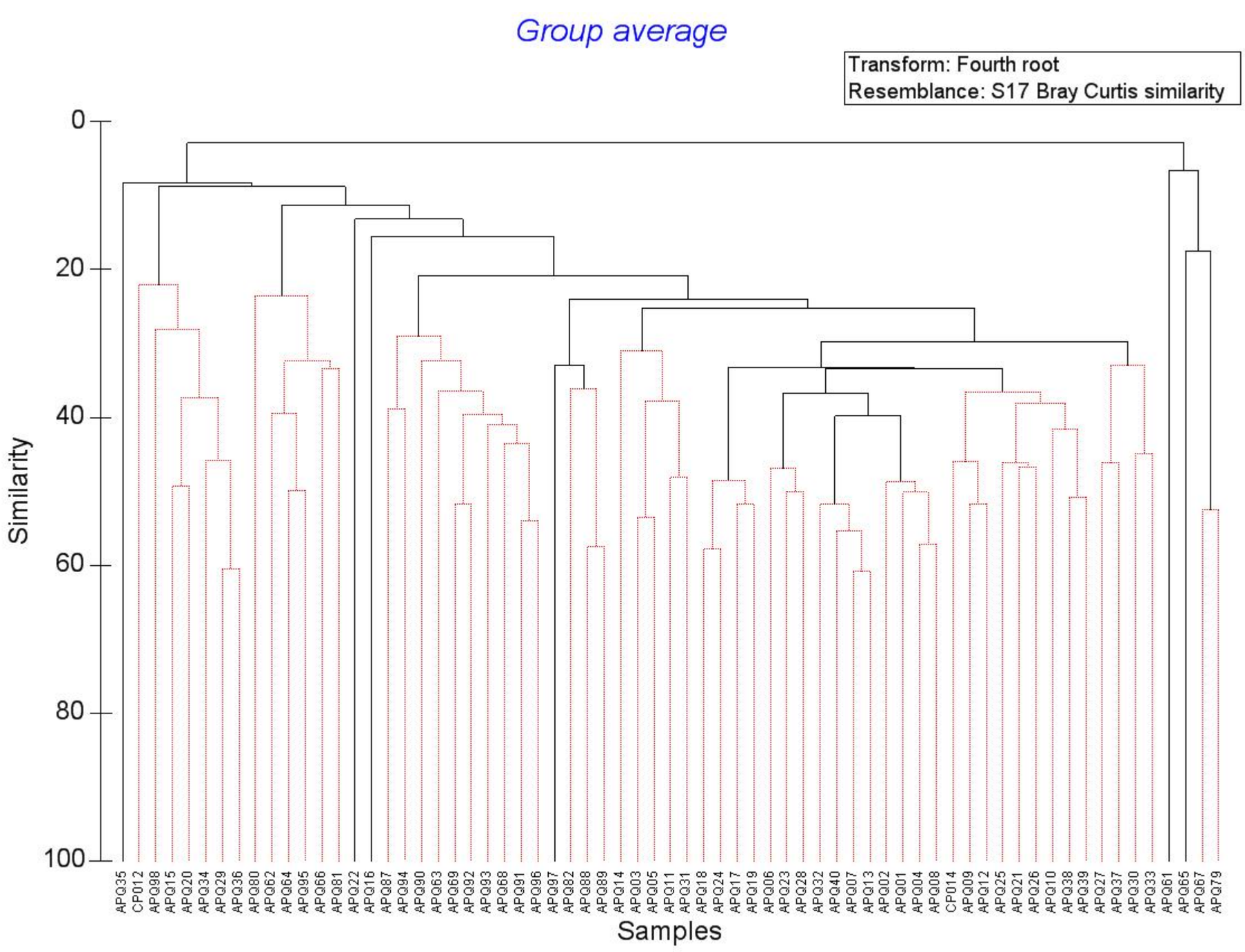
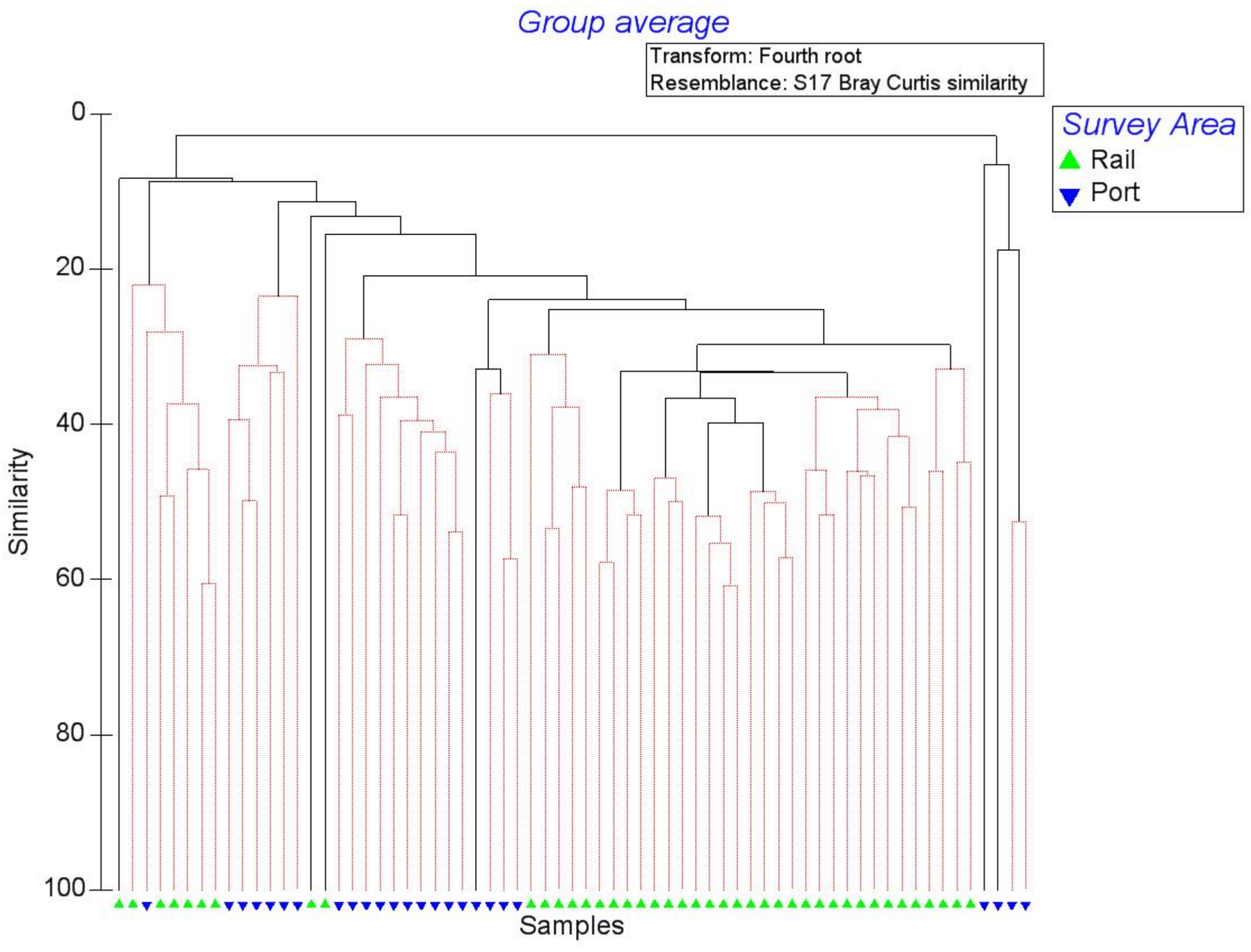


Figure A1: Dendrogram of Hierarchical Clustering analysis of AECOM (2009 and 2010) quadrat data, Study Area. Transformation is 4^{th}-root, and the Similarity Profile Test is significant ($p<0.001$). Groups of quadrats are identified by vertical black lines splitting to red.



FigureA2: Dendrogram of Hierarchical Clustering analysis of AECOM (2009 and 2010) quadrat data. The factor used to highlight patterns in this data was quadrat location; Rail Corridor or Port Area. ANOSIM for differences between vegetation communities is significant ($p<0.001$)

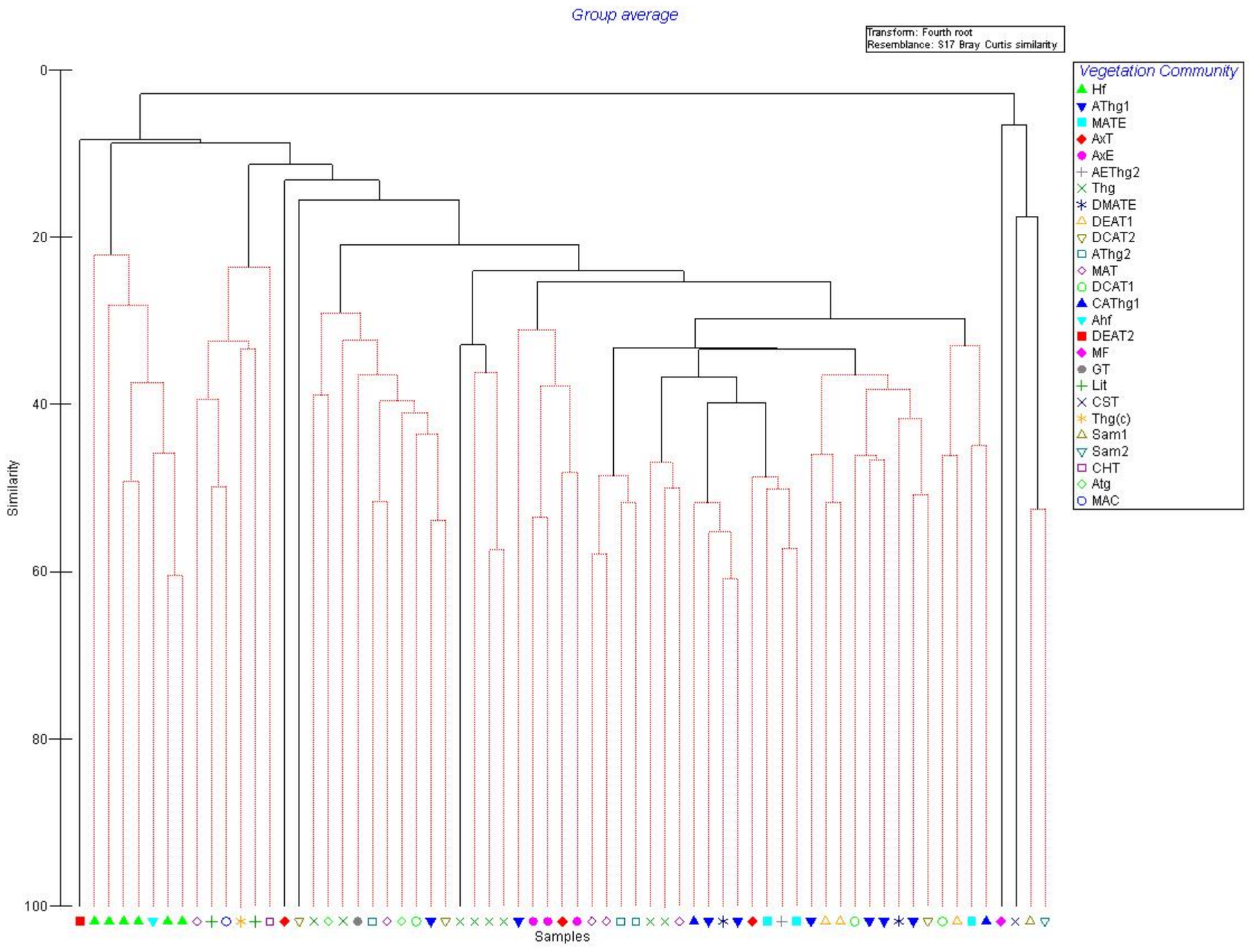


Figure A3: Dendrogram of Hierarchical Clustering analysis of AECOM (2009 and 2010) quadrat data. Factors used to highlight patterns of data distribution are field delineated vegetation community. The Grouping of communities by SIMPROF is significant (p<0.001).

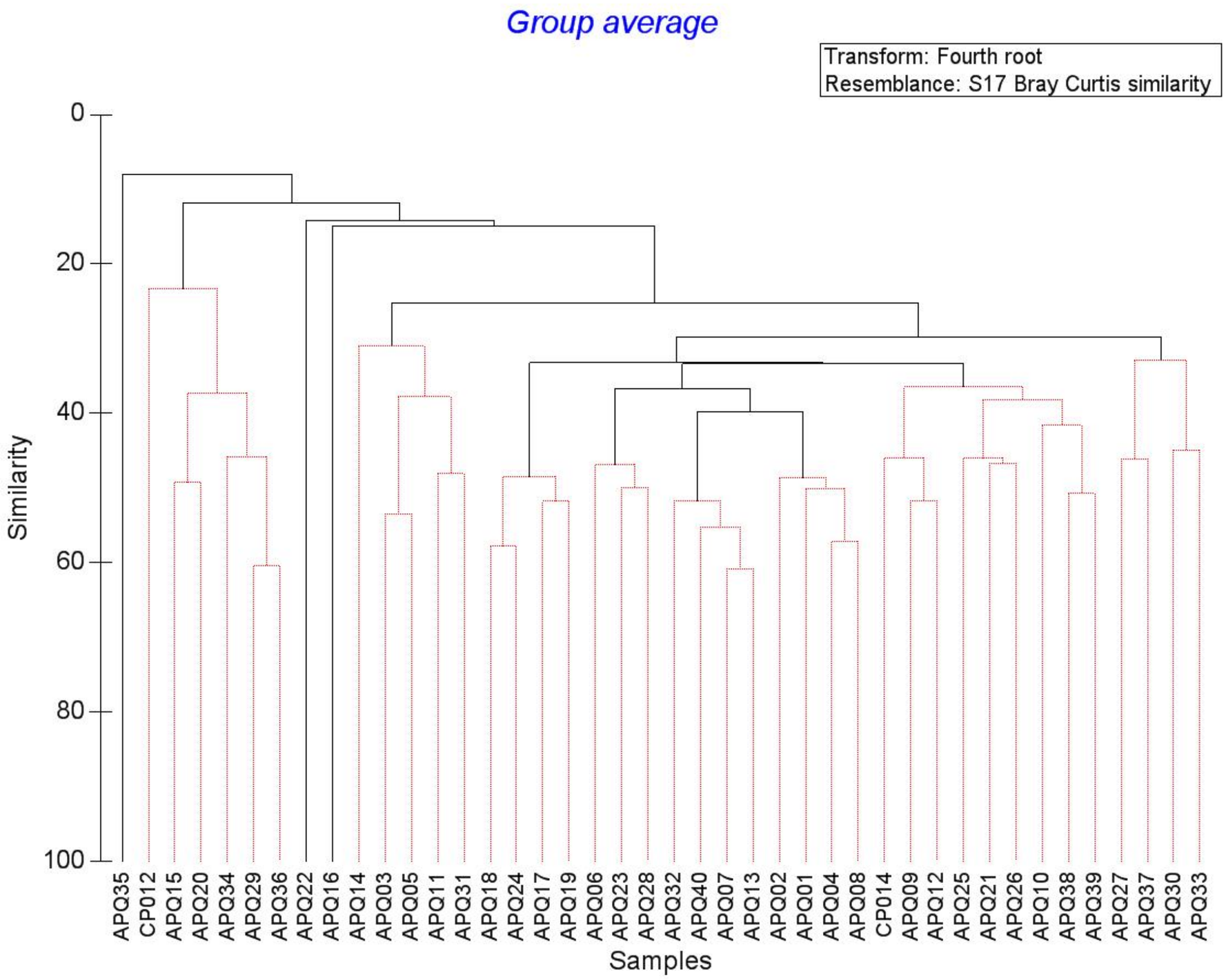


Figure A4: Dendrogram of Hierarchical Clustering analysis of AECOM (2009) Rail Corridor quadrat data. Eight numerical communities and three single quadrat outliers are apparent in this analysis. Groups of quadrats are significantly associated ($p<0.001$)

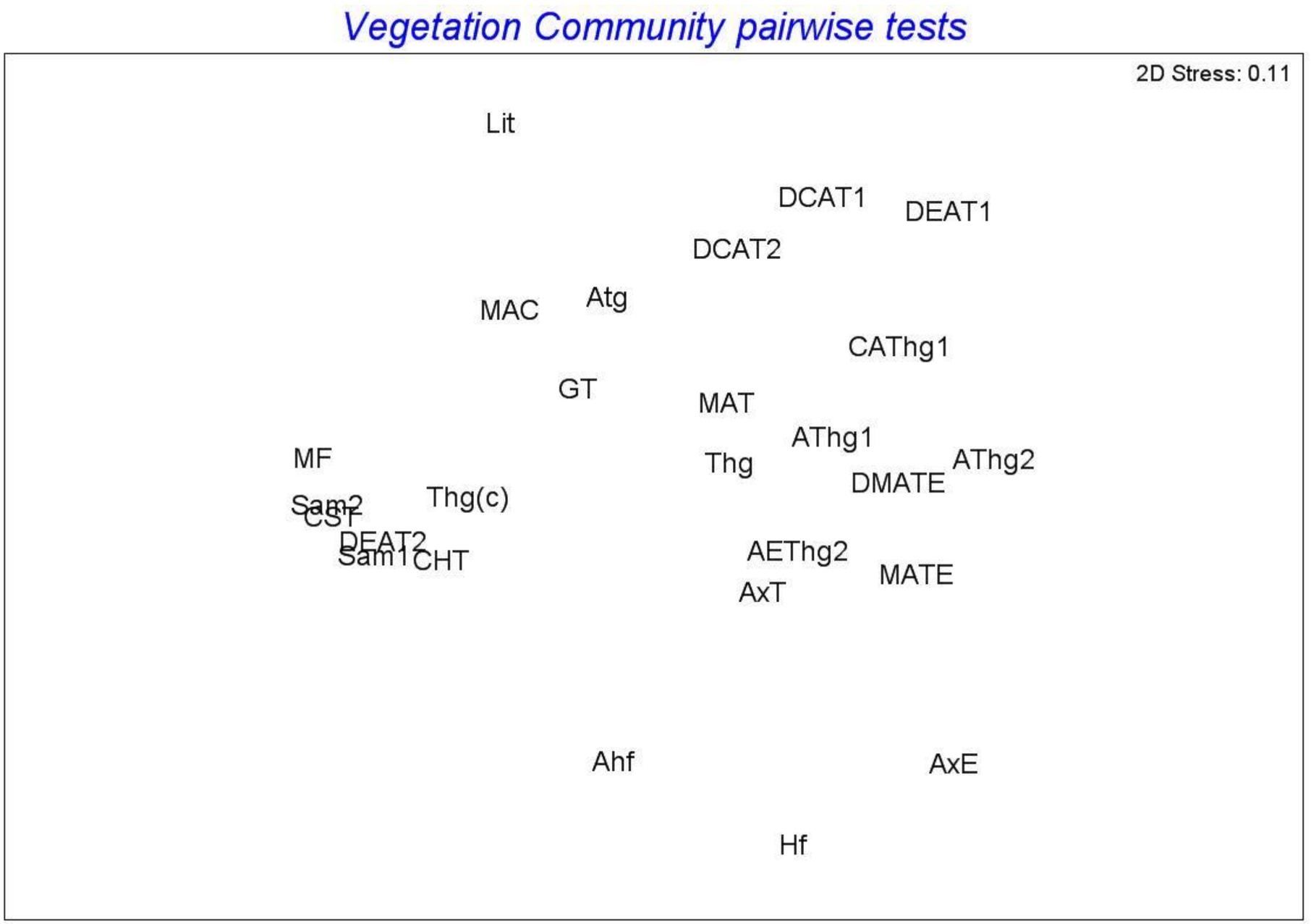


Figure A5: Ordination plot of AECOM (2010) of pairwise tests showing the close relationship between a number of vegetation communities used in vegetation mapping for the Survey Area (Port and Rail). For example, SAM2, CST, SAM1 and DEAT2 are very similar.

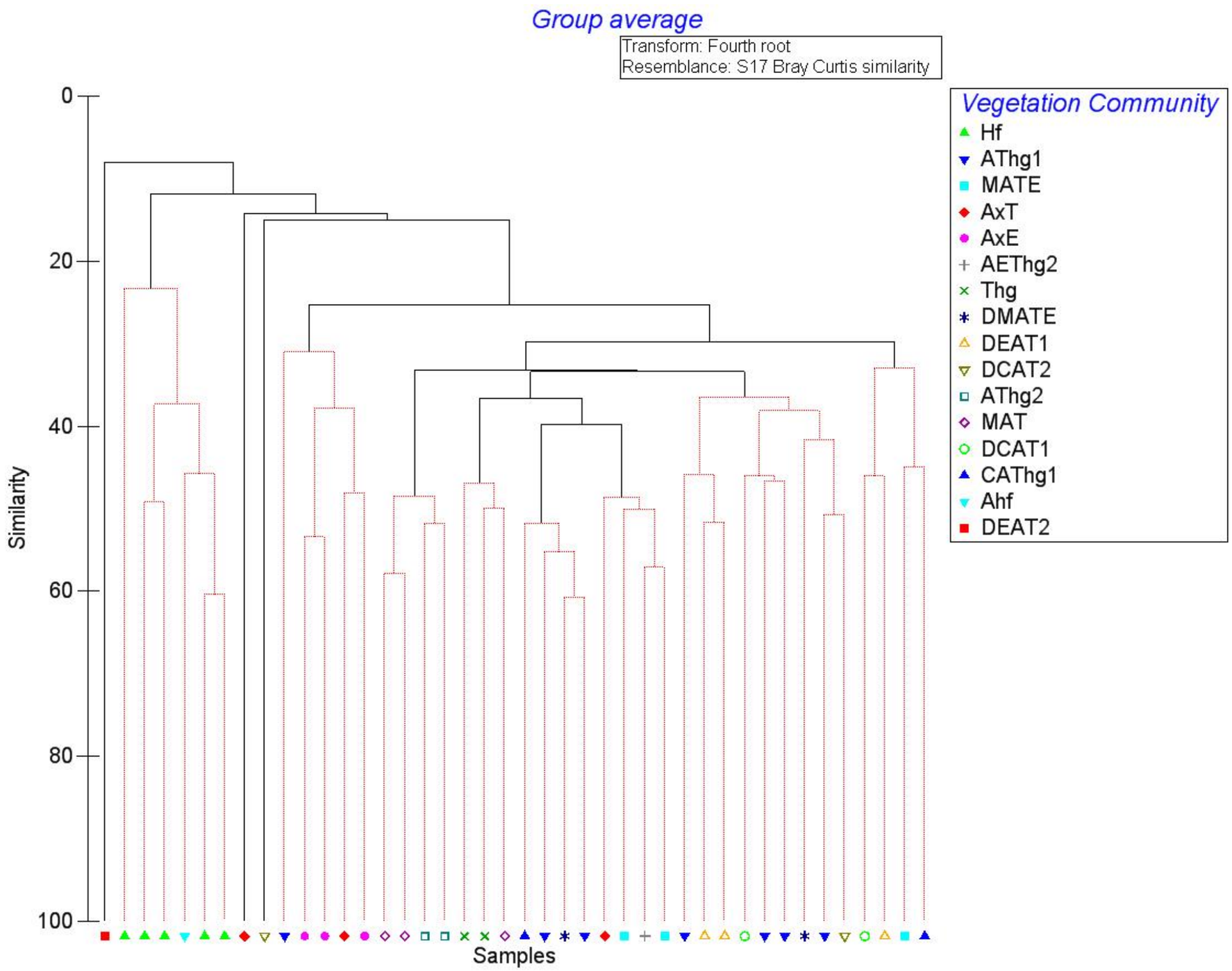


Figure A6: Dendrogram of Hierarchical Clustering analysis of AECOM (2009) Rail Corridor quadrat data. Factors used to highlight patterns of data distribution are field delineated vegetation community indicating several field communities occurring within each numerical community. The Grouping of communities by SIMPROF is significant (p<0.001).

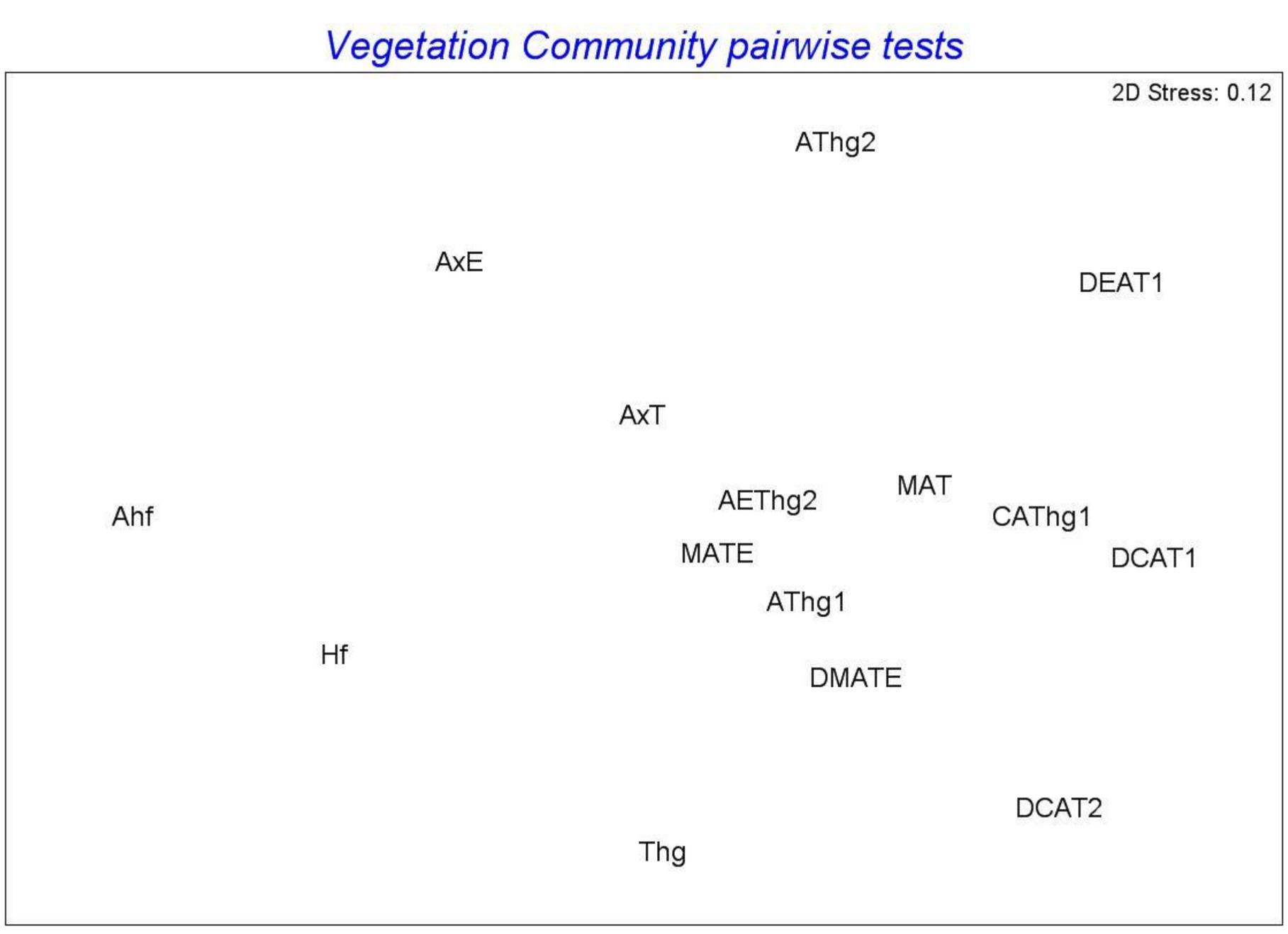


Figure A7: Ordination plot of AECOM (2009) of pairwise tests for Rail Corridor surveys showing the close relationship between a number of the vegetation communities used in vegetation mapping. For example, Athg1, MATE and AEThg2 are very similar.

Appendix B

Summary of vascular flora species recorded at each quadrat within the Anketell Point Transport Corridor between 2008 - 2009

APPENDIX B: SUMMARY OF VASCULAR FLORA SPECIES RECRDED AT EACH QUADRAT WITHIN THE ANKETELL POINT TRANSPORT CORRIDOR BETWEEN 2008 - 2009

NB * denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ01	APQ02	APQ03	APQ04	APQ05	APQ06	APQ07	APQ08	APQ09
13	Marsileaceae		*Marsilea*		*hirsuta*																	
31	Poaceae		*Aristida*		*contorta*									+	+	+	+	+	+	+	+	
31	Poaceae		*Aristida*		*holathera*		var.		*holathera*													
31	Poaceae		*Aristida*		*latifolia*																	
31	Poaceae		*Aristida*		sp.																	
31	Poaceae		*Astrebla*		*pectinata*																	
31	Poaceae		*Bothriochloa*		*ewartiana*																	
31	Poaceae		*Brachyachne*		*convergens*										+		+					
31	Poaceae		*Brachyachne*		*prostrata*													+				
31	Poaceae	*	*Cenchrus*		*ciliaris*									+		+	+			+	+	+
31	Poaceae		*Chloris*		*pectinata*												+					
31	Poaceae		*Chrysopogon*		*fallax*										+		+					
31	Poaceae		*Cymbopogon*		*ambiguus*																	
31	Poaceae		*Cymbopogon*		*procerus*																	
31	Poaceae		*Dactyloctenium*		*radulans*										+	+	+				+	
31	Poaceae		*Dichanthium*		*sericeum*		subsp.		*humilius*					+	+	+	+	+		+	+	
31	Poaceae		*Digitaria*		*ctenantha*																+	
31	Poaceae		*Enneapogon*		*caerulescens*		var.		*caerulescens*					+		+	+			+	+	
31	Poaceae		*Enneapogon*		*polyphyllus*															+		
31	Poaceae		*Enteropogon*		*ramosus*													+				
31	Poaceae		*Eragrostis*		*falcata*																	
31	Poaceae		*Eragrostis*		*setifolia*																	
31	Poaceae		*Eragrostis*		*tenellula*																	
31	Poaceae		*Eragrostis*		*xerophila*										+	+	+	+				
31	Poaceae		*Eriachne*	aff.					*mucronata*													
31	Poaceae		*Eriachne*		*benthamii*										+		+					
31	Poaceae		*Eriachne*		*obtusa*																	
31	Poaceae		*Eriachne*		*pulchella*		subsp.		*dominii*							+		+				
31	Poaceae		*Eriachne*		*pulchella*		subsp.		*pulchella*					+		+		+	+		+	
31	Poaceae		*Eulalia*		*aurea*																	
31	Poaceae		*Iseilema*		*dolichotrichum*									+	+		+	+	+	+	+	
31	Poaceae		*Iseilema*		*eremaeum*																	
31	Poaceae		*Iseilema*		*macratherum*												+					
31	Poaceae		*Panicum*		*decompositum*																	
31	Poaceae		*Panicum*		*laevinode*																	
31	Poaceae		*Paraneurachne*		*muelleri*															+		
31	Poaceae		*Paspalidium*		*clementii*															+		
31	Poaceae		*Paspalidium*		*tabulatum*																	
31	Poaceae		*Paspalidium*		*tabulatum*					(Whim Creek form)												
31	Poaceae		*Schizachyrium*		*fragile*																	
31	Poaceae		*Setaria*		*dielsii*																	
31	Poaceae		*Sorghum*		*plumosum*		var.		*plumosum*													
31	Poaceae		*Sorghum*		*timorense*																	
31	Poaceae		*Sporobolus*		*australasicus*										+	+	+	+		+		
31	Poaceae		*Sporobolus*		*virginicus*																	
31	Poaceae		*Themeda*		*triandra*															+		
31	Poaceae		*Triodia*	aff.	*epactia*																	
31	Poaceae		*Triodia*	aff.	*pungens*											+						
31	Poaceae		*Triodia*	aff.	*wiseana*																	
31	Poaceae		*Triodia*		*angusta*																	
31	Poaceae		*Triodia*		*brizoides*																	
31	Poaceae		*Triodia*		*epactia*												+					
31	Poaceae		*Triodia*		*wiseana*																	+
31	Poaceae		*Triodia*		*wiseana*					(fine form)				+	+	+	+	+	+	+	+	
31	Poaceae		*Urochloa*		*pubigera*																	
31	Poaceae		*Xerochloa*		*barbata*																	
31	Poaceae		*Xerochloa*		*imberbis*																	
31	Poaceae		*Yakirra*		*australiensis*		var.		*australiensis*													
32	Cyperaceae		*Bulbostylis*		*barbata*										+							
32	Cyperaceae		*Cyperus*		*difformis*																	
32	Cyperaceae		*Cyperus*		*iria*																	
32	Cyperaceae		*Cyperus*		*pygmaeus*																	
32	Cyperaceae		*Cyperus*		*vaginatus*																	
32	Cyperaceae		*Fimbristylis*	aff.	*dichotoma*						(M15-4)					+			+	+		
90	Proteaceae		*Grevillea*		*pyramidalis*																	
90	Proteaceae		*Grevillea*		*pyramidalis*		subsp.		*leucadendron*													
90	Proteaceae		*Hakea*		*lorea*		subsp.		*lorea*													
92	Santalaceae		*Santalum*		*lanceolatum*																	
107	Nyctaginaceae		*Boerhavia*		*burbidgeana*																	
107	Nyctaginaceae		*Boerhavia*		*coccinea*														+			
105	Chenopodiaceae		*Dysphania*		*rhadinostachya*		subsp.		*rhadinostachya*											+		

APPENDIX B: SUMMARY OF VASCULAR FLORA SPECIES RECRDED AT EACH QUADRAT WITHIN THE ANKETELL POINT TRANSPORT CORRIDOR BETWEEN 2008 - 2009

NB * denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ01	APQ02	APQ03	APQ04	APQ05	APQ06	APQ07	APQ08	APQ09
105	Chenopodiaceae		*Enchylaena*		*tomentosa*																	
105	Chenopodiaceae		*Enchylaena*		*tomentosa*		var.		*tomentosa*													
105	Chenopodiaceae		*Rhagodia*		*eremaea*									+							+	
105	Chenopodiaceae		*Salsola*		*tragus*																	
105	Chenopodiaceae		*Salsola*		*tragus*		subsp.		*grandiflora*												+	
105	Chenopodiaceae		*Salsola*		*tragus*		subsp.		*tragus*													
105	Chenopodiaceae		*Sclerolaena*		*bicornis*																	
105	Chenopodiaceae		*Sclerolaena*		*costata*									+	+		+			+	+	
105	Chenopodiaceae		*Sclerolaena*		*densiflora*											+		+	+		+	
105	Chenopodiaceae		*Sclerolaena*		*eriacantha*													+				
105	Chenopodiaceae		*Sclerolaena*		*glabra*																	
106	Amaranthaceae	*	*Aerva*		*javanica*																	
106	Amaranthaceae		*Alternanthera*		*angustifolia*																	+
106	Amaranthaceae		*Alternanthera*		*nana*																	
106	Amaranthaceae		*Alternanthera*		*nodiflora*																	
106	Amaranthaceae		*Amaranthus*		*undulatus*																	
106	Amaranthaceae		*Gomphrena*		*affinis*		subsp.		*pilbarensis*						+		+	+		+		
106	Amaranthaceae		*Gomphrena*		*canescens*		subsp.		*canescens*													
106	Amaranthaceae		*Gomphrena*		*cunninghamii*									+						+		
106	Amaranthaceae		*Ptilotus*		*?exaltatus*		var.		*exaltatus*													
106	Amaranthaceae		*Ptilotus*		*aervoides*										+		+					
106	Amaranthaceae		*Ptilotus*		*astrolasius*		var.		*astrolasius*													
106	Amaranthaceae		*Ptilotus*		*auriculifolius*																	
106	Amaranthaceae		*Ptilotus*		*calostachyus*																	
106	Amaranthaceae		*Ptilotus*		*calostachyus*		var.		*calostachyus*													
106	Amaranthaceae		*Ptilotus*		*carinatus*									+	+			+	+	+	+	
106	Amaranthaceae		*Ptilotus*		*clementii*																	+
106	Amaranthaceae		*Ptilotus*		*exaltatus*										+				+			
106	Amaranthaceae		*Ptilotus*		*exaltatus*		var.		*exaltatus*							+	+	+		+	+	
106	Amaranthaceae		*Ptilotus*		*fusiformis*																	
106	Amaranthaceae		*Ptilotus*		*fusiformis*		var.		*fusiformis*						+							
106	Amaranthaceae		*Ptilotus*		*gomphrenoides*		var.		*gomphrenoides*													
106	Amaranthaceae		*Ptilotus*		*helipteroides*										+				+			
106	Amaranthaceae		*Ptilotus*		*helipteroides*		var.		*helipteroides*					+						+	+	
106	Amaranthaceae		*Ptilotus*		*murrayi*		var.		*murrayi*													
106	Amaranthaceae		*Ptilotus*		*obovatus*		var.		*obovatus*							+						
110	Aizoaceae		*Trianthema*	aff.	*triquetra*						(M3.35)											
110	Aizoaceae		*Trianthema*		sp. Python Pool																	
110A	Molluginaceae		*Mollugo*		*molluginea*																	
111	Portulacaceae		*Portulaca*		*conspicua*																	
111	Portulacaceae	*	*Portulaca*		*oleracea*									+			+		+	+	+	+
113	Caryophyllaceae		*Polycarpaea*		*corymbosa*		var.		*corymbosa*													
113	Caryophyllaceae		*Polycarpaea*		*holtzei*																	
113	Caryophyllaceae		*Polycarpaea*		*longiflora*										+							+
113	Caryophyllaceae		*Polycarpaea*		*longiflora*					(Whim Creek form WC141-1)												
113	Caryophyllaceae		*Polycarpaea*		*longiflora*					(white form)									+	+		
122	Menispermaceae		*Tinospora*		*smilacina*																	
131	Lauraceae		*Cassytha*		*capillaris*																	
137A	Capparaceae		*Capparis*		*spinosa*		var.		*nummularia*													
137A	Capparaceae		*Cleome*		*viscosa*										+		+					
138	Brassicaceae		*Lepidium*		*pedicellosum*																	
138	Brassicaceae		*Lepidium*		*pholidogynum*																	
163	Mimosaceae		*Acacia*		*ancistrocarpa*												+			+		+
163	Mimosaceae		*Acacia*		*ancistrocarpa*				*x stellaticeps*													
163	Mimosaceae		*Acacia*		*acradenia*																	
163	Mimosaceae		*Acacia*		*adsurgens*																	
163	Mimosaceae		*Acacia*		*bivenosa*									+						+	+	
163	Mimosaceae		*Acacia*		*colei*		var.		*colei*													
163	Mimosaceae		*Acacia*		*coriacea*		subsp.		*coriacea*													
163	Mimosaceae		*Acacia*		*coriacea*		subsp.		*pendens*													
163	Mimosaceae		*Acacia*		*cowleana*																	
163	Mimosaceae		*Acacia*		*elachantha*					(golden hairy variant)												
163	Mimosaceae		*Acacia*		*inaequilatera*												+			+		
163	Mimosaceae		*Acacia*		*ligulata*																	
163	Mimosaceae		*Acacia*		*maitlandii*																	
163	Mimosaceae		*Acacia*		*pyrifolia*		var.		pyrifolia								+				+	+
163	Mimosaceae		*Acacia*		*sclerosperma*		subsp.		*sclerosperma*													
163	Mimosaceae		*Acacia*		*stellaticeps*																	
163	Mimosaceae		*Acacia*		*synchronicia*											+	+		+		+	
163	Mimosaceae		*Acacia*		*tenuissima*																	
163	Mimosaceae		*Acacia*		*trachycarpa*																	+

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NB * denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ01	APQ02	APQ03	APQ04	APQ05	APQ06	APQ07	APQ08	APQ09
163	Mimosaceae		*Acacia*		*trachycarpa x tumida*		var.		*pilbarensis*													
163	Mimosaceae		*Acacia*		*trudgeniana*																	
163	Mimosaceae		*Acacia*		*tumida*		var.		*pilbarensis*													
163	Mimosaceae		*Acacia*		*victoriae*															+		
163	Mimosaceae		*Acacia*		*xiphophylla*									+	+	+		+				
163	Mimosaceae		*Dichrostachys*		*spicata*																	
163	Mimosaceae		*Neptunia*		*dimorphantha*													+				
163	Mimosaceae	*	*Prosopis*		*pallida*																	
163	Mimosaceae	*	*Vachellia*		*farnesiana*																	
164	Caesalpiniaceae		*Petalostylis*		*labicheoides*																	
164	Caesalpiniaceae		*Senna*	aff.	*artemisioides*		subsp.		*oligophylla*	(thinly sericeous)					+		+			+		
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla*											+		
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla*													+
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla x helmsii*												+	
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*glutinosa*											+	+	
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*glutinosa x luerssenii*													
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*luerssenii*							+		+			+	
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*pruinosa*										+		+	
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*x luerssenii*									+		+	+	
164	Caesalpiniaceae		*Senna*		*hamersleyensis*													+				
164	Caesalpiniaceae		*Senna*		*notabilis*																	
164	Caesalpiniaceae		*Senna*		sp. Karijini						(M.E. Trudgen 10392)								+		+	
164	Caesalpiniaceae		*Senna*		*venusta*																	
165	Papilionaceae		*Alysicarpus*		*muelleri*									+	+		+	+	+	+	+	
165	Papilionaceae		*Cajanus*		*cinereus*																	
165	Papilionaceae		*Crotalaria*		*dissitiflora*		subsp.		*benthamiana*					+								
165	Papilionaceae		*Crotalaria*		*medicaginea*		var.		*neglecta*						+		+		+			
165	Papilionaceae		*Crotalaria*		*novae-hollandiae*		subsp.		*novae-hollandiae*													
165	Papilionaceae		*Cullen*		*cinereum*																	
165	Papilionaceae		*Cullen*		*graveolens*																	
165	Papilionaceae		*Cullen*		*leucanthum*																	
165	Papilionaceae		*Desmodium*		*campylocaulon*																	
165	Papilionaceae		*Desmodium*		*muelleri*																	
165	Papilionaceae		*Indigastrum*		*parviflorum*									+								
165	Papilionaceae		*Indigofera*	aff.	*monophylla*																	
165	Papilionaceae		*Indigofera*		*colutea*									+	+		+					
165	Papilionaceae		*Indigofera*		*linifolia*									+	+		+				+	
165	Papilionaceae		*Indigofera*		*linnaei*										+							
165	Papilionaceae		*Indigofera*		*monophylla*																	
165	Papilionaceae		*Indigofera*		*monophylla*					(Burrup form)												
165	Papilionaceae		*Indigofera*		*monophylla*					(Cape Preston form)										+		+
165	Papilionaceae		*Indigofera*		*monophylla*					(grey leaflet form)												
165	Papilionaceae		*Indigofera*		*monophylla*					(grey/green leaflet form)												
165	Papilionaceae		*Indigofera*		*monophylla*						(MJOPP-2)											
165	Papilionaceae		*Indigofera*		*trita*									+			+					
165	Papilionaceae		*Isotropis*		*atropurpurea*																	
165	Papilionaceae		*Rhynchosia*		*minima*									+	+		+			+	+	
165	Papilionaceae		*Sesbania*		*cannabina*										+				+			
165	Papilionaceae		*Swainsona*		*canescens*																	
165	Papilionaceae		*Swainsona*		*formosa*												+					
165	Papilionaceae		*Tephrosia*	aff.	*clementii*						(4) (M35-14)											
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD133-20)											
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD205-10)											
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD88-4)											
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(MET 12,351)				+		+	+		+		
165	Papilionaceae		*Tephrosia*		*clementii*											+		+				
165	Papilionaceae		*Tephrosia*		*rosea*		var.		*clementii*													
165	Papilionaceae		*Tephrosia*		sp. B Kimberley Flora						(C.A. Gardner 1300)											
165	Papilionaceae		*Tephrosia*		*supina*																	
165	Papilionaceae		*Vigna*		*lanceolata*		var.		*lanceolata*													
165	Papilionaceae		*Vigna*		sp. rockpiles						(R.Butcher *et al* ., RB1400)											
165	Papilionaceae		*Vigna*		sp. central						(MET 1626)	2										
167	Geraniaceae		*Erodium*		*cygnorum*																	
173	Zygophyllaceae		*Tribulus*		*hirsutus*																	
173	Zygophyllaceae		*Tribulus*		*suberosus*																	
183	Polygalaceae		*Polygala*	aff.	*isingii*									+		+		+	+			
185	Euphorbiaceae		*Adriana*		*tomentosa*		var.		*tomentosa*													
185	Euphorbiaceae		*Euphorbia*	aff.	*australis*																	
185	Euphorbiaceae		*Euphorbia*		*australis*														+			
185	Euphorbiaceae		*Euphorbia*		*biconvexa*									+	+					+		
185	Euphorbiaceae		*Euphorbia*		*boophthona*														+			

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FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ01	APQ02	APQ03	APQ04	APQ05	APQ06	APQ07	APQ08	APQ09
185	Euphorbiaceae		*Euphorbia*		*coghlanii*																	
185	Euphorbiaceae		*Euphorbia*		sp.																	
185	Euphorbiaceae		*Euphorbia*		sp.						(BPBS10-50)										+	
185	Euphorbiaceae		*Euphorbia*		*tannensis*		subsp.		*eremophila*	(Burrup form)												
185	Euphorbiaceae		*Euphorbia*		*wheeleri*																	
185	Euphorbiaceae		*Leptopus*		*decaisnei*										+							
185	Euphorbiaceae		*Leptopus*		*decaisnei*		var.		*orbicularis*											+	+	+
185	Euphorbiaceae		*Phyllanthus*		*maderaspatensis*																	
207	Sapindaceae		*Diplopeltis*		*eriocarpa*																	
220	Tiliaceae		*Corchorus*	aff.	*parviflorus*																	
220	Tiliaceae		*Corchorus*	aff.	*parviflorus*						(JW 11-11)											
220	Tiliaceae		*Corchorus*	aff.	*walcotti*						(K.J. Atkins 510)			+	+	+	+					
220	Tiliaceae		*Corchorus*		*laniflorus*										+	+	+			+		+
220	Tiliaceae		*Corchorus*		sp..																	
220	Tiliaceae		*Corchorus*		*tectus*																	
220	Tiliaceae		*Corchorus*		*tridens*																	
220	Tiliaceae		*Triumfetta*		*appendiculata*																	
220	Tiliaceae		*Triumfetta*		*clementii*									+	+	+	+		+	+	+	+
221	Malvaceae		*Abutilon*	aff.	*lepidum*						(1) (MET 15,352)						+					
221	Malvaceae		*Abutilon*	aff.	*lepidum*						(4)									+		
221	Malvaceae		*Abutilon*		*amplum*																	
221	Malvaceae		*Abutilon*		*fraseri*																+	
221	Malvaceae		*Abutilon*		*lepidum*																	
221	Malvaceae		*Abutilon*		*oxycarpum*		subsp.		*prostratum*						+							
221	Malvaceae		*Gossypium*		*australe*					(Burrup Peninsula form)					+							
221	Malvaceae		*Gossypium*		*australe*					(Whim Creek form)												
221	Malvaceae		*Hibiscus*	aff.	*platychlamys*						(MET 15,061)											
221	Malvaceae		*Hibiscus*		*brachysiphonius*																	
221	Malvaceae		*Hibiscus*		*coatesii*																	
221	Malvaceae		*Hibiscus*		*sturtii*		var.		*campylochlamys*													
221	Malvaceae		*Hibiscus*		*sturtii*		var.		*platychlamys*							+				+		
221	Malvaceae	*	*Malvastrum*		*americanum*																	
221	Malvaceae		*Sida*	aff.	*echinocarpa*						(MET 15,350)									+		
221	Malvaceae		*Sida*	aff.	*fibulifera*						(HD200-6)				+			+				
221	Malvaceae		*Sida*	aff.	*fibulifera*					(oblong)	(MET 15220)											
221	Malvaceae		*Sida*		*arsiniata*																	
221	Malvaceae		*Sida*		*clementii*																	
221	Malvaceae		*Sida*		*echinocarpa*																	
221	Malvaceae		*Sida*		*pilbarensis*					(Ferrugineous form)												
221	Malvaceae		*Sida*		sp. spiciform panicles						(E. Leyland s.n. 14/08/1990)											
221	Malvaceae		*Sida*		*spinosa*										+							
223	Sterculiaceae		*Brachychiton*		*acuminatus*																	
223	Sterculiaceae		*Melhania*		sp. Burrup																	
223	Sterculiaceae		*Melhania*		sp.						(CH15-39)									+	+	
223	Sterculiaceae		*Waltheria*		*indica*																	
235	Elatinaceae		*Bergia*		*pedicellaris*																	
243	Violaceae		*Hybanthus*		*aurantiacus*										+					+		
248	Passifloraceae	*	*Passiflora*		*foetida*		var.		*hispida*													
265	Lythraceae		*Ammannia*		*auriculata*																	
265	Lythraceae		*Ammannia*		*baccifera*																	
273	Myrtaceae		*Corymbia*		*hamersleyana*																	
273	Myrtaceae		*Eucalyptus*		*camaldulensis*																	
273	Myrtaceae		*Eucalyptus*		*victrix*																	+
273	Myrtaceae		*Melaleuca*		*glomerata*																	
281	Apiaceae		*Trachymene*		*oleracea*		subsp.		*oleracea*													
301	Oleaceae		*Jasminum*		*didymum*		subsp.		*lineare*													
305	Asclepiadaceae		*Sarcostemma*		*viminale*		subsp.		*australe*													
307	Convolvulaceae		*Bonamia*		*media*		var.		*villosa*						+		+		+		+	
307	Convolvulaceae		*Bonamia*		*rosea*																	
307	Convolvulaceae		*Duperreya*		*commixta*																+	
307	Convolvulaceae		*Evolvulus*		*alsinoides*		var.		*decumbens*													
307	Convolvulaceae		*Evolvulus*		*alsinoides*		var.		*villosicalyx*					+			+		+	+	+	
307	Convolvulaceae		*Ipomoea*		*coptica*										+							
307	Convolvulaceae		*Ipomoea*		*costata*																	
307	Convolvulaceae		*Ipomoea*		*muelleri*																	
307	Convolvulaceae		*Ipomoea*		*plebeia*																	
307	Convolvulaceae		*Ipomoea*		*polymorpha*																	
307	Convolvulaceae		*Operculina*		*aequisepala*																	
307	Convolvulaceae		*Polymeria*		*ambigua*																	
307	Convolvulaceae		*Polymeria*		sp.						(site 1365)											
310	Boraginaceae		*Ehretia*		*saligna*		var.		*saligna*						+							

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FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ01	APQ02	APQ03	APQ04	APQ05	APQ06	APQ07	APQ08	APQ09
310	Boraginaceae		*Heliotropium*		*conocarpum*										+							
310	Boraginaceae		*Heliotropium*		*cunninghamii*																	
310	Boraginaceae		*Heliotropium*		*heteranthum*									+			+	+				
310	Boraginaceae		*Heliotropium*		*inexplicitum*																	
310	Boraginaceae		*Heliotropium*		*ovalifolium*																	
310	Boraginaceae		*Trichodesma*		*zeylanicum*																	
310	Boraginaceae		*Trichodesma*		*zeylanicum*		var.		*zeylanicum*						+		+			+	+	+
311	Verbenaceae		*Clerodendrum*		*tomentosum*		var.		*lanceolatum*													
315	Solanaceae		*Solanum*		*diversiflorum*										+			+		+		
315	Solanaceae		*Solanum*		*gabrielae*																	
315	Solanaceae		*Solanum*		*horridum*																	
315	Solanaceae		*Solanum*		*lasiophyllum*												+			+	+	
316	Scrophulariaceae		*Stemodia*		*grossa*																	
316	Scrophulariaceae		*Stemodia*		*kingii*															+		
325	Acanthaceae		*Dicliptera*		*armata*																	
326	Myoporaceae		*Eremophila*		*forrestii*																	
326	Myoporaceae		*Eremophila*		*forrestii*		subsp.		*forrestii*					+	+		+				+	
326	Myoporaceae		*Eremophila*		*longifolia*												+				+	
331	Rubiaceae		*Synaptantha*		*tillaeacea*		var.		*tillaeacea*													
337	Cucurbitaceae	*	*Citrullus*		*colocynthis*																	
337	Cucurbitaceae		*Cucumis*		*maderaspatanus*									+			+			+	+	
337	Cucurbitaceae	*	*Cucumis*		*melo*		subsp.		*agrestis*													
337	Cucurbitaceae		*Trichosanthes*		*cucumerina*																	
341	Goodeniaceae		*Goodenia*		*forrestii*									+	+	+	+			+		
341	Goodeniaceae		*Goodenia*		*lamprosperma*																	
341	Goodeniaceae		*Goodenia*		*microptera*																	
341	Goodeniaceae		*Goodenia*		*pascua*																	
341	Goodeniaceae		*Goodenia*		*stobbsiana*																	
341	Goodeniaceae		*Scaevola*		*spinescens*																	
341	Goodeniaceae		*Scaevola*		*spinescens*					(broad leaf form)											+	
341	Goodeniaceae		*Scaevola*		*spinescens*					(narrow form)												
345	Asteraceae		*Flaveria*		*australasica*		subsp.			gilgai		3										
345	Asteraceae		*Pentalepis*		*trichodesmoides*																	
345	Asteraceae		*Pluchea*		*rubelliflora*																	
345	Asteraceae		*Pluchea*		sp.																	
345	Asteraceae		*Pterocaulon*		*sphacelatum*																	
345	Asteraceae		*Pterocaulon*		*sphaeranthoides*																	
345	Asteraceae		*Streptoglossa*		*bubakii*										+		+		+		+	
345	Asteraceae		*Streptoglossa*		*decurrens*										+				+			
345	Asteraceae		*Streptoglossa*		*liatroides*																	
345	Asteraceae		*Streptoglossa*		sp.																	

APPENDIX B: SUMMARY OF VASCULAR FLORA SPECIES RECRDED AT EACH QUADRAT WITHIN THE ANKETELL POINT TRANSPORT CORRIDOR BETWEEN 2008 - 2009

NB * denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ10	APQ11	APQ12	APQ13	APQ14	APQ15	APQ16	APQ17	APQ18
13	Marsileaceae		*Marsilea*		*hirsuta*																	
31	Poaceae		*Aristida*		*contorta*									+	+		+	+			+	+
31	Poaceae		*Aristida*		*holathera*		var.		*holathera*													
31	Poaceae		*Aristida*		*latifolia*																	
31	Poaceae		*Aristida*		sp.																	
31	Poaceae		*Astrebla*		*pectinata*																	
31	Poaceae		*Bothriochloa*		*ewartiana*															+		
31	Poaceae		*Brachyachne*		*convergens*																	
31	Poaceae		*Brachyachne*		*prostrata*																	
31	Poaceae	*	*Cenchrus*		*ciliaris*										+	+				+	+	+
31	Poaceae		*Chloris*		*pectinata*																	
31	Poaceae		*Chrysopogon*		*fallax*										+					+		
31	Poaceae		*Cymbopogon*		*ambiguus*																	
31	Poaceae		*Cymbopogon*		*procerus*									+								
31	Poaceae		*Dactyloctenium*		*radulans*																	
31	Poaceae		*Dichanthium*		*sericeum*		subsp.		*humilius*					+	+	+	+		+		+	+
31	Poaceae		*Digitaria*		*ctenantha*																	
31	Poaceae		*Enneapogon*		*caerulescens*		var.		*caerulescens*								+	+	+		+	+
31	Poaceae		*Enneapogon*		*polyphyllus*																	
31	Poaceae		*Enteropogon*		*ramosus*																	
31	Poaceae		*Eragrostis*		*falcata*																	
31	Poaceae		*Eragrostis*		*setifolia*																	
31	Poaceae		*Eragrostis*		*tenellula*																	
31	Poaceae		*Eragrostis*		*xerophila*										+				+			
31	Poaceae		*Eriachne*	aff.					*mucronata*													
31	Poaceae		*Eriachne*		*benthamii*																	
31	Poaceae		*Eriachne*		*obtusa*																	
31	Poaceae		*Eriachne*		*pulchella*		subsp.		*dominii*						+							+
31	Poaceae		*Eriachne*		*pulchella*		subsp.		*pulchella*													
31	Poaceae		*Eulalia*		*aurea*																	
31	Poaceae		*Iseilema*		*dolichotrichum*										+		+	+			+	+
31	Poaceae		*Iseilema*		*eremaeum*																	
31	Poaceae		*Iseilema*		*macratherum*														+			
31	Poaceae		*Panicum*		*decompositum*														+			
31	Poaceae		*Panicum*		*laevinode*														+			
31	Poaceae		*Paraneurachne*		*muelleri*																	
31	Poaceae		*Paspalidium*		*clementii*										+							
31	Poaceae		*Paspalidium*		*tabulatum*																	
31	Poaceae		*Paspalidium*		*tabulatum*					(Whim Creek form)												
31	Poaceae		*Schizachyrium*		*fragile*																	
31	Poaceae		*Setaria*		*dielsii*										+							
31	Poaceae		*Sorghum*		*plumosum*		var.		*plumosum*											+		
31	Poaceae		*Sorghum*		*timorense*									+	+							
31	Poaceae		*Sporobolus*		*australasicus*									+	+	+			+			
31	Poaceae		*Sporobolus*		*virginicus*																	
31	Poaceae		*Themeda*		*triandra*									+						+		+
31	Poaceae		*Triodia*	aff.	*epactia*																	
31	Poaceae		*Triodia*	aff.	*pungens*																	
31	Poaceae		*Triodia*	aff.	*wiseana*																	
31	Poaceae		*Triodia*		*angusta*																	
31	Poaceae		*Triodia*		*brizoides*																	
31	Poaceae		*Triodia*		*epactia*											+					+	+
31	Poaceae		*Triodia*		*wiseana*											+						
31	Poaceae		*Triodia*		*wiseana*					(fine form)				+	+	+	+	+			+	+
31	Poaceae		*Urochloa*		*pubigera*										+							
31	Poaceae		*Xerochloa*		*barbata*																	
31	Poaceae		*Xerochloa*		*imberbis*																	
31	Poaceae		*Yakirra*		*australiensis*		var.		*australiensis*													
32	Cyperaceae		*Bulbostylis*		*barbata*																	
32	Cyperaceae		*Cyperus*		*difformis*																	
32	Cyperaceae		*Cyperus*		*iria*																	
32	Cyperaceae		*Cyperus*		*pygmaeus*																	
32	Cyperaceae		*Cyperus*		*vaginatus*																	
32	Cyperaceae		*Fimbristylis*	aff.	*dichotoma*						(M15-4)				+		+				+	
90	Proteaceae		*Grevillea*		*pyramidalis*											+						
90	Proteaceae		*Grevillea*		*pyramidalis*		subsp.		*leucadendron*							+						
90	Proteaceae		*Hakea*		*lorea*		subsp.		*lorea*					+								
92	Santalaceae		*Santalum*		*lanceolatum*																	
107	Nyctaginaceae		*Boerhavia*		*burbidgeana*											+						
107	Nyctaginaceae		*Boerhavia*		*coccinea*											+	+	+		+		+
105	Chenopodiaceae		*Dysphania*		*rhadinostachya*		subsp.		*rhadinostachya*													

APPENDIX B: SUMMARY OF VASCULAR FLORA SPECIES RECRDED AT EACH QUADRAT WITHIN THE ANKETELL POINT TRANSPORT CORRIDOR BETWEEN 2008 - 2009

NB * denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ10	APQ11	APQ12	APQ13	APQ14	APQ15	APQ16	APQ17	APQ18
105	Chenopodiaceae		*Enchylaena*		*tomentosa*																	
105	Chenopodiaceae		*Enchylaena*		*tomentosa*		var.		*tomentosa*													
105	Chenopodiaceae		*Rhagodia*		*eremaea*									+								
105	Chenopodiaceae		*Salsola*		*tragus*														+			
105	Chenopodiaceae		*Salsola*		*tragus*		subsp.		*grandiflora*													
105	Chenopodiaceae		*Salsola*		*tragus*		subsp.		*tragus*										+			+
105	Chenopodiaceae		*Sclerolaena*		*bicornis*																	
105	Chenopodiaceae		*Sclerolaena*		*costata*													+				
105	Chenopodiaceae		*Sclerolaena*		*densiflora*												+					
105	Chenopodiaceae		*Sclerolaena*		*eriacantha*																	
105	Chenopodiaceae		*Sclerolaena*		*glabra*																	
106	Amaranthaceae	*	*Aerva*		*javanica*											+						+
106	Amaranthaceae		*Alternanthera*		*angustifolia*																	
106	Amaranthaceae		*Alternanthera*		*nana*																	
106	Amaranthaceae		*Alternanthera*		*nodiflora*																	
106	Amaranthaceae		*Amaranthus*		*undulatus*																	
106	Amaranthaceae		*Gomphrena*		*affinis*		subsp.		*pilbarensis*								+		+			
106	Amaranthaceae		*Gomphrena*		*canescens*		subsp.		*canescens*													
106	Amaranthaceae		*Gomphrena*		*cunninghamii*																+	
106	Amaranthaceae		*Ptilotus*		*?exaltatus*		var.		*exaltatus*													
106	Amaranthaceae		*Ptilotus*		*aervoides*																	
106	Amaranthaceae		*Ptilotus*		*astrolasius*		var.		*astrolasius*													
106	Amaranthaceae		*Ptilotus*		*auriculifolius*																	
106	Amaranthaceae		*Ptilotus*		*calostachyus*																	
106	Amaranthaceae		*Ptilotus*		*calostachyus*		var.		*calostachyus*													
106	Amaranthaceae		*Ptilotus*		*carinatus*											+	+		+			
106	Amaranthaceae		*Ptilotus*		*clementii*											+	+				+	
106	Amaranthaceae		*Ptilotus*		*exaltatus*											+	+	+	+			
106	Amaranthaceae		*Ptilotus*		*exaltatus*		var.		*exaltatus*					+	+	+	+	+	+			
106	Amaranthaceae		*Ptilotus*		*fusiformis*																+	
106	Amaranthaceae		*Ptilotus*		*fusiformis*		var.		*fusiformis*													
106	Amaranthaceae		*Ptilotus*		*gomphrenoides*		var.		*gomphrenoides*													
106	Amaranthaceae		*Ptilotus*		*helipteroides*												+		+			
106	Amaranthaceae		*Ptilotus*		*helipteroides*		var.		*helipteroides*					+	+	+	+	+	+		+	+
106	Amaranthaceae		*Ptilotus*		*murrayi*		var.		*murrayi*													
106	Amaranthaceae		*Ptilotus*		*obovatus*		var.		*obovatus*													
110	Aizoaceae		*Trianthema*	aff.	*triquetra*						(M3.35)							+				
110	Aizoaceae		*Trianthema*		sp. Python Pool																	
110A	Molluginaceae		*Mollugo*		*molluginea*											+						
111	Portulacaceae		*Portulaca*		*conspicua*																	
111	Portulacaceae	*	*Portulaca*		*oleracea*											+			+			
113	Caryophyllaceae		*Polycarpaea*		*corymbosa*		var.		*corymbosa*													
113	Caryophyllaceae		*Polycarpaea*		*holtzei*												+					
113	Caryophyllaceae		*Polycarpaea*		*longiflora*											+	+					
113	Caryophyllaceae		*Polycarpaea*		*longiflora*					(Whim Creek form WC141-1)												
113	Caryophyllaceae		*Polycarpaea*		*longiflora*					(white form)							+				+	
122	Menispermaceae		*Tinospora*		*smilacina*																	
131	Lauraceae		*Cassytha*		*capillaris*																	
137A	Capparaceae		*Capparis*		*spinosa*		var.		*nummularia*													+
137A	Capparaceae		*Cleome*		*viscosa*														+			
138	Brassicaceae		*Lepidium*		*pedicellosum*													+				
138	Brassicaceae		*Lepidium*		*pholidogynum*																	
163	Mimosaceae		*Acacia*		*ancistrocarpa*												+			+		+
163	Mimosaceae		*Acacia*		*ancistrocarpa*				*x stellaticeps*													
163	Mimosaceae		*Acacia*		*acradenia*																	
163	Mimosaceae		*Acacia*		*adsurgens*																	
163	Mimosaceae		*Acacia*		*bivenosa*									+		+				+	+	+
163	Mimosaceae		*Acacia*		*colei*		var.		*colei*													
163	Mimosaceae		*Acacia*		*coriacea*		subsp.		*coriacea*													
163	Mimosaceae		*Acacia*		*coriacea*		subsp.		*pendens*													
163	Mimosaceae		*Acacia*		*cowleana*																	
163	Mimosaceae		*Acacia*		*elachantha*					(golden hairy variant)												
163	Mimosaceae		*Acacia*		*inaequilatera*											+				+		
163	Mimosaceae		*Acacia*		*ligulata*											+						
163	Mimosaceae		*Acacia*		*maitlandii*																	
163	Mimosaceae		*Acacia*		*pyrifolia*		var.		pyrifolia					+		+				+	+	+
163	Mimosaceae		*Acacia*		*sclerosperma*		subsp.		*sclerosperma*							+						
163	Mimosaceae		*Acacia*		*stellaticeps*																	
163	Mimosaceae		*Acacia*		*synchronicia*												+	+				
163	Mimosaceae		*Acacia*		*tenuissima*																	
163	Mimosaceae		*Acacia*		*trachycarpa*											+						

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FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ10	APQ11	APQ12	APQ13	APQ14	APQ15	APQ16	APQ17	APQ18
163	Mimosaceae		*Acacia*		*trachycarpa x tumida*		var.		*pilbarensis*													
163	Mimosaceae		*Acacia*		*trudgeniana*																	
163	Mimosaceae		*Acacia*		*tumida*		var.		*pilbarensis*													
163	Mimosaceae		*Acacia*		*victoriae*																	
163	Mimosaceae		*Acacia*		*xiphophylla*									+	+			+				
163	Mimosaceae		*Dichrostachys*		*spicata*															+		
163	Mimosaceae		*Neptunia*		*dimorphantha*										+				+			
163	Mimosaceae	*	*Prosopis*		*pallida*															+		
163	Mimosaceae	*	*Vachellia*		*farnesiana*																	
164	Caesalpiniaceae		*Petalostylis*		*labicheoides*																	
164	Caesalpiniaceae		*Senna*		*artemisioides*	aff.	subsp.		*oligophylla*	(thinly sericeous)												
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla*											+		
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla*						+							
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla x helmsii*							+				+		
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*glutinosa*					+	+							
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*glutinosa x luerssenii*													
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*luerssenii*					+			+	+				
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*pruinosa*							+	+					
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*x luerssenii*							+		+			+	
164	Caesalpiniaceae		*Senna*		*hamersleyensis*																	
164	Caesalpiniaceae		*Senna*		*notabilis*																+	+
164	Caesalpiniaceae		*Senna*		sp. Karijini						(M.E. Trudgen 10392)						+					
164	Caesalpiniaceae		*Senna*		*venusta*																	
165	Papilionaceae		*Alysicarpus*		*muelleri*																	+
165	Papilionaceae		*Cajanus*		*cinereus*																	
165	Papilionaceae		*Crotalaria*		*dissitiflora*		subsp.		*benthamiana*													
165	Papilionaceae		*Crotalaria*		*medicaginea*		var.		*neglecta*									+		+	+	+
165	Papilionaceae		*Crotalaria*		*novae-hollandiae*		subsp.		*novae-hollandiae*													
165	Papilionaceae		*Cullen*		*cinereum*																	
165	Papilionaceae		*Cullen*		*graveolens*																	
165	Papilionaceae		*Cullen*		*leucanthum*																	
165	Papilionaceae		*Desmodium*		*campylocaulon*																	
165	Papilionaceae		*Desmodium*		*muelleri*																	
165	Papilionaceae		*Indigastrum*		*parviflorum*																	
165	Papilionaceae		*Indigofera*	aff.	*monophylla*																	
165	Papilionaceae		*Indigofera*		*colutea*																	+
165	Papilionaceae		*Indigofera*		*linifolia*										+	+	+	+				+
165	Papilionaceae		*Indigofera*		*linnaei*																	
165	Papilionaceae		*Indigofera*		*monophylla*												+			+		
165	Papilionaceae		*Indigofera*		*monophylla*					(Burrup form)												
165	Papilionaceae		*Indigofera*		*monophylla*					(Cape Preston form)				+		+	+			+		
165	Papilionaceae		*Indigofera*		*monophylla*					(grey leaflet form)												
165	Papilionaceae		*Indigofera*		*monophylla*					(grey/green leaflet form)						+						
165	Papilionaceae		*Indigofera*		*monophylla*						(MJOPP-2)											
165	Papilionaceae		*Indigofera*		*trita*														+			
165	Papilionaceae		*Isotropis*		*atropurpurea*																	
165	Papilionaceae		*Rhynchosia*		*minima*										+	+	+	+	+		+	+
165	Papilionaceae		*Sesbania*		*cannabina*											+						
165	Papilionaceae		*Swainsona*		*canescens*																	
165	Papilionaceae		*Swainsona*		*formosa*																	
165	Papilionaceae		*Tephrosia*	aff.	*clementii*						(4) (M35-14)											
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD133-20)											
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD205-10)											
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD88-4)											
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(MET 12,351)			+		+	+					
165	Papilionaceae		*Tephrosia*		*clementii*										+							
165	Papilionaceae		*Tephrosia*		*rosea*		var.		*clementii*							+						
165	Papilionaceae		*Tephrosia*		sp. B Kimberley Flora						(C.A. Gardner 1300)					+						
165	Papilionaceae		*Tephrosia*		*supina*																	
165	Papilionaceae		*Vigna*		*lanceolata*		var.		*lanceolata*													
165	Papilionaceae		*Vigna*		sp. rockpiles						(R.Butcher *et al* ., RB1400)										+	
165	Papilionaceae		*Vigna*		sp. central						(MET 1626)	2										
167	Geraniaceae		*Erodium*		*cygnorum*																	
173	Zygophyllaceae		*Tribulus*		*hirsutus*												+					
173	Zygophyllaceae		*Tribulus*		*suberosus*																	
183	Polygalaceae		*Polygala*	aff.	*isingii*														+			
185	Euphorbiaceae		*Adriana*		*tomentosa*		var.		*tomentosa*													
185	Euphorbiaceae		*Euphorbia*	aff.	*australis*													+				
185	Euphorbiaceae		*Euphorbia*		*australis*												+				+	
185	Euphorbiaceae		*Euphorbia*		*biconvexa*																+	+
185	Euphorbiaceae		*Euphorbia*		*boophthona*																	

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NB * denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ10	APQ11	APQ12	APQ13	APQ14	APQ15	APQ16	APQ17	APQ18
185	Euphorbiaceae		*Euphorbia*		*coghlanii*														+			
185	Euphorbiaceae		*Euphorbia*		sp.																	
185	Euphorbiaceae		*Euphorbia*		sp.						(BPBS10-50)					+		+				+
185	Euphorbiaceae		*Euphorbia*		*tannensis*		subsp.		*eremophila*	(Burrup form)												
185	Euphorbiaceae		*Euphorbia*		*wheeleri*											+			+	+	+	
185	Euphorbiaceae		*Leptopus*		*decaisnei*											+		+				
185	Euphorbiaceae		*Leptopus*		*decaisnei*		var.		*orbicularis*							+		+				+
185	Euphorbiaceae		*Phyllanthus*		*maderaspatensis*										+				+			+
207	Sapindaceae		*Diplopeltis*		*eriocarpa*																	
220	Tiliaceae		*Corchorus*	aff.	*parviflorus*																+	
220	Tiliaceae		*Corchorus*	aff.	*parviflorus*						(JW 11-11)											
220	Tiliaceae		*Corchorus*	aff.	*walcotti*						(K.J. Atkins 510)			+		+		+		+		+
220	Tiliaceae		*Corchorus*		*laniflorus*											+	+	+			+	+
220	Tiliaceae		*Corchorus*		sp..																	
220	Tiliaceae		*Corchorus*		*tectus*																	
220	Tiliaceae		*Corchorus*		*tridens*																	
220	Tiliaceae		*Triumfetta*		*appendiculata*																	
220	Tiliaceae		*Triumfetta*		*clementii*									+		+	+	+		+	+	+
221	Malvaceae		*Abutilon*	aff.	*lepidum*						(1) (MET 15,352)											
221	Malvaceae		*Abutilon*	aff.	*lepidum*						(4)						+	+			+	+
221	Malvaceae		*Abutilon*		*amplum*																	
221	Malvaceae		*Abutilon*		*fraseri*											+						
221	Malvaceae		*Abutilon*		*lepidum*																	
221	Malvaceae		*Abutilon*		*oxycarpum*		subsp.		*prostratum*													
221	Malvaceae		*Gossypium*		*australe*					(Burrup Peninsula form)						+	+					+
221	Malvaceae		*Gossypium*		*australe*					(Whim Creek form)												
221	Malvaceae		*Hibiscus*	aff.	*platychlamys*						(MET 15,061)											
221	Malvaceae		*Hibiscus*		*brachysiphonius*																	
221	Malvaceae		*Hibiscus*		*coatesii*																	
221	Malvaceae		*Hibiscus*		*sturtii*		var.		*campylochlamys*													
221	Malvaceae		*Hibiscus*		*sturtii*		var.		*platychlamys*							+						
221	Malvaceae	*	*Malvastrum*		*americanum*										+					+		
221	Malvaceae		*Sida*	aff.	*echinocarpa*						(MET 15,350)						+	+				
221	Malvaceae		*Sida*	aff.	*fibulifera*						(HD200-6)				+				+			
221	Malvaceae		*Sida*	aff.	*fibulifera*					(oblong)	(MET 15220)											
221	Malvaceae		*Sida*		*arsiniata*									+								
221	Malvaceae		*Sida*		*clementii*												+			+		+
221	Malvaceae		*Sida*		*echinocarpa*																	
221	Malvaceae		*Sida*		*pilbarensis*					(Ferrugineous form)												
221	Malvaceae		*Sida*		sp. spiciform panicles						(E. Leyland s.n. 14/08/1990)						+	+				
221	Malvaceae		*Sida*		*spinosa*														+			
223	Sterculiaceae		*Brachychiton*		*acuminatus*																	
223	Sterculiaceae		*Melhania*		sp. Burrup																	
223	Sterculiaceae		*Melhania*		sp.						(CH15-39)											
223	Sterculiaceae		*Waltheria*		*indica*									+		+						
235	Elatinaceae		*Bergia*		*pedicellaris*																	
243	Violaceae		*Hybanthus*		*aurantiacus*									+		+				+		
248	Passifloraceae	*	*Passiflora*		*foetida*		var.		*hispida*													
265	Lythraceae		*Ammannia*		*auriculata*																	
265	Lythraceae		*Ammannia*		*baccifera*																	
273	Myrtaceae		*Corymbia*		*hamersleyana*															+		
273	Myrtaceae		*Eucalyptus*		*camaldulensis*																	
273	Myrtaceae		*Eucalyptus*		*victrix*																	
273	Myrtaceae		*Melaleuca*		*glomerata*																	
281	Apiaceae		*Trachymene*		*oleracea*		subsp.		*oleracea*								+				+	
301	Oleaceae		*Jasminum*		*didymum*		subsp.		*lineare*													
305	Asclepiadaceae		*Sarcostemma*		*viminale*		subsp.		*australe*													
307	Convolvulaceae		*Bonamia*		*media*		var.		*villosa*					+		+	+	+			+	+
307	Convolvulaceae		*Bonamia*		*rosea*																	
307	Convolvulaceae		*Duperreya*		*commixta*																	
307	Convolvulaceae		*Evolvulus*		*alsinoides*		var.		*decumbens*													
307	Convolvulaceae		*Evolvulus*		*alsinoides*		var.		*villosicalyx*					+				+		+	+	+
307	Convolvulaceae		*Ipomoea*		*coptica*																	
307	Convolvulaceae		*Ipomoea*		*costata*																	
307	Convolvulaceae		*Ipomoea*		*muelleri*											+			+			
307	Convolvulaceae		*Ipomoea*		*plebeia*																	
307	Convolvulaceae		*Ipomoea*		*polymorpha*																	
307	Convolvulaceae		*Operculina*		*aequisepala*														+			
307	Convolvulaceae		*Polymeria*		*ambigua*											+				+		
307	Convolvulaceae		*Polymeria*		sp.						(site 1365)											
310	Boraginaceae		*Ehretia*		*saligna*		var.		*saligna*													

APPENDIX B: SUMMARY OF VASCULAR FLORA SPECIES RECRDED AT EACH QUADRAT WITHIN THE ANKETELL POINT TRANSPORT CORRIDOR BETWEEN 2008 - 2009

NB * denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ10	APQ11	APQ12	APQ13	APQ14	APQ15	APQ16	APQ17	APQ18
310	Boraginaceae		*Heliotropium*		*conocarpum*														+			
310	Boraginaceae		*Heliotropium*		*cunninghamii*																	
310	Boraginaceae		*Heliotropium*		*heteranthum*												+	+	+			
310	Boraginaceae		*Heliotropium*		*inexplicitum*														+			
310	Boraginaceae		*Heliotropium*		*ovalifolium*																	
310	Boraginaceae		*Trichodesma*		*zeylanicum*																	
310	Boraginaceae		*Trichodesma*		*zeylanicum*		var.		*zeylanicum*								+	+			+	+
311	Verbenaceae		*Clerodendrum*		*tomentosum*		var.		*lanceolatum*													
315	Solanaceae		*Solanum*		*diversiflorum*									+		+	+					
315	Solanaceae		*Solanum*		*gabrielae*																	
315	Solanaceae		*Solanum*		*horridum*												+					
315	Solanaceae		*Solanum*		*lasiophyllum*									+				+				
316	Scrophulariaceae		*Stemodia*		*grossa*																	
316	Scrophulariaceae		*Stemodia*		*kingii*														+			
325	Acanthaceae		*Dicliptera*		*armata*																	
326	Myoporaceae		*Eremophila*		*forrestii*																	
326	Myoporaceae		*Eremophila*		*forrestii*		subsp.		*forrestii*					+				+				
326	Myoporaceae		*Eremophila*		*longifolia*											+						
331	Rubiaceae		*Synaptantha*		*tillaeacea*		var.		*tillaeacea*													
337	Cucurbitaceae	*	*Citrullus*		*colocynthis*																	
337	Cucurbitaceae		*Cucumis*		*maderaspatanus*											+						
337	Cucurbitaceae	*	*Cucumis*		*melo*		subsp.		*agrestis*										+		+	+
337	Cucurbitaceae		*Trichosanthes*		*cucumerina*																	
341	Goodeniaceae		*Goodenia*		*forrestii*											+		+		+		
341	Goodeniaceae		*Goodenia*		*lamprosperma*																	
341	Goodeniaceae		*Goodenia*		*microptera*																	
341	Goodeniaceae		*Goodenia*		*pascua*														+			
341	Goodeniaceae		*Goodenia*		*stobbsiana*																	
341	Goodeniaceae		*Scaevola*		*spinescens*																	
341	Goodeniaceae		*Scaevola*		*spinescens*					(broad leaf form)				+		+						
341	Goodeniaceae		*Scaevola*		*spinescens*					(narrow form)												
345	Asteraceae		*Flaveria*		*australasica*		subsp.			gilgai		3										
345	Asteraceae		*Pentalepis*		*trichodesmoides*												+					
345	Asteraceae		*Pluchea*		*rubelliflora*																	
345	Asteraceae		*Pluchea*		sp.																	
345	Asteraceae		*Pterocaulon*		*sphacelatum*																	
345	Asteraceae		*Pterocaulon*		*sphaeranthoides*																	
345	Asteraceae		*Streptoglossa*		*bubakii*																	
345	Asteraceae		*Streptoglossa*		*decurrens*														+			
345	Asteraceae		*Streptoglossa*		*liatroides*																	
345	Asteraceae		*Streptoglossa*		sp.																	

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FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ19	APQ20	APQ21	APQ22	APQ23	APQ24	APQ25	APQ26	APQ27
13	Marsileaceae		*Marsilea*		*hirsuta*																	
31	Poaceae		*Aristida*		*contorta*									+		+	+	+				
31	Poaceae		*Aristida*		*holathera*		var.		*holathera*													
31	Poaceae		*Aristida*		*latifolia*																	
31	Poaceae		*Aristida*		sp.																	
31	Poaceae		*Astrebla*		*pectinata*																	
31	Poaceae		*Bothriochloa*		*ewartiana*																	+
31	Poaceae		*Brachyachne*		*convergens*										+							
31	Poaceae		*Brachyachne*		*prostrata*																	
31	Poaceae	*	*Cenchrus*		*ciliaris*											+	+		+	+	+	+
31	Poaceae		*Chloris*		*pectinata*																	
31	Poaceae		*Chrysopogon*		*fallax*												+					
31	Poaceae		*Cymbopogon*		*ambiguus*																	
31	Poaceae		*Cymbopogon*		*procerus*																	
31	Poaceae		*Dactyloctenium*		*radulans*											+			+			
31	Poaceae		*Dichanthium*		*sericeum*		subsp.		*humilius*					+	+		+		+	+	+	
31	Poaceae		*Digitaria*		*ctenantha*																	
31	Poaceae		*Enneapogon*		*caerulescens*		var.		*caerulescens*							+	+				+	
31	Poaceae		*Enneapogon*		*polyphyllus*																	
31	Poaceae		*Enteropogon*		*ramosus*																	
31	Poaceae		*Eragrostis*		*falcata*																	
31	Poaceae		*Eragrostis*		*setifolia*																	
31	Poaceae		*Eragrostis*		*tenellula*										+							
31	Poaceae		*Eragrostis*		*xerophila*										+		+					
31	Poaceae		*Eriachne*	aff.					*mucronata*						+							
31	Poaceae		*Eriachne*		*benthamii*										+							
31	Poaceae		*Eriachne*		*obtusa*																	
31	Poaceae		*Eriachne*		*pulchella*		subsp.		*dominii*					+				+				
31	Poaceae		*Eriachne*		*pulchella*		subsp.		*pulchella*									+				
31	Poaceae		*Eulalia*		*aurea*																	
31	Poaceae		*Iseilema*		*dolichotrichum*									+	+	+		+		+	+	
31	Poaceae		*Iseilema*		*eremaeum*																	
31	Poaceae		*Iseilema*		*macratherum*										+							
31	Poaceae		*Panicum*		*decompositum*									+	+							
31	Poaceae		*Panicum*		*laevinode*									+								
31	Poaceae		*Paraneurachne*		*muelleri*																	+
31	Poaceae		*Paspalidium*		*clementii*																+	
31	Poaceae		*Paspalidium*		*tabulatum*										+							
31	Poaceae		*Paspalidium*		*tabulatum*					(Whim Creek form)												
31	Poaceae		*Schizachyrium*		*fragile*									+								
31	Poaceae		*Setaria*		*dielsii*																	
31	Poaceae		*Sorghum*		*plumosum*		var.		*plumosum*													
31	Poaceae		*Sorghum*		*timorense*										+							
31	Poaceae		*Sporobolus*		*australasicus*									+		+	+		+	+	+	
31	Poaceae		*Sporobolus*		*virginicus*																	
31	Poaceae		*Themeda*		*triandra*														+	+		
31	Poaceae		*Triodia*	aff.	*epactia*														+			
31	Poaceae		*Triodia*	aff.	*pungens*																	
31	Poaceae		*Triodia*	aff.	*wiseana*																	
31	Poaceae		*Triodia*		*angusta*												+		+	+		+
31	Poaceae		*Triodia*		*brizoides*									+								
31	Poaceae		*Triodia*		*epactia*									+					+	+		
31	Poaceae		*Triodia*		*wiseana*																	
31	Poaceae		*Triodia*		*wiseana*					(fine form)				+		+		+	+	+	+	+
31	Poaceae		*Urochloa*		*pubigera*																	
31	Poaceae		*Xerochloa*		*barbata*												+					
31	Poaceae		*Xerochloa*		*imberbis*																	
31	Poaceae		*Yakirra*		*australiensis*		var.		*australiensis*													
32	Cyperaceae		*Bulbostylis*		*barbata*									+	+							
32	Cyperaceae		*Cyperus*		*difformis*																	
32	Cyperaceae		*Cyperus*		*iria*																	
32	Cyperaceae		*Cyperus*		*pygmaeus*																	
32	Cyperaceae		*Cyperus*		*vaginatus*																	
32	Cyperaceae		*Fimbristylis*	aff.	*dichotoma*						(M15-4)											
90	Proteaceae		*Grevillea*		*pyramidalis*																	
90	Proteaceae		*Grevillea*		*pyramidalis*		subsp.		*leucadendron*											+		
90	Proteaceae		*Hakea*		*lorea*		subsp.		*lorea*													
92	Santalaceae		*Santalum*		*lanceolatum*																	
107	Nyctaginaceae		*Boerhavia*		*burbidgeana*																	
107	Nyctaginaceae		*Boerhavia*		*coccinea*											+	+		+			
105	Chenopodiaceae		*Dysphania*		*rhadinostachya*		subsp.		*rhadinostachya*					+						+		

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FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ19	APQ20	APQ21	APQ22	APQ23	APQ24	APQ25	APQ26	APQ27
105	Chenopodiaceae		*Enchylaena*		*tomentosa*																	
105	Chenopodiaceae		*Enchylaena*		*tomentosa*		var.		*tomentosa*								+					
105	Chenopodiaceae		*Rhagodia*		*eremaea*																	
105	Chenopodiaceae		*Salsola*		*tragus*									+								
105	Chenopodiaceae		*Salsola*		*tragus*		subsp.		*grandiflora*					+								
105	Chenopodiaceae		*Salsola*		*tragus*		subsp.		*tragus*					+		+						
105	Chenopodiaceae		*Sclerolaena*		*bicornis*																	
105	Chenopodiaceae		*Sclerolaena*		*costata*									+		+					+	
105	Chenopodiaceae		*Sclerolaena*		*densiflora*												+				+	
105	Chenopodiaceae		*Sclerolaena*		*eriacantha*																	
105	Chenopodiaceae		*Sclerolaena*		*glabra*																	
106	Amaranthaceae	*	*Aerva*		*javanica*																	
106	Amaranthaceae		*Alternanthera*		*angustifolia*																	
106	Amaranthaceae		*Alternanthera*		*nana*															+		
106	Amaranthaceae		*Alternanthera*		*nodiflora*																	
106	Amaranthaceae		*Amaranthus*		*undulatus*																	
106	Amaranthaceae		*Gomphrena*		*affinis*		subsp.		*pilbarensis*								+					
106	Amaranthaceae		*Gomphrena*		*canescens*		subsp.		*canescens*													
106	Amaranthaceae		*Gomphrena*		*cunninghamii*									+								
106	Amaranthaceae		*Ptilotus*		*?exaltatus*		var.		*exaltatus*													
106	Amaranthaceae		*Ptilotus*		*aervoides*										+				+			
106	Amaranthaceae		*Ptilotus*		*astrolasius*		var.		*astrolasius*													
106	Amaranthaceae		*Ptilotus*		*auriculifolius*									+			+					
106	Amaranthaceae		*Ptilotus*		*calostachyus*									+								
106	Amaranthaceae		*Ptilotus*		*calostachyus*		var.		*calostachyus*													
106	Amaranthaceae		*Ptilotus*		*carinatus*																	
106	Amaranthaceae		*Ptilotus*		*clementii*																	
106	Amaranthaceae		*Ptilotus*		*exaltatus*																	
106	Amaranthaceae		*Ptilotus*		*exaltatus*		var.		*exaltatus*					+			+		+			
106	Amaranthaceae		*Ptilotus*		*fusiformis*									+				+				
106	Amaranthaceae		*Ptilotus*		*fusiformis*		var.		*fusiformis*													
106	Amaranthaceae		*Ptilotus*		*gomphrenoides*		var.		*gomphrenoides*						+							
106	Amaranthaceae		*Ptilotus*		*helipteroides*																+	
106	Amaranthaceae		*Ptilotus*		*helipteroides*		var.		*helipteroides*					+		+	+	+				
106	Amaranthaceae		*Ptilotus*		*murrayi*		var.		*murrayi*													
106	Amaranthaceae		*Ptilotus*		*obovatus*		var.		*obovatus*								+			+		
110	Aizoaceae		*Trianthema*	aff.	*triquetra*						(M3.35)				+				+			
110	Aizoaceae		*Trianthema*		sp. Python Pool																	
110A	Molluginaceae		*Mollugo*		*molluginea*																	
111	Portulacaceae		*Portulaca*		*conspicua*										+							
111	Portulacaceae	*	*Portulaca*		*oleracea*									+			+	+	+			
113	Caryophyllaceae		*Polycarpaea*		*corymbosa*		var.		*corymbosa*					+								
113	Caryophyllaceae		*Polycarpaea*		*holtzei*													+				
113	Caryophyllaceae		*Polycarpaea*		*longiflora*																	
113	Caryophyllaceae		*Polycarpaea*		*longiflora*					(Whim Creek form WC141-1)				+								
113	Caryophyllaceae		*Polycarpaea*		*longiflora*					(white form)					+							
122	Menispermaceae		*Tinospora*		*smilacina*																	
131	Lauraceae		*Cassytha*		*capillaris*																	+
137A	Capparaceae		*Capparis*		*spinosa*		var.		*nummularia*											+		
137A	Capparaceae		*Cleome*		*viscosa*										+		+					
138	Brassicaceae		*Lepidium*		*pedicellosum*																	
138	Brassicaceae		*Lepidium*		*pholidogynum*																	
163	Mimosaceae		*Acacia*		*ancistrocarpa*											+		+	+	+		+
163	Mimosaceae		*Acacia*		*ancistrocarpa*				*x stellaticeps*													
163	Mimosaceae		*Acacia*		*acradenia*																	
163	Mimosaceae		*Acacia*		*adsurgens*																	
163	Mimosaceae		*Acacia*		*bivenosa*											+		+	+	+	+	+
163	Mimosaceae		*Acacia*		*colei*		var.		*colei*													+
163	Mimosaceae		*Acacia*		*coriacea*		subsp.		*coriacea*													
163	Mimosaceae		*Acacia*		*coriacea*		subsp.		*pendens*													
163	Mimosaceae		*Acacia*		*cowleana*																	+
163	Mimosaceae		*Acacia*		*elachantha*					(golden hairy variant)												
163	Mimosaceae		*Acacia*		*inaequilatera*											+			+		+	
163	Mimosaceae		*Acacia*		*ligulata*																	
163	Mimosaceae		*Acacia*		*maitlandii*																	
163	Mimosaceae		*Acacia*		*pyrifolia*		var.		pyrifolia					+		+		+	+	+	+	
163	Mimosaceae		*Acacia*		*sclerosperma*		subsp.		*sclerosperma*													
163	Mimosaceae		*Acacia*		*stellaticeps*																	
163	Mimosaceae		*Acacia*		*synchronicia*											+					+	
163	Mimosaceae		*Acacia*		*tenuissima*																	
163	Mimosaceae		*Acacia*		*trachycarpa*																	

APPENDIX B: SUMMARY OF VASCULAR FLORA SPECIES RECRDED AT EACH QUADRAT WITHIN THE ANKETELL POINT TRANSPORT CORRIDOR BETWEEN 2008 - 2009

NB * denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ19	APQ20	APQ21	APQ22	APQ23	APQ24	APQ25	APQ26	APQ27
163	Mimosaceae		*Acacia*		*trachycarpa x tumida*		var.		*pilbarensis*													
163	Mimosaceae		*Acacia*		*trudgeniana*																	
163	Mimosaceae		*Acacia*		*tumida*		var.		*pilbarensis*													
163	Mimosaceae		*Acacia*		*victoriae*																	
163	Mimosaceae		*Acacia*		*xiphophylla*												+					
163	Mimosaceae		*Dichrostachys*		*spicata*																	
163	Mimosaceae		*Neptunia*		*dimorphantha*										+							
163	Mimosaceae	*	*Prosopis*		*pallida*															+		
163	Mimosaceae	*	*Vachellia*		*farnesiana*															+		
164	Caesalpiniaceae		*Petalostylis*		*labicheoides*																	
164	Caesalpiniaceae		*Senna*	aff.	*artemisioides*		subsp.		*oligophylla*	(thinly sericeous)								+				
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla*													
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla*								+	+	+	+		
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla x helmsii*										+			
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*glutinosa*													
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*glutinosa x luerssenii*													
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*luerssenii*													
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*pruinosa*							+						
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*x luerssenii*								+					
164	Caesalpiniaceae		*Senna*		*hamersleyensis*																	
164	Caesalpiniaceae		*Senna*		*notabilis*									+				+	+		+	+
164	Caesalpiniaceae		*Senna*		sp. Karijini						(M.E. Trudgen 10392)					+						
164	Caesalpiniaceae		*Senna*		*venusta*																	
165	Papilionaceae		*Alysicarpus*		*muelleri*												+		+	+		
165	Papilionaceae		*Cajanus*		*cinereus*																	+
165	Papilionaceae		*Crotalaria*		*dissitiflora*		subsp.		*benthamiana*													
165	Papilionaceae		*Crotalaria*		*medicaginea*		var.		*neglecta*					+			+		+	+		
165	Papilionaceae		*Crotalaria*		*novae-hollandiae*		subsp.		*novae-hollandiae*													
165	Papilionaceae		*Cullen*		*cinereum*																+	
165	Papilionaceae		*Cullen*		*graveolens*																	
165	Papilionaceae		*Cullen*		*leucanthum*																	
165	Papilionaceae		*Desmodium*		*campylocaulon*																	
165	Papilionaceae		*Desmodium*		*muelleri*																	
165	Papilionaceae		*Indigastrum*		*parviflorum*																	
165	Papilionaceae		*Indigofera*	aff.	*monophylla*																	
165	Papilionaceae		*Indigofera*		*colutea*											+			+	+	+	
165	Papilionaceae		*Indigofera*		*linifolia*											+	+		+	+	+	+
165	Papilionaceae		*Indigofera*		*linnaei*																	
165	Papilionaceae		*Indigofera*		*monophylla*																	
165	Papilionaceae		*Indigofera*		*monophylla*					(Burrup form)												
165	Papilionaceae		*Indigofera*		*monophylla*					(Cape Preston form)												+
165	Papilionaceae		*Indigofera*		*monophylla*					(grey leaflet form)												
165	Papilionaceae		*Indigofera*		*monophylla*					(grey/green leaflet form)												
165	Papilionaceae		*Indigofera*		*monophylla*						(MJOPP-2)							+				
165	Papilionaceae		*Indigofera*		*trita*														+	+	+	
165	Papilionaceae		*Isotropis*		*atropurpurea*																	
165	Papilionaceae		*Rhynchosia*		*minima*										+		+		+	+	+	+
165	Papilionaceae		*Sesbania*		*cannabina*																	
165	Papilionaceae		*Swainsona*		*canescens*											+	+					
165	Papilionaceae		*Swainsona*		*formosa*																	+
165	Papilionaceae		*Tephrosia*	aff.	*clementii*						(4) (M35-14)											
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD133-20)											
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD205-10)											
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD88-4)			+								
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(MET 12,351)			+								+
165	Papilionaceae		*Tephrosia*		*clementii*													+				
165	Papilionaceae		*Tephrosia*		*rosea*		var.		*clementii*													
165	Papilionaceae		*Tephrosia*		sp. B Kimberley Flora						(C.A. Gardner 1300)											
165	Papilionaceae		*Tephrosia*		*supina*																	
165	Papilionaceae		*Vigna*		*lanceolata*		var.		*lanceolata*													
165	Papilionaceae		*Vigna*		sp. rockpiles						(R.Butcher *et al* ., RB1400)											
165	Papilionaceae		*Vigna*		sp. central						(MET 1626)	2										
167	Geraniaceae		*Erodium*		*cygnorum*												+					
173	Zygophyllaceae		*Tribulus*		*hirsutus*																	
173	Zygophyllaceae		*Tribulus*		*suberosus*																	
183	Polygalaceae		*Polygala*	aff.	*isingii*												+	+	+	+		
185	Euphorbiaceae		*Adriana*		*tomentosa*		var.		*tomentosa*													
185	Euphorbiaceae		*Euphorbia*	aff.	*australis*																	
185	Euphorbiaceae		*Euphorbia*		*australis*									+			+	+	+	+	+	
185	Euphorbiaceae		*Euphorbia*		*biconvexa*									+		+	+		+			
185	Euphorbiaceae		*Euphorbia*		*boophthona*																	

APPENDIX B: SUMMARY OF VASCULAR FLORA SPECIES RECRDED AT EACH QUADRAT WITHIN THE ANKETELL POINT TRANSPORT CORRIDOR BETWEEN 2008 - 2009

NB * denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ19	APQ20	APQ21	APQ22	APQ23	APQ24	APQ25	APQ26	APQ27
185	Euphorbiaceae		*Euphorbia*		*coghlanii*														+			
185	Euphorbiaceae		*Euphorbia*		sp.																	
185	Euphorbiaceae		*Euphorbia*		sp.						(BPBS10-50)			+		+	+				+	
185	Euphorbiaceae		*Euphorbia*		*tannensis*		subsp.		*eremophila*	(Burrup form)												+	
185	Euphorbiaceae		*Euphorbia*		*wheeleri*									+		+						
185	Euphorbiaceae		*Leptopus*		*decaisnei*															+			+
185	Euphorbiaceae		*Leptopus*		*decaisnei*		var.		*orbicularis*							+	+		+		+	
185	Euphorbiaceae		*Phyllanthus*		*maderaspatensis*																	
207	Sapindaceae		*Diplopeltis*		*eriocarpa*															+	+	
220	Tiliaceae		*Corchorus*	aff.	*parviflorus*									+	+			+	+			
220	Tiliaceae		*Corchorus*	aff.	*parviflorus*						(JW 11-11)											
220	Tiliaceae		*Corchorus*	aff.	*walcotti*						(K.J. Atkins 510)					+			+	+	+	
220	Tiliaceae		*Corchorus*		*laniflorus*											+						
220	Tiliaceae		*Corchorus*		sp..																	
220	Tiliaceae		*Corchorus*		*tectus*									+				+	+			
220	Tiliaceae		*Corchorus*		*tridens*																	
220	Tiliaceae		*Triumfetta*		*appendiculata*																	
220	Tiliaceae		*Triumfetta*		*clementii*									+		+	+	+	+	+	+	
221	Malvaceae		*Abutilon*	aff.	*lepidum*						(1) (MET 15,352)								+			
221	Malvaceae		*Abutilon*	aff.	*lepidum*						(4)			+		+						
221	Malvaceae		*Abutilon*		*amplum*																	
221	Malvaceae		*Abutilon*		*fraseri*																	
221	Malvaceae		*Abutilon*		*lepidum*																+	
221	Malvaceae		*Abutilon*		*oxycarpum*		subsp.		*prostratum*							+						
221	Malvaceae		*Gossypium*		*australe*					(Burrup Peninsula form)									+	+	+	+
221	Malvaceae		*Gossypium*		*australe*					(Whim Creek form)												
221	Malvaceae		*Hibiscus*	aff.	*platychlamys*						(MET 15,061)											
221	Malvaceae		*Hibiscus*		*brachysiphonius*																	
221	Malvaceae		*Hibiscus*		*coatesii*																	
221	Malvaceae		*Hibiscus*		*sturtii*		var.		*campylochlamys*													
221	Malvaceae		*Hibiscus*		*sturtii*		var.		*platychlamys*							+						
221	Malvaceae	*	*Malvastrum*		*americanum*															+		
221	Malvaceae		*Sida*	aff.	*echinocarpa*						(MET 15,350)							+				
221	Malvaceae		*Sida*	aff.	*fibulifera*						(HD200-6)						+					
221	Malvaceae		*Sida*	aff.	*fibulifera*					(oblong)	(MET 15220)											
221	Malvaceae		*Sida*		*arsiniata*																	
221	Malvaceae		*Sida*		*clementii*									+					+	+	+	+
221	Malvaceae		*Sida*		*echinocarpa*																	
221	Malvaceae		*Sida*		*pilbarensis*					(Ferrugineous form)												
221	Malvaceae		*Sida*		sp. spiciform panicles						(E. Leyland s.n. 14/08/1990)											
221	Malvaceae		*Sida*		*spinosa*																	
223	Sterculiaceae		*Brachychiton*		*acuminatus*																	
223	Sterculiaceae		*Melhania*		sp. Burrup																	
223	Sterculiaceae		*Melhania*		sp.						(CH15-39)									+		
223	Sterculiaceae		*Waltheria*		*indica*																	
235	Elatinaceae		*Bergia*		*pedicellaris*																	
243	Violaceae		*Hybanthus*		*aurantiacus*													+				+
248	Passifloraceae	*	*Passiflora*		*foetida*		var.		*hispida*													
265	Lythraceae		*Ammannia*		*auriculata*																	
265	Lythraceae		*Ammannia*		*baccifera*																	
273	Myrtaceae		*Corymbia*		*hamersleyana*															+		+
273	Myrtaceae		*Eucalyptus*		*camaldulensis*																	
273	Myrtaceae		*Eucalyptus*		*victrix*																	
273	Myrtaceae		*Melaleuca*		*glomerata*																	
281	Apiaceae		*Trachymene*		*oleracea*		subsp.		*oleracea*					+				+		+	+	
301	Oleaceae		*Jasminum*		*didymum*		subsp.		*lineare*													
305	Asclepiadaceae		*Sarcostemma*		*viminale*		subsp.		*australe*													
307	Convolvulaceae		*Bonamia*		*media*		var.		*villosa*					+				+			+	
307	Convolvulaceae		*Bonamia*		*rosea*																	
307	Convolvulaceae		*Duperreya*		*commixta*																	
307	Convolvulaceae		*Evolvulus*		*alsinoides*		var.		*decumbens*													
307	Convolvulaceae		*Evolvulus*		*alsinoides*		var.		*villosicalyx*					+		+	+		+		+	
307	Convolvulaceae		*Ipomoea*		*coptica*										+							
307	Convolvulaceae		*Ipomoea*		*costata*																	
307	Convolvulaceae		*Ipomoea*		*muelleri*										+							
307	Convolvulaceae		*Ipomoea*		*plebeia*																	
307	Convolvulaceae		*Ipomoea*		*polymorpha*																	
307	Convolvulaceae		*Operculina*		*aequisepala*																	
307	Convolvulaceae		*Polymeria*		*ambigua*														+	+		+
307	Convolvulaceae		*Polymeria*		sp.						(site 1365)											
310	Boraginaceae		*Ehretia*		*saligna*		var.		*saligna*											+		

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FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ19	APQ20	APQ21	APQ22	APQ23	APQ24	APQ25	APQ26	APQ27
310	Boraginaceae		*Heliotropium*		*conocarpum*										+							
310	Boraginaceae		*Heliotropium*		*cunninghamii*														+			
310	Boraginaceae		*Heliotropium*		*heteranthum*										+			+				
310	Boraginaceae		*Heliotropium*		*inexplicitum*									+								
310	Boraginaceae		*Heliotropium*		*ovalifolium*																	+
310	Boraginaceae		*Trichodesma*		*zeylanicum*																	
310	Boraginaceae		*Trichodesma*		*zeylanicum*		var.		*zeylanicum*					+			+		+	+		
311	Verbenaceae		*Clerodendrum*		*tomentosum*		var.		*lanceolatum*													
315	Solanaceae		*Solanum*		*diversiflorum*																	
315	Solanaceae		*Solanum*		*gabrielae*																	
315	Solanaceae		*Solanum*		*horridum*									+								
315	Solanaceae		*Solanum*		*lasiophyllum*																	
316	Scrophulariaceae		*Stemodia*		*grossa*																	
316	Scrophulariaceae		*Stemodia*		*kingii*										+							
325	Acanthaceae		*Dicliptera*		*armata*																	
326	Myoporaceae		*Eremophila*		*forrestii*																	
326	Myoporaceae		*Eremophila*		*forrestii*		subsp.		*forrestii*													
326	Myoporaceae		*Eremophila*		*longifolia*																	
331	Rubiaceae		*Synaptantha*		*tillaeacea*		var.		*tillaeacea*													
337	Cucurbitaceae	*	*Citrullus*		*colocynthis*																	
337	Cucurbitaceae		*Cucumis*		*maderaspatanus*										+							
337	Cucurbitaceae	*	*Cucumis*		*melo*		subsp.		*agrestis*					+	+		+					
337	Cucurbitaceae		*Trichosanthes*		*cucumerina*																	
341	Goodeniaceae		*Goodenia*		*forrestii*									+					+	+		
341	Goodeniaceae		*Goodenia*		*lamprosperma*																	
341	Goodeniaceae		*Goodenia*		*microptera*																	
341	Goodeniaceae		*Goodenia*		*pascua*																	
341	Goodeniaceae		*Goodenia*		*stobbsiana*																	
341	Goodeniaceae		*Scaevola*		*spinescens*																	
341	Goodeniaceae		*Scaevola*		*spinescens*					(broad leaf form)							+					
341	Goodeniaceae		*Scaevola*		*spinescens*					(narrow form)												
345	Asteraceae		*Flaveria*		*australasica*		subsp.			gilgai		3										
345	Asteraceae		*Pentalepis*		*trichodesmoides*																	
345	Asteraceae		*Pluchea*		*rubelliflora*																	
345	Asteraceae		*Pluchea*		sp.																	
345	Asteraceae		*Pterocaulon*		*sphacelatum*																	
345	Asteraceae		*Pterocaulon*		*sphaeranthoides*																	
345	Asteraceae		*Streptoglossa*		*bubakii*										+							
345	Asteraceae		*Streptoglossa*		*decurrens*														+			
345	Asteraceae		*Streptoglossa*		*liatroides*										+							
345	Asteraceae		*Streptoglossa*		sp.																	

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13	Marsileaceae		*Marsilea*		*hirsuta*																+	
31	Poaceae		*Aristida*		*contorta*									+	+		+			+		+
31	Poaceae		*Aristida*		*holathera*		var.		*holathera*													
31	Poaceae		*Aristida*		*latifolia*																	
31	Poaceae		*Aristida*		sp.																	
31	Poaceae		*Astrebla*		*pectinata*																	
31	Poaceae		*Bothriochloa*		*ewartiana*																	
31	Poaceae		*Brachyachne*		*convergens*										+							
31	Poaceae		*Brachyachne*		*prostrata*																	
31	Poaceae	*	*Cenchrus*		*ciliaris*											+	+		+	+		
31	Poaceae		*Chloris*		*pectinata*																	
31	Poaceae		*Chrysopogon*		*fallax*												+					
31	Poaceae		*Cymbopogon*		*ambiguus*														+			
31	Poaceae		*Cymbopogon*		*procerus*														+			
31	Poaceae		*Dactyloctenium*		*radulans*									+	+		+			+		
31	Poaceae		*Dichanthium*		*sericeum*		subsp.		*humilius*					+	+		+			+	+	+
31	Poaceae		*Digitaria*		*ctenantha*																	
31	Poaceae		*Enneapogon*		*caerulescens*		var.		*caerulescens*						+	+	+					
31	Poaceae		*Enneapogon*		*polyphyllus*																	
31	Poaceae		*Enteropogon*		*ramosus*																	
31	Poaceae		*Eragrostis*		*falcata*																	
31	Poaceae		*Eragrostis*		*setifolia*															+		
31	Poaceae		*Eragrostis*		*tenellula*															+	+	
31	Poaceae		*Eragrostis*		*xerophila*										+	+	+			+		+
31	Poaceae		*Eriachne*	aff.					*mucronata*						+		+					+
31	Poaceae		*Eriachne*		*benthamii*										+		+			+	+	+
31	Poaceae		*Eriachne*		*obtusa*																+	
31	Poaceae		*Eriachne*		*pulchella*		subsp.		*dominii*					+								
31	Poaceae		*Eriachne*		*pulchella*		subsp.		*pulchella*									+				
31	Poaceae		*Eulalia*		*aurea*																	
31	Poaceae		*Iseilema*		*dolichotrichum*									+								
31	Poaceae		*Iseilema*		*eremaeum*																	
31	Poaceae		*Iseilema*		*macratherum*															+		
31	Poaceae		*Panicum*		*decompositum*											+				+		
31	Poaceae		*Panicum*		*laevinode*															+		
31	Poaceae		*Paraneurachne*		*muelleri*									+		+		+	+			
31	Poaceae		*Paspalidium*		*clementii*																	
31	Poaceae		*Paspalidium*		*tabulatum*																	
31	Poaceae		*Paspalidium*		*tabulatum*					(Whim Creek form)										+		
31	Poaceae		*Schizachyrium*		*fragile*																	
31	Poaceae		*Setaria*		*dielsii*																	
31	Poaceae		*Sorghum*		*plumosum*		var.		*plumosum*													
31	Poaceae		*Sorghum*		*timorense*											+	+					
31	Poaceae		*Sporobolus*		*australasicus*									+	+		+					
31	Poaceae		*Sporobolus*		*virginicus*																+	
31	Poaceae		*Themeda*		*triandra*														+			
31	Poaceae		*Triodia*	aff.	*epactia*																	
31	Poaceae		*Triodia*	aff.	*pungens*																	
31	Poaceae		*Triodia*	aff.	*wiseana*																	
31	Poaceae		*Triodia*		*angusta*									+			+					
31	Poaceae		*Triodia*		*brizoides*																	
31	Poaceae		*Triodia*		*epactia*													+	+		+	
31	Poaceae		*Triodia*		*wiseana*															+		
31	Poaceae		*Triodia*		*wiseana*					(fine form)				+		+	+	+	+		+	
31	Poaceae		*Urochloa*		*pubigera*																	
31	Poaceae		*Xerochloa*		*barbata*												+			+		+
31	Poaceae		*Xerochloa*		*imberbis*									'+	+				+		+	
31	Poaceae		*Yakirra*		*australiensis*		var.		*australiensis*													
32	Cyperaceae		*Bulbostylis*		*barbata*																	
32	Cyperaceae		*Cyperus*		*difformis*																+	
32	Cyperaceae		*Cyperus*		*iria*																+	
32	Cyperaceae		*Cyperus*		*pygmaeus*																	+
32	Cyperaceae		*Cyperus*		*vaginatus*																+	
32	Cyperaceae		*Fimbristylis*	aff.	*dichotoma*						(M15-4)				+					+		+
90	Proteaceae		*Grevillea*		*pyramidalis*																	
90	Proteaceae		*Grevillea*		*pyramidalis*		subsp.		*leucadendron*													
90	Proteaceae		*Hakea*		*lorea*		subsp.		*lorea*							+						
92	Santalaceae		*Santalum*		*lanceolatum*																	
107	Nyctaginaceae		*Boerhavia*		*burbidgeana*																	
107	Nyctaginaceae		*Boerhavia*		*coccinea*										+		+					
105	Chenopodiaceae		*Dysphania*		*rhadinostachya*		subsp.		*rhadinostachya*									+				

APPENDIX B: SUMMARY OF VASCULAR FLORA SPECIES RECRDED AT EACH QUADRAT WITHIN THE ANKETELL POINT TRANSPORT CORRIDOR BETWEEN 2008 - 2009

NB * denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ28	APQ29	APQ30	APQ31	APQ32	APQ33	APQ34	APQ35	APQ36
105	Chenopodiaceae		*Enchylaena*		*tomentosa*																	
105	Chenopodiaceae		*Enchylaena*		*tomentosa*		var.		*tomentosa*											+		
105	Chenopodiaceae		*Rhagodia*		*eremaea*																	
105	Chenopodiaceae		*Salsola*		*tragus*																	+
105	Chenopodiaceae		*Salsola*		*tragus*		subsp.		*grandiflora*													
105	Chenopodiaceae		*Salsola*		*tragus*		subsp.		*tragus*													
105	Chenopodiaceae		*Sclerolaena*		*bicornis*																	
105	Chenopodiaceae		*Sclerolaena*		*costata*										+							+
105	Chenopodiaceae		*Sclerolaena*		*densiflora*										+							
105	Chenopodiaceae		*Sclerolaena*		*eriacantha*																	
105	Chenopodiaceae		*Sclerolaena*		*glabra*															+		
106	Amaranthaceae	*	*Aerva*		*javanica*																	
106	Amaranthaceae		*Alternanthera*		*angustifolia*																+	
106	Amaranthaceae		*Alternanthera*		*nana*																+	
106	Amaranthaceae		*Alternanthera*		*nodiflora*																+	
106	Amaranthaceae		*Amaranthus*		*undulatus*																+	
106	Amaranthaceae		*Gomphrena*		*affinis*		subsp.		*pilbarensis*						+							+
106	Amaranthaceae		*Gomphrena*		*canescens*		subsp.		*canescens*													
106	Amaranthaceae		*Gomphrena*		*cunninghamii*													+				
106	Amaranthaceae		*Ptilotus*		*?exaltatus*		var.		*exaltatus*													
106	Amaranthaceae		*Ptilotus*		*aervoides*										+		+			+		+
106	Amaranthaceae		*Ptilotus*		*astrolasius*		var.		*astrolasius*					+		+						
106	Amaranthaceae		*Ptilotus*		*auriculifolius*																	
106	Amaranthaceae		*Ptilotus*		*calostachyus*																	
106	Amaranthaceae		*Ptilotus*		*calostachyus*		var.		*calostachyus*													
106	Amaranthaceae		*Ptilotus*		*carinatus*									+	+					+	+	+
106	Amaranthaceae		*Ptilotus*		*clementii*																	
106	Amaranthaceae		*Ptilotus*		*exaltatus*													+		+		+
106	Amaranthaceae		*Ptilotus*		*exaltatus*		var.		*exaltatus*					+	+			+				
106	Amaranthaceae		*Ptilotus*		*fusiformis*																	
106	Amaranthaceae		*Ptilotus*		*fusiformis*		var.		*fusiformis*													
106	Amaranthaceae		*Ptilotus*		*gomphrenoides*		var.		*gomphrenoides*													+
106	Amaranthaceae		*Ptilotus*		*helipteroides*										+							
106	Amaranthaceae		*Ptilotus*		*helipteroides*		var.		*helipteroides*							+	+					
106	Amaranthaceae		*Ptilotus*		*murrayi*		var.		*murrayi*					+								+
106	Amaranthaceae		*Ptilotus*		*obovatus*		var.		*obovatus*					+		+						
110	Aizoaceae		*Trianthema*	aff.	*triquetra*						(M3.35)				+		+			+		
110	Aizoaceae		*Trianthema*		sp. Python Pool																	
110A	Molluginaceae		*Mollugo*		*molluginea*									+								
111	Portulacaceae		*Portulaca*		*conspicua*																	
111	Portulacaceae	*	*Portulaca*		*oleracea*									+	+		+			+		+
113	Caryophyllaceae		*Polycarpaea*		*corymbosa*		var.		*corymbosa*													
113	Caryophyllaceae		*Polycarpaea*		*holtzei*																	
113	Caryophyllaceae		*Polycarpaea*		*longiflora*													+				
113	Caryophyllaceae		*Polycarpaea*		*longiflora*					(Whim Creek form WC141-1)												
113	Caryophyllaceae		*Polycarpaea*		*longiflora*					(white form)												
122	Menispermaceae		*Tinospora*		*smilacina*																	
131	Lauraceae		*Cassytha*		*capillaris*									+		+			+			
137A	Capparaceae		*Capparis*		*spinosa*		var.		*nummularia*													
137A	Capparaceae		*Cleome*		*viscosa*										+		+					
138	Brassicaceae		*Lepidium*		*pedicellosum*																	
138	Brassicaceae		*Lepidium*		*pholidogynum*									+	+	+						
163	Mimosaceae		*Acacia*		*ancistrocarpa*									+		+		+	+			
163	Mimosaceae		*Acacia*		*ancistrocarpa*				*x stellaticeps*													
163	Mimosaceae		*Acacia*		*acradenia*																	
163	Mimosaceae		*Acacia*		*adsurgens*																	
163	Mimosaceae		*Acacia*		*bivenosa*									+		+						
163	Mimosaceae		*Acacia*		*colei*		var.		*colei*													
163	Mimosaceae		*Acacia*		*coriacea*		subsp.		*coriacea*										+		+	
163	Mimosaceae		*Acacia*		*coriacea*		subsp.		*pendens*												+	
163	Mimosaceae		*Acacia*		*cowleana*													+	+		+	
163	Mimosaceae		*Acacia*		*elachantha*					(golden hairy variant)									+			
163	Mimosaceae		*Acacia*		*inaequilatera*									+				+				
163	Mimosaceae		*Acacia*		*ligulata*																	
163	Mimosaceae		*Acacia*		*maitlandii*											+						
163	Mimosaceae		*Acacia*		*pyrifolia*		var.		pyrifolia					+				+	+		+	
163	Mimosaceae		*Acacia*		*sclerosperma*		subsp.		*sclerosperma*											+		
163	Mimosaceae		*Acacia*		*stellaticeps*																	
163	Mimosaceae		*Acacia*		*synchronicia*											+						
163	Mimosaceae		*Acacia*		*tenuissima*																	
163	Mimosaceae		*Acacia*		*trachycarpa*																+	

APPENDIX B: SUMMARY OF VASCULAR FLORA SPECIES RECRDED AT EACH QUADRAT WITHIN THE ANKETELL POINT TRANSPORT CORRIDOR BETWEEN 2008 - 2009

NB * denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ28	APQ29	APQ30	APQ31	APQ32	APQ33	APQ34	APQ35	APQ36
163	Mimosaceae		*Acacia*		*trachycarpa x tumida*		var.		*pilbarensis*													
163	Mimosaceae		*Acacia*		*trudgeniana*																	
163	Mimosaceae		*Acacia*		*tumida*		var.		*pilbarensis*									+				
163	Mimosaceae		*Acacia*		*victoriae*																	
163	Mimosaceae		*Acacia*		*xiphophylla*										+	+	+			+		
163	Mimosaceae		*Dichrostachys*		*spicata*																	
163	Mimosaceae		*Neptunia*		*dimorphantha*										+		+			+		
163	Mimosaceae	*	*Prosopis*		*pallida*																	
163	Mimosaceae	*	*Vachellia*		*farnesiana*																+	
164	Caesalpiniaceae		*Petalostylis*		*labicheoides*																	
164	Caesalpiniaceae		*Senna*		*artemisioides*	aff.	subsp.		*oligophylla*	(thinly sericeous)						+						
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla*									+				
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla*					+								
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla x helmsii*													
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*glutinosa*							+		+				
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*glutinosa x luerssenii*													
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*luerssenii*													
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*pruinosa*							+						
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*x luerssenii*							+			+			
164	Caesalpiniaceae		*Senna*		*hamersleyensis*																	
164	Caesalpiniaceae		*Senna*		*notabilis*									+		+	+	+	+			
164	Caesalpiniaceae		*Senna*		sp. Karijini						(M.E. Trudgen 10392)					+						
164	Caesalpiniaceae		*Senna*		*venusta*																	
165	Papilionaceae		*Alysicarpus*		*muelleri*									+				+				
165	Papilionaceae		*Cajanus*		*cinereus*																	
165	Papilionaceae		*Crotalaria*		*dissitiflora*		subsp.		*benthamiana*								+			+		
165	Papilionaceae		*Crotalaria*		*medicaginea*		var.		*neglecta*													
165	Papilionaceae		*Crotalaria*		*novae-hollandiae*		subsp.		*novae-hollandiae*													
165	Papilionaceae		*Cullen*		*cinereum*															+		
165	Papilionaceae		*Cullen*		*graveolens*															+		
165	Papilionaceae		*Cullen*		*leucanthum*																	
165	Papilionaceae		*Desmodium*		*campylocaulon*																	
165	Papilionaceae		*Desmodium*		*muelleri*																	+
165	Papilionaceae		*Indigastrum*		*parviflorum*																	
165	Papilionaceae		*Indigofera*	aff.	*monophylla*																	
165	Papilionaceae		*Indigofera*		*colutea*																	
165	Papilionaceae		*Indigofera*		*linifolia*										+		+		+	+		+
165	Papilionaceae		*Indigofera*		*linnaei*																	
165	Papilionaceae		*Indigofera*		*monophylla*													+				
165	Papilionaceae		*Indigofera*		*monophylla*					(Burrup form)												
165	Papilionaceae		*Indigofera*		*monophylla*					(Cape Preston form)						+		+				
165	Papilionaceae		*Indigofera*		*monophylla*					(grey leaflet form)												
165	Papilionaceae		*Indigofera*		*monophylla*					(grey/green leaflet form)												
165	Papilionaceae		*Indigofera*		*monophylla*						(MJOPP-2)										+	
165	Papilionaceae		*Indigofera*		*trita*										+							
165	Papilionaceae		*Isotropis*		*atropurpurea*													+				
165	Papilionaceae		*Rhynchosia*		*minima*										+	+	+	+		+		
165	Papilionaceae		*Sesbania*		*cannabina*										+					+	+	
165	Papilionaceae		*Swainsona*		*canescens*																	
165	Papilionaceae		*Swainsona*		*formosa*													+				
165	Papilionaceae		*Tephrosia*	aff.	*clementii*						(4) (M35-14)											
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD133-20)											
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD205-10)											
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD88-4)											
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(MET 12,351)							+				
165	Papilionaceae		*Tephrosia*		*clementii*											+	+					+
165	Papilionaceae		*Tephrosia*		*rosea*		var.		*clementii*													
165	Papilionaceae		*Tephrosia*		sp. B Kimberley Flora						(C.A. Gardner 1300)											
165	Papilionaceae		*Tephrosia*		*supina*																	
165	Papilionaceae		*Vigna*		*lanceolata*		var.		*lanceolata*												+	
165	Papilionaceae		*Vigna*		sp. rockpiles						(R.Butcher *et al* ., RB1400)											
165	Papilionaceae		*Vigna*		sp. central						(MET 1626)	2										
167	Geraniaceae		*Erodium*		*cygnorum*																	
173	Zygophyllaceae		*Tribulus*		*hirsutus*																	
173	Zygophyllaceae		*Tribulus*		*suberosus*																	
183	Polygalaceae		*Polygala*	aff.	*isingii*																	
185	Euphorbiaceae		*Adriana*		*tomentosa*		var.		*tomentosa*													
185	Euphorbiaceae		*Euphorbia*	aff.	*australis*																	
185	Euphorbiaceae		*Euphorbia*		*australis*									+								
185	Euphorbiaceae		*Euphorbia*		*biconvexa*													+				
185	Euphorbiaceae		*Euphorbia*		*boophthona*																	

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FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ28	APQ29	APQ30	APQ31	APQ32	APQ33	APQ34	APQ35	APQ36
185	Euphorbiaceae		*Euphorbia*		*coghlanii*										+		+			+		
185	Euphorbiaceae		*Euphorbia*		sp.												+					
185	Euphorbiaceae		*Euphorbia*		sp.						(BPBS10-50)					+					+	
185	Euphorbiaceae		*Euphorbia*		*tannensis*		subsp.		*eremophila*	(Burrup form)												
185	Euphorbiaceae		*Euphorbia*		*wheeleri*															+		
185	Euphorbiaceae		*Leptopus*		*decaisnei*											+			+			
185	Euphorbiaceae		*Leptopus*		*decaisnei*		var.		*orbicularis*								+					
185	Euphorbiaceae		*Phyllanthus*		*maderaspatensis*											+	+				+	
207	Sapindaceae		*Diplopeltis*		*eriocarpa*																	
220	Tiliaceae		*Corchorus*	aff.	*parviflorus*									+		+			+			
220	Tiliaceae		*Corchorus*	aff.	*parviflorus*						(JW 11-11)											
220	Tiliaceae		*Corchorus*	aff.	*walcotti*						(K.J. Atkins 510)					+						
220	Tiliaceae		*Corchorus*		*laniflorus*													+				
220	Tiliaceae		*Corchorus*		sp..																	
220	Tiliaceae		*Corchorus*		*tectus*									+		+			+			
220	Tiliaceae		*Corchorus*		*tridens*																	
220	Tiliaceae		*Triumfetta*		*appendiculata*																	
220	Tiliaceae		*Triumfetta*		*clementii*											+		+	+			
221	Malvaceae		*Abutilon*	aff.	*lepidum*						(1) (MET 15,352)											
221	Malvaceae		*Abutilon*	aff.	*lepidum*						(4)					+	+					
221	Malvaceae		*Abutilon*		*amplum*																	
221	Malvaceae		*Abutilon*		*fraseri*																	
221	Malvaceae		*Abutilon*		*lepidum*																	
221	Malvaceae		*Abutilon*		*oxycarpum*		subsp.		*prostratum*													
221	Malvaceae		*Gossypium*		*australe*					(Burrup Peninsula form)								+				
221	Malvaceae		*Gossypium*		*australe*					(Whim Creek form)												
221	Malvaceae		*Hibiscus*	aff.	*platychlamys*						(MET 15,061)											
221	Malvaceae		*Hibiscus*		*brachysiphonius*																	
221	Malvaceae		*Hibiscus*		*coatesii*											+						
221	Malvaceae		*Hibiscus*		*sturtii*		var.		*campylochlamys*									+				
221	Malvaceae		*Hibiscus*		*sturtii*		var.		*platychlamys*									+				
221	Malvaceae	*	*Malvastrum*		*americanum*															+		
221	Malvaceae		*Sida*	aff.	*echinocarpa*						(MET 15,350)			+				+				
221	Malvaceae		*Sida*	aff.	*fibulifera*						(HD200-6)				+		+					
221	Malvaceae		*Sida*	aff.	*fibulifera*					(oblong)	(MET 15220)											+
221	Malvaceae		*Sida*		*arsiniata*																	
221	Malvaceae		*Sida*		*clementii*											+		+				
221	Malvaceae		*Sida*		*echinocarpa*																	
221	Malvaceae		*Sida*		*pilbarensis*					(Ferrugineous form)												
221	Malvaceae		*Sida*		sp. spiciform panicles						(E. Leyland s.n. 14/08/1990)											
221	Malvaceae		*Sida*		*spinosa*																	+
223	Sterculiaceae		*Brachychiton*		*acuminatus*																	
223	Sterculiaceae		*Melhania*		sp. Burrup																	
223	Sterculiaceae		*Melhania*		sp.						(CH15-39)											
223	Sterculiaceae		*Waltheria*		*indica*													+				
235	Elatinaceae		*Bergia*		*pedicellaris*																+	
243	Violaceae		*Hybanthus*		*aurantiacus*													+	+		+	
248	Passifloraceae	*	*Passiflora*		*foetida*		var.		*hispida*												+	
265	Lythraceae		*Ammannia*		*auriculata*																+	
265	Lythraceae		*Ammannia*		*baccifera*																+	
273	Myrtaceae		*Corymbia*		*hamersleyana*																	
273	Myrtaceae		*Eucalyptus*		*camaldulensis*																+	
273	Myrtaceae		*Eucalyptus*		*victrix*																+	
273	Myrtaceae		*Melaleuca*		*glomerata*																+	
281	Apiaceae		*Trachymene*		*oleracea*		subsp.		*oleracea*									+	+			
301	Oleaceae		*Jasminum*		*didymum*		subsp.		*lineare*													
305	Asclepiadaceae		*Sarcostemma*		*viminale*		subsp.		*australe*													
307	Convolvulaceae		*Bonamia*		*media*		var.		*villosa*							+		+	+			
307	Convolvulaceae		*Bonamia*		*rosea*																	
307	Convolvulaceae		*Duperreya*		*commixta*																	
307	Convolvulaceae		*Evolvulus*		*alsinoides*		var.		*decumbens*									+				
307	Convolvulaceae		*Evolvulus*		*alsinoides*		var.		*villosicalyx*					+			+	+	+			
307	Convolvulaceae		*Ipomoea*		*coptica*																	
307	Convolvulaceae		*Ipomoea*		*costata*																	
307	Convolvulaceae		*Ipomoea*		*muelleri*																	
307	Convolvulaceae		*Ipomoea*		*plebeia*																	
307	Convolvulaceae		*Ipomoea*		*polymorpha*																	
307	Convolvulaceae		*Operculina*		*aequisepala*																	
307	Convolvulaceae		*Polymeria*		*ambigua*																+	
307	Convolvulaceae		*Polymeria*		sp.						(site 1365)											
310	Boraginaceae		*Ehretia*		*saligna*		var.		*saligna*													

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FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ28	APQ29	APQ30	APQ31	APQ32	APQ33	APQ34	APQ35	APQ36
310	Boraginaceae		*Heliotropium*		*conocarpum*																	+
310	Boraginaceae		*Heliotropium*		*cunninghamii*																	
310	Boraginaceae		*Heliotropium*		*heteranthum*										+		+			+		
310	Boraginaceae		*Heliotropium*		*inexplicitum*										+		+			+		+
310	Boraginaceae		*Heliotropium*		*ovalifolium*									+		+						
310	Boraginaceae		*Trichodesma*		*zeylanicum*																	
310	Boraginaceae		*Trichodesma*		*zeylanicum*		var.		*zeylanicum*							+		+	+		+	
311	Verbenaceae		*Clerodendrum*		*tomentosum*		var.		*lanceolatum*													
315	Solanaceae		*Solanum*		*diversiflorum*											+		+	+			
315	Solanaceae		*Solanum*		*gabrielae*																	
315	Solanaceae		*Solanum*		*horridum*											+						
315	Solanaceae		*Solanum*		*lasiophyllum*																	
316	Scrophulariaceae		*Stemodia*		*grossa*																+	
316	Scrophulariaceae		*Stemodia*		*kingii*												+					
325	Acanthaceae		*Dicliptera*		*armata*																	
326	Myoporaceae		*Eremophila*		*forrestii*																	
326	Myoporaceae		*Eremophila*		*forrestii*		subsp.		*forrestii*													
326	Myoporaceae		*Eremophila*		*longifolia*											+				+		
331	Rubiaceae		*Synaptantha*		*tillaeacea*		var.		*tillaeacea*												+	
337	Cucurbitaceae	*	*Citrullus*		*colocynthis*																	
337	Cucurbitaceae		*Cucumis*		*maderaspatanus*														+		+	
337	Cucurbitaceae	*	*Cucumis*		*melo*		subsp.		*agrestis*													
337	Cucurbitaceae		*Trichosanthes*		*cucumerina*																	
341	Goodeniaceae		*Goodenia*		*forrestii*																	
341	Goodeniaceae		*Goodenia*		*lamprosperma*																+	
341	Goodeniaceae		*Goodenia*		*microptera*													+				
341	Goodeniaceae		*Goodenia*		*pascua*																	
341	Goodeniaceae		*Goodenia*		*stobbsiana*											+			+			
341	Goodeniaceae		*Scaevola*		*spinescens*															+		
341	Goodeniaceae		*Scaevola*		*spinescens*					(broad leaf form)				+								
341	Goodeniaceae		*Scaevola*		*spinescens*					(narrow form)										+	+	
345	Asteraceae		*Flaveria*		*australasica*		subsp.			gilgai		3										
345	Asteraceae		*Pentalepis*		*trichodesmoides*																	
345	Asteraceae		*Pluchea*		*rubelliflora*																+	
345	Asteraceae		*Pluchea*		sp.																	
345	Asteraceae		*Pterocaulon*		*sphacelatum*									+					+			
345	Asteraceae		*Pterocaulon*		*sphaeranthoides*													+	+		+	
345	Asteraceae		*Streptoglossa*		*bubakii*										+		+	+		+		
345	Asteraceae		*Streptoglossa*		*decurrens*													+				
345	Asteraceae		*Streptoglossa*		*liatroides*										+							+
345	Asteraceae		*Streptoglossa*		sp.																	

APPENDIX B: SUMMARY OF VASCULAR FLORA SPECIES RECRDED AT EACH QUADRAT WITHIN THE ANKETELL POINT TRANSPORT CORRIDOR BETWEEN 2008 - 2009

NB * denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ37	APQ38	APQ39	APQ40	APQ41	APQ42_1	APQ43	APQ44	APQ45
13	Marsileaceae		*Marsilea*		*hirsuta*																	
31	Poaceae		*Aristida*		*contorta*										+		+			+		
31	Poaceae		*Aristida*		*holathera*		var.		*holathera*													
31	Poaceae		*Aristida*		*latifolia*																	
31	Poaceae		*Aristida*		sp.																	
31	Poaceae		*Astrebla*		*pectinata*																	
31	Poaceae		*Bothriochloa*		*ewartiana*																	
31	Poaceae		*Brachyachne*		*convergens*																	
31	Poaceae		*Brachyachne*		*prostrata*																	
31	Poaceae	*	*Cenchrus*		*ciliaris*									+								
31	Poaceae		*Chloris*		*pectinata*																	
31	Poaceae		*Chrysopogon*		*fallax*													+				
31	Poaceae		*Cymbopogon*		*ambiguus*																	
31	Poaceae		*Cymbopogon*		*procerus*																	
31	Poaceae		*Dactyloctenium*		*radulans*																	
31	Poaceae		*Dichanthium*		*sericeum*		subsp.		*humilius*													
31	Poaceae		*Digitaria*		*ctenantha*																	
31	Poaceae		*Enneapogon*		*caerulescens*		var.		*caerulescens*							+					+	
31	Poaceae		*Enneapogon*		*polyphyllus*																	
31	Poaceae		*Enteropogon*		*ramosus*																	
31	Poaceae		*Eragrostis*		*falcata*																	
31	Poaceae		*Eragrostis*		*setifolia*																	
31	Poaceae		*Eragrostis*		*tenellula*																	
31	Poaceae		*Eragrostis*		*xerophila*																	
31	Poaceae		*Eriachne*	aff.					*mucronata*									+				
31	Poaceae		*Eriachne*		*benthamii*													+				
31	Poaceae		*Eriachne*		*obtusa*																	
31	Poaceae		*Eriachne*		*pulchella*		subsp.		*dominii*						+		+					
31	Poaceae		*Eriachne*		*pulchella*		subsp.		*pulchella*								+			+	+	
31	Poaceae		*Eulalia*		*aurea*																	
31	Poaceae		*Iseilema*		*dolichotrichum*														+	+		
31	Poaceae		*Iseilema*		*eremaeum*																	
31	Poaceae		*Iseilema*		*macratherum*																	
31	Poaceae		*Panicum*		*decompositum*																	
31	Poaceae		*Panicum*		*laevinode*																	
31	Poaceae		*Paraneurachne*		*muelleri*											+						
31	Poaceae		*Paspalidium*		*clementii*																	
31	Poaceae		*Paspalidium*		*tabulatum*																	
31	Poaceae		*Paspalidium*		*tabulatum*					(Whim Creek form)												
31	Poaceae		*Schizachyrium*		*fragile*																	
31	Poaceae		*Setaria*		*dielsii*																	
31	Poaceae		*Sorghum*		*plumosum*		var.		*plumosum*													
31	Poaceae		*Sorghum*		*timorense*																	
31	Poaceae		*Sporobolus*		*australasicus*															+		
31	Poaceae		*Sporobolus*		*virginicus*																	
31	Poaceae		*Themeda*		*triandra*									+								
31	Poaceae		*Triodia*	aff.	*epactia*																	
31	Poaceae		*Triodia*	aff.	*pungens*																	
31	Poaceae		*Triodia*	aff.	*wiseana*									+								
31	Poaceae		*Triodia*		*angusta*									+								
31	Poaceae		*Triodia*		*brizoides*																	
31	Poaceae		*Triodia*		*epactia*																	
31	Poaceae		*Triodia*		*wiseana*													+	+			
31	Poaceae		*Triodia*		*wiseana*					(fine form)					+	+	+			+	+	+
31	Poaceae		*Urochloa*		*pubigera*																	
31	Poaceae		*Xerochloa*		*barbata*																	
31	Poaceae		*Xerochloa*		*imberbis*																	
31	Poaceae		*Yakirra*		*australiensis*		var.		*australiensis*													
32	Cyperaceae		*Bulbostylis*		*barbata*																	
32	Cyperaceae		*Cyperus*		*difformis*																	
32	Cyperaceae		*Cyperus*		*iria*																	
32	Cyperaceae		*Cyperus*		*pygmaeus*																	
32	Cyperaceae		*Cyperus*		*vaginatus*																	
32	Cyperaceae		*Fimbristylis*	aff.	*dichotoma*						(M15-4)						+			+		+
90	Proteaceae		*Grevillea*		*pyramidalis*																	
90	Proteaceae		*Grevillea*		*pyramidalis*		subsp.		*leucadendron*							+						
90	Proteaceae		*Hakea*		*lorea*		subsp.		*lorea*									+			+	
92	Santalaceae		*Santalum*		*lanceolatum*									+								
107	Nyctaginaceae		*Boerhavia*		*burbidgeana*																	
107	Nyctaginaceae		*Boerhavia*		*coccinea*																	
105	Chenopodiaceae		*Dysphania*		*rhadinostachya*		subsp.		*rhadinostachya*													

APPENDIX B: SUMMARY OF VASCULAR FLORA SPECIES RECRDED AT EACH QUADRAT WITHIN THE ANKETELL POINT TRANSPORT CORRIDOR BETWEEN 2008 - 2009

NB * denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ37	APQ38	APQ39	APQ40	APQ41	APQ42_1	APQ43	APQ44	APQ45
105	Chenopodiaceae		*Enchylaena*		*tomentosa*																	
105	Chenopodiaceae		*Enchylaena*		*tomentosa*		var.		*tomentosa*													
105	Chenopodiaceae		*Rhagodia*		*eremaea*																	
105	Chenopodiaceae		*Salsola*		*tragus*																	
105	Chenopodiaceae		*Salsola*		*tragus*		subsp.		*grandiflora*													
105	Chenopodiaceae		*Salsola*		*tragus*		subsp.		*tragus*													
105	Chenopodiaceae		*Sclerolaena*		*bicornis*																	
105	Chenopodiaceae		*Sclerolaena*		*costata*																	
105	Chenopodiaceae		*Sclerolaena*		*densiflora*																	
105	Chenopodiaceae		*Sclerolaena*		*eriacantha*																	
105	Chenopodiaceae		*Sclerolaena*		*glabra*																	
106	Amaranthaceae	*	*Aerva*		*javanica*																	
106	Amaranthaceae		*Alternanthera*		*angustifolia*																	
106	Amaranthaceae		*Alternanthera*		*nana*									+								
106	Amaranthaceae		*Alternanthera*		*nodiflora*																	
106	Amaranthaceae		*Amaranthus*		*undulatus*																	
106	Amaranthaceae		*Gomphrena*		*affinis*		subsp.		*pilbarensis*								+					
106	Amaranthaceae		*Gomphrena*		*canescens*		subsp.		*canescens*										+			
106	Amaranthaceae		*Gomphrena*		*cunninghamii*										+							
106	Amaranthaceae		*Ptilotus*		*?exaltatus*		var.		*exaltatus*													
106	Amaranthaceae		*Ptilotus*		*aervoides*																	
106	Amaranthaceae		*Ptilotus*		*astrolasius*		var.		*astrolasius*													
106	Amaranthaceae		*Ptilotus*		*auriculifolius*																	
106	Amaranthaceae		*Ptilotus*		*calostachyus*																	
106	Amaranthaceae		*Ptilotus*		*calostachyus*		var.		*calostachyus*													
106	Amaranthaceae		*Ptilotus*		*carinatus*										+	+	+					
106	Amaranthaceae		*Ptilotus*		*clementii*										+						+	
106	Amaranthaceae		*Ptilotus*		*exaltatus*											+	+					
106	Amaranthaceae		*Ptilotus*		*exaltatus*		var.		*exaltatus*						+						+	
106	Amaranthaceae		*Ptilotus*		*fusiformis*																	
106	Amaranthaceae		*Ptilotus*		*fusiformis*		var.		*fusiformis*													
106	Amaranthaceae		*Ptilotus*		*gomphrenoides*		var.		*gomphrenoides*													
106	Amaranthaceae		*Ptilotus*		*helipteroides*														+			
106	Amaranthaceae		*Ptilotus*		*helipteroides*		var.		*helipteroides*												+	
106	Amaranthaceae		*Ptilotus*		*murrayi*		var.		*murrayi*													
106	Amaranthaceae		*Ptilotus*		*obovatus*		var.		*obovatus*													
110	Aizoaceae		*Trianthema*	aff.	*triquetra*						(M3.35)											
110	Aizoaceae		*Trianthema*		sp. Python Pool																	
110A	Molluginaceae		*Mollugo*		*molluginea*																	
111	Portulacaceae		*Portulaca*		*conspicua*																	
111	Portulacaceae	*	*Portulaca*		*oleracea*																	
113	Caryophyllaceae		*Polycarpaea*		*corymbosa*		var.		*corymbosa*													
113	Caryophyllaceae		*Polycarpaea*		*holtzei*										+							
113	Caryophyllaceae		*Polycarpaea*		*longiflora*												+					
113	Caryophyllaceae		*Polycarpaea*		*longiflora*					(Whim Creek form WC141-1)												
113	Caryophyllaceae		*Polycarpaea*		*longiflora*					(white form)							+					+
122	Menispermaceae		*Tinospora*		*smilacina*																	+
131	Lauraceae		*Cassytha*		*capillaris*														+		+	
137A	Capparaceae		*Capparis*		*spinosa*		var.		*nummularia*													
137A	Capparaceae		*Cleome*		*viscosa*																	
138	Brassicaceae		*Lepidium*		*pedicellosum*																	
138	Brassicaceae		*Lepidium*		*pholidogynum*																	
163	Mimosaceae		*Acacia*		*ancistrocarpa*									+			+				+	+
163	Mimosaceae		*Acacia*		*ancistrocarpa*				*x stellaticeps*													
163	Mimosaceae		*Acacia*		*acradenia*																	
163	Mimosaceae		*Acacia*		*adsurgens*																	+
163	Mimosaceae		*Acacia*		*bivenosa*									+	+	+			+	+	+	+
163	Mimosaceae		*Acacia*		*colei*		var.		*colei*													
163	Mimosaceae		*Acacia*		*coriacea*		subsp.		*coriacea*					+								
163	Mimosaceae		*Acacia*		*coriacea*		subsp.		*pendens*													
163	Mimosaceae		*Acacia*		*cowleana*									+	+							
163	Mimosaceae		*Acacia*		*elachantha*					(golden hairy variant)					+							
163	Mimosaceae		*Acacia*		*inaequilatera*										+			+	+	+	+	
163	Mimosaceae		*Acacia*		*ligulata*																	
163	Mimosaceae		*Acacia*		*maitlandii*										+							
163	Mimosaceae		*Acacia*		*pyrifolia*		var.		pyrifolia					+	+	+						+
163	Mimosaceae		*Acacia*		*sclerosperma*		subsp.		*sclerosperma*													
163	Mimosaceae		*Acacia*		*stellaticeps*																	
163	Mimosaceae		*Acacia*		*synchronicia*															+	+	
163	Mimosaceae		*Acacia*		*tenuissima*										+							
163	Mimosaceae		*Acacia*		*trachycarpa*									+								

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FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ37	APQ38	APQ39	APQ40	APQ41	APQ42_1	APQ43	APQ44	APQ45
163	Mimosaceae		*Acacia*		*trachycarpa x tumida*		var.		*pilbarensis*					+								
163	Mimosaceae		*Acacia*		*trudgeniana*																	
163	Mimosaceae		*Acacia*		*tumida*		var.		*pilbarensis*					+								
163	Mimosaceae		*Acacia*		*victoriae*																	
163	Mimosaceae		*Acacia*		*xiphophylla*																	
163	Mimosaceae		*Dichrostachys*		*spicata*																	
163	Mimosaceae		*Neptunia*		*dimorphantha*																	
163	Mimosaceae	*	*Prosopis*		*pallida*																	
163	Mimosaceae	*	*Vachellia*		*farnesiana*																	
164	Caesalpiniaceae		*Petalostylis*		*labicheoides*											+						
164	Caesalpiniaceae		*Senna*		*artemisioides*	aff.	subsp.		*oligophylla*	(thinly sericeous)												
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla*													
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla*					+		+			+			
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla x helmsii*													
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*glutinosa*													+
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*glutinosa x luerssenii*								+					
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*luerssenii*						+					+	+	
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*pruinosa*						+						+	
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*x luerssenii*							+	+		+			
164	Caesalpiniaceae		*Senna*		*hamersleyensis*																	
164	Caesalpiniaceae		*Senna*		*notabilis*									+	+							
164	Caesalpiniaceae		*Senna*		sp. Karijini						(M.E. Trudgen 10392)				+							
164	Caesalpiniaceae		*Senna*		*venusta*																	+
165	Papilionaceae		*Alysicarpus*		*muelleri*																	
165	Papilionaceae		*Cajanus*		*cinereus*																	
165	Papilionaceae		*Crotalaria*		*dissitiflora*		subsp.		*benthamiana*													
165	Papilionaceae		*Crotalaria*		*medicaginea*		var.		*neglecta*					+								
165	Papilionaceae		*Crotalaria*		*novae-hollandiae*		subsp.		*novae-hollandiae*													+
165	Papilionaceae		*Cullen*		*cinereum*																	
165	Papilionaceae		*Cullen*		*graveolens*																	
165	Papilionaceae		*Cullen*		*leucanthum*																	+
165	Papilionaceae		*Desmodium*		*campylocaulon*																	
165	Papilionaceae		*Desmodium*		*muelleri*																	
165	Papilionaceae		*Indigastrum*		*parviflorum*																	
165	Papilionaceae		*Indigofera*	aff.	*monophylla*																	
165	Papilionaceae		*Indigofera*		*colutea*									+								
165	Papilionaceae		*Indigofera*		*linifolia*									+			+					
165	Papilionaceae		*Indigofera*		*linnaei*									+								
165	Papilionaceae		*Indigofera*		*monophylla*									+	+	+			+			
165	Papilionaceae		*Indigofera*		*monophylla*					(Burrup form)												
165	Papilionaceae		*Indigofera*		*monophylla*					(Cape Preston form)					+	+	+			+		
165	Papilionaceae		*Indigofera*		*monophylla*					(grey leaflet form)												
165	Papilionaceae		*Indigofera*		*monophylla*					(grey/green leaflet form)												
165	Papilionaceae		*Indigofera*		*monophylla*						(MJOPP-2)											+
165	Papilionaceae		*Indigofera*		*trita*																	
165	Papilionaceae		*Isotropis*		*atropurpurea*																	
165	Papilionaceae		*Rhynchosia*		*minima*											+			+		+	
165	Papilionaceae		*Sesbania*		*cannabina*												+					
165	Papilionaceae		*Swainsona*		*canescens*									+								
165	Papilionaceae		*Swainsona*		*formosa*									+								
165	Papilionaceae		*Tephrosia*	aff.	*clementii*						(4) (M35-14)											
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD133-20)										+	
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD205-10)											
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD88-4)											
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(MET 12,351)											
165	Papilionaceae		*Tephrosia*		*clementii*																+	
165	Papilionaceae		*Tephrosia*		*rosea*		var.		*clementii*					+								
165	Papilionaceae		*Tephrosia*		sp. B Kimberley Flora						(C.A. Gardner 1300)											
165	Papilionaceae		*Tephrosia*		*supina*																	
165	Papilionaceae		*Vigna*		*lanceolata*		var.		*lanceolata*					+								
165	Papilionaceae		*Vigna*		sp. rockpiles						(R.Butcher *et al* ., RB1400)											
165	Papilionaceae		*Vigna*		sp. central						(MET 1626)	2										
167	Geraniaceae		*Erodium*		*cygnorum*																	
173	Zygophyllaceae		*Tribulus*		*hirsutus*																	
173	Zygophyllaceae		*Tribulus*		*suberosus*																	
183	Polygalaceae		*Polygala*	aff.	*isingii*										+		+			+		
185	Euphorbiaceae		*Adriana*		*tomentosa*		var.		*tomentosa*													
185	Euphorbiaceae		*Euphorbia*	aff.	*australis*																	
185	Euphorbiaceae		*Euphorbia*		*australis*										+		+			+		
185	Euphorbiaceae		*Euphorbia*		*biconvexa*																	+
185	Euphorbiaceae		*Euphorbia*		*boophthona*															+		

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FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ37	APQ38	APQ39	APQ40	APQ41	APQ42_1	APQ43	APQ44	APQ45
185	Euphorbiaceae		*Euphorbia*		*coghlanii*																	
185	Euphorbiaceae		*Euphorbia*		sp.									+								
185	Euphorbiaceae		*Euphorbia*		sp.						(BPBS10-50)										+	
185	Euphorbiaceae		*Euphorbia*		*tannensis*		subsp.		*eremophila*	(Burrup form)												
185	Euphorbiaceae		*Euphorbia*		*wheeleri*																	+
185	Euphorbiaceae		*Leptopus*		*decaisnei*																	
185	Euphorbiaceae		*Leptopus*		*decaisnei*		var.		*orbicularis*						+							
185	Euphorbiaceae		*Phyllanthus*		*maderaspatensis*									+								
207	Sapindaceae		*Diplopeltis*		*eriocarpa*																	
220	Tiliaceae		*Corchorus*	aff.	*parviflorus*																	
220	Tiliaceae		*Corchorus*	aff.	*parviflorus*						(JW 11-11)											
220	Tiliaceae		*Corchorus*	aff.	*walcotti*						(K.J. Atkins 510)											
220	Tiliaceae		*Corchorus*		*laniflorus*										+						+	
220	Tiliaceae		*Corchorus*		sp..														+			
220	Tiliaceae		*Corchorus*		*tectus*												+					
220	Tiliaceae		*Corchorus*		*tridens*																	
220	Tiliaceae		*Triumfetta*		*appendiculata*																	+
220	Tiliaceae		*Triumfetta*		*clementii*									+	+	+	+		+	+	+	+
221	Malvaceae		*Abutilon*	aff.	*lepidum*						(1) (MET 15,352)											
221	Malvaceae		*Abutilon*	aff.	*lepidum*						(4)						+					+
221	Malvaceae		*Abutilon*		*amplum*									+								
221	Malvaceae		*Abutilon*		*fraseri*																	
221	Malvaceae		*Abutilon*		*lepidum*																	
221	Malvaceae		*Abutilon*		*oxycarpum*		subsp.		*prostratum*													
221	Malvaceae		*Gossypium*		*australe*					(Burrup Peninsula form)				+								
221	Malvaceae		*Gossypium*		*australe*					(Whim Creek form)												
221	Malvaceae		*Hibiscus*	aff.	*platychlamys*						(MET 15,061)						+					
221	Malvaceae		*Hibiscus*		*brachysiphonius*																	
221	Malvaceae		*Hibiscus*		*coatesii*																	
221	Malvaceae		*Hibiscus*		*sturtii*		var.		*campylochlamys*						+							
221	Malvaceae		*Hibiscus*		*sturtii*		var.		*platychlamys*													
221	Malvaceae	*	*Malvastrum*		*americanum*									+								
221	Malvaceae		*Sida*	aff.	*echinocarpa*						(MET 15,350)									+		
221	Malvaceae		*Sida*	aff.	*fibulifera*						(HD200-6)											
221	Malvaceae		*Sida*	aff.	*fibulifera*					(oblong)	(MET 15220)											
221	Malvaceae		*Sida*		*arsiniata*																	
221	Malvaceae		*Sida*		*clementii*										+							
221	Malvaceae		*Sida*		*echinocarpa*														+			
221	Malvaceae		*Sida*		*pilbarensis*					(Ferrugineous form)												
221	Malvaceae		*Sida*		sp. spiciform panicles						(E. Leyland s.n. 14/08/1990)						+					
221	Malvaceae		*Sida*		*spinosa*											+	+					
223	Sterculiaceae		*Brachychiton*		*acuminatus*																	
223	Sterculiaceae		*Melhania*		sp. Burrup																	
223	Sterculiaceae		*Melhania*		sp.						(CH15-39)			+								
223	Sterculiaceae		*Waltheria*		*indica*																	
235	Elatinaceae		*Bergia*		*pedicellaris*																	
243	Violaceae		*Hybanthus*		*aurantiacus*									+		+					+	
248	Passifloraceae	*	*Passiflora*		*foetida*		var.		*hispida*													
265	Lythraceae		*Ammannia*		*auriculata*																	
265	Lythraceae		*Ammannia*		*baccifera*																	
273	Myrtaceae		*Corymbia*		*hamersleyana*									+		+						
273	Myrtaceae		*Eucalyptus*		*camaldulensis*																	
273	Myrtaceae		*Eucalyptus*		*victrix*									+								
273	Myrtaceae		*Melaleuca*		*glomerata*																	
281	Apiaceae		*Trachymene*		*oleracea*		subsp.		*oleracea*						+		+		+			
301	Oleaceae		*Jasminum*		*didymum*		subsp.		*lineare*													
305	Asclepiadaceae		*Sarcostemma*		*viminale*		subsp.		*australe*											+		
307	Convolvulaceae		*Bonamia*		*media*		var.		*villosa*						+		+					
307	Convolvulaceae		*Bonamia*		*rosea*										+							
307	Convolvulaceae		*Duperreya*		*commixta*																	
307	Convolvulaceae		*Evolvulus*		*alsinoides*		var.		*decumbens*													
307	Convolvulaceae		*Evolvulus*		*alsinoides*		var.		*villosicalyx*								+		+			
307	Convolvulaceae		*Ipomoea*		*coptica*																	
307	Convolvulaceae		*Ipomoea*		*costata*																	+
307	Convolvulaceae		*Ipomoea*		*muelleri*																	
307	Convolvulaceae		*Ipomoea*		*plebeia*																	
307	Convolvulaceae		*Ipomoea*		*polymorpha*																	
307	Convolvulaceae		*Operculina*		*aequisepala*																	
307	Convolvulaceae		*Polymeria*		*ambigua*									+								
307	Convolvulaceae		*Polymeria*		sp.						(site 1365)											
310	Boraginaceae		*Ehretia*		*saligna*		var.		*saligna*					+		+						

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NB * denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ37	APQ38	APQ39	APQ40	APQ41	APQ42_1	APQ43	APQ44	APQ45
310	Boraginaceae		*Heliotropium*		*conocarpum*																	
310	Boraginaceae		*Heliotropium*		*cunninghamii*																	
310	Boraginaceae		*Heliotropium*		*heteranthum*																	
310	Boraginaceae		*Heliotropium*		*inexplicitum*																	
310	Boraginaceae		*Heliotropium*		*ovalifolium*																	
310	Boraginaceae		*Trichodesma*		*zeylanicum*														+			
310	Boraginaceae		*Trichodesma*		*zeylanicum*		var.		*zeylanicum*					+		+	+				+	+
311	Verbenaceae		*Clerodendrum*		*tomentosum*		var.		*lanceolatum*													
315	Solanaceae		*Solanum*		*diversiflorum*														+			
315	Solanaceae		*Solanum*		*gabrielae*																	
315	Solanaceae		*Solanum*		*horridum*										+							
315	Solanaceae		*Solanum*		*lasiophyllum*												+		+			
316	Scrophulariaceae		*Stemodia*		*grossa*																	
316	Scrophulariaceae		*Stemodia*		*kingii*														+			
325	Acanthaceae		*Dicliptera*		*armata*																	
326	Myoporaceae		*Eremophila*		*forrestii*																	
326	Myoporaceae		*Eremophila*		*forrestii*		subsp.		*forrestii*												+	
326	Myoporaceae		*Eremophila*		*longifolia*									+								
331	Rubiaceae		*Synaptantha*		*tillaeacea*		var.		*tillaeacea*													
337	Cucurbitaceae	*	*Citrullus*		*colocynthis*														+			
337	Cucurbitaceae		*Cucumis*		*maderaspatanus*															+	+	+
337	Cucurbitaceae	*	*Cucumis*		*melo*		subsp.		*agrestis*													
337	Cucurbitaceae		*Trichosanthes*		*cucumerina*																	
341	Goodeniaceae		*Goodenia*		*forrestii*																	
341	Goodeniaceae		*Goodenia*		*lamprosperma*														+			
341	Goodeniaceae		*Goodenia*		*microptera*																	
341	Goodeniaceae		*Goodenia*		*pascua*																	
341	Goodeniaceae		*Goodenia*		*stobbsiana*																	
341	Goodeniaceae		*Scaevola*		*spinescens*																	
341	Goodeniaceae		*Scaevola*		*spinescens*					(broad leaf form)				+		+					+	
341	Goodeniaceae		*Scaevola*		*spinescens*					(narrow form)												
345	Asteraceae		*Flaveria*		*australasica*		subsp.			gilgai		3										
345	Asteraceae		*Pentalepis*		*trichodesmoides*																	+
345	Asteraceae		*Pluchea*		*rubelliflora*																	
345	Asteraceae		*Pluchea*		sp.																	
345	Asteraceae		*Pterocaulon*		*sphacelatum*																+	
345	Asteraceae		*Pterocaulon*		*sphaeranthoides*									+								
345	Asteraceae		*Streptoglossa*		*bubakii*										+		+					
345	Asteraceae		*Streptoglossa*		*decurrens*																	
345	Asteraceae		*Streptoglossa*		*liatroides*																	
345	Asteraceae		*Streptoglossa*		sp.																	

APPENDIX B: SUMMARY OF VASCULAR FLORA SPECIES RECRDED AT EACH QUADRAT WITHIN THE ANKETELL POINT TRANSPORT CORRIDOR BETWEEN 2008 - 2009

NB * denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ46	APQ47	APQ48	APQ49	APQ50	APQ51	APQ52	APQ53	APQ54
13	Marsileaceae		*Marsilea*		*hirsuta*																	
31	Poaceae		*Aristida*		*contorta*											+					+	
31	Poaceae		*Aristida*		*holathera*		var.		*holathera*													
31	Poaceae		*Aristida*		*latifolia*																	
31	Poaceae		*Aristida*		sp.																	
31	Poaceae		*Astrebla*		*pectinata*																	
31	Poaceae		*Bothriochloa*		*ewartiana*																	
31	Poaceae		*Brachyachne*		*convergens*																	
31	Poaceae		*Brachyachne*		*prostrata*										+							
31	Poaceae	*	*Cenchrus*		*ciliaris*															+		
31	Poaceae		*Chloris*		*pectinata*																	
31	Poaceae		*Chrysopogon*		*fallax*																	
31	Poaceae		*Cymbopogon*		*ambiguus*													+				
31	Poaceae		*Cymbopogon*		*procerus*																	
31	Poaceae		*Dactyloctenium*		*radulans*															+		+
31	Poaceae		*Dichanthium*		*sericeum*		subsp.		*humilius*													
31	Poaceae		*Digitaria*		*ctenantha*																	
31	Poaceae		*Enneapogon*		*caerulescens*		var.		*caerulescens*													
31	Poaceae		*Enneapogon*		*polyphyllus*																	
31	Poaceae		*Enteropogon*		*ramosus*																	
31	Poaceae		*Eragrostis*		*falcata*																	
31	Poaceae		*Eragrostis*		*setifolia*																	
31	Poaceae		*Eragrostis*		*tenellula*																	
31	Poaceae		*Eragrostis*		*xerophila*										+					+		+
31	Poaceae		*Eriachne*	aff.					*mucronata*													
31	Poaceae		*Eriachne*		*benthamii*																	
31	Poaceae		*Eriachne*		*obtusa*																	
31	Poaceae		*Eriachne*		*pulchella*		subsp.		*dominii*										+			
31	Poaceae		*Eriachne*		*pulchella*		subsp.		*pulchella*						+							
31	Poaceae		*Eulalia*		*aurea*																	
31	Poaceae		*Iseilema*		*dolichotrichum*																	
31	Poaceae		*Iseilema*		*eremaeum*																	
31	Poaceae		*Iseilema*		*macratherum*																	
31	Poaceae		*Panicum*		*decompositum*																	
31	Poaceae		*Panicum*		*laevinode*																	
31	Poaceae		*Paraneurachne*		*muelleri*									+							+	
31	Poaceae		*Paspalidium*		*clementii*										+							
31	Poaceae		*Paspalidium*		*tabulatum*													+				
31	Poaceae		*Paspalidium*		*tabulatum*					(Whim Creek form)												
31	Poaceae		*Schizachyrium*		*fragile*																	
31	Poaceae		*Setaria*		*dielsii*																	
31	Poaceae		*Sorghum*		*plumosum*		var.		*plumosum*													
31	Poaceae		*Sorghum*		*timorense*																	
31	Poaceae		*Sporobolus*		*australasicus*																	+
31	Poaceae		*Sporobolus*		*virginicus*																	
31	Poaceae		*Themeda*		*triandra*																	
31	Poaceae		*Triodia*	aff.	*epactia*																	
31	Poaceae		*Triodia*	aff.	*pungens*																	
31	Poaceae		*Triodia*	aff.	*wiseana*																	
31	Poaceae		*Triodia*		*angusta*																	
31	Poaceae		*Triodia*		*brizoides*																	
31	Poaceae		*Triodia*		*epactia*																	
31	Poaceae		*Triodia*		*wiseana*																	
31	Poaceae		*Triodia*		*wiseana*					(fine form)				+	+	+	+	+	+	+	+	
31	Poaceae		*Urochloa*		*pubigera*																	
31	Poaceae		*Xerochloa*		*barbata*															+		+
31	Poaceae		*Xerochloa*		*imberbis*																	
31	Poaceae		*Yakirra*		*australiensis*		var.		*australiensis*							+						
32	Cyperaceae		*Bulbostylis*		*barbata*										+	+				+		
32	Cyperaceae		*Cyperus*		*difformis*																	
32	Cyperaceae		*Cyperus*		*iria*																	
32	Cyperaceae		*Cyperus*		*pygmaeus*																	
32	Cyperaceae		*Cyperus*		*vaginatus*																	
32	Cyperaceae		*Fimbristylis*	aff.	*dichotoma*						(M15-4)					+						
90	Proteaceae		*Grevillea*		*pyramidalis*																	
90	Proteaceae		*Grevillea*		*pyramidalis*		subsp.		*leucadendron*													
90	Proteaceae		*Hakea*		*lorea*		subsp.		*lorea*								+	+	+			
92	Santalaceae		*Santalum*		*lanceolatum*																	
107	Nyctaginaceae		*Boerhavia*		*burbidgeana*																	
107	Nyctaginaceae		*Boerhavia*		*coccinea*																	
105	Chenopodiaceae		*Dysphania*		*rhadinostachya*		subsp.		*rhadinostachya*													

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FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ46	APQ47	APQ48	APQ49	APQ50	APQ51	APQ52	APQ53	APQ54
105	Chenopodiaceae		*Enchylaena*		*tomentosa*																	+
105	Chenopodiaceae		*Enchylaena*		*tomentosa*		var.		*tomentosa*													
105	Chenopodiaceae		*Rhagodia*		*eremaea*																	
105	Chenopodiaceae		*Salsola*		*tragus*																	
105	Chenopodiaceae		*Salsola*		*tragus*		subsp.		*grandiflora*													
105	Chenopodiaceae		*Salsola*		*tragus*		subsp.		*tragus*													
105	Chenopodiaceae		*Sclerolaena*		*bicornis*															+		
105	Chenopodiaceae		*Sclerolaena*		*costata*																	
105	Chenopodiaceae		*Sclerolaena*		*densiflora*																	
105	Chenopodiaceae		*Sclerolaena*		*eriacantha*																	
105	Chenopodiaceae		*Sclerolaena*		*glabra*															+		
106	Amaranthaceae	*	*Aerva*		*javanica*																	
106	Amaranthaceae		*Alternanthera*		*angustifolia*																	
106	Amaranthaceae		*Alternanthera*		*nana*																	
106	Amaranthaceae		*Alternanthera*		*nodiflora*																	
106	Amaranthaceae		*Amaranthus*		*undulatus*																	
106	Amaranthaceae		*Gomphrena*		*affinis*		subsp.		*pilbarensis*											+		
106	Amaranthaceae		*Gomphrena*		*canescens*		subsp.		*canescens*													
106	Amaranthaceae		*Gomphrena*		*cunninghamii*													+				
106	Amaranthaceae		*Ptilotus*		*?exaltatus*		var.		*exaltatus*													
106	Amaranthaceae		*Ptilotus*		*aervoides*																	
106	Amaranthaceae		*Ptilotus*		*astrolasius*		var.		*astrolasius*												+	+
106	Amaranthaceae		*Ptilotus*		*auriculifolius*																+	
106	Amaranthaceae		*Ptilotus*		*calostachyus*																	
106	Amaranthaceae		*Ptilotus*		*calostachyus*		var.		*calostachyus*												+	
106	Amaranthaceae		*Ptilotus*		*carinatus*																	
106	Amaranthaceae		*Ptilotus*		*clementii*									+								
106	Amaranthaceae		*Ptilotus*		*exaltatus*																	
106	Amaranthaceae		*Ptilotus*		*exaltatus*		var.		*exaltatus*					+	+	+	+		+		+	+
106	Amaranthaceae		*Ptilotus*		*fusiformis*																	
106	Amaranthaceae		*Ptilotus*		*fusiformis*		var.		*fusiformis*													
106	Amaranthaceae		*Ptilotus*		*gomphrenoides*		var.		*gomphrenoides*													
106	Amaranthaceae		*Ptilotus*		*helipteroides*																	
106	Amaranthaceae		*Ptilotus*		*helipteroides*		var.		*helipteroides*						+							
106	Amaranthaceae		*Ptilotus*		*murrayi*		var.		*murrayi*											+		
106	Amaranthaceae		*Ptilotus*		*obovatus*		var.		*obovatus*													
110	Aizoaceae		*Trianthema*	aff.	*triquetra*						(M3.35)											+
110	Aizoaceae		*Trianthema*		sp. Python Pool																+	
110A	Molluginaceae		*Mollugo*		*molluginea*																	
111	Portulacaceae		*Portulaca*		*conspicua*													+		+		
111	Portulacaceae	*	*Portulaca*		*oleracea*																	
113	Caryophyllaceae		*Polycarpaea*		*corymbosa*		var.		*corymbosa*													
113	Caryophyllaceae		*Polycarpaea*		*holtzei*																	
113	Caryophyllaceae		*Polycarpaea*		*longiflora*																	
113	Caryophyllaceae		*Polycarpaea*		*longiflora*					(Whim Creek form WC141-1)												
113	Caryophyllaceae		*Polycarpaea*		*longiflora*					(white form)								+				
122	Menispermaceae		*Tinospora*		*smilacina*													+				
131	Lauraceae		*Cassytha*		*capillaris*									+								
137A	Capparaceae		*Capparis*		*spinosa*		var.		*nummularia*													
137A	Capparaceae		*Cleome*		*viscosa*												+		+			
138	Brassicaceae		*Lepidium*		*pedicellosum*																	
138	Brassicaceae		*Lepidium*		*pholidogynum*																	
163	Mimosaceae		*Acacia*		*ancistrocarpa*																	
163	Mimosaceae		*Acacia*		*ancistrocarpa*				*x stellaticeps*													
163	Mimosaceae		*Acacia*		*acradenia*													+				
163	Mimosaceae		*Acacia*		*adsurgens*																	
163	Mimosaceae		*Acacia*		*bivenosa*									+		+	+		+		+	
163	Mimosaceae		*Acacia*		*colei*		var.		*colei*													
163	Mimosaceae		*Acacia*		*coriacea*		subsp.		*coriacea*													
163	Mimosaceae		*Acacia*		*coriacea*		subsp.		*pendens*													
163	Mimosaceae		*Acacia*		*cowleana*																	
163	Mimosaceae		*Acacia*		*elachantha*					(golden hairy variant)												
163	Mimosaceae		*Acacia*		*inaequilatera*									+			+					
163	Mimosaceae		*Acacia*		*ligulata*																	
163	Mimosaceae		*Acacia*		*maitlandii*																+	
163	Mimosaceae		*Acacia*		*pyrifolia*		var.		pyrifolia								+				+	
163	Mimosaceae		*Acacia*		*sclerosperma*		subsp.		*sclerosperma*													
163	Mimosaceae		*Acacia*		*stellaticeps*																	
163	Mimosaceae		*Acacia*		*synchronicia*											+						
163	Mimosaceae		*Acacia*		*tenuissima*																	
163	Mimosaceae		*Acacia*		*trachycarpa*																	

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NB * denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ46	APQ47	APQ48	APQ49	APQ50	APQ51	APQ52	APQ53	APQ54
163	Mimosaceae		*Acacia*		*trachycarpa x tumida*		var.		*pilbarensis*													
163	Mimosaceae		*Acacia*		*trudgeniana*														+			
163	Mimosaceae		*Acacia*		*tumida*		var.		*pilbarensis*													
163	Mimosaceae		*Acacia*		*victoriae*												+					
163	Mimosaceae		*Acacia*		*xiphophylla*										+					+	+	+
163	Mimosaceae		*Dichrostachys*		*spicata*																	
163	Mimosaceae		*Neptunia*		*dimorphantha*																	
163	Mimosaceae	*	*Prosopis*		*pallida*																	
163	Mimosaceae	*	*Vachellia*		*farnesiana*																	
164	Caesalpiniaceae		*Petalostylis*		*labicheoides*									+								
164	Caesalpiniaceae		*Senna*		*artemisioides*	aff.	subsp.		*oligophylla*	(thinly sericeous)												
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla*													
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla*													
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla x helmsii*						+		+					
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*glutinosa*					+				+				
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*glutinosa x luerssenii*							+						
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*luerssenii*													
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*pruinosa*					+		+						
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*x luerssenii*						+							
164	Caesalpiniaceae		*Senna*		*hamersleyensis*										+							+
164	Caesalpiniaceae		*Senna*		*notabilis*														+		+	
164	Caesalpiniaceae		*Senna*		sp. Karijini						(M.E. Trudgen 10392)											
164	Caesalpiniaceae		*Senna*		*venusta*																	
165	Papilionaceae		*Alysicarpus*		*muelleri*																	
165	Papilionaceae		*Cajanus*		*cinereus*																	
165	Papilionaceae		*Crotalaria*		*dissitiflora*		subsp.		*benthamiana*													
165	Papilionaceae		*Crotalaria*		*medicaginea*		var.		*neglecta*											+		
165	Papilionaceae		*Crotalaria*		*novae-hollandiae*		subsp.		*novae-hollandiae*													
165	Papilionaceae		*Cullen*		*cinereum*																	
165	Papilionaceae		*Cullen*		*graveolens*																	
165	Papilionaceae		*Cullen*		*leucanthum*																	
165	Papilionaceae		*Desmodium*		*campylocaulon*																	
165	Papilionaceae		*Desmodium*		*muelleri*																	
165	Papilionaceae		*Indigastrum*		*parviflorum*											+						
165	Papilionaceae		*Indigofera*	aff.	*monophylla*																	
165	Papilionaceae		*Indigofera*		*colutea*															+		
165	Papilionaceae		*Indigofera*		*linifolia*															+		
165	Papilionaceae		*Indigofera*		*linnaei*																	
165	Papilionaceae		*Indigofera*		*monophylla*																	
165	Papilionaceae		*Indigofera*		*monophylla*					(Burrup form)												
165	Papilionaceae		*Indigofera*		*monophylla*					(Cape Preston form)								+			+	
165	Papilionaceae		*Indigofera*		*monophylla*					(grey leaflet form)				+								
165	Papilionaceae		*Indigofera*		*monophylla*					(grey/green leaflet form)												
165	Papilionaceae		*Indigofera*		*monophylla*						(MJOPP-2)											
165	Papilionaceae		*Indigofera*		*trita*																	
165	Papilionaceae		*Isotropis*		*atropurpurea*																	
165	Papilionaceae		*Rhynchosia*		*minima*									+	+					+		
165	Papilionaceae		*Sesbania*		*cannabina*															+		
165	Papilionaceae		*Swainsona*		*canescens*																	
165	Papilionaceae		*Swainsona*		*formosa*																	
165	Papilionaceae		*Tephrosia*	aff.	*clementii*						(4) (M35-14)								+			
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD133-20)											
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD205-10)											+
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD88-4)								+			
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(MET 12,351)											
165	Papilionaceae		*Tephrosia*		*clementii*																	
165	Papilionaceae		*Tephrosia*		*rosea*		var.		*clementii*													
165	Papilionaceae		*Tephrosia*		sp. B Kimberley Flora						(C.A. Gardner 1300)											
165	Papilionaceae		*Tephrosia*		*supina*																	
165	Papilionaceae		*Vigna*		*lanceolata*		var.		*lanceolata*													
165	Papilionaceae		*Vigna*		sp. rockpiles						(R.Butcher *et al* ., RB1400)											
165	Papilionaceae		*Vigna*		sp. central						(MET 1626)	2										
167	Geraniaceae		*Erodium*		*cygnorum*																	
173	Zygophyllaceae		*Tribulus*		*hirsutus*																	
173	Zygophyllaceae		*Tribulus*		*suberosus*																	
183	Polygalaceae		*Polygala*	aff.	*isingii*																	
185	Euphorbiaceae		*Adriana*		*tomentosa*		var.		*tomentosa*													
185	Euphorbiaceae		*Euphorbia*	aff.	*australis*																	
185	Euphorbiaceae		*Euphorbia*		*australis*											+			+			
185	Euphorbiaceae		*Euphorbia*		*biconvexa*																	
185	Euphorbiaceae		*Euphorbia*		*boophthona*																	

APPENDIX B: SUMMARY OF VASCULAR FLORA SPECIES RECRDED AT EACH QUADRAT WITHIN THE ANKETELL POINT TRANSPORT CORRIDOR BETWEEN 2008 - 2009

NB * denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ46	APQ47	APQ48	APQ49	APQ50	APQ51	APQ52	APQ53	APQ54
185	Euphorbiaceae		*Euphorbia*		*coghlanii*																	
185	Euphorbiaceae		*Euphorbia*		sp.														+			
185	Euphorbiaceae		*Euphorbia*		sp.						(BPBS10-50)						+					
185	Euphorbiaceae		*Euphorbia*		*tannensis*		subsp.		*eremophila*	(Burrup form)												
185	Euphorbiaceae		*Euphorbia*		*wheeleri*																	
185	Euphorbiaceae		*Leptopus*		*decaisnei*																	
185	Euphorbiaceae		*Leptopus*		*decaisnei*		var.		*orbicularis*								+		+			
185	Euphorbiaceae		*Phyllanthus*		*maderaspatensis*														+			
207	Sapindaceae		*Diplopeltis*		*eriocarpa*																	
220	Tiliaceae		*Corchorus*	aff.	*parviflorus*																+	
220	Tiliaceae		*Corchorus*	aff.	*parviflorus*						(JW 11-11)							+	+			
220	Tiliaceae		*Corchorus*	aff.	*walcotti*						(K.J. Atkins 510)											
220	Tiliaceae		*Corchorus*		*laniflorus*											+	+					
220	Tiliaceae		*Corchorus*		sp..																	
220	Tiliaceae		*Corchorus*		*tectus*																	
220	Tiliaceae		*Corchorus*		*tridens*																	
220	Tiliaceae		*Triumfetta*		*appendiculata*																	
220	Tiliaceae		*Triumfetta*		*clementii*											+	+		+		+	
221	Malvaceae		*Abutilon*	aff.	*lepidum*						(1) (MET 15,352)											
221	Malvaceae		*Abutilon*	aff.	*lepidum*						(4)											
221	Malvaceae		*Abutilon*		*amplum*																	
221	Malvaceae		*Abutilon*		*fraseri*																	
221	Malvaceae		*Abutilon*		*lepidum*																	
221	Malvaceae		*Abutilon*		*oxycarpum*		subsp.		*prostratum*													
221	Malvaceae		*Gossypium*		*australe*					(Burrup Peninsula form)												
221	Malvaceae		*Gossypium*		*australe*					(Whim Creek form)								+			+	
221	Malvaceae		*Hibiscus*	aff.	*platychlamys*						(MET 15,061)										+	
221	Malvaceae		*Hibiscus*		*brachysiphonius*																	
221	Malvaceae		*Hibiscus*		*coatesii*																	
221	Malvaceae		*Hibiscus*		*sturtii*		var.		*campylochlamys*													
221	Malvaceae		*Hibiscus*		*sturtii*		var.		*platychlamys*										+			
221	Malvaceae	*	*Malvastrum*		*americanum*																	
221	Malvaceae		*Sida*	aff.	*echinocarpa*						(MET 15,350)					+	+				+	
221	Malvaceae		*Sida*	aff.	*fibulifera*						(HD200-6)			+								+
221	Malvaceae		*Sida*	aff.	*fibulifera*					(oblong)	(MET 15220)											
221	Malvaceae		*Sida*		*arsiniata*																+	
221	Malvaceae		*Sida*		*clementii*																	
221	Malvaceae		*Sida*		*echinocarpa*																	
221	Malvaceae		*Sida*		*pilbarensis*					(Ferrugineous form)									+			
221	Malvaceae		*Sida*		sp. spiciform panicles						(E. Leyland s.n. 14/08/1990)											
221	Malvaceae		*Sida*		*spinosa*																	
223	Sterculiaceae		*Brachychiton*		*acuminatus*													+				
223	Sterculiaceae		*Melhania*		sp. Burrup																	
223	Sterculiaceae		*Melhania*		sp.						(CH15-39)											
223	Sterculiaceae		*Waltheria*		*indica*																	
235	Elatinaceae		*Bergia*		*pedicellaris*																	
243	Violaceae		*Hybanthus*		*aurantiacus*														+			
248	Passifloraceae	*	*Passiflora*		*foetida*		var.		*hispida*													
265	Lythraceae		*Ammannia*		*auriculata*																	
265	Lythraceae		*Ammannia*		*baccifera*																	
273	Myrtaceae		*Corymbia*		*hamersleyana*									+			+		+			
273	Myrtaceae		*Eucalyptus*		*camaldulensis*																	
273	Myrtaceae		*Eucalyptus*		*victrix*																	
273	Myrtaceae		*Melaleuca*		*glomerata*																	
281	Apiaceae		*Trachymene*		*oleracea*		subsp.		*oleracea*							+					+	
301	Oleaceae		*Jasminum*		*didymum*		subsp.		*lineare*					+			+	+				
305	Asclepiadaceae		*Sarcostemma*		*viminale*		subsp.		*australe*													
307	Convolvulaceae		*Bonamia*		*media*		var.		*villosa*										+		+	
307	Convolvulaceae		*Bonamia*		*rosea*																	
307	Convolvulaceae		*Duperreya*		*commixta*																	
307	Convolvulaceae		*Evolvulus*		*alsinoides*		var.		*decumbens*													
307	Convolvulaceae		*Evolvulus*		*alsinoides*		var.		*villosicalyx*												+	
307	Convolvulaceae		*Ipomoea*		*coptica*													+				
307	Convolvulaceae		*Ipomoea*		*costata*																	
307	Convolvulaceae		*Ipomoea*		*muelleri*																	
307	Convolvulaceae		*Ipomoea*		*plebeia*																	
307	Convolvulaceae		*Ipomoea*		*polymorpha*																	
307	Convolvulaceae		*Operculina*		*aequisepala*																	
307	Convolvulaceae		*Polymeria*		*ambigua*																	
307	Convolvulaceae		*Polymeria*		sp.						(site 1365)											
310	Boraginaceae		*Ehretia*		*saligna*		var.		*saligna*													

APPENDIX B: SUMMARY OF VASCULAR FLORA SPECIES RECRDED AT EACH QUADRAT WITHIN THE ANKETELL POINT TRANSPORT CORRIDOR BETWEEN 2008 - 2009

NB * denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ46	APQ47	APQ48	APQ49	APQ50	APQ51	APQ52	APQ53	APQ54
310	Boraginaceae		*Heliotropium*		*conocarpum*																	
310	Boraginaceae		*Heliotropium*		*cunninghamii*																	
310	Boraginaceae		*Heliotropium*		*heteranthum*																	
310	Boraginaceae		*Heliotropium*		*inexplicitum*																	+
310	Boraginaceae		*Heliotropium*		*ovalifolium*																	
310	Boraginaceae		*Trichodesma*		*zeylanicum*																	
310	Boraginaceae		*Trichodesma*		*zeylanicum*		var.		*zeylanicum*												+	
311	Verbenaceae		*Clerodendrum*		*tomentosum*		var.		*lanceolatum*													
315	Solanaceae		*Solanum*		*diversiflorum*																+	
315	Solanaceae		*Solanum*		*gabrielae*													+				
315	Solanaceae		*Solanum*		*horridum*									+							+	
315	Solanaceae		*Solanum*		*lasiophyllum*																	
316	Scrophulariaceae		*Stemodia*		*grossa*																	
316	Scrophulariaceae		*Stemodia*		*kingii*																	
325	Acanthaceae		*Dicliptera*		*armata*																	
326	Myoporaceae		*Eremophila*		*forrestii*																	
326	Myoporaceae		*Eremophila*		*forrestii*		subsp.		*forrestii*													
326	Myoporaceae		*Eremophila*		*longifolia*												+		+			
331	Rubiaceae		*Synaptantha*		*tillaeacea*		var.		*tillaeacea*													
337	Cucurbitaceae	*	*Citrullus*		*colocynthis*																	
337	Cucurbitaceae		*Cucumis*		*maderaspatanus*													+				
337	Cucurbitaceae	*	*Cucumis*		*melo*		subsp.		*agrestis*													
337	Cucurbitaceae		*Trichosanthes*		*cucumerina*													+				
341	Goodeniaceae		*Goodenia*		*forrestii*														+			
341	Goodeniaceae		*Goodenia*		*lamprosperma*																	
341	Goodeniaceae		*Goodenia*		*microptera*												+				+	
341	Goodeniaceae		*Goodenia*		*pascua*																	
341	Goodeniaceae		*Goodenia*		*stobbsiana*																	
341	Goodeniaceae		*Scaevola*		*spinescens*																	
341	Goodeniaceae		*Scaevola*		*spinescens*					(broad leaf form)				+			+	+			+	
341	Goodeniaceae		*Scaevola*		*spinescens*					(narrow form)												
345	Asteraceae		*Flaveria*		*australasica*		subsp.			gilgai		3										
345	Asteraceae		*Pentalepis*		*trichodesmoides*																	
345	Asteraceae		*Pluchea*		*rubelliflora*																	
345	Asteraceae		*Pluchea*		sp.																	
345	Asteraceae		*Pterocaulon*		*sphacelatum*																	
345	Asteraceae		*Pterocaulon*		*sphaeranthoides*																	
345	Asteraceae		*Streptoglossa*		*bubakii*																	
345	Asteraceae		*Streptoglossa*		*decurrens*																	
345	Asteraceae		*Streptoglossa*		*liatroides*																	
345	Asteraceae		*Streptoglossa*		sp.																	

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NB * denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ55	APQ56	APQ57	APQ58	APQ59	APQ60	APQ70	APQ71	APQ72
13	Marsileaceae		*Marsilea*		*hirsuta*																	
31	Poaceae		*Aristida*		*contorta*									+		+				+		+
31	Poaceae		*Aristida*		*holathera*		var.		*holathera*													
31	Poaceae		*Aristida*		*latifolia*													+				
31	Poaceae		*Aristida*		sp.																	
31	Poaceae		*Astrebla*		*pectinata*																	
31	Poaceae		*Bothriochloa*		*ewartiana*																	
31	Poaceae		*Brachyachne*		*convergens*																	
31	Poaceae		*Brachyachne*		*prostrata*															+		
31	Poaceae	*	*Cenchrus*		*ciliaris*										+	+					+	+
31	Poaceae		*Chloris*		*pectinata*																	
31	Poaceae		*Chrysopogon*		*fallax*																+	
31	Poaceae		*Cymbopogon*		*ambiguus*																	
31	Poaceae		*Cymbopogon*		*procerus*																	
31	Poaceae		*Dactyloctenium*		*radulans*													+				
31	Poaceae		*Dichanthium*		*sericeum*		subsp.		*humilius*						+		+	+		+		
31	Poaceae		*Digitaria*		*ctenantha*																	
31	Poaceae		*Enneapogon*		*caerulescens*		var.		*caerulescens*						+							
31	Poaceae		*Enneapogon*		*polyphyllus*																	
31	Poaceae		*Enteropogon*		*ramosus*																	
31	Poaceae		*Eragrostis*		*falcata*																	
31	Poaceae		*Eragrostis*		*setifolia*																	
31	Poaceae		*Eragrostis*		*tenellula*												+				+	
31	Poaceae		*Eragrostis*		*xerophila*												+	+		+		
31	Poaceae		*Eriachne*	aff.					*mucronata*													
31	Poaceae		*Eriachne*		*benthamii*												+			+		
31	Poaceae		*Eriachne*		*obtusa*																	
31	Poaceae		*Eriachne*		*pulchella*		subsp.		*dominii*							+	+		+			
31	Poaceae		*Eriachne*		*pulchella*		subsp.		*pulchella*					+						+		
31	Poaceae		*Eulalia*		*aurea*																	
31	Poaceae		*Iseilema*		*dolichotrichum*										+	+						+
31	Poaceae		*Iseilema*		*eremaeum*																+	
31	Poaceae		*Iseilema*		*macratherum*												+	+				
31	Poaceae		*Panicum*		*decompositum*												+	+	+		+	
31	Poaceae		*Panicum*		*laevinode*																	
31	Poaceae		*Paraneurachne*		*muelleri*														+			
31	Poaceae		*Paspalidium*		*clementii*																	
31	Poaceae		*Paspalidium*		*tabulatum*																	
31	Poaceae		*Paspalidium*		*tabulatum*					(Whim Creek form)												
31	Poaceae		*Schizachyrium*		*fragile*																	
31	Poaceae		*Setaria*		*dielsii*																	
31	Poaceae		*Sorghum*		*plumosum*		var.		*plumosum*													
31	Poaceae		*Sorghum*		*timorense*																	
31	Poaceae		*Sporobolus*		*australasicus*														+			+
31	Poaceae		*Sporobolus*		*virginicus*																	
31	Poaceae		*Themeda*		*triandra*																+	
31	Poaceae		*Triodia*	aff.	*epactia*											+						
31	Poaceae		*Triodia*	aff.	*pungens*																	
31	Poaceae		*Triodia*	aff.	*wiseana*																	
31	Poaceae		*Triodia*		*angusta*																+	
31	Poaceae		*Triodia*		*brizoides*																	
31	Poaceae		*Triodia*		*epactia*									+			+		+			+
31	Poaceae		*Triodia*		*wiseana*																	
31	Poaceae		*Triodia*		*wiseana*					(fine form)					+	+	+		+			
31	Poaceae		*Urochloa*		*pubigera*																	
31	Poaceae		*Xerochloa*		*barbata*																	
31	Poaceae		*Xerochloa*		*imberbis*																	
31	Poaceae		*Yakirra*		*australiensis*		var.		*australiensis*													
32	Cyperaceae		*Bulbostylis*		*barbata*									+			+		+			
32	Cyperaceae		*Cyperus*		*difformis*																	
32	Cyperaceae		*Cyperus*		*iria*																	
32	Cyperaceae		*Cyperus*		*pygmaeus*																	
32	Cyperaceae		*Cyperus*		*vaginatus*																	
32	Cyperaceae		*Fimbristylis*	aff.	*dichotoma*					(M15-4)				+		+				+		
90	Proteaceae		*Grevillea*		*pyramidalis*																	
90	Proteaceae		*Grevillea*		*pyramidalis*		subsp.		*leucadendron*													
90	Proteaceae		*Hakea*		*lorea*		subsp.		*lorea*													
92	Santalaceae		*Santalum*		*lanceolatum*																	
107	Nyctaginaceae		*Boerhavia*		*burbidgeana*																	
107	Nyctaginaceae		*Boerhavia*		*coccinea*									+								
105	Chenopodiaceae		*Dysphania*		*rhadinostachya*		subsp.		*rhadinostachya*													

APPENDIX B: SUMMARY OF VASCULAR FLORA SPECIES RECRDED AT EACH QUADRAT WITHIN THE ANKETELL POINT TRANSPORT CORRIDOR BETWEEN 2008 - 2009

NB * denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ55	APQ56	APQ57	APQ58	APQ59	APQ60	APQ70	APQ71	APQ72
105	Chenopodiaceae		*Enchylaena*		*tomentosa*																	
105	Chenopodiaceae		*Enchylaena*		*tomentosa*		var.		*tomentosa*													
105	Chenopodiaceae		*Rhagodia*		*eremaea*																	
105	Chenopodiaceae		*Salsola*		*tragus*																	
105	Chenopodiaceae		*Salsola*		*tragus*		subsp.		*grandiflora*													
105	Chenopodiaceae		*Salsola*		*tragus*		subsp.		*tragus*								+	+	+			
105	Chenopodiaceae		*Sclerolaena*		*bicornis*																	
105	Chenopodiaceae		*Sclerolaena*		*costata*																	
105	Chenopodiaceae		*Sclerolaena*		*densiflora*																	
105	Chenopodiaceae		*Sclerolaena*		*eriacantha*																	
105	Chenopodiaceae		*Sclerolaena*		*glabra*																	
106	Amaranthaceae	*	*Aerva*		*javanica*																	
106	Amaranthaceae		*Alternanthera*		*angustifolia*																	
106	Amaranthaceae		*Alternanthera*		*nana*																	
106	Amaranthaceae		*Alternanthera*		*nodiflora*																	
106	Amaranthaceae		*Amaranthus*		*undulatus*																	
106	Amaranthaceae		*Gomphrena*		*affinis*		subsp.		*pilbarensis*													
106	Amaranthaceae		*Gomphrena*		*canescens*		subsp.		*canescens*													
106	Amaranthaceae		*Gomphrena*		*cunninghamii*														+			
106	Amaranthaceae		*Ptilotus*		*?exaltatus*		var.		*exaltatus*													
106	Amaranthaceae		*Ptilotus*		*aervoides*											+	+					
106	Amaranthaceae		*Ptilotus*		*astrolasius*		var.		*astrolasius*							+						+
106	Amaranthaceae		*Ptilotus*		*auriculifolius*										+							
106	Amaranthaceae		*Ptilotus*		*calostachyus*																	
106	Amaranthaceae		*Ptilotus*		*calostachyus*		var.		*calostachyus*							+						
106	Amaranthaceae		*Ptilotus*		*carinatus*																	
106	Amaranthaceae		*Ptilotus*		*clementii*																	
106	Amaranthaceae		*Ptilotus*		*exaltatus*																	
106	Amaranthaceae		*Ptilotus*		*exaltatus*		var.		*exaltatus*								+		+			
106	Amaranthaceae		*Ptilotus*		*fusiformis*																	
106	Amaranthaceae		*Ptilotus*		*fusiformis*		var.		*fusiformis*													
106	Amaranthaceae		*Ptilotus*		*gomphrenoides*		var.		*gomphrenoides*								+					
106	Amaranthaceae		*Ptilotus*		*helipteroides*																	
106	Amaranthaceae		*Ptilotus*		*helipteroides*		var.		*helipteroides*						+	+			+			
106	Amaranthaceae		*Ptilotus*		*murrayi*		var.		*murrayi*													
106	Amaranthaceae		*Ptilotus*		*obovatus*		var.		*obovatus*													
110	Aizoaceae		*Trianthema*	aff.	*triquetra*						(M3.35)									+		
110	Aizoaceae		*Trianthema*		sp. Python Pool																	
110A	Molluginaceae		*Mollugo*		*molluginea*									+								
111	Portulacaceae		*Portulaca*		*conspicua*																	
111	Portulacaceae	*	*Portulaca*		*oleracea*											+	+					
113	Caryophyllaceae		*Polycarpaea*		*corymbosa*		var.		*corymbosa*					+								
113	Caryophyllaceae		*Polycarpaea*		*holtzei*																	
113	Caryophyllaceae		*Polycarpaea*		*longiflora*																	
113	Caryophyllaceae		*Polycarpaea*		*longiflora*					(Whim Creek form WC141-1)												
113	Caryophyllaceae		*Polycarpaea*		*longiflora*					(white form)												
122	Menispermaceae		*Tinospora*		*smilacina*																	
131	Lauraceae		*Cassytha*		*capillaris*																	
137A	Capparaceae		*Capparis*		*spinosa*		var.		*nummularia*													+
137A	Capparaceae		*Cleome*		*viscosa*									+			+					
138	Brassicaceae		*Lepidium*		*pedicellosum*																	
138	Brassicaceae		*Lepidium*		*pholidogynum*																	
163	Mimosaceae		*Acacia*		*ancistrocarpa*											+						+
163	Mimosaceae		*Acacia*		*ancistrocarpa*				*x stellaticeps*										+			
163	Mimosaceae		*Acacia*		*acradenia*																	
163	Mimosaceae		*Acacia*		*adsurgens*																	
163	Mimosaceae		*Acacia*		*bivenosa*										+	+			+		+	+
163	Mimosaceae		*Acacia*		*colei*		var.		*colei*										+		+	
163	Mimosaceae		*Acacia*		*coriacea*		subsp.		*coriacea*												+	
163	Mimosaceae		*Acacia*		*coriacea*		subsp.		*pendens*												+	
163	Mimosaceae		*Acacia*		*cowleana*																	
163	Mimosaceae		*Acacia*		*elachantha*					(golden hairy variant)												
163	Mimosaceae		*Acacia*		*inaequilatera*									+		+			+			+
163	Mimosaceae		*Acacia*		*ligulata*																	
163	Mimosaceae		*Acacia*		*maitlandii*																	
163	Mimosaceae		*Acacia*		*pyrifolia*		var.		pyrifolia							+			+			+
163	Mimosaceae		*Acacia*		*sclerosperma*		subsp.		*sclerosperma*													
163	Mimosaceae		*Acacia*		*stellaticeps*														+			
163	Mimosaceae		*Acacia*		*synchronicia*											+						+
163	Mimosaceae		*Acacia*		*tenuissima*																	
163	Mimosaceae		*Acacia*		*trachycarpa*																	

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NB * denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ55	APQ56	APQ57	APQ58	APQ59	APQ60	APQ70	APQ71	APQ72
163	Mimosaceae		*Acacia*		*trachycarpa x tumida*		var.		*pilbarensis*													
163	Mimosaceae		*Acacia*		*trudgeniana*																	
163	Mimosaceae		*Acacia*		*tumida*		var.		*pilbarensis*													
163	Mimosaceae		*Acacia*		*victoriae*																	
163	Mimosaceae		*Acacia*		*xiphophylla*																	
163	Mimosaceae		*Dichrostachys*		*spicata*																+	+
163	Mimosaceae		*Neptunia*		*dimorphantha*													+				
163	Mimosaceae	*	*Prosopis*		*pallida*																	
163	Mimosaceae	*	*Vachellia*		*farnesiana*																	
164	Caesalpiniaceae		*Petalostylis*		*labicheoides*																	
164	Caesalpiniaceae		*Senna*	aff.	*artemisioides*		subsp.		*oligophylla*	(thinly sericeous)												
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla*							+	+					
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla*													
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla x helmsii*													
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*glutinosa*													
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*glutinosa x luerssenii*													
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*luerssenii*													
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*pruinosa*													
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*x luerssenii*							+						
164	Caesalpiniaceae		*Senna*		*hamersleyensis*																	
164	Caesalpiniaceae		*Senna*		*notabilis*										+	+	+		+			
164	Caesalpiniaceae		*Senna*		sp. Karijini						(M.E. Trudgen 10392)											
164	Caesalpiniaceae		*Senna*		*venusta*																	
165	Papilionaceae		*Alysicarpus*		*muelleri*											+	+					
165	Papilionaceae		*Cajanus*		*cinereus*																	
165	Papilionaceae		*Crotalaria*		*dissitiflora*		subsp.		*benthamiana*													
165	Papilionaceae		*Crotalaria*		*medicaginea*		var.		*neglecta*													
165	Papilionaceae		*Crotalaria*		*novae-hollandiae*		subsp.		*novae-hollandiae*													
165	Papilionaceae		*Cullen*		*cinereum*																	
165	Papilionaceae		*Cullen*		*graveolens*																	
165	Papilionaceae		*Cullen*		*leucanthum*																	
165	Papilionaceae		*Desmodium*		*campylocaulon*												+					
165	Papilionaceae		*Desmodium*		*muelleri*																	
165	Papilionaceae		*Indigastrum*		*parviflorum*																	
165	Papilionaceae		*Indigofera*	aff.	*monophylla*																	
165	Papilionaceae		*Indigofera*		*colutea*										+	+						
165	Papilionaceae		*Indigofera*		*linifolia*										+		+			+		
165	Papilionaceae		*Indigofera*		*linnaei*																	
165	Papilionaceae		*Indigofera*		*monophylla*																	
165	Papilionaceae		*Indigofera*		*monophylla*					(Burrup form)											+	
165	Papilionaceae		*Indigofera*		*monophylla*					(Cape Preston form)												
165	Papilionaceae		*Indigofera*		*monophylla*					(grey leaflet form)												
165	Papilionaceae		*Indigofera*		*monophylla*					(grey/green leaflet form)				+								
165	Papilionaceae		*Indigofera*		*monophylla*						(MJOPP-2)											
165	Papilionaceae		*Indigofera*		*trita*											+	+	+		+	+	
165	Papilionaceae		*Isotropis*		*atropurpurea*																	
165	Papilionaceae		*Rhynchosia*		*minima*										+	+	+	+		+		
165	Papilionaceae		*Sesbania*		*cannabina*																+	
165	Papilionaceae		*Swainsona*		*canescens*										+							
165	Papilionaceae		*Swainsona*		*formosa*																	
165	Papilionaceae		*Tephrosia*	aff.	*clementii*						(4) (M35-14)											
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD133-20)											
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD205-10)											
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD88-4)					+						
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(MET 12,351)											
165	Papilionaceae		*Tephrosia*		*clementii*												+					
165	Papilionaceae		*Tephrosia*		*rosea*		var.		*clementii*													
165	Papilionaceae		*Tephrosia*		sp. B Kimberley Flora						(C.A. Gardner 1300)											
165	Papilionaceae		*Tephrosia*		*supina*									+								+
165	Papilionaceae		*Vigna*		*lanceolata*		var.		*lanceolata*												+	
165	Papilionaceae		*Vigna*		sp. rockpiles						(R.Butcher *et al* ., RB1400)											
165	Papilionaceae		*Vigna*		sp. central						(MET 1626)	2										
167	Geraniaceae		*Erodium*		*cygnorum*																	
173	Zygophyllaceae		*Tribulus*		*hirsutus*																	
173	Zygophyllaceae		*Tribulus*		*suberosus*									+								
183	Polygalaceae		*Polygala*	aff.	*isingii*										+			+				
185	Euphorbiaceae		*Adriana*		*tomentosa*		var.		*tomentosa*													
185	Euphorbiaceae		*Euphorbia*	aff.	*australis*																	
185	Euphorbiaceae		*Euphorbia*		*australis*									+		+			+			
185	Euphorbiaceae		*Euphorbia*		*biconvexa*										+							
185	Euphorbiaceae		*Euphorbia*		*boophthona*																	

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FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ55	APQ56	APQ57	APQ58	APQ59	APQ60	APQ70	APQ71	APQ72
185	Euphorbiaceae		*Euphorbia*		*coghlanii*														+			+
185	Euphorbiaceae		*Euphorbia*		sp.																	
185	Euphorbiaceae		*Euphorbia*		sp.						(BPBS10-50)				+							
185	Euphorbiaceae		*Euphorbia*		*tannensis*		subsp.		*eremophila*	(Burrup form)												
185	Euphorbiaceae		*Euphorbia*		*wheeleri*																	
185	Euphorbiaceae		*Leptopus*		*decaisnei*																	
185	Euphorbiaceae		*Leptopus*		*decaisnei*		var.		*orbicularis*													+
185	Euphorbiaceae		*Phyllanthus*		*maderaspatensis*												+	+				
207	Sapindaceae		*Diplopeltis*		*eriocarpa*																	
220	Tiliaceae		*Corchorus*	aff.	*parviflorus*										+						+	
220	Tiliaceae		*Corchorus*	aff.	*parviflorus*						(JW 11-11)											
220	Tiliaceae		*Corchorus*	aff.	*walcotti*						(K.J. Atkins 510)					+	+					+
220	Tiliaceae		*Corchorus*		*laniflorus*																	
220	Tiliaceae		*Corchorus*		sp..																	
220	Tiliaceae		*Corchorus*		*tectus*																	
220	Tiliaceae		*Corchorus*		*tridens*												+					
220	Tiliaceae		*Triumfetta*		*appendiculata*																	
220	Tiliaceae		*Triumfetta*		*clementii*														+		+	+
221	Malvaceae		*Abutilon*	aff.	*lepidum*						(1) (MET 15,352)											
221	Malvaceae		*Abutilon*	aff.	*lepidum*						(4)				+	+			+			
221	Malvaceae		*Abutilon*		*amplum*																	
221	Malvaceae		*Abutilon*		*fraseri*																	
221	Malvaceae		*Abutilon*		*lepidum*																	
221	Malvaceae		*Abutilon*		*oxycarpum*		subsp.		*prostratum*													
221	Malvaceae		*Gossypium*		*australe*					(Burrup Peninsula form)												
221	Malvaceae		*Gossypium*		*australe*					(Whim Creek form)												
221	Malvaceae		*Hibiscus*	aff.	*platychlamys*						(MET 15,061)											
221	Malvaceae		*Hibiscus*		*brachysiphonius*																	
221	Malvaceae		*Hibiscus*		*coatesii*																	
221	Malvaceae		*Hibiscus*		*sturtii*		var.		*campylochlamys*													
221	Malvaceae		*Hibiscus*		*sturtii*		var.		*platychlamys*					+								
221	Malvaceae	*	*Malvastrum*		*americanum*												+				+	
221	Malvaceae		*Sida*	aff.	*echinocarpa*						(MET 15,350)			+								
221	Malvaceae		*Sida*	aff.	*fibulifera*						(HD200-6)						+	+		+		
221	Malvaceae		*Sida*	aff.	*fibulifera*					(oblong)	(MET 15220)											
221	Malvaceae		*Sida*		*arsiniata*																	
221	Malvaceae		*Sida*		*clementii*																	
221	Malvaceae		*Sida*		*echinocarpa*																	
221	Malvaceae		*Sida*		*pilbarensis*					(Ferrugineous form)												
221	Malvaceae		*Sida*		sp. spiciform panicles						(E. Leyland s.n. 14/08/1990)											
221	Malvaceae		*Sida*		*spinosa*																	
223	Sterculiaceae		*Brachychiton*		*acuminatus*																	
223	Sterculiaceae		*Melhania*		sp. Burrup																	
223	Sterculiaceae		*Melhania*		sp.						(CH15-39)											
223	Sterculiaceae		*Waltheria*		*indica*																	
235	Elatinaceae		*Bergia*		*pedicellaris*																	
243	Violaceae		*Hybanthus*		*aurantiacus*																	+
248	Passifloraceae	*	*Passiflora*		*foetida*		var.		*hispida*													
265	Lythraceae		*Ammannia*		*auriculata*																	
265	Lythraceae		*Ammannia*		*baccifera*																	
273	Myrtaceae		*Corymbia*		*hamersleyana*																+	
273	Myrtaceae		*Eucalyptus*		*camaldulensis*																	
273	Myrtaceae		*Eucalyptus*		*victrix*																+	
273	Myrtaceae		*Melaleuca*		*glomerata*																	
281	Apiaceae		*Trachymene*		*oleracea*		subsp.		*oleracea*													
301	Oleaceae		*Jasminum*		*didymum*		subsp.		*lineare*												+	
305	Asclepiadaceae		*Sarcostemma*		*viminale*		subsp.		*australe*													
307	Convolvulaceae		*Bonamia*		*media*		var.		*villosa*						+	+						
307	Convolvulaceae		*Bonamia*		*rosea*																	
307	Convolvulaceae		*Duperreya*		*commixta*																	
307	Convolvulaceae		*Evolvulus*		*alsinoides*		var.		*decumbens*													
307	Convolvulaceae		*Evolvulus*		*alsinoides*		var.		*villosicalyx*					+	+	+	+					
307	Convolvulaceae		*Ipomoea*		*coptica*												+					
307	Convolvulaceae		*Ipomoea*		*costata*																	
307	Convolvulaceae		*Ipomoea*		*muelleri*																	
307	Convolvulaceae		*Ipomoea*		*plebeia*																	
307	Convolvulaceae		*Ipomoea*		*polymorpha*																	
307	Convolvulaceae		*Operculina*		*aequisepala*													+				
307	Convolvulaceae		*Polymeria*		*ambigua*																	
307	Convolvulaceae		*Polymeria*		sp.						(site 1365)					+						
310	Boraginaceae		*Ehretia*		*saligna*		var.		*saligna*													

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FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ55	APQ56	APQ57	APQ58	APQ59	APQ60	APQ70	APQ71	APQ72
310	Boraginaceae		*Heliotropium*		*conocarpum*													+				
310	Boraginaceae		*Heliotropium*		*cunninghamii*									+								
310	Boraginaceae		*Heliotropium*		*heteranthum*																	
310	Boraginaceae		*Heliotropium*		*inexplicitum*									+						+		
310	Boraginaceae		*Heliotropium*		*ovalifolium*																	
310	Boraginaceae		*Trichodesma*		*zeylanicum*																	
310	Boraginaceae		*Trichodesma*		*zeylanicum*		var.		*zeylanicum*							+						
311	Verbenaceae		*Clerodendrum*		*tomentosum*		var.		*lanceolatum*													
315	Solanaceae		*Solanum*		*diversiflorum*																+	
315	Solanaceae		*Solanum*		*gabrielae*																	
315	Solanaceae		*Solanum*		*horridum*																	
315	Solanaceae		*Solanum*		*lasiophyllum*														+			
316	Scrophulariaceae		*Stemodia*		*grossa*																	
316	Scrophulariaceae		*Stemodia*		*kingii*															+	+	
325	Acanthaceae		*Dicliptera*		*armata*																	
326	Myoporaceae		*Eremophila*		*forrestii*																	
326	Myoporaceae		*Eremophila*		*forrestii*		subsp.		*forrestii*													
326	Myoporaceae		*Eremophila*		*longifolia*																	
331	Rubiaceae		*Synaptantha*		*tillaeacea*		var.		*tillaeacea*													
337	Cucurbitaceae	*	*Citrullus*		*colocynthis*																	
337	Cucurbitaceae		*Cucumis*		*maderaspatanus*																	
337	Cucurbitaceae	*	*Cucumis*		*melo*		subsp.		*agrestis*								+					
337	Cucurbitaceae		*Trichosanthes*		*cucumerina*																	
341	Goodeniaceae		*Goodenia*		*forrestii*																+	
341	Goodeniaceae		*Goodenia*		*lamprosperma*																	
341	Goodeniaceae		*Goodenia*		*microptera*														+			
341	Goodeniaceae		*Goodenia*		*pascua*																	
341	Goodeniaceae		*Goodenia*		*stobbsiana*																	
341	Goodeniaceae		*Scaevola*		*spinescens*																	
341	Goodeniaceae		*Scaevola*		*spinescens*					(broad leaf form)												
341	Goodeniaceae		*Scaevola*		*spinescens*					(narrow form)												
345	Asteraceae		*Flaveria*		*australasica*		subsp.			gilgai		3										
345	Asteraceae		*Pentalepis*		*trichodesmoides*																	
345	Asteraceae		*Pluchea*		*rubelliflora*																+	
345	Asteraceae		*Pluchea*		sp.												+					
345	Asteraceae		*Pterocaulon*		*sphacelatum*																	
345	Asteraceae		*Pterocaulon*		*sphaeranthoides*																+	
345	Asteraceae		*Streptoglossa*		*bubakii*												+					
345	Asteraceae		*Streptoglossa*		*decurrens*									+								
345	Asteraceae		*Streptoglossa*		*liatroides*															+		
345	Asteraceae		*Streptoglossa*		sp.																	

APPENDIX B: SUMMARY OF VASCULAR FLORA SPECIES RECRDED AT EACH QUADRAT WITHIN THE ANKETELL POINT TRANSPORT CORRIDOR BETWEEN 2008 - 2009

NB * denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ73	APQ74	APQ75	APQ76	APQ77	APQ78	APQ83	APQ84	APQ85
13	Marsileaceae		*Marsilea*		*hirsuta*																	
31	Poaceae		*Aristida*		*contorta*											+				+	+	
31	Poaceae		*Aristida*		*holathera*		var.		*holathera*								+					
31	Poaceae		*Aristida*		*latifolia*																	
31	Poaceae		*Aristida*		sp.												+					
31	Poaceae		*Astrebla*		*pectinata*																	
31	Poaceae		*Bothriochloa*		*ewartiana*																	
31	Poaceae		*Brachyachne*		*convergens*																	
31	Poaceae		*Brachyachne*		*prostrata*																	
31	Poaceae	*	*Cenchrus*		*ciliaris*									+	+	+		+	+	+		
31	Poaceae		*Chloris*		*pectinata*																	
31	Poaceae		*Chrysopogon*		*fallax*										+	+						
31	Poaceae		*Cymbopogon*		*ambiguus*									+				+				
31	Poaceae		*Cymbopogon*		*procerus*																	
31	Poaceae		*Dactyloctenium*		*radulans*																	
31	Poaceae		*Dichanthium*		*sericeum*		subsp.		*humilius*						+	+			+		+	
31	Poaceae		*Digitaria*		*ctenantha*																	
31	Poaceae		*Enneapogon*		*caerulescens*		var.		*caerulescens*							+		+		+	+	
31	Poaceae		*Enneapogon*		*polyphyllus*																	
31	Poaceae		*Enteropogon*		*ramosus*																	
31	Poaceae		*Eragrostis*		*falcata*																	
31	Poaceae		*Eragrostis*		*setifolia*																	
31	Poaceae		*Eragrostis*		*tenellula*																	
31	Poaceae		*Eragrostis*		*xerophila*																	
31	Poaceae		*Eriachne*	aff.					*mucronata*													
31	Poaceae		*Eriachne*		*benthamii*																	
31	Poaceae		*Eriachne*		*obtusa*																	
31	Poaceae		*Eriachne*		*pulchella*		subsp.		*dominii*							+		+				
31	Poaceae		*Eriachne*		*pulchella*		subsp.		*pulchella*												+	
31	Poaceae		*Eulalia*		*aurea*										+							
31	Poaceae		*Iseilema*		*dolichotrichum*											+		+			+	
31	Poaceae		*Iseilema*		*eremaeum*																	
31	Poaceae		*Iseilema*		*macratherum*																	
31	Poaceae		*Panicum*		*decompositum*																	
31	Poaceae		*Panicum*		*laevinode*																	
31	Poaceae		*Paraneurachne*		*muelleri*																	
31	Poaceae		*Paspalidium*		*clementii*													+	+			+
31	Poaceae		*Paspalidium*		*tabulatum*																	
31	Poaceae		*Paspalidium*		*tabulatum*					(Whim Creek form)				+								
31	Poaceae		*Schizachyrium*		*fragile*																	
31	Poaceae		*Setaria*		*dielsii*																	
31	Poaceae		*Sorghum*		*plumosum*		var.		*plumosum*													
31	Poaceae		*Sorghum*		*timorense*																	
31	Poaceae		*Sporobolus*		*australasicus*										+							
31	Poaceae		*Sporobolus*		*virginicus*																	
31	Poaceae		*Themeda*		*triandra*										+				+	+		
31	Poaceae		*Triodia*	aff.	*epactia*										+							
31	Poaceae		*Triodia*	aff.	*pungens*																	
31	Poaceae		*Triodia*	aff.	*wiseana*																	
31	Poaceae		*Triodia*		*angusta*											+				+		
31	Poaceae		*Triodia*		*brizoides*																	
31	Poaceae		*Triodia*		*epactia*									+			+			+		
31	Poaceae		*Triodia*		*wiseana*																	
31	Poaceae		*Triodia*		*wiseana*					(fine form)				+		+	+	+	+		+	+
31	Poaceae		*Urochloa*		*pubigera*																	
31	Poaceae		*Xerochloa*		*barbata*																	
31	Poaceae		*Xerochloa*		*imberbis*																	
31	Poaceae		*Yakirra*		*australiensis*		var.		*australiensis*													
32	Cyperaceae		*Bulbostylis*		*barbata*																	
32	Cyperaceae		*Cyperus*		*difformis*																	
32	Cyperaceae		*Cyperus*		*iria*																	
32	Cyperaceae		*Cyperus*		*pygmaeus*																	
32	Cyperaceae		*Cyperus*		*vaginatus*															+		
32	Cyperaceae		*Fimbristylis*	aff.	*dichotoma*						(M15-4)										+	+
90	Proteaceae		*Grevillea*		*pyramidalis*																	
90	Proteaceae		*Grevillea*		*pyramidalis*		subsp.		*leucadendron*					+					+			
90	Proteaceae		*Hakea*		*lorea*		subsp.		*lorea*													
92	Santalaceae		*Santalum*		*lanceolatum*																	
107	Nyctaginaceae		*Boerhavia*		*burbidgeana*												+					
107	Nyctaginaceae		*Boerhavia*		*coccinea*									+		+					+	
105	Chenopodiaceae		*Dysphania*		*rhadinostachya*		subsp.		*rhadinostachya*													

APPENDIX B: SUMMARY OF VASCULAR FLORA SPECIES RECRDED AT EACH QUADRAT WITHIN THE ANKETELL POINT TRANSPORT CORRIDOR BETWEEN 2008 - 2009

NB * denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ73	APQ74	APQ75	APQ76	APQ77	APQ78	APQ83	APQ84	APQ85
105	Chenopodiaceae		*Enchylaena*		*tomentosa*																	
105	Chenopodiaceae		*Enchylaena*		*tomentosa*		var.		*tomentosa*								+					
105	Chenopodiaceae		*Rhagodia*		*eremaea*																	
105	Chenopodiaceae		*Salsola*		*tragus*																	
105	Chenopodiaceae		*Salsola*		*tragus*		subsp.		*grandiflora*													
105	Chenopodiaceae		*Salsola*		*tragus*		subsp.		*tragus*						+	+						
105	Chenopodiaceae		*Sclerolaena*		*bicornis*																	
105	Chenopodiaceae		*Sclerolaena*		*costata*																	
105	Chenopodiaceae		*Sclerolaena*		*densiflora*																	
105	Chenopodiaceae		*Sclerolaena*		*eriacantha*																	
105	Chenopodiaceae		*Sclerolaena*		*glabra*																	
106	Amaranthaceae	*	*Aerva*		*javanica*																	
106	Amaranthaceae		*Alternanthera*		*angustifolia*																	
106	Amaranthaceae		*Alternanthera*		*nana*																	
106	Amaranthaceae		*Alternanthera*		*nodiflora*																	
106	Amaranthaceae		*Amaranthus*		*undulatus*																	
106	Amaranthaceae		*Gomphrena*		*affinis*		subsp.		*pilbarensis*													
106	Amaranthaceae		*Gomphrena*		*canescens*		subsp.		*canescens*													
106	Amaranthaceae		*Gomphrena*		*cunninghamii*									+			+	+				
106	Amaranthaceae		*Ptilotus*		*?exaltatus*		var.		*exaltatus*							+						
106	Amaranthaceae		*Ptilotus*		*aervoides*																	
106	Amaranthaceae		*Ptilotus*		*astrolasius*		var.		*astrolasius*													
106	Amaranthaceae		*Ptilotus*		*auriculifolius*									+	+							
106	Amaranthaceae		*Ptilotus*		*calostachyus*																	
106	Amaranthaceae		*Ptilotus*		*calostachyus*		var.		*calostachyus*													
106	Amaranthaceae		*Ptilotus*		*carinatus*																	
106	Amaranthaceae		*Ptilotus*		*clementii*																	
106	Amaranthaceae		*Ptilotus*		*exaltatus*																	
106	Amaranthaceae		*Ptilotus*		*exaltatus*		var.		*exaltatus*							+			+	+		+
106	Amaranthaceae		*Ptilotus*		*fusiformis*																	
106	Amaranthaceae		*Ptilotus*		*fusiformis*		var.		*fusiformis*													
106	Amaranthaceae		*Ptilotus*		*gomphrenoides*		var.		*gomphrenoides*													
106	Amaranthaceae		*Ptilotus*		*helipteroides*																	
106	Amaranthaceae		*Ptilotus*		*helipteroides*		var.		*helipteroides*							+						
106	Amaranthaceae		*Ptilotus*		*murrayi*		var.		*murrayi*													
106	Amaranthaceae		*Ptilotus*		*obovatus*		var.		*obovatus*								+					
110	Aizoaceae		*Trianthema*	aff.	*triquetra*						(M3.35)											
110	Aizoaceae		*Trianthema*		sp. Python Pool																	
110A	Molluginaceae		*Mollugo*		*molluginea*																	
111	Portulacaceae		*Portulaca*		*conspicua*																	
111	Portulacaceae	*	*Portulaca*		*oleracea*											+						
113	Caryophyllaceae		*Polycarpaea*		*corymbosa*		var.		*corymbosa*													
113	Caryophyllaceae		*Polycarpaea*		*holtzei*																	
113	Caryophyllaceae		*Polycarpaea*		*longiflora*																	
113	Caryophyllaceae		*Polycarpaea*		*longiflora*					(Whim Creek form WC141-1)												+
113	Caryophyllaceae		*Polycarpaea*		*longiflora*					(white form)				+								
122	Menispermaceae		*Tinospora*		*smilacina*												+					
131	Lauraceae		*Cassytha*		*capillaris*															+		
137A	Capparaceae		*Capparis*		*spinosa*		var.		*nummularia*								+					
137A	Capparaceae		*Cleome*		*viscosa*																	
138	Brassicaceae		*Lepidium*		*pedicellosum*																	
138	Brassicaceae		*Lepidium*		*pholidogynum*																	
163	Mimosaceae		*Acacia*		*ancistrocarpa*																+	+
163	Mimosaceae		*Acacia*		*ancistrocarpa*				*x stellaticeps*													
163	Mimosaceae		*Acacia*		*acradenia*																	
163	Mimosaceae		*Acacia*		*adsurgens*																	
163	Mimosaceae		*Acacia*		*bivenosa*									+		+				+		+
163	Mimosaceae		*Acacia*		*colei*		var.		*colei*													
163	Mimosaceae		*Acacia*		*coriacea*		subsp.		*coriacea*													
163	Mimosaceae		*Acacia*		*coriacea*		subsp.		*pendens*						+					+		
163	Mimosaceae		*Acacia*		*cowleana*																	
163	Mimosaceae		*Acacia*		*elachantha*					(golden hairy variant)												
163	Mimosaceae		*Acacia*		*inaequilatera*																	+
163	Mimosaceae		*Acacia*		*ligulata*																	
163	Mimosaceae		*Acacia*		*maitlandii*																	
163	Mimosaceae		*Acacia*		*pyrifolia*		var.		pyrifolia					+	+			+		+	+	
163	Mimosaceae		*Acacia*		*sclerosperma*		subsp.		*sclerosperma*													
163	Mimosaceae		*Acacia*		*stellaticeps*																	
163	Mimosaceae		*Acacia*		*synchronicia*																	
163	Mimosaceae		*Acacia*		*tenuissima*																	
163	Mimosaceae		*Acacia*		*trachycarpa*										+						+	

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FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ73	APQ74	APQ75	APQ76	APQ77	APQ78	APQ83	APQ84	APQ85
163	Mimosaceae		*Acacia*		*trachycarpa x tumida*		var.		*pilbarensis*													
163	Mimosaceae		*Acacia*		*trudgeniana*														+			
163	Mimosaceae		*Acacia*		*tumida*		var.		*pilbarensis*													
163	Mimosaceae		*Acacia*		*victoriae*																	
163	Mimosaceae		*Acacia*		*xiphophylla*											+	+					
163	Mimosaceae		*Dichrostachys*		*spicata*										+							
163	Mimosaceae		*Neptunia*		*dimorphantha*																	
163	Mimosaceae	*	*Prosopis*		*pallida*																	
163	Mimosaceae	*	*Vachellia*		*farnesiana*																	
164	Caesalpiniaceae		*Petalostylis*		*labicheoides*																	
164	Caesalpiniaceae		*Senna*		*artemisioides*	aff.	subsp.		*oligophylla*	(thinly sericeous)												
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla*													+
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla*													
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla x helmsii*						+							
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*glutinosa*						+					+	+	+
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*glutinosa x luerssenii*													+
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*luerssenii*													
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*pruinosa*					+							+	+
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*x luerssenii*							+						
164	Caesalpiniaceae		*Senna*		*hamersleyensis*																	
164	Caesalpiniaceae		*Senna*		*notabilis*											+		+	+			
164	Caesalpiniaceae		*Senna*		sp. Karijini						(M.E. Trudgen 10392)											
164	Caesalpiniaceae		*Senna*		*venusta*									+								
165	Papilionaceae		*Alysicarpus*		*muelleri*									+	+							
165	Papilionaceae		*Cajanus*		*cinereus*																	
165	Papilionaceae		*Crotalaria*		*dissitiflora*		subsp.		*benthamiana*													
165	Papilionaceae		*Crotalaria*		*medicaginea*		var.		*neglecta*					+					+			
165	Papilionaceae		*Crotalaria*		*novae-hollandiae*		subsp.		*novae-hollandiae*													
165	Papilionaceae		*Cullen*		*cinereum*																	
165	Papilionaceae		*Cullen*		*graveolens*																	
165	Papilionaceae		*Cullen*		*leucanthum*																	
165	Papilionaceae		*Desmodium*		*campylocaulon*																	
165	Papilionaceae		*Desmodium*		*muelleri*																	
165	Papilionaceae		*Indigastrum*		*parviflorum*																	
165	Papilionaceae		*Indigofera*	aff.	*monophylla*														+			
165	Papilionaceae		*Indigofera*		*colutea*										+	+						
165	Papilionaceae		*Indigofera*		*linifolia*										+							
165	Papilionaceae		*Indigofera*		*linnaei*																	
165	Papilionaceae		*Indigofera*		*monophylla*																	
165	Papilionaceae		*Indigofera*		*monophylla*					(Burrup form)				+	+							
165	Papilionaceae		*Indigofera*		*monophylla*					(Cape Preston form)										+		+
165	Papilionaceae		*Indigofera*		*monophylla*					(grey leaflet form)												
165	Papilionaceae		*Indigofera*		*monophylla*					(grey/green leaflet form)								+				
165	Papilionaceae		*Indigofera*		*monophylla*						(MJOPP-2)											
165	Papilionaceae		*Indigofera*		*trita*										+							
165	Papilionaceae		*Isotropis*		*atropurpurea*																	
165	Papilionaceae		*Rhynchosia*		*minima*									+	+				+			+
165	Papilionaceae		*Sesbania*		*cannabina*																	
165	Papilionaceae		*Swainsona*		*canescens*																	
165	Papilionaceae		*Swainsona*		*formosa*																	
165	Papilionaceae		*Tephrosia*	aff.	*clementii*						(4) (M35-14)											
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD133-20)										+	
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD205-10)											
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD88-4)											
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(MET 12,351)									+		+
165	Papilionaceae		*Tephrosia*		*clementii*																	
165	Papilionaceae		*Tephrosia*		*rosea*		var.		*clementii*													
165	Papilionaceae		*Tephrosia*		sp. B Kimberley Flora						(C.A. Gardner 1300)											
165	Papilionaceae		*Tephrosia*		*supina*																	
165	Papilionaceae		*Vigna*		*lanceolata*		var.		*lanceolata*						+							
165	Papilionaceae		*Vigna*		sp. rockpiles						(R.Butcher *et al* ., RB1400)						+	+	+			
165	Papilionaceae		*Vigna*		sp. central						(MET 1626)	2										
167	Geraniaceae		*Erodium*		*cygnorum*																	
173	Zygophyllaceae		*Tribulus*		*hirsutus*																	
173	Zygophyllaceae		*Tribulus*		*suberosus*																	
183	Polygalaceae		*Polygala*	aff.	*isingii*																	
185	Euphorbiaceae		*Adriana*		*tomentosa*		var.		*tomentosa*											+		
185	Euphorbiaceae		*Euphorbia*	aff.	*australis*																	
185	Euphorbiaceae		*Euphorbia*		*australis*									+								
185	Euphorbiaceae		*Euphorbia*		*biconvexa*										+		+					
185	Euphorbiaceae		*Euphorbia*		*boophthona*													+				

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FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ73	APQ74	APQ75	APQ76	APQ77	APQ78	APQ83	APQ84	APQ85
185	Euphorbiaceae		*Euphorbia*		*coghlanii*									+					+			
185	Euphorbiaceae		*Euphorbia*		sp.																	
185	Euphorbiaceae		*Euphorbia*		sp.						(BPBS10-50)					+		+				
185	Euphorbiaceae		*Euphorbia*		*tannensis*		subsp.		*eremophila*	(Burrup form)												
185	Euphorbiaceae		*Euphorbia*		*wheeleri*													+	+			
185	Euphorbiaceae		*Leptopus*		*decaisnei*																	
185	Euphorbiaceae		*Leptopus*		*decaisnei*		var.		*orbicularis*											+		
185	Euphorbiaceae		*Phyllanthus*		*maderaspatensis*															+		
207	Sapindaceae		*Diplopeltis*		*eriocarpa*																	
220	Tiliaceae		*Corchorus*	aff.	*parviflorus*										+			+	+			
220	Tiliaceae		*Corchorus*	aff.	*parviflorus*						(JW 11-11)											
220	Tiliaceae		*Corchorus*	aff.	*walcotti*						(K.J. Atkins 510)				+	+				+		
220	Tiliaceae		*Corchorus*		*laniflorus*																+	
220	Tiliaceae		*Corchorus*		sp..																	
220	Tiliaceae		*Corchorus*		*tectus*																	
220	Tiliaceae		*Corchorus*		*tridens*																	
220	Tiliaceae		*Triumfetta*		*appendiculata*																	
220	Tiliaceae		*Triumfetta*		*clementii*									+	+	+		+	+		+	+
221	Malvaceae		*Abutilon*	aff.	*lepidum*						(1) (MET 15,352)											
221	Malvaceae		*Abutilon*	aff.	*lepidum*						(4)			+		+	+	+			+	
221	Malvaceae		*Abutilon*		*amplum*																	
221	Malvaceae		*Abutilon*		*fraseri*																	
221	Malvaceae		*Abutilon*		*lepidum*																	
221	Malvaceae		*Abutilon*		*oxycarpum*		subsp.		*prostratum*													
221	Malvaceae		*Gossypium*		*australe*					(Burrup Peninsula form)												
221	Malvaceae		*Gossypium*		*australe*					(Whim Creek form)				+								
221	Malvaceae		*Hibiscus*	aff.	*platychlamys*						(MET 15,061)			+	+			+			+	
221	Malvaceae		*Hibiscus*		*brachysiphonius*																	
221	Malvaceae		*Hibiscus*		*coatesii*																	
221	Malvaceae		*Hibiscus*		*sturtii*		var.		*campylochlamys*													
221	Malvaceae		*Hibiscus*		*sturtii*		var.		*platychlamys*													
221	Malvaceae	*	*Malvastrum*		*americanum*										+					+		
221	Malvaceae		*Sida*	aff.	*echinocarpa*						(MET 15,350)										+	+
221	Malvaceae		*Sida*	aff.	*fibulifera*						(HD200-6)									+		
221	Malvaceae		*Sida*	aff.	*fibulifera*					(oblong)	(MET 15220)											
221	Malvaceae		*Sida*		*arsiniata*																	
221	Malvaceae		*Sida*		*clementii*																	
221	Malvaceae		*Sida*		*echinocarpa*																	
221	Malvaceae		*Sida*		*pilbarensis*					(Ferrugineous form)												
221	Malvaceae		*Sida*		sp. spiciform panicles						(E. Leyland s.n. 14/08/1990)											
221	Malvaceae		*Sida*		*spinosa*																	
223	Sterculiaceae		*Brachychiton*		*acuminatus*																	
223	Sterculiaceae		*Melhania*		sp. Burrup																	
223	Sterculiaceae		*Melhania*		sp.						(CH15-39)											
223	Sterculiaceae		*Waltheria*		*indica*															+		
235	Elatinaceae		*Bergia*		*pedicellaris*																	
243	Violaceae		*Hybanthus*		*aurantiacus*									+	+			+		+		
248	Passifloraceae	*	*Passiflora*		*foetida*		var.		*hispida*													
265	Lythraceae		*Ammannia*		*auriculata*																	
265	Lythraceae		*Ammannia*		*baccifera*																	
273	Myrtaceae		*Corymbia*		*hamersleyana*										+					+		
273	Myrtaceae		*Eucalyptus*		*camaldulensis*																	
273	Myrtaceae		*Eucalyptus*		*victrix*										+					+		
273	Myrtaceae		*Melaleuca*		*glomerata*															+		
281	Apiaceae		*Trachymene*		*oleracea*		subsp.		*oleracea*					+					+		+	
301	Oleaceae		*Jasminum*		*didymum*		subsp.		*lineare*													
305	Asclepiadaceae		*Sarcostemma*		*viminale*		subsp.		*australe*													
307	Convolvulaceae		*Bonamia*		*media*		var.		*villosa*						+	+		+			+	
307	Convolvulaceae		*Bonamia*		*rosea*																	
307	Convolvulaceae		*Duperreya*		*commixta*																	
307	Convolvulaceae		*Evolvulus*		*alsinoides*		var.		*decumbens*													
307	Convolvulaceae		*Evolvulus*		*alsinoides*		var.		*villosicalyx*					+	+			+			+	
307	Convolvulaceae		*Ipomoea*		*coptica*																	
307	Convolvulaceae		*Ipomoea*		*costata*																	
307	Convolvulaceae		*Ipomoea*		*muelleri*																	
307	Convolvulaceae		*Ipomoea*		*plebeia*																	
307	Convolvulaceae		*Ipomoea*		*polymorpha*																	
307	Convolvulaceae		*Operculina*		*aequisepala*										+							
307	Convolvulaceae		*Polymeria*		*ambigua*										+					+		
307	Convolvulaceae		*Polymeria*		sp.						(site 1365)											
310	Boraginaceae		*Ehretia*		*saligna*		var.		*saligna*								+					

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FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ73	APQ74	APQ75	APQ76	APQ77	APQ78	APQ83	APQ84	APQ85
310	Boraginaceae		*Heliotropium*		*conocarpum*																	
310	Boraginaceae		*Heliotropium*		*cunninghamii*																	
310	Boraginaceae		*Heliotropium*		*heteranthum*											+						
310	Boraginaceae		*Heliotropium*		*inexplicitum*																	
310	Boraginaceae		*Heliotropium*		*ovalifolium*															+		
310	Boraginaceae		*Trichodesma*		*zeylanicum*														+		+	
310	Boraginaceae		*Trichodesma*		*zeylanicum*		var.		*zeylanicum*						+							
311	Verbenaceae		*Clerodendrum*		*tomentosum*		var.		*lanceolatum*								+					
315	Solanaceae		*Solanum*		*diversiflorum*									+	+			+		+	+	
315	Solanaceae		*Solanum*		*gabrielae*																	
315	Solanaceae		*Solanum*		*horridum*													+	+			
315	Solanaceae		*Solanum*		*lasiophyllum*															+		
316	Scrophulariaceae		*Stemodia*		*grossa*															+		
316	Scrophulariaceae		*Stemodia*		*kingii*																	
325	Acanthaceae		*Dicliptera*		*armata*									+								
326	Myoporaceae		*Eremophila*		*forrestii*																	
326	Myoporaceae		*Eremophila*		*forrestii*		subsp.		*forrestii*											+		+
326	Myoporaceae		*Eremophila*		*longifolia*																	
331	Rubiaceae		*Synaptantha*		*tillaeacea*		var.		*tillaeacea*													
337	Cucurbitaceae	*	*Citrullus*		*colocynthis*																	
337	Cucurbitaceae		*Cucumis*		*maderaspatanus*									+	+		+		+	+		
337	Cucurbitaceae	*	*Cucumis*		*melo*		subsp.		*agrestis*													
337	Cucurbitaceae		*Trichosanthes*		*cucumerina*																	
341	Goodeniaceae		*Goodenia*		*forrestii*																	
341	Goodeniaceae		*Goodenia*		*lamprosperma*																	
341	Goodeniaceae		*Goodenia*		*microptera*											+				+		
341	Goodeniaceae		*Goodenia*		*pascua*																	
341	Goodeniaceae		*Goodenia*		*stobbsiana*																	
341	Goodeniaceae		*Scaevola*		*spinescens*																	
341	Goodeniaceae		*Scaevola*		*spinescens*					(broad leaf form)										+		+
341	Goodeniaceae		*Scaevola*		*spinescens*					(narrow form)												
345	Asteraceae		*Flaveria*		*australasica*		subsp.			gilgai		3										
345	Asteraceae		*Pentalepis*		*trichodesmoides*																	
345	Asteraceae		*Pluchea*		*rubelliflora*																	
345	Asteraceae		*Pluchea*		sp.																	
345	Asteraceae		*Pterocaulon*		*sphacelatum*																	
345	Asteraceae		*Pterocaulon*		*sphaeranthoides*																	
345	Asteraceae		*Streptoglossa*		*bubakii*																	
345	Asteraceae		*Streptoglossa*		*decurrens*																	
345	Asteraceae		*Streptoglossa*		*liatroides*																	
345	Asteraceae		*Streptoglossa*		sp.												+					

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FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ86	CP012	CP014
13	Marsileaceae		*Marsilea*		*hirsuta*											
31	Poaceae		*Aristida*		*contorta*									+		
31	Poaceae		*Aristida*		*holathera*		var.		*holathera*							
31	Poaceae		*Aristida*		*latifolia*									+	+	
31	Poaceae		*Aristida*		sp.											
31	Poaceae		*Astrebla*		*pectinata*										+	
31	Poaceae		*Bothriochloa*		*ewartiana*											
31	Poaceae		*Brachyachne*		*convergens*									+	+	
31	Poaceae		*Brachyachne*		*prostrata*											
31	Poaceae	*	*Cenchrus*		*ciliaris*											+
31	Poaceae		*Chloris*		*pectinata*									+		
31	Poaceae		*Chrysopogon*		*fallax*										+	+
31	Poaceae		*Cymbopogon*		*ambiguus*											
31	Poaceae		*Cymbopogon*		*procerus*											
31	Poaceae		*Dactyloctenium*		*radulans*										+	+
31	Poaceae		*Dichanthium*		*sericeum*		subsp.		*humilius*					+	+	+
31	Poaceae		*Digitaria*		*ctenantha*											
31	Poaceae		*Enneapogon*		*caerulescens*		var.		*caerulescens*					+	+	
31	Poaceae		*Enneapogon*		*polyphyllus*											
31	Poaceae		*Enteropogon*		*ramosus*											
31	Poaceae		*Eragrostis*		*falcata*										+	
31	Poaceae		*Eragrostis*		*setifolia*											
31	Poaceae		*Eragrostis*		*tenellula*											
31	Poaceae		*Eragrostis*		*xerophila*									+	+	
31	Poaceae		*Eriachne*	aff.					*mucronata*							
31	Poaceae		*Eriachne*		*benthamii*											
31	Poaceae		*Eriachne*		*obtusa*											
31	Poaceae		*Eriachne*		*pulchella*		subsp.		*dominii*							
31	Poaceae		*Eriachne*		*pulchella*		subsp.		*pulchella*							
31	Poaceae		*Eulalia*		*aurea*											
31	Poaceae		*Iseilema*		*dolichotrichum*										+	
31	Poaceae		*Iseilema*		*eremaeum*											
31	Poaceae		*Iseilema*		*macratherum*									+	+	
31	Poaceae		*Panicum*		*decompositum*											
31	Poaceae		*Panicum*		*laevinode*										+	
31	Poaceae		*Paraneurachne*		*muelleri*											
31	Poaceae		*Paspalidium*		*clementii*											
31	Poaceae		*Paspalidium*		*tabulatum*											
31	Poaceae		*Paspalidium*		*tabulatum*					(Whim Creek form)						
31	Poaceae		*Schizachyrium*		*fragile*											
31	Poaceae		*Setaria*		*dielsii*											
31	Poaceae		*Sorghum*		*plumosum*		var.		*plumosum*							
31	Poaceae		*Sorghum*		*timorense*											
31	Poaceae		*Sporobolus*		*australasicus*										+	+
31	Poaceae		*Sporobolus*		*virginicus*											
31	Poaceae		*Themeda*		*triandra*											
31	Poaceae		*Triodia*	aff.	*epactia*											
31	Poaceae		*Triodia*	aff.	*pungens*											
31	Poaceae		*Triodia*	aff.	*wiseana*											
31	Poaceae		*Triodia*		*angusta*											
31	Poaceae		*Triodia*		*brizoides*											
31	Poaceae		*Triodia*		*epactia*											
31	Poaceae		*Triodia*		*wiseana*											
31	Poaceae		*Triodia*		*wiseana*					(fine form)						+
31	Poaceae		*Urochloa*		*pubigera*											
31	Poaceae		*Xerochloa*		*barbata*											
31	Poaceae		*Xerochloa*		*imberbis*											
31	Poaceae		*Yakirra*		*australiensis*		var.		*australiensis*							
32	Cyperaceae		*Bulbostylis*		*barbata*											
32	Cyperaceae		*Cyperus*		*difformis*											
32	Cyperaceae		*Cyperus*		*iria*											
32	Cyperaceae		*Cyperus*		*pygmaeus*											
32	Cyperaceae		*Cyperus*		*vaginatus*											
32	Cyperaceae		*Fimbristylis*	aff.	*dichotoma*						(M15-4)					
90	Proteaceae		*Grevillea*		*pyramidalis*											
90	Proteaceae		*Grevillea*		*pyramidalis*		subsp.		*leucadendron*							
90	Proteaceae		*Hakea*		*lorea*		subsp.		*lorea*							
92	Santalaceae		*Santalum*		*lanceolatum*											
107	Nyctaginaceae		*Boerhavia*		*burbidgeana*											
107	Nyctaginaceae		*Boerhavia*		*coccinea*											
105	Chenopodiaceae		*Dysphania*		*rhadinostachya*		subsp.		*rhadinostachya*							

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FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ86	CP012	CP014
105	Chenopodiaceae		*Enchylaena*		*tomentosa*											
105	Chenopodiaceae		*Enchylaena*		*tomentosa*		var.		*tomentosa*							
105	Chenopodiaceae		*Rhagodia*		*eremaea*											
105	Chenopodiaceae		*Salsola*		*tragus*										+	
105	Chenopodiaceae		*Salsola*		*tragus*		subsp.		*grandiflora*						+	+
105	Chenopodiaceae		*Salsola*		*tragus*		subsp.		*tragus*							
105	Chenopodiaceae		*Sclerolaena*		*bicornis*											
105	Chenopodiaceae		*Sclerolaena*		*costata*											
105	Chenopodiaceae		*Sclerolaena*		*densiflora*											
105	Chenopodiaceae		*Sclerolaena*		*eriacantha*											
105	Chenopodiaceae		*Sclerolaena*		*glabra*											
106	Amaranthaceae	*	*Aerva*		*javanica*											
106	Amaranthaceae		*Alternanthera*		*angustifolia*											
106	Amaranthaceae		*Alternanthera*		*nana*											
106	Amaranthaceae		*Alternanthera*		*nodiflora*											
106	Amaranthaceae		*Amaranthus*		*undulatus*											
106	Amaranthaceae		*Gomphrena*		*affinis*		subsp.		*pilbarensis*						+	+
106	Amaranthaceae		*Gomphrena*		*canescens*		subsp.		*canescens*							
106	Amaranthaceae		*Gomphrena*		*cunninghamii*											
106	Amaranthaceae		*Ptilotus*		*?exaltatus*		var.		*exaltatus*							
106	Amaranthaceae		*Ptilotus*		*aervoides*											
106	Amaranthaceae		*Ptilotus*		*astrolasius*		var.		*astrolasius*							
106	Amaranthaceae		*Ptilotus*		*auriculifolius*											
106	Amaranthaceae		*Ptilotus*		*calostachyus*											
106	Amaranthaceae		*Ptilotus*		*calostachyus*		var.		*calostachyus*							
106	Amaranthaceae		*Ptilotus*		*carinatus*										+	
106	Amaranthaceae		*Ptilotus*		*clementii*											
106	Amaranthaceae		*Ptilotus*		*exaltatus*											+
106	Amaranthaceae		*Ptilotus*		*exaltatus*		var.		*exaltatus*						+	
106	Amaranthaceae		*Ptilotus*		*fusiformis*											
106	Amaranthaceae		*Ptilotus*		*fusiformis*		var.		*fusiformis*							
106	Amaranthaceae		*Ptilotus*		*gomphrenoides*		var.		*gomphrenoides*						+	
106	Amaranthaceae		*Ptilotus*		*helipteroides*											
106	Amaranthaceae		*Ptilotus*		*helipteroides*		var.		*helipteroides*							
106	Amaranthaceae		*Ptilotus*		*murrayi*		var.		*murrayi*							
106	Amaranthaceae		*Ptilotus*		*obovatus*		var.		*obovatus*							+
110	Aizoaceae		*Trianthema*	aff.	*triquetra*						(M3.35)					
110	Aizoaceae		*Trianthema*		sp. Python Pool											
110A	Molluginaceae		*Mollugo*		*molluginea*											
111	Portulacaceae		*Portulaca*		*conspicua*											
111	Portulacaceae	*	*Portulaca*		*oleracea*											+
113	Caryophyllaceae		*Polycarpaea*		*corymbosa*		var.		*corymbosa*							
113	Caryophyllaceae		*Polycarpaea*		*holtzei*											
113	Caryophyllaceae		*Polycarpaea*		*longiflora*											
113	Caryophyllaceae		*Polycarpaea*		*longiflora*					(Whim Creek form WC141-1)						
113	Caryophyllaceae		*Polycarpaea*		*longiflora*					(white form)						
122	Menispermaceae		*Tinospora*		*smilacina*											
131	Lauraceae		*Cassytha*		*capillaris*											
137A	Capparaceae		*Capparis*		*spinosa*		var.		*nummularia*							
137A	Capparaceae		*Cleome*		*viscosa*									+		
138	Brassicaceae		*Lepidium*		*pedicellosum*											
138	Brassicaceae		*Lepidium*		*pholidogynum*											
163	Mimosaceae		*Acacia*		*ancistrocarpa*											+
163	Mimosaceae		*Acacia*		*ancistrocarpa*				*x stellaticeps*							
163	Mimosaceae		*Acacia*		*acradenia*											
163	Mimosaceae		*Acacia*		*adsurgens*											
163	Mimosaceae		*Acacia*		*bivenosa*											+
163	Mimosaceae		*Acacia*		*colei*		var.		*colei*							
163	Mimosaceae		*Acacia*		*coriacea*		subsp.		*coriacea*							
163	Mimosaceae		*Acacia*		*coriacea*		subsp.		*pendens*							
163	Mimosaceae		*Acacia*		*cowleana*											
163	Mimosaceae		*Acacia*		*elachantha*					(golden hairy variant)						
163	Mimosaceae		*Acacia*		*inaequilatera*											+
163	Mimosaceae		*Acacia*		*ligulata*											
163	Mimosaceae		*Acacia*		*maitlandii*											
163	Mimosaceae		*Acacia*		*pyrifolia*		var.		pyrifolia							+
163	Mimosaceae		*Acacia*		*sclerosperma*		subsp.		*sclerosperma*							
163	Mimosaceae		*Acacia*		*stellaticeps*											
163	Mimosaceae		*Acacia*		*synchronicia*											+
163	Mimosaceae		*Acacia*		*tenuissima*											
163	Mimosaceae		*Acacia*		*trachycarpa*											

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FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ86	CP012	CP014
163	Mimosaceae		*Acacia*		*trachycarpa x tumida*		var.		*pilbarensis*							
163	Mimosaceae		*Acacia*		*trudgeniana*											
163	Mimosaceae		*Acacia*		*tumida*		var.		*pilbarensis*							
163	Mimosaceae		*Acacia*		*victoriae*											
163	Mimosaceae		*Acacia*		*xiphophylla*											
163	Mimosaceae		*Dichrostachys*		*spicata*										+	
163	Mimosaceae		*Neptunia*		*dimorphantha*									+	+	
163	Mimosaceae	*	*Prosopis*		*pallida*										+	
163	Mimosaceae	*	*Vachellia*		*farnesiana*											
164	Caesalpiniaceae		*Petalostylis*		*labicheoides*											
164	Caesalpiniaceae		*Senna*		*artemisioides*	aff.	subsp.		*oligophylla*	(thinly sericeous)						
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla*							
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla*							+
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla x helmsii*							+
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*glutinosa*						+	
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*glutinosa x luerssenii*							
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*luerssenii*							
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*pruinosa*							
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*x luerssenii*							
164	Caesalpiniaceae		*Senna*		*hamersleyensis*											
164	Caesalpiniaceae		*Senna*		*notabilis*											
164	Caesalpiniaceae		*Senna*		sp. Karijini						(M.E. Trudgen 10392)					
164	Caesalpiniaceae		*Senna*		*venusta*											
165	Papilionaceae		*Alysicarpus*		*muelleri*										+	+
165	Papilionaceae		*Cajanus*		*cinereus*											
165	Papilionaceae		*Crotalaria*		*dissitiflora*		subsp.		*benthamiana*						+	
165	Papilionaceae		*Crotalaria*		*medicaginea*		var.		*neglecta*							+
165	Papilionaceae		*Crotalaria*		*novae-hollandiae*		subsp.		*novae-hollandiae*							
165	Papilionaceae		*Cullen*		*cinereum*											
165	Papilionaceae		*Cullen*		*graveolens*											
165	Papilionaceae		*Cullen*		*leucanthum*											
165	Papilionaceae		*Desmodium*		*campylocaulon*											
165	Papilionaceae		*Desmodium*		*muelleri*											
165	Papilionaceae		*Indigastrum*		*parviflorum*											
165	Papilionaceae		*Indigofera*	aff.	*monophylla*											
165	Papilionaceae		*Indigofera*		*colutea*											+
165	Papilionaceae		*Indigofera*		*linifolia*									+		+
165	Papilionaceae		*Indigofera*		*linnaei*											
165	Papilionaceae		*Indigofera*		*monophylla*											
165	Papilionaceae		*Indigofera*		*monophylla*					(Burrup form)						
165	Papilionaceae		*Indigofera*		*monophylla*					(Cape Preston form)						+
165	Papilionaceae		*Indigofera*		*monophylla*					(grey leaflet form)						
165	Papilionaceae		*Indigofera*		*monophylla*					(grey/green leaflet form)						
165	Papilionaceae		*Indigofera*		*monophylla*						(MJOPP-2)					
165	Papilionaceae		*Indigofera*		*trita*										+	
165	Papilionaceae		*Isotropis*		*atropurpurea*											
165	Papilionaceae		*Rhynchosia*		*minima*									+	+	
165	Papilionaceae		*Sesbania*		*cannabina*										+	
165	Papilionaceae		*Swainsona*		*canescens*											
165	Papilionaceae		*Swainsona*		*formosa*											
165	Papilionaceae		*Tephrosia*	aff.	*clementii*						(4) (M35-14)					
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD133-20)					
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD205-10)					
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD88-4)					
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(MET 12,351)					+
165	Papilionaceae		*Tephrosia*		*clementii*											
165	Papilionaceae		*Tephrosia*		*rosea*		var.		*clementii*							
165	Papilionaceae		*Tephrosia*		sp. B Kimberley Flora						(C.A. Gardner 1300)					
165	Papilionaceae		*Tephrosia*		*supina*											
165	Papilionaceae		*Vigna*		*lanceolata*		var.		*lanceolata*							
165	Papilionaceae		*Vigna*		sp. rockpiles						(R.Butcher *et al* ., RB1400)					
165	Papilionaceae		*Vigna*		sp. central						(MET 1626)	2				+
167	Geraniaceae		*Erodium*		*cygnorum*											
173	Zygophyllaceae		*Tribulus*		*hirsutus*											
173	Zygophyllaceae		*Tribulus*		*suberosus*											
183	Polygalaceae		*Polygala*	aff.	*isingii*											
185	Euphorbiaceae		*Adriana*		*tomentosa*		var.		*tomentosa*							
185	Euphorbiaceae		*Euphorbia*	aff.	*australis*											
185	Euphorbiaceae		*Euphorbia*		*australis*											
185	Euphorbiaceae		*Euphorbia*		*biconvexa*											
185	Euphorbiaceae		*Euphorbia*		*boophthona*											

APPENDIX B: SUMMARY OF VASCULAR FLORA SPECIES RECRDED AT EACH QUADRAT WITHIN THE ANKETELL POINT TRANSPORT CORRIDOR BETWEEN 2008 - 2009

NB * denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ86	CP012	CP014
185	Euphorbiaceae		*Euphorbia*		*coghlanii*											+
185	Euphorbiaceae		*Euphorbia*		sp.											
185	Euphorbiaceae		*Euphorbia*		sp.						(BPBS10-50)					
185	Euphorbiaceae		*Euphorbia*		*tannensis*		subsp.		*eremophila*	(Burrup form)						
185	Euphorbiaceae		*Euphorbia*		*wheeleri*											
185	Euphorbiaceae		*Leptopus*		*decaisnei*											+
185	Euphorbiaceae		*Leptopus*		*decaisnei*		var.		*orbicularis*							+
185	Euphorbiaceae		*Phyllanthus*		*maderaspatensis*											
207	Sapindaceae		*Diplopeltis*		*eriocarpa*											
220	Tiliaceae		*Corchorus*	aff.	*parviflorus*											
220	Tiliaceae		*Corchorus*	aff.	*parviflorus*						(JW 11-11)					
220	Tiliaceae		*Corchorus*	aff.	*walcotti*						(K.J. Atkins 510)					
220	Tiliaceae		*Corchorus*		*laniflorus*											+
220	Tiliaceae		*Corchorus*		sp..											
220	Tiliaceae		*Corchorus*		*tectus*											
220	Tiliaceae		*Corchorus*		*tridens*											
220	Tiliaceae		*Triumfetta*		*appendiculata*											
220	Tiliaceae		*Triumfetta*		*clementii*											+
221	Malvaceae		*Abutilon*	aff.	*lepidum*						(1) (MET 15,352)					
221	Malvaceae		*Abutilon*	aff.	*lepidum*						(4)					
221	Malvaceae		*Abutilon*		*amplum*											
221	Malvaceae		*Abutilon*		*fraseri*											
221	Malvaceae		*Abutilon*		*lepidum*											
221	Malvaceae		*Abutilon*		*oxycarpum*		subsp.		*prostratum*							
221	Malvaceae		*Gossypium*		*australe*					(Burrup Peninsula form)						
221	Malvaceae		*Gossypium*		*australe*					(Whim Creek form)						
221	Malvaceae		*Hibiscus*	aff.	*platychlamys*						(MET 15,061)					
221	Malvaceae		*Hibiscus*		*brachysiphonius*										+	
221	Malvaceae		*Hibiscus*		*coatesii*											
221	Malvaceae		*Hibiscus*		*sturtii*		var.		*campylochlamys*							
221	Malvaceae		*Hibiscus*		*sturtii*		var.		*platychlamys*							
221	Malvaceae	*	*Malvastrum*		*americanum*										+	+
221	Malvaceae		*Sida*	aff.	*echinocarpa*						(MET 15,350)					
221	Malvaceae		*Sida*	aff.	*fibulifera*						(HD200-6)			+	+	
221	Malvaceae		*Sida*	aff.	*fibulifera*					(oblong)	(MET 15220)				+	+
221	Malvaceae		*Sida*		*arsiniata*											
221	Malvaceae		*Sida*		*clementii*											
221	Malvaceae		*Sida*		*echinocarpa*											
221	Malvaceae		*Sida*		*pilbarensis*					(Ferrugineous form)						
221	Malvaceae		*Sida*		sp. spiciform panicles						(E. Leyland s.n. 14/08/1990)					
221	Malvaceae		*Sida*		*spinosa*										+	+
223	Sterculiaceae		*Brachychiton*		*acuminatus*											
223	Sterculiaceae		*Melhania*		sp. Burrup											+
223	Sterculiaceae		*Melhania*		sp.						(CH15-39)					+
223	Sterculiaceae		*Waltheria*		*indica*											
235	Elatinaceae		*Bergia*		*pedicellaris*											
243	Violaceae		*Hybanthus*		*aurantiacus*											+
248	Passifloraceae	*	*Passiflora*		*foetida*		var.		*hispida*							
265	Lythraceae		*Ammannia*		*auriculata*											
265	Lythraceae		*Ammannia*		*baccifera*											
273	Myrtaceae		*Corymbia*		*hamersleyana*											
273	Myrtaceae		*Eucalyptus*		*camaldulensis*											
273	Myrtaceae		*Eucalyptus*		*victrix*											
273	Myrtaceae		*Melaleuca*		*glomerata*											
281	Apiaceae		*Trachymene*		*oleracea*		subsp.		*oleracea*							+
301	Oleaceae		*Jasminum*		*didymum*		subsp.		*lineare*							
305	Asclepiadaceae		*Sarcostemma*		*viminale*		subsp.		*australe*							
307	Convolvulaceae		*Bonamia*		*media*		var.		*villosa*							
307	Convolvulaceae		*Bonamia*		*rosea*											
307	Convolvulaceae		*Duperreya*		*commixta*											
307	Convolvulaceae		*Evolvulus*		*alsinoides*		var.		*decumbens*							
307	Convolvulaceae		*Evolvulus*		*alsinoides*		var.		*villosicalyx*							+
307	Convolvulaceae		*Ipomoea*		*coptica*											
307	Convolvulaceae		*Ipomoea*		*costata*											
307	Convolvulaceae		*Ipomoea*		*muelleri*											
307	Convolvulaceae		*Ipomoea*		*plebeia*										+	
307	Convolvulaceae		*Ipomoea*		*polymorpha*											+
307	Convolvulaceae		*Operculina*		*aequisepala*										+	
307	Convolvulaceae		*Polymeria*		*ambigua*											
307	Convolvulaceae		*Polymeria*		sp.						(site 1365)					
310	Boraginaceae		*Ehretia*		*saligna*		var.		*saligna*							+

APPENDIX B: SUMMARY OF VASCULAR FLORA SPECIES RECRDED AT EACH QUADRAT WITHIN THE ANKETELL POINT TRANSPORT CORRIDOR BETWEEN 2008 - 2009

NB * denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPCIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	APQ86	CP012	CP014
310	Boraginaceae		*Heliotropium*		*conocarpum*									+	+	
310	Boraginaceae		*Heliotropium*		*cunninghamii*											+
310	Boraginaceae		*Heliotropium*		*heteranthum*											
310	Boraginaceae		*Heliotropium*		*inexplicitum*											
310	Boraginaceae		*Heliotropium*		*ovalifolium*											
310	Boraginaceae		*Trichodesma*		*zeylanicum*											
310	Boraginaceae		*Trichodesma*		*zeylanicum*		var.		*zeylanicum*							+
311	Verbenaceae		*Clerodendrum*		*tomentosum*		var.		*lanceolatum*							
315	Solanaceae		*Solanum*		*diversiflorum*											+
315	Solanaceae		*Solanum*		*gabrielae*											
315	Solanaceae		*Solanum*		*horridum*											
315	Solanaceae		*Solanum*		*lasiophyllum*										+	+
316	Scrophulariaceae		*Stemodia*		*grossa*											
316	Scrophulariaceae		*Stemodia*		*kingii*										+	
325	Acanthaceae		*Dicliptera*		*armata*											
326	Myoporaceae		*Eremophila*		*forrestii*											+
326	Myoporaceae		*Eremophila*		*forrestii*		subsp.		*forrestii*							+
326	Myoporaceae		*Eremophila*		*longifolia*											+
331	Rubiaceae		*Synaptantha*		*tillaeacea*		var.		*tillaeacea*							
337	Cucurbitaceae	*	*Citrullus*		*colocynthis*											
337	Cucurbitaceae		*Cucumis*		*maderaspatanus*										+	+
337	Cucurbitaceae	*	*Cucumis*		*melo*		subsp.		*agrestis*						+	
337	Cucurbitaceae		*Trichosanthes*		*cucumerina*											
341	Goodeniaceae		*Goodenia*		*forrestii*											+
341	Goodeniaceae		*Goodenia*		*lamprosperma*											
341	Goodeniaceae		*Goodenia*		*microptera*											
341	Goodeniaceae		*Goodenia*		*pascua*											
341	Goodeniaceae		*Goodenia*		*stobbsiana*											
341	Goodeniaceae		*Scaevola*		*spinescens*											
341	Goodeniaceae		*Scaevola*		*spinescens*					(broad leaf form)						+
341	Goodeniaceae		*Scaevola*		*spinescens*					(narrow form)						
345	Asteraceae		*Flaveria*		*australasica*		subsp.			gilgai		3		+		
345	Asteraceae		*Pentalepis*		*trichodesmoides*											
345	Asteraceae		*Pluchea*		*rubelliflora*											
345	Asteraceae		*Pluchea*		sp.											
345	Asteraceae		*Pterocaulon*		*sphacelatum*											
345	Asteraceae		*Pterocaulon*		*sphaeranthoides*											
345	Asteraceae		*Streptoglossa*		*bubakii*									+	+	
345	Asteraceae		*Streptoglossa*		*decurrens*											
345	Asteraceae		*Streptoglossa*		*liatroides*										+	
345	Asteraceae		*Streptoglossa*		sp.											

Appendix C

Summary of vascular flora species recorded at each community within the Anketell Point Transport Corridor between 2008-2009

APPENDIX C: SUMMARY OF VASCULAR FLORA SPECIES RECRDED AT EACH COMMUNITY WITHIN THE ANKETELL POINT TRANSPORT CORRIDOR BETWEEN 2008 - 2009 Project_site_species_ctab

^ Denotes communities and/or species that are common to both areas

 # Denotes species which are part of community but recorded in Port Area quadrats

+ Denotes species recorded in rail quadrats only

NB: * Denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPECIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	VEGETATION COMMUNITIES: Hf ^	Thg ^	AEThg	AHf	Amg	AThg1^	AThg2^	AxE	AxT	MAT^	MATE	CAT	CAThg1	CAThg2	DCAT1^	DCAT2^	DEAT1	DEAT2	DMATE
13	Marsileaceae		*Marsilea*		*hirsuta*									#																+	
31	Poaceae		*Aristida*		*burbidgeae*										#																	
31	Poaceae		*Aristida*		*contorta*									+	^	+	+	+	+	+	+	+	+	+						+		+
31	Poaceae		*Aristida*		*holathera*		var.		*holathera*						+																	
31	Poaceae		*Aristida*		*hygrometrica*																								#			
31	Poaceae		*Aristida*		*latifolia*									+																		
31	Poaceae		*Aristida*		sp.										+																	
31	Poaceae		*Astrebla*		*pectinata*									+																		
31	Poaceae		*Bothriochloa*		*ewartiana*																							+	+			
31	Poaceae		*Brachyachne*		*convergens*									+		+						+										
31	Poaceae		*Brachyachne*		*prostrata*									+							+	+										
31	Poaceae	*	*Cenchrus*		*ciliaris*										^	+	+		^	+	+	+	^	+		+		^	^	+		+
31	Poaceae		*Chloris*		*pectinata*									+		+																
31	Poaceae		*Chrysopogon*		*fallax*									+		+		+	+		+	+						#	^	+		
31	Poaceae		*Cymbopogon*		*ambiguus*										^											+						
31	Poaceae		*Cymbopogon*		*procerus*																					+						+
31	Poaceae		*Dactyloctenium*		*radulans*									+		+	+		+		+	+	+	+								
31	Poaceae		*Dichanthium*		*sericeum*		subsp.		*humilius*					+	+	+	+		+	+	+	+	^	+				^		+	+	+
31	Poaceae		*Digitaria*		*ctenantha*																			+								
31	Poaceae		*Enneapogon*		*caerulescens*		var.		*caerulescens*					+	^	+			+	^	+	+	+	+				+	+	+		+
31	Poaceae		*Enneapogon*		*polyphyllus*																											+
31	Poaceae		*Enteropogon*		*ramosus*																+											
31	Poaceae		*Eragrostis*	aff.	*eriopoda*																								#			
31	Poaceae		*Eragrostis*		*falcata*									+																		
31	Poaceae		*Eragrostis*		*setifolia*												+															
31	Poaceae		*Eragrostis*		*tenellula*									^			+													+	+	
31	Poaceae		*Eragrostis*		*xerophila*									^		+	+				+	+		+								
31	Poaceae		*Eriachne*	aff.	*mucronata*									+				+			+											
31	Poaceae		*Eriachne*		*aristidea*										#																	
31	Poaceae		*Eriachne*		*benthamii*									^		+	+	+			+	+								+		
31	Poaceae		*Eriachne*		*obtusa*										#															+		
31	Poaceae		*Eriachne*		*pulchella*		subsp.		*dominii*					+	+				+	^	+	+	^		+			#				
31	Poaceae		*Eriachne*		*pulchella*		subsp.		*pulchella*					+	+			+	+		+	+	+	+		+						
31	Poaceae		*Eulalia*		*aurea*														#											+		
31	Poaceae		*Iseilema*		*dolichotrichum*									+	+	+			+	+	+	+	+	+			+	^				+
31	Poaceae		*Iseilema*		*eremaeum*																									+		
31	Poaceae		*Iseilema*		*macratherum*									^		+	+															
31	Poaceae		*Panicum*		*decompositum*									^	#		+			+			+	+						+		
31	Poaceae		*Panicum*		*laevinode*									+			+			+												
31	Poaceae		*Paraneurachne*		*muelleri*															#		+	+	+		+			+			+
31	Poaceae		*Paspalidium*		*clementii*										+				+			+	+									+
31	Poaceae		*Paspalidium*		*tabulatum*									+	+																	
31	Poaceae		*Paspalidium*		*tabulatum*					(Whim Creek form)					+		+															
31	Poaceae		*Schizachyrium*		*fragile*															+												
31	Poaceae		*Setaria*		*dielsii*																	+										
31	Poaceae		*Sorghum*		*plumosum*		var.		*plumosum*																				+			
31	Poaceae		*Sorghum*		*timorense*									+							+	+		+								+
31	Poaceae		*Sporobolus*		*australasicus*									+	#	+			+	^	+	+	^					^		+		+
31	Poaceae		*Sporobolus*		*virginicus*																										+	
31	Poaceae		*Themeda*		*triandra*										+				#				+			+		^	^	+		+
31	Poaceae		*Triodia*	aff.	*epactia*																		+						#	+		
31	Poaceae		*Triodia*	aff.	*pungens*																+											
31	Poaceae		*Triodia*	aff.	*wiseana*																									+		
31	Poaceae		*Triodia*		*angusta*										#							+	+					+		+		
31	Poaceae		*Triodia*		*brizoides*															+												
31	Poaceae		*Triodia*		*epactia*									+	^	+		+	^	+			^			+		^	+	+	+	
31	Poaceae		*Triodia*		*schinzii*																		#									
31	Poaceae		*Triodia*		*wiseana*										#		+	+									+			+		
31	Poaceae		*Triodia*		*wiseana*					(fine form)				+	^	+			^	^	+	+	+	+	+	+			^	+	+	+	+
31	Poaceae		*Urochloa*		*pubigera*																	+										
31	Poaceae		*Xerochloa*		*barbata*									^			+				+	+										
31	Poaceae		*Xerochloa*		*imberbis*									+			+						+									
31	Poaceae		*Yakirra*		*australiensis*		var.		*australiensis*										+	#			#									
32	Cyperaceae		*Bulbostylis*		*barbata*									+				+	+	+	+	+	^									
32	Cyperaceae		*Cyperus*		*difformis*																									+		
32	Cyperaceae		*Cyperus*		*iria*																									+		
32	Cyperaceae		*Cyperus*		*pygmaeus*									+																		
32	Cyperaceae		*Cyperus*		*vaginatus*																									+	+	
32	Cyperaceae		*Fimbristylis*	aff.	*dichotoma*						(M75-4)			+	^		+	+	+	+	+	+	+					#				+
54P	Hemerocallidaceae		*Corynotheca*		*pungens*																		#									
90	Proteaceae		*Grevillea*		*pyramidalis*														+				+							+		
90	Proteaceae		*Grevillea*		*pyramidalis*		subsp.		*leucadendron*						+				#									+	^	+		
90	Proteaceae		*Grevillea*		*wickhamii*		subsp.		*hispidula*										+													
90	Proteaceae		*Hakea*		*lorea*		subsp.		*lorea*						+			+	+					+	+							+
92	Santalaceae		*Santalum*		*lanceolatum*																									+		
105	Chenopodiaceae		*Atriplex*		*codonocarpa*									#																		
105	Chenopodiaceae		*Dysphania*		*rhadinostachya*		subsp.		*rhadinostachya*						#					+						+			+			+
105	Chenopodiaceae		*Enchylaena*		*tomentosa*																+											
105	Chenopodiaceae		*Enchylaena*		*tomentosa*		var.		*tomentosa*						+		+						+									
105	Chenopodiaceae		*Rhagodia*		*eremaea*																			+								+
105	Chenopodiaceae		*Salsola*		*tragus*									+						+												
105	Chenopodiaceae		*Salsola*		*tragus*		subsp.		*grandiflora*					+						+				+									
105	Chenopodiaceae		*Salsola*		*tragus*		subsp.		*tragus*					+	#				+	+		+	^							+		
105	Chenopodiaceae		*Sclerolaena*		*bicornis*									#							+											
105	Chenopodiaceae		*Sclerolaena*		*costata*									+		+			+	+		+		+								+
105	Chenopodiaceae		*Sclerolaena*		*densiflora*									+	+				+		+	+		+								
105	Chenopodiaceae		*Sclerolaena*		*diacantha*										#																	
105	Chenopodiaceae		*Sclerolaena*		*eriacantha*																+											
105	Chenopodiaceae		*Sclerolaena*		*glabra*												+				+											
106	Amaranthaceae	*	*Aerva*		*javanica*										#								+							+		
106	Amaranthaceae		*Alternanthera*		*angustifolia*																									+	+	
106	Amaranthaceae		*Alternanthera*		*nana*																								+	+	+	
106	Amaranthaceae		*Alternanthera*		*nodiflora*																										+	
106	Amaranthaceae		*Amaranthus*		*cuspidifolius*										#																	
106	Amaranthaceae		*Amaranthus*		*undulatus*																										+	
106	Amaranthaceae		*Gomphrena*		*affinis*		subsp.		*pilbarensis*					+		+			+		+	+										+
106	Amaranthaceae		*Gomphrena*		*canescens*		subsp.		*canescens*																		+					
106	Amaranthaceae		*Gomphrena*		*cunninghamii*										^				+	^			^	+		+						+
106	Amaranthaceae		*Ptilotus*		*?exaltatus*		var.		*exaltatus*													+										
106	Amaranthaceae		*Ptilotus*		*aervoides*									+		+	+				+	+	+									
106	Amaranthaceae		*Ptilotus*		*astrolasius*		var.		*astrolasius*										+		+	+	+	+								

APPENDIX C: SUMMARY OF VASCULAR FLORA SPECIES RECRDED AT EACH COMMUNITY WITHIN THE ANKETELL POINT TRANSPORT CORRIDOR BETWEEN 2008 - 2009 Project_site_species_ctab

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NB: * Denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPECIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	VEGETATION COMMUNITIES: Hf ^	Thg ^	AEThg	AHf	Amg	AThg1^	AThg2^	AxE	AxT	MAT^	MATE	CAT	CAThg1	CAThg2	DCAT1^	DCAT2^	DEAT1	DEAT2	DMATE
106	Amaranthaceae		*Ptilotus*		*auriculifolius*										+				#	^		+								+		
106	Amaranthaceae		*Ptilotus*		*axillaris*														+													
106	Amaranthaceae		*Ptilotus*		*calostachyus*														+	+												
106	Amaranthaceae		*Ptilotus*		*calostachyus*		var.		*calostachyus*													+	+									
106	Amaranthaceae		*Ptilotus*		*carinatus*									+	+		+		+		+	+	+	+					+	+	+	+
106	Amaranthaceae		*Ptilotus*		*clementii*														+	+			#						+	+		
106	Amaranthaceae		*Ptilotus*		*exaltatus*									^	+		+		+			+						+	+	+		
106	Amaranthaceae		*Ptilotus*		*exaltatus*		var.		*exaltatus*					+	+	+			^	^	+	+	^	+	+	+			+	+		+
106	Amaranthaceae		*Ptilotus*		*fusiformis*										+					+								+				
106	Amaranthaceae		*Ptilotus*		*fusiformis*		var.		*fusiformis*						#							+										
106	Amaranthaceae		*Ptilotus*		*gomphrenoides*		var.		*gomphrenoides*					+																		
106	Amaranthaceae		*Ptilotus*		*helipteroides*									+	+				+			+					+					
106	Amaranthaceae		*Ptilotus*		*helipteroides*		var.		*helipteroides*					+	+				+	^	+	+	+	+					#	+		+
106	Amaranthaceae		*Ptilotus*		*incanus*		var.		*incanus*						#																
106	Amaranthaceae		*Ptilotus*		*murrayi*		var.		*murrayi*					+							+		+									
106	Amaranthaceae		*Ptilotus*		*obovatus*		var.		*obovatus*						+				+		+	+	+	+				+		+		
106	Amaranthaceae		*Ptilotus*		*polystachyus*		var.		*arthrotrichus*														#									
106	Amaranthaceae		*Ptilotus*		*polystachyus*		var.		*polystachyus*																				#			
107	Nyctaginaceae		*Boerhavia*		*burbidgeana*										+															+		
107	Nyctaginaceae		*Boerhavia*		*coccinea*									+	+			+	+	#	+	+	^						+	+		
107	Nyctaginaceae		*Boerhavia*		*gardneri*										#				#													
110	Aizoaceae		*Trianthema*	aff.	*triquetra*						(M3.35)			+			+		+		+		+									
110	Aizoaceae		*Trianthema*		*glossostigma*										#																	
110	Aizoaceae		*Trianthema*		sp. Python Pool																	+										
110	Aizoaceae		*Trianthema*		*turgidifolia*										#																	
110A	Molluginaceae		*Mollugo*		*molluginea*													+					+						#	+		
111	Portulacaceae		*Portulaca*		*conspicua*									+	+						+											
111	Portulacaceae	*	*Portulaca*		*oleracea*									^	^	+	+		+	^	+	+	^	+					#	+		+
111	Portulacaceae		*Portulaca*		*pilosa*										#																	
113	Caryophyllaceae		*Polycarpaea*		*corymbosa*		var.		*corymbosa*									+		+												
113	Caryophyllaceae		*Polycarpaea*		*holtzei*										+				+													
113	Caryophyllaceae		*Polycarpaea*		*longiflora*														+			+				+				+		
113	Caryophyllaceae		*Polycarpaea*		*longiflora*						(Whim Creek form, WC147-7)									+			+									
113	Caryophyllaceae		*Polycarpaea*		*longiflora*						(white form)			+	^				+	+												+
122	Menispermaceae		*Tinospora*		*smilacina*										^				+													
131	Lauraceae		*Cassytha*		*capillaris*										#				+				+	+		+	+	+	+	+		
137A	Capparaceae		*Capparis*		*spinosa*		var.		*nummularia*						^				+				+					+	+			
137A	Capparaceae		*Cleome*		*viscosa*									+	#	+		+	+		+	+	#		+			#	#			
138	Brassicaceae		*Lepidium*		*pedicellosum*														+													
138	Brassicaceae		*Lepidium*		*pholidogynum*									+									+	+								
163	Mimosaceae		*Acacia*		*acradenia*										+																	
163	Mimosaceae		*Acacia*		*adsurgens*														+													
163	Mimosaceae		*Acacia*		*ancistrocarpa*										+	+			+				+	+		+			+	+	+	+
163	Mimosaceae		*Acacia*		*ancistrocarpa*				*x stellaticeps*														+									
163	Mimosaceae		*Acacia*		*bivenosa*										^	+			^	^		+	^	+	+			+	^	^	+		+
163	Mimosaceae		*Acacia*		*colei*		var.		*colei*														+						+			
163	Mimosaceae		*Acacia*		*coriacea*		subsp.		*coriacea*						#				^				#			+				+	+	
163	Mimosaceae		*Acacia*		*coriacea*		subsp.		*pendens*																					+	+	
163	Mimosaceae		*Acacia*		*cowleana*														+							+			+	+		
163	Mimosaceae		*Acacia*		*elachantha*						(golden hairy variant)								+							+						
163	Mimosaceae		*Acacia*		*glaucocaesia*								3		+					+												
163	Mimosaceae		*Acacia*		*gregorii*										#																	
163	Mimosaceae		*Acacia*		*inaequilatera*										#	+		+	^	#			^			+	+			+	+		+
163	Mimosaceae		*Acacia*		*ligulata*																									+		
163	Mimosaceae		*Acacia*		*maitlandii*														+			+		+								
163	Mimosaceae		*Acacia*		*pyrifolia*		var.		*pyrifolia*						^	+			^	^		+	^	+		+			^	^	+	+	+
163	Mimosaceae		*Acacia*		*sabulosa*																		#									
163	Mimosaceae		*Acacia*		*sclerosperma*		subsp.		*sclerosperma*								+													+		
163	Mimosaceae		*Acacia*		*stellaticeps*																		^						#			
163	Mimosaceae		*Acacia*		*synchronicia*										+	+			+		+		+	+								
163	Mimosaceae		*Acacia*		*tenuissima*														+													
163	Mimosaceae		*Acacia*		*trachycarpa*																		+						+	+	+	
163	Mimosaceae		*Acacia*		*trachycarpa x tumida*		var.		*pilbarensis*																						+		
163	Mimosaceae		*Acacia*		*trudgeniana*										+										+							
163	Mimosaceae		*Acacia*		*tumida*		var.		*pilbarensis*										#							+			#	#	+		
163	Mimosaceae		*Acacia*		*victoriae*														+													+
163	Mimosaceae		*Acacia*		*xiphophylla*									+	+		+		+		+	+		+								+
163	Mimosaceae		*Dichrostachys*		*spicata*									+					+										+	+		
163	Mimosaceae		*Neptunia*		*dimorphantha*									^			+				+	+										
163	Mimosaceae	*	*Prosopis*		*pallida*									+														+	+			
163	Mimosaceae	*	*Vachellia*		*farnesiana*																							+			+	
164	Caesalpiniaceae		*Petalostylis*		*labicheoides*																								+			
164	Caesalpiniaceae		*Senna*		*artemisioides*	aff.	subsp.		*oligophylla*	(thinly sericeous)					+	+						+		+					#			+
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla*					+									+			+					+
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla*						+							+	+					+	+	+		
164	Caesalpiniaceae		*Senna*		*artemisioides*		subsp.		*oligophylla x helmsii*										+			+	+	+					+	+		
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*glutinosa*					+	+				+	#		+	+			+			+	+		+
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*glutinosa x luerssenii*										+				+									
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*glutinosa x oligophylla*						#																	
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*luerssenii*						#				+		+		+	+								+
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*pruinosa*						+				+				+	+					+	+		
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*pruinosa x glutinosa*						#																	
164	Caesalpiniaceae		*Senna*		*glutinosa*		subsp.		*x luerssenii*										+	+	+	+	+	+		+	+	+	+	+		+
164	Caesalpiniaceae		*Senna*		*hamersleyensis*																+	+										
164	Caesalpiniaceae		*Senna*		*notabilis*									+	+				+	^	+	+	^	+	+	+			^		+		
164	Caesalpiniaceae		*Senna*		sp. Karijini						(M.E. Trudgen 10392)				+				+					+								
164	Caesalpiniaceae		*Senna*		*venusta*										+				+													
165	Papilionaceae		*Alysicarpus*		*muelleri*									+	^	+			+		+	+	^	+		+			+		+		+
165	Papilionaceae		*Cajanus*		*cinereus*																								+		+	
165	Papilionaceae		*Crotalaria*		*dissitiflora*		subsp.		*benthamiana*					+			+				+			+								
165	Papilionaceae		*Crotalaria*		*medicaginea*		var.		*neglecta*						^	+			+	+	+	+	+					+	^	+		
165	Papilionaceae		*Crotalaria*		*novae-hollandiae*		subsp.		*novae-hollandiae*										+													
165	Papilionaceae		*Cullen*		*cinereum*										#		+		+													
165	Papilionaceae		*Cullen*		*graveolens*												+															
165	Papilionaceae		*Cullen*		*leucanthum*														+										#			
165	Papilionaceae		*Cullen*		*leucochaites*										#																	
165	Papilionaceae		*Desmodium*		*campylocaulon*									+																		
165	Papilionaceae		*Desmodium*		*filiforme*																		#									
165	Papilionaceae		*Desmodium*		*muelleri*									+																		
165	Papilionaceae		*Indigastrum*		*parviflorum*														+					+								
165	Papilionaceae		*Indigofera*	aff.	*monophylla*										+																	

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FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPECIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	VEGETATION COMMUNITIES: Hf ^	Thg ^	AEThg	AHf	Amg	AThg1^	AThg2^	AxE	AxT	MAT^	MATE	CAT	CAThg1	CAThg2	DCAT1^	DCAT2^	DEAT1	DEAT2	DMATE
165	Papilionaceae		*Indigofera*		*colutea*										^	+			+		+	+	^	+				+	#	+		
165	Papilionaceae		*Indigofera*		*linifolia*									+	^	+	+		^		+	+	^	+		+			+	#	+		
165	Papilionaceae		*Indigofera*		*linnaei*										#							+									+		
165	Papilionaceae		*Indigofera*		*monophylla*														+							+	+		+	+		
165	Papilionaceae		*Indigofera*		*monophylla*					(Burrup form)					+					#									#		+		
165	Papilionaceae		*Indigofera*		*monophylla*					(Cape Preston form)					^				+			+	+	+		+			+	+	+	+	
165	Papilionaceae		*Indigofera*		*monophylla*					(grey leaflet form)					#														+			
165	Papilionaceae		*Indigofera*		*monophylla*					(grey/green leaflet form)					+			+												+		
165	Papilionaceae		*Indigofera*		*monophylla*						(MJOPP-2)				^				+				#						#		+	
165	Papilionaceae		*Indigofera*		*trita*									+	#	+			^	#			+	+				+		+		
165	Papilionaceae		*Isotropis*		*atropurpurea*																					+						
165	Papilionaceae		*Rhynchosia*		*minima*									^	^	+	+		^	^	+	+	^	+		+	+	^	^	+		+
165	Papilionaceae		*Sesbania*		*cannabina*									+	+		+		+		+	+								+	+	
165	Papilionaceae		*Swainsona*		*canescens*										^				^			+								+		
165	Papilionaceae		*Swainsona*		*formosa*											+				#			#			+		^	#	+		
165	Papilionaceae		*Swainsona*		*pterostylis*										#																	
165	Papilionaceae		*Tephrosia*	aff.	*clementii*						(4) (M35-14)														+							
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD133-20)				#				^				^									
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD205-10)				#							+										
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(HD88-4)									+			+		+							
165	Papilionaceae		*Tephrosia*	aff.	*supina*						(MET 12,357)					+			^	+	+	+	+			+		+	#	+		+
165	Papilionaceae		*Tephrosia*		*clementii*									+	+				+		+	+		+				#				
165	Papilionaceae		*Tephrosia*		*rosea*		var.		*clementii*										#											+		
165	Papilionaceae		*Tephrosia*		sp. B Kimberley Flora						(C.A. Gardner 7300)																			+		
165	Papilionaceae		*Tephrosia*		sp. Bungaroo Creek						(M.E. Trudgen 11601)								#										#			
165	Papilionaceae		*Tephrosia*		*supina*													+	+													
165	Papilionaceae		*Vigna*		*lanceolata*		var.		*lanceolata*																					+	+	
165	Papilionaceae		*Vigna*		sp. rockpiles						(R.Butcher *et al.* , RB1400)				+					+												
165	Papilionaceae		*Vigna*		sp. central							2							+													
167	Geraniaceae		*Erodium*		*cygnorum*																	+									
173	Zygophyllaceae		*Tribulus*		*hirsutus*														+												
173	Zygophyllaceae		*Tribulus*		*suberosus*													+													
183	Polygalaceae		*Polygala*	aff.					*isingii*					^	+				+		+	+	+	+				+				
185	Euphorbiaceae		*Adriana*		*tomentosa*		var.		*tomentosa*																					+		
185	Euphorbiaceae		*Euphorbia*	aff.	*australis*														+													
185	Euphorbiaceae		*Euphorbia*		*australis*										^			+	+	+		+	^		+			+				
185	Euphorbiaceae		*Euphorbia*		*biconvexa*										+				+	+		+	+	+		+				+		+
185	Euphorbiaceae		*Euphorbia*		*boophthona*										+								+									
185	Euphorbiaceae		*Euphorbia*		*coghlanii*									+	^		+		^	#	+		^						#			
185	Euphorbiaceae		*Euphorbia*		*sp.*																+				+					+		
185	Euphorbiaceae		*Euphorbia*		*sp.*						(BPBS10-50)				+				^	^		+	+	+						+	+	
185	Euphorbiaceae		*Euphorbia*		*tannensis*		subsp.		*eremophila*	(Burrup form)					#				+													
185	Euphorbiaceae		*Euphorbia*		*wheeleri*									+	^		+		^	+									#	+		
185	Euphorbiaceae		*Flueggea*		*virosa*		subsp.		*melanthesoides*						#																	
185	Euphorbiaceae		*Leptopus*		*decaisnei*														+			+		+		+			+			
185	Euphorbiaceae		*Leptopus*		*decaisnei*		var.		*orbicularis*										+	#	+	+	^	+	+					+		+
185	Euphorbiaceae		*Phyllanthus*		*maderaspatensis*									+	#						+	+	+	+				#		+	+	
207	Sapindaceae		*Diplopeltis*		*eriocarpa*										#				+										+			
220	Tiliaceae		*Corchorus*	aff.	*parviflorus*									+	+					+		+	+	+		+			#		+	
220	Tiliaceae		*Corchorus*	aff.	*parviflorus*						(JW 11-11)				+										+							
220	Tiliaceae		*Corchorus*	aff.	*walcotti*						(K.J. Atkins 570)			+	#	+			+	#	+	+	^	+					+	+	+		+
220	Tiliaceae		*Corchorus*		*laniflorus*											+			+	+	+	+	+			+				+		+
220	Tiliaceae		*Corchorus*		*parviflorus*										#				#				#						#			
220	Tiliaceae		*Corchorus*		sp.																						+					
220	Tiliaceae		*Corchorus*		*tectus*										+				+	+			+	+		+						
220	Tiliaceae		*Corchorus*		*tridens*									+																		
220	Tiliaceae		*Triumfetta*		*appendiculata*														+													
220	Tiliaceae		*Triumfetta*		*clementii*										^	+			^	^	+	+	^	+	+	+	+	^	+	+		+
221	Malvaceae		*Abutilon*	aff.	*lepidum*						(1) (MET 15,352)					+							+									
221	Malvaceae		*Abutilon*	aff.	*lepidum*						(4)				^				+	^	+	+	+	+								+
221	Malvaceae		*Abutilon*		*amplum*																									+		
221	Malvaceae		*Abutilon*		*fraseri*										#									+						+		
221	Malvaceae		*Abutilon*		*lepidum*										#				^													
221	Malvaceae		*Abutilon*		*oxycarpum*		subsp.		*prostratum*										+			+										
221	Malvaceae		*Gossypium*		*australe*					(Burrup Peninsula form)									^			+	+			+		+	#	+		
221	Malvaceae		*Gossypium*		*australe*					(Whim Creek form)					^							+										
221	Malvaceae		*Hibiscus*	aff.	*platychlamys*					(MET 15,067)					^				+			+	+					#		+		
221	Malvaceae		*Hibiscus*		*brachysiphonius*									+																		
221	Malvaceae		*Hibiscus*		*coatesii*										#				#					+								
221	Malvaceae		*Hibiscus*		*leptocladus*																								#	#		
221	Malvaceae		*Hibiscus*		*sturtii*		var.		*campylochlamys*										+							+						
221	Malvaceae		*Hibiscus*		*sturtii*		var.		*platychlamys*									+	+	#	+				+	+				+		+
221	Malvaceae	*	*Malvastrum*		*americanum*									+			+		+			+							+	+		
221	Malvaceae		*Sida*	aff.	*echinocarpa*						(MET 15,350)				+			+	^			+	+			+						+
221	Malvaceae		*Sida*	aff.	*fibulifera*						(HD200-6)			^							+	+							#		+	
221	Malvaceae		*Sida*	aff.	*fibulifera*					(oblong)	(MET 15,220)			+	#				+													
221	Malvaceae		*Sida*		*arsiniata*																	+									+
221	Malvaceae		*Sida*		*clementii*														+	+			+	+		+		+	+			
221	Malvaceae		*Sida*		*echinocarpa*																		#				+					
221	Malvaceae		*Sida*		*pilbarensis*					(Ferrugineous form)									#				#	+				#	#			
221	Malvaceae		*Sida*		*rohlenae*		subsp.		*rohlenae*														#						#			
221	Malvaceae		*Sida*		sp. spiciform panicles						(E. Leyland s.n 14/08/1990)								+													
221	Malvaceae		*Sida*		sp. verrucose glands						(F.H. Mollemans 2423)																			#		
221	Malvaceae		*Sida*		*spinosa*									+					+			+							+		
223	Sterculiaceae		*Brachychiton*		*acuminatus*										+																	
223	Sterculiaceae		*Melhania*		sp.						(CH15-39)								+					+				+		+		+
223	Sterculiaceae		*Melhania*		sp. Burrup														+													
223	Sterculiaceae		*Waltheria*		*indica*														#						+					+		+
235	Elatinaceae		*Bergia*		*pedicellaris*																										+	
243	Violaceae		*Hybanthus*		*aurantiacus*										^				^	#		+		+	+			^	^	+	+	+
248	Passifloraceae	*	*Passiflora*		*foetida*		var.		*hispida*																						+	
265	Lythraceae		*Ammannia*		*auriculata*																										+	
265	Lythraceae		*Ammannia*		*baccifera*																										+	
273	Myrtaceae		*Corymbia*		*hamersleyana*														+						+				^	^	+		
273	Myrtaceae		*Corymbia*		*opaca*																					+						
273	Myrtaceae		*Eucalyptus*		*camaldulensis*																										+	
273	Myrtaceae		*Eucalyptus*		*victrix*																									+	+	
273	Myrtaceae		*Melaleuca*		*glomerata*																									+	+	
281	Apiaceae		*Trachymene*		*oleracea*										#								#									
281	Apiaceae		*Trachymene*		*oleracea*		subsp.		*oleracea*						^				+	+		+	+			+	+	+				
301	Oleaceae		*Jasminum*		*didymum*		subsp.		*lineare*						+				+										+	+		

APPENDIX C: SUMMARY OF VASCULAR FLORA SPECIES RECRDED AT EACH COMMUNITY WITHIN THE ANKETELL POINT TRANSPORT CORRIDOR BETWEEN 2008 - 2009 Project_site_species_ctab

^ Denotes communities and/or species that are common to both areas

 # Denotes species which are part of community but recorded in Port Area quadrats

+ Denotes species recorded in rail quadrats only

NB: * Denotes introduced (weed) species

FAMILY CODE	FAMILY NAME	I	GENUS	aff.	SPECIES	aff.	INFRA SPECIES CLASS	aff.	INFRA SPECIES	FORM	AUTHORITY	CONS. STATUS	RANGE EXT.	VEGETATION COMMUNITIES Hf ^	Thg ^	AEThg	AHf	Amg	AThg1^	AThg2^	AxE	AxT	MAT^	MATE	CAT	CAThg1	CAThg2	DCAT1^	DCAT2^	DEAT1	DEAT2	DMATE
305	Asclepiadaceae		*Sarcostemma*		*viminale*		subsp.		*australe*										+				+									
307	Convolvulaceae		*Bonamia*		*media*		var.		*villosa*						^	+			+	^		+	+	+	+	+		#		+		+
307	Convolvulaceae		*Bonamia*		*pannosa*																		#					#				
307	Convolvulaceae		*Bonamia*		*rosea*														+													
307	Convolvulaceae		*Duperreya*		*commixta*																			+								
307	Convolvulaceae		*Evolvulus*		*alsinoides*		var.		*decumbens*																	+						
307	Convolvulaceae		*Evolvulus*		*alsinoides*		var.		*villosicalyx*					+	^	+		+	+	^	+	+	^	+		+	+	#	+	+		+
307	Convolvulaceae		*Ipomoea*		*coptica*									+	+							+										
307	Convolvulaceae		*Ipomoea*		*costata*														+													
307	Convolvulaceae		*Ipomoea*		*muelleri*									+															+			
307	Convolvulaceae		*Ipomoea*		*plebeia*									+																		
307	Convolvulaceae		*Ipomoea*		*polymorpha*														+				#									
307	Convolvulaceae		*Operculina*		*aequisepala*									+															+			
307	Convolvulaceae		*Polymeria*		*ambigua*																		+					#	+	+	+	
307	Convolvulaceae		*Polymeria*		sp.						(site 1365)												+									
310	Boraginaceae		*Ehretia*		*saligna*		var.		*saligna*						^				+			+						#	+	+		
310	Boraginaceae		*Heliotropium*		*conocarpum*									+								+										
310	Boraginaceae		*Heliotropium*		*cunninghamii*													+	+				+									
310	Boraginaceae		*Heliotropium*		*heteranthum*									+	+	+	+		+		+	+		+								
310	Boraginaceae		*Heliotropium*		*inexplicitum*									+			+	+		+	+											
310	Boraginaceae		*Heliotropium*		*ovalifolium*																		+	+				+		+		
310	Boraginaceae		*Trichodesma*		*zeylanicum*										+								+				+					
310	Boraginaceae		*Trichodesma*		*zeylanicum*		var.		*zeylanicum*						#	+			^	+		+	^	+		+		^	^	+	+	+
311	Verbenaceae		*Clerodendrum*		*tomentosum*		var.		*lanceolatum*						+																	
315	Solanaceae		*Solanum*		*diversiflorum*										+				+		+	+	+	+		+	+	#		+		+
315	Solanaceae		*Solanum*		*ellipticum*										#																	
315	Solanaceae		*Solanum*		*gabrielae*										+																	
315	Solanaceae		*Solanum*		*horridum*										^				+	+		+		+						+		
315	Solanaceae		*Solanum*		*lasiophyllum*									+	#	+			+				+	+			+				+		+
316	Scrophulariaceae		*Stemodia*		*grossa*														#												+	+	
316	Scrophulariaceae		*Stemodia*		*kingii*									+							+						+				+		+
325	Acanthaceae		*Dicliptera*		*armata*										^																	
326	Myoporaceae		*Eremophila*		*forrestii*														+													
326	Myoporaceae		*Eremophila*		*forrestii*		subsp.		*forrestii*							+			+			+	+	+						+		+
326	Myoporaceae		*Eremophila*		*longifolia*											+	+		+					+	+					+		
331	Rubiaceae		*Oldenlandia*		*crouchiana*										#																	
331	Rubiaceae		*Synaptantha*		*tillaeacea*		var.		*tillaeacea*																						+		
337	Cucurbitaceae	*	*Citrullus*		*colocynthis*																							+				
337	Cucurbitaceae		*Cucumis*		*maderaspatanus*									+	^	+			+				+	+		+		#		+	+	+
337	Cucurbitaceae	*	*Cucumis*		*melo*		subsp.		*agrestis*					+						+		+	+									
337	Cucurbitaceae		*Trichosanthes*		*cucumerina*										+																	
341	Goodeniaceae		*Goodenia*		*forrestii*											+			+	+	+	+	+	+	+				+	+	+		+
341	Goodeniaceae		*Goodenia*		*lamprosperma*																							+				+	
341	Goodeniaceae		*Goodenia*		*microptera*										#				^	#		+	+			+		#	#	+		
341	Goodeniaceae		*Goodenia*		*pascua*									+																		
341	Goodeniaceae		*Goodenia*		*stobbsiana*																			+		+						
341	Goodeniaceae		*Scaevola*		*spinescens*												+															
341	Goodeniaceae		*Scaevola*		*spinescens*						(broad leaf form)				+				+			+	+	+					+	+		+
341	Goodeniaceae		*Scaevola*		*spinescens*						(narrow form)						+														+	
345	Asteraceae		*Flaveria*		*australasica*		subsp.		*gilgai*		3			+																		
345	Asteraceae		*Pentalepis*		*trichodesmoides*														+													
345	Asteraceae		*Pluchea*		*rubelliflora*																								+	+		
345	Asteraceae		*Pluchea*		sp.									+																		
345	Asteraceae		*Pterocaulon*		*sphacelatum*														+				+			+				+		
345	Asteraceae		*Pterocaulon*		*sphaeranthoides*																					+				+	+	
345	Asteraceae		*Streptoglossa*		*bubakii*									+	+	+	+		+		+	+		+		+				+		
345	Asteraceae		*Streptoglossa*		*decurrens*									+	^			+				+	+			+						
345	Asteraceae		*Streptoglossa*		*liatroides*									+								+										
345	Asteraceae		*Streptoglossa*		sp.										+																	

Appendix D

Quadrat data recorded from vegetation communities within the Anketell Point Transport Corridor

API Transport Corridor Flora Site APQ01

Described by KH Date 20/04/2009 Type Q 50 X 50

MGA Zone 50 422561 mE 7663448 mN

Soil Red sands with rocky nodules

Vegetation Tall Open Shrubland dominated by *Acacia xiphophila* and *Acacia bivenosa* over a Mid-dense Hummock Grassland of *Triodia wiseana* (fine form), *Aristida* spp and *Eriachne pulchella* ssp. *pulchella* on red sandy loam.

Veg Condition Very Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)

SPECIES LIST

Name	Cover	Height	Specimen
Acacia bivenosa#	4	1.5	BN54
Acacia xiphophylla#	7.5	2.5	AP1.02
Alysicarpus muelleri	<1	0.2	AP1.09
Aristida contorta#	8	0.15	BN03
**Cenchrus ciliaris#*	<1	0.6	BN21
Corchorus aff. *walcotti* (K.J. Atkins 570)	<1	0.05	AP1.18
Crotalaria dissitiflora ssp. *benthamiana^*	<1	0.15	BN117
*Cucumis maderaspatanus^*	<1	Creeper	BN57
Dichanthium sericeum ssp. *humilius^*	3	0.3	BN08A
Enneapogon caerulescens var. *caerulescens^*	<1	0.2	BN04
Eremophila forrestii ssp. *forrestii^*	<1	0.8	BN100
Eriachne pulchella ssp. *pulchella*	1	0.1	AP1.05
Euphorbia biconvexa	<1	0.15	AP1.16
Evolvulus alsinoides var. *villosicalyx*	<1	0.2	AP1.03
Gomphrena cunninghamii	<1	0.15	AP1.23
Goodenia forrestii	<1	0.05	AP1.19
Heliotropium heteranthum	<1	0.1	AP1.21
Indigastrum parviflorum	<1	0.1	AP1.10
*Indigofera colutea^*	<1	0.1	BN221
*Indigofera linifolia^*	<1	0.2	BN07
Indigofera trita	<1	0.05	AP1.08
Iseilema dolichotrichum	<1	0.05	AP1.07
Polygala aff. *isingii*	<1	0.1	AP1.22
**Portulaca oleracea^*	<1	0.2	BN207
*Ptilotus carinatus^*	<1	0.1	BN111
Ptilotus helipteroides var. *helipteroides*	<1	0.2	AP1.13
Rhagodia eremaea	<1	0.2	AP1.15
Rhynchosia minima#	<1	0.1	BN148
Sclerolaena costata#	<1	0.2	BN198
Triodia wiseana (fine form)#	70	0.9	AP1.01
Triumfetta clementii	<1	0.3	AP1.04

API Rail Flora Site APQ02

Described by KH Date 20/04/2009 Type Q 50 X 50

MGA Zone 50 422511 mE 7663569 mN

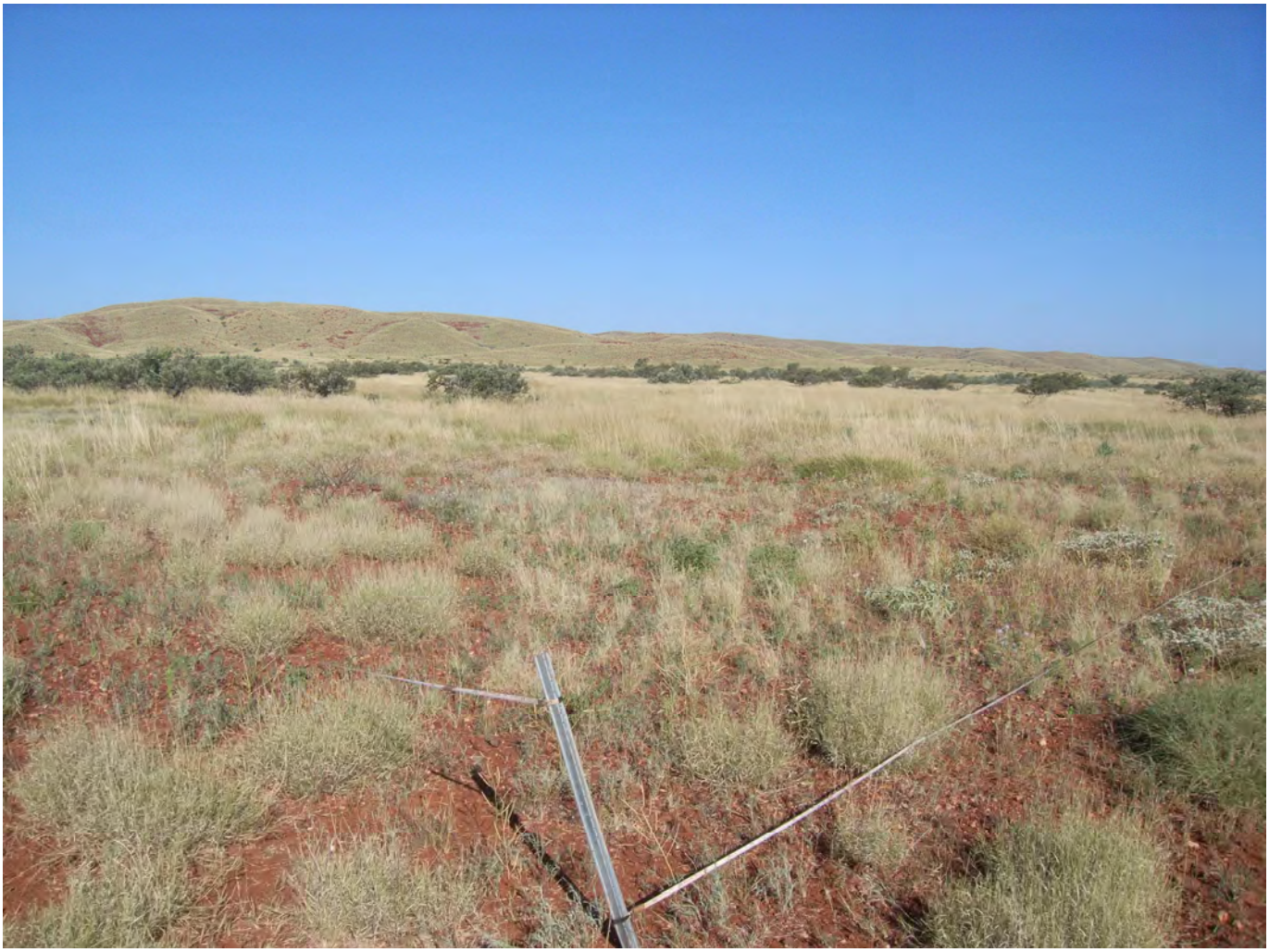
Soil Red rocky clayey loam

Vegetation Shrubland of *Acacia xiphophila* over a Hummock Grassland of *Triodia wiseana* (fine form) over an Open Tussock Grassland dominated by *Aristida contorta* and *Eragrostis xerophila* on red rocky clay loam

Veg Condition Very Good - Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)



SPECIES LIST

Name	Cover	Height	Specimen
Abutilon oxycarpum ssp. *prostratum*	<1	creeper	AP2.14
Acacia xiphophylla#	12	2	AP2.26
*Alysicarpus muelleri^*	<1	0.2	BN200
Aristida contorta#	15	0.3	AP2.10
Bonamia media var. *villosa^*	<1	0.3	BN27

Brachyachne convergens	<1	0.05	AP2.16
Bulbostylis barbata	<1	0.05	AP2.24
Chrysopogon fallax#	<1	0.8	AP2.02
Cleome viscosa	0.5	0.1	AP2.12
Corchorus aff. *walcotti* (K.J. Atkins 570)	1	0.3	AP2.03
*Corchorus laniflorus^*	<1	0.2	BN24
Crotalaria medicaginea var. *neglecta#*	<1	0.4	BN233
Dactyloctenium radulans#	<1	0.15	BN19
Dichanthium sericeum ssp. *humilius#*	1	0.3	BN13
Ehretia saligna var. *saligna*	<1	0.3	AP2.28
Eragrostis xerophila#	12	0.15	AP2.11
Eremophila forrestii ssp. *forrestii#*	<1	0.8	BN100
*Eriachne benthamii^*	<1	0.4	AP07
Euphorbia biconvexa	<1	0.2	AP2.04
Gomphrena affinis ssp. *pilbarensis#*	<1	0.4	BN09
Goodenia forrestii	<1	0.15	AP2.09
Gossypium australe (Burrup Peninsula form)	<1	0.3	BN181
*Heliotropium conocarpum^*	<1	0.2	BN93
*Hybanthus aurantiacus^*	<1	0.4	BN209
Indigofera colutea	<1	0.05	AP2.13
Indigofera linifolia#	<1	0.1	BN07
Indigofera linnaei	<1	0.1	AP2.31
Ipomoea coptica	<1	0.05	AP2.36
*Iseilema dolichotrichum^*	1	0.3	BN14
*Leptopus decaisnei^*	<1	0.2	AP04
*Polycarpaea longiflora^*	<1	0.2	BN179
Ptilotus aervoides	<1	0.02	AP2.17
*Ptilotus carinatus^*	<1	0.05	BN111
*Ptilotus exaltatus^*	<1	0.4	
Ptilotus fusiformis var. *fusiformis#*	<1	0.2	AP05
*Ptilotus helipteroides^*	<1	0.3	AP06
Rhynchosia minima#	<1	0.4	BN77
*Sclerolaena costata^*	<1	0.1	BN198
Senna artemisioides ssp. aff. *oligophylla* (thinly sericeous)	<1	0.4	AP2.05
*Sesbania cannabina^*	<1	0.2	BN164
Sida aff. *fibulifera* (HD200-6)	<1	0.1	AP2.32
*Sida spinosa^*	<1	0.4	BN33
*Solanum diversiflorum^*	<1	0.2	BN69
Sporobolus australasicus	<1	0.05	AP2.23
*Streptoglossa bubakii^*	1	0.4	BN95
Streptoglossa decurrens	<1	0.05	AP2.07
Tephrosia aff. *supina* (MET 12,357)#	<1	0.4	BN204
Trichodesma zeylanicum var. *zeylanicum#*	<1	0.15	AP2.19
Triodia wiseana (fine form)#	25	0.4	AP2.01
*Triumfetta clementii^*	<1	0.2	BN29

API Rail Flora Site APQ03

Described by KH Date 20/04/2009 Type Q 50 X 50

MGA Zone 50 422610 mE 7663627 mN

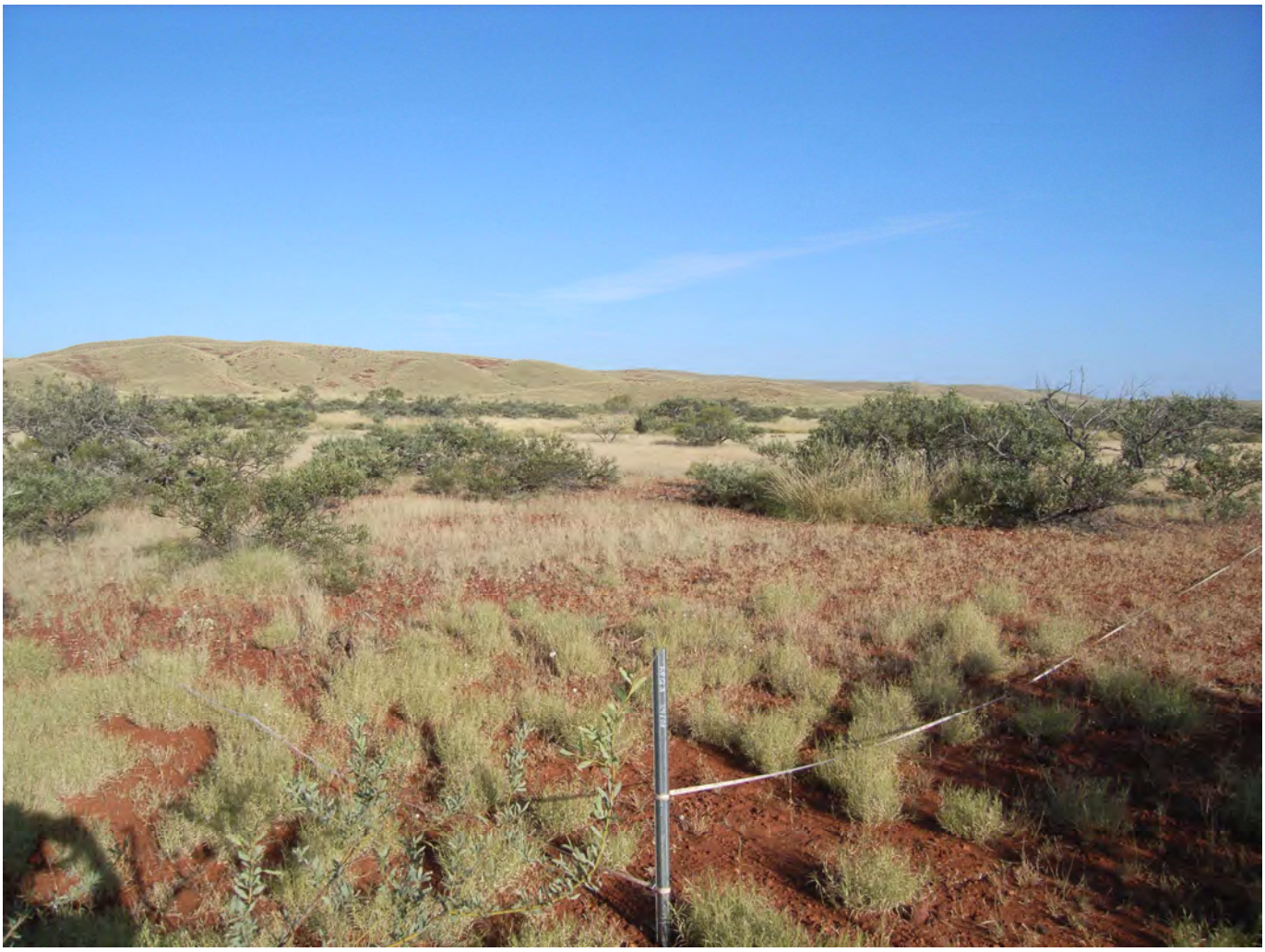
Soil Red clay with occasional stones

Vegetation Shrubland of *Acacia xiphophila* over a Tussock Grassland dominated by *Eriachne pulchella* ssp. *dominii*, *Aristida contorta* and *Eragrostis xerophila* on rocky red clay loam.

Veg Condition Very Good - Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)



SPECIES LIST:

Name	Cover	Height	Specimen
Acacia synchronicia#	1.5	0.3	BN203
Acacia xiphophylla#	11	2	AP3.05
Aristida contorta#	20	0.2	BN03
**Cenchrus ciliaris^*	<1	0.4	BN21
Corchorus aff. *walcotti* (K.J. Atkins 570)	1	0.3	AP3.15
*Corchorus laniflorus^*	<1	0.3	BN24
Dactyloctenium radulans	<1	0.1	AP3.16
Dichanthium sericeum ssp. *humilius^*	8	0.3	BN08A
Enneapogon caerulescens var. *caerulescens^*	<1	0.2	BN04
Eragrostis xerophila	2	0.1	AP3.01
Eriachne pulchella ssp. *dominii*	70	0.1	AP3.09
Eriachne pulchella ssp. *pulchella^*	15	0.1	AP09
Fimbristylis aff. *dichotoma* (M75-4)	<1	0.07	AP3.17
*Goodenia forrestii^*	<1	0.1	BN201
Hibiscus sturtii var. *platychlamys*	<1	0.05	AP3.04
Polygala aff. *isingii*	<1	0.05	AP3.14
Ptilotus exaltatus var. *exaltatus*	<1	0.05	AP3.18
Ptilotus obovatus var. *obovatus^*	<1	0.4	AP02
*Sclerolaena densiflora^*	<1	0.1	AP10
Senna glutinosa ssp. *luerssenii#*	<1	0.2	AP3.07
Sporobolus australasicus	1	0.05	AP3.03
Tephrosia clementii	<1	0.1	AP3.13
Triodia aff. *pungens*	<1	0.7	AP3.11
Triodia wiseana (fine form)#	6	0.5	AP3.10
Triumfetta clementii	<1	0.1	AP3.12

API Rail Flora Site APQ04

Described by KH Date 21/04/2009 Type Q 50 X 50

MGA Zone 50 422902 mE 7664026 mN

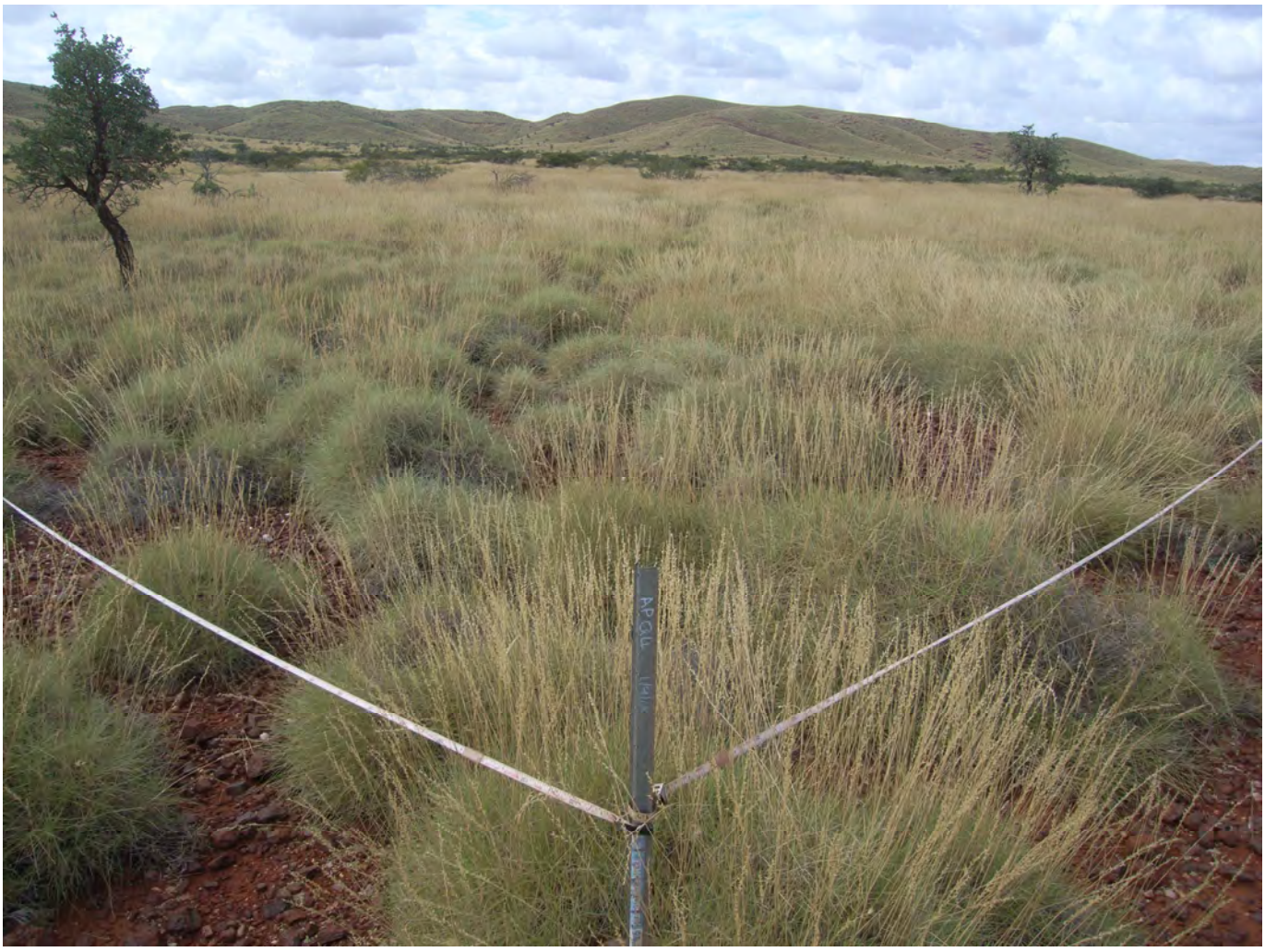
Soil Orange red rocky clay

Vegetation Tall Open Shrubland of *Acacia pyrifolia* var. *pyrifolia* over a Closed Hummock Grassland dominated by *Triodia wiseana* (fine form).

Veg Condition Very Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)



SPECIES LIST

Name	Cover	Height	Specimen
Abutilon aff. *lepidum* (1) (MET 15 352)	<1	0.1	AP4.31
Acacia ancistrocarpa#	<1	1	BN41
Acacia inaequilatera	<1	0.9	AP4.35
Acacia pyrifolia var. *pyrifolia^*	5	2.4	BN56
Acacia synchronicia#	<1	0.9	BN203
Alysicarpus muelleri#	<1	0.2	BN200
Aristida contorta#	3	0.2	BN03
Bonamia media var. *villosa*	<1	creeper	AP4.15
Brachyachne convergens	<1	0.2	AP4.22
**Cenchrus ciliaris*	<1	0.5	AP4.07
Chloris pectinata	<1	0.2	AP4.24
Chrysopogon fallax	<1	0.8	AP4.03
Cleome viscosa	<1	0.3	AP4.17
Corchorus aff. *walcotti* (K.J. Atkins 570)	<1	0.2	AP4.16
*Corchorus laniflorus^*	<1	0.2	BN24
Crotalaria medicaginea var. *neglecta*	<1	0.15	AP4.30
Cucumis maderaspatanus#	<1	creeper	AP4.33
*Dactyloctenium radulans^*	<1	0.05	BN19
Dichanthium sericeum ssp. *humilius#*	1	0.2	BN08A
Enneapogon caerulescens var. *caerulescens*	1	0.1	AP4.40
Eragrostis xerophila#	1	0.3	BN197
Eremophila forrestii ssp. *forrestii#*	<1	0.7	AP4.08
*Eremophila longifolia^*	1	1	BN184
Eriachne benthamii	<1	0.4	AP4.04
Evolvulus alsinoides var. *villosicalyx#*	<1	0.1	BN241
Gomphrena affinis ssp. *pilbarensis#*	<1	0.3	BN09
Goodenia forrestii#	<1	0.2	BN201
Heliotropium heteranthum	<1	0.20	AP4.27
Indigofera colutea	<1	0.1	AP4.43
Indigofera linifolia#	<1	0.15	BN07
Indigofera trita	<1	0.2	AP4.11
*Iseilema dolichotrichum^*	3	0.15	BN14
Iseilema macratherum	<1	0.6	AP4.05
**Portulaca oleracea^*	<1	0.2	BN207
Ptilotus aervoides	<1	0.05	AP4.39
Ptilotus exaltatus var. exaltatus	<1	0.1	AP4.18
Rhynchosia minima#	<1	creeper	BN148
*Sclerolaena costata^*	<1	0.1	BN198
Senna artemisioides aff ssp. *oligophylla* (thinly sericeous)#	<1	0.4	AP01
*Solanum lasiophyllum^*	<1	0.1	
Sporobolus australasicus	<1	0.1	AP4.37
*Streptoglossa bubakii^*	<1	0.15	BN95
*Swainsona formosa^*	<1	0.2	
Tephrosia aff. *supina* (MET 12,357)#	<1	0.2	BN204
Trichodesma zeylanicum var. *zeylanicum#*	<1	0.1	BN59
*Triodia epactia^*	1	0.6	BN153
Triodia wiseana (fine form)#	75	1.2	AP18
Triumfetta clementii#	<1	0.2	AP4.14

API Rail Flora Site APQ05

Described by KH Date 21/04/2009 Type Q 50 X 50

MGA Zone 50 423059 mE 7664131 mN

Soil Red clay with quartz nodules

Vegetation Shrubland of *Acacia xiphophila* over a Closed Tussock Grassland dominated by *Aristida contorta* and *Eriachne pulchella* ssp. *dominii* on red rocky clay loam.

Veg Condition Very Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)

SPECIES LIST

Name	Cover	Height	Specimen
Acacia xiphophylla#	20	2	AP5.01
Alysicarpus muelleri	<1	0.2	AP5.18
Aristida contorta#	60	0.4	AP5.02
Brachyachne prostrata	<1	0.05	AP5.04
Dichanthium sericeum ssp. *humilius#*	1	0.1	BN13
Enteropogon ramosus	<1		AP5.21
Eragrostis xerophila#	10	0.3	AP5.08
Eriachne pulchella ssp. *dominii*	30	0.15	AP5.03
Eriachne pulchella ssp. *pulchella^*	15	0.2	AP09
Gomphrena affinis ssp. *pilbarensis#*	<1	0.3	BN09
Heliotropium heteranthum	<1	0.05	AP5.09
*Iseilema dolichotrichum^*	<1	0.1	BN14
Neptunia dimorphantha	<1	0.6	AP5.07
Polygala aff. *isingii*	<1	0.05	AP5.10
*Ptilotus carinatus^*	<1	0.2	BN111
Ptilotus exaltatus var. *exaltatus#*	<1	0.1	AP5.16
Sclerolaena densiflora	<1	0.1	AP10
*Sclerolaena eriacantha^*	<1	0.05	AP5.05
Senna glutinosa ssp. *luerssenii*	<1	0.4	AP5.19
Senna glutinosa ssp. *x luerssenii^*	<1	0.2	AP08
Senna hamersleyensis	<1	0.25	AP5.12
Sida aff. *fibulifera* (HD200-6)	<1	0.15	AP5.15
Solanum diversiflorum	<1	0.2	AP5.17
Sporobolus australasicus	<1	0.1	AP5.13
Tephrosia aff. *supina* (MET 12,357)^	<1	0.2	BN204
Tephrosia clementii	<1	0.15	AP5.20
Triodia wiseana (fine form)	1	0.5	AP5.06

API Rail Flora Site APQ06

Described by KH Date 21/04/2009 Type Q 50 X 50

MGA Zone50 423739 mE 7664650 mN

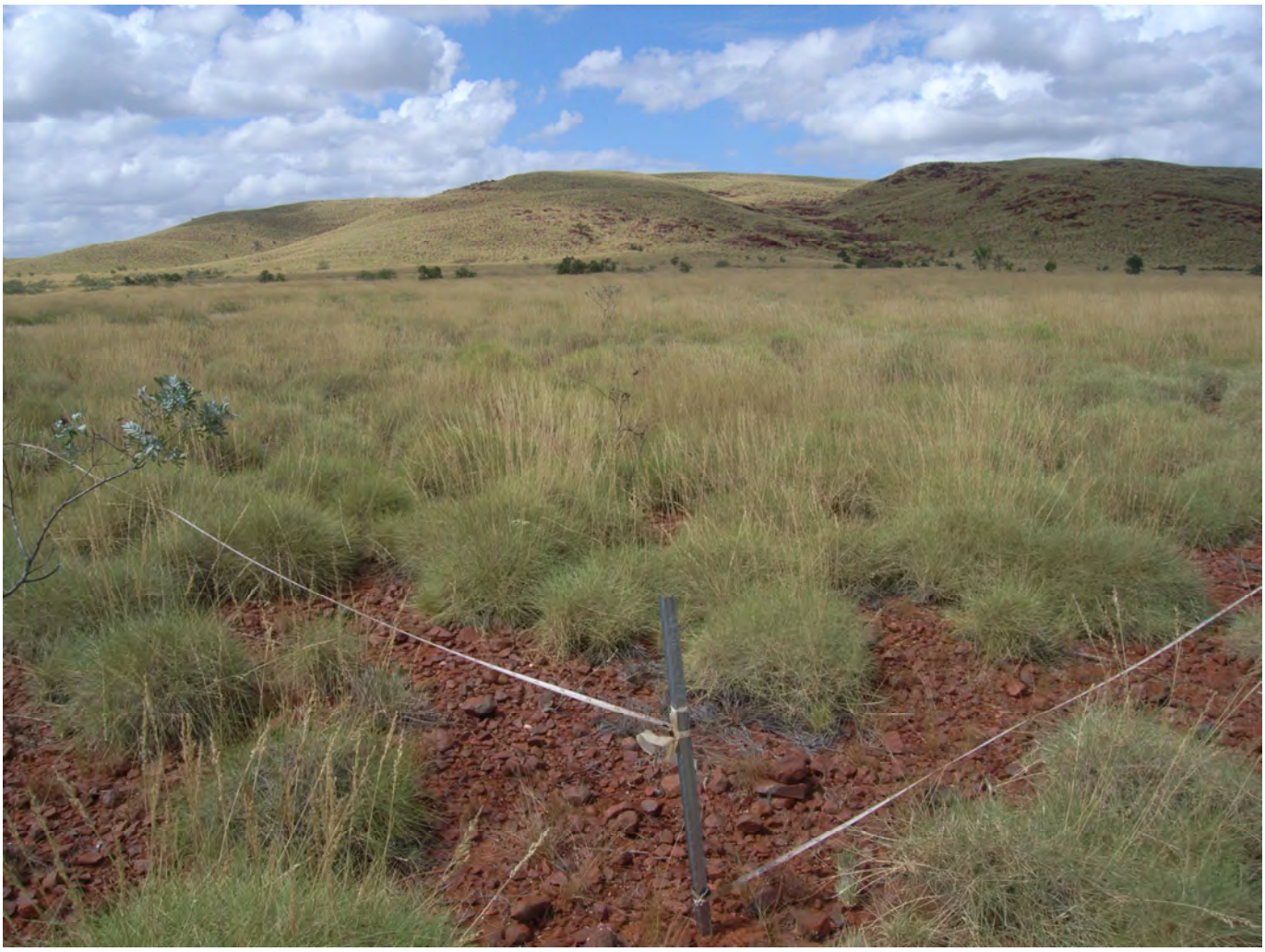
Soil Red rocky substrate with very little soil present. Where soil is present it is sandy

Vegetation Closed Hummock Grassland dominated by *Triodia wiseana* (fine form) on hillslopes, ridgetops and stony plains.

Veg Condition Very Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)



SPECIES LIST

Name	Cover	Height	Specimen
Acacia synchronicia	<1	0.6	AP6.16
Alysicarpus muelleri^	<1	0.4	BN200
Aristida contorta#	7	0.3	AP6.10
Boerhavia coccinea	<1	0.2	AP6.15
Bonamia media var. *villosa*	<1	0.15	AP6.13
Crotalaria medicaginea var. *neglecta*	<1	0.1	AP6.05
Eriachne pulchella ssp. *pulchella*^	<1	0.1	AP09
Euphorbia australis	<1	0.1	AP6.06
Euphorbia boophthona	<1	0.15	AP6.14
Evolvulus alsinoides var. *villosicalyx*^	<1	0.2	BN241
Fimbristylis aff. *dichotoma* (M75-4)	<1	0.15	AP6.03
Iseilema dolichotrichum	<1	0.1	AP6.04
Polycarpaea longiflora (white form)	<1	0.15	AP6.12
Polygala aff. *isingii*	<1	0.1	AP6.11
Portulaca oleracea^	<1	0.05	BN207
Ptilotus carinatus^	<1	0.05	BN111
Ptilotus exaltatus^	<1	0.2	
Ptilotus helipteroides^	<1	0.2	AP06
Sclerolaena densiflor^a	<1	0.1	AP10
Senna glutinosa ssp. *pruinosa*	<1	0.8	AP6.02
Senna sp. *Karijini* (M.E. Trudgen 10392)^	<1	1.1	BN49
Sesbania cannabina^	<1	0.3	AP16
Streptoglossa bubakii^	<1	0.2	BN95
Streptoglossa decurrens	<1	0.1	AP6.07
Triodia wiseana (fine form)#	80	0.6	AP6.01
Triumfetta clementii	<1	0.2	AP6.09

API Rail Flora Site APQ07

Described by KH Date 21/04/2009 Type Q 50 X 50

MGA Zone 50 424126 mE 7664823 mN

HabitatSoil Red sandy loam

Rock Type

Vegetation Mixed Acacia Shrubland dominated *Acacia victoriae*, *Acacia ancistrocarpa* and *Acacia bivenosa* over a Mid-dense Hummock Grassland of *Triodia wiseana* (fine form) over a Very Open Tussock Grassland dominated by *Paraneurachne muelleri*, *Aristida contorta* and *Themeda triandr*a on red sandy loam.

Veg Condition Very Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)

SPECIES LIST

Name	Cover	Height	Specimen
Abutilon aff. *lepidum (4)*	<1	0.2	AP7.21
Acacia ancistrocarpa#	22	2	AP7.03
Acacia bivenosa#	5	0.9	BN54

Acacia inaequilatera	<1	1.8	AP7.10
Acacia victoriae	22	2	AP7.16
Alysicarpus muelleri	<1	0.1	AP7.26
Aristida contorta#	10	0.2	BN03
**Cenchrus ciliaris*#	3	0.4	BN21
Corchorus laniflorus^	<1	0.3	BN24
Cucumis maderaspatanus^	<1	BN57	
Dichanthium sericeum ssp. *humilius*#	1	0.2	BN08A
Dysphania rhadinostachya ssp. *rhadinostachya*^	<1	0.2	AP19
Enneapogon caerulescens var. *caerulescens*^	<1	0.2	BN04
Enneapogon polyphyllus	<1	0.3	AP7.29
Euphorbia biconvexa	<1	0.1	AP7.20
Evolvulus alsinoides var. *villosicalyx*#	<1	0.3	BN241
Fimbristylis aff. *dichotoma* (M75-4)	<1	0.3	AP7.22
Gomphrena affinis ssp. *pilbarensis*#	<1	0.2	BN09
Gomphrena cunninghamii	<1	0.02	AP7.38
Goodenia forrestii#	<1	0.3	BN201
Hibiscus sturtii var. *platychlamys*	0.2	0.25	AP7.09
Hybanthus aurantiacus#	<1	0.2	BN209
Indigofera monophylla (Cape Preston form)^	<1	0.2	BN180
Iseilema dolichotrichum#	<1	0.1	BN14
Leptopus decaisnei var. *orbicularis*	<1	0.1	AP7.34
Melhania sp. (CH15-39)	<1	0.2	AP7.23
Paraneurachne muelleri	2	0.4	AP7.33
Paspalidium clementii	<1	0.1	AP7.18
Polycarpaea longiflora (white form)#	<1	0.2	AP7.31
**Portulaca oleracea*^	<1	0.15	BN207
Ptilotus carinatus^	<1	0.2	BN124
Ptilotus exaltatus var. *exaltatus*	<1	0.2	AP7.28
Ptilotus helipteroides var. *helipteroides*^	<1	0.2	AP06
Rhynchosia minima	<1	0.1	AP7.01
Sclerolaena costata^	<1	0.2	BN198
Senna artemisioides aff. ssp. *oligophylla (thinly sericeous)*^	1	1	AP1
Senna artemisioides ssp. *oligophylla*	<1	0.5	AP7.36
Senna glutinosa ssp. *glutinosa*	<1	0.6	AP7.14
Senna glutinosa ssp. *x luerssenii*^	<1	0.4	AP08
Sida aff. *echinocarpa* (MET 15,350)	<1	1.2	AP7.15
Solanum diversiflorum#	<1	0.2	BN69
Solanum lasiophyllum	<1	0.3	AP7.12
Sporobolus australasicus	<1	0.1	AP7.32
Stemodia kingii^	<1	0.3	BN94
Tephrosia aff. *supina* (MET 12,357)#	<1	0.3	BN204
Themeda triandra	1	0.5	AP7.08
Trichodesma zeylanicum var. *zeylanicum*#	<1	0.5	BN59
Triodia wiseana (fine form)#	40	0.8	AP18
Triumfetta clementii#	<1	0.2	BN05

API Rail Flora Site APQ08

Described by KH Date 21/04/2009 Type Q 50 X 50

MGA Zone 50 424841 mE 7665277 mN

Soil Red rocky soil

Vegetation Tall Shrubland of *Acacia synchronicia* and *Acacia bivenosa* over a Mid Dense Hummock Grassland of *Triodia wiseana* (fine form) over a Very Open Tussock Grassland dominated by **Cenchrus ciliaris* and *Aristida contorta* on red sandy loam.

Veg Condition Very Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)

SPECIES LIST

Name	Cover	Height	Specimen
Abutilon fraseri	<1	0.1	AP8.29
Acacia bivenosa#	2	1.7	BN54
Acacia pyrifolia var. *pyrifolia^*	15	3	BN56
Acacia synchronicia#	9	2.5	AP8.22
Alysicarpus muelleri#	<1	0.1	BN200
Aristida contorta#	25	0.3	BN03
Bonamia media var. *villosa*	<1	0.05	AP8.23
**Cenchrus ciliaris#*	3	0.4	AP8.03
Cucumis maderaspatanus#	<1	0.05	BN57
*Dactyloctenium radulans^*	<1	0.05	BN19
Dichanthium sericeum ssp. *humilius^*	<1	0.1	BN08A
Digitaria ctenantha	<1	0.15	AP8.27
Duperreya commixta	<1	creeper	AP8.11
Enneapogon caerulescens var. *caerulescens#*	<1	0.15	BN04
Eremophila forrestii ssp. *forrestii*	<1	1	AP8.12
Eremophila longifolia	<1	1.8	AP8.17
Eriachne pulchella ssp. *pulchella^*	<1	0.1	AP09
Euphorbia sp. (BPBS10-50)	<1	0.02	AP8.28
Evolvulus alsinoides var. *villosicalyx#*	<1	0.1	BN241
*Indigofera linifolia^*	<1	0.1	BN07
Iseilema dolichotrichum#	1	0.15	AP8.07
Leptopus decaisnei var. *orbicularis#*	<1	0.1	AP8.30
Melhania sp. (CH15-39)	<1	0.1	AP8.24
**Portulaca oleracea^*	<1	0.2	BN207
*Ptilotus carinatus^*	<1	0.1	BN111
Ptilotus exaltatus var. *exaltatus^*	<1	0.3	
Ptilotus helipteroides var. *helipteroides#*	1.5	0.15	AP06
Rhagodia eremaea	<1	1	AP8.13
*Rhynchosia minima^*	<1	0.1	BN77
Salsola tragus ssp. *grandiflora^*	<1	0.2	BN248
Scaevola spinescens (broad leaf form)#	<1	1	AP8.15
*Sclerolaena costata^*	<1	0.1	BN198
*Sclerolaena densiflora^*	<1	0.1	AP10
Senna artemisioides ssp. *oligophylla x helmsii*	<1	0.8	AP8.19
Senna glutinosa ssp. *glutinosa*	<1	0.4	AP8.08
Senna glutinosa ssp. *luerssenii*	<1	0.6	AP8.25
Senna glutinosa ssp. *pruinosa*	<1	0.6	AP8.05
Senna glutinosa ssp.. *x luerssenii^*	<1	1	AP08
Senna sp. *Karijini* (M.E. Trudgen 10392)^	<1	1	BN49
Solanum lasiophyllum	<1	0.2	AP8.21
*Streptoglossa bubakii^*	<1	0.2	BN95
Trichodesma zeylanicum var. *zeylanicum#*	<1	0.3	BN59
Triodia wiseana (fine form)#	60	0.6	AP8.01
Triumfetta clementii#	<1	0.3	BN29

API Rail Flora Site APQ09

Described by LC Date 2/09/2008 Type Q 50 X 50

MGA Zone 50 424677 mE 7665538 mN
Soil Red rocky soil
Vegetation
Veg Condition Very Good
Fire Age
Notes COULD NOT LOCATE IN 2009. QUADRAT NOT SURVEYED IN 2009 (PHOTO AND DATA FROM 2008 SURVEY)

SPECIES LIST

Name	Cover	Height	Specimen
Acacia ancistrocarpa	25	2	BN41
Acacia pyrifolia var. *pyrifolia*	10	0.4	AP03
Acacia trachycarpa	10	2	BN222
Alternanthera angustifolia	<1	0.2	AP21
**Cenchrus ciliaris*	20	0.6	AP21
Corchorus laniflorus	<1	0.2	BN24
Eucalyptus victrix	5	15	
Indigofera monophylla (Cape Preston form)	<1	0.2	BN180
Leptopus decaisnei var. *orbicularis*	<1	0.1	AP4
Polycarpaea longiflora	<1	0.3	BN179
**Portulaca oleracea*	<1	0.1	BN207
Ptilotus clementii	<1	0.2	BN42
Senna artemisioides ssp. *oligophylla*	1	0.5	AP01
Trichodesma zeylanicum var. *zeylanicum*	<1	0.2	BN59
Triodia wiseana	20	0.2	BN178
Triumfetta clementii	<1	0.2	BN29

API Rail Flora Site APQ10

Described by KH Date 21/04/2009 Type Q 50 X 50

MGA Zone 50 425141 mE 7665464 mN

Soil Red clay

Vegetation Tall Open Scrub dominated by *Acacia bivenosa* and *Acacia xiphophila* over a Closed Hummock Grassland dominated by *Triodia wiseana* (fine form) and *Themeda triandra* on red sandy loam in drainage lines.

Veg Condition Very Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)

SPECIES LIST

Name	Cover	Height	Specimen
Acacia bivenosa#	50	2.5	BN54
Acacia pyrifolia var. *pyrifolia*^	1	3	BN56
Acacia xiphophylla#	5	0.3	
Aristida contorta#	<1	0.1	BN03
Bonamia media var. *villosa*	<1	0.04	AP10.21A
Corchorus aff. *walcotti* (K.J. Atkins 570)	<1	0.4	AP10.19
Cymbopogon procerus^	30	0.8	BN182
Dichanthium sericeum ssp. *humilius*^	<1	0.3	BN13
Eremophila forrestii ssp. *forrestii*#	<1	0.2	AP10.21B
Evolvulus alsinoides var. *villosicalyx*#	<1	0.1	BN241
Hakea lorea ssp. *lorea*#	1	2.5	AP22
Hybanthus aurantiacus#	<1	0.2	BN209
Indigofera monophylla (Cape Preston form)#	<1	0.3	AP10.08
Ptilotus exaltatus var. *exaltatus*	<1	0.1	AP10.12
Ptilotus helipteroides var. *helipteroides*	<1	0.02	AP10.04
Rhagodia eremaea	<1	0.8	AP10.20
Scaevola spinescens (broad leaf form)^	<1	0.7	BN64
Senna glutinosa ssp. *glutinosa*	<1	0.5	AP10.06
Senna glutinosa ssp. *luerssenii*#	<1	0.4	AP08
Sida arsiniata^	<1	0.3	AP10.23
Solanum diversiflorum#	<1	0.2	AP10.14
Solanum lasiophyllum	<1	0.2	AP10.10
Sorghum timorense#	1	0.5	AP10.15
Sporobolus australasicus	<1	0.1	AP10.16
Tephrosia aff. *supina* (MET 12,357)^	1	0.3	BN204
Themeda triandra	30	0.4	AP10.13
Triodia wiseana (fine form)#	55	0.9	AP10.01
Triumfetta clementii#	<1	0.15	BN29
Waltheria indica	<1	0.3	AP10.22

API Rail Flora Site APQ11

Described by KH Date 21/04/2009 Type Q 50 X 50

MGA Zone 50 425766 mE 7665865 mN

Soil Orange red clay with quartz nodules

Vegetation Tall Shrubland of *Acacia xiphophila* over a Mid Dense Hummock Grassland of *Triodia wiseana* (fine form) and *Sorghum timorense* on red rocky clay loam.

Veg Condition Very Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)

SPECIES LIST

Name	Cover	Height	Specimen
Acacia xiphophylla#	20	3	AP11.02
Aristida contorta	<1	0.1	AP11.15
**Cenchrus ciliaris*	<1	0.4	AP11.10
*Chrysopogon fallax^*	30	0.5	BN79
Dichanthium sericeum ssp. *humilius#*	<1	0.15	BN08A
Eragrostis xerophila	<1	0.4	AP11.06
Eriachne pulchella ssp. *dominii*	<1	0.2	AP11.21
Fimbristylis aff. *dichotoma* (M75-4)	<1	0.2	AP11.05
Indigofera linifolia#	<1	0.2	AP11.19
Ipomoea coptica	<1	creeper	AP11.11
*Iseilema dolichotrichum^*	<1	0.15	BN14
**Malvastrum americanum*	<1	0.2	AP11.07
Neptunia dimorphantha	<1	0.05	AP11.12
Paspalidium clementii	<1	0.1	AP11.13
Phyllanthus maderaspatensis	<1	0.2	AP11.20
Ptilotus exaltatus var. *exaltatus*	<1	0.3	AP11.09A
Ptilotus helipteroides var. *helipteroides*	<1	0.1	AP11.18
Rhynchosia minima#	<1	0.05	BN148
Senna artemisioides ssp. *oligophylla^*	<1	0.4	AP01
Senna glutinosa ssp. *glutinosa*	<1	0.4	AP11.08
*Setaria dielsii^*	<1	0.1	BN18
Sida aff. *fibulifera* (HD200-6)	<1	0.4	AP11.09C
Sorghum timorense	10	0.6	AP11.03
Sporobolus australasicus	<1	0.1	AP11.04
Tephrosia clementii	<1	0.05	AP11.09B
Triodia wiseana (fine form)#	50	0.8	AP11.01
Urochloa pubigera	<1	0.1	AP11.17

API Rail Flora Site APQ12

Described by KH Date 22/04/2009 Type Q 50 X 50

MGA Zone 50 426766 mE 7665983 mN

Soil Rocky orange loam

Vegetation Open Woodland of *Eucalyptus victrix* over an Open Heath dominated by *Acacia bivenosa*, *Acacia trachycarpa* and *Acacia sclerosperma* ssp.*sclerosperma* over a Hummock Grassland of *Triodia wiseana* (fine form), *Triodia epactia* and **Cenchrus ciliaris* in rocky drainage lines.

Veg Condition Very Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)

SPECIES LIST

Name	Cover	Height	Specimen
Abutilon fraseri	<1	0.2	AP12.21
Acacia bivenosa#	35	1.6	AP12.01
Acacia inaequilatera	<1	1.5	AP12.26
Acacia ligulata	<1	0.9	AP12.33
Acacia pyrifolia var. *pyrifolia*#	3	3	BN56

Acacia sclerosperma ssp. *sclerosperma*	1	1.7	AP12.04
Acacia trachycarpa#	15	2	BN222
**Aerva javanica*	<1	0.4	AP12.27
Boerhavia burbidgeana	<1	0.05	AP12.36
Boerhavia coccinea	<1	0.1	AP12.34A
Bonamia media var. *villosa*	<1	0.05	AP12.28
**Cenchrus ciliaris#*	20	0.6	BN21
Corchorus aff. *walcotti* (K.J. Atkins 570)	<1	0.2	AP12.20A
*Corchorus laniflorus^*	<1	0.1	BN24
Cucumis maderaspatanus	<1	creeper	AP12.09
Dichanthium sericeum ssp. *humilius*	<1	0.1	AP12.30
Eremophila longifolia	0.5	0.4	AP12.24
Euphorbia sp. (BPBS10-50)	<1	0.05	AP12.37
Euphorbia wheeleri#	<1	0.1	BN176
Goodenia forrestii	<1	0.1	AP12.10
Gossypium australe (Burrup Peninsula form)	<1	0.2	AP12.12
Grevillea pyramidalis ssp. *leucadendron#*	<1	2.3	BN24
Hibiscus sturtii var. *platychlamys*	<1	0.2	AP12.20B
Hybanthus aurantiacus#	<1	0.2	BN209
*Indigofera linifolia^*	<1	0.1	BN07
Indigofera monophylla (Cape Preston form)^	<1	0.2	BN180
Indigofera monophylla (grey/green leaflet form)	<1	0.02	AP12.29
*Ipomoea muelleri^*	<1	AP27	
*Leptopus decaisnei^*	<1	0.1	AP04
Leptopus decaisnei var. *orbicularis*	<1	0.05	AP12.31
*Mollugo molluginea^*	<1	0.2	BN219
*Polycarpaea longiflora^*	<1	0.2	BN179
Polymeria ambigua	<1	creeper	AP12.22
**Portulaca oleracea#*	<1	0.2	BN207
Ptilotus carinatus#	<1	0.1	BN111
*Ptilotus clementii^*	<1	0.2	BN42
Ptilotus exaltatus var. *exaltatus#*	<1	0.3	
Ptilotus helipteroides var. *helipteroides*	<1	0.05	AP12.18
Rhynchosia minima#	<1	0.1	BN148
Scaevola spinescens (broad leaf form)#	<1	0.5	AP12.32
Senna artemisioides ssp. *oligophylla x helmsii*	<1	0.6	AP12.16
Senna glutinosa ssp. *pruinosa*	<1	0.4	AP12.13
Senna glutinosa ssp. *x luerssenii^*	<1	0.1	AP08
*Sesbania cannabina^*	<1	0.3	AP16
Solanum diversiflorum	<1	0.2	AP12.07
Sporobolus australasicus	<1	0.05	AP12.06
Tephrosia aff. *supina* (MET 12,357)^	<1	0.3	BN204
Tephrosia rosea var. *clementii*	<1	1	AP12.05
Tephrosia sp. *B Kimberley Flora* (C.A. Gardner 7300)^	<1	0.9	AP25
Triodia epactia#	15	0.8	BN153
Triodia wiseana (fine form)#	20	0.6	BN63
Triumfetta clementii#	<1	0.3	BN29
Waltheria indica#	<1	0.4	AP26

API Rail Flora Site APQ13

Described by KH Date 23/04/2009 Type Q 50 X 50

MGA Zone50 427110 mE 7666161 mN

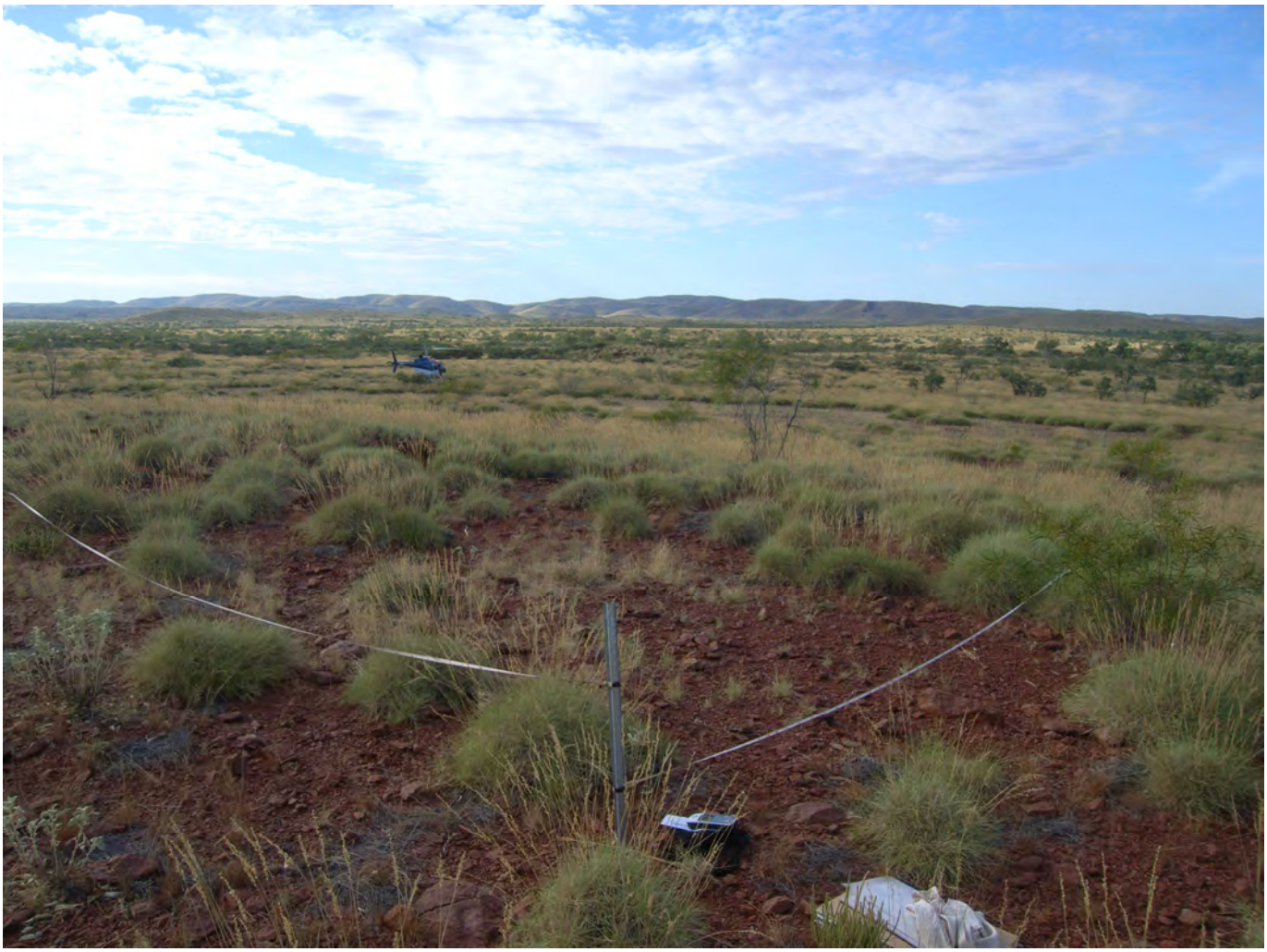
Soil Rocky red soil on hill slopes

Vegetation Open Shrubland of *Acacia ancistrocarpa* with scattered *Acacia synchronicia* over a Mid Dense Hummock Grassland of *Triodia wiseana* (fine form) on rocky hill slopes.

Veg Condition Very Good - Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)



SPECIES LIST

Name	Cover	Height	Specimen
Abutilon aff. *lepidum* (4)	<1	0.2	AP13.21
Acacia ancistrocarpa#	5	2	BN238
Acacia synchronicia	<1	0.3	AP13.13
Aristida contorta#	20	0.3	BN03
Boerhavia coccinea	<1	0.05	AP13.18
Bonamia media var. *villosa#*	<1	0.2	AP13.25
Corchorus laniflorus#	<1	0.2	AP13.06
Dichanthium sericeum ssp. *humilius*	1	0.1	AP13.04
Enneapogon caerulescens var. *caerulescens*			AP13.20
Eucalyptus camaldulensis	5	1.3	AP13.12
Euphorbia australis	<1	0.2	AP13.22
Fimbristylis aff. *dichotoma* (M75-4)	2	0.15	AP13.11
Gomphrena affinis ssp. *pilbarensis^*	<1	0.2	BN09
Gossypium australe (Burrup Peninsula form)^	<1	0.2	AP13.17A
Heliotropium heteranthum	<1	0.2	AP13.23
Indigofera linifolia	<1	0.1	AP13.10
Indigofera monophylla	<1	0.3	AP13.28
Indigofera monophylla (Cape Preston form)^	<1	0.2	BN180
Iseilema dolichotrichum	1	0.1	AP13.03
Pentalepis trichodesmoides#	<1	0.3	AP13.26
Polycarpaea holtzei	<1	0.05	AP13.08
Polycarpaea longiflora (white form)#	<1	0.2	AP13.02
*Ptilotus carinatus^*	<1	0.05	BN111
*Ptilotus clementii^*	<1	0.2	BN42
Ptilotus exaltatus var. *exaltatus#*	<1	0.3	
Ptilotus helipteroides var. *helipteroides#*	<1	0.15	AP06
*Rhynchosia minima^*	<1	0.1	BN148
*Sclerolaena densiflora^*	<1	0.1	AP10
Senna glutinosa ssp. *luerssenii*	<1	0.2	AP13.15
Senna glutinosa ssp. *pruinosa*	<1	0.5	AP13.14
Senna sp. *Karijini* (M.E. Trudgen 10392)^	<1	0.3	BN49
Sida aff. *echinocarpa* (MET 15,350)	<1	0.5	AP13.17B
*Sida clementii^*	<1	0.3	BN208
Sida sp. *spiciform panicles* (E. Leyland s.n. 14/8/1990)			AP13.16B
*Solanum diversiflorum^*	<1	0.2	BN69
*Solanum horridum^*	<1	0.2	AP28
Tephrosia aff. *supina* (MET 12,357)^	<1	0.2	BN204
Trachymene oleracea ssp. *oleracea^*	<1	0.4	BN39
Tribulus hirsutus	<1	2	AP13.24
Trichodesma zeylanicum var. *zeylanicum#*	<1	0.3	BN59
Triodia wiseana (fine form)#	40	0.7	AP18
Triumfetta clementii#	<1	0.3	AP13.27

API Rail Flora Site APQ14

Described by KH Date 23/04/2009 Type Q 50 X 50

MGA Zone50 427500 mE 7666206 mN

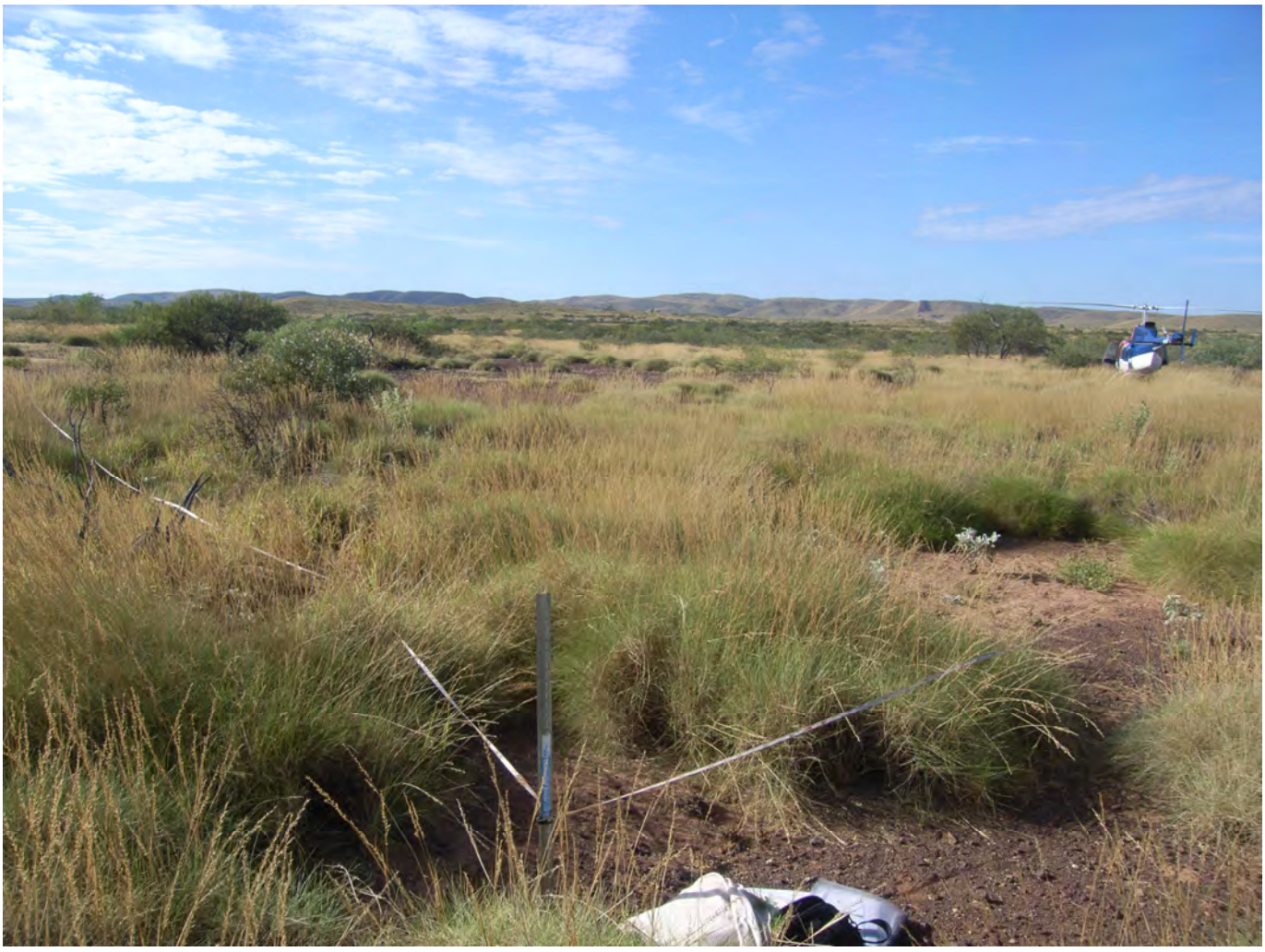
Soil Grey brown loam

Vegetation Tall Open Shrubland of *Acacia synchronicia* over a Hummock Grassland of *Triodia wiseana* (fine form) on rocky hill slopes

Veg Condition Very Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)



SPECIES LIST

Name	Cover	Height	Specimen
Abutilon aff. *lepidum* (4)	<1	0.1	AP14.25B
Acacia synchronicia#	3	3	BN203
Acacia xiphophylla#	1	1.2	
Aristida contorta	2	0.1	AP14.09
Boerhavia coccinea	<1	0.02	AP14.21
Bonamia media var. *villosa*	<1	0.05	AP14.18
Corchorus aff. *walcotti* (K.J. Atkins 570)	<1	0.2	AP14.16
*Corchorus laniflorus^*	<1	0.3	BN239
Crotalaria medicaginea var. *neglecta*	<1	0.1	AP14.30
Cucumis maderaspatanus	<1	creeper	AP14.27
Enneapogon caerulescens var. *caerulescens#*	3	0.1	AP14.14
Eremophila forrestii ssp. *forrestii#*	<1	1.2	AP14.02
Euphorbia aff. *australis^*	<1	0.05	BN234
Euphorbia sp. (BPBS10-50)	<1	0.05	AP14.24
Evolvulus alsinoides var. *villosicalyx*	<1	0.1	AP14.07
Goodenia forrestii	<1	0.2	AP14.31
Heliotropium heteranthum	<1	0.02	AP14.20
Indigofera linifolia	<1	0.2	AP14.28
Iseilema dolichotrichum	<1	0.05	AP14.25
*Lepidium pedicellosum^*	<1	0.3	AP31
Leptopus decaisnei var. *orbicularis#*	<1	0.2	AP04
Ptilotus exaltatus var. *exaltatus#*	<1	0.2	
Ptilotus helipteroides var. *helipteroides#*	<1	0.2	AP14.08
Rhynchosia minima	<1	creeper	AP14.23
Sclerolaena costata#	<1	0.1	BN198
Senna glutinosa ssp. *luerssenii*	<1	0.8	AP14.11
Senna glutinosa ssp. *x luerssenii^*	<1	0.8	AP08
Sida aff. *echinocarpa* (MET 15,350)	<1	0.2	AP14.13
Sida sp. *spiciform panicles* (E. Leyland s.n. 14/8/1990)	<1	0.2	AP14.15
Solanum lasiophyllum#	<1	0.3	
Trianthema aff. *triquetra* (M3.35)	<1	0.1	AP14.22
Trichodesma zeylanicum var. *zeylanicum#*	<1	0.2	BN59
Triodia wiseana (fine form)#	30	0.8	AP18
Triumfetta clementii	<1	0.2	AP14.04

API Rail Flora Site APQ15

Described by KH Date 22/04/2009 Type Q 50 X 50

MGA Zone 50 504797 mE 7704597 mN

Soil Red cracking clay with occasional rocky nodules

Vegetation Horseflats dominated by *Eragrostis xerophila* and *Dichanthium sericeum* ssp. *humilius* on red clay loam

Veg Condition Very Good - Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)

SPECIES LIST

Name	Cover	Height	Specimen
Cleome viscosa	<1	0.2	AP15.20
**Cucumis melo* ssp. *agrestis*	<1	creeper	AP15.04
Dichanthium sericeum ssp. *humilius*#	15	0.3	BN13
Enneapogon caerulescens var. *caerulescens*	<1	0.1	AP15.17
Eragrostis xerophila#	30	0.15	AP15.03
Euphorbia coghlanii	<1	0.15	AP15.14
Euphorbia wheeleri^	1	0.2	BN176
Gomphrena affinis ssp. *pilbarensis*^	<1	0.2	BN09
Goodenia pascua	<1	0.15	AP15.19
Heliotropium conocarpum^	<1	0.2	BN93
Heliotropium heteranthum^	<1	0.02	BN218
Heliotropium inexplicitum	<1	0.02	AP15.15B
Indigofera trita	<1	0.2	AP15.12
Ipomoea muelleri^	<1	0.1	BN214
Iseilema macratherum	1	0.1	AP15.06
Neptunia dimorphantha^	<1	0.15	BN17
Operculina aequisepala	<1	creeper	AP15.21
Panicum decompositum	<1	0.2	AP15.09
Panicum laevinode^	<1	0.2	BN115
Phyllanthus maderaspatensis	<1	0.2	AP15.13
Polygala aff. *isingii*	<1	0.1	AP15.22
**Portulaca oleracea*	<1	0.02	AP15.02
Ptilotus carinatus^	<1	0.2	AP17
Ptilotus exaltatus var. *exaltatus*#	<1	0.3	
Ptilotus helipteroides var. *helipteroides*#	<1	0.1	AP06
Rhynchosia minima#	<1	0.2	BN77
Salsola tragus ssp. *tragus*#	<1	0.4	
Sida aff. *fibulifera* (HD200-6)	<1	0.15	AP15.16
Sida spinosa^	<1	0.3	AP34
Sporobolus australasicus	<1	0.05	AP15.05
Stemodia kingii^	<1	0.3	BN94
Streptoglossa decurrens	<1	0.1	AP15.15A

API Rail Flora Site APQ16

Described by KH Date 22/04/2009 Type Q 10 X 50

MGA Zone 50 504643 mE 7704490 mN

Soil Red cracking clay

Rock Type

Vegetation Low Open Woodland of *Corymbia hamersleyana* over a Shrubland dominated by *Acacia pyrifolia* ssp. *pyrifolia* and *Acacia inaequilatera* over a Low Shrubland of *Corchorus* aff. *walcotti* (K.J. Atkins 570) over a Tussock Grassland domianted by *Chrysopogon fallax*, *Themeda triandra* and *Bothriochloa ewartiana* in minor drainage lines.

Veg Condition Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)

SPECIES LIST

Name	Cover	Height	Specimen
Acacia ancistrocarpa	<1	1.2	AP16.06
Acacia bivenosa^	1	0.8	BN54
Acacia inaequilatera	5	1.2	AP16.16
Acacia pyrifolia var. *pyrifolia*#	15	1.5	BN56
Boerhavia coccinea	<1	0.1	AP16.17A
Bothriochloa ewartiana	2	0.4	AP16.19
**Cenchrus ciliaris*#	20	0.8	BN21
Chrysopogon fallax#	5	0.8	BN79
Corchorus aff. *walcotti* (K.J. Atkins 570)	15	0.5	AP16.02
Corymbia hamersleyana#	20	8	AP38
Crotalaria medicaginea var. *neglecta*	<1	0.1	AP16.09
Dichrostachys spicata	<1	0.7	AP16.05
Euphorbia wheeleri^	<1	0.2	BN245
Evolvulus alsinoides var. *villosicalyx*	<1	0.1	AP16.04
Goodenia forrestii	<1	0.15	AP16.12
Hybanthus aurantiacus#	<1	0.2	BN209
Indigofera monophylla	<1	0.3	AP16.14
Indigofera monophylla (Cape Preston form)^	<1	0.3	BN180
**Malvastrum americanum*^	1	0.4	
Polymeria ambigua#	4	0.1	AP37
**Prosopis pallida*^	<1	0.4	
Senna artemisioides ssp. *oligophylla x helmsii*#	<1	0.4	AP16.08
Sida clementii^	25	0.3	BN208
Sorghum plumosum var. *plumosum*#	40	1.2	AP16.01
Themeda triandra	20	0.3	AP16.18
Triumfetta clementii#	<1	0.4	AP16.07

API Rail Flora Site APQ17

Described by KH Date 22/04/2009 Type Q 50 X 50

MGA Zone 50 504011 mE 7704158 mN

Soil Rocky hilltop

Vegetation Open Shrubland of *Acacia pyrifolia* var. *pyrifolia* over a Mid Dense Hummock Grassland of *Triodia wiseana* (fine form) on rocky hill slopes

Veg Condition Very Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)

SPECIES LIST

Name	Cover	Height	Specimen
Abutilon aff. *lepidum* (4)	<1	0.2	AP17.07
Acacia bivenosa	2	2	AP17.24
Acacia pyrifolia var. *pyrifolia#*	2	2	
*Aristida contorta^*	10	0.15	BN03
Bonamia media var. *villosa*	<1	0.05	AP17.21
**Cenchrus ciliaris#*	<1	0.3	AP17.13
Corchorus aff. *parviflorus*	<1	0.3	AP17.26
*Corchorus laniflorus^*	<1	0.2	BN24
Crotalaria medicaginea var. *neglecta*	<1	0.1	AP17.18
**Cucumis melo* ssp. *agrestis*	<1	creeper	AP17.10
Dichanthium sericeum ssp. *humilius*	<1	0.1	AP17.03
Enneapogon caerulescens var. *caerulescens#*	1	0.1	BN04
Euphorbia australis	<1	0.2	AP17.23
Euphorbia biconvexa	<1	0.3	AP17.14
Euphorbia wheeleri	<1	0.2	BN176
Evolvulus alsinoides var. *villosicalyx#*	<1	0.1	BN241
Fimbristylis aff. *dichotoma* (M75-4)	<1	0.1	AP17.02
Gomphrena cunninghamii	<1	0.1	AP17.08
Iseilema dolichotrichum#	<1	0.2	BN14
Polycarpaea longiflora (white form)	<1	0.2	AP17.05
*Ptilotus clementii^*	<1	0.2	BN42
*Ptilotus fusiformis^*	<1	0.3	BN216
Ptilotus helipteroides var. *helipteroides#*	<1	0.4	AP17.25
Rhynchosia minima#	<1	0.1	BN77
Senna glutinosa ssp. *x luerssenii^*	<1	0.3	AP08
Senna notabilis	<1	0.1	AP17.06
Trachymene oleracea ssp. *oleracea#*	<1	0.3	BN39
Trichodesma zeylanicum var. *zeylanicum*	<1	0.2	AP17.20
*Triodia epactia^*	20	0.6	BN153
Triodia wiseana (fine form)#	40	0.6	AP17.01
Triumfetta clementii#	<1	0.4	AP17.16
Vigna sp. rockpiles (R. Butcher *et al* RB1400)	<1	creeper	AP17.11

API Rail Flora Site APQ18

Described by KH Date 12/05/2009 Type Q 50 X 50

MGA Zone 50 503752 mE 7704011 mN

Soil Orange/brown rocky nodules on sandy soil

Vegetation Shrubland of *Acacia pyrifolia* var. *pyrifolia*, *Acacia ancistrocarpa* and *Acacia bivenosa* over a Mid Dense Hummock Grassland of *Triodia wiseana* (fine form) on orange brown sandy soil with rocky nodules.

Veg Condition Very Good - Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)

SPECIES LIST

Name	Cover	Height	Specimen
Abutilon aff. *lepidum* (4)	<1	0.2	AP18.10
Acacia ancistrocarpa#	5	1.5	AP18.28
Acacia bivenosa#	5	0.9	AP18.30
Acacia pyrifolia var. *pyrifolia#*	8	2	AP18.02
**Aerva javanica*	<1	0.4	AP18.12
Alysicarpus muelleri	<1	0.15	AP18.19
*Aristida contorta^*	<1	0.1	BN03
Boerhavia coccinea	<1	0.1	AP18.03
Bonamia media var. *villosa*	<1	0.05	AP18.06
Capparis spinosa var. *nummularia*	<1	0.5	AP18.14
**Cenchrus ciliaris#*	8	0.4	AP18.29
Corchorus aff. *walcotti* (K.J. Atkins 570)	1	0.2	AP18.04
*Corchorus laniflorus^*	<1	0.3	BN24
Crotalaria medicaginea var. *neglecta*	<1	0.1	AP18.34
**Cucumis melo* ssp. *agrestis*	<1	creeper	AP18.07
Dichanthium sericeum ssp. *humilius#*	2	0.2	BN13
Enneapogon caerulescens var. *caerulescens#*	<1	0.2	BN04
Eriachne pulchella ssp. *dominii*	<1	0.05	AP18.25
Euphorbia biconvexa	<1	0.1	AP18.18
Euphorbia sp. (BPBS10-50)	<1	0.15	AP18.22A
Evolvulus alsinoides var. *villosicalyx*	<1	0.2	AP18.17
Gossypium australe (Burrup Peninsula form)^	<1	0.2	BN181
Indigofera colutea	<1	0.1	AP18.35
Indigofera linifolia	<1	0.1	AP18.31
Iseilema dolichotrichum#	<1	0.1	BN14
Leptopus decaisnei var. *orbicularis*	<1	0.1	AP18.26
Phyllanthus maderaspatensis	<1	0.2	AP18.16
Ptilotus helipteroides var. *helipteroides*	<1	0.1	AP06
Rhynchosia minima	<1	creeper	AP18.21
Salsola tragus ssp. *tragus#*	<1	0.5	
Senna notabilis	<1	0.2	AP18.13
*Sida clementii^*	<1	0.6	BN208
Themeda triandra	<1	0.1	AP18.08
Trichodesma zeylanicum var. *zeylanicum*	<1	0.1	AP18.05
*Triodia epactia^*	10	0.5	BN153
Triodia wiseana (fine form)#	35	0.7	AP18.11
Triumfetta clementii#	<1	0.3	BN109

API Rail Flora Site APQ19

Described by KH Date 12/05/2009 Type Q 50 X 50

MGA Zone 50 503459 mE 7703972 mN

Soil Red rocky hills with occasional quartz outcrops

Vegetation Low Open Shrubland of *Acacia pyrifolia* var. *pyrifolia* with scattered *Corchorus* aff. *parviflorus* over a Mid Dense Hummock Grassland of *Triodia wiseana* (fine form) on rocky hill slopes.

Veg Condition Very Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)

SPECIES LIST

Name	Cover	Height	Specimen
Abutilon aff. *lepidum* (4)#	<1	0.25	AP19.20
Acacia pyrifolia var. *pyrifolia*#	5	0.8	AP19.09
Aristida contorta#	<1	0.1	AP19.02
Bonamia media var. *villosa*#	<1	0.2	AP19.24
Bulbostylis barbata	<1	0.1	AP19.33
Corchorus aff. *parviflorus*	2	0.2	AP19.07
Corchorus tectus^	<1	0.2	AP41
Crotalaria medicaginea var. *neglecta*	<1	0.1	AP19.31
**Cucumis melo* ssp. *agrestis*	<1	creeper	AP19.15
Dichanthium sericeum ssp. *humilius*^	<1	0.1	BN13
Dysphania rhadinostachya ssp. *rhadinostachya*	<1	0.1	AP19.28
Eriachne pulchella ssp. *dominii*#	<1	0.1	AP43
Euphorbia australis#	<1	0.03	BN234
Euphorbia biconvexa	<1	0.2	AP19.14
Euphorbia sp. (BPBS10-50)	<1	0.2	AP19.23B
Euphorbia wheeleri^	<1	0.2	BN176
Evolvulus alsinoides var. *villosicalyx*	<1	0.1	AP19.10
Gomphrena cunninghamii	<1	0.2	AP19.05
Goodenia forrestii^	<1	0.3	BN201
Heliotropium inexplicitum	<1	0.1	AP19.26
Iseilema dolichotrichum#	1	0.1	BN14
Panicum decompositum	<1	0.5	AP19.25
Panicum laevinode	<1	0.2	BN115
Polycarpaea corymbosa var. *corymbosa*	<1	0.15	AP19.22
Polycarpaea longiflora (Whim Creek form, WC147-7)	<1	0.2	AP19.15B
Portulaca oleracea	<1	0.1	AP19.03
Ptilotus auriculifolius	<1	0.1	AP19.11
Ptilotus calostachyus^	<1	0.3	BN65
Ptilotus exaltatus var. *exaltatus*#	<1	0.6	BN21
Ptilotus fusiformis			
Ptilotus helipteroides var. *helipteroides*#	<1	0.2	AP30
Salsola tragus^	1	0.2	
Salsola tragus ssp. *grandiflora*^	<1	0.1	BN248
Salsola tragus ssp. *tragus*	<1	0.1	AP19.17
Schizachyrium fragile#	<1	0.1	AP40
Sclerolaena costata^	<1	0.2	BN198
Senna notabilis#	<1	0.3	AP19.19
Sida clementii^	1	0.4	BN208
Solanum horridum^	<1	0.2	AP28
Sporobolus australasicus	<1	0.5	AP19.18
Tephrosia aff. *supina* (HD88-4)	<1	0.1	AP19.32
Tephrosia aff. *supina* (MET 12,357)	<1	0.1	AP19.16
Trachymene oleracea ssp. *oleracea*^	<1	0.4	BN39
Trichodesma zeylanicum var. *zeylanicum*#	<1	0.6	BN59
Triodia brizoides	<1	0.1	AP19.30
Triodia epactia^	15	0.4	BN153
Triodia wiseana (fine form)#	30	0.6	AP19.01
Triumfetta clementii#	<1	0.2	BN29

API Rail Flora Site APQ20

Described by KH Date 12/05/2009 Type Q 50 X 50

MGA Zone 50 499335 mE 7703708 mN
Soil Red cracking clay
Vegetation Horseflats of *Eragrostis xerophila* and *Eriachne benthamii* on red clay loam.
Veg Condition Very Good - Good
Fire Age
Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)

SPECIES LIST

Name	Cover	Height	Specimen
Brachyachne convergens	<1	0.1	AP20.02
Bulbostylis barbata	<1	0.1	AP20.01
Cleome viscosa	<1	0.2	AP20.17
Corchorus aff. *parviflorus*	<1	0.3	AP20.09B
Cucumis maderaspatanus	<1	0.05	AP20.05B
**Cucumis melo* ssp. *agrestis*	<1	creeper	AP20.06
Dichanthium sericeum ssp. *humilius*#	<1	0.3	BN13
Eragrostis tenellula	<1	0.2	AP20.03
Eragrostis xerophila#	32	0.4	AP33
Eriachne aff. *mucronata*^	15	0.6	AP44
Eriachne benthamii	15	0.2	AP20.11
Heliotropium conocarpum	<1	0.1	AP20.07
Heliotropium heteranthum^	<1	0.03	BN218
Ipomoea coptica	<1	creeper	AP20.18A
Ipomoea muelleri^	<1	creeper	AP27
Iseilema dolichotrichum^	2	0.3	BN14
Iseilema macratherum	<1	0.2	AP20.08
Neptunia dimorphantha	<1	0.1	AP20.19
Panicum decompositum^	<1	0.4	
Paspalidium tabulatum	<1	0.2	AP20.18B
Polycarpaea longiflora (white form)	<1	0.15	AP20.13
Portulaca conspicua	<1	0.05	AP20.09A
Ptilotus aervoides	<1	0.1	AP20.10
Ptilotus gomphrenoides var. *gomphrenoides*	<1	0.15	AP20.16
Rhynchosia minima#	<1	0.2	BN77
Sorghum timorense	<1	0.5	AP20.20
Stemodia kingii#	<1	0.5	BN94
Streptoglossa bubakii^	<1	0.3	BN95
Streptoglossa liatroides	<1	0.2	AP20.04
Trianthema aff. *triquetra* (M3.35)	<1	0.05	AP20.05A

API Rail Flora Site APQ21

Described by KH Date 12/05/2009 Type Q 50 X 50

MGA Zone 50 497941 mE 7702294mN

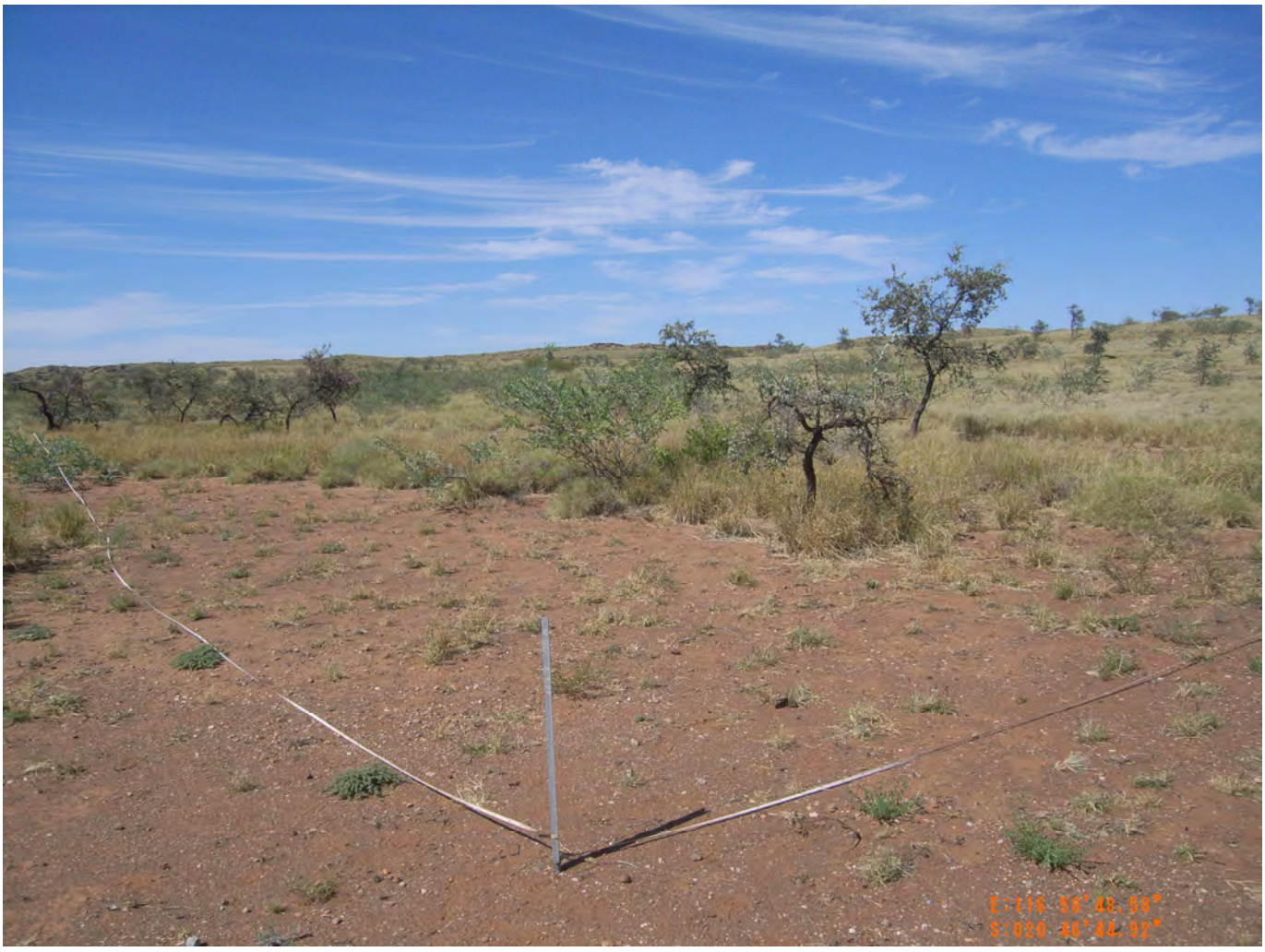
Soil Orange rocky loam

Vegetation Tall Shrubland of *Acacia bivenosa* and *Acacia inaequilatera* over a Closed Hummock Grassland of *Triodia wiseana* (fine form) and **Cenchrus ciliaris* on orange rocky sand

Veg Condition Very Good - Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)



SPECIES LIST

Name	Cover	Height	Specimen
Abutilon aff. *lepidum* (4)	<1	0.2	AP21.20
Abutilon oxycarpum ssp. *prostratum*	<1	0.1	AP21.26
Acacia ancistrocarpa#	1	2	AP21.06
Acacia bivenosa#	20	2	BN54
Acacia inaequilatera	10	3	AP21.09
Acacia pyrifolia var. *pyrifolia^*	10	3	BN56
Acacia synchronicia#	1	1.3	AP21.07
Aristida contorta	<1	0.6	AP21.29
Boerhavia coccinea	<1	0.2	AP21.16
**Cenchrus ciliaris#*	20	0.8	AP21.08
Corchorus aff. *walcotti* (K.J. Atkins 570)	<1	0.3	AP21.22
*Corchorus laniflorus^*	<1	0.2	BN24
Dactyloctenium radulans	<1	0.1	AP21.15
Enneapogon caerulescens var. *caerulescens*	1	0.1	AP21.05
Euphorbia biconvexa	<1	0.1	AP21.04
Euphorbia sp. (BPBS10-50)	<1	0.2	AP21.03
*Euphorbia wheeleri^*	<1	0.2	BN176
Evolvulus alsinoides var. *villosicalyx*	<1	0.1	AP21.18
Hibiscus sturtii var. *platychlamys*	<1	0.2	AP21.25
Indigofera colutea	<1	0.1	AP21.17
Indigofera linifolia#	<1	0.2	BN07
Iseilema dolichotrichum	<1	0.1	AP21.14
Leptopus decaisnei var. *orbicularis*	<1	0.1	AP21.13
Ptilotus helipteroides var. *helipteroides*	<1	0.1	AP21.27
Salsola tragus ssp. *tragus*	<1	0.05	AP21.24
Sclerolaena costata	<1	0.2	AP21.21
Senna glutinosa ssp. *pruinosa*	<1	0.8	AP21.11
Senna sp. *Karijini* (M.E. Trudgen 10392)^	<1	1	BN49
Sporobolus australasicus	<1	0.1	AP21.15
Swainsona canescens	<1	0.05	AP21.28
Triodia wiseana (fine form)#	70	0.8	AP21.01
Triumfetta clementii	<1	0.4	AP21.10

API Rail Flora Site APQ22

Described by KH Date 12/05/2009 Type Q 50 X 50

MGA Zone 50 494478 mE 7698825 mN

Soil Orange clay loam

Vegetation Tall Shrubland of *Acacia xiphophila* over a Hummock Grassland of *Triodia angusta* on red rocky clay loam.

Veg Condition Very Good - Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)

SPECIES LIST

Name	Cover	Height	Specimen	Notes
Acacia xiphophylla#	25	3		
Alysicarpus muelleri	<1	0.2	AP22.17	
Aristida contorta	<1	0.1	AP22.32	
Boerhavia coccinea	<1	0.2	AP22.03	
**Cenchrus ciliaris#*	30	0.6	AP22.01	
*Chrysopogon fallax^*	<1	0.5	AP45	
Cleome viscosa	<1	0.3	AP22.34	
Crotalaria medicaginea var. *neglecta*	<1	0.2	AP22.30	
**Cucumis melo* ssp. *agrestis*	<1	creeper	AP22.13	
Dichanthium sericeum ssp. *humilius*	<1	0.1	AP22.06	
Enchylaena tomentosa var. *tomentosa*	<1	0.3	AP22.10	
Enneapogon caerulescens var. *caerulescens*	<1	0.1	AP22.09	
Eragrostis xerophila	<1	0.1	AP22.20	
*Erodium cygnorum^*	<1	0.05	AP46	
Euphorbia australis	<1	0.2	AP22.08	
Euphorbia biconvexa	<1	0.2	AP22.22	
Euphorbia sp. (BPBS10-50)	<1	0.1	AP22.31	
Evolvulus alsinoides var. *villosicalyx*	<1	0.2	AP22.35	
Gomphrena affinis ssp. *pilbarensis*	<1	0.1	AP22.04	
Indigofera linifolia	<1	0.1	AP22.14	
Leptopus decaisnei var. *orbicularis*	<1	0.05	AP22.29	
Polygala aff. *isingii*	<1	0.05	AP22.37	
**Portulaca oleracea*	<1	0.1	AP22.18	
Ptilotus auriculifolius	<1	0.1	AP22.28	
Ptilotus exaltatus var. *exaltatus*	<1	0.1	AP22.25	
Ptilotus helipteroides var. *helipteroides#*	<1	0.15	AP22.33	
Ptilotus obovatus var. *obovatus#*	<1	0.8	AP22.24	
Rhynchosia minima	<1	creeper	AP22.15	
Scaevola spinescens (broad leaf form)#	5	0.5	BN64	
*Sclerolaena densiflora^*	<1	0.1	BN11	"Form B"
Senna artemisioides ssp. *oligophylla^*	<1	0.7	AP01	
Senna glutinosa ssp. *x luerssenii*	<1	0.8	AP22.23	
Sida aff. *fibulifera* (HD200-6)	<1	0.2	AP22.19	
Sporobolus australasicus	<1	0.2	AP22.05	
Swainsona canescens	<1	0.1	AP22.36	
Trichodesma zeylanicum var. *zeylanicum*	<1	0.2	AP22.07	
Triodia angusta#	25	0.6	AP22.21	
Triumfetta clementii	<1	0.3	AP22.12	
Xerochloa barbata	<1	0.1	AP22.16	

API Rail Flora Site APQ23

Described by KH Date 24/04/2009 Type Q 50 X 50

MGA Zone 50 490431 mE 7697277 mN

Soil Red rocky loam

Vegetation Mid Dense Hummock Grassland of *Triodia wiseana* (fine form) on hillslopes, ridgetops and stony plains.

Veg Condition Very Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)

SPECIES LIST

Name	Cover	Height	Specimen
Acacia ancistrocarpa#	1	1.5	BN41
Acacia bivenosa#	<1	1.8	AP23.02
Acacia pyrifolia var. *pyrifolia*^	<1	0.3	AP03
Aristida contorta#	<1	0.1	BN03
Bonamia media var. *villosa*	<1	0.05	AP23.11A
Corchorus aff. *parviflorus*	<1	0.15	AP23.19
Corchorus tectus^	<1	0.3	AP41
Eriachne pulchella ssp. *dominii*	<1	0.15	AP23.07
Eriachne pulchella ssp. *pulchella*^	1	0.1	AP09
Euphorbia australis#	<1	0.1	AP23.06
Heliotropium heteranthum	<1	0.1	AP23.09
Hybanthus aurantiacus	<1	0.1	AP23.14
Indigofera monophylla (MJOPP-2)	<1	0.3	AP23.21
Iseilema dolichotrichum	<1	0.1	AP23.05
Polycarpaea holtzei	<1	0.1	AP23.10
Polygala aff. *isingii*	<1	0.1	AP23.11B
Portulaca oleracea	<1	0.05	AP23.04
Ptilotus fusiformis^	<1	0.2	AP05
Ptilotus helipteroides var. *helipteroides*#	<1	0.1	AP23.12
Senna artemisioides ssp. aff. *oligophylla* (thinly sericeous)	<1	0.7	AP23.16
Senna artemisioides ssp. *oligophylla*^	<1	0.5	AP01
Senna notabilis	<1	0.1	AP23.15
Sida aff. *echinocarpa* (MET 15,350)	<1	0.15	AP23.20
Tephrosia clementii	<1	0.05	AP23.13
Trachymene oleracea ssp. *oleracea*^	<1	0.3	BN39
Triodia wiseana (fine form)#	40	0.6	BN12
Triumfetta clementii	<1	0.2	AP23.03

API Rail Flora Site APQ24

Described by KH Date 24/04/2009 Type Q 50 X 50

MGA Zone 50 488780 mE 7696482 mN

Soil Red clay

Vegetation Open Shrubland of *Acacia inaequilatera*, *Acacia ancistrocarpa*, *Acacia bivenosa* and *Acacia pyrifolia* var. *pyrifolia* over a Closed Hummock Grassland domianted by *Triodia angusta*, *Triodia wiseana* (fine form) and *Triodia* aff. *epactia* on orange brown sandy soil with rocky nodules

Veg Condition Very Good - Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)

SPECIES LIST

Name	Cover	Height	Specimen
Abutilon aff. lepidum (1) (MET 15 352)	<1	0.4	AP24.09
Acacia ancistrocarpa#	1	1.5	BN238
Acacia bivenosa	1	1.2	AP24.05
Acacia inaequilatera	1	1.9	AP24.03
Acacia pyrifolia var. *pyrifolia#*	1	0.8	AP24.06
Alysicarpus muelleri	<1	0.2	AP24.24
Boerhavia coccinea			AP24.33B
**Cenchrus ciliaris#*	<1	0.6	BN21
Corchorus aff. *parviflorus*	<1	0.2	AP24.20
Corchorus aff. *walcotti* (K.J. Atkins 570)	<1	0.2	AP24.14
*Corchorus tectus^*	<1	0.4	AP41
Crotalaria medicaginea var. *neglecta*	<1	0.1	AP24.28
Dactyloctenium radulans	<1	0.05	AP24.23
Dichanthium sericeum ssp. *humilius^*	<1	0.2	BN13
Euphorbia australis	<1	0.1	AP24.18
Euphorbia biconvexa	<1	0.1	AP24.36
Euphorbia coghlanii	<1	0.2	AP24.41
Evolvulus alsinoides var. *villosicalyx*	<1	0.1	AP24.29
Goodenia forrestii	<1	0.3	AP24.10
Gossypium australe (Burrup Peninsula form)#	<1	0.6	BN181
Heliotropium cunninghamii	<1	0.1	AP24.35
Indigofera colutea	<1	0.05	AP24.25
Indigofera linifolia#	<1	0.2	BN07
Indigofera trita	<1	0.2	AP24.40
Leptopus decaisnei var. *orbicularis*	<1	0.1	AP24.26
Polygala aff. *isingii*	<1	0.1	AP24.21
Polymeria ambigua	<1	0.1	AP24.33A
**Portulaca oleracea*	<1	0.1	AP24.27
Ptilotus aervoides	<1	0.05	AP24.38
Ptilotus exaltatus var. *exaltatus*	<1	0.1	AP24.12
Rhynchosia minima#	<1	0.2	BN77
Senna artemisioides ssp. *oligophylla^*	<1	0.6	AP01
Senna artemisioides ssp. *oligophylla x helmsii*	<1	0.8	AP24.16
Senna notabilis	<1	0.2	AP24.11
*Sida clementii^*	<1	0.3	BN208
Sporobolus australasicus	<1	0.1	AP24.07
Streptoglossa decurrens	<1	0.1	AP24.34
Themeda triandra	<1	0.1	AP24.02
Trianthema aff. *triquetra* (M3.35)	<1	0.2	AP24.13
Trichodesma zeylanicum var. *zeylanicum*	<1	0.2	AP24.30
Triodia aff. *epactia*	10	0.6	AP24.32
Triodia angusta	40	0.7	AP24.31
*Triodia epactia^*	40	0.8	BN153
Triodia wiseana (fine form)#	30	0.8	BN12
Triumfetta clementii	<1	0.2	AP24.17

API Rail Flora Site APQ25

Described by KH Date 24/04/2009 Type Q 50 X 50

MGA Zone 50 486060 mE 7695716 mN

Soil Red clay

Vegetation Woodland of *Corymbia hamersleyana* over a Tall Shrubland of *Acacia bivenosa* with occasional *Grevillea pyramidalis* ssp. *leucadendron* over a Mid to Dense Hummock Grassland of *Triodia angusta* and *Triodia wiseana* (fine form) over a Tussock Grassland of **Cenchrus ciliaris* on red clay drainage lines.

Veg Condition Very Good - Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)

SPECIES LIST

Name	Cover	Height	Specimen
Acacia ancistrocarpa	<1	2	AP25.22
Acacia bivenosa#	30	2.2	BN54
Acacia pyrifolia var. *pyrifolia*#	<1	1.6	AP25.07
Alternanthera nana	<1	0.15	AP25.32
Alysicarpus muelleri	<1	0.1	AP25.25
Capparis spinosa var. *nummularia*#	<1	0.4	AP39
**Cenchrus ciliaris*#	65	0.3	AP25.03
Corchorus aff. *walcotti* (K.J. Atkins 570)	<1	0.2	AP25.19
Corymbia hamersleyana#	15	15	AP25.08
Crotalaria medicaginea var. *neglecta*	<1	0.2	AP25.18
Dichanthium sericeum ssp. *humilius*^	<1	0.2	BN08A
Diplopeltis eriocarpa	<1	0.1	AP25.09
Dysphania rhadinostachya ssp. *rhadinostachya*^	<1	0.3	AP19
Ehretia saligna var. *saligna*	<1	0.7	AP25.28
Euphorbia australis^	<1	0.2	BN234
Goodenia forrestii^	<1	0.3	BN201
Gossypium australe (Burrup Peninsula form)	<1	0.5	AP25.13
Grevillea pyramidalis ssp. *leucadendron*#	1	1.2	AP24
Indigofera colutea	<1	0.05	AP25.16
Indigofera linifolia#	<1	0.3	BN07
Indigofera trita	<1	0.3	AP25.14
Iseilema dolichotrichum^	<1	0.2	BN14
Leptopus decaisnei^	<1	0.4	AP04
**Malvastrum americanum*	<1	0.2	AP25.26
Melhania sp. (CH15-39)	<1	0.10	AP25.27
Polygala aff. *isingii*	<1	0.05	AP25.30
Polymeria ambigua	<1	0.05	AP25.17
**Prosopis pallida*^	<1	0.8	
Ptilotus obovatus var. *obovatus*#	<1	0.3	AP02
Rhynchosia minima	<1	creeper	AP25.10
Senna artemisioides ssp. *oligophylla*^	<1	0.4	AP01
Sida clementii^	<1	0.3	BN208
Sporobolus australasicus	<1	0.1	AP25.04
Themeda triandra	1	0.8	AP25.12
Trachymene oleracea ssp. *oleracea*^	<1	0.3	AP47
Trichodesma zeylanicum var. *zeylanicum*	<1	0.2	AP25.21
Triodia angusta	30	0.5	AP25.02
Triodia epactia^	2	0.6	BN153
Triodia wiseana (fine form)#	45	0.8	BN12
Triumfetta clementii^	<1	0.3	BN29
**Vachellia farnesiana*	<1	0.6	AP25.15

API Rail Flora Site APQ26

Described by KH Date 24/04/2009 Type Q 50 X 50

MGA Zone 50 485305 mE 7695770 mN

Soil Orange sandy loam

Vegetation Open Shrubland of *Acacia syncronicia* and *Acacia inaequilatera* over a Mid to Dense Hummock Grassland of *Triodia wiseana* (fine form) with scattered *Sclerolaena costata* and *Indigofera linifolia* on orange sandy loam.

Veg Condition Very Good - Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)

SPECIES LIST

Name	Cover	Height	Specimen
Abutilon lepidum^	<1	0.2	AP42
Acacia bivenosa^	3	1.8	BN54
Acacia inaequilatera	1	1.2	AP26.17
Acacia pyrifolia var. *pyrifolia*#	1	1.2	BN56
Acacia synchronicia#	3	1.8	AP26.16
Bonamia media var. *villosa*	<1	0.05	AP26.12
**Cenchrus ciliaris*#	<1	0.4	BN21
Corchorus aff. *walcotti* (K.J. Atkins 570)	<1	0.2	AP26.21
Cullen cinereum	<1	0.05	AP26.13
Dichanthium sericeum ssp. *humilius*#	<1	0.2	BN08A
Diplopeltis eriocarpa	<1	0.1	AP26.05
Enneapogon caerulescens var. *caerulescens*#	1	0.1	AP26.15
Euphorbia australis^	<1	0.05	BN234
Euphorbia sp. (BPBS10-50)	<1	0.1	AP26.14
Euphorbia tannensis ssp. *eremophila* (Burrup form)	<1	0.2	AP26.07
Evolvulus alsinoides var. *villosicalyx*#	<1	0.3	BN241
Gossypium australe (Burrup Peninsula form)^	<1	0.2	BN181
Indigofera colutea	<1	0.05	AP26.11
Indigofera linifolia	1	0.2	AP26.20
Indigofera trita	<1	0.2	AP26.22
Iseilema dolichotrichum^	<1	0.2	BN14
Leptopus decaisnei var. *orbicularis*#	<1	0.2	AP4
Paspalidium clementii	<1	0.2	AP26.03
Ptilotus helipteroides^	<1	0.1	AP02
Rhynchosia minima^	<1	0.2	BN77
Sclerolaena costata	1	0.2	AP26.10
Sclerolaena densiflora^	<1	0.2	AP10
Senna notabilis#	<1	0.3	BN215
Sida clementii^	<1	0.3	BN208
Sporobolus australasicus	<1	0.1	AP26.02
Trachymene oleracea ssp. *oleracea*^	<1	0.3	AP47
Triodia wiseana (fine form)#	70	0.6	BN12
Triumfetta clementii#	<1	0.3	AP26.19

API Rail Flora Site APQ27

Described by KH Date 24/04/2009 Type Q 50 X 50

MGA Zone 50481635 mE 7695307 mN

Soil Red

Vegetation Low Woodland of *Corymbia hamersleyana* over an Open Heath of *Acacia ancistrocarpa* with scattered *Acacia bivenosa* and *Acacia colei* var. *colei* over a Mid Dense Hummock Grassland of *Triodia wiseana* (fine form) and *Triodia angusta* on red rocky soil in drainage lines.

Veg Condition Very Good - Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)

SPECIES LIST

Name	Cover	Height	Specimen
Acacia ancistrocarpa#	30	2	AP27.05
Acacia bivenosa#	<1	1.2	AP27.06
Acacia colei var. *colei*	<1	1.4	AP27.02
*Acacia cowleana^*	1	1.4	BN187
Bothriochloa ewartiana	2	0.8	AP27.13
Cajanus cinereus	<1	0.3	AP27.10
Cassytha capillaris#	<1	creeper	AP27.04
**Cenchrus ciliaris#*	1	0.6	BN21
Corymbia hamersleyana#	20	8	AP38
Gossypium australe (Burrup Peninsula form)^	<1	0.3	BN181
Heliotropium ovalifolium	<1	0.2	AP27.16
Hybanthus aurantiacus#	2	0.2	AP27.09
*Indigofera linifolia^*	<1	0.2	BN07
Indigofera monophylla (Cape Preston form)^	<1	0.3	BN180
*Leptopus decaisnei^*	1	0.4	AP04
Paraneurachne muelleri	2	0.4	AP27.12
Polymeria ambigua	<1	0.1	AP27.14
Rhynchosia minima#	<1	0.3	BN77
*Senna notabilis^*	<1	0.2	BN215
*Sida clementii^*	<1	0.3	BN208
*Swainsona formosa^*	<1	0.2	
Tephrosia aff. *supina* (MET 12,357)^	<1	0.2	BN204
Triodia angusta			AP27.01B
Triodia wiseana (fine form)#	50	0.6	AP27.01A

API Rail Flora Site APQ28

Described by KH Date 24/04/2009 Type Q 50 X 50

MGA Zone 50 481375 mE 7695179 mN

Soil Orange rocky sand

Vegetation Shrubland of *Acacia bivenosa* and *Acacia ancistrocarpa* over a Mid to Dense Hummock Grassland of *Triodia angusta* and *Triodia wiseana* (fine form) on orange rocky sand.

Veg Condition Very Good - Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)

SPECIES LIST

Name	Cover	Height	Specimen
Acacia ancistrocarpa#	2	1.8	AP28.14
Acacia bivenosa#	8	1.2	AP28.11
Acacia inaequilatera	<1	1.2	AP28.06
Acacia pyrifolia var. *pyrifolia*^	<1	1.2	BN56
Alysicarpus muelleri^	<1	0.2	BN200
Aristida contorta#	1	0.1	BN03
Cassytha capillaris^	<1		BN51
Corchorus aff. *parviflorus*	<1	0.2	AP28.19
Corchorus tectus^	<1	0.8	AP41
Dactyloctenium radulans^	<1		BN19
Dichanthium sericeum ssp. *humilius*^	<1	0.3	BN08A
Eriachne pulchella ssp. *dominii*	<1	0.2	AP28.10
Euphorbia australis#	<1	0.1	AP28.09
Evolvulus alsinoides var. *villosicalyx*	<1	0.2	AP28.08
Heliotropium ovalifolium#	<1	0.1	AP50
Iseilema dolichotrichum	<1	0.1	AP28.03
Lepidium pholidogynum^	<1	0.3	AP49
Mollugo molluginea	<1	0.2	AP28.17
Paraneurachne muelleri	<1	0.1	AP28.20
Portulaca oleracea^	<1	0.2	BN207
Pterocaulon sphacelatum	<1	0.2	AP28.21
Ptilotus astrolasius var. *astrolasius*	<1	0.2	AP28.16
Ptilotus carinatus^	<1	0.3	BN124
Ptilotus exaltatus var. *exaltatus*#	<1	0.8	
Ptilotus murrayi var. *murrayi*	<1	0.05	AP28.22
Ptilotus obovatus var. *obovatus*^	<1	0.2	AP2
Scaevola spinescens (broad leaf form)^	<1	0.5	BN64
Senna artemisioides ssp. *oligophylla*^	<1	0.8	AP01
Senna notabilis	<1	0.3	AP28.12
Sida aff. *echinocarpa* (MET 15,350)	<1	0.3	AP28.07
Sporobolus australasicus	<1	0.1	AP28.05
Triodia angusta	50	0.5	AP28.01
Triodia wiseana (fine form)#	70	0.8	BN12
Xerochloa imberbis^	<1	0.2	

API Rail Flora Site APQ29

Described by KH Date 24/04/2009 Type Q 50 X 50

MGA Zone 50 480464 mE 7694905 mN

Soil Red clay with rocky nodules

Vegetation Horseflats of *Eragrostis xerophila*, *Eriachne benthamii*, *Aristida contorta*, *Dichanthium sericeium* ssp. *humilis* and *Brachyachne convergens* on red clay flats with rocky nodules.

Veg Condition Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)

SPECIES LIST

Name	Cover	Height	Specimen
Acacia xiphophylla^	<1	0.3	
Aristida contorta#	5	0.15	BN03
Boerhavia coccinea	<1	0.05	AP29.17
Brachyachne convergens	1	0.1	AP29.07
Cleome viscosa	<1	0.25	AP29.22
Dactyloctenium radulans^	<1	BN19	
Dichanthium sericeum ssp. *humilius*#	1	0.1	BN13
Enneapogon caerulescens var. *caerulescens*#	1	0.1	AP29.15
Eragrostis xerophila#	31	0.4	BN247
Eriachne aff. *mucronata*^	3	0.4	AP44
Eriachne benthamii	4	0.2	AP29.20
Euphorbia coghlanii	<1	0.1	AP29.26
Fimbristylis aff. *dichotoma* (M75-4)	<1	0.15	AP29.19
Gomphrena affinis ssp. *pilbarensis*#	<1	0.2	BN09
Heliotropium heteranthum#	<1	0.02	AP29.29
Heliotropium inexplicitum	<1	0.1	AP29.08
Indigofera linifolia	<1	0.1	AP29.28
Indigofera trita	<1	0.1	AP29.27
Lepidium pholidogynum^	<1	0.1	AP49
Neptunia dimorphantha	<1	0.05	AP29.06
Portulaca oleracea#	<1	0.2	BN207
Ptilotus aervoides	<1	0.05	AP29.23
Ptilotus carinatus^	3	0.05	BN111
Ptilotus exaltatus var. *exaltatus*#	<1	0.2	
Ptilotus helipteroides^			AP06
Rhynchosia minima#	<1	0.2	BN77
Sclerolaena costata#	<1	0.15	AP29.16
Sclerolaena densiflora#	<1	0.1	AP10
Sesbania cannabina^	<1	0.3	BN164
Sida aff. *fibulifera* (HD200-6)	<1	0.15	AP29.24
Sporobolus australasicus	<1	0.05	AP29.13
Streptoglossa bubakii^	<1	0.2	BN95
Streptoglossa liatroides#	<1	0.2	BN123
Trianthema aff. *triquetra* (M3.35)	<1	0.1	AP29.09
Xerochloa imberbis^	2	0.3	

API Rail Flora Site APQ30

Described by KH Date 24/04/2009 Type Q 50 X 50

MGA Zone 50 478186 mE 7693764 mN

Soil Orange rocky soil

Vegetation Tall Shrubland of *Acacia ancistrocarpa* over an Open Shrubland of *Acacia bivenosa* with scattered *Acacia maitlandii*, *Acacia synchronicia* and *Acacia xiphophila* over a Mid to Dense Hummock Grassland of *Triodia wiseana* (fine form) with **Cenchrus ciliaris* on orange rocky soil.

Veg Condition Good

Fire Age

Notes (^ denotes collections made in 2008 survey only, # denotes collections made in 2008 and 2009 surveys)

SPECIES LIST

Name	Cover	Height	Specimen
Abutilon aff. *lepidum* (4)	<1	0.2	AP30.07
Acacia ancistrocarpa#	20	3	BN41
Acacia bivenosa#	3	1.5	AP30.14
Acacia maitlandii#	0.2	1.5	AP30.36
Acacia synchronicia	<1	0.8	AP30.37
Acacia xiphophylla#	10	3	
Bonamia media var. *villosa*	<1	0.1	AP30.29
Cassytha capillaris	<1	creeper	AP30.31
**Cenchrus ciliaris#*	10	0.5	BN21
Corchorus aff. *parviflorus*	1	0.5	AP30.27
Corchorus aff. *walcotti* (K.J. Atkins 570)	<1	0.2	AP30.05
*Corchorus tectus^*	<1	0.4	AP41
Enneapogon caerulescens var. *caerulescens#*	<1	0.2	BN04
Eragrostis xerophila	<1	0.3	AP30.34A
Eremophila longifolia	<1	0.6	AP30.32
Euphorbia sp. (BPBS10-50)	<1	0.1	AP30.26
Goodenia stobbsiana#	<1	0.5	AP30.09
Hakea lorea ssp. *lorea#*	<1	1.5	AP30.16
*Heliotropium ovalifolium^*	<1	0.2	AP50
*Hibiscus coatesii^*	<1	0.4	AP52
Indigofera monophylla (Cape Preston form)	<1	0.4	AP30.17
*Lepidium pholidogynum^*	<1	0.4	AP49
*Leptopus decaisnei^*	<1	0.2	AP04
Panicum decompositum	<1	0.4	AP30.38
Paraneurachne muelleri	<1	0.4	AP30.33
Phyllanthus maderaspatensis	<1	0.2	AP30.23
Ptilotus astrolasius var. *astrolasius*	<1	0.4	AP30.28
Ptilotus helipteroides var. *helipteroides*	<1	0.1	AP30.18
Ptilotus obovatus var. *obovatus^*	<1	0.5	AP02
Rhynchosia minima	<1	0.1	AP30.08
Senna artemisioides ssp. aff. *oligophylla* (thinly sericeous)	<1	0.7	AP30.15
Senna glutinosa ssp. *glutinosa*	<1	0.3	AP30.34B
Senna glutinosa ssp. *pruinosa*	<1	0.8	AP30.21
Senna glutinosa ssp. *x luerssenii^*	2	0.3	AP08
Senna notabilis#	<1	0.3	BN205
Senna sp. *Karijini* (M.E. Trudgen 10392)^	<1	0.3	BN49
*Sida clementii^*	5	0.4	BN208
Solanum diversiflorum	<1	0.2	AP30.25
Solanum horridum	<1	0.1	AP30.19
Sorghum timorense	<1	0.2	AP30.30
Tephrosia clementii	<1	0.1	AP30.22
Trichodesma zeylanicum var. *zeylanicum*	<1	0.2	AP30.04
Triodia wiseana (fine form)#	50	0.7	BN12
Triumfetta clementii#	<1	0.3	AP30.10

API Rail Flora Site APQ31

Described by KH Date 23/04/2009 Type Q 50 X 50

MGA Zone 50 475247 mE 7693926 mN

Soil Red loamy clay under rocky surface layer

Vegetation Shrubland of *Acacia xiphophylla* over an Open Hummock Grassland of *Triodia wiseana* (fine form) over a Very Open Tussock Grassland of *Eriachne benathmii, Eragrostis xerophila and Xerochloa barbata* on red rocky clay flats.

Veg Condition Good

Fire Age

Notes

SPECIES LIST

Name	Cover	Height	Specimen
Abutilon aff. *lepidum* (4)	<1	0.1	AP31.17
Acacia xiphophylla#	15	1.5	
Aristida contorta#	2	0.2	BN03
Boerhavia coccinea	<1	0.05	AP31.18
**Cenchrus ciliaris^*	1	0.6	BN21
Chrysopogon fallax#	5	0.8	BN79
Cleome viscosa	1	0.3	AP31.12
Crotalaria dissitiflora ssp. *benthamiana*	<1	0.1	AP31.37
Dactyloctenium radulans	<1	0.05	AP31.24
Dichanthium sericeum ssp. *humilius^*	1	0.3	BN08A
Enneapogon caerulescens var. *caerulescens#*	<1	0.15	BN04
Eragrostis xerophila#	11	0.3	AP33
Eriachne aff. *mucronata^*	5	0.5	AP44
Eriachne benthamii	4	0.2	AP31.21
Euphorbia coghlanii	<1	0.1	AP31.13
Euphorbia sp.	<1	0.1	AP31.28
Evolvulus alsinoides var. *villosicalyx*	<1	0.1	AP31.14
Heliotropium heteranthum#	3	0.1	AP31.06
Heliotropium inexplicitum	<1	0.1	AP31.30
Indigofera linifolia	<1	0.1	AP31.32
Leptopus decaisnei var. *orbicularis*	<1	0.05	AP31.36
Neptunia dimorphantha#	<1	0.2	BN17
Phyllanthus maderaspatensis	<1	0.1	AP31.34
**Portulaca oleracea*	<1	0.05	AP31.10
Ptilotus aervoides	1	0.2	AP31.05
Ptilotus helipteroides var. *helipteroides*	<1	0.05	AP31.15
Rhynchosia minima#	<1	0.3	BN77
Senna notabilis	<1	0.02	AP31.07
Sida aff. *fibulifera* (HD200-6)	<1	0.1	AP31.23
Sorghum timorense	<1	0.8	AP31.27
Sporobolus australasicus	<1	0.1	AP31.31
Stemodia kingii	<1	0.2	AP31.26
Streptoglossa bubakii	<1	0.05	AP31.19
Tephrosia clementii	<1	0.05	AP31.35
Trianthema aff. *triquetra* (M3.35)	<1	0.2	AP31.29
*Triodia angusta^*	<1	0.7	BN50
Triodia wiseana (fine form)#	6	0.8	AP31.01
Xerochloa barbata	2	0.1	AP31.11

API Rail Flora Site APQ32

Described by KH Date 23/04/2009 Type Q 10 X 50

MGA Zone 50 428271 mE 7666425 mN

Soil Loamy red clay

Vegetation Tall Open Scrub of *Acacia ancistrocarpa* and *Acacia tumida* var. *pilbarensis* over a Closed Hummock Grassland of *Triodia wiseana* (fine form) and *Triodia epactia* on loamy red clay creeklines.

Veg Condition Very Good

Fire Age

Notes

SPECIES LIST

Name	Cover	Height	Specimen
Acacia ancistrocarpa#	30	3	BN238
Acacia cowleana^	20	3	BN187
Acacia inaequilatera^	<1	3	AP32.20
Acacia pyrifolia var. *pyrifolia*#	1	3	BN56
Acacia tumida var. *pilbarensis*	20	2.8	AP32.11
Alysicarpus muelleri^	<1	0.2	BN200
Bonamia media var. *villosa*#	<1	0.2	BN27
Corchorus laniflorus^	<1	0.3	BN24
Dysphania rhadinostachya ssp. *rhadinostachya*^	<1	0.2	AP19
Eriachne pulchella ssp. *pulchella*	<1	0.1	AP32.02
Euphorbia biconvexa	<1	0.1	AP32.22
Evolvulus alsinoides var. *decumbens*	<1	0.3	AP32.31
Evolvulus alsinoides var. *villosicalyx*	<1	0.1	AP32.21
Gomphrena cunninghamii	<1	0.2	AP32.06
Goodenia microptera	<1	0.1	AP32.05
Gossypium australe (Burrup Peninsula form)	<1	0.4	AP32.13
Hibiscus sturtii var. *campylochlamys*	<1	0.2	AP32.24
Hibiscus sturtii var. *platychlamys*	<1	0.2	AP32.32
Hybanthus aurantiacus#	<1	0.15	BN209
Indigofera monophylla	<1	0.4	AP32.17
Indigofera monophylla (Cape Preston form)^	<1	0.3	BN180
Isotropis atropurpurea	<1	0.3	AP32.25
Paraneurachne muelleri	<1	0.6	AP32.27
Polycarpaea longiflora^	<1	0.3	BN179
Pterocaulon sphaeranthoides^	<1	0.15	BN166
Ptilotus exaltatus var. *exaltatus*#	<1	0.2	AP32.30
Rhynchosia minima	<1	creeper	AP32.10
Senna artemisioides ssp. *oligophylla*#	<1	0.9	AP01
Senna glutinosa ssp. *glutinosa*	<1	0.6	AP32.16
Senna notabilis^	<1	0.3	BN215
Sida aff. *echinocarpa* (MET 15,350)	<1	0.2	AP32.18
Sida clementii^	<1	0.3	BN208
Solanum diversiflorum#	<1	0.3	AP32.19
Streptoglossa bubakii^	<1	0.2	BN95
Streptoglossa decurrens	<1	0.1	AP32.33
Swainsona formosa^	<1	0.1	
Tephrosia aff. *supina* (MET 12,357)	<1	0.1	AP32.03
Trachymene oleracea ssp. *oleracea*	<1	0.2	AP32.29
Trichodesma zeylanicum var. *zeylanicum*^	<1	0.3	BN59
Triodia epactia	40	0.6	AP32.28
Triodia wiseana (fine form)#	70	0.8	BN12
Triumfetta clementii#	<1	0.3	BN29
Waltheria indica#	<1	0.2	AP32.23

API Rail Flora Site APQ33

Described by KH Date 23/04/2009 Type Q 10 X 50

MGA Zone 50 471368 mE 7693481 mN

Soil Red rocky loam

Vegetation Tall Open Shrubland of *Acacia ancistrocarpa*, *Acacia pyrifolia* ssp. *pyrifolia* and *Acacia elachantha* (golden hairy variant) over a Mid to Dense Hummock Grassland of *Triodia wiseana* (fine form) and a Tussock Grassland of *Paraneurachne muelleri* and *Cymbopogon ambiguus* on rocky hill slopes.

Veg Condition Very Good

Fire Age

Notes

SPECIES LIST

Name	Cover	Height	Specimen
Acacia ancistrocarpa#	35	3	BN41
Acacia coriacea ssp. *coriacea^*	5	2	BN146
*Acacia cowleana^*	1	1.3	BN187
Acacia elachantha (golden hairy variant)	1	2	AP33.13
Acacia pyrifolia var. *pyrifolia#*	2	2.5	AP33.11
Bonamia media var. *villosa*	<1	0.05	AP33.08
Cassytha capillaris	<1	creeper	AP33.17
**Cenchrus ciliaris^*	5	0.6	BN21
Corchorus aff. *parviflorus*	<1	0.2	AP33.10
*Corchorus tectus^*	<1	0.3	AP41
Cucumis maderaspatanus#	<1	creeper	AP33.03
Cymbopogon ambiguus	4	0.6	AP33.12
*Cymbopogon procerus^*	10	0.7	BN182
Evolvulus alsinoides var. *villosicalyx*	<1	0.1	AP33.06
*Goodenia stobbsiana^*	1	0.6	AP54
Hybanthus aurantiacus#	<1	0.3	BN209
*Indigofera linifolia^*	<1	0.2	BN07
*Leptopus decaisnei^*	<1	0.2	AP04
Paraneurachne muelleri	5	0.4	AP33.14A
*Pterocaulon sphacelatum^*	<1	0.4	BN166
Pterocaulon sphaeranthoides	<1	0.2	AP33.16
*Senna glutinosassp. x luerssenii^*	<1	0.2	AP08
Senna notabilis#	<1	0.3	BN215
Solanum diversiflorum	<1	0.2	AP33.09
Themeda triandra	<1	0.1	AP33.04
*Trachymene oleraceassp. Oleracea^*	2	0.5	BN39
Trichodesma zeylanicum var. zeylanicum#	<1	0.6	BN59
*Triodia epactia^*	25	0.8	BN153
Triodia wiseana (fine form)#	50	0.6	AP33.01
Triumfetta clementii#	<1	0.3	BN29

API Rail Flora Site APQ34

Described by KH Date 23/04/2009 Type Q 50 X 50

MGA Zone 50 465508 mE 7693340 mN

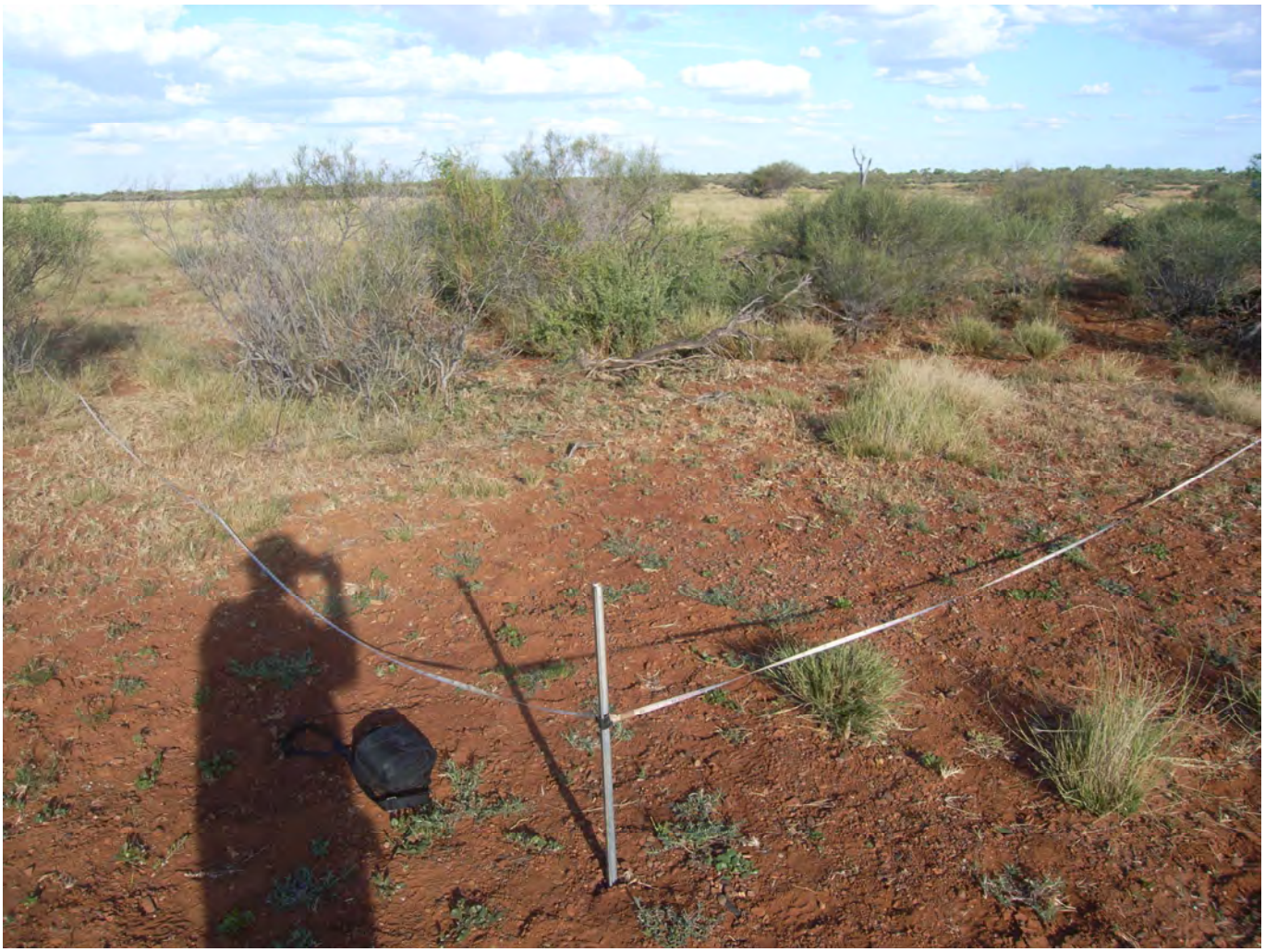
Soil Red cracking clay

Vegetation Shrubland of *Acacia sclerosperma* ssp. *sclerosperma* over a Tussock Grassland of *Eragrostis xerophila*, *Eriachne benthamii*, and *Xerochloa barbata* on red cracking clay flats.

Veg Condition Good - Degraded

Fire Age

Notes



SPECIES LIST

Name	Cover	Height	Specimen
Acacia sclerosperma ssp. *sclerosperma#*	15	2	AP57
*Acacia xiphophylla^*	<1	1	
*Aristida contorta^*	1	0.1	BN03
**Cenchrus ciliaris^*	<1	0.6	
Crotalaria dissitiflora ssp. *benthamiana*	<1	0.1	AP34.25
Cullen cinereum	<1	0.05	AP34.28
Cullen graveolens	<1	0.05	AP34.26
Dactyloctenium radulans	<1	0.1	AP34.18
Dichanthium sericeum ssp. *humilius*	<1	0.1	AP34.05B
Enchylaena tomentosa var. *tomentosa*	<1	0.1	AP34.09
*Eragrostis setifolia^*	30	0.7	AP55
Eragrostis tenellula	<1	0.1	AP34.22
Eragrostis xerophila#	40	0.6	AP34.02
Eremophila longifolia#	<1	1.8	AP34.14
Eriachne benthamii#	10	0.6	AP34.01
Euphorbia coghlanii	<1	0.1	AP34.24
*Euphorbia wheeleri^*	<1	0.7	BN245
Fimbristylis aff. *dichotoma* (M75-4)	<1	0.2	AP34.11
*Heliotropium heteranthum^*	<1	0.1	BN218
Heliotropium inexplicitum	<1	0.1	AP34.21
Indigofera linifolia#	<1	0.2	BN07
Iseilema macratherum	<1	0.1	AP34.04
**Malvastrum americanum*	<1	0.1	AP34.06
Neptunia dimorphantha#	<1	0.3	AP34.19
Panicum decompositum	<1	0.3	AP34.03
Panicum laevinode#	3	0.5	BN115
Paspalidium tabulatum (Whim Creek form)	<1	0.1	AP34.15B
**Portulaca oleracea^*	<1	0.2	BN207
Ptilotus aervoides	<1	0.1	AP34.07
*Ptilotus carinatus^*	<1	0.05	BN111
*Ptilotus exaltatus^*	<1	0.2	
Rhynchosia minima	<1	creeper	AP34.10
*Scaevola spinescens^*	<1	1.2	AP58
Scaevola spinescens (narrow form)	<1	0.3	AP34.12
*Sclerolaena glabra^*	<1	0.2	BN61
*Sesbania cannabina^*	<1	0.2	BN164
Streptoglossa bubakii	<1	0.1	AP34.17
Trianthema aff. *triquetra* (M3.35)	<1	0.05	AP34.08
*Triodia wiseana^*	1	0.7	BN12
Xerochloa barbata	5	0.1	AP34.15A
*Xerochloa imberbis^*	5	0.3	

API Rail Flora Site APQ35

Described by KH Date 23/04/2009 Type Q 50 X 50

MGA Zone 50 464766 mE 7692678 mN

Soil Red clay loam

Vegetation Open Forest of *Eucalyptus victrix* over a Tall Open Scrub of *Melaeluca glomerata and Acacia coriacea* ssp. *pendens* over an Open Hummock Grassland of *Triodia wiseana* (fine form).

Veg Condition Good

Fire Age

Notes

SPECIES LIST

Name	Cover	Height	Specimen
Acacia coriacea ssp. *coriacea*^	8	3	BN146
Acacia coriacea ssp. *pendens*	8	2.6	AP35.26
Acacia cowleana^	<1	0.8	BN187
Acacia pyrifolia var. *pyrifolia*^	1	1	AP03
Acacia trachycarpa^	15	3	BN222
Alternanthera angustifolia^	<1	0.2	AP21
Alternanthera nana	<1	0.2	AP35.20
Alternanthera nodiflora	<1	0.2	AP35.25
Amaranthus undulatus#	<1	0.6	BN254
Ammannia auriculata	<1	0.2	AP35.09
Ammannia baccifera	<1	0.2	AP35.22
Bergia pedicellaris	<1	0.05	AP35.31
Cucumis maderaspatanus^	<1	BN57	
Cyperus difformis	<1	0.5	AP35.06
Cyperus iria	1	0.2	AP35.18
Cyperus vaginatus#	1	0.9	AP65
Dichanthium sericeum ssp. *humilius*^	10	0.1	BN08A
Eragrostis tenellula	1	0.4	AP35.05
Eriachne benthamii#	1	0.4	BN01
Eriachne obtusa^	35	0.4	AP59
Eucalyptus camaldulensis^	40	20	
Eucalyptus victrix	40	20	AP35.12
Euphorbia sp. (BPBS10-50)	<1	0.1	AP35.15
Goodenia lamprosperma#	5	0.5	BN255
Hybanthus aurantiacus^	<1	0.2	BN207
Indigofera monophylla (MJOPP-2)	<1	0.3	AP35.24
Marsilea hirsuta	<1	0.05	AP35.11
Melaleuca glomerata#	40	3	AP61
**Passiflora foetida* var. *hispida*	<1	0.2	AP35.04
Phyllanthus maderaspatensis	<1	0.3	AP35.30
Pluchea rubelliflora#	<1	0.3	AP60
Polymeria ambigua^	<1	BN211	
Pterocaulon sphaeranthoides	<1	0.1	AP35.19
Ptilotus carinatus^	<1	0.2	BN124
Scaevola spinescens (narrow form)	<1	0.6	AP35.29
Sesbania cannabina#	<1	0.9	AP62
Sporobolus virginicus^	15	0.4	AP63
Stemodia grossa#	<1	0.3	BN172
Synaptantha tillaeacea var. *tillaeacea*	<1	0.1	AP35.27
Trichodesma zeylanicum var. *zeylanicum*^	<1	0.8	BN59
Triodia epactia^	10	0.6	BN153
Triodia wiseana (fine form)	10	0.7	AP35.01
**Vachellia farnesiana*	<1	0.6	AP35.14
Vigna lanceolata var. *lanceolata*	<1	creeper	AP35.02

API Rail Flora Site APQ36

Described by KH Date 23/04/2009 Type Q 50 X 50

MGA Zone 50 452566 mE 7685410 mN
Soil Red cracking clay
Vegetation Horseflats dominated by *Eragrostis xerophi*la and *Xerochloa imberbis* on red clay loam.
Veg Condition Good - Degraded
Fire Age
Notes (^denotes species collected in 2008 only, #denotes species collected in 2008 and 2009)

SPECIES LIST

Name	Cover	Height	Specimen
Aristida contorta^	1	0.2	BN03
Cyperus pygmaeus	<1	0.04	AP36.11
Desmodium muelleri	<1	0.1	AP36.08
Dichanthium sericeum ssp. *humilius*#	2	0.2	BN13
Eragrostis xerophila#	50	0.8	AP36.03
Eriachne aff. *mucronata*^	10	0.6	AP44
Eriachne benthamii	1	0.2	AP36.10
Fimbristylis aff. *dichotoma* (M75-4)	1	0.1	AP36.02
Gomphrena affinis ssp. *pilbarensis*	<1	0.05	AP36.04
Heliotropium conocarpum^	<1	0.3	BN93
Heliotropium inexplicitum	<1	0.1	AP36.15
Indigofera linifolia#	<1	0.2	BN07
**Portulaca oleracea*^	<1	0.2	BN207
Ptilotus aervoides	<1	0.05	AP36.05
Ptilotus carinatus^	1	0.2	BN111
Ptilotus exaltatus^	<1	0.3	
Ptilotus gomphrenoides var. *gomphrenoides*	<1	0.1	AP36.12
Ptilotus murrayi var. *murrayi*	<1	0.05	AP36.01
Salsola tragus^	<1	0.3	
Sclerolaena costata#	<1	0.1	BN198
Sida aff. *fibulifera* (oblong; MET 15 220)^	<1	0.2	BN149
Sida spinosa^	<1	0.3	BN33
Streptoglossa liatroides#	1	0.05	BN123
Tephrosia clementii	<1	0.1	AP36.07
Xerochloa barbata	10	0.1	AP36.13A
Xerochloa imberbis^	6	0.3	

API Rail Flora Site APQ37

Described by KH Date 23/04/2009 Type Q 10 X 50

MGA Zone 50 441209 mE 7680490 mN

Soil Brown clay

Vegetation Low Open Forest to Low Woodland of *Eucalyptus victrix* and *Corymbia hamersleyana* over a Shrubland of *Acacia tumida* var. *pilbarensis*, *Acacia bivenosa* and *Acacia trachycarpa* X *tumida* var. *pilbarensis* over a Mid Dense Hummock Grassland of *Triodia angusta* in drainage lines.

Veg Condition Good - Degraded

Fire Age

Notes (^denotes species collected in 2008 only, #denotes species collected in 2008 and 2009)

SPECIES LIST

Name	Cover	Height	Specimen
Abutilon amplum#	<1	1.2	AP37.26
*Acacia ancistrocarpa^*	5	1.5	BN238
Acacia bivenosa#	2	3	BN54
Acacia coriacea ssp. *coriacea^*	1	0.8	BN146
*Acacia cowleana^*	10	3	BN187
Acacia pyrifolia var. *pyrifolia^*	0.8	1	AP03
*Acacia trachycarpa^*	5	3	BN222
Acacia trachycarpa X tumida var. *pilbarensis*	2	1.8	AP37.21
Acacia tumida var. *pilbarensis*	8	1.5	AP37.15
Alternanthera nana	<1	0.2	AP37.27
**Cenchrus ciliaris^*	10	0.3	BN21
Corymbia hamersleyana	35	8	AP37.11
Crotalaria medicaginea var. *neglecta*	<1	0.1	AP37.23
Ehretia saligna var. *saligna*	<1	1.5	AP37.16
Eremophila longifolia#	3	1.6	BN184
Eucalyptus victrix#	50	1.5	
Euphorbia sp.	<1	0.1	AP37.18
Gossypium australe (Burrup Peninsula form)^	<1	0.3	BN181
*Hybanthus aurantiacus^*	<1	0.3	BN209
Indigofera colutea	<1	0.3	AP37.06
*Indigofera linifolia^*	<1	0.3	BN07
Indigofera linnaei	<1	0.2	AP37.20
Indigofera monophylla	<1	0.2	AP37.25
Malvastrum americanum#	<1	0.3	
Melhania sp. (CH15-39)	<1	0.3	AP37.28
Phyllanthus maderaspatensis	<1	0.6	AP37.31
Polymeria ambigua	<1	creeper	AP37.05
Pterocaulon sphaeranthoides	<1	0.05	AP37.24
*Santalum lanceolatum^*	10	2.5	AP73
Scaevola spinescens (broad leaf form)	<1	0.6	AP37.13
Senna artemisioides ssp. *oligophylla#*	1	1.6	AP01
*Senna notabilis^*	<1	0.3	BN215
Swainsona canescens	<1	0.1	AP37.22
*Swainsona formosa^*	<1	0.2	
Tephrosia rosea var. clementii	<1	0.2	AP37.30
Themeda triandra	<1	0.4	AP37.08
Trichodesma zeylanicum var. *zeylanicum*	<1	0.1	AP37.07
Triodia aff. *wiseana^*	30	1.3	AP71
Triodia angusta	50	2.2	AP37.01
Triumfetta clementii#	<1	0.4	BN29
Vigna lanceolata var. *lanceolata*	<1	creeper	AP37.02

API Rail Flora Site APQ38

Described by KH Date 23/04/2009 Type Q 50 X 50

MGA Zone 50 436587 mE 7676923 mN

Soil Red rocky

Vegetation Open shrubland to Tall Open Shrubland of *Acacia bivenosa* , *Acacia pyrifolia* var. *pyrifolia* with scattered *Acacia inaequilatera* over a Mid to Dense Hummock Grassland of *Triodia wiseana* (fine form) on rocky hill slopes.

Veg Condition Good - Degraded

Fire Age

Notes(^denotes species collected in 2008 only, #denotes species collected in 2008 and 2009)

SPECIES LIST

Name	Cover	Height	Specimen
Acacia bivenosa#	2	2.2	AP38.15
Acacia cowleana^	<1	1.5	BN187
Acacia elachantha (golden hairy variant)	<1	1.2	AP38.12
Acacia inaequilatera	0.2	3	AP38.10
Acacia maitlandii	<1	0.8	AP38.17
Acacia pyrifolia var. *pyrifolia*#	1.5	3	BN56
Acacia tenuissima^	<1	0.3	AP74
Aristida contorta^	<1	0.2	BN03
Bonamia media var. *villosa*	<1	0.05	AP38.18
Bonamia rosea	<1	0.05	AP38.23
Corchorus laniflorus	<1	0.2	AP38.05
Eriachne pulchella ssp. *dominii*	<1	0.1	AP38.06
Euphorbia australis	<1	0.05	AP38.24
Gomphrena cunninghamii	<1	0.05	AP38.09
Hibiscus sturtii var. *campylochlamys*	<1	0.2	AP38.03
Indigofera monophylla	<1	0.2	AP38.16
Indigofera monophylla (Cape Preston form)^	<1	0.2	BN180
Leptopus decaisnei var. *orbicularis*^	<1	0.2	AP4
Polycarpaea holtzei#	<1	0.05	AP38.08
Polygala aff. *isingii*	<1	0.02	AP38.25
Ptilotus carinatus^	10	0.02	BN111
Ptilotus clementii^	<1	0.2	BN42
Ptilotus exaltatus var. *exaltatus*#	1	0.2	AP38.20
Senna glutinosa ssp. *luerssenii*	<1	0.6	AP38.21
Senna glutinosa ssp. *pruinosa*	<1	1.2	AP38.11
Senna notabilis	<1	0.1	AP38.22
Senna sp. *Karijini* (M.E. Trudgen 10392)^	1	1.5	BN49
Sida clementii^	<1	0.9	BN208
Solanum horridum	<1	0.2	AP38.07
Streptoglossa bubakii^	<1	0.1	BN95
Trachymene oleracea ssp. *oleracea*	<1	0.2	AP38.14
Triodia wiseana (fine form)#	60	0.7	BN12
Triumfetta clementii	<1	0.1	AP38.19

API Rail Flora Site APQ39

Described by KH Date 23/04/2009 Type Q 50 X 50

MGA Zone 50 434817 mE 7674709 mN

Soil Rocky red

Vegetation Low Open Woodland of *Corymbia hamersleyana* over a Tall Open Scrub of *Acacia bivenosa* over a Low Open Shrubland of *Acacia pyrifolia* var. *pyrifolia* over a Closed Hummock Grassland of *Triodia wiseana* (fine form) in creeklines on rocky hillslopes.

Veg Condition Very Good

Fire Age

Notes (^denotes species collected in 2008 only, #denotes species collected in 2008 and 2009)

SPECIES LIST

Name	Cover	Height	Specimen
Acacia bivenosa#	60	3	BN54
Acacia pyrifolia var. *pyrifolia*#	6	0.9	BN56
Corymbia hamersleyana#	10	3	AP38
Ehretia saligna var. *saligna*#	1	0.8	AP76
Enneapogon caerulescens var. *caerulescens*^	1	0.2	BN04
Grevillea pyramidalis ssp. *leucadendron*#	<1	1.2	AP24
Hybanthus aurantiacus	<1	0.1	AP39.12
Indigofera monophylla	<1	0.3	AP39.16
Indigofera monophylla (Cape Preston form)^	<1	0.3	BN180
Paraneurachne muelleri	<1	0.3	AP39.08
Petalostylis labicheoides	<1	0.8	AP39.14
Ptilotus carinatus^	<1	0.05	BN111
Ptilotus exaltatus^	<1	0.3	
Rhynchosia minima	<1	creeper	AP39.02
Scaevola spinescens (broad leaf form)#	1	0.6	AP39.06
Senna artemisioides ssp. *oligophylla*#	1	0.9	AP01
Senna glutinosa ssp. *x luerssenii*^	<1	0.8	AP08
Sida spinosa^	<1	0.6	BN33
Trichodesma zeylanicum var. *zeylanicum*^	<1	0.6	BN59
Triodia wiseana (fine form)#	76	0.9	AP39.01
Triumfetta clementii	<1	0.2	AP39.03

API Rail Flora Site APQ40

Described by KH Date 23/04/2009 Type Q 50 X 50

MGA Zone 50 433113 mE 7670885 mN

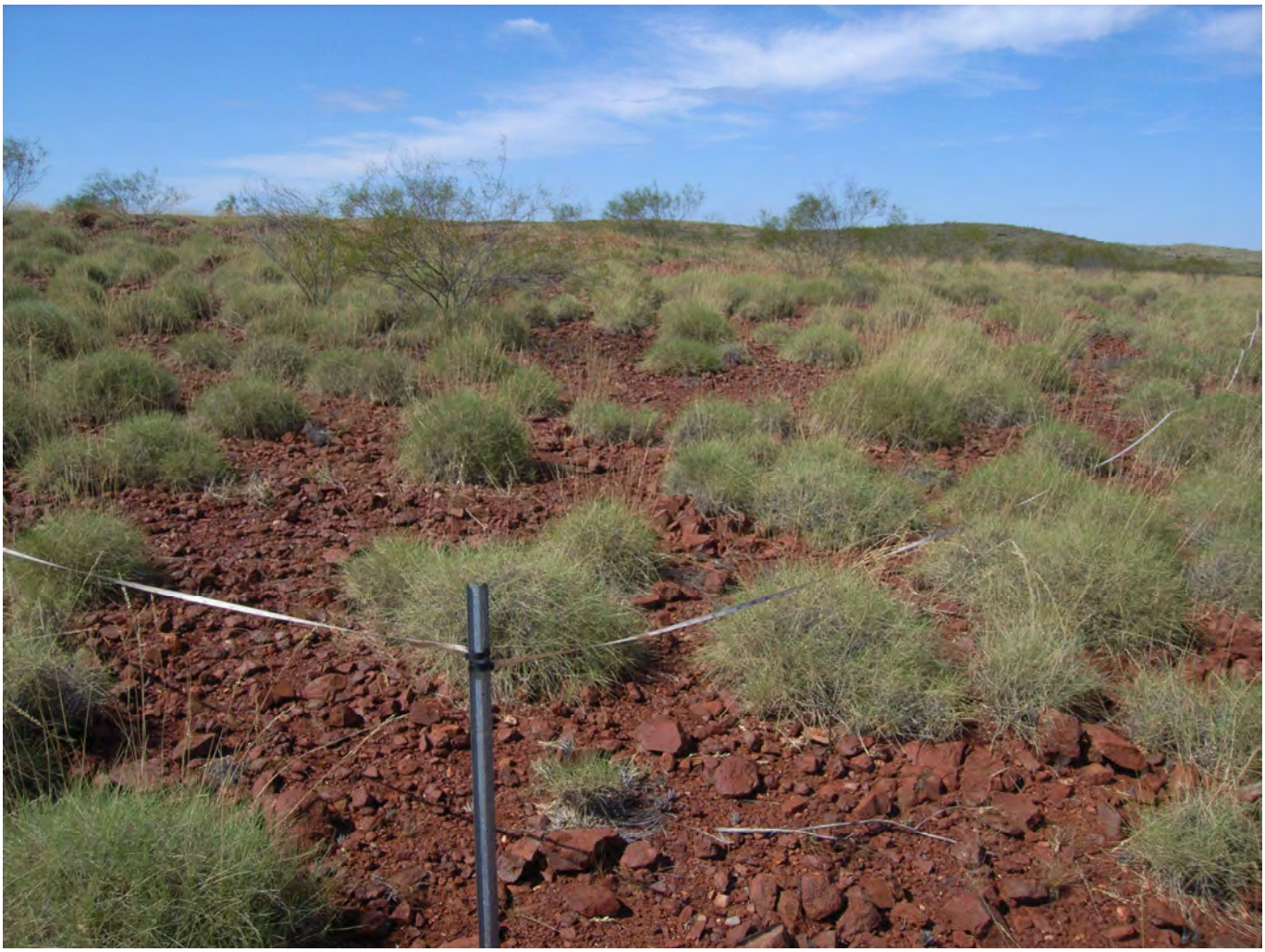
Soil Rocky red

Vegetation Shrubland of *Acacia ancistrocarpa* over a Mid to Dense Hummock Grassland of *Triodia wiseana* (fine form) on rocky hillslopes.

Veg Condition Very Good

Fire Age

Notes (^denotes species collected in 2008 only, #denotes species collected in 2008 and 2009)



SPECIES LIST

Name	Cover	Height	Specimen
Abutilon aff. *lepidum* (4)	<1	0.3	AP40.14
Acacia ancistrocarpa#	15	2.5	BN238
*Aristida contorta^*	<1	0.2	BN03
Bonamia media var. *villosa#*	<1	0.05	BN27
*Corchorus tectus^*	<1	0.3	AP41
Eriachne pulchella ssp. *dominii*	<1	0.05	AP40.03
Eriachne pulchella ssp. *pulchella^*	<1	0.1	AP09
Euphorbia australis#	<1	0.05	BN234
Evolvulus alsinoides var. *villosicalyx*	<1	0.1	AP40.05
Fimbristylis aff. *dichotoma* (M75-4)	<1	0.1	AP40.02
Gomphrena affinis ssp. *pilbarensis^*	<1	0.3	BN09
Hibiscus aff. *platychlamys* (MET 15,067)	<1	0.1	AP40.10
*Indigofera linifolia^*	<1	0.2	BN07
Indigofera monophylla (Cape Preston form)#	<1	0.3	BN180
*Polycarpaea longiflora^*	1	0.3	BN179
Polycarpaea longiflora (white form)	1	0.2	AP40.13
Polygala aff. *isingii*	<1	0.05	AP40.08
*Ptilotus carinatus^*	<1	0.02	BN111
*Ptilotus exaltatus^*	<1	0.3	
Senna glutinosa ssp. *glutinosa x luerssenii*	<1	0.8	AP40.06
Senna glutinosa ssp. *x luerssenii^*	<1	0.5	AP08
*Sesbania cannabina^*	0.3	BN164	
Sida sp. *spiciform panicles* (E. Leyland s.n. 14/8/1990)	<1	0.1	AP40.09
*Sida spinosa^*	<1	0.3	BN33
*Solanum lasiophyllum^*	<1	0.2	
*Streptoglossa bubakii^*	<1	0.3	BN95
Trachymene oleracea ssp. *oleracea^*	<1	0.4	BN39
Trichodesma zeylanicum var. *zeylanicum^*	<1	0.6	BN59
Triodia wiseana (fine form)#	50	0.6	BN12
Triumfetta clementii#	<1	0.2	BN29

API Rail Flora Site APQ41

Described by LC Date 5/09/2008 Type Vegetation description

MGA Zone 50 475175 mE 7693877mN

Soil Red clay loam

Vegetation Tall Shrubland of *Acacia inaequilatera* over a Grassland dominated by *Triodia wiseana*, *Eriachne* aff. *mucronata* and *Chrysopogon fallax* in drainage lines.

Veg Condition Good

Fire Age

Notes DESCRIPTION ONLY, NOT RELOCATED IN 2009

SPECIES LIST

Name	Cover	Height	Specimen
Acacia inaequilatera	20	4	
Chrysopogon fallax	30	0.6	BN79
Eriachne aff. *mucronata*	30	0.6	AP44
Eriachne benthamii	10	0.6	BN01
Hakea lorea ssp. *lorea*	2	2	AP22
Triodia wiseana	5	0.6	

API Rail Flora Site APQ42.1

Described by Date 1/09/2008 Type Opportunistic observation

MGA Zone 50 423649 mE 7664410mN

Vegetation Tall Open Shrubland of *Acacia inaequilatera* with scattered *Acacia bivenosa* over a Mid Dense Hummock Grassland of *Triodia wiseana* on orange rocky sand.

Veg Condition Very Good

Fire Age

Notes DESCRIPTION ONLY NOT RELOCATED IN 2009

SPECIES LIST

Name	Cover	Height
Acacia bivenosa	1	1.1
Acacia inaequilatera	5	2.1
Citrullus colocynthis	<1	
Corchorus sp.	<1	
Evolvulus alsinoides var. *villosicalyx*	<1	
Gomphrena canescensssp. canescens	<1	
Goodenia lamprosperma	<1	
Indigofera monophylla	<1	
Iseilema dolichotrichum	<1	
Ptilotus helipteroides	<1	
Rhynchosia minima	<1	
Senna artemisioides ssp. *oligophylla*	<1	
Senna glutinosassp. x luerssenii	<1	
Sida echinocarpa	<1	
Solanum diversiflorum	<1	
Solanum lasiophyllum	<1	
Stemodia kingii	<1	
Trachymene oleraceassp. oleracea	<1	
Trichodesma zeylanicum	<1	
Triodia wiseana	70	0.8
Triumfetta clementii	<1	

API Rail Flora Site APQ43

Described by KG Date 13/05/2009 Type Q 50 x 50

MGA Zone 50 423460 mE 7664235 mN

Soil Red rocky loam

Vegetation Scattered *Acacia syncronicia*, *Acacia bivenosa* and *Acacia inaquilatera* over a Mid to Dense Hummock Grassland of *Triodia wiseana* (fine form) on red rocky loam occuring at the base of hills.

Veg Condition Very Good

Fire Age

Notes

SPECIES LIST

Name	Cover	Height	Specimen
Acacia bivenosa	<1	2	BP31.17
Acacia inaequilatera	<1	2.2	BP31.04
Acacia synchronicia	1	1.8	BP31.18
Aristida contorta	<1	0.1	BP31.15
Cucumis maderaspatanus	<1	creeper	BP31.03
Eriachne pulchella ssp. *pulchella*	<1	0.05	BP31.16
Euphorbia australis	<1	0.1	BP31.02
Euphorbia boophthona	<1	0.1	BP31.19
Fimbristylis aff. *dichotoma* (M75-4)	<1	0.2	BP31.11
Indigofera monophylla (Cape Preston form)	<1	0.1	BP31.01
Iseilema dolichotrichum	<1	0.1	BP31.06
Polygala aff. *isingii*	<1	0.1	BP31.07
Sarcostemma viminale ssp. *australe*	<1	0.3	BP31.08
Senna glutinosa ssp. *luerssenii*	1	0.6	BP31.09
Sida aff. echinocarpa (MET 15,350)	<1	0.3	BP31.05
Sporobolus australasicus	<1	0.2	BP31.14
Triodia wiseana (fine form)	45	0.8	BP31.13
Triumfetta clementii	<1	0.3	BP31.10

API Rail Flora Site APQ44

Described by KG Date 13/05/2009 Type Q 50 x 50

MGA Zone 50 428253 mE 7666344 mN

Soil Red rocky sand

Vegetation Tall Open Shrubland of *Acacia inaequilatera* and *Acacia bivenosa* over very Open Tussock Grassland of *Eriachne pulchella* ssp. *pulchella* over a Mid to Dense Hummock Grassland of *Triodia wiseana* (fine form) on red rocky sand lower slopes.

Veg Condition Very Good - Good

Fire Age

Notes

SPECIES LIST

Name	Cover	Height	Specimen
Acacia ancistrocarpa	<1	2.5	BP30.1.08
Acacia bivenosa	3	2.8	BP30.1.10
Acacia inaequilatera	5	2.5	BP30.1.14
Acacia synchronicia	<1	2.2	BP30.1.02
Cassytha capillaris	<1	creeper	BP30.1.07
Corchorus laniflorus	<1	0.5	BP30.1.03
Cucumis maderaspatanus	<1	creeper	BP30.1.20
Enneapogon caerulescens var. *caerulescens*	<1	0.1	BP30.1.18
Eremophila forrestii ssp. *forrestii*	<1	0.6	BP30.1.21
Eriachne pulchella ssp. *pulchella*	5	0.1	BP30.1.12
Euphorbia sp. (BPBS10-50)	<1	0.05	BP30.1.24
Hakea lorea ssp. *lorea*	<1	2.6	BP30.1.26
Hybanthus aurantiacus	<1	0.2	BP30.1.05
Pterocaulon sphacelatum	<1	0.3	BP30.1.16
Ptilotus clementii	<1	0.2	BP30.1.04
Ptilotus exaltatus var. *exaltatus*	<1	0.4	BP30.1.17
Ptilotus helipteroides var. *helipteroides*	<1	0.2	BP30.1.15
Rhynchosia minima	<1	creeper	BP30.1.11
Scaevola spinescens (broad leaf form)	<1	0.6	BP30.1.25
Senna glutinosa ssp. *luerssenii*	1	0.6	BP30.1.09
Senna glutinosa ssp. *pruinosa*	<1	2.2	BP30.1.13
Tephrosia aff. *supina* (HD133-20)	<1	0.1	BP30.1.23
Tephrosia clementii	<1	0.05	BP30.1.19B
Trichodesma zeylanicum var. *zeylanicum*	<1	0.1	BP30.1.22
Triodia wiseana (fine form)	50	0.7	BP30.1.01
Triumfetta clementii	<1	0.2	BP30.1.06

API Rail Flora Site APQ45

Described by KG Date 13/05/2009 Type Q 50 x 50

MGA Zone 50 434063 mE 7671868 mN

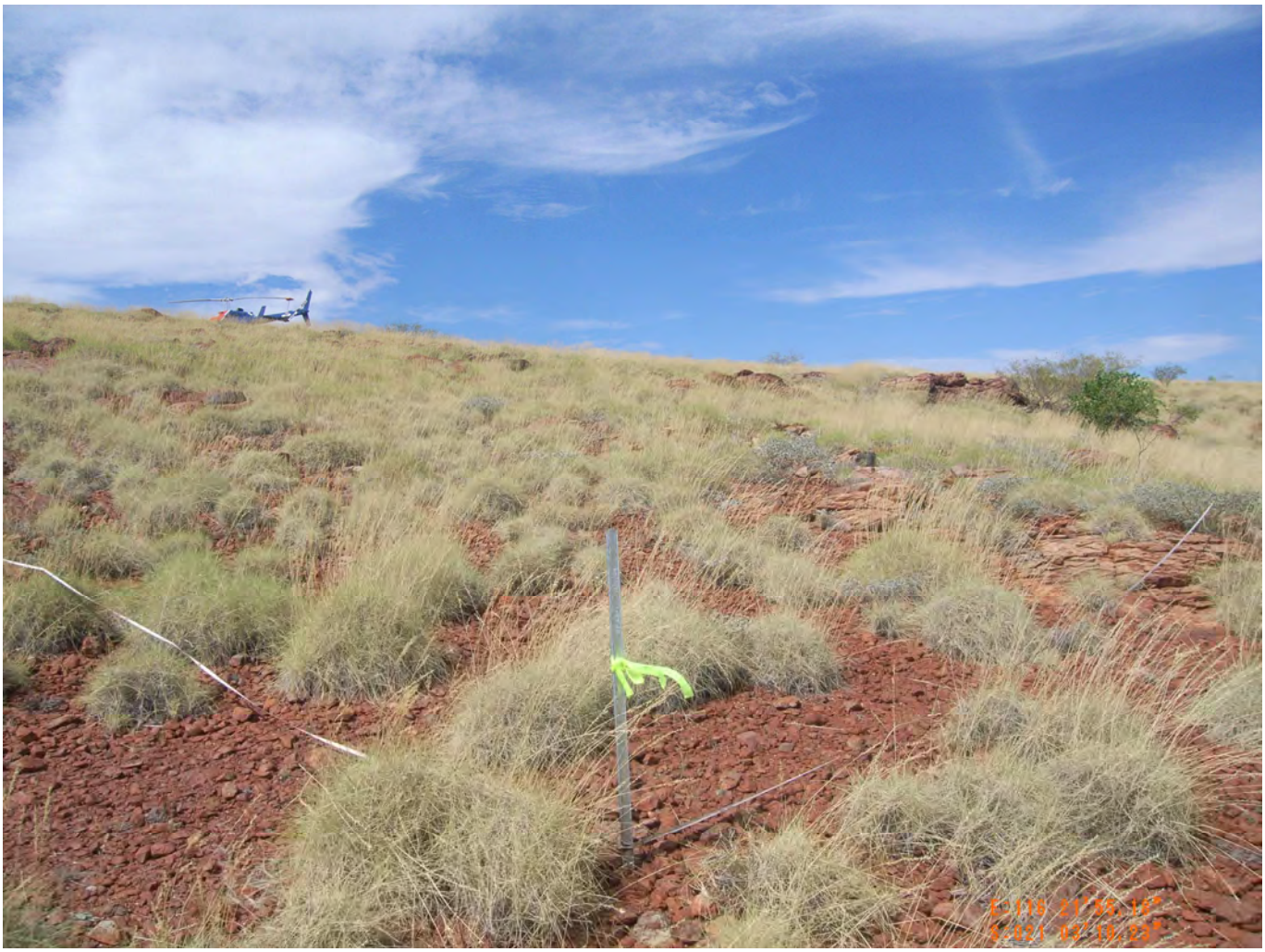
Soil Red rocky loam

Vegetation Scattered *Acacia bivenosa* over a Mid to Dense Hummock Grassland of *Triodia wiseana* (fine form) on red rocky ridgetops.

Veg Condition Very Good

Fire Age

Notes



SPECIES LIST

Name	Cover	Height	Specimen
Abutilon aff. *lepidum* (4)	<1	0.2	BP29.1.02
Acacia adsurgens	<1	2	BP29.1.06
Acacia ancistrocarpa	<1	2	BP29.1.05
Acacia bivenosa	1	2.2	BP29.1.09
Acacia pyrifolia var. *pyrifolia*	<1	1.8	BP29.1.14
Crotalaria novae-hollandiae ssp. *novae-hollandiae*	<1	0.3	BP29.1.13
Cucumis maderaspatanus	<1	creeper	BP29.1.15
Cullen leucanthum	<1	0.4	BP29.1.07
Euphorbia biconvexa	<1	0.05	BP29.1.20
Euphorbia wheeleri	<1	0.05	BP29.1.21
Fimbristylis aff. *dichotoma* (M75-4)	<1	0.2	BP29.1.16
Indigofera monophylla (MJOPP-2)	<1	0.2	BP29.1.03
Ipomoea costata	<1	1.8	BP29.1.17
Pentalepis trichodesmoides	<1	0.6	BP29.1.12
Polycarpaea longiflora (white form)	<1	0.2	BP29.1.18
Senna glutinosa ssp. *glutinosa*	<1	0.7	BP29.1.04
Senna venusta	<1	0.6	BP29.1.11
Tinospora smilacina	<1	creeper	BP29.1.08
Trichodesma zeylanicum var. *zeylanicum*	<1	0.05	BP29.1.23
Triodia wiseana (fine form)	40	0.4	BP29.1.01
Triumfetta appendiculata	<1	0.2	BP29.1.22
Triumfetta clementii	<1	0.2	BP29.1.19

API Rail Flora Site APQ46

Described by KG Date 13/05/2009 Type Q 50 x 50

MGA Zone 50 434963 mE 7674686 mN

Soil Red stony loam with quartz

Vegetation Low Open Woodland of *Corymbia hamersleyana* over a Tall Shrubland of *Acacia bivenosa* and *Acacia inaequilatera* over a Mid to Dense Hummock Grassland of *Triodia wiseana* (fine form) on red stony loam lower slopes with quartz nodules.

Veg Condition Very Good - Good

Fire Age

Notes

SPECIES LIST

Name	Cover	Height	Specimen
Acacia bivenosa	15	2.5	BP26.1.10
Acacia inaequilatera	5	1.8	BP26.1.17
Cassytha capillaris	<1	creeper	BP26.1.12
Corymbia hamersleyana	2	2.8	BP26.1.3
Indigofera monophylla (grey leaflet form)	<1	0.8	BP26.1.9
Jasminum didymum ssp. *lineare*	<1	creeper	BP26.1.15
Paraneurachne muelleri	<1	0.4	BP26.1.14
Petalostylis labicheoides	<1	0.8	BP26.1.5
Ptilotus clementii	<1	0.3	BP26.1.13
Ptilotus exaltatus var. *exaltatus*	<1	0.2	BP26.1.18
Rhynchosia minima	<1	creeper	BP26.1.11
Scaevola spinescens (broad leaf form)	<1	0.9	BP26.1.16
Senna glutinosa ssp. *glutinosa*	<1	1.2	BP26.1.8
Senna glutinosa ssp. *pruinosa*	<1	1.2	BP26.1.7
Solanum horridum	<1	0.05	BP26.1.4
Triodia wiseana (fine form)	60	0.7	BP26.1.2

API Rail Flora Site APQ47

Described by KG Date 13/05/2009 Type Q 50 x 50

MGA Zone 50 436153 mE 7676569 mN

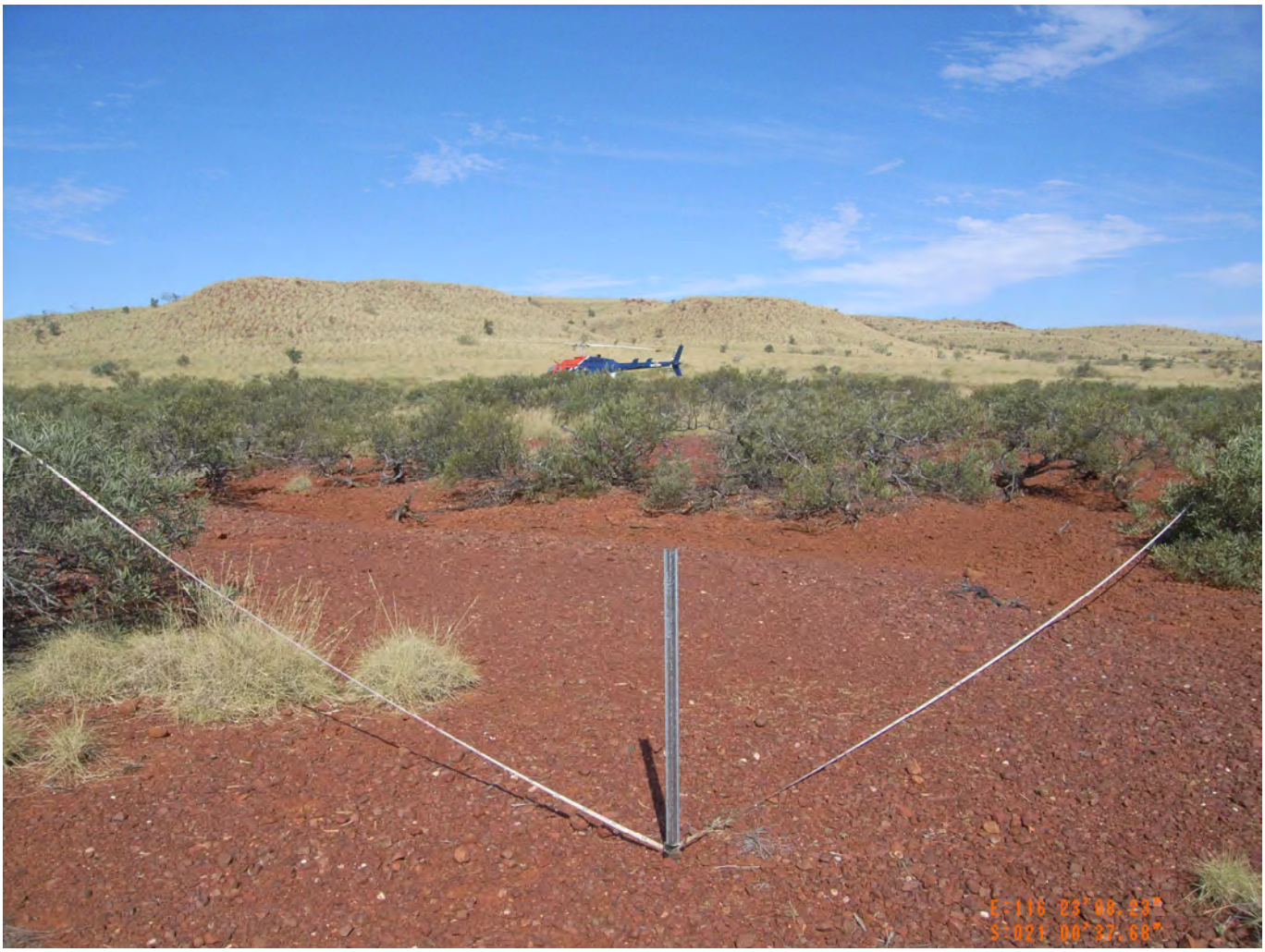
Soil Red brown stony loam

Vegetation Shrubland of *Acacia xiphophylla* over a Mid - Dense Hummock Grassland of *Triodia wiseana* (fine form) on lower brown sandy loam slopes.

Veg Condition Very Good - Good

Fire Age

Notes



SPECIES LIST

Name	Cover	Height	Specimen
Acacia xiphophylla	20	1	BP25.1.3
Brachyachne prostrata	<1	0.02	BP25.1.13
Bulbostylis barbata	<1	0.05	BP25.1.12
Eragrostis xerophila	<1	0.2	BP25.1.5
Eriachne pulchella ssp. *pulchella*	<1	0.1	BP25.1.9
Paspalidium clementii	<1	0.2	BP25.1.7
Ptilotus exaltatus var. *exaltatus*	<1	0.2	BP25.1.2
Ptilotus helipteroides var. *helipteroides*	<1	0.05	BP25.1.8
Rhynchosia minima	<1	creeper	BP25.1.14
Senna artemisioides ssp. *oligophylla x helmsii*	<1	0.5	BP25.1.15
Senna glutinosa ssp. *x luerssenii*	<1	0.5	BP25.1.6
Senna hamersleyensis	<1	0.1	BP25.1.4
Sida aff. *fibulifera* (HD200-6)	<1	0.2	BP25.1.11
Triodia wiseana (fine form)	40	0.5	BP25.1.1

API Rail Flora Site APQ48

Described by KG Date 13/05/2009 Type Q 50 x 50

MGA Zone 50 438187 mE 7677860 mN

Soil Red rocky loam with quartz

Vegetation Shrubland of *Senna glutinosa* ssp. *pruinosa* , *Senna glutinosa* ssp. *glutinosa x luerssenii* and *Acacia bivenosa* over a Mid Dense Hummock Grassland of *Triodia wiseana* (fine form) on red rocky loam with quartz nodules on midslopes.

Veg Condition Very Good

Fire Age

Notes

SPECIES LIST

Name	Cover	Height	Specimen
Acacia bivenosa	1	1.8	24.1.10
Acacia synchronicia	<1	2	24.1.15
Aristida contorta	<1	0.2	24.1.11
Bulbostylis barbata	<1	0.05	24.1.13
Corchorus laniflorus	<1	0.1	24.1.16
Euphorbia australis	<1	0.1	24.1.3
Fimbristylis aff. *dichotoma* (M75-4)	<1	0.15	24.1.14
Indigastrum parviflorum	<1	0.2	24.1.8
Ptilotus exaltatus var. *exaltatus*	<1	0.1	24.1.5
Senna glutinosa ssp. *glutinosa x luerssenii*	3	1.6	24.1.7
Senna glutinosa ssp. *pruinosa*	4	1.5	24.1.4
Sida aff. echinocarpa (MET 15,350)	<1	0.4	24.1.9
Trachymene oleracea ssp. *oleracea*	<1	0.2	24.1.2
Triodia wiseana (fine form)	35	0.7	24.1.1
Triumfetta clementii	<1	0.3	24.1.6
Yakirra australiensis var. *australiensis*	<1	0.1	24.1.12

API Rail Flora Site APQ49

Described by KG Date 13/05/2009 Type Q 50 x 50

MGA Zone 50 443397 mE 7682219 mN

Soil Brown red stony loam

Vegetation Tall Shrubland of *Acacia bivenosa* with scattered *Acacia pyrifolia* var. *pyrifolia* and *Acacia inaequilatera* over a Mid - Dense Hummock Grassland of *Triodia wiseana* (fine form) on brown stony loam midslopes.

Veg Condition Very Good

Fire Age

Notes

SPECIES LIST

Name	Cover	Height	Specimen
Acacia bivenosa	12	2.2	BP21.1.5
Acacia inaequilatera	1	1.8	BP21.1.20
Acacia pyrifolia var. *pyrifolia*	1	1.8	BP21.1.19
Acacia victoriae	<1	1.4	BP21.1.16
Cleome viscosa	<1	0.2	BP21.1.11
Corchorus laniflorus	<1	0.8	BP21.1.8
Corymbia hamersleyana	1	2.8	BP21.1.13
Eremophila longifolia	<1	1.2	BP21.1.9
Euphorbia sp. (BPBS10-50)	<1	0.1	BP21.1.12
Goodenia microptera	<1	0.8	BP21.1.14
Hakea lorea ssp. *lorea*	<1	2.5	BP21.1.2
Jasminum didymum ssp. *lineare*	<1	0.6	BP21.1.17
Leptopus decaisnei var. *orbicularis*	<1	0.2	BP21.1.15
Ptilotus exaltatus var. *exaltatus*	<1	0.2	BP21.1.4
Scaevola spinescens (broad leaf form)	<1	0.6	BP21.1.6
Senna artemisioides ssp. *oligophylla x helmsii*	<1	0.7	BP21.1.3
Sida aff. echinocarpa (MET 15,350)	<1	0.5	BP21.1.18
Triodia wiseana (fine form)	62	0.7	BP21.1.1
Triumfetta clementii	<1	0.4	BP21.1.10

API Rail Flora Site APQ50

Described by KG Date 13/05/2009 Type Q 50 x 50

MGA Zone 50 445119 mE 7683947 mN

Soil Red rocky soil

Vegetation Hummock Grassland of *Triodia wiseana* (fine form) with scattered *Brachychiton acuminatus* on red rocky ridge tops.

Veg Condition Excellent - Very Good

Fire Age

Notes

SPECIES LIST

Name	Cover	Specimen
Acacia acradenia	<1	BP20.1.8
Brachychiton acuminatus	1	BP20.1.15
Corchorus aff. *parviflorus* (JW 11 -11)	<1	BP20.1.9B
Cucumis maderaspatanus	<1	BP20.1.5
Cymbopogon ambiguus	<1	BP20.1.14
Gomphrena cunninghamii	<1	BP20.1.6
Gossypium australe (Whim Creek form)	<1	BP20.1.2
Hakea lorea ssp. *lorea*	<1	BP20.1.17
Indigofera monophylla (Cape Preston form)	<1	BP20.1.12
Ipomoea coptica	<1	BP20.1.18A
Jasminum didymum ssp. *lineare*	<1	BP20.1.4
Paspalidium tabulatum	<1	BP20.1.18B
Polycarpaea longiflora (white form)	<1	BP20.1.13
Portulaca conspicua	<1	BP20.1.9A
Scaevola spinescens (broad leaf form)	<1	BP20.1.10
Senna glutinosa ssp. *glutinosa*	<1	BP20.1.11
Solanum gabrielae	<1	BP20.1.3
Tinospora smilacina	<1	BP20.1.7
Trichosanthes cucumerina	<1	BP20.1.16
Triodia wiseana (fine form)	20	BP20.1.1

API Rail Flora Site APQ51

Described by KG Date 15/05/2009 Type Q 50 X 50

MGA Zone 50 463867 mE 7693320 mN

Soil Red stony loam

Vegetation Low Open Woodland of *Corymbia hammersleyana* over a Shrubland of *Acacia trudgeniana* and *Acacia bivenosa* over a Closed Tussock Grassland of *Triodia wiseana* (fine form) on lower red stony loam slopes.

Veg Condition Very Good

Fire Age

Notes

SPECIES LIST

Name	Cover	Height	Specimen
Acacia bivenosa	8		18.1.2
Acacia trudgeniana	10		18.1.14
Bonamia media var. *villosa*	<1		18.1.11
Cleome viscosa	<1		18.1.15
Corchorus aff. *parviflorus* (JW 11 -11)	<1		18.1.7
Corymbia hamersleyana	6		18.1.21
Eremophila longifolia	<1		18.1.13
Eriachne pulchella ssp. *dominii*	<1		18.1.18
Euphorbia australis	<1		18.1.12
Euphorbia sp.	<1		18.1.25
Goodenia forrestii	<1		18.1.17
Hakea lorea ssp. *lorea*	<1		18.1.19
Hibiscus sturtii var. *platychlamys*	<1	0.2	18.1.27
Hybanthus aurantiacus	<1		18.1.20
Leptopus decaisnei var. *orbicularis*	<1		18.1.22
Phyllanthus maderaspatensis	<1	0.2	18.1.26
Ptilotus exaltatus var. *exaltatus*	<1		18.1.3
Senna notabilis	<1	0.05	18.1.28
Sida pilbarensis (Ferrugineous form)	<1		18.1.16
Tephrosia aff. *clementii* (4) (M35-14)	<1		18.1.24
Tephrosia aff. *supina* (HD88-4)	<1		18.1.23
Triodia wiseana (fine form)	70		18.1.1
Triumfetta clementii	<1		18.1.4

API Rail Flora Site APQ52

Described by KG Date 14/05/2009 Type Q 50 X 50

MGA Zone 50 464631 mE 7693408 mN

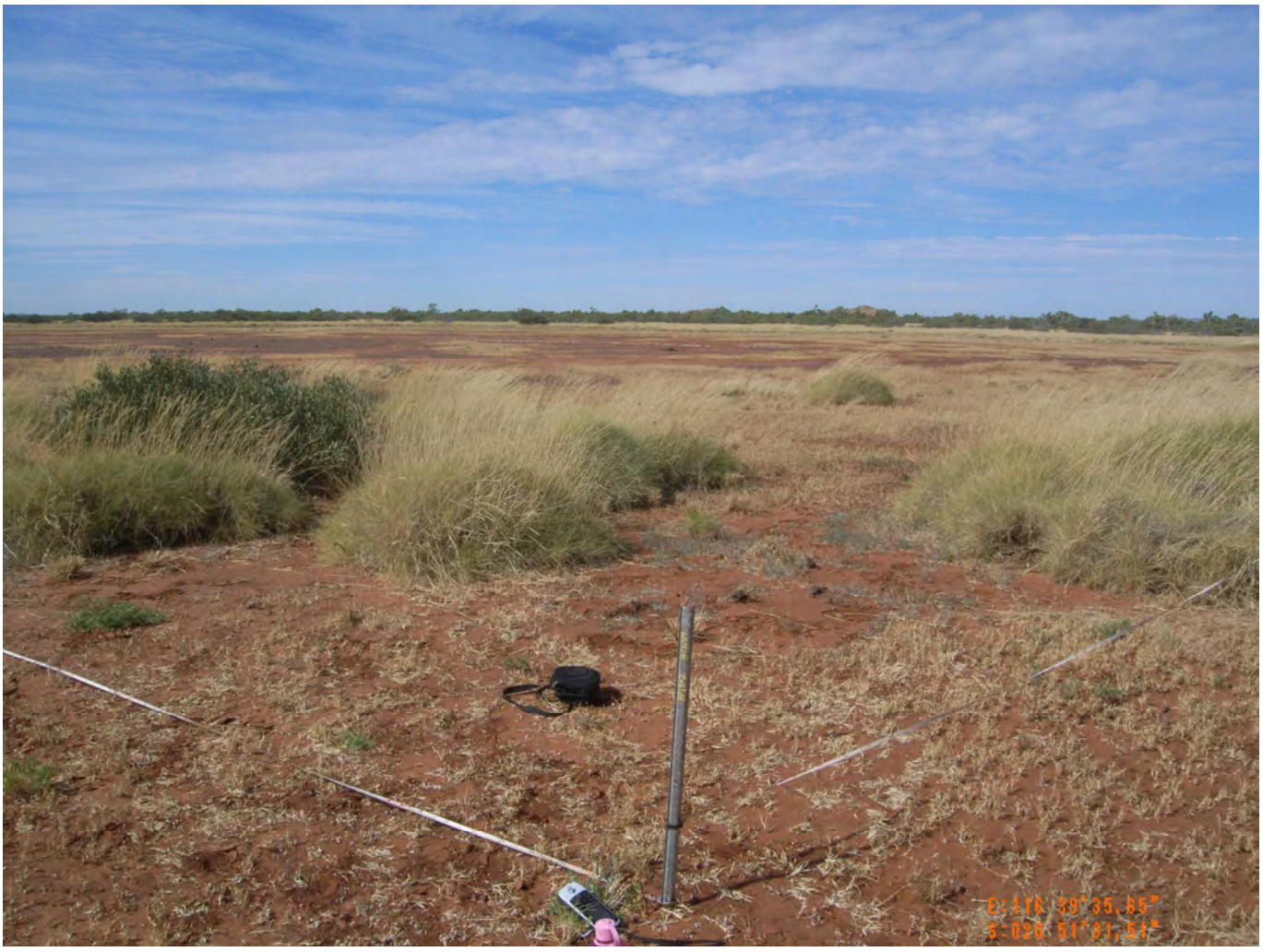
Soil Red sandy clay

Vegetation Open Shrubland of *Acacia xiphophylla* over an Open Hummock Grassland of *Triodia wiseana* (fine form) with scattered *Xerochloa imberbis* on red sandy clay flats.

Veg Condition Good - Degraded

Fire Age

Notes



SPECIES LIST

Name	Cover	Height	Specimen
Acacia xiphophylla	2	1.2	18.2.05
Bulbostylis barbata	<1	0.05	18.2.11
**Cenchrus ciliaris*	<1	0.3	18.2.16
Crotalaria medicaginea var. *neglecta*	<1	0.1	18.2.07
Dactyloctenium radulans	<1	0.05	18.2.02
Eragrostis xerophila	<1	0.15	18.2.14
Gomphrena affinis ssp. *pilbarensis*	<1	0.3	18.2.09
Indigofera colutea	<1	0.1	18.2.15
Indigofera linifolia	<1	0.1	18.2.04
Portulaca conspicua	<1	0.02	18.2.12
Ptilotus murrayi var. *murrayi*	<1	0.05	18.2.13
Rhynchosia minima	<1	creeper	18.2.06
Sclerolaena bicornis	<1	0.15	18.2.10
Sclerolaena glabra	<1	0.1	18.2.18
Sesbania cannabina	<1	0.5	18.2.17
Triodia wiseana (fine form)	5	0.4	18.2.03
Xerochloa barbata	2 (dead)	0.1	18.2.01

API Rail Flora Site APQ53

Described by KG Date 14/05/2009 Type Q 50 X 50

MGA Zone 50 469210 mE 7693830 mN

Soil Orange stony sandy clay

Vegetation Open shrubland of *Acacia xiphophylla* and *Acacia pyrifolia* var. *pyrifolia* over a Low Open Shrubland of *Corchorus* aff. *parviflorus* over a Mid Dense Hummock Grassland of *Triodia wiseana* (fine form) on orange stony and sandy clay midslopes.

Veg Condition Good

Fire Age <1 year

Notes

SPECIES LIST

Name	Cover	Height	Specimen
Acacia bivenosa	<1	1	BP17.1.14
Acacia maitlandii	<1	0.2	BP17.1.28
Acacia pyrifolia var. *pyrifolia*	1	1.5	BP17.1.09
Acacia xiphophylla	3	1.5	BP17.1.19
Aristida contorta	<1	0.15	BP17.1.25
Bonamia media var. *villosa*	<1	0.05	BP17.1.29
Corchorus aff. *parviflorus*	10	0.4	BP17.1.06
Evolvulus alsinoides var. *villosicalyx*	<1	0.1	BP17.1.18
Goodenia microptera	<1	0.5	BP17.1.15
Gossypium australe (Whim Creek form)	<1	0.8	BP17.1.20
Hibiscus aff. *platychlamys* (MET 15,067)	<1	0.1	BP17.1.23B
Indigofera monophylla (Cape Preston form)	<1	0.4	BP17.1.07
Paraneurachne muelleri	<1	0.4	BP17.1.26
Ptilotus astrolasius var. astrolasius	<1	0.2	BP17.1.12
Ptilotus auriculifolius	<1	0.2	BP17.1.04
Ptilotus calostachyus var. *calostachyus*	<1	0.3	BP17.1.22
Ptilotus exaltatus var. *exaltatus*	<1	0.3	BP17.1.08
Scaevola spinescens (broad leaf form)	<1	0.4	BP17.1.21
Senna notabilis	<1	0.2	BP17.1.05
Sida aff. *echinocarpa* (MET 15,350)	<1	0.3	BP17.1.10
Sida arsiniata	<1	0.2	BP17.1.23A
Solanum diversiflorum	<1	0.3	BP17.1.11
Solanum horridum	<1	0.3	BP17.1.02
Tephrosia aff. *supina* (HD205-10)	<1	0.05	BP17.1.24
Trachymene oleracea ssp. *oleracea*	<1	0.2	BP17.1.16
Trianthema sp. *Python Pool*	<1	0.05	BP17.1.17
Trichodesma zeylanicum var. *zeylanicum*	<1	0.3	BP17.1.27
Triodia wiseana (fine form)	40	0.5	BP17.1.01
Triumfetta clementii	<1	0.2	BP17.1.03

API Rail Flora Site APQ54

Described by KG Date 14/05/2009 Type Q 50 x 50

MGA Zone 50 470829 mE 7693721 mN

Soil Orange clay with stones

Vegetation Low Open Shrubland of *Acacia xiphophylla* over a Very Open Tussock Grassland of *Eragrostis xerophila*, *Xerochloa imberbis* with scattered *Dactyloctenum radulans* on orange stony clay flats.

Veg Condition Good

Fire Age

Notes

SPECIES LIST:

Name	Cover	Height	Specimen
Acacia xiphophylla	9	1	AQ1.3
Dactyloctenium radulans	1	0.8	AQ1.5
Enchylaena tomentosa	<1	0.2	AQ1.15
Eragrostis xerophila	3	0.2	AQ1.13
Heliotropium inexplicitum	<1	0.15	AQ1.11
Ptilotus astrolasius var. *astrolasius*	<1	0.2	AQ1.12
Ptilotus exaltatus var. *exaltatus*	<1	0.1	AQ1.6
Senna hamersleyensis	<1	0.5	AQ1.14
Sida aff. *fibulifera* (HD200-6)	<1	0.2	AQ1.7
Sporobolus australasicus	<1	0.1	AQ1.2
Trianthema aff. *triquetra* (M3.35)	<1	0.05	AQ1.1
Xerochloa barbata	3	0.1	AQ1.4

API Rail Flora Site APQ55

Described by KG Date 14/05/2009 Type Q 50 x 50

MGA Zone 50 479785 mE 7695836 mN

Soil Orange sand

Vegetation Tall Shrubland of *Acacia inaequilatera* over a Closed Hummock Grassland of *Triodia epactia* on orange sand midslopes.

Veg Condition Excellent - Very Good

Fire Age

Notes

SPECIES LIST

Name	Cover	Height	Specimen
Acacia inaequilatera	15	2.5	BP12.1.6
Aristida contorta	<1	0.1	BP12.1.15
Boerhavia coccinea	<1	0.1	BP12.1.7
Bulbostylis barbata	<1	0.05	BP12.1.12
Cleome viscosa	<1	0.3	BP12.1.16
Eriachne pulchella ssp. *pulchella*	<1	0.1	BP12.1.11
Euphorbia australis	<1	0.05	BP12.1.10
Evolvulus alsinoides var. *villosicalyx*	<1	0.15	BP12.1.9
Fimbristylis aff. *dichotoma* (M75-4)	<1	0.2	BP12.1.3
Heliotropium cunninghamii	<1	0.1	BP12.1.13
Heliotropium inexplicitum	<1	0.15	BP12.1.14
Hibiscus sturtii var. *platychlamys*	<1	0.2	BP12.1.17A
Indigofera monophylla (grey/green leaflet form)	<1	0.3	BP12.1.18
Mollugo molluginea	<1	0.15	BP12.1.5
Polycarpaea corymbosa var. corymbosa	<1	0.1	BP12.1.4
Sida aff. *echinocarpa* (MET 15,350)	<1	0.3	BP12.1.8
Streptoglossa decurrens	<1	0.15	BP12.1.21
Tephrosia supina	<1	0.1	BP12.1.17B
Tribulus suberosus	<1	0.4	BP12.1.19
Triodia epactia	70	0.6	BP12.1.1

API Rail Flora Site APQ56

Described by KG Date 14/05/2009 Type Q 50 x 50

MGA Zone 50 493252 mE 7698468 mN
Soil Pale orange clay
Vegetation Closed Hummock Grassland of *Triodia wiseana* (fine form) on pale orange clay midslopes.
Veg Condition Good
Fire Age
Notes

SPECIES LIST

Name	Cover	Height	Specimen
Abutilon aff. *lepidum* (4)	<1	0.1	7.1.20
Acacia bivenosa	<1	1.5	7.1.09
Bonamia media var. *villosa*	<1	0.05	7.1.06
**Cenchrus ciliaris*	<1	0.2	7.1.11
Corchorus aff. *parviflorus*	<1	0.4	7.1.08
Dichanthium sericeum ssp. *humilius*	<1	0.1	7.1.12
Enneapogon caerulescens var. *caerulescens*	<1	0.05	7.1.03
Euphorbia biconvexa	<1	0.05	7.1.15
Euphorbia sp. (BPBS10-50)	<1	0.05	7.1.16
Evolvulus alsinoides var. *villosicalyx*	<1	0.1	7.1.14
Indigofera colutea	<1	0.05	7.1.17
Indigofera linifolia	<1	0.05	7.1.19
Iseilema dolichotrichum	<1	0.05	7.1.04
Polygala aff. *isingii*	<1	0.05	7.1.21A
Ptilotus auriculifolius	<1	0.25	7.1.07
Ptilotus helipteroides var. *helipteroides*	<1	0.2	7.1.13
Rhynchosia minima	<1	creeper	7.1.18
Senna notabilis	<1	0.1	7.1.10
Swainsona canescens	<1	0.1	7.1.21B
Triodia wiseana (fine form)	100	0.7	7.1.01

API Rail Flora Site APQ57

Described by KG Date 14/05/2009 Type Q 50 x 50

MGA Zone 50 495064 mE 7699216 mN

Habitat

Soil Red stony clay

Vegetation Tall Open Shrubland of *Acacia ancistrocarpa* with scattered *Acacia inaequilatera* over a Closed Hummock Grassland of *Triodia wiseana* (fine form) and *Triodia* aff. *epactia* on red stony clay.

Veg Condition Very Good

Fire Age

Notes

SPECIES LIST

Name	Cover	Height	Specimen
Abutilon aff. *lepidum* (4)	<1	0.3	6.1.34
Acacia ancistrocarpa	8	2.2	6.1.06
Acacia bivenosa	<1	1.8	6.1.19
Acacia inaequilatera	1	1.8	6.1.10
Acacia pyrifolia var. *pyrifolia*	<1	2	6.1.20
Acacia synchronicia	<1	2	6.1.21
Alysicarpus muelleri	<1	0.1	6.1.22
Aristida contorta	<1	0.1	6.1.07
Bonamia media var. *villosa*	<1	0.1	6.1.14
**Cenchrus ciliaris*	<1	0.3	6.1.27
Corchorus aff. *walcotti* (K.J. Atkins 570)	<1	0.2	6.1.12
Eriachne pulchella ssp. *dominii*	<1	0.1	6.1.08
Euphorbia australis	<1	0.05	6.1.26
Evolvulus alsinoides var. *villosicalyx*	<1	0.15	6.1.35
Fimbristylis aff. *dichotoma* (M75-4)	<1	0.15	6.1.18
Indigofera colutea	<1	0.1	6.1.24
Indigofera trita	<1	0.3	6.1.23
Iseilema dolichotrichum	<1	0.1	6.1.04
Polymeria sp. (site 1365)	<1	0.05	6.1.33
Portulaca oleracea	<1	0.02	6.1.31
Ptilotus aervoides	<1	0.2	6.1.11
Ptilotus astrolasius var. *astrolasius*	<1	0.2	6.1.09
Ptilotus calostachyus var. *calostachyus*	<1	0.3	6.1.05
Ptilotus helipteroides var. *helipteroides*	<1	0.05	6.1.17
Rhynchosia minima	<1	creeper	6.1.29
Senna artemisioides ssp. *oligophylla*	<1	0.1	6.1.13
Senna glutinosa ssp. *x luerssenii*	<1	1	6.1.28
Senna notabilis	<1	0.2	6.1.30
Tephrosia aff. *supina* (HD88-4)	<1	0.05	6.1.32
Trichodesma zeylanicum var. *zeylanicum*	<1	0.1	6.1.16
Triodia aff. *epactia*	35	0.7	6.1.01
Triodia wiseana (fine form)	35	0.6	6.1.02

API Rail Flora Site APQ58

Described by KG Date 15/05/2009 Type Q 50 x 50

MGA Zone 50 503122 mE 7703760 mN

Soil Orange stony clay

Rock Type

Vegetation Horseflats of *Eragrostis xerophila* over an Open Hummock Grassland of *Triodia epactia* & *Triodia wiseana* (fine form) on red stony cracking clay

Veg Condition Good - Degraded

Fire Age

Notes

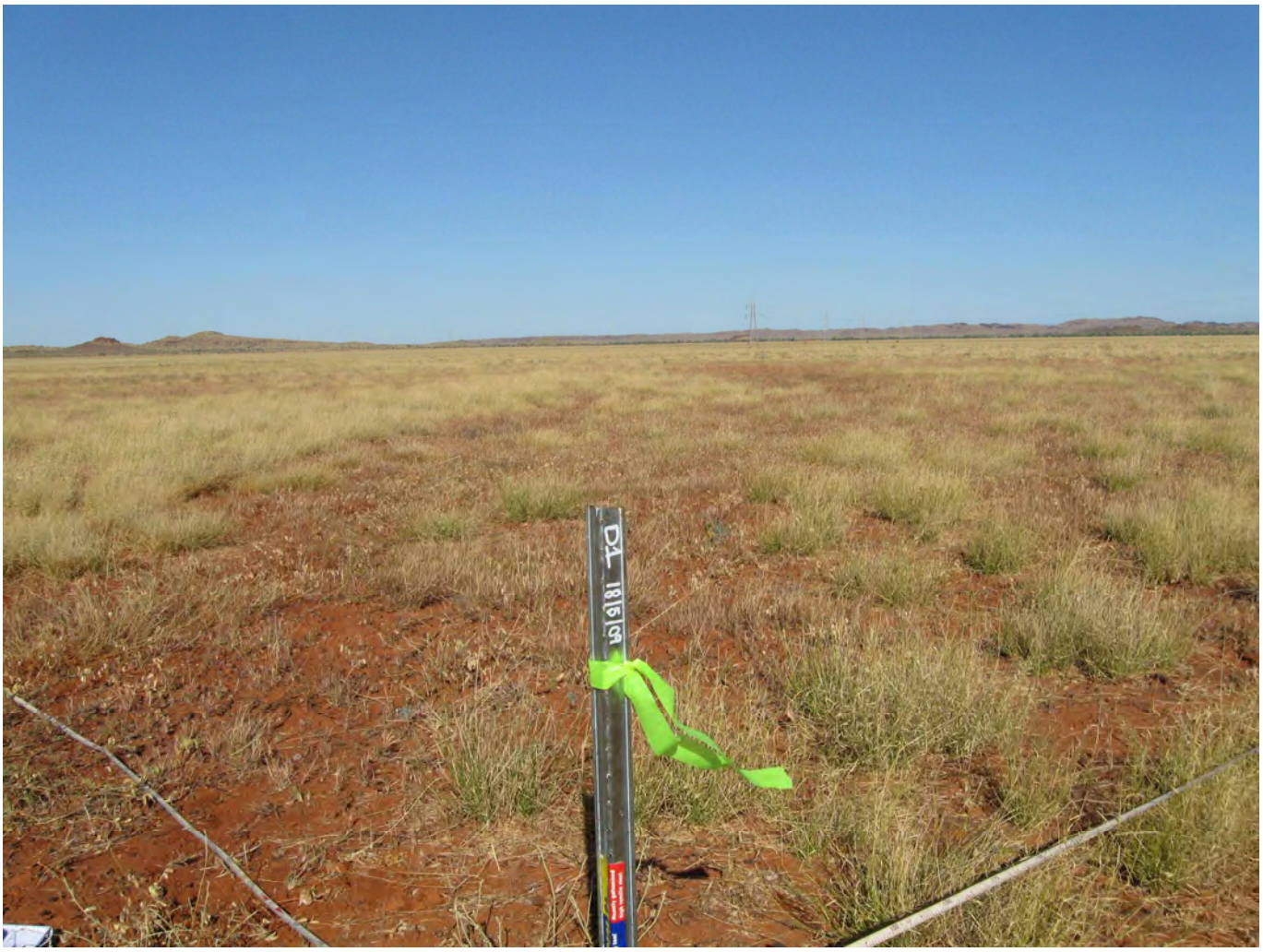
SPECIES LIST

Name	Cover	Height	Specimen
Alysicarpus muelleri	<1	0.2	1.1.21
Bulbostylis barbata	<1	0.1	1.1.31
Cleome viscosa	<1	0.2	1.1.8
Corchorus aff. *walcotti* (K.J. Atkins 570)	<1	0.1	1.1.29
Corchorus tridens	<1	0.05	1.1.26
**Cucumis melo* ssp. *agrestis*	<1	creeper	1.1.12
Desmodium campylocaulon	<1	creeper	1.1.25
Dichanthium sericeum ssp. *humilius*	<1	0.15	1.1.35
Eragrostis tenellula	<1	0.1	1.1.18
Eragrostis xerophila	40	0.2	1.1.15
Eriachne benthamii	<1	0.2	1.1.32
Eriachne pulchella ssp. *dominii*	<1	0.1	1.1.17
Evolvulus alsinoides var. *villosicalyx*	<1	0.1	1.1.4
Indigofera linifolia	<1	0.1	1.1.11
Indigofera trita	<1	0.1	1.1.34
Ipomoea coptica	<1	0.1	1.1.10
Iseilema macratherum	1	0.1	1.1.5
**Malvastrum americanum*	<1	0.05	1.1.33
Panicum decompositum	<1	0.3	1.1.9
Phyllanthus maderaspatensis	<1	0.2	1.1.20
Pluchea sp.	<1	0.05	1.1.28
**Portulaca oleracea*	<1	0.05	1.1.6
Ptilotus aervoides	<1	0.05	1.1.3
Ptilotus exaltatus var. *exaltatus*	<1	0.1	1.1.2
Ptilotus gomphrenoides var. *gomphrenoides*	1	0.25	1.1.30
Rhynchosia minima	<1	creeper	1.1.13
Salsola tragus ssp. *tragus*	<1	0.2	1.1.23
Senna artemisioides ssp. *oligophylla*	<1	0.1	1.1.24
Senna notabilis	<1	0.05	1.1.22
Sida aff. *fibulifera* (HD200-6)	<1	0.2	1.1.19
Streptoglossa bubakii	<1	0.15	1.1.7
Tephrosia clementii	<1	0.1	1.1.14
Triodia epactia (Form A)	7	0.3	1.1.16
Triodia wiseana (fine form)	5	0.3	1.1.1

API Rail Flora Site APQ59

Described by KG Date 18/05/2009 Type Q 50 x 50

MGA Zone 50 507987 mE 7703471 mN
Soil Orange cracking clay
Vegetation Horseflats of *Eragrostis xerophila* and *Dichanthium sericeum* ssp. *humilis* on orange clay flats.
Veg Condition Good
Fire Age
Notes



SPECIES LIST

Name	Cover	Height	Specimen
Aristida latifolia	<1	0.7	D1.10
Dactyloctenium radulans	<1	0.1	D1.15
Dichanthium sericeum ssp. *humilius*	15	0.1	D1.01
Eragrostis xerophila	45	0.3	D1.11
Heliotropium conocarpum	<1	0.1	D1.02
Indigofera trita	<1	0.3	D1.08
Iseilema macratherum	<1	0.3	D1.12
Neptunia dimorphantha	<1	0.05	D1.07
Operculina aequisepala	<1	0.2	D1.04
Panicum decompositum	<1	0.6	D1.03
Phyllanthus maderaspatensis	<1	0.1	D1.13
Polygala aff. *isingii*	<1	0.1	D1.14
Rhynchosia minima	<1	creeper	D1.05
Salsola tragus ssp. *tragus*	<1	0.2	D1.06
Sida aff. *fibulifera* (HD200-6)	<1	0.4	D1.09

API Rail Flora Site APQ60

Described by KG Date 18/05/2009 Type Q 50 x 50

MGA Zone 50 508736 mE 7704740 mN

Soil Red stony clay over rock

Vegetation Mixed Shrubland of *Acacia* spp. dominated by *Acacia pyrifolia* var. *pyrifolia* over a Hummock Grassland of *Triodia wiseana* (fine form) on red stony clay.

Veg Condition Good

Fire Age <2 years

Notes

SPECIES LIST

Name	Cover	Height	Specimen
Abutilon aff. *lepidum* (4)	<1	0.2	D2.8
Acacia ancistrocarpa x stellaticeps	<1	0.1	D2.19
Acacia bivenosa	<1	0.2	D2.21
Acacia colei var. *colei*	<1	1.2	D2.15
Acacia inaequilatera	2	3	D2.24
Acacia pyrifolia var. *pyrifolia*	30	2	D2.16
Acacia stellaticeps	<1	0.4	D2.18
Bulbostylis barbata	<1	0.05	D2.23
Eriachne pulchella ssp. *dominii*	<1	0.1	D2.11
Euphorbia australis	<1	0.05	D2.2
Euphorbia coghlanii	<1	0.2	D2.22
Gomphrena cunninghamii	<1	0.2	D2.4
Goodenia microptera	<1	0.3	D2.13
Panicum decompositum	<1	0.5	D2.5
Paraneurachne muelleri	<1	0.3	D2.14
Ptilotus exaltatus var. *exaltatus*	<1	0.3	D2.17
Ptilotus helipteroides var. *helipteroides*	<1	0.2	D2.3
Salsola tragus ssp. *tragus*	<1	0.2	D2.9
Senna notabilis	<1	0.2	D2.7
Solanum lasiophyllum	<1	0.3	D2.6
Sporobolus australasicus	<1	0.1	D2.1
Triodia epactia (Form B)	5	0.3	D2.12
Triodia wiseana (fine form)	25	0.3	D2.20
Triumfetta clementii	<1	0.4	D2.10

API Rail Flora Site APQ70

Described by KG Date 21/05/2009 Type Q 50 x 50
Season E

MGA Zone 50 500692 mE 7709480mN
Habitat
Soil Orange stony cracking clay
Rock Type
Vegetation Horseflats domianted by *Eragrostis xerophila* and *Eriachne benthamii* on stony clay flats.
Veg Condition Good
Fire Age
Notes

SPECIES LIST

Name	Cover	Height	Specimen
Aristida contorta	<1	0.15	D12.11
Brachyachne prostrata	<1	0.2	D12.15
Dichanthium sericeum ssp. *humilius*	<1	0.1	D12.6
Eragrostis xerophila	45	0.3	D12.3
Eriachne benthamii	2	0.3	D12.2
Eriachne pulchella ssp. *pulchella*	<1	0.1	D12.13
Fimbristylis aff. *dichotoma* (M75-4)	<1	0.2	D12.14
Heliotropium inexplicitum	<1	0.1	D12.10
Indigofera linifolia	<1	0.2	D12.4
Indigofera trita	<1	0.1	D12.9
Rhynchosia minima	<1	creeper	D12.1
Sida aff. *fibulifera* (HD200-6)	D12.7B		
Stemodia kingii	<1	0.15	D12.12
Streptoglossa liatroides	<1	0.1	D12.8
Trianthema aff. *triquetra* (M3.35)	<1	0.1	D12.5

API Rail Flora Site APQ71

Described by KG Date 21/05/2009 Type Q 50 X 50

Season E

MGA Zone 50 501484 mE 7708267 mN

Habitat

Soil Brown orange clay

Rock Type

Vegetation Woodland of *Eucalyptus victrix* over a Low Open Woodland *of Corymbia hammersleyana* over Tall Open Shrubland to Open Shrubland of *Acacia colei* var. *colei* and *Acacia bivenosa* over a Closed Tussock Grassland of **Cenchrus ciliaris* on brown clay in association with drainage lines.

Veg Condition Degraded

Fire Age

Notes

SPECIES LIST

Name	Cover	Height	Specimen
Acacia bivenosa	2	1.5	D13.03
Acacia colei var. *colei*	3	2.5	D13.16
Acacia coriacea ssp. *coriacea*	<1	1.8	D13.18
Acacia coriacea ssp. *pendens*	<1	2.5	D13.15
**Cenchrus ciliaris*	90	0.4	D13.08
Chrysopogon fallax	<1	0.7	D13.05
Corchorus aff. *parviflorus*	<1	0.2	D13.07
Corymbia hamersleyana	5	3.5	D13.04
Dichrostachys spicata	<1	1	D13.17
Eragrostis tenellula	<1	0.1	D13.26
Eucalyptus victrix	25	16	D13.27
Goodenia forrestii	<1	0.4	D13.24
Indigofera monophylla (Burrup form)	<1	0.2	D13.09
Indigofera trita	<1	0.3	D13.25
Iseilema eremaeum	<1	0.1	D13.28
Jasminum didymum ssp. *lineare*	<1	0.3	D13.21
**Malvastrum americanum*	<1	0.5	D13.23
Panicum decompositum	<1	0.4	D13.01
Pluchea rubelliflora	<1	0.5	D13.19
Pterocaulon sphaeranthoides	<1	0.3	D13.13
Sesbania cannabina	<1	0.5	D13.22
Solanum diversiflorum	<1	0.3	D13.14
Stemodia kingii	<1	0.3	D13.20
Themeda triandra	<1	0.6	D13.12
Triodia angusta	<1	0.5	D13.10
Triumfetta clementii	<1	0.3	D13.06
Vigna lanceolata var. *lanceolata*	<1	creeper	D13.02

API Rail Flora Site APQ72

Described by KG Date 12/05/2009 Type Q 50 X 50
Season E

MGA Zone 50 505262 mE 7703710mN
Habitat
Soil Orange stony clayey loam
Rock Type
Vegetation Open Shrubland of Acacia pyrifolia var. pyrifolia and Acacia synchronicia over a Tall Shrubland of Acacia ancistrocarpa, Acacia inaequilatera and Acacia ancistrocarapa over a Hummock Grassland of Triodia epactia with *Cenchrus ciliaris on orange stony clayey loam midslopes.
Veg Condition Very Good - Good
Fire Age
Notes

SPECIES LIST:

Name	Cover	Height	Specimen
Acacia ancistrocarpa	15	2.5	D14.12
Acacia bivenosa	3	2.5	D14.9
Acacia inaequilatera	3	2.8	D14.8
Acacia pyrifolia var. *pyrifolia*	5	1.5	D14.4
Acacia synchronicia	1	1.5	D14.13
Aristida contorta	<1	0.1	D14.19
Capparis spinosa var. *nummularia*	<1	1	D14.11
**Cenchrus ciliaris*	5	0.4	D14.10
Corchorus aff. *walcotti* (K.J. Atkins 570)	<1	0.3	D14.5
Dichrostachys spicata	<1	1	D14.16
Euphorbia coghlanii	<1	0.2	D14.18
Hybanthus aurantiacus	<1	0.2	D14.7
Iseilema dolichotrichum	<1	0.1	D14.17
Leptopus decaisnei var. *orbicularis*	<1	0.3	D14.1
Ptilotus astrolasius var. *astrolasius*	<1	0.3	D14.15
Sporobolus australasicus	<1	0.1	D14.3
Tephrosia supina	<1	0.1	D14.6
Triodia epactia	30	0.4	D14.2
Triumfetta clementii	<1	0.3	D14.14

API Rail Flora Site APQ73

Described by KG Date 19/05/2009 Type Q 50 X 50

Season E

MGA Zone 50 501201 mE 7703593mN

Habitat

Soil Rocky clay loam

Rock Type

Vegetation Mid to Dense Hummock Grassland of Triodia wiseana (fine form) and Triodia epactia on red rocky ridge.

Veg Condition Very Good - Good

Fire Age

Notes

SPECIES LIST:

Name	Cover	Height	Specimen
Abutilon aff. *lepidum* (4)	<1	0.8	VQ01.09A
Acacia bivenosa	VQ01.09B		
Acacia pyrifolia var. *pyrifolia*	<1	1	VQ01.08
Alysicarpus muelleri	<1	0.2	VQ01.30
Boerhavia coccinea	<1	0.1	VQ01.27
**Cenchrus ciliaris*	<1	0.2	VQ01.05
Crotalaria medicaginea var. *neglecta*	<1	0.15	VQ01.26
Cucumis maderaspatanus	<1	Creeper	VQ01.15
Cymbopogon ambiguus	<1	0.7	VQ01.13
Dicliptera armata	<1	0.2	VQ01.01
Euphorbia australis	<1	0.05	VQ01.28
Euphorbia coghlanii	<1	0.1	VQ01.17
Evolvulus alsinoides var. *villosicalyx*	<1	0.15	VQ01.03
Gomphrena cunninghamii	<1	0.1	VQ01.25
Gossypium australe (Whim Creek form)	<1	0.8	VQ01.21
Grevillea pyramidalis ssp. *leucadendron*	<1	0.9	VQ01.20
Hibiscus aff. *platychlamys* (MET 15,067)	<1	0.5	VQ01.23
Hybanthus aurantiacus	<1	0.4	VQ01.02
Indigofera monophylla (Burrup form)	<1	0.5	VQ01.22
Paspalidium tabulatum (Whim Creek form)	<1	0.1	VQ01.18
Polycarpaea longiflora (white form)	<1	0.15	VQ01.04
Ptilotus auriculifolius	<1	0.1	VQ01.24
Rhynchosia minima	<1	Creeper	VQ01.06
Senna glutinosa ssp. *pruinosa*	<1	1.2	VQ01.16
Senna venusta	<1	0.2	VQ01.12
Solanum diversiflorum	<1	0.3	VQ01.14
Trachymene oleracea ssp. *oleracea*	<1	0.1	VQ01.07
Triodia epactia	20	0.5	VQ01.31
Triodia wiseana (fine form)	60	0.5	VQ01.11
Triumfetta clementii	<1	0.2	VQ01.29

API Rail Flora Site APQ74

Described by KG Date 19/05/2009 Type Q 50 X 20

Season E

MGA Zone 50 502781 mE 7704920mN

Habitat

Soil Clayey loam

Rock Type

Vegetation Low woodland of Eucalyptus victrix and Corymbia hammersleyana over a Tall Open Shrubland of Acacia trachycarpa and Acacia coriaceassp. pendens over a Tussock Grassland of *Cenchrus ciliaris, Themeda triandra and Chrysopogon fallax on brown, clayey loam in association with drainage lines.

Veg Condition Very Good

Fire Age

Notes

SPECIES LIST:

Name	Cover	Heights	Specimen
Acacia coriaceassp. pendens	2	1.5	VQ02.14
Acacia pyrifolia var. pyrifolia	<1	1.5	VQ02.25
Acacia trachycarpa	2	3	VQ02.05
Alysicarpus muelleri	<1	0.4	VQ02.38
Bonamia media var. villosa	<1	Creeper	VQ02.34
**Cenchrus ciliaris*	25	0.5	
Chrysopogon fallax	5	1	VQ02.01
Corchorus aff. parviflorus	<1	0.4	VQ02.22
Corchorus aff. walcotti (K.J. Atkins 570)	<1	0.4	VQ02.36
Corymbia hamersleyana	5	6	VQ02.11
Cucumis maderaspatanus	<1	Creeper	VQ02.26
Dichanthium sericeumssp. humilius	<1	0.2	VQ02.07
Dichrostachys spicata	<1	0.9	VQ02.16
Eucalyptus victrix	15	10	VQ02.10
Eulalia aurea	2	0.5	VQ02.03
Euphorbia biconvexa	<1	0.1	VQ02.27
Evolvulus alsinoides var. villosicalyx	<1	0.1	VQ02.19
Hibiscus aff. platychlamys (MET 15,067)	<1	0.4	VQ02.29
Hybanthus aurantiacus	<1	0.3	VQ02.33
Indigofera colutea	<1	0.05	VQ02.35
Indigofera linifolia	<1	0.1	VQ02.30
Indigofera monophylla (Burrup form)	<1	0.6	VQ02.37
Indigofera trita	<1	0.15	VQ02.28
**Malvastrum americanum*	<1	0.3	VQ02.32
Operculina aequisepala	<1	Creeper	VQ02.13
Polymeria ambigua	<1	Creeper	VQ02.02
Ptilotus auriculifolius	<1	0.1	VQ02.15
Rhynchosia minima	<1	Creeper	VQ02.09
Salsola tragus ssp. *tragus*	<1	0.4	VQ02.21
Senna artemisioides ssp. *oligophylla x helmsii*	<1	0.3	VQ02.08
Senna glutinosa ssp. *glutinosa*	<1	0.5	VQ02.06
Solanum diversiflorum	<1	0.2	VQ02.12
Sporobolus australasicus	<1	0.05	VQ02.18
Themeda triandra	15	0.5	VQ02.17
Trichodesma zeylanicum var. zeylanicum	<1	0.5	VQ02.23
Triodia aff. epactia	<1	0.2	VQ02.04
Triumfetta clementii	<1	0.5	VQ02.24
Vigna lanceolata var. lanceolata	<1	Creeper	VQ02.31

API Rail Flora Site APQ75

Described by KG Date 19/05/2009 Type Q 50 X 50

Season E

MGA Zone 50 503366 mE 7704385 mN

Habitat

Soil Loamy clay

Rock Type

Vegetation Open Shrubland of Acacia xiphophylla over a Mid to Dense Hummock Grassland of Triodia angusta and Triodia wiseana (fine form) over a Very Open Tussock Grassland of Aristida contorta on red loamy clay flats.

Veg Condition Good

Fire Age

Notes

SPECIES LIST:

Name	Cover	Height	Specimen
Abutilon aff. *lepidum (4)*	<1	0.8	VQ03.17
Acacia bivenosa	<1	1	VQ03.04
Acacia xiphophylla	3	2	VQ03.18
Aristida contorta	5	0.2	VQ03.29
Boerhavia coccinea	<1	0.1	VQ03.20
Bonamia media var. *villosa*	<1	0.1	VQ03.19
**Cenchrus ciliaris*	<1	0.5	VQ03.08
Chrysopogon fallax	<1	0.9	VQ03.25
Corchorus aff. *walcotti* (K.J. Atkins 570)	2	0.8	VQ03.24
Dichanthium sericeum ssp. *humilius*	<1	0.25	VQ03.30
Enneapogon caerulescens var. *caerulescens*	<1	0.05	VQ03.23
Eriachne pulchella ssp. *dominii*	<1	0.15	VQ03.26
Euphorbia sp. (BPBS10-50)	3	0.1	VQ03.22
Goodenia microptera	<1	0.2	VQ03.06
Heliotropium heteranthum	<1	0.05	VQ03.21
Indigofera colutea	<1	0.15	VQ03.14
Iseilema dolichotrichum	<1	0.05	VQ03.27
**Portulaca oleracea*	<1	0.05	VQ03.07
Ptilotus ? exaltatus var. *exaltatus*	<1	0.2	VQ03.13
Ptilotus exaltatus var. *exaltatus*	<1	0.2	VQ03.09
Ptilotus helipteroides var. *helipteroides*	<1	0.1	VQ03.05
Salsola tragus ssp. *tragus*	<1	0.4	VQ03.12
Senna glutinosa ssp. *x luerssenii*	<1	1	VQ03.15
Senna notabilis	<1	0.1	VQ03.11
Triodia angusta	40	1.5	VQ03.02
Triodia wiseana (fine form)	20	0.5	VQ03.01
Triumfetta clementii	<1	0.2	VQ03.28

API Rail Flora Site APQ76

Described by KG Date 18/05/2009 Type R
Season E

MGA Zone 50 506923 mE 7713754mN
Habitat Ridge tops - vegetation confined to small flat tops
Soil Red rocky soils
Rock Type
Vegetation Hummock Grassland of Triodia wiseana (fine form) and Triodia epactia on rocky ridge tops.
Veg Condition Very Good - Good
Fire Age
Notes No quadrat put in due to large % of rocks. All species present were collected.

SPECIES LIST

Name	Cover	Height	Specimen
Abutilon aff. *lepidum (4)*	<1	0.1	CT01.03B
Acacia xiphophylla	1	4	CT01.03
Aristida holathera var. *holathera*	<1	0.1	CT01.08C
Aristida sp.	<1	0.4	CT01.06
Boerhavia burbidgeana	<1	Creeper	CT01.12
Capparis spinosa var. *nummularia*	<1	0.5	CT01.07
Clerodendrum tomentosum var. *lanceolatum*	<1	2.5	CT01.09
Cucumis maderaspatanus	<1	Creeper	CT01.04
Ehretia saligna var. *saligna*	<1	2	CT01.13
Enchylaena tomentosa var. *tomentosa*	<1	0.4	CT01.05
Euphorbia biconvexa	<1	0.2	CT01.08B
Gomphrena cunninghamii	<1	0.2	CT01.01
Ptilotus obovatus var. *obovatus*	2	0.4	CT01.02
Streptoglossa sp.	<1	0.15	CT01.14
Tinospora smilacina	<1	Creeper	CT01.08A
Triodia epactia	10	0.4	CT01.10
Triodia wiseana (fine form)	10	0.4	CT01.11
Vigna sp. rockpiles (R. Butcher et al. RB 1400)	<1	Creeper	CT01.15

API Rail Flora Site APQ77

Described by KG Date 18/05/2009 Type Q 50 X 50

Season E

MGA Zone 50 503988 mE 7707986mN

Habitat

Soil Rocky clay loam

Rock Type

Vegetation Mid Dense Hummock Grassland of Triodia wiseana (fine form) over a Very Open Tussock Grassland of *Iseilema dolichotrichum* and *Eriachne pulchellassp. dominii* over a Low Open Shrubland dominated by Euphorbia sp. (BPBS10-50), *Euphorbia wheeleri* and *Corchorus aff. parviflorus* on rocky ridgetops.

Veg Condition Very Good - Good

Fire Age < 2 years

Notes Burnt in Late 2007

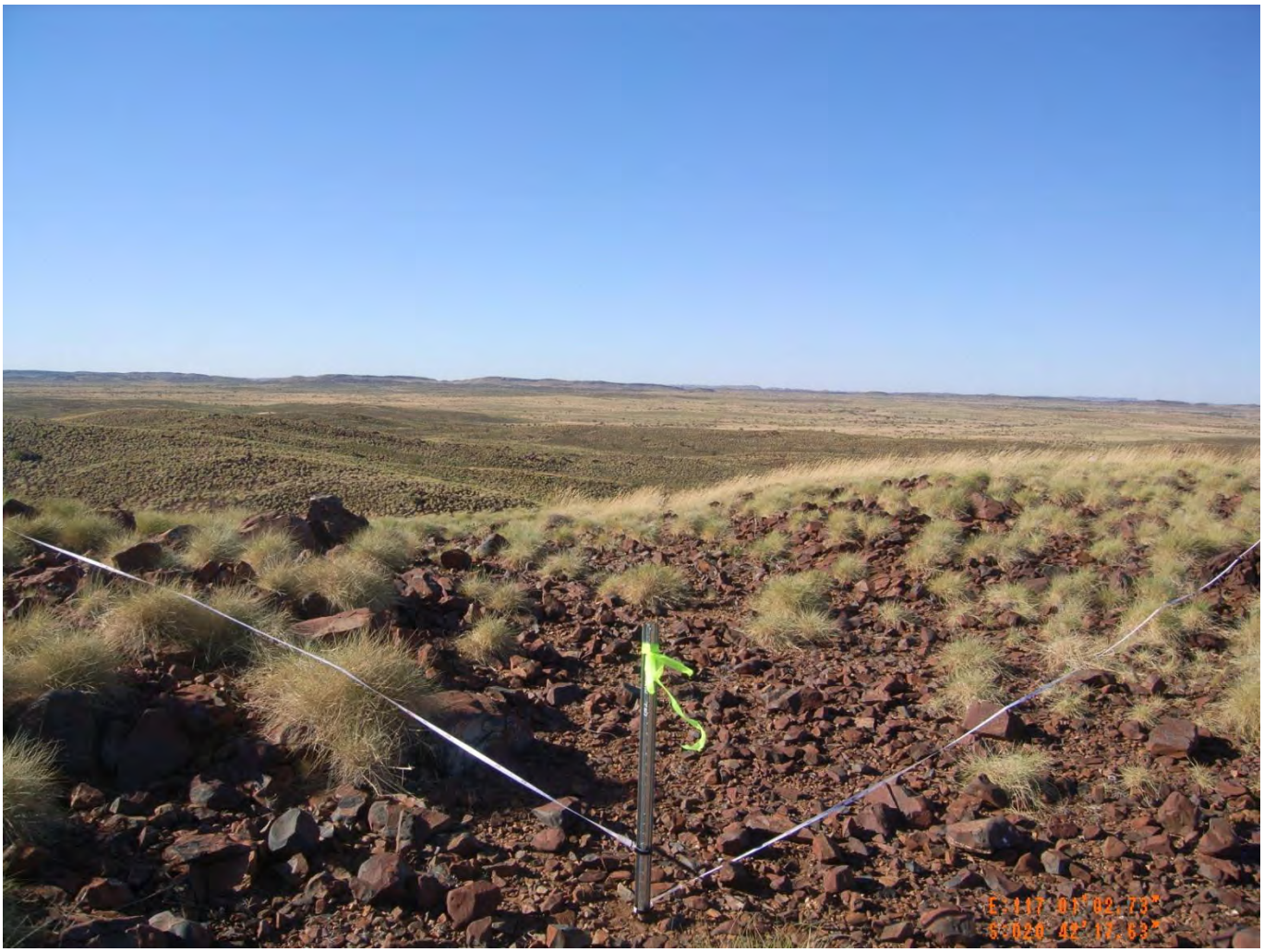
SPECIES LIST:

Name	Cover	Height	Specimen
Abutilon aff. *lepidum (4)*	<1	0.3	CQ01.03
Acacia pyrifolia var. *pyrifolia*	<1	0.12	CQ01.11
Bonamia media var. *villosa*	<1	0.1	CQ01.09
**Cenchrus ciliaris*	<1	0.3	CQ01.07
Corchorus aff. *parviflorus*	3	0.4	CQ01.12
Cymbopogon ambiguus	<1	0.5	CQ01.17
Enneapogon caerulescens var. *caerulescens*	<1	0.1	CQ01.15
Eriachne pulchella ssp. *dominii*	5	0.1	CQ01.05
Euphorbia boophthona	<1	0.2	CQ01.08
Euphorbia sp. (BPBS10-50)	2	0.05	CQ01.06
Euphorbia wheeleri	5	0.25	CQ01.13
Evolvulus alsinoides var. villosicalyx	<1	0.15	CQ01.20
Gomphrena cunninghamii	<1	0.05	CQ01.23
Hibiscus aff. *platychlamys* (MET 15,067)	<1	0.2	CQ01.21
Hybanthus aurantiacus	<1	0.3	CQ01.19
Indigofera monophylla (grey/green leaflet form)	1	0.4	CQ01.24
Iseilema dolichotrichum	3	0.1	CQ01.02
Paspalidium clementii	<1	0.1	CQ01.01
Senna notabilis	<1	0.08	CQ01.22
Solanum diversiflorum	<1	0.4	CQ01.10
Solanum horridum	<1	0.3	CQ01.18
Triodia wiseana (fine form)	40	0.4	CQ01.25
Triumfetta clementii	<1	0.3	CQ01.16
Vigna sp. rockpiles (R. Butcher et al. RB 1400)	<1	Creeper	CQ01.04

API Rail Flora Site APQ78

Described by KG Date 19/05/2009 Type 50 X 50
Season E

MGA Zone 50 501814 mE 7710511mN
Habitat
Soil Clayey loam
Rock Type ironstone rocks
Vegetation Closed Hummock Grassland of Triodia wiseana (fine form) on rocky hilltops.
Veg Condition Very Good - Good
Fire Age
Notes Partly burnt in 2007, small *Cenchrus ciliaris invasion in NE corner of quadrat.



SPECIES LIST:

Name	Cover	Height	Specimen
Acacia trudgeniana	<1	0.5	CQ02.08
**Cenchrus ciliaris*	1	0.4	CQ02.13
Corchorus aff. *parviflorus*	<1	0.3	CQ02.23
Crotalaria medicaginea var. *neglecta*	<1	0.1	CQ02.18
Cucumis maderaspatanus	<1	Creeper	CQ02.19
Dichanthium sericeum ssp. *humilius*	<1	0.1	CQ02.01
Euphorbia coghlanii	<1	0.2	CQ02.06
Euphorbia wheeleri	2	0.2	CQ02.11
Grevillea pyramidalis ssp. *leucadendron*	<1	1.5	CQ02.20
Indigofera aff. *monophylla*	<1	0.4	CQ02.14
Paspalidium clementii	<1	0.2	CQ02.04
Ptilotus exaltatus var. *exaltatus*	<1	0.2	CQ02.07
Rhynchosia minima	<1	Creeper	CQ02.21
Senna notabilis	<1	0.1	CQ02.09
Solanum horridum	<1	0.3	CQ02.17
Themeda triandra	8	0.4	CQ02.03
Trachymene oleracea ssp. *oleracea*	2	0.4	CQ02.10
Trichodesma zeylanicum	<1	0.15	CQ02.15
Triodia wiseana (fine form)	90	0.5	CQ02.05
Triumfetta clementii	<1	0.3	CQ02.22
Vigna sp. rockpiles (R. Butcher et al. RB 1400)	<1	0.1	CQ02.16

API Rail Flora Site APQ83

Described by GM Date 4/06/2009 Type Q 50 X 50
Season E

Location Campsite 2

MGA Zone 50428716 mE 7672340 mN
Habitat
Soil Rocky loam
Rock Type
Vegetation Low Open Woodland of *Eucalyptus victrix* with scattered *Corymbia hammersleyana* over an Open Shrubland of *Melaleuca glomerata* and Acacia bivenosa over a Closed Hummock Grassland of *Triodia epactia* and *Triodia angusta* on orange rocky loam drainage lines.
Veg Condition Very Good
Fire Age
Notes

SPECIES LIST

Name	Cover	Height	Specimen
Acacia bivenosa	3	160	APQ83.02
Acacia coriacea ssp. *pendens*	<1	200	APQ83.22
Acacia pyrifolia var. *pyrifolia*	<1	0.5	APQ83.21
Adriana urticoides var. *tomentosa*	<1	100	APQ83.18
Aristida contorta	<1	0.1	APQ83.27
Cassytha capillaris	<1	Creeper	APQ83.11
**Cenchrus ciliaris*	1	0.4	APQ83.30
Corchorus aff. *walcotti* (K.J. Atkins 570)	<1	0.3	APQ83.17
Corymbia hamersleyana	2	300	APQ83.05
Cucumis maderaspatanus	<1	Creeper	APQ83.25
Cyperus vaginatus	1	0.5	APQ83.10
Enneapogon caerulescens var. *caerulescens*	<1	0.1	APQ83.28
Eremophila forrestii ssp. *forrestii*	<1	0.4	APQ83.31
Eucalyptus victrix	<1	600	APQ83.04
Goodenia microptera	<1	0.1	APQ83.03
Heliotropium ovalifolium	<1	0.1	APQ83.23
Hybanthus aurantiacus	<1	0.3	APQ83.12
Indigofera monophylla (Cape Preston form)	<1	0.2	APQ83.16
Leptopus decaisnei var. *orbicularis*	<1	0.1	APQ83.32
**Malvastrum americanum*	<1	0.6	APQ83.34
Melaleuca glomerata	2	150	APQ83.01
Phyllanthus maderaspatensis	<1	0.3	APQ83.29
Polymeria ambigua	<1	Creeper	APQ83.13
Ptilotus exaltatus var. *exaltatus*	<1	0.1	APQ83.08
Scaevola spinescens (broad leaf form)	1	0.5	APQ83.33
Senna glutinosa ssp. *glutinosa*	<1	100	APQ83.26
Sida aff. *fibulifera* (HD200-6)			APQ83.07A
Solanum diversiflorum	<1	0.2	APQ83.06
Solanum lasiophyllum	<1	0.3	APQ83.24
Stemodia grossa	1	0.3	APQ83.15
Tephrosia aff. *supina* (MET 12,357)	<1	0.3	APQ83.35
Themeda triandra	<1	0.5	APQ83.14
Triodia angusta	5	100	APQ83.20
Triodia epactia	80	0.7	APQ83.19
Waltheria indica	<1	0.4	APQ83.07B

API Rail Flora Site APQ84

Described by GM Date 4/06/2009 Type Q

Season

Location Campsite 2

MGA Zone 50 429289 mE 7672454mN

Habitat

Soil Rocky loam

Rock Type ironstsone and quartz

Vegetation Open Shrubland of *Acacia ancistrocarpa, Acacia pyrifolia* var. *pyrifolia,* and *Acacia trachycarpa* with *scattered Senna glutinosassp. pruinosa* over a Closed Hummock Grassland of *Triodia wiseana* (fine form) on ridgetop with with quartz and ironstone nodules.

Veg Condition Very Good

Fire Age

Notes

SPECIES LIST:

Name	Cover	Height	Specimen
Abutilon aff. *lepidum* (4)	<1	0.4	APQ84.22
Acacia ancistrocarpa	1	200	APQ84.7
Acacia pyrifolia var. *pyrifolia*	<1	120	APQ84.17
Acacia trachycarpa	<1	150	APQ84.20
Aristida contorta	<1	0.4	APQ84.13
Boerhavia coccinea	<1	0.4	APQ84.9
Bonamia media var. *villosa*	<1	0.1	APQ84.6
Corchorus laniflorus	<1	0.4	APQ84.3
Dichanthium sericeum ssp. *humilius*	1	0.2	APQ84.10
Enneapogon caerulescens var. *caerulescens*	<1	0.1	APQ84.18
Eriachne pulchella ssp. *pulchella*	<1	0.1	APQ84.21
Evolvulus alsinoides var. *villosicalyx*	<1	0.3	APQ84.12
Fimbristylis aff. *dichotoma* (M75-4)	1	0.2	APQ84.11
Hibiscus aff. *platychlamys* (MET 15,067)	<1	0.2	APQ84.4
Iseilema dolichotrichum	<1	0.1	APQ84.19
Senna glutinosa ssp. *glutinosa*	<1	120	APQ84.8
Senna glutinosa ssp. *pruinosa*	1	200	APQ84.1
Sida aff. *echinocarpa* (MET 15,350)	1	0.3	APQ84.15
Solanum diversiflorum	<1	0.2	APQ84.2
Tephrosia aff. *supina* (HD133-20)	<1	0.1	APQ84.23
Trachymene oleracea ssp. *oleracea*	<1	0.1	APQ84.14
Trichodesma zeylanicum	<1	0.4	APQ84.16
Triodia wiseana (fine form)	70	0.3	APQ84.26
Triumfetta clementii	<1	0.3	APQ84.5

API Rail Flora Site APQ85

Described by GM Date 4/06/2009 Type R 15 X 100
Season E

Location Campsite 2

MGA Zone 50 430582 mE 7672386mN
Habitat Minor Drainage line
Soil Loamy
Rock Type
Vegetation Open Heath *of Acacia ancistrocarpa, Acacia bivenosa, Acacia inaequilatera* and *Senna artemisioides ssp. oligophylla* over Mid to Dense Hummock Grassland of *Triodia wiseana* (fine form) on orange loam.
Veg Condition Very Good
Fire Age
Notes

SPECIES LIST:

Name	Cover	Height	Specimen
Acacia ancistrocarpa	40	200	APQ85.13
Acacia bivenosa	5	150	APQ85.10
Acacia inaequilatera	3	180	APQ85.11
Eremophila forrestii ssp. *forrestii*	<1	0.3	APQ85.2
Fimbristylis aff. *dichotoma* (M75-4)	<1	0.1	APQ85.9
Indigofera monophylla (Cape Preston form)	<1	0.3	APQ85.1
Paspalidium clementii	<1	0.05	APQ85.19
Polycarpaea longiflora (Whim Creek form, WC147-	<1	0.2	APQ85.18
Ptilotus exaltatus var. *exaltatus*	<1	0.1	APQ85.7
Rhynchosia minima	<1	Creeper	APQ85.8
Scaevola spinescens (broad leaf form)	<1	0.2	APQ85.3
Senna artemisioides ssp. *oligophylla*	3	100	APQ85.12
Senna glutinosa ssp. *glutinosa*	1	110	APQ85.14
Senna glutinosa ssp. *glutinosa x luerssenii*	<1	100	APQ85.15
Senna glutinosa ssp. *pruinosa*	<1	100	APQ85.16
Sida aff. echinocarpa (MET 15,350)	1	0.2	APQ85.5
Tephrosia aff. supina (MET 12,357)	<1	0.3	APQ85.17
Triodia wiseana (fine form)	40	0.4	APQ85.4
Triumfetta clementii	1	0.1	APQ85.6

API Rail Flora Site APQ86

Described by GM Date 4/06/2009 Type Q 50 X 50
Season E

Location Campsite 2

MGA Zone 50 431132 mE 7674024mN
Habitat Horseflat
Soil Clayey loam
Rock Type ironstone
Vegetation Horseflats dominated by *Dichanthium sericeumssp. humilius* and *Eragrsotis xerophila* on orange clay flats.
Veg Condition Very Good
Fire Age
Notes

SPECIES LIST:

Name	Cover	Height	Specimen
Aristida contorta	<1	0.1	APQ86.15
Aristida latifolia	2	0.4	APQ86.4
Brachyachne convergens	<1	0.3	
Chloris pectinata	1	0.4	APQ86.13
Dichanthium sericeum ssp. *humilius*	70	0.2	APQ86.3
Enneapogon caerulescens var. *caerulescens*	<1	0.1	APQ86.1
Eragrostis xerophila	15	0.4	APQ86.8
Flaveria australasica ssp. *gilgai*	5	0.1	APQ86.1
Heliotropium conocarpum	<1	0.1	APQ86.16
Indigofera linifolia	<1	0.2	APQ86.14
Iseilema macratherum	1	0.3	APQ86.7
Neptunia dimorphantha	<1	0.1	APQ86.2
Rhynchosia minima	<1	Creeper	APQ86.12
Sida aff. *fibulifera* (HD200-6)	<1	0.4	APQ86.5
Streptoglossa bubakii	<1	0.2	APQ86.10

API Rail Flora Site CP012

Described by KH Date 21/04/2009 Type Q 50 X 50

MGA Zone 50 422895 mE 7664784 mN
Soil Red cracking clay
Vegetation Horseflats dominated by *Eragrostis xerophila* and *Iseilema macratherum* on red cracking clay.
Veg Condition Very Good - Good
Fire Age
Notes

SPECIES LIST

Name	Cover	Height	Specimen
Alysicarpus muelleri^	<1	0.3	BN200
Aristida latifolia	0.5	0.5	CP12.12
Astrebla pectinata	<1	0.2	CP12.18
Brachyachne convergens	1	0.3	CP12.07
Chrysopogon fallax	<1	0.7	CP12.09A
Cleome viscosa#	<1	0.4	CP12.06
Crotalaria dissitiflora ssp. *benthamiana*	<1	0.1	CP12.28
Cucumis maderaspatanus	<1	creeper	CP12.09B
**Cucumis melo* ssp. *agrestis*	<1	creeper	CP12.10
Dactyloctenium radulans#	0.5	0.1	CP12.19
Dichanthium sericeum ssp. *humilius*	1	0.15	CP12.21
Dichrostachys spicata	0.1	0.8	CP12.05
Enneapogon caerulescens var. *caerulescens*	<1	0.2	CP12.11
Eragrostis falcata^	12	0.2	BN89
Eragrostis xerophila#	40	0.2	CP12.20
Gomphrena affinis ssp. *pilbarensis*	<1	0.2	CP12.14
Heliotropium conocarpum#	1	0.1	BN93
Hibiscus brachysiphonius	<1	0.4	CP12.19B
Indigofera trita	<1	0.1	CP12.16
Ipomoea plebeia	<1	0.1	CP12.25
Iseilema dolichotrichum^	20	0.3	BN14
Iseilema macratherum	20	0.1	CP12.01
**Malvastrum americanum*#	<1	0.4	
Neptunia dimorphantha	<1	0.3	CP12.04
Operculina aequisepala	<1	creeper	CP12.02
Panicum laevinode#	1.5	0.4	BN115
**Prosopis pallida*^	<1	0.8	
Ptilotus carinatus#	<1	0.15	BN124
Ptilotus exaltatus var. *exaltatus*#	<1	0.15	CP12.30
Ptilotus gomphrenoides var. *gomphrenoides*	<1	0.1	CP12.24
Rhynchosia minima#	<1	0.4	BN77
Salsola tragus#	<1	0.1	AP12
Salsola tragus ssp. *Grandiflora*^	<1	0.1	BN248
Senna glutinosa ssp. *Glutinosa*#	<1	0.3	AP13
Sesbania cannabina^	<1	0.4	BN164
Sida aff. *fibulifera* (HD200-6)	<1	0.2	CP12.29
Sida aff. *fibulifera* (oblong; MET 15 220)^	<1	0.4	BN149
Sida spinosa^	<1	0.25	BN33
Solanum lasiophyllum	<1	0.2	CP12.03
Sporobolus australasicus	<1	0.05	CP12.17
Stemodia kingii^	<1	0.3	AP15
Streptoglossa bubakii#	<1	0.3	BN95
Streptoglossa liatroides^	<1	0.1	BN123

API Rail Flora Site CP014

Described by KH Date 21/04/2009 Type Q 50 X 50
Season E

MGA Zone 50 422529 mE 7663263mN
Habitat
Soil Red brown loam
Rock Type
Vegetation Shrubland of Acacia bivenosa, Acacia pyrifolia var. pyrifolia with scattered Acacia syncronicia over a Mid Dense Hummock Grassland of Triodia wiseana (fine form) and *Cenchrus ciliaris on red brown loam.
Veg Condition Very Good
Fire Age
Notes

SPECIES LIST:

Name	Cover	Height	Specimen
Acacia ancistrocarpa	<1	1.8	CP14.14
Acacia bivenosa#	10	2.5	BN54
Acacia inaequilatera	0.1	1.5	CP14.06
Acacia pyrifolia var. *pyrifolia*#	5	2.2	AP03
Acacia synchronicia#	1.5	1.8	CP14.34
Alysicarpus muelleri	<1	0.1	CP14.30
**Cenchrus ciliaris*#	30	0.8	CP14.01
Chrysopogon fallax#	<1	1.1	CP14.35
Corchorus laniflorus^	<1	0.3	BN24
Crotalaria medicaginea var. *neglecta*	<1	0.1	CP14.32
Cucumis maderaspatanus#	<1	creeper	CP14.09
Dactyloctenium radulans	<1	0.1	CP14.17
Dichanthium sericeum ssp. humilius	<1	0.15	CP14.20
Ehretia saligna var. *saligna*	<1	1.5	CP14.04
Eremophila forrestii ssp. *forrestii*#	1	1.2	
Eremophila longifolia^	<1	1	BN184
Euphorbia coghlanii	<1	0.1	CP14.22
Evolvulus alsinoides var. *villosicalyx*	<1	0.2	CP14.11
Gomphrena affinis ssp. *pilbarensis*#	<1	0.3	BN09
Goodenia forrestii#	<1	0.2	BN201
Heliotropium cunninghamii	<1	0.3	CP14.25
Hybanthus aurantiacus^	<1	0.3	BN209
Indigofera colutea	<1	0.1	CP14.08
Indigofera linifolia#	<1	0.2	CP14.07
Indigofera monophylla (Cape Preston form)^	<1	0.3	BN180
Ipomoea polymorpha	<1	0.1	CP14.27
Leptopus decaisnei var. *orbicularis*	<1	0.2	AP04
Malvastrum americanum^	<1	0.3	
Melhania sp. (CH15-39)	<1	0.25	CP14.26
Melhania sp. *Burrup*	<1	0.15	CP14.23
**Portulaca oleracea*^	<1	0.3	BN207
Ptilotus exaltatus^	<1	0.3	
Ptilotus obovatus var. *obovatus*#	<1	0.3	CP14.33
*Salsola tragus*ssp. *Grandiflora*^	<1	0.2	BN248
Scaevola spinescens (broad leaf form)#	8	0.9	BN64
Senna artemisioides ssp. *oligophylla*#	<1	0.5	AP01
Sida aff. *fibulifera* (oblong; MET 15 220)^	<1	0.2	BN149
Sida spinosa^	<1	0.3	BN33
Solanum diversiflorum#	<1	0.3	BN6
Solanum lasiophyllum#	<1	0.2	CP14.21
Sporobolus australasicus	<1	0.05	CP14.18
Tephrosia aff. *supina* (MET 12,357)#	<1	0.2	BN204
Trachymene oleracea ssp. oleracea^	<1	0.5	BN39
Trichodesma zeylanicum var. *zeylanicum*#	<1	0.2	CP14.12
Triodia wiseana (fine form)#	55	0.8	CP14.03
Triumfetta clementii	<1	0.4	CP14.15
Vigna sp. central	<1	0.25	CP14.10

Appendix E

Recommended Department of Agriculture and Food Control Measures for *Prosopis spp.

Mesquite (*Prosopis spp.*)

Declaration

(Code: C= City; S=Shire; T=Town)

Category : P1
Location : For the whole of the State

Category : P2
Location : For the whole of the State except the area on Mardie Station bordered by the coast, the boundary between Mardie and Karratha stations, the North West Coastal Highway, Peter's Creek and the boundary between Yarraloola and Mardi stations.

Category : P4
Location : For the area on Mardie Station bordered by the coast, the boundary between Mardie and Karratha stations, the North West Coastal Highway, Peter's Creek and the boundary between Yarraloola and Mardie stations.

Standard Control Codes (these may vary for individual plants)	
P1 **REQUIREMENTS** Prohibits movement	The movement of plants or their seeds is prohibited within the State. This prohibits the movement of contaminated machinery and produce including livestock and fodder.
P2 **REQUIREMENTS** Aim is to eradicate infestation	Treat all plants to destroy and prevent propagation each year until no plants remain. The infested area must be managed in such a way that prevents the spread of seed or plant parts on or in livestock, fodder, grain, vehicles and/or machinery.

P4 REQUIREMENTS Aims to prevent infestation spreading beyond existing boundaries of infestation.	The infested area must be managed in such a way that prevents the spread of seed or plant parts within and from the property on or in livestock, fodder, grain, vehicles and/or machinery. Treat to destroy and prevent seed set all plants: • within 100 metres inside of the boundaries of the infested property • within 50 metres of roads and highwater mark on waterways • within 50 metres of sheds, stock yards and houses Treatment must be done prior to seed set each year. Properties with less than 2 hectares of infestation must treat the entire infestation. Additional areas may be ordered to be treated.
Special considerations	In the case of P4 infestations where they continue across property boundaries there is no requirement to treat the relevant part of the property boundaries as long as the boundaries of the infestation as a whole are treated. There must be agreement between neighbours in relation to the treatment of these areas .

Control Method

Recommended herbicides	**:**	• When activley growing - basal bark spray and/or overall foliar spray **Triclopyr** **Triclopyr + picloram** • At any time **Velpar®** **Access™ Herbicide** • small plants **Garlon™ 600**

Herbicide	**:**	**Access™ Herbicide**
Active ingredient	**:**	240 g/L triclopyr + 120 g/L picloram **(Group I)**
Rates of dilution for spot spraying	**:**	1:60 in distillate
Amount of product per 10 litres distillate	**:**	160 mL
Time of application	**:**	When actively growing at all stages before pod formation
Remarks	**:**	Treat plants with stems up to 5 cm diameter. If using 'cut stump' treatment, the tree diameter is not restrictive
More information and other control methods	**:**	• Treat stems up to a height of 30 cm above ground level for 'basal bark'. • For 'cut stump'cut stem as close to the ground (<15 cm) as possible. • Do not treat trees with wet bark

Herbicide	**:**	**Triclopyr** (Various trade names)
Active ingredient	**:**	600 g/litre triclopyr **(Group I)**
Rates of dilution for spot spraying	**:**	1:60-1:120 in distillate

Amount of product per 10 litres distillate	**:**	1:60 = 160 mL; 1:120 = 80 mL
Rate of product per hectare	**:**	Not Recommended
Time of application	**:**	When actively growing.
Remarks	**:**	Apply as a 'basal bark' spray to mature trees. Poor results can be expected if treatment undertaken during or after long dry spell. Mix only what can be used on day of spraying. Agitate regularly. Use 1:60 on large mature trees. The mixture can be used as a 'cut-stump' treatment at any time of year.
More information and other control methods	**:**	Individual trees can be removed mechanically. There will be seedling regrowth in subsequent years.

Herbicide	**:**	**Tryclopyr** (other trade names also available)
Active ingredient	**:**	600 g/litre triclopyr **(Group I)**
Rates of dilution for spot spraying	**:**	1:330
Amount of product per 10 litres water	**:**	30 mL
Rate of product per hectare	**:**	Not Recommended
Remarks	**:**	Use to treat small plants as overall foliar spray.

Herbicide	**:**	**Triclopyr + picloram** (various trade names)
Active ingredient	**:**	300 g/litre triclopyr + 100 g/litre picloram **(Group I)**
Amount of product per 10 litres water	**:**	350 - 670 mL
Rate of product per hectare	**:**	Not Recommended
Wetting agent	**:**	BS 1000 @ 100mL/100L
Time of application	**:**	When actively growing, up to pod formation

Herbicide	**:**	**Velpar®**
Active ingredient	**:**	250 g/litre hexazinone **(Group C)**
Rates of dilution for spot spraying	**:**	Use undiluted at 4 mL/spot. One spot/tree up to 5 m tall. Recommendation for parkinsonian.
Amount of product per 10 litres water	**:**	Not Recommended
Rate of product per hectare	**:**	Not Recommended
Time of application	**:**	At any time. Inject into soil (sub-surface) if dry. Use spotgun.
Remarks	**:**	Needs rain to activate. Distribute dose around dripline of large trees. Keep clear of desirable trees. Best suited to isolated small plants (up to 2 m in height). For prickly acacia (*Acacia nilotica*) 4 mL/spot using one spot for every meter of height.

Weed Description

Family : Mimosaceae
Form : Tree – Perennial
Status : Present in WA

Can be evergreen or deciduous shrub or low tree with one to several trunks and arched branches. It has different growth forms depending on its location and water supply. Mesquite is a Weed of National Significance.

- Drier soils – short, many stemmed shrubs 1-3 m high
- Near permanent water – large single trunk 6-15 m high.
- Floodplains – branching from the base, forming dense thickets 5-8 m high, particularly along the banks of intermittently flowing creeks.

Reproduce by seed and suckers.

Branches: Small branches have a zigzag appearance. Plants can have an irregular outline, with some branches protruding out of the canopy. Spines are solitary or paired along the stem, and range from 4 mm to 75 mm in length.

Leaves: Bipinnate (like jacaranda leaves),i.e. divided twice, with 1-4 pairs of pinnae, each with 7-21 pairs of small opposite leaflets.

Flowers: Long finger-like spikes (5-12 cm long) of many small greenish, cream or yellow flowers, all densely crowded. Stamens 10 in number and protrude out of the flower.

Seed: Pods are 5-20 cm long, compressed, straight to curved, smooth or with slight restrictions between the seeds. Ripe pods are yellow, purple, or yellow with purple streaks and patches. The flat seeds are oval or elliptical 2.5-7 mm long by 2-3 mm wide, each enclosed in a flattened fibrous case, and surrounded by sweet pulp.

Other relevant information related to this topic:

- Quarantine WA
- Permitted and quarantine species list
- Weed of National Significance
- Weeds CRC
- CSIRO poster
- Permit for minor off-label-use of a registered agvet chemical product (Permit number – per9655)
- Off-label permit (olp) for use of a registered agvet chemical product (Permit number - per4590)