

MOUNT GIBSON MINING LIMITED

MT GIBSON MAGNETITE PROJECT SUPPLEMENTARY VEGETATION AND FLORA SURVEYS



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1. INTRODUCTION

1.1 Background

The proposed Mt Gibson Iron Ore Project at Mt Gibson is a combined hematite/magnetite open cut mining operation that will produce both direct shipping grade hematite ore and magnetite concentrate. These products will be exported to China through the Port of Geraldton, at annual shipping rates of 1.8Mtpa and 5Mtpa respectively.

The project will source both hematite ore and magnetite bearing Banded Iron Formation ("BIF") ore from the Extension Hill deposit, which comprises the most northerly ridge of the Mt Gibson ranges. The Extension Hill deposit contains hematite resources of 13Mt and a further 230Mt of BIF resources underlying and extending beyond the hematite cap. The final pit will be approximately 1300m long, 600m wide and up to 400m deep, and will be developed in stages over the projected 23 year Life of Mine. For the purposes of this report the project is referred to as the Mt Gibson Magnetite Project.

1.2 Purpose and Scope of Work

A number of vegetation and flora surveys have been previously conducted in the Mt Gibson area (i.e. Muir Environmental 1995, Bennett 2000, Paul Armstrong & Associates 2004, ATA Environmental 2004). The most detailed of these was conducted by Bennett flora and vegetation survey in 2000. These previous flora and vegetation surveys were conducted to prior to the release of the EPA's Guidance Statement No. 51 Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia (EPA, 2004). Guidance Statement No. 51 that requires that development proposals that are likely to result in a high level of impact require a detailed flora surveys are required involving one or more during the main flowering season and replication of survey plots or quadrats within vegetation units identified from the proposal area.

While the Bennett (2000) survey identified flora associated with a particular vegetation units, no quadrat data was collected from representative replicated vegetation units and hence the survey was not considered to have been conducted in accordance with Guidance Statement No. 51. Additionally, a small area to the east and larger areas to the west of the project area were not surveyed during any of the previous assessments. This report is intended to supplement vegetation mapping of the Mt Gibson lease area previously undertaken by Bennett and to ensure the mapping of the vegetation communities occurring on the Mt Gibson leases was a comprehensive as possible. The ATA Environmental supplementary vegetation mapping provide had been prepared a finer level of detail than the Bennett (2000) mapping.

As the proposal is to be formally assessed by the Environmental Protection Authority under Section 38 of *Environmental Protection Act 1980*, there was a requirement for supplementary flora and vegetation surveys of the project area to be conducted, including collection of quadrat-based floristic data. Following discussions with the

Department of Conservation and Land Management (CALM), a commitment was made to only collect plot-based floristic data from Banded Ironstone Formation (BIF) within the Mt Gibson leases and on BIF within a 20km radius of the Mt Gibson leases. The results of the analysis of this data is described in Griffin (2005).

2. SITE DESCRIPTION

2.1 Location

The Mt Gibson Ranges are located approximately 350km north east of Perth, immediately adjacent to the Great Northern Highway between Wubin and Paynes Find (Figure 1). The project area abuts the Mt Gibson, White Wells and Ninghan pastoral leases. Mongers Lake and Lake Moore are located approximately 40km to the west and 30km to the east respectively. The additional areas associated with the project that have been surveyed for this assessment include two large areas to the immediate west of Great Northern Highway to the north and south of Wanarra Road that were investigated by Mount Gibson Iron as potential sites for tailings from the proposed mine (approximately 11km² and 13.5km² respectively) and a smaller area (approximately 3km²) to the east that was omitted from previous surveys (Figures 2a and 2c).

2.2 Existing Environment

2.2.1 Climate

The Mt Gibson Magnetite project area is located in the semi-desert Mediterranean bioclimatic region of Beard (1990). There is an average of 9-11 months of dry weather with mild wet winters, hot dry summers and an average rainfall between 250-300mm. The nearest rainfall recording station is at Paynes Find where the average rainfall is 273mm. The rainfall is both irregular and variable.

2.2.2 Biogeography

The Mt Gibson Magnetite project area is located within the Ancient Drainage Subregion of the Avon Wheatbelt Interim Bioregion (Thackway and Cresswell, 1995). The Ancient Drainage Subregion is an ancient peneplain with low relief and a gently undulating landscape. Lateritic uplands are surrounded by a yellow dominated sandplain. The Mt Gibson Magnetite project area is located near the junction of the Avon Wheatbelt, Yalgoo and Coolgardie Interim Bioregions (Thackway and Cresswell, 1995). As a consequence, the floristic composition of the project area is considered to be representative of all three Bioregions.

2.2.3 Vegetation

The Mt Gibson project area occurs within the Avon Botanical District in the Southwest Botanical Province but near the boundary of the Austin Botanical District of the Eremaean Botanical Province and the (Beard, 1990). As was the case with the Bioregions, the flora and vegetation of the Mt Gibson project area contains components that are representative of both the Avon and Austin Botanical District.

The division between these two Botanical Provinces is the 'Eucalyptus- Acacia' line between the Acacia low woodland and the Eucalyptus medium height woodland on

the lower slope soils. The Avon Botanical District is characterised by low shrubs and heath on the sand plain, *Acacia- Allocasuarina* thickets on ironstone gravels, woodlands of York Gum (*Eucalyptus loxophleba*) Salmon Gum (*Eucalyptus salmonophloia*) and Wandoo (*Eucalyptus wandoo*) on loam soils and halophytes on saline soils. The Austin Botanical District is characterised by Mulga (*Acacia aneura*) low woodland on the plains and shrubs on the hills with Eucalyptus spp and *Triodia basedowii* on the sand plains.

2.2.4 Geology, Landform and Topography

The Mt Gibson Magnetite project area is comprised of Archaean granites with infolded metamorphics of the Yilgarn Block. The topography is described by Beard (1990) as undulating plateau mostly with disorganised drainage for the Avon Botanical District and undulating with occasional ranges of low hills for the Austin Botanical District. The soils of the Avon Botanical District are typically yellow earths on sand plains with ironstone gravels, hard setting loam soils on the slopes and lower land and saline soils in the depressions.

2.2.5 Land Systems

Based on mapping undertaken by Agriculture Western Australia (Payne et al., 1998) there are five land system units within and in the immediate vicinity of the Mt Gibson Magnetite project area, which are shown in Table 1.

TABLE 1 LAND SYSTEM UNITS IN THE MT GIBSON AREA

Land System Unit	Description
	Hills with Mixed Shrublands
Tallering	Tallering Prominent ridges and hills of banded ironstone, dolerite and sedimentary rocks with mixed shrublands.
	Stony plains and lower alluvial plains with predominantly saline soils and halophytic shrublands
Moriarty	Moriaty Gently undulating stony plains, low rises with limonite and alluvial plains supporting Salmon Gum, Gimlet, and Goldfields Blackbutt woodlands with halophytic and Acacia shrublands.
	Plains with deep sandy soils supporting acacia shrublands and occasionally with wanderrie grasses
Blackbutt woodlands with halophytic and Acacia Plains with deep sandy soils supporting acaci occasionally with wanderrie grasses Illaara Gently undulating plains and occasiona mantles of ironstone gravels supporting A shrublands. Plains with minor calcrete inclusions with	Illaara Gently undulating plains and occasional low rises with mantles of ironstone gravels supporting Acacia Casuarina shrublands.
9 11 9	
Joseph	Joseph Undulating yellow sandplain supporting very dense and diverse shrublands with some mallees, sedges and Spinifex.

MGM-2004-002-FLAS_004_sg_V2: Mt Gibson Magnetite Project Supplementary Vegetation & Flora Surveys Version 2: 22 March 2006

3. VEGETATION AND FLORA

3.1 Methodology

This supplementary vegetation and flora survey of the Mt Gibson Magnetite project area was conducted over a period of 3 days from 3 November to 5 November 2004 and for 4 days from 19 January to 22 January 2005 (a total of 18 field-days) by Mr Shaun Grein, Ms Cassyanna Gray and Ms Gabriela Martinez, all qualified botanists with experienced in conducting surveys in the region. This was considered to be an adequate amount of time to survey the 76 non permanent quadrats 30m x 30m in dimension.

Prior to undertaking the surveys, colour orthophotographs at a scale of 1:30,000 were examined to identify the patterns of vegetation change in the study area. This was used to aid in the mapping of the different vegetation associations occurring over the area.

Prior to the field survey, the Department of Conservation and Land Management's (CALM) database of Declared Rare and Priority Flora was searched to determine the occurrence of any significant species in the study area (Table 2). A search of CALMs Threatened Ecological Communities (TEC's) database was also conducted. The search indicated that there are no known occurrences of TEC's in the vicinity of the Mt Gibson Magnetite project area.

The survey was generally conducted in accordance with the EPA's Guidance Statement No. 51 *Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia* (EPA, 2004). However, as outlined in Section 3.1.1, the timing of the surveys was not optimal for the identification of all ephemeral and annual species, but was considered appropriate for the mapping of vegetation communities.

The surveys were conducted by a combination of vehicle access along tracks within the project area and extensive foot traverses through those areas not accessible by vehicle. The amount of time on site was considered adequate given accessibility size and relative homogeneity of the survey area.

The condition of the vegetation was assessed according to the condition rating scale devised by Keighery and described in Bush Forever (Government of Western Australia, 2000). This condition rating scale ranges from Pristine (which the vegetation exhibits no visible signs of disturbance) to Completely Degraded (where the vegetation structure in no longer intact and without native plant species).

A total of 76 non-permanent quadrats (30m x 30m) established in representative vegetation associations were surveyed in the study area with species, height and percentage cover being recorded (Appendix 2). Photos were taken of the majority of quadrats. In addition to the quadrat survey, the presence of all other species was also recorded within each vegetation type during the traverses of the area (Appendix 1).

All plant specimens not identified during the flora survey were collected, dried and identified at the Western Australian Herbarium. Voucher specimens have been retained for verification if required.

The condition of the vegetation was assessed using the vegetation condition scale rating adapted from Keighery (Government of WA, 2000). Keighery's condition rating scale ranges from Pristine (which the vegetation exhibits no visible signs of disturbance) to Completely Degraded (where the vegetation structure in no longer intact and without native plant species).

3.1.1 Limitations of the Surveys

The supplementary surveys were conducted during early November 2004 and mid January 2005, times of the year that are not considered optimal for detecting many of the ephemeral flora and grass species likely to occur in the area (including annual daisies that only germinate and flower immediately after late winter rains). As a consequence of the lack of flowering material, some taxa could be identified to genus level only. Therefore the floristic suite recorded during the surveys is not considered to be as comprehensive as if the surveys had of been conducted during early spring (i.e. September). However, additional, quadrat-based flora surveys were conducted along the ridges of the Mt Gibson ranges and other Banded Iron Formations in the region during spring 2005.

Fungi and nonvascular flora (e.g. algae, mosses and liverworts) were not specifically surveyed for during these supplementary surveys.

No floristic analysis of the quadrat data collected from the supplementary surveys was conducted for this study.

3.2 Vegetation

3.2.1 Description

A total of 35 vegetation associations were identified by ATA Environmental during the supplementary flora and vegetation surveys. These vegetation associations are based on the vegetation structural class nomenclatures as outlined in Muir 1977. The vegetation associations are mapped in Figure 2a and 2c. Bennett's (2000) vegetation type mapping for the remainder of the project area, which mapped a total of 24 communities is also shown in Figures 2a and 2c. Figure 2c also indicates the locations of the 30m x30m quadrats in relation to the mapped vegetation associations. The ATA Environmental supplementary vegetation mapping was undertaken to complement the Bennett (2000) vegetation unit mapping and included mapping additional areas of the Mt Gibson leases that were not surveyed by Bennett. The supplementary vegetation mapping was also prepared a finer level of detail than the Bennett mapping.

The 35 vegetation associations identified by ATA Environmental are:

1. Closed Heath to Tall Open Shrubland dominated by *Acacia aneura* var. *aneura*, *Calycopeplus paucifolius*, *Melaleuca uncinata* and *Aluta aspera* with scattered *Melaleuca nematophylla* to 5m in height over an Open Heath dominated by *Acacia assimilis* subsp. *assimilis* to 2m in height over a Low Open Shrubland dominated by *Thryptomene cuspidata* to 1m in height on lateritic gravel.

This community is represented by quadrats Q1a, Q1b and Q1c Condition: Very Good

2. Closed Heath to Tall Open Scrub dominated by *Acacia masliniana*, *Acacia aneura* var. *aneura*, and *Allocasuarina acutivalvis* subsp. *prinsepiana* to 3m in height with scattered *Eucalyptus leptopoda* subsp. *arctata* over a Shrubland dominated by *Melaleuca nematophylla*, *Grevillea paradoxa* and *Micromyrtus clavata* (ms) to 1.5m in height.

This community is represented by Q2a, Q2b, Q2c and Q2d Condition: Very Good to Excellent

3. Low Open Woodland dominated by *Eucalyptus kochii* subsp. *plenissima*, *Eucalyptus leptopoda* subsp. *arctata* and *Eucalyptus ebbanoensis* subsp. *ebbanoensis* to 9m in height with occasional *Callitris glaucophylla* and *Allocasuarina acutivalvis* subsp. *prinsepiana* to 4m in height over a Tall Open Shrubland dominated by *Acacia anthochaera* and *Acacia tetragonophylla* to 2m in height over a Shrubland of *Acacia aneura* var. *aneura* and *Hibbertia ancistrophylla* (ms) to 2m on loamy clayey soils with scattered rocks.

This community is represented by quadrats Q3a, Q3b and Q3c Condition: Excellent to Good

4. Closed Tall Scrub to Shrubland dominated by Acacia aneura var. aneura, Melaleuca nematophylla, Baeckea sp. to 3m with occasional Allocasuarina acutivalvis subsp. prinsepiana, Eucalyptus kochii subsp. horistes (ms) and Eucalyptus brachycorys to 4m over a Low Open Shrubland dominated by Micromyrtus clavata (ms) to 2m over a Very Open Herbland dominated by Hyalosperma glutinosum subsp. glutinosum

This community is represented by quadrats Q4a, Q4b, Q4c, Q4d, Q4e, Q4f and Q4g

Condition: Excellent to Good

5. Closed Tall Scrub to Tall Open Scrub dominated by *Acacia aneura* var. *aneura*, *Hakea minyma* and *Allocasuarina acutivalvis* subsp. *prinsepiana* to 4m with occasional *Santalum acuminatum* over an Open Shrubland dominated by *Philotheca brucei* subsp. *brucei*, *Philotheca tomentella*, *Thryptomene cuspidata* and *Micromytus clavata* (ms) to 2m.

This community is represented by quadrats Q5a and Q5b Condition: Excellent to Good

6. Closed Heath to Shrubland dominated by *Baeckea benthamii* (ms), *Acacia ramulosa*, *Acacia assimilis* subsp. *assimilis* and *Melaleuca uncinata* to 3m over a Very Open Herbland dominated by *Borya sphaerocephala* and *Calandrinia polyandra* associated with granite outcropping. This community is represented by quadrats Q6a, Q6b and Q6c and was considered to be Very Good to Degraded condition.

7. Woodland to Low Open Woodland of *Eucalyptus kochii* subsp. *plenissima*, *Eucalyptus oldfieldii* with scattered *Callitris glaucophylla* to 10m over a Tall Open Scrub dominated by *Acacia aneura* var. *aneura*, *Santalum acuminatum*, *Hakea minyma* and *Melaleuca leiocarpa* to 5m over an Open Shrubland dominated by *Alyxia buxifolia* and *Phebalium tuberculosum* to 2m over a Low Open Shrubland of *Olearia muelleri* and *Olearia dampieri* subsp. *eremicola* to 0.5m.

This community is represented by quadrats Q7a and Q7b Condition: Very Good to Good

8. Mixed Closed Heath to Tall Open Scrub dominated by *Acacia aneura* var. *aneura*, *Acacia stereophylla* var. *stereophylla*, *Acacia masliniana* and *Allocasuarina acutivalvis* subsp. *prinsepiana* to 3m with scattered *Eucalyptus leptopoda* subsp. *arctata* over a Low Open Shrubland dominated by *Micromyrtus clavata* (ms) and *Melaleuca fabri* to 1.2m.

This community is represented by quadrats Q8a and Q8b Condition: Excellent to Very Good

9. Open Woodland of *Eucalyptus loxophleba* subsp. *supralaevis* to 15m with occasional *Eucalyptus leptopoda* subsp. *arctata* and *Callitris glaucophylla* to 4m over a Shrubland dominated by *Acacia colletioides*, *Acacia tetragonophylla* and Exocarpos *aphyllus* to 3m over a Low Open Shrubland of *Olearia muelleri*, *Ptilotus obovatus* and *Atriplex bunburyana* to 1m.

This community is represented by quadrats Q9a, Q9b, Q9c and Q9d Condition: Very Good to Good

10. Low Open Woodland of *Eucalyptus leptopoda* subsp. *arctata* to 5m with occasional *Allocasuarina acutivalvis* subsp. *prinsepiana* to 4.2m over a Tall Open Scrub of *Melaleuca uncinata* and *Acacia aneura* var. *aneura* to 4m over a Tall Shrubland dominated by *Acacia masliniana* to 3m over a Low Shrubland dominated by *Micromyrtus clavata* (ms) and *Thryptomene cuspidata* to 1m over a Very Open Herbland of *Ecdeiocolea monostachya* and *Hyalosperma glutinosum* subsp. *glutinosum* to 0.5m.

This community is represented by quadrats Q10a, Q10b, Q10c, Q10d and Q10e Condition: Excellent to Good

11. Tall Open Scrub Acacia longispinea, Acacia ramulosa subsp. ramulosa, Acacia assimilis subsp. assimilis and Grevillea paradoxa to 3m with scattered Allocasuarina acutivalvis subsp. prinsepiana, Eucalyptus oldfieldii and Eucalyptus leptopoda subsp. arctata to 3m over a Shrubland dominated by Acacia stereophylla, Baeckea benthamii (ms) and Acacia aneura var. aneura to 2m over a Low Open Shrubland of Micromyrtus clavata (ms) and Cryptandra sp to 1m.

This community is represented by quadrats Q11a, Q11b and Q11c Condition: Excellent to Very Good

12. Closed Tall Scrub of *Allocasuarina acutivalvis* subsp. *prinsepiana* to 3m with scattered *Eucalyptus leptopoda* subsp. *arctata* and *Grevillea paradoxa* to 3m over a Tall Open Scrub dominated by *Acacia aneura* var. *aneura*, *Acacia masliniana*, *Acacia ramulosa* and *Acacia anthochaera* to 2m over a Low Open Shrubland dominated by *Micromyrtus clavata* (ms) and *Acacia prainii* to 0.8m over a Very Open Herbland dominated by *Ecdeiocolea monostachya* to 0.8m.

This community is represented by quadrats Q12a, Q12b and Q12c Condition: Excellent to Good

13. Open Woodland to Low Woodland of *Eucalyptus brachycorys and Callitris glaucophylla* to 4m with scattered *Santalum acuminatum* and *Eucalyptus kochii* subsp. *horistes* (ms) to 3m over a Tall Open Scrub of *Acacia aneura* var. *aneura* and *Melaleuca nematophylla* to 3m over an Open Shrubland dominated by *Alyxia buxifolia* and *Scaevola spinescens* over a Low Open Shrubland of *Ptilotus obovatus* to 0.5m.

This community is represented by quadrats Q13a, Q13b and Q13c Condition: Very Good to Good

14. Tall Open Scrub to Tall Open Shrubland dominated by *Melaleuca scalena* and *Baeckea benthamii* (ms) to 3m with occasional *Allocasuarina acutivalvis* subsp. *prinsepiana* over a Closed Low Heath dominated by *Acacia aneura* var. *aneura* to 1m over a Very Open Herbland dominated by *Ecdeiocolea monostachya* to 0.8m.

This community is represented by quadrats Q14a and Q14b Condition: Excellent to Good

15. Low Woodland of Eucalyptus loxophleba subsp. supralaevis and Eucalyptus salicola to 10m with scattered Callitris glaucophylla and Hakea minyma to 5m over a Tall Shrubland of Acacia aneura var. aneura, Acacia anthochaera and Eremophila caperata (ms) to 3m over an Open Shrubland dominated by Gastrolobium laytonii and Eremophila oppositifolia to 2m over a Low Open Shrubland of Olearia muelleri and Olearia dampieri subsp. eremicola to 1m.

This community is represented by quadrats Q15a, Q15b and Q15c Condition: Very Good

16. Low Open Woodland of *Eucalyptus leptopoda* subsp. *arctata*, *Eucalyptus kochii* subsp. *plenissima* to 5m with occasional *Eucalyptus kochii* subsp. *horistes* (ms) and *Eucalyptus petraea* to 3m over a Closed Tall Scrub dominated *by Allocasuarina acutivalvis* subsp. *prinsepiana* over a Tall Shrubland dominated by *Melaleuca nematophylla*, *Acacia resinimarginea* and *Acacia acuminata* (npv) (ms) to 3.5m over an Open Shrubland dominated by *Acacia aneura* var. *aneura* to 2m.

This community is represented by quadrats Q16a, Q16b and Q16c Condition: Excellent to Good

17. Low Open Woodland of Eucalyptus kochii subsp. plenissima, Eucalyptus kochii subsp. horistes (ms) over a Tall Open Scrub dominated by Allocasuarina acutivalvis subsp. prinsepiana, Acacia aneura var. aneura, Micromyrtus clavata (ms) and Acacia acuminata (npv) (ms) over a Low Open Shrubland dominated by Acacia andrewsii, Acacia ramulosa var. ramulosa, Acacia acuaria and Acacia anthochaera on clayey loamy soils.

This community is represented by quadrats Q17a, Q17b and Q17c Condition: Excellent to Very Good

18. Tall Shrubland dominated by *Allocasuarina acutivalvis* subsp. *prinsepiana*, *Melaleuca leiocarpa* and *Calycopeplus paucifolius* with occasional *Eucalyptus petraea* and *Callitris glaucophylla* to 4m over a Tall Open Shrubland of *Acacia aneura* var. *aneura*, *Acacia acuminata* (npv) (ms) and *Acacia tetragonophylla* to 2.2m over an Open Shrubland dominated by *Hakea minyma* and *Philotheca tomentella* to 1.5m over a Very Open Herbland dominated by *Lepidosperma costale* and *Hyalosperma glutinosum* subsp. *glutinosum* on loamy clayey soils.

This community is represented by quadrats Q18a, Q18b and Q18c Condition: Excellent to Very Good

19. Closed to Open Heath dominated by *Acacia masliniana*, *Acacia stereophylla* var. *stereophylla*, *Micromyrtus clavata* (ms), *Melaleuca fabric*, *Melaleuca cordata* and *Grevillea juncifolia* (ms) to 2.2m over a Very Open Herbland dominated by *Hyalosperma glutinosum* subsp. *glutinosum*.

This community is represented by quadrats Q19 Condition: Excellent to Very Good

20. Closed Tall Scrub dominated by *Allocasuarina acutivalvis* subsp. *prinsepiana*, *Melaleuca uncinata* and *Acacia acuminata* (npv) (ms) to 3m over an Open Shrubland dominated by *Dodonaea inaequifolia* to 1.3m over a Very Open Herbland dominated by *Lepidosperma costale* to 1m.

This community represents quadrats Q20a and Q20b Condition: Excellent to Very Good

21. Tall Open Scrub of *Grevillea obliquistigma* subsp. *obliquistigma* and *Acacia masliniana* to 3m with scattered *Eucalyptus leptopoda* subsp. *arctata* to 3m over an Open Shrubland dominated by *Melaleuca brophyi* to 1.2m over a Very Open Sedgeland dominated by *Ecdeiocolea monostachya* to 0.3m.

This community is represented by quadrat Q21 Condition: Excellent to Very Good

22. Closed Shrubland dominated by *Acacia aneura* var. *aneura* with occasional *Melaleuca brophyi* and *Eucalyptus leptopoda* subsp. *arctata*.

This community is represented by quadrat Q22 Condition: Very Good

23. Open Heath dominated by *Melaleuca uncinata, Acacia prainii, Acacia aneura* var. *aneura* and *Acacia acuminata* (npv) (ms) to 1.6m over an Open Shrubland dominated by *Philotheca tomentella* and *Eremophila latrobei* subsp. *latrobei* (ms) to 0.5m over a Very Open Sedgelands dominated by *Ecdeiocolea monostachya* to 0.8m on yellow sandy loam.

This community is represented by quadrat Q23 Condition: Excellent to Very Good

24. Open Woodland of *Eucalyptus salicola* to 0.5m over Tall Open Scrub dominated by Acacia *aneura* var. *aneura*, *Acacia acuminata* (npv) (ms), *Acacia longispinea* and *Acacia ramulosa* var. *ramulosa* to 3m on yellow sandy loam.

This community is represented by quadrat Q24 Condition: Very Good

25. Closed Heath of *Acacia masliniana* to 2m in height over a Low Open Shrubland dominated by *Melaleuca cordata* and *Thryptomene cuspidata* to 1m in height. The area associated with this vegetation type has been burnt in the previous 2-5 years.

This community is represented by quadrat Q25

Condition: Very Good

26. Tall Open Shrubland dominated by *Hakea subsulcata* to 2m over an Open Low Heath dominated by *Micromyrtus clavata* (ms), *Hibbertia ancistrophylla* (ms) and *Philotheca brucei* subsp. *brucei* to 1m.

This community is represented by quadrat Q26 Condition: Very Good

27. Closed Heath dominated by *Melaleuca uncinata* to 2m with occasional *Eucalyptus petraea* and *Acacia assimilis* subsp. *assimilis* to 3m over a Low Open Shrubland dominated by *Acacia alata* and *Ptilotus obovatus* to 0.8m on hardpan.

This community is represented by quadrat Q27 Condition: Very Good

28. Open Woodland dominated by *Eucalyptus leptopoda* subsp. *arctata* to 15m over a Tall Shrubland dominated by *Callitris glaucophylla* and *Acacia acuminata* (npv) (ms) to 5m over a Tall Open Shrubland dominated by *Eremophila latrobei* subsp. *latrobei* (ms), *Eremophila clarkei*, *Acacia tetragonophylla*, *Dodonaea inaequifolia* and *Alyxia buxifolia* to 2.5m over a Very Open Sedgeland dominated by *Lepidosperma costale* to 0.6m on granite outcropping.

This community is represented by quadrat Q28

Condition: Good

29. Closed Tall Scrub dominated by *Acacia acuminata* (npv) (ms), *Melaleuca nematophylla*, *Grevillea scabrida* (P3) and *Baeckea benthamii* (ms) to 2.5m with occasional *Eucalyptus petraea* over a Very Open Herbland dominated by *Borya sphaerocephala*.

This community is represented by quadrat Q29 Condition: Excellent to Very Good

30. Mixed Tall Open Scrub dominated by *Acacia tetragonophylla* and *Acacia colletioides* with *Eremophila oldfieldii* subsp. *oldfieldii* and *Senna artemisioides* subsp. x *artemisioides* to 2.5m over a Very Open Herbland dominated by *Borya sphaerocephala* on granite outcropping.

This community is represented by quadrat Q30

Condition: Very Good

31. Closed Tall Scrub of *Baeckea benthamii*, *Melaleuca filifolia* and *Acacia assimilis* subsp. *assimilis* to 4m over a Low Open Shrubland of *Thryptomene cuspidata* to 1m.

This community is represented by quadrat Q31

Condition: Excellent to Very Good

32. Tall Open Scrub of *Acacia aneura* var. *aneura*, *Callitris glaucophylla*, *Grevillea obliquistigma* subsp. *obliquistigma* to 4m with scattered *Santalum acuminatum* to 3m over a Low Open Shrubland dominated by *Acacia colletioides* and *Acacia assimilis* subsp. *assimilis* to 1m.

This community is represented by quadrat Q32

Condition: Very Good

33. Closed Heath dominated by *Acacia stereophylla* var. *stereophylla* to 1.8m over an Open Shrubland dominated by *Baeckea benthamii* (ms) and *Acacia aneura* var. *aneura* to 1.5m over a Low Open Shrubland dominated by *Philotheca brucei* subsp. *brucei* and *Enekbatus stowardii* to 0.4m.

This community is represented by quadrat Q33

Condition: Excellent to Very Good

34. Tall Shrubland dominated by *Melaleuca nematophylla*, *Grevillea integrifolia* and *Acacia aneura* var. *aneura* to 3m with occasional *Eucalyptus loxophleba* subsp. *supralaevis* to 15m over a Low Shrubland dominated by *Ptilotus obovatus*.

This community is represented by quadrat Q34

Condition: Good

35. Tall Shrubland dominated by *Acacia quadrimarginea*, *Acacia ramulosa* var. *ramulosa* and Calycopeplus *paucifolius* to 6m over an Open Herbland dominated by *Borya sphaerocephala* on clayey loams.

This community is represented by quadrat Q38

Condition: Very Good

3.2.2 Vegetation Significance

None of the vegetation associations described from the survey areas are classified as TEC's as described by English (2002), or listed as a TEC under the *Environmental Protection Biodiversity Conservation Act* (1999). None of the vegetation associations recorded are regarded as Regionally Significant.

3.2.3 Vegetation Condition

Vegetation condition associated with the supplementary survey area ranged from Good to Excellent according to condition rating scale condition rating scale devised by Keighery and described in Bush Forever (Government of Western Australia, 2000).

A description of the vegetation condition ratings relevant to the supplementary study area are outlined below.

Excellent (E) Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species.

Very

Good (VG) 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.

Good (G) Vegetation structure significantly altered by very obvious signs of multiple disturbance. Retains basic vegetation structure or ability to regenerate. 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.

3.3 Flora

3.3.1 Description

A total of 193 species was recorded from the November 2004 and January 2005 field surveys (Appendix 1). Of these, 192 were native species and 1 was introduced. This total compares favourably with the Bennett 2000 survey, which identified 285 taxa from a considerably larger area covering a much wider range of habitat and landforms

which was conducted at a more suitable time of the year for the identification of

which was conducted at a more suitable time of the year for the identification of ephemeral and herbaceous species. Several of the taxa recorded could only be identified to genus level due to lack of flowering material. The total number of species recorded from the ATA Environmental survey included 20 Monocotyledons and 173 Dicotyledons. The families with the greatest number of species are the Myrtaceae (Eucalyptus family – 41 species) and Mimosaceae (Wattle family – 27 species). The largest representation of species was recorded for the Acacias (27 species), Eremophilas (14 species) and Melaleucas (13 species).

3.3.2 Significant Flora

According to CALM's Rare Flora databases, 37 Declared Rare and Priority listed species have been recorded from general vicinity of the Mt Gibson project area (Table 2).

TABLE 2
CALM LIST OF DECLARED RARE AND PRIORITY FLORA PREVIOUSLY RECORDED FROM VICINITY OF MT GIBSON

CONS Code	Taxa
DRF	
	Acacia imitans
	Cyphanthera odgersii subsp. occidentalis
	Darwinia masonii
	Eucalyptus cruces subsp. praecipua
	Eucalyptus synandra
	Hybanthus cymulosus
	Pityrodia axillaris
Priority 1	
-	Acacia cerastes
	Acacia unguicula
	Allocasuarina tessellata
	Baeckea sp. Paynes Find
	Chamelaucium ?sp. Yalgoo (Y Chadwick 1816)
	Dodonaea sp. Ninghan (H Demarz 5121)
	Gnephosis setifera
	Grevillea subtiliflora
	Micromyrtus cuensis
	Micromyrtus racemosa var. muconata
	Leptospermum exsertum
	Philotheca nutans
	Rhodanthe collina
	Thryptomene ninghanensis
Priority 2	Acacia synoria
	Baeckea sp. Perenjori (JW Green 1516)
	Persoonia pentasticha

CONS Code	Taxa
Priority 3	
	Acacia acanthoclada subsp. glaucescens
	Calytrix uncinata
	Cryptandra imbricata
	Goodenia perryi
	Grevillea asparagoides
	Grevillea eriobotrya
	Grevillea granulosa
	Grevillea scabrida
	Podotheca uniseta
	Psammomoya implexa
	Verticordia insignis subsp. eomagis
	Verticordia venusta
Priority 4	Grevillea rudis

The November 2004 and January 2005 supplementary flora and vegetation surveys conducted by ATA Environmental identified three Priority listed species from the study area; the Priority 1 *Acacia cerastes*, the Priority 2 listed *Persoonia pentasticha* and the Priority 3 *Grevillea scabrida*. All 3 species were recorded from the same area adjacent to granite outcropping approximately 5km north of Wanarra Rd. No mining or associated activities are proposed for this area.

Acacia cerastes is a low tangled glabrous apparently leafless shrub, growing 0.5 to 1.5m tall with a spread to 2m in diameter. CALM (2003) did not report on flowering. This species has a known distribution from the following locations: Mt Gibson and Mt Singleton (CALM 2004) where it occurs on rocky hills (Maslin, 2002). Maslin (2001) describes Acacia cerastes as a much-branched, intricate, glabrous shrub growing to 1.5m high. The branchlets are tortuous, terete, striate, green or brown in colour. The inflorescences are rudimentary on peduncles 3 to 4mm long with globular golden heads.

CALM records indicate there are 11 populations of *Acacia cerastes*. Of these populations at least five, those recorded by Bennett (2000), are in the general area of the project, near the Mt Gibson Range. A small population of approximately 5 plants of *Acacia cerastes* was recorded by ATA Environmental during the current survey from Mixed Closed Heath dominated by *Acacia ramulosa*, *Acacia assimilis* subsp. *assimilis*, *Melaleuca uncinata* and *Baeckea benthamii* (MGA 511555E; 6730363N). An additional 1700 plants were recorded from the Mt Gibson lease during a targeted survey for a new *Lepidosperma* sp conducted in February 2006.

Persoonia pentasticha is a small yellow flowering shrub growing 0.3 to 1.8 m tall with a similar spread to 1 m diameter. CALM reports flowering in August. However, during the survey the plants were in full flower, extending the reported flowering period to October. This species has a known distribution from the following locations: Camel Soak, Mingenew, Mullewa, Perenjori, Yuna and Oudabunna Station.

Two small populations of this species were recorded by ATA Environmental during the supplementary surveys from two areas approximately 4km north of Wanarra Road.; 3 plants from Tall Shrubland dominated by *Melaleuca nematophylla*, *Grevillea*

integrifolia (MGA 511972E 6730763N) and 4 plants from Tall Shrubland dominated by *Melaleuca nematophylla*, *Grevillea integrifolia* and *Acacia aneura* var. *aneura* (MGA 511834E 6730195N).

Grevillea scabrida is a much branched, silvery leafed shrub growing to 1 m tall. CALM (2003) reports flowering between July. This species has a known distribution from Mt Singleton and Mt Gibson.

CALM records indicate that there are 13 populations of *Grevillea scabrida*. Of these populations, two are in the general area of the project, located to the north or east of the project area. A total of approximately 20 *Grevillea scabrida* plants from two populations (MGA 511800E 6730800N and 510932E 6730205N) were recorded by ATA Environmental during the current survey from a Closed Heath to Shrubland dominated by *Baeckea benthamii* (ms), *Acacia ramulosa*, *Acacia assimilis* subsp. *assimilis* and *Melaleuca uncinata*.

Additionally, *Gastrolobium laytonii*, which was recorded in significant numbers during the supplementary surveys from immediately adjacent to and from approximately 5km north of Wanarra Road is considered to be a possible locally endemic species. It has been previously recorded by Bennett (2000) from several vegetation types occurring over the Mt Gibson ranges. There are no other records of this taxon from elsewhere and it may require further investigation.

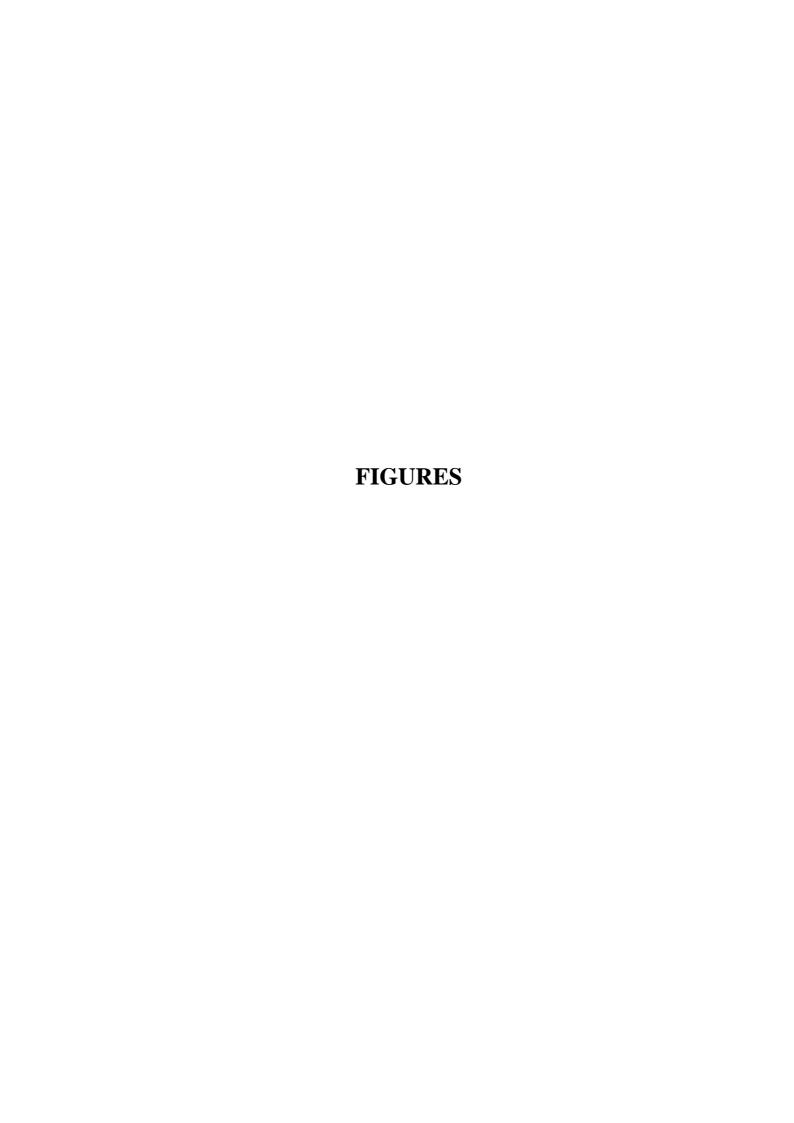
4. CONCLUSIONS

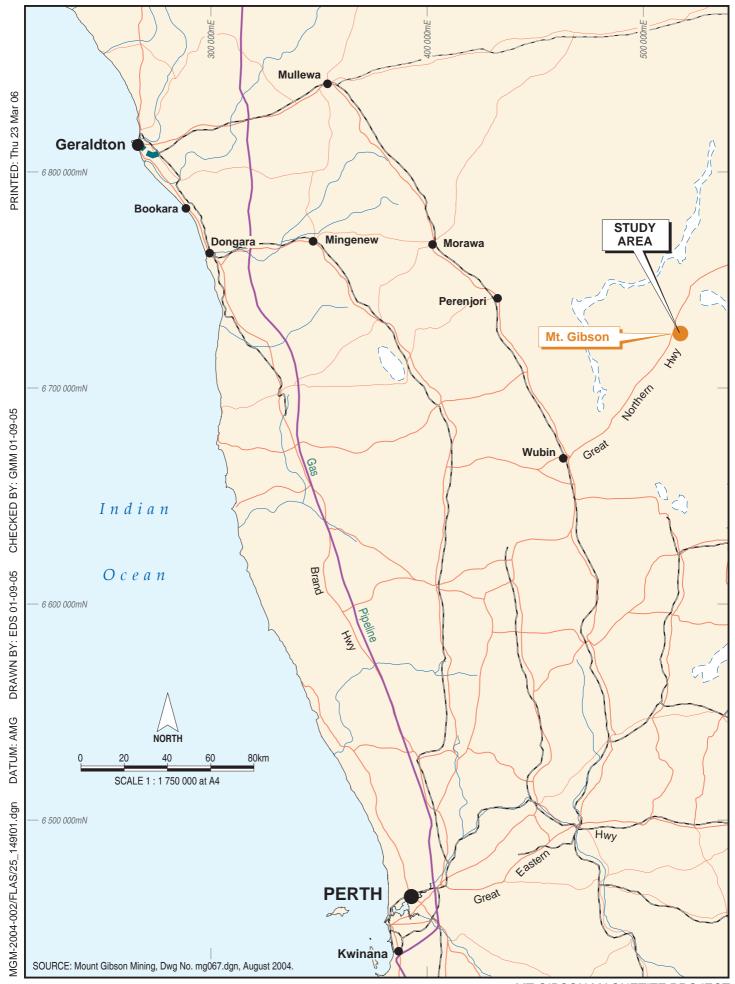
- A total of 35 vegetation associations were described and mapped by ATA Environmental from three main areas associated with the Mt Gibson Magnetite project area (i.e. two areas to the west of Great North Highway, one north and one south of Wanarra Rd and one area to the east of Extension Hill).
- A total of 193 plant species, including 192 native species, were recorded by ATA Environmental during the November 2004 and January 2005 supplementary surveys. The timing of the surveys was not considered optimal for the identification of many ephemeral species but was appropriate for the mapping of vegetation communities on a structural basis.
- Populations of three Priority listed taxa, the Priority 1 *Acacia cerastes*, and the Priority 2 *Persoonia pentasticha* and the Priority 2 *Grevillea scabrida* were recorded by ATA Environmental from the supplementary surveys areas. These populations are not located in areas proposed for mining.

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MT GIBSON MAGNETITE PROJECT SUPPLEMENTARY VEGETATION & FLORA SURVEYS

12

ATA ENVIRONMENTAL CONSULTING VEGETATION ASSOCIATIONS LEGEND

Closed Heath to Tall Open Shrubland dominated by Acacia aneura var. aneura, Calycopeplus paucifolius, Melaleuca uncinata and Aluta aspera with scattered Melaleuca nematophylla over an Open Heath dominated by Acacia assimilis subsp. assimilis over a Low Open Shrubland dominated by Thryptomene cuspidata on lateritic

Condition: Very Good

Closed Heath to Tall Open Scrub dominated by Acacia masliniana, Acacia aneura var. aneura, and Allocasuarina acutivalvis subsp. prinsepiana with scattered Eucalyptus leptopoda subsp. arctata over a Shrubland dominated by Melaleuca nematophylla, Grevillea paradoxa and Micromyrtus clavata (ms). Condition: Very Good

Low Open Woodland dominated by Eucalyptus kochii subsp. plenissima, Eucalyptus leptopoda subsp. arctata and Eucalyptus ebbanoensis subsp. ebbanoensis with occasional Callitris glaucophylla and Allocasuarina acutivalvis subsp. prinsepiana over a Tall Open Shrubland dominated by Acacia anthochaera and Acacia tetragonophylla over a Shrubland of Acacia aneura var. aneura and Hibbertia ancistrophylla (ms) on loamy clavey soils with

Condition: Excellent to Good

Closed Tall Scrub to Shrubland dominated by Acacia aneura var. aneura, Melaleuca nematophylla, Baeckea sp. with occasional Allocasuarina acutivalvis subsp. prinsepiana, Eucalyptus kochii subsp. horistes (ms) and Eucalyptus brachycorys over a Low Open Shrubland dominated by Micromyrtus clavata (ms) over a Very Open Herbland dominated by Hyalosperma glutinosum subsp. glutinosum

Closed Tall Scrub to Tall Open Scrub dominated by Acacia aneura var. aneura, Hakea minyma and Allocasuarina acutivalvis subsp. prinsepiana with occasional Santalum acuminatum over an Open Shrubland dominated by Philotheca brucei subsp. brucei, Philotheca tomentella, Thryptomene cuspidata and Micromytus clavata (ms) Condition: Excellent to Good

6 Closed Heath to Shrubland dominated by Baeckea benthamii (ms), Acacia ramulosa, Acacia assimilis subsp. assimilis and Melaleuca uncinata over a Very Open Herbland dominated by Borya sphaerocephala and Calandinia polyandra associated with granite outcropping.

Condition: Very Good to Degraded

Woodland to Low Open Woodland of Eucalyptus kochii subsp. plenissima, Eucalyptus oldfieldii with scattered Callitris glaucophylla over a Tall Open Scrub dominated by Acacia aneura var. aneura, Santalum acuminatum, Hakea minyma and Melaleuca leiocarpa over an Open Shrubland dominated by Alyxia buxifolia and Phebalium tuberculosum over a Low Open Shrubland of Olearia muelleri and Olearia dampieri subsp. eremicola Condition: Very Good to Good

8 Mixed Closed Heath to Tall Open Scrub dominated by Acacia aneura var. aneura. Acacia stereophylla var. stereophylla, Acacia masliniana and Allocasuarina acutivalvis subsp. prinsepiana with scattered Eucalyptus leptopoda subsp. arctata over a Low Open Shrubland dominated by Micromyrtus clavata (ms) and Melaleuca fabri

Open Woodland of Eucalyptus loxophleba subsp. supralaevis with occasional Eucalyptus leptopoda subsp. arctata and Callitris glaucophylla over a Shrubland dominated by Acacia colletioides, Acacia tetragonophylla and Exocarpos aphyllus over a Low Open Shrubland of Olearia muelleri, Ptilotus obovatus and Atriplex bunburyana Condition: Very Good to Good

Low Open Woodland of Eucalyptus leptopoda subsp. arctata with occasional Allocasuarina acutivalvis subsp. prinsepiana over a Tall Open Scrub of Melaleuca uncinata and Acacia aneura var. aneura over a Tall Shrubland dominated by Acacia masliniana over a Low Shrubland dominated by Micromyrtus clavata (ms) and Thryptomene cuspidata over a Very Open Herbland of Ecdeiocolea monostachya and Hyalosperma glutinosum subsp. alutinosum

Condition: Excellent to Good

11 Tall Open Scrub Acacia longispinea, Acacia ramulosa subsp. ramulosa, Acacia assimilis subsp. assimilis and Grevillea paradoxa with scattered Allocasuarina acutivalvis subsp. prinsepiana, Eucalyptus oldfieldii and Eucalyptus leptopoda subsp. arctata over a Shrubland dominated by Acacia stereophylla, Baeckea benthamii (ms) and Acacia aneura var. aneura over a Low Open Shrubland of Micromyrtus clavata (ms) and Cryptandra sp. Condition: Excellent to Very Good

Closed Tall Scrub of Allocasuarina acutivalvis subsp. prinsepiana with scattered Eucalyptus leptopoda subsp. arctata and Grevillea paradoxa over a Tall Open Scrub dominated by Acacia aneura var. aneura, Acacia

masliniana, Acacia ramulosa and Acacia anthochaera over a Low Open Shrubland dominated by Micromyrtus clavata (ms) and Acacia prainii over a Very Open Herbland dominated by Ecdeiocolea monostachya. Condition: Excellent to Good

Open Woodland to Low Woodland of Eucalyptus brachycorys and Callitris glaucophylla with scattered Santalum acuminatum and Eucalyptus kochii subsp. horistes (ms) over a Tall Open Scrub of Acacia aneura var. aneura and Melaleuca nematophylla over an Open Shrubland domianated by Alyxia buxifolia and Scaevola spinescens over a Low Open Shrubland of Ptilotus obovatus

Condition: Very Good to Good

Tall Open Scrub to Tall Open Shrubland dominated by Melaleuca scalena and Baeckea benthamii (ms) with occasional Allocasuarina acutivalvis subsp. prinsepiana over a Closed Low Heath dominated by Acacia aneura var. aneura over a Very Open Herbland dominated by Ecdeiocolea monostachya

Low Woodland of Eucalyptus loxophleba subsp. supralaevis and Eucalyptus salicola with scattered Callitris glaucophylla and Hakea mynima over a Tall Shrubland of Acacia aneura var. aneura, Acacia anthochaera and Eremophila caperata (ms) over an Open Shrubland dominated by Gastrolobium laytonii, Eremophila oppositifolia over a Low Open Shrubland of Olearia muelleri and Olearia dampieri subsp. eremicola

Low Open Woodland of Eucalyptus leptopoda subsp. arctata, Eucalyptus kochii subsp. plenissima with occasional Eucalyptus kochii subsp. horistes (ms) and Eucalyptus petraea over a Closed Tall Scrub dominated by Allocasuarina acutivalvis subsp. prinsepiana over a Tall Shrubland dominated by Melaleuca nematophylla, Acacia resinimarginea and Acacia acuminata (npv) (ms) over an Open Shrubland dominated by Acacia aneura var.

Condition: Excellent to Good

Condition: Very Good

Low Open Woodland of Eucalyptus kochii subsp. plenissima, Eucalyptus kochii subsp. horistes (ms) over a Tall Open Scrub dominated by Allocasuarina acutivalvis subsp. prinsepiana, Acacia aneura var. aneura, Micromyrtus clavata (ms) and Acacia acuminata (npv) (ms) over a Low Open Shrubland dominated by Acacia andrewsii, Acacia ramulosa var. ramulosa, Acacia acuaria and Acacia anthochaera on clayey loamy soils.

Condition: Excellent to Very Good

18 Tall Shrubland dominated by Allocasuarina acutivalvis subsp. prinsepiana, Melaleuca leiocarpa and Calycopeplus paucifolius with occasional Eucalyptus petraea and Callitris glaucophylla over a Tall Open Shrubland of Acacia aneura var. aneura, Acacia acuminata (npv) (ms) and Acacia tetragonophylla over an Open Shrubland dominated by Hakea minyma and Philotheca tomentella over a Very Open Herbland dominated by Lepidosperma costale and Hyalosperma glutinosum subsp. glutinosum on loamy clayey soils. Condition: Excellent to Very Good

Closed to Open Heath dominated by Acacia masliniana, Acacia stereophylla var. stereophylla, Micromyrtus clavata (ms), Melaleuca fabri and Grevillea juncifolia (ms) over a Low Open Shrubland of Melaleuca cordata and Thryptomene cuspidata over a Very Open Herbland dominated by Hyalosperma glutinosum subsp. glutinosum.

Condition: Excellent to Very Good Closed Tall Scrub dominated by Allocasuarina acutivalvis subsp. prinsepiana, Melaleuca uncinata and Acacia acuminata (npv) (ms) over an Open Shrubland dominated by Dodonaea inaequifolia over a Very Open Herbland

Condition: Excellent to Very Good

Tall Open Scrub of *Grevillea obliquistigma* subsp. *obliquistigma* and *Acacia masliniana* with scattered *Eucalyptus leptopoda* subsp. *arctata* over an Open Shrubland dominated by *Melaleuca brophyi* over a Very Open Sedgeland dominated by Ecdeiocolea monostachya. Condition: Excellent to Very Good

Closed Shrubland dominated by Acacia aneura var. aneura with occasional Melaleuca brophyi and Eucalyptus leptopoda subsp. arctata

Open Heath dominated by Melaleuca uncinata, Acacia prainii, Acacia aneura var. aneura and Acacia acuminata (npv) (ms) over an Open Shrubland dominated by Philotheca tomentella and Eremophila latrobei subsp. latrobei (ms) over a Very Open Sedgelands dominated by Ecdeiocolea monostachya on yellow sandy loam. Condition: Excellent to Very Good

Open Woodland of Eucalyptus salicola over Tall Open Scrub dominated by Acacia aneura var. aneura, Acacia acuminata (npv) (ms), Acacia longispinea and Acacia ramulosa var. ramulosa on yellow sandy loam. Condition: Very Good

25 Closed Heath of Acacia masliniana over a Low Open Shrubland dominated by Melaleuca cordata and Thryptomene cuspidate

26 Tall Open Shrubland dominated by Hakea subsulcata over a an Open Low Heath dominated by Micromyrtus clavata (ms), Hibbertia ancistrophylla (ms) and Philotheca brucei subsp. brucei. Condition: Very Good

27 Closed Heath dominated by Melaleuca uncinata with occasional Eucalyptus petraea and Acacia assimilis subsp. assimilis over a Low Open Shrubland dominated by Acacia alata and Ptilotus obovatus on hardpan. Condition: Very Good

Open Woodland dominated by Eucalyptus leptopoda subsp. arctata over a Tall Shrubland dominated by Callitris glaucophylla and Acacia acuminata (npv) (ms) over a Tall Open Shrubland dominated by Eremophila latrobei subsp. latrobei (ms), Eremophila clarkei, Acacia tetragonophylla, Dodonaea inaequifolia and Alyxia buxifolia over a Very Open Sedgeland dominated by Lepidosperma costale on granite outcropping. Condition: Very Good

29 Closed Tall Scrub dominated by Acacia acuminata (npv) (ms), Melaleuca nematophylla, Grevillea scabrida (P3) and Baeckea benthamii (ms) with occasional Eucalyptus petraea over a Very Open Herbland dominated by Borya sphaerocephala.

Condition: Excellent to Very Good

Condition: Very Good

30 Mixed Tall Open Scrub dominated by Acacia tetragonophylla and Acacia colletioides with Eremophila oldfieldii subsp. oldfieldii and Senna artemisioides subsp. x artemisioides over a Very Open Herbland dominated by Borya sphaerocephala on granite outcropping Condition: Very Good

Closed Tall Scrub of Baeckea benthamii, Melaleuca filifolia (P2) and Acacia assimilis subsp. assimilis over a Low Open Shrubland of Thryptomene cuspidata Condition: Excellent to Very Good

Tall Open Scrub of Acacia aneura var. aneura, Callitris glaucophylla, Grevillea obliquistigma subsp. obliquistigma with scattered Santalum acuminatum over a Low Open Shrubland dominated by Acacia colletioides and Acacia assimilis subsp. assimilis

Closed Heath dominated by Acacia stereophylla var. stereophylla over an Open Shrubland dominated by Baeckea benthamii (ms) and Acacia aneura var. aneura over a Low Open Shrubland dominated by Philotheca brucei subsp. brucei and Enekbatus stowardii

Condition: Excellent to Very Good Tall Shrubland dominated by Melaleuca nematophylla, Grevillea integrifolia and Acacia aneura var. aneura with occasional Eucalyptus loxophleba subsp. supralaevis over a Low Shrubland dominated by Ptilotus obovatus

Tall Shrubland dominated by Acacia quadrimarginea, Acacia ramulosa var. ramulosa and Calycopeplus paucifolius over an Open Herbland dominated by Borya sphaerocephala on clayey loams. Condition: Very Good

Granite Outcrop

BENNETT ENVIRONMENTAL CONSULTING VEGETATION ASSOCIATIONS LEGEND

W1 Woodland of Eucalyptus salmonophloia (Salmon gum) over Thicket of Acacia species over Dense Low Heath dominated by Atriplex bunburyana on loam

W2 Dense to Open Woodland of Eucalyptus loxophleba subsp. supralaevis with occasional Callitris glaucophylla over a Thicket of Acacia species dominated by A.assimilis over Herbs dominated at the time of survey by Velleia rosea

W3 Woodland of Eucalyptus loxophleba subsp. supralaevis and Callitris glaucophylla over a Thicket of Melaleuca stereophloia, Acacia nigripilosa subsp. nigripilosa, A. obtecta over Low Shrubland of Olearia dampiera subsp. erimcola and Bossiaea walkeri and Herbs on silty sand.

W4 Very Open Woodland of Callitris glaucophylla and Eucalyptus loxophleba subsp. supralaevis over an Open hicket of Acacia acuminata over a Herbland in sandy loam.

Open Woodland of Eucalyptus loxophleba subsp. supralaevis with occasional Callitris glaucophylla over an Open Thicket of Acacia acuminata over a Low Shrubland of mixed species in silty clay.

W6 Very Open Woodland of Eucalyptus salicola over Open Low Shrubland of mixed shrubs over Herbs and Dense

MALLEE COMMUNITIES

M1 Open Tree Mallee of Eucalyptus brachycorys, E. hypochlamydea subsp. hypochlamydea, E. loxophleba subsp. supralaevis and Callitris glaucophylla over Thicket of Acacia species over Low Shrubland and Herbs on loam.

Wery Open Tree Mallee of Eucalyptus brachycorys and E. oldfieldii over a Thicket of Acacia anthochaera and A. ramulosa over a Herbland in loamy clay.

M3 Open Shrub Mallee of Eucalyptus brachycorys and E. synandra over Thicket of Acacia anthochaera and A. ramulosa over Low Shrubland of Baeckea affin. cryptandroides and Ptilotus obovatus over Herbs of Amphipogon caricinus subsp. caricinus, Chamaexeros macrantha, Gilbertia tenuifolia, Waitzia acuminata and Velleia rosea.

Wery Open Shrub Mallee of Eucalyptus leptopoda with emergent Eucalyptus loxophleba subsp. supralaevis over Thicket of Acacia ramulosa over Herbland of Asteraceae species in loam.

THICKET COMMUNITIES

T1 Dense Thicket of mixed species dominated by Acacia species, Allocasuarina acutivalvis subsp. prinsepiana, Calcopeplus paucifolius, and Melaleuca nematophylla over Low Shrubland in jaspilite rocks with pockets of loam.

Dense Thicket dominated by Acacia assimilis, A. stereophylla var. stereophylla, A. ramulosa and Allocasuarina acutivalvis var. prinsepiana over Low Shrubland of Acacia acuaria, Hemigenia sp. Paynes Find and Baeckea affin. cryptandroides in loam with scattered rocks on the surface.

T3 Dense Thicket of Acacia assimilis, Allocasuarina acutivalvis subsp. prinsepiana and Melaleuca nematophylla over Low Shrubland of Hemigenia sp. Paynes Find and Hibbertia crassifolia in loam pockets in jaspilite rocks.

T4 Dense Thicket of Allocasuarina acutivalvis subsp. prinsepiana with occasional Eucalyptus oldfieldii over an Open Scrub of Acacia species over Open Shrubland of Hemigenia sp. Paynes Find or Open Herbs of Xanthosia bungei.

Thicket of Allocasuarina acutivalvis subsp. prinsepiana and Grevillea obliquistigma with emergent Callitris glaucophylla over Low Shrubland dominated by Darwinia masonii, Hibbertia crassifolia, Melaleuca radula and Philotheca brucei subsp. brucei over Open Herbs of Xanthosia bungei in loam pockets in dense jaspilite rocks.

Thicket of Acacia aneura and Acacia stowardii over Low Shrubland of mixed species with large numbers of Darwinia masonii in loam with abundant rocks on the surface.

Open Thicket of Acacia ramulosa with emergent Callitris glaucophylla and Eucalyptus loxophleba subsp. supralaevis over Low Shrubland and Herbs in loamy sand surrounding the lake edge.

Dense thicket of Melaleuca sp. Wongan Hills and Acacia ramulosa over low shrubland of mixed species in loamy

T9 Dense Thicket of Acacia species, Hakea species, Eucalyptus brachycorys and E. oldfieldii with emergent Callitris alaucophylla, over Open Low Shrubland of mixed species on sand.

Thicket of Acacia acuminata, A. ramulosa, Allocasuarina acutivalvis subsp. prinsepiana, Eucalyptus hypoclamydea subsp. hypoclamydea over an Open Shrubland of mixed species on sandy loam.

T11 Thicket of Acacia species and Allocasuarina acutivalvis subsp. prinsepiana with emergent Very Open Mallee of Eucalyptus brachycorys and E. leptopoda in loam.

T12 Thicket of Acacia ramulosa with emergent Eucalyptus oldfieldii and E. loxophleba subsp. supralaevis over a Low Shrubland over Herbs in loam with pebbles common on the surface.

HEATH COMMUNITIES

Low Heath of Ptilotus obovatus with emergent shrubs of Acacia stowardii and Calcopeplus paucifolius over Herbs in loamy clay amongst large boulders.

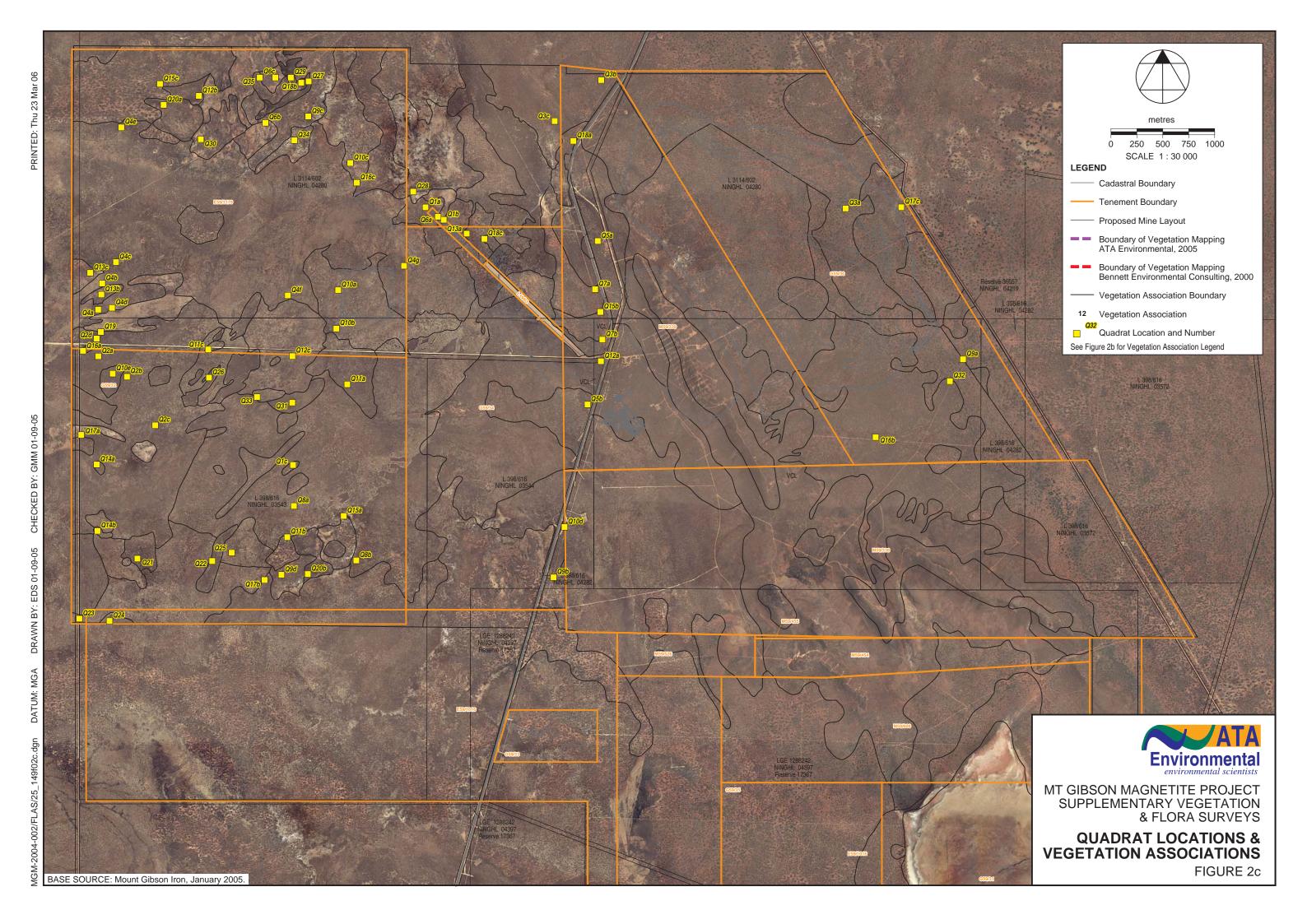
HS2 Dense Low Heath of *Halosarcia* species with other chenopods over Herbs in sandy clay soil in a salt lake.



MT GIBSON MAGNETITE PROJECT SUPPLEMENTARY VEGETATION & FLORA SURVEYS

VEGETATION ASSOCIATIONS LEGEND

FIGURE 2b





APPENDIX 1 MOUNT GIBSON SUPPLEMENTARY SURVEYS FLORA SPECIES LIST

APPENDIX 1 MOUNT GIBSON SUPPLEMENTAR SURVEYS FLORA SPECIES LIST

Family	Genus/Species
MONO COMM ED ONG	
MONOCOTYLEDONS	
ANTHERICACEAE	Borya sphaerocephala
	Thysanotus patersonii
	Thysanotus sp.
APOCYNACEAE	Alyxia buxifolia
CUPRESSACEAE	Callitris glaucophylla
CYPERACEAE	Lepidosperma costale
	Lepidosperma gracile
	Lepidosperma tenue
	Schoenus sp.
D A GLYDOG ONLA GE A E	
DASYPOGONACEAE	Chamaexeros macranthera
	Chamaexeros sp.
	Lomandra effusa
PHORMIACEAE	Dianella revoluta var. divaricata
r rroruviii rozz iz	Sumetra revenue van arrentente
POACEAE	Amphipogon caricinus
	Amphipogon turbinatus
	Aristida contorta
	Austrostipa sp.
	Eragrostis sp.
	Monachather paradoxus
PEGENOVI GE LE	
RESTIONACEAE	Ecdeiocolea monostachya
DICOTYLEDONS	
DICOTTLEDONS	
AMARANTHACEAE	Ptilotus exaltatus var. exaltatus
	Ptilotus obovatus
	Ptilotus schwartzii var. schwartzii
ASTERACEAE	Brachyscome sp.
	Cephalipterum drummondii
	Hyalosperma glutinosum subsp. glutinosum
	Hylaosperma glutinosum subsp. venustum
	Olearia dampieri subsp. eremicola (ms)
	Olearia muelleri
	Olearia pimeleoides

Family	Genus/Species
	Olearia sp.
	Rhodanthe sp.
BORAGINACEAE	*Echium plantagineum
CAESALPINACEAE	Petalostylis cassioides
	Senna artemisioides subsp. x artemisioides
	Senna artemisioides subsp. filifolia
	Senna charlesiana
	Senna sp. Austin (A.Strid 20210)
CASUARINACEAE	Allocasuarina acutivalvis subsp. prinsepiana
	Allocasuarina campestris
CHENOPODIACEAE	Atriplex bunburyana
	Atriplex lindleyi subsp. inflata
	Atriplex nummularium
	Enchylaena tomentosa
	Halosarcia inidica
	Maireana georgei
	Maireana tomentosa
	Rhagodia ?latifolia
	Rhagodia baccata
	Salsola tragus
	Sclerolaena diacantha
	Sclerolaena fusiformis
CHLOANTHACEAE	Dicrastylis ?parvifolia
	Dicrastylis sp.
	Physopsis spicata
	z nybopata spreemi
DILLENIACEAE	Hibbertia acerosa
	Hibbertia ancistrophylla (ms)
	Hibbertia crassifolia
	Hibbertia glomerosa
	Hibbertia sp.
DROSERACEAE	Drosera glanduligera
	Drosera sp.
EUPHORBIACEAE	Calva ananlus navaifalius
LOTHORDIACEAE	Calycopeplus paucifolius
FRANKENIACEAE	Frankenia pauciflora
COODENHACEAE	Cog and a prince of our
GOODENIACEAE	Scaevola spinescens
HALORAGACEAE	Glischocaryon aureum

Hemigenia sp.? Paynes Find
Prostanthera eckersleyana
Prostanthera magnifica
Prostanthera sp.
Cassytha glabella
Cassytha nodiflora
Cassytha sp.
Alyogyne hakeifolia
7 07
Acacia acuaria
Acacia acuminata
Acacia acuminata (npv) (ms)
Acacia alata
Acacia andrewsii
Acacia aneura var. aneura
Acacia anthochaera
Acacia assimilis
Acacia assimilis subsp. assimilis
Acacia burkittii
Acacia cerastes (P1)
Acacia colletioides
Acacia coolgardiensis
Acacia duriuscula
Acacia erinacea
Acacia kochii
Acacia longispinea
Acacia masliniana
Acacia prainii
Acacia quadrimarginea
Acacia ramulosa
Acacia ramulosa var. ramulosa
Acacia resinimarginea
Acacia stereophylla var. stereophylla
Acacia stowardii
Acacia tetragonophylla
Acacia sp.
1
Eremophila ?granitica
Eremophila caperata (ms)
Eremophila clarkei
Eremophila georgei
Eremophila latrobei subsp. latrobei (ms)
Eremophila longifolia

Family	Genus/Species
	Eremophila miniata
	Eremophila oldfieldii subsp. oldfieldii
	Eremophila oppositifolia
	Eremophila oppositifolia subsp. angustifolia
	Eremophila oppositifolia subsp. oppositifolia
	Eremophila pantonii
	Eremophila serrulata
	Eremophila sp.
MYRTACEAE	
	Aluta aspera subsp. hesperia
	Astus subroseus
	Baeckea benthamii (ms)
	Baeckea sp.
	Balaustion pulcherrimum
	Calothamnus chrysantherus
	Calothamnus gilesii
	Calothamnus rupestris (P4)
	Calytrix strigosa
	Chamelaucium pauciflorum subsp. pauciflorum (ms)
	Darwinia capitellata
	Darwinia sp.
	Enekbatus stowardii (ms)
	Eremaea sp.
	Eucalyptus brachycorys
	Eucalyptus ebbanoensis subsp. ebbanoensis
	Eucalyptus kochii subsp. horistes (ms)
	Eucalyptus kochii subsp. plenissima
	Eucalyptus leptopoda subsp. arctata
	Eucalyptus loxophleba
	Eucalyptus loxophleba subsp. supralaevis
	Eucalyptus oldfieldii
	Eucalyptus otajietati Eucalyptus petraea
	Eucalyptus salicola
	Homalocalyx aureus
	Melaleuca brophyi
	Melaleuca conothamnoides
	Melaleuca conomamnotaes Melaleuca cordata
	Melaleuca coraata Melaleuca eleuterostachya
	Melaleuca fabri
	Melaleuca filifolia
	Melaleuca fulgens subsp. fulgens Melaleuca laterifolia subsp. gentifolia
	Melaleuca laterifolia subsp. acutifolia
	Melaleuca leiocarpa
	Melaleuca nematophylla
	Melaleuca radula
	Melaleuca scalena

Family	Genus/Species
	Melaleuca uncinata
	Micromyrtus clavata (ms)
	Micromyrtus sp.
	Thryptomene cuspidata
PAPILIONACEAE	Daviesia divaricata
	Gastrolobium laytonii
	Mirbelia ramulosa
POLYGALACEAE	Comesperma ?ciliatum
PORTULACACEAE	Calandrinia polyandra
PROTEACEAE	Grevillea dielsiana
	Grevillea eriostachya
	Grevillea integrifolia
	Grevillea juncifolia
	Grevillea levis
	Grevillea obliquistigma subsp. obliquistigma
	Grevillea paradoxa
	Grevillea scabrida (P3)
	Hakea francisiana
	Hakea invaginata
	Hakea minyma
	Hakea preissii
	Hakea recurva
	Hakea subsulcata
	Persoonia pentasticha (P2)
	Persoonia saundersiana
	Fersoonia saunaersiana
RHAMNACEAE	Cryptandra sp.
	1
RUTACEAE	Phebalium tuberculosum
	Philotheca brucei subsp. brucei
	Philotheca tomentella
SANTALACEAE	Eurogamos anleyllus
SANTALACEAE	Exocarpos aphyllus
	Santalum acuminatum
	Santalum spicatum
SAPINDACEAE	Dodonaea inaequifolia
a a z	
SOLANACEAE	Duboisia hopwoodii
	Solanum lasiophyllum
CTEDCIII IA CEAE	Vananduonia integrifi-li-
STERCULIACEAE	Keraudrenia integrifolia Keraudrenia velutina subsp. velutina
	Keraudrenia velutina subsp. velutina

Family	Genus/Species	
THYMELAEACEAE	Pimelea brevistyla	
	Pimelea microcephala	
ZYGOPHYLLACEAE	Zygophyllum ?eremaeum	
	Zygophyllum glaucum	
Total	193	
Native species	192	
Introduces Species	1	

APPENDIX 2 QUADRAT DATA

QUADRAT Q1a 513099E 6729549N

Closed Heath of $Acacia\ aneura\ var.\ aneura\ with\ Calycopeplus\ pauciflorus\ and\ Aluta$ aspera subsp. hesperia on lateritic gravel.

Condition: Very Good



QUADRAT Q1a (30x30m)

SPECIES	% COVER	HEIGHT (M)
Acacia ramulosa	2	1.6
Calycopeplus paucifolius	5	1.6
Acacia aneura var. aneura	70	1.5
Aluta aspera subsp. hesperia	5	0.6
Melaleuca uncinata	1	0.5

QUADRAT Q1b 513275E 6729428N

Closed Heath of *Acacia aneura* var. *aneura* with *Calycopeplus pauciflorus* and *Aluta aspera* with scattered *Melaleuca nematophylla* subsp. *hesperia* on lateritic gravel.

Condition: Very Good

QUADRAT Q1b (30x30m)

SPECIES	% COVER	HEIGHT (M)
Calycopeplus paucifolius	5	1.6
Acacia aneura var. aneura	75	1.5
Aluta aspera subsp. hesperia	5	0.6
Melaleuca uncinata	1	0.5
Acacia ramulosa	10	1.5
Hyalosperma glutinosum subsp. glutinosum	<1	0.2

QUADRAT Q1c 511821E 6727063N

Tall Open Shrubland of Acacia aneura var. aneura and Melaleuca uncinata over an Open Heath dominated by Acacia assimilis subsp. assimilis over Thryptomene cuspidata Low Open Shrubland.
Condition: Very Good



QUADRAT Q1c (30x30m)

SPECIES	% COVER	HEIGHT (M)
Acacia aneura var. aneura	5	5
Melaleuca uncinata	2	5
Allocasuarina acutivalvis subsp. prinsepiana	1	3
Eucalyptus leptopoda subsp. arctata	<1	3
Acacia assimilis subsp. assimilis	50	2
Dianella revoluta var. divaricata	<1	1.2
Phebalium tuberculosum	<1	1
Thryptomene cuspidata	5	1
Hibbertia ancistrophylla (ms)	<1	0.3

QUADRAT Q2a 509943E 6728112N

Closed Heath dominated by *Acacia masliniana* and *Acacaia aneura* var. *aneura* with occasional *Allocasuarina acutivalvis* subsp. *prinsepiana* over a Low Shrubland dominated by *Micromyrtus clavata* (ms) and *Cryptandra* sp. on sands.

Condition: Very Good



QUADRAT Q2a (30x30m)

QUIDIUI Qui (Une un)			
SPECIES	% COVER	HEIGHT (M)	
Acacia assimilis	1	2.2	
Acacia masliniana	20	1.8	
Allocasuarina acutivalvis subsp. prinsepiana	<1	1.8	
Acacia longispinea	<1	1.6	
Acacia aneura var. aneura	40	1.5	
Hakea subsulcata	1	1.2	
Melaleuca fabri	<1	0.8	
Micromyrtus clavata (ms)	10	0.6	
Thryptomene cuspidata	5	0.6	
Cryptandra sp.	5	0.5	
Hyalosperma glutinosum subsp. glutinosum	<1	0.05	

QUADRAT Q2b 510220E 6727915N

Tall Open Scrub dominated by *Acacia aneura* var. *aneura*, *Acacia masliniana*, *Acacia assimilis* and *Allocasuarina acutivalvis* subsp. *prinsepiana* with scattered *Eucalyptus leptopoda* subsp. *arctata* over a Low Open Shrubland dominated by *Micromyrtus clavata* (ms).

Condition: Very Good



QUADRAT Q2b (30x30m)

QUIDINII QLO (CONCOM)		
SPECIES	% COVER	HEIGHT (M)
Acacia aneura var. aneura	15	3
Acacia assimilis	10	2.5
Acacia masliniana	15	2.5
Allocasuarina acutivalvis subsp.	8	2.2
prinsepiana		
Acacia ramulosa var. ramulosa	1	1.8
Grevillea paradoxa	<1	1.5
Micromyrtus clavata (ms)	10	0.5
Enekbatus stowardii (ms)	<1	0.3

QUADRAT Q2c 510492E 6727447N

Tall Open Scrub dominated by *Acacia masliniana*, *Allocasuarina acutivalvis* subsp. *prinsepiana* and *Acacia aneura* var. *aneura* over a Shrubland dominated by *Thryptomene cuspidata*, *Acacia acuminata* (npv) (ms) and *Grevillea paradoxa* over a Low Shrubland dominated by *Micromyrtus clavata* (ms) and *Enekbatus stowardii* (ms).

Condition: Excellent



QUADRAT Q2c (30x30m)

SPECIES	% COVER	HEIGHT (M)
Acacia masliniana	10	2.5
Allocasuarina acutivalvis subsp.	8	2.5
prinsepiana		
Acacia aneura var. aneura	15	2.2
Melaleuca scalena	1	2
Acacia acuminata (npv) (ms)	5	1.5
Acacia longispinea	1	1.5
Thryptomene cuspidata	10	1.5
Grevillea paradoxa	2	1.3
Melaleuca cordata	1	1
Enekbatus stowardii (ms)	2	0.5
Micromyrtus clavata (ms)	10	0.5
Hibbertia sp.	1	0.5

QUADRAT Q2d 509927E 6728283N

Tall Open Scrub of Acacia masliniana, Melaleuca uncinata and Allocasuarina acutivalvis subsp. prinsepiana over Shrubland of Melaleuca nematophylla, Grevillea paradoxa and Micromyrtus clavata (ms).

Condition: Very Good



QUADRAT Q2d (30x30m)

SPECIES	% COVER	HEIGHT (M)
Acacia masliniana	20	3
Melaleuca uncinata	40	3
Allocasuarina acutivalvis	5	3
subsp. prinsepiana		
Acacia assimilis subsp. assimilis	1	2.2
Acacia aneura var. aneura	1	2
Grevillea paradoxa	2	1.6
Baeckea benthamii (ms)	5	1.5
Melaleuca nematophylla	10	1.5
Micromyrtus clavata (ms)	5	1.1
Eremophila latrobei subsp. latrobei (ms)	<1	1
Senna artemisioides subsp. x artemisioides	1	0.8
Micromyrtus clavata (ms)	<1	0.5
Baeckea sp.	<1	0.3
Darwinia sp.	2	0.05
Cassytha nodiflora	<1	Climber

QUADRAT Q3a 517150E 6729538N

Low Open Woodland of *Eucalyptus kochii* subsp. *plenissima* with occasional *Callitris glaucophylla* over a Tall Open Shrubland of *Acacia anthochaera* and *Acacia tetragonophylla* over a Low Open Shrubland dominated by *Olearia muelleri*.

Condition: Good



QUADRAT Q3a (30x30m)

SPECIES	% COVER	HEIGHT (M)
Eucalyptus kochii subsp.	4	8
plenissima		
Callitris glaucophylla	2	4.2
Allocasuarina acutivalvis subsp.	2	4.1
prinsepiana		
Acacia anthochaera	1	2.2
Acacia tetragonophylla	1.5	2.1
Hakea preissii	<1	2
Acacia acuaria	<1	1
Eremophila oppositifolia	<1	0.9
Olearia muelleri	5	0.7
Eremophila clarkei	<1	0.6
Sclerolaena fusiformis	<1	0.2

QUADRAT Q3b 514793E 6730776N

Low Open Woodland dominated by *Eucalyptus kochii* subsp. *plenissima* and *Eucalyptus ebbanoensis* subsp. *ebbanoensis* with occasional *Allocasuarina* acutivalvis subsp. *prinsepiana* over a Shrubland dominated by *Acaci aneura* var. *aneura*, *Philotheca tomentella*, *Hibbertia ancistrophylla* (ms) and *Philotheca brucei* subsp. *brucei* on silty loamy soils with abundant rocks on the surface.

Condition: Excellent to Very Good



QUADRAT Q3b (30x30m)

SPECIES	% COVER	HEIGHT (M)
Eucalyptus kochii subsp.	5	8
plenissima		
Eucalyptus ebbanoensis subsp.	2	4.2
ebbanoensis		
Melaleuca leiocarpa	8	4.2
Allocasuarina acutivalvis subsp.	1.5	4
prinsepiana		
Acacia aneura var. aneura	9	2
Callitris glaucophylla	1	2
Eremophila latrobei subsp.	<1	1.8
latrobei (ms)		
Micromyrtus sp.	<1	1.7
Philotheca tomentella	12	1.5
Grevillea levis	1	1.4
Hibbertia ancistrophylla (ms)	3	1

SPECIES	% COVER	HEIGHT (M)
Acacia anthochaera	<1	0.8
Philotheca brucei subsp. brucei	2	0.8
Eremophila clarkei	<1	0.7
Amphipogon caricinus	<1	0.2

QUADRAT Q3c 514344E 6730380N

Low Open Woodland of *Eucalyptus kochii* subsp. *plenissima* and *Eucalyptus leptopoda* subsp. *arctata* over a Tall Open Shrubland dominated by *Melaleuca leiocarpa*, *Allocasuarina acutivalvis* subsp. *prinsepiana* and *Callitris glaucophylla* over a Shrubland dominated by *Acacia aneura* var. *aneura* and *Hibbertia ancistrophylla* (ms) on loamy clayey soils with scattered rocks.

Condition: Very Good



QUADRAT Q3c (30x30m)

SPECIES	% COVER	HEIGHT (M)
Eucalyptus kochii subsp.	5	9
plenissima		
Eucalyptus leptopoda subsp.	2	5
arctata		
Melaleuca leiocarpa	2	4.2
Allocasuarina acutivalvis subsp.	2.5	4
prinsepiana		
Callitris glaucophylla	1.5	4
Acacia aneura var. aneura	15	2
Calycopeplus paucifolius	<1	2
Micromyrtus sp.	1	1.5
Eremophila clarkei	<1	1.3
Grevillea paradoxa	<1	1.2
Hibbertia ancistrophylla (ms)	2	1.1
Philotheca tomentella	1	0.9
Amphipogon caricinus	1	0.1

QUADRAT Q4a 509942E 6728562N

Closed Tall Scrub of *Acacia aneura* var. *aneura*, *Baeckea benthamii* (ms) *and Melaleuca uncinata* with occasional *Eucalyptus kochii* subsp. *horistes* (ms) and *Melaleuca nematophylla* over a Low Open Shrubland dominated by *Micromyrtus clavata* (ms)

Condition: Excellent to Very Good



QUADRAT Q4a (30x30m)

SPECIES	% COVER	HEIGHT (M)
Acacia aneura var. aneura	5	3
Acacia stereophylla var. stereophylla	1	2.5
Baeckea benthamii (ms)	60	2.5
Hakea subsulcata	1	2.5
Melaleuca uncinata	30	2.5
Micromyrtus clavata (ms)	5	0.5
Hyalosperma glutinosum subsp. glutinosum	1	0.05

QUADRAT Q4b 509981E 6728815N

Closed Heath dominated by *Acacia aneura* var. *aneura*, *Micromyrtus clavata* (ms) and *Baeckea benthamii* (ms) with occasional *Eucalyptus brachycorys*

Condition: Good



QUADRAT Q4b (30x30m)

SPECIES	% COVER	HEIGHT (M)
Eucalyptus brachycorys	1	2.5
Acacia aneura var. aneura	85	1.2
Baeckea benthamii (ms)	5	1
Micromyrtus clavata (ms)	5	1
Grevillea juncifolia	<1	0.9
Melaleuca uncinata	<1	0.7
Dianella revoluta var. divaricata	12	0.6
Cassytha sp.	<1	Creeper
Melaleuca nematophylla	<1	Creeper

QUADRAT Q4c 510114E 6729020N

Closed Tall Scrub dominated by *Micromyrtus clavata* (ms), *Baeckea* sp. and *Chamelaucium pauciflorum* (ms) subsp. *pauciflorum* with scattered *Melaleuca nematophylla*.

Condition: Excellent to Very Good



OUADRAT O4c (30x30m)

QUADRAT Q4C (30X30III)		
SPECIES	% COVER	HEIGHT (M)
Baeckea sp.	30	3
Melaleuca cordata	1	3
Micromyrtus clavata (ms)	60	3
Acacia aneura var. aneura	<1	2
Chamelaucium pauciflorum subsp. pauciflorum (ms)	9	2
Hyalosperma glutinosum subsp. glutinosum	<1	0.03
Amphipogon caricinus	<1	0.02
Borya sphaerocephala	<1	Ground cover
<i>Drosera</i> sp.	<1	Climber

QUADRAT Q4d 510076E 6728579N

Shrubland of *Melaleuca nematophylla, Baeckea* sp., *Acacia aneura* var. *aneura Micromyrtus clavata* (ms) and *Acacia ramulosa*.

Condition: Excellent



QUADRAT Q4d (30x30m)

SPECIES	% COVER	HEIGHT (M)
Melaleuca nematophylla	20	3
Baeckea sp.	50	1.5
Acacia aneura var. aneura	10	3
Micromyrtus clavata (ms)	10	1.5
Acacia ramulosa	10	2

QUADRAT Q4e 510165E 6730320N

Closed Heath dominated by *Acacia aneura* var. *aneura* and *Melaleuca uncinata* with scattered *Eucalyptus brachycorys*.

Condition: Excellent to Very Good

QUADRAT Q4e (30x30m)

SPECIES	% COVER	HEIGHT (M)
Eucalyptus brachycorys	1	4
Allocasuarina acutivalvis subsp. prinsepiana	<1	3
Acacia aneura var. aneura	70	2
Melaleuca uncinata	10	2
Baeckea benthamii (ms)	<1	0.8
Dianella revoluta var. divaricata	<1	0.6

QUADRAT Q4f 511771E 6728699N

Closed Tall Scrub dominated by Melaleuca nematophylla, Allocasuarina acutivalvis subsp. prinsepiana, Acacia aneura var. aneura and Baeckea sp. over a Very Open Herbland dominated by Hyalosperma glutinosum subsp. glutinosum.

Condition: Excellent to Very Good



QUADRAT Q4f (30x30m)

SPECIES	% COVER	HEIGHT (M)
		` '
Melaleuca nematophylla	20	3
Allocasuarina acutivalvis subsp.	5	2.5
prinsepiana		
Acacia aneura var. aneura	70	2
Acacia ramulosa	2	2
Dodonaea inaequifolia	1	2
Acacia assimilis subsp. assimilis	<1	1.5
Baeckea sp.	5	1.5
Hakea recurva	1	1.5
Baeckea benthamii (ms)	5	1
Keraudrenia velutina subsp. velutina	<1	1
Melaleuca leiocarpa	<1	0.8
Hakea subsulcata	<1	0.7
Micromyrtus clavata (ms)	<1	0.7
Dianella revoluta var. divaricata	<1	0.6
Hyalosperma glutinosum subsp.	2	0.03
glutinosum		

QUADRAT Q4g 512892E 6728984N

Tall Open Scrub dominated by *Baeckea* sp., *Melaleuca nematophylla* and *Acacia aneura* var. *aneura* over a Shrubland dominated by *Baeckea benthamii* (ms) and *Hakea recurva*.

Condition: Very Good



QUADRAT Q4g (30x30m)

SPECIES	% COVER	HEIGHT (M)
Melaleuca nematophylla	3.5	10
Baeckea sp.	20	3
Acacia aneura var. aneura	30	2.5
Baeckea benthamii (ms)	10	1.5
Hakea recurva	1	1.4
Dianella revoluta var. divaricata	<1	0.6
Cryptandra sp.	1	0.5
Homalocalyx aureus	<1	0.5
Hibbertia crassifolia	<1	0.4
Hyalosperma glutinosum subsp. glutinosum	<1	0.03
Drosera sp.	<1	Climber

QUADRAT Q5a 514760E 6729224N

Closed Tall Scrub dominated by *Acacia aneura* var. *aneura* and *Allocasuarina acutivalvis* subsp. *prinsepiana* with occasional *Santalum acuminatum* over a Tall Open Shrubland of *Philotheca brucei* subsp. *brucei* and *Philotheca tomentella*.

Condition: Excellent to Very Good



QUADRAT Q5a (30x30m)

SPECIES	% COVER	HEIGHT (M)
Acacia aneura var. aneura	80	4.2
Allocasuarina acutivalvis subsp.	14	4
prinsepiana		
Philotheca brucei subsp. brucei	3	2.2
Calycopeplus paucifolius	<1	2
Philotheca tomentella	2	1.2
Dianella revoluta var. divaricata	<1	0.8

QUADRAT Q5b 514661E 6727647N

Tall Open Scrub of *Acacia aneura* var. *aneura*, *Allocasuarina acutivalvis* subsp. *prinsepiana* and *Hakea minyma* over an Open Shrubland dominated by *Thryptomene cuspidata* and *Micromyrtus clavata* (ms).

Condition: Very Good to Good



QUADRAT Q5b (30x30m)

Q 0.122 2.1112 Q 0.20 (0.0110 0.111)		
SPECIES	% COVER	HEIGHT (M)
Acacia aneura var. aneura	50	4
Allocasuarina acutivalvis subsp.	5	3
prinsepiana		
Melaleuca leiocarpa	1	3
Hakea minyma	5	2.5
Thryptomene cuspidata	5	1.2
Hibbertia crassifolia	<1	1
Micromyrtus clavata (ms)	5	0.5
Aluta aspersa subsp. hesperia	<1	0.4

QUADRAT Q6a 513218E 6729458N

Shrubland dominated by *Calycopeplus paucifolius* and *Baeckea benthamii* (ms) over a Very Open Herbland dominated by *Borya sphaerocephala* and *Calandrinia polyandra*.

Condition: Good



QUADRAT Q6a (30x30m)

SPECIES	% COVER	HEIGHT (M)
Hakea preissii	1	2.5
Calycopeplus paucifolius	2	2
Baeckea benthamii (ms)	10	1.2
Mirbelia ramulosa	1	1
Prostanthera magnifica	<1	0.5
Ptilotus obovatus	<1	0.3
Borya sphaerocephala	5	Ground cover
Calandrinia polyandra	5	Ground cover
Thysanotus sp.	<1	0.2

QUADRAT Q6b 511555E 6730363N

Mixed Closed Heath dominated by *Acacia ramulosa*, *Acacia assimilis* subsp. *assimilis*, *Melaleuca uncinata* and *Baeckea benthamii* (ms) with occasional *Calycopeplus paucifolius* and *Acacia acuminata* (npv) (ms) over a Very Open Herbland dominated by *Borya sphaerocephala* on granite outcropping.

Condition: Very Good



OUADRAT O6b (30x30m)

SPECIES	% COVER	HEIGHT (M)
Acacia burkittii	<1	3
Calycopeplus paucifolius	5	2
Acacia acuminata (npv) (ms)	2	1.8
Acacia assimilis subsp. assimilis	10	1.5
Acacia cerastes (P1)	<1	1.5
Acacia ramulosa	30	1.5
Melaleuca uncinata	10	1.5
Micromyrtus clavata (ms)	5	1.5
Baeckea benthamii (ms)	10	1.2
Eremaea sp.	<1	1
Hibbertia crassifolia	<1	1
Acacia alata	<1	0.6
Lepidosperma gracile	<1	0.5
Calandrinia polyandra	<1	0.03
Borya spherocephala	2	Ground cover

QUADRAT Q6c 511650E 6730800N

Shrubland of *Baeckea benthamii* (ms) over a Herbland dominated by *Borya spaerocephala* associated with granite outcrops.

Condition: Good to Degraded

QUADRAT Q6c(30x30m)

Q 0.122 1221 Q 0.0(0 0.120 0.11)		
SPECIES	% COVER	HEIGHT (M)
Baeckea benthamii (ms)	15	2
Dodonaea inaequifolia	1	1
Borya sphaerocephala	40	0.2
Calandrinia polyandra	3	0.1

QUADRAT Q7a 514735E 6728758N

Low Open Woodland of *Eucalyptus oldfieldii* and *Eucalyptus kochii* subsp. plenissima with scattered *Callitris glaucophylla* over a Tall Open Scrub dominated by *Acacia aneura* var. aneura, Hakea minyma and Melaleuca leiocarpa over an Open Shrubland dominated by *Alyxia buxifolia* and *Phebalium tuberculosum*.

Condition: Very Good to Good



OUADRAT O7a (30x30m)

SPECIES	% COVER	HEIGHT (M)
Callitris glaucophylla	1	10
Eucalyptus loxophleba subsp.	1	10
supralaevis		
Acacia aneura var. aneura	30	5
Eucalyptus kochii subsp.	1	5
plenissima		
Hakea minyma	10	5
Melaleuca leiocarpa	5	4
Eucalyptus oldfieldii	2	3
Allocasuarina acutivalvis subsp.	<1	2
prinsepiana		
Alyxia buxifolia	3	2
Eremophila caperata (ms)	<1	1.5
Phebalium tuberculosum	5	1
Dianella revoluta var. divaricata	<1	0.8
Eremophila pantonii	1	0.8
Olearia pimeleoides	<1	0.8

SPECIES	% COVER	HEIGHT (M)
Thysanotus patersonii	<1	Creeper

QUADRAT Q7b 514804E 6728273N

Woodland of *Eucalyptus kochii* subsp. *plenissima* and *Callitris glaucophylla* over a Tall Shrubland dominated by *Santalum acuminatum*, *Acacaia aneura* var. *aneura* and *Acacia anthochaera* over an Open Shrubland dominated by *Eremophila latrobei* subsp. *latrobei* (ms) and *Alyxia buxifolia* over a Low Open Shrubland of *Olearia muelleri* and *Olearia dampieri* subsp. *eremicola* (ms).

Condition: Very Good



QUADRAT Q7b (30x30m)

SPECIES	% COVER	HEIGHT (M)
Eucalyptus kochii subsp.	10	10
plenissima		
Callitris glaucophylla	10	6
Santalum acuminatum	1	4
Acacia aneura var. aneura	10	3
Acacia anthochaera	5	2.5
Hakea preissii	<1	1.6
Alyxia buxifolia	1	1.5
Eremophila latrobei subsp.	2	1.5
latrobei (ms)		
Olearia dampieri subsp.	1	0.6
eremicola (ms)		
Olearia muelleri	2	0.5
Eragrostis sp.	<1	0.3
Maireana georgei	<1	0.3

QUADRAT Q8a 511830E 6726669N

Mixed Closed Heath of *Acacia aneura* var. *aneura*, *Acacia masliniana*, *Allocasuarina acutivalvis* subsp. *prinsepiana* and *Thryptomene cuspidate*.

Condition: Excellent to Very Good



QUADRAT Q8a (30x30m)

SPECIES	% COVER	HEIGHT (M)
Acacia aneura var. aneura	30	2
Acacia masliniana	20	2
Allocasuarina acutivalvis subsp.	5	2
prinsepiana		
Thryptomene cuspidata	10	1.8
Melaleuca cordata	<1	1.5
Melaleuca uncinata	2	1.5
Hakea subsulcata	1	1.2
Amphipogon turbinatus	<1	0.3
Hibbertia ancistrophylla (ms)	1	0.3
Hyalosperma glutinosum subsp.	<1	0.2
venustum		

QUADRAT Q8b 512431E 6726143N

Mixed Tall Open Scrub of *Allocasuarina acutivalvis* subsp. *prinsepiana*, *Acacia aneura* var. *aneura* and *Acacia stereophylla* var. *stereophylla* with scattered *Eucalyptus leptopoda* subsp. *arctata* over a Low Open Shrubland dominated by *Micromyrtus clavata* (ms) and *Melaleuca fabri*.

Condition: Very Good



OUADRAT O8b (30x30m)

SPECIES	% COVER	HEIGHT (M)
		HEIGHT (M)
Acacia aneura var. aneura	50	2
Acacia stereophylla var.	5	2
stereophylla		
Allocasuarina acutivalvis subsp.	5	3
prinsepiana		
Melaleuca cordata	1	1
Micromyrtus clavata (ms)	1	1
Acacia longispinea	<1	1.2
Melaleuca fabri	1	1.2
Hibbertia ancistrophylla (ms)	<1	0.2
Hibbertia sp.	<1	0.8
Baeckea sp.	<1	0.5

QUADRAT Q9a 518283E 6728083N

Open Woodland of *Eucalyptus loxophleba* subsp. *supralaevis* with scattered *Callitris glaucophylla* and *Exocarpos aphyllus* over an Open Shrubland of *Hakea preissii*, *Acacia burkittii* and *Acacia assimilis* subsp. *assimilis* over a Low Open Shrubland dominated by *Olearia muelleri* and *Atriplex bunburyana*.

Condition: Very Good



OUADRAT O9a (30x30m)

SPECIES	% COVER	HEIGHT (M)
Eucalyptus loxophleba subsp.	10	10.5
supralaevis		
Callitris glaucophylla	1	4
Exocarpos aphyllus	1	3
Acacia tetragonophylla	1	2.5
Acacia anthochaera	<1	2
Acacia burkittii	2	2
Hakea preissii	2	2
Acacia assimilis subsp. assimilis	1	1.2
Atriplex bunburyana	1	1
Dicrastylis ?parvifolia	<1	0.9
Olearia muelleri	2	0.5
Ptilotus obovatus	<1	0.3
Chamaexeros sp.	<1	0.2
Sclerolaena diacantha	<1	0.2

QUADRAT Q9b 514334E 6725980N

Open Woodland of *Eucalyptus loxophleba* subsp. *supralaevis* over a Tall Open Scrub of *Acacia burkittii, Acacia aneura* var. *aneura, Allocasuarina acutivalvis* subsp. *prinsepiana* and *Exocarpos aphyllus* over a Shrubland dominated by *Acacia colletioides, Eremophila oppositifolia* subsp. *angustifolia* and *Eremophila latrobei* subsp. *latrobei* (ms).

Condition: Very Good to Good



OUADRAT O9b (30x30m)

QUADRAT Q50 (30x30iii)			
SPECIES	% COVER	HEIGHT (M)	
Eucalyptus loxophleba subsp.	10	15	
supralaevis			
Acacia aneura var. aneura	10	3	
Acacia burkittii	20	3	
Allocasuarina acutivalvis subsp.	10	3	
prinsepiana			
Exocarpos aphyllus	2	2.5	
Acacia tetragonophylla	<1	2	
Alyxia buxifolia	1	2	
Acacia colletioides	20	1.5	
Eremophila oppositifolia subsp.	2	1.5	
oppositifolia			
Eremophila latrobei subsp.	5	1.2	
latrobei (ms)			
Dianella revoluta var. divaricata	<1	1	
Eremophila clarkei	<1	0.6	

SPECIES	% COVER	HEIGHT (M)
Lepidosperma costale	<1	0.6

QUADRAT Q9c 511968E 6730425N

Woodland of *Eucalyptus loxophleba* subsp. *supralaevis* with occasional *Eucalyptus leptopoda* subsp. *arctata* over a Tall Shrubland dominated by *Eremophila clarkei*, *Acacia tetragonophylla* and *Acacia colletioides* over a Low Shrubland dominated by *Ptilotus obovatus*.

Condition: Good

QUADRAT Q9c (30x30m)

SPECIES	% COVER	HEIGHT (M)
Eucalyptus loxophleba subsp.	30	10
supralaevis		
Eucalyptus leptopoda subsp.	1	4
arctata		
Eremophila clarkei	5	3
Hakea preissii	<1	3
Acacia tetragonophylla	5	2
Santalum spicatum	1	2
Acacia colletioides	5	1.5
Dodonaea inaequifolia	<1	1.5
Atriplex lindleyi subsp. inflata	<1	1
Scaevola spinescens	<1	1
Acacia erinacea	<1	0.5
Senna artemisioides subsp. x	<1	0.5
artemisioides		
Ptilotus obovatus	20	0.4
Solanum lasiophyllum	<1	0.4

QUADRAT Q9d 511709E 6726005N

Low Woodland of *Eucalyptus loxophleba* with scattered *Callitris glaucophylla* over Tall Open Scrub of *Acacia tetragonophylla*, *Dodonaea inaequifolia*, *Alyxia buxifolia* and *Acacia acuaria* over a Low Open Shrubland dominated by *Olearia muelleri*.

Condition: Very Good to Good



QUADRAT Q9d (30x30m)

SPECIES	% COVER	HEIGHT (M)
Eucalyptus loxophleba	30	8
Acacia tetragonophylla	3	5
Callitris glaucophylla	1	4
Exocarpos aphyllus	<1	2.5
Dodonaea inaequifolia	2	2
Alyxia buxifolia	2	2
Acacia acuaria	30	1.2
Olearia dampieri subsp. eremicola (ms)	<1	1
Eremophila clarkei	3.2	1
Senna artemisioides subsp. filifolia	<1	1
Ptilotus obovatus	2	0.5
Olearia muelleri	5	0.5
Maireana tomentosa	<1	0.3
Aristida contorta	<1	0.2

QUADRAT Q10a 512256E 6728750N

Low Open Woodland of *Eucalyptus leptopoda* subsp. *arctata* over a Tall Open Scrub dominated by *Melaleuca uncinata, Micromyrtus clavata* (ms) and *Acacia aneura* var. *aneura* over a Very Open Herbland dominated by *Hyalosperma glutinosum* subsp. *glutinosum*.

Condition: Very Good to Good



OUADRAT O10a (30x30m)

Quiditii Qioa (concom)			
SPECIES	% COVER	HEIGHT (M)	
Melaleuca uncinata	30	4	
Allocasuarina acutivalvis subsp. prinsepiana	<1	3	
Eucalyptus leptopoda subsp. arctata	10	3	
Acacia aneura var. aneura	5	2	
Micromyrtus clavata (ms)	10	2	
Diuanella revoluta var. divaricata	<1	0.8	

SPECIES	% COVER	HEIGHT (M
Baeckea sp.	<1	0.7
Balaustion pulcherrimum	1	0.3
Cryptandra sp.	<1	0.3
Hyalosperma glutinosum subsp. glutinosum	2	0.03

QUADRAT Q10b 512239E 6728379N

Low Open Woodland of *Eucalyptus leptopoda* subsp. *supralaevis* over a Tall Open Scrub dominated by *Melaleuca uncinata* over a Shrubland dominated *by Acacia masliana*, *Allocasuarina acutivalvis* subsp. *prinsepiana*, *Acacia ramulosa* and *Hakea recurve*.

Condition: Very Good



OUADRAT O10b (30x30m)

QUIDRIT Q100 (30A30M)			
SPECIES	% COVER	HEIGHT (M)	
Melaleuca uncinata	40	3	
Hakea recurva	2	2	
Acacia ramulosa	5	2	
Allocasuarina acutivalvis subsp. prinsepiana	5	2	
Eucalyptus leptopoda subsp. supralaevis	5	2	
Acacia masliana	20	2	

SPECIES	% COVER	HEIGHT (M
Calothamnus gilesii	1	1.2
Allocasuarina campestris	2	1
Melaleuca conothamnoides	2	0.8
Micromyrtus clavata (ms)	5	0.8
Hyalosperma glutinosum subsp. glutinosum	<1	0.03
Cassytha sp.	<1	Creeper

QUADRAT Q10c 512373E 6729976N

Low Open Woodland of *Eucalyptus leptopoda* subsp. *arctata* over a Tall Open Shrubland dominated by *Acacia acuminata* (npv) (ms) over an Open Shrubland dominated by *Acacia aneura* var. *aneura*, *Dodonaea inaequifolia* and *Acacia colletioides*.

Condition: Good



QUADRAT Q10c (30x30m)

SPECIES	% COVER	HEIGHT (M)
Eucalyptus leptopoda subsp. arctata	10	5
Acacia acuminata (npv) (ms)	10	3
Eremophila miniata	1	2.5
Santalum spicatum	1	2.5
Eremophila oppostifolia	<1	2.2
Eremophila longifolia	<1	1.8

SPECIES	% COVER	HEIGHT (M)
Acacia aneura var. aneura	2	1.6
Acacia tetragonophylla	1	1.5
Dodonaea inaequifolia	5	1.5
Senna artemisioides subsp. x artemisioides	1	1.3
Eremophila clarkei	<1	1.2
Acacia colletioides	5	0.6
Maireana georgei	<1	0.6
Baeckea benthamii (ms)	<1	0.5
Eremophila latrobei subsp. latrobei (ms)	<1	0.5
Scaevola spinescens	1	0.5
Hyalosperma glutinosum subsp. glutinosum	<1	0.03
Rhodanthe sp.	<1	0.02

QUADRAT Q10d 514439E 6726466N

Low Open Woodland of *Eucalyptus leptopoda* subsp. *arctata* with occasional *Allocasuarina acutivalvis* subsp. *prinsepiana* over an Open Heath dominated by *Acacia masliniana* and *Acacia aneura* var. *aneura* over a Low Open Shrubland of *Philotheca tomentella* and *Calothamnus chrysantherus* over a Very Open Herbland dominated by *Ecdeiocolea monostachya*.

Condition: Excellent



QUADRAT Q10d (30x30m)

SPECIES	% COVER	HEIGHT (M)
Allocasuarina acutivalvis subsp. prinsepiana	2	4.2
Eucalyptus leptopoda subsp. arctata	7	3.5
Acacia masliniana	60	1.7
Acacia aneura var. aneura	5	1.5
Hakea subsulcata	<1	1.5
Melaleuca cordata	<1	0.8
Philotheca tomentella	3	0.8
Calothamnus chrysantherus	3	0.7
Hibbertia sp.	<1	0.7
Ecdeiocolea monostachya	4	0.5

QUADRAT Q10e 510082E 6727944N

Low Open Woodland dominated by *Eucalyptus leptopoda* subsp. *arctata* with occasional *Allocasuarina acutivalvis* subsp. *prinsepiana* over a Tall Open Shrubland dominated by *Melaleuca uncinata* over a Tall Shrubland dominated by *Acacia aneura* var. *aneura* and *Acacia masliniana* over a Low Shrubland dominated by *Micromyrtus clavata* (ms) and *Thryptomene cuspidate*.

Condition: Very Good



QUADRAT Q10e (30x30m)

SPECIES	% COVER	HEIGHT (M)
Melaleuca uncinata	10	6.5
Eucalyptus leptopoda subsp.	5	4
arctata		
Acacia aneura var. aneura	10	3
Acacia longispinea	1	3
Acacia masliniana	10	3
Allocasuarina acutivalvis subsp.	1	2.5
prinsepiana		
Melaleuca fabri	1	1.4
Thryptomene cuspidata	10	1
Phebalium tuberculosum	5	0.8
Hakea longispinea	<1	0.6
Micromyrtus clavata (ms)	10	0.6
Enekbatus stowardii (ms)	2	0.3

QUADRAT Q11a 512344E 6727841N

Tall Open Scrub of *Acacia ramulosa* var. *ramulosa* with scattered *Eucalyptus leptopoda* subsp. *arctata* over a Low Open Shrubland dominated by *Acacia longispinea* and *Micromyrtus clavata* (ms).

Condition: Excellent to Very Good



QUADRAT Q11a (30x30m)

SPECIES	% COVER	HEIGHT (M)
Acacia ramulosa var. ramulosa	60	3
Eucalyptus leptopoda subsp.	2	3
arctata		
Acacia sp.	<1	1.1
Acacia longispinea	2	1
Melaleuca fabri	<1	0.6
Micromyrtus clavata (ms)	1	0.6

QUADRAT Q11b 511766E 6726368N

Tall Open Scrub of *Allocasuarina acutivalvis* subsp. *prinsepiana*, *Acacia assimilis* subsp. *assimilis*, *Acacia longispinea* and *Grevillea paradoxa* with scattered *Eucalyptus kochii* subsp. *plenissima* over a Low Open Shrubland dominated by *Micromyrtus clavata* (ms).

Condition: Excellent to Very Good



OUADRAT O11b (30x30m)

SPECIES	% COVER	HEIGHT (M)
Acacia assimilis subsp. assimilis	20	3
Allocasuarina acutivalvis subsp. prinsepiana	20	3
Eucalyptus kochii subsp. plenissima	1	3
Melaleuca uncinata	20	3
Acacia longispinea	10	2
Melaleuca filifolia	2	1.6
Acacia aneura var. aneura	<1	1.5
Grevillea paradoxa	20	1.5
Hakea subsulcata	<1	1.5
Phebalium tuberculosum	<1	1
Eremophila latrobei subsp. latrobei (ms)	<1	0.5

QUADRAT Q11c 511004E 6728178N

Tall Open Scrub dominated by *Acacia masliniana* with occasional *Allocasuarina acutivalvis* subsp. *prinsepiana* and *Eucalyptus oldfieldii* over a Shrubland dominated by *Acacia stereophylla* var. *sterophylla*, *Baeckea benthamii* (ms), *Grevillea paradoxa*, *Acacia aneura* var. *aneura* and *Calothamnus chrysantherus* over a Low Shrubland dominated by *Micromyrtus clavata* (ms) and *Cryptandra* sp.

Condition: Excellent to Very Good



QUADRAT Q11c (30x30m)

SPECIES	% COVER	HEIGHT (M)
Allocasuarina acutivalvis subsp.	1	3
prinsepiana		
Acacia masliniana	60	2.2
Acacia stereophylla var.	1.5	2
stereophylla		
Acacia aneura var. aneura	2	1.6
Baeckea benthamii (ms)	4	1.6
Grevillea paradoxa	2	1.6
Calothamnus chrysantherus	3	1.5
Acacia acuminata (npv) (ms)	<1	1.4
Dianella revoluta var. divaricata	<1	1
Micromyrtus clavata (ms)	15	1
Hakea subsulcata	<1	0.9
Melaleuca cordata	1.5	0.8
Melaleuca fabri	1	0.7

SPECIES	% COVER	HEIGHT (M)
Cryptandra sp.	7	0.6
Hibbertia sp.	1	0.5
Cassytha nodiflora	<1	Creeper

QUADRAT Q12a 514791E 6728064N

Closed Tall Scrub of *Melaleuca leiocarpa* with scattered *Eucalyptus leptopoda* subsp. *arctata* over a Mixed Tall Open Scrub dominated by *Acacia ramulosa* var. *ramulosa*, *Acacia anthochaera*, *Acacia aneura* var. *aneura*, *Acacia masliniana* and *Melaleuca uncinata* over a Low Open Shrubland dominated by *Micromyrtus clavata* (ms) and *Acacia prainii*.

Condition: Very Good to Good



QUADRAT Q12a (30x30m)

SPECIES	% COVER	HEIGHT (M)
Acacia anthochaera	10	3
Acacia ramulosa var. ramulosa	10	3
Allocasuarina acutivalvis subsp. prinsepiana	1	3
Eucalyptus leptopoda subsp. arctata	2	3
Hakea minyma	<1	3
Melaleuca leiocarpa	70	2.5
Acacia aneura var. aneura	20	2
Acacia masliniana	20	2
Melaleuca uncinata	5	1.5
Micromyrtus clavata (ms)	5	0.8
Dianella revoluta var. divaricata	<1	0.6
Melaleuca cordata	<1	0.6
Acacia prainii	2	0.5
Phebalium tuberculosum	1	0.5

SPECIES	% COVER	HEIGHT (M)
Olearia muelleri	<1	0.4
Hibbertia ancistrophylla (ms)	<1	0.2

QUADRAT Q12b 510913E 6730624N

Closed Tall Scrub dominated by *Allocasuarina acutivalvis* subsp. *prinsepiana* with occasional *Eucalyptus leptopoda* subsp. *arctata* and *Grevillea paradoxa* over a Very Open Herbland dominated by *Ecdeiocolea monostachya*.

Condition: Very Good



OUADRAT O12b (30x30m)

QUIDINI Q120 (CONCOM)		
% COVER	HEIGHT (M)	
1	5	
80	3	
2	2	
1	1.5	
5	0.8	
1	0.5	
<1	0.5	
	% COVER	

SPECIES	% COVER	HEIGHT (M)
Dianella revoluta var. divaricata	<1	0.4
Lepidosperma tenue	<1	0.4
Hyalosperma glutinosum subsp.	<1	0.03
glutinosum		
Comesperma ?ciliatum	<1	Creeper
Drosera sp.	<1	Creeper

QUADRAT Q12c 511815E 6728114N

Closed Tall Scrub of *Alloacsuarina acutivalvis* subsp. *prinsepiana*, *Gastrolobium laytonii*, *Acacia longispinea* and *Grevillea paradoxa* over an Open Shrubland dominated by *Acacia aneura* var. *aneura* and *Hibbertia crassifolia*.

Condition: Excellent to Very Good



QUADRAT Q12c (30x30m)

SPECIES	% COVER	HEIGHT (M)
Allocasuarina acutivalvis subsp.	50	3
prinsepiana		
Acacia longispinea	10	2
Gastrolobium laytonii	20	2
Grevillea paradoxa	10	2
Acacia aneura var. aneura	2	1.5
Hakea subsulcata	<1	1.5
Acacia stereophylla var.	1	1.2

SPECIES	% COVER	HEIGHT (M)
stereophylla		
Hibbertia crassifolia	2	1.2
Melaleuca filifolia	<1	1.2
Phebalium tuberculosum	<1	1.2
Dianella revoluta var. divaricata	<1	1
Hibbertia ancistrophylla (ms)	2	0.5
Thryptomene cuspidata	1	0.5
Cassytha sp.	<1	Creeper

QUADRAT Q13a 513496E 6729295N

Low Open Woodland of *Eucalyptus brachycorys* over a Shrubland dominated by *Acacia acuminata* (npv) (ms) and *Acacia aneura* var *aneura* over a Low Open Shrubland dominated by *Ptilotus obovatus*.

Condition: Very Good

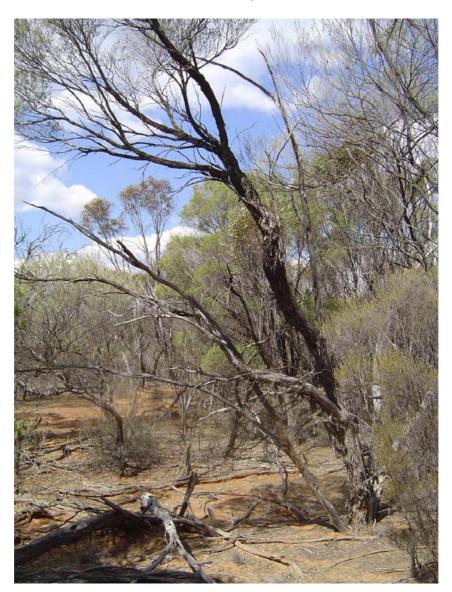
QUADRAT Q13a (30x30m)

SPECIES	% COVER	HEIGHT (M)
Eucalyptus brachycorys	5	4
Callitris glaucophylla	10	3
Allocasuarina acutivalvis subsp. prinsepiana	10	3
Acacia aneura var. aneura	20	3
Acacia acuminata (npv) (ms)	5	3
Acacia tetragonophylla	10	2.5
Acacia colletioides	10	2.5
Eremophila miniata	1	0.8
Eremophila clarkei	1	0.8
Dodonaea inaequifolia	1	0.8
Scaevola spinescens	1	0.7
Eremophila latrobei subsp. latrobei (ms)	1	0.7
Ptilotus obovatus	1	0.4

QUADRAT Q13b 509973E 6728708N

Low Woodland of *Eucalyptus brachycorys* with *Callitris glaucophylla* over a Tall Open Scrub dominated by *Acacia aneura* var. *aneura*, *Melaleuca nematophylla* and *Micromyrtus clavata* (ms).

Condition: Very Good



QUADRAT Q13b (30x30m)

SPECIES	% COVER	HEIGHT (M)
Callitris glaucophylla	5	4
Eucalyptus brachycorys	15	4
Acacia aneura var. aneura	5	3
Melaleuca nematophylla	5	3
Eremophila oppositifolia subsp. angustifolia	1	2.5
Acacia tetragonophylla	1	2.2
Melaleuca leiocarpa	1	2
Micromyrtus clavata (ms)	50	2

SPECIES	% COVER	HEIGHT (M)
Alyxia buxifolia	1	1.8
Eremophila clarkei	1	1.5
Hakea preissii	1	1.2
Scaevola spinescens	1	0.7
Olearia muelleri	1	0.3
Hyalopserma glutinosum subsp.	1	0.03
glutinosum		
Rhodanthe sp.	1	0.03

QUADRAT Q13c 509865E 6728917N

Low Open Woodland of *Eucalyptus brachycorys* and *Callitris glaucophylla* with scattered *Santalum acuminatum* and *Eucalyptus kochii* subsp. *horistes* (ms) over a an Open Shrubland dominated by *Alyxia buxifolia* and *Scaevola spinescens*.

Condition: Very Good to Good



QUADRAT Q13c (30x30m)

SPECIES	% COVER	HEIGHT (M)
Eucalyptus brachycorys	10	4
Callitris glaucophylla	5	3
Eucalyptus kochii subsp. horistes (ms)	1	3
Santalum acuminatum	1	3
Eremophila oppositifolia	1	2
Alyxia buxifolia	5	1.8
Hakea preissii	1	1.2
Scaevola spinescens	2	1
Chamelaucium pauciflorum subsp. pauciflorum (ms)	1	0.8
Acacia anthochaera	1	0.5
Olearia muelleri	<1	0.5
Ptilotus obovatus	<1	0.3
Hyalosperma glutinosum subsp. glutinosum	<1	0.02

QUADRAT Q14a 509928E 6727069N

Tall Open Scrub dominated by *Melaleuca scalena* and *Baeckea benthamii* (ms) with occasional *Allocasuarina acutivalvis* subsp. *prinsepiana* over a Low Shrubland dominated by *Acacia aneura* var. *aneura*, *Astus subroseus* and *Hibbertia* sp.

Condition: Very Good to Good



QUADRAT Q14a (30x30m)

SPECIES	% COVER	HEIGHT (M)
Melaleuca scalena	3	3
Baeckea benthamii (ms)	60	2.5
Acacia aneura var. aneura	1.5	0.9
Astus subroseus	9	0.7
Hibbertia sp.	1.5	0.6
Amphipogon caricinus	<1	0.1
Hyalopserma glutinosum subsp.	<1	0.1
glutinosum		
Cassytha nodiflora	<1	Creeper

QUADRAT Q14b 509935E 6726428N

Tall Open Shrubland dominated by *Melaleuca scalena* with occasional *Allocasuarina acutivalvis* subsp. *prinsepiana* over a Closed Low Heath dominated by *Acacia masliniana*, *Acacaia aneura* var. *aneura* and *Hakea subsulcata* over a Very Open Herbland dominated by *Ecdeiocolea monostachya*.

Condition: Excellent to Very Good

QUADRAT Q14b (30x30m)

SPECIES	% COVER	HEIGHT (M)
Melaleuca scalena	3	2
Acacia aneura var. aneura	8	1.2
Acacia ramulosa var. ramulosa	<1	1.2
Acacia masliniana	75	1
Hakea subsulcata	5	1
Melaleuca cordata	<1	1
Melaleuca nematophylla	1	0.9
Ecdeiocolea monostachya	2.5	0.8
Hibbertia sp.	2	0.6
Micromyrtus clavata (ms)	2	0.3
Borya sphaerocephala	<1	0.1
Cassytha nodiflora	<1	Creeper

QUADRAT Q15a 512310E 6726572N

Low Woodland of Eucalyptus loxophleba subsp. supralaevis and Eucalyptus salicola with scattered Callitris glaucophylla over an Open Shrubland dominated by Gastrolobium laytonii, Eremophila oppositifolia, Allocasuarina acutivalvis subsp. prinsepiana and Dodonaea inaequifolia over a Low Shrubland dominated by Olearia muelleri.

Condition: Very Good



QUADRAT Q15a (30x30m)

SPECIES	% COVER	HEIGHT (M)
Eucalyptus loxophleba subsp.	10	10
supralaevis		
Eucalyptus salicola	15	8
Gastrolobium laytonii	2	3
Exocarpos aphyllus	<1	2.5
Allocasuarina acutivalvis subsp.	1	2
prinsepiana		
Dodonaea inaequifolia	1	2
Eremophila oppositifolia	1	2
Acacia colletioides	1	1
Olearia muelleri	20	0.8
Acacia erinacea	1	0.5
Frankenia pauciflora	2	0.2
Ptilotus obovatus	1	0.2

QUADRAT Q15b 514785E 6728539N

Low Woodland of *Eucalyptus loxophleba* subsp. *supralaevis* with scattered *Callitris glaucophylla* over a Tall Shrubland dominated by *Acacia aneura* var. *aneura*, *Allocasuarina acutivalvis* subsp. *prinsepiana*, *Acacia anthochaera* and *Eremophila caperata* (ms) over a Low Open Shrubland dominated by *Olearia muelleri* and *Olearia dampieri* subsp. *eremicola* (ms).

Condition: Very Good



OUADRAT O15b (30x30m)

QCADRAT Q150 (50x50m)			
SPECIES	% COVER	HEIGHT (M)	
Eucalyptus loxophleba subsp.	15	8	
supralaevis			
Callitris glaucophylla	1	5	
Acacia aneura var. aneura	15	3	
Allocasuarina acutivalvis subsp.	2	3	
prinsepiana			
Alyxia buxifolia	<1	3	
Acacia anthochaera	2	2	
Eremophila caperata (ms)	1	2	
Senna charlesiana	<1	1	
Olearia muelleri	1	0.6	
Olearia damperi subsp.	<1	0.4	
eremicola			

QUADRAT Q15c 510538E 6730739N

Low Woodland of *Eucalyptus loxophleba* subsp. *supralaevis* with scattered *Callitris glaucophylla* and *Hakea minyma* over a Tall Open Shrubland dominated by *Eremophila caperata* (ms) over an Open Shrubland dominated by *Acacia andrewsii*.

Condition: Very Good



OUADRAT O15c (30x30m)

QUADRAT QISC (SUASUIII)			
SPECIES	% COVER	HEIGHT (M)	
Eucalyptus loxophleba subsp.	25	6	
supralaevis			
Melaleuca uncinata	1	4	
Callitris glaucophylla	2	3	
Hakea mynima	1	3	
Eremophila caperata (ms)	2	2.5	
Acacia andrewsii	5	1.2	
Olearia dampieri subsp.	1	1.1	
eremicola (ms)			
Baeckea sp.	<1	1	
Eremophila latrobei subsp.	<1	0.6	
latrobei (ms)			
Ptilotus schwartzii var. schwartzii	<1	0.6	
Calytrix strigosa	2	0.5	
Hyalosperma glutinosum subsp.	1	0.03	
glutinosum			

QUADRAT Q16a 509795E 6728165N

Low Open Woodland of *Eucalyptus leptopoda* subsp. *arctata* over a Tall Shrubland dominated by *Acacia resinimarginea* over an Open Shrubland dominated by *Acacia aneura* var. *aneura* and *Hakea minima*.

Condition: Very Good to Good

QUADRAT Q16a (30x30m)

SPECIES	% COVER	HEIGHT (M)
Acacia resinimarginea	30	3.5
Eucalyptus leptopoda subsp. arctata	8	3.5
Allocasuarina acutivalvis subsp. prinsepiana	<1	2.2
Acacia aneura var. aneura	5	2
Hakea minyma	2	1.2
Melaleuca fabri	<1	1
Phebalium tuberculosum	2	0.6
Micromyrtus clavata (ms)	30	0.5
Hibbertia ancistrophylla (ms)	2	0.3
Cassytha nodiflora	<1	Creeper

QUADRAT Q16b 517439E 6727332N

Low Open Woodland of *Eucalyptus kochii* subsp. *plenissima* and *Eucalyptus loxophleba* subsp. *supralaevis* over a Closed Tall Scrub of *Allocasuarina acutivalvis* subsp. *prinsepiana* over an Open Shrubland dominated by *Acacia colletioides*, *Acacia anthochaera* and *Acacia aneura* var. *aneura*.

Condition: Excellent to Very Good



QUADRAT Q16b (30x30m)

SPECIES	% COVER	HEIGHT (M)
Eucalyptus loxophleba subsp.	1	10
supralaevis		
Eucalyptus kochii subsp.	5	5
plenissima		
Grevillea obliquistigma subsp.	1	4
obliquistigma		
Allocasuarina acutivalvis subsp.	80	3
prinsepiana		
Acacia colletioides	2	2
Acacia anthochaera	2	1.5
Acacia aneura var. aneura	2	1
Aluta aspersa subsp. hesperia	<1	1
Melaleuca leiocarpa	<1	0.6
Hibbertia ancistrophylla (ms)	<1	0.5

QUADRAT Q16c 512436E 6729786N

Low Open Woodland of *Eucalyptus leptopoda* subsp. *arctata* with occasional *Eucalyptus kochii* subsp. *horistes* (ms) and *Eucalyptus petraea* over a Tall Open Scrub dominated by *Melaleuca nematophylla*, *Acacia aneura* var. *aneura*, *Dodonaea inaequifolia*, *Acacia acuminata* (npv) (ms) and *Allocasuarina acutivalvis* subsp. *prinsepiana* on clay hardpan.

Condition: Very Good to Good



QUADRAT Q16c (30x30m)

SPECIES	% COVER	HEIGHT (M)
Eucalyptus leptopoda subsp.	10	6
arctata		
Acacia aneura var. aneura	25	5
Acacia tetragonophylla	<1	3
Eucalyptus kochii subsp. horistes (ms)	<1	3
Eucalyptus petraea	<1	2.5
Melaleuca nematophylla	5	2.5
Acacia acuminata (npv) (ms)	5	2
Allocasuarina acutivalvis subsp. acutivalvis	5	2
Dodonaea inaequifolia	10	2
Eremophila clarkei	1	2
Melaleuca uncinata	<1	2
Eremophila oppositifolia subsp.	<1	1.5

SPECIES	% COVER	HEIGHT (M)
angustifolia		
Grevillea paradoxa	2	1.5
Scaevola spinescens	<1	1.2
Mirbelia ramulosa	<1	0.9
Acacia colletioides	2	0.8
Eremophila latrobei subsp. latrobei (ms)	<1	0.8
Micromyrtus clavata (ms)	20	0.8
Cryptandra sp.	<1	0.3

QUADRAT Q17a 509783E 6727336N

Low Open Woodland of *Eucalyptus kochii* subsp. *horistes* (ms) over a Tall Open Scrub dominated by *Allocasuarina acutivalvis* subsp. *prinsepiana*, *Acacia aneura* var. *aneura*, *Micromyrtus clavata* (ms) and *Acacia acuminata* (npv) (ms) over a Low Open Shrubland dominated by *Acacia andrewsii* and *Philotheca brucei* subsp. *brucei* on clayey soils.

Condition: Excellent to Very Good



QUADRAT Q17a (30x30m)

SPECIES	% COVER	HEIGHT (M)
Eucalyptus kochii subsp. horistes	4	4.5
(ms)		
Allocasuarina acutivalvis subsp.	8	2.2
prinsepiana		
Acacia acuminata (npv) (ms)	3	2
Acacia aneura var. aneura	15	2
Acacia tetragonophylla	2	2
Muicromyrtus clavata (ms)	6	1.8
Melaleuca nematophylla	2	1.6
Acacia andrewsii	5	1
Eremophila sp.	1	1
Dodonaea inaequifolia	<1	0.9
Hakea preissii	<1	0.8
Philotheca brucei subsp. brucei	2	0.7
Baeckea benthamii (ms)	<1	0.6
Hibbertia sp.	<1	0.4

SPECIES	% COVER	HEIGHT (M)
Hyalosperma glutinosum subsp.	<1	0.05
glutinosum		

QUADRAT Q17b 511547E 6725955N

Low Open Woodland of *Eucalyptus kochii* subsp. *plenissima* over a Tall Open Shrubland dominated by *Allocasuarina acutivalvis* subsp. *prinsepiana* and *Acacia aneura* var. *aneura* over a Low Open Shrubland dominated by *Acacia ramulosa* var. *ramulosa* and *Acacia anthochaera* on clayey loam.

Condition: Excellent to Very Good



QUADRAT Q17b (30x30m)

Company (Suzoni)			
SPECIES	% COVER	HEIGHT (M)	
Eucalyptus kochii subsp.	5	4	
plenissima			
Acacia aneura var. aneura	60	3	
Allocasuarina acutivalvis subsp.	10	3	
prinsepiana			
Melaleuca leiocarpa	5	3	
Hakea minyma	<1	2.5	
Acacia anthochaera	1	2	
Acacia ramulosa var. ramulosa	2	2	
Acacia acuaria	<1	1.2	
Hakea subsulcata	2.5	1	
Dianella revoluta var. divaricata	<1	0.6	
Hibbertia crassifolia	<1	0.6	
Alyxia buxifolia	<1	0.5	
Micromyrtus clavata (ms)	2	0.5	
Phebalium tuberculosum	<1	0.5	

QUADRAT Q17c 517687E 6729550N

Low Open Woodland of *Eucalyptus kochii* subsp. *plenissima* and *Allocasuarina acutivalvis* subsp. *prinsepiana* over a Tall Shrubland dominated by *Acacia tetragonophylla* and *Alyxia buxifolia* over a Low Open Shrubland dominated by *Acacia acuaria* on clayey loamy soils with scattered rocks.

Condition: Excellent to Very Good



OUADRAT O17c (30x30m)

SPECIES	% COVER	HEIGHT (M)
Eucalyptus kochii subsp.	3	9
plenissima		
Allocasuarina acutivalvis subsp.	5	4
prinsepiana		
Santalum acuminatum	<1	2.5
Acacia tetragonophylla	20	2.2
Melaleuca scalena	1	2.2
Alyxia buxifolia	3	2.1
Acacia acuminata (npv) (ms)	1.5	2
Hakea preissii	<1	1.6
Acacia aneura var. aneura	2	1.4
Dodonaea inaequifolia	<1	1.4
Eremophila clarkei	1	1.4
Grevillea juncifolia	1.5	1.4
Acacia andrewsii	2	1.2
Eremophila latrobei subsp.	1.5	1
latrobei (ms)		

SPECIES	% COVER	HEIGHT (M)
Acacia acuaria	5	0.8
Chamaexeros macranthera	<1	0.4
Olearia sp.	<1	0.4
Amphipogon caricinus	1.5	0.2
Borya sphaerocephala	<1	0.1
Cassytha nodiflora	<1	Creeper

QUADRAT Q18a 514525E 6730189N

Tall Shrubland dominated by *Allocasuarina acutivalvis* subsp. *prinsepiana* and *Calycopeplus paucifolius* with occasional *Callitris glaucophylla* over a Tall Open Shrubland of *Acacia aneura* var. *aneura*, *Acacia acuminata* (npv) (ms) and *Acacia tetragonophylla* over an Open Shrubland dominated by *Hakea minyma* and *Philotheca tomentella* on loamy clayey soils with scattered rocks.

Condition: Very Good



QUADRAT Q18a (30x30m)

SPECIES	% COVER	HEIGHT (M)
Santalum acuminatum	<1	4.5
Allocasuarina acutivalvis subsp.	8	4
prinsepiana		
Calycopeplus paucifolius	3	4
Acacia aneura var. aneura	3	2.2
Acacia acuminata (npv) (ms)	4	2.1
Acacia tetragonophylla	2	2.1
Hakea minyma	3	1.5
Philotheca tomentella	40	1.4
Micromyrtus sp.	<1	1.3
Amphipogon caricinus	1	0.2

QUADRAT Q18b 511900E 6730750N

Tall Shrubland of Acacia burkittii, Allocasuarina acutivalvis subsp. prinsepiana, Calycopeplus paucifolius, Melaleuca radula with occasional Eucalyptus petraea over a Very Open Herbland dominated by Lepidosperma costale and Hyalosperma glutinosum subsp. glutinosum on red clayey loam

Condition: Very Good to Excellent

QUADRAT Q18b (30x30m)

SPECIES	% COVER	HEIGHT (M)
Acacia burkittii	5	6
Allocasuarina acutivalvis subsp.	2	6
prinsepiana	1	1
Eucalyptus petraea	1	4
Calycopeplus paucifolius	20	2.5
Melaleuca radula	3	2.4
Acacia acuminata (npv) (ms)	3	2
Lepidosperma costale	8	1
Hyalosperma glutinosum subsp.	<1	0.1
glutinosum		

QUADRAT Q18c 513820E 6729125N

Tall Open Scrub dominated by *Allocasuarina acutivalvis* subsp. *prinsepiana* and *Melaleuca leiocarpa* with occasional *Callitris glaucophylla* an Open Shrubland dominated by *Acacia aneura* var. *aneura*, *Eremophila clarkei* and *Baeckea benthamii* (ms).

Condition: Good

QUADRAT Q18c (30x30m)

SPECIES	% COVER	HEIGHT (M)
Allocasuarina acutivalvis subsp.	30	4
prinsepiana		
Melaleuca leiocarpa	10	4
Callitris glaucophylla	1	3
Acacia aneura var. aneura	2	2
Eremophila miniata	<1	2
Acacia tetragonophylla	<1	1.8
Alyxia buxifolia	<1	1.5
Baeckea benthamii (ms)	2	1.5
Eremophila clarkei	5	1.5
Eremophila latrobei subsp.	<1	1.2
latrobei (ms)		
Cryptandra sp.	<1	1
Scaevola spinescens	<1	0.5

QUADRAT Q19 509968E 6728346N

Open Heath of *Acacia masliniana*, *Acacia sterophylla* var. *sterophylla*, *Micromyrtus clavata*, *Melaleuca fabri*, *Melaleuca cordata* and *Grevillea juncifolia* (ms) over Very Open Herbland dominated by *Hyalosperma glutinosum* subsp. *glutinosum*.

Condition: Very Good to Excellent

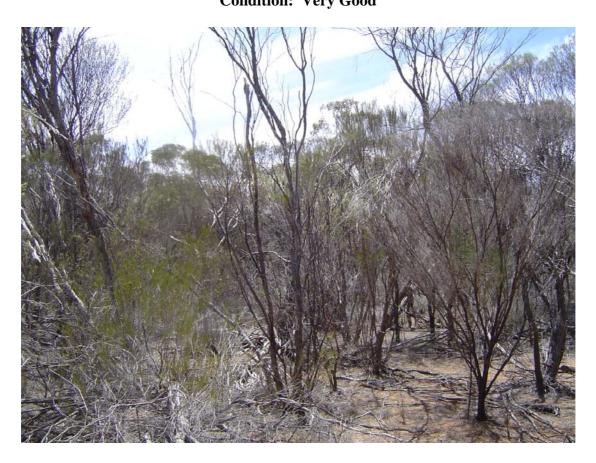


OUADRAT O19 (30x30m)

SPECIES	% COVER	HEIGHT (M)
Grevillea juncifolia	2	2.2
Acacia sterophylla var.	5	2
sterophylla		
Melaleuca cordata	1	2
Acacia masliniana	40	1.5
Acacia aneura var. aneura	2	1.5
Melaleuca fabri	5	1.4
Baeckea benthamii (ms)	2	1.2
Micromyrtus clavata (ms)	5	1
Dianella revoluta var. divaricata	<1	0.6
Grevillea paradoxa	1	0.5
Aluta aspera subsp. hesperia	<1	0.4
Hyalosperma glutinosum subsp.	5	0.2
glutinosum		
Cassytha nodiflora	<1	Climber

QUADRAT Q20a 510573E 6730537N

Closed Tall Scrub dominated by *Allocasuarina acutivalvis* subsp. *prinsepiana* and *Melaleuca uncinata* over a Very Open Herbland dominated by *Lepidosperma costale*. **Condition: Very Good**



QUADRAT Q20a (30x30m)

QUIDINII QUU (UNICUM)			
SPECIES	% COVER	HEIGHT (M)	
Allocasuarina acutivalvis subsp. prinsepiana	60	3	
Melaleuca uncinata	30	3	
Grevillea paradoxa	1	2	
Acacia aneura var. aneura	<1	1	
Lepidosperma costale	5	1	
Hyalosperma glutinosum subsp. glutinosum	<1	0.03	
Borya spherocephala	2	Ground cover	

QUADRAT Q20b 511964E 6726012N

Closed Tall Scrub of *Allocasuarina acutivalvis* subsp. *prinsepiana* and *Acacia acuminata* (npv) (ms) over an Open Shrubland dominated by *Dodonaea inaequifolia* and *Melaleuca uncinata*.

Condition: Very Good to Excellent



QUADRAT Q20b (30x30m)

SPECIES	% COVER	HEIGHT (M)
Acacia acuminata (npv) (ms)	30	3
Acacia assimilis subsp. assimilis	<1	3
Allocasuarina acutivalvis subsp. prinsepiana	50	3
Melaleuca uncinata	2	2.2
Eremophila clarkei	1	1.8
Baeckea sp.	<1	1.5
Dodonaea inaequifolia	2	1.3
Acacia aneura var. aneura	1	1.2
Eremophila latrobei subsp. latrobei (ms)	1	1

QUADRAT Q21 510320E 6726161N

Tall Open Scrub of *Grevillea obliquistigma* subsp. *obliquistigma* and *Acacia masliniana* with scattered *Eucalyptus leptopoda* subsp. *arctata* over an Open Shrubland dominated by *Melaleuca brophyi* over a Very Open Sedgeland dominated by *Ecdeiocolea monostachya*.

Condition: Excellent to Very Good



OUADRAT O21 (30x30m)

SPECIES	% COVER	HEIGHT (M)
Eucalyptus leptopoda subsp. arctata	2	3
Grevillea obliquistigma subsp. obliquistigma	50	3
Acacia masliniana	20	2
Melaleuca brophyi	5	1.2
Micromyrtus clavata (ms)	2	0.5
Ecdeiocolea monostachya	2	0.3

QUADRAT Q22 511041E 6726138N

Closed Shrubland dominated by *Acacia aneura* var. *aneura* with occasional *Melaleuca brophyi* and *Eucalyptus leptopoda* subsp. *arctata*.

Condition: Very Good

QUADRAT Q22 (30x30m)

SPECIES	% COVER	HEIGHT (M)
Acacia aneura var. aneura	80	2
Melaleuca brophyi	3	2.2
Eucalyptus leptopoda subsp.	2	3
arctata		

QUADRAT Q23 509761E 6725582

Open Heath dominated by *Melaleuca uncinata*, *Acacia prainii*, *Acacia aneura* var. *aneura* and *Acacia acuminata* (npv) (ms) over an Open Shrubland dominated by *Philotheca tomentella* and *Eremophila latrobei* subsp. *latrobei* (ms) over a Very Open Sedgelands dominated by *Ecdeiocolea monostachya* on yellow sandy loam.

Condition: Very Good to Excellent



OUADRAT O23 (30x30m)

SPECIES	% COVER	HEIGHT (M)
Acacia acuminata (npv) (ms)	10	1.6
Melaleuca uncinata	40	1.5
Acacia aneura var. aneura	10	1.3
Acacia masliana	20	1.2
Acacia longispinea	<1	1
Acacia prainii	<1	1
Hakea subsulcata	<1	1
Dianella revoluta var. divaricata	<1	0.8
Ecdeiocolea monostachya	2	0.8
Thryptomene cuspidata	<1	0.6
Acacia ramulosa var. ramulosa	<1	0.5
Eremophila latrobei subsp. latrobei (ms)	2	0.5
Philotheca tomentella	5	0.5
Phebalium tuberculosum	<1	0.4
Hyalosperma glutinosum subsp. glutinosum	<1	0.2

QUADRAT Q24 510052E 6725560N

Open Woodland of *Eucalyptus salicola* over Tall Open Scrub dominated by *Acacia aneura* var. *aneura*, *Acacia acuminata* (npv) (ms), *Acacia longispinea* and *Acacia ramulosa* var. *ramulosa* on yellow sandy loam.

Condition: Very Good



OUADRAT O24 (30x30m)

SPECIES	% COVER	HEIGHT (M)
Eucalyptus salicola	10	5
Acacia acuminata (npv) (ms)	5	3
Acacia aneura var. aneura	20	3
Acacia colletioides	<1	2
Acacia longispinea	5	1.6
Acacia prainii	<1	1.5
Acacia ramulosa var. ramulosa	5	1.5
Dianella revoluta var. divaricata	<1	1
Eremophila caperata (ms)	<1	1
Eremophila georgei	<1	0.5
Phebalium tuberculosum	<1	0.5
Ptilotus obovatus	<1	0.5
Austrostipa sp.	<1	0.3
Hyalosperma glutinosum subsp. glutinosum	<1	0.1
Thysanotus patersonii	<1	Creeper

QUADRAT Q25 511230E 6726218N

Closed Heath of *Acacia masliniana* over a Low Open Shrubland dominated by *Melaleuca cordata* and *Thryptomene cuspidata*.

Condition: Very Good



QUADRAT Q25 (30x30m)

SPECIES	% COVER	HEIGHT (M)
Acacia masliniana	80	2
Acacia aneura var. aneura	<1	1
Melaleuca cordata	5	1
Melaleuca uncinata	<1	1
Dianella revoluta var. divaricata	<1	0.5
Thryptomene cuspidata	2	0.5

QUADRAT Q26 511011E 6727906N

Tall Open Shrubland dominated by *Hakea subsulcata* over an Open Low Heath dominated by *Micromyrtus clavata* (ms), *Hibbertia ancistrophylla* (ms) and *Philotheca brucei* subsp. *brucei*.

Condition: Very Good



QUADRAT Q26 (30x30m)

SPECIES	% COVER	HEIGHT (M)
Acacia stereophylla var.	<1	2.2
stereophylla		
Hakea subsulcata	3	2
Melaleuca cordata	1	1.2
Hibbertia ancistrophylla (ms)	15	1
Micromyrtus clavata (ms)	40	1
Philotheca brucei subsp. brucei	7	0.8
Hyalosperma glutinosum subsp.	1	0.1
glutinosum		

QUADRAT Q27 511972E 6730763N

Closed Heath dominated by *Melaleuca uncinata* with occasional *Eucalyptus petraea* and *Acacia assimilis* subsp. *assimilis* over a Low Open Shrubland dominated by *Acacia alata* and *Ptilotus obovatus* on hardpan.

Condition: Very Good



QUADRAT Q27 (30x30m)

SPECIES	% COVER	HEIGHT (M)
Allocasuarina acutivalvis subsp.	<1	3
prinsepiana		
Eucalyptus petraea	2	3
Melaleuca uncinata	90	2
Acacia assimilis subsp. assimilis	1	1.8
Acacia alata	3	0.8
Persoonia pentasticha (P2)	<1	0.5
Ptilotus obovatus	2	0.5

QUADRAT Q28 512981E 6729700N

Open Woodland dominated by *Eucalyptus leptopoda* subsp. *arctata* over a Tall Shrubland dominated by *Callitris glaucophylla* and *Acacia acuminata* (npv) (ms) over a Tall Open Shrubland dominated by *Eremophila latrobei* subsp. *latrobei* (ms), *Eremophila clarkei*, *Acacia tetragonophylla*, *Dodonaea inaequifolia* and *Alyxia buxifolia* over a Very Open Sedgeland dominated by *Lepidosperma costale* on granite outcropping.

Condition: Very Good



QUADRAT Q28 (30x30m)

SPECIES	% COVER	HEIGHT (M)
Eucalyptus leptopoda subsp.	10	15
arctata		
Callitris galucophylla	2	5
Acacia acuminata (npv) (ms)	10	4
Eremophila latrobei subsp. latrobei (ms)	2	2.5
Acacia tetragonophylla	2	2
Eremophila clarkei	2	2
Eremophila oppositifolia subsp. angustifolia	<1	2
Dodonaea inaequitifolia	2	1.8
Alyxia buxifolia	2	1.2
Maireana georgei	<1	1
Olearia muelleri	<1	0.8

SPECIES	% COVER	HEIGHT (M)
Acacia colletioides	1	0.6
Lepidoseprma costale	5	0.6
Ptilotus obovatus	1	0.5
Eremophila miniata	<1	0.3

QUADRAT Q29 511800E 6730800N

Closed Tall Scrub dominated by *Acacia acuminata* (npv) (ms), *Melaleuca nematophylla*, *Grevillea scabrida* (P3) and *Baeckea benthamii* (ms) with occasional *Eucalyptus petraea* over a Very Open Herbland dominated by *Borya sphaerocephala*.

Condition: Excellent to Very Good

QUADRAT Q29 (30x30m)

SPECIES	% COVER	HEIGHT (M)
Acacia acuminata (npv) (ms)	60	2.5
Grevillea scabrida (P3)	3	2
Melaleuca nematophylla	5	2
Baeckea benthamii (ms)	10	1.2
Scaevola spinescens	<1	0.8
Dodonaea inaequitifolia	<1	0.7
Borya sphaerocephala	6	0.1
Hyalopserma glutinosum subsp.	1	0.1
glutinosum		

QUADRAT Q30 510932E 6730205N

Mixed Tall Open Scrub dominated by *Acacia tetragonophylla* and *Acacia colletioides* with *Eremophila oldfieldii* subsp. *oldfieldii* and *Senna artemisioides* subsp. x *artemisioides* over a Very Open Herbland dominated by *Borya sphaerocephala* on granite outcropping.

Condition: Very Good



OUADRAT O30 (30x30m)

SPECIES	% COVER	HEIGHT (M)
Melaleuca leiocarpa	1	3
Acacia tetragonophylla	20	2.5
Eremophila oldfieldii subsp. oldfieldii	5	2
Melaleuca radula	<1	2
Senna artemisioides subsp. x artemisioides	5	1.5
Acacia colletioides	20	1.2
Baeckea benthamii (ms)	2	1.2
Acacia kochii	2	1
Scaevola spinescens	1	1
Grevillea scabrida (P3)	<1	0.8
Enchylaena tomentosa	<1	0.3
Ptilotus obovatus	<1	0.3
Calandrinia polyandra	1	0.01
Borya sphaerocephala	5	Ground cover
Zygophyllum ?eremaeum	<1	Creeper

QUADRAT Q31 511814E 6727665N

Closed Tall Scrub of *Baeckea benthamii* (ms), *Melaleuca filifolia* and *Acacia assimilis* subsp. *assimilis* over a Low Open Shrubland of *Thryptomene cuspidata*.

Condition: Excellent to Very Good



QUADRAT Q31 (30x30m)

SPECIES	% COVER	HEIGHT (M)
Baeckea benthamii (ms)	30	4
Melaleuca filifolia	30	4
Acacia assimilis subsp. assimilis	20	3
Acacia stereophylla var.	2	2
stereophylla		
Melaleuca cordata	<1	2
Thryptomene cuspidata	5	1
Hibbertia ancistrophylla (ms)	2	0.2

QUADRAT Q32 518156E 6727872N

Tall Open Scrub of *Acacia aneura* var. *aneura*, *Callitris glaucophylla*, *Grevillea obliquistigma* subsp. *obliquistigma* with scattered *Santalum acuminatum* over a Low Open Shrubland dominated by *Acacia colletioides* and *Acacia assimilis* subsp. *assimilis*.

Condition: Very Good



OUADRAT O32 (30x30m)

SPECIES	% COVER	HEIGHT (M)
Acacia aneura var. aneura	30	4
Callitris glaucophylla	5	4
Grevillea obliquistigma subsp.	5	3
obliquistigma		
Santalum acuminatum	1	3
Acacia tetragonophylla	<1	2.5
Acacia burkittii	<1	2
Alyxia buxifolia	<1	1.5
Acacia anthochaera	<1	1
Acacia assimilis subsp. assimilis	1	1
Acacia colletioides	1	1
Eremophila clarkei	<1	0.6
Scaevola spinescens	<1	0.6
Olearia sp.	<1	0.3

QUADRAT Q33 511474E 6727719N

Closed Heath dominated by *Acacia stereophylla* var. *stereophylla* over an Open Shrubland dominated by *Baeckea benthamii* (ms) and *Acacia aneura* var. *aneura* over a Low Open Shrubland dominated by *Philotheca brucei* subsp. *brucei* and *Enekbatus stowardii* (ms).

Condition: Excellent to Very Good



OUADRAT O33 (30x30m)

SPECIES	% COVER	HEIGHT (M)
Acacia stereophylla var. stereophylla	80	1.8
Acacia aneura var. aneura	1.5	1.5
Baeckea benthamii (ms)	2	1.4
Hakea subsulcata	1	1
Melaleuca cordata	<1	1
Acacia acuminata (npv) (ms)	<1	0.9
Dianella revoluta var. divaricata	<1	0.7
Enekbatus stowardii (ms)	1.5	0.4
Philotheca brucei subsp. brucei	3	0.4
Amphipogon caricinus	<1	0.1
Borya sphaerocephala	<1	0.1
Cassytha nodiflora	<1	Creeper

QUADRAT Q34 511834E 6730195N

Tall Shrubland dominated by *Melaleuca nematophylla*, *Grevillea integrifolia* and *Acacia aneura* var. *aneura* with occasional *Eucalyptus loxophleba* subsp. *supralaevis* over a Low Shrubland dominated by *Ptilotus obovatus*.

Condition: Good



QUADRAT Q34 (30x30m)

SPECIES	% COVER	HEIGHT (M)
Eucalyptus loxophleba subsp.	2	15
supralaevis		
Acacia microbotrya	1	3
Grevillea integrifolia	10	3
Melaleuca nematophylla	10	3
Acacia aneura var. aneura	5	2
Dodonaea inaequifolia	2	1.2
Eremophila clarkei	1	1
Daviesia divaricata	<1	0.5
Eremophila latrobei subsp.	<1	0.5
latrobei (ms)		
Ptilotus obovatus	30	0.5
Persoonia pentasticha (P2)	<1	0.4
Chamaexeros macranthera	<1	0.3

QUADRAT Q35 511500E 6730800N

Tall Shrubland dominated by Acacia quadrimarginea, Acacia ramulosa var. ramulosa and Calycopeplus paucifolius over an Open Herbland dominated by Borya sphaerocephala on clayey loams.

Condition: Good

QUADRAT Q35 (30x30m)

SPECIES	% COVER	HEIGHT (M)
Acacia quadrimarginea	7	6
Acacia ramulosa var. ramulosa	2	2.2
Calycopeplus paucifolius	7	2
Acacia acuminata (npv) (ms)	3	1.5
Acacia alata	5	1.4
Scaevola spinescens	1	0.8
Acacia kochii	<1	0.2
Borya sphaerocephala	10	0.2
Hyalosperma glutinosum subsp.	2	0.2
glutinosum		
Rhodanthe sp.	1	0.2