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MT GIBSON RANGES: DARWINIA MASONII TARGETED FLORA SURVEY




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This document describes the results of a survey targeting *Darwinia masonii* and carried out by Maia Environmental Consultancy Pty Ltd (Maia) in December 2013 for Mount Gibson Iron Limited (MGX). The survey was carried out over three specific areas (Study Areas 1, 2 and 3) at the Mt Gibson Ranges.

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Acronyms, Abbreviations and Glossary

Article	Part of a branch or fruit pod which separates easily from the rest of a joint
ATA	Alan Tingay and Associates
Axil	The upper angle between a leafstalk and the stem that bears it
BIF	Banded iron formation
BoM	Bureau of Meteorology
Bract	A leaf-like or scale-like plant part, usually small, sometimes showy or brightly coloured and located just below a flower, a flower stalk, or an inflorescence
Branchlet	A small branch or the terminal or ultimate subdivision of a branch
cf.	Compare with
CPBR	Centre for Plant Biodiversity Research
cm	Centimetre
Culm	The hollow jointed stem of a grass or sedge
DAFWA	Department of Agriculture and Food Western Australia
DEC	Former Department of Environment and Conservation – now DPaW
Dioecious	Having male and female reproductive organs borne on separate individuals of the same species
DPaW	Department of Parks and Wildlife
EPA	Environmental Protection Authority
EPBC Act	*Environment Protection and Biodiversity Conservation Act* 1999
ESCAVI	Executive Steering Committee for Australian Vegetation Information
***et al*.**	And others
GDA	Geocentric Datum of Australia
GPS	Global positioning system
ha	Hectare
Inflorescence	A cluster of flowers
IUCN	International Union for Conservation of Nature
km	Kilometre
m	Metre
mm	Millimetre
Maia	Maia Environmental Consultancy Pty Ltd
MGA	Metric grid Australia
MGX	Mt Gibson Iron Limited
NVIS	National Vegetation Information System
Operculum	A lid or flap covering an aperture
Ovary	The ovule-bearing lower part of a pistil that ripens into a fruit
Ovule	The egg in the ovary that develops into a seed after fertilisation
P (1-5)	Priority (1 to Priority 5)
Pedicel	A small stalk or stalk-like part bearing a single flower in an inflorescence
Petiole	The stalk by which a leaf is attached to a stem also a leaf stalk

Phyllichnia	Branchlet with striations, as in casuarinas
Phyllode	A flattened leafstalk that functions as a leaf, as in acacias
Pinnate	Leaflets grow opposite each other in pairs on either side of stem
Pistil	The female, egg-bearing organ of a flower, including the stigma, style, and ovary
SAID	Study Area Identifier
Stigma	The sticky tip of a flower pistil, on which pollen is deposited at the beginning of pollination
Striate	Striped
Style	The slender part of a flower pistil, extending from the ovary to the stigma
subsp.	Subspecies
T	Threatened
Terete	Smooth and usually cylindrical and tapering
Un-dissected	Not divided into many deep, narrow segments
WA	Western Australia
WAH	Western Australian Herbarium
WC Act	*Wildlife Conservation Act* 1950

Summary

Background

- *Darwinia masonii* is a flora taxon protected as a listed 'Threatened Species' of flora under the *Environment Protection and Biodiversity Conservation Act* 1999 (EPBC Act) and declared as 'Rare Flora' under the *Wildlife Conservation Act 1950* (WA) (WC Act).
- Mount Gibson Iron Limited (MGX) wishes to gain an understanding of any records of *D. masonii* that may be present in three polygons in the area of the Mt Gibson Ranges in the Shire of Yalgoo in Western Australia (WA).
- The three polygons are named Study Area 1, 2 and 3 and they cover approximately 121 ha. During an earlier survey carried out in the northern section of Study Area 2, 325 *D. masonii* were recorded. One NatureMap record also exists for *D. masonii* in Study Area 3.
- MGX contracted Maia Environmental Consultancy Pty Ltd (Maia) to carry out a survey targeting the Threatened Flora species *D. masonii* in the three polygons. A secondary aim of the survey was to record the locations of any other conservation significant flora species identified and also the locations of any Malleefowl (*Leipoa ocellata*) nest mounds encountered while carrying out the survey.

The Survey

- The survey was carried out between 3 December and 8 December 2013 (two botanists, 12 field person days).
- The Study Areas were gridded into 15 m by 15 m cells and each cell was given an identification number, individual cells are referred to as Study Area Identifiers (SAIDs) in this report.
- The botanists recorded information on: the number of *Darwinia masonii* located; the habitat and typical vegetation association in which *D. masonii* occurs; the height, health, life stage (seedling, juvenile or adult) and reproductive status (vegetative, flowering or fruiting) of each live *D. masonii* located. The locations of any dead *D. masonii* encountered were also recorded.
- The locations and numbers of any other conservation significant flora species, weed species and Malleefowl (*Leipoa ocellata*) nest mounds identified were also recorded.

Results

- *Darwinia masonii* was located on the hill in the northern section of Study Area 2. A total of 874 plants (one dead and 873 live) were recorded. No *D. masonii* were located in Study Area 1 or 3.
- *D. masonii* was located on iron formation boulders, on outcropping ironstone boulders and stones and also in areas with a mix of laterite and ironstone stony and gravelly soils. It was located on the mid- and upper-slopes and also on the top of the hill in the northern section of Study Area 2.
- The majority (42%) of all live *D. masonii* recorded in Study Area 2 grow on iron formation rocks on the upper-slopes of the western side of the hill. When rock type, topographic location and aspect are considered separately, most of the *D. masonii* were located on iron formation rocks (approximately 83%), on the upper-slopes of the hill (approximately 59%) and on the western side of the hill (approximately 63%).
- The density of *D. masonii* (per SAID hectare (ha)) was approximately 301 plants. *D. masonii* tended to be denser in the SAIDs on the top and upper-slopes of the hill and on the western side.
- The average height of the *D. masonii* population was approximately 137 cm. When height, aspect and topographic location are considered the shortest plants were on the east facing mid-slopes and the tallest on the east facing upper-slopes and west facing mid-slopes.
- Overall the *D. masonii* located on the mid-slopes were slightly taller than those on the upper-slopes

and top while those on the top of the hill were shortest. By aspect overall the tallest plants were located on the eastern and western sides of the hill and the shortest on the northern side.

- The average health rating for all live *D. masonii* was 2.4 (where a rating of 1 is most healthy and 4 least healthy) and 85% of the plants were rated as a 3 or 2. By aspect overall, the *D. masonii* located on the top of the hill were healthiest as were the *D. masonii* on the top of the hill when assessed by topographic location overall. Seedlings were healthier than juveniles and adults.
- Approximately 96% of the *D. masonii* population were adults, 1% juveniles and 3% seedlings.
- Peak flowering had occurred in the weeks before the survey (December 2013) and approximately 92% of the *D. masonii* were fertile and 8% vegetative. More of the fertile plants had old inflorescences containing fruit (approximately 89%) than old buds (approximately 3%).
- *Eucalyptus synandra* and *Lepidosperma gibsonii* were also recorded in Study Area 2. *E. synandra* is a flora taxon protected as a listed Threatened Species under the EPBC Act and declared as Rare Flora under the WC Act. *L. gibsonii* is a flora taxon declared as Rare Flora under the WC Act.
- Six flora species classified by the Department of Parks and Wildlife (DPaW) as 'Priority Flora' were located while carrying out the survey: *Persoonia pentasticha* (Priority (P) 3) in Study Area 1; *Acacia cerastes* (P1), *Allocasuarina tessellata* (P1), *Micromyrtus trudgenii* (P3) and *P. pentasticha* (P3) in Study Area 2; and, *A. tessellata* (P1), *Grevillea scabrida* (P3), *G. subtiliflora* (P3) and *P. pentasticha* (P3) in Study Area 3.
- Two taxa of interest were located in the Survey Areas – *Baeckea* sp. Mt Gibson (Study Area 2) and *Acacia* cf. *umbraculiformis* (Study Area 3). *B.* sp. Mt Gibson is an uncommon species not yet listed on FloraBase and *A.* cf. *umbraculiformis* is similar to but does not match reference specimens of *A. umbraculiformis* held at the WA Herbarium.
- Two weed species were recorded in Study Areas 2 and 3: *Mesembryanthemum nodiflora* and *Pentameris airoides* subsp. *airoides*; neither species is a weed of national interest or a declared pest plant in WA.
- Malleefowl (*Leipoa ocellata*) nest mounds were located in Study Area 1 (one) and Study Area 2 (13).

Discussion and Conclusions

- *Darwinia masonii* was recorded on a hill in the northern section of Study Area 2.
- More *D. masonii* were located on iron formation, on the upper-slopes and western side of the hill than on any of the other rock types, habitats and aspects of Study Area 2.
- *D. masonii* was at its densest in the SAIDs on the upper-slopes and top of the hill.
- Most of the *D. masonii* in the Study Area 2 fell within and between the 90 cm to 190 cm height increment range, which may indicate that most of the *D. masonii* germinated at a similar time.
- The healthiest *D. masonii* were on the top and the mid-slopes of the eastern side of the hill, while the least healthy were on the upper and mid-slopes of the western side of the hill.
- No overall trend is apparent in height increment and health rating data; however, *D. masonii* in the 10 cm and 20 cm height classes (i.e. the seedlings) were healthier than the *D. masonii* in all other height classes.
- Approximately 96% of the *D. masonii* in Study Area 2 were adults, 3% seedlings and 1% juveniles. These percentages may indicate that seed set and germination could be low in *D. masonii* and seedling attrition rates relatively high, or that the seed needs a trigger (e.g. fire) for germination.
- Overall, approximately 92% of the measured *D. masonii* had either old buds or old inflorescences with fruit in December 2013 and only approximately 8% were vegetative (i.e. had no reproductive material) and peak flowering had occurred in the weeks before the survey. None of the plants had both old buds and old inflorescences; they had either old buds or old inflorescences.

Mt Gibson Ranges: *Darwinia masonii* Targeted Flora Survey

1 Background Information

1.1 Project Scope of Work

Mount Gibson Iron Limited (MGX) contracted Maia Environmental Consultancy Pty Ltd (Maia) to carry out a targeted survey for *Darwinia masonii* within three polygons in the area of the Mt Gibson Ranges. The Mt Gibson Ranges are located in the Shire of Yalgoo, approximately 78 km north-east of Wubin and 62 km south-west of Paynes Find in Western Australia (WA) (Map 6.1, Section 6).

The purpose of the targeted survey is to provide MGX with an understanding of any records of *Darwinia masonii* (additional to plants previously located) that may be present in these polygons.

The scope of works included collecting information on the number of *D. masonii* and on the height, life stage and reproductive status of each live *D. masonii* identified. The scope of works also included recording the location and number of any other conservation significant flora species, weed species and Malleefowl nest mounds identified.

1.2 The Study Areas

The three polygons are referred to as Study Area 1 (western polygon), Study Area 2 (central polygon) and Study Area 3 (eastern polygon) (Map 6.2, Section 6).

The extent of each polygon (hectares (ha)) and the tenements in which they lie are listed in Table 1.1. The Study Areas cover approximately 121 ha in total.

Table 1.1: Study Areas, Tenements and Extents

Study Area	Tenements	Area (ha)
1	M59/609, G59/31	24.1
2	M59/454, M59/550, M59/609, M59/737, E59/1590, P59/1703	72.0
3	E59/1980	25.1
	Total Area	121.2

1.3 Darwinia masonii

Darwinia masonii (Mason's Darwinia) is declared as Rare Flora under the *Wildlife Conservation Act 1950* (WC Act) in WA (Government of Western Australia, 2013). It is a listed Threatened Species of flora under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (Australian Government, 2013a). *D. masonii* has been assessed by the Department of Parks and Wildlife (DPaW) as meeting the category of 'Vulnerable' using the criteria of the International Union for Conservation of Nature (IUCN) (DPaW, 2013a). The species is currently only known from the Mt Gibson Ranges in Western Australia (Australian Government, 2013a).

D. masonii is an erect shrub growing to 3 m tall. The leaves are narrow, approximately 1 cm long and are triangular in cross section (Brown *et al.*, 1998). The leaves are clustered towards the ends of the branchlets. The flowering inflorescences are approximately 3 cm in diameter and are surrounded by numerous spreading pinkish bracts that are pendulous on the ends of small branchlets. The bracts are broad at the base but narrow to a pointed apex with a distinct midrib. Each bract is approximately 2 cm in length and 5 mm wide at the base. Each

tubular flower is about 5 mm long with a style approximately 1.5 cm in length with hairs below the stigma (Brown *et al*., 1998).

1.4 Earlier *Darwinia Masonii* Surveys and Records

Based on the results of a regional survey carried out at parts of the Mt Gibson Ranges and on surrounding hills (ATA, 2004; DEC, 2009), nine discrete locations, comprising approximately 16,000 *D. masonii* plants, are known to occur in the area (Map 6.3, Section 6).

Study Area 1 does not appear to have been thoroughly searched in the past. The northern section of Study Area 2 was searched by ATA in 2004 and, at that time, 325 *D. masonii* were located. Study Area 3 was defined by a historical record of *D. masonii* in NatureMap (DEC, 2007 -). The record lies in an area of Mt Gibson Station towards Mt Singleton (DEC, 2007 -); however, no detailed survey information is available for the record.

1.5 Local Temperature and Rainfall

The closest Bureau of Meteorology (BoM) weather station recording temperature data is Paynes Find (station number 7139), which is approximately 62 km to the north-east of the Study Areas.

The mean annual maximum temperature at Paynes Find is 27.8˚C while the mean annual minimum temperature is 12.9˚C (BoM, 2013a). The mean maximum daytime temperature is highest in January, 44.0˚C (BoM, 2013b), and the mean minimum winter temperature is lowest in July at -0.7˚C (BoM, 2013c).

The closest BoM weather station recording rainfall data is Mt Gibson (station number 10075). Long-term mean monthly and total annual rainfall data for Mt Gibson are listed in Table 1.2 along with monthly totals for 2012 and 2013 (BoM, 2013d). Long-term total monthly rainfall data has been calculated using rainfall data recorded at Mt Gibson from January 2003 to December 2013; however, total monthly rainfall data is not available for 2004 and 2006 and data is missing for January 2010, April 2008 and July 2009 and 2013.

Total long-term mean monthly rainfall for June to November is 156.5 mm while actual rainfall received in June to November 2013 was 125.6 mm, which is approximately 80% of the 2003 to 2013 mean for those six months.

Table 1.2: Mt Gibson Rainfall Data (BoM, 2013d)

Mt Gibson (station number 10075)													
	Monthly Rainfall (mm)												
Year	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Total**
2012	33.0	7.4	19.6	0.0	34.5	81.8	15.0	18.6	16.8	5.2	32.7	9.5	274.1
2013	42.5	0.0	49.5	19.2	43.5	13.2	19.0*	31.0	29.6	17.6	15.2	1.3	246.1
Long-term mean (2003-2013)	31.5	32.9	23.0	10.5	36.0	35.6	37.5	35.9	21.9	9.9	15.7	10.7	301.2

Note: * = rainfall data for July is from Paynes Find as no data was recorded at Mt Gibson.

2 METHODS

2.1 SURVEY TIMING, DURATION AND PRE-SURVEY RAINFALL

The *Darwinia masonii* targeted survey was conducted in summer 2013. Two botanists carried out the survey between December 3 and December 8 2013. Twelve field person days were spent on the targeted survey.

Total rainfall recorded over the three months before the survey (September to November 2013) was higher (62.4 mm) than the 2003 to 2013 long-term mean for the same three months (47.5 mm) (Table 1.2).

2.2 FIELD SURVEY

Shape files for the Study Areas were uploaded onto hand held global positioning systems (GPS). The Study Areas were searched walking transects at a spacing of approximately 15 m apart over each – the distance apart depending on the density of any *Darwinia masonii*, the terrain, topography and density of the vegetation.

The Study Areas were divided into 15 m by 15 m cells, and each cell was given a specific identification number (Study Area Identifier (SAID)). All information collected within a particular cell was then linked to that SAID. The SAIDs in Study Area 1 and 2 are shown on Map 6.4 (Section 6).

The following information was collected for each individual *D. masonii* located:

- Its coordinates (by GPS).
- Its estimated height (to the nearest 10 cm).
- Its age (seedling ≤ 20 cm in height; juvenile > 20 cm ≤ 50 cm in height; adult > 50 cm in height).
- Its reproductive status (flowering, fruiting or vegetative).
- Its health (on a scale from 1 to 5, where 1 is very healthy and 5 dead).

Representative photographs of *D. masonii* in the area in which it was recorded were also taken and information on the typical vegetation association, habitat and topography in which the *D. masonii* occurred was also collected.

2.3 ADDITIONAL DATA COLLECTION

While walking transects within each Study Area, the locations of other identified conservation significant flora taxa classified as a listed Threatened Species under the EPBC Act, declared as Rare Flora under the WC Act or classified by DPaW as 'Priority Flora' (DPaW, 2013a; Smith, 2013) were recorded on a GPS and their numbers counted or approximated (when large populations were encountered). Similarly, the locations of any known introduced species (weeds) were also recorded on a GPS and their numbers counted or approximated. Any Malleefowl nest mounds encountered within each Study Area were also recorded and photographed.

2.4 STANDARDS AND GUIDELINES

The field survey and report have been executed to meet relevant standards and guidelines included in Position Statement No. 3: Terrestrial Biological Surveys as an Element of Biodiversity Protection (EPA, 2002) and Guidance Statement No. 51: Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia (EPA, 2004).

2.5 Project Team

The field survey and reporting tasks were undertaken by the botanists listed in Table 2.1.

Table 2.1: Project Team

Project Team					
Name	**Qualification**	**Experience**	**Project Role**	**DEC Flora License Number (Expiry)**	**Threatened Flora Collecting Permit Number (Expiry)**
Christina Cox	PhD	13 + years	Botanist–report	Not applicable	
Scott Hitchcock	BSc	7 + years	Botanist–survey and taxonomy	SL010516 (April 2014)	39-1314 (September 2014)
Rochelle Haycock	BSc	5 + years	Botanist–survey and report	SL010518 (April 2014)	129B-1213 (March 2014)
Malcolm Trudgen	BSc	20 + years	Contract taxonomist	Not applicable	

3 RESULTS

3.1 COVERAGE ACHIEVED

All of the approximately 121 ha comprising the three Study Areas were surveyed. Transects walked across each Study Area are shown on maps 6.5 and 6.6 in Section 6.

3.2 *DARWINIA MASONII*

Darwinia masonii was located in Study Area 2 – on a hill in the northern section (Map 6.7, Section 6).

No *D. masonii* was located in Study Area 1 or 3.

D. masonii (Plates 3.1, 3.2, 3.3) was recorded on weathered ironstone and lateritic gravelly soils and also growing out of cracks in iron formation boulders (including banded iron formation, BIF). The remains of old flowering material and fruiting structures (Plate 3.4) were present on many of the mature plants located.

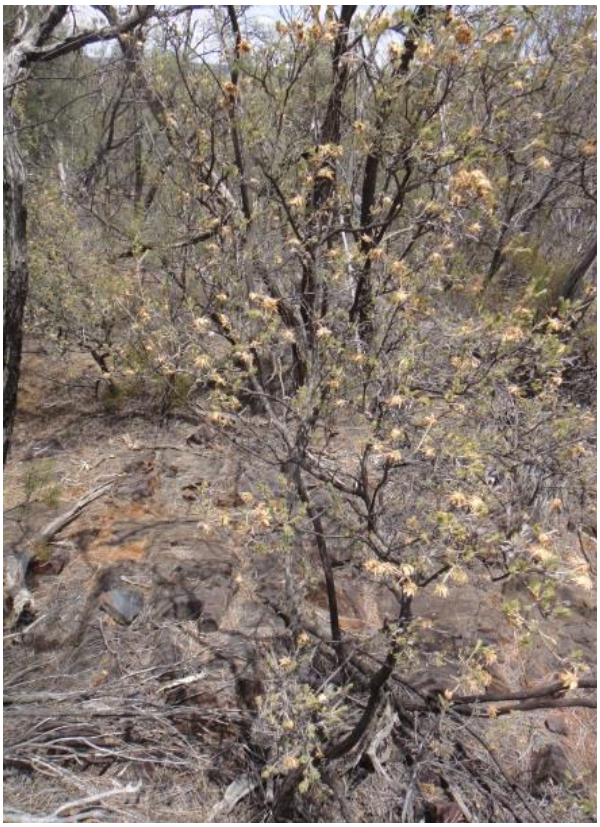

Plate 3.1: Growth habit

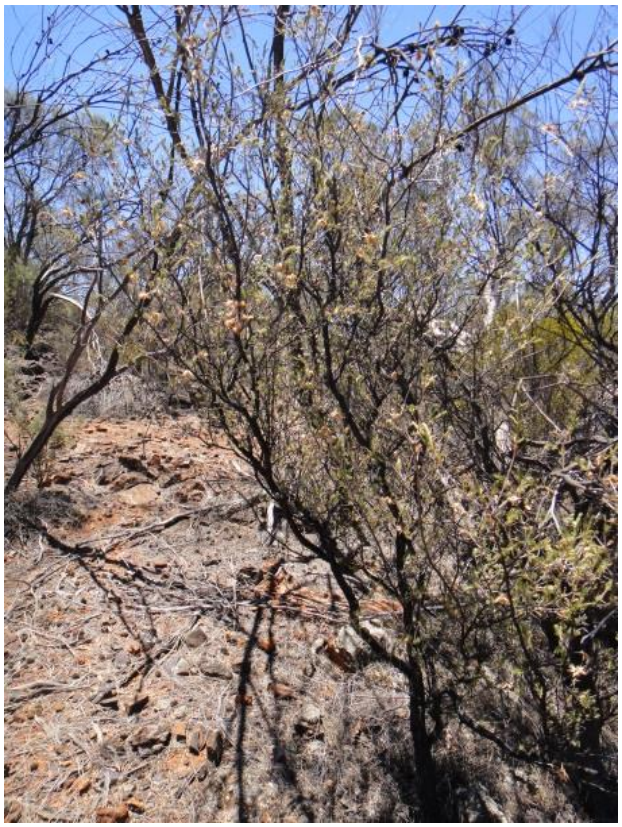

Plate 3.2: Growth habit

Plate 3.3: Close-up of leaves

Plate 3.4: Close-up of old inflorescence and bracts

(Photographs by Maia.)

3.2.1 Information Presented in Following Sub-sections

The following sub-sections of this report summarise information on the vegetation associations in which *Darwinia masonii* occurs in Study Area 2, the number of *D. masonii* recorded, the habitat in which *D. masonii* typically occurs and on their aspect, height, health, life stage and reproductive status when the survey was carried out in December 2013.

The maps illustrating the density, height, life stage and reproductive data collected in each SAID and discussed in the following sub-sections focus on the SAIDs in which *D. masonii* was recorded (Map 6.8, Section 6). The boundaries for the areas defined as the top of the hill and the upper-slopes are also included on each of the maps on which the SAIDs are shown.

3.2.2 Vegetation Associations

Darwinia masonii was typically located in two vegetation units in Study Area 2 (Table 3.1). The growth form, height classes and cover characteristics of the vegetation units in Table 3.1 are described using the current National Vegetation Inventory System (NVIS) methodology at the association level (ESCAVI, 2003).

Table 3.1: Vegetation Units in which *Darwinia masonii* occurs in Study Area 2

Description	Associated species	Photograph
Allocasuarina acutivalvis subsp. *prinsepiana* low open woodland with *Melaleuca nematophylla*, *Acacia assimilis* subsp. *assimilis* and *Calycopeplus paucifolius* Tall Open Shrubland and *Eremophila latrobei* subsp. *latrobei* and *Philotheca sericea* Low Open Shrubland.	*Darwinia masonii* (T), *Eremophila clarkei*, *Grevillea paradoxa*, *Philotheca brucei* subsp. *brucei*. This unit was recorded in the northern section of the area in which *D. masonii* was located. It occurs on the mid-slopes, upper-slopes and the top of the hill in an area with boulders of iron formation and weathered ironstone and laterite gravelly soils.	
Allocasuarina acutivalvis subsp. *prinsepiana* low open woodland with *Melaleuca nematophylla*, *Acacia assimilis* subsp. *assimilis* and *Malleostemon tuberculatus* Tall Open Shrubland and *Grevillea paradoxa* and *Xanthosia bungei* Low Open Shrubland.	*Darwinia masonii* (T), *Eremophila clarkei*, *Hibbertia crassifolia*, *Philotheca brucei* subsp. *brucei*. This unit occurs on west facing aspects of the hill and on the upper-slopes, mid-slopes and top. Boulders of outcropping iron formation were present in the area along with weathered ironstone and laterite gravelly soils.	

3.2.3 *Darwinia masonii* Located in the Study Areas

Darwinia masonii was located in the northern section of Study Area 2 where 874 *D. masonii* were recorded (873 live plants and one dead). Measurements were recorded for all 873 live plants located in Study Area 2.

The locations of the 873 live and one dead *D. masonii* are shown on Map 6.7, Section 6. The information recorded for each *D. masonii* is included in Table A1.1, Appendix 1.

3.2.4 Habitat – Rock Type, Topography and Aspect

Darwinia masonii grows on outcropping iron formation boulders and stones and also in areas with a mix of laterite and ironstone stony and gravelly soils. It was found on the mid-slope, upper-slope and top of the hill in the northern section of Study Area 2 as well as on its western, northern and eastern sides. The distribution of the *D. masonii* in Study Area 2 is listed by habitat in Table 3.2 and shown by rock type, topography and aspect in Figures 3.1, 3.2 and 3.3. Map 6.9, Section 6, shows the distribution of the *D. masonii* by aspect and topographic location.

Approximately 42% of all live *D. masonii* recorded in Study Area 2 were located on the upper-slopes of the western side of the hill in areas of iron formation rocks (Table 3.2; Map 6.9, Section 6). Approximately 18% of all live *D. masonii* were on the top of the hill on iron formation rocks and approximately 13% on the west facing mid-slope on iron formation rocks.

Table 3.2: *Darwinia masonii* Habitats

Topographic Location	Rock	Aspect							
		Top		East Facing		North Facing		West Facing	
		Count	%	Count	%	Count	%	Count	%
Top	Iron formation	157	**18.0**						
	Ironstone	3	0.3						
	Laterite & ironstone	16	1.8						
Upper-slope	Iron formation			35	4.0	59	6.8	365	**41.8**
	Ironstone			15	1.7				
	Laterite & ironstone			26	3.0	15	1.7	4	0.5
Mid-slope	Iron formation			1	0.1			110	**12.6**
	Laterite & ironstone							67	7.67

Most *D. masonii* in Study Area 2 were located predominantly on iron formation rock (approximately 83%) (Figure 3.1), on the upper-slopes of the hill (approximately 59%) (Figure 3.2) and on the western side of the hill (approximately 63%) (Figure 3.3).

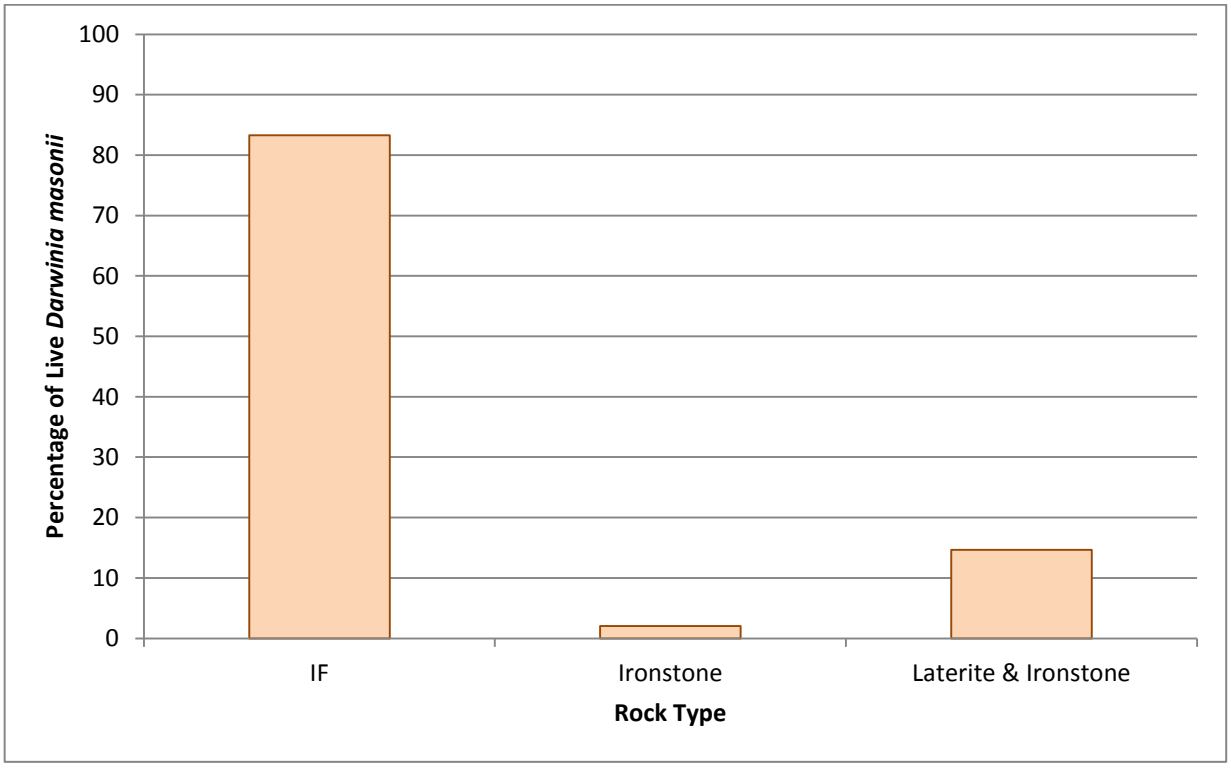

Figure 3.1: *Darwinia masonii* (%) and Rock Type

Note: IF on figure above = iron formation.

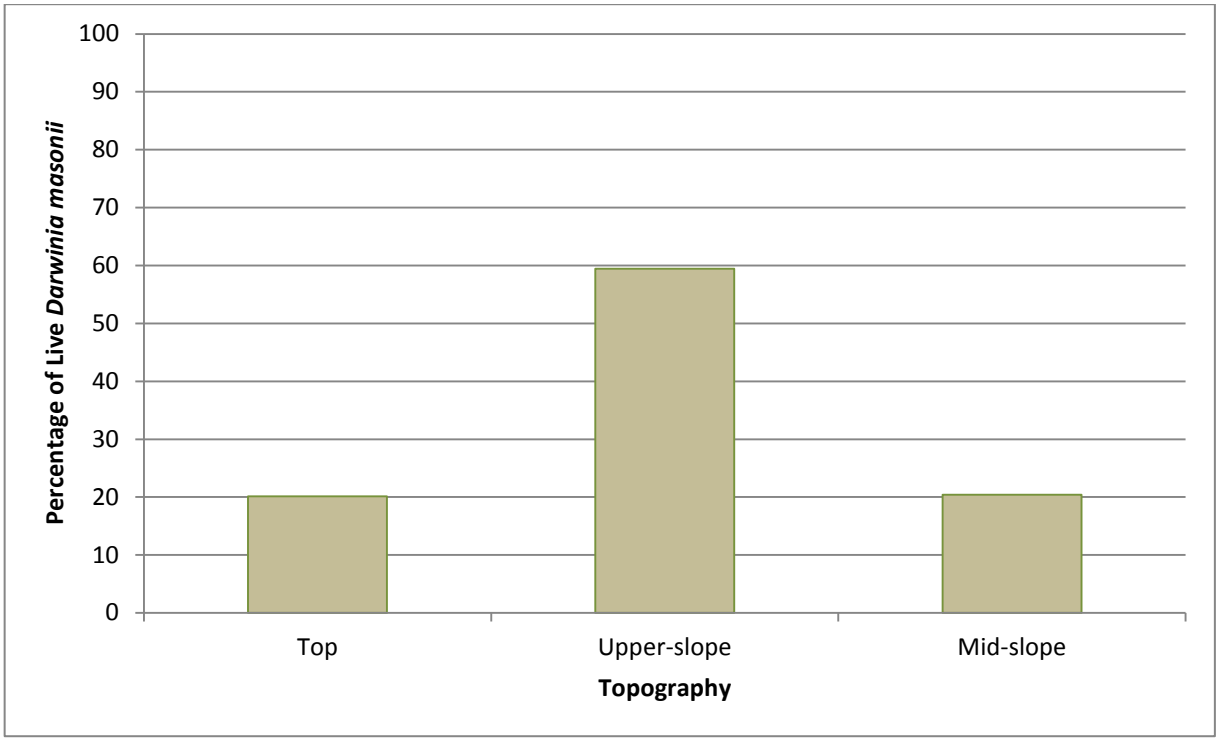

Figure 3.2: *Darwinia masonii* (%) and Topography

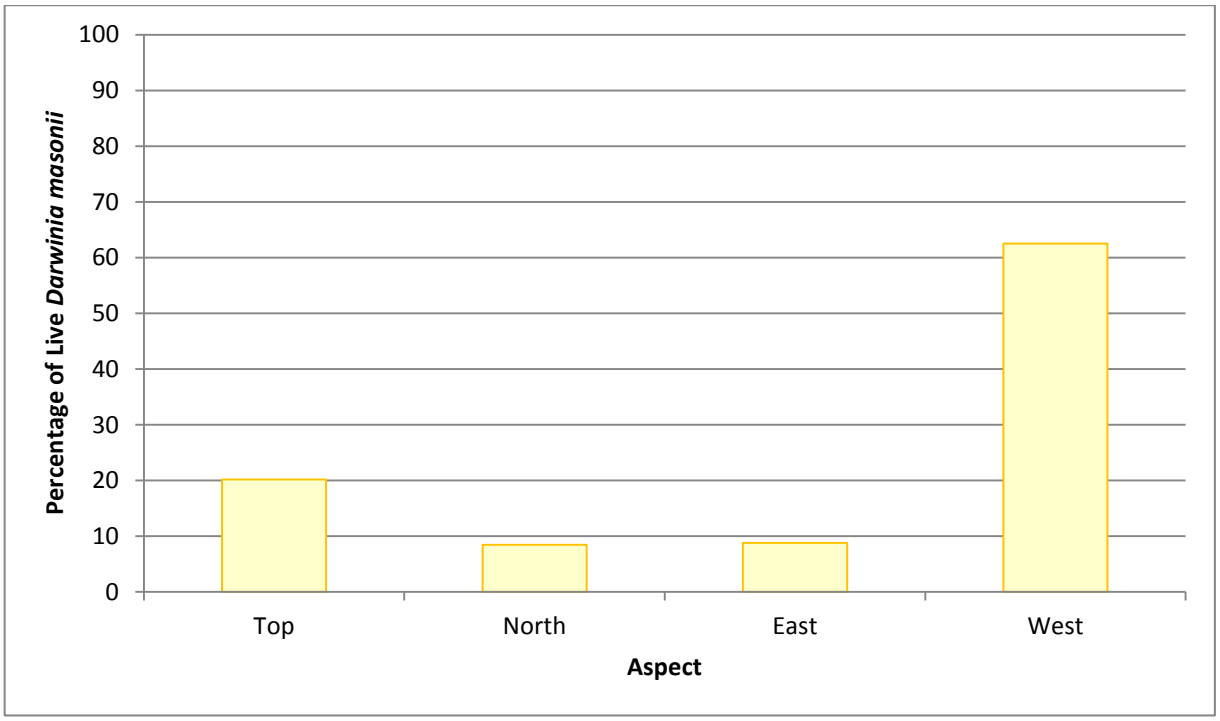

Figure 3.3: *Darwinia masonii* (%) and Aspect

3.2.5 Density

Map 6.10 (Section 6) shows the density data for live *Darwinia masonii* located within each SAID. Between 1 and 5 plants were located in the majority (56%) of SAIDs in which live *D. masonii* were recorded. *D. masonii* tended to be more dense (16 – 21+ plants per SAID) on the top and upper-slopes and on the western side of the hill.

Density information for live *D. masonii* is presented in Table 3.3. The density of *D. masonii* was approximately 301 plants per SAID hectare.

Table 3.3: *Darwinia masonii* Density

Total Number of Plants	Number of SAIDs	Total Area of SAIDs (ha)	*Dm* Density (Number of Plants per SAID ha)	Minimum - Maximum Records in a SAID
873	129	2.9	300.8	1 - 27

Note: SAID = Study Area Identifier (each SAID is 15 m x 15 m; 0.02 ha); *Dm = Darwinia masonii*.

3.2.6 Height and Habitat

Map 6.11 (Section 6) presents the average height classes for the live *D. masonii* located in each SAID. In 79 of the 129 SAIDs (57%) average height was in the >120 - 160 cm height range. In only six SAIDs (5%) was the average height of the plants in the lowest two ranges (1 - 40 cm and >40 – 80 cm).

The average height of all live *D. masonii* as a whole was approximately 137 cm (Table 3.4). The shortest plant measured was 10 cm and the tallest 260 cm. More of the *D. masonii* were in the 90 cm to 190 cm height classes (approximately 4 to 11% in each) and fewer in the taller height classes (230 cm– 260 cm, < 1% in each) (Figure 3.4).

Table 3.4: *Darwinia masonii* Height

Average Height (cm)	Minimum Height of Live *Dm* Recorded in a SAID (cm)	Maximum Height of Live *Dm* Recorded in a SAID (cm)
136.7	10	260

Note: SAID = Study Area Identifier and each SAID is 15 m x 15 m; *Dm = Darwinia masonii*.

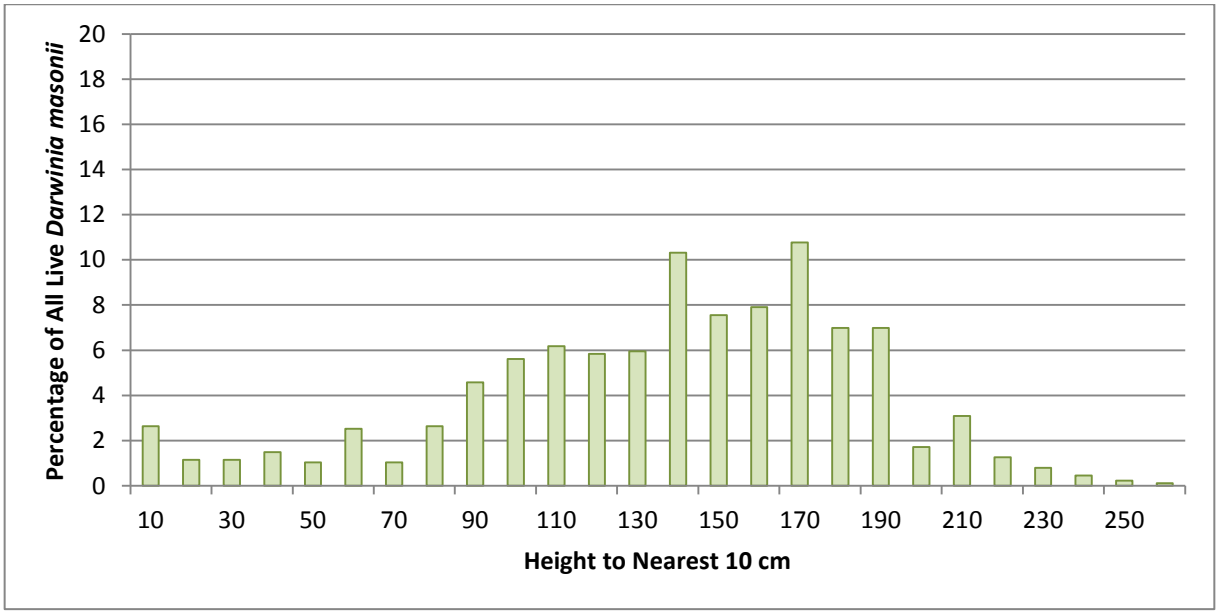

Figure 3.4: *Darwinia masonii* (%) and Height Group (to Nearest 10 cm)

Overall the *D. masonii* located on the mid-slopes (approximately 140 cm) were slightly taller than those on the upper-slopes and top while those on the top of the hill were shortest (approximately 130 cm) (Table 3.5). By aspect overall the tallest plants were located on the eastern and western sides of the hill (both approximately

140 cm) and the shortest on the northern side (approximately 123 cm). When average height by aspect and topographic location is calculated, the shortest plants were on the east facing mid-slopes (approximately 100 cm) and the tallest on the east facing upper-slopes (approximately 141 cm). Although this group was only slightly taller than the plants on the west facing upper- and mid-slopes (both approximately 140 cm).

Table 3.5: Average Height (cm) of *Darwinia masonii* by Aspect and Topography

Topographic Location	Average Height (cm) by Aspect				Average Height (cm) by Topographic Location
	Top	East	North	West	
Top	130.3				130.3
Upper-slope		**140.7**	123.1	**139.9**	137.6
Mid-slope		100.0		**140.3**	**140.1**
Average Height (cm) by Aspect	130.3	**140.1**	123.1	**140.1**	
Average Height (cm) of all Plants					136.7

3.2.7 Health Rating and Habitat

The following photographs (Plates 3.5 to 3.8) and descriptions aim to illustrate and define the health ratings developed in the field and used to rate the health of each live *Darwinia masonii* located in Study Area 2.

Plate 3.5: Health rating 1

Health rating of 1: Healthiest – leaves are green, plant appears bushy and small amount of leaf dieback.

Plate 3.6: Health rating 2

Health rating of 2: Healthy – leaves are green, plant appears bushy, but a little more leaf dieback and loss.

Plate 3.7: Health rating 3

Plate 3.8: Health rating 4

Health rating of 3: Average condition – crown dieback is present on the branchlets (between 30-70%) and plant appears straggly. Some leaves on the tips of the branchlets are changing colour from green to brown.

Health rating of 4: Poor condition – more than 70% leaf dieback on the ends of the branchlets. Leaves changing colour from green to brown. Often been crushed by a fallen plant, snapped or bending over.

Health rating of 5: Plant is dead. (Only one dead plant (a previously tagged one) was recorded in the area. However, it is difficult to differentiate dead *D. masonii* from other dead shrubs and organic litter because *D. masonii* drop their leaves as they become progressively less healthy and the dead plants have no distinguishing features.)

The average health rating for the live *Darwinia masonii* measured in each SAID is shown on Map 6.12 (Section 6). The health rating in 50% of all SAIDs was 3 and in 46% it was 2. The healthiest (average health rating of 1) *D. masonii* were located in only two (1%) of the SAIDS on the top and eastern side of the hill while the least healthy (average health rating of 4) were located in four SAIDs (3%) on the eastern side of the hill. The plants tended to be healthier in the SAIDs on the top and upper-slopes of the eastern side of the hill.

Additional information on the overall health of all live *D. masonii* is presented in Table 3.6 and Figure 3.5.

Table 3.6: *Darwinia masonii* Health Rating

Average Health Rating	Minimum Rating of Live *Dm* Recorded in a SAID (cm)	Maximum Rating of Live *Dm* Recorded in a SAID (cm)
2.4	1	4

Note: SAID = Study Area Identifier and each SAID is 15 m x 15 m; *Dm* = *Darwinia masonii*.

The average health rating calculated for all plants measured is 2.4. As the healthiest *D. masonii* were given a rating of 1, the least healthy 4 and the dead plant a rating of 5, the plants with a rating lower than the average of 2.4 are healthiest and those with a rating higher than the average are less healthy.

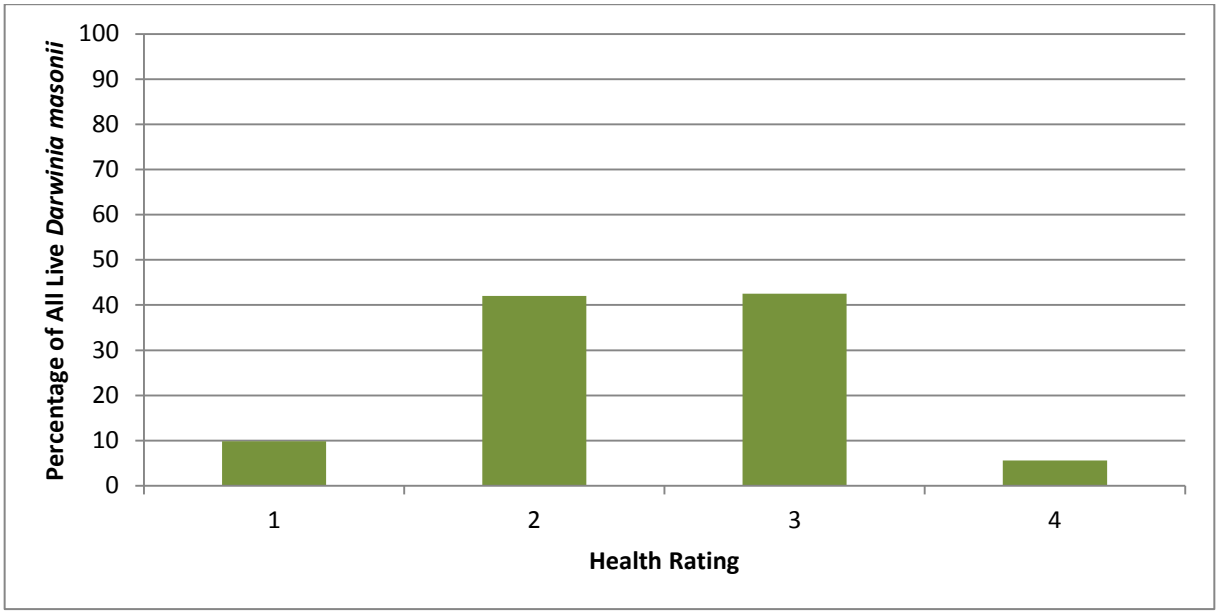

Figure 3.5: Live *Darwinia masonii* (%) and Health Ratings

Most (approximately 85%) of the *D. masonii* in Study Area 2 were rated as a 3 or 2 (approximately 43% and 42% respectively) (Figure 3.5).

Figure 3.6 shows the average health rating for *D. masonii* within each 10 cm height increment. The *D. masonii* in the 10 cm and 20 cm height classes were healthier than the *D. masonii* in all other height classes. This probably reflects the fact that the *D. masonii* in these two height classes were seedlings and their new growth was healthier than that of older (taller) plants.

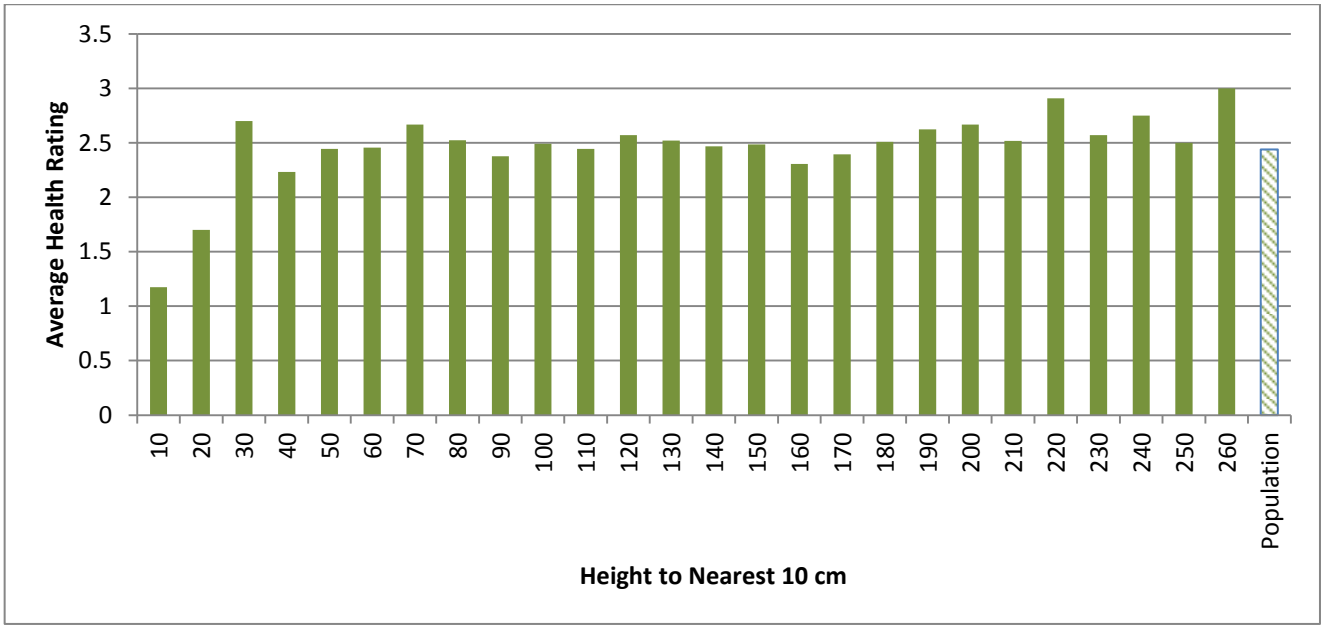

Figure 3.6: Average Health Rating of *Darwinia masonii* in each 10 cm Height Class

Data relating to health rating, aspect and topography are presented in Table 3.7.

Table 3.7: Average Health Rating of *Darwinia masonii* by Aspect and Topography

Topographic Location	Health Rating by Aspect				Average Health Rating by Topographic Location
	Top	East	North	West	
Top	2.1				**2.1**
Upper-slope		2.3	2.3	2.6	2.5
Mid-slope		2.0		2.6	2.6
Average Health Rating by Aspect	**2.1**	2.3	2.3	2.6	
Average Overall Health Rating					2.4

By topographic location overall the average health rating of the *D. masonii* on the top of the hill was lower (i.e. the plants were healthier) than that of the plants on the mid- and upper-slopes. By aspect overall the health rating of the plants on the top of the hill was lower than that of the plants on the east, north or west facing sides of the hill. The healthiest *D. masonii* by both aspect and topography were those on the mid-slopes of the eastern side of the hill, while those on the upper- and mid-slopes on the western side of the hill were least healthy.

3.2.8 Life Stage

The photographs (Plates 3.9 to 3.11) and descriptions below indicate the three life stages (seedling, juvenile and adult) of the *Darwinia masonii* located at Study Area 2.

Plate 3.9: Seedling

Seedling: Plant is ≤ 20 cm in height, has no reproductive material and leaves are present along most of the main stem and all of the way up the branchlets.

Plate 3.10: Juvenile

Juvenile: Plant is > 20 cm and < 50 cm in height, has no reproductive material, the leaves are dying off and being shed from both the main stem and the branchlets.

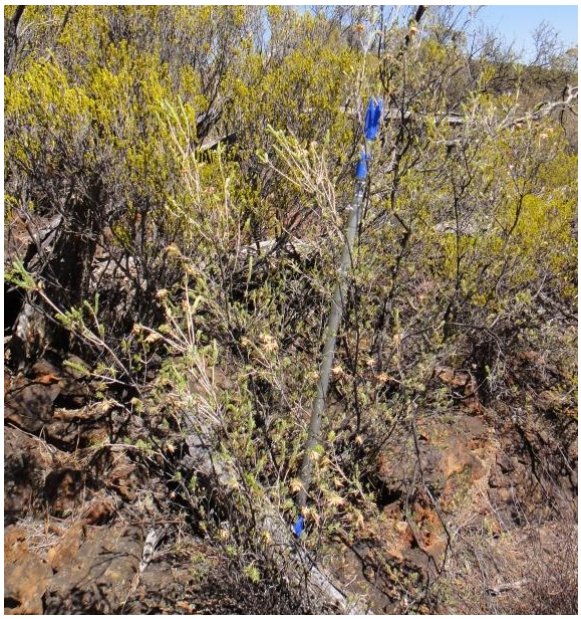

Plate 3.11: Adult

Adult: Plants > 50 cm in height (apart from damaged plants and those not having the characteristics of seedlings and juveniles). Reproductive material is generally present on these plants.

The life stages (seedling, juvenile and adult) for measured *D. masonii* are displayed by SAID on Maps 6.13 to 6.15 (Section 6).

In most SAIDs (93%) adult *D. masonii* were in the highest class range (i.e. >80 to 100% of the plants located in the SAID were adults). Juveniles were in the 1 to 20% range in most (80%) of the five SAIDs in which they were located and seedlings were in the 1 to 20% range in most (65%) of the 20 SAIDs in which they were located.

Life stage summary data for all live *D. masonii* are presented in Table 3.8.

Of the 873 live *D. masonii* recorded in Study Area 2, approximately 96% were adults, 3% seedlings and 1% juveniles.

The seedlings were healthier than juvenile and adult *D. masonii* (Table 3.8, Figure 3.6).

Table 3.8: *Darwinia masonii* Life Stage

Life Stage	Number of Live *Dm*	Percentage of Live *Dm*	Average Health Rating	Average Height
Adult	837	95.9	2.5	141.7
Juvenile	6	0.7	1.5	36.7
Seedling	30	3.4	1.1	17.7

Note: *Dm* = *Darwinia masonii*.

3.2.9 Reproductive Status

The following photographs and descriptions illustrate the flowering (Plate 3.12, old bud) and fruiting (Plate 3.13, matured inflorescence) status of the *Darwinia masonii* in Study Area 2 while Plate 3.14 shows an individual fruit.

Plate 3.12: Old bud

Plate 3.13: Fruits present in old inflorescence

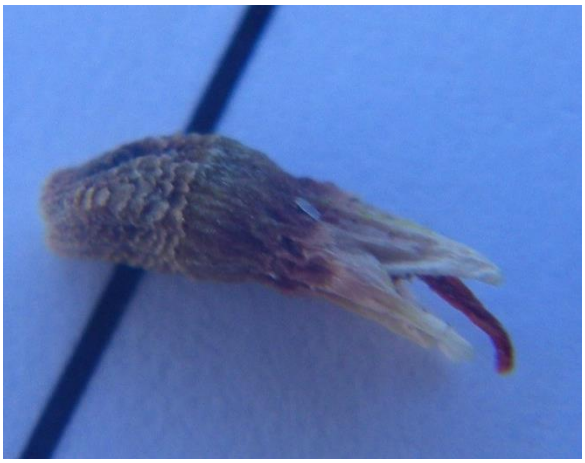

Plate 3.14: Individual fruit (the seed is contained within the fruit)

- The peak flowering period had occurred before the December 2013 survey and only shrunken old buds (Plate 3.12) were recorded on a few of the *D. masonii* located in Study Area 2. These buds had no fruit in their centre and the plants were classified as flowering.
- A number of the large old inflorescences were examined and all were found to contain fruit (Plate 3.13 and 3.14).
- Old inflorescences on each *D. masonii* were examined to determine whether any fruit was present and if present the plants were classified as fruiting.
- *D. masonii* plants having neither old buds nor large old inflorescences were classified as vegetative.

The reproductive status of the *D. masonii* in Study Area 2 is displayed by SAID on Maps 6.16 to 6.18 (Section 6). The *D. masonii* in 99% of the SAIDs in which *D. masonii* were recorded were fertile i.e. had old buds or old inflorescences with fruit. In only one SAID (1%) were the *D. masonii* all vegetative (Table A1.1, Appendix 1). Vegetative *D. masonii* were recorded in 35% of the SAIDs where *D. masonii* were recorded, flowering material in 16% and fruiting material in 96%.

Of the 124 SAIDs in which fruiting *D. masonii* were recorded, the majority (78%) fall in the >80 to 100% range for fruit presence. Of the 21 SAIDs in which flowering *D. masonii* were recorded, the majority (57%) fall in the 1 – 20% range for flower presence and of the 45 SAIDs in which vegetative *D. masonii* were recorded the majority (58%) fall in the 1 – 20% range for vegetative plants.

D. masonii reproductive status summary data are presented in Table 3.9.

Table 3.9: *Darwinia masonii* Reproductive Status

Total Plants Measured	Vegetative		Flowering Only		Fruiting Only		Reproductive Overall	
	Number	%	Number	%	Number	%	Number	%
873	70	8.0	27	3.1	776	88.9	803	92.0

Overall, approximately 92% of the measured *D. masonii* were fertile at the time of the survey and approximately 8% were vegetative. None of the plants had both old buds and mature inflorescences with fruit they had either old buds or mature inflorescences.

3.3 Other Taxa

3.3.1 *Eucalyptus synandra* and *Lepidosperma gibsonii*

Eucalyptus synandra and *Lepidosperma gibsonii* were also recorded in Study Area 2. *E. synandra* is a flora taxon protected as a listed Threatened Species under the EPBC Act and declared as Rare Flora under the WC Act. *L. gibsonii* is a flora taxon declared as Rare Flora under the WC Act.

A description for and photographs of these two species follow; their coordinates and the number of plants recorded at each location are listed in Table A2.1 (Appendix 2), and their locations are shown on Map 6.19 (Section 6).

Eucalyptus synandra

E. synandra is a mallee growing to 4 m tall (Plate 3.15) (CPBR, 2006). The bark is smooth and white to pale grey to red in colour. The leaves are green and dull and the base tapers to the petiole. The flowers are white or pink (CPBR, 2006) and are produced in August or December or January to March (WAH, 1998 -). The pedicels are 1.1-1.5 cm long. The operculum has a slender beak and is 0.9-1.6 cm long. The fruit are 0.4-0.6 cm long and 0.9-1.3 cm wide (Plate 3.16) (CPBR, 2006). This species is known to grow on sandy and lateritic soils (WAH, 1998 -).

E. synandra was recorded mostly on the north and north-east facing lower foot-slopes of the hill along the eastern section of Study Area 2. It occurs on lateritic and weathered ironstone in this area. Fruiting material was recorded on all plants located during the survey while flowers were present on only a few of the plants located, as the peak flowering period had taken place before early December 2013.

Plate 3.15: Growth habit

Plate 3.16: Fruit

Lepidosperma gibsonii

L. gibsonii is a tufted perennial sedge (Plate 3.17) growing to 0.45 m high (Barrett, 2007). The culms are terete, scarcely finely ribbed, erect, and no greater than 0.51 mm in width and 35-45 cm long. The leaves are angular, distinctly diamond shaped and pale green. The flowers are pale tan (Plate 3.18) (Barrett, 2007) and are produced from January to May (WAH, 1998 -). This species grows on shallow soil on BIF on slopes and in gullies (WAH, 1998 -).

L. gibsonii was recorded on west to south-west facing iron formation and ironstone hillslopes of Study Area 2. Plants were flowering and fruiting in December 2013.

Plate 3.17: Growth habit

Plate 3.18: Leaves and flowers

(Photographs by Maia.)

3.3.2 Priority Flora

Six flora species classified by DPaW as 'Priority Flora' species (DPaW, 2013b) were recorded within the Study Areas. *Persoonia pentasticha* (Priority (P) 3) was recorded in Study Area 1; *Acacia cerastes* (P1), *Allocasuarina tessellata* (P1), *Micromyrtus trudgenii* (P3) and *P. pentasticha* (P3) were located in Study Area 2; and *A. tessellata* (P1), *Grevillea scabrida* (P3), *G. subtiliflora* (P3) and *P. pentasticha* (P3) were recorded in Study Area 3.

A description for and photographs of these species follow; their coordinates and the number of plants recorded at each location are listed in Table A2.1 (Appendix 2), and their locations are shown on Maps 6.20 to 6.22 (Section 6).

***Acacia cerastes* – Fabaceae (P1)**

A. cerastes is an erect, intricate and much–branched shrub growing to 1.5 m high (Plate 3.19). The branchlets are terete and have finely-striate yellow ribs. The phyllodes are reduced to minute horn-like projections to 1 mm long. The golden yellow flowers are globular (Maslin, 1995) and are produced in August or November. It grows on skeletal soils and on rocky ironstone hillslopes (WAH, 1998 -).

A. cerastes was recorded on hill-tops and hill-slopes of IF and ironstone rock. Fruiting material was present on a few plants at the time of the survey.

Plate 3.19: Growth habit

***Allocasuarina tessellata* – Casuarinaceae (P1)**

A. tessellata is a dioecious shrub or tree growing to 5 m high (Plate 3.20). The articles are 7-14 mm long and 0.7-1 mm in diameter. The phyllichnia are rounded. It has 8 or 9 teeth on the ends of the articles. The cones are 26-55 mm long and 14-18 mm in diameter, sometimes with a sterile apex to 5 mm long (Wilson & Johnson, 1989). It grows amongst greenstone and dolerite boulders on loam or sand soils (WAH, 1998 -).

A. tessellata was recorded on hill-slopes with basalt rocks. Fruiting material was present on some plants at the time of the survey.

Plate 3.20: Growth habit

***Grevillea scabrida* – Proteaceae (P3)**

G. scabrida is a densely and irregularly branched shrub growing to 1.5 m (Plate 3.21). The leaves are un-dissected and are flat and linear. The leaves are 10-60 mm long and 0.5-1.5 mm wide. The green-yellow-white flowers are produced in July and form in the axils and on the end of the branchlets. It grows on gravelly soils of loam or clay amongst trees (WAH, 1998 -).

G. scabrida was recorded on hill-slopes with basalt rocks and gravelly ironstone and lateritic low rises. Fruiting material was present on some plants at the time of the survey.

Plate 3.21: Growth habit

***Grevillea subtiliflora* – Proteaceae (P3)**

G. subtiliflora is an erect to spreading shrub growing to 2.5 m (Plate 3.22). The leaves have a spiky tip and the leaf blade is pinnately lobed. The leaves are 5-20 mm long and 0.5-1 mm wide. The white flowers are produced in April or July to September and form on the end of the branchlets. It grows on red-brown loam soils amongst trees (WAH, 1998 -).

G. subtiliflora was recorded on hill-slopes with basalt rocks. Some plants were fruiting at the time of the survey.

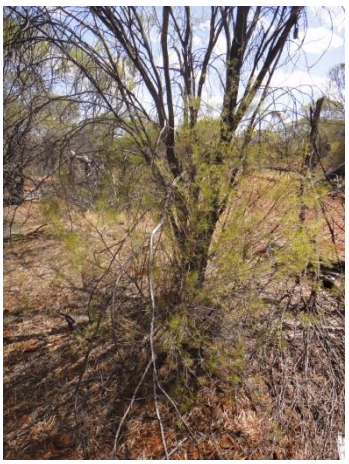

Plate 3.22: Growth habit

***Micromyrtus trudgenii* – Myrtaceae (P3)**

M. trudgenii is an erect, open, straggly weeping shrub growing to 2 m high (Plate 3.23) on hill slopes and ridges of quartz, basalt, dolerite and banded ironstone. The leaves are 4 to 9 mm long and are densely arranged on the smaller branchlets (Rye, 2007). *M. trudgenii* produces yellow flowers from June to October (WAH, 1998 -).

M. trudgenii was recorded on hill-slopes of weathered ironstone. None of the plants were flowering or fruiting at the time of the survey.

Plate 3.23: Growth habit

***Persoonia pentasticha* – Proteaceae (P3)**

P. pentasticha is an erect, spreading shrub growing to 1.8 m high (Plate 3.24). The terete leaves are simple, folded and are covered with short, simple curled hairs. *P. pentasticha* produces yellow flowers from August to November. It grows on lower hill-slopes and outcrops of granite, haematite or banded ironstone (WAH, 1998 -).

P. pentasticha was recorded on lower foot-slopes of hills on weathered ferrous gravelly soils. The plants were not flowering or fruiting at the time of the survey.

(Photographs by Maia.)

Plate 3.24: Growth habit

3.3.3 Taxa of Interest

Two taxa of interest were located in the Survey Areas – *Baeckea* sp. Mt Gibson (Study Area 2) and *Acacia* cf. *umbraculiformis* (Study Area 3). The locations of these two taxa are listed in Table A2.2 and shown on Maps 6.21 and 6.22, Section 6. *B.* sp. Mt Gibson has been collected previously but is an uncommon species and not yet listed on FloraBase, while *A.* cf. *umbraculiformis* is similar to but does not match the reference specimens for *A. umbraculiformis* in the WA Herbarium; the phyllodes are similar but the seed pods differ (pers. comm., Malcolm Trudgen, January 2014).

3.3.4 Introduced (Weed) Species

Two weed species were located in the Study Areas - *Mesembryanthemum nodiflorum* (Slender Iceplant) and *Pentameris airoides* subsp. *airoides* (False Hairgrass).

Neither of these is a weed species of national interest (Australian Government, 2013b) or a declared plant pest in WA (DAFWA, 2013).

A description for and photographs of these two species follow, their coordinates and the number of plants recorded at each location are listed in Table A3.1 (Appendix 3), and their locations are shown on Map 6.23 (Section 6).

Mesembryanthemum nodiflorum

M. nodiflorum is a prostrate or erect annual herb growing to 0.2 m high (Plate 3.25). The leaves are narrow and fleshy and the flowers are white and produced from September to November (Hussey *et al*. 2007; WAH 1998 -).

Plate 3.25: Growth habit

Pentameris airoides* subsp. *airoides

P. airoides subsp. *airoides* is a delicate tufted annual grass growing to 0.15 m high (Plate 3.26). The leaves are located at the base of the plant and are between 3-6 cm long and 1-3 mm wide. The red, green and/or brown flowers are produced from September to October (Hussey *et*. *al*. 2007; WAH, 1998 -).

Photographs by Maia.

Plate 3.26: Growth habit

3.3.5 Malleefowl (*Leipoa ocellata*) Nest Mounds

Fourteen Malleefowl (*Leipoa ocellata*) nest mounds were recorded in Study Area 1 (one inactive) and Study Area 2 (one active and 12 inactive). No nest mounds were recorded in Study Area 3.

Coordinates for and photographs of these Malleefowl nest mounds are listed in Table A4.1, Appendix 4, and their locations are shown on Map 6.24 (Section 6).

4 Discussion and Conclusions

4.1 Darwinia masonii

Darwinia masonii was recorded in the northern section of Study Area 2; 874 *D. masonii* were located and 873 of these were live plants (99.9%) and one was dead (0.1%). ATA recorded 325 plants in 2004 and therefore 549 of the 873 *D. masonii* plants located are new records.

D. masonii was not found in Study Areas 1 or 3. The NatureMap record for *D. masonii* in Study Area 3 could not be relocated; however, potentially suitable habitat for *D. masonii* was observed to the south-east of Study Area 3 and that location has been identified to MGX for potential further survey.

When the *D. masonii* data was analysed by rock type, topographic location and aspect, most *D. masonii* were on iron formation rock (approximately 83%), on the upper-slopes of the hill (approximately 59%) and on the western side of the hill (approximately 63%). Overall, most *D. masonii* (approximately 42%) were located on the upper-slopes of west facing areas of iron formation rocks.

The average density of *D. masonii* at Study Area 2 was approximately 301 plants per SAID hectare. *D. masonii* was most dense in the SAIDs on the upper-slopes and top of the hill (16 – 21 plants) and in most SAIDs only 1 to 5 plants were recorded.

The average height of the *D. masonii* in most SAIDs was in the >120 – 160 cm range and the SAIDs with the shortest average plant height (the two ranges comprising 1 – 80 cm) tended to occur at the outer edges of the population. The average height of the *D. masonii* in the whole population was approximately 137 cm. Both topography and aspect appear to affect the height of *D. masonii* because the shortest plants were on the top of the hill and north facing aspects, while the tallest were on the upper-slopes of the eastern side of the hill and on the upper-slopes and mid-slopes of the western side of the hill. When plotted by height increment approximately 81% of the *D. masonii* were in the 90 cm to 190 cm range. Given this consistency in height it is possible that the plants germinated within a similar time period.

The average health rating for all *D. masonii* recorded was 2.4 (where the most healthy plants were rated as 1, the least healthy as 4 and dead plants as 5) and the two most common health ratings were 3 and 2 (approximately 85% of the plants). By topographic location overall the healthiest plants were on the top of the hill and the least healthy plants on the mid-slopes (marginally less healthy than those on the upper-slopes). By aspect overall the healthiest plants were on the top of the hill and the least healthy on the western side.

D. masonii in the 10 cm and 20 cm height classes were healthier than the *D. masonii* in all other height classes and this probably reflects the fact that the *D. masonii* in these two height classes were seedlings and their new growth was healthier than that of older (taller) plants.

Of the 873 live *D. masonii* recorded, approximately 96% were adults, 3% were seedlings and 1% juveniles. This may indicate that seed set and germination could be low in *D. masonii* and seedling attrition rates high.

Of the 129 SAIDS in which *D. masonii* were recorded, *D. masonii* with flowers were recorded in 16%, with fruiting material in 96% and with vegetative material in 35%. In more than 99% of the SAIDs in which *D. masonii* was recorded the plants were fertile (i.e. had either old buds or old inflorescences with fruit). This indicates that peak flowering had occurred in the weeks before the survey and that most of the *D. masonii* produce inflorescences that go on to produce fruit. Given the low number of seedlings recorded it is possible that much of the seed in the fruit is not viable or requires a trigger (such as fire or some other form of disturbance) to promote germination.

Overall, approximately 92% of the measured *D. masonii* were fertile and approximately 8% were vegetative. None of the plants had both old buds and old inflorescences with fruit; they had either old flower buds or old inflorescences with fruit. This may indicate that the flowers on plants with old buds only might not be able to mature and produce fruit for some reason. The average health rating for the plants with old buds was 3 compared with an average of 2 for plants with old inflorescences with fruit.

4.2 Other Taxa

Eucalyptus synandra and *Lepidosperma gibsonii* were recorded in Study Area 2. *E. synandra* is a flora taxon protected as a listed Threatened Species under the EPBC Act and declared as Rare Flora under the WC Act. *L. gibsonii* is a flora taxon declared as Rare Flora under the WC Act.

Six flora species classified by DPaW as 'Priority Flora' were located while carrying out the survey: *Persoonia pentasticha* (P3) in Study Area 1; *Acacia cerastes* (P1), *Allocasuarina tessellata* (P1), *Micromyrtus trudgenii* (P3) and *P. pentasticha* (P3) in Study Area 2; and, *A. tessellata* (P1), *Grevillea scabrida* (P3), *G. subtiliflora* (P3) and *P. pentasticha* (P3) in Study Area 3.

Two taxa of interest were located in Study Areas 2 and 3 – *Baeckea* sp. Mt Gibson in Study Area 2 and *Acacia* cf. *umbraculiformis* in Study Area 3. *B.* sp. Mt Gibson has been collected previously but is an uncommon species and not yet listed on FloraBase, while *A.* cf. *umbraculiformis* is similar to but does not match the reference specimens for *A. umbraculiformis* in the WA Herbarium; the phyllodes are similar but the seed pods differ.

Two weed species were recorded in Study Area 2 and 3: *Mesembryanthemum nodiflora* and *Pentameris airoides* subsp. *airoides*. Neither species is a weed of national interest or a declared pest plant in WA.

Malleefowl nest mounds were located in Study Area 1 (1 inactive) and Study Area 2 (1 active and 12 inactive).

5 REFERENCES

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6 MAPS

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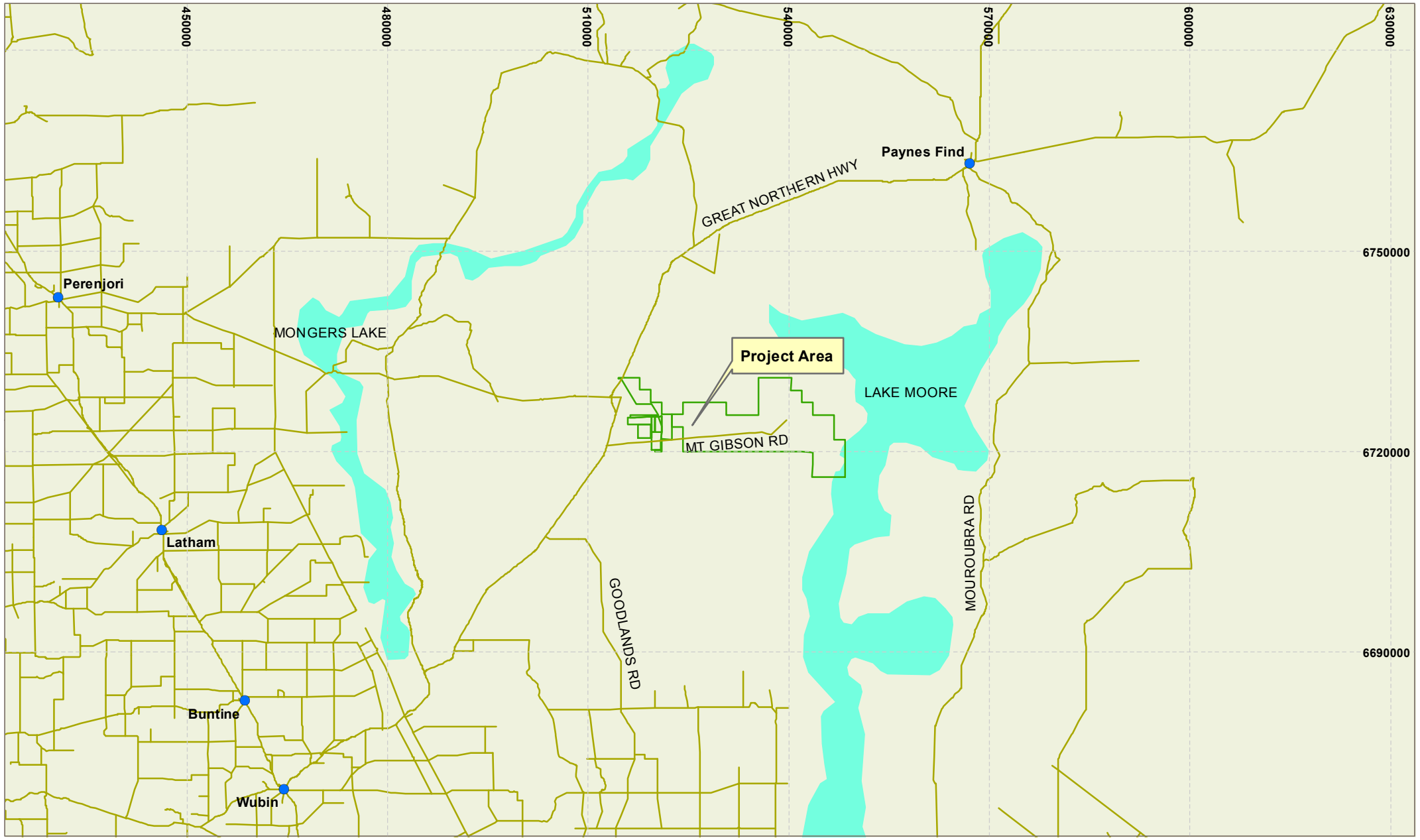

Location Map

- Port Hedland
- Newman
- Wiluna
- Geraldton
- Kalgoorlie
- Perth

Tenement Boundaries
Towns
Major Roads
Waterbodies

General Location

maia

N

0 15
Kilometres

Datum: GDA 1994, MGA 50

Map: 6.1
Prepared for: MGX
Drawn by: RH
Date: 13/02/2014
Version: 2

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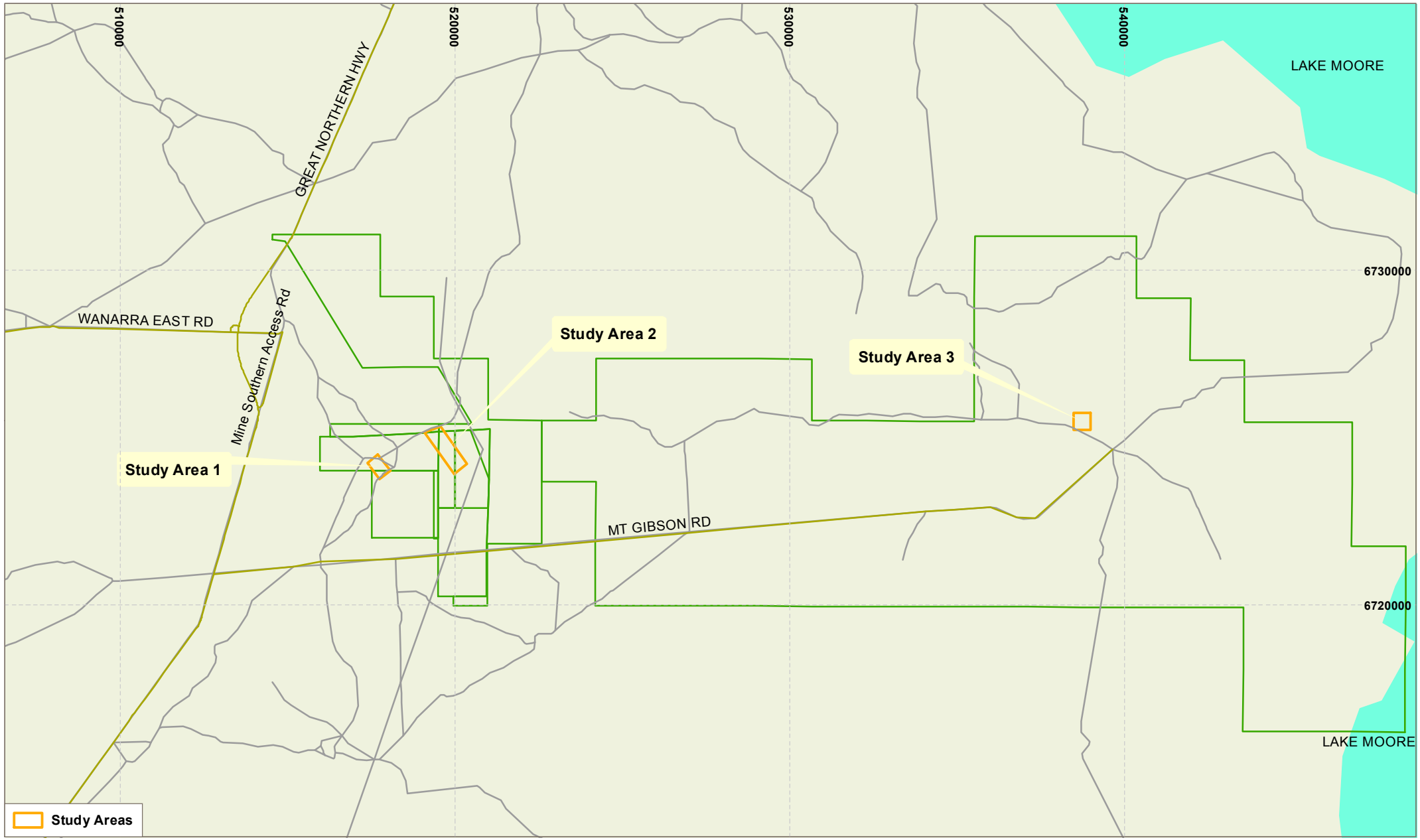

Location Map

- Port Hedland
- Newman
- Wiluna
- Geraldton
- Kalgoorlie
- Perth

Tenement Boundaries
Major Roads
Other Roads and Tracks
Waterbodies

Study Areas

maia

N

0 3
Kilometres

Datum: GDA 1994, MGA 50

Map: 6.2
Prepared for: MGX
Drawn by: RH
Date: 13/02/2014
Version: 2

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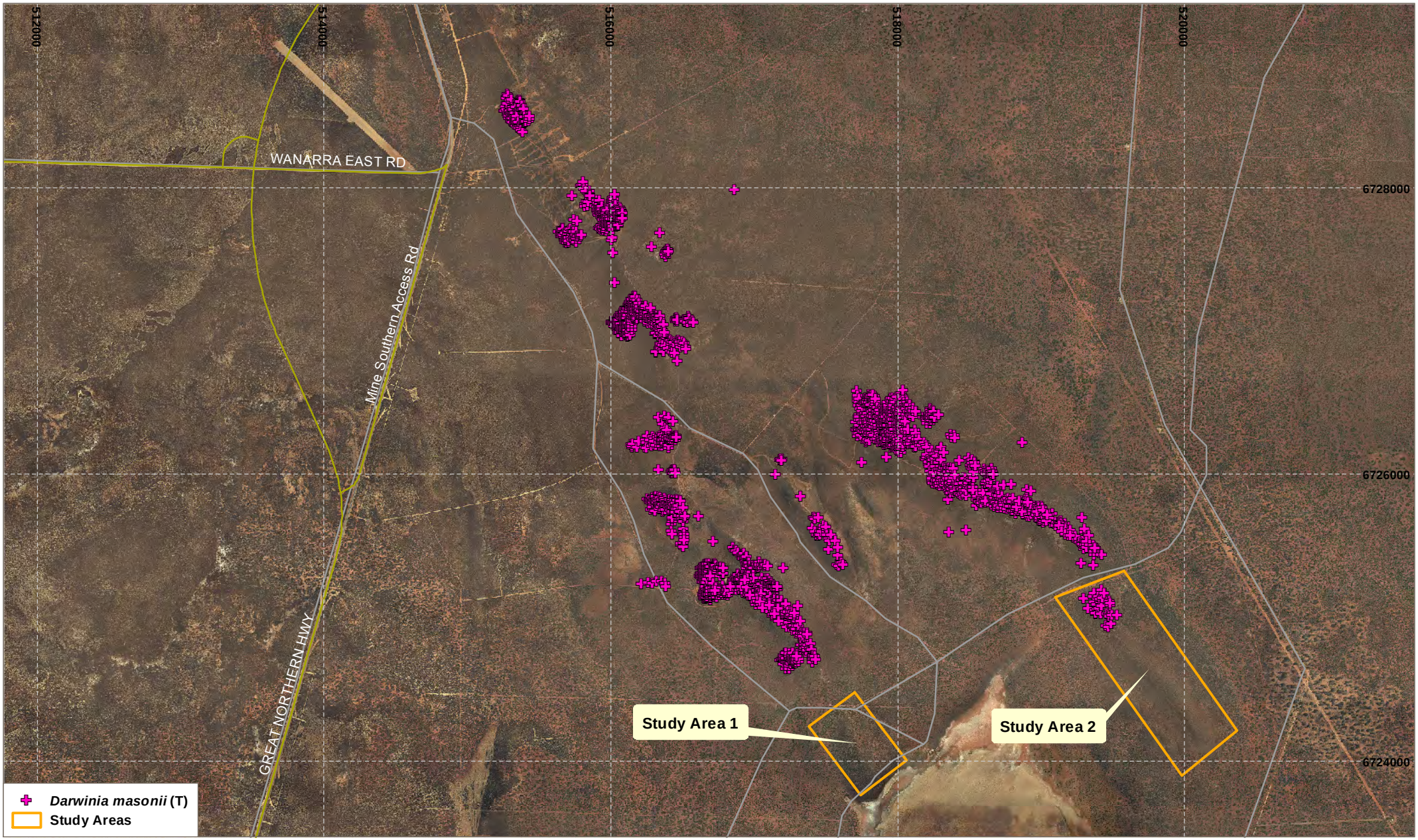

Location Map

- Port Hedland
- Newman
- Wiluna
- Geraldton
- Kalgoorlie
- Perth

Major Roads
Other Roads and Tracks

Darwinia masonii Existing Records

maia

N

0 0.5
Kilometres

Datum: GDA 1994, MGA 50

Map: 6.3
Prepared for: MGX
Drawn by: RH
Date: 13/02/2014
Version: 2

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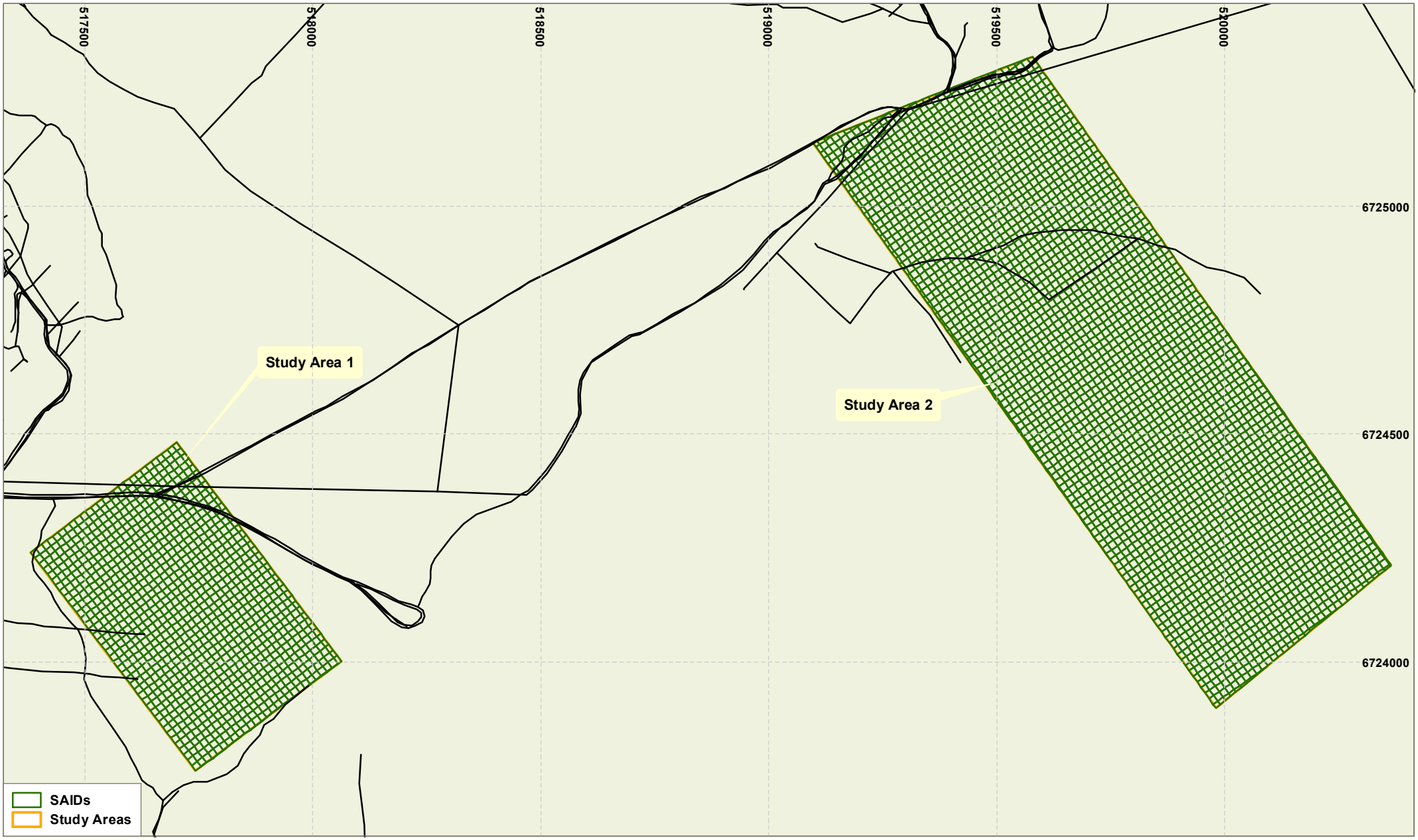

Location Map

Port Hedland
Newman
Wiluna
Geraldton
Kalgoorlie
Perth

MGX Tracks

15 m x 15 m SAIDs in Study Area 1 and 2

maia

N

0 0.225
Kilometres

Datum: GDA 1994, MGA 50

Map: 6.4
Prepared for: MGX
Drawn by: RH
Date: 13/02/2014
Version: 2

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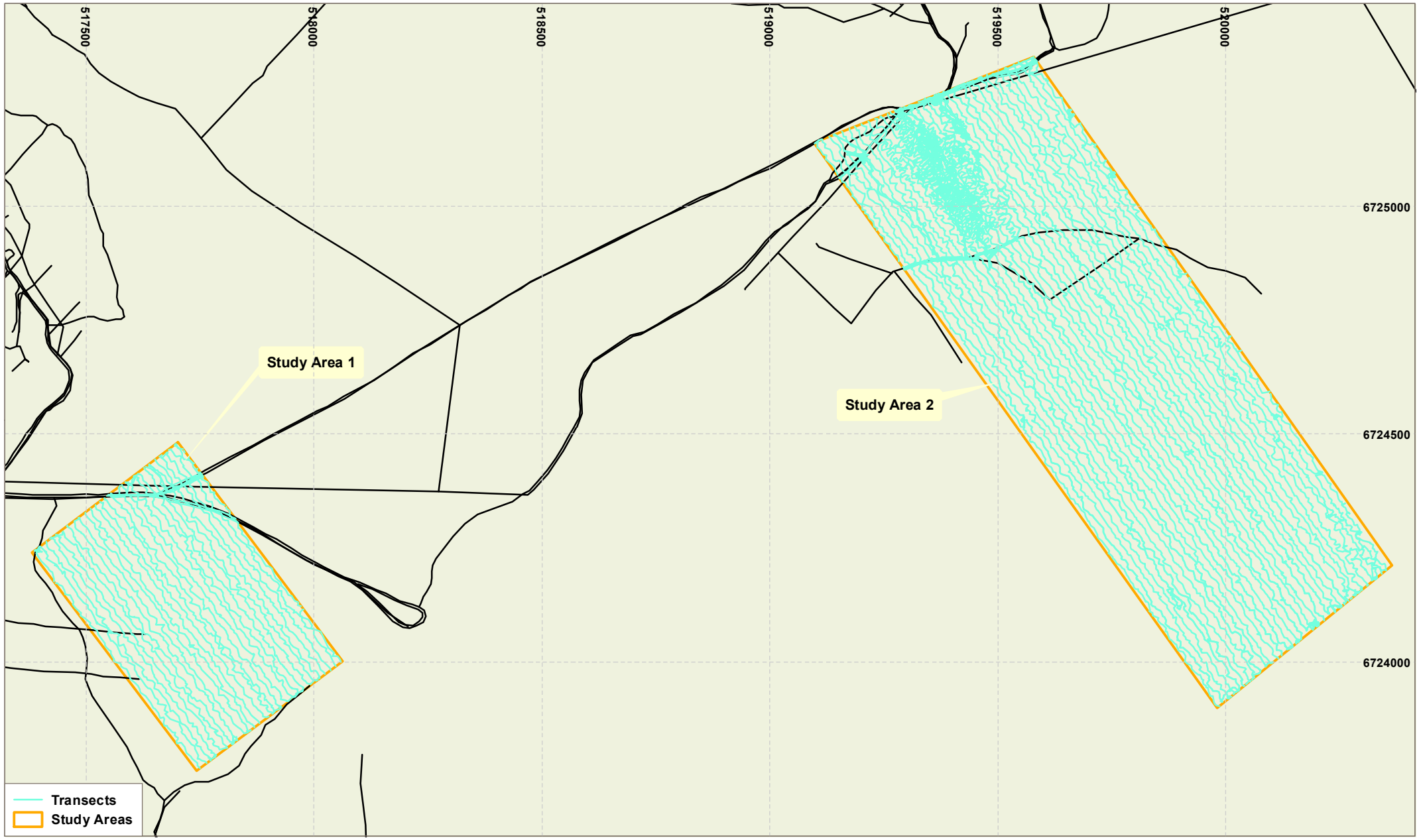

Location Map

Port Hedland
Newman
Wiluna
Geraldton
Kalgoorlie
Perth

MGX Tracks

Transects Walked in Study Area 1 and 2

maia

N

0 0.225
Kilometres

Datum: GDA 1994, MGA 50

Map: 6.5
Prepared for: MGX
Drawn by: RH
Date: 13/02/2014
Version: 2

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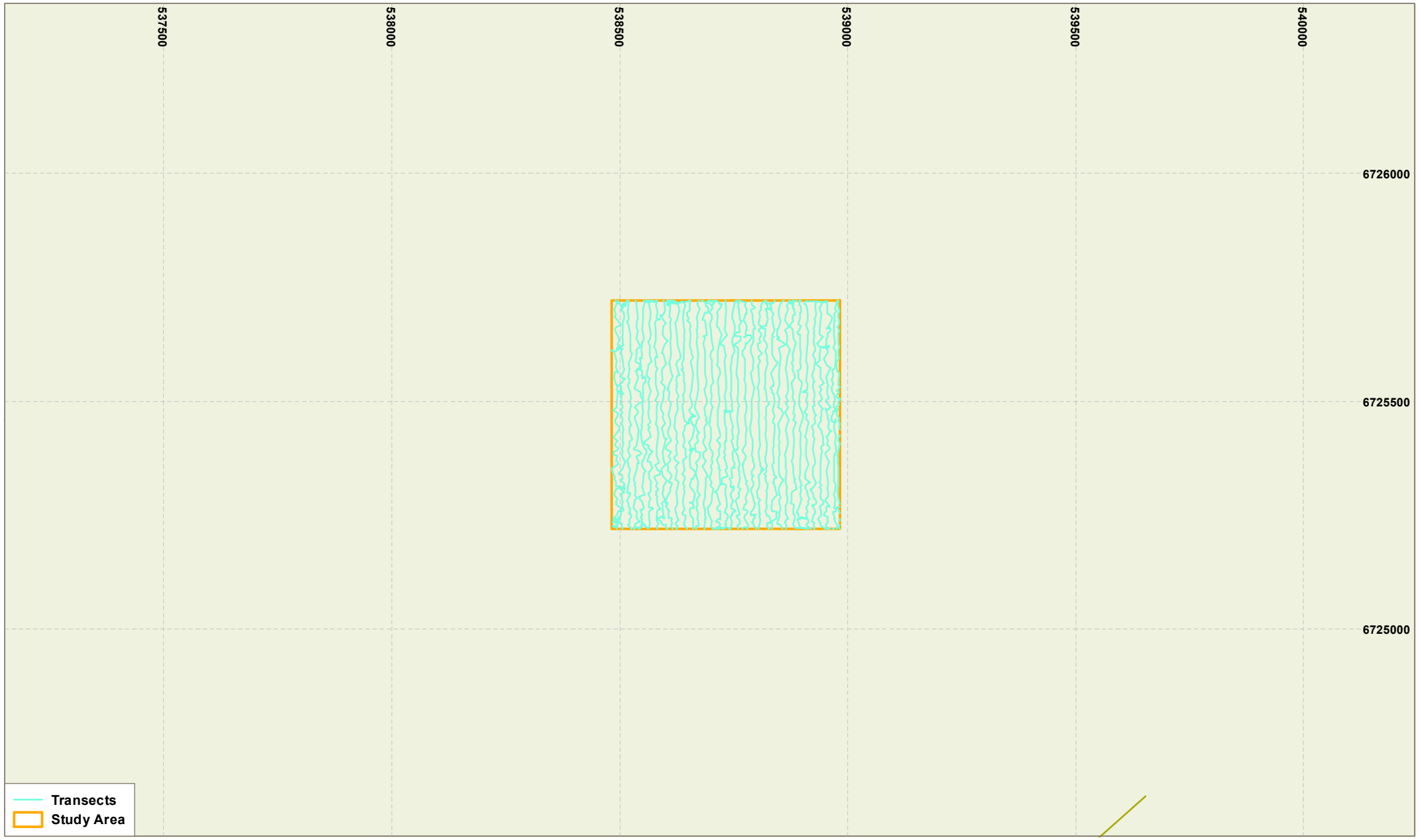

Location Map

Major Roads

Transects Walked in Study Area 3

maia

N

0 0.225

Kilometres

Datum: GDA 1994, MGA 50

Map: 6.6
Prepared for: MGX
Drawn by: RH
Date: 13/02/2014
Version: 2

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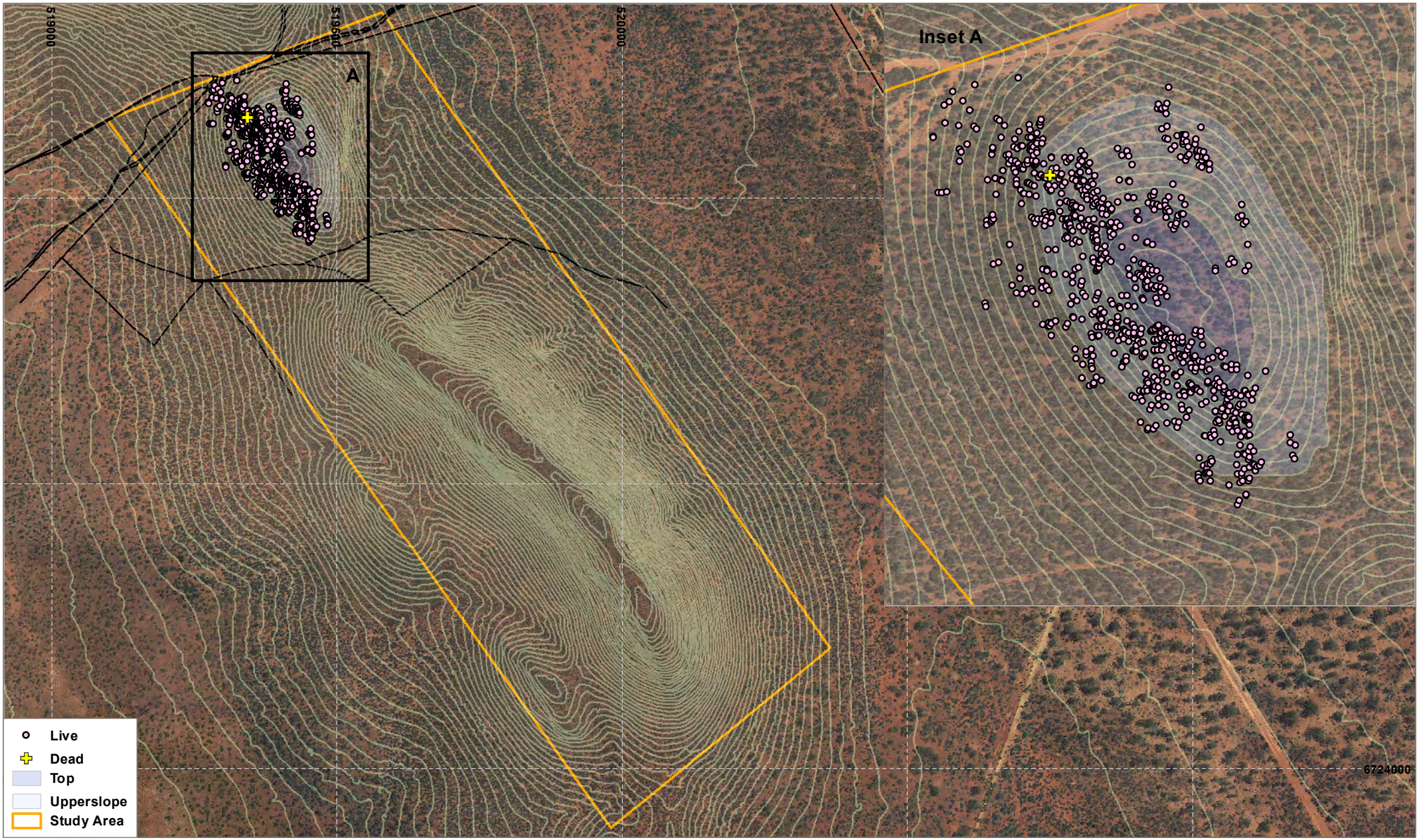

Location Map

Port Hedland
Newman
Wiluna
Geraldton
Kalgoorlie
Perth

MGX Tracks
Contours (1m)

Darwinia masonii
Located in Study Area 2

maia

N

0 0.175
Kilometres

Datum: GDA 1994, MGA 50

Map: 6.7
Prepared for: MGX
Drawn by: RH
Date: 13/02/2014
Version: 2

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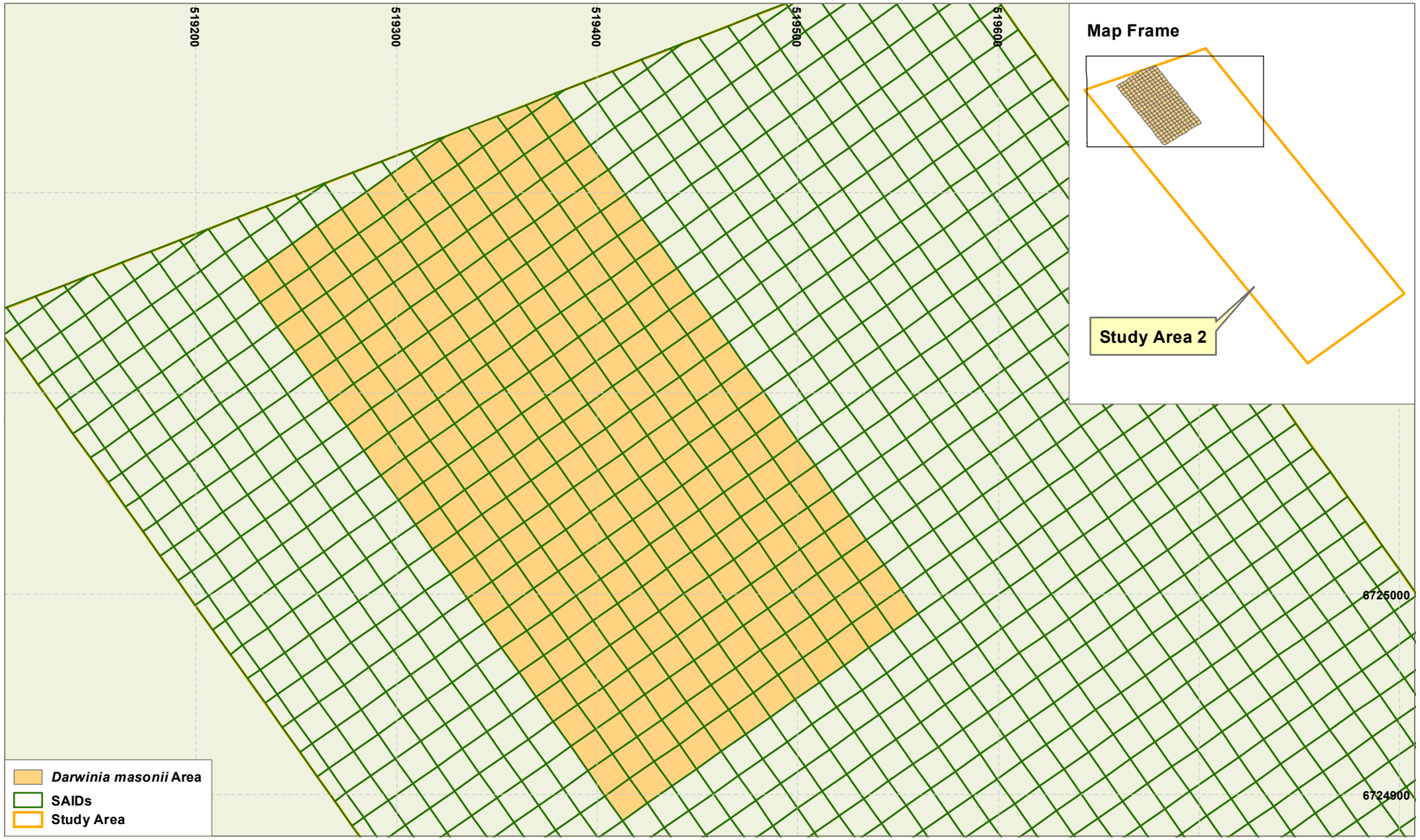

Location Map

***Darwinia masonii* SAIDs in Study Area 2**

N

0 0.05

Kilometres

Datum: GDA 1994, MGA 50

Map: 6.8

Prepared for: MGX

Drawn by: RH

Date: 13/02/2014

Version: 2

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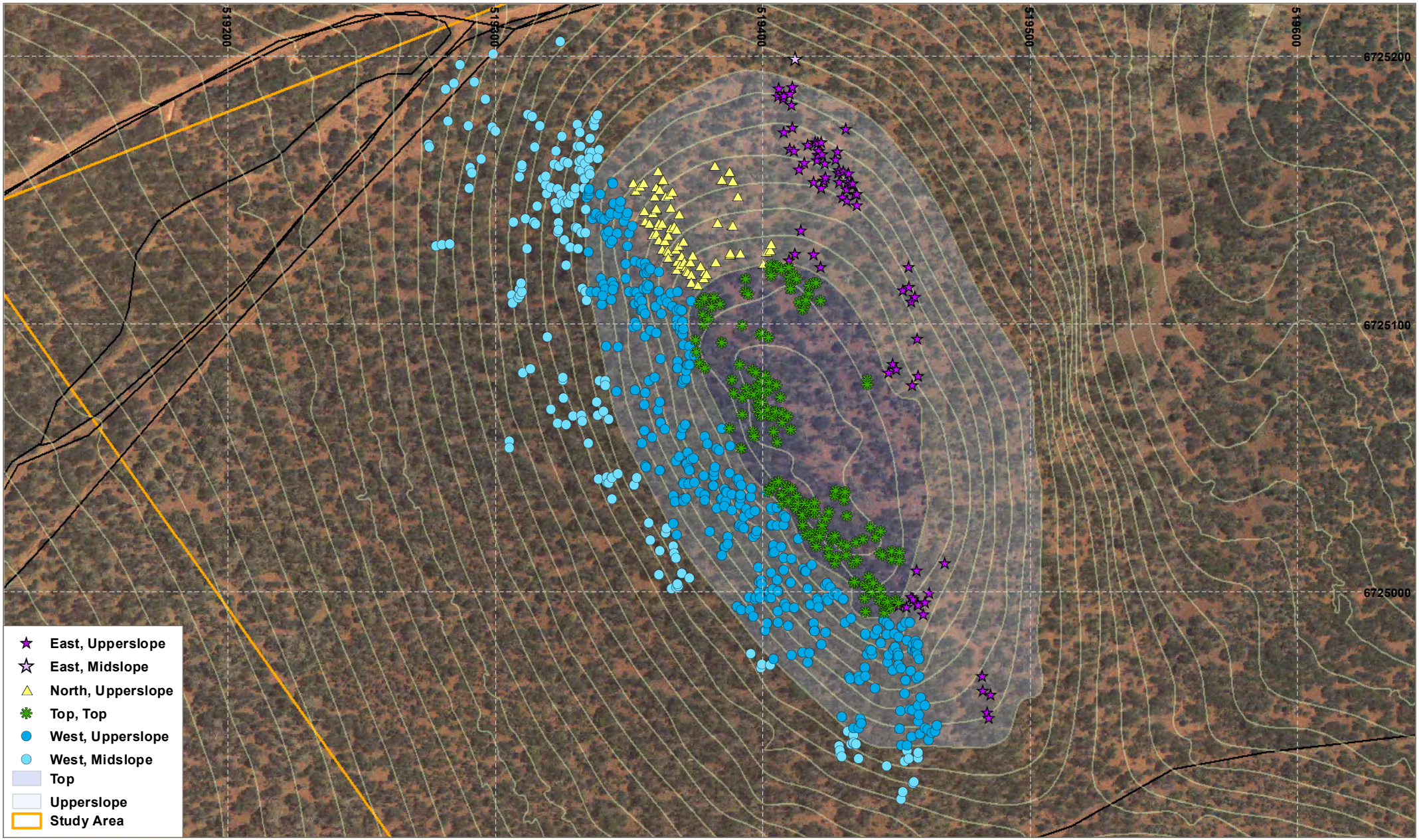

Location Map

Port Hedland
Newman
Wiluna
Geraldton
Kalgoorlie
Perth

MGX Tracks
Contours (1m)

Darwinia masonii
Aspect and Topography

maia

N

0 0.035
Kilometres

Datum: GDA 1994, MGA 50

Map: 6.9
Prepared for: MGX
Drawn by: RH
Date: 13/02/2014
Version: 2

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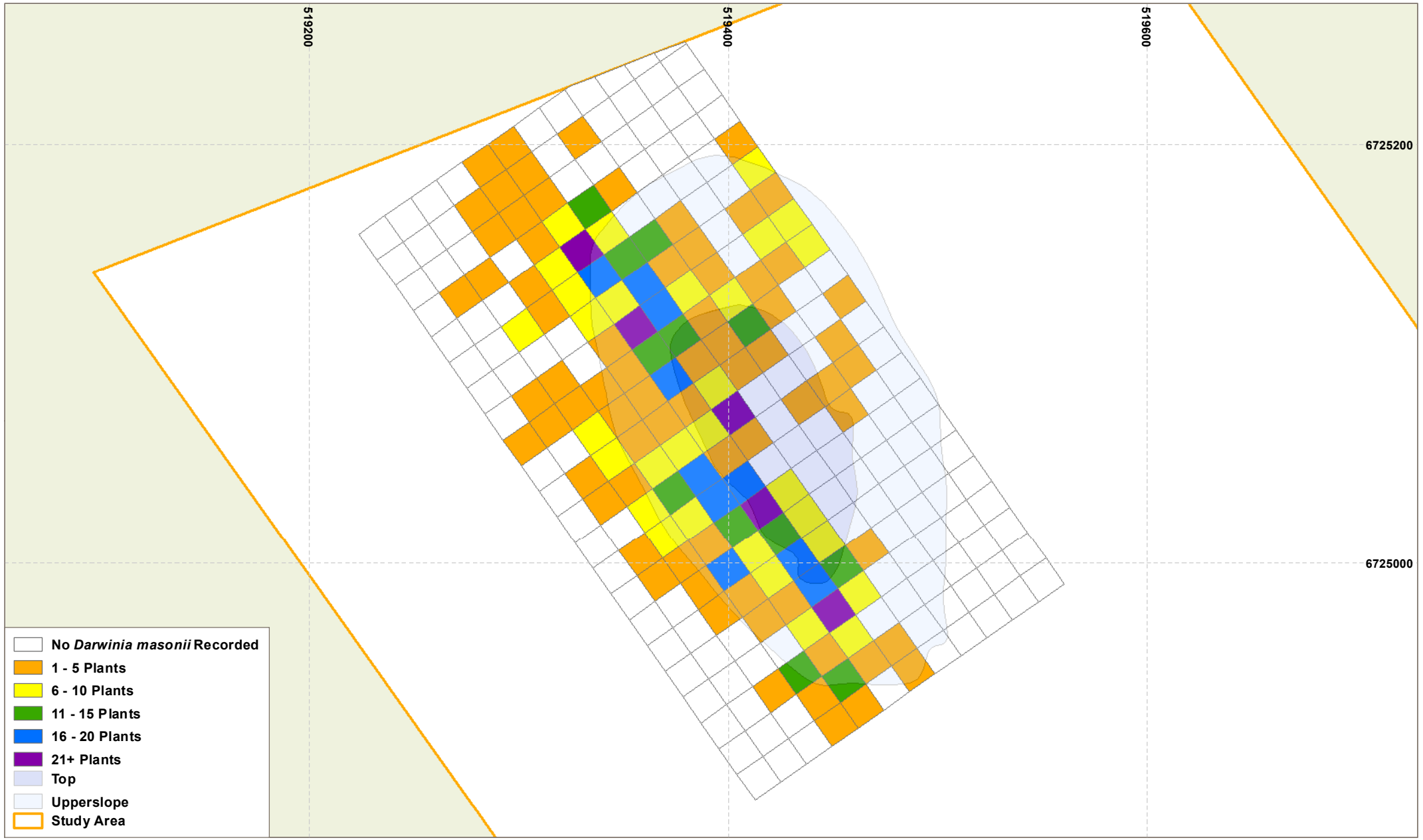

Density of Live
Darwinia masonii
by SAID

maia

N

0 0.0475
Kilometres

Datum: GDA 1994, MGA 50

Map: 6.10
Prepared for: MGX
Drawn by: RH
Date: 13/02/2014
Version: 2

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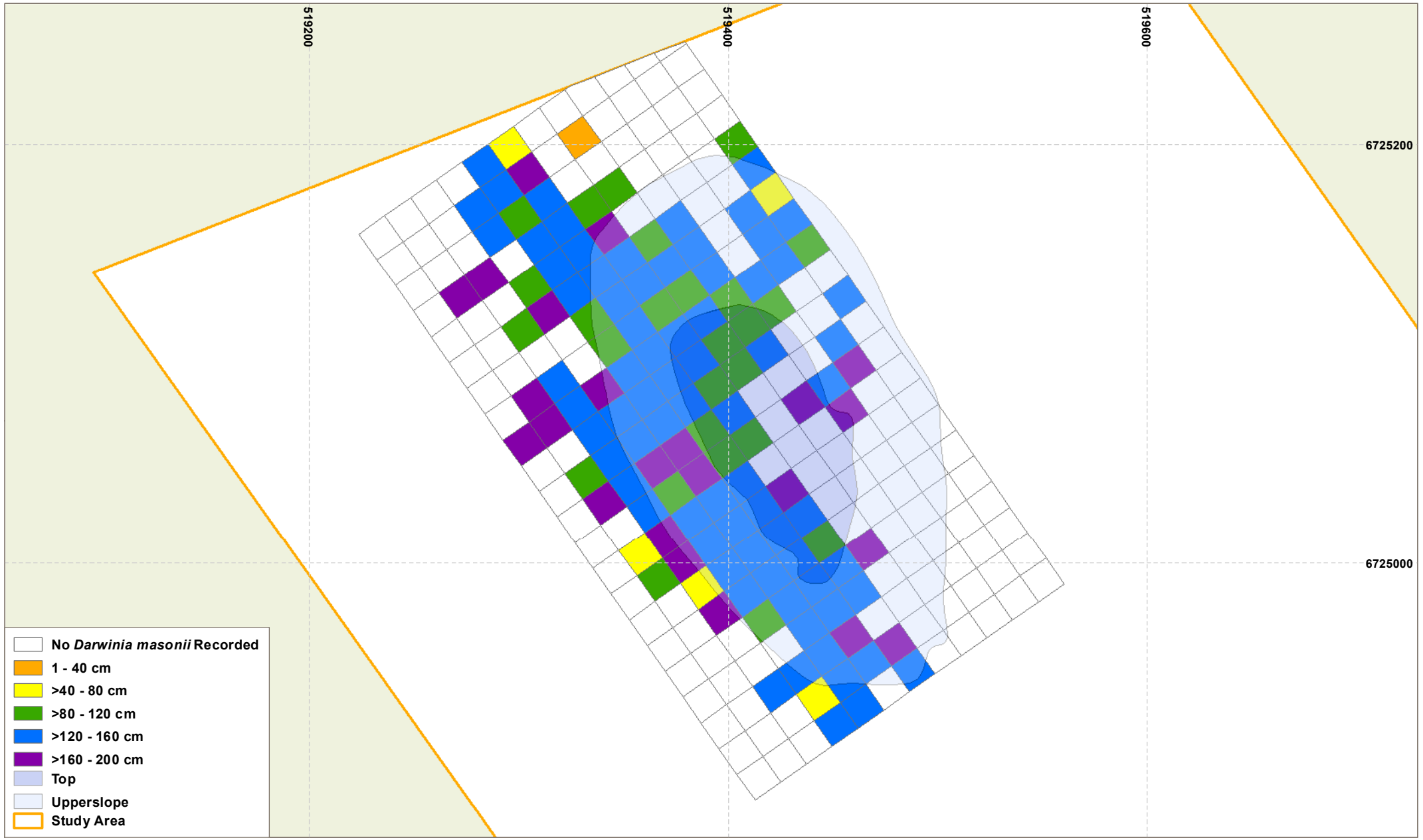

Average Height (cm) of *Darwinia masonii* by SAID

maia

N

0 0.0475

Kilometres

Datum: GDA 1994, MGA 50

Map: 6.11
Prepared for: MGX
Drawn by: RH
Date: 13/02/2014
Version: 2

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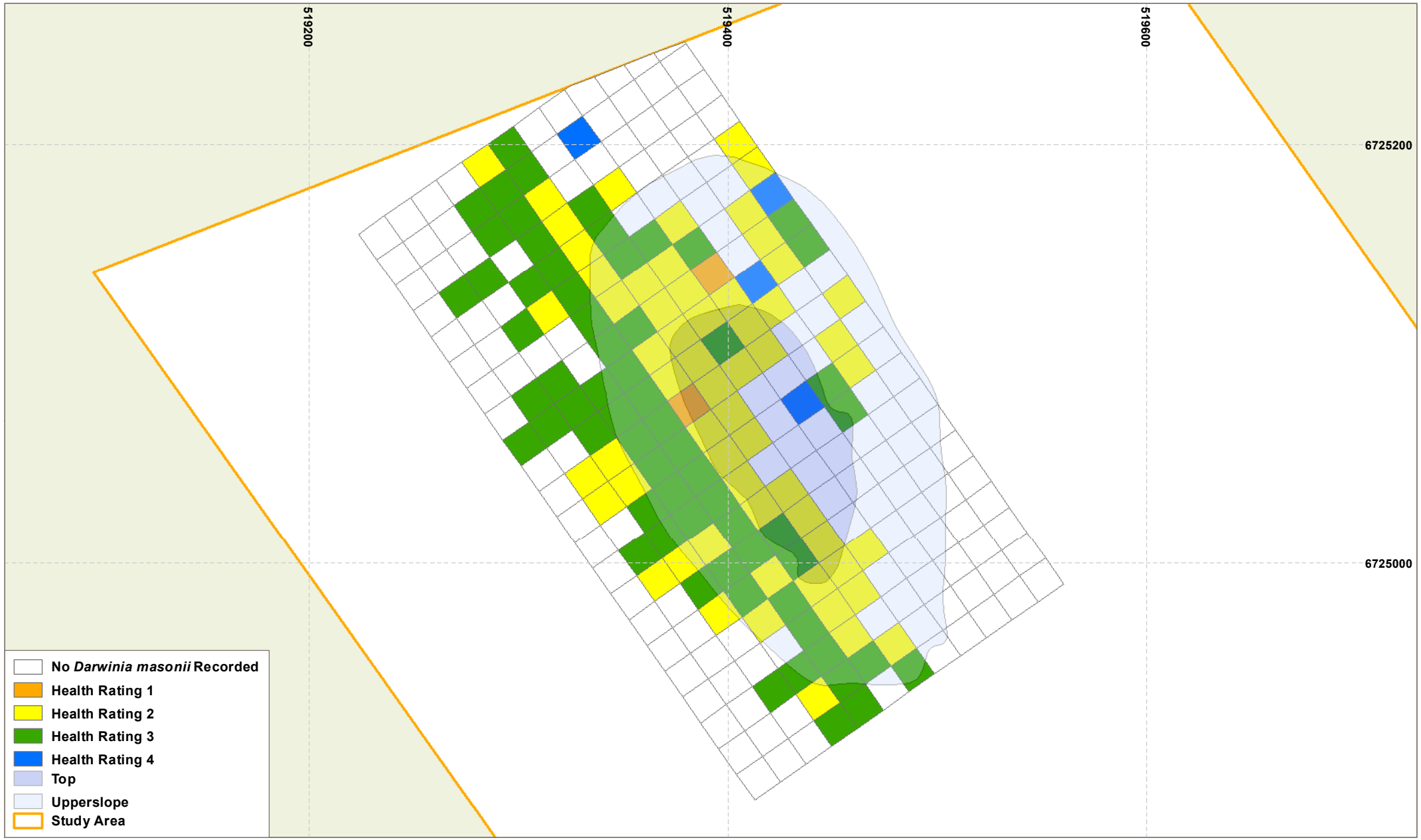

Average Health Rating of *Darwinia masonii* by SAID

maia

N

0 0.0475

Kilometres

Datum: GDA 1994, MGA 50

Map: 6.12
Prepared for: MGX
Drawn by: RH
Date: 13/02/2014
Version: 2

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Note: The following three maps (6.13 to 6.15) display life stage information as a percentage of the total number of plants assessed in each individual SAID.

The percentages for each life stage in each SAID were derived as follows:

In each SAID where *Darwinia masonii* was recorded the percentage of all live *D. masonii* classified as Adult in that particular SAID was calculated. Similarly the percentage of all *D. masonii* measured and classified as Juvenile in that SAID was calculated along with the percentage classified as Seedling.

For example, if 100 *D. masonii* were measured in SAID X and 62 were Adult (i.e. 62%), then that particular SAID was coloured blue on the Adult map indicating that the percentage of Adult *D. masonii* in that particular SAID fell in the range >60-80%. If, in the same SAID, 15 *D. masonii* were Juvenile (15%) then that SAID was coloured orange (falling in the range 1 – 20%) on the Juvenile map. Similarly the remaining 23 *D. masonii* seedlings (23%) in that SAID were shown as yellow (i.e. in the >20%-40% range) on the Seedling map.

There is no overlap in the data included in the three maps relating to life stage. The data in any one SAID where *D. masonii* were recorded and assessed add up to 100%.

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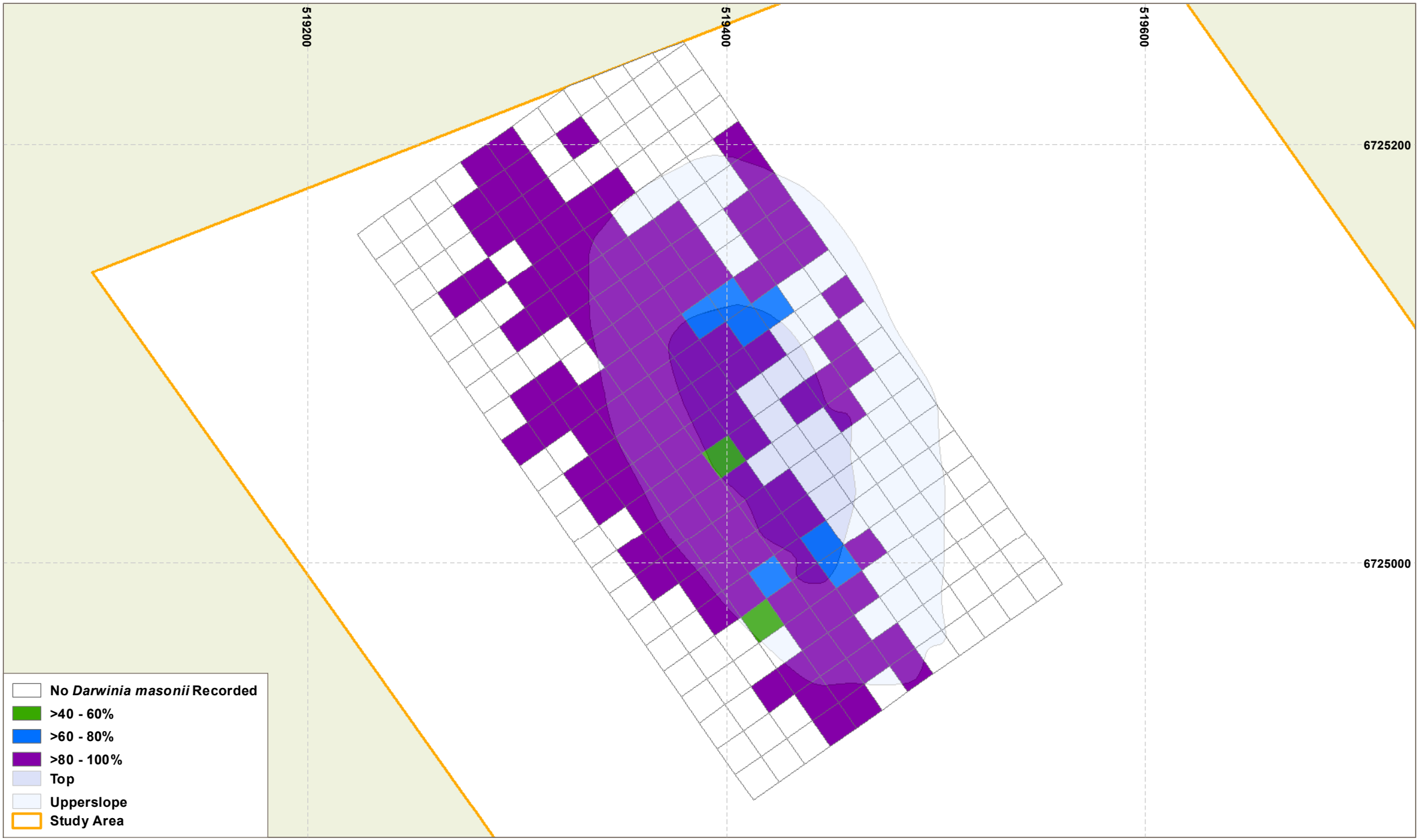

Location Map

- Port Hedland
- Newman
- Wiluna
- Geraldton
- Kalgoorlie
- Perth

Percentage Adult *Darwinia masonii* by SAID

maia

N

0 0.0475

Kilometres

Datum: GDA 1994, MGA 50

Map: 6.13
Prepared for: MGX
Drawn by: RH
Date: 13/02/2014
Version: 2

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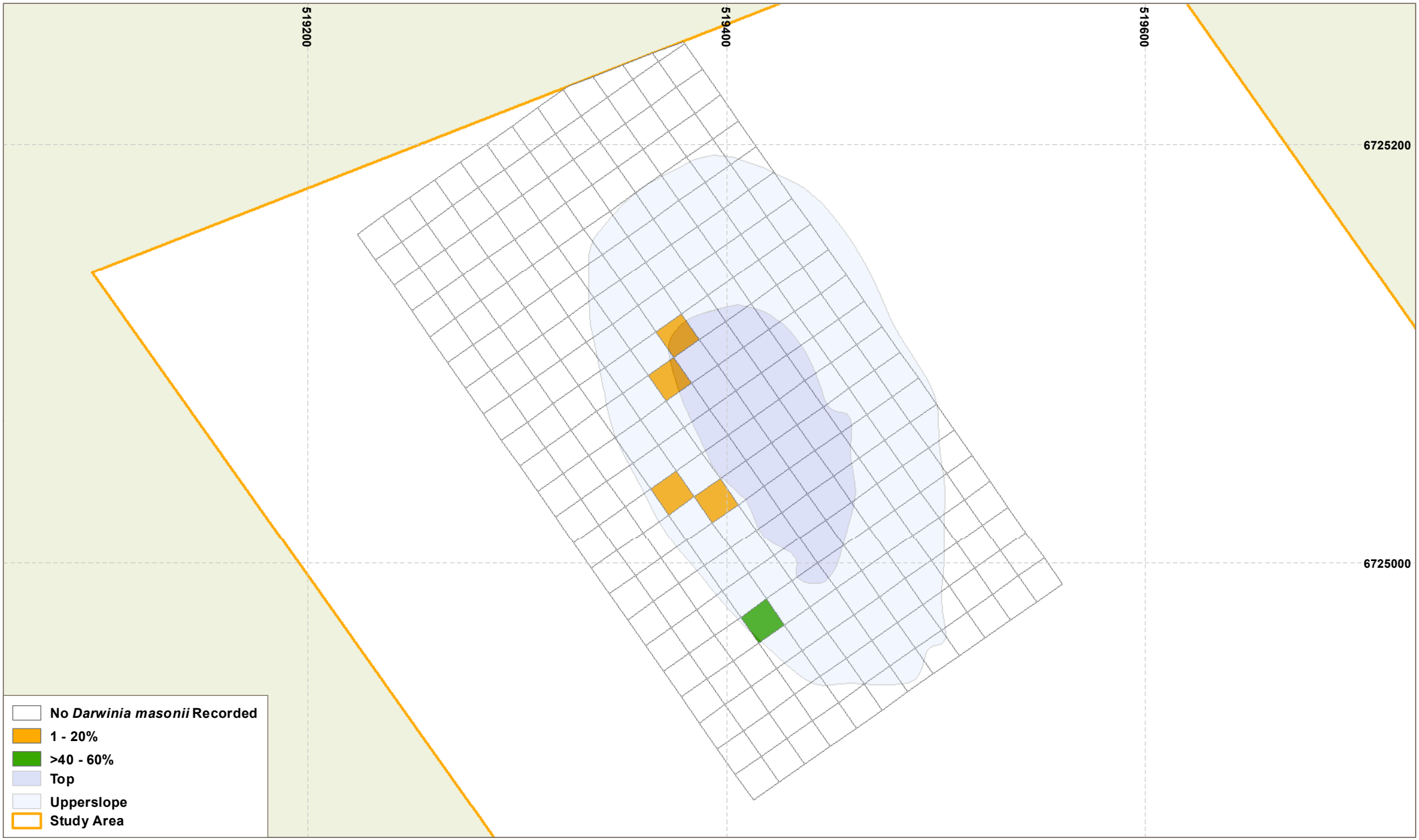

Location Map

Percentage Juvenile *Darwinia masonii* by SAID

maia

N

0 0.0475

Kilometres

Datum: GDA 1994, MGA 50

Map: 6.14
Prepared for: MGX
Drawn by: RH
Date: 13/02/2014
Version: 2

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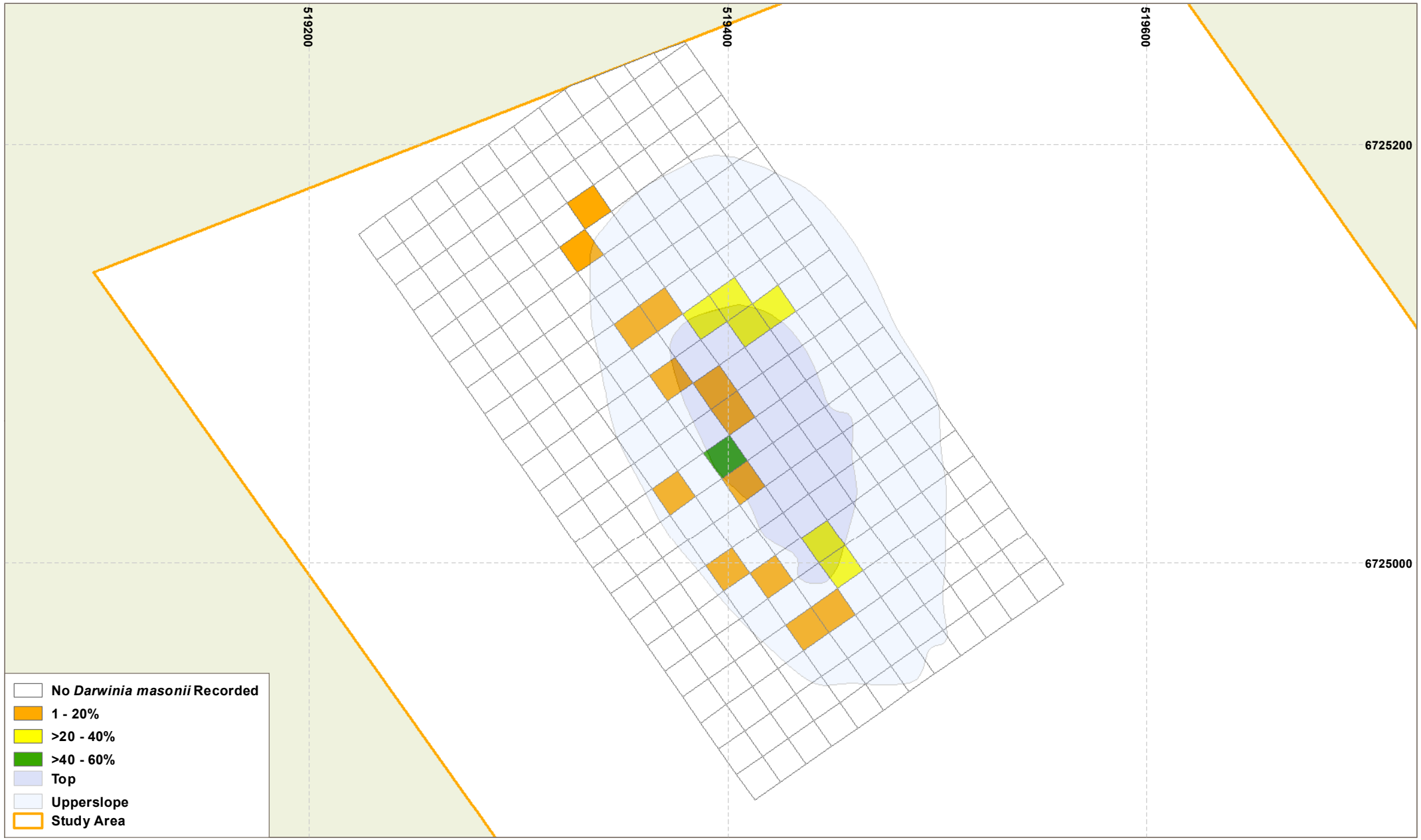

Percentage *Darwinia masonii* Seedlings by SAID

maia

N

0 0.0475

Kilometres

Datum: GDA 1994, MGA 50

Map: 6.15
Prepared for: MGX
Drawn by: RH
Date: 13/02/2014
Version: 2

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Note: The following three maps (6.16 to 6.18) display reproductive status information as a percentage of the total number of plants assessed in each individual SAID.

The percentages for each reproductive state in each SAID were derived as follows:

In each SAID where *Darwinia masonii* was recorded the percentage of all *D. masonii* having old flowers in that particular SAID was calculated. Similarly, the percentage of *D. masonii* with flowers with fruit was calculated and plants that were vegetative and not fertile.

For example, if 100 *D. masonii* were measured in SAID X and 10 were vegetative (i.e. 10%), then that particular SAID was coloured orange on the Vegetative map indicating that the percentage of vegetative *D. masonii* in that particular SAID fell in the range 1-20%. If, in the same SAID, 5 *D. masonii* had old flowers (5%) then that SAID was also coloured orange (falling in the range 1 – 20%) on the Old Flowers map. If, in the same SAID, 85 *D. masonii* had fruit (85%) then that SAID was coloured purple (falling in the range >80 – 100%) on the Fruit map.

There is no overlap in the data included in the three maps relating to reproductive status. The data in any one SAID where *D. masonii* were recorded and assessed add up to 100%.

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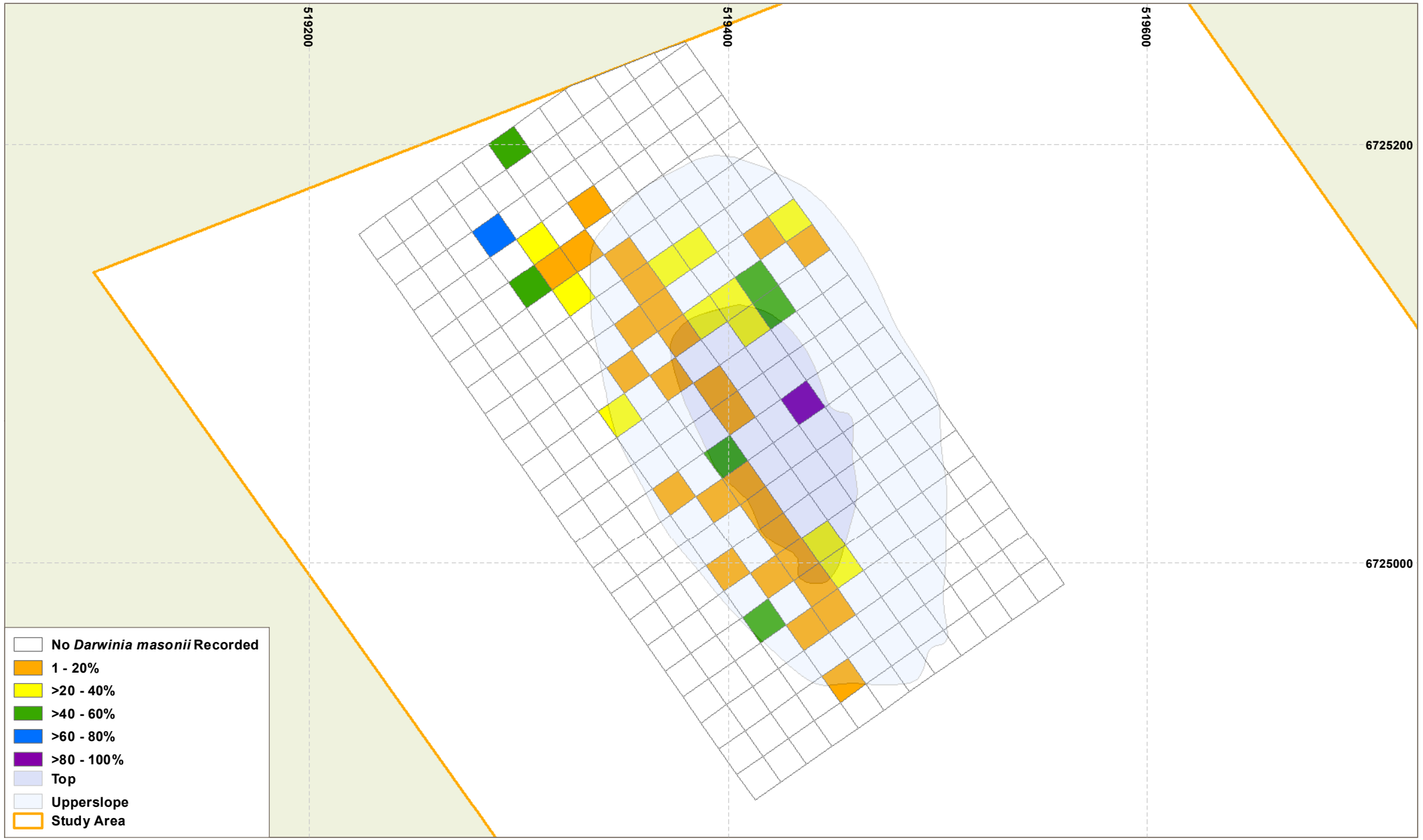

Percentage Vegetative *Darwinia masonii* by SAID

maia

N

0 0.0475

Kilometres

Datum: GDA 1994, MGA 50

Map: 6.16
Prepared for: MGX
Drawn by: RH
Date: 13/02/2014
Version: 2

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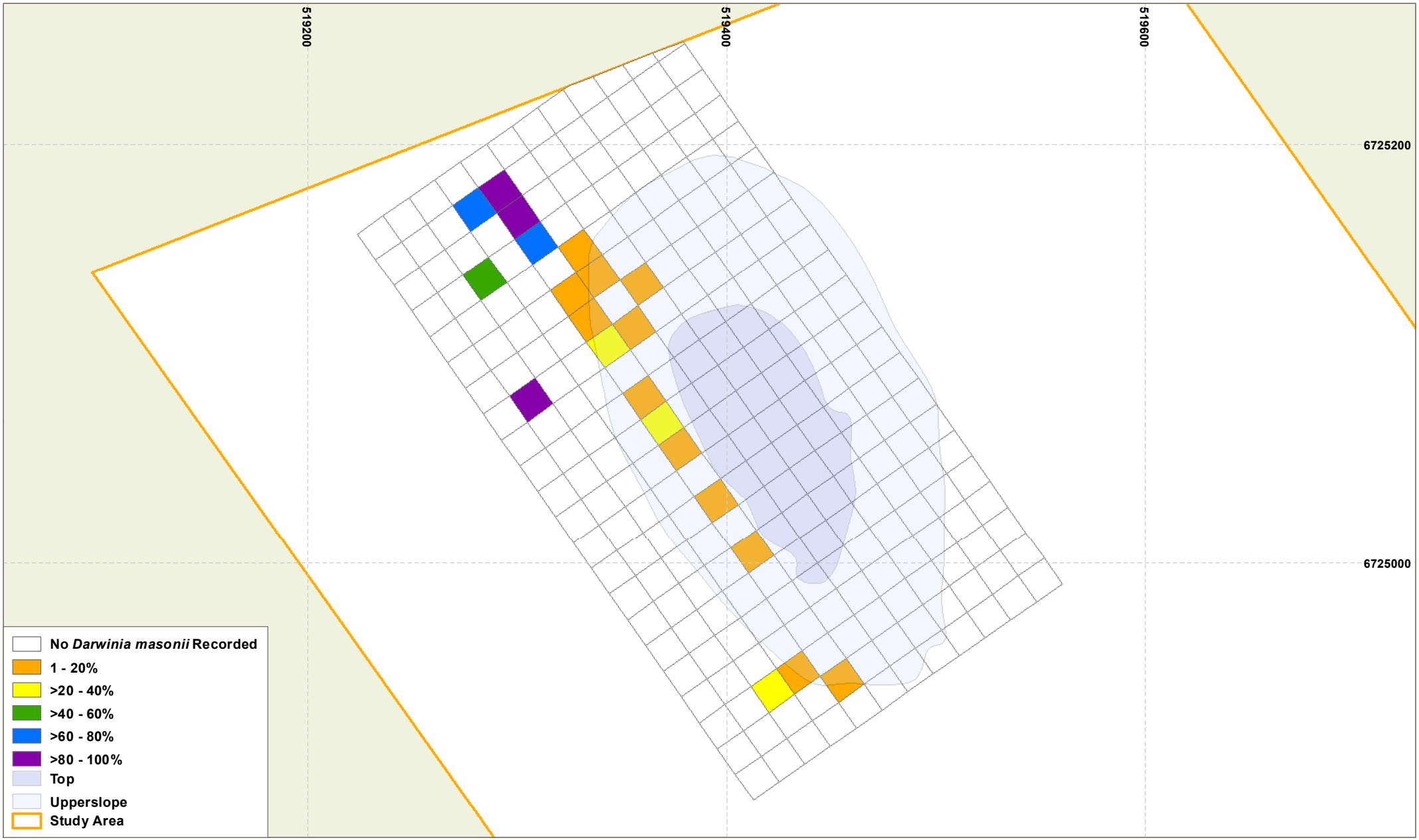

Percentage of *Darwinia masonii* with Old Flowers by SAID

maia

N

0 0.0475

Kilometres

Datum: GDA 1994, MGA 50

Map: 6.17
Prepared for: MGX
Drawn by: RH
Date: 13/02/2014
Version: 2

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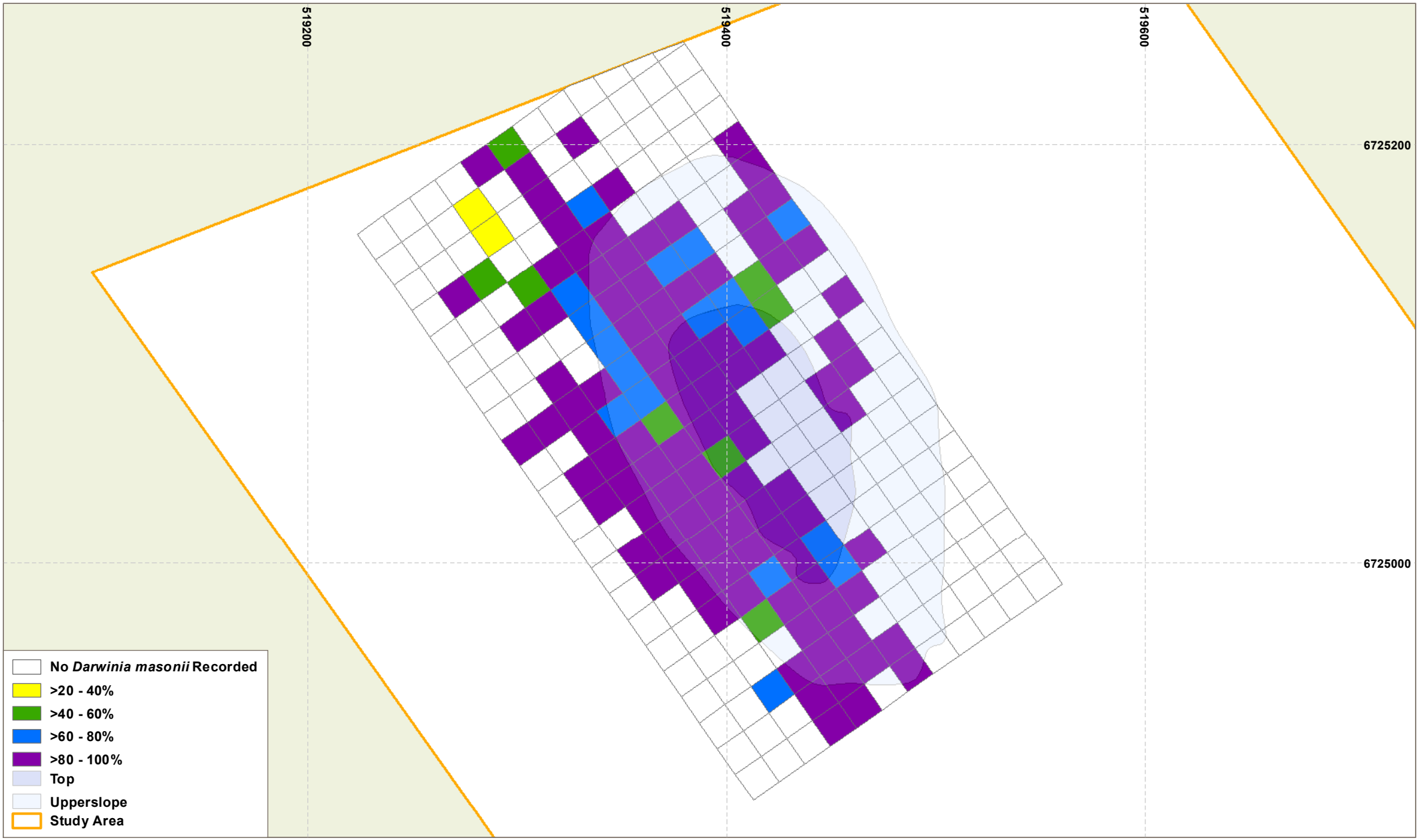

Location Map

Percentage of *Darwinia masonii* with Fruit by SAID

maia

N

0 0.0475

Kilometres

Datum: GDA 1994, MGA 50

Map: 6.18
Prepared for: MGX
Drawn by: RH
Date: 13/02/2014
Version: 2

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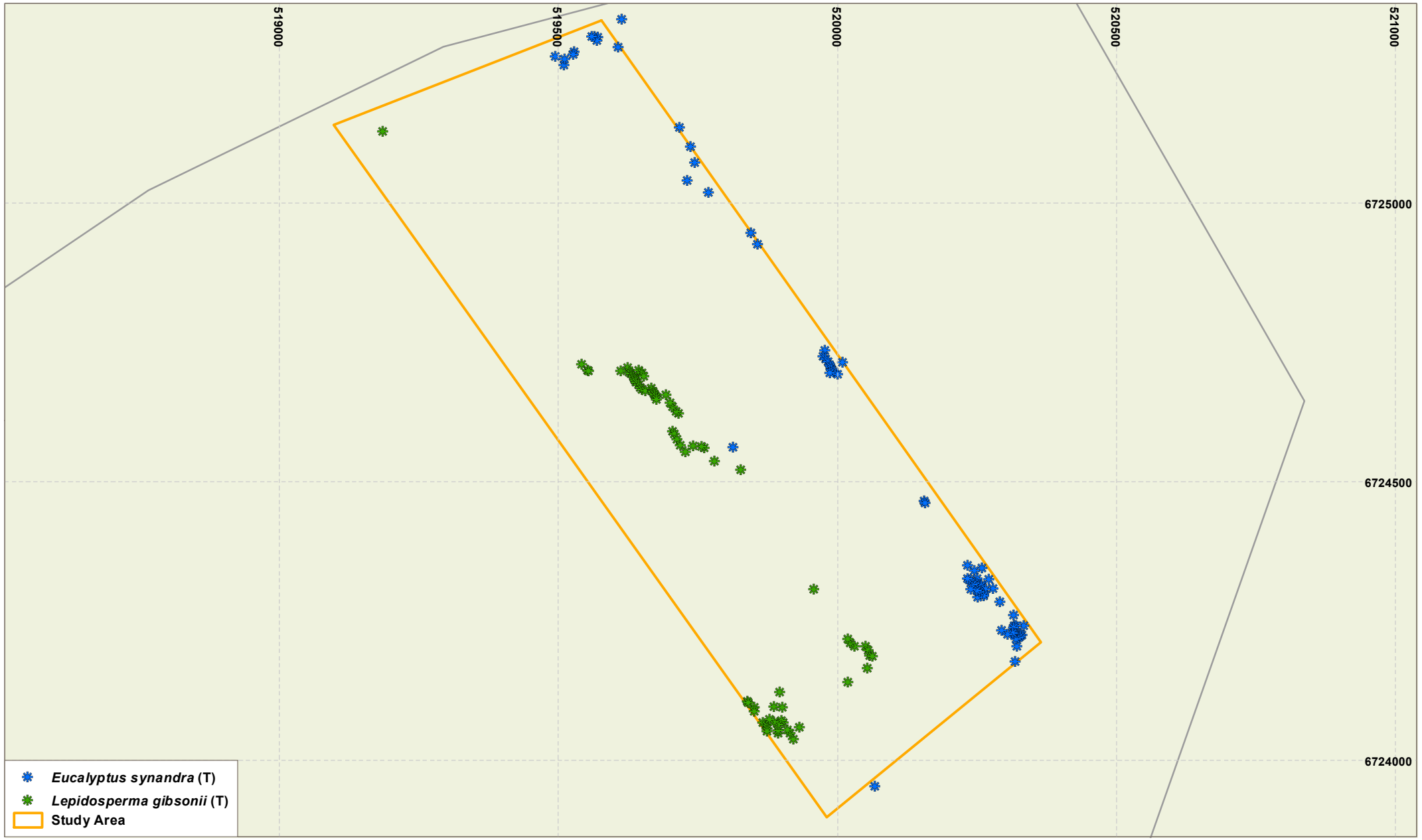

Location Map

Port Hedland
Newman
Wiluna
Geraldton
Kalgoorlie
Perth

Other Roads and Tracks

Additional Threatened Flora Species Located in Study Area 2

N

0 0.175
Kilometres

Datum: GDA 1994, MGA 50

Map: 6.19
Prepared for: MGX
Drawn by: RH
Date: 13/02/2014
Version: 2

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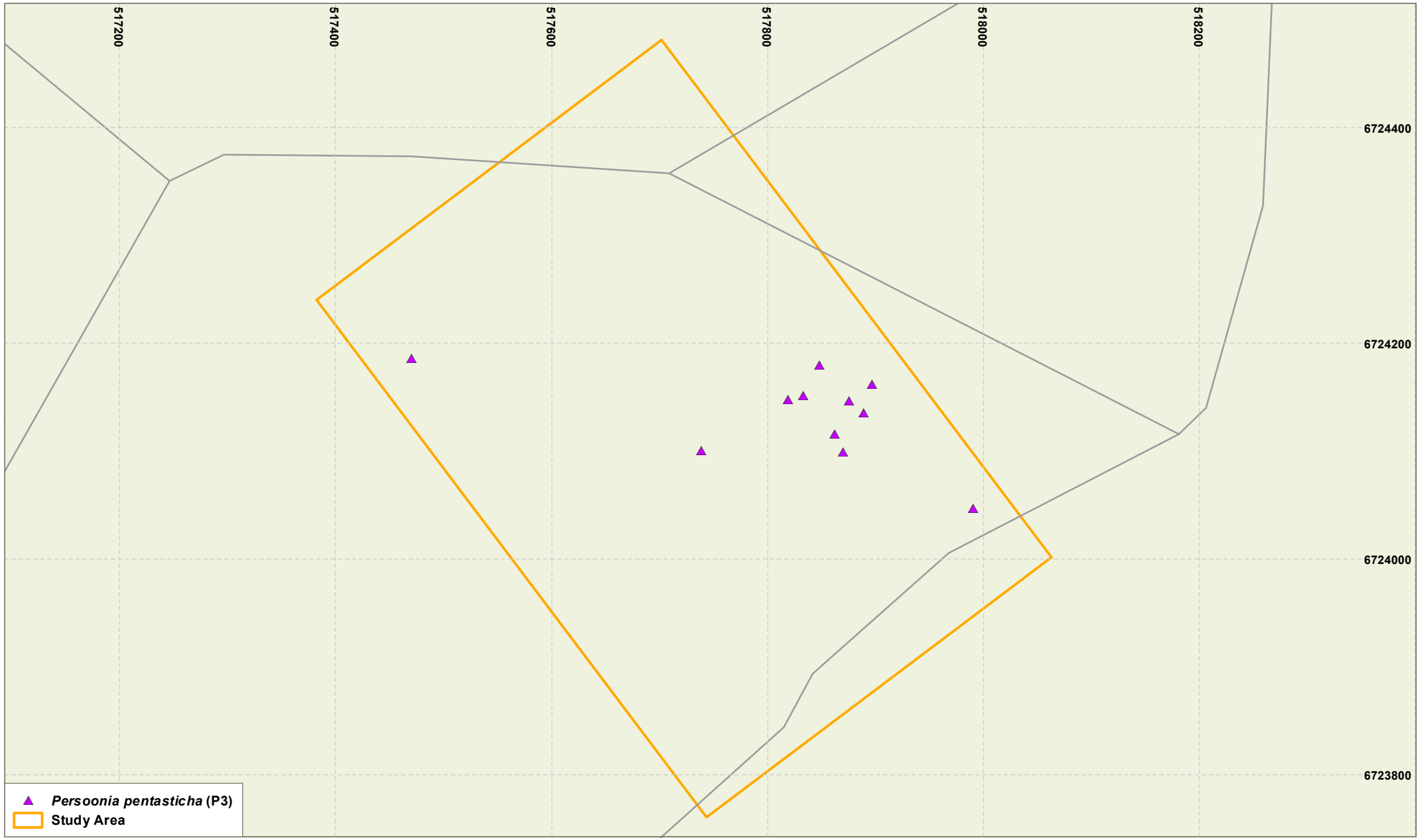

Location Map

Port Hedland
Newman
Wiluna
Geraldton
Kalgoorlie
Perth

Other Roads and Tracks

Priority Flora Species Located in Study Area 1

maia

N

0 0.075

Kilometres

Datum: GDA 1994, MGA 50

Map: 6.20
Prepared for: MGX
Drawn by: RH
Date: 13/02/2014
Version: 2

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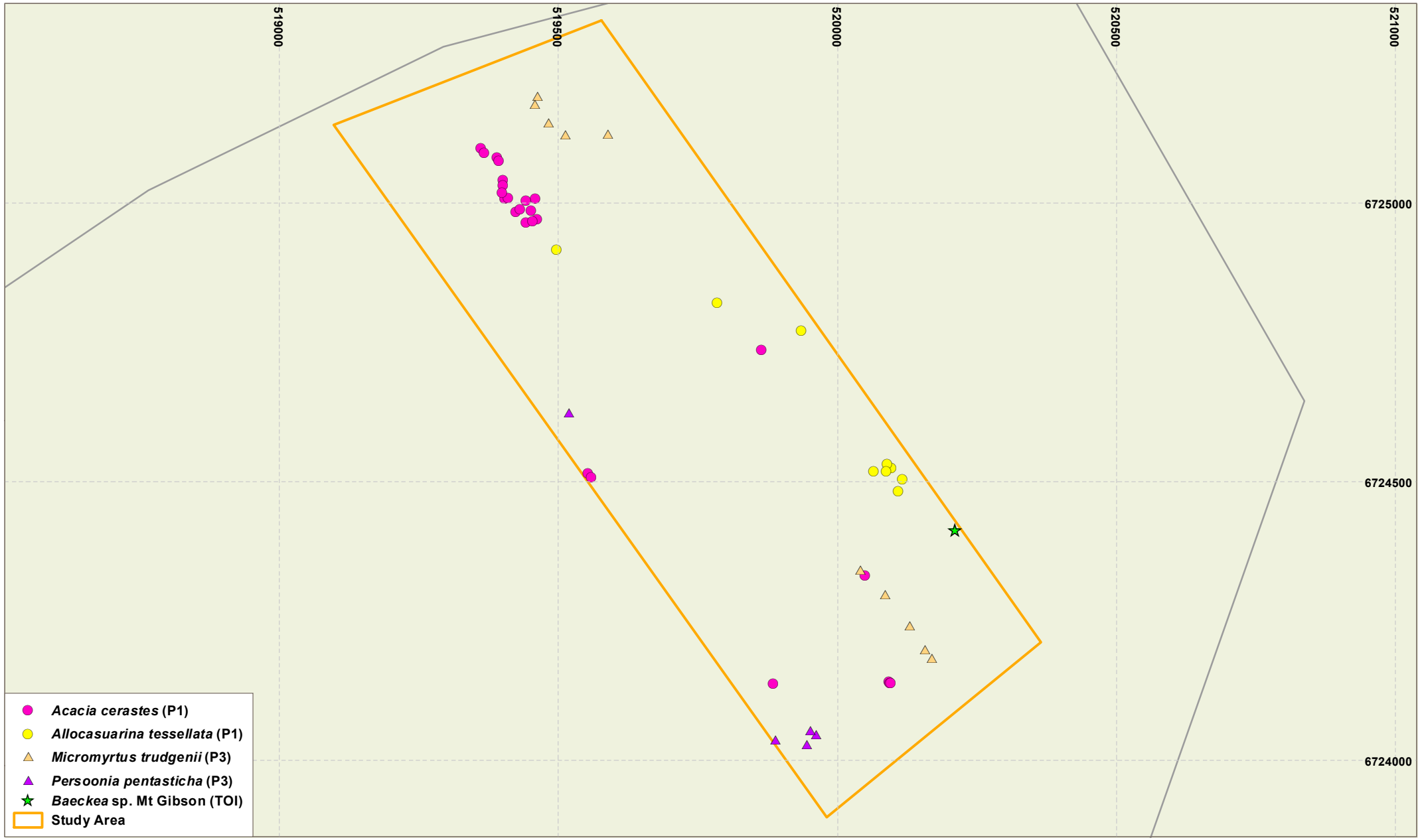

Location Map

Port Hedland
Newman
Wiluna
Geraldton
Kalgoorlie
Perth

Other Roads and Tracks

Priority Flora and Taxa of Interest Located in Study Area 2

maia

N

0 0.175
Kilometres

Datum: GDA 1994, MGA 50

Map: 6.21
Prepared for: MGX
Drawn by: RH
Date: 13/02/2014
Version: 2

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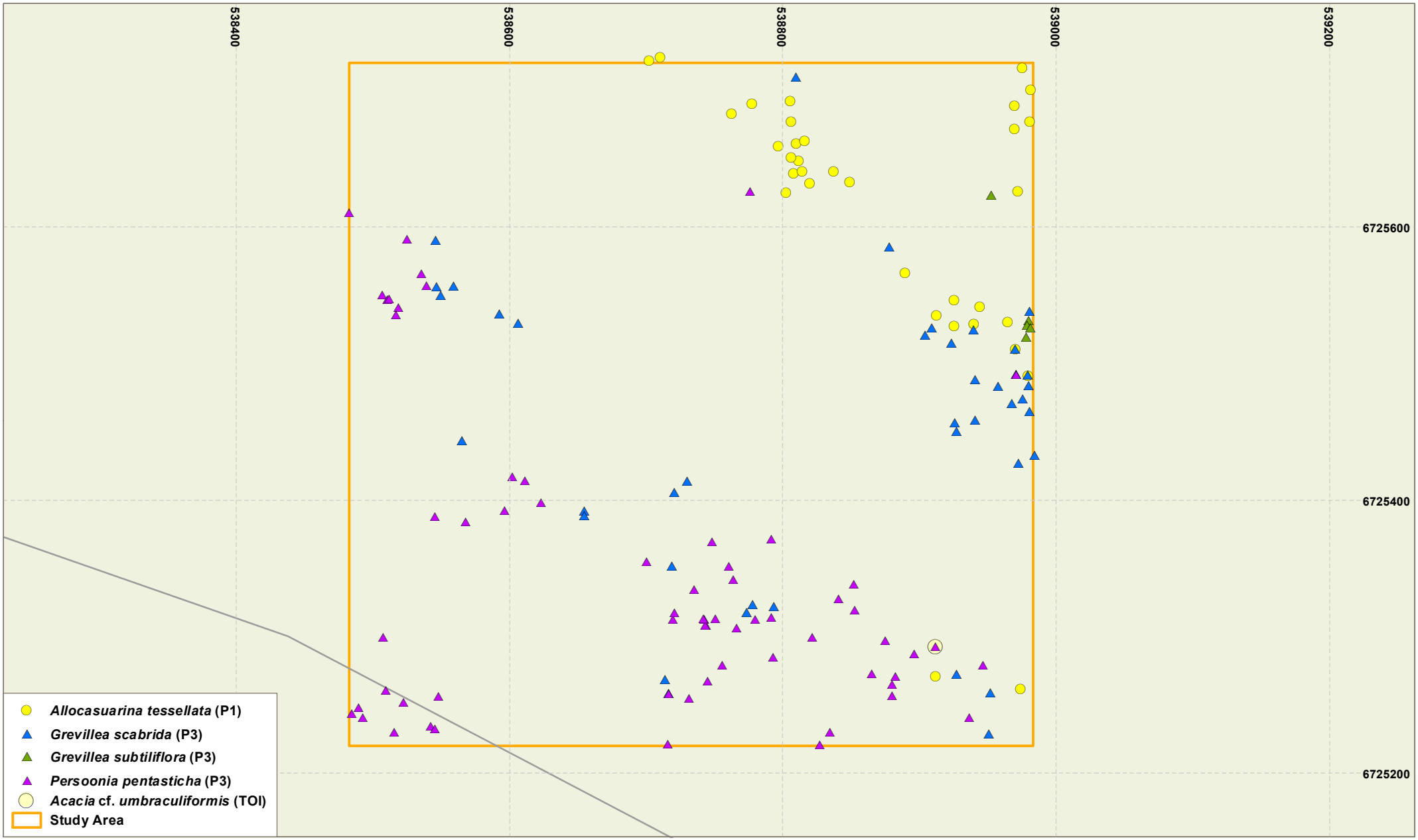

Location Map

Other Roads and Tracks

Priority Flora and Taxa of Interest Located in Study Area 3

maia

N

0 0.075

Kilometres

Datum: GDA 1994, MGA 50

Map: 6.22
Prepared for: MGX
Drawn by: RH
Date: 13/02/2014
Version: 2

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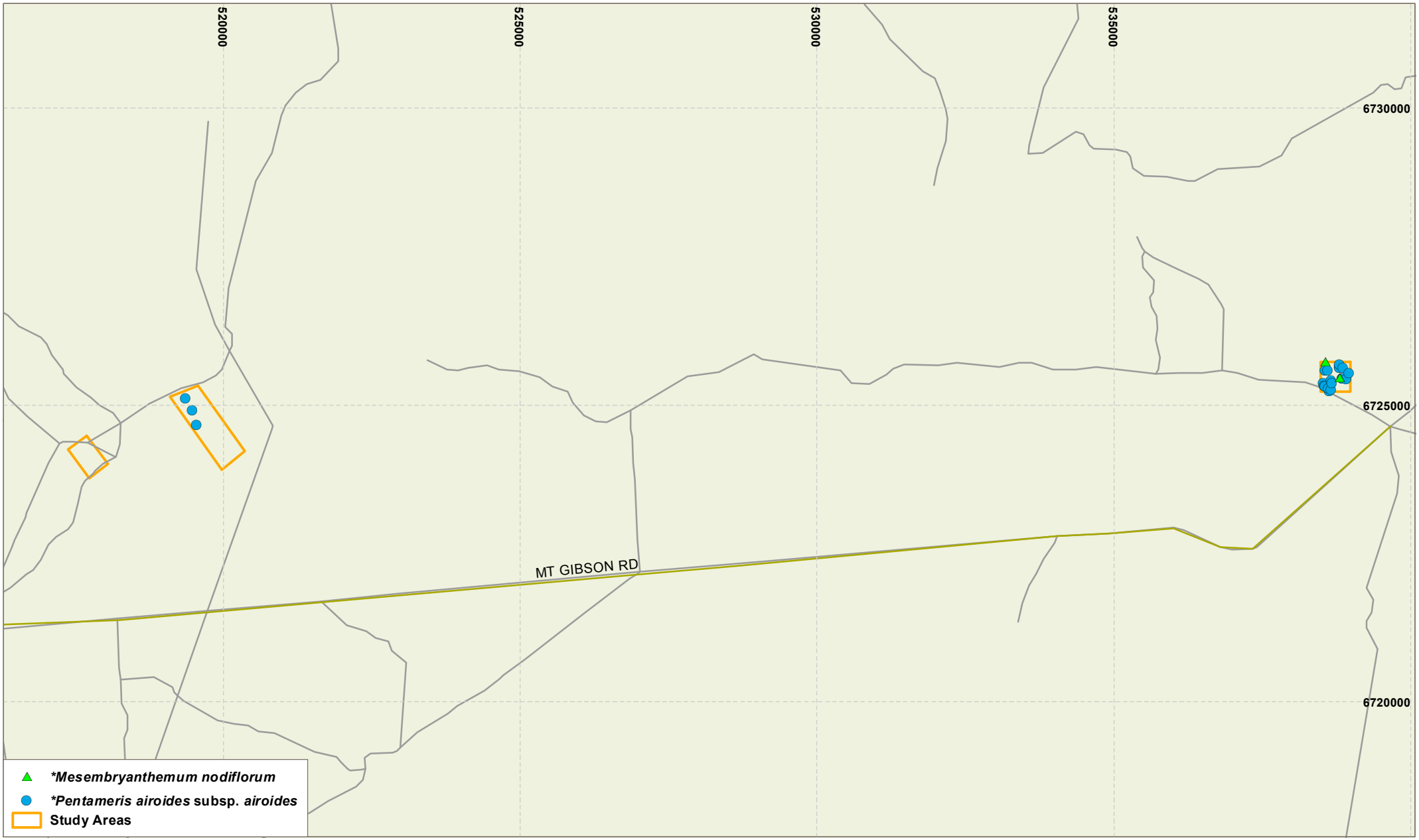

Location Map

Port Hedland
Newman
Wiluna
Geraldton
Kalgoorlie
Perth

Major Roads
Other Roads and Tracks

Weed Species Located in Study Area 2 and 3

maia

N

0 1.5
Kilometres

Datum: GDA 1994, MGA 50

Map: 6.23
Prepared for: MGX
Drawn by: RH
Date: 13/02/2014
Version: 2

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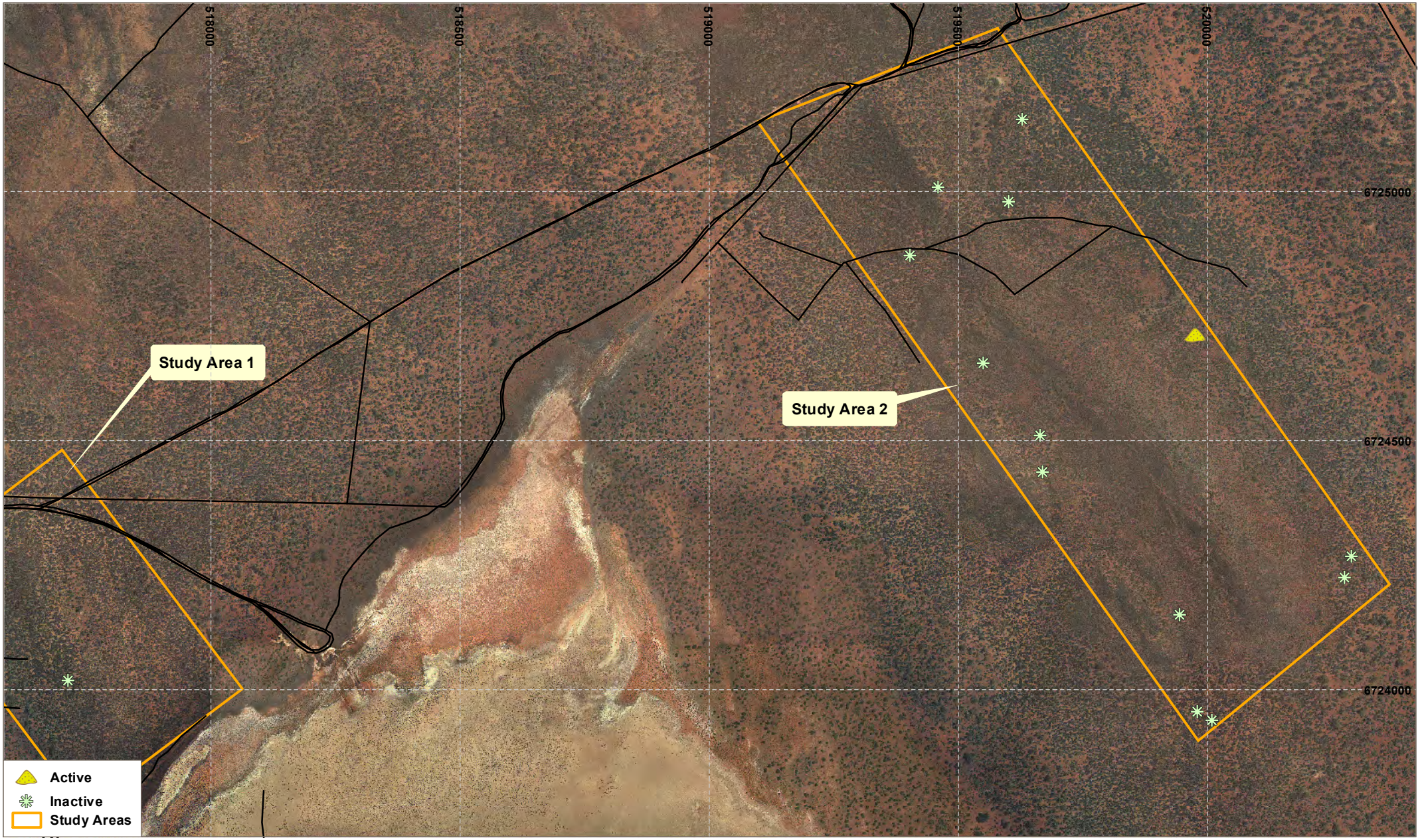

Location Map

- Port Hedland
- Newman
- Wiluna
- Geraldton
- Kalgoorlie
- Perth

MGX Tracks

***Leipoa ocellata* (Malleefowl) Nest Mounds Located in Study Area 1 and 2**

maia

N

0 0.2

Kilometres

Datum: GDA 1994, MGA 50

Map: 6.24
Prepared for: MGX
Drawn by: RH
Date: 13/02/2014
Version: 2

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APPENDIX 1: *DARWINIA MASONII* DATA

Explanations for descriptors used in the following table rows and columns follow:

- SAID = Study Area Identifier (15 x 15 m cells)
- DMID = *Darwinia masonii* individual plant identifier
- Height = height measured to nearest 10 cm
- Health Rating = health rating of plant, classified from 1 (healthiest) to 5 (dead)
- Maturity = plant life stage i.e. adult/mature, juvenile, seedling
- Reprod. Status = reproductive status of plant i.e. fruit = fruit present, old flowers = flowers but no fruit present, vegetative = no flowers or fruit present
- Aspect = east, west, north, south or top of hill
- Topography = top of hill, upper-slope or mid-slope of hill
- Rock Type = habitat in which plant growing i.e. IF (iron formation boulders and outcropping), Fe = ironstone (ironstone boulders and stones), Lat/Fe = laterite & ironstone (laterite and ironstone weathered soils).
- Easting and Northing = coordinates for each plant location in GDA94 MGA50
- NM = not measured.

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Table A1.1: *Darwinia masonii* Data

SAID	DMID	Height (cm)	Health Rating	Maturity	Reprod. Status	Aspect	Topography	Rock Type	Easting (mE)	Northing (mN)
9	1	130	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519305	6725056
9	2	200	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519305	6725054
26	3	170	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519278	6725129
30	4	180	3	Adult	Old flower	West	Mid-slope	Lat/Fe	519310	6725082
31	5	180	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519321	6725068
31	6	190	2	Adult	Fruit	West	Mid-slope	Lat/Fe	519324	6725063
33	7	120	2	Adult	Fruit	West	Mid-slope	Lat/Fe	519339	6725042
34	8	170	2	Adult	Fruit	West	Mid-slope	Lat/Fe	519344	6725034
36	9	50	2	Adult	Fruit	West	Mid-slope	Lat/Fe	519361	6725006
36	10	100	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519366	6725001
37	11	170	2	Adult	Fruit	West	Mid-slope	Lat/Fe	519368	6725002
37	12	50	2	Adult	Fruit	West	Mid-slope	Lat/Fe	519368	6725002
48	13	180	3	Adult	Old flower	West	Mid-slope	Lat/Fe	519280	6725130
48	14	170	2	Adult	Fruit	West	Mid-slope	Lat/Fe	519283	6725130
50	15	80	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519306	6725111
50	16	170	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519306	6725108
50	17	60	4	Adult	Fruit	West	Mid-slope	Lat/Fe	519309	6725110
50	18	150	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519309	6725113
50	19	100	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519309	6725111
50	20	130	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519310	6725112
52	21	150	2	Adult	Fruit	West	Mid-slope	Lat/Fe	519313	6725083
52	22	150	3	Adult	Fruit	West	Mid-slope	IF	519320	6725095
53	23	180	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519325	6725079
53	24	190	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519325	6725080
53	25	70	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519325	6725072
54	26	170	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519327	6725063
54	27	140	2	Adult	Fruit	West	Mid-slope	Lat/Fe	519329	6725066
54	28	160	4	Adult	Fruit	West	Mid-slope	Lat/Fe	519332	6725066
54	29	190	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519333	6725064
54	30	180	2	Adult	Fruit	West	Mid-slope	Lat/Fe	519335	6725056
54	31	100	2	Adult	Fruit	West	Mid-slope	IF	519338	6725071
54	32	160	2	Adult	Fruit	West	Mid-slope	Lat/Fe	519338	6725066
54	33	120	3	Adult	Fruit	West	Mid-slope	IF	519341	6725067
54	34	210	3	Adult	Fruit	West	Mid-slope	IF	519342	6725064
55	35	170	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519342	6725041
55	36	130	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519342	6725043
55	37	170	2	Adult	Fruit	West	Mid-slope	Lat/Fe	519343	6725041
55	38	190	2	Adult	Fruit	West	Mid-slope	Lat/Fe	519344	6725043
55	39	160	2	Adult	Fruit	West	Mid-slope	Lat/Fe	519344	6725043
55	40	110	2	Adult	Fruit	West	Mid-slope	Lat/Fe	519346	6725044
56	41	140	2	Adult	Fruit	West	Mid-slope	Lat/Fe	519352	6725040
56	42	170	2	Adult	Fruit	West	Mid-slope	Lat/Fe	519353	6725043
57	43	170	2	Adult	Fruit	West	Mid-slope	Lat/Fe	519357	6725026
57	44	190	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519358	6725019
57	45	90	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519364	6725022
57	46	90	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519364	6725024
57	47	160	2	Adult	Fruit	West	Upper-slope	Lat/Fe	519367	6725025
57	48	110	2	Adult	Fruit	West	Upper-slope	Lat/Fe	519368	6725021

SAID	DMID	Height (cm)	Health Rating	Maturity	Reprod. Status	Aspect	Topography	Rock Type	Easting (mE)	Northing (mN)
58	49	170	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519362	6725015
58	50	180	2	Adult	Fruit	West	Mid-slope	Lat/Fe	519367	6725017
58	51	180	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519367	6725014
58	52	150	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519367	6725013
58	53	150	2	Adult	Fruit	West	Mid-slope	IF	519368	6725003
58	54	180	2	Adult	Fruit	West	Mid-slope	Lat/Fe	519370	6725007
59	55	170	2	Adult	Fruit	West	Mid-slope	Lat/Fe	519373	6725005
60	56	100	2	Adult	Fruit	West	Upper-slope	IF	519390	6724994
60	57	30	4	Adult	Fruit	West	Upper-slope	IF	519392	6724993
61	58	200	2	Adult	Fruit	West	Mid-slope	IF	519396	6724977
61	59	190	2	Adult	Fruit	West	Mid-slope	IF	519399	6724972
61	60	110	2	Adult	Fruit	West	Mid-slope	IF	519400	6724973
61	61	170	2	Adult	Fruit	West	Mid-slope	IF	519403	6724973
61	62	170	2	Adult	Fruit	West	Upper-slope	IF	519404	6724975
64	63	190	3	Adult	Fruit	West	Mid-slope	IF	519429	6724942
64	64	150	2	Adult	Old flower	West	Mid-slope	IF	519429	6724939
64	65	100	3	Adult	Fruit	West	Mid-slope	IF	519429	6724940
64	66	150	3	Adult	Fruit	West	Mid-slope	IF	519430	6724938
68	67	110	3	Adult	Old flower	West	Mid-slope	Lat/Fe	519275	6725167
68	68	100	3	Adult	Old flower	West	Mid-slope	Lat/Fe	519275	6725166
68	69	210	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519282	6725176
69	70	170	3	Adult	Fruit	West	Mid-slope	IF	519290	6725151
69	71	170	3	Adult	Vegetative	West	Mid-slope	Lat/Fe	519291	6725158
69	72	100	3	Adult	Vegetative	West	Mid-slope	Lat/Fe	519291	6725157
71	73	90	3	Adult	Fruit	West	Mid-slope	IF	519307	6725138
71	74	80	3	Adult	Vegetative	West	Mid-slope	IF	519312	6725128
72	75	180	2	Adult	Fruit	West	Mid-slope	Lat/Fe	519310	6725115
75	76	220	3	Adult	Fruit	West	Mid-slope	IF	519339	6725079
75	77	190	3	Adult	Fruit	West	Mid-slope	IF	519341	6725079
75	78	160	3	Adult	Fruit	West	Mid-slope	IF	519341	6725077
75	79	170	2	Adult	Fruit	West	Upper-slope	Lat/Fe	519341	6725092
76	80	150	3	Adult	Fruit	West	Upper-slope	IF	519345	6725075
76	81	100	4	Adult	Vegetative	West	Upper-slope	IF	519352	6725075
76	82	130	3	Adult	Fruit	West	Upper-slope	IF	519356	6725070
77	83	100	3	Adult	Fruit	West	Upper-slope	IF	519355	6725055
77	84	90	3	Adult	Fruit	West	Upper-slope	IF	519356	6725060
77	85	150	3	Adult	Fruit	West	Upper-slope	IF	519359	6725058
77	86	200	3	Adult	Fruit	West	Upper-slope	IF	519362	6725063
77	87	120	3	Adult	Fruit	West	Upper-slope	IF	519363	6725061
78	88	210	3	Adult	Fruit	West	Upper-slope	IF	519356	6725047
78	89	210	3	Adult	Fruit	West	Upper-slope	IF	519356	6725047
78	90	140	3	Adult	Fruit	West	Upper-slope	IF	519361	6725045
78	91	80	3	Adult	Fruit	West	Upper-slope	IF	519367	6725049
78	92	230	2	Adult	Fruit	West	Upper-slope	IF	519369	6725050
78	93	60	3	Adult	Fruit	West	Upper-slope	IF	519370	6725041
78	94	150	3	Adult	Fruit	West	Upper-slope	IF	519371	6725048
78	95	220	3	Adult	Fruit	West	Upper-slope	IF	519372	6725048
78	96	180	3	Adult	Fruit	West	Upper-slope	IF	519372	6725046
78	97	130	2	Adult	Fruit	West	Upper-slope	IF	519373	6725045

SAID	DMID	Height (cm)	Health Rating	Maturity	Reprod. Status	Aspect	Topography	Rock Type	Easting (mE)	Northing (mN)
79	98	100	1	Adult	Fruit	West	Upper-slope	IF	519367	6725036
79	99	190	2	Adult	Fruit	West	Upper-slope	Lat/Fe	519367	6725034
79	100	110	2	Adult	Fruit	West	Upper-slope	IF	519370	6725034
79	101	120	3	Adult	Fruit	West	Upper-slope	IF	519370	6725040
79	102	30	3	Adult	Fruit	West	Upper-slope	IF	519371	6725034
79	103	130	3	Adult	Fruit	West	Upper-slope	IF	519371	6725035
79	104	140	3	Adult	Fruit	West	Upper-slope	IF	519372	6725040
79	105	150	3	Adult	Fruit	West	Upper-slope	IF	519374	6725041
79	106	140	4	Adult	Fruit	West	Upper-slope	IF	519376	6725037
79	107	10	2	Seedling	Vegetative	West	Upper-slope	IF	519378	6725036
79	108	30	2	Juvenile	Vegetative	West	Upper-slope	IF	519378	6725034
79	109	170	3	Adult	Fruit	West	Upper-slope	IF	519383	6725031
80	110	140	3	Adult	Fruit	West	Upper-slope	IF	519380	6725023
80	111	60	3	Adult	Fruit	West	Upper-slope	IF	519386	6725017
80	112	150	3	Adult	Fruit	West	Upper-slope	IF	519386	6725017
80	113	90	2	Adult	Fruit	West	Upper-slope	IF	519386	6725017
80	114	190	3	Adult	Fruit	West	Upper-slope	IF	519387	6725021
80	115	110	3	Adult	Fruit	West	Upper-slope	IF	519387	6725018
81	116	190	3	Adult	Fruit	West	Upper-slope	IF	519385	6725014
81	117	100	1	Adult	Fruit	West	Upper-slope	IF	519398	6725009
82	118	220	3	Adult	Fruit	West	Upper-slope	IF	519395	6724998
82	119	180	3	Adult	Fruit	West	Upper-slope	IF	519395	6724993
82	120	190	3	Adult	Fruit	West	Upper-slope	IF	519396	6724991
82	121	110	3	Adult	Fruit	West	Upper-slope	IF	519397	6724997
82	122	70	3	Adult	Fruit	West	Upper-slope	IF	519397	6724998
82	123	110	3	Adult	Fruit	West	Upper-slope	IF	519399	6725000
82	124	160	3	Adult	Fruit	West	Upper-slope	IF	519399	6725004
82	125	180	3	Adult	Fruit	West	Upper-slope	IF	519399	6724998
82	126	80	2	Adult	Fruit	West	Upper-slope	IF	519399	6725004
82	127	90	3	Adult	Fruit	West	Upper-slope	IF	519400	6725003
82	128	140	3	Adult	Fruit	West	Upper-slope	IF	519402	6724998
82	129	20	1	Seedling	Vegetative	West	Upper-slope	IF	519403	6724998
82	130	80	2	Adult	Fruit	West	Upper-slope	IF	519403	6724999
82	131	210	3	Adult	Fruit	West	Upper-slope	IF	519403	6725000
82	132	110	3	Adult	Fruit	West	Upper-slope	IF	519403	6724998
82	133	180	3	Adult	Fruit	West	Upper-slope	IF	519404	6725001
82	134	160	3	Adult	Fruit	West	Upper-slope	IF	519406	6725000
82	135	90	1	Adult	Fruit	West	Upper-slope	IF	519406	6724993
82	136	170	3	Adult	Fruit	West	Upper-slope	IF	519408	6724995
82	137	150	3	Adult	Fruit	West	Upper-slope	IF	519409	6724994
83	138	20	4	Adult	Fruit	West	Upper-slope	IF	519401	6724986
83	139	170	2	Adult	Fruit	West	Upper-slope	IF	519402	6724988
83	140	260	3	Adult	Fruit	West	Upper-slope	IF	519406	6724988
83	141	190	3	Adult	Fruit	West	Upper-slope	IF	519410	6724987
84	142	40	1	Juvenile	Vegetative	West	Upper-slope	IF	519411	6724977
84	143	190	3	Adult	Fruit	West	Upper-slope	IF	519415	6724977
84	144	40	1	Juvenile	Vegetative	West	Upper-slope	IF	519417	6724973
84	145	180	3	Adult	Fruit	West	Upper-slope	IF	519417	6724977
86	146	120	1	Adult	Fruit	West	Upper-slope	IF	519429	6724953

SAID	DMID	Height (cm)	Health Rating	Maturity	Reprod. Status	Aspect	Topography	Rock Type	Easting (mE)	Northing (mN)
86	147	190	3	Adult	Old flower	West	Mid-slope	IF	519432	6724948
86	148	140	3	Adult	Fruit	West	Mid-slope	IF	519433	6724943
86	149	120	3	Adult	Fruit	West	Mid-slope	IF	519434	6724943
86	150	100	2	Adult	Fruit	West	Mid-slope	IF	519434	6724946
86	151	110	3	Adult	Fruit	West	Mid-slope	IF	519434	6724944
86	152	150	3	Adult	Fruit	West	Upper-slope	IF	519434	6724949
86	153	190	3	Adult	Fruit	West	Mid-slope	IF	519435	6724943
86	154	90	3	Adult	Fruit	West	Upper-slope	IF	519436	6724949
86	155	160	3	Adult	Fruit	West	Upper-slope	IF	519436	6724953
86	156	220	3	Adult	Fruit	West	Upper-slope	IF	519437	6724951
87	157	40	2	Adult	Fruit	West	Mid-slope	IF	519436	6724938
87	158	90	2	Adult	Fruit	West	Mid-slope	IF	519446	6724935
88	159	150	3	Adult	Fruit	West	Mid-slope	IF	519452	6724922
88	160	210	2	Adult	Fruit	West	Mid-slope	IF	519452	6724925
88	161	120	3	Adult	Fruit	West	Mid-slope	IF	519456	6724928
90	162	150	2	Adult	Fruit	West	Mid-slope	Lat/Fe	519282	6725188
90	163	150	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519285	6725190
90	164	130	2	Adult	Fruit	West	Mid-slope	Lat/Fe	519287	6725197
91	165	140	3	Adult	Old flower	West	Mid-slope	Lat/Fe	519290	6725174
91	166	120	3	Adult	Old flower	West	Mid-slope	Lat/Fe	519299	6725174
92	167	140	2	Adult	Old flower	West	Mid-slope	Lat/Fe	519295	6725162
92	168	100	3	Adult	Old flower	West	Mid-slope	Lat/Fe	519300	6725172
93	169	130	3	Adult	Old flower	West	Mid-slope	IF	519309	6725155
93	170	180	2	Adult	Vegetative	West	Mid-slope	Lat/Fe	519310	6725159
93	171	140	3	Adult	Old flower	West	Mid-slope	IF	519310	6725159
94	172	130	3	Adult	Fruit	West	Mid-slope	IF	519311	6725139
94	173	140	2	Adult	Fruit	West	Mid-slope	IF	519311	6725139
94	174	130	3	Adult	Fruit	West	Mid-slope	IF	519314	6725138
94	175	150	3	Adult	Fruit	West	Mid-slope	IF	519315	6725137
94	176	160	2	Adult	Fruit	West	Mid-slope	IF	519316	6725144
94	177	200	3	Adult	Fruit	West	Mid-slope	IF	519319	6725149
94	178	140	3	Adult	Fruit	West	Mid-slope	IF	519322	6725145
94	179	160	3	Adult	Fruit	West	Mid-slope	IF	519323	6725143
94	180	60	3	Adult	Vegetative	West	Mid-slope	IF	519324	6725138
95	181	150	3	Adult	Fruit	West	Mid-slope	IF	519323	6725134
95	182	110	3	Adult	Fruit	West	Mid-slope	IF	519324	6725135
95	183	160	3	Adult	Old flower	West	Mid-slope	IF	519326	6725131
95	184	140	2	Adult	Fruit	West	Mid-slope	IF	519327	6725122
95	185	170	3	Adult	Vegetative	West	Mid-slope	IF	519328	6725129
95	186	140	3	Adult	Vegetative	West	Mid-slope	IF	519328	6725129
95	187	110	2	Adult	Fruit	West	Mid-slope	IF	519330	6725136
95	188	190	3	Adult	Fruit	West	Mid-slope	IF	519331	6725128
95	189	170	2	Adult	Fruit	West	Upper-slope	IF	519335	6725127
96	190	100	4	Adult	Old flower	West	Mid-slope	IF	519333	6725113
96	191	80	1	Adult	Fruit	West	Mid-slope	Lat/Fe	519334	6725112
96	192	80	1	Adult	Fruit	West	Mid-slope	IF	519334	6725109
96	193	140	2	Adult	Fruit	West	Upper-slope	IF	519336	6725112
96	194	180	3	Adult	Fruit	West	Upper-slope	IF	519338	6725112
96	195	70	2	Adult	Fruit	West	Upper-slope	IF	519340	6725117

SAID	DMID	Height (cm)	Health Rating	Maturity	Reprod. Status	Aspect	Topography	Rock Type	Easting (mE)	Northing (mN)
96	196	90	3	Adult	Old flower	West	Upper-slope	IF	519340	6725115
96	197	100	3	Adult	Fruit	West	Upper-slope	IF	519341	6725113
96	198	110	3	Adult	Fruit	West	Upper-slope	IF	519344	6725116
96	199	60	4	Adult	Fruit	West	Upper-slope	IF	519344	6725114
97	200	110	3	Adult	Fruit	West	Upper-slope	IF	519340	6725107
97	201	100	3	Adult	Old flower	West	Upper-slope	IF	519340	6725111
97	202	150	2	Adult	Fruit	West	Upper-slope	IF	519343	6725109
97	203	110	3	Adult	Fruit	West	Upper-slope	IF	519344	6725113
98	204	170	3	Adult	Fruit	West	Upper-slope	IF	519346	6725092
98	205	160	2	Adult	Fruit	West	Upper-slope	IF	519352	6725099
98	206	150	2	Adult	Fruit	West	Upper-slope	IF	519352	6725101
98	207	190	2	Adult	Fruit	West	Upper-slope	IF	519353	6725099
98	208	90	4	Adult	Vegetative	West	Upper-slope	IF	519356	6725095
99	209	140	3	Adult	Fruit	West	Upper-slope	IF	519356	6725074
99	210	120	3	Adult	Old flower	West	Upper-slope	IF	519357	6725079
99	211	170	2	Adult	Fruit	West	Upper-slope	IF	519360	6725080
99	212	110	2	Adult	Fruit	West	Upper-slope	IF	519362	6725087
99	213	140	3	Adult	Fruit	West	Upper-slope	IF	519370	6725078
100	214	110	3	Adult	Old flower	West	Upper-slope	IF	519361	6725068
100	215	120	4	Adult	Fruit	West	Upper-slope	IF	519361	6725071
100	216	50	2	Adult	Old flower	West	Upper-slope	IF	519369	6725058
100	217	160	1	Adult	Fruit	West	Upper-slope	IF	519370	6725061
100	218	250	3	Adult	Fruit	West	Upper-slope	IF	519371	6725063
101	219	90	2	Adult	Old flower	West	Upper-slope	IF	519372	6725052
101	220	210	3	Adult	Fruit	West	Upper-slope	IF	519373	6725049
101	221	220	3	Adult	Fruit	West	Upper-slope	IF	519374	6725050
101	222	90	2	Adult	Fruit	West	Upper-slope	IF	519378	6725058
101	223	200	3	Adult	Fruit	West	Upper-slope	IF	519379	6725055
101	224	210	3	Adult	Fruit	West	Upper-slope	IF	519383	6725054
101	225	130	3	Adult	Fruit	West	Upper-slope	IF	519384	6725053
102	226	100	3	Adult	Fruit	West	Upper-slope	IF	519378	6725043
102	227	220	3	Adult	Fruit	West	Upper-slope	IF	519381	6725043
102	228	150	2	Adult	Fruit	West	Upper-slope	IF	519381	6725040
102	229	140	3	Adult	Fruit	West	Upper-slope	IF	519381	6725040
102	230	110	3	Adult	Fruit	West	Upper-slope	IF	519382	6725043
102	231	230	3	Adult	Fruit	West	Upper-slope	IF	519382	6725045
102	232	170	3	Adult	Fruit	West	Upper-slope	IF	519382	6725047
102	233	200	2	Adult	Fruit	West	Upper-slope	IF	519384	6725035
102	234	130	2	Adult	Fruit	West	Upper-slope	IF	519385	6725035
102	235	160	3	Adult	Fruit	West	Upper-slope	IF	519386	6725038
102	236	150	3	Adult	Fruit	West	Upper-slope	IF	519386	6725037
102	237	180	3	Adult	Fruit	West	Upper-slope	IF	519386	6725034
102	238	190	3	Adult	Fruit	West	Upper-slope	IF	519387	6725037
102	239	190	3	Adult	Fruit	West	Upper-slope	IF	519388	6725044
102	240	220	3	Adult	Fruit	West	Upper-slope	IF	519389	6725036
102	241	140	3	Adult	Fruit	West	Upper-slope	IF	519390	6725042
102	242	100	2	Adult	Fruit	West	Upper-slope	IF	519391	6725041
102	243	180	2	Adult	Fruit	West	Upper-slope	IF	519391	6725042
102	244	190	3	Adult	Fruit	West	Upper-slope	IF	519392	6725040

SAID	DMID	Height (cm)	Health Rating	Maturity	Reprod. Status	Aspect	Topography	Rock Type	Easting (mE)	Northing (mN)
103	245	30	1	Juvenile	Vegetative	West	Upper-slope	IF	519386	6725032
103	246	210	3	Adult	Old flower	West	Upper-slope	IF	519389	6725030
103	247	110	4	Adult	Fruit	West	Upper-slope	IF	519391	6725024
103	248	140	3	Adult	Fruit	West	Upper-slope	IF	519391	6725033
103	249	160	3	Adult	Fruit	West	Upper-slope	IF	519391	6725025
103	250	170	3	Adult	Fruit	West	Upper-slope	IF	519391	6725035
103	251	190	3	Adult	Fruit	West	Upper-slope	IF	519392	6725035
103	252	150	3	Adult	Fruit	West	Upper-slope	IF	519392	6725036
103	253	110	3	Adult	Fruit	West	Upper-slope	IF	519392	6725025
103	254	150	3	Adult	Fruit	West	Upper-slope	IF	519393	6725024
103	255	230	3	Adult	Fruit	West	Upper-slope	IF	519393	6725028
103	256	120	4	Adult	Fruit	West	Upper-slope	IF	519394	6725031
103	257	120	3	Adult	Fruit	West	Upper-slope	IF	519395	6725029
103	258	120	2	Adult	Fruit	West	Upper-slope	IF	519396	6725035
103	259	90	1	Adult	Fruit	West	Upper-slope	IF	519396	6725039
103	260	180	3	Adult	Fruit	West	Upper-slope	IF	519397	6725030
103	261	120	3	Adult	Fruit	West	Upper-slope	IF	519403	6725031
104	262	120	2	Adult	Fruit	West	Upper-slope	IF	519396	6725020
104	263	190	2	Adult	Fruit	West	Upper-slope	IF	519397	6725022
104	264	90	2	Adult	Fruit	West	Upper-slope	IF	519398	6725023
104	265	170	3	Adult	Fruit	West	Upper-slope	IF	519403	6725025
104	266	230	3	Adult	Fruit	West	Upper-slope	IF	519403	6725025
104	267	120	3	Adult	Fruit	West	Upper-slope	IF	519404	6725015
104	268	150	3	Adult	Fruit	West	Upper-slope	IF	519404	6725016
104	269	160	3	Adult	Fruit	West	Upper-slope	IF	519404	6725018
104	270	190	3	Adult	Fruit	West	Upper-slope	IF	519404	6725015
104	271	190	3	Adult	Fruit	West	Upper-slope	IF	519405	6725025
104	272	170	3	Adult	Fruit	West	Upper-slope	IF	519407	6725017
104	273	140	1	Adult	Fruit	West	Upper-slope	IF	519408	6725013
105	274	130	2	Adult	Fruit	West	Upper-slope	IF	519403	6725007
105	275	120	2	Adult	Fruit	West	Upper-slope	IF	519405	6725004
105	276	140	3	Adult	Fruit	West	Upper-slope	IF	519408	6725008
105	277	140	2	Adult	Fruit	West	Upper-slope	IF	519410	6725003
105	278	220	3	Adult	Old flower	West	Upper-slope	IF	519411	6725012
105	279	120	3	Adult	Fruit	West	Upper-slope	IF	519415	6725009
105	280	160	3	Adult	Fruit	West	Upper-slope	IF	519416	6725008
105	281	130	3	Adult	Fruit	West	Upper-slope	IF	519416	6725008
105	282	170	3	Adult	Fruit	West	Upper-slope	IF	519416	6725007
105	283	120	4	Adult	Fruit	West	Upper-slope	IF	519417	6725001
106	284	240	2	Adult	Fruit	West	Upper-slope	IF	519412	6724994
106	285	170	3	Adult	Fruit	West	Upper-slope	IF	519418	6724995
106	286	170	2	Adult	Fruit	West	Upper-slope	IF	519419	6724988
106	287	20	1	Seedling	Vegetative	West	Upper-slope	IF	519419	6724985
106	288	20	1	Seedling	Vegetative	West	Upper-slope	IF	519419	6724985
106	289	190	4	Adult	Fruit	West	Upper-slope	IF	519420	6724997
106	290	180	3	Adult	Fruit	West	Upper-slope	IF	519420	6724997
106	291	180	3	Adult	Fruit	West	Upper-slope	IF	519421	6724994
106	292	190	2	Adult	Fruit	West	Upper-slope	IF	519424	6724998
106	293	190	3	Adult	Fruit	West	Upper-slope	IF	519425	6724997

SAID	DMID	Height (cm)	Health Rating	Maturity	Reprod. Status	Aspect	Topography	Rock Type	Easting (mE)	Northing (mN)
107	294	200	3	Adult	Fruit	West	Upper-slope	IF	519422	6724980
107	295	140	2	Adult	Fruit	West	Upper-slope	IF	519423	6724985
107	296	140	3	Adult	Fruit	West	Upper-slope	IF	519431	6724989
108	297	20	2	Seedling	Vegetative	West	Upper-slope	IF	519432	6724968
108	298	120	3	Adult	Fruit	West	Upper-slope	IF	519433	6724968
108	299	100	3	Adult	Fruit	West	Upper-slope	IF	519436	6724968
108	300	240	3	Adult	Fruit	West	Upper-slope	IF	519436	6724967
108	301	210	3	Adult	Fruit	West	Upper-slope	IF	519438	6724971
108	302	140	2	Adult	Fruit	West	Upper-slope	IF	519438	6724969
108	303	70	4	Adult	Fruit	West	Upper-slope	IF	519439	6724977
108	304	190	3	Adult	Fruit	West	Upper-slope	IF	519440	6724978
108	305	90	3	Adult	Fruit	West	Upper-slope	IF	519441	6724977
108	306	180	3	Adult	Fruit	West	Upper-slope	IF	519442	6724964
109	307	120	3	Adult	Fruit	West	Upper-slope	IF	519451	6724955
109	308	180	3	Adult	Fruit	West	Upper-slope	IF	519455	6724956
109	309	110	3	Adult	Fruit	West	Upper-slope	IF	519456	6724956
110	310	100	2	Adult	Fruit	West	Upper-slope	IF	519451	6724949
110	311	80	3	Adult	Fruit	West	Upper-slope	IF	519452	6724943
110	312	140	3	Adult	Fruit	West	Mid-slope	IF	519453	6724937
110	313	190	3	Adult	Fruit	West	Mid-slope	IF	519454	6724941
110	314	80	3	Adult	Fruit	West	Upper-slope	IF	519454	6724943
110	315	110	3	Adult	Fruit	West	Mid-slope	IF	519455	6724938
110	316	140	3	Adult	Fruit	West	Upper-slope	IF	519455	6724946
110	317	180	3	Adult	Vegetative	West	Mid-slope	IF	519458	6724938
110	318	130	3	Adult	Fruit	West	Upper-slope	IF	519458	6724952
110	319	190	3	Adult	Fruit	West	Mid-slope	IF	519458	6724940
110	320	160	3	Adult	Old flower	West	Upper-slope	IF	519459	6724947
110	321	160	3	Adult	Fruit	West	Upper-slope	IF	519461	6724949
110	322	160	3	Adult	Fruit	West	Upper-slope	IF	519462	6724945
111	323	150	3	Adult	Fruit	West	Mid-slope	IF	519456	6724929
112	324	90	3	Adult	Vegetative	West	Mid-slope	Lat/Fe	519292	6725191
112	325	60	2	Adult	Fruit	West	Mid-slope	Lat/Fe	519299	6725201
113	326	180	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519296	6725184
114	327	160	2	Adult	Fruit	West	Mid-slope	IF	519312	6725178
114	328	190	2	Adult	Fruit	West	Mid-slope	IF	519314	6725177
114	329	110	3	Adult	Fruit	West	Mid-slope	IF	519317	6725174
115	330	170	3	Adult	Fruit	West	Mid-slope	IF	519315	6725166
115	331	140	2	Adult	Fruit	West	Mid-slope	IF	519318	6725154
115	332	210	2	Adult	Fruit	West	Mid-slope	IF	519319	6725152
115	333	120	2	Adult	Fruit	West	Mid-slope	IF	519319	6725155
115	334	100	2	Adult	Fruit	West	Mid-slope	IF	519322	6725160
115	335	140	2	Adult	Fruit	West	Mid-slope	IF	519323	6725165
115	336	130	2	Adult	Fruit	West	Mid-slope	IF	519324	6725159
115	337	210	3	Adult	Fruit	West	Mid-slope	IF	519326	6725161
115	338	130	3	Adult	Fruit	West	Mid-slope	IF	519327	6725160
116	339	160	2	Adult	Fruit	West	Mid-slope	IF	519321	6725151
116	340	190	2	Adult	Fruit	West	Mid-slope	IF	519323	6725151
116	341	130	2	Adult	Fruit	West	Mid-slope	IF	519325	6725148
116	342	170	3	Adult	Old flower	West	Mid-slope	IF	519325	6725146

SAID	DMID	Height (cm)	Health Rating	Maturity	Reprod. Status	Aspect	Topography	Rock Type	Easting (mE)	Northing (mN)
116	343	110	3	Adult	Fruit	West	Mid-slope	IF	519326	6725145
116	344	200	3	Adult	Fruit	West	Mid-slope	IF	519327	6725147
116	345	140	3	Adult	Fruit	West	Mid-slope	IF	519328	6725146
116	346	50	4	Adult	Fruit	West	Mid-slope	IF	519328	6725148
116	347	30	4	Adult	Fruit	West	Mid-slope	IF	519330	6725149
116	348	120	3	Adult	Fruit	West	Mid-slope	IF	519330	6725151
116	349	170	2	Adult	Fruit	West	Mid-slope	IF	519331	6725158
116	350	140	2	Adult	Fruit	West	Mid-slope	IF	519332	6725157
116	351	140	2	Adult	Fruit	West	Mid-slope	IF	519333	6725151
116	352	150	3	Adult	Fruit	West	Mid-slope	IF	519333	6725155
116	353	40	2	Adult	Fruit	West	Mid-slope	IF	519334	6725154
116	354	170	2	Adult	Fruit	West	Upper-slope	IF	519334	6725147
116	355	160	2	Adult	Fruit	West	Upper-slope	IF	519335	6725148
116	356	10	1	Seedling	Vegetative	West	Upper-slope	IF	519335	6725149
116	357	150	3	Adult	Fruit	West	Upper-slope	IF	519335	6725150
116	358	170	2	Adult	Fruit	West	Upper-slope	IF	519335	6725150
116	359	170	2	Adult	Fruit	West	Upper-slope	IF	519339	6725148
117	360	110	2	Adult	Fruit	West	Mid-slope	IF	519330	6725136
117	361	170	2	Adult	Fruit	West	Mid-slope	IF	519331	6725136
117	362	140	2	Adult	Fruit	West	Mid-slope	IF	519332	6725134
117	363	120	2	Adult	Fruit	West	Mid-slope	IF	519334	6725134
117	364	170	3	Adult	Fruit	West	Mid-slope	IF	519334	6725143
117	365	130	2	Adult	Fruit	West	Upper-slope	IF	519336	6725140
117	366	100	3	Adult	Fruit	West	Upper-slope	IF	519337	6725141
117	367	140	3	Adult	Fruit	West	Upper-slope	IF	519338	6725141
117	368	180	3	Adult	Fruit	West	Upper-slope	IF	519339	6725140
117	369	90	3	Adult	Fruit	West	Upper-slope	IF	519340	6725139
117	370	60	2	Adult	Old flower	West	Upper-slope	IF	519341	6725139
117	371	180	2	Adult	Fruit	West	Upper-slope	IF	519341	6725134
117	372	140	2	Adult	Fruit	West	Upper-slope	IF	519342	6725133
117	373	170	2	Adult	Fruit	West	Upper-slope	IF	519343	6725135
117	374	170	2	Adult	Fruit	West	Upper-slope	IF	519343	6725140
117	375	NM	5	Adult	NM	West	Upper-slope	IF	519343	6725141
117	376	130	2	Adult	Fruit	West	Upper-slope	IF	519346	6725134
118	377	190	1	Adult	Fruit	West	Upper-slope	IF	519343	6725130
118	378	60	3	Adult	Fruit	West	Upper-slope	IF	519344	6725131
118	379	100	2	Adult	Fruit	West	Upper-slope	IF	519349	6725123
118	380	160	2	Adult	Fruit	West	Upper-slope	IF	519349	6725117
118	381	140	2	Adult	Fruit	West	Upper-slope	IF	519350	6725129
118	382	150	2	Adult	Fruit	West	Upper-slope	IF	519352	6725124
118	383	170	2	Adult	Fruit	West	Upper-slope	IF	519354	6725123
118	384	150	2	Adult	Fruit	West	Upper-slope	IF	519356	6725123
119	385	40	4	Adult	Fruit	West	Upper-slope	IF	519350	6725112
119	386	170	3	Adult	Fruit	West	Upper-slope	IF	519352	6725107
119	387	90	3	Adult	Fruit	West	Upper-slope	IF	519352	6725112
119	388	150	2	Adult	Fruit	West	Upper-slope	IF	519353	6725112
119	389	90	2	Adult	Fruit	West	Upper-slope	IF	519354	6725108
119	390	100	2	Adult	Fruit	West	Upper-slope	IF	519354	6725108
119	391	100	3	Adult	Fruit	West	Upper-slope	IF	519354	6725110

SAID	DMID	Height (cm)	Health Rating	Maturity	Reprod. Status	Aspect	Topography	Rock Type	Easting (mE)	Northing (mN)
119	392	170	2	Adult	Fruit	West	Upper-slope	IF	519354	6725105
119	393	180	3	Adult	Fruit	West	Upper-slope	IF	519355	6725105
119	394	180	3	Adult	Fruit	West	Upper-slope	IF	519355	6725108
119	395	150	3	Adult	Fruit	West	Upper-slope	IF	519355	6725106
119	396	190	2	Adult	Fruit	West	Upper-slope	IF	519355	6725113
119	397	140	2	Adult	Fruit	West	Upper-slope	IF	519356	6725119
119	398	170	3	Adult	Fruit	West	Upper-slope	IF	519356	6725104
119	399	140	4	Adult	Fruit	West	Upper-slope	IF	519356	6725121
119	400	140	3	Adult	Fruit	West	Upper-slope	IF	519357	6725115
119	401	150	2	Adult	Fruit	West	Upper-slope	IF	519357	6725113
119	402	170	2	Adult	Fruit	West	Upper-slope	IF	519357	6725119
119	403	10	1	Seedling	Vegetative	West	Upper-slope	IF	519357	6725120
119	404	130	3	Adult	Fruit	West	Upper-slope	IF	519357	6725114
119	405	60	2	Adult	Fruit	West	Upper-slope	IF	519358	6725121
119	406	40	3	Adult	Fruit	West	Upper-slope	IF	519358	6725121
119	407	160	2	Adult	Fruit	West	Upper-slope	IF	519360	6725107
119	408	120	3	Adult	Fruit	West	Upper-slope	IF	519361	6725112
119	409	140	3	Adult	Old flower	West	Upper-slope	IF	519361	6725112
119	410	110	2	Adult	Fruit	West	Upper-slope	IF	519362	6725109
119	411	60	3	Adult	Fruit	West	Upper-slope	IF	519364	6725109
120	412	140	3	Adult	Fruit	West	Upper-slope	IF	519358	6725098
120	413	180	2	Adult	Fruit	West	Upper-slope	IF	519360	6725097
120	414	110	3	Adult	Fruit	West	Upper-slope	IF	519362	6725104
120	415	90	2	Adult	Fruit	West	Upper-slope	IF	519364	6725108
120	416	150	2	Adult	Fruit	West	Upper-slope	IF	519366	6725107
120	417	100	3	Adult	Fruit	West	Upper-slope	IF	519368	6725102
120	418	160	2	Adult	Fruit	West	Upper-slope	IF	519368	6725105
120	419	140	2	Adult	Fruit	West	Upper-slope	IF	519368	6725099
120	420	160	2	Adult	Fruit	West	Upper-slope	IF	519369	6725106
120	421	170	3	Adult	Fruit	West	Upper-slope	IF	519369	6725097
120	422	110	3	Adult	Fruit	West	Upper-slope	IF	519369	6725099
120	423	160	2	Adult	Fruit	West	Upper-slope	IF	519370	6725100
120	424	60	2	Adult	Fruit	West	Upper-slope	IF	519370	6725101
120	425	140	2	Adult	Fruit	West	Upper-slope	IF	519370	6725096
120	426	170	2	Adult	Fruit	West	Upper-slope	IF	519370	6725098
121	427	180	2	Adult	Fruit	West	Upper-slope	IF	519368	6725084
121	428	110	2	Adult	Fruit	West	Upper-slope	IF	519368	6725086
121	429	150	3	Adult	Fruit	West	Upper-slope	IF	519368	6725083
121	430	210	3	Adult	Fruit	West	Upper-slope	IF	519370	6725079
121	431	220	3	Adult	Fruit	West	Upper-slope	IF	519371	6725079
121	432	10	1	Seedling	Vegetative	West	Upper-slope	IF	519371	6725092
121	433	240	3	Adult	Fruit	West	Upper-slope	IF	519371	6725080
121	434	40	2	Juvenile	Vegetative	West	Upper-slope	IF	519371	6725083
121	435	120	3	Adult	Fruit	West	Upper-slope	IF	519372	6725085
121	436	50	2	Adult	Fruit	West	Upper-slope	IF	519372	6725085
121	437	170	2	Adult	Fruit	West	Upper-slope	IF	519373	6725092
121	438	120	2	Adult	Fruit	West	Upper-slope	IF	519373	6725085
121	439	180	3	Adult	Fruit	West	Upper-slope	IF	519373	6725088
121	440	170	2	Adult	Fruit	West	Upper-slope	IF	519375	6725088

SAID	DMID	Height (cm)	Health Rating	Maturity	Reprod. Status	Aspect	Topography	Rock Type	Easting (mE)	Northing (mN)
121	441	160	2	Adult	Fruit	Top	Top	IF	519375	6725094
121	442	140	3	Adult	Fruit	Top	Top	IF	519375	6725089
121	443	140	2	Adult	Fruit	Top	Top	IF	519377	6725085
121	444	130	3	Adult	Fruit	Top	Top	IF	519378	6725083
122	445	160	1	Adult	Fruit	Top	Top	IF	519389	6725074
123	446	140	2	Adult	Fruit	West	Upper-slope	IF	519385	6725061
123	447	20	4	Adult	Fruit	Top	Top	IF	519387	6725061
123	448	180	2	Adult	Fruit	West	Upper-slope	IF	519388	6725055
123	449	50	2	Adult	Fruit	Top	Top	IF	519392	6725072
123	450	160	2	Adult	Fruit	Top	Top	IF	519392	6725066
123	451	170	2	Adult	Fruit	Top	Top	IF	519396	6725060
124	452	10	1	Seedling	Vegetative	Top	Top	IF	519392	6725054
124	453	170	3	Adult	Fruit	Top	Top	IF	519397	6725058
125	454	10	1	Seedling	Vegetative	West	Upper-slope	IF	519401	6725037
125	455	10	1	Seedling	Vegetative	Top	Top	IF	519402	6725037
125	456	230	2	Adult	Fruit	Top	Top	IF	519403	6725038
125	457	120	3	Adult	Fruit	West	Upper-slope	IF	519403	6725031
125	458	160	3	Adult	Fruit	Top	Top	IF	519404	6725039
125	459	160	2	Adult	Fruit	Top	Top	IF	519405	6725041
125	460	100	2	Adult	Fruit	West	Upper-slope	IF	519405	6725031
125	461	160	2	Adult	Fruit	Top	Top	IF	519406	6725041
125	462	140	2	Adult	Fruit	Top	Top	IF	519407	6725036
125	463	130	2	Adult	Fruit	Top	Top	IF	519407	6725033
125	464	170	2	Adult	Fruit	Top	Top	IF	519407	6725036
125	465	90	2	Adult	Fruit	Top	Top	IF	519409	6725039
125	466	190	2	Adult	Fruit	Top	Top	IF	519409	6725033
125	467	80	2	Adult	Fruit	Top	Top	IF	519409	6725038
125	468	30	2	Adult	Fruit	Top	Top	IF	519410	6725033
125	469	210	2	Adult	Fruit	Top	Top	IF	519411	6725038
125	470	180	2	Adult	Fruit	Top	Top	IF	519413	6725035
126	471	190	4	Adult	Vegetative	West	Upper-slope	IF	519408	6725025
126	472	120	2	Adult	Fruit	West	Upper-slope	IF	519408	6725028
126	473	170	3	Adult	Fruit	West	Upper-slope	IF	519408	6725027
126	474	160	2	Adult	Fruit	Top	Top	IF	519412	6725032
126	475	190	2	Adult	Fruit	Top	Top	IF	519413	6725031
126	476	190	2	Adult	Fruit	Top	Top	IF	519413	6725033
126	477	190	3	Adult	Fruit	West	Upper-slope	IF	519413	6725020
126	478	160	2	Adult	Fruit	Top	Top	IF	519415	6725029
126	479	230	3	Adult	Fruit	Top	Top	IF	519415	6725027
126	480	120	3	Adult	Fruit	Top	Top	IF	519415	6725029
126	481	160	3	Adult	Fruit	Top	Top	IF	519415	6725025
126	482	170	2	Adult	Fruit	Top	Top	IF	519416	6725033
126	483	60	2	Adult	Fruit	Top	Top	IF	519416	6725021
126	484	160	3	Adult	Fruit	Top	Top	IF	519417	6725030
126	485	180	2	Adult	Fruit	Top	Top	IF	519417	6725031
126	486	160	2	Adult	Fruit	Top	Top	IF	519418	6725022
126	487	120	2	Adult	Fruit	Top	Top	IF	519418	6725032
126	488	180	3	Adult	Fruit	Top	Top	IF	519419	6725020
126	489	100	3	Adult	Fruit	Top	Top	IF	519419	6725029

SAID	DMID	Height (cm)	Health Rating	Maturity	Reprod. Status	Aspect	Topography	Rock Type	Easting (mE)	Northing (mN)
126	490	180	2	Adult	Vegetative	Top	Top	IF	519419	6725031
126	491	100	3	Adult	Fruit	Top	Top	IF	519419	6725033
126	492	60	2	Adult	Fruit	Top	Top	IF	519420	6725022
126	493	100	2	Adult	Fruit	Top	Top	IF	519421	6725021
126	494	210	3	Adult	Fruit	Top	Top	IF	519422	6725023
126	495	170	2	Adult	Fruit	Top	Top	IF	519422	6725025
126	496	160	2	Adult	Fruit	Top	Top	IF	519424	6725027
127	497	180	2	Adult	Fruit	West	Upper-slope	IF	519418	6725010
127	498	140	3	Adult	Fruit	Top	Top	IF	519420	6725017
127	499	100	2	Adult	Fruit	Top	Top	IF	519421	6725021
127	500	130	2	Adult	Fruit	Top	Top	IF	519424	6725016
127	501	140	3	Adult	Fruit	Top	Top	IF	519425	6725013
127	502	200	2	Adult	Fruit	Top	Top	IF	519426	6725020
127	503	160	2	Adult	Fruit	Top	Top	IF	519426	6725020
127	504	170	3	Adult	Fruit	Top	Top	IF	519426	6725020
127	505	150	3	Adult	Fruit	Top	Top	IF	519427	6725011
127	506	150	2	Adult	Fruit	Top	Top	IF	519427	6725021
127	507	200	4	Adult	Fruit	Top	Top	IF	519427	6725013
127	508	150	2	Adult	Fruit	Top	Top	IF	519429	6725018
127	509	190	4	Adult	Vegetative	Top	Top	IF	519431	6725014
127	510	170	2	Adult	Fruit	Top	Top	IF	519431	6725017
128	511	110	3	Adult	Fruit	West	Upper-slope	IF	519423	6725003
128	512	210	3	Adult	Fruit	West	Upper-slope	IF	519424	6725003
128	513	210	3	Adult	Fruit	West	Upper-slope	IF	519425	6725002
128	514	100	3	Adult	Fruit	West	Upper-slope	IF	519426	6724999
128	515	130	3	Adult	Fruit	West	Upper-slope	IF	519427	6725000
128	516	110	3	Adult	Fruit	West	Upper-slope	IF	519428	6724999
128	517	200	3	Adult	Fruit	West	Upper-slope	IF	519428	6724998
128	518	130	3	Adult	Fruit	West	Upper-slope	IF	519430	6724997
128	519	110	2	Adult	Fruit	Top	Top	IF	519434	6725011
128	520	190	3	Adult	Fruit	Top	Top	IF	519434	6725003
128	521	90	3	Adult	Vegetative	Top	Top	IF	519434	6725003
128	522	210	2	Adult	Fruit	Top	Top	IF	519434	6725004
128	523	90	3	Adult	Fruit	Top	Top	IF	519438	6724998
128	524	180	1	Adult	Fruit	Top	Top	IF	519438	6725002
128	525	80	4	Adult	Fruit	Top	Top	IF	519440	6725005
128	526	80	2	Adult	Fruit	Top	Top	IF	519440	6725001
128	527	90	2	Adult	Fruit	Top	Top	IF	519441	6725000
129	528	150	3	Adult	Fruit	West	Upper-slope	IF	519433	6724990
129	529	130	2	Adult	Vegetative	Top	Top	IF	519438	6724993
129	530	140	2	Adult	Fruit	West	Upper-slope	IF	519439	6724984
129	531	140	3	Adult	Fruit	West	Upper-slope	IF	519439	6724984
129	532	170	3	Adult	Fruit	West	Upper-slope	IF	519442	6724984
129	533	160	3	Adult	Fruit	West	Upper-slope	IF	519443	6724986
129	534	100	2	Adult	Fruit	Top	Top	IF	519444	6724997
129	535	210	1	Adult	Fruit	Top	Top	IF	519444	6724998
129	536	60	2	Adult	Fruit	West	Upper-slope	IF	519445	6724990
129	537	160	3	Adult	Fruit	West	Upper-slope	IF	519445	6724989
129	538	190	2	Adult	Fruit	Top	Top	IF	519445	6724992

SAID	DMID	Height (cm)	Health Rating	Maturity	Reprod. Status	Aspect	Topography	Rock Type	Easting (mE)	Northing (mN)
129	539	50	2	Adult	Fruit	Top	Top	IF	519446	6724995
129	540	60	2	Adult	Fruit	West	Upper-slope	IF	519446	6724984
129	541	190	2	Adult	Fruit	West	Upper-slope	IF	519446	6724988
129	542	170	2	Adult	Fruit	Top	Top	IF	519447	6724995
129	543	160	2	Adult	Fruit	West	Upper-slope	IF	519447	6724988
129	544	100	1	Adult	Vegetative	Top	Top	IF	519447	6724994
130	545	150	3	Adult	Fruit	West	Upper-slope	IF	519441	6724978
130	546	40	2	Adult	Fruit	West	Upper-slope	IF	519444	6724981
130	547	210	3	Adult	Fruit	West	Upper-slope	IF	519447	6724974
130	548	190	3	Adult	Fruit	West	Upper-slope	IF	519447	6724976
130	549	140	2	Adult	Fruit	West	Upper-slope	IF	519449	6724971
130	550	140	2	Adult	Fruit	West	Upper-slope	IF	519449	6724978
130	551	140	3	Adult	Fruit	West	Upper-slope	IF	519449	6724984
130	552	190	3	Adult	Fruit	West	Upper-slope	IF	519450	6724979
130	553	180	2	Adult	Fruit	West	Upper-slope	IF	519450	6724976
130	554	100	2	Adult	Fruit	West	Upper-slope	IF	519450	6724977
130	555	200	2	Adult	Fruit	West	Upper-slope	IF	519451	6724983
130	556	30	2	Adult	Fruit	West	Upper-slope	IF	519451	6724976
130	557	10	1	Seedling	Vegetative	West	Upper-slope	IF	519451	6724973
130	558	170	2	Adult	Fruit	West	Upper-slope	IF	519452	6724971
130	559	160	2	Adult	Fruit	West	Upper-slope	IF	519452	6724987
130	560	40	2	Adult	Fruit	West	Upper-slope	IF	519454	6724982
130	561	170	2	Adult	Fruit	West	Upper-slope	IF	519456	6724978
130	562	190	2	Adult	Fruit	West	Upper-slope	IF	519456	6724980
130	563	110	1	Adult	Fruit	West	Upper-slope	IF	519457	6724978
130	564	10	1	Seedling	Vegetative	West	Upper-slope	IF	519457	6724978
130	565	180	2	Adult	Fruit	West	Upper-slope	IF	519458	6724979
130	566	190	3	Adult	Fruit	West	Upper-slope	IF	519458	6724977
130	567	110	1	Adult	Fruit	West	Upper-slope	IF	519458	6724975
131	568	150	3	Adult	Fruit	West	Upper-slope	IF	519453	6724962
131	569	180	2	Adult	Fruit	West	Upper-slope	IF	519453	6724967
131	570	150	2	Adult	Fruit	West	Upper-slope	IF	519455	6724970
131	571	110	3	Adult	Fruit	West	Upper-slope	IF	519457	6724968
131	572	220	3	Adult	Fruit	West	Upper-slope	IF	519458	6724957
131	573	140	2	Adult	Fruit	West	Upper-slope	IF	519458	6724968
131	574	170	2	Adult	Fruit	West	Upper-slope	IF	519459	6724960
131	575	190	2	Adult	Fruit	West	Upper-slope	IF	519461	6724957
132	576	170	3	Adult	Fruit	West	Upper-slope	IF	519458	6724954
132	577	70	3	Adult	Fruit	West	Upper-slope	IF	519462	6724948
132	578	100	4	Adult	Fruit	West	Upper-slope	IF	519463	6724947
132	579	210	3	Adult	Fruit	West	Upper-slope	IF	519464	6724948
132	580	150	3	Adult	Fruit	West	Upper-slope	IF	519465	6724950
137	581	140	2	Adult	Fruit	West	Mid-slope	IF	519325	6725170
137	582	30	4	Adult	Vegetative	West	Mid-slope	IF	519331	6725166
137	583	120	2	Adult	Fruit	West	Mid-slope	IF	519331	6725175
137	584	100	4	Adult	Vegetative	West	Mid-slope	IF	519331	6725161
137	585	140	3	Adult	Fruit	West	Mid-slope	Lat/Fe	519332	6725171
137	586	10	1	Seedling	Vegetative	West	Mid-slope	IF	519332	6725166
137	587	130	3	Adult	Fruit	West	Mid-slope	IF	519332	6725161

SAID	DMID	Height (cm)	Health Rating	Maturity	Reprod. Status	Aspect	Topography	Rock Type	Easting (mE)	Northing (mN)
137	588	140	3	Adult	Fruit	West	Mid-slope	IF	519335	6725164
137	589	160	3	Adult	Fruit	West	Mid-slope	IF	519335	6725169
137	590	140	2	Adult	Fruit	West	Mid-slope	IF	519336	6725163
137	591	60	1	Adult	Fruit	West	Mid-slope	IF	519336	6725164
137	592	120	2	Adult	Fruit	West	Mid-slope	IF	519337	6725175
137	593	70	4	Adult	Fruit	West	Mid-slope	IF	519337	6725174
137	594	110	2	Adult	Fruit	West	Mid-slope	IF	519337	6725176
137	595	180	3	Adult	Fruit	West	Mid-slope	IF	519339	6725165
138	596	150	3	Adult	Fruit	West	Mid-slope	IF	519333	6725160
138	597	190	2	Adult	Fruit	West	Mid-slope	IF	519335	6725157
138	598	190	2	Adult	Fruit	West	Mid-slope	IF	519335	6725162
138	599	160	3	Adult	Fruit	West	Mid-slope	IF	519336	6725156
138	600	170	3	Adult	Fruit	West	Mid-slope	IF	519338	6725162
138	601	190	3	Adult	Fruit	West	Upper-slope	IF	519344	6725153
138	602	180	4	Adult	Fruit	West	Upper-slope	IF	519344	6725152
139	603	190	3	Adult	Fruit	West	Upper-slope	IF	519344	6725145
139	604	130	2	Adult	Fruit	West	Upper-slope	IF	519346	6725141
139	605	110	3	Adult	Fruit	West	Upper-slope	IF	519347	6725143
139	606	240	3	Adult	Fruit	West	Upper-slope	IF	519347	6725146
139	607	90	3	Adult	Fruit	West	Upper-slope	IF	519348	6725138
139	608	140	4	Adult	Vegetative	West	Upper-slope	IF	519349	6725141
139	609	190	3	Adult	Fruit	West	Upper-slope	IF	519350	6725142
139	610	60	1	Adult	Fruit	North	Upper-slope	IF	519352	6725153
139	611	150	2	Adult	Vegetative	North	Upper-slope	IF	519353	6725150
139	612	130	3	Adult	Fruit	North	Upper-slope	IF	519354	6725152
139	613	170	3	Adult	Fruit	North	Upper-slope	IF	519356	6725142
140	614	180	3	Adult	Old flower	West	Upper-slope	IF	519350	6725134
140	615	130	3	Adult	Fruit	West	Upper-slope	IF	519351	6725136
140	616	70	2	Adult	Fruit	North	Upper-slope	Lat/Fe	519356	6725138
140	617	150	2	Adult	Fruit	North	Upper-slope	Lat/Fe	519358	6725137
140	618	80	4	Adult	Vegetative	North	Upper-slope	IF	519359	6725142
140	619	170	3	Adult	Fruit	North	Upper-slope	IF	519359	6725133
140	620	200	3	Adult	Fruit	North	Upper-slope	IF	519360	6725143
140	621	180	3	Adult	Fruit	North	Upper-slope	IF	519360	6725134
140	622	120	3	Adult	Vegetative	North	Upper-slope	IF	519360	6725143
140	623	130	2	Adult	Fruit	North	Upper-slope	IF	519361	6725137
140	624	150	2	Adult	Fruit	North	Upper-slope	IF	519361	6725131
140	625	160	2	Adult	Fruit	North	Upper-slope	IF	519361	6725138
140	626	140	3	Adult	Fruit	North	Upper-slope	IF	519362	6725138
140	627	90	2	Adult	Fruit	North	Upper-slope	IF	519362	6725128
140	628	160	2	Adult	Fruit	North	Upper-slope	IF	519363	6725131
140	629	120	1	Adult	Fruit	North	Upper-slope	IF	519365	6725133
140	630	180	2	Adult	Fruit	North	Upper-slope	IF	519366	6725136
141	631	130	3	Adult	Fruit	West	Upper-slope	IF	519361	6725119
141	632	170	3	Adult	Fruit	North	Upper-slope	IF	519364	6725128
141	633	80	2	Adult	Fruit	North	Upper-slope	IF	519365	6725127
141	634	110	2	Adult	Fruit	North	Upper-slope	IF	519365	6725125
141	635	30	1	Adult	Fruit	West	Upper-slope	IF	519366	6725111
141	636	80	4	Adult	Fruit	North	Upper-slope	IF	519368	6725128

SAID	DMID	Height (cm)	Health Rating	Maturity	Reprod. Status	Aspect	Topography	Rock Type	Easting (mE)	Northing (mN)
141	637	160	2	Adult	Fruit	North	Upper-slope	IF	519368	6725120
141	638	140	2	Adult	Fruit	North	Upper-slope	IF	519368	6725123
141	639	140	1	Adult	Fruit	North	Upper-slope	IF	519368	6725124
141	640	110	2	Adult	Fruit	North	Upper-slope	IF	519368	6725129
141	641	100	1	Adult	Fruit	North	Upper-slope	IF	519369	6725122
141	642	100	2	Adult	Fruit	North	Upper-slope	IF	519370	6725125
141	643	100	4	Adult	Fruit	North	Upper-slope	IF	519371	6725123
141	644	10	1	Seedling	Vegetative	North	Upper-slope	IF	519371	6725121
141	645	170	2	Adult	Fruit	North	Upper-slope	IF	519372	6725120
141	646	160	2	Adult	Fruit	North	Upper-slope	IF	519372	6725119
141	647	90	2	Adult	Fruit	North	Upper-slope	IF	519373	6725123
141	648	50	3	Adult	Fruit	North	Upper-slope	IF	519373	6725118
141	649	160	3	Adult	Fruit	North	Upper-slope	IF	519378	6725119
142	650	40	2	Juvenile	Vegetative	West	Upper-slope	IF	519368	6725112
142	651	150	2	Adult	Fruit	West	Upper-slope	IF	519370	6725105
142	652	210	1	Adult	Fruit	West	Upper-slope	IF	519373	6725108
142	653	130	1	Adult	Fruit	North	Upper-slope	IF	519373	6725115
142	654	140	2	Adult	Fruit	North	Upper-slope	IF	519376	6725115
142	655	60	1	Adult	Fruit	Top	Top	IF	519377	6725108
142	656	150	2	Adult	Fruit	Top	Top	IF	519377	6725108
142	657	130	1	Adult	Fruit	Top	Top	IF	519378	6725103
142	658	170	3	Adult	Fruit	North	Upper-slope	IF	519378	6725117
142	659	170	2	Adult	Fruit	Top	Top	IF	519378	6725110
142	660	180	2	Adult	Fruit	Top	Top	IF	519381	6725106
142	661	160	2	Adult	Fruit	Top	Top	IF	519382	6725110
142	662	170	3	Adult	Fruit	Top	Top	IF	519384	6725107
143	663	120	2	Adult	Fruit	Top	Top	IF	519378	6725100
143	664	90	2	Adult	Fruit	Top	Top	IF	519380	6725102
143	665	170	1	Adult	Fruit	Top	Top	IF	519385	6725093
144	666	210	1	Adult	Fruit	Top	Top	IF	519388	6725079
144	667	10	1	Seedling	Vegetative	Top	Top	IF	519391	6725085
144	668	140	1	Adult	Fruit	Top	Top	IF	519394	6725076
144	669	130	2	Adult	Fruit	Top	Top	IF	519396	6725083
144	670	60	2	Adult	Fruit	Top	Top	IF	519398	6725082
144	671	100	2	Adult	Fruit	Top	Top	IF	519401	6725080
145	672	160	1	Adult	Fruit	Top	Top	IF	519395	6725074
145	673	70	2	Adult	Fruit	Top	Top	IF	519397	6725073
145	674	170	2	Adult	Fruit	Top	Top	IF	519398	6725077
145	675	170	1	Adult	Fruit	Top	Top	IF	519398	6725070
145	676	110	2	Adult	Fruit	Top	Top	IF	519398	6725067
145	677	190	1	Adult	Fruit	Top	Top	IF	519399	6725076
145	678	200	2	Adult	Fruit	Top	Top	IF	519399	6725070
145	679	60	2	Adult	Fruit	Top	Top	IF	519399	6725071
145	680	170	2	Adult	Fruit	Top	Top	IF	519399	6725075
145	681	160	2	Adult	Fruit	Top	Top	IF	519399	6725066
145	682	170	2	Adult	Fruit	Top	Top	IF	519400	6725067
145	683	170	3	Adult	Fruit	Top	Top	IF	519400	6725071
145	684	150	1	Adult	Fruit	Top	Top	IF	519400	6725079
145	685	160	1	Adult	Fruit	Top	Top	IF	519401	6725075

SAID	DMID	Height (cm)	Health Rating	Maturity	Reprod. Status	Aspect	Topography	Rock Type	Easting (mE)	Northing (mN)
145	686	160	1	Adult	Fruit	Top	Top	IF	519402	6725066
145	687	120	2	Adult	Fruit	Top	Top	IF	519402	6725068
145	688	150	2	Adult	Fruit	Top	Top	IF	519402	6725075
145	689	90	2	Adult	Fruit	Top	Top	IF	519402	6725078
145	690	20	1	Seedling	Vegetative	Top	Top	IF	519403	6725065
145	691	160	1	Adult	Fruit	Top	Top	IF	519404	6725067
145	692	90	2	Adult	Fruit	Top	Top	IF	519405	6725067
145	693	120	2	Adult	Fruit	Top	Top	IF	519405	6725077
145	694	40	1	Adult	Fruit	Top	Top	IF	519407	6725073
145	695	160	1	Adult	Fruit	Top	Top	IF	519407	6725067
146	696	120	2	Adult	Fruit	Top	Top	IF	519404	6725060
146	697	150	2	Adult	Fruit	Top	Top	IF	519405	6725056
146	698	170	1	Adult	Fruit	Top	Top	IF	519407	6725063
146	699	120	2	Adult	Fruit	Top	Top	IF	519409	6725065
146	700	40	3	Adult	Fruit	Top	Top	IF	519411	6725061
148	701	170	3	Adult	Fruit	Top	Top	IF	519425	6725030
148	702	210	1	Adult	Fruit	Top	Top	IF	519427	6725036
148	703	160	2	Adult	Fruit	Top	Top	IF	519427	6725038
148	704	190	2	Adult	Fruit	Top	Top	IF	519430	6725037
148	705	180	3	Adult	Fruit	Top	Top	IF	519430	6725034
148	706	160	2	Adult	Fruit	Top	Top	IF	519431	6725037
149	707	180	2	Adult	Fruit	Top	Top	IF	519431	6725028
149	708	140	2	Adult	Fruit	Top	Top	IF	519435	6725018
149	709	130	2	Adult	Fruit	Top	Top	IF	519437	6725020
149	710	130	2	Adult	Fruit	Top	Top	IF	519440	6725024
149	711	250	2	Adult	Fruit	Top	Top	IF	519442	6725020
149	712	120	4	Adult	Fruit	Top	Top	IF	519444	6725022
150	713	10	1	Seedling	Vegetative	Top	Top	IF	519435	6725012
150	714	110	1	Adult	Fruit	Top	Top	IF	519441	6725003
150	715	10	1	Seedling	Vegetative	Top	Top	IF	519444	6725001
150	716	130	3	Adult	Fruit	Top	Top	IF	519444	6725014
150	717	10	1	Seedling	Vegetative	Top	Top	IF	519445	6725013
150	718	100	3	Adult	Fruit	Top	Top	IF	519448	6725012
150	719	130	4	Adult	Fruit	Top	Top	IF	519448	6725015
150	720	130	4	Adult	Fruit	Top	Top	IF	519451	6725014
150	721	120	3	Adult	Fruit	Top	Top	IF	519451	6725012
151	722	220	2	Adult	Fruit	Top	Top	IF	519446	6724996
151	723	10	1	Seedling	Vegetative	Top	Top	IF	519447	6724996
151	724	210	2	Adult	Fruit	Top	Top	IF	519449	6724997
151	725	140	3	Adult	Fruit	East	Upper-slope	IF	519451	6724995
151	726	10	1	Seedling	Vegetative	Top	Top	IF	519451	6724996
151	727	110	3	Adult	Fruit	East	Upper-slope	IF	519454	6724994
151	728	10	1	Seedling	Vegetative	East	Upper-slope	IF	519455	6724998
151	729	110	2	Adult	Fruit	East	Upper-slope	IF	519456	6724997
151	730	180	2	Adult	Fruit	East	Upper-slope	IF	519458	6724995
151	731	190	3	Adult	Fruit	East	Upper-slope	IF	519458	6724995
151	732	180	2	Adult	Fruit	East	Upper-slope	IF	519461	6724996
152	733	150	2	Adult	Fruit	West	Upper-slope	IF	519453	6724989
152	734	170	1	Adult	Fruit	West	Upper-slope	IF	519455	6724989

SAID	DMID	Height (cm)	Health Rating	Maturity	Reprod. Status	Aspect	Topography	Rock Type	Easting (mE)	Northing (mN)
152	735	140	2	Adult	Fruit	West	Upper-slope	IF	519457	6724981
152	736	160	4	Adult	Fruit	West	Upper-slope	IF	519458	6724980
152	737	170	3	Adult	Fruit	West	Upper-slope	IF	519458	6724980
152	738	170	1	Adult	Fruit	East	Upper-slope	Lat/Fe	519460	6724992
154	739	180	2	Adult	Fruit	East	Upper-slope	Lat/Fe	519482	6724968
154	740	160	2	Adult	Fruit	East	Upper-slope	Lat/Fe	519482	6724963
154	741	170	3	Adult	Fruit	East	Upper-slope	Lat/Fe	519485	6724961
155	742	140	2	Adult	Fruit	East	Upper-slope	Lat/Fe	519484	6724955
155	743	160	3	Adult	Fruit	East	Upper-slope	Lat/Fe	519484	6724953
157	744	10	4	Adult	Fruit	West	Mid-slope	IF	519324	6725206
159	745	110	2	Adult	Fruit	West	Mid-slope	IF	519338	6725178
161	746	100	2	Adult	Fruit	North	Upper-slope	IF	519355	6725153
161	747	100	2	Adult	Fruit	North	Upper-slope	IF	519360	6725148
161	748	110	2	Adult	Fruit	North	Upper-slope	IF	519360	6725151
161	749	90	2	Adult	Fruit	North	Upper-slope	IF	519361	6725157
161	750	100	2	Adult	Fruit	North	Upper-slope	IF	519362	6725150
161	751	100	2	Adult	Fruit	North	Upper-slope	IF	519362	6725154
161	752	140	3	Adult	Fruit	North	Upper-slope	IF	519363	6725154
161	753	80	3	Adult	Fruit	North	Upper-slope	IF	519363	6725154
161	754	60	4	Adult	Fruit	North	Upper-slope	IF	519364	6725148
161	755	170	3	Adult	Fruit	North	Upper-slope	IF	519365	6725148
161	756	130	3	Adult	Fruit	North	Upper-slope	IF	519366	6725149
162	757	130	3	Adult	Vegetative	North	Upper-slope	IF	519366	6725143
162	758	90	1	Adult	Fruit	North	Upper-slope	IF	519367	6725136
162	759	100	2	Adult	Fruit	North	Upper-slope	IF	519368	6725135
162	760	170	3	Adult	Fruit	North	Upper-slope	IF	519369	6725141
163	761	80	2	Adult	Fruit	North	Upper-slope	IF	519371	6725131
163	762	80	1	Adult	Fruit	North	Upper-slope	IF	519374	6725126
163	763	110	3	Adult	Fruit	North	Upper-slope	Lat/Fe	519377	6725122
163	764	120	3	Adult	Fruit	North	Upper-slope	Lat/Fe	519382	6725123
163	765	150	2	Adult	Fruit	North	Upper-slope	Lat/Fe	519383	6725138
163	766	100	2	Adult	Fruit	North	Upper-slope	Lat/Fe	519388	6725126
163	767	130	2	Adult	Fruit	North	Upper-slope	Lat/Fe	519388	6725127
164	768	120	2	Adult	Fruit	North	Upper-slope	IF	519379	6725119
164	769	170	1	Seedling	Vegetative	North	Upper-slope	Lat/Fe	519392	6725126
164	770	140	2	Adult	Fruit	Top	Top	Lat/Fe	519394	6725112
164	771	140	2	Adult	Fruit	Top	Top	Lat/Fe	519394	6725117
165	772	140	2	Adult	Fruit	Top	Top	Lat/Fe	519392	6725099
165	773	50	3	Adult	Fruit	Top	Top	Lat/Fe	519394	6725111
166	774	120	2	Adult	Fruit	Top	Top	Lat/Fe	519399	6725096
166	775	140	2	Adult	Fruit	Top	Top	Lat/Fe	519400	6725096
166	776	90	2	Adult	Fruit	Top	Top	Lat/Fe	519402	6725095
173	777	110	1	Adult	Fruit	East	Upper-slope	IF	519457	6725008
173	778	210	2	Adult	Fruit	East	Upper-slope	IF	519462	6725000
173	779	230	2	Adult	Fruit	East	Upper-slope	Lat/Fe	519468	6725011
183	780	130	2	Adult	Fruit	North	Upper-slope	IF	519382	6725159
184	781	80	2	Adult	Fruit	North	Upper-slope	IF	519385	6725154
184	782	190	3	Adult	Fruit	North	Upper-slope	Lat/Fe	519388	6725157
184	783	150	3	Adult	Vegetative	North	Upper-slope	Lat/Fe	519389	6725153

SAID	DMID	Height (cm)	Health Rating	Maturity	Reprod. Status	Aspect	Topography	Rock Type	Easting (mE)	Northing (mN)
184	784	140	3	Adult	Fruit	North	Upper-slope	Lat/Fe	519391	6725148
185	785	140	1	Adult	Fruit	North	Upper-slope	IF	519389	6725137
185	786	180	1	Adult	Fruit	North	Upper-slope	IF	519389	6725137
186	787	20	1	Seedling	Vegetative	North	Upper-slope	Lat/Fe	519400	6725123
186	788	120	3	Adult	Fruit	North	Upper-slope	Lat/Fe	519401	6725127
186	789	20	1	Adult	Fruit	Top	Top	Lat/Fe	519402	6725121
186	790	140	3	Adult	Fruit	North	Upper-slope	Lat/Fe	519403	6725128
186	791	140	2	Adult	Fruit	Top	Top	IF	519403	6725122
186	792	110	2	Adult	Fruit	North	Upper-slope	Lat/Fe	519403	6725130
186	793	10	1	Seedling	Vegetative	Top	Top	Lat/Fe	519405	6725121
186	794	130	3	Adult	Fruit	Top	Top	Lat/Fe	519405	6725122
186	795	70	1	Adult	Fruit	East	Upper-slope	Lat/Fe	519410	6725124
187	796	170	2	Adult	Fruit	Top	Top	IF	519403	6725118
187	797	10	1	Seedling	Vegetative	Top	Top	IF	519407	6725120
187	798	10	1	Seedling	Vegetative	Top	Top	Lat/Fe	519410	6725121
187	799	20	1	Seedling	Vegetative	Top	Top	Lat/Fe	519410	6725116
187	800	150	2	Adult	Fruit	Top	Top	IF	519410	6725118
187	801	140	2	Adult	Fruit	Top	Top	IF	519410	6725113
187	802	110	2	Adult	Fruit	Top	Top	IF	519411	6725119
187	803	90	2	Adult	Fruit	Top	Top	Fe	519413	6725117
187	804	110	2	Adult	Fruit	Top	Top	Lat/Fe	519413	6725108
187	805	80	1	Adult	Fruit	Top	Top	IF	519417	6725111
187	806	110	4	Adult	Fruit	Top	Top	IF	519417	6725114
188	807	120	2	Adult	Fruit	Top	Top	Lat/Fe	519415	6725105
188	808	120	3	Adult	Fruit	Top	Top	IF	519416	6725107
188	809	140	2	Adult	Fruit	Top	Top	IF	519416	6725109
188	810	120	2	Adult	Fruit	Top	Top	Lat/Fe	519422	6725109
190	811	210	4	Adult	Vegetative	Top	Top	IF	519439	6725079
190	812	140	4	Adult	Vegetative	Top	Top	Lat/Fe	519439	6725078
208	813	90	3	Adult	Fruit	East	Upper-slope	Lat/Fe	519412	6725126
208	814	160	4	Adult	Vegetative	East	Upper-slope	Lat/Fe	519414	6725135
209	815	110	2	Adult	Fruit	East	Upper-slope	Lat/Fe	519419	6725126
209	816	180	3	Adult	Fruit	Top	Top	Fe	519419	6725115
209	817	10	1	Seedling	Vegetative	Top	Top	Fe	519420	6725115
209	818	90	3	Adult	Vegetative	East	Upper-slope	Lat/Fe	519421	6725121
212	819	130	2	Adult	Fruit	East	Upper-slope	Lat/Fe	519447	6725082
212	820	150	3	Adult	Fruit	East	Upper-slope	IF	519448	6725085
212	821	120	3	Adult	Fruit	East	Upper-slope	Fe	519450	6725083
213	822	190	3	Adult	Fruit	East	Upper-slope	Lat/Fe	519456	6725077
213	823	180	2	Adult	Fruit	East	Upper-slope	IF	519458	6725080
228	824	140	3	Adult	Fruit	East	Upper-slope	Lat/Fe	519408	6725172
228	825	150	1	Adult	Fruit	East	Upper-slope	Lat/Fe	519410	6725165
228	826	140	2	Adult	Fruit	East	Upper-slope	Lat/Fe	519411	6725173
228	827	170	2	Adult	Fruit	East	Upper-slope	Lat/Fe	519412	6725165
228	828	170	3	Adult	Fruit	East	Upper-slope	Lat/Fe	519417	6725167
229	829	170	3	Adult	Fruit	East	Upper-slope	Lat/Fe	519413	6725158
229	830	170	2	Adult	Fruit	East	Upper-slope	Fe	519415	6725160
229	831	140	2	Adult	Vegetative	East	Upper-slope	Fe	519419	6725153
229	832	180	2	Adult	Fruit	East	Upper-slope	Fe	519420	6725161

SAID	DMID	Height (cm)	Health Rating	Maturity	Reprod. Status	Aspect	Topography	Rock Type	Easting (mE)	Northing (mN)
229	833	150	4	Adult	Fruit	East	Upper-slope	Lat/Fe	519421	6725163
229	834	80	2	Adult	Fruit	East	Upper-slope	Fe	519422	6725151
229	835	170	2	Adult	Fruit	East	Upper-slope	Fe	519423	6725154
229	836	130	2	Adult	Fruit	East	Upper-slope	Fe	519423	6725154
229	837	130	3	Adult	Fruit	East	Upper-slope	Fe	519424	6725155
230	838	160	2	Adult	Fruit	East	Upper-slope	Fe	519430	6725147
230	839	160	2	Adult	Fruit	East	Upper-slope	Fe	519431	6725146
233	840	140	2	Adult	Fruit	East	Upper-slope	Fe	519452	6725113
233	841	110	2	Adult	Fruit	East	Upper-slope	IF	519454	6725114
233	842	150	1	Adult	Fruit	East	Upper-slope	IF	519455	6725109
233	843	130	2	Adult	Fruit	East	Upper-slope	IF	519457	6725110
234	844	190	2	Adult	Fruit	East	Upper-slope	IF	519458	6725095
248	845	100	2	Adult	Fruit	East	Mid-slope	IF	519412	6725199
249	846	130	2	Adult	Fruit	East	Upper-slope	Lat/Fe	519406	6725185
249	847	130	2	Adult	Fruit	East	Upper-slope	IF	519406	6725188
249	848	90	2	Adult	Fruit	East	Upper-slope	Lat/Fe	519408	6725184
249	849	180	2	Adult	Fruit	East	Upper-slope	IF	519408	6725185
249	850	200	2	Adult	Fruit	East	Upper-slope	IF	519410	6725186
249	851	120	1	Adult	Fruit	East	Upper-slope	IF	519411	6725182
249	852	140	2	Adult	Fruit	East	Upper-slope	IF	519411	6725189
250	853	40	4	Adult	Fruit	East	Upper-slope	Lat/Fe	519420	6725168
250	854	80	4	Adult	Fruit	East	Upper-slope	Lat/Fe	519421	6725168
251	855	140	3	Adult	Vegetative	East	Upper-slope	IF	519421	6725165
251	856	170	3	Adult	Vegetative	East	Upper-slope	IF	519422	6725168
251	857	150	3	Adult	Vegetative	East	Upper-slope	IF	519422	6725163
251	858	180	3	Adult	Fruit	East	Upper-slope	Fe	519423	6725160
251	859	150	2	Adult	Fruit	East	Upper-slope	IF	519427	6725162
251	860	150	2	Adult	Fruit	East	Upper-slope	IF	519428	6725165
251	861	150	2	Adult	Fruit	East	Upper-slope	Fe	519428	6725157
251	862	90	2	Adult	Fruit	East	Upper-slope	IF	519429	6725158
251	863	150	2	Adult	Fruit	East	Upper-slope	IF	519430	6725157
251	864	140	3	Adult	Fruit	East	Upper-slope	Lat/Fe	519431	6725173
252	865	30	4	Adult	Vegetative	East	Upper-slope	Fe	519429	6725153
252	866	160	2	Adult	Fruit	East	Upper-slope	Fe	519431	6725151
252	867	80	4	Adult	Fruit	East	Upper-slope	IF	519432	6725153
252	868	190	2	Adult	Fruit	East	Upper-slope	IF	519432	6725156
252	869	90	2	Adult	Fruit	East	Upper-slope	IF	519433	6725152
252	870	60	4	Adult	Fruit	East	Upper-slope	IF	519433	6725153
252	871	180	3	Adult	Fruit	East	Upper-slope	IF	519435	6725149
252	872	110	1	Adult	Fruit	East	Upper-slope	IF	519435	6725144
252	873	180	2	Adult	Fruit	East	Upper-slope	IF	519435	6725149
254	874	160	2	Adult	Fruit	East	Upper-slope	IF	519454	6725121

APPENDIX 2: ADDITIONAL CONSERVATION SIGNIFICANT FLORA AND TAXA OF INTEREST DATA

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Table A2. 1: Additional Conservation Significant Flora (GDA94, MGA50)

Taxon	Study Area	Easting (m E)	Northing (m N)	No. of Plants
Eucalyptus synandra (T)	2	520317	6724241	1
	2	520322	6724204	1
	2	520256	6724311	1
	2	519846	6724946	1
	2	519857	6724925	1
	2	519977	6724735	1
	2	520260	6724345	1
	2	520271	6724324	1
	2	520278	6724308	1
	2	520316	6724261	1
	2	520333	6724241	1
	2	520332	6724224	1
	2	520318	6724177	1
	2	519494	6725261	1
	2	519813	6724561	1
	2	520068	6723953	4
	2	519565	6725298	1
	2	519571	6725296	1
	2	519745	6725070	1
	2	519769	6725018	1
	2	519975	6724723	1
	2	519979	6724719	1
	2	519983	6724714	1
	2	519987	6724706	1
	2	519989	6724705	1
	2	519989	6724701	1
	2	519994	6724696	1
	2	520000	6724691	1
	2	520156	6724464	1
	2	520157	6724462	1
	2	520233	6724348	1
	2	520246	6724340	1
	2	520251	6724326	1
	2	520248	6724317	1
	2	520257	6724315	1
	2	520257	6724312	1
	2	520258	6724305	1

Taxon	Study Area	Easting (m E)	Northing (m N)	No. of Plants
Eucalyptus synandra (T)	2	520265	6724306	1
	2	520262	6724298	1
	2	520320	6724241	1
	2	520316	6724238	1
	2	520318	6724227	1
	2	520318	6724225	1
	2	520327	6724225	1
	2	520327	6724222	1
	2	520325	6724219	1
	2	520320	6724218	1
	2	520315	6724228	1
	2	520314	6724228	1
	2	520306	6724226	1
	2	520294	6724233	1
	2	520263	6724294	1
	2	520251	6724292	1
	2	520254	6724302	1
	2	520249	6724305	1
	2	520246	6724317	1
	2	520242	6724316	1
	2	520236	6724322	1
	2	520234	6724326	1
	2	519987	6724695	1
	2	519730	6725039	1
	2	519569	6725290	1
	2	519560	6725298	1
	2	519528	6725270	1
	2	519527	6725265	1
	2	519511	6725246	1
	2	519511	6725257	1
	2	519613	6725328	1
	2	519607	6725277	1
	2	519717	6725134	1
	2	519738	6725100	1
	2	520009	6724713	1
	2	520292	6724283	1
	2	520240	6724306	1
Lepidosperma gibsonii (T)	2	519186	6725128	10
	2	519827	6724521	5

Taxon	Study Area	Easting (m E)	Northing (m N)	No. of Plants
Lepidosperma gibsonii (T)	2	520050	6724205	10
	2	520056	6724196	5
	2	520059	6724188	5
	2	520063	6724187	5
	2	520054	6724165	10
	2	520030	6724204	10
	2	520023	6724211	5
	2	520019	6724217	10
	2	519958	6724306	10
	2	519625	6724703	1
	2	519628	6724697	5
	2	519631	6724693	5
	2	519634	6724690	5
	2	519636	6724687	20
	2	519636	6724685	20
	2	519638	6724681	20
	2	519639	6724677	20
	2	519643	6724673	20
	2	519647	6724669	20
	2	519650	6724664	20
	2	519657	6724663	20
	2	519705	6724589	10
	2	519708	6724585	3
	2	519713	6724577	3
	2	519719	6724565	5
	2	519728	6724553	2
	2	520018	6724140	2
	2	519611	6724697	5
	2	519542	6724709	5
	2	519552	6724700	10
	2	519555	6724697	10
	2	519902	6724095	10
	2	519932	6724059	5
	2	519921	6724038	3
	2	519914	6724049	5
	2	519910	6724055	10
	2	519903	6724068	5
	2	519899	6724072	5
	2	519885	6724096	1

Taxon	Study Area	Easting (m E)	Northing (m N)	No. of Plants
Lepidosperma gibsonii (T)	2	519839	6724106	10
	2	519841	6724103	20
	2	519851	6724094	5
	2	519852	6724089	5
	2	519866	6724067	5
	2	519873	6724063	5
	2	519874	6724056	5
	2	519874	6724051	5
	2	519779	6724536	1
	2	519761	6724560	17
	2	519757	6724563	3
	2	519716	6724622	11
	2	519711	6724627	18
	2	519705	6724634	12
	2	519701	6724641	4
	2	519693	6724655	9
	2	519644	6724700	10
	2	519650	6724695	10
	2	519652	6724689	10
	2	519667	6724668	3
	2	519669	6724662	10
	2	519672	6724658	10
	2	519673	6724655	10
	2	519676	6724651	10
	2	519677	6724647	10
	2	519741	6724563	10
	2	519897	6724122	12
	2	519894	6724049	10
	2	519893	6724054	10
	2	519894	6724064	10
	2	519886	6724069	5
	2	519879	6724073	5
Acacia cerastes (P1)	2	519458	6725008	1
	2	519442	6725005	1
	2	519400	6725040	1
	2	519400	6725031	1
	2	519403	6725007	1
	2	519410	6725008	1
	2	519423	6724985	1

Taxon	Study Area	Easting (m E)	Northing (m N)	No. of Plants
Acacia cerastes (P1)	2	519431	6724989	1
	2	519442	6724965	1
	2	519398	6725017	2
	2	520091	6724142	1
	2	520093	6724139	1
	2	520095	6724138	1
	2	519552	6724514	1
	2	519559	6724508	1
	2	519390	6725082	1
	2	519392	6725075	1
	2	519863	6724736	1
	2	520050	6724332	1
	2	519361	6725098	1
	2	519367	6725089	1
	2	519451	6724986	1
	2	519461	6724971	1
	2	519454	6724967	1
	2	519885	6724137	1
Allocasuarina tessellata (P1)	2	519935	6724770	3
	2	520116	6724505	5
	2	520096	6724525	3
	2	520088	6724532	3
	2	520108	6724483	10
	2	520087	6724517	5
	2	520064	6724519	10
	2	519784	6724821	10
	2	519496	6724915	1
	3	538703	6725722	3
	3	538762	6725683	5
	3	538802	6725625	1
	3	538808	6725639	1
	3	538812	6725648	1
	3	538806	6725651	3
	3	538810	6725661	3
	3	538806	6725677	3
	3	538806	6725692	3
	3	538816	6725662	5
	3	538814	6725640	2
	3	538820	6725632	2

Taxon	Study Area	Easting (m E)	Northing (m N)	No. of Plants
Allocasuarina tessellata (P1)	3	538925	6725527	15
	3	538926	6725546	3
	3	538944	6725541	2
	3	538940	6725529	5
	3	538974	6725262	3
	3	538970	6725510	2
	3	538964	6725530	1
	3	538972	6725626	1
	3	538970	6725671	1
	3	538970	6725689	20
	3	538975	6725716	10
	3	538981	6725700	10
	3	538981	6725677	5
	3	538980	6725491	5
	3	538710	6725724	4
	3	538778	6725690	10
	3	538796	6725659	10
	3	538837	6725640	10
	3	538849	6725633	20
	3	538890	6725567	1
	3	538912	6725271	1
	3	538913	6725535	10
Grevillea scabrida (P3)	3	538566	6725443	1
	3	538559	6725556	1
	3	538810	6725709	1
	3	538878	6725585	4
	3	538927	6725272	2
	3	538927	6725450	1
	3	538926	6725456	1
	3	538923	6725515	1
	3	538940	6725524	1
	3	538941	6725488	4
	3	538941	6725458	5
	3	538973	6725426	6
	3	538968	6725470	8
	3	538971	6725491	2
	3	538970	6725510	1
	3	538981	6725538	1
	3	538980	6725491	2

Taxon	Study Area	Easting (m E)	Northing (m N)	No. of Plants
Grevillea scabrida (P3)	3	538980	6725484	5
	3	538975	6725474	5
	3	538981	6725464	2
	3	538984	6725433	2
	3	538550	6725550	2
	3	538547	6725556	3
	3	538546	6725590	1
	3	538593	6725536	1
	3	538606	6725529	2
	3	538655	6725391	1
	3	538655	6725389	1
	3	538721	6725405	1
	3	538719	6725351	1
	3	538714	6725269	3
	3	538717	6725258	7
	3	538730	6725413	1
	3	538778	6725323	2
	3	538774	6725317	1
	3	538793	6725322	1
	3	538905	6725521	1
	3	538909	6725526	1
	3	538958	6725483	12
	3	538952	6725259	1
	3	538951	6725229	3
Grevillea subtiliflora (P3)	3	538980	6725531	1
	3	538979	6725528	1
	3	538982	6725526	1
	3	538978	6725519	2
	3	538953	6725623	1
Micromyrtus trudgenii (P3)	2	519589	6725123	1
	2	520170	6724184	1
	2	520158	6724199	4
	2	520130	6724241	3
	2	520086	6724298	2
	2	519513	6725121	4
	2	519463	6725189	1
	2	519459	6725176	2
	2	519483	6725142	1
	2	520042	6724341	1

Taxon	Study Area	Easting (m E)	Northing (m N)	No. of Plants
Persoonia pentasticha (P3)	1	517819	6724147	1
	1	517833	6724151	1
	1	517863	6724115	1
	1	517870	6724099	1
	1	517897	6724161	1
	1	517990	6724047	1
	1	517739	6724100	1
	1	517889	6724135	1
	1	517876	6724146	1
	1	517848	6724179	1
	2	519946	6724027	1
	2	519519	6724623	1
	2	519890	6724037	1
	2	519962	6724045	1
	2	519952	6724053	1
	2	517471	6724186	1
	3	538509	6725261	2
	3	538508	6725300	1
	3	538507	6725550	1
	3	538511	6725547	1
	3	538512	6725547	1
	3	538525	6725590	1
	3	538519	6725541	1
	3	538517	6725535	1
	3	538523	6725252	1
	3	538516	6725230	1
	3	538568	6725384	1
	3	538624	6725398	1
	3	538700	6725355	1
	3	538716	6725221	1
	3	538745	6725267	1
	3	538751	6725313	1
	3	538744	6725309	1
	3	538743	6725308	1
	3	538743	6725312	1
	3	538742	6725313	1
	3	538748	6725369	1
	3	538760	6725351	1
	3	538763	6725342	1

Taxon	Study Area	Easting (m E)	Northing (m N)	No. of Plants
Persoonia pentasticha (P3)	3	538766	6725307	1
	3	538755	6725279	1
	3	538822	6725299	1
	3	538827	6725220	1
	3	538865	6725273	1
	3	538875	6725297	1
	3	538882	6725271	1
	3	538880	6725265	1
	3	538880	6725256	1
	3	538946	6725279	1
	3	538936	6725241	1
	3	538971	6725491	2
	3	538492	6725240	16
	3	538485	6725243	4
	3	538489	6725248	3
	3	538483	6725611	1
	3	538535	6725566	9
	3	538539	6725557	1
	3	538546	6725388	1
	3	538543	6725234	1
	3	538545	6725232	3
	3	538548	6725256	1
	3	538602	6725417	1
	3	538597	6725392	1
	3	538611	6725414	1
	3	538720	6725313	6
	3	538717	6725258	1
	3	538731	6725255	1
	3	538721	6725318	2
	3	538735	6725334	2
	3	538776	6725626	1
	3	538780	6725313	4
	3	538793	6725285	2
	3	538792	6725314	1
	3	538792	6725371	1
	3	538841	6725328	1
	3	538834	6725230	1
	3	538853	6725319	1
	3	538852	6725338	1

Taxon	Study Area	Easting (m E)	Northing (m N)	No. of Plants
Persoonia pentasticha (P3)	3	538896	6725287	2
	3	538912	6725293	1

Note: E = East, N = North; T = Threatened; P (1, 2, 3) = Priority (1, 2 or 3).

Table A2. 2: Taxa of Interest (GDA94, MGA50)

Taxon	Study Area	Easting (m E)	Northing (m N)	No. of Plants
Acacia cf. *umbraculiformis*	3	538912	6725293	Approx. 5
Baeckea sp. Mt Gibson	2	520211	6724413	Approx. 5

APPENDIX 3: ENVIRONMENTAL WEED DATA

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Table A3. 1: Environmental Weeds (GDA94, MGA50)

Taxon	Study Area	Easting (m E)	Northing (m N)	No. of Plants
Mesembryanthemum nodiflorum	3	538805	6725454	20
	3	538559	6725720	100
Pentameris airoides subsp. *airoides*	2	519549	6724655	10
	2	538517	6725367	20
	2	538533	6725315	20
	3	519366	6725105	1
	3	519473	6724909	10
	3	538549	6725312	20
	3	538546	6725577	100
	3	538593	6725571	20
	3	538615	6725231	100
	3	538605	6725273	100
	3	538652	6725409	20
	3	538655	6725249	100
	3	538670	6725358	100
	3	538788	6725644	20
	3	538788	6725618	20
	3	538791	6725684	20
	3	538835	6725453	100
	3	538848	6725451	1000
	3	538851	6725618	20
	3	538909	6725435	100
	3	538955	6725531	1000

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APPENDIX 4: MALLEEFOWL (*LEIPOA OCELLATA*) NEST MOUND DATA

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Table A4. 1: Malleefowl (*Leipoa ocellata*) Nest Mounds (GDA94, MGA50)

Photograph	Easting (m E)	Northing (m N)	Status
	519974	6724711	Active
No photograph available	519628	6725144	Inactive
	520288	6724268	Inactive
	519458	6725008	Inactive

Photograph	Easting (m E)	Northing (m N)	Status
	519943	6724150	Inactive
	519664	6724510	Inactive
	519403	6724871	Inactive

Photograph	Easting (m E)	Northing (m N)	Status
	519668	6724437	Inactive
	520008	6723938	Inactive
	519979	6723955	Inactive

Photograph	Easting (m E)	Northing (m N)	Status
	517713	6724019	Inactive
	520275	6724225	Inactive
	519600	6724979	Inactive

Photograph	Easting (m E)	Northing (m N)	Status
	519549	6724655	Inactive